

**Ministry of the Environment,
Conservation and Parks**
*Drinking Water and Environmental
Compliance Division*

**Ministère de l'Environnement de la
Protection de la nature et des Parcs**
*Division de la conformité en matière d'eau
potable et d'environnement*



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January 24, 2022

The Corporation of the Township of Ramara
2297 Highway 12 Hwy, Post Office Box Delivery, 130, Brechin, ON, L0K 1B0

Attention: Zachary Drinkwalter, Chief Administrative Officer (Acting)

Re: **Inspection of Brechin & Lagoon City Drinking Water System at 2 Poplar Crescent, Brechin on December 9, 2021**
Event No. 1-31507882

The ministry undertakes inspections of the regulated community including industry, businesses and individuals. The primary focus of this inspection is to confirm compliance with ministry legislation as well as evaluating compliance and conformance with related permissions, policies and guidelines.

Attached to this letter is the report for the inspection completed at Brechin & Lagoon City Drinking Water System at 2 Poplar Crescent, Brechin on December 9, 2021. This report provides an assessment of compliance and conformance based on observations and information available during the inspection review period only. As always, please refer to the applicable legislative requirements, permissions, policies, guidelines and best management practices to clarify your specific obligations.

Instances of non-compliance and/or non-conformance may have been identified during the inspection. Please refer to the "NON-COMPLIANCE/NON-CONFORMANCE ITEMS" section within the report to determine the actions required and take any necessary steps by the date(s) prescribed to bring the system/facility into compliance/conformance. Additional findings and applicable comments, where provided, will be found within the report.

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 and risk experts. The Inspection Summary Rating Record (IRR) provides the ministry, the system owner and the associated 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 recent change in IT systems, the IRR cannot currently be generated at the same time as the inspection report. The IRR will be sent separately, typically within one to two months, and prior to any public release. IRR ratings are published (for the previous inspection year) in the ministry's Chief Drinking Water Inspector's Annual Report.

If you have any questions or concerns regarding this inspection report, please contact the undersigned.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter Vreugdenhil".

Peter Vreugdenhil
Provincial Officer
Ministry of the Environment, Conservation and Parks
Barrie District Office
(705) 727-8769 (Tel)
peter.vreugdenhil@ontario.ca

CC Nick Leroux, Senior Operations Manager, OCWA
Christine Craig, Process And Compliance Technician, OCWA
Medical Officer of Health, Simcoe Muskoka District Health Unit
Barrie District Office File, Ministry of the Environment, Conservation and Parks



BRECHIN & LAGOON CITY DRINKING WATER SYSTEM
2 POPLAR CRES, RAMARA, ON, L0K 1B0

Inspection Report

System Number: 210001273
Inspection Start Date: 12/09/2021
Inspection End Date: 01/24/2022
Inspected By: Peter Vreugdenhil
Badge #: 924

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(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

The following item(s) have been identified as non-compliance/non-conformance, based on a "No" response captured for a legislative or best management practice (BMP) question (s), respectively.

Question Group: Other Inspection Findings

Question ID	MRDW1116000	
Question	Question Type	Legislative Requirement
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable
Observation/Corrective Action(s)		
<p>The following issues were also noted during the inspection: Section 4.1 of the Operations and Maintenance Manual states that periodically, the raw water intake crib should be inspected visually either using an underwater camera or by conducting an underwater diving operation. The overall structural integrity, the quantity of sediment accumulation at the bottom of the intake, the need for cleaning, and any concerns must be noted. Concerns should be reported to the Manager and addressed as soon as possible. Inspection results should be compared to the previous year's inspection results. If the review concludes that cleaning is required, advise the Manager. The Manager will determine the urgency to complete the cleaning and either request Council approval for an immediate expenditure or include the work in the next year's capital forecast.</p> <p>The raw water intake crib and conduit have not been inspected by an underwater diving operation within the last 7-8 years, nor have they been inspected by remote camera or cleaned within the last 5-6 years. It is recommended that the raw water intake crib and conduit be inspected on a regular basis, and cleaned as necessary, to ensure they are free from debris and sediment.</p>		

INSPECTION DETAILS

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

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

Question ID	MRDW1001000	
Question	Question Type	Legislative Requirement
What was the scope of this inspection?	Information	Not Applicable
Observation		
<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 Brechin & Lagoon City Drinking Water System, which serves an estimated population of 2,618 people in the communities of Brechin and Lagoon City, is owned by the Corporation of the Township of Ramara (Owner) and operated by the Ontario Clean Water Agency (Operating Authority).</p> <p>The Brechin & Lagoon City Drinking Water System is categorized as a large municipal residential drinking water system, as defined by Ontario Regulation 170/03 and operates under DWS number 210001273.</p> <p>The Brechin & Lagoon City Drinking Water System draws water from Lake Simcoe. Treatment consists of chemically assisted filtration and chlorination. Three low lift pumps draw water from Lake Simcoe. Raw water is injected with carbon dioxide for pH adjustment, sodium hypochlorite and polyaluminum chloride. Water is then directed to four spiral flow flocculators and two filter-absorbers. Water is then injected with sodium hypochlorite and directed to the clearwell. Five highlift pumps discharge treated water to the distribution system. There is an elevated storage tower in the town of Brechin.</p> <p>This inspection was conducted pursuant to section 81 of the Safe Drinking Water Act in order to assess compliance with the requirements of Ontario Regulation 170/03 (O. Reg. 170) and other Ministry control documents. The drinking water inspection included: physical inspection of the treatment equipment and facility; interview with Ontario Clean Water Agency (OCWA) staff; and a review of relevant documents and data from the period of November 17, 2020 to December 9, 2021 (hereafter referred to as the "inspection review period").</p>		

Question ID	MRDW1000000	
Question	Question	Legislative

	Type	Requirement
Does this drinking water system provide primary disinfection?	Information	Not Applicable
Observation		
This Drinking Water System provides for both primary and secondary disinfection and distribution of water.		

Question ID	MRDW1010000	Question	Question Type	Legislative Requirement
		Are trends in source water quality being monitored?	BMP	Not Applicable
Observation				
Trends in source water quality were being monitored. Raw water microbiological results are reviewed when the results are received each week and summarized in the Annual Report. Quarterly sampling for Alkalinity, Ammonia+Ammonium (N), Dissolved Organic Carbon, Nitrogen-Kjeldahl (N) and Organic Nitrogen is done for the raw water, and the results summarized in the Brechin and Lagoon City Water Works Annual Report.				

Question ID	MRDW1011000	Question	Question Type	Legislative Requirement
		Does the owner have a harmful algal bloom monitoring plan in place?	BMP	Not Applicable
Observation				
The owner had a harmful algal bloom monitoring plan in place. The Operating Authority has developed a Standard Operating Procedure (SOP) for responding to a blue-green algae bloom. In summary, the SOP requires the following:				
<ul style="list-style-type: none"> • When a bloom is identified, begin weekly sampling of raw and treated water. Continue until the bloom is no longer suspected or observed in and around the intake, or until two weekly ELISA analyses show no presence of microcystin-LR. • Report all treated water microcystin results >1.5 micrograms/Litre (including provisional results) as per O. Reg. 170 adverse reporting requirements. • Follow directions given by local Ministry of Health (MOH) and Ministry of the Environment, Conservation and Parks (MECP). 				

