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Ministry of the Environment,  
Conservation and Parks

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

**Barrie District**

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July 18, 2022

**Attention: Zach Drinkwalter Township of Ramara CAO**

**Re: 2022 Drinking Water Inspection Report  
Somerset/ Knob Hill Distribution System**

Please find enclosed the Ministry of the Environment, Conservation and Parks Inspection Report for Somerset/ Knob Hill Distribution System (Water Works # 260046137). The physical inspection process took place on June 28, 2022.

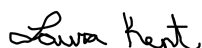
The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks legislation and authorizing documents, as well as evaluating conformance with Ministry drinking water-related policies and guidelines during the inspection review period.

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 recent change in IT systems, the IRR cannot currently be generated at the same time as the inspection report. The IRR will be sent separately, typically within one to two months, and prior to any public release. IRR ratings are published (for the previous inspection year) in the Ministry's Chief Drinking Water Inspector's Annual Report. If you have any questions or concerns regarding 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](mailto:laura.kent@ontario.ca).

Sincerely,



Laura Kent  
Water Inspector  
Provincial Officer

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Barrie District Office, Ministry of the Environment Conservation and Parks

CC Nick Leroux, Ontario Clean Water Agency, Senior Operations Manager, [nleroux@owca.com](mailto:nleroux@owca.com)  
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Medical Officer of Health, Simcoe Muskoka District Health Unit  
Barrie District Office File, Ministry of the Environment, Conservation and Parks



SOMERSET/ KNOB HILL DISTRIBUTION SYSTEM  
3398 QUENTON ST, RAMARA, ON, L0K 1B0  
**Inspection Report**

System Number: 260046137  
Entity: CORPORATION OF THE  
TOWNSHIP OF RAMARA  
Inspection Start Date: 06/28/2022  
Inspection End Date: 07/08/2022  
Inspected By: Laura Kent  
Badge #: 1123

*Laura Kent*

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(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
<b>Question:</b>			
What was the scope of this inspection?			
<b>Legislative Requirement</b>		Not Applicable	
<b>Observation</b>			
<p>The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.</p> <p>This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O. Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.</p> <p>This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.</p> <p>The Somerset/Knob Hill Distribution System is a stand-alone distribution small municipal residential drinking water system, as defined by Ontario Regulation 170/3, and operates under drinking water system # 260046137. The distribution system serves an estimated population of 44 people. Eighteen of the available 20 lots have water service connections. The distribution system is owned by the Corporation of the Township of Ramara and operated by the Ontario Clean Water Agency (OCWA). Drinking water is supplied by the Township of Severn from the Washago Drinking Water System (waterworks # 220005161). The Washago Drinking Water System is a surface water treatment plant which provides coagulation, flocculation, filtration and disinfection.</p> <p>The Somerset/Knob Hill Distribution System consists of approximately 700 m of 50 mm diameter watermains, including a watermain that conveys treated water across the Severn River. There are three sample stations, a blow off, and an air vent installed in the distribution system. There are no storage structures or rechlorination facilities within the distribution system.</p> <p>The drinking water inspection included: going to a sample station, communication with operating staff; and a review of relevant documents and data from the period of December</p>			

9, 2021 to June 28, 2022 (hereafter referred to as the "inspection review period"). The previous inspection of the Somerset/Knob Hill Distribution System was conducted on December 9, 2021.

<b>Question ID</b>	MRDW1000001	<b>Question Type</b>	Information
<b>Question:</b> Does this drinking water system provide primary disinfection?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b>			
This Drinking Water System provides for only secondary disinfection and distribution of water. Primary disinfection is undertaken by another regulated Drinking Water System which provides treated water to this Drinking Water System. Treatment is not provided at the Somerset/Knob Hill Distribution system. Drinking water is supplied by the Township of Severn from the Washago Drinking Water System (waterworks # 220005161). The Washago Drinking Water System is a surface water treatment plant which provides coagulation, flocculation, filtration and disinfection. Addition of sodium hypochlorite for secondary disinfection is performed at the Washago Water Treatment Plant.			

