Ministry of the Environment, Conservation and Parks Eastern Region Peterborough District Office 300 Water Street 2<sup>nd</sup> Floor, South Tower Peterborough ON K9J 3C7



Ministère de l'Environnement, de la Protection de la nature et des Parcs Région de l'Est Bureau du district de Peterborough 300, rue Water 2<sup>e</sup> étage, Tour Sud Peterborough ON K9J 3C7

February 15, 2024

Scott Jibb Major The Corporation of the Township of Hamilton, 8285 Majestic Hills Drive, Post Office Delivery 1060 Cobourg ON K9A 4W5

#### RE: 2023/24 Creighton Heights Drinking Water System Inspection Report 1-204083800

Please see the attached Ministry of the Environment, Conservation and Parks inspection report for the compliance inspection initiated for the Creighton Heights Drinking Water System on January 25, 2024.

A section of the report entitled **NON-COMPLIANCE** are typically linked to incidents of non-compliance with regulatory requirements contained within the Environmental Compliance Approval and its associated Acts and Regulations. It should be noted that there were no violations identified during this inspection. **NON-CONFORMANCE ITEMS** convey information that the owner or operating authority should consider implementing to advance efforts already in place. Please note that items which appear as recommendations do not, in themselves, constitute violations.

Thank you for the assistance afforded to me during this compliance assessment. Please do not hesitate to call me at 905-449-9369 or Ms. Brittney Wielgos, Supervisor, Safe Drinking Water Branch 705-768-0436, should you have any questions or concerns regarding the above.

Yours truly,

Kayla Trofimczuk

Kayla Trofimczuk Water Compliance Officer Peterborough District Office

Enclosure (1)

CC: Anita Schoenleber, Water Operations, Manager, Township of Hamilton On Call Operator, Water Operator, Township of Hamilton Keith Taylor, Conservation Authority, Lower Trent Haliburton, Kawartha, Pine Ridge District Health Unit Brittney Wielgos, Water Compliance Supervisor, Peterborough District Office, MECP Ministère de l'Environnement, de la Protection de la nature et des Parcs



# Ontario 😿

# CREIGHTON HEIGHTS DRINKING WATER SYSTEM 9235 DALE RD, HAMILTON TOWNSHIP, ON, KOK 1CO **INSPECTION REPORT**

Entity: art Date:

Inspection Start Date: January 25, 2024 Inspection End Date: February 12, 2024 Inspected By: Kayla Trofimczuk Badge #: 2111 Inspected By: Viktoria Light Badge #: 1100

Kayla Trofimczuk

(signature)

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Ministry of the Environment, Conservation & Parks Drinking Water Inspection Report

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# 1. Drinking Water System Inspection Report

# Appendix:

- A. Stakeholders Appendix
- **B.** Inspection Rating Record



#### **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**

The following item(s) have been identified as non-conformance, based on a "No" response captured for a best management practice (BMP) question(s). For additional information on each question see the Inspection Details section of the report.

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

ltem	Question	Recommendation(s)
R-1	Question ID: DWMR1116000 Were the inspection questions sufficient to address other identified best practice issues?	The following issues were also noted during the inspection:



#### **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 Requestion Not Applicable	Legislative Requirement(s): Not Applicable			
<b>Question:</b> What was the sco	ope of this inspection?			
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> 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.				
Act, 2002 (SDWA	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.			
evaluated. It rem	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.			
An unannounced detailed inspection of the Creighton Heights Drinking Water System (DWS) began January 25, 2024 by Provincial Officer, Kayla Trofimczuk. The inspection included the physical inspection of the works and a compliance assessment with all applicable legislation and legal documents.				
The Creighton Heights DWS is owned and operated by the Corporation of the Township of Hamilton. The system consists of three (3) artesian wells, a plant that houses the treatment and pumping equipment and a distribution system. The system is categorized as a 'Large Municipal Residential System', it operates under DWS No. 2220008104 and is classified as a Water Treatment Subsystem Class 2 and Water Distribution Subsystem Class 1. The drinking water system utilizes primary and secondary disinfection.				
1. Ministry of the License (MDWL), 2. Ministry of the No. 139-202, date	wed in association with this report Environment, Conservation and Pa , No. 139-102, dated August 12, 20 Environment, Conservation and Pa ed August 12, 2021. nts maintained by the owner/opera	arks (MECP) Munic 021. arks, Drinking Wate	sipal Drinking Water er Works Permit (DWWP),	



through to January 25, 2024, were also reviewed in conjunction with this inspection.

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 both primary and secondary disinfection and distribution of water.

Question ID	DWMR1007000	Question Type	Legislative		
• ·	Legislative Requirement(s):				
SDWA   O. Reg.	170/03   1-2   (1);				
Question:					
	ntaining the production well(s) in a r ater and other foreign materials?	nanner sufficient to	prevent entry into the		
The owner was m	<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials.				
Source water for the Creighton Heights is provided by three (3) groundwater wells identified as TW1, TW6 and TW7 located outside of the treatment plant building at 9235 Dale Road, Cobourg ON.					
The Township of Hamilton Operators perform monthly, quarterly and annual inspections as described in the 'Well Inspection and Maintenance Schedule'. On a monthly basis Operations Staff perform a visual inspection to identify any sources of contamination of the well; any signs of vandalism or unauthorized entry into the well and verify drainage is directed away from the well head.					
identified followin	Weil nead. Most recently a visual inspection was performed on January 25, 2024. There were no concerns dentified following a visual inspection of the casing and the immediate area around each well. Furthermore, no concerns were detected following the review of the raw water quality data for				

the inspection review period.

Question ID	DWMR1009000	Question Type	Legislative	
Legislative Requirement(s): SDWA   31   (1);				
Question:				



Are measures in place to protect the groundwater and/or GUDI source in accordance with any MDWL and DWWP issued under Part V of the SDWA?

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

Measures were in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.

