

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 25, 2019

Attention: John Pinsent Chief Administrative Officer

**Re: 2019 Drinking Water Inspection Report
South Ramara Drinking Water System**

Please find enclosed the Ministry of the Environment, Conservation and Parks Inspection Report for South Ramara Drinking Water System (Water Works # 220010681). The physical inspection process took place on May 10, 2019.

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 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 and Enforcement Secretariat and advice of internal/external risk experts. The Inspection Summary Rating Record (IRR), included as Appendix A of this inspection report, provides the Ministry, the system owner and the local Public Health Units with a summarized quantitative measure of the drinking water system's annual inspection and regulated water quality testing performance. If you have any questions or concerns regarding the rating, please contact Sheri Broeckel, Drinking Water Supervisor at (705) 739-6386.

If you have any questions regarding the inspection report please feel free to contact the undersigned at (705) 716-5655.

Sincerely,



Laura Greidanus
Provincial Officer

Drinking Water Inspection Program, Safe Drinking Water Branch
Barrie District Office, Ministry of the Environment Conservation and Parks

CC Medical Officer of Health, Simcoe Muskoka District Health Unit
Manager of Environmental Services, Township of Ramara
Barrie District Office File, Ministry of the Environment, Conservation and Parks



Ministry of the Environment, Conservation and Parks

**SOUTH RAMARA DRINKING WATER SYSTEM
Inspection Report**

Site Number:	220010681
Inspection Number:	1-KYC23
Date of Inspection:	May 10, 2019
Inspected By:	Laura Mary Greidanus

OWNER INFORMATION:

Company Name:	RAMARA, THE CORPORATION OF THE TOWNSHIP OF	Unit Identifier:	
Street Number:	2297		
Street Name:	HIGHWAY 12 Hwy		
City:	BRECHIN	Postal Code:	L0K 1B0
Province:	ON		

CONTACT INFORMATION

Type:	Owner	Name:	John Pinsent
Phone:	(705) 484-5374 xext222	Fax:	(705) 484-0441
Email:	jpinsent@ramara.ca		
Title:	Chief Administrative Officer		
Type:	Operating Authority	Name:	David Readman
Phone:	(705) 238-9092	Fax:	(705) 484-0885
Email:	dreadman@ramara.ca		
Title:	Manager of Environmental Services		

INSPECTION DETAILS:

Site Name:	SOUTH RAMARA DRINKING WATER SYSTEM
Site Address:	3001 SUNTRAC Drive BRECHIN ON L0K 1B0
County/District:	RAMARA
MECP District/Area Office:	Barrie District
Health Unit:	SIMCOE MUSKOKA DISTRICT HEALTH UNIT
Conservation Authority:	
MNR Office:	
Category:	Large Municipal Residential
Site Number:	220010681
Inspection Type:	Announced
Inspection Number:	1-KYC23
Date of Inspection:	May 10, 2019
Date of Previous Inspection:	Sep 17, 2018

COMPONENTS DESCRIPTION

Site (Name):	MOE DWS Mapping	Sub Type:	
Type:	DWS Mapping Point		
Site (Name):	RAW WATER	Sub Type:	Surface
Type:	Source		
Comments:	The Heritage Farm and Mara Shores Estate subdivisions obtain their drinking water from Lake Simcoe which is treated at the South Ramara Water Treatment Plant (WTP). The raw water intake structure for the South Ramara WTP consists of a redwood intake crib in approximately 3 metres of water located 80 metres from shore. An on shore		

low lift pumping station, situated within a municipal easement on the Lake Simcoe shorefront, draws water from Lake Simcoe through a 150 millimetre diameter intake pipe. The intake pipe is equipped with a frazil ice cap, chlorine solution line, diffuser for pre-chlorination and zebra mussel control, and a raw water sampling line installed exterior to the ice cap. The low lift pumping station is a 1.8 metre diameter, 6.8 metre deep well with an average operational depth of 4.6 metres. The lift station is equipped with a manually cleaned inlet screen and two 3 kW submersible pumps, each capable of pumping 6.29 L/s at 18.9 metres Total Dynamic Head (TDH). Raw water is conveyed by the low lift pumps to the treatment facility, where water taking is measured by an electromagnetic flow measuring device prior to chemical injection and treatment. The low lift pumps alternate duty on each start-up, which are controlled by the level of the treated water reservoir at the plant.

Site (Name): TREATED WATER
Type: Treated Water POE **Sub Type:** Pumphouse

Comments:

The South Ramara Water Treatment Plant is a surface water treatment facility with chemically assisted filtration. Raw water is dosed with sodium hypochlorite and aluminum sulphate. The pre-chlorination system consists of a 50 litre chemical solution storage tank and a chemical metering pump with a rating of 7.5 litres/hour at 150 pounds per square inch (psi). The coagulant system consists of a 380 litre chemical solution storage tank and two chemical metering pumps (one duty, one standby) each with a rating of 2.1 litres/hour at 150 psi. The chemical metering pumps for both the pre-chlorination and coagulant dosing systems are interlocked with the low lift pump starter to start injecting at the same time that the low lift pumps begin pumping water. In addition, a three stage inline static mixer is installed within the raw water header downstream of the chemical injection points to provide flash mixing of the coagulant prior to flocculation and the treatment units. The post-chlorination system consists of a 100 litre chemical solution storage tank and two chemical metering pumps each with a rating of 0.59 litres/hour at 126 pounds per square inch (psi) equipped with an automatic switchover mechanism.

