



Ontario Clean Water Agency Agence Ontarienne Des Eaux

March 30, 2017

Bill Jones, CAO
billjones.nbp@eastlink.ca
Municipality of Northern Bruce Peninsula
56 Lindsay Road 5
R. R. #2
Lion's Head, Ontario
N0H 1W0

RE: 2016 Summary Report, Requirement under O. Reg. 170/03, Schedule 22

Dear Mr. Jones,

Attached is the 2016 Summary Report for the Lion's Head Drinking Water System.

This report was completed in accordance with Schedule 22 of Ontario Regulation 170/03. It is required that a Summary Report for the previous calendar year be prepared no later than March 31st of each year and be given to the members of the Municipal Council. Please ensure this distribution.

Section 12 of Ontario Regulation 170/03 requires that the Summary Report be made available for inspection, at no charge, by any member of the public during regular business hours. The report should be made available for inspection at the office of the Town or at a location that is convenient for the users of the water system.

Should you require further clarification of information regarding this report, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read "Leo-Paul Frigault".

Leo-Paul Frigault
Senior Operations Manager
OCWA, Georgian Highlands Region



Ontario Clean Water Agency
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LION'S HEAD
DRINKING WATER SYSTEM

Large Municipal Residential

SCHEDULE 22
SUMMARY REPORT

For the period of
JANUARY 1, 2016 TO DECEMBER 31, 2016

Overview

This report is a summary of water quality and quantity information submitted in accordance with Schedule 22 of Ontario's Drinking Water System Regulation for the reporting period of January 1, 2016 to December 31, 2016 for the Lion's Head Drinking Water System located in the Municipality of Northern Bruce Peninsula. The summary includes the following information:

- Any requirements of the Act and Regulation, Orders or System Approval(s) that the system failed to meet during the reporting period and the measures taken to correct each failure.
- A summary of the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows.
- A comparison of the average and monthly maximum daily flows to the approved capacity specified in the System Approval.

Issues of Non-Compliance

An MOECC Drinking Water System Inspection was performed on December 1, 2016. On February 2, 2017 the report for this inspection was issued, the Lion's Head Drinking Water System received an inspection rating of 93.05% with 5 non-compliances.

The following is a summary of the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water license, and any orders applicable to the system that were not met at any time during the period covered by the report; as well as the duration of the failure and the measures that were taken to correct the failure:

Non-Compliance(s)	Duration	Corrective Actions
1) The Drinking Water System (DWS) Process Schematic requires update. (From 2016/2017 MOECC Inspection Report)	December 11, 2015 to December 1, 2016	A consulting company was hired by the Municipality of Northern Bruce Peninsula to update the process schematic. The required changes will be provided by the OA. The deadline for updates as per the 2016/2017 MOECC Inspection Report is April 3, 2017.
2) Insufficient sampling period of distribution system. On 5 occasions the period between distribution sampling events was less than 48 hours. (Reported by the Operating Authority (OA) to the Provincial Officer and also documented in the 2016/2017 MOECC Inspection Report)	December 31, 2015, March 31, 2016, May 26, 2016, August 4, 2016, September 4, 2016	On September 30, 2016 the distribution chlorine residual timeframes required as per O.Reg 170.03 were reviewed with operations staff. Starting October 1, 2016, distribution free chlorine residual sampling schedule was updated so that it would be taken on a daily basis. The relevant excerpt of O.Reg 170/03 was summarized at the bottom as the check sheet for reference.
3) The Operations Manual requires an update. (From 2016/2017 MOECC Inspection Report)	December 11, 2015 to December 1, 2016	The Operating Authority provided the required changes and is updating the Operation Manual for the Municipality of Northern Bruce Peninsula. The deadline for updates as per the 2016/2017 MOECC Inspection Report is April 3, 2017.
4) Laboratory results were taken for Total Suspended Solids but were not presented in 2015 Section 11 Annual Report. (From 2016/2017 MOECC Inspection Report)	December 11, 2015 to December 1, 2016	On February 21, 2017 a revised Section 11 Annual Report Template was submitted to the Provincial Officer for review. Upon review the Provincial Officer stated that "the additional information and changes to Table 3 that demonstrate this format is acceptable". The deadline for submitting a revised template as per the 2016/2017 MOECC Inspection Report is April 3, 2017.
5) DWS Profile information was outdated. (From 2016/2017 MOECC Inspection Report)	December 11, 2015 to December 1, 2016	DWS Profile was updated on December 12, 2016 to reflect organizational changes (i.e. updated main and alternate contacts, updated contact information of Acting Public Works Manager)

<p>6) Monthly total chlorine residual readings of filter backwash water were being taken instead of free chlorine residual. No chlorine residual samples were taken for January, February and August. (Reported by the OA to the Provincial Officer)</p>	<p>January 2016 to December 2016</p>	<p>The sampling schedule was reviewed and found to have free chlorine residual listed for the filter backwash sample. An informal and a formal meeting were held with staff to review the sampling requirements for the DWS as well as the MDWL. A report has been created which identifies if required monthly samples have been taken. It was noted in the Section 11 Annual Report that total chlorine = free chlorine + combined chlorine, so although the exact annual average for free chlorine residual is not known, it is known that it will be less than the annual average for total chlorine residual.</p>
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Refer to the Section 11 Annual Report for a summary of any Adverse Water Quality Incident(s) which occurred during the reporting period.

Assessment of Flowrates and Quantity of Water Supplied

The following tables summarize the quantities (Table 1) and flow rates (Table 2) of the water supplied during the period covered by the report, including monthly average and maximum daily flows as well as a comparison of the summary to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water license.

As per Municipal Drinking Water License (MDWL) 250-101 (Issue Number: 3, expires January 15, 2021), the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed a rated capacity of 1,351 m³/day There is no maximum allowable limit listed in the MDWL for the flowrate of water that flows into a treatment subsystem, however, raw water flowrate has been included in this report (Table 3).

Table 1. Treated Water Monthly Average and Maximum Daily Flows and Comparison to Rated Capacity for 2016

2016	Treated Water Flow			
	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity
January	396.12	29.32 %	455.20	33.69 %
February	396.28	29.33 %	522.65	38.69 %
March	386.73	28.63 %	418.68	30.99 %
April	388.44	28.75 %	418.00	30.94 %
May	449.77	33.29 %	552.00	40.86 %
June	372.99	27.61 %	484.00	35.83 %
July	388.68	28.77 %	447.00	33.09 %
August	387.09	28.65 %	439.00	32.49 %
September	355.93	26.35 %	522.00	38.64 %
October	234.77	17.38 %	336.00	24.87 %
November	225.86	16.72 %	439.00	32.49 %
December	214.42	15.87 %	228.00	16.88 %

Table 2. Treated Water Monthly Average and Maximum Flowrates for 2016

2016	Treated Water	
	Average Flowrate (l/s)	Maximum Flowrate (l/s)
January	4.71	16.57
February	4.72	33.26
March	4.61	20.60
April	4.58	30.48
May	5.23	36.96
June	4.33	37.69
July	4.50	34.65
August	4.48	32.33
September	4.12	37.65
October	2.72	32.86
November	2.53	15.60
December	2.49	7.63

Table 3. Raw Water Monthly Average and Maximum Flowrates for 2016

2016	Raw Water	
	Average Flowrate (l/s)	Maximum Flowrate (l/s)
January	3.95	14.27
February	4.27	17.37
March	4.84	17.69
April	4.81	14.49
May	5.49	17.74
June	4.52	17.80
July	4.81	17.78
August	4.77	10.92
September	4.38	18.30
October	2.92	14.49
November	2.73	3.83
December	2.68	12.88