<b>Question ID</b>	MRDW1018001	<b>Question Type</b>	Legislative
<b>Question:</b> Has the owner ensured that all equipment is installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b>			
The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit. Drinking Water Works Permit 147-207 issue number 3 contains a description of the length and diameter of the installed watermains. There are also three sample stations, a blow-off and air vent installed in the distribution system. A flow meter and bypass flow meter are housed in a metering chamber and used to measure the treated water flows to the Somerset/Knob Hill water distribution system from the Township of Severn. There is not a Schedule C in the Drinking Water Works Permit.			

<b>Question ID</b>	MRDW1024001	<b>Question Type</b>	Legislative
<b>Question:</b> Do records confirm that the water treatment equipment which provides chlorination or			

chloramination for secondary disinfection purposes was operated as required?	
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   1-2   (2);
<b>Observation</b>	
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. During the inspection review period the lowest chlorine residual measured in the Somerset/Knob Hill distribution system was 1.15 mg/L and the highest value was 1.62 mg/L.	

<b>Question ID</b>	MRDW1034001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Is the secondary disinfectant residual measured as required for the small municipal residential distribution system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-2   (5); SDWA   O. Reg. 170/03   7-2   (6);		
<b>Observation</b>			
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 Somerset/ Knob Hill Distribution System on at least two days each week, with at least 48 hours between samples as required.			

<b>Question ID</b>	MRDW1099001	<b>Question Type</b>	Information
<b>Question:</b>			
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)?			
<b>Legislative Requirement</b>	Not Applicable		



<b>Observation</b>
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).

<b>Question ID</b>	MRDW1082001	<b>Question Type</b>	Legislative
<b>Question:</b>			
For SMR systems, are all microbiological water quality monitoring requirements for distribution samples prescribed by legislation being met?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   11-2   (1); SDWA   O. Reg. 170/03   11-2   (2);		
<b>Observation</b>			
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 Somerset/ Knob Hill Distribution System has secondary disinfection. During the inspection review period one distribution sample was collected every two weeks from the Somerset/ Knob Hill Distribution system and tested for all the required parameters.			

<b>Question ID</b>	MRDW1096001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Do records confirm that chlorine residual tests are being conducted at the same time and at the same location that microbiological samples are obtained?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   6-3   (1);		
<b>Observation</b>			
Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.			

<b>Question ID</b>	MRDW1086001	<b>Question Type</b>	Legislative
<b>Question:</b>			
Are all haloacetic acid water quality monitoring requirements prescribed by legislation conducted within the required frequency and at the required location?			
<b>Legislative Requirement</b>	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);		
<b>Observation</b>			
<p>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. The standard of 0.80 mg/L for HAA as a reportable limit came into effect on January 1, 2020.</p> <p>During the inspection review period a sample was collected from the Somerset/Knob Hill distribution system in February 2022 and May 2022 and tested for HAA as required. The average for HAA during the inspection review period was 20.75 ug/L.</p> <p>Subsection 13-6.1 (4) of Schedule 13 of Ontario Regulation 170/03 states that despite subsection (a) and subject to subsection (5), if the following conditions have been met after samples have been taken and tested under subsections (1) and (2) in at least 12 consecutive calendar quarters, a drinking water system that is a small municipal residential system may cease sampling and testing for eight consecutive calendar quarters:</p> <ol style="list-style-type: none"> <li>1. No single test result obtained in the previous 12 consecutive calendar quarters indicated that the concentration of haloacetic acids was greater than 0.040 milligrams per litre.</li> <li>2. The drinking water system's raw water supply is the same source of raw water supply that was used in the calendar quarters referred to in paragraph 1.</li> <li>3. No alterations that may increase levels of haloacetic acids in the drinking water system have been made to the treatment equipment used in the calendar quarters referred to in paragraph 1.</li> </ol> <p>The Somerset/Knob Hill Distribution system has obtained more than 12 consecutive calendar quarter haloacetic acid test results with no values greater than 0.040 mg/L. The source water has not changed, nor have there been alterations that may increase the levels of haloacetic acids in the drinking water system. As such the Somerset/Knob Hill Distribution system is eligible to cease sampling and testing for haloacetic acids for eight consecutive calendar quarters.</p>			

<b>Question ID</b>	MRDW1087001	<b>Question Type</b>	Legislative
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<b>Question:</b>	
Have all trihalomethane water quality monitoring requirements prescribed by legislation been conducted within the required frequency and at the required location?	
<b>Legislative Requirement</b>	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);
<b>Observation</b>	
<p>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 Somerset/Knob Hill distribution system in February 2022 and May 2022. The average for THMs during the inspection review period was 37 ug/L. The Somerset/Knob Hill Distribution System is not eligible for reduced sampling of THMs at this time, as there have been results above 0.050 mg/L in the previous 12 consecutive calendar quarters.</p>	