In addition to pre-chlorination and coagulation, a pH adjustment system consisting of a 340 kilogram stainless steel refillable storage cylinder containing liquefied carbon dioxide (CO) gas and a wall mounted metering panel equipped with an actuated control valve and bypass piping, gas feed flowmeter, filter, CO gas pressure regulator, and isolating manual ball valves are installed to inject CO gas into the raw water prior to the treatment units, to lower the pH, if required.

Two filtration units, each rated for a maximum capacity of 387 cubic metres/day, are utilized. A US Filter WaterBoy 133 (Filter #1) was installed in 2005 as part of the upgrades to duplicate the existing Neptune Microfloc WaterBoy Model WB-133 (Filter #2). Each package treatment unit consists of a flocculation tank, a settling tank, and a media filter. After an approximate detention time of 35 minutes in the flocculation tank, water overflows into the settling tank. The settling tank consists of horizontal tube settlers, and a sump pipe that is used for backwashing and the prevention of overflows. Settled water then flows through the filter media. Both filters are equipped with granular activated carbon, sand and gravel. The water is drawn through the filter media by a 1.5 kilowatt (kW) effluent pump that is controlled by an on/off float switch. A second float switch regulates the amount of water being filtered. The media filters are backwashed manually approximately once a week or more if necessary. The backwash cycle uses a 5.6 kW pump to draw water from the clearwell and flush the filter media. Backwash water overflows from the filter tank into the sedimentation tank and the sump pipe lowers the water level in the sedimentation tank to allow the settling tubes to be hosed off manually. Water from the backwash process is drained from near the bottom of the sedimentation tank, and discharged to a backwash water storage facility which overflows to Lake Simcoe. Upon completion of a backwash, a filter-to-waste cycle is initiated. Two continuous on-line turbidimeters are installed and separately supplied with continuous samples from each of the filter effluent lines. Each of the analysers are equipped with signal outputs connected to a data logging device and an auto dialer for continuous monitoring and reporting purposes. A primary disinfection system consisting of a 100 litre sodium hypochlorite solution storage tank and two sodium hypochlorite metering pumps (one duty, one stand-by) complete with 4-20 mA control, automatic switchover and contact output for alarm notification of duty pump failure injects sodium hypochlorite into the filtered water line prior to entering the clearwells. The injection rate is flow paced.

Chemically dosed water is discharged into the two above ground clearwells located in the building. Clearwell #1 has an approximate operating volume of 104 cubic metres and Clearwell #2 has an approximate operating volume of 72 cubic metres. These clearwells are designed and operated in series to provide a minimum chlorine contact volume of 35 cubic metres at all times. In the event that the low reservoir level falls below 35 cubic metres an Operator is called

and the high lift pumps lockout.

Two 7.5 kW (10 HP) high lift pumps deliver the water from the clearwell to the distribution system. One pump operates on continuous duty, while the other is on standby. The duty pump maintains line pressure of 620 kPA (90 psi). If it cannot keep up with the water demand, and the pressure drops to approximately 310 kPA (45 psi), the backup pump will engage to assist.

Water discharging from the clearwells is monitored by on-line turbidity and chlorine analysers that have signal outputs connected to a data logging device and an auto dialer for continuous monitoring and alarming purposes. The water for these analysers is drawn continuously by a pump to ensure that the water is being drawn from a location that represents the point at which CT is being achieved.

The South Ramara Water Treatment Plant has been equipped with a standby 47 kW propane powered generator capable of operating the entire treatment plant in the event of a power failure.

Site (Name): DISTRIBUTION (WATER INSPECTION)
Type: Other **Sub Type:** Other

Comments:

The South Ramara water treatment plant is designed to service 76 residential lots in the Heritage Farm water distribution system, 36 residential lots in the Mara Shores Estates water distribution system, 8 lots on Furniss Crescent, and 5 residential lots on Florida Avenue.

The distribution system is comprised of 4 inch and 6 inch poly-vinyl chloride (PVC) water mains, isolation valves, fire hydrants, two designated sample stations and the former Mara Shores pumphouse which serves as a distribution sampling location and has a continuous chlorine analyser installed which is connected to the SCADA system. The fire hydrants have been installed for distribution system maintenance purposes only as the system is not designed for fire protection.

There are no known designated facilities serviced by the South Ramara Drinking Water System.

INSPECTION SUMMARY:

Introduction

- **The primary focus of this inspection is to confirm compliance with Ministry of the Environment, Conservation and Parks (MECP) legislation as well as evaluating conformance with ministry drinking water policies and guidelines during the inspection period. The ministry utilizes a comprehensive, multi-barrier approach in the inspection of water systems that focuses on the source, treatment, and distribution components as well as management practices.**

This drinking water system is subject to the legislative requirements of the Safe Drinking Water Act, 2002 (SDWA) and regulations made therein, including Ontario Regulation 170/03, "Drinking Water Systems" (O.Reg. 170/03). This inspection has been conducted pursuant to Section 81 of the SDWA.