Question ID	MRDW1014000	Question	Question Type	Legislative Requirement
		Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation				
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. Condition 2.1 of Schedule C of				

Municipal Drinking Water Licence 147-101 prescribes that the Owner undertake continuous measurement and recording of the flow rate and daily volume of water conveyed into the treatment subsystem and into the distribution system from the treatment subsystem.

There is a magnetic flow meter installed on the raw water intake header as well as on the treated water discharge header. The Supervisory Control And Data Acquisition (SCADA) system records the raw and treated water flows via a 4-20 mA signal from each flow meter. Flow monitoring data is captured by the SCADA system and is capable of being monitored remotely by the operators via laptop.

Question ID	MRDW1015000	
Question	Question Type	Legislative Requirement
Are the flow measuring devices calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>The flow measuring devices were calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SWDA. Condition 3.1 of Schedule C of Municipal Drinking Water Licence 147-101 requires that all flow measuring devices that are required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment, Conservation and Parks, shall be checked and calibrated in accordance with the manufacturer's instructions.</p> <p>Condition 3.2 of Schedule C of Municipal Drinking Water Licence 147-101 states that if the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and calibrated at least once every 12 months during which the drinking water system is in operation.</p> <p>Condition 3.2.1 of Schedule C of Municipal Drinking Water Licence 147-101 states that for greater certainty, if condition 3.2 applies, the equipment shall be checked and calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.</p> <p>The raw and treated water flow meters installed for the Brechin & Lagoon City Drinking Water System were calibrated on January 19, 2021. The calibration verification certificate indicates an annual calibration frequency. Both of the flow meters passed the calibration verification.</p>		

Question ID	MRDW1016000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA 31 (1)
Observation		
<p>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. Condition 1.1 of Schedule C of Municipal Drinking Water Licence 147-101 prescribes that flows from the treatment subsystem to the distribution system shall not exceed 4,000 cubic metres/day.</p>		

Based on a review of flow data for the inspection review period, there were no exceedances of the prescribed flow capacity. The Brechin & Lagoon City Drinking Water System currently operates on average under half the rated capacity.

Question ID	MRDW1017000	
Question	Question Type	Legislative Requirement
Were appropriate records of flows and any capacity exceedances made in accordance with the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>Appropriate records of flows and any capacity exceedances were made in accordance with the Municipal Drinking Water Licence issued under Part V of the SDWA. Condition 2.1 of Schedule C of Municipal Drinking Water Licence Number 147-101 requires that for each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:</p> <p>2.1.1 The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.</p> <p>2.1.2 The flow rate and daily volume of water that flows into the treatment subsystem.</p> <p>There is a magnetic flow meter installed on the raw water header, as well as on the treated water discharge line. Each of the flow meters provides a 4-20 mA signal. Raw and treated water flows are continuously recorded on the SCADA system. Daily log print outs include the 24 hour flows from Lake Simcoe and the volume entering the distribution system.</p> <p>Condition 2.3 of Schedule C of Municipal Drinking Water Licence Number 147-101 states that where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:</p> <p>2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;</p> <p>2.3.2 The time and date of the measurement;</p> <p>2.3.3 The reason for the exceedance; and</p> <p>2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.</p> <p>The rated capacity for the Brechin & Lagoon City Drinking Water System was not exceeded during the inspection review period.</p>		

Question ID	MRDW1013000	
Question	Question Type	Legislative Requirement
Is the owner in compliance with all conditions of the PTTW?	Legislative	OWRA 34 (3)
Observation		
The owner was in compliance with all conditions of the PTTW. Permit To Take Water #0278-AQ4LYS (reference #0172-ANLN2F), which expires on August 30, 2027, authorizes the Owner		

to extract up to 3993287 litres per day from Lake Simcoe at a maximum rate of 2773 litres per minute.

Question ID	MRDW1030000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 7-2 (1), SDWA O. Reg. 170/03 7-2 (2)
Observation		
<p>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. Subsection 7-2 (1) of Schedule 7 of Ontario Regulation 170/03 states that drinking water systems that use chlorination for primary disinfection must have continuous monitoring equipment sampling and testing for free chlorine residuals at or near a location where the intended contact time has just been completed in accordance with the Ministry's "Procedure for Disinfection of Drinking Water in Ontario".</p> <p>At the time of the physical inspection, the chlorine residual was being monitored at the end of the chlorine contact chamber, a location which is at the point at which the intended contact time has been completed.</p>		

Question ID	MRDW1038000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4
Observation		
<p>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. Subsection 6-5(1) of Schedule 6 of Ontario Regulation 170/03 sets out standards to be adhered to where continuous monitoring equipment is used for sampling and testing required under Ontario Regulation 170/03, for a parameter set out in the Table included in Schedule 6. For the Brechin & Lagoon City Drinking Water System, this subsection applies to the continuous chlorine analyser used to monitor primary disinfection residuals at or near the intended contact time. In the case of primary disinfection chlorine residual monitoring, paragraph 1, subparagraph I of subsection 6-5 (1) of Schedule 6 and the associated Table requires that the continuous analyser test for free chlorine residual once every five minutes, at a minimum.</p> <p>Data generated during the inspection review period from the continuous analysers used to monitor primary and operational parameters associated with the Brechin & Lagoon City Drinking Water System was reviewed in conjunction with this inspection. The data indicated that these continuous</p>		

analysers measured and recorded parameters more frequently than the required frequency set out in the Table included in Schedule 6. The on-line analysers capture the parameter test results and upload the results to the SCADA system once every minute.

Question ID	MRDW1036000	
Question	Question Type	Legislative Requirement
Where continuous monitoring equipment is not used for chlorine residual analysis, are samples tested using an acceptable portable device?	Legislative	SDWA O. Reg. 170/03 6-7 (1)
Observation		
<p>Samples for chlorine residual analysis were tested using an acceptable portable device. Section 6-7 of Schedule 6 of Ontario Regulation 170/03 states that if a water sample is required to be taken and tested for free chlorine residual or combined chlorine residual, the owner of the drinking water system and the operating authority for the system shall ensure that the testing is conducted using,</p> <p>(a) an electronic direct readout colourimetric or amperometric chlorine analyzer; or</p> <p>(b) another device, if, based on an inspection of the device and on a review of relevant records and documentation, a licensed engineering practitioner states in writing that it is equivalent to or better than an electronic direct readout colourimetric or amperometric chlorine analyzer, having regard to accuracy, reliability and ease of use.</p>		

Question ID	MRDW1037000	
Question	Question Type	Legislative Requirement
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?	Legislative	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)
Observation		
<p>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. Subsection 6-5 (1) paragraph 5i and subsection 6-5 (1.1) paragraph 1 of Schedule 6 of Ontario Regulation 170/03 set out standards for continuous monitoring equipment that is used to conduct sampling and testing required by the regulation.</p> <p>All continuous analysers are equipped with alarms or shut-off mechanisms and are linked to the SCADA system to alert on-call operators in the event of an alarm.</p>		

Question ID	MRDW1035000	
Question	Question	Legislative

	Type	Requirement
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
<p>Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test. Subsection 6-5 (1) 3 of Schedule 6 of Ontario Regulation 170/03 requires that test results recorded under paragraph 1 or 2 must be examined, within 72 hours after the tests are conducted by a certified operator.</p> <p>During the inspection review period, continuous monitoring test results were reviewed by certified operators within 72 hours. Operators are capable of monitoring the results remotely and comments are entered electronically onto the daily logsheets or into the on-site logbook.</p>		

