

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

Central Region

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

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December 30, 2021

Zach Drinkwalter, Acting Chief Administrative Officer/Director of Finance
The Township of Ramara
2297 Highway 12, PO Box 130
Brechin, ON, L0K 1B0
(email: zdrinkwalter@ramara.ca)

Dear Mr. Drinkwalter

**RE: Communal Drinking Water Inspection Report #1-31512556
Val Harbour Subdivision Drinking Water System
Date of MECP Inspection: November 5, 2021**

Please find enclosed the Ministry of the Environment, Conservation and Parks Inspection Report for the Val Harbour Subdivision Drinking Water System (Water Works # 220010690) inspection. The physical inspection process took place on November 5, 2021.

The primary focus of this inspection was to confirm compliance with Ministry of the Environment, Conservation and Parks legislation and control documents, as well as conformance with Ministry drinking water related policies for the inspection period. The Ministry is implementing a rigorous and comprehensive approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as water system management practices.

Section 19 of the Safe Drinking Water Act (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems. Please be aware that the Ministry has encouraged such individuals, particularly municipal councillors, to take steps to be better informed about the drinking water systems over which they have decision-making authority. These steps could include asking for a copy of this inspection report and a review of its findings. Further information about Section 19 can be found in "Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils" found under "Resources" on the Drinking Water Ontario website at www.ontario.ca/drinkingwater.

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.

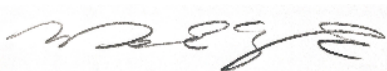
The Inspection Summary Rating Record (IRR) provides the Ministry, the system owner and the associated Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspector's Annual Report.

Please note that due to a change in IT systems, the Inspection Rating Report (IRR) cannot be generated at the same time as the inspection report. The IRR will be sent separately and prior to any public release (typically within 1-2 month of the completion of the inspection).

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 or concerns regarding this inspection report, please contact the undersigned.

Respectfully,



Mark Kowalyk
Drinking Water Inspector – Provincial Officer # 1707
Barrie District Office
Drinking Water and Environmental Compliance Division
Ministry of the Environment, Conservation and Parks

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VAL HARBOUR SUBDIVISION DRINKING WATER SYSTEM
3885 EDGEHILL RD, RAMARA, ON, L3V 0L1

Inspection Report

System Number:	220010690
Inspection Start Date:	11/05/2021
Inspection End Date:	12/30/2021
Inspected By:	Mark Kowalyk
Badge #:	1707

A handwritten signature in black ink, appearing to be 'W. D. E. J. E.', written over a horizontal line.

(signature)

NON-COMPLIANCE/NON-CONFORMANCE ITEMS

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

Question Group: Water Quality Monitoring

Question ID	MRDW1097000	
Question	Question Type	Legislative Requirement
If the drinking water system obtains water from a ground water source, is turbidity being tested at least once every month from each well that is supplying water to the system?	Legislative	SDWA O. Reg. 170/03 7-3 (1.1)
Observation/Corrective Action(s)		
<p>Turbidity was not being tested at least once every month from each well that is supplying water to the system. Section 7-3 of Schedule 7 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 month, from a location that is before raw water enters the treatment system, and is tested for turbidity. If the drinking water system obtains water from a raw water supply that is ground water, the owner of the system and the operating authority for the system shall ensure that a sample is taken from each well that is supplying water to the system. There are three groundwater supply wells for the Val Harbour Subdivision Drinking Water System.</p> <p>During the inspection review period, monthly raw water turbidity samples were not collected in September and October 2020. As a corrective action, Operations staff were provided and trained on facility sampling calendars which list the requirement for monthly raw water turbidity sampling from each raw water source.</p>		

INSPECTION DETAILS

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

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

Question ID	MRDW1001000	
Question	Question Type	Legislative Requirement
What was the scope of this inspection?	Information	Not Applicable
Observation		
<p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA. 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 Val Harbour Subdivision Drinking Water System is comprised of 74 residential lots, with most connected to the drinking water system. Since September 1, 2020, the drinking water system has been operated by the Ontario Clean Water Agency. 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 DWS number 220010690.</p> <p>The Val Harbour Subdivision Drinking Water System consists of three source wells, one decommissioned well, three distribution sample points and six blow offs for flushing and maintenance purposes. Treatment is provided by chlorination for primary and secondary disinfection. Two 43,800 L precast concrete treated water reservoirs are used to achieve the necessary contact time and to meet peak demand. There are no storage structures within the distribution system. The distribution system consists of approximately 1,700 m of 100 mm diameter polyethylene watermain. On Friday November 5, 2021, an announced on-site physical inspection of the Val Harbour Subdivision Drinking Water System was conducted. The inspection included a review of relevant documents and data.</p>		

Question ID	MRDW1000000	
Question	Question Type	Legislative Requirement
Does this drinking water system provide primary disinfection?	Information	Not Applicable
Observation		
<p>This Drinking Water System provides for both primary and secondary disinfection and distribution of water. Section 1-3 of Schedule 1 Ontario Regulation 170/03 requires the Owner of</p>		

a drinking water system that obtains water from a raw water supply that is ground water to ensure provision of water treatment equipment that is designed to be capable of achieving, at all times, primary disinfection in accordance with the Ministry's Procedure for Disinfection of Drinking Water in Ontario, including at least 99 per cent removal or inactivation of viruses by the time water enters the distribution system.

Val Harbour Subdivision obtains its drinking water from Well #1, 2 and 3R. Raw water is treated with sodium hypochlorite for primary disinfection before entering two below grade reservoirs adjacent to the Water Works building. The tanks are operated in series to maximize chlorine contact time. Two high lift pumps convey the primary disinfected water from the reservoirs to the distribution system. Sodium hypochlorite is injected in the discharge line of the high lift pumps for secondary disinfection. Continuous water quality on-line analysers monitor the free chlorine residual, pH and turbidity of the treated water before it enters the distribution system.

Based on continuously recorded and manually sampled data provided by the Owner and reviewed during the course of this inspection, it appears that the required level of treatment was provided at all times during the inspection review period for the Val Harbour Subdivision Drinking Water System.

