

2023 SECTION 22 SUMMARY REPORT

LION'S HEAD
DRINKING WATER SYSTEM



For the period of:
JANUARY 1, 2023 TO DECEMBER 31, 2023

Prepared for the Township of Northern Bruce Peninsula by the Ontario Clean Water Agency

This report was prepared in accordance with the requirements of [O.Reg 170/03, Schedule 22, Summary Reports for Municipalities](#) for the following system and reporting period:

Drinking-Water System Number:	220002672
Drinking-Water System Name:	Lion’s Head Drinking Water System
Drinking-Water System Owner:	Municipality of Northern Bruce Peninsula
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2023 – December 31, 2023

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on November 23, 2023 for the period covering November 2, 2022 to November 23, 2023. On January 11, 2024 the Inspection Report was issued and an inspection rating of 95.89% was received.

The following is a summary of non-compliances noted in the MECP Inspection Report, as well as the duration and the measures that were taken to correct the non-compliance. If any self-reported non-compliances were included in the inspection report, they will be noted in Table 1.

Table 1. Non-Compliances and Corrective Actions noted in the 2022/2023 MECP Inspection Report

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
<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.</p> <p>The secondary disinfectant residual was not measured as required for the large municipal residential distribution system. The owner routinely takes daily chlorine residuals, however the OA failed to sample on November 17, 2023.</p>	N/A	<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).</p> <p>Compliance with this requirement will be assessed during the next inspection period.</p>

The following table (Table 2) is a summary of any incidents that the Operating Authority interpreted as instances where any requirements of the Act, the regulations, the system’s approval, drinking water works permit (DWWP), municipal drinking water licence (MDWL), and

any orders applicable were not met. The Operating Authority reported the following incidents to the MECP and confirmation of whether the incidents are considered non-compliances are noted in the MECP Inspection Report and included in Table 1.

Table 2. Self-Reported Incidents and Corrective Actions for the Reporting Period

Incident	Duration	Corrective Actions
N/A	N/A	N/A

For information on any Adverse Water Quality Incident(s) that may have occurred during the reporting period, please refer to the Lion’s Head Drinking Water System Annual Report (Section 11).

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables summarize the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows as well as a comparison to the rated capacity and flow rates approved in the system’s approval, DWWP or MDWL.

As required by the MDWL, regulatory flow measuring devices are checked/verified and where necessary, calibrated. These checks/verifications/calibrations are performed annually by a third party to ensure the flow measuring devices are within acceptable deviation limits.

2.1 Treated Water

Municipal Drinking Water License (MDWL):	250-101 (Issue Number: 4)
Allowable Rated Capacity:	1,351 m ³ /day
Allowable Flowrate into Treatment System:	N/A

As per the MDWL, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the listed rated capacity. However, the MDWL allows a system to be operated temporarily at a maximum daily volume and/or a maximum flowrate above the values set out in the MDWL for the purposes of fighting a large fire or for the maintenance of the drinking water system.

Table 3. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity Total Volume for 2023

Treated Water Flow					
Timeframe	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity	Total Volume (m ³)
January	426	31.5%	509	37.7%	13,201
February	424	31.4%	451	33.4%	11,882
March	422	31.2%	440	32.6%	13,073
April	383	28.3%	450	33.3%	11,490
May	375	27.8%	409	30.3%	11,639
June	412	30.5%	443	32.8%	12,366
July	411	30.4%	471	34.9%	12,741
August	409	30.3%	457	33.8%	12,676
September	406	30.1%	470	34.8%	12,194
October	398	29.5%	440	32.6%	12,333
November	368	27.2%	386	28.6%	11,035
December	383	28.3%	420	31.1%	11,871
2023	401	29.7%	509	37.7%	146,501

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL, for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for 2023

Treated Water Flowrate		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	4.93	33.32
February	4.91	20.26
March	4.89	20.32
April	4.43	14.54
May	4.35	41.24
June	4.77	14.51
July	4.89	18.72
August	4.87	18.14
September	4.84	15.97
October	4.74	41.68
November	4.37	14.49
December	4.56	30.28
2023	4.71	41.68

The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into a treatment subsystem. A summary of flowrates of water that flows into the treatment system can be found in Table 6.

2.2 Raw Water

Permit to Take Water Number:	0002-BDCRL5
Allowable Maximum Raw Water Volume – Isthmus Bay:	1,831.5 m ³ /day
Allowable Maximum Raw Water Flowrate – Isthmus Bay:	1,272 L/min (21.2 L/sec)

As per the PTTW, water shall only be taken from the specified source(s) and at the rates and amounts taken as specified in the permit.

Table 5. Raw Water (Isthmus Bay) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Isthmus Bay					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	445	24.3%	519	28.3%	13,792
February	442	24.1%	483	26.4%	12,371
March	435	23.8%	464	25.3%	13,494
April	408	22.3%	465	25.4%	12,251
May	394	21.5%	436	23.8%	12,224
June	433	23.7%	510	27.8%	13,003
July	448	24.4%	516	28.1%	13,877
August	443	24.2%	543	29.7%	13,744
September	444	24.2%	569	31.1%	13,309
October	433	23.6%	543	29.6%	13,410
November	399	21.8%	426	23.2%	11,961
December	411	22.5%	432	23.6%	12,751
2023	428	23.4%	569	31.1%	156,187

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume.

Table 6. Raw Water (Isthmus Bay) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water (Isthmus Bay) Flowrate		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	5.24	17.33
February	5.04	17.52
March	5.08	17.32
April	4.70	14.66
May	4.65	14.87
June	5.11	13.53
July	5.28	13.42
August	5.23	17.59
September	5.23	14.50
October	5.10	14.98
November	4.68	16.67
December	4.84	17.84
2023	5.01	17.84

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate.