

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

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

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January 11, 2024

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 announced inspection was conducted on November 23, 2023.

Two sections of the report, namely "Actions Required" and "Recommended Actions", specify due dates for the submission of information or plans to my attention.

Please note that "Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, orders or instructions; "Recommended Actions" convey information that the owner or operating authority should consider implementing in order to conform with existing and emerging industry standards.

The report includes an Inspection Summary Rating Record as an appendix. This record forms part of the ministry's comprehensive, risk-based inspection process. The rating provides a quantitative measure of the inspection results for this specific drinking water system for the reporting year. An inspection rating that is less than 100 per cent does not mean that the drinking water from the system is unsafe. The primary goals of this assessment are to encourage ongoing improvement of drinking water systems and to measure this progress from year to year.

I would like to remind you that Section 19 of the Safe Drinking Water Act, 2002 (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems, including members of municipal councils. "Taking Care of Your

Drinking Water: A guide for members of municipal council”, a publication found on the [Drinking Water Ontario website](https://www.ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils) (https://www.ontario.ca/page/taking-care-your-drinking-water-guide-members-municipal-councils), provides further information about these obligations.

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

Yours truly,

Shayne Finlay

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 (2023)



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: November 23, 2023
Inspection End Date: December 22, 2023
Inspected By: Shayne Finlay
Badge #: 1285
Inspected By: John Ritchie
Badge #: 1157

Shayne Finlay

(signature)

NON-COMPLIANCE

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

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

| Item | Question | Compliance Response/Corrective Action(s) |
|------|--|---|
| NC-1 | <p>Question ID: DWMR1033000</p> <p>Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?</p> | <p>The secondary disinfectant residual was not measured as required for the large municipal residential distribution system.</p> <p>Subsections 7-2 (3) of Schedule 7, O. Reg. 170/03 requires the Owner and Operating Authority (OA) of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution system samples are taken each week and tested immediately for free chlorine residual. Where secondary disinfection monitoring is not being done on a daily basis. Subsection 7- 2(4) of Schedule 7. O. Reg. 170/03 requires that at least four of the seven required tests be taken on one day of the week at least 48 hours after the last samples were taken the week previous, while the remaining three tests are required to be collected within the same week and at least 48 hours after the initial four.</p> <p>Records provided by the OA and reviewed during the inspection indicate that they did not comply with these requirements. The owner routinely takes daily chlorine residuals, however the OA failed to sample on November 17, 2023.</p> <p>From herein, the owner/operating authority must ensure the secondary disinfection residual is measured as required by O.Reg.170/03 7-2 (3). Compliance with this requirement will be assessed during the next inspection period.</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 | DWMR1001000 | Question Type | Information |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): Not Applicable | | | |
| Question: What was the scope of this inspection? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): <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.</p> <p>The inspection review period is from the date of the previous inspection November 2, 2022- November 23, 2023.</p> | | | |

| Question ID | DWMR1000000 | Question Type | Information |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): Not Applicable | | | |
| Question: Does this drinking water system provide primary disinfection? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): This drinking water system provides for both primary and secondary disinfection and distribution of water. | | | |

| Question ID | DWMR1011000 | Question Type | BMP |
|--|-------------|---------------|-----|
| Legislative Requirement(s): Not Applicable | | | |

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|---|
| <p>Question: Does the owner have a harmful algal bloom monitoring plan in place?</p> |
| <p>Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had a harmful algal bloom monitoring plan in place.</p> |

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1012000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had a harmful algal bloom monitoring plan in place. | | | |

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1014000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): There was sufficient monitoring of flow as required by the Municipal Drinking Water Licence or Drinking Water Works Permit issued under Part V of the SDWA. | | | |

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1016000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA. | | | |
| 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.
The OA met these conditions.

| Question ID | DWMR1018000 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. | | | |

| Question ID | DWMR1025000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit. | | | |

| Question ID | DWMR1023000 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2); | | | |
| Question: Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers. 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.

