

Ministry of the Environment,  
Conservation and Parks

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

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August 14, 2025

by Email

The Corporation of the Town of Hearst  
925 Alexandra St.  
Hearst, ON P0L 1N0

Attention: Eric Picard, Chief Administrative Officer

**RE: Hearst Drinking Water System No. 220002592  
2025-2026 Inspection Report 1-1398577761**

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Enclosed is the Hearst Drinking Water System Inspection Report and the corresponding Inspection Rating Report (IRR) resulting from an announced, focused inspection conducted on June 26, 2025. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only.

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

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

Electronic copies of this report have been sent to OCWA as the operating authority of the drinking water system. Copies have also been forwarded to the Porcupine Health Unit and the Ministry of Natural Resources and Forestry in accordance with the Ministry's Municipal Drinking Water Inspection Protocol.

If you have any questions or concerns about this inspection report, please contact me at (705) 262-0540 or by email at [connie.croisier@ontario.ca](mailto:connie.croisier@ontario.ca).

Regards,



**Connie Croisier** | Water Compliance Officer, Provincial Officer Badge No. 2049  
Northern Region, Timmins District - Drinking Water and Environmental Compliance Division  
Ministry of the Environment, Conservation and Parks

cc: Luc Léonard, Director of Public Works and Engineering Services – The Corporation of the Town of Hearst  
Michel Plourde, Overall Responsible Operator – Ontario Clean Water Agency  
Michael Case, Process and Compliance Technician – Ontario Clean Water Agency  
Claude Rancourt, Sr Operations Manager – Ontario Clean Water Agency  
Lori Duquette, A/Water Compliance Supervisor – Ministry of the Environment, Conservation and Parks  
Sue Lajoie, Manager of Environmental Health – Porcupine Health Unit  
Kaitlin McCaw, Program Coordinator Environmental Health – Porcupine Health Unit  
Wesley Woods, District Manager – Ministry of Natural Resources and Forestry



HEARST DRINKING WATER SYSTEM  
Physical Address: 1215 EDWARD ST, , HEARST,  
ON P0L 1N0

## INSPECTION REPORT

System Number: 220002592  
Entity: THE CORPORATION OF THE  
TOWN OF HEARST  
ONTARIO CLEAN WATER  
AGENCY  
Inspection Start Date: June 26, 2025  
Site Inspection Date: June 26, 2025  
Inspection End Date: July 24, 2025  
Inspected By: Connie Croisier  
Badge #: 2049



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(signature)

## INTRODUCTION

### **Purpose**

This announced, focused inspection was conducted to confirm compliance with Ministry of the Environment, Conservation and Parks' (MECP) legislation and conformance with ministry drinking water policies and guidelines.

### **Scope**

The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management and the operation of the system.

The inspection of the drinking water system included both the physical inspection of the component parts of the system listed in section 4 "Systems Components" of the report and the review of data and documents associated with the operation of the drinking water system during the review period.

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

### **Facility Contacts and Dates**

The drinking water system is owned by the Corporation of the Town of Hearst and operated by the Ontario Clean Water Agency (OCWA).

The system serves an estimated population of 4,794 and is categorized as a Large Municipal Residential System. Information reviewed for this inspection covered the time period of August 1, 2024, to May 31, 2025.

The Water Compliance Officer met with Michel Plourde, Overall Responsible Operator, Natalie Bureau, Operator-in-Charge, and Michael Case, Process and Compliance Technician, as part of the inspection process.

### **Systems/Components**

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

- Hearst Water Treatment Plant (1215 Edward St.)

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

### **Permissions/Approvals**

This drinking water system was subject to specific conditions contained within the following permissions and/or approvals (please note this list is not exhaustive) at the time of the inspection in addition to the requirements of the SDWA and its regulations:

- Municipal Drinking Water Licence 211-101 Issue No. 3
- Drinking Water Works Permit 211-201 Issue No. 6
- Permit to Take Water 5460-AVWLEV

**NON-COMPLIANCE**

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

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

| Item | Question  | Compliance Response/Corrective Action(s)   |
|------|---|--|
| NC-1 | <p><b>Question ID:</b><br/>DWMR1060001</p> <p>Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?</p>             | <p>The operations and maintenance manual(s) did not meet the requirements of the Municipal Drinking Water Licence.</p> <p>Required Action:</p> <p>The owner and operating authority shall develop and implement a procedure for the operation and maintenance of the clearwell bypass piping in accordance with Condition 16.3 of Schedule B to the MDWL. This procedure shall also address any changes to the worst-case scenario parameters listed in the "Chlorine Contact Time" SOP when operating the plant with only the clearwell storage.</p> <p>A copy of the procedure(s) shall be provided electronically to Water Compliance Officer Connie Croisier by no later than Friday, August 29, 2025.</p> |
| NC-2 | <p><b>Question ID:</b><br/>DWMR1115001</p> <p>Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?</p> | <p>The following instance(s) of non-compliance were also noted during the inspection:</p> <p>Condition 2.4 of Schedule B to DWWP No. 211-201 requires the owner to notify the Director in writing within 30 days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:</p> <p>2.4.1 Schedule B to the DWWP which would require an alteration of the description of a drinking water system component described in Schedule A of this DWWP</p>   |

2.4.2 Any document to be incorporated in Schedule C to this DWWP respecting works other than watermains.

Information provided for this inspection confirmed that a "Director Notification Form" was not submitted for the following undertakings:

- Soda Ash/Lime Equipment: On June 19, 2024, the two positive displacement diaphragm type feed pumps with a maximum feed rate of 118 L/hr per pump were removed and replaced with two peristaltic feed pumps with a maximum feed rate of 674.6 L/hr per pump.

- Filter Effluent Piping Modifications: On November 5, 2024, the "Schedule C: Authorization to Alter the Drinking Water System" was issued for the installation of new 150 mm diameter PVC clearwell bypass piping from the filter effluent piping, directing water to the in-ground reservoir, along with associated connections, valves, and fittings. The alteration was completed on January 10, 2025.

Failure to notify the Director in writing within 30 days of the placing into service or the completion of any minor modification which had been authorized through Schedule B or Schedule C is a violation of Condition 2.4 of Schedule B to the DWWP

Required Action:

On July 24, 2025, the owner and operating authority submitted Director Notification Forms for the replacement of the soda ash/lime dosing pumps and the filter effluent piping modifications. No additional action required at this time.

NC-3 **Question ID:**  
DWMR1021001

Form 2 documents were not prepared as required.

|             |  |   |
|-------------|--|---|
|             | <p>Were Form 2 documents prepared as required?</p>   | <p>Required Action:</p> <p>On July 23, 2025, the owner and operating authority prepared a "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System" for the replacement of the process Lime/Soda Ash pumps and provided a copy to Water Compliance Officer Connie Croisier. No additional action required at this time.</p>   |
| <p>NC-4</p> | <p><b>Question ID:</b><br/>DWMR1025001</p> <p>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?</p> | <p>All parts of the drinking water system were not disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.</p> <p>Required Action:</p> <p>By no later than Friday, August 22, 2025, the owner shall review the Ministry's 2020 Watermain Disinfection Procedure with all municipal staff involved in water distribution work and provide confirmation of the training/review to Water Compliance Officer Connie Croisier. It remains incumbent on the owner to ensure that contractors hired to conduct repair and maintenance activities to the water distribution system are doing so in accordance with AWWA standards and the Watermain Disinfection Procedure, and that a certified operator is present when required.</p> |

## **RECOMMENDATIONS**

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

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

### INSPECTION DETAILS

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

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

| Question ID  | DWMR1012001 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |               |             |
| <b>Question:</b><br>Did the owner have a harmful algal bloom monitoring plan in place that met the requirements of the Municipal Drinking Water Licence?   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner had a harmful algal bloom monitoring plan in place which met the requirements.<br><br>Condition 6.0 of Schedule C to Municipal Drinking Water Licence (MDWL) No. 211-101 requires the owner to develop and keep up to date a Harmful Algal Bloom (HAB) monitoring, reporting and sampling plan to be implemented when a potential HAB is suspected or present. The owner shall have the Plan in place on or before August 15, 2021.<br><br>OCWA's standard operating procedure for HAB Monitoring, Reporting and Sampling at the Hearst WTP was issued on May 25, 2020, and most recently updated on May 18, 2023. The Plan thoroughly describes the visual monitoring, sampling, and reporting processes for HABs that meets the requirements of the Licence. A review of the facility logbook confirmed that operators conduct visual monitoring for HABs near the shoreline and around the intake at least once per week beginning June 1 until October 31 and document any findings in accordance with the Plan. |             |               |             |

| Question ID  | DWMR1014001 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |               |             |
| <b>Question:</b><br>Was flow monitoring performed as required by the Municipal Drinking Water Licence or Drinking Water Works Permit?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Flow monitoring was performed as required.<br><br>Condition 2.1 of Schedule C to the MDWL requires continuous flow measurement and recording to be undertaken for:<br><br>2.1.1 The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system (treated water flow). |             |               |             |

2.1.2 The flow rate and daily volume of water that flows into the treatment subsystem (raw water flow).

The Hearst WTP is equipped with a raw water flowmeter on the low lift pump common discharge header located in the low lift building, and a treated water flowmeter on the high lift pump common discharge header located at the end of the treatment process which measures flow to the distribution system. The filter effluent and backwash lines for both treatment trains are also equipped with individual flowmeters. Raw and treated water flow are continuously measured and recorded using the Supervisory Control and Data Acquisition (SCADA) system.

| Question ID  | DWMR1016001 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |               |             |
| <b>Question:</b><br>Was the owner in compliance with the conditions associated with maximum flow rate or the rated/operational capacity in the Municipal Drinking Water Licence?   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner was in compliance with the conditions associated with maximum flow rate and/or the rated/operational capacity conditions.<br><br>Condition 1.1 of Schedule C to the MDWL states that the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the rated capacity of 10,280 m <sup>3</sup> /day.<br><br>The maximum daily volume of treated water supplied to the distribution system during the inspection period was 1,736 m <sup>3</sup> /day which equates to 17% of the rated capacity. The average daily volume of water supplied to the distribution system was approximately 1,288.21 m <sup>3</sup> /day (12.5% of the rated capacity). |             |               |             |

| Question ID  | DWMR1018001 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |               |             |
| <b>Question:</b><br>Did the owner ensure that equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner ensured that equipment was installed as required.<br><br>The Drinking Water System Description found under Schedule A of Drinking Water Works Permit (DWWP) No. 211-201 lists all components and associated equipment for the Hearst DWS. Schedule C of the DWWP was issued on November 5, 2024, and describes the installation of the clearwell bypass piping from the filter effluent piping, directing water to the |             |               |             |

in-ground reservoir, along with associated connections, valves and fittings.

A physical inspection of the low lift works, treatment works, and elevated storage tower confirmed that all equipment was installed in accordance with Schedule A and Schedule C of the DWWP.

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|---|-------------|----------------------|-------------|
| <b>Question ID</b>  | DWMR1020001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);  |             |                      |             |
| <b>Question:</b><br>Were Form 1 documents prepared as required?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Form 1 documents were prepared as required.<br><br>The owner prepared one (1) "Form 1 – Record of Watermains Authorized as a Future Alteration" document for the following undertaking verified by a Licensed Engineer Practitioner:<br><br>- Addition of 150mm HDPE watermain to service future concrete plant at 1682 Highway 11 West, approximately 440m west of Fontaine Drive. The watermain is connected to the existing 300mm watermain by means of a reducing tee. The new watermain was installed by directional bore underneath the highway and is protected inside an HDPE casing. Valves have been installed on each side of the highway and a hydrant has also been installed and is located on the property line. |             |                      |             |

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|--|-------------|----------------------|-------------|
| <b>Question ID</b>   | DWMR1021001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |                      |             |
| <b>Question:</b><br>Were Form 2 documents prepared as required?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Form 2 documents were not prepared as required.<br><br>Required Action:<br><br>On July 23, 2025, the owner and operating authority prepared a "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System" for the replacement of the process Lime/Soda Ash pumps and provided a copy to Water Compliance Officer Connie Croisier. No additional action required at this time.<br><br>Details are as follows: |             |                      |             |

The owner and operating authority of the system prepared one (1) "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System" document for the following undertaking during the inspection period:

- Existing Well TH-5 to be included in Schedule A of the Drinking Water Works Permit for emergency use. A hydrogeological assessment was also conducted by EXP Services for the evaluation of the well and a Director Notification Form was submitted to the Ministry for review and processing.

**\*\*Non-Compliance:**

The Drinking Water System Description detailed in Schedule A to DWWP No. 211-201 lists two (2) positive displacement diaphragm type feed pumps (one duty and one standby) with a maximum feed rate of 118 L/hr per pump for the Lime/Soda Ash chemical treatment equipment. On June 19, 2024, the pumps were replaced with two (2) peristaltic feed pumps (one duty and one standby) with a maximum feed rate of 674.6 L/hr per pump. Condition 4.2.6 of Schedule B to the DWWP authorizes the drinking water system to add, modify, replace, or remove chemical metering pumps and chemical handling pumps; however the modification was required to be recorded on a Form 2 document prior to the components being placed into service in accordance with Condition 4.6.1 of Schedule B to the DWWP.

| Question ID   | DWMR1025001 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);  |             |               |             |
| <b>Question:</b><br>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?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>All parts of the drinking water system were not disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.<br><br>Required Action:<br><br>By no later than Friday, August 22, 2025, the owner shall review the Ministry's 2020 Watermain Disinfection Procedure with all municipal staff involved in water distribution work and provide confirmation of the training/review to Water Compliance Officer Connie Croisier. It remains incumbent on the owner to ensure that contractors hired to conduct repair and maintenance activities to the water distribution system are doing so in accordance with AWWA standards and the Watermain Disinfection Procedure, and that a certified operator is present when required.<br><br>Details are as follows: |             |               |             |

Condition 2.3 of Schedule B to DWWP No. 211-201 requires the owner to ensure that all parts of the drinking water system in contact with drinking water that are added, modified, replaced or extended shall be disinfected in accordance with the Ministry's Watermain Disinfection Procedure or the applicable AWWA standard for disinfection.

The 2020 Watermain Disinfection Procedure states that all watermains that form part of a drinking water system can only be isolated and placed into service by a certified operator, and that valves opened to place a new watermain into service shall, in all cases, be operated by a certified operator. On May 5, 2025, the connection between the watermain at 1691 Hwy 11 and the new 6" line was completed without a certified operator present and the valve was activated by uncertified personnel. Failure to ensure that a certified operator is present to place a new watermain into service is a violation of Condition 2.3 of the Schedule B to the DWWP.

Note: Aside from the incident described above, all new watermain installs, watermain breaks/repairs, and repair and maintenance activities conducted at the Hearst WTP were disinfected in accordance with AWWA standards as required. Operators disinfected all parts using the applicable disinfection method, conducted microbiological sampling and testing if required, and documented all pertinent information in the logbook and/or logsheets.

| Question ID   | DWMR1023001 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| <p><b>Legislative Requirement(s):</b><br/>SDWA   O. Reg. 170/03   1-2   (2);</p>  |             |               |             |
| <p><b>Question:</b><br/>Did records indicate that the treatment equipment was operated in a manner that achieved the design capabilities prescribed by O. Reg. 170/03, Drinking Water Works Permit and/or Municipal Drinking Water Licence at all times that water was being supplied to consumers?</p>   |             |               |             |
| <p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br/>Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities prescribed.</p> <p>Section 1-4 of Schedule 1 to O. Reg. 170/03 requires the owner of a drinking water system that obtains raw water from a surface water supply to 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:</p> <ul style="list-style-type: none"> <li>- at least 99% (2-log) removal/inactivation of Cryptosporidium oocysts</li> <li>- at least 99.9% (3-log) removal/inactivation of Giardia cysts</li> <li>- at least 99.99% (4-log) removal/inactivation of viruses by the time water enters the distribution system.</li> </ul> <p>In accordance with Schedule E of the MDWL, the Hearst WTP is assigned the following disinfection credits based on each treatment process being fully operational and the applicable log removal/inactivation credit assignment criteria being met :</p> |             |               |             |

- 2-log removal of *Cryptosporidium* oocysts, 2.5-log removal of *Giardia* cysts and 2-log removal/inactivation of viruses through conventional filtration
- 0.5+log removal of *Giardia* cysts and 2+log removal/inactivation of viruses through chlorination, thus meeting the requirements above.

In order to receive the required removal/inactivation credits for conventional filtration, the following criteria must be met:

1. A chemical coagulant shall be used at all times when the treatment plant is in operation
2. Chemical dosage shall be monitored and adjusted in response to variations in raw water quality
3. Effective backwash procedures shall be maintained
4. Turbidity shall be continuously monitored from each filter
5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.

Information provided for this inspection confirmed that the Hearst WTP operated in accordance with the above requirements for the duration of the inspection period.

In addition, the following criteria must be met to receive the required removal/inactivation credits for chlorination:

1. Sampling and testing for free chlorine residual shall be carried out by continuous monitoring equipment in the treatment process at or near a location where the intended contact time has just been completed in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario
2. At all times, CT provided shall be greater than or equal to the CT required to achieve the log removal credits assigned.

For this drinking water system and under worst-case scenario conditions (peak treated flow rate of 4,752 m<sup>3</sup>/d, reservoir/clearwell level of 1.7 m, pH above 7.0, free chlorine residual of 0.40 mg/L, and clearwell water temperature below 0°C), a CT value of 35.19 mg/L\*minute is required to achieve primary disinfection. Information provided by the operating authority indicated that the baffled clearwell and storage reservoir provide a minimum T of approximately 91.08 minutes based on maximum flows and baffling factors of 0.5 (clearwell) and 0.1 (reservoir). Based on the above worst-case conditions, free chlorine residuals following contact time must be maintained above 0.40 mg/L to ensure the required CT of 35.19 mg/L\*minute is achieved.

For this inspection period, during worst-case conditions for highest treated water flow rates and the corresponding lowest clearwell/reservoir levels and free chlorine residuals, the required CT was met or exceeded at all times.

