

Ministry of the Environment,  
Conservation & Parks

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

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January 17, 2023

**Sent by Email: Peggy Van Mierlo-West <cao@northernbruce.ca>**

The Municipality of Northern Bruce Peninsula,  
56 Lindsay Rd, RR#2,  
Lion's Head, Ontario,  
N0H 1W0

Attention: Peggy Van Mierlo-West - CAO

Lion's Head Drinking Water System  
Drinking Water Licence 250-101  
Drinking Water Works Permit 250-201

Please find enclosed the Drinking Water System Inspection Report for the Lion's Head Drinking Water System (DWS 220002672). This year's unannounced inspection was conducted on November 2, 2022.

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 on the Drinking Water Ontario website at [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater).

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

Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).

IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspectors' Annual Report. If you have any questions or concerns regarding the rating, please contact John Ritchie, Water Compliance Supervisor, at (519) 377-1058.

Should you have any questions regarding the content of the enclosed report, please do not hesitate to contact me.

Yours truly,



Shayne Finlay  
Water Compliance Inspector  
Phone: 519-270-8955  
e-mail: shayne.finlay@ontario.ca

Enclosure

ec:

Dr. Ian Arra, Medical Officer of Health, Grey-Bruce Health Unit  
John Ritchie, Drinking Water Inspections Program Supervisor  
Carl Seider, Project Manager, Source Water Protection Program  
Karla Young, Process and Compliance Technician, OCWA  
Leo-Paul Frigault, Operations Manager, OCWA  
File SI-BR-NBP -540 (2022)



LION'S HEAD DRINKING WATER SYSTEM  
10 IDA ST, NORTHERN BRUCE PENINSULA, ON, N0H 1W0  
**Inspection Report**

System Number: 220002672  
Entity: THE CORPORATION OF THE  
MUNICIPALITY OF NORTHERN  
BRUCE PENINSULA  
ONTARIO CLEAN WATER  
AGENCY

Inspection Start Date: 11/02/2022  
Inspection End Date: 01/04/2023  
Inspected By: Shayne Finlay  
Badge #: 1285  
Inspected By: John Ritchie  
Badge #: 1157

*Shayne Finlay*  
(signature)

### **NON-COMPLIANCE/NON-CONFORMANCE ITEMS**

This should not be construed as a confirmation of full compliance with all potential applicable legal requirement and 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	MRDW1001001	Question Type	Information
<b>Question:</b> What was the scope of this inspection?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b>			
<p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.</p> <p>This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements. The inspection review period is from the date of the previous inspection December 21, 2021- November 2, 2023.</p>			

Question ID	MRDW1000001	Question Type	Information
<b>Question:</b> Does this drinking water system provide primary disinfection?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b>			
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.			

<b>Question ID</b>	MRDW1018001	<b>Question Type</b>	Legislative
<b>Question:</b> Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b> The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.			

<b>Question ID</b>	MRDW1021001	<b>Question Type</b>	Legislative
<b>Question:</b> Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b> The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.			

<b>Question ID</b>	MRDW1025001	<b>Question Type</b>	Legislative
<b>Question:</b> Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b> All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit.			

<b>Question ID</b>	MRDW1024001	<b>Question Type</b>	Legislative
<b>Question:</b> Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required?			

<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-2   (2);
<b>Observation</b>	
Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined.	

<b>Question ID</b>	MRDW1038001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-5   (1)1-4;		
<b>Observation</b>			
Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format.			

<b>Question ID</b>	MRDW1035001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-5   (1)1-4; SDWA   O. Reg. 170/03   6-5   (1)5-10;		
<b>Observation</b>			
Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.			
The OA reviews the SCADA reports daily. They also sign, date, document any findings. When the system has abnormal operating conditions the OA reviews, documents their finding on the printed trends which are attached to the daily SCADA report.			

