

Ministry of the Environment,
Conservation & Parks

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

Owen Sound District Office

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January 19, 2021

Sent by Email: lara.widdifield@southbrucepeninsula.com

Town of South Bruce Peninsula
315 George Street,
PO Box 310,
Warton, Ontario,
N0H 2T0

Attention: Lara Widdifield,
Director of Public Works

Dear Ms. Widdifield,

Re: 2020/2021 Amabel-Sauble Drinking Water System Inspection Report No. 1-OVPOY
Municipal Drinking Water Licence No. 094-101, Issue No. 4
Drinking Water Works Permit No. 094-201, Issue No. 5

The enclosed report documents findings of the inspection that was performed on November 27, 2020. Two sections of the report, namely "Actions Required" and "Recommended Actions", specify due dates for the submission of information or plans to my attention. Please note that "Actions Required" are linked to incidents of non-compliance with regulatory requirements contained within an Act, a Regulation, or site-specific approvals, orders or instructions; "Recommended Actions" convey information that the owner or operating authority should consider implementing in order to conform with existing and emerging industry standards.

The report includes an Inspection Summary Rating Record as an appendix. This record forms part of the ministry's comprehensive, risk-based inspection process. The rating provides a quantitative measure of the inspection results for this specific drinking water system for the reporting year. An inspection rating that is less than 100 per cent does not mean that the drinking water from the system is unsafe. The primary goals of this assessment are to encourage ongoing improvement of drinking water systems and to measure this progress from year to year.

2.

I would like to remind you that Section 19 of the Safe Drinking Water Act, 2002 (Standard of Care) creates a number of obligations for individuals who exercise decision-making authority over municipal drinking water systems, including members of municipal councils. "Taking Care of Your Drinking Water: A guide for members of municipal council", a publication found on the Drinking Water Ontario website (<https://www.ontario.ca/page/taking-care-your-drinking-water-guidemembers-municipal-councils>), provides further information about these obligations. Should you have any questions regarding the content of the enclosed report, please do not hesitate to contact me.

Yours truly,



Bob Graham
Water Compliance Inspector
Ministry of the Environment, Conservation and Parks
Phone: 519-374-0216
e-mail: Robert.g.graham@ontario.ca

Enclosure

ec: Carl Seider, Project Manager, Source Water Protection Program
Leo-Paul Frigault, Senior Operations Manager, OCWA
Karla Young, Process Compliance Technician, OCWA
Mark Smith, Water Compliance Supervisor, MECP
Dr. Ian Arra, Medical Officer of Health, GBHU

c: File SI-BR-SBP-DL-540 (2020)



Ministry of the Environment, Conservation and Parks

**AMABEL-SAUBLE DRINKING WATER SYSTEM
Inspection Report**

Site Number:	220007917
Inspection Number:	1-OVPOY
Date of Inspection:	Nov 27, 2020
Inspected By:	Robert Graham

OWNER INFORMATION:

Company Name:	SOUTH BRUCE PENINSULA, THE CORPORATION OF THE TOWN OF		
Street Number:	315	Unit Identifier:	Box 310
Street Name:	GEORGE St		
City:	WIARTON		
Province:	ON	Postal Code:	N0H 2T0

CONTACT INFORMATION

Type:	Owner	Name:	CAO CAO
Phone:	(519) 534-1400 x122	Fax:	(519) 534-4976
Email:	tsbpcao@bmts.com		
Title:	Chief Administrative Officer		

Type:	Operating Authority	Name:	Leo-Paul Frigault
Phone:	(519) 534-1600	Fax:	
Email:	lfrigault@ocwa.com		
Title:	OCWA - Operations Manager, West Highlands Hub.		

Type:	Owner	Name:	Lara Widdifield
Phone:	(519) 534-1400 x133	Fax:	
Email:	lara.widdifield@southbrucepeninsula.com		
Title:	Director of Public Works		

INSPECTION DETAILS:

Site Name:	AMABEL-SAUBLE DRINKING WATER SYSTEM
Site Address:	628 D Line SAUBLE BEACH ON N0H 2G0
County/District:	THE SOUTH BRUCE PENINSULA
MECP District/Area Office:	Owen Sound Area Office
Health Unit:	GREY BRUCE HEALTH UNIT
Conservation Authority:	Grey Sauble Conservation Authority
MNR Office:	Owen Sound Regional Office
Category:	Large Municipal Residential
Site Number:	220007917
Inspection Type:	Unannounced
Inspection Number:	1-OVPOY
Date of Inspection:	Nov 27, 2020
Date of Previous Inspection:	Jan 29, 2020

COMPONENTS DESCRIPTION

Site (Name):	MOE DWS Mapping	Sub Type:	
Type:	DWS Mapping Point		

Site (Name):	Well # 1 (PW1)
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Type: Source **Sub Type:** GUDI w/o Effective Insitu

Comments:

This raw water source is used in conjunction with PW2 as the primary water source. This is a 150 mm diameter 102 m deep drilled well equipped with a submersible pump rated at 4 L/sec.