Question ID	MRDW1007000		
Question	Question Type	Legislative Requirement	
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	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 the Val Harbour Subdivision Drinking Water System. Each of the wells has a secure cap and screened vents. The grading around the base of the wells does not promote the pooling of water at the base. Operators check the exposed parts of each of the wells monthly.			

Question ID	MRDW1008000		
Question	Question Type	Legislative Requirement	
If there are municipal wells not being used as a raw water supply, is the owner maintaining the wells in a manner to prevent the entry of surface water and other foreign materials?	Legislative	OWRA R.R.O. 1990, Reg. 903 21 (3)	
Observation			
The owner was maintaining the municipal wells not being used as a raw water supply in a manner to prevent the entry of surface water and other foreign materials. There is one decommissioned well associated with the Val Harbour Subdivision Drinking Water System. This well is adjacent to			

source Well 3R. The decommissioned well has a secure cap and screened vent and has Well Tag No. A111794 attached. The well was completed on December 22, 2011 by Allan Wright Water Wells (Well Contractor's Licence # 5528). The inner annular space was sealed with bentonite grout to a depth of 9 meters. The Operating Authority checks the well monthly.

Question ID	MRDW1009000	
Question	Question Type	Legislative Requirement
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	SDWA 31 (1)
Observation		
<p>Measures were in place to protect the groundwater and/or GUDI source in accordance with any 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 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.</p> <p>Condition 16.2.9 of Schedule B of Municipal Drinking Water Licence 147-105 Issue Number 4 requires well inspection and maintenance procedures for the entire well structure of each well including all above and below grade well components.</p> <p>Condition 16.2.10 of Schedule B of Municipal Drinking Water Licence 147-105 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 Operating Authority has developed a Well Inspection, Maintenance and Monitoring Plan. The Plan outlines the schedule for inspection of the three production wells supplying water for the Val Harbour Drinking Water System. The inspection schedule includes both above and below grade well components, as well as comparison of well level monitoring data and calibration of the flow meters. The Plan includes a list of conditions that may indicate a problem with the well casing or structure. The Plan includes a monthly well inspection checklist, monthly well checks, yearly well inspection performance inspection check list and a 5-year checklist for the unexposed well structure.</p>		

Question ID	MRDW1010000	
Question	Question Type	Legislative Requirement
Are trends in source water quality being monitored?	BMP	Not Applicable
Observation		
<p>Trends in source water quality were being monitored. Raw water microbiological results are reviewed when the results are received. Quarterly sampling for major ions, nitrate and nitrite is performed for each of the wells, and the results summarized in the Val Harbour Water Works Annual Report.</p>		

Question ID	MRDW1014000	
Question	Question	Legislative

	Type	Requirement
Is there sufficient monitoring of flow as required by the MDWL or DWWP issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<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 147-105 Issue Number 3 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 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. Daily log print outs include the 24 hour flows, min, max and average from each of the raw water wells as well as the combined raw water header and treated water flows. The 24 hour flow as well as the amount of flow since midnight (the print out occurs at approximately 6:00 am) is indicated.</p>		

Question ID	MRDW1015000		
Question	Question Type	Legislative Requirement	
Are the flow measuring devices calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)	
Observation			
<p>The flow measuring devices were calibrated or verified in accordance with the requirements of the MDWL issued under Part V of the SWDA. Condition 3 of Schedule of Municipal Drinking Water Licence Number 147-105 Issue 4 states that:</p> <p>3.1 All flow measuring devices that are required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment, Conservation and Parks, shall be checked and calibrated in accordance with the manufacturer's instructions.</p> <p>3.2 If the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and calibrated at least once every 12 months during which the drinking water system is in operation.</p> <p>3.2.1 For greater certainty, if condition 3.2 applies, the equipment shall be checked and calibrated not more than 30 days after the first anniversary of the day the equipment was checked and calibrated in the previous 12-month period.</p> <p>On January 20, 2021, the three flow meters underwent testing for calibration verification. A review of the submitted Flow Meter Verification Report shows that the flow meters passed calibration.</p>			

Question ID	MRDW1016000		
Question	Question Type	Legislative Requirement	

Is the owner in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>The owner was in compliance with the conditions associated with maximum flow rate or the rated capacity conditions in the Municipal Drinking Water Licence issued under Part V of the SDWA. Table 1 of Schedule C of Municipal Drinking Water Licence 147-105 Issue Number 4 states that the rated capacity for Val Harbour Water Works is 207.36 m3/day. This value was not exceeded during the inspection review period.</p> <p>Table 2 of Schedule C of Municipal Drinking Water Licence 147-105 Issue Number 3 does not have a maximum flow rate associated with the Val Harbour Subdivision Drinking Water System. Records provided for review indicate that between August 2020 to November 2021, the maximum daily flow rate occurred on August 28, 2021 when 80m3 or 39% of the plant rated capacity was recorded.</p> <p>A review of records made during this inspection review period indicates that the Val Harbour Subdivision Drinking Water System was not operated to exceed the plant rated capacity set out in the Licence.</p>		

Question ID	MRDW1017000	
Question	Question Type	Legislative Requirement
Were appropriate records of flows and any capacity exceedances made in accordance with the MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>Appropriate records of flows and any capacity exceedances were made in accordance with the Municipal Drinking Water Licence issued under Part V of the SDWA. Condition 2.1 of Schedule C of Municipal Drinking water Licence Number 147-105 Issue 4 requires that for each treatment subsystem identified in column 1 of Table 1 and in addition to any other flow measurement and recording that may be required, continuous flow measurement and recording shall be undertaken for:</p> <p>2.1.1 - The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.</p> <p>2.1.2 - The flow rate and daily volume of water that flows into the treatment subsystem.</p> <p>There are five (5) flow meters installed in the Val Harbour Subdivision pumphouse; one for each of the three (3) wells, one (1) for the combined raw water header and one (1) for the treated water header entering the distribution system. The SCADA system records the measurements from the flow meters each minute.</p> <p>Condition 2.3 of Schedule C of Municipal Drinking Water Licence Number 4 states that where a rated capacity from Table 1 or a maximum flow rate from Table 2 is exceeded, the following shall be recorded:</p> <p>2.3.1 The difference between the measured amount and the applicable rated capacity or maximum flow rate specified in Table 1 or Table 2;</p> <p>2.3.2 The time and date of the measurement;</p> <p>2.3.3 The reason for the exceedance; and</p> <p>2.3.4 The duration of time that lapses between the applicable rated capacity or maximum flow rate</p>		

first being exceeded and the next measurement where the applicable rated capacity or maximum flow rate is no longer exceeded.