<b>Question ID</b>	MRDW1037001	<b>Question Type</b>	Legislative
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<b>Question:</b>	
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?	
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-5   (1)1-4; SDWA   O. Reg. 170/03   6-5   (1)5-10; SDWA   O. Reg. 170/03   6-5   (1.1);
<b>Observation</b>	
All continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or Municipal Drinking Water Licence or Drinking Water Works Permit or order, were equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6.	
The Lion's Head water treatment plant is equipped with continuous analyzers and alarms for free chlorine and turbidity. The alarm set points for Treated Water chlorine analyzer is Low 0.80 mg/L and Low, Low 0.75 mg/L. If Low, Low level is reached, the Pall Filtration system locks out to mitigate risk on not achieving minimum CT requirement.	
The distribution water chlorine analyzer has two set points which it alarms out at low 0.60 mg/L and Low, Low 0.50 mg/L. The analyzer will stay in alarm until the chlorine residual is above 0.6 mg/L.	
The turbidity set points on the two Pall filter trains is High 0.08 NTU and High, High 0.10 NTU. Should the system be in alarm for more than 5 minutes an alarm sequence is triggered and the Pall skids are locked out, ceasing water production and preventing any adverse conditions.	

<b>Question ID</b>	MRDW1040000	<b>Question Type</b>	Legislative
<b>Question:</b>			
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-5   (1)1-4; SDWA   O. Reg. 170/03   6-5   (1)5-10;		
<b>Observation</b>			
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.			

<b>Question ID</b>	MRDW1108001	<b>Question Type</b>	Legislative
<b>Question:</b>			

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

<b>Question ID</b>	MRDW1033001	<b>Question Type</b>	Legislative
<b>Question:</b> Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-2   (3); SDWA   O. Reg. 170/03   7-2   (4);		
<b>Observation</b>			
The secondary disinfectant residual was measured as required for the large municipal residential distribution system.			

<b>Question ID</b>	MRDW1099001	<b>Question Type</b>	Information
<b>Question:</b> Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b>			
Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03).			

<b>Question ID</b>	MRDW1081001	<b>Question Type</b>	Legislative
<b>Question:</b>			

For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?	
<b>Legislative Requirement</b>	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>Observation</b>	
<p>All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.</p> <p>The owner of a large municipal residential drinking water system shall ensure that if the system serves a population of 100,000 or less, at least 8 distribution samples plus one for every thousand people served by the system are taken every month. At least one of the samples must be taken each week. As Lion's Head population is under 1000 residents, eight samples must be collected monthly as a minimum requirement from the distribution system. These samples are required to be tested for E.Coli. and total coliform; and at least 25 percent of the samples are required to be tested for general bacteria populations expressed as colony counts on a heterotrophic plate count.</p> <p>A review of the data provided by the OA indicates that the OA is routinely collecting two distribution samples each week in order to comply with the regulatory requirement. Each of those samples were tested for E.Coli., total coliform, and approximately half of the samples were tested for general bacteria populations expressed as colony counts on a heterotrophic plate count.</p>	

<b>Question ID</b>	MRDW1096001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-3   (1);		
<b>Observation</b>			
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.			

<b>Question ID</b>	MRDW1086001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   13-6.1   (1); SDWA   O. Reg. 170/03   13-6.1   (2); SDWA   O. Reg. 170/03   13-6.1   (3);		

	SDWA   O. Reg. 170/03   13-6.1   (4); SDWA   O. Reg. 170/03   13-6.1   (5); SDWA   O. Reg. 170/03   13-6.1   (6);
<b>Observation</b>	
<p>All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.</p> <p>Section 13-6.1 (1) of Schedule 13, O. Reg. 170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the drinking water system's distribution system that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Haloacetic Acids (HAA), and tested for HAAs.</p> <p>Section 6-1.1 of Schedule 6, O. Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three-month period. The standard for Haloacetic Acids came into effect on January 1, 2020. It will be expressed as a Running Annual Average (RAA), where the RAA is defined as the average for quarterly HAA results for a drinking water system. HAA's will generally form at the beginning of the distribution system.</p> <p>Sampling occurred January 4,2022 April 4, 2022, July 5 ,2022 and October 3, 2022.</p>	

<b>Question ID</b>	MRDW1087001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?			
<b>Legislative Requirement</b>	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);		
<b>Observation</b>			
<p>All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.</p> <p>Section 13-6 of Schedule 13, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the drinking water system's distribution system, or in plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Trihalomethanes (THMs), and tested for THMs. Section 6-1.1 of Schedule 6, Reg. 170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three-month period.</p> <p>Sampling occurred January 4,2022 April 4, 2022, July 5 ,2022 and October 3, 2022.</p>			

<b>Question ID</b>	MRDW1094001	<b>Question Type</b>	Legislative
<b>Question:</b> Are all water quality monitoring requirements imposed by the MDWL and DWWP being met?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b>			
All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.			