Condition 16.2.8, 16.2.9 and 16.2.10 of the Municipal Drinking Water Licence 139-102 requires an inspection schedule, maintenance procedure and remedial action plan for all wells associated with the drinking water system.

The Township of Hamilton utilize a Well Inspection and Maintenance Schedule to address well head protection, well condition, water quality and well use. The schedule outlines the following on a monthly frequency: Operations Staff perform a visual inspection to identify any sources contamination, any signs of vandalism or unauthorized entry into the well and verify drainage is directed away from the well head.

On a quarterly frequency: Operations Staff inspect the integrity of the well chamber; well casing; well cap; review plumbing records; review records of static water levels and review records of pumping water levels.

On an annual basis Operations Staff review raw water quality records and assess any changes or trends.

Furthermore, on a 5 - 8 year frequency or as needed, the Township of Hamilton retains a Licensed Well contractor to service the pumps in each production well and provide recommendations for future service.

Well #TW-1 has casing that terminates above grade and is capped with a vented, locked lid. Well #TW-6 and Well #TW-7 are contained in a concrete, below grade well chambers that are accessed through a secure/padlocked metal hatch.

A below grade cleaning of Well #TW-1 was completed in July 2021, Well #TW-6 completed in May 2021 and Well #TW-7 completed in October 2022 by Lotowater Technical Services Inc.

All inspections are done by a certified operator.

Question ID	DWMR1010000	Question Type	BMP	
Legislative Requirement(s): Not Applicable				
Question: Are trends in source water quality being monitored?				
Compliance Response(s)/Corrective Action(s)/Observation(s): Trends in source water quality were being monitored.				



Question ID DWMR1014000	Question Type	Legislative
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SDWA | 31 | (1);

#### Question:

Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?

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

There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.

Magnetic flow meters are installed at Well #TW-1, Well #TW-6, Well # TW-7, raw water discharge lines and at the common treated water pump header.

Daily monitoring of flow readings have been logged in the Creighton Heights Logbook and confirmed from April 14, 2023 until January 25, 2024.

Question ID	DWMR1015000	Question Type	Legislative	
Legislative Requirement(s): SDWA   31   (1);				
Question:				
Are the flow measuring devices calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SDWA?				

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

The flow measuring devices were calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SWDA.

Question ID	DWMR1016000	Question Type	Legislative

#### Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?

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

The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.

Part 1.0 of Schedule C of the current Municipal Drinking Water License limits the maximum daily volume of treated water that flows from the treatment system to the distribution system to 979.2



m3/day.

The DWS did not exceed the maximum daily limit from April 14, 2023 until January 25, 2024. The maximum treated flow for the inspection review period was 521.74 m<sup>3</sup>/day on December 2, 2023.

Question ID	DWMR1017000	Question Type	Legislative	
Legislative Requirement(s): SDWA   31   (1);				
Question:				
Were appropriate records of flows and any capacity exceedances made in accordance with the MDWL issued under Part V of the SDWA?				
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Appropriate records of flows and any capacity exceedances were made in accordance with the				

Municipal Drinking Water Licence issued under Part V of the SDWA.

Question ID DWMR1013000	Question Type	Legislative
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#### Legislative Requirement(s):

OWRA | 34 | (3);

#### Question:

Is the owner in compliance with all conditions of the PTTW?

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

The owner was in compliance with all conditions of the PTTW.

Section 9(3) of O. Reg. 387/04 (Water Taking and Transfer) requires all holders of a permit to report daily water taking amount annually, in a manner and form approved by the Director, reports shall be submitted electronically to the Water Taking Reporting System (WTRS) electronic database or via hard copy.

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.

The Drinking Water Works Permit 139-202 outlines the equipment installed throughout the



Creighton Heights Drinking Water System which includes the groundwater supply, pumphouse and on-site storage.

During the physical inspection, a comparison between the equipment described in the permit and the equipment installed on site was performed.

# Question ID DWMR1019000 Question Type Legislative Legislative Requirement(s): SDWA | 31 | (1); Image: Complex Comp

B of the Drinking Water Works Permit were made to the Ministry during the inspection period.

The owner and operating authority have records of submission to Part V, Safe Drinking Water Act (SDWA) Director, notifying of the placing into service or completion of any addition, modification, replacement or extension of the system.

Question ID	DWMR1114000	Question Type	Legislative
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#### 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	DWMR1028000	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   31   (1);				

#### Question:

Are up-to-date plans for the drinking water system kept in place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA?

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



Up-to-date plans for the drinking water system were kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA.

# Question IDDWMR1025000Question Type

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.

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Question ID	DWMR1023000	Question Type	Legislative

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (2);

#### Question:

Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA 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 required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.

Section 1-3 of Schedule 1 of O. Reg. 170/03 states that the Owner of a drinking water system that obtains water from a raw water supply that is ground water shall ensure provision of water treatment equipment that is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario, including at least 99 per cent removal or inactivation of viruses by the time water enters the distribution system.

The System consists of three (3) wells, identified as wells TW1, TW6 and TW7. The treatment consists of oxidation using potassium permanganate, two (2) greensand filtration for iron and turbidity removal, primary disinfection using ten (10) UV irradiation, methane stripper and secondary disinfection using sodium hypochlorite. The treatment facility is capable of achieving an over all performance that provides at a minimum 2-log removal or inactivation of viruses.



Raw water enters the building via two headers, one for Well TW1 and one for TW6 and TW7. Potassium permanganate is injected in to the raw water header using a dedicated chemical feed pump; water is then directed to pass through two (2) parallel manganese greensand filters for removal of oxidized iron and manganese.

Next, water is injected with sodium hypochlorite, which reacts with naturally occurring ammonia in the water to form chloramines; the water is then directed to pass though ten (10) UV units operating in parallel, which provides primary disinfection. Water then enters the methane stripper for methane removal prior to being discharged into the two celled in-ground reservoir. The System is equipped with an online chlorine analyzer installed on the treated water supply line leaving the plant for continuous monitoring and recording of flow, chlorine residual and pressure. There is standby generator on site.

