

Ministry of the Environment,
Conservation and Parks

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

Barrie District

District de Barrie

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February 17, 2023

Attention: Zach Drinkwalter Township of Ramara CAO

**Re: 2022 Drinking Water Inspection Report
Bayshore Village Subdivision Drinking Water System**

Please find enclosed the Ministry of the Environment, Conservation and Parks Inspection Report for Bayshore Village Subdivision Drinking Water System (Water Works # 220012724). The physical inspection process took place on January 18, 2023.

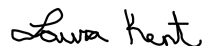
The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks legislation and authorizing documents, as well as evaluating conformance with Ministry drinking water-related policies and guidelines during the inspection review period.

No issues of non-compliance or best management practices were identified in the inspection. No Provincial Officer's Orders were issued in conjunction with this inspection.

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 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 the rating, please contact Sheri Broeckel, Drinking Water Program Supervisor, at 705-716-3712.

If you have any questions regarding the inspection report please feel free to contact the undersigned at (705) 716-5655 or laura.kent@ontario.ca.

Sincerely,



Laura Kent
Water Inspector
Provincial Officer
Barrie District Office, Ministry of the Environment Conservation and Parks

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BAYSHORE VILLAGE SUBDIVISION DRINKING WATER SYSTEM
143 BAYSHORE DR, RAMARA, ON, L0K 1W0

Inspection Report

System Number: 220012724
Entity: CORPORATION OF THE
TOWNSHIP OF RAMARA
Inspection Start Date: 01/18/2023
Inspection End Date: 02/17/2023
Inspected By: Laura Kent
Badge #: 1123

Laura Kent

(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

This should not be construed as a confirmation of full compliance with all potential applicable legal requirement and BMPs. These inspection findings are limited to the components and/or activities that were assessed, and the legislative framework(s) that were applied. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

If you have any questions related to this inspection, please contact the signed Provincial Officer.

INSPECTION DETAILS

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

Ministry Program: DRINKING WATER | **Regulated Activity:**

Question ID	MRDW1001001	Question Type	Information
Question:			
What was the scope of this inspection?			
Legislative Requirement	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.</p> <p>The Bayshore Village Subdivision Drinking Water System is owned by the Corporation of the Township of Ramara and operated by the Ontario Clean Water Agency (OCWA). The Bayshore Village Subdivision is categorized as a large municipal residential drinking water system, as defined by Ontario Regulation 170/03 and operates under DWS number 220012724.</p> <p>The Bayshore Village Subdivision Drinking Water System consists of 3 wells and one pumphouse. Treatment is provided by chlorination for primary and secondary disinfection. There are no storage structures within the distribution system. The distribution system consists of approximately 7,200 m of 150 mm diameter PVC watermain. There are four sample stations installed throughout the distribution system and 28 fire hydrants.</p> <p>This inspection was conducted in order to assess compliance with the requirements of Ontario Regulation 170/03 and Ministry control documents and conformance with Ministry best management practices. The drinking water inspection included: physical inspection of the treatment equipment and facility; interview with OCWA staff; and a review of relevant documents and data from the period of December 14, 2021, to January 18, 2023 (hereafter referred to as the "inspection review period"). The previous inspection of the Bayshore</p>			

Village Subdivision Drinking Water System was conducted on December 14, 2021.

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

Question ID	MRDW1018001	Question Type	Legislative
Question: Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
Legislative Requirement	SDWA 31 (1);		
Observation			
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. During the inspection installed equipment appeared to meet the description contained in Schedule A of Drinking Water Works Permit 147-204 Issue Number 3. The continuous operational chlorine analyser installed in the Hayloft building is not included in the Drinking Water Works Permit. There is not a Schedule C associated with the Permit.			

Question ID	MRDW1021001	Question Type	Legislative
Question: Is the owner/operating authority able to demonstrate that, when required during the inspection period, Form 2 documents were prepared in accordance with their Drinking Water Works Permit?			
Legislative Requirement	SDWA 31 (1);		
Observation			
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. During the inspection review period one Form 2 was completed for the Bayshore Village Subdivision Drinking Water System. Six chemical diaphragm metering pumps and three			

control panels for dosing sodium hypochlorite were replaced. The new pumps have the same capacity as the pumps that were replaced.