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|--|-------------|----------------------|-------------|
| <b>Question ID</b>   | DWMR1024001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (2); |             |                      |             |

|   |
|---|
| <p><b>Question:</b><br/>Did records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required?</p>   |
| <p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br/>Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection was operated as required.<br/><br/>A review of the data provided for the inspection period confirmed that the combined chlorine residual was maintained above 0.25 mg/L at all times and at all locations within the distribution system. The minimum combined chlorine residual recorded in the distribution system was 0.40 mg/L on September 24, 2024.</p> |

| Question ID   | DWMR1033001 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-2   (3); SDWA   O. Reg. 170/03   7-2   (4);   |             |               |             |
| <b>Question:</b><br>Was secondary disinfectant residual tested as required for the large municipal residential distribution system?   |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Secondary disinfectant residual was tested as required.<br><br>Subsection 7-2(3) of Schedule 7 to O. Reg. 170/03 requires the owner and operating authority of a drinking water system that provides secondary disinfection to ensure that at least seven (7) distribution samples are taken each week and tested immediately for combined chlorine residual if the system provides chloramination.<br><br>Unless at least one sample is taken on each day of the week, secondary disinfectant residual testing must be conducted in accordance with subsection 7-2(4) of Schedule 7 to O. Reg. 170/03 such that:<br><br>1) At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.<br><br>2) At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1.<br><br>3) When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location.<br><br>A review of the distribution chlorine residual logs for the inspection period confirmed that the secondary disinfectant residual was monitored in accordance with the above requirements. Operators routinely collected four samples at different locations one day early in the week and three samples on a second day at least 48 hours after the last sample in the same week. |             |               |             |

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|--|-------------|----------------------|-------------|
| <b>Question ID</b>   | DWMR1030001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-2   (1); SDWA   O. Reg. 170/03   7-2   (2);  |             |                      |             |
| <b>Question:</b><br>Was primary disinfection chlorine monitoring being conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit or at/near a location where the intended CT had just been achieved?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Primary disinfection chlorine monitoring was conducted as required.<br><br>Subsection 7-2(1) of Schedule 7 to O. Reg. 170/03 requires the owner of a drinking water system that provides chlorination for primary disinfection to sample and test for free chlorine residual using continuous monitoring equipment in the treatment process at or near a location where the intended contact time (CT) has just been achieved in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario.<br><br>This sampling point is located downstream of the baffled clearwell and storage reservoir, and represents the location where water is taken from the clearwell/reservoir (where CT is achieved) and directed to the remainder of the treatment process. |             |                      |             |

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|--|-------------|----------------------|-------------|
| <b>Question ID</b>   | DWMR1032001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-3   (2);   |             |                      |             |
| <b>Question:</b><br>If the drinking water system obtained water from a surface water source and provided filtration, was continuous monitoring of each filter effluent line performed for turbidity?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Continuous monitoring of each filter effluent line was performed for turbidity.<br><br>Subsection 7-3(2) of Schedule 7 to O. Reg. 170/03 requires the owner of the system to ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line if the drinking water system obtains water from a raw water supply that is surface water and the system provides filtration.<br><br>The Hearst WTP is equipped with two (2) turbidity analyzers (one on each filter effluent line) which continuously measure and record turbidity to the SCADA system. A review of the turbidity data confirmed that each continuous analyzer was operating at all times when water was being produced. There were no instances of gaps in data that did not correlate to times when the plant was not treating water or for maintenance of the analyzers. |             |                      |             |

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| <b>Question ID</b>  | DWMR1035001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-5   (1)1-4;   |             |                      |             |
| <b>Question:</b><br>Were operators examining continuous monitoring test results and did they examine the results within 72 hours of the test?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Operators were examining continuous monitoring test results as required.<br><br>Continuous monitoring data is reviewed on-site Monday through Friday during an operating shift and remotely by the on-call operator on weekends using OCWA's Outpost data management system (Wonderware). Operators document instantaneous readings and minimums/maximums from the previous day to the Wonderware Data Review Sheet and make note of any observations or abnormal conditions. |             |                      |             |

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| <b>Question ID</b>  | DWMR1038001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-5   (1)1-4;   |             |                      |             |
| <b>Question:</b><br>Was continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency and recording data with the prescribed format.<br><br>Subsection 6-5(1)1 of Schedule 6 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that continuous monitoring equipment, except when no water is being directed to users of water sampled by the equipment, tests for the parameter with at least the minimum frequency specified in the Table, and records the date, time, sampling location and result of every test. The Table specifies a minimum testing and recording frequency of 5 minutes for free chlorine residual required to achieve primary disinfection, and a minimum frequency of 15 minutes for turbidity.<br><br>A review of the continuous monitoring data confirmed that the free chlorine residual and turbidity analyzers were testing and recording in accordance with the above requirements for the duration of the inspection period. |             |                      |             |

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| <b>Question ID</b>  | DWMR1037001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-5   (1)5-10; SDWA   O. Reg. 170/03   6-5   (1.1); |             |                      |             |

**Question:**

Were all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, equipped with alarms or shut-off mechanisms that satisfied the standards described in Schedule 6?

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

All required continuous monitoring equipment utilized for sampling and testing were equipped with alarms or shut-off mechanisms that satisfied the standards

Subsections 6-5(1)5 and 6-5(1.1) of Schedule 6 to O. Reg. 170/03 requires continuous monitoring equipment to be equipped with an automatic shut-off or designed and operated such that an alarm sounds immediately at the following locations if the equipment malfunctions, loses power, or a test result for a parameter is above or below the alarm standard:

- i) The location where the equipment conducts tests.
- ii) A location where a person is present, if a person is not always present at the location where the equipment conducts tests.

In addition, the Table in Section 6-5 of Schedule 6 to O. Reg. 170/03 imposes the following Minimum and Maximum Alarm Standards for continuous monitoring equipment:

1. No less than 0.1 mg/L less than the concentration of free chlorine residual required to achieve primary disinfection
2. No greater than 1.0 NTU for filter effluent turbidity monitoring.

In accordance with OCWA's standard operating procedure for Chlorine Contact Time, the minimum free chlorine residual required to ensure primary disinfection is achieved under worst-case conditions is 0.40 mg/L when both storage reservoirs are in operation.

On the day of the inspection, the regulatory alarm for low primary disinfection was set at a free chlorine residual of 1.0 mg/L which meets the above requirements. If free chlorine residual reaches this value or if the analyzer malfunctions or loses power, the low lift and high lift pumps are configured to shut-down and an alarm is generated through the auto-dialer to alert the on-call operator. Additionally, the low lifts and filters are configured to shut-down when turbidity reaches 1.0 NTU or if the analyzer malfunctions or loses power, and an alarm is generated to alert the on-call operator.

| Question ID   | DWMR1040001 | Question Type | Legislative |
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| <p><b>Legislative Requirement(s):</b><br/>SDWA   O. Reg. 170/03   6-5   (1)1-4; SDWA   O. Reg. 170/03   6-5   (1)5-10;</p>  |             |               |             |
| <p><b>Question:</b><br/>Were all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?</p> |             |               |             |
| <p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br/>All continuous analysers were calibrated, maintained, and operated as required.</p>         |             |               |             |

Operators check all continuous monitoring equipment and perform in-house verifications as part of their routine inspection of the WTP. Analyzer maintenance is conducted when required and instrument calibrations are performed by OCWA's instrumentation technicians. The calibration records provided for the inspection period confirmed that the filter effluent turbidity analyzers are calibrated on a quarterly basis, and the free and total chlorine residual analyzers are calibrated at least once per year (including the continuous analyzer which monitors free chlorine residual for primary disinfection). Calibration dates for the inspection period were August 27, 2024, November 27, 2024, January 22, 2025, February 20, 2025, March 26, 2025, and May 6, 2025.

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| <b>Question ID</b>   | DWMR1108001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   6-5   (1)5-10; SDWA   O. Reg. 170/03   6-5   (1.1);  |             |                      |             |
| <b>Question:</b><br>Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, Municipal Drinking Water Licence, Drinking Water Works Permit, or order triggered an alarm or an automatic shut-off, did a qualified person respond as required and take appropriate actions? |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>A qualified person responded as required and took appropriate actions.<br><br>A review of the continuous monitoring data and corresponding logbook entries confirmed that operators addressed all alarm scenarios in a timely manner and took appropriate action.  |             |                      |             |

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| <b>Question ID</b>  | DWMR1099001 | <b>Question Type</b> | Information |
| <b>Legislative Requirement(s):</b><br>Not Applicable  |             |                      |             |
| <b>Question:</b><br>Do records show that water provided by the drinking water system met the Ontario Drinking Water Quality Standards?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Records showed that not all water sample results met the Ontario Drinking Water Quality Standards.<br><br>The Ontario Drinking Water Quality Standard for chloramines (ie: combined chlorine residual) is 3.0 mg/L.<br><br>On February 26, 2025, there were two (2) samples collected in the distribution system which exceeded the maximum allowable concentration for combined chlorine residual. One sample resulted in 5.36 mg/L, and the other sample result could not be determined due to limitations of the portable instrument but is likely to have exceeded the limit (total chlorine residual maxed out at 8.8 mg/L). |             |                      |             |

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| <b>Question ID</b>  | DWMR1083001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   10-3;   |             |                      |             |
| <b>Question:</b><br>Were treated microbiological sampling requirements prescribed by Schedule 10-3 of O. Reg. 170/03 for large municipal residential systems met?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Treated microbiological sampling requirements were met.<br><br>Section 10-3 of Schedule 10 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one sample of treated water is collected weekly and tested for E. coli, total coliforms, and general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).<br><br>A review of the water quality data confirmed that the microbiological monitoring requirements for treated water were met for the duration of the inspection period. |             |                      |             |

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| <b>Question ID</b>  | DWMR1081001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   10-2   (1); SDWA   O. Reg. 170/03   10-2   (2); SDWA   O. Reg. 170/03   10-2   (3);   |             |                      |             |
| <b>Question:</b><br>Were distribution microbiological sampling requirements prescribed by Schedule 10-2 of O. Reg. 170/03 for large municipal residential systems met?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Distribution microbiological sampling requirements were met.<br><br>Section 10-2 of Schedule 10 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least twelve (12) water samples are collected monthly from the distribution system (based on an estimated population of 4,794) with at least one sample collected each week. Samples must be tested for E. coli and total coliforms, and at least 25% of the samples must be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).<br><br>A review of the water quality data for the inspection period confirmed that the above microbiological monitoring requirements for the distribution system were consistently met. Operators routinely collected four (4) distribution system samples each week and had them tested for E. coli and total coliforms, and had one of the samples tested for HPC. |             |                      |             |