<b>Question ID</b>	MRDW1113000	<b>Question Type</b>	Legislative
<b>Question:</b> Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   10.1   (3);		
<b>Observation</b>			
All changes to the system registration information were provided within ten (10) days of the change.			

<b>Question ID</b>	MRDW1059000	<b>Question Type</b>	Legislative
<b>Question:</b> Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   28;		
<b>Observation</b>			
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.			

<b>Question ID</b>	MRDW1060000	<b>Question Type</b>	Legislative
<b>Question:</b> Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
<b>Legislative Requirement</b>	SDWA   31   (1);		

<b>Observation</b>
The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA. As per Condition 16, Schedule B of the Licence # 250-101 prescribes that an up-to-date operations and maintenance manual or manuals is maintained and applicable parts of the manual or manuals are made available for reference by all persons responsible for all or part of the operation or maintenance of the drinking water system; this requirement has been met.

<b>Question ID</b>	MRDW1061001	<b>Question Type</b>	Legislative
<b>Question:</b> Are logbooks properly maintained and contain the required information?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   27   (1); SDWA   O. Reg. 128/04   27   (2); SDWA   O. Reg. 128/04   27   (3); SDWA   O. Reg. 128/04   27   (4); SDWA   O. Reg. 128/04   27   (5); SDWA   O. Reg. 128/04   27   (6); SDWA   O. Reg. 128/04   27   (7);		
<b>Observation</b>			
Logbooks were properly maintained and contained the required information.			

<b>Question ID</b>	MRDW1062001	<b>Question Type</b>	Legislative
<b>Question:</b> Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-5;		
<b>Observation</b>			
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.			

<b>Question ID</b>	MRDW1071000	<b>Question Type</b>	BMP
<b>Question:</b> Has the owner provided security measures to protect components of the drinking water system?			
<b>Legislative Requirement</b>	Not Applicable		

<b>Observation</b>
The owner had provided security measures to protect components of the drinking water system.

<b>Question ID</b>	MRDW1073001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   23   (1);		
<b>Observation</b>			
The overall responsible operator had been designated for each subsystem.			
James Learn is the designated overall responsible operator for the Lion's Head drinking water system.			

<b>Question ID</b>	MRDW1074001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   25   (1);		
<b>Observation</b>			
Operators-in-charge had been designated for all subsystems which comprise the drinking water system.			

<b>Question ID</b>	MRDW1075001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Do all operators possess the required certification?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   22;		
<b>Observation</b>			
All operators possessed the required certification.			

<b>Question ID</b>	MRDW1076001	<b>Question Type</b>	Legislative
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<b>Question:</b> Do only certified operators make adjustments to the treatment equipment?	
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-2   (2);
<b>Observation</b> Only certified operators made adjustments to the treatment equipment.	

<b>Question ID</b>	MRDW1011001	<b>Question Type</b>	BMP
<b>Question:</b> Does the owner have a harmful algal bloom monitoring plan in place?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b> The owner had a harmful algal bloom monitoring plan in place.			

<b>Question ID</b>	MRDW1012001	<b>Question Type</b>	Legislative
<b>Question:</b> Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b> The owner had a harmful algal bloom monitoring plan in place.			

<b>Question ID</b>	MRDW1014001	<b>Question Type</b>	Legislative
<b>Question:</b> Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b> There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA.			

<b>Question ID</b>	MRDW1016001	<b>Question Type</b>	Legislative
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<b>Question:</b>	
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?	
<b>Legislative Requirement</b>	SDWA   31   (1);
<b>Observation</b>	
The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA.	
Lion's Head Drinking Water System has the following control documents in place: -Municipal Drinking Water Licence Number: 250-101 with a rated capacity of 1351 m3/d. -Drinking Water Works Permit 250-201. -The Permit to Take Water (PTTW ) 0002-BDCRL5 stipulates a maximum daily limit of 1831 m3/day expiring June 23, 2029.	

<b>Question ID</b>	MRDW1023001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-2   (2);		
<b>Observation</b>			
Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers.			
The Inactivation of Viruses and Giardia by Free Chlorine is achieved when the OA maintains a minimum Free Chlorine Concentration of 0.32 mg/L which is required to meet primary disinfection with a minimum clear well volume of 291.5 m3 (25%) as per the system's CT document dated May 1, 2012 provided by the OA.			
Records reviewed indicate that the Lion's Head Water Treatment Plant was operated to achieve the necessary CT requirements and filter performance criteria for primary disinfection purposes during the inspection cycle.			