Question ID	MRDW1114001	Question Type	Legislative
Question:			
Does the owner have evidence that, when required, all legal owners associated with the DWS were notified of the requirements of the Licence & Permit?			
Legislative Requirement	SDWA 31 (1);		
Observation			
The owner had evidence that required notifications to all legal owners associated with the Drinking Water System had been made during the inspection period. The Owner notifies all developers/applicants of the requirements of the Licence and Permit during the pre-consultation stage.			

Question ID	MRDW1025001	Question Type	Legislative
Question:			
Were all parts of the drinking water system that came in contact with drinking water (added, modified, replaced or extended) disinfected in accordance with a procedure listed in Schedule B of the Drinking Water Works Permit?			
Legislative Requirement	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. Section 2.3 of Schedule B of Drinking Water Works Permit 147-204 Issue Number 3 states that all parts of the drinking water system in contact with drinking water that are added, modified, replaced, extended shall be disinfected in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:</p> <ul style="list-style-type: none"> a) Until August 3, 2022 the ministry's Watermain Disinfection Procedure, dated November 2015. As of August 4, 2022 the ministry's Watermain Disinfection Procedure, dated August 1, 2020. b) Subject to condition 2.3.2, any updated version of the ministry's Watermain Disinfection Procedure; c) AWWA C652 – Standard for Disinfection of Water-Storage Facilities; d) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and e) AWWA C654 – Standard for Disinfection of Wells. <p>The Operating Authority has developed a Standard Operating Procedure (SOP) for disinfection of drinking water system components. The SOP states that the required standards are to be followed as per the Drinking Water Works Permit.</p>			

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Question ID	MRDW1024001	Question Type	Legislative
Question:			
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated as required?			
Legislative Requirement	SDWA O. Reg. 170/03 1-2 (2);		
Observation			
<p>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) 4. of Schedule 1 of Ontario Regulation 170/03 states that the owner of a drinking water system and the operating authority for the system shall ensure that if the drinking water system's water treatment equipment provides chlorination or chloramination for secondary disinfection, 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 per litre, if the drinking water system provides chlorination and does not provide chloramination.</p> <p>During the inspection review period the lowest regulatory chlorine residual measured in the Bayshore distribution system was 0.21 mg/L. At the time of inspection, the Inspector measured a free chlorine residual of 1.57 mg/L at the Hayloft building.</p>			

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

Question ID	MRDW1035001	Question Type	Legislative
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Question:	
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	
Legislative Requirement	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, in the case of, a large municipal residential system, such as Bayshore Village Subdivision Drinking Water System.</p> <p>During the inspection review period records indicate that trending data was reviewed within 72 hours of the test being conducted. Operators are able to logon remotely to view the continuous analyser data. The Operating Authority has developed a Standard Operating Procedure for how Operators are to complete the review of continuous monitoring data. There is a continuous chlorine analyser installed at the Hayloft building in the distribution system. The Operating Authority does not consider this analyser to be a regulatory analyser. Operators are able to view the free chlorine residuals measured by the continuous analyser remotely. Daily an Operator will log on and view and record the free chlorine residual being measured at that time in the Hayloft and record it on the daily spreadsheet for the purpose of secondary disinfection monitoring.</p>	

Question ID	MRDW1037001	Question Type	Legislative
Question:			
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg. 170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?			
Legislative Requirement	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. (1.1) of Schedule 6 of Ontario Regulation 170/03 requires that the continuous monitoring equipment must cause an alarm to sound immediately at the following locations if the equipment malfunctions or loses power or a test result for a parameter is above the maximum alarm standard or below the minimum alarm standard specified in the Table to this section for the parameter:</p> <ul style="list-style-type: none"> i. The location where the equipment conducts tests. ii. A location where a person is present, if a person is not always present at the location 			

where the equipment conducts tests.

iii. Every designated facility served by the drinking water system, unless the system is a large municipal residential system or a small municipal residential system.