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

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| <b>Question ID</b>   | DWMR1084001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-2;  |             |                      |             |
| <b>Question:</b><br>Were inorganic parameter sampling requirements prescribed by Schedule 13-2 of O. Reg. 170/03 met?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Inorganic parameter sampling requirements were met.<br><br>Subsection 13-2(a) of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one sample of treated water is collected every 12 months and tested for all parameters set out in Schedule 23 to O. Reg. 170/03 (inorganics).<br><br>Sampling and monitoring of Schedule 23 parameters was most recently completed on October 29, 2024, and previously on October 24, 2023. |             |                      |             |

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| <b>Question ID</b>   | DWMR1085001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-4   (1); SDWA   O. Reg. 170/03   13-4   (2); SDWA   O. Reg. 170/03   13-4   (3);  |             |                      |             |
| <b>Question:</b><br>Were organic parameter sampling requirements prescribed by Schedule 13-4 of O. Reg. 170/03 met?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Organic parameter sampling requirements were met.<br><br>Subsection 13-4(a) of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one sample of treated water is collected every 12 months and tested for all parameters set out in Schedule 24 to O. Reg. 170/03 (organics). |             |                      |             |

Sampling and monitoring of Schedule 24 parameters was most recently completed on October 29, 2024, and previously on October 24, 2023.

| Question ID   | DWMR1086001 | Question Type | Legislative |
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| <p><b>Legislative Requirement(s):</b><br/>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);</p>   |             |               |             |
| <p><b>Question:</b><br/>Were haloacetic acid sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?</p>   |             |               |             |
| <p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br/>Haloacetic acid sampling requirements were met.</p> <p>Section 13-6.1 of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one water sample is collected in each calendar quarter from a point in the distribution system likely to have an elevated potential for the formation of haloacetic acids (HAA) and have the sample(s) tested for HAAs. The Ontario Drinking Water Quality Standard (ODWQS) for HAAs is 80 µg/L expressed as a running annual average (RAA) of quarterly results.</p> <p>A review of the water quality data for the inspection period confirmed that sampling for HAAs was conducted on September 10, 2024, October 29, 2024, January 7, 2025, and April 8, 2025. The current RAA is 61.6 µg/L based on these results.</p> |             |               |             |

| Question ID  | DWMR1087001 | Question Type | Legislative |
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| <p><b>Legislative Requirement(s):</b><br/>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);</p>  |             |               |             |
| <p><b>Question:</b><br/>Were trihalomethane sampling requirements prescribed by Schedule 13-6 of O. Reg. 170/03 met?</p>   |             |               |             |
| <p><b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br/>Trihalomethane sampling requirements were met.</p> <p>Section 13-6 of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one water sample is taken in each calendar quarter from points in the distribution system likely to have an elevated potential for the formation of trihalomethanes (THM) and have the sample(s) tested for THMs. The ODWQS for THMs is 100.0 µg/L expressed as a RAA of quarterly results.</p> <p>A review of the water quality data for the inspection period confirmed that sampling for THMs</p> |             |               |             |

was conducted on October 29, 2024, January 7, 2025, February 11, 2025, and April 8, 2025. The current RAA is 92.35 µg/L based on these results.

Note: The operating authority currently treats with soda ash during the spring to fall seasons to reduce the formation of HAAs and THMs. It is recommended that the owner and operating authority review the Ministry's technical bulletin "Strategies for Minimizing the Disinfection By-Products Trihalomethanes and Haloacetic Acids" as the current THM RAA is approaching the ODWQS.

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| <b>Question ID</b>   | DWMR1088001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-7;  |             |                      |             |
| <b>Question:</b><br>Were nitrate/nitrite sampling requirements prescribed by Schedule 13-7 of O. Reg. 170/03 met?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Nitrate/nitrite sampling requirements were met.  |             |                      |             |
| Section 13-7 of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one treated water sample is taken every three months and tested for nitrate and nitrite. |             |                      |             |
| A review of the water quality data for the inspection period confirmed that samples were collected on October 29, 2024, January 7, 2025, and April 8, 2025.  |             |                      |             |

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| <b>Question ID</b>   | DWMR1089001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-8;  |             |                      |             |
| <b>Question:</b><br>Were sodium sampling requirements prescribed by Schedule 13-8 of O. Reg. 170/03 met?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Sodium sampling requirements were met.   |             |                      |             |
| Section 13-8 of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one treated water sample is taken every 60 months and tested for sodium.   |             |                      |             |
| The most recent sample was collected on October 11, 2022, and previously on October 18, 2017. Both samples exceeded the maximum allowable concentration for sodium (20 mg/L). The Northeastern Public Health Unit issued a letter to health care providers in the area to advise of the high sodium content in the water supply. |             |                      |             |

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| <b>Question ID</b>  | DWMR1090001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   13-9;   |             |                      |             |
| <b>Question:</b><br>Where fluoridation is not practiced, were fluoride sampling requirements prescribed by Schedule 13-9 of O. Reg. 170/03 met?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Fluoride sampling requirements were met.<br><br>Section 13-9 of Schedule 13 to O. Reg. 170/03 requires the owner and operating authority for the system to ensure that at least one treated water sample is taken every 60 months and tested for fluoride.<br><br>The most recent sample was collected on October 11, 2022, and previously on October 18, 2017. |             |                      |             |

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| <b>Question ID</b>  | DWMR1094001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);  |             |                      |             |
| <b>Question:</b><br>Were water quality sampling requirements imposed by the Municipal Drinking Water Licence and Drinking Water Works Permit met?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Water quality sampling requirements were met.<br><br>There are no additional water quality sampling requirements imposed by the MDWL or DWWP for the Hearst DWS, however the MDWL stipulates the following conditions with regards to process wastewater sampling and monitoring:<br><br>Condition 5.2 and Table 7 of Schedule C to the MDWL requires sampling, testing, and monitoring for total suspended solids (TSS), total chlorine residual, pH, biological oxygen demand (BOD) and aluminum from the lagoon effluent during the prescribed seasonal discharge periods of April 25 to June 15, and October 1 to November 15.<br><br>Further, Condition 1.5 and Table 3 of Schedule C to the MDWL requires that effluent discharged into the natural environment from the treatment subsystem shall not exceed a maximum concentration of 25 mg/L for TSS (calculated as the mean of at least three grab samples taken at the start, middle and end of the seasonal discharge) and an annual average concentration of 0.02 mg/L for total chlorine residual (Note: monitoring of total chlorine residual is required only when pre-filtration chlorination is being used). The owner shall also ensure that the annual flow into the residue management lagoon does not exceed 44,325 m <sup>3</sup> , and that the average rate of supernatant discharged into the swale that leads to Hearst Creek does not exceed 16.7 L/s. |             |                      |             |

A review of the sludge lagoon data confirmed that all effluent monitoring was conducted in accordance with the MDWL. Samples were collected at the start, middle and end of each discharge and tested for TSS as a composite sample, and weekly grab samples were collected and tested for pH, BOD and aluminum as required. The annual flow for 2024 was 5,940 m<sup>3</sup> with an average flow rate of 7.64 L/s (East cell only). The West cell was not discharged during the Spring period in 2024, and there was no discharge from either cell during the Fall period in 2024.

| Question ID   | DWMR1104001 | Question Type | Legislative |
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| <b>Legislative Requirement(s):</b><br>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); |             |               |             |
| <b>Question:</b><br>Were immediate verbal notification requirements for adverse water quality incidents met?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Immediate verbal notification requirements for adverse water quality incidents were met.  |             |               |             |

| Question ID  | DWMR1101001 | Question Type | Legislative |
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| <b>Legislative Requirement(s):</b><br>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;   |             |               |             |
| <b>Question:</b><br>For large municipal residential systems, were corrective actions, including any steps directed by the Medical Officer of Health, taken to address adverse conditions?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Corrective actions were taken to address adverse conditions.<br><br>There was one (1) adverse water quality incident (AWQI) reported during the inspection period:<br><br>AWQI 167440 – On February 26, 2025, the operating authority for the system reported an exceedance of chloramines (combined chlorine residual) in the distribution system due to a malfunction in one of the post-adjustment chlorinators.<br><br>In accordance with Section 17-10 of Schedule 17 to O. Reg. 170/03, the required corrective actions in response to a chemical parameter exceedance are to resample and test as soon as |             |               |             |

reasonably possible, and to take such other steps as are directed by the medical officer of health (MOH).

Once the issue was discovered, operators sampled and tested for combined chlorine residual at various locations throughout the distribution system which identified two areas of concern that had high residuals. Operators flushed two hydrants for approximately one hour each to lower the chlorine residuals. Once flushing was complete, operators resampled the areas with high chlorine residuals to ensure that they were within normal range. Additional resamples were also collected the following morning. The MOH was verbally notified at the time of the incident and was satisfied with the above corrective actions.