Question ID	MRDW1040000	
Question	Question Type	Legislative Requirement
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
<p>All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. Subsection 6-5 (1) 8 of Schedule 6 of Ontario Regulation 170/03 prescribes that the continuous monitoring equipment must be checked and calibrated in accordance with the manufacturer's instructions. Subsection 6-5(1)10 states that if the manufacturer's instructions do not indicate how often to check and calibrate the continuous monitoring equipment and paragraph 9 does not apply, the equipment must be checked and calibrated as often as necessary to ensure that test results are within the following margins of error:</p> <p>i. In the case of free chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre,</p> <p>ii. In the case of free chlorine residual and total chlorine residual measured for the purpose of determining combined chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre.</p> <p>Operational staff regularly perform verifications of the continuous chlorine residual analysers using a portable handheld device. If a comparative assessment indicates significant differences, the operator will calibrate the continuous analysers as per the manufacturer's instructions. Records of these maintenance activities are made on the daily pumphouse logsheets. In addition, the continuous analysers are calibrated by a qualified company on an annual basis.</p>		

Question ID	MRDW1108000	
Question	Question Type	Legislative Requirement
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by Regulation 170, 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?	Legislative	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)
Observation		
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. Upon review of logbook entries and SCADA data, it appears that a qualified person responded in a timely manner and took appropriate actions in each instance that continuous monitoring equipment triggered an alarm.		

Question ID	MRDW1033000	
Question	Question Type	Legislative Requirement
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?	Legislative	SDWA O. Reg. 170/03 7-2 (3), SDWA O. Reg. 170/03 7-2 (4)
Observation		
<p>The secondary disinfectant residual was measured as required for the distribution system. Subsections 7-2(3) and 7-2(4) of Ontario Regulation 170/03 prescribe the following:</p> <p>(3) The owner of a large municipal residential system that provides secondary disinfection and the Operating Authority for the system shall ensure that at least seven distribution samples are taken each week in accordance with subsection (4) and are tested immediately for,</p> <p>(a) free chlorine residual, if the system provides chlorination and does not provide chloramination; or</p> <p>(b) combined chlorine residual, if the system provides chloramination.</p> <p>(4) The following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:</p> <ol style="list-style-type: none"> 1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week. 2. At least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day referred to in paragraph 1. 3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location. <p>Based on records reviewed, the Operating Authority is testing secondary disinfection residuals in the distribution system at the appropriate frequencies and are taking the requisite number of samples.</p>		

Question ID	MRDW1031000	
Question	Question Type	Legislative Requirement
Are operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?	BMP	Not Applicable
Observation		
Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.		

Question ID	MRDW1032000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 7-3 (2)
Observation		
<p>Continuous monitoring of each filter effluent line was being performed for turbidity. Subsection 7-3 (2) (b) of Schedule 7 of Ontario Regulation 170/03 requires that if a drinking water system obtains water from a raw water supply that is surface water and the system provides filtration the owner of the system shall ensure that sampling and testing for turbidity is carried out by continuous monitoring equipment on each filter effluent line.</p> <p>There are two continuous turbidity analysers for the two filter effluent lines and two continuous analysers that measure the turbidity of the treated water and the raw water.</p>		

Question ID	MRDW1018000	
Question	Question Type	Legislative Requirement
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
<p>The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. Drinking Water Works Permit 147-201 and Municipal Drinking Water Licence 147-101 were in effect during the inspection review period. At the time of the physical inspection, the equipment at the treatment facility appeared to be installed in accordance with these authorizing documents.</p>		

Question ID	MRDW1021000	
Question	Question Type	Legislative Requirement
Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2	Legislative	SDWA 31 (1)

documents were prepared in accordance with their Drinking Water Works Permit?		
Observation		
<p>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. Condition 4.6 of Schedule B of Drinking Water Works Permit 147-201 prescribes that the owner must record all minor modifications to the works on a "Form 2 – Record of Minor Modifications or Replacements to the Drinking Water System". During the inspection review period, one modification was made to the works and was documented on the appropriate form.</p>		

Question ID	MRDW1023000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
<p>Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 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.</p> <p>Section 1-4 of Schedule 1 Ontario Regulation 170/03 prescribes that the Owner of a drinking water system that obtains water from a raw water supply that is surface water shall ensure provision of water treatment equipment that is designed to be capable of chemically assisted filtration or better, and is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario. Primary disinfection for a surface water source includes at least 99 per cent removal or inactivation of Cryptosporidium oocysts, at least 99.9 per cent removal or inactivation of Giardia cysts and at least 99.99 per cent removal or inactivation of viruses by the time water enters the distribution system. Section 1-5 of Schedule 1 of Ontario Regulation 170/03 prescribes that the Operator of a drinking water system shall ensure provision of water treatment equipment that is designed to be capable of secondary disinfection (where necessary): using chlorination or chloramination in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario; or, provide other water treatment equipment that, in the opinion of a licensed engineering practitioner, is designed to be capable of providing secondary disinfection that is equivalent to or better than the secondary disinfection provided by the chlorination or chloramination equipment.</p> <p>Condition 1 of Schedule E of Municipal Drinking Water Licence 147-101 states that the Brechin and Lagoon City Water Works achieves 2 log removal of cryptosporidium oocysts, 2 log removal of giardia cysts and one log removal of viruses by direct filtration , and 1 log removal of giardia cysts and 3+ log removal of viruses by chlorination, if the applicable log removal/inactivation credit assignment criteria is met.</p> <p>The log removal/inactivation credit assignment criteria for direct filtration are:</p> <ol style="list-style-type: none"> 1. A chemical coagulant shall be used at all times when the treatment plant is in operation; 		

2. Chemical dosages shall be monitored and adjusted in response to variations in raw water quality;
3. Effective backwash procedures shall be maintained including filter-to-waste or an equivalent procedure during filter ripening to ensure that effluent turbidity requirements are met at all times;
4. Filtrate turbidity shall be continuously monitored from each filter; and each month shall be met for each filter.
5. Performance criterion for filtered water turbidity of less than or equal to 0.3 NTU in 95% of the measurements each month shall be met for each filter.

The coagulant and carbon dioxide systems are tied into the raw water pumps, so that coagulant is used at all times when the treatment plant is in operation. Raw water is continuously monitored for turbidity. The daily logsheet indicates the dosage for the pre-chlorine, reservoir chlorine and coagulant, as well as the amount used in 24 hours.

Operators monitor the dosage and make adjustments where necessary in response to raw water quality. Backwash cycles for both filters are initiated manually based on the head loss for each filter and observations of raw water quality, and include a filter-to-waste portion. A continuous turbidity analyser is installed on each filter effluent line, and values are continuously recorded by the SCADA system. The daily logsheet includes a calculation of the percentage of turbidity readings that are less than 0.3 NTU.

The log removal/inactivation credit assignment criteria for chlorination are:

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

Based on continuously recorded and manually sampled data provided by the Operating Authority and reviewed during the course of this inspection, it appears that the required level of treatment was provided at all times during the inspection review period. Sufficient contact time is afforded to all users of the system by the in-ground contact chamber, and treatment integrity is supported by auxiliary and duty chemical feed pumps with automatic switch over if one pump fails. In addition, distribution of treated water is halted if there are any disruptions in the process that could result in a failure of appropriate treatment.