Site (Name): Well # 2 (PW2)

Type: Source **Sub Type:** GUDI w/o Effective Insitu

Comments:

This raw water source is used in conjunction with PW1 as a primary water source for this drinking water system. This is a 150 mm diameter 86.9 m deep drilled well. It is equipped with a submersible well pump rated at 4 L/sec.

Site (Name): Well (Winburk)

Type: Source **Sub Type:** GUDI

Comments:

This raw water source for the Amabel-Sauble DWS consists of a 150 mm diameter, 87-metre deep drilled groundwater well which is GUDI and is used only as a standby source. It was constructed in 1977 and has steel casing. Upgrades to the well were completed in 2009 to remove the well pit. The well is equipped with a 6.05 L/s (80 IGPM) capacity 10 HP submersible well pump. A raw watermain from the former Winburk pumphouse to the new Amabel-Sauble Water Treatment Plant was installed from Bunnyview Drive to the D-Line.

Site (Name): Amabel-Sauble Water Treatment Plant

Type: Treated Water POE **Sub Type:** Treatment Facility

Comments:

The Amabel-Sauble Water Treatment Plant houses the treatment and control facilities including:

- Iron Removal with two pressure vessels containing anthracite and catalytic media.
- Chlorine Disinfection System with three pumps each with a dedicated duty. One pump is used for iron and manganese oxidation, one is used to chlorinate treated water after UV disinfection prior to water entering the clearwell and the third pump is used for post chlorination.
- Additional Disinfection System consisting of one cartridge filter housing prior to the two (2) UV disinfection units.
- Clearwell/Storage Tank with high lift and backwash pumps.
- Residual Management System consisting of one backwash holding tank which discharges supernatant to the ditch and the remaining sludge is pumped via a connection at the building exterior.
- Standby Power consisting of generator with a 32 hour double wall sub-base fuel tank.
- There is also, one (1) programmable logic controller and associated SCADA system for control of plant operations, a chlorine residual analyzer, treated water turbidity analyzer, filtered water turbidity analyzer and Raw, Treated and Backwash flow meters.

As per CT control document dated 04/13/2012 provided by OCWA . The Procedure for Disinfecting Drinking Water in Ontario requires the Amabel Sauble system to achieve 4 log (99.99%) Inactivation of Viruses by Free Chlorine with a Raw Water temperature of 5 degrees Celsius, with a pH between 6 – 9 the required CT value = 8

Clearwell capacity = 654 m³

Clearwell volume required for fire protection 1.6 m = 43%

Baffle ratio = 0.1

Flow rate = 687 m³/day (0.477 m³/min)

Effective Contact time = (654 x 0.43 x 0.1) / 0.477

Effective Contact Time = 28.12 / 0.477 = 58.95 min

CT (required) = Disinfection Residual Concentration (mg/L) x Effective contact time (min)

The minimum disinfection residual can be calculated using the following formula:

Minimum Disinfection Residual (mg/L) = CT (required) / Effective contact time (min)

Minimum Disinfection Residual (mg/L) = 8 / 58.95 = 0.135

A minimum Free Chlorine Concentration of 0.14 mg/L is required to meet primary disinfection with a minimum

clearwell volume of 281.2 m3 (43%).

Site (Name): Amabel-Sauble Distribution System

Type: Other

Sub Type: Other

Comments:

The Amabel-Sauble distribution system connected seven former distribution systems (Gremik, Thompson, Trask, Forbes, Winburk, Fedy and Robins). Trunk watermains were constructed on Sauble Falls Parkway, Woodland Crescent, 6th Street North, 3rd Avenue North, 9th Street North, 2nd Avenue North, D-Line, Jewel Bridge Road, Deer Trail Road and Martin Drive in Sauble Beach. There are fire hydrants on the trunk mains and two air release valve chambers.

A second distribution line, originating at the water treatment plant supplies water to the Amabel-Sauble School. There are approximately 300 service connections in the Amabel-Sauble distribution system serving a population of approximately 730 residents.

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.

On November 27, 2020, Ministry of the Environment, Conservation and Parks (MECP) Provincial Officer Bob Graham conducted an unannounced detailed inspection of the Amabel-Sauble Drinking Water System (DWS). The Amabel-Sauble DWS is owned by the Town of South Bruce Peninsula (Owner) and operated by the Ontario Clean Water Agency (OCWA). Assistance with the inspection was provided by Leo-Paul Frigault, OCWA Senior Operations Manager, James Learn, OCWA Overall Responsible Operator (ORO), Karla Young, OCWA Process & Compliance Technician and OCWA Operator in Training, James MacKinnon. During the inspection review period, from January 30, 2020, to the date of inspection, November 27, 2020, there were five (5) Adverse Water Quality Incidents (AWQIs) reported to the MECP Spills Action Centre.