Question ID	MRDW1013000	
Question	Question Type	Legislative Requirement
Is the owner in compliance with all conditions of the PTTW?	Legislative	OWRA 34 (3)
Observation		
<p>The owner was in compliance with all conditions of the PTTW. Permit to Take Water (PTTW) P-300-9104539203 was issued for the three wells supplying the Val Harbour Subdivision Drinking Water System was issued on December 4, 2020, and expires December 3, 2030.</p> <p>Table A of the PTTW gives the following limits for takings from each of the supply wells: Well 1 maximum takings of 47L/min; 67,680L/day Well 2 maximum takings of 97L/min; 139,680L/day Well 3R maximum takings of 150L/min; 207,360L/day</p> <p>All wells listed may be operated individually or simultaneously but the maximum combined daily taking shall not exceed 216m³/day.</p> <p>During the inspection review period, the total daily takings limit was not exceeded for any of the wells. There were instances when the L/min value for wells were exceeded, however, these instances were short in duration and were at start up.</p> <p>Condition 3.3 of PTTW P-300-9104539203 states that all wells listed in Table A may be operated individually or simultaneously but the maximum combined daily taking shall not exceed 216m³/day.</p> <p>Condition 4.1 of PTTW P-300-9104539203 states that the Permit Holder shall install and maintain flow meters of each well source listed in Table A. Readings shall be recorded daily for each well in the system but may include average daily values to cover absences up to 7 days maximum. The Permit Holder shall keep all required records up to date and available for inspection by a Provincial Officer upon his or her request.</p> <p>There is a flow meter installed on each of the raw water lines, and on the combined raw water header. The SCADA system records the flow rate for the four flow meters each minute. The daily log printouts include the maximum, minimum and average flow rates from each well and from the total combined raw water flow meters. The total flow, flow since midnight (the log sheet prints at 6am) and the percentage of raw water taken are also included on the log sheet. Operators record the well pump hours on the log sheet when they attend the pumphouse. Condition 4.2 of PTTW P-300-9104539203 states that the Permit Holder shall install and maintain a water level recorder in the original Well 3 or an alternative well in this vicinity of comparable depth to the supply wells identified in Table A. Data collected shall be available electronically to the Ministry of Environment staff upon request.</p> <p>The Operating Authority is able to measure the level in Well 2.</p>		

Question ID	MRDW1030000	
Question	Question Type	Legislative Requirement
Is primary disinfection chlorine monitoring being conducted	Legislative	SDWA O. Reg.

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?		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 distribution system.		

Question ID	MRDW1038000	
Question	Question Type	Legislative Requirement
Is continuous monitoring equipment that is being utilized to fulfill O. Reg. 170/03 requirements performing tests for the parameters with at least the minimum frequency specified in the Table in Schedule 6 of O. Reg. 170/03 and recording data with the prescribed format?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4
Observation		
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	MRDW1036000	
Question	Question Type	Legislative Requirement
Where continuous monitoring equipment is not used for chlorine residual analysis, are samples tested using an acceptable portable device?	Legislative	SDWA O. Reg. 170/03 6-7 (1)
Observation		
Samples for chlorine residual analysis were tested using an acceptable portable device. The Val Harbour Subdivision utilizes the HACH direct read out colourimeters for assessing the secondary disinfection performance, as required by section 6-7 of Schedule 6 of Ontario Regulation 170/03. These units are assessed each month against the secondary standards to ensure accuracy. A complete recalibration of each unit is completed annually.		

Question ID	MRDW1037000	
Question	Question Type	Legislative Requirement
Are all continuous monitoring equipment utilized for sampling and testing required by O. Reg.170/03, or MDWL or DWWP or order, equipped with alarms or shut-off mechanisms that satisfy the standards described in Schedule 6?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10,SDWA

		O. Reg. 170/03 6-5 (1.1)
Observation		
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.		

Question ID	MRDW1035000	
Question	Question Type	Legislative Requirement
Are operators examining continuous monitoring test results and are they examining the results within 72 hours of the test?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
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. An Operator reviews the data recorded by the continuous monitoring equipment each day from Monday to Friday and once over the weekend.		

Question ID	MRDW1040000	
Question	Question Type	Legislative Requirement
Are all continuous analysers calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10
Observation		
All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation. Subsection 6-5 (1) 8 of Schedule 6 of Ontario Regulation 170/03 states that the continuous monitoring equipment must be checked and calibrated in accordance with the manufacturer's instructions. Subsection 6-5 (1) 10 states that if the manufacturer's instructions do not indicate how often to check and calibrate the continuous monitoring equipment and paragraph 9 does not apply, the equipment must be checked and calibrated as often as necessary to ensure that test results are within the following margins of error: i. In the case of free chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre, ii. In the case of free chlorine residual and total chlorine residual measured for the purpose of		

determining combined chlorine residual, 0.05 milligrams per litre, if the concentrations usually measured by the equipment are less than or equal to 1.0 milligrams per litre, and proportionally higher if the concentrations usually measured are greater than 1.0 milligrams per litre, iii. 0.1 Nephelometric Turbidity Units (NTU), in the case of turbidity. Each day on site, an Operator compares the hand held colorimeter value for free chlorine residual with the continuous analyzer. The hand held units undergo a verification with secondary standards annually, and are serviced by the manufacturer if the secondary verification is not within the required range. In the event that the discrepancy is greater than 0.2mg/ℓ, the span of the continuous analyser is changed. The continuous analyser probe is changed annually and calibrated as required by a Service Technician. SCG Flowmetrix calibrated the continuous turbidity and chlorine analyser installed in the Val Harbour pumphouse on January 22, 2021. Manufacturer's instructions are part of the Operations and Maintenance Manual and are used for the maintenance and calibration of the unit.

Question ID	MRDW1108000	
Question	Question Type	Legislative Requirement
Where continuous monitoring equipment used for the monitoring of free chlorine residual, total chlorine residual, combined chlorine residual or turbidity, required by Regulation 170, an Order, MDWL, or DWWP issued under Part V, SDWA, has triggered an alarm or an automatic shut-off, did a qualified person respond in a timely manner and take appropriate actions?	Legislative	SDWA O. Reg. 170/03 6-5 (1) 1-4,SDWA O. Reg. 170/03 6-5 (1)5-10,SDWA O. Reg. 170/03 6-5 (1.1)
Observation		
Where required continuous monitoring equipment used for the monitoring of chlorine residual and/or turbidity triggered an alarm or an automatic shut-off, a qualified person responded in a timely manner and took appropriate actions. Following a review of log books and the supporting information provided in conjunction with the inspection, it appears that when required, an operator was dispatched and arrived in a timely manner to respond to any alarm occurrences. There were no concerns identified with operator entries in the logs.		

Question ID	MRDW1031000	
Question	Question Type	Legislative Requirement
Are operators aware of the operational criteria necessary to achieve primary disinfection within the drinking water system?	BMP	Not Applicable
Observation		
Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system. Operators are familiar with the operational criteria necessary to achieve primary disinfection. A CT calculator is also available so that details of each specific parameter can be entered and a calculation performed to ensure primary disinfection is being achieved at all times. CT related procedures also exist within the Operations and Maintenance Manual.		

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Question ID	MRDW1034000	
Question	Question Type	Legislative Requirement
Is the secondary disinfectant residual measured as required for the small municipal residential distribution system?	Legislative	SDWA O. Reg. 170/03 7-2 (5), SDWA O. Reg. 170/03 7-2 (6)
Observation		
<p>The secondary disinfectant residual was measured as required for the 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 free chlorine residuals were measured in the Val Harbour Subdivision distribution system as required.</p>		

Question ID	MRDW1018000	
Question	Question Type	Legislative Requirement
Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?	Legislative	SDWA 31 (1)
Observation		
<p>The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. During the inspection, installed equipment appeared to meet the description contained in Schedule A of Drinking Water Works Permit 147-205 Issue Number 2. In the system description overview, it notes that the Val Harbour Subdivision Drinking Water System obtains its drinking water from Wells # 1 and 2. The overview does not mention supply Well 3R. The Water Works description contained in Schedule A does include the third supply well, 3R, and notes it is connected to the well pump header in the pump house. At the time this report was issued, steps were being taken to amend the Drinking Water Works Permit to include Well 3R in the description overview. There is not a Schedule C associated with the Permit.</p>		

Question ID	MRDW1023000	
Question	Question Type	Legislative Requirement
Do records indicate that the treatment equipment was operated in a manner that achieved the design capabilities	Legislative	SDWA O. Reg. 170/03 1-2 (2)

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?		
Observation		
<p>Records indicated that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Drinking Water Works Permit and/or Municipal Drinking Water Licence issued under Part V of the SDWA at all times that water was being supplied to consumers. 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 two (2) 43,800L reservoirs, 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 and Operator to respond, prior to the chlorine residual dropping below 0.6mg/L. Operators perform CT calculations in the event of a low chlorine alarm to confirm that primary disinfection had been achieved.</p> <p>During the course of the inspection review period, the chlorine residual did not fall below the required level for primary disinfection expect during maintenance activities, such as testing the low chlorine alarm, cleaning the analyzer, or replacing with a new analyzer.</p>		

Question ID	MRDW1024000	
Question	Question Type	Legislative Requirement
Do records confirm that the water treatment equipment which provides chlorination or chloramination for secondary disinfection purposes was operated so that at all times and all locations in the distribution system the chlorine residual was never less than 0.05 mg/l free or 0.25 mg/l combined?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation		
<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. Section 1-2. (2) 4. of Schedule 1 of Ontario Regulation 170/03 requires 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 0.05mg/L, if the drinking water system provides chlorination and does not provide chloramination.</p> <p>During the inspection review period, there were no free chlorine residual results resulting in the Val Harbour Subdivision distribution system being below 0.05mg/L.</p>		

Question ID	MRDW1027000	
Question	Question Type	Legislative Requirement

Does the owner have evidence indicating that all chemicals and materials which come in contact with water within the drinking water system have met all applicable AWWA and ANSI standards in accordance with the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>The owner had evidence indicating that all chemicals and materials that come in contact with water within the drinking water system met the AWWA and ANSI standards in accordance with the Municipal Drinking Water Licence and Drinking Water Works Permit issued under Part V of the SDWA. Condition 14.1 of Municipal Drinking Water Licence 147-105 Issue Number 4 states that all chemicals and materials used in the alteration or operation of the drinking water system that come into contact with water within the system shall meet all applicable standards set by both the American Water Works Association ("AWWA") and the American National Standards Institute ("ANSI") safety critical standards NSF/60, NSF/61, NSF/372.</p> <p>Sodium hypochlorite is the only chemical that comes into contact with the Val Harbour Subdivision drinking water. Sodium hypochlorite meets ANSI/NSF Standard 60.</p>		

Question ID	MRDW1028000	
Question	Question Type	Legislative Requirement
Are up-to-date plans for the drinking water system kept in place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA?	Legislative	SDWA 31 (1)
Observation		
<p>Up-to-date plans for the drinking water system were kept in a place, or made available in such a manner, that they could be readily viewed by all persons responsible for all or part of the operation of the drinking water system in accordance with the DWWP and MDWL issued under Part V of the SDWA. Condition 15.3 of Schedule B of Municipal Drinking Water Licence 147-105 Number 4 requires that process flow diagrams and process and instrumentation diagrams for any treatment subsystem shall be kept in place, or made available in such a manner, that they may be readily viewed by all persons responsible for all or part of the operation of the drinking water system. Plans are available at the pumphouse and a Process Flow Diagram also exists in Schedule D of the Permit.</p>		

Question ID	MRDW1029000	
Question	Question Type	Legislative Requirement
Where a potential bypass of primary or secondary treatment equipment exists, have measures been taken to ensure that raw or partially treated water is not directed to the distribution system?	BMP	Not Applicable
Observation		

Where a potential bypass of primary or secondary treatment equipment existed, measures were taken to ensure that raw or partially treated water was not directed to the distribution system. Under normal operating conditions, the reservoirs are operated in series to provide contact time for primary disinfection purposes. Piping allows for one of the reservoirs to be bypassed for maintenance purposes. In the event that one of the reservoirs was taken out of service, Operators would perform manual CT calculations to determine the dosing of sodium hypochlorite required for the reduced retention time.