Question ID	MRDW1024000	
Question	Question Type	Legislative Requirement
Do records confirm 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?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
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. Subsection 1-2 (2), paragraph 4 of Schedule 1 of Ontario Regulation 170/03 states that if chlorination is provided for secondary disinfection, the owner shall ensure that the		

equipment is operated so that, at all times and at all locations within the distribution system, the free chlorine residual is never less than 0.05 milligrams/Litre. Records indicated that there were no free chlorine residuals less than 0.05 milligrams/Litre within the distribution system at any time during the inspection review period.

Question ID MRDW1025000		
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA 31 (1)
Observation		
<p>All parts of the drinking water system were disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit. Condition 2.3 of Schedule B of Drinking Water Works Permit 147-201 states that all parts of the drinking water system in contact with drinking water which are:</p> <p>2.3.1 Added, modified, replaced, extended; or</p> <p>2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination, shall be disinfected before being put into service in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:</p> <p>a) The ministry's Watermain Disinfection Procedure;</p> <p>b) AWWA C652 – Standard for Disinfection of Water Storage Facilities;</p> <p>c) AWWA C653 – Standard for Disinfection of Water Treatment Plans; and</p> <p>d) AWWA C654 - Standard for Disinfection of Wells.</p> <p>The Operating Authority for the Brechin and Lagoon City Drinking Water System use the ANSI/AWWA C651 Standard for Disinfecting Water Mains where required. The Operations and Maintenance Manual, which was updated in December 2021, contains the AWWA document and the Contingency Emergency Plan for watermain breaks or service interruption notes that operators are to follow the procedure outlined in the AWWA document in the event of a break or service interruption.</p>		

Question ID MRDW1027000		
Question	Question Type	Legislative Requirement
Does the owner have evidence indicating that all chemicals and materials which come in contact with water within the drinking water system have met all applicable AWWA and ANSI standards in accordance with the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA. Condition 14.1 of Schedule B of Municipal Drinking Water Licence 147-101 states</p>		

that all chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety criteria standards NSF/60, NSF/61 and NSF/372. Chemicals that come into contact with the Brechin and Lagoon City drinking water include carbon dioxide, alum and sodium hypochlorite. Documentation was provided indicating that the sodium hypochlorite meets ANSI/NSF Standard 60, the ground aluminum sulfate meets AWWA B403-09 and the carbon dioxide meets ANSI/NSF Standard 60.

Question ID	MRDW1028000	
Question	Question Type	Legislative Requirement
Are up-to-date plans for the drinking water system kept in place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
Up-to-date plans for the drinking water system were kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA.		

Question ID	MRDW1045000	
Question	Question Type	Legislative Requirement
Has the owner updated the document describing the distribution components within 12 months of completion of alterations to the system?	Legislative	SDWA 31 (1)
Observation		
The owner had up-to-date documents describing the distribution components as required.		

Question ID	MRDW1046000	
Question	Question Type	Legislative Requirement
Is there a backflow prevention program, policy and/or bylaw in place that addresses cross connections and connections to high hazard facilities?	BMP	Not Applicable
Observation		
There is a backflow prevention program, policy and/or bylaw in place. The Owner of the Brechin and Lagoon City Drinking Water System has installed backflow preventers on all service connections within the system. The backflow preventers were installed as part of the water metering program.		

The Corporation of the Township of Ramara has a cross connection bylaw which requires backflow prevention devices for all industrial, commercial, institutional, agricultural and multi-residential buildings, or if a condition exists in any building or structure that may be hazardous or detrimental to the potable water supply as determined by the Township, including lawn sprinkler systems for residential connections.

Question ID	MRDW1047000	
Question	Question Type	Legislative Requirement
Does the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?	BMP	Not Applicable
Observation		
<p>The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system. The Brechin and Lagoon City Drinking Water System Operations Manual indicates that the tower must be inspected for the following monthly:</p> <ul style="list-style-type: none"> Interior of base, for signs of illegal entry, vermin, or leaks; Exterior for any signs of leaks and deficiencies; Valve chamber for any leaks; Heaters to ensure operational (in cold weather). <p>Every five years, the interior of the tower must be inspected by underwater camera to assess the extent of particulate accumulation, the structural integrity and to identify any other problem. Furthermore, the Manual requires the Operating Authority to analyze the results of the inspection to determine if any action is required and the timeframe to complete it.</p> <p>The Operating Authority reports that the elevated water storage tower was inspected by a remote operated vehicle (ROV) in 2019 and the inspection determined that work was required to be undertaken, including possible replacement of the interior liner and the installation of a membrane cover at the top of the tower. It is recommended that the recommendations stemming from the 2019 ROV inspection of the elevated water storage tower be implemented in a timely manner.</p>		

Question ID	MRDW1048000	
Question	Question Type	Legislative Requirement
Has the owner implemented a program for the flushing of watermains as per industry standards?	BMP	Not Applicable
Observation		
<p>The owner had implemented a program for the flushing of watermains as per industry standards. Annually, in the fall, the Brechin and Lagoon City distribution system is flushed using hydrants. The hydrants are also prepared for winter at this time.</p>		

Question ID	MRDW1049000	
Question	Question Type	Legislative Requirement

Do records confirm that disinfectant residuals are routinely checked at the extremities and dead ends of the distribution system?	BMP	Not Applicable
Observation		
Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system.		

Question ID	MRDW1050000	
Question	Question Type	Legislative Requirement
Is there a program in place for inspecting and exercising valves?	BMP	Not Applicable
Observation		
A program was in place for inspecting and exercising valves. The Operations Manual indicates that each distribution system main valve must be operated once per year to ensure it is in good working order. In the event that a valve is found to not function properly, it is to be fixed and the superintendent notified. All valve maintenance activities are to be recorded in the valve log book.		

Question ID	MRDW1051000	
Question	Question Type	Legislative Requirement
Is there a program in place for inspecting and operating hydrants?	BMP	Not Applicable
Observation		
There was a program in place for inspecting and operating hydrants. The Operations Manual for the Brechin and Lagoon City Drinking Water System indicates that each fall, as part of flushing activities, each hydrant must be operated, including the isolation valve, to ensure it is in good working order. Hydrants are to be left drained. Maintenance activities are to be recorded in the hydrant logbook.		

Question ID	MRDW1052000	
Question	Question Type	Legislative Requirement
Is there a by-law or policy in place limiting access to hydrants?	BMP	Not Applicable
Observation		
There was a by-law or policy in place limiting access to hydrants. The Corporation of the Township of Ramara By-law No. 2007.87 states that temporary connections to any potable water system including via fire hydrants must have a backflow prevention device installed or an air gap, except for connections for firefighting purposes. It was indicated that the Ramara Fire Department is aware that they can only fill trucks and tankers from the Brechin and Lagoon City distribution system. All of the fire hydrants in the Township of Ramara are colour coded for flow. The fire department is aware of the flow rating for each colour.		