Source

- **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.**

The Amabel-Sauble DWS consists of three (3) drilled wells (Wells PW1, PW2 and the Winburk well) which have steel well casings sealed with locked vermin proof well caps. Well casings are extended at least 40 cm above ground and surface drainage does not collect or pond in the vicinity of the wells due to mounding around the well casings. Wells PW1 and PW2 are the primary water sources for the DWS. The Winburk well is used as a standby source for the DWS. Land use(s) immediately adjacent to the drilled wells are predominantly residential and institutional (Amabel-Sauble Community School), as such the Amabel-Sauble DWS wells are located in close proximity to privately owned septic systems. Although malfunctioning septic systems have the potential to pose a risk to groundwater quality, the Owner has proactively undertaken a septic system re-inspection program to address potential issues with the operation and maintenance of septic systems in the Amabel-Sauble DWS area. Additionally, the Owner has posted signs at Wells PW1 and PW2 warning the owner of Amabel-Sauble Community School against the application of pesticides within 100 metres of the DWS wells.

- **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.**

Well inspection and maintenance procedures for the entire well structure including all above and below grade components are required by MDWL Schedule B (Section 16.2.8, 16.2.9 and 16.2.10) for the Amabel-Sauble DWS. Well inspection and maintenance procedures are included in Appendix F of the Operations and Maintenance Manual.

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

Source

Permit To Take Water

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

Permit To Take Water Number 8444-AKMQCN (PTTW) was issued to the Owner on May 5, 2017. Table A of the PTTW identifies that the holder of the PTTW shall only take water as follows:

* Well PW1: 477 L/min and 687,000 L/day;

*Well PW2: 477 L/min and 687,000 L/day;

*Well Winburk : 364 L/min and 262,080 L/day max hours of taking 12 hours per day.

Note PTTW Section 3.3 identifies that:

Notwithstanding Table A, the maximum total taking from any combination of Well PW1 and/or Well PW2 shall not exceed 687,000 litres per day. This maximum rate of withdrawal shall not occur on more than 120 days per year. On all other days of the year, the maximum total taking from any combination of Well PW1 and/or Well PW2 shall not exceed 535,680 litres per day.

During the inspection review time period, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system was not exceeded.

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.**

MDWL Section 2.0 identifies that continuous flow measurement and recording shall be undertaken for water that flows into the treatment subsystem and from the treatment subsystem to the distribution system. Three (3) raw water flow meters are installed and flow rates and volumes are recorded for each well. Two (2) treated water flow meters are installed and flow rates and volumes are recorded for treated water entering the DWS distribution system and the distribution system dedicated solely to the Amabel-Sauble Community School, which is located immediately west and north of the DWS treatment building.

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

- **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.**

MDWL Schedule C, Table 1 identifies that the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system of the Amabel-Sauble DWS is 687 cubic meters/day. Permit To Take Water Number 8444-AKMQCN (PTTW) was issued to the Owner on May 5, 2017. Table A of the PTTW identifies that the holder of the PTTW shall only take water as follows:

* Well PW1: 477 L/min and 687,000 L/day;

*Well PW2: 477 L/min and 687,000 L/day;

*Well Winburk : 364 L/min and 262,080 L/day max hours of taking 12 hours per day.

Note PTTW Section 3.3 identifies that:

Notwithstanding Table A, the maximum total taking from any combination of Well PW1 and/or Well PW2 shall not exceed 687,000 litres per day. This maximum rate of withdrawal shall not occur on more than 120 days per year. On all other days of the year, the maximum total taking from any combination of Well PW1 and/or Well PW2 shall not exceed 535,680 litres per day.

During the inspection review time period, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system was not exceeded.

- **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.**

Capacity Assessment

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.**

The equipment installed at the Amabel-Sauble DWS plant compares favourably to the equipment listed in the DWWP issued for the Amabel-Sauble DWS. The process flow diagram included in Schedule D of the Permit also appears to be accurate. All equipment described in the Permit appeared to be installed and operating on the date of this inspection. There were no reported alterations undertaken during this inspection review period which required a Form 2 – Record of Modification or Replacement document to be prepared, nor did the Municipality undertake any alterations to the works which required Director Notifications to be made under Condition 2.4, Schedule B of the Permit.

- **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.**

Records reviewed indicate that the Amabel-Sauble DWS was operated to achieve the necessary CT requirements and UV performance criteria for primary disinfection during the inspection cycle. Further details about the CT calculation provided by OCWA dated April 13, 2012 can be found in the components section of the report.