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| <b>Question ID</b>   | DWMR1045001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |                      |             |
| <b>Question:</b><br>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?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The owner had up-to-date documents describing the distribution components.<br><br>Condition 3.5 of Schedule B to the DWWP requires the owner to retain maps of watermains within the distribution system and update to include watermain additions, modifications, replacements and extensions within 12 months of the alteration.<br><br>The Hearst distribution system map/plan provided for this inspection was up-to-date and contained the new 150mm watermain and associated appurtenances at 1682 Hwy 11 W as required. |             |                      |             |

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| <b>Question ID</b>   | DWMR1060001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   31   (1);   |             |                      |             |
| <b>Question:</b><br>Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The operations and maintenance manual(s) did not meet the requirements of the Municipal Drinking Water Licence.<br><br>Required Action:<br><br>The owner and operating authority shall develop and implement a procedure for the operation |             |                      |             |

and maintenance of the clearwell bypass piping in accordance with Condition 16.3 of Schedule B to the MDWL. This procedure shall also address any changes to the worst-case scenario parameters listed in the "Chlorine Contact Time" SOP when operating the plant with only the clearwell storage.

A copy of the procedure(s) shall be provided electronically to Water Compliance Officer Connie Croisier by no later than Friday, August 29, 2025.

Details are as follows:

Condition 16.3 of Schedule B to MDWL No. 211-101 requires that procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be implemented into the operations and maintenance manual(s) prior to those alterations coming into operation.

The "Schedule C: Authorization to Alter the Drinking Water System" was issued for the installation of the clearwell bypass piping from the filter effluent piping along with associated connections, valves and fittings on November 5, 2024, and alterations were completed on January 10, 2025. There are currently no written procedures in place for the operation and maintenance of the clearwell bypass piping which is a violation of Condition 16.3 of Schedule B to the MDWL.

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| <b>Question ID</b>  | DWMR1062001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   7-5;  |             |                      |             |
| <b>Question:</b><br>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?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>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. |             |                      |             |

|   |             |                      |     |
|---|-------------|----------------------|-----|
| <b>Question ID</b>  | DWMR1071001 | <b>Question Type</b> | BMP |
| <b>Legislative Requirement(s):</b><br>Not Applicable  |             |                      |     |
| <b>Question:</b><br>Did the owner provide security measures to protect components of the drinking water system? |             |                      |     |

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

The owner provided security measures to protect components of the drinking water system.

The following security measures are currently in place at the Hearst Drinking Water System:

- The access doors to the WTP, low lift building and elevated storage tower are steel-constructed and kept locked when unattended.
- The WTP and elevated storage tower are equipped with an intrusion alarm system.
- All keys and alarm codes are restricted to authorized personnel.
- All components of the drinking water system are checked regularly by operations staff Monday to Friday.
- The WTP, low lift building and reservoir are located on one property that is surrounded by chain-link fencing and secured under lock and key.
- The property is located in a central area of the municipality and is equipped with exterior lighting.
- The WTP sludge lagoon is enclosed in chain-link fencing which is kept locked when unattended.

|   |             |                      |             |
|---|-------------|----------------------|-------------|
| <b>Question ID</b>  | DWMR1073001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 128/04   23   (1);   |             |                      |             |
| <b>Question:</b><br>Was an overall responsible operator designated for all subsystems which comprise the drinking water system?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>An overall responsible operator was designated for all subsystem.<br><br>OCWA has designated Michel Plourde as the Overall Responsible Operator (ORO) and possesses the required certification for the system, categorized as "Water Treatment Subsystem Class 3" and "Water Distribution Subsystem Class 2". |             |                      |             |

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

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

|  |             |                      |             |
|--|-------------|----------------------|-------------|
| <b>Question ID</b>   | DWMR1076001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>SDWA   O. Reg. 170/03   1-2   (2);   |             |                      |             |
| <b>Question:</b><br>Were adjustments to the treatment equipment only made by certified operators?  |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>Adjustments to the treatment equipment were only made by certified operators.<br><br>A review of the facility logbook confirmed that all adjustments made to treatment equipment were conducted by certified operators. A designated Operator-in-Charge was available at all times, either in person or by phone, to provide written or verbal direction to an Operator-in-Training and ensured that records were maintained of all process adjustments in accordance with O. Reg. 128/04. |             |                      |             |

|   |             |                      |             |
|---|-------------|----------------------|-------------|
| <b>Question ID</b>  | DWMR1115001 | <b>Question Type</b> | Legislative |
| <b>Legislative Requirement(s):</b><br>Not Applicable  |             |                      |             |
| <b>Question:</b><br>Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?   |             |                      |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The following instance(s) of non-compliance were also noted during the inspection:<br><br>Condition 2.4 of Schedule B to DWWP No. 211-201 requires the owner to notify the Director in writing within 30 days of the placing into service or the completion of any addition, modification, replacement, removal or extension of the drinking water system which had been authorized through:<br><br>2.4.1 Schedule B to the DWWP which would require an alteration of the description of a drinking water system component described in Schedule A of this DWWP |             |                      |             |

2.4.2 Any document to be incorporated in Schedule C to this DWWP respecting works other than watermains.

Information provided for this inspection confirmed that a "Director Notification Form" was not submitted for the following undertakings:

- Soda Ash/Lime Equipment: On June 19, 2024, the two positive displacement diaphragm type feed pumps with a maximum feed rate of 118 L/hr per pump were removed and replaced with two peristaltic feed pumps with a maximum feed rate of 674.6 L/hr per pump.
- Filter Effluent Piping Modifications: On November 5, 2024, the "Schedule C: Authorization to Alter the Drinking Water System" was issued for the installation of new 150 mm diameter PVC clearwell bypass piping from the filter effluent piping, directing water to the in-ground reservoir, along with associated connections, valves, and fittings. The alteration was completed on January 10, 2025.

Failure to notify the Director in writing within 30 days of the placing into service or the completion of any minor modification which had been authorized through Schedule B or Schedule C is a violation of Condition 2.4 of Schedule B to the DWWP

Required Action:

On July 24, 2025, the owner and operating authority submitted Director Notification Forms for the replacement of the soda ash/lime dosing pumps and the filter effluent piping modifications. No additional action required at this time.

| Question ID   | DWMR1117001 | Question Type | Information |
|---|-------------|---------------|-------------|
| <b>Legislative Requirement(s):</b><br>Not Applicable  |             |               |             |
| <b>Question:</b><br>Were there any other items related to the drinking water system that should be recognized in the report?  |             |               |             |
| <b>Compliance Response(s)/Corrective Action(s)/Observation(s):</b><br>The following items were noted as being relevant to the drinking water system:<br><br>It is understood that the Town of Hearst and OCWA plan to ready the pre-existing drilled well (Well TH-5 installed in 2006) as an emergency back-up raw water supply and are in the process of adding the well to the DWWP as a component of the drinking water system. A pre-consultation held in March 2024 with the Ministry's Environmental Permissions Branch, the local MECP office, OCWA and EXP Services determined that the submission of a Director Notification Form and supporting hydrogeological study would be sufficient to process the DWWP amendment since no additional work or modifications would be made to the well or any other components of the DWS. The Director Notification Form and hydrogeological |             |               |             |

assessment were submitted to the Ministry for review and processing on April 30, 2025.

It is recommended that the owner and operating authority develop and implement a well inspection and maintenance program for Well TH-5 in accordance with Condition 16.2 of Schedule B to the MDWL which addresses the following:

- 16.2.8 An inspection schedule for all wells associated with the drinking water system, including all production wells, standby wells, test wells and monitoring wells;
- 16.2.9 Well inspection and maintenance procedures that consider the entire well structure of each well including all above and below grade well components; and
- 16.2.10 Remedial action plans for situations where an inspection indicates noncompliance with respect to regulatory requirements and/or risk to raw well water quality.

It can be noted that once the DWWP is amended to include Well TH-5, the above condition which speaks to the requirements of the operations and maintenance manual will become a legislative requirement in addition to any other condition(s) stipulated in the DWWP/MDWL amendment.

## **APPENDIX A**

### Drinking Water System Components Description

# DWS Component Information Report for 220002592

as of 13-AUG-2025

## Drinking Water System Profile Information

**DWS #** 220002592  
**MOE Assigned Name** Hearst Drinking Water System  
**Category** LMRS  
**Regulation** O.REG 170/03  
**DWS Type** Water Treatment Plant  
**Source Type** Surface Water  
**Address** 1215 Edward Street, Hearst, Ontario, P0L 1N0, Canada  
**Region** Northern Region  
**District** Timmins District  
**Municipality** Hearst  
**Public Health Unit** Porcupine Health Unit

| LWIS Component Name   | LWIS Component Type | LWIS Component Sub-Type | Component Address | Comments  |
|-----------------------|---------------------|-------------------------|-------------------|---|
| Distribution System   | Other               | Other                   |                   | The Hearst distribution system serves a population of 4,794 and has 2,000 service connections which are metered. The water main leaving the water treatment plant consists of 16-inch PVC plastic and connects to cast iron, ductile iron or PVC piping depending on the age of the subdivision. Water from the water treatment plant (WTP) supplies treated water to residential, commercial and industrial customers as well as an elevated storage tower (1,000 m <sup>3</sup> ). High lift pump activation is controlled by the water level in the elevated storage tower. The distribution system has 10 dead end locations. The Town of Hearst currently has three maintenance programs in the distribution system: a water main replacement program, a hydrant flushing/inspection program and a valve exercising program. The municipality plans to replace the ductile and cast-iron mains with PVC piping. The municipality has replaced most of the old watermains with PVC.   |
| Water Tower           | Other               | Reservoir               |                   | The Hearst elevated water tower, located at 416 George St. – Hearst Public Works Yard, and holds 909 m <sup>3</sup> of treated drinking water.  |
| Water Treatment Plant | Treated Water Poe   | Treatment Facility      |                   | The raw water wet well is located in a building on the bank of the Mattawishkwia River, adjacent to the water treatment plant (WTP). Raw water is gravity fed into the wet well; as such the water level in the wet well is dependent on the level of the river. Pre-chlorination of the wet well is available. The pre-chlorination system has not been used since 2003. There are three low lift pumps, only one low lift pump is operated at any given time to deliver the raw water from the wet well to the mixing chamber and the flocc tanks in the treatment plant. Alum and soda ash are added for coagulation and pH adjustment upstream of the two flocculation tanks and polymer is added to aid the coagulation process. The polymer injection system is set on a timer to automatically trigger the addition of polymer to the flocc tank when required. Clarification is achieved through two settling tanks. Water from the settling tanks is then passed through two sand/anthracite/gravel media filters. Filters are backwashed as required with backwash going to a |