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Question ID	MRDW1053000	
Question	Question Type	Legislative Requirement
Is the Owner able to maintain proper pressures in the distribution system and is pressure monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate?	BMP	Not Applicable
Observation		
<p>The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate. Pressure is measured on the distribution header leaving the Brechin and Lagoon City pumphouse. In the event of low or high pressure an alarm is sent to the Operator in Charge.</p> <p>Positive pressure was maintained in the Brechin and Lagoon City distribution system during the inspection review period.</p>		

Question ID	MRDW1058000	
Question	Question Type	Legislative Requirement
Do operators and maintenance personnel have ready access to operations and maintenance manuals?	Legislative	SDWA O. Reg. 128/04 28
Observation		
<p>Operators and maintenance personnel had ready access to operations and maintenance manuals. Operations and maintenance manuals, including the contingency plans for the Brechin and Lagoon City Drinking Water System are located at the pumphouse and at the Environmental Services office. Operators are aware of where the operations and maintenance manuals are located.</p>		

Question ID	MRDW1063000	
Question	Question Type	Legislative Requirement
For every required operational test and for every required sample, is a record made of the date, time, location, name of the person conducting the test and result of the test?	Legislative	SDWA O. Reg. 170/03 6-10 (1)
Observation		
<p>For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test. Section 6-10 of Ontario Regulation 170/03 requires that the Owner of a drinking water system and the Operating Authority for the system shall ensure that, for every sample required by this Regulation, a record is made of the date and time the sample was taken, the location where the sample was taken, the name of the person who took the sample, and the result of the test where applicable.</p> <p>All required information was recorded during the inspection review period, either on the chain of</p>		

custody form for samples submitted to an accredited laboratory, on the logsheets for the Brechin and Lagoon City Drinking Water System or in the person logs of Operators.

Question ID	MRDW1064000	
Question	Question Type	Legislative Requirement
Did the operator-in-charge ensure that records were maintained of all adjustments made to the processes within his or her responsibility?	Legislative	SDWA O. Reg. 128/04 26 (2)
Observation		
The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.		

Question ID	MRDW1065000	
Question	Question Type	Legislative Requirement
Are logs and other record keeping mechanisms available for at least five (5) years?	Legislative	SDWA O. Reg. 128/04 27 (6)
Observation		
Logs or other record keeping mechanisms were available for at least five (5) years.		

Question ID	MRDW1059000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?	Legislative	SDWA O. Reg. 128/04 28
Observation		
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system. In December 2021, the Operating Authority undertook a review and performed revisions of the Operations and Maintenance Manuals for the Brechin & Lagoon City Drinking Water System. The revisions were performed to ensure that the procedures and information contained in the Manuals accurately reflected the activities performed by operators and the installed equipment. The Manual indicates that all adjustments or works undertaken on the system are to be incorporated into the Manual prior to work being completed and that the Operating Authority and all operators are to review the documents annually to ensure accuracy and familiarity with the content.		

Question ID	MRDW1060000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V	Legislative	SDWA 31 (1)

of the SDWA?		
Observation		
<p>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. Condition 16.2 of Schedule B of Municipal Drinking Water Licence 147-101 prescribes that the following must be contained within the Operations Manual:</p> <p>16.2.1 The requirements of this licence and associated procedures;</p> <p>16.2.2 The requirements of the drinking water works permit for the drinking water system;</p> <p>16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system, including where applicable:</p> <p>a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions; and</p> <p>b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;</p> <p>16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;</p> <p>16.2.5 Procedures for the operation and maintenance of monitoring equipment;</p> <p>16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;</p> <p>16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint.</p> <p>The Operations Manual for the Brechin & Lagoon City Drinking Water System appears to include the prescribed requirements. In addition, all manufacturer's manuals for equipment in use at the treatment facilities are retained for operator's reference and use.</p>		

Question ID	MRDW1061000	
Question	Question Type	Legislative Requirement
Are logbooks properly maintained and contain the required information?	Legislative	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)
Observation		
Logbooks were properly maintained and contained the required information. Section 27 of		

Ontario Regulation 128/04 requires the following:

- (1) The Owner or Operating Authority of a subsystem shall ensure that logs or other record-keeping mechanisms are provided to record information concerning the operation of the subsystem.
- (2) Entries in the logs or other record-keeping mechanisms shall be made chronologically.
- (3) No person shall make an entry in a log or other record-keeping mechanism unless the person is an overall responsible operator, an operator-in-charge or is authorized to make an entry by the owner, the operating authority, the overall responsible operator or an operator-in-charge.
- (4) A person who makes an entry in a log or other record-keeping mechanism shall do so in a manner that permits the person to be unambiguously identified as the maker of the entry.
- (5) An operator-in-charge shall record the following information in the logs or other record-keeping mechanisms in respect of each operating shift:
 1. The date, the time of day the shift began and ended and the number or designation of the shift.
 2. The names of all operators on duty during the shift.
 3. Any departures from normal operating procedures that occurred during the shift and the time they occurred.
 4. Any unusual or abnormal conditions that were observed in the subsystem during the shift, any action that was taken and any conclusions drawn from the observations.
 5. Any equipment that was taken out of service or ceased to operate during the shift and any action taken to maintain or repair equipment during the shift.

Logbooks are maintained for the Brechin and Lagoon City Drinking Water System. Each morning a summary sheet is printed with the flow rates, min/max/average values from analysers from the previous day, and analyser values at the time the sheet is printed. Operators record values from tests performed when they attend the pumphouse, such as chlorine residual results and dosage. Operators on duty are indicated on the logsheets. Operators record notes on the log sheets, such as explanations of any abnormal analyser readings or maintenance activities.

Question ID	MRDW1062000	
Question	Question Type	Legislative Requirement
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?	Legislative	SDWA O. Reg. 170/03 7-5
Observation		
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. Subsection 7-5 (1) of Schedule 7 of Ontario Regulation 170/03 prescribes that chlorine residual and turbidity tests not performed by continuous monitoring equipment must be conducted by a certified operator or water quality analyst. A review of records indicated that manual chlorine residual and turbidity tests undertaken during the inspection review period were conducted by certified operators.		

Question ID	MRDW1066000
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Question	Question Type	Legislative Requirement
Is spill containment provided for process chemicals and standby power generator fuel?	BMP	Not Applicable
Observation		
Spill containment was provided for process chemicals and/or standby power generator fuel. The chemical storage containers are contained within adequate spill containment.		

Question ID	MRDW1067000		
Question	Question Type	Legislative Requirement	
Are clean-up equipment and materials in place for the clean up of spills?	BMP	Not Applicable	
Observation			
Clean-up equipment and materials were in place for the clean up of spills. There is a container of absorbent material at the pumphouse in the event of a spill. Spill response kits are located in operator vehicles.			

Question ID	MRDW1068000		
Question	Question Type	Legislative Requirement	
If available, are standby power generators tested under normal load conditions?	BMP	Not Applicable	
Observation			
Standby power generators were tested under normal load conditions. The Brechin and Lagoon City Drinking Water System has a standby generator capable of powering the water treatment plant equipment. The generator is exercised by operators manually switching the power source to the generator. During the inspection review period the generator was tested under load at least once every three months.			

Question ID	MRDW1069000		
Question	Question Type	Legislative Requirement	
Are all storage facilities completely covered and secure?	BMP	Not Applicable	
Observation			
All storage facilities were completely covered and secure. The elevated storage tower has a locked fence around it. The valve chamber hatch is locked, as well as the tower door.			

Question ID	MRDW1070000		
Question	Question Type	Legislative Requirement	
Are air vents and overflows associated with reservoirs and elevated storage structures equipped with screens?	BMP	Not Applicable	

Observation
Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.

Question ID	MRDW1071000	
Question	Question Type	Legislative Requirement
Has the owner provided security measures to protect components of the drinking water system?	BMP	Not Applicable
Observation	The owner had provided security measures to protect components of the drinking water system. The pumphouse for the Brechin & Lagoon City Drinking Water System is constructed of brick with a locking door containing restriction signs, is outfitted with dusk to dawn exterior lighting and is equipped with intrusion alarms. In addition, all sample stations within the distribution system are locked as well as the water tower in Brechin which is also fenced.	