- **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.**

Free available chlorine residual is maintained out of the clearwell and into the distribution system for secondary disinfection purposes to reduce the potential for microbial re-growth within the distribution system, and in accordance with section 1-5 of Schedule 1, O.Reg.170/03. During the inspection review period, the free chlorine residual in the distribution system exceeded the minimum distribution system chlorine residual regulatory limit of 0.05 mg/L.

- **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.**
- **The primary disinfection equipment was equipped with alarms or shut-off mechanisms that satisfied the standards described in Section 1-6 (1) of Schedule 1 of Ontario Regulation 170/03.**

The UV disinfection units are equipped with alarms for UV intensity and lamp status. There is an automatic shut-off associated with the UV intensity alarm. All alarms or lockouts are documented on the SCADA system and in logbooks. When critical alarm values have been triggered well pumps are shut down preventing improperly disinfected water from being directed into the clear well.
- **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.**
- **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.**

Treatment Process Monitoring

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.**
- **Operators were aware of the operational criteria necessary to achieve primary disinfection within the drinking water system.**
- **Continuous monitoring of each filter effluent line was being performed for turbidity.**

For large municipal residential systems that use surface water or GUDI as the source and are required to provide filtration, Reg.170/03, Schedule 7 section 7(3)(2) requires continuous monitoring equipment of each filter effluent line. The Amabel-Sauble DWS has two (2) pressure filtration vessels (one duty and one standby) each rated at 8.2 L/s containing approximately 300 mm deep layer of anthracite and 600 mm deep layer of catalytic media used in conjunction with chlorine oxidation which is used for iron and manganese oxidation and one (1) cartridge filter housing with 3 filters rated at 10 micron or smaller (1 micron filters installed) for pre-treatment of the ultraviolet disinfection system. Continuous monitoring of turbidity is measured via one analyzer located downstream of the cartridge filters and prior to the Trojan Ultra Violet (UV) treatment units.

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

Subsections 7-2 (3) of Schedule 7, O.Reg.170/03 requires the Owner and Operating Authority of a large municipal residential system that provides secondary disinfection to ensure that at least seven distribution system samples are taken each week and tested immediately for free chlorine residual. Where secondary disinfection monitoring is not being done on a daily basis, Subsection 7-2(4) of Schedule 7. Reg.170/03 requires that at least four of the seven required tests be taken on one day of the week at least 48 hours after the last samples were taken the week previous; while the remaining three tests are required to be collected within the same week and at least 48 hours after the initial four. Records provided by OCWA and reviewed during the inspection indicate that the owner complied with these requirements.

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

The operators review the daily SCADA system at least every 72 hours. The operator conducting the review signs and dates the daily SCADA report.

- **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.**

The water treatment plant is equipped with continuous analyzers and alarms for free chlorine and turbidity. The SCADA system low alarm set point for the treated water chlorine analyzer is 0.60 mg/L, which, if triggered, activates the trim chlorination system to increase the chlorine concentration. If the chlorine residual lowers to 0.20 mg/L the SCADA system low low alarm is activated, notifies the operator, and locks out the DWS ensuring the system meets CT requirements. The SCADA system turbidity analyzer high alarm set point downstream of the filters is set at 0.30 NTU, which, if triggered, notifies the operator. The SCADA system turbidity analyzer high high alarm set point is set at 0.60 NTU, which, if triggered, notifies the operator and locks out the well pumps ceasing water production and prevents any adverse conditions.

- **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.**

Treatment Process Monitoring

- **The owner and operating authority ensured that the primary disinfection equipment had a recording device that continuously recorded the performance of the disinfection equipment.**
- **All continuous analysers were calibrated, maintained, and operated, in accordance with the manufacturer's instructions or the regulation.**
- **All UV sensors were checked and calibrated as required.**

Records provided by OCWA identify that duty UV sensors were checked monthly against a reference UV sensor, with the calibration ratio (intensity measured with the duty sensor/intensity measured with the reference UV sensor) documented to be less than or equal to 1.2, in compliance with Schedule E of the MDWL. Reference UV sensors shall be checked against a Master Reference Assembly at a minimum frequency of once every three years or on a more frequent basis depending upon the recommendations of the equipment manufacturer.

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.**
- **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.**

Wastewater from the backwash process for the iron and manganese filter system is discharged to a wastewater holding tank where suspended solids are permitted to settle. MDWL Schedule C, Table 3 identifies that the annual average concentration of Backwash Wastewater Facility Suspended Solids discharged from the holding tank shall not exceed 25 mg/L and the annual average concentration of total chlorine residual shall not exceed 0.02 mg/L. Table 7 identifies that Backwash Wastewater Suspended Solids and total chlorine residual parameters shall be comprised of manual composite samples taken monthly at the point of discharge from the filter backwash tank. During the inspection review period this requirement has been met.

Distribution System

- **The owner had up-to-date documents describing the distribution components as required.**
- **There is a backflow prevention program, policy and/or bylaw in place.