In the event that the continuous chlorine or turbidity analysers record a value below or above the set points an alarm is sent to an Operator. The setpoints exceed the requirements of the Table in Schedule 6 of Ontario Regulation 170/03. The low chlorine alarm setpoint is at a level high enough to try and afford an operator enough time to respond before primary disinfection is compromised. Operators regularly test the chlorine and turbidity alarms to ensure they are functioning properly.

Question ID	MRDW1040000	Question Type	Legislative
Question:			
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?			
Legislative Requirement	SDWA O. Reg. 170/03 6-5 (1)1-4; SDWA O. Reg. 170/03 6-5 (1)5-10;		
Observation			
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. Annually a third party performs calibrations on the continuous analysers. Operators change probes and electrolyte as required. Operators regularly make comparisons of the continuous analysers with handheld units. In the event that the discrepancy is greater than approximately 0.2 mg/L, the span of the continuous analyser is changed. The handheld units undergo a verification with secondary standards periodically, and are serviced by a third party annually.			

Question ID	MRDW1108001	Question Type	Legislative
Question:			
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by O. Reg. 170/03, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?			
Legislative Requirement	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. According to the lognotes,			

during the inspection review period operators responded to seven alarms at the pumphouse and one alarm remotely. Alarms were for low chlorine, low reservoir and high turbidity, power failure, generator running and to check the internet connection. Response time was in a timely manner and appropriate actions were taken for each event. None of the alarms resulted in an adverse water condition.

Question ID	MRDW1033001	Question Type	Legislative
Question:			
Is the secondary disinfectant residual measured as required for the large municipal residential distribution system?			
Legislative Requirement	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 large municipal residential distribution system. Subsection 7-2 (3) of Schedule 7 of Ontario Regulation 170/03 requires that 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 free chlorine residual, if the system provides chlorination and does not provide chloramination.</p> <p>Subsection (4) states that 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>There is a continuous chlorine analyser installed in the Hayloft building that continuously measures the free chlorine residual in the Bayshore Village Subdivision distribution system. The Operating Authority does not consider the analyser to be a regulatory analyser. Operators recorded a distribution chlorine residual daily during the inspection review period, on the Distribution Residual Record monthly sheets. Distribution chlorine residuals were also sampled and recorded from other locations in the distribution system besides the Hayloft, in conjunction with microbiological sample collection.</p>			

Question ID	MRDW1099001	Question Type	Information
Question:			
Do records show that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards			

(O. Reg. 169/03)?	
Legislative Requirement	Not Applicable
Observation	
Records showed that all water sample results taken during the inspection review period did not exceed the values of tables 1, 2 and 3 of the Ontario Drinking Water Quality Standards (O. Reg. 169/03). All samples collected during the inspection review period, including Schedule 23 and 24 parameters and fluoride, met the Ontario Drinking Water Quality Standards.	

Question ID	MRDW1081001	Question Type	Legislative
Question:			
For LMR systems, are all microbiological water quality monitoring requirements for distribution samples being met?			
Legislative Requirement	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			
All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a large municipal residential system were being met. Subsection 10-2 of Schedule 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 if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples taken in each week. The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken is tested for Escherichia coli (EC) and total coliforms (TC) and at least 25 per cent of the samples required to be taken are to be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). The estimated population of the Bayshore Village Subdivision is approximately 900 people. As such, 8 distribution samples are required to be collected each month. During the inspection review period, two distribution samples were taken each week and tested for the required parameters. All distribution microbiological samples collected during the inspection review period were tested for HPC.			

Question ID	MRDW1096001	Question Type	Legislative
Question:			
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?			

Legislative Requirement	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.	

Question ID	MRDW1086001	Question Type	Legislative
Question:			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
Legislative Requirement	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 were 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. During the inspection review period a sample was collected from the Bayshore Village Subdivision distribution system in February 2022, May 2022, August 2022 and November 2022 and tested for HAA as required. The sample location was alternated between the Marina 66 and Marina 99 sample stations. The average for HAA during the inspection review period was 6.6 ug/L. To calculate the average, the method detection limit of 5.3 ug/L was used for the one sample result that had a value that was below the method detection limit.			