Question ID	MRDW1072000	
Question	Question Type	Legislative Requirement
Has the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in their system?	BMP	Not Applicable
Observation	The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system. All service connections to the Brechin and Lagoon City Drinking Water System are outfitted with water meters. The Owner is moving towards billing that is more weighted to consumption than a base rate for delivery. The Owner has a Bylaw to regulate the supply of water, including restrictions for lawn watering and non-domestic water use.	

Question ID	MRDW1073000	
Question	Question Type	Legislative Requirement
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 23 (1)
Observation	The overall responsible operator has been designated for each subsystem. Subsection 23 (1) of Ontario Regulation 128/04 prescribes that a municipal residential drinking water system must have a designated overall responsible operator (ORO). The ORO shall be an operator who holds a certificate for that type of subsystem and that is of the same class or higher than the class of that subsystem. The Brechin and Lagoon City Well Supply system is classified as a Water Distribution Class 1 subsystem and Water Treatment Class II subsystem. At the time of the inspection the Overall Responsible Operator was designated for both subsystems.	

Question ID	MRDW1074000	
Question	Question Type	Legislative Requirement
Have operators in charge been designated for all subsystems for which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 25 (1)
Observation		
Operators-in-charge had been designated for all subsystems which comprised the drinking water system. Subsection 25 (1) of Ontario Regulation 128/04 prescribes that one or more operators shall be designated as operators-in-charge (OIC) of the drinking water system. Subsection 25 (5) states that a person who holds an operator-in-training certificate shall not be designated as an OIC. Duties of an OIC are laid out in section 26 of Ontario Regulation 128/04. Operators in in charge have been designated for both the Water Distribution Class I and the Water Treatment Class II subsystems.		

Question ID	MRDW1075000	
Question	Question Type	Legislative Requirement
Do all operators possess the required certification?	Legislative	SDWA O. Reg. 128/04 22
Observation		
All operators possessed the required certification. Section 22 of Ontario Regulation 128/04 prescribes that the owner or Operating Authority of a subsystem shall ensure that every operator employed in the subsystem holds, (a) a certificate applicable to that type of subsystem; or (b) a certificate applicable to that subsystem, in the case of an operator who holds a conditional certificate issued or renewed under section 10. It appears that all operators employed in the subsystems hold an appropriate certificate.		

Question ID	MRDW1076000	
Question	Question Type	Legislative Requirement
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
Only certified operators made adjustments to the treatment equipment. Subsection 1-2 (2) paragraph 5 of Schedule 1 of Ontario Regulation 170/03 prescribes that adjustments to water treatment equipment must be made only by certified operators. Based on a review of pumphouse logbook entries, it appears that only certified operators made adjustments to treatment equipment during the inspection review period.		

Question ID	MRDW1078000	
Question	Question Type	Legislative Requirement

<p>In instances where the overall responsible operator was unable to act, was an adequately certified operator designated to act in place of the overall responsible operator?</p>	<p>Legislative</p>	<p>SDWA O. Reg. 128/04 23 (1), SDWA O. Reg. 128/04 23 (2), SDWA O. Reg. 128/04 23 (3), SDWA O. Reg. 128/04 23 (4), SDWA O. Reg. 128/04 23 (5), SDWA O. Reg. 128/04 23 (6), SDWA O. Reg. 128/04 23 (7)</p>
<p>Observation</p>		
<p>An adequately licenced operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.</p>		

<p>Question ID</p>	<p>MRDW1099000</p>	
<p>Question</p>	<p>Question Type</p>	<p>Legislative Requirement</p>
<p>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)?</p>	<p>Information</p>	<p>Not Applicable</p>
<p>Observation</p>		
<p>Records did not 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). The standards for drinking water quality in Ontario are prescribed in Ontario Regulation 169/03 "Ontario Drinking Water Quality Standards". Background and supporting information for each of the standards can be found in the Ministry's "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines". Results of sampling conducted during this inspection review period met the microbiological and chemical requirements of the ODWQS, with one exception. A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. NDOG is an acronym used to represent 'No Data, Overgrown'.</p>		

<p>Question ID</p>	<p>MRDW1079000</p>	
<p>Question</p>	<p>Question Type</p>	<p>Legislative Requirement</p>
<p>Are all microbiological water quality monitoring requirements for raw water samples prescribed by legislation being met?</p>	<p>Legislative</p>	<p>SDWA O. Reg. 170/03 10-4 (1),SDWA O. Reg. 170/03 10-4 (2),SDWA O.</p>

		Reg. 170/03 10-4 (3)
Observation		
<p>All microbiological water quality monitoring requirements for raw water samples were being met. Subsection 10-4 (1) of Schedule 10 of Ontario Regulation 170/03 prescribes that the Owner and the Operating Authority for the system ensure that a water sample is taken at least once every week from the drinking water system's raw water, before any treatment is applied to the water. In addition, subsection 10-4 (3) requires that each of the samples taken under subsection (1) is tested for Escherichia coli and total coliforms. Records provided by the Operating Authority and reviewed during the course of this inspection indicate that the Operating Authority took the appropriate number of samples and tested for the requisite parameters during the inspection review period.</p>		

Question ID	MRDW1081000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for distribution samples being met?	Legislative	SDWA O. Reg. 170/03 10-2 (1),SDWA O. Reg. 170/03 10-2 (2),SDWA O. Reg. 170/03 10-2 (3)
Observation		
<p>All microbiological water quality monitoring requirements for distribution samples were being met. Subsection 10-2 (1) of Schedule 10 of Ontario Regulation 170/03 prescribes that the Owner and the Operating Authority of a large municipal residential drinking-water system ensure that at least eight distribution system samples are taken every month plus an additional sample for each 1,000 population served (10 samples total for the Brechin & Lagoon City Drinking Water System), with at least one of the samples being taken in each week. In addition, subsection 10-2 (2) requires that each of the samples taken under subsection (1) is tested for Escherichia coli and total coliforms, and that 25 percent of the samples are tested for general bacteria population expressed as colony counts on a heterotrophic plate count. Records provided by the Operating Authority and reviewed during the course of this inspection indicate that the Operating Authority took the appropriate number of samples and tested for the requisite parameters during the inspection review period.</p>		

Question ID	MRDW1083000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for treated samples being met?	Legislative	SDWA O. Reg. 170/03 10-3
Observation		
<p>All microbiological water quality monitoring requirements for treated samples were being met. Subsection 10-3 (1) of Schedule 10 of Ontario Regulation 170/03 prescribes that the Owner and</p>		

the Operating Authority of a large municipal residential drinking-water system ensure that a treated water sample is taken at least once every week and tested for Escherichia coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic plate count. Records provided by the Operating Authority and reviewed during the course of this inspection indicate that the Operating Authority sampled and tested for the requisite parameters on a weekly basis during the inspection review period.