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

Question ID	MRDW1047000	
Question	Question Type	Legislative Requirement
Does the owner have a program or maintain a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system?	BMP	Not Applicable
Observation		
The owner had a program or maintained a schedule for routine cleanout, inspection and maintenance of reservoirs and elevated storage tanks within the distribution system. During the on-site inspection, it was confirmed with the operator that for the routine cleanout, inspection and maintenance of its storage structures, the Val Harbour Subdivision Drinking Water System maintains a 5 year schedule.		

Question ID	MRDW1048000	
Question	Question Type	Legislative Requirement
Has the owner implemented a program for the flushing of watermains as per industry standards?	BMP	Not Applicable
Observation		
The owner had implemented a program for the flushing of watermains as per industry standards. The flushing of watermains occurs on an annual basis in the fall. The Owner has not received complaints regarding water quality.		

Question ID	MRDW1049000	
Question	Question Type	Legislative Requirement
Do records confirm that disinfectant residuals are routinely checked at the extremities and dead ends of the distribution system?	BMP	Not Applicable
Observation		
Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system. Blow offs are installed at the extremities of the Val Harbour distribution system. The blow offs are used as sample stations, and chlorine residuals are measured.		

Question ID	MRDW1050000	
Question	Question Type	Legislative Requirement
Is there a program in place for inspecting and exercising valves?	BMP	Not Applicable
Observation		
A program was in place for inspecting and exercising valves. On a yearly basis, the Val Harbour Subdivision Drinking Water System regularly inspects and exercises valves.		

Question ID	MRDW1053000	
Question	Question Type	Legislative Requirement
Is the Owner able to maintain proper pressures in the distribution system and is pressure monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate?	BMP	Not Applicable
Observation		
<p>The owner was able to maintain proper pressures in the distribution system and pressure was monitored to alert the operator of conditions which may lead to loss of pressure below the value under which the system is designed to operate.</p> <p>A review of ministry records between 2019 to November 2021, along with a review of Val Harbour Subdivision's Drinking Water System's reporting logs over the last inspection period demonstrates that the Owner is able to maintain proper pressures in the distribution system other than two short in duration, low water pressure AWQI's which are captured further in this report. For both AWQI's, the Operator was able to return adequate water pressure to the drinking water system, the system was then flushed and residuals were collected. Additionally, the Spills Action Centre as well as the Public Health Unit were notified. The Public Health Unit was satisfied with efforts taken and did not require further actions.</p>		

Question ID	MRDW1058000	
Question	Question	Legislative

	Type	Requirement
Do operators and maintenance personnel have ready access to operations and maintenance manuals?	Legislative	SDWA O. Reg. 128/04 28
Observation		
Operators and maintenance personnel had ready access to operations and maintenance manuals. Operations and maintenance manuals, including the contingency plans for the Val Harbour Subdivision Drinking Water System are located at the pumphouse and at the Environmental Services office. Operators are aware of where the operations and maintenance manuals are located.		

Question ID	MRDW1063000		
Question	Question Type	Legislative Requirement	
For every required operational test and for every required sample, is a record made of the date, time, location, name of the person conducting the test and result of the test?	Legislative	SDWA O. Reg. 170/03 6-10 (1)	
Observation			
For every required operational test and every required sample, a record was made of the date, time, location, name of the person conducting the test and result of the test. Schedule 6-10 of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system shall ensure that for every sample required by this Regulation, a record is made of the date and time the sample was taken, the location where the sample was taken, the name of the person who took the sample, and the result of the test where applicable. All required information was recorded during the inspection review period, either on the chain of custody form for samples submitted to an accredited laboratory, or on the log sheets for the Val Harbour Subdivision Drinking Water System, or in Operator logbooks.			

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

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

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Question ID	MRDW1059000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?	Legislative	SDWA O. Reg. 128/04 28
Observation		
The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system. The manuals contain plans, drawings and process descriptions that are sufficient for the safe and efficient operation of the system.		

Question ID	MRDW1060000	
Question	Question Type	Legislative Requirement
Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?	Legislative	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 147-105 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 operating conditions; and</p> <p>b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;</p> <p>16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;</p> <p>16.2.5 Procedures for the operation and maintenance of monitoring equipment;</p> <p>16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;</p> <p>16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint;</p> <p>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 for the entire well structure of each well including all above and below grade well components; and</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.
The Val Harbour Water Works Operations and Maintenance manual meets the requirements of the Municipal Drinking Water Licence.
The Operating Authority updated the Val Harbour Subdivision Operations Manuals in January 2019 to ensure that the descriptions contained and procedures outlined were accurate. In March 2020 the Operators and Classification section was updated to reflect changes to Operator certification.

Question ID	MRDW1061000	
Question	Question Type	Legislative Requirement
Are logbooks properly maintained and contain the required information?	Legislative	SDWA O. Reg. 128/04 27 (1), SDWA O. Reg. 128/04 27 (2), SDWA O. Reg. 128/04 27 (3), SDWA O. Reg. 128/04 27 (4), SDWA O. Reg. 128/04 27 (5), SDWA O. Reg. 128/04 27 (6), SDWA O. Reg. 128/04 27 (7)
Observation		
Logbooks were properly maintained and contained the required information.		

Question ID	MRDW1062000	
Question	Question Type	Legislative Requirement
Do records or other record keeping mechanisms confirm that operational testing not performed by continuous monitoring equipment is being done by a certified operator, water quality analyst, or person who meets the requirements of O. Reg. 170/03 7-5?	Legislative	SDWA O. Reg. 170/03 7-5
Observation		
Records or other record keeping mechanisms confirmed that operational testing not performed by continuous monitoring equipment was being done by a certified operator, water quality analyst, or person who suffices the requirements of O. Reg. 170/03 7-5.		