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|--|-------------|----------------------|-------------|
| Question ID | DWMR1026000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-6 (1); | | | |
| Question: If primary disinfection equipment that does not use chlorination or chloramination is provided, is the equipment equipped with alarms or shut-off mechanisms that satisfy the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of O. Reg. 170/03. | | | |

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1024000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2); | | | |
| Question: Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Records confirmed that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined. | | | |

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|--|-------------|----------------------|-------------|
| Question ID | DWMR1033000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (3); SDWA O. Reg. 170/03 7-2 (4); | | | |
| Question: Is the secondary disinfectant residual measured as required for the large municipal residential distribution system? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |

The secondary disinfectant residual was not measured as required for the large municipal residential distribution system.

Subsections 7-2 (3) of Schedule 7, O. Reg. 170/03 requires the Owner and Operating Authority (OA) of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution system samples are taken each week and tested immediately for free chlorine residual. Where secondary disinfection monitoring is not being done on a daily basis. Subsection 7- 2(4) of Schedule 7. O. Reg. 170/03 requires that at least four of the seven required tests be taken on one day of the week at least 48 hours after the last samples were taken the week previous, while the remaining three tests are required to be collected within the same week and at least 48 hours after the initial four.

Records provided by the OA and reviewed during the inspection indicate that they did not comply with these requirements. The owner routinely takes daily chlorine residuals, however the OA failed to sample on November 17, 2023.

From herein, the owner/operating authority must ensure the secondary disinfection residual is measured as required by O.Reg.170/03 7-2 (3). Compliance with this requirement will be assessed during the next inspection period.

| Question ID | DWMR1030000 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 7-2 (1); SDWA O. Reg. 170/03 7-2 (2); | | | |
| Question: 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? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): 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. | | | |

| Question ID | DWMR1032000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 7-3 (2); | | | |
| Question: 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? | | | |

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

Continuous monitoring of each filter effluent line was being performed for turbidity.

Lion's Head WTP has 2 Pall Membrane Filtration Skids each with a filtered effluent turbidity analyzers.

| Question ID | DWMR1035000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; | | | |
| Question: | | | |
| Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |
| Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test. | | | |
| The 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. | | | |

| Question ID | DWMR1038000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 6-5 (1)1-4; | | | |
| Question: | | | |
| Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |
| Continuous monitoring equipment that was being utilized to fulfill O. Reg. 170/03 requirements was performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format. | | | |

| Question ID | DWMR1037000 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1); | | | |
| Question: | | | |
| Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6? | | | |

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

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

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.

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|---|--------------|----------------------|-------------|
| Question ID | DWWMR1040000 | Question Type | Legislative |
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; | | | |
| Question: | | | |
| Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |
| All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. | | | |

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|--|--------------|----------------------|-------------|
| Question ID | DWWMR1108000 | Question Type | Legislative |
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10; SDWA O. Reg. 170/03 6-5 (1.1); | | | |
| Question: | | | |
| Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |
| Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions. | | | |

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|--|--------------|----------------------|-------------|
| Question ID | DWMMR1039000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-6 (3); | | | |
| Question: If primary disinfection equipment that does not use chlorination or chloramination is provided, has the owner and operating authority ensured that the equipment has a recording device that continuously records the performance of the disinfection equipment? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment. | | | |

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|--|--------------|----------------------|-------------|
| Question ID | DWMMR1109000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-6 (1); | | | |
| Question: If the system uses equipment for primary disinfection other than chlorination or chloramination and the equipment has malfunctioned, lost power or ceased to provide the appropriate level of disinfection, causing an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): When failure(s) of primary disinfection equipment, other than that used for chlorination or chloramination, caused an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions. | | | |

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|---|--------------|----------------------|-------------|
| Question ID | DWMMR1099000 | Question Type | Information |
| Legislative Requirement(s): Not Applicable | | | |
| Question: Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03)? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03). | | | |

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|------------------------------------|--------------|----------------------|-------------|
| Question ID | DWMMR1081000 | Question Type | Legislative |
| Legislative Requirement(s): | | | |

SDWA | O. Reg. 170/03 | 10-2 | (1); SDWA | O. Reg. 170/03 | 10-2 | (2); SDWA | O. Reg. 170/03 | 10-2 | (3);

Question:

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

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

All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met.

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.

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.

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1083000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 10-3; | | | |
| Question: For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met. | | | |

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|--|-------------|----------------------|-------------|
| Question ID | DWMR1096000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 6-3 (1); | | | |
| Question: Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |

Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.