Question ID	MRDW1084000	
Question	Question Type	Legislative Requirement
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-2
Observation		
<p>All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-2 of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a large municipal residential system and the Operating Authority for the system shall ensure that, at least one water sample is taken every 12 months and tested for every parameter set out in Schedule 23, if the system obtains water from a raw water supply that is surface water.</p> <p>Subsection 6-1.1 (5) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 12 months and tested for a parameter, the owner of the drinking water system and the Operating Authority for the system shall ensure that at least one sample that is taken during a 12-month period for the purpose of being tested for that parameter is taken not more than 30 days before or after the first anniversary of the day a sample was taken for that purpose in the previous 12-month period.</p> <p>During the inspection review period treated water samples were collected and tested for every Schedule 23 parameter on August 4, 2021. Prior to that, samples were collected and tested for all parameters listed in Schedule 23 on August 12, 2020.</p>		

Question ID	MRDW1085000	
Question	Question Type	Legislative Requirement
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-4 (1),SDWA O. Reg. 170/03 13-4 (2),SDWA O. Reg. 170/03 13-4 (3)
Observation		
<p>All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-4 of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a large municipal residential system and the Operating Authority for the system shall ensure that, at least one water sample is taken every 12 months and tested for every</p>		

parameter set out in Schedule 24, if the system obtains water from a raw water supply that is surface water.

Subsection 6-1.1 (5) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 12 months and tested for a parameter, the owner of the drinking water system and the Operating Authority for the system shall ensure that at least one sample that is taken during a 12-month period for the purpose of being tested for that parameter is taken not more than 30 days before or after the first anniversary of the day a sample was taken for that purpose in the previous 12-month period.

During the inspection review period treated water samples were collected and tested for every Schedule 24 parameter on August 4, 2021. Prior to that, samples were collected and tested for all parameters listed in Schedule 24 on August 12, 2020.

Question ID	MRDW1086000		
Question	Question Type	Legislative Requirement	
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?	Legislative	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)	
Observation			
All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location. Section 13-6.1 of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a drinking water system that provides chlorination or chloramination and the Operating Authority for the system shall ensure that at least one distribution sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of haloacetic acids (HAA), and have the samples tested for haloacetic acids. The requirement to sample for HAA came into effect on January 1, 2017. The standard for HAA as a reportable limit came into effect on January 1, 2020. During the inspection review period, samples were collected from the Brechin & Lagoon City Drinking Water System distribution system on the following dates and submitted to an accredited laboratory for analysis of HAAs: February 11, 2021, May 12, 2021, August 4, 2021, and November 19, 2021. The requisite number of samples were collected throughout the inspection review period with at least one sample being taken in each calendar quarter.			

Question ID	MRDW1087000	
Question	Question Type	Legislative Requirement
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	Legislative	SDWA O. Reg. 170/03 13-6 (1)
Observation		
<p>All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location. Subsections 13-6 (1) and (2) of Schedule 13 of Ontario Regulation 170/03 prescribes that the owner/Operating Authority of a drinking water system that provides chlorination shall ensure at least one distribution system sample is taken in each calendar quarter, from a point in the drinking water system's distribution system, or plumbing that is connected to the drinking water system, that is likely to have an elevated potential for the formation of trihalomethanes and have that sample tested for trihalomethanes (THMs).</p> <p>During the inspection review period, samples were collected from the Brechin & Lagoon City Drinking Water System distribution system on the following dates and submitted to an accredited laboratory for analysis of THMs: February 11, 2021, May 12, 2021, August 4, 2021, and November 19, 2021. The requisite number of samples were collected throughout the inspection review period with at least one sample being taken in each calendar quarter.</p>		

Question ID	MRDW1088000	
Question	Question Type	Legislative Requirement
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA O. Reg. 170/03 13-7
Observation		
<p>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 of Ontario Regulation 170/03 prescribes that at least one water sample is collected every three months and tested for nitrate and nitrite. Treated water samples were collected from the Brechin & Lagoon City Drinking Water System on the following dates and submitted to an accredited laboratory for analysis of nitrate and nitrite: February 11, 2021, May 12, 2021, August 4, 2021, and November 19, 2021. The requisite number of samples were collected throughout the inspection review period in the appropriate time frames.</p>		

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

within the required frequency. Section 13-8 of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a drinking water system and the Operating Authority for the system shall ensure that at least one water sample is taken every 60 months and tested for sodium.

Section 6-1.1 (7) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 60 months and tested for a parameter, the owner of the drinking water system and the Operating Authority for the system shall ensure that at least one sample that is taken during a 60-month period for the purpose of being tested for that parameter is taken not more than 90 days before or after the fifth anniversary of the day a sample was taken for that purpose in the previous 60-month period.

The most recent treated water sample tested for sodium was collected on August 12, 2020 from the Brechin & Lagoon City Drinking Water System. A resample was collected and tested for sodium on August 24, 2020. Prior to that a sample was taken and tested for sodium on August 25, 2015.

Question ID	MRDW1090000	
Question	Question Type	Legislative Requirement
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-9
Observation		
<p>All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Section 13-9 of Schedule 13 of Ontario Regulation 170/03 requires that if a drinking water system does not provide fluoridation, the owner of the system and the Operating Authority for the system shall ensure that a water sample is taken at least once every 60 months and tested for fluoride.</p> <p>Section 6-1.1 (7) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 60 months and tested for a parameter, the owner of the drinking water system and the Operating Authority for the system shall ensure that at least one sample that is taken during a 60-month period for the purpose of being tested for that parameter is taken not more than 90 days before or after the fifth anniversary of the day a sample was taken for that purpose in the previous 60-month period.</p> <p>The most recent treated water sample was collected and tested for fluoride on August 15, 2017.</p>		

Question ID	MRDW1092000	
Question	Question Type	Legislative Requirement
Has the owner ensured that water samples are taken at the prescribed location?	Legislative	SDWA O. Reg. 170/03 6-2
Observation		
<p>The owner ensured that water samples were taken at the prescribed location. Section 6-2 of Schedule 6 of Ontario Regulation 170/03 states that unless otherwise specified, a person who is required to ensure that samples are taken under this Regulation, shall ensure that they are taken from the point at which water enters the drinking water systems' distribution system or plumbing that is connected to the drinking water system.</p>		

Nitrate, nitrite, organic and inorganic samples, as well as treated water microbiological samples were collected from the treated water sampling point in the Brechin and Lagoon City pumphouse.

Question ID	MRDW1095000	
Question	Question Type	Legislative Requirement
Have all lead sampling requirements prescribed by Schedule 15.1 of O.R. 170/03 been met?	Legislative	SDWA O. Reg. 170/03 15.1-10, SDWA O. Reg. 170/03 15.1-4 (1),SDWA O. Reg. 170/03 15.1-5 (1), SDWA O. Reg. 170/03 15.1-5 (10),SDWA O. Reg. 170/03 15.1-5 (11), SDWA O. Reg. 170/03 15.1-5 (12),SDWA O. Reg. 170/03 15.1-5 (2), SDWA O. Reg. 170/03 15.1-5 (3),SDWA O. Reg. 170/03 15.1-5 (4), SDWA O. Reg. 170/03 15.1-5 (5),SDWA O. Reg. 170/03 15.1-5 (6), SDWA O. Reg. 170/03 15.1-5 (7),SDWA O. Reg. 170/03 15.1-5 (8), SDWA O. Reg. 170/03 15.1-5 (9),SDWA O. Reg. 170/03 15.1-7 (1), SDWA O. Reg. 170/03 15.1-7 (2),SDWA O. Reg. 170/03

	<p>15.1-7 (3), SDWA O. Reg. 170/03 15.1-7 (4),SDWA O. Reg. 170/03 15.1-9 (1), SDWA O. Reg. 170/03 15.1-9 (2),SDWA O. Reg. 170/03 15.1-9 (3), SDWA O. Reg. 170/03 15.1-9 (4),SDWA O. Reg. 170/03 15.1-9 (5), SDWA O. Reg. 170/03 15.1-9 (6),SDWA O. Reg. 170/03 15.1-9 (7), SDWA O. Reg. 170/03 15.1-9 (8),SDWA O. Reg. 170/03 15.1-9 (9)</p>
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Observation

All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met. The Brechin and Lagoon City Drinking Water System has met the requirements to be eligible for reduced sampling under section 15.1-5 (10) of Schedule 15.1 of Ontario Regulation 170/03. As such, one distribution sample is required to be sampled in each winter and summer period (December 15 to April 15, and June 15 to October 15), and be tested for total alkalinity and for pH. Lead needs to be tested for in winter and summer in every third 12-month period. Samples analyzed for total alkalinity, pH, and lead were collected by the Operating Authority within the predefined sampling periods as required. Lead sampling was last conducted in 2019.