A review of records indicates that treatment equipment was operated in accordance with the design capabilities during the inspection review period.

Question ID	DWMR1026000	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   O. Reg. 170/03   1-6   (1);				

#### Question:

If primary disinfection equipment that does not use chlorination or chloramination is provided, is the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03?

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

The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of O. Reg. 170/03.

The ten (10) UV reactors are equipped with water quality sensor, lamp intensity sensor and warning and low alarm set points.

In the event that alarm is initiated at a single UV reactor, a solenoid valve will automatically shut off flow of water to prevent inappropriately disinfected water from entering the distribution system.

Schedule D of the Municipal Drinking Water Licence 139-102 prescribes the following regulatory relief:

1.1 Notwithstanding the provisions of O.Reg.170/03, the Owner is not required to comply with the following:

1.1.1 continuously record UV parameters in accordance with O.Reg.170/03, Schedule 1, Section 1-6(3).

Conditions in exchange for relief from regulatory requirements 1.2 In exchange for the regulatory relief noted in Part 1.1, the following condition applies:



1.2.1 every incidence of the UV system generating an alarm condition in accordance with O. Reg.170/03, Schedule 1, Section 1-6(2) shall be recorded by documenting a log entry of the incidence.

Waterworks operators record the status of each UV unit in the 'Creighton Heights Weekly/Monthly Checks' logbook.

Question ID	DWMR1027000	Question Type	Legislative
Legislative Requirement(s):			

SDWA | 31 | (1);

#### Question:

Does the owner have evidence indicating that all chemicals and materials which come in contact with water within the drinking water system have met all applicable AWWA and ANSI standards in accordance with the DWWP and MDWL issued under Part V of the SDWA?

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

The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA.

Question ID DWMR1024000	Question Type	Legislative
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#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-2 | (2);

#### Question:

Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes 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 purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.

Section 1-2(2)4 of Schedule 1, O. Reg. 170/03 states that if the drinking water system's water treatment equipment provides chlorination or chloramination for secondary disinfection, the equipment is operated so that, at all times and at all locations within the distribution system, i. the free chlorine residual is never less than 0.05 milligrams per litre, if the drinking water system provides chlorination and does not provide chloramination, or

ii. the combined chlorine residual is never less than 0.25 milligrams per litre, if the drinking water system provides chloramination.

Actions undertaken to identify and eliminate low chlorine areas by the municipality during the



inspection period of April 14, 2023 until January 25, 2024 that led to the low chlorine residuals reported during the inspection period were due to the online analyzer, grab samples were tested with their handheld and confirmed the chlorine residuals were satisfactory.

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Question ID	DWMR1033000	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.

The Creighton Heights DWS serves 492 connections with a population of approximately 1,230 people. The system is classified as a large municipal residential drinking water system and the owner/operator for the system must ensure that at least two distribution samples are taken each week, must be at least 48 hours apart between the last sample of one day and the first sample of the next sampling day, four (4) samples are to be taken one day and three (3) on the other and tested immediately for free chlorine residual.

Question IDDWMR1049000Question TypeBMP
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# Legislative Requirement(s):

Not Applicable

#### Question:

Do records confirm that disinfectant residuals are routinely checked at the extremities and dead ends of the distribution system?

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

Records confirmed that disinfectant residuals were routinely checked at the extremities and dead ends of the distribution system.

Question ID	DWMR1036000	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   O. Reg. 170/03   6-7   (1);				
Question:				
Where continuous monitoring equipment is not used for chlorine residual analysis, are samples tested using an acceptable portable device?				

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

Samples for chlorine residual analysis were tested using an acceptable portable device.



Question ID	DWMR1031000	Question Type	BMP	

Not Applicable

#### Question:

Are operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?

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

Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.

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;				
SDWA   O. Reg. 1				

#### 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.

The System is controlled and monitored by a SCADA system and is inspected on a daily basis by a licenced operator to review continuous trending, examine alarm printouts each day, perform operations duties and maintenance.

Question ID	DWMR1038000	Question Type	Legislative
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#### 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.

It was confirmed during the inspection that SCADA logs chlorine residual data every minute.

Question ID	DWMR1037000	Question Type	Legislative
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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.

Question ID	DWMR1040000	Question Type	Legislative	
Legislative Requ				
SDWA   O. Reg.	170/03   6-5   (1)1-4; SDWA   O. Re	eg. 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?			
All continuous an	ponse(s)/Corrective Action(s)/Ol alysers were calibrated, maintained structions or the regulation.	( )	accordance with the	

Question ID	DWMR1108000	Question Type	Legislative
Logialativa Dogu	uiromont(a).		

#### 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	DWMR1039000	Question Type	Legislative
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SDWA | O. Reg. 170/03 | 1-6 | (3);

#### Question:

If primary disinfection equipment that does not use chlorination or chloramination is provided, has the owner and operating authority ensured that the equipment has a recording device that continuously records the performance of the disinfection equipment?

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

The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.

Schedule D of the Municipal Drinking Water Licence 139-102 prescribes the following regulatory relief:

1.1 Notwithstanding the provisions of O.Reg.170/03, the Owner is not required to comply with the following:

1.1.1 continuously record UV parameters in accordance with O.Reg.170/03, Schedule 1, Section 1-6(3).

Conditions in exchange for relief from regulatory requirements:

1.2 In exchange for the regulatory relief noted in Part 1.1, the following condition applies: 1.2.1 every incidence of the UV system generating an alarm condition in accordance with O. Reg.170/03, Schedule 1, Section 1-6(2) shall be recorded by documenting a log entry of the incidence.

Waterworks operators record the status of each UV unit and any observed alarms in the logbook as well as on the 'Creighton Heights Weekly/Monthly Checks'.