Question ID	MRDW1066000	
Question	Question	Legislative

	Type	Requirement
Is spill containment provided for process chemicals and standby power generator fuel?	BMP	Not Applicable
Observation		
Spill containment was provided for process chemicals and/or standby power generator fuel. During the course of the inspection, it was observed that adequate spill containment measures are available within the pumphouse. In regards to the standby power generator's fuel supply, the propane tank is located approximately 6 meters away from the pumphouse, and within the fenced yard. The propane tank is mounted on concrete footings and is free and clear from any foliage.		

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

Question ID	MRDW1068000		
Question	Question Type	Legislative Requirement	
If available, are standby power generators tested under normal load conditions?	BMP	Not Applicable	
Observation			
Standby power generators were tested under normal load conditions. The Val Harbour Subdivision Drinking Water System has a propane fueled standby generator capable of powering the water treatment plant equipment. The generator is exercised automatically each week and is periodically tested under load conditions.			

Question ID	MRDW1069000		
Question	Question Type	Legislative Requirement	
Are all storage facilities completely covered and secure?	BMP	Not Applicable	
Observation			
All storage facilities were completely covered and secure. The only storage facilities associated with the Val Harbour Subdivision Drinking Water System are the two reservoirs at the pumphouse. The access hatches for the reservoirs are secure and locked. The vents for the reservoirs are screened. There is also a locked fence around the perimeter of the reservoirs.			

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

Question ID	MRDW1071000		
Question	Question Type	Legislative Requirement	
Has the owner provided security measures to protect components of the drinking water system?	BMP	Not Applicable	
Observation			
The owner had provided security measures to protect components of the drinking water system. The 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. There are no other storage structures within the distribution system.			

Question ID	MRDW1072000		
Question	Question Type	Legislative Requirement	
Has the owner and/or operating authority undertaken efforts to promote water conservation and reduce water losses in their system?	BMP	Not Applicable	
Observation			
The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.			

Question ID	MRDW1073000		
Question	Question Type	Legislative Requirement	
Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 23 (1)	
Observation			
The overall responsible operator has been designated for each subsystem. The Val Harbour Subdivision Drinking Water System is classed as a Limited Groundwater System.			

Question ID	MRDW1074000		
Question	Question Type	Legislative Requirement	
Have operators in charge been designated for all subsystems for which comprise the drinking water system?	Legislative	SDWA O. Reg. 128/04 25 (1)	

Observation
Operators-in-charge had been designated for all subsystems which comprised the drinking water system. The Val Harbour Subdivision Drinking Water System is comprised of a Water Distribution Class 1 and Water Treatment Class 1 subsystem. The Operators In Charge are designated for both of the subsystems.

Question ID	MRDW1075000	
Question	Question Type	Legislative Requirement
Do all operators possess the required certification?	Legislative	SDWA O. Reg. 128/04 22
Observation	All operators possessed the required certification.	

Question ID	MRDW1076000	
Question	Question Type	Legislative Requirement
Do only certified operators make adjustments to the treatment equipment?	Legislative	SDWA O. Reg. 170/03 1-2 (2)
Observation	Only certified operators made adjustments to the treatment equipment.	

Question ID	MRDW1078000	
Question	Question Type	Legislative Requirement
In instances where the overall responsible operator was unable to act, was an adequately certified operator designated to act in place of the overall responsible operator?	Legislative	SDWA O. Reg. 128/04 23 (1), SDWA O. Reg. 128/04 23 (2), SDWA O. Reg. 128/04 23 (3), SDWA O. Reg. 128/04 23 (4), SDWA O. Reg. 128/04 23 (5), SDWA O. Reg. 128/04 23 (6), SDWA O. Reg. 128/04 23 (7)
Observation	An adequately licenced operator was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.	

Question ID	MRDW1099000	
Question	Question Type	Legislative Requirement
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)?	Information	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 as well as the most recent samples tested for all Schedule 23 and 24 parameters and fluoride, met the Ontario Drinking Water Quality Standards.		

Question ID	MRDW1080000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for raw water samples prescribed by legislation being met?	Legislative	SDWA O. Reg. 170/03 11-3 (1),SDWA O. Reg. 170/03 11-3 (3)
Observation		
All microbiological water quality monitoring requirements for raw water samples were being met. Section 11-3 of Schedule 11 of Ontario Regulation 170/03 requires that if a drinking water system obtains water from a raw water supply that is ground water or a drinking water system is deemed under section 2 to obtain water from a raw water supply that is surface water, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at least once every month from the raw water in each well that is supplying water to the system, before any treatment is applied to the water. 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 coil and total coliforms. After a review of the submitted reports, raw water microbiological sample requirements were met by the Val Harbour Subdivision Drinking Water System.		

Question ID	MRDW1084000	
Question	Question Type	Legislative Requirement
Are all inorganic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-2
Observation		
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 small residential 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 every parameter set out in Schedule 23.
During the inspection review period, treated samples were collected on August 21, 2019.

Question ID	MRDW1085000	
Question	Question Type	Legislative Requirement
Are all organic water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-4 (1),SDWA O. Reg. 170/03 13-4 (2),SDWA O. Reg. 170/03 13-4 (3)
Observation		
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 small municipal residential 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 every parameter set out in Schedule 24. The most recent treated water samples tested for all Schedule 24 parameters were collected on August 19, 2019.		

Question ID	MRDW1086000	
Question	Question Type	Legislative Requirement
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?	Legislative	SDWA O. Reg. 170/03 13-6.1 (1),SDWA O. Reg. 170/03 13-6.1 (2),SDWA O. Reg. 170/03 13-6.1 (3), SDWA O. Reg. 170/03 13-6.1 (4),SDWA O. Reg. 170/03 13-6.1 (5),SDWA O. Reg. 170/03 13-6.1 (6)
Observation		
All haloacetic acid water quality monitoring requirements prescribed by legislation are being conducted within the required frequency and at the required location. Section 13-6.1 of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a drinking water system that provides chlorination or chloramination and the operating authority for the system shall ensure		

that at least one distribution sample is taken in each calendar quarter from a point in the drinking water system's distribution system or plumbing that is connected to the drinking water system that is likely to have an elevated potential for the formation of haloacetic acids (HAA), and have the samples tested for haloacetic acids.

The requirement to sample for HAA came into effect on January 1, 2017. The standard for HAA as a reportable limit came into effect on January 1, 2020.