This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The South Ramara Drinking Water System is a Large Municipal Residential drinking water system as defined by Ontario Regulation 170/03, and serves 125 service connections in the Heritage Farm and Mara Shores Estates distribution systems located in Part Lot 16 Concession B and Lot 15, Concession C and on Ferniss Crescent and Florida Avenue. The South Ramara Drinking Water System has the drinking water system number 220010681. There are no known designated facilities serviced by the South Ramara Drinking Water System.

The South Ramara Drinking Water System draws water from Lake Simcoe. Treatment consists of chemically assisted filtration and chlorination. Two low lift pumps send water to the pumphouse. Raw water is injected with carbon dioxide for pH adjustment, sodium hypochlorite and aluminum sulphate. Filtration is achieved in two package treatment units, each including a flocculation tank, settling tank and a mixed media filter. Water is then injected with sodium hypochlorite and contact time is achieved in two clearwells. Two highlift pumps discharge treated water to the distribution system. There are two sample stations, one in a former pumphouse which has a continuous chlorine analyser, and 7 hydrants installed which are used for flushing and maintenance purposes. This inspection was conducted pursuant to section 81 of the Safe Drinking Water Act in order to assess compliance with the requirements of Ontario Regulation 170/03. The drinking water inspection included: physical inspections of the treatment equipment and facility; interview with Township of Ramara staff; and a review of relevant documents and data from the period of September 17, 2018 to May 10, 2019 (hereafter referred to as the "inspection review period"). The previous inspection of the South Ramara Drinking Water System was conducted on September 17, 2018.

Source

- **Trends in source water quality were being monitored.**

Raw water microbiological results are reviewed when the results are received and summarized each year in the South Ramara Water Works Annual Report. Raw water sampling is performed for microcystin during the summer months. Nitrogenous compounds and Dissolved Organic Carbon (DOC) which have the potential to affect the treatment process are tested quarterly in the raw water.

Operators monitor weather conditions and adjust dosage as required to respond to changes in the lake conditions, such as variations in colour, temperature and turbidity.

- **The owner had a harmful algal bloom monitoring plan in place.**

Raw water and distribution samples are tested for microcystin in the summer months. During the inspection review period samples were tested for microcystin from the beginning of the review period until the first week of October 2018. The microcystin sampling program had not started for summer 2019 at the time of inspection.

Permit To Take Water

- **The owner was in compliance with all conditions of the PTTW.**

Permit to Take Water (PTTW) 4371-9UYKYB was issued for the water takings from Lake Simcoe for the South Ramara drinking water system on April 22, 2015. The PTTW expires on March 31, 2025. Table 1 of the PTTW limits the water takings to 542,880 litres/day.

Condition 4.1 of PTTW 4371-9UYKYB requires that the Permit Holder shall, on each day water is taken under the authorization of this Permit, record the date, the volume of water taken on that date and the rate at which it was taken. The daily volume of water taken shall be measured by a flow meter. The Permit Holder shall keep all records required by this condition current and available at or near the site of the taking and shall produce the records immediately for inspection by a Provincial Officer upon his or her request. The Permit Holder, unless otherwise required by the Director, shall submit, on or before March 31st in every year, the daily water taking data collected and recorded for the previous year to the ministry's Water Taking Reporting System.

During the inspection review period the maximum allowed takings identified in the PTTW were not exceeded. The Permit Holder maintains records of the raw water takings measured by the raw water flow meter.

Capacity Assessment

- **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 147-103 Issue Number 2 requires that for each treatment subsystem, continuous flow measurement and recording shall be undertaken for the flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system, and the flow rate and daily volume of water that flows into the treatment subsystem.

There are three magnetic flow meters installed at the South Ramara Water Treatment Plant, one that measures the raw water entering the South Ramara Water Treatment Plant from Lake Simcoe, one that measures the combined filter effluent and one that measures the water entering the distribution system. Each of the flow meters provides a 4-20 mA signal. Raw, filtered and treated water flows are continuously recorded on the SCADA system. Daily log printouts include the 24 hour flows, flow since midnight (the printouts occur at approximately 6 am), minimum, maximum and average flow recorded by each of the three flow meters and the percentage of the allowed takings.

- **The flow measuring devices were calibrated or verified in accordance with the requirements of the MDWL Issued under Part V of the SWDA.**

Condition 3.1 of Schedule C of Municipal Drinking Water Licence 147-103 Issue Number 2 requires that all flow measuring devices that are required by regulation, by a condition in the Drinking Water Works Permit, or by a condition otherwise imposed by the Ministry of the Environment and Climate Change, shall be checked and calibrated in accordance with the manufacturer's instructions.

Condition 3.2 of Schedule C of Municipal Drinking Water Licence 147-103 Issue Number 2 requires that if the manufacturer's instructions do not indicate how often to check and calibrate a flow measuring device, the equipment shall be checked and calibrated at least once every 12 months during which the drinking water system is in operation.

The three flow meters installed in the South Ramara Water Treatment Plant are calibrated annually. The most recent calibration was performed on January 16, 2019. All three flow meters passed the calibration.

- **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 147-103 Issue Number 2 states that the rated capacity for South Ramara Water Treatment System is 387 m3/day. This value was not exceeded during the inspection review period for the amount of water flowing from the treatment subsystem to the distribution system. There is not a maximum flow rate for South Ramara Drinking Water System in Table 2 of Schedule C of Municipal Drinking Water Licence 147-103 Issue Number 2.

Capacity Assessment

- **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 147-103 Issue Number 2 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:

2.1.1 The flow rate and daily volume of treated water that flows from the treatment subsystem to the distribution system.

2.1.2 The flow rate and daily volume of water that flows into the treatment subsystem.

The South Ramara Water Treatment Plant has a raw water, filtered water and treated water flow meter installed. Records are made of the flow rates measured by the flow meters through the SCADA system. There were no capacity exceedances during the inspection review period. Daily log printouts include the flow information for each day.

Treatment Processes

- **The owner had ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.**

Based on observations made at the time of inspection it appears that all equipment installed at the South Ramara Water Treatment Plant is as described in Schedule A of Drinking Water Works Permit 147-203 Issue Number 3. Drinking Water Works Permit 147-203 Issue Number 3 was issued on February 16, 2017 and does not contain a Schedule C.

- **The owner/operating authority was in compliance with the requirement to prepare Form 2 documents as required by their Drinking Water Works Permit during the inspection period.**

During the inspection review period Form 2 documents were completed for replacing the pre filter automatic control valves, replacing the aluminum sulphate dosing pump and replacing the surefeed plc.

The Operating Authority has implemented a procedure for the completion and filing of Form 2 documents.

- **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 the South Ramara Drinking Water System is achieved by chemically assisted filtration and the use of the chlorine contact/concentration time (CT) concept to ensure the provision of effective pathogen inactivation. Two package filtration units, each with a flocculation tank, settling tank and mixed media filter, filter the water after raw water is injected with carbon dioxide, sodium hypochlorite and aluminum sulphate. The effective disinfectant contact time required for the CT concept is attained within the two clearwells, one with an approximate operation volume of 104 m³ and one with an approximate operation volume of 72 m³. The clearwells are configured in series. 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. The alarm set points are at levels which afford sufficient time for an Operator to respond, prior to the chlorine residual dropping below the level required for primary disinfection. Operators perform CT calculations in the event of a low chlorine alarm to confirm that primary disinfection has been achieved. Alarms are tested regularly to ensure they are functioning properly. In the event that the low reservoir level is reached an alarm is sent to the on-call Operator and the high lift pumps are locked out.

During the inspection review period, the majority of readings that were above or below the alarm set points were the result of maintenance activities, such as cleaning the analysers, changing electrolyte or probes, testing the generator and filter backwashing or air bubbles in the turbidity analyser.

The SCADA system calculates the percentage of turbidity readings below 0.3 NTU. During the inspection review

Treatment Processes

period the filters produced water with turbidity values below 0.3 NTU when in service in at least 95% of the measurements each month, as required by the Procedure for Disinfection of Drinking Water in Ontario. When the criteria was not met, it was during times that Filter 1 was not in service. Calculations were performed to ensure that when water was being directed to users, the criteria for filter effluent turbidity was met. During the inspection review period records indicate that primary disinfection was achieved whenever water was being supplied.

- **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.**

There were no records made during the inspection review period of distribution chlorine residuals being below 0.05 mg/L. The lowest chlorine residual recorded on the distribution chlorine monthly sheets, which had a value recorded each day of the inspection review period, and from samples tested in conjunction with microbiological sample collection was 0.69 mg/L. The Operating Authority installed a continuous chlorine analyser in the old Mara Shores pumphouse. Since July 2018 the minimum and maximum values recorded by the continuous distribution chlorine analyser are included on the daily print outs.

At the time of inspection the Inspector measured a chlorine residual of 1.48 mg/L from Sample Station #1.

- **Where an activity has occurred that could introduce contamination, all parts of the drinking water system were disinfected in accordance with Schedule B, Condition 2.3 of the Drinking Water Works Permit.**

Condition 2.3 of Schedule B of Drinking Water Works Permit 147-203 Issue Number 3 states that all parts of the drinking water system in contact with drinking water which are:

2.3.1 Added, modified, replaced, extended; or

2.3.2 Taken out of service for inspection, repair or other activities that may lead to contamination, shall be disinfected before being put into service in accordance with a procedure approved by the Director or in accordance with the applicable provisions of the following documents:

- a) The ministry's Watermain Disinfection Procedure, effective January 29, 2017;
- b) AWWA C652 – Standard for the Disinfection of Water-Storage Facilities;
- c) AWWA C653 – Standard for Disinfection of Water Treatment Plants; and
- d) AWWA C654 – Standard for Disinfection of Wells.

The South Ramara Water Works Contingency and Emergency Plan was updated in January 2019 by the Operating Authority. The Plan includes procedures for watermain leak repairs. The procedures are detailed and meet the requirements. The Ministry's Watermain Disinfection Procedure (effective for the system on January 29, 2017) as well as the most recent version of AWWA C651 are appended in the Plan. The Operations Manual includes direction for maintenance and cleaning of reservoirs and the AWWA Standard for Disinfection of Water-Storage Facilities.

