Ontario

Ministry of the Environment, Conservation and Parks

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

District de Barrie

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February 28, 2023

Attention: Zach Drinkwalter Township of Ramara CAO

Re: 2022 Drinking Water Inspection Report
Val Harbour Subdivision Drinking Water System

Please find enclosed the Ministry of the Environment, Conservation and Parks Inspection Report for Val Harbour Subdivision Drinking Water System (Water Works # 220010690). 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

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

CC Nick Leroux, Ontario Clean Water Agency, Senior Operations Manager, nleroux@owca.com
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VAL HARBOUR SUBDIVISION DRINKING WATER SYSTEM
3885 EDGEHILL RD, RAMARA, ON, L3V 0L1

Inspection Report

System Number:	220010690
Entity:	CORPORATION OF THE TOWNSHIP OF RAMARA
Inspection Start Date:	01/18/2023
Inspection End Date:	02/28/2023
Inspected By:	Laura Kent
Badge #:	1123

(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			

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.

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.

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 Val Harbour Subdivision Drinking Water System serves an estimated population of 193 people on 74 lots. The drinking water system is owned by the Corporation of the Township of Ramara and operated by the Ontario Clean Water Agency (OCWA). The Val Harbour Subdivision Drinking Water System is categorized as a small municipal residential drinking water system, as defined by Ontario Regulation 170/03 and operates under drinking water system (DWS) number 220010690.
The Val Harbour Subdivision Drinking Water System consists of 3 wells, treatment equipment, three distribution sample points and six blow offs for flushing and maintenance purposes. 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 1700 m of 100 mm diameter polyethylene watermain.
The drinking water inspection included: physical inspection of the treatment equipment and facility; interviews with OCWA staff; and a review of relevant documents and data from the period of November 5, 2021 to January 18, 2023 (hereafter referred to as the "inspection review period"). The previous inspection of the Val Harbour subdivision Drinking Water System was conducted on November 5, 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. At the time of inspection, the installed equipment at the Val Harbour Subdivision pumphouse appeared to be installed as per the description in Schedule A of Drinking Water Works Permit 147-205 Issue Number 3 and the process flow diagram contained in Schedule D. The overview in Schedule A does not include Well 3R, but Well 3R is reflected in the Water Works description and in the process flow diagram. There are no items in Schedule C contained in the Drinking Water Works Permit. A Director's Notification Form was completed on January 27, 2022, indicating that the sodium hypochlorite feed system for secondary disinfection was removed. The secondary disinfection system has not been required to achieve CT for primary disinfection or to maintain the chlorine residual in the Val Harbour distribution system since upgrades were completed in 2004. Drinking Water Works Permit 147-205 Issue Number 3 was signed on February 4, 2022 and does not reference the secondary disinfection sodium hypochlorite system.			

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 Val Harbour Subdivision Drinking Water System, dated January 27, 2022. The sodium hypochlorite feed system for secondary disinfection was removed. The system had not been required for CT or to maintain distribution chlorine residuals since upgrades were done to install the reservoirs in 2004. A Director's Notification Form was also completed for the equipment removal.	

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			
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 147-205 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:			

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.
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.

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

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, such as the Val Harbour Subdivision drinking water system.
During the inspection review period the lowest chlorine residual measured in the Val Harbour Subdivision distribution system was 0.82 mg/L. At the time of inspection, the Inspector measured a free chlorine residual of 1.77 mg/L at the Leo Sample Station. An Operator measured a free chlorine residual of 1.79 mg/L at the same time from the same place as the Inspector.

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
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			
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 small municipal residential system, such as Val Harbour Subdivision Drinking Water System. 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 anlayser data. The Operating Authority has developed a Standard Operating Procedure for how Operators are to complete the review of continuous monitoring data.			

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			
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. 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.
The reservoir is also alarmed for high and low levels and Operators review the miltronics data for the reservoir levels.