Question ID	MRDW1087001	Question Type	Legislative
Question:			
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?			
Legislative Requirement	SDWA O. Reg. 170/03 13-6 (1); SDWA O. Reg. 170/03 13-6 (2); SDWA O. Reg. 170/03 13-6 (3); SDWA O. Reg. 170/03 13-6 (4); SDWA O. Reg. 170/03 13-6 (5); SDWA O. Reg. 170/03 13-6 (6);		

Observation
<p>All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location. Subsection 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 trihalomethanes (THMs). The samples are to be tested for THMs. During the inspection review period, distribution samples were collected and tested for THMs in February 2022, May 2022, August 2022 and November 2022. The THM sample location alternated between the Marine 66 and Marina 99 sample stations. The average for THMs during the inspection review period was 33.5 ug/L.</p>

Question ID	MRDW1113000	Question Type	Legislative
Question:			
Have all changes to the system registration information been provided to the Ministry within ten (10) days of the change?			
Legislative Requirement	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	MRDW1059000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
Legislative Requirement	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.			

Question ID	MRDW1060000	Question Type	Legislative
Question:			
Do the operations and maintenance manuals meet the requirements of the DWWP and			

MDWL issued under Part V of the SDWA?	
Legislative Requirement	SDWA 31 (1);
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. Section 16.2 of Schedule B of Municipal Drinking Water Licence 147-104 Issue Number 4 requires that the operations and maintenance manual or manuals, shall include at a minimum:</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 operation conditions and other operating conditions, if applicable; 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>16.2.8 An inspection schedule for all wells associated with the drinking water system, including all production wells, standby wells, test wells and monitoring wells;</p> <p>16.2.9 Well inspection and maintenance procedures that consider the entire well structure of each well including all above and below grade well components; and</p> <p>16.2.10 Remedial action plans for situations where an inspection indicates non-compliance with respect to regulatory requirements and/or risk to raw well water quality.</p> <p>The Bayshore Village Operations and Maintenance manual meets the requirements of the Municipal Drinking Water Licence. The Operating Authority last updated the Manual in May 2022 to include the most recent Permit and Licence.</p>	

Question ID	MRDW1061001	Question Type	Legislative
Question:			
Are logbooks properly maintained and contain the required information?			
Legislative Requirement	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. The Operating Authority uses electronic logs as well as a number of spreadsheets for the recording of information regarding the Bayshore Village Subdivision Drinking Water System. Records include all required information.	

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

Question ID	MRDW1071000	Question Type	BMP
Question:			
Has the owner provided security measures to protect components of the drinking water system?			
Legislative Requirement	Not Applicable		
Observation			
The owner had provided security measures to protect components of the drinking water system. The three wells and the sample stations are locked as well as the pumphouse. Access to the reservoir is located within the pumphouse. There are no other storage structures within the distribution system. There is a continuous chlorine analyser installed in the Hayloft community building which operators have access to at all times.			

Question ID	MRDW1073001	Question Type	Legislative
Question:			
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?			

Legislative Requirement	SDWA O. Reg. 128/04 23 (1);
Observation	
<p>The overall responsible operator had been designated for each subsystem. The drinking water system is classified as Bayshore Village Water Distribution and Supply Class II (Certificate # 2353). The Overall Responsible Operator is designated for the entire system. The Operator acting as the ORO is indicated in the electronic logbook on each day that entries are made.</p>	

Question ID	MRDW1074001	Question Type	Legislative
Question:			
Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?			
Legislative Requirement	SDWA O. Reg. 128/04 25 (1);		
Observation			
<p>Operators-in-charge had been designated for all subsystems which comprise the drinking water system. The drinking water system is classified as Bayshore Village Water Distribution and Supply Class II (Certificate # 2353). The Operators acting as the operators-in-charge (OIC) are designated for the entire system. The Operators acting as the OIC are indicated in the electronic logbook on each day that entries are made.</p>			

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

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

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Question ID	MRDW1007001	Question Type	Legislative
Question:			
Is the owner maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials?			
Legislative Requirement	SDWA O. Reg. 170/03 1-2 (1);		
Observation			
The owner was maintaining the production well(s) in a manner sufficient to prevent entry into the well of surface water and other foreign materials. Subsection 1-2. (1) 1. of Schedule 1 of Ontario Regulation 170/03 requires that the owner of a drinking water system shall ensure that any well that serves as an entry point of raw water supply is constructed and maintained to prevent surface water and other foreign materials from entering the well. There are three supply wells for Bayshore Village Subdivision Drinking Water System. Each of the wells has a secure cap and screened vent. The raw water results during the inspection review period support that the wells are being maintained to prevent the entry of surface water. All raw results were clear of microbiological contamination. Operators perform monthly checks on the above grade components of the wells.			