- **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 147-103 Issue Number 2 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 and NSF/372.

Chemicals that come into contact with the South Ramara drinking water include carbon dioxide, alum and sodium hypochlorite. Documentation was provided indicating that the sodium hypochlorite meets ANSI/NSF Standard 60, the ground aluminum sulfate meets AWWA B403-09 and the carbon dioxide meets ANSI/NSF Standard 60.

- **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**

Treatment Processes

water system in accordance with the DWWP and MDWL issued under Part V of the SDWA.

Treatment Process Monitoring

- **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 clearwells and the intended CT, prior to water entering the distribution system.

- **Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.**

The South Ramara Water Works Operations and Maintenance Manual outlines the operational criteria necessary to achieve primary disinfection, plant optimization and safety buffers for alarming set points. A CT calculation worksheet is also included for Operators to use to confirm CT is met during abnormal conditions.

- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

Daily log printouts include the minimum, maximum and average turbidity readings from the continuous analysers installed on each filter effluent line as well as the treated water. The number of readings greater than 0.3 NTU for each filter effluent line are also recorded to assist with monthly calculations to ensure that 95% of readings each month are below 0.3 NTU.

- **The secondary disinfectant residual was measured as required for the distribution system.**

Subsection 7-2 (3) of Schedule 7 of Ontario Regulation 170/03 requires that the owner of a large municipal residential system that provides secondary disinfection and the operating authority for the system shall ensure that at least seven distribution samples are taken each week in accordance with subsection (4) and are tested immediately for free chlorine residual, if the system provides chlorination and does not provide chloramination. Subsection 7-2 (4) of Schedule 7 of Ontario Regulation 170/03 states that the following rules apply to the distribution samples referred to in subsection (3) unless at least one sample is taken on each day of the week:

1. At least four of the samples must be taken on one day of the week, at least 48 hours after the last sample was taken in the previous week.
2. At least three of the samples must be taken on a second day of the week, at last 48 hours after the last sample was taken on the day referred to in paragraph 1.
3. When more than one sample is taken on the same day of the week under paragraph 1 or 2, each sample must be taken from a different location.

During the inspection review period the chlorine residual was recorded from the South Ramara distribution system by a continuous analyser. Records were made daily on a monthly spreadsheet by Operators. The daily log print outs include the minimum and maximum chlorine residual measured in the Mara Shores pumphouse by the continuous chlorine analyser, as well as the reading at the time the daily sheet was printed which is typically around 6:00 am. Operators also measure the distribution chlorine residual in conjunction with microbiological testing and seven records on the monthly distribution chlorine residual spreadsheets for the inspection review period were recorded from Sample Station #1.

- **Operators were examining continuous monitoring test results and they were examining the results within 72 hours of the test.**

Subsection 6-5. (1) 3. of Schedule 6 of Ontario Regulation 170/03 requires that test results recorded under paragraph 1 or 2 must be examined, within 72 hours after the tests are conducted by a certified operator, in the case of, a large municipal residential system, such as South Ramara Drinking Water System.

An Operator reviews the data recorded by the continuous monitoring equipment each day with few exceptions. Data is always reviewed within 72 hours of it being recorded. Operators are able to review the SCADA data

Treatment Process Monitoring

remotely and log their comments, initials and the time.

- **Samples for chlorine residual analysis were tested using an acceptable portable device.**
- **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.**
- **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.**
- **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. Most days that Operators attend the treatment plant they compare the hand held colorimeter value for free chlorine residual with the continuous analyser. The hand held units undergo a verification with secondary standards periodically, 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 approximately 0.2 mg/L, the span of the continuous analyser is changed. The continuous analyser probe and electrolyte are changed as required and calibrated annually by a service technician. During the inspection review period the three turbidity, chlorine analyser in the plant and the distribution system, and carbon dioxide analysers were calibrated in January 2019. Manufacturer's instructions are part of the Operations and Maintenance Manual and are used for the maintenance and calibration of the units.

Process Wastewater

- **The process wastewater and residual solids/sludges were treated, handled and disposed of in accordance with the design requirements approved under the Drinking Water Works Permit and the Municipal Drinking Water Licence.**

Schedule A of Drinking Water Works Permit 147-203 Issue Number 3 describes the filter backwash waste facility as two below grade connected 1.8 m diameter maintenance holes which provide 25 m3 of storage for filter backwash wastewater. A sump pump transfers supernatant to the 1.2 m diameter maintenance hole, where it discharges to Lake Simcoe by gravity. Accumulated settled solids are removed from the maintenance holes by a sewage pump truck.

After a backwash, a timer is activated by a float to allow the backwash water to settle for 24 hours prior to discharging to Lake Simcoe. Accumulated solids are removed by a pump truck. The solids have not been required to be removed for approximately five years. The South Ramara Operations Manual indicates that every three months the volume of accumulated sludge is to be evaluated. When the sludge has accumulated to approximately 100 mm above the bottom of the tank arrangements are to be made to clean out the tank and dispose of the sludge at an approved disposal site.