<b>Question ID</b>	MRDW1026001	<b>Question Type</b>	Legislative
<b>Question:</b> If primary disinfection equipment that does not use chlorination or chloramination is provided, is the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-6   (1);		
<b>Observation</b>			
The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of O. Reg. 170/03.			

<b>Question ID</b>	MRDW1030000	<b>Question Type</b>	Legislative
<b>Question:</b> Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-2   (1); SDWA   O. Reg. 170/03   7-2   (2);		
<b>Observation</b>			
Primary disinfection chlorine monitoring was conducted at a location approved by Municipal Drinking Water Licence and/or Drinking Water Works Permit issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved. The plant discharge free chlorine analyzer is used for monitoring CT. The Chlorine Contact Tank Free Chlorine analyzer is used for alarming purposes in order to be able to maintain the required residuals at the end of the disinfection process due to the long retention time.			

<b>Question ID</b>	MRDW1032001	<b>Question Type</b>	Legislative
<b>Question:</b> If the drinking water system obtains water from a surface water source and provides filtration, is continuous monitoring of each filter effluent line being performed for turbidity?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-3   (2);		
<b>Observation</b>			
Continuous monitoring of each filter effluent line was being performed for turbidity. For large municipal residential systems that use surface water or GUDI as the source and are required to provide filtration, Reg.170/03, Schedule 7 section 7(3)(2) requires continuous monitoring equipment of each filter effluent line. Lion's Head WTP has 2 Pall Membrane Filtration Skids each with a filtered effluent turbidity analyzers.			

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<b>Question ID</b>	MRDW1039000	<b>Question Type</b>	Legislative
<b>Question:</b>			
If primary disinfection equipment that does not use chlorination or chloramination is provided, has the owner and operating authority ensured that the equipment has a recording device that continuously records the performance of the disinfection equipment?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-6   (3);		
<b>Observation</b>			
The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.			

<b>Question ID</b>	MRDW1109001	<b>Question Type</b>	Legislative
<b>Question:</b>			
If the system uses equipment for primary disinfection other than chlorination or chloramination and the equipment has malfunctioned, lost power or ceased to provide the appropriate level of disinfection, causing an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-6   (1);		
<b>Observation</b>			
When failure(s) of primary disinfection equipment, other than that used for chlorination or chloramination, caused an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.			

<b>Question ID</b>	MRDW1083001	<b>Question Type</b>	Legislative
<b>Question:</b>			
For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   10-3;		
<b>Observation</b>			
All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met.			

<b>Question ID</b>	MRDW1084001	<b>Question Type</b>	Legislative
<b>Question:</b> Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   13-2;		
<b>Observation</b>			
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
Sampling and testing for inorganic parameters has been conducted for the Lion's Head drinking water system in accordance with Schedule 13-2 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in Schedule 23; this requirement has been met. The most recent samples were collected on January 17, 2022 and there were no concerns identified from the results.			

<b>Question ID</b>	MRDW1088000	<b>Question Type</b>	Legislative
<b>Question:</b> Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   13-7;		
<b>Observation</b>			
All nitrate/nitrite water quality monitoring requirements prescribed by legislation were conducted within the required frequency for the DWS.			
Section 13-7 of Schedule 13, O. Reg. 170/03 requires the Owner and Operating authority to ensure that at least one water sample is taken every three months and tested for nitrates and nitrites. Section 6-1.1 of Schedule 6, O. Reg. 170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period.			
. Sampling occurred January 4, 2022 April 4, 2022, July 5, 2022 and October 3, 2022.			

<b>Question ID</b>	MRDW1089000	<b>Question Type</b>	Legislative
<b>Question:</b> Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   13-8;		

<b>Observation</b>
All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.
Section 13-8 of Schedule 13, O.Reg.170/03 requires that the Owner and the Operating Authority ensure that a treated water sample is taken every 60 months and is tested for sodium. Records provided by the OA and reviewed during the inspection, indicate that the OA conducted sampling for sodium on January 8, 2018 and achieved a result of 6.72 mg/L.

<b>Question ID</b>	MRDW1090000	<b>Question Type</b>	Legislative
<b>Question:</b>			
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   13-9;		
<b>Observation</b>			
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Fluoride sampling is required every sixty (60) months. The most current fluoride sample date was on January 8, 2018.			