During the inspection review period a sample was collected from the Val Harbour Subdivision distribution system on November 19, 2020, February 9, 2021, May 12, 2021, and August 4, 2021, as required.

Question ID	MRDW1087000	
Question	Question Type	Legislative Requirement
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	Legislative	SDWA O. Reg. 170/03 13-6 (1)
Observation		
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 every three months 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 from the Val Harbour Subdivision distribution system and tested for THMs on November 19, 2020, February 9, 2021, May 12, 2021 and August 4, 2021, as required.		

Question ID	MRDW1088000	
Question	Question Type	Legislative Requirement
Are all nitrate/nitrite water quality monitoring requirements prescribed by legislation conducted within the required frequency for the DWS?	Legislative	SDWA O. Reg. 170/03 13-7
Observation		
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 on November 19, 2020, February 9, 2021, May 12, 2021 and August 4, 2021, as required.		

Question ID	MRDW1089000	
Question	Question Type	Legislative Requirement
Are all sodium water quality monitoring requirements prescribed by legislation conducted within the required frequency?	Legislative	SDWA O. Reg. 170/03 13-8
Observation		
<p>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.</p> <p>Section 6-1.1 (7) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires at least one water sample to be taken every 60 months and tested for a parameter, the owner of the drinking water system and the operating authority for the system shall ensure that at least one sample that is taken during a 60-month period for the purpose of being tested for that parameter is taken not more than 90 days before or after the fifth anniversary of the day a sample was taken for that purpose in the previous 60-month period.</p> <p>A treated water sample for sodium was last sampled on August 12, 2020. Prior to the August 2020 sample, a treated water sample tested for sodium was collected on August 25, 2015.</p>		

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

Question ID	MRDW1092000	
Question	Question Type	Legislative Requirement
Has the owner ensured that water samples are taken at the	Legislative	SDWA O. Reg.

prescribed location?	170/03 6-2
Observation	
<p>The owner ensured that water samples were taken at the prescribed location. Section 6-2 of Schedule 6 of Ontario Regulation 170/03 states that unless otherwise specified, a person who is required to ensure that samples are taken under this Regulation, shall ensure that they are taking from the point at which water enters the drinking water systems' distribution system or plumbing that is connected to the drinking water system.</p> <p>Nitrate, nitrite, organic and inorganic samples, as well as treated water microbiological samples were collected from the treated water sampling point in the Val Harbour Subdivision pumphouse.</p>	

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

		<p>(9),SDWA O. Reg. 170/03 15.1-7 (1), SDWA O. Reg. 170/03 15.1-7 (2),SDWA O. Reg. 170/03 15.1-7 (3), SDWA O. Reg. 170/03 15.1-7 (4),SDWA O. Reg. 170/03 15.1-9 (1), SDWA O. Reg. 170/03 15.1-9 (2),SDWA O. Reg. 170/03 15.1-9 (3), SDWA O. Reg. 170/03 15.1-9 (4),SDWA O. Reg. 170/03 15.1-9 (5), SDWA O. Reg. 170/03 15.1-9 (6),SDWA O. Reg. 170/03 15.1-9 (7), SDWA O. Reg. 170/03 15.1-9 (8),SDWA O. Reg. 170/03 15.1-9 (9)</p>
<p>Observation</p>		
<p>All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met. Val Harbour Subdivision Drinking Water System has met the requirements to be eligible for reduced sampling under section 15.1-5 (10) of Schedule 15.1 of Ontario Regulation 170/03. As such, one distribution sample is required to be sampled in each winter and summer period (December 15 to April 15, and June 15 to October 15), and be tested for total alkalinity and for pH.</p> <p>During the inspection review period, a lead sample, along with alkalinity and pH was collected on March 11, 2019, and the required second lead sample was collected on August 21, 2019. Distribution water lead samples are next required in 2022.</p>		

Question ID	MRDW1096000	
Question	Question Type	Legislative Requirement

Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?	Legislative	SDWA O. Reg. 170/03 6-3 (1)
Observation		
<p>Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained. Subsection 6-3 of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires a water sample to be taken and tested for a microbiological parameter, the owner of the drinking water system and the operating authority for the system shall ensure that another sample is taken at the same time from the same location and is tested immediately for free chlorine residual, if the system provides chlorination and does not provide chloramination.</p> <p>During the inspection review period, free chlorine residuals were tested at the same time and from the same location as treated water and distribution microbiological samples. The chlorine residual results were recorded on the chain of custody forms submitted to the laboratory and in the personal logs of Operators.</p> <p>In addition, during the course of the physical inspection of the Val Harbour Subdivision Drinking Water System, one (1) grab sample of treated water was collected from the sample tap. The ministry calibrated HACH grab sample showed a reading of 1.58mg/L while the continuous analyser showed a reading of 1.41 milligrams/litre.</p>		

Question ID	MRDW1097000	
Question	Question Type	Legislative Requirement
If the drinking water system obtains water from a ground water source, is turbidity being tested at least once every month from each well that is supplying water to the system?	Legislative	SDWA O. Reg. 170/03 7-3 (1.1)
Observation		
<p>Turbidity was not being tested at least once every month from each well that is supplying water to the system. Section 7-3 of Schedule 7 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 month, from a location that is before raw water enters the treatment system, and is tested for turbidity. If the drinking water system obtains water from a raw water supply that is ground water, the owner of the system and the operating authority for the system shall ensure that a sample is taken from each well that is supplying water to the system. There are three groundwater supply wells for the Val Harbour Subdivision Drinking Water System.</p> <p>During the inspection review period, monthly raw water turbidity samples were not collected in September and October 2020. As a corrective action, Operations staff were provided and trained on facility sampling calendars which list the requirement for monthly raw water turbidity sampling from each raw water source.</p>		

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

		SDWA O. Reg. 170/03 13 (2), SDWA O. Reg. 170/03 13 (3)
Observation		
The owner indicated that the required records are kept and will be kept for the required time period.		