Process Wastewater

- **The process wastewater discharge monitoring program and discharge quality complied with requirements established in the Municipal Drinking Water Licence Issued under Part V of the SDWA.**

Condition 1.5 of Schedule C of Municipal Drinking Water Licence 147-103 Issue Number 2 states in respect of an effluent discharged into the natural environment from a treatment subsystem or treatment subsystem component listed in column 1 of Table 3:

1.5.1 The annual average concentration of a test parameter identified in column 2 shall not exceed the value in column 3 of the same row; and

1.5.2 The maximum concentration of a test parameter identified in column 2 shall not exceed the value in column 4 of the same row.

Table 3 states that the total suspended solids average annual concentration limit is 25 mg/L for the South Ramara Water Works.

During the inspection review period the average concentration of total suspended solids was 12 mg/L. One sample had a result below the method detection limit of two. A value of two was used for calculating the average.

Condition 4.2 of Schedule C of Municipal Drinking Water Licence 147-103 Issue Number 2 states that for each treatment subsystem or treatment subsystem component listed in column 2 of Table 7 and in addition to any other sampling, testing and monitoring that may be required, sampling, testing and monitoring shall be undertaken for a test parameter listed in column 2 using the sample type identified in column 3 at the sampling frequency listed in column 4 and at the monitoring location listed in column 5 of the same row.

Table 7 requires monthly manual composite samples from the point of discharge to Lake Simcoe for total suspended solids, pH and aluminum for the South Ramara Water Works.

During the inspection review period, manual composite samples were collected for the required parameters each month, from the point of discharge with the exception of no pH sample for the month of October 2018. The Operations Manual details how the composite samples are to be collected, including a sample at the discharge commencement, midpoint and immediately before the discharge ceases. Operators collect the samples after the backwash water has settled for approximately 24 hours. The discharge to the lake is put into a manual setting after a backwash event each month to allow for sampling to occur.

Distribution System

- **There is a backflow prevention program, policy and/or bylaw in place.**

The Owner of the South Ramara Drinking Water System has installed backflow preventers on all service connections within the system. The backflow preventers were installed as part of the water metering program. The Corporation of the Township of Ramara has a cross connection bylaw which requires backflow prevention devices for all industrial, commercial, institutional, agricultural and multi-residential buildings, or if a condition exists in any building or structure that may be hazardous or detrimental to the potable water supply as determined by the Township, including lawn sprinkler systems for residential connections.

- **The owner had implemented a program for the flushing of water mains as per industry standards.**

Annually, in the fall, the South Ramara distribution system is flushed. Notices are delivered to residents to inform them that flushing will be taking place.

- **Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system.**

The continuous chlorine analyser installed in the old Mara Shores pumphouse represents an extremity of the South Ramara distribution system. During the inspection review period the majority of the recorded values on the monthly distribution chlorine residual spreadsheet were from this location or from Sample Station 1. There are sample stations or hydrants located at extremities and dead ends of the system to allow for maintenance and monitoring.

- **A program was in place for inspecting and exercising valves.**

The South Ramara Operations Manual indicates that each distribution system main valve must be operated once

Distribution System

per year to ensure it is in good working order. Any identified issues are to be rectified. A valve log book is maintained to record valve maintenance activities.

- **There was a program in place for inspecting and operating hydrants.**

The South Ramara Operations Manual contains a procedure for hydrant inspection and operation, and states that all hydrants should be flushed once a year, typically during the same time as distribution system flushing in the fall to prepare for winter. Operating the hydrants, including the isolation valve, is part of the hydrant flushing procedure. A hydrant log book is maintained to record all maintenance activities performed on hydrants.

- **There was a by-law or policy in place limiting access to hydrants.**

By-law No. 2007.87 states that temporary connections to any potable water system including via fire hydrants must have a backflow prevention device installed or an air gap, except for connections for fire fighting purposes. The by-law prescribes who is authorized to carry out work.

- **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.**

There were no complaints of low water pressure from consumers of the South Ramara Drinking Water System during the inspection review period. Water pressure is measured in the pumphouse on the distribution header. The pressure switch is connected to the SCADA system and will alarm for both high and low pressure conditions.

Operations Manuals

- **Operators and maintenance personnel had ready access to operations and maintenance manuals.**

Operations manuals are kept in the plant as well as at the Environmental Services Office.

- **The operations and maintenance manuals contained plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

- **The operations and maintenance manuals met the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.**

Condition 16.2 of Schedule B of Municipal Drinking Water Licence 147-103 Issue Number 2 requires that the operations and maintenance manual or manuals, shall include at a minimum:

- 16.2.1 The requirements of this licence and associated procedures;
- 16.2.2 The requirements of the drinking water works permit for the drinking water system;
- 16.2.3 A description of the processes used to achieve primary and secondary disinfection within the drinking water system, including where applicable:
 - a) A copy of the CT calculations that were used as the basis for primary disinfection under worst case operating conditions; and
 - b) The validated operating conditions for UV disinfection equipment, including a copy of the validation certificate;
- 16.2.4 Procedures for monitoring and recording the in-process parameters necessary for the control of any treatment subsystem and for assessing the performance of the drinking water system;
- 16.2.5 Procedures for the operation and maintenance of monitoring equipment;
- 16.2.6 Contingency plans and procedures for the provision of adequate equipment and material to deal with emergencies, upset conditions and equipment breakdown;
- 16.2.7 Procedures for dealing with complaints related to the drinking water system, including the recording of the nature of the complaint and any investigation and corrective action taken in respect of the complaint.