# DWS Component Information Report for 220002592

as of 13-AUG-2025

| LWIS Component Name         | LWIS Component Type       | LWIS Component Sub-Type | Component Address | Comments   |
|-----------------------------|---------------------------|-------------------------|-------------------|--|
|                             |                           |                         |                   | waste water tank. The filtered water is then chlorinated on the intake side of the clear well. Sodium hydroxide is also used for pH control. The outflow of the clearwell is conveyed to the storage reservoir by gravity. Post-chlorination and ammonium sulphate for chloramination is added on the intake side of the high lift pump prior to discharge to the distribution system.   |
| Standby Power               | Stand-By Power Generation |                         |                   | The water treatment facility is equipped with a 150-kW natural gas generator to provide emergency standby power.   |
| Residue Management System   | Other                     |                         |                   | The WTP is equipped with:<br>-one sludge holding tank to receive and store sludge from the settling tank, sludge collectors, having dimensions of 1.8 m x 7.9 m x 5.0 m, capable of holding 66 m <sup>3</sup> of sludge (and wastewater from the backwash wastewater holding tank) volume.<br>-one backwash wastewater holding tank for storage of filter backwash wastewater, having dimensions of 7.6 m x 7.9 m x 5.0 m, capable of holding 273 m <sup>3</sup> of wastewater volume and equipped with two (2) horizontal centrifugal transfer pump at 6.4 L/s (one duty, one shelf spare) for the transfer of wastewater to a sludge holding tank<br>-a 450 mm overflow pipe located in the sludge holding tank and 450 mm overflow sewer conveying excess filter backwash wastewater/settling tank sludge under emergency situations to the Mattawishkwia River outfall approximately 29 m downstream of the intake pipe. |
| Additional Raw Water Source | Other                     | Surface Water           |                   | Permit to Take Water (PTTW) No. 5460-AVWLEV also includes the following sources:<br>- Mattawishkwia River<br>- Mattawishkwia River rock weir located at the WTP<br>- Mattawishkwia River rock weir located at Columbia Forest Products<br>- Well TH-5 located at the WTP<br><br>The rock weirs were constructed in September 2005 to create ponding around the intake structures. The drilled well on-site at the Hearst WTP (Well TH-5) is not listed as a component in Drinking Water Works Permit (DWWP) No 211-201, Issue No. 6, however a Form 2 and Director Notification were prepared and submitted in April 2025 to include the existing Well TH-5 into the DWWP for emergency use.   |
| Raw Water Intake            | Source                    | Surface Water           |                   | The raw water intake structure in the Mattawishkwia River consists of a 400 mm diameter by 48.8 m long steel intake pipe, a rock filled timber intake crib located approximately 27.4 m from the shore in 2.0 m of water and an infiltration gallery. The infiltration gallery consists of 12 rows of 34 m long 150 mm diameter perforated pipes connected in parallel, buried at a depth of 1.0 m that extend into the Mattawishkwia River.   |

# DWS Component Information Report for 220002592

as of 13-AUG-2025

| LWIS Component Name       | LWIS Component Type | LWIS Component Sub-Type | Component Address | Comments   |
|---------------------------|---------------------|-------------------------|-------------------|--|
| Residue Management Lagoon | Other               |                         |                   | <p>One two-celled residue management lagoon having a total sludge storage volume of approximately 44,325 m<sup>3</sup>. Sludge transfer chamber is equipped with two submersible pumps (one duty, one standby) rated at 16.7 L/s. One 150 mm diameter force main for the sludge transfer chamber to the lagoon.</p> <p>The residue management lagoon is equipped with two effluent chambers (one in each cell) with aluminium stop logs, lifting handles and 300 mm diameter pipe outlet to discharge supernatant water to Hearst Creek that leads to Mattawishkwia River.</p> |

## **APPENDIX B**

### **Key Reference and Guidance Material for Municipal Residential Drinking Water Systems**

# Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or [waterforms@ontario.ca](mailto:waterforms@ontario.ca).

For more information on Ontario's drinking water visit [www.ontario.ca/page/drinking-water](http://www.ontario.ca/page/drinking-water)



## Click on the publication below to access it

- [Drinking Water System Profile Information Form - 012-2149E](#)
- [Laboratory Services Notification Form – 012-2148E](#)
- [Adverse Test Result Notification Form – 012-4444E](#)
- [Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils](#)
- [Procedure for Disinfection of Drinking Water in Ontario](#)
- [Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids](#)
- [Filtration Processes Technical Bulletin](#)
- [Ultraviolet Disinfection Technical Bulletin](#)
- [Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments](#)
- [Certification Guide for Operators and Water Quality Analysts](#)
- [Training Requirements for Drinking Water Operator](#)
- [Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption](#)
- [Drinking Water System Contact List – 7128E01](#)
- [Ontario's Drinking Water Quality Management Standard - Pocket Guide](#)
- [2020 Watermain Disinfection Procedure](#)
- [List of Licensed Laboratories](#)

# 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](mailto: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](http://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 trihalométhane 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](#)
- [Exigences d'exploitant d'eau potable en formation](#)
- [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](#)

## **APPENDIX C**

### **Inspection Rating Report (IRR) and Risk Methodology Document**

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

|  |                                       |
|--|---------------------------------------|
| <b>DWS Name:</b>                         | HEARST DRINKING WATER SYSTEM          |
| <b>DWS Number:</b>                       | 220002592                             |
| <b>DWS Owner:</b>                        | THE CORPORATION OF THE TOWN OF HEARST |
| <b>Municipal Location:</b>               | HEARST                                |
| <b>Regulation:</b>                       | O.REG. 170/03                         |
| <b>DWS Category:</b>                     | DW Municipal Residential              |
| <b>Type of Inspection:</b>               | Focused                               |
| <b>Compliance Assessment Start Date:</b> | Jun-26-2025                           |
| <b>Ministry Office:</b>                  | Timmins District Office               |

**Maximum Risk Rating:** 500

| Inspection Module              | Non Compliance Risk (X out of Y) |
|--------------------------------|----------------------------------|
| Capacity Assessment            | 0/30                             |
| Certification and Training     | 0/42                             |
| Distribution System            | 0/4                              |
| Logbooks                       | 0/14                             |
| Operations Manuals             | 14/14                            |
| Other Inspection Findings      | 0/0                              |
| Reporting & Corrective Actions | 0/66                             |
| Source                         | 0/0                              |
| Treatment Processes            | 25/218                           |
| Water Quality Monitoring       | 0/112                            |
| <b>Overall - Calculated</b>    | <b>39/500</b>                    |

|                                |              |
|--------------------------------|--------------|
| <b>Inspection Risk Rating:</b> | <b>7.80%</b> |
|--------------------------------|--------------|

|                                 |               |
|---------------------------------|---------------|
| <b>Final Inspection Rating:</b> | <b>92.20%</b> |
|---------------------------------|---------------|

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

|  |
|--|
| <b>DWS Name:</b> HEARST DRINKING WATER SYSTEM                |
| <b>DWS Number:</b> 220002592                                 |
| <b>DWS Owner Name:</b> THE CORPORATION OF THE TOWN OF HEARST |
| <b>Municipal Location:</b> HEARST                            |
| <b>Regulation:</b> O.REG. 170/03                             |
| <b>DWS Category:</b> DW Municipal Residential                |
| <b>Type of Inspection:</b> Focused                           |
| <b>Compliance Assessment Start Date:</b> Jun-26-2025         |
| <b>Ministry Office:</b> Timmins District Office              |

| Non-Compliance Question(s)   | Non Compliance Risk |
|--|---------------------|
| <b>Operations Manuals</b>  |                     |
| Did the operations and maintenance manual(s) meet the requirements of the Municipal Drinking Water Licence?  | 14                  |
| <b>Other Inspection Findings</b>   |                     |
| Were the inspection questions sufficient to address other non-compliance items identified during the inspection period?  | 0                   |
| <b>Treatment Processes</b>   |                     |
| 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? | 21                  |
| Were Form 2 documents prepared as required?  | 4                   |
| <b>Overall - Total</b>   | <b>39</b>           |

Maximum Question Rating: 500

|                                |              |
|--------------------------------|--------------|
| <b>Inspection Risk Rating:</b> | <b>7.80%</b> |
|--------------------------------|--------------|

|                                 |               |
|---------------------------------|---------------|
| <b>FINAL INSPECTION RATING:</b> | <b>92.20%</b> |
|---------------------------------|---------------|

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



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

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

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

MOE reviews the risk rating methodology every three years.