Question ID	DWMR1109000	Question Type	Legislative
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#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 1-6 | (1);

#### Question:

If the system uses equipment for primary disinfection other than chlorination or chloramination and the equipment has malfunctioned, lost power or ceased to provide the appropriate level of disinfection, causing 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):

When failure(s) of primary disinfection equipment, other than that used for chlorination or chloramination, caused an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.

Question ID	DWMR1042000	Question Type	Legislative
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SDWA | 31 | (1);

#### Question:

If UV disinfection is used were duty sensors and reference UV sensors checked and calibrated as per the requirements of Schedule E of the MDWL or at a frequency as otherwise recommended by the UV equipment manufacturer?

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

All UV sensors were checked and calibrated as required.

Item No.1 of Log Removal/Inactivation Credit Assignment Criteria of Schedule E states the Duty UV sensors shall be checked on at least a monthly basis against a reference UV sensor or at a frequency as otherwise recommended

by the UV equipment manufacture.

Review of records suggests calibrations are performed once per year. All ten (10) brand new UV units were installed December 5, 2023 and calibrated.

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 showed 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).

Actions undertaken on June 28, 2023, when MECP received a AWQI with a Total Coliform (TC) hit of 28. A Boil Water Advisory (BWA) was issued by the County of Haliburton, City of Kawartha Lakes and Northumberland Count (HKPR) Health Unit (HU) and distributed to 71 affected homes.

Chlorine residuals were increased at the plant, distribution system were flushed and first set of bacteriology samples were collected June 28, 2023 and the second sample were collected June 29, 2023.

Both samples collected at the original, downstream and upstream locations were free of TC and EC bacteria. On June 30, 2023, the HKPR HU lifted the BWA.

TC reported increase was believed to be due to rain water entering into the sample.



Question ID	DWMR1079000	Question Type	Legislative	
Legislative Requ	iirement(s):			
SDWA   O. Reg. 7   10-4   (3);	170/03   10-4   (1); SDWA   O. Reg.	. 170/03   10-4   (2)	); SDWA   O. Reg. 170/03	
Question:				
-	are all microbiological water quali ed by legislation being met?	ty monitoring requi	irements for raw water	
=	<pre>ponse(s)/Corrective Action(s)/Ol l water quality monitoring requirem ng met.</pre>		legislation for raw water	
operating authorit	Schedule 10 10-4 (1) of O. Reg 170/03 requires the owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once (1) every week from the drinking water system's raw water, before any treatment is applied to the water.			
deemed under se of the system and	water system obtains water from a ction 2 to obtain water from a raw v I the operating authority for the system. (1) from each well in the system.	water supply that is	s surface water, the owner	
· /				
	nking Water test results confirms the required timeframe.	at each raw water	microbiological sample is	
Question ID	DWMR1081000	Question Type	Legislative	
Legislative Requ		Question Type	Leyisialive	
•	170/03   10-2   (1); SDWA   O. Reg	. 170/03   10-2   (2)	); SDWA   O. Reg. 170/03	
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.

Schedule 10 10-2. of O. Reg 170/03 requires (1) The owner of a drinking water system and the operating authority for the system shall ensure that,

(a) if the system serves 100,000 people or less, at least eight distribution samples, plus one



additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples being taken in each week.

(2) The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for,

- (a) Escherichia coli; and
- (b) total coliforms.

(3) The owner of the drinking water system and the operating authority for the system shall ensure that at least 25 per cent of the samples required to be taken under subsection (1) are tested for general bacteria population expressed as colony counts on a heterotrophic plate count.

Review of the Drinking Water test results confirms that each distribution microbiological sample was taken in the required timeframe.

# Question IDDWMR1083000Question TypeLegislativeLegislative Requirement(s):

SDWA | O. Reg. 170/03 | 10-3;

#### Question:

For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?

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

All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met.

Section 10-3 of Schedule 10 of the O.Reg. 170/03 requires the owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every week and tested for,

- (a) Escherichia coli;
- (b) total coliforms; and

(c) general bacteria population expressed as colony counts on a heterotrophic plate count.

Review of the Drinking Water test results confirms that each treated microbiological sample is being taken and in the required timeframe.

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.

#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-2;

#### Question:

Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

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

All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-2 of Schedule 13 of O.Reg. 170/03 states that the owner of a large municipal drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water.

The owner shall ensure that each of the samples taken is tested for every parameter set out in Schedule 23.

Samples for inorganic parameters were analyzed for raw water February 8, 2021 and treated water May 26, 2021. The next round of sampling should occur within 90 days of February 8, 2024 for raw water and May 26, 2024 for treated water.

Question ID	DWMR1085000	Question Type	Legislative
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#### 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:

Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?

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

All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-4 of Schedule 13 of O.Reg. 170/03 states that the owner of a large municipal drinking water system and the operating authority for the system shall ensure that at least one water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water.

The owner shall ensure that each of the samples taken is tested for every parameter set out in

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Schedule 24.

Samples for organic parameters were analyzed for treated water May 26, 2021. The next round of sampling should occur within 90 days of May 26, 2024.

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Question ID	DWMR1086000	Question Type	Legislative	
Legislative Requ	uirement(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);				
<b>Question:</b> Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?				
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.				
Schedule 13-11 of O. Reg. 170/03 requires the owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or				

plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids.

Results provided by Hamilton Township indicate that sampling was conducted every three (3) months as required on June 5, 2023, September 12, 2023 and December 12, 2023.

Question ID	DWMR1087000	Question Type	Legislative
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#### 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.

Section 13-6 of Schedule 13 of O. Reg. 170/03 requires that the owner of a drinking water system that provides chlorination and the operating authority for the system ensure that at least one distribution sample is taken every three (3) months, from a point in the drinking water



system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes. Each sample shall be tested for

trihalomethanes.