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|--|-------------|----------------------|-------------|
| Question ID | DWMR1084000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 13-2; | | | |
| Question: Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. 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 16, 2023 and there were no concerns identified from the results. | | | |

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|--|-------------|----------------------|-------------|
| Question ID | DWMR1085000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 13-4 (1); SDWA O. Reg. 170/03 13-4 (2); SDWA O. Reg. 170/03 13-4 (3); | | | |
| Question: Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. 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 16, 2023 and there were no concerns identified from the results. | | | |

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|---|-------------|----------------------|-------------|
| Question ID | DWMR1086000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 13-6.1 (1); SDWA O. Reg. 170/03 13-6.1 (2); SDWA O. Reg. 170/03 13-6.1 (3); SDWA O. Reg. 170/03 13-6.1 (4); SDWA O. Reg. 170/03 13-6.1 (5); SDWA O. Reg. 170/03 13-6.1 (6); | | | |

Question:

Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?

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

All haloacetic acid water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location.

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.

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.

Sampling occurred January 3, 2023 April 4, 2023, July 4 ,2023 and October 3, 2023.

| Question ID | DWMR1087000 | Question Type | Legislative |
|---|-------------|---------------|-------------|
| Legislative Requirement(s): | | | |
| SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6); | | | |
| Question: | | | |
| Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): | | | |
| All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location. | | | |
| Section 13-6 of Schedule 13, 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. | | | |
| Sampling occurred January 3, 2023 April 4, 2023, July 4 ,2023 and October 3, 2023. | | | |

| Question ID | DWMR1088000 | Question Type | Legislative |
|------------------------------------|-------------|---------------|-------------|
| Legislative Requirement(s): | | | |

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

Question:

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

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

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

Section 13-7 of Schedule 13, 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 3, 2023 April 4, 2023, July 4 ,2023 and October 3, 2023.

| Question ID | DWMR1089000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 13-8; | | | |
| Question: Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency. | | | |
| Section 13-8 of Schedule 13, 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 9, 2023 and achieved a result of 6.03 mg/L. | | | |

| Question ID | DWMR1090000 | Question Type | Legislative |
|--|-------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 13-9; | | | |
| Question: Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. | | | |
| 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 9, 2023 achieved a result of 0.06 mg/L.

| | | | |
|--|-------------|----------------------|-------------|
| Question ID | DWMR1113000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 10.1 (3); | | | |
| Question: Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All changes to the system registration information were provided within ten (10) days of the change. | | | |

| | | | |
|--|-------------|----------------------|-------------|
| Question ID | DWMR1059000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 128/04 28; | | | |
| Question: Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system. | | | |

| | | | |
|--|-------------|----------------------|-------------|
| Question ID | DWMR1060000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA 31 (1); | | | |
| Question: Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA. 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. | | | |

| | | | |
|--------------------|-------------|----------------------|-------------|
| Question ID | DWMR1061000 | Question Type | Legislative |
|--------------------|-------------|----------------------|-------------|

Legislative Requirement(s):

SDWA | O. Reg. 128/04 | 27 | (1); SDWA | O. Reg. 128/04 | 27 | (2); SDWA | O. Reg. 128/04 | 27 | (3); SDWA | O. Reg. 128/04 | 27 | (4); SDWA | O. Reg. 128/04 | 27 | (5); SDWA | O. Reg. 128/04 | 27 | (6); SDWA | O. Reg. 128/04 | 27 | (7);

Question:

Are logbooks properly maintained and contain the required information?

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

Logbooks were properly maintained and contained the required information.

| Question ID | DWMMR1062000 | Question Type | Legislative |
|--|--------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 170/03 7-5; | | | |
| Question: Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5. | | | |

| Question ID | DWMMR1071000 | Question Type | BMP |
|--|--------------|---------------|-----|
| Legislative Requirement(s): Not Applicable | | | |
| Question: Has the owner provided security measures to protect components of the drinking water system? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The owner had provided security measures to protect components of the drinking water system. | | | |

| Question ID | DWMMR1073000 | Question Type | Legislative |
|--|--------------|---------------|-------------|
| Legislative Requirement(s): SDWA O. Reg. 128/04 23 (1); | | | |
| Question: Has the overall responsible operator been designated for all subsystems which comprise the drinking water system? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): The overall responsible operator had been designated for each subsystem. | | | |

James Learn is the designated overall responsible operator for the Lion's Head drinking water system.