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

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

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

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

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

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

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

## Determining Potential to Compromise the Delivery of Safe Water

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

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

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

(of the consequence)

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

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

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

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

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

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

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

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

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

## Application of the Methodology to Inspection Results

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

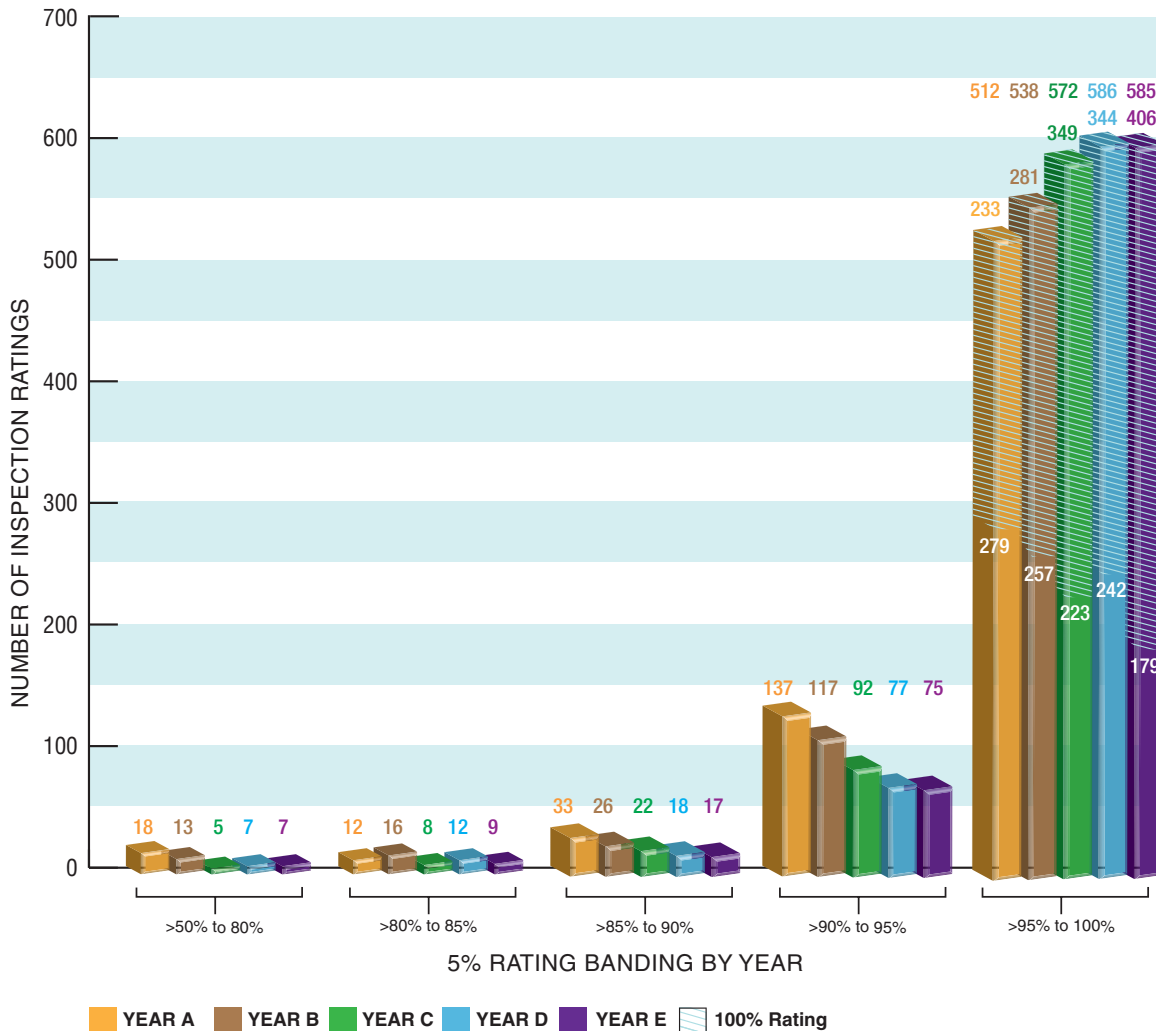
The risk ratings of all non-compliant answers are summed and divided by the sum of the risk ratings of all questions asked (maximum question rating). The resulting inspection risk rating (as a percentage) is subtracted from 100 per cent to arrive at the final inspection rating.

## Application of the Methodology for Public Reporting

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

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

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



## Reporting Results to MRDWS Owners/Operators

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

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

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

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

## APPLICATION DE LA MÉTHODOLOGIE EN MATIÈRE DE RISQUES AFIN DE MESURER LES RÉSULTATS D'INSPECTION DES RÉSEAUX D'EAU POTABLE RÉSIDENNELS MUNICIPAUX



Le ministère de l'Environnement (MEO) possède un programme d'inspection rigoureux et exhaustif pour les réseaux d'eau potable résidentiels municipaux. Son objectif vise à déterminer la conformité des réseaux d'eau potable résidentiels municipaux aux exigences prévues par la *Loi de 2002 sur la salubrité de l'eau potable* et les règlements afférents. Les propriétaires de réseaux d'eau potable résidentiels municipaux ont la responsabilité de s'assurer que leurs réseaux d'eau potable se conforment à toutes les exigences légales applicables.

Ce document décrit la méthodologie d'évaluation des risques qui a été appliquée aux constatations tirées des résultats d'inspection des réseaux d'eau potable résidentiels municipaux du ministère depuis l'exercice 2008-2009. Le but premier de cette évaluation est d'encourager l'amélioration continue de ces réseaux et d'établir une manière de mesurer ce progrès.

Le MEO examine la méthodologie en matière d'évaluation du risque tous les trois ans afin de tenir compte des modifications législatives et sociétales qui affectent les niveaux de risque acceptables. À la suite du plus récent examen, la méthodologie a été modifiée afin de présenter un mode de mesure amélioré pour l'évaluation du risque et de la sécurité liés à l'exploitation des réseaux d'eau potable résidentiels municipaux.

Le protocole d'inspection des réseaux d'eau potable résidentiels municipaux du ministère comporte jusqu'à 14 modules d'inspection et environ 120 questions réglementaires. Ces questions du protocole sont également liées à l'orientation définitive que les inspecteurs du ministère utilisent lorsqu'ils inspectent les réseaux d'eau potable résidentiels municipaux. Les questions abordent un large éventail de problèmes réglementaires, allant des procédures administratives au contrôle de la qualité de l'eau potable. De plus, le protocole

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d'inspection contient un certain nombre d'autres questions qui ne touchent pas la réglementation.

Une équipe de spécialistes de l'eau potable du ministère a évalué chaque question réglementaire du protocole d'inspection pour déterminer le risque (non-conformité au règlement) qui existe à l'approvisionnement d'une eau potable salubre. Cette évaluation était fondée sur des principes d'évaluation des risques établis pour la province et chaque question s'est vue attribuer un indice de risque, appelé indice de risque de la question. Selon le nombre de domaines auquel un réseau est réputé ne pas se conformer au cours de l'inspection et l'importance de ces domaines sur les conséquences administratives, environnementales et sanitaires, un indice d'inspection basé sur le risque est calculé par le ministère pour chaque réseau d'eau potable.

Il est important de souligner qu'un indice d'inspection inférieur à 100 pour cent ne signifie pas nécessairement que l'eau potable du réseau est insalubre. Il indique les domaines du fonctionnement du réseau qui peuvent être améliorés. Pour ce faire, le ministère veille à ce que les propriétaires et les exploitants de réseau d'eau potable sachent ce qu'ils doivent faire pour être conformes.

L'indice d'inspection reflète les résultats d'inspection de ce réseau d'eau potable pour l'année sur laquelle porte le rapport. Depuis que la méthodologie est appliquée systématiquement sur plusieurs années, elle sert de mesure comparative tant à l'échelle provinciale que pour un réseau particulier. Tant le réseau d'eau potable que le public peuvent faire un suivi du rendement au fil du temps, ce qui encourage l'amélioration continue et permet aux réseaux d'identifier les domaines précis qui nécessitent une attention particulière.

Le programme d'inspection annuelle du ministère est un élément important du filet de sécurité qui veille à la qualité de l'eau potable. Le ministère et ses partenaires sont engagés à faire preuve d'excellence et nous continuons à faire des progrès en vue d'atteindre l'objectif de 100 pour cent en matière de conformité réglementaire.

## Déterminer les risques d'atteinte à l'intégrité d'un approvisionnement en eau potable

L'approche en matière de gestion des risques utilisée pour les réseaux d'eau potable résidentiels municipaux est conforme au Cadre de gestion des risques du gouvernement de l'Ontario. La gestion des risques est une méthode systématique pour identifier les dangers potentiels, comprendre la probabilité et les conséquences de ces dangers et prendre des mesures pour réduire les risques si cela s'avère nécessaire et approprié.

Le Cadre de gestion des risques donne une formule qui sert à déterminer les risques :

$$\text{RISQUE} = \text{PROBABILITÉ} \times \text{CONSÉQUENCE}$$

(de la conséquence)

Chaque question réglementaire du protocole d'inspection possède une valeur de probabilité (P) pour une valeur de conséquence assignée (C), comme on le voit dans les **tableaux 1 et 2**.