<b>Question ID</b>	MRDW1085001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
<b>Legislative Requirement</b>	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>Observation</b>			
All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.			
Sampling and testing for organic parameters has been conducted for the Lion's Head drinking water system in accordance with Schedule 13-4 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in schedule 24; this requirement has been met. The most recent samples were collected on January 17, 2022 and there were no concerns identified from the results.			





**Ontario**

**Ministry of the Environment and Climate Change  
Drinking Water Inspection Report**

## **APPENDIX A**

### **REFERENCE GUIDE FOR STAKEHOLDERS**

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

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

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Public Information Centre if you need assistance or have questions at 1-800-565-4923/416-325-4000 or [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca).

For more information on Ontario's drinking water visit [www.ontario.ca/drinkingwater](http://www.ontario.ca/drinkingwater) and email [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) to subscribe to drinking water news.



PUBLICATION TITLE	PUBLICATION NUMBER
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	7889e01
FORMS: Drinking Water System Profile Information, Laboratory Services Notification, Adverse Test Result Notification Form	7419e, 5387e, 4444e
Procedure for Disinfection of Drinking Water in Ontario	4448e01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	7152e
Total Trihalomethane (TTHM) Reporting Requirements Technical Bulletin (February 2011)	8215e
Filtration Processes Technical Bulletin	7467
Ultraviolet Disinfection Technical Bulletin	7685
Guide for Applying for Drinking Water Works Permit Amendments, Licence Amendments, Licence Renewals and New System Applications	7014e01
Certification Guide for Operators and Water Quality Analysts	
Guide to Drinking Water Operator Training Requirements	9802e
Taking Samples for the Community Lead Testing Program	6560e01
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	7423e
Guide: Requesting Regulatory Relief from Lead Sampling Requirements	6610
Drinking Water System Contact List	7128e
Technical Support Document for Ontario Drinking Water Quality Standards	4449e01

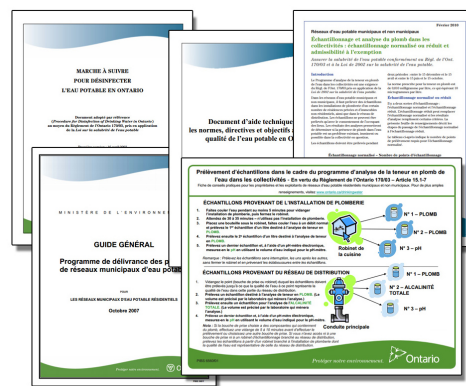
[ontario.ca/drinkingwater](http://ontario.ca/drinkingwater)



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

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment.

Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le Centre d'information au public au 1 800 565-4923 ou au 416 325-4000, ou encore à [picemail.moe@ontario.ca](mailto:picemail.moe@ontario.ca) si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site [www.ontario.ca/eaupotable](http://www.ontario.ca/eaupotable) ou envoyez un courriel à [drinking.water@ontario.ca](mailto:drinking.water@ontario.ca) pour suivre l'information sur l'eau potable.

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Prendre soin de votre eau potable – Un guide destiné aux membres des conseils municipaux	7889f01
Renseignements sur le profil du réseau d'eau potable, Avis de demande de services de laboratoire, Formulaire de communication de résultats d'analyse insatisfaisants et du règlement des problèmes	7419f, 5387f, 4444f
Marche à suivre pour désinfecter l'eau potable en Ontario	4448f01
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids (en anglais seulement)	7152e
Total Trihalomethane (TTHM) Reporting Requirements: Technical Bulletin (février 2011) (en anglais seulement)	8215e
Filtration Processes Technical Bulletin (en anglais seulement)	7467
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	7685
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable, de modification du permis de réseau municipal d'eau potable, de renouvellement du permis de réseau municipal d'eau potable et de permis pour un nouveau réseau	7014f01
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	
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802f
Prélèvement d'échantillons dans le cadre du programme d'analyse de la teneur en plomb de l'eau dans les collectivités	6560f01
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	7423f
Guide: Requesting Regulatory Relief from Lead Sampling Requirements (en anglais seulement)	6610
Liste des personnes-ressources du réseau d'eau potable	7128f
Document d'aide technique pour les normes, directives et objectifs associés à la qualité de l'eau potable en Ontario	4449f01

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