Results provided by Hamilton Township indicate that sampling was conducted every three (3) months as required on June 5, 2023, September 12, 2023 and December 12, 2023.

Question ID	DWMR1088000	Question Type	Legislative
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# Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 13-7;

#### Question:

Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?

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

All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-7 of Schedule 13 of O. Reg. 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that at least one (1) water sample is taken every three (3) months and tested for nitrate and nitrite.

Results provided by Hamilton Township indicate that sampling was conducted a minimum of every three (3) months on June 5, 2023, September 12, 2023 and December 12, 2023.

Question ID	DWMR1089000	Question Type	Legislative
Legislative Requirement(s):			

SDWA | O. Reg. 170/03 | 13-8;

#### Question:

Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?

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

All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-8 of Schedule 13 of O. Reg. 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that at least one water sample is taken every sixty (60) months and tested for sodium.

Results provided by Hamilton Township indicate that sampling was last completed for raw water on February 8, 2021 and treated water on June 6, 2022. The next round of sampling should occur within 90 days of raw water on February 8, 2027 and treated water on June 6, 2028.



Question ID	DWMR1090000	Question Type	Legislative

SDWA | O. Reg. 170/03 | 13-9;

#### **Question:**

Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?

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

All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.

Section 13-9 of Schedule 13 of O. Reg. 170/03 requires that the owner of a drinking water system and the operating authority for the system ensure that at least one (1) water sample is taken every sixty (60) months and tested for fluoride.

Results provided by Hamilton Township indicate that sampling was completed June 1, 2022. The next round of sampling should occur within 90 days of the treated water on June 1, 2028.

Question ID	DWMR1092000	Question Type	Legislative
Legislative Requirement(s): SDWA   O. Reg. 170/03   6-2;			
Question: Has the owner ensured that water samples are taken at the prescribed location?			

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

The owner ensured that water samples were taken at the prescribed location.

Question ID	DWMR1094000	Question Type	Legislative
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# Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?

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

All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.

Section 5.2, 5.3 and 5.4 of Schedule C of the MDWL 139-102 prescribes that the collection and analysis of backwash wastewater discharged to storm sewer.

Table 7 of Section 5.4 of Schedule C of the MDWL prescribes quarterly composite samples of backwash wastewater and analysis of suspended solids (TSS) and quarterly grab samples and



measurement of chlorine residual. Section 1.5 of Schedule C prescribes that the annual average concentration of TSS shall not exceed 25 mg/L.

Question ID	DWMR1095000	Question Type	Legislative
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#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 15.1-10; SDWA | O. Reg. 170/03 | 15.1-4 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (1); SDWA | O. Reg. 170/03 | 15.1-5 | (10); SDWA | O. Reg. 170/03 | 15.1-5 | (11); SDWA | O. Reg. 170/03 | 15.1-5 | (12); SDWA | O. Reg. 170/03 | 15.1-5 | (2); SDWA | O. Reg. 170/03 | 15.1-5 | (3); SDWA | O. Reg. 170/03 | 15.1-5 | (4); SDWA | O. Reg. 170/03 | 15.1-5 | (5); SDWA | O. Reg. 170/03 | 15.1-5 | (6); SDWA | O. Reg. 170/03 | 15.1-5 | (7); SDWA | O. Reg. 170/03 | 15.1-5 | (8); SDWA | O. Reg. 170/03 | 15.1-5 | (9); SDWA | O. Reg. 170/03 | 15.1-7 | (1); SDWA | O. Reg. 170/03 | 15.1-7 | (2); SDWA | O. Reg. 170/03 | 15.1-7 | (3); SDWA | O. Reg. 170/03 | 15.1-7 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (1); SDWA | O. Reg. 170/03 | 15.1-9 | (2); SDWA | O. Reg. 170/03 | 15.1-9 | (3); SDWA | O. Reg. 170/03 | 15.1-9 | (4); SDWA | O. Reg. 170/03 | 15.1-9 | (5); SDWA | O. Reg. 170/03 | 15.1-9 | (6); SDWA | O. Reg. 170/03 | 15.1-9 | (7); SDWA | O. Reg. 170/03 | 15.1-9 | (8); SDWA | O. Reg. 170/03 | 15.1-9 | (9);

#### Question:

Have all lead sampling requirements prescribed by Schedule 15.1 of O. Reg. 170/03 been met?

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

All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.

Historic lead sampling data from Summer 2011 and Winter 2012 was granted reduced sampling for the Township of Hamilton as per O. Reg. 170/03 Schedule 15.1-5 (9) and (10).

Testing for pH and alkalinity is performed annually (Winter and Summer) in every 12 month period. Both tests were confirmed on June 19, 2023.

Testing of lead is performed every third 12 month period during Winter and Summer. The next lead sampling test will be done in 2025.

Question ID	DWMR1097000	Question Type	Legislative	
Legislative Requirement(s): SDWA   O. Reg. 170/03   7-3   (1.1);				
Question: If the drinking water system obtains water from a ground water source, is turbidity being tested at least once every month from each well that is supplying water to the system?				
Compliance Response(s)/Corrective Action(s)/Observation(s): Turbidity was being tested at least once every month from each well that is supplying water to the system.				



Question ID	DWMR1098000	Question Type	Legislative
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SDWA | O. Reg. 170/03 | 13 | (1); SDWA | O. Reg. 170/03 | 13 | (2); SDWA | O. Reg. 170/03 | 13 | (3);

#### Question:

Has the owner indicated that the required records are kept and will be kept for the required time period?

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

The owner indicated that the required records are kept and will be kept for the required time period.

Question ID	DWMR1101000	Question Type	Legislative
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#### 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.

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 DWMR1105000	Question Type	Legislative
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SDWA | O. Reg. 170/03 | 16-7 | (1); SDWA | O. Reg. 170/03 | 16-7 | (2); SDWA | O. Reg. 170/03 | 16-7 | (3); SDWA | O. Reg. 170/03 | 16-7 | (4); SDWA | O. Reg. 170/03 | 16-7 | (5);

#### Question:

Were all required written notices of adverse water quality incidents provided as per O. Reg. 170/03 16-7?