Question ID	MRDW1009001	Question Type	Legislative
Question:			
Are measures in place to protect the groundwater and/or GUDI source in accordance with any MDWL and DWWP issued under Part V of the SDWA?			
Legislative Requirement	SDWA 31 (1);		
Observation			
Measures were in place to protect the groundwater and/or GUDI source in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA. Condition 16.2.8 of Schedule B of Municipal Drinking Water Licence 147-104 Issue Number 4 requires an inspection schedule for all wells associated with the drinking water system, including all production wells, standby wells, test wells and monitoring wells. Condition 16.2.9 of Schedule B of Municipal Drinking Water Licence 147-104 Issue Number 4 requires well inspection and maintenance procedures that consider the entire well structure of each well including all above and below grade well components. Condition 16.2.10 of Schedule B of Municipal Drinking Water Licence 147-104 Issue Number 4 requires remedial action plans for situations where an inspection indicates non-compliance with respect to regulatory requirements and/or risk to raw well water quality. The Bayshore Village Water Works Operations and Maintenance Manual includes a well inspection, maintenance and monitoring plan. The Plan details what is to be included in the			

monthly inspections as well as when the inspection of the unexposed well structure should be completed and what should be included in the assessment.

Question ID	MRDW1014001	Question Type	Legislative
Question:			
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?			
Legislative Requirement	SDWA 31 (1);		
Observation			
<p>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 147-104 Issue Number 4 requires that for each treatment subsystem, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system, and the flow rate and daily volume of water that flows into the treatment subsystem.</p> <p>There is a magnetic flow meter installed on each of the raw water lines, and a magnetic flow meter installed on the distribution header. Each of the flow meters provides a 4-20 mA signal. Raw and treated water flows are continuously recorded on the SCADA system. Well 5 failed the annual calibration performed on January 17, 2023 for the flow meters. The Well is still being used as the flow meter appears to be accurately measuring flow, based on historical data comparisons. A new flow meter has been ordered and is expected in May 2023.</p>			

Question ID	MRDW1016001	Question Type	Legislative
Question:			
Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?			
Legislative Requirement	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. Table 1 of Schedule C of Municipal Drinking Water Licence 147-104 Issue Number 4 states that the rated capacity for Bayshore Village Subdivision Drinking Water System is 1,243.8 m³/day.</p> <p>During the inspection review period the rated capacity was not exceeded.</p>			

Question ID	MRDW1023001	Question Type	Legislative
Question:			
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a DWWP and/or MDWL issued under Part V of the SDWA at all times that water was being supplied to consumers?			
Legislative Requirement	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 O. Reg. 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers. Primary disinfection for Bayshore Village Subdivision Drinking Water System is achieved by chlorination and the use of the chlorine contact/concentration time (CT) concept to ensure the provision of effective pathogen inactivation. The effective disinfectant contact time required for the CT concept is attained within the reservoir located under the pumphouse, prior to the conveyance of the treated water to consumers. Following completion of the intended contact time, free chlorine residuals are maintained within the distribution system for secondary disinfection purposes. In efforts to ensure minimum treatment is provided at all times, a series of fail safes have been incorporated into the SCADA system. Fail safes include, the low alarm set point being at a level which affords sufficient time for an Operator to respond, prior to the chlorine residual dropping below the concentration required for primary disinfection and low reservoir level alarms. In addition, each of the three wells supplying the drinking water system have a separate chlorine injection point with a duty and standby chemical metering pump. Operators can perform CT calculations in the event of a low chlorine alarm to confirm that primary disinfection has been achieved.</p> <p>In order to determine if primary disinfection was achieved at the Bayshore Village Subdivision Drinking Water System during the inspection review period, flow rates, free chlorine residuals, reservoir levels and logsheets were reviewed. On days when the continuous chlorine analyser read a value below the low chlorine alarm set point or the reservoir level was below the alarm set point, maintenance activities were being undertaken, such as cleaning or testing the low chlorine alarm, swabbing the distribution system, calibration and changing the chlorine probe and tip, or an operator responded to an alarm and rectified the issue.</p>			

Question ID	MRDW1030000	Question Type	Legislative
Question:			
Is primary disinfection chlorine monitoring being conducted at a location approved by MDWL and/or DWWP issued under Part V of the SDWA, or at/near a location where the intended CT has just been achieved?			