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 and standards. 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 14 alarms. Eight responses			

were due to communication issues with the alarm company. In these instances Operators were able to enable a backup alarm system to ensure that notifications would be received in the event of a value being measured above or below the setpoints. Three alarm responses were for low chlorine, one for a low reservoir alarm and one for a high turbidity event. In each instance primary and secondary disinfection were maintained. One alarm response was for low temperature at the pumphouse. Response time was in a timely manner and appropriate actions were taken for each event. None of the alarms resulted in an adverse water quality incident.

Question ID	MRDW1034001	**Question Type**	Legislative
Question: Is the secondary disinfectant residual measured as required for the small municipal residential distribution system?			
Legislative Requirement	SDWA | O. Reg. 170/03 | 7-2 | (5); SDWA | O. Reg. 170/03 | 7-2 | (6);		
Observation			
The secondary disinfectant residual was measured as required for the small municipal residential distribution system. Subsection 7-2 (5) of Schedule 7 of Ontario Regulation 170/03 requires that the owner of a small municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least two distribution samples are taken each week in accordance with subsection (6) and are tested immediately for free chlorine residual, if the system provides chlorination and does not provide chloramination. Subsection (6) states that at least one of the distribution samples referred to in subsection (5) must be taken at least 48 hours after, and during the same week as, one of the other distribution samples referred to in subsection (5). During the inspection review period a free chlorine residual was measured in the Val Harbour Subdivision distribution system on at least two days each week, with at least 48 hours between samples as required.			

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 sample results from samples collected during the inspection review period, including fluoride and lead samples, as well as the most recent samples tested for Schedule 23 and 24 parameters met the Ontario Drinking Water Quality Standards.

Question ID	MRDW1082001	**Question Type**	Legislative

Question:

For SMR systems, are all microbiological water quality monitoring requirements for distribution samples prescribed by legislation being met?

Legislative Requirement	SDWA | O. Reg. 170/03 | 11-2 | (1); SDWA | O. Reg. 170/03 | 11-2 | (2);

Observation

All microbiological water quality monitoring requirements prescribed by legislation for distribution samples in a small municipal residential system were being met. Subsection 11-2 of Schedule 11 of Ontario Regulation 170/03 requires that the owner of a small municipal residential drinking water system and the operating authority for the system shall ensure that at least one distribution sample is taken every two weeks, if the system provides treatment equipment in accordance with Schedule 1 or 2 and the equipment is operated in accordance with that Schedule. 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, total coliforms and general bacteria population expressed as colony counts on a heterotrophic plate count (HPC), as Val Harbour Subdivision distribution system has secondary disinfection.
During the inspection review period one distribution sample was collected every two weeks from the Val Harbour Subdivision distribution system and tested for all the required parameters.

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 Val Harbour Subdivision distribution system in February 2022, May 2022, August 2022 and November 2022 and tested for HAA as required. Three different sample locations were used. The Operating Authority should use the location that is likely to have an elevated potential for the formation of HAA. The average for HAA during the inspection review period was 9.6 ug/L. Three of the sample values were below the method detection limit. The value used for the three samples below the method detection limit in calculating the average was 5.3 ug/L, which is the method detection limit. The Val Harbour Subdivision Drinking Water System is eligible for reduced sampling of HAAs as per subsection 13-6.1(4) of Schedule 13 of Ontario Regulation 170/03, as there have not been any sample results greater than 0.04 milligrams per litre in the previous 12 consecutive calendar quarters.	

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			
All trihalomethane water quality monitoring requirements prescribed by legislation were conducted within the required frequency and at the required location. Section 13-6 of Schedule 13 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 samples were collected and tested for THMs from the Val Harbour distribution system in February 2022, May 2022, August 2022 and November 2022. The average for THMs during the inspection review period was 15.75 ug/L.
The Val Harbour Subdivision Drinking Water System is eligible for reduced sampling of THMs as per subsection 13-6.(4), as there have not been results above 0.050 mg/L in the previous 12 consecutive calendar quarters.