<b>Question ID</b>	MRDW1059000	<b>Question Type</b>	Legislative
<b>Question:</b>			
Do the operations and maintenance manuals contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   28;		
<b>Observation</b>			
<p>The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system. The Somerset/Knob Hill Distribution System Operations and Maintenance Manual Contingency and Emergency Plan was updated with Ontario Clean Water Agency (OCWA) procedures in December 2021 and the updated Permit and Approval was included in May 2022. The Manual includes an overview of the facility, including the source and distribution system as well as the MECP Permits and Approvals. Operator and facility classifications are documented. Procedures are detailed for flushing, inspecting and repairing the distribution system. Sampling and monitoring requirements as well as responding to adverse water quality incidents is detailed in the Manual. Logbook and reporting requirements are outlined as well.</p>			

Contingency and Emergency plans are included for responding to and notifying the Township of Severn, watermain breaks, low chlorine events and adverse water quality incidents from sampling as well as a procedure for high water use. Contact information and a map of the distribution system are also included.

<b>Question ID</b>	MRDW1060000	<b>Question Type</b>	Legislative
<b>Question:</b> Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?			
<b>Legislative Requirement</b>	SDWA   31   (1);		
<b>Observation</b>			
<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 147-107 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 maintain secondary disinfection within the drinking water system;</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>16.3 Procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.</p> <p>The Somerset/ Knob Hill Operations and Maintenance Manual Contingency and Emergency Plan meets the requirements of the Municipal Drinking Water Licence.</p>			

<b>Question ID</b>	MRDW1061001	<b>Question Type</b>	Legislative
<b>Question:</b> Are logbooks properly maintained and contain the required information?			
<b>Legislative Requirement</b>	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);
<b>Observation</b>	
<p>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 Somerset/ Knob Hill Distribution system. Physical records are kept at the Park Lane pumphouse. Records include all required information including the date, time, name of Operator and details. Meter readings, sample collection and chlorine residuals are recorded in the electronic logs as well as responding to leaks. The ORO, OIC and Duty OIC are indicated in the logs. There is a specific monthly sheet where operators record treated flows and distribution chlorine residuals as well as one for critical control points alarms records for if the distribution chlorine residual measured below 0.05 mg/L.</p>	

<b>Question ID</b>	MRDW1062001	<b>Question Type</b>	Legislative
<b>Question:</b>			
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?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 170/03   7-5;		
<b>Observation</b>			
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.			

<b>Question ID</b>	MRDW1071000	<b>Question Type</b>	BMP
<b>Question:</b>			
Has the owner provided security measures to protect components of the drinking water system?			
<b>Legislative Requirement</b>	Not Applicable		
<b>Observation</b>			
The owner had provided security measures to protect components of the drinking water system. The three sampling stations are kept locked. Periodic checks are done of the watermain running through the Severn River.			

<b>Question ID</b>	MRDW1073001	<b>Question Type</b>	Legislative
<b>Question:</b> Has the overall responsible operator been designated for all subsystems which comprise the drinking water system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   23   (1);		
<b>Observation</b>			
<p>The overall responsible operator had been designated for each subsystem.                  The Somerset/ Knob Hill Distribution System is classified as a Water Distribution Class 1 subsystem. The Overall Responsible Operators (OROs) are designated for the subsystem and have appropriate certification. The Operator acting as the ORO is indicated in the electronic logbook on each day that entries are made.</p>			

<b>Question ID</b>	MRDW1074001	<b>Question Type</b>	Legislative
<b>Question:</b> Have operators-in-charge been designated for all subsystems for which comprise the drinking water system?			
<b>Legislative Requirement</b>	SDWA   O. Reg. 128/04   25   (1);		
<b>Observation</b>			
<p>Operators-in-charge had been designated for all subsystems which comprise the drinking water system. The Somerset/ Knob Hill Distribution System is classified as a Water Distribution Class 1 subsystem. The Operators-in-charge (OIC) are designated for the subsystem and have appropriate certification. The Operator acting as the OIC is indicated in the electronic logbook on each day that entries are made.</p>			

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