| | | | |
|--|-------------|----------------------|-------------|
| Question ID | DWMR1074000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 128/04 25 (1); | | | |
| Question: Have operators-in-charge been designated for all subsystems which comprise the drinking water system? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Operators-in-charge had been designated for all subsystems which comprise the drinking water system. | | | |

| | | | |
|---|-------------|----------------------|-------------|
| Question ID | DWMR1075000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 128/04 22; | | | |
| Question: Do all operators possess the required certification? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): All operators possessed the required certification. | | | |

| | | | |
|---|-------------|----------------------|-------------|
| Question ID | DWMR1076000 | Question Type | Legislative |
| Legislative Requirement(s): SDWA O. Reg. 170/03 1-2 (2); | | | |
| Question: Do only certified operators make adjustments to the treatment equipment? | | | |
| Compliance Response(s)/Corrective Action(s)/Observation(s): Only certified operators made adjustments to the treatment equipment. | | | |



Ontario

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

APPENDIX A

INSPECTION SUMMARY RATING RECORD

Ministry of the Environment, Conservation and Parks - Inspection Summary Rating Record (Reporting Year - 2023-24)

DWS Name: LION'S HEAD DRINKING WATER SYSTEM
DWS Number: 220002672
DWS Owner: THE CORPORATION OF THE MUNICIPALITY OF NORTHERN BRUCE PENINSULA
Municipal Location: NORTHERN BRUCE PENINSULA

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Nov-23-2023
Ministry Office: Owen Sound District Office

Maximum Risk Rating: 511

| Inspection Module | Non Compliance Risk (X out of Y) |
|--------------------------------|----------------------------------|
| Capacity Assessment | 0/30 |
| Certification and Training | 0/42 |
| Logbooks | 0/18 |
| Operations Manuals | 0/28 |
| Reporting & Corrective Actions | 0/46 |
| Source | 0/0 |
| Treatment Processes | 21/235 |
| Water Quality Monitoring | 0/112 |
| Overall - Calculated | 21/511 |

Inspection Risk Rating: 4.11%

Final Inspection Rating: 95.89%

Ministry of the Environment, Conservation and Parks - Detailed Inspection Rating Record (Reporting Year - 2023-24)

DWS Name: LION'S HEAD DRINKING WATER SYSTEM
DWS Number: 220002672
DWS Owner Name: THE CORPORATION OF THE MUNICIPALITY OF NORTHERN BRUCE PENINSULA
Municipal Location: NORTHERN BRUCE PENINSULA

Regulation: O.REG. 170/03
DWS Category: DW Municipal Residential
Type of Inspection: Focused
Inspection Date: Nov-23-2023
Ministry Office: Owen Sound District Office

| Non-Compliance Question(s) | Non Compliance Risk |
|--|---------------------|
| Treatment Processes | |
| Is the secondary disinfectant residual measured as required for the large municipal residential distribution system? | 21 |
| Overall - Total | 21 |

Maximum Question Rating: 511

Inspection Risk Rating: 4.11%

FINAL INSPECTION RATING: 95.89%



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

APPENDIX B

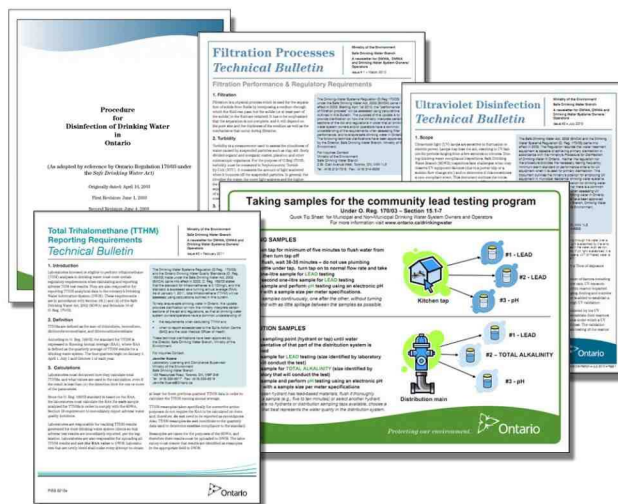
REFERENCE GUIDE FOR STAKEHOLDERS

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.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater and email 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

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 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 ou envoyez un courriel à 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