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

All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7.

Question ID	DWMR1106000	Question Type	Legislative	
Legislative Requirement(s): SDWA   O. Reg. 170/03   16-9   (1); SDWA   O. Reg. 170/03   16-9   (2);				
<b>Question:</b> Were all required written notices of issue resolution provided as per O. Reg. 170/03 16-9?				

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

All required written notices of issue resolution were provided as per O. Reg. 170/03 16-9.

Question ID	DWMR1107000	Question Type	Legislative	
Legislative Req	uirement(s):			
SDWA   O. Reg. 170/03   15.1-9   (1); SDWA   O. Reg. 170/03   15.1-9   (2); SDWA   O. Reg. 170/03   15.1-9   (3); SDWA   O. Reg. 170/03   15.1-9   (4); SDWA   O. Reg. 170/03   15.1-9   (5); SDWA   O. Reg. 170/03   15.1-9   (6); SDWA   O. Reg. 170/03   15.1-9   (7); SDWA   O. Reg. 170/03   15.1-9   (8); SDWA   O. Reg. 170/03   15.1-9   (9);				
<b>Question:</b> Were all reporting requirements for lead sampling complied with as per Schedule 15.1-9 of O. Reg. 170/03?				
•	Compliance Response(s)/Corrective Action(s)/Observation(s): All reporting requirements for lead sampling were complied with as per schedule 15.1-9 of O.			

Reg. 170/03.

Question ID	DWMR1110000	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   O. Reg. 170/03   11   (6);				
Question:				



Was an Annual Report containing the required information prepared by February 28 of the following year?

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

The Annual Report containing the required information was prepared by February 28th of the following year.

Question ID	DWMR1111000	Question Type	Legislative
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#### Legislative Requirement(s):

SDWA | O. Reg. 170/03 | 22-2 | (1); SDWA | O. Reg. 170/03 | 22-2 | (2); SDWA | O. Reg. 170/03 | 22-2 | (3); SDWA | O. Reg. 170/03 | 22-2 | (4);

#### Question:

Have Summary Reports for municipal council been completed on time, include the required content, and distributed in accordance with the regulatory requirements?

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

Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.

Question ID	DWMR1043000	Question Type	Legislative
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Legislative Requirement(s):

SDWA | 31 | (1);

#### Question:

Are the process wastewater and residual solids/sludges being treated, handled and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence?

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

The process wastewater and residual solids/sludges were treated, handled and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence.

Question ID	DWMR1044000	Question Type	Legislative	
Legislative Requirement(s): SDWA   31   (1);				
Question				

#### Question:

Does the process wastewater discharge monitoring program and discharge quality comply with requirements established in the MDWL issued under Part V of the SDWA?

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

The process wastewater discharge monitoring program and discharge quality complied with requirements established in the Municipal Drinking Water Licence Issued under Part V of the

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SDWA.

# Question IDDWMR1045000Question TypeLegislative

#### Legislative Requirement(s):

SDWA | 31 | (1);

#### **Question:**

Has the owner updated the document describing the distribution components within 12 months of completion of alterations to the system?

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

The owner had up-to-date documents describing the distribution components as required.

Question ID	DWMR1046000	Question Type	BMP		
Legislative Requ	uirement(s):				
Not Applicable					
Question: Is there a backflow prevention program, policy and/or bylaw in place that addresses cross connections and connections to high hazard facilities?					
•	<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> There was a backflow prevention program, policy and/or bylaw in place.				

Question ID	DWMR1053000	Question Type	BMP		
Legislative Requirement(s): Not Applicable					
Question:					
Is the Owner able to maintain proper pressures in the distribution system and is pressure monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate?					
The owner was a monitored to aler	sponse(s)/Corrective Action(s)/O ble to maintain proper pressures in t the operator of conditions which n system is designed to operate.	the distribution sys	•		

Question ID	DWMR1047000	Question Type	BMP		
Legislative Requirement(s): Not Applicable					
Question:					



Does the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?

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

The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system.

Question ID	DWMR1048000	Question Type	BMP		
Legislative Requ	Legislative Requirement(s):				
Not Applicable					
Question:					
Has the owner implemented a program for the flushing of watermains as per industry standards?					
Compliance Response(s)/Corrective Action(s)/Observation(s):					

The owner had implemented a program for the flushing of watermains as per industry standards.

Question ID	DWMR1050000	Question Type	BMP			
Legislative Requ	Legislative Requirement(s):					
Not Applicable						
Question:						
Is there a program in place for inspecting and exercising valves?						
Compliance Response(s)/Corrective Action(s)/Observation(s):						
There was a program in place for inspecting and exercising valves.						

Question ID	DWMR1051000	Question Type	BMP	
Legislative Requirement(s): Not Applicable				
<b>Question:</b> Is there a program	m in place for inspecting and opera	ating hydrants?		
-	sponse(s)/Corrective Action(s)/C gram in place for inspecting and op	• •		

Question ID	DWMR1052000	Question Type	BMP
Legislative Requirement(s): Not Applicable			
Question: Is there a by-law or policy in place limiting access to hydrants?			



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

There was a by-law or policy in place limiting access to hydrants.

Question ID	DWMR1058000	Question Type	Legislative	
Legislative Requ	<b>\ /</b>			
SDWA   O. Reg.	120/04   20,			
• • • • • • •	I maintenance personnel have reac	ly access to operat	ions and maintenance	
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Operators and maintenance personnel had ready access to operations and maintenance manuals.				
Operations and maintenance manuals are readily available at the Creighton Heights drinking water treatment facility in the operators' control room, operators are aware of the location of manuals				
	to them at all times.			