**TABLEAU 1**

| Probabilité d'occurrence de la conséquence    | Valeur de la probabilité |
|---|--------------------------|
| 0 % à 0,99 % (possible, mais fort improbable) | P = 0                    |
| 1 à 10 % (improbable)                         | P = 1                    |
| 11 à 49 % (possible)                          | P = 2                    |
| 50 à 89 % (probable)                          | P = 3                    |
| 90 à 100 % (presque certaine)                 | P = 4                    |

**TABLEAU 2**

| Conséquence                          | Valeur de la conséquence |
|--------------------------------------|--------------------------|
| Conséquence administrative moyenne   | C = 1                    |
| Conséquence administrative majeure   | C = 2                    |
| Conséquence environnementale mineure | C = 3                    |
| Conséquence sanitaire mineure        | C = 4                    |
| Conséquence environnementale moyenne | C = 5                    |
| Conséquence environnementale majeure | C = 6                    |
| Conséquence sanitaire moyenne        | C = 7                    |
| Conséquence sanitaire majeure        | C = 8                    |

Les valeurs de conséquence (de 0 à 8) sont choisies afin de s'harmoniser avec les autres programmes fondés sur le risque et les projets actuellement en cours d'élaboration ou d'utilisation au sein du ministère, tel qu'illustré dans le **tableau 2**.

L'indice de risque de la question de l'inspection prévue par le règlement provient d'une évaluation de chaque conséquence identifiée et correspond à la probabilité d'occurrence :

- tous les niveaux de conséquence sont évalués relativement à leur potentiel d'occurrence;
- la plus grande parmi toutes les combinaisons est choisie.

L'indice de risque de la question quantifie le risque de non-conformité de chaque question par rapport aux autres. Les questions avec les valeurs les plus élevées sont celles qui ont un impact possiblement plus important sur la salubrité de l'eau potable et une probabilité d'occurrence supérieure. La valeur la plus élevée possible est 32 (4x8) et la plus basse est 0 (0x1).

Le **tableau 3** présente une question type et montre le processus de détermination de l'indice de risque.

| TABLEAU 3  |                                    |                                      |                               |                                      |                                      |                               |                               |
|--|------------------------------------|--------------------------------------|-------------------------------|--------------------------------------|--------------------------------------|-------------------------------|-------------------------------|
| L'exploitant responsable s'assure-t-il que l'équipement et les processus sont contrôlés, inspectés et évalués? |                                    |                                      |                               |                                      |                                      |                               |                               |
| Risque = probabilité × conséquence   |                                    |                                      |                               |                                      |                                      |                               |                               |
| C=1  | C=2                                | C=3                                  | C=4                           | C=5                                  | C=6                                  | C=7                           | C=8                           |
| Conséquence administrative moyenne   | Conséquence administrative majeure | Conséquence environnementale mineure | Conséquence sanitaire mineure | Conséquence environnementale moyenne | Conséquence environnementale majeure | Conséquence sanitaire moyenne | Conséquence sanitaire majeure |
| P=4<br>(presque certaine)  | P=1<br>(improbable)                | P=2<br>(possible)                    | P=3<br>(probable)             | P=3<br>(probable)                    | P=1<br>(improbable)                  | P=3<br>(probable)             | P=2<br>(possible)             |
| <b>R=4</b>   | <b>R=2</b>                         | <b>R=6</b>                           | <b>R=12</b>                   | <b>R=15</b>                          | <b>R=6</b>                           | <b>R=21</b>                   | <b>R=16</b>                   |

## Application de la méthodologie aux résultats d'inspection

Un indice d'inspection global est calculé en fonction des résultats de l'inspection des réseaux d'eau potable résidentiels municipaux. Lors d'une inspection, les inspecteurs répondent aux questions reliées à la conformité réglementaire et inscrivent leurs réponses sous la forme de « oui », « non » ou « sans objet » dans la base de données du système d'information en matière d'eau potable (SIEP) du ministère. Un « non » indique la non-conformité. Le nombre maximal de questions réglementaires posées par un inspecteur varie selon le réseau (relié ou indépendant), le type d'inspection (ciblée ou détaillée) et le type de source (eau souterraine ou eau de surface).

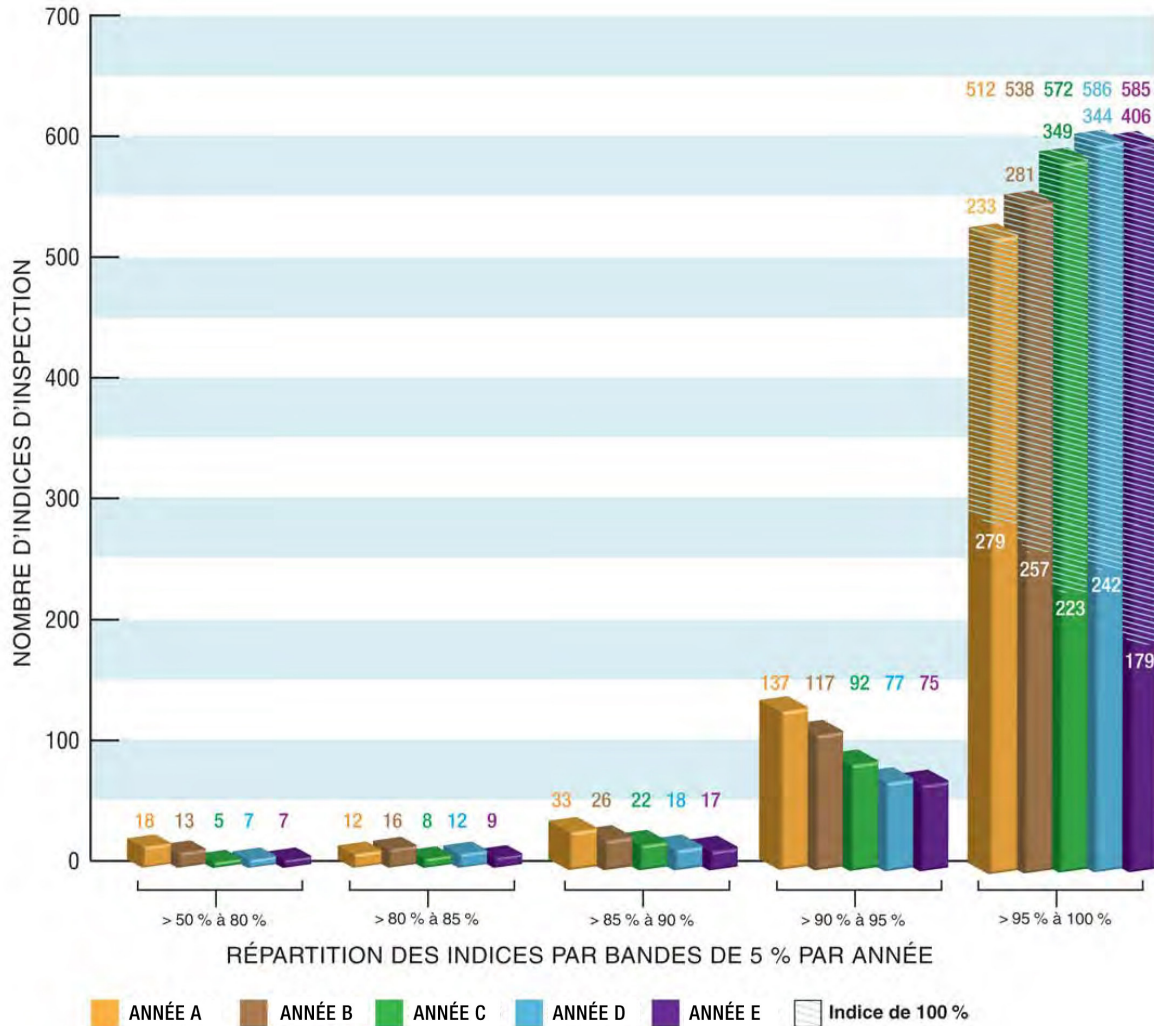
Les indices de risque de toutes les réponses non conformes sont totalisés et divisés par la somme des indices de risque de toutes les questions posées (indice des questions maximal). L'indice de risque d'inspection (en pourcentage) qui en résulte est soustrait de 100 pour cent afin d'obtenir l'indice d'inspection final.

## Application de la méthodologie relative aux rapports publics

Les indices d'inspection totaux de chaque réseau d'eau potable résidentiel municipal sont publiés dans le rapport annuel de l'inspecteur en chef de l'eau potable du ministère.

La **Figure 1** donne la distribution des indices relatifs aux réseaux d'eau potable résidentiels municipaux à partir d'un échantillon d'inspections annuelles. Chaque réseau d'eau potable peut se comparer aux autres réseaux inspectés au cours d'une période donnée.

**Figure 1 : Distribution sur douze mois des indices relatifs aux réseaux d'eau potable résidentiels municipaux**



## Transmission des résultats aux propriétaires et aux exploitants de réseaux d'eau potable résidentiels municipaux

Un sommaire des constatations d'inspection relatives à chaque réseau est généré sous la forme d'un dossier de l'indice d'inspection (DII). Les constatations sont regroupées dans les 14 modules

possibles du protocole d'inspection, ce qui fournit au propriétaire ou à l'exploitant d'un réseau des renseignements sur les domaines qui doivent être améliorés. Les 14 modules sont :

- |                                |   |                                      |   |
|--------------------------------|---|--------------------------------------|---|
| 1. Source                      | 6. Réseau de distribution                                   | 10. Relations avec les consommateurs | 13. Déclarations, avis et mesures correctives |
| 2. Permis de prélèvement d'eau | 7. Manuels d'exploitation                                   | 11. Agrément et formation            | 14. Autres conclusions de l'inspection        |
| 3. Évaluation de la capacité   | 8. Registres  | 12. Contrôle de la qualité de l'eau  |   |
| 4. Procédés de traitement      | 9. Planification des interventions et des mesures d'urgence |                                      |   |
| 5. Procédé pour les eaux usées |   |                                      |   |

Renseignements : [www.ontario.ca/eaupotable](http://www.ontario.ca/eaupotable)