Question ID	MRDW1096000	
Question	Question Type	Legislative Requirement
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?	Legislative	SDWA O. Reg. 170/03 6-3 (1)
Observation		
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained. During the inspection review period, free chlorine residual tests were conducted at the same time and location that treated and		

distribution system samples were collected for microbiological analysis, as required by subsection 6-3(1) of Schedule 6 of Ontario Regulation 170/03.

Question ID	MRDW1098000	
Question	Question Type	Legislative Requirement
Has the owner indicated that the required records are kept and will be kept for the required time period?	Legislative	SDWA O. Reg. 170/03 13 (1), SDWA O. Reg. 170/03 13 (2), SDWA O. Reg. 170/03 13 (3)
Observation		
The owner indicated that the required records are kept and will be kept for the required time period.		

Question ID	MRDW1100000	
Question	Question Type	Legislative Requirement
Did any reportable adverse/exceedance conditions occur during the inspection period?	Information	Not Applicable
Observation		
<p>There were reportable adverse/exceedances during the inspection period. The standards for drinking water quality in Ontario are prescribed in Ontario Regulation 169/03 "Ontario Drinking Water Quality Standards". Background and supporting information for each of the standards can be found in the Ministry's "Technical Support Document for Ontario Drinking Water Standards, Objectives and Guidelines".</p> <p>Results of sampling conducted during this inspection review period met the microbiological and chemical requirements of the ODWQS, with one exception.</p> <p>A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. NDOG is an acronym used to represent 'No Data, Overgrown'.</p>		

Question ID	MRDW1101000	
Question	Question Type	Legislative Requirement
Have corrective actions (as per Schedule 17) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	Legislative	SDWA O. Reg. 170/03 17-1, SDWA O. Reg. 170/03 17-10 (1),SDWA O. Reg. 170/03 17-10 (2),SDWA O. Reg. 170/03 17-11,SDWA O.

		Reg. 170/03 17-12,SDWA O. Reg. 170/03 17-13,SDWA O. Reg. 170/03 17-14,SDWA O. Reg. 170/03 17-2,SDWA O. Reg. 170/03 17-3,SDWA O. Reg. 170/03 17-4,SDWA O. Reg. 170/03 17-5,SDWA O. Reg. 170/03 17-6,SDWA O. Reg. 170/03 17-9
Observation		
<p>Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health. A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. The Operating Authority ensured to undertake all required actions, including but not limited to resampling in the required manner and within the required timeframes. Two sets of three distribution resamples (taken upstream, downstream, and at the same location as the adverse) resulted in no traces of bacterial contamination.</p>		

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

Question ID	MRDW1104000	
Question	Question Type	Legislative Requirement
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?	Legislative	SDWA O. Reg. 170/03 16-6 (1),SDWA O. Reg. 170/03 16-6 (2),SDWA O. Reg. 170/03 16-

		6 (3),SDWA O. Reg. 170/03 16-6 (3.1),SDWA O. Reg. 170/03 16-6 (3.2), SDWA O. Reg. 170/03 16-6 (4),SDWA O. Reg. 170/03 16-6 (5),SDWA O. Reg. 170/03 16-6 (6)
Observation		
All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6. A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. The Operating Authority ensured to undertake all required actions, including but not limited to notifications (verbal and written) in the required manner and within the required timeframes.		

Question ID	MRDW1105000	
Question	Question Type	Legislative Requirement
Were all required written notices of adverse water quality incidents provided as per O. Reg. 170/03 16-7?	Legislative	SDWA O. Reg. 170/03 16-7 (1),SDWA O. Reg. 170/03 16-7 (2),SDWA O. Reg. 170/03 16-7 (3),SDWA O. Reg. 170/03 16-7 (4),SDWA O. Reg. 170/03 16-7 (5)
Observation		
All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7. A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. The Operating Authority ensured to undertake all required actions, including but not limited to notifications (verbal and written) in the required manner and within the required timeframes.		

Question ID	MRDW1106000	
Question	Question Type	Legislative Requirement
Were all required written notices of issue resolution provided as per O. Reg.. 170/03 16-9?	Legislative	SDWA O. Reg. 170/03 16-9

		(1),SDWA O. Reg. 170/03 16-9 (2)
Observation		
In instances where written notice of issue resolution was required by regulation, the notice was provided as per O. Reg. 170/03 16-9. A distribution sample collected on February 22, 2021 showed a result of NDOG Total Coliforms and NDOG E.Coli. The Operating Authority ensured to undertake all required actions, including but not limited to notifications (verbal and written) in the required manner and within the required timeframes.		

Question ID	MRDW1110000	
Question	Question Type	Legislative Requirement
Was an Annual Report containing the required information prepared by February 28 of the following year?	Legislative	SDWA O. Reg. 170/03 11 (6)
Observation		
The Annual Report containing the required information was prepared by February 28th of the following year.		

Question ID	MRDW1116000	
Question	Question Type	Legislative Requirement
Were the inspection questions sufficient to address other identified best practice issues?	BMP	Not Applicable
Observation		
<p>The following issues were also noted during the inspection: Section 4.1 of the Operations and Maintenance Manual states that periodically, the raw water intake crib should be inspected visually either using an underwater camera or by conducting an underwater diving operation. The overall structural integrity, the quantity of sediment accumulation at the bottom of the intake, the need for cleaning, and any concerns must be noted. Concerns should be reported to the Manager and addressed as soon as possible. Inspection results should be compared to the previous year's inspection results. If the review concludes that cleaning is required, advise the Manager. The Manager will determine the urgency to complete the cleaning and either request Council approval for an immediate expenditure or include the work in the next year's capital forecast.</p> <p>The raw water intake crib and conduit have not been inspected by an underwater diving operation within the last 7-8 years, nor have they been inspected by remote camera or cleaned within the last 5-6 years. It is recommended that the raw water intake crib and conduit be inspected on a regular basis, and cleaned as necessary, to ensure they are free from debris and sediment.</p>		

Question ID	MRDW1111000	
Question	Question Type	Legislative Requirement
Have Summary Reports for municipal council been completed on time, include the required content, and	Legislative	SDWA O. Reg. 170/03 22-2

distributed in accordance with the regulatory requirements?		(1),SDWA O. Reg. 170/03 22- 2 (2),SDWA O. Reg. 170/03 22- 2 (3),SDWA O. Reg. 170/03 22- 2 (4)
Observation		
Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.		