Question ID	DWMR1059000	Question Type	Legislative
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## 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.

Question ID	DWMR1060000	Question Type	Legislative
Legislative Requirement(s):			

# SDWA | 31 | (1);

#### SDWA | 51 | (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.



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);				
<b>Question:</b> Are logbooks pro	perly maintained and contain the re	equired information	?	
-	ponse(s)/Corrective Action(s)/O roperly maintained and contained t	• •	ation.	
<ul> <li>the shift. Logs mu</li> <li>1) the date,</li> <li>2) the time period</li> <li>3) the names of a</li> <li>4) details of depa</li> <li>they occurred and</li> <li>5) abnormal and</li> <li>6) a record of equ</li> <li>carried out on the</li> </ul>	Section 27 of O. Reg. 128/04 requires that the logbooks must identify all operators on duty for the shift. Logs must also include:			
A review of logbooks for the inspection period of April 14, 2023 until January 25, 2024 confirmed the required information.				
Question IDDWMR1062000Question TypeLegislative				
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	DWMR1063000	Question Type	Legislative		
Legislative Requirement(s):					
SDWA   O. Reg. 170/03   6-10   (1);					
Question:	Question:				



For every required operational test and for every required sample, is a record made of the date, time, location, name of the person conducting the test and result of the test?

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

For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test.

A review of the 'Daily Lab Test' sheet for the inspection period of April 14, 2023 until January 25, 2024 confirmed that all necessary information was recorded.

Question ID	DWMR1064000	Question Type	Legislative		
Legislative Requ	Legislative Requirement(s):				
SDWA   O. Reg. 128/04   26   (2);					
Question:					
Did the operator-in-charge ensure that records were maintained of all adjustments made to the processes within his or her responsibility?					

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

The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.

Question ID	DWMR1065000	Question Type	Legislative

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 27 | (6);

#### Question:

Are logs and other record keeping mechanisms available for at least five (5) years?

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

Logs or other record keeping mechanisms were available for at least five (5) years.

Question ID	DWMR1066000	Question Type	BMP	
Legislative Requirement(s): Not Applicable				
Question: Is spill containment provided for process chemicals and standby power generator fuel?				
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Spill containment was provided for process chemicals and/or standby power generator fuel.				
Question ID	DW/MR1067000	Question Type	BMP	

Question ID	DWMR1067000	Question Type	BMP
Legislative Requ	uirement(s):		

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#### Not Applicable

#### Question:

Are clean-up equipment and materials in place for the clean up of spills?

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

Clean-up equipment and materials were in place for the clean up of spills.

Question ID	DWMR1068000	Question Type	BMP	
Legislative Requ	uirement(s):			
Not Applicable				
Question: If available, are standby power generators tested under normal load conditions?				
Compliance Response(s)/Corrective Action(s)/Observation(s): Standby power generators were tested under normal load conditions.				

Review of 'Weekly/Monthly Checks' logsheet confirmed that monthly generator testing was performed between the inspection period of April 14, 2023 until January 25, 2024. The most resent test was performed on January 8, 2024.

Question ID	DWMR1069000	Question Type	BMP		
Legislative Requestion Not Applicable	Legislative Requirement(s): Not Applicable				
Question: Are all storage facilities completely covered and secure?					
Compliance Response(s)/Corrective Action(s)/Observation(s): All storage facilities were completely covered and secure.					

Question ID	DWMR1070000	Question Type	BMP	
Legislative Requirement(s): Not Applicable				
<b>Question:</b> Are air vents and overflows associated with reservoirs and elevated storage structures equipped with screens?				
<b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b> Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.				

Question IDDWMR1071000Question	Question Type BMP
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Ministère de l'Environnement, de la Protection de la nature et des Parcs



#### 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.

During the inspection, it was observed that the wells were properly locked, caps in place and screens intact with a secure/padlocked metal hatch.

The Pumphouse exterior door had a lock on the outside and secured with an alarm system.

Question ID	DWMR1072000	Question Type	BMP	
Legislative Requirement(s): Not Applicable				
Question:				
Has the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in their system?				

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

The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.

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.

The system is categorized as a 'Large Municipal Residential System', it operates under DWS No. 220008104 and is classified as a Water Treatment Subsystem Class 2 and Water Distribution Subsystem Class 1.

The ORO designation is documented in the facility logbook at each site visit.

Question ID	DWMR1078000	Question Type	Legislative	
Legislative Requirement(s):				
SDWA   O. Reg. 128/04   23   (1); SDWA   O. Reg. 128/04   23   (2); SDWA   O. Reg. 128/04				



## 23 | (4); SDWA | O. Reg. 128/04 | 23 | (6); SDWA | O. Reg. 128/04 | 23 | (7);

### Question:

In instances where the overall responsible operator was unable to act, was an adequately certified operator designated to act in place of the overall responsible operator?

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

An adequately licenced operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.

Question ID	DWMR1074000	Question Type	Legislative			
Legislative Requ	uirement(s):					
SDWA   O. Reg.	128/04   25   (1);					
Question:						
Have operators-in system?	n-charge been designated fo	r all subsystems which co	omprise the drinking water			
Compliance Res	sponse(s)/Corrective Actio	n(s)/Observation(s):				
Operators-in-cha system.	rge had been designated for	all subsystems which co	mprise the drinking water			
0	wnship of Hamilton staff were or distribution system:	e eligible to assume the C	Dperator-in-Charge role			
1. Anita P. Scoer	leber (WTS Class 4 and WE	OSS Class 3)				
2. John Corey (W	/TS Class 2)	,				
· ·	3. John Smith (WTS Class 2 and WQAC)					
	4. Jeff C. Bailey (WTS Class 1)					
5. Jeff M. Baldini	(WTSS Class 1)					
The OIC designa	tion was documented each o	day in the logbook.				
	1		1			

Question ID	DWMR1075000 Question Type Legislative				
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.					

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.