The South Ramara Water Works Operations and Maintenance Manual and Contingency Plans were updated by the Operating Authority in January 2019. The Manual and Plans meet the requirements of the Municipal Drinking Water Licence.

Operations Manuals

Logbooks

- **Logbooks were properly maintained and contained the required information.**

Logbooks are maintained for the South Ramara Drinking Water System on daily printouts which summarize continuous analyser and flow data as well as on a series of spreadsheets and checklists. Departures from normal operating conditions, such as increased alum dosage or a change to flow rate or maintenance activities performed are recorded. The times associated with these activities are not always recorded on the logsheets. Operators have the capability to remotely review trendline data and to enter notes electronically on the logsheets.

- **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.**
- **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.**
Operators record the required information on the logsheets, distribution chlorine sheets, chain of custody forms and personal logbooks.
- **The operator-in-charge ensured that records were maintained of all adjustments made to the processes within his or her responsibility.**
- **Logs or other record keeping mechanisms were available for at least five (5) years.**

Contingency/Emergency Planning

- **Spill containment was provided for process chemicals and/or standby power generator fuel.**

Liquid chemicals are stored on spill containment structures. The carbon dioxide cylinder is kept in a locked cage. The generator is located in a locked area.

- **Clean-up equipment and materials were in place for the clean up of spills.**

A spill clean-up kit is located in the South Ramara treatment plant.

- **Standby power generators were tested under normal load conditions.**

The South Ramara Water Works Operations Manual states that the generator is to be tested under load conditions each month. Annually the generator is serviced by a technician.

Security

- **The owner had provided security measures to protect components of the drinking water system.**

The sample stations and pumphouse are locked. The pumphouse is also alarmed for forced entry. The reservoir hatches are located within the pumphouse building. The intake structure is not marked.

Consumer Relations

- **The owner and/or operating authority undertook efforts to promote water conservation and reduce water losses in their system.**

All service connections are outfitted with water meters. Billing is based on a flat rate and consumption to promote conservation.

Consumer Relations

The Owner has a Bylaw to regulate the supply of water, including restrictions for lawn watering and non-domestic water use.

Certification and Training

- **The overall responsible operator had been designated for each subsystem.**
The South Ramara Drinking Water System is comprised of a Water Distribution Subsystem Class I and Water Treatment Subsystem Class II. The Overall Responsible Operator is designated for both of the subsystems.
- **Operators-in-charge had been designated for all subsystems which comprised the drinking water system.**
The South Ramara Drinking Water System is comprised of a Water Distribution Subsystem Class I and Water Treatment Subsystem Class II. The Operators In Charge are designated for both of the subsystems.
- **All operators possessed the required certification.**
- **Only certified operators made adjustments to the treatment equipment.**
- **An adequately licenced operate was designated to act in place of the overall responsible operator when the overall responsible operator was unable to act.**

Water Quality Monitoring

- **All microbiological water quality monitoring requirements for raw water samples were being met.**
Subsection 10-4. of Schedule 10 of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every week from the drinking water system's raw water, 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 is tested for Escherichia coli and total coliforms.
A raw water sample was collected prior to treatment being applied during each week of the inspection review period. The samples were tested for the required parameters.
- **All microbiological water quality monitoring requirements for distribution samples were being met.**
Subsection 10-2. of Schedule 10 of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system shall ensure that if the system serves 100,000 people or less, at least eight distribution samples, plus one additional distribution sample for every 1,000 people served by the system, are taken every month, with at least one of the samples taken in each week. The owner of the drinking water system and the operating authority for the system shall ensure that each of the samples taken is tested for Escherichia coli and total coliforms and at least 25 per cent of the samples required to be taken are to be tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC).
The estimated population of the South Ramara Drinking Water System is approximately 270 people. As such, 8 distribution samples are required to be collected each month. During the inspection review period two distribution samples were taken each week and tested for the required parameters, all samples were tested for HPC.
- **All microbiological water quality monitoring requirements for treated samples were being met.**
Subsection 10-3. of Schedule 10 of Ontario Regulation 170/03 requires that the owner of a drinking water system and the operating authority for the system shall ensure that a water sample is taken at least once every week and tested for Escherichia coli, total coliforms and general bacteria population expressed as colony counts on a heterotrophic plate count.
During the inspection review period a treated water sample was collected each week and tested for the required

Water Quality Monitoring

parameters.

- **All inorganic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsection 13-2. (1) of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a large municipal residential system and the operating authority for the system shall ensure that, at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water. Subsection 13-2. (2) of Schedule 13 of Ontario Regulation 170/03 states that the owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for every parameter set out in Schedule 23.

The most recent treated water samples tested for all Schedule 23 parameters were collected on August 29, 2018. Prior to that, samples were collected and tested for all parameters listed in Schedule 23 on August 15, 2017.
- **All organic water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Subsection 13-4. (1) of Schedule 13 of Ontario Regulation 170/03 requires that the owner of a large municipal residential system and the operating authority for the system shall ensure that, at least one water sample is taken every 12 months, if the system obtains water from a raw water supply that is surface water. Subsection 13-4. (2) of Schedule 13 of Ontario Regulation 170/03 states that the owner of a large municipal residential system and the operating authority for the system shall ensure that each of the samples taken under subsection (1) is tested for every parameter set out in Schedule 24.