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
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 147-105 Issue Number 5 requires that the operations and maintenance manual or manuals, shall include at a minimum: 16.2.1 The requirements of this licence and associated procedures; 16.2.2 The requirements of the drinking water works permit for the drinking water system; 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system, including where applicable: a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions and other operating conditions, if applicable; and b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate; 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; 16.2.5 Procedures for the operation and maintenance of monitoring equipment; 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown; 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; 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; 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 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. The Val Harbour Water Works Operations and Maintenance Manual and Contingency and Emergency Plan meet the requirements of the Municipal Drinking Water Licence (MDWL). The Operating Authority last updated the Manual in May 2022 for the changes from the MDWL and Drinking Water Works Permit (DWWP) issued in February 2022.

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 Val Harbour 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 wells, sample stations, reservoir hatches and pumphouse are locked. The pumphouse is also alarmed for forced entry. There is a fence with a locked gate around the reservoir hatches and one of the wells. There are no other storage structures within the distribution system.			

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			

The overall responsible operator had been designated for each subsystem.
The Val Harbour Subdivision Drinking Water System is categorized as a Limited Ground Water system under Ontario Regulation 128/04. The Overall Responsible Operator (ORO) 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.

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			
Operators-in-charge had been designated for all subsystems which comprise the drinking water system. The Val Harbour Subdivision Drinking Water System is categorized as a Limited Ground Water system under Ontario Regulation 128/04. The Operators-in-charge (OIC) are designated for the entire system. The Operators acting as OIC are indicated in the electronic logbook on each day that entries are made.			

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.			

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 Val Harbour Subdivision Drinking Water System. Each of the wells has a secure cap and screened vent. The surface grading does not promote the pooling of water at the base of the well casings. Raw water samples were collected monthly during the inspection review period. All raw water microbiological results were zero for total coliforms and Escherichia coli. Operators perform inspections at least monthly of the above grade components of the wells. Well rehabilitation work was completed in December 2022 for Well 1 and Well 2.	

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 147-105 Issue Number 5 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 147-105 Issue Number 5 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 147-105 Issue Number 5 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 Val Harbour 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.			

During the inspection review period Well 1 and Well 2 had rehab work completed in December of 2022.

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			
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 147-105 Issue Number 5 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. There is a magnetic flow meter installed on each of the three raw water lines, as well as on the combined raw water header, 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.			

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			
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 147-105 Issue Number 5 states that the rated capacity for Val Harbour Subdivision Drinking Water System is 207.36 m3/day. The rated capacity was not exceeded during the inspection review period. There is not a maximum flow rate contained in the Val Harbour Municipal Drinking Water Licence.			

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

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 Val Harbour 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 reservoirs. 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 chlorine and reservoir alarm set points being at a level which affords sufficient time for an Operator to respond, prior to the CT dropping below the level required for primary disinfection. Operators perform CT calculations regularly.
In order to determine if primary disinfection was achieved at the Val Harbour Subdivision Drinking Water System during the inspection review period, flow rates, free chlorine residuals, turbidity values, reservoir levels and the logsheets were reviewed. These records indicate that during the inspection review period the treatment equipment was operated as required to achieve the disinfection requirements.

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

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 a point after the reservoirs and the

intended CT, prior to water entering the Val Harbour distribution system.

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			
All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency. Subsection 13-2 (3) of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a small municipal residential system and the operating authority for the system shall ensure that, at least one water sample is taken every 60 months and tested for every parameter set out in Schedule 23. The most recent treated water samples tested for all Schedule 23 parameters were collected on August 21, 2019. Previously samples were tested for Schedule 23 parameters on August 16, 2016.			

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 Val Harbour 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 and 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 Val Harbour Subdivision Drinking Water System. The result was 26.0 mg/L. A resample was collected on August 24, 2020 with a result of 21.4 mg/L.

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 and 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.
A treated water sample was collected on August 8, 2022, from Val Harbour and tested for fluoride. Prior to that a fluoride sample was collected on August 15, 2017.

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 (3) of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a small municipal residential system and the operating authority for the system shall ensure that, at least one water sample is taken every 60 months and tested for every parameter set out in Schedule 24. The most recent treated water samples tested for all Schedule 24 parameters were collected on August 21, 2019. Previously samples were tested for Schedule 24 parameters on August 16, 2016.			