Question ID	DWMR1116000	Question Type	BMP			
Legislative Requ	Legislative Requirement(s):					
Not Applicable						
Question:						
Were the inspection questions sufficient to address other identified best practice issues?						
Compliance Response(s)/Corrective Action(s)/Observation(s):						

The following issues were also noted during the inspection:

It has been noted during the inspection period of April 14, 2023 and January 25, 2024 that Creighton Heights online analyzer has had some malfunctions resulting in AWQI incidents. Potential improvements continued for the analyzer, to allow for correct readouts and proper feedback.

Question ID DWMR1117000	Question Type	Information
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## Legislative Requirement(s):

Not Applicable

### Question:

Are there any other DWS related items that should be recognized in this report?

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

The following items are noted as being relevant to the Drinking Water System:

Walkerton Clean Water Centre (WCWC) attended the Creighton Heights DWS location on January 25, 2024. Two gentlemen from the centre were setting up a new pilot program that originates from the United States, that helps with the removal of ammonia. The unit is United States Environmental Protection Agency (USEPA) approved and certified. This system is the first in Canada.



# APPENDIX A STAKEHOLDER APPENDIX

# 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 in the table 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/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS:	
Drinking Water System Profile Information	012-2149E
Laboratory Services Notification	012-2148E
Adverse Test Result Notification	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	Website
Amendments	
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 cidessous 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 LAPUBLICATION	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 portable 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





# **APPENDIX B**

# **INSPECTION RATING RECORD**

# 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. The questions address a wide range of regulatory issues, from administrative procedures

Ontario

ontario.ca/drinkingwater

to drinking water quality monitoring. Additionally, the inspection protocol contains a number of nonregulatory 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 × 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

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  $32 (4 \times 8)$  and the lowest would be  $0 (0 \times 1)$ .

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

•	Greatest	of all	the com	binations	is se	lected.

TABLE 3:							
Does the Opera	Does the Operator in Charge ensure that the equipment and processes are monitored, inspected and evaluated?						
		I	Risk = Likelihoo	d × Consequence	)		
C=1	C=2	C=3	C=4	C=5	C=6	C=7	C=8
<b>Medium</b> Administrative Consequence	<b>Major</b> Administrative Consequence	<b>Minor</b> Environmental Consequence	<b>Minor</b> Health Consequence	<b>Medium</b> Environmental Consequence	<b>Major</b> Environmental Consequence	<b>Medium</b> Health Consequence	<b>Major</b> Health Consequence
L=4 (Almost Certain)	L=1 (Unlikely	L=2 (Possible)	L=3 (Likely)	L=3 (Likely)	L=1 (Unlikely	L=3 (Likely)	L=2 (Possible)
R=4	R=2	R=6	R=12	R=15	R=6	R=21	R=16

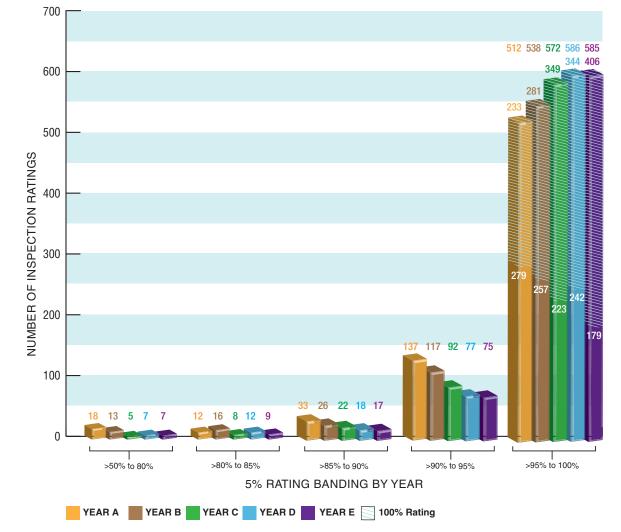
## **Application of the Methodology to Inspection Results**

Based on the results of a MRDWS inspection, an overall inspection risk rating is calculated. During an inspection, inspectors answer the questions 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

## **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,

- 1. Source
- 2. Permit to Take Water
- Capacity Assessment
   Treatment Processes
- 7. Operations Manuals

5. Process Wastewater

6. Distribution System

8. Logbooks

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

- 9. Contingency and
- Emergency Planning
- Consumer Relations
   Certification and Training
- 12. Water Quality Monitoring
- 13. Reporting, Notification and Corrective Actions
- 14. Other Inspection Findings
- For further information, please visit www.ontario.ca/drinkingwater

DWS Name:	CREIGHTON HEIGHTS DRINKING WATER SYSTEM		
DWS Number:	220008104		
<b>DWS Owner:</b> THE CORPORATION OF THE TOWNSHIP OF HAMILTON			
Municipal Location:	COBOURG		
Regulation:	O.REG. 170/03		
DWS Category: DW Municipal Residential			
Type of Inspection: Detailed			
Inspection Date:	Inspection Date: Feb-14-2024		
Ministry Office:	Peterborough District Office		

#### Maximum Risk Rating: 705

Inspection Module	Non Compliance Risk (X out of Y)
Capacity Assessment	0/42
Certification and Training	0/49
Distribution System	0/4
Effluent Quality and Quantity	0/20
Logbooks	0/30
Operations Manuals	0/42
Reporting & Corrective Actions	0/117
Source	0/26
Treatment Processes	0/231
Water Quality Monitoring	0/144
Overall - Calculated	0/705

Inspection Risk Rating: 0.00%

Final Inspection Rating: 100.00%

DWS Number:	
Municipal Location:	
•	O.REG. 170/03 DW Municipal Residential
Type of Inspection: Inspection Date:	
Ministry Office:	Peterborough District Office

All legislative requirements were met. No detailed rating scores.

Maximum Question Rating: 705

Inspection Risk Rating: 0.00%

FINAL INSPECTION RATING: 100.00%