Question ID	MRDW1100000	
Question	Question Type	Legislative Requirement
Did any reportable adverse/exceedance conditions occur during the inspection period?	Information	Not Applicable
Observation		
<p>There were reportable adverse/exceedances during the inspection period. Four (4) reportable adverse conditions were observed during the review period.</p> <p>AWQI# 151439 - A treated water sample collected on August 12, 2020 showed a sodium value of 26mg/L. (Limit 20mg/L). A resample was collected on August 24, 2020 with results yielding 21.4mg/L. No further actions required.</p> <p>AWQI - 152795 - Power outage due to generator not starting. Operator manually started generator. Power restored to plant and Operator took chlorine residuals and found that samples within operating range. Generator was inspected by contractor and no issues found. No further actions required.</p> <p>AWQI - 153217 - Low water pressure - On December 10, 2020, the Val Harbour Subdivision Drinking Water System reported to the Spills Action Centre that while switching between distribution pumps, the first pump airlocked. As a result, for about 15 mins, the water pressure was inconsistent. The Val Harbour Subdivision Drinking Water System collected chlorine residuals at three sample stations. All residuals had good readings and the Simcoe Muskoka District Health Unit was satisfied with corrective actions. No further actions required.</p> <p>AWQI 154067 - Low water pressure - On May 14, 2021, the Val Harbour Subdivision Drinking Water System reported to the Spills Action Centre that the system lost water pressure due to a power outage. The power outage lasted about 15 mins. Once the pressure was restored to the system, the operator flushed in the distribution system and took a chlorine residual from the distribution. Free Cl₂ Residual= 0.57 mg/L. For the week of May 17, 2021, samples were collected and results shared with the Simcoe Muskoka District Health Unit. Sample results showed TC = 0 and EC = 0. No further actions required.</p>		

Question ID	MRDW1102000	
Question	Question Type	Legislative Requirement
Have corrective actions (as per Schedule 18) been taken to address adverse conditions, including any other steps as directed by the Medical Officer of Health?	Legislative	SDWA O. Reg. 170/03 18-10 (1),SDWA O. Reg. 170/03 18- 11,SDWA O.

		Reg. 170/03 18-12,SDWA O. Reg. 170/03 18-13,SDWA O. Reg. 170/03 18-14,SDWA O. Reg. 170/03 18-2,SDWA O. Reg. 170/03 18-3,SDWA O. Reg. 170/03 18-4,SDWA O. Reg. 170/03 18-5,SDWA O. Reg. 170/03 18-6,SDWA O. Reg. 170/03 18-9
Observation		
Corrective actions (as per Schedule 18) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.		

Question ID	MRDW1104000	
Question	Question Type	Legislative Requirement
Were all required verbal notifications of adverse water quality incidents immediately provided as per O. Reg. 170/03 16-6?	Legislative	SDWA O. Reg. 170/03 16-6 (1),SDWA O. Reg. 170/03 16-6 (2),SDWA O. Reg. 170/03 16-6 (3),SDWA O. Reg. 170/03 16-6 (3.1),SDWA O. Reg. 170/03 16-6 (3.2),SDWA O. Reg. 170/03 16-6 (4),SDWA O. Reg. 170/03 16-6 (5),SDWA O. Reg. 170/03 16-6 (6)
Observation		
All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.		

Question ID	MRDW1105000	
Question	Question Type	Legislative Requirement
Were all required written notices of adverse water quality incidents provided as per O. Reg. 170/03 16-7?	Legislative	SDWA O. Reg. 170/03 16-7 (1),SDWA O. Reg. 170/03 16-7 (2),SDWA O. Reg. 170/03 16-7 (3),SDWA O. Reg. 170/03 16-7 (4),SDWA O. Reg. 170/03 16-7 (5)
Observation		
All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7. Written notices were submitted to the Medical Officer of Health, the Spills Action Centre, as well as the owner.		

Question ID	MRDW1106000	
Question	Question Type	Legislative Requirement
Were all required written notices of issue resolution provided as per O. Reg.. 170/03 16-9?	Legislative	SDWA O. Reg. 170/03 16-9 (1),SDWA O. Reg. 170/03 16-9 (2)
Observation		
In instances where written notice of issue resolution was required by regulation, the notice was provided as per O. Reg. 170/03 16-9.		

Question ID	MRDW1110000	
Question	Question Type	Legislative Requirement
Was an Annual Report containing the required information prepared by February 28 of the following year?	Legislative	SDWA O. Reg. 170/03 11 (6)
Observation		
The Annual Report containing the required information was prepared by February 28th of the following year. The 2020 Annual Report was prepared by the operating authority, on behalf of the owner, for the Val Harbour Subdivision Drinking Water System. A copy of the report is available to the public through the municipality's website and is also available for review at the municipal offices.		

Question ID	MRDW1082000	
Question	Question Type	Legislative Requirement
Are all microbiological water quality monitoring requirements for distribution samples prescribed by legislation being met?	Legislative	SDWA O. Reg. 170/03 11-2 (1),SDWA O. Reg. 170/03 11-2 (2),SDWA O. Reg. 170/03 11-2 (6)
Observation		
<p>All microbiological water quality monitoring requirements for distribution samples prescribed by legislation were being met. Subsection 11-2(1) of Schedule 11 of, Ontario Regulation 170/03 requires the owner and the operating authority of a small municipal residential drinking water system to ensure that at least one distribution sample is taken every two weeks, if the system provides treatment equipment in accordance with Schedule 2 and the equipment is operated in accordance with that Schedule, as is the case for the Val Harbour Subdivision Drinking Water System.</p> <p>Subsection 11-2(2) further stipulates that each of the distribution samples collected are tested for E.Coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic plate count, if subsection 2-5(1) of Schedule 2 applies to the system.</p> <p>Records provided and reviewed in the course of this inspection indicate that the owner has complied with these sampling requirements,</p>		

Question ID	MRDW1111000	
Question	Question Type	Legislative Requirement
Have Summary Reports for municipal council been completed on time, include the required content, and distributed in accordance with the regulatory requirements?	Legislative	SDWA O. Reg. 170/03 22-2 (1),SDWA O. Reg. 170/03 22-2 (2),SDWA O. Reg. 170/03 22-2 (3),SDWA O. Reg. 170/03 22-2 (4)
Observation		
<p>Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements. During the course of the inspection period, it was confirmed that the reports was issued and sent to the owner on February 26, 2021 and on March 15, 2021, the Township of Ramara brought up these reports during their Council Meeting,</p>		