The most recent treated water samples tested for all parameters listed in Schedule 24 were collected on August 29, 2018. Prior to that, samples were collected and tested for all parameters listed in Schedule 24 on August 15, 2017.
- **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 comes into effect on January 1, 2020.

During the inspection review period a sample was collected from the South Ramara distribution system in November 2018 and February 2019 and tested for HAA as required. The Inspector discussed with the Operator that it may be beneficial to sample for HAA from different locations in the distribution system to find out where the location is with the highest results. Studies indicate that longest residence time isn't necessarily the location that will have the highest value for HAA. The average of the two samples collected during the inspection review period was 47.25 ug/L.
- **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 and tested for THMs in November 2018 and February 2019. The average for THMs during the inspection review period was 48 ug/L.

Water Quality Monitoring

- **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 South Ramara Drinking Water System in November 2018 and February 2019.

- **All sodium water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

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

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

The most recent treated water sample tested for sodium was collected on August 25, 2015 from the South Ramara Drinking Water System. A resample was collected and tested for sodium on September 2, 2015. Prior to that a sample was taken and tested for sodium on August 17, 2010 and a resample collected on August 25, 2010.

- **All fluoride water quality monitoring requirements prescribed by legislation were conducted within the required frequency.**

Section 13-9 of Schedule 13 of Ontario Regulation 170/03 requires that if a drinking water system does not provide fluoridation, the owner of the system and the operating authority for the system shall ensure that a water sample is taken at least once every 60 months and tested for fluoride.

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

The most recent sample tested for fluoride was collected on August 25, 2017 from the treated water sample point at the South Ramara Drinking Water System. Previously a sample to be tested for fluoride was collected on August 22, 2012.

- **The owner ensured that water samples were taken at the prescribed location.**
- **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**

The South Ramara Drinking Water System has met the requirements to be eligible for reduced sampling under section 15.1-5 (10) of Schedule 15.1 of Ontario Regulation 170/03. As such, one distribution sample is required to be sampled in each winter and summer period (December 15 to April 15, and June 15 to October 15), and be tested for total alkalinity and for pH. Lead needs to be tested for in winter and summer in every third 12-month period.

During the inspection review period one distribution sample was collected and tested for lead on March 11, 2019 and August 29, 2018. Alkalinity and pH were tested multiple times during the required periods.

- **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. (1) of Schedule 6 of Ontario Regulation 170/03 states that if this Regulation requires a water

Water Quality Monitoring

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.

During the inspection review period free and total chlorine residuals were tested at the same time from the same location as treated water and distribution microbiological samples.

- **The owner indicated that the required records are kept and will be kept for the required time period.**

Water Quality Assessment

- **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 treated water and distribution system microbiological samples collected during the inspection review period, as well as the most recent samples tested for Schedules 23 and 24 parameters and fluoride met the Ontario Drinking Water Quality Standards.

Reporting & Corrective Actions

- **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.**

During the inspection review period Operators responded to alarms either in person or through remotely accessing the SCADA system. CT calculations were performed to verify primary disinfection was achieved where appropriate. Primary disinfection was achieved in all instances.

- **The Annual Report containing the required information was prepared by February 28th of the following year.**
- **Summary Reports for municipal council were completed on time, included the required content, and were distributed in accordance with the regulatory requirements.**

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

Not Applicable

SIGNATURES

Inspected By:

Laura Mary Greidanus

Signature: (Provincial Officer)



Reviewed & Approved By:

Sheri Broeckel

Signature: (Supervisor)



Review & Approval Date:

July 25, 2019

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.



Inspection Summary Rating Record

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2019-2020)

DWS Name: SOUTH RAMARA DRINKING WATER SYSTEM
DWS Number: 220010681
DWS Owner: Ramara, The Corporation Of The Township Of
Municipal Location: Ramara

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Detailed
Inspection Date: May 10, 2019
Ministry Office: Barrie District

Maximum Question Rating: 594

Inspection Module	Non-Compliance Rating
Permit To Take Water	0 / 12
Capacity Assessment	0 / 42
Treatment Processes	0 / 93
Process Wastewater	0 / 20
Operations Manuals	0 / 42
Logbooks	0 / 30
Certification and Training	0 / 49
Water Quality Monitoring	0 / 136
Reporting & Corrective Actions	0 / 29
Treatment Process Monitoring	0 / 141
TOTAL	0 / 594

Inspection Risk Rating	0.00%
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FINAL INSPECTION RATING:	100.00%
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Ministry of the Environment - Detailed Inspection Rating Record (Reporting Year - 2019-2020)

DWS Name: SOUTH RAMARA DRINKING WATER SYSTEM
DWS Number: 220010681
DWS Owner: Ramara, The Corporation Of The Township Of
Municipal Location: Ramara

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Detailed
Inspection Date: May 10, 2019
Ministry Office: Barrie District

Maximum Question Rating: 594

Inspection Risk Rating 0.00%

FINAL INSPECTION RATING: 100.00%