Legislative Requirement	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. The continuous chlorine analyser is fed sample water from the point after the reservoir and the intended CT, prior to the water entering the Bayshore Village Subdivision distribution system.</p>	

Question ID	MRDW1083001	Question Type	Legislative
Question:			
For LMR systems, are all microbiological water quality monitoring requirements for treated samples being met?			
Legislative Requirement	SDWA O. Reg. 170/03 10-3;		
Observation			
<p>All microbiological water quality monitoring requirements prescribed by legislation for treated samples were being met. Subsection 10-3 of Schedule 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 a 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.</p> <p>During the inspection review period, a treated water sample was collected each week and tested for the required microbiological parameters.</p>			

Question ID	MRDW1084001	Question Type	Legislative
Question:			
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	SDWA O. Reg. 170/03 13-2;		
Observation			
<p>All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Subsection 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, if the system obtains water from a raw water supply that is surface water, or at least one water sample is taken every 36 months, if the system obtains water from a</p>			

raw water supply that is ground water. The owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples are tested for every parameter set out in Schedule 23.

Section 6-1.1 (6) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 36 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 36-month period for the purpose of being tested for that parameter is taken not more than 60 days before or after the third anniversary of the day a sample was taken for that purpose in the previous 36-month period.

The three source water wells for Bayshore Village Subdivision Drinking Water System are groundwater. During the inspection review period treated water samples were collected on August 3, 2022 and tested for all parameters listed in Schedule 23 of Ontario Regulation 170/03. The previous samples tested for all Schedule 23 parameters were collected on August 21, 2019.

Question ID	MRDW1088000	Question Type	Legislative
Question: Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?			
Legislative Requirement	SDWA O. Reg. 170/03 13-7;		
Observation			
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 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 three months and tested for nitrate and nitrite. During the inspection review period, samples tested for nitrate and nitrite were collected from the treated water point of entry for Bayshore Village Subdivision Drinking Water System in February 2022, May 2022, August 2022 and November 2022 as required.			

Question ID	MRDW1089000	Question Type	Legislative
Question: Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	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 for the purpose of Section 13-8 of Schedule 13 of Ontario Regulation 170/03 was collected on August 12, 2020, with a resample collected on August 24, 2020.

Question ID	MRDW1090000	Question Type	Legislative
Question:			
Where fluoridation is not practiced, are all fluoride water quality monitoring requirements prescribed by legislation conducted within the required frequency?			
Legislative Requirement	SDWA O. Reg. 170/03 13-9;		
Observation			
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.			
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.			
During the inspection review period a treated water sample was collected and tested for fluoride on August 3, 2022. The previous treated water fluoride sample was collected on August 15, 2017 from the Bayshore Village Subdivision Drinking Water System.			

Question ID	MRDW1085001	Question Type	Legislative
Question:			
Are all organic water quality monitoring requirements prescribed by legislation conducted			

within the required frequency?

Legislative Requirement

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

All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Subsection 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, if the system obtains water from a raw water supply that is surface water, or at least one water sample is taken every 36 months, if the system obtains water from a raw water supply that is ground water. The owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples is tested for every parameter set out in Schedule 24.

Section 6-1.1 (6) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 36 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 36-month period for the purpose of being tested for that parameter is taken not more than 60 days before or after the third anniversary of the day a sample was taken for that purpose in the previous 36-month period.

The three source water wells for Bayshore Village Subdivision Drinking Water System are groundwater. During the inspection review period treated water samples were collected on August 3, 2022 and tested for all parameters listed in Schedule 24 of Ontario Regulation 170/03. The previous samples tested for all Schedule 24 parameters were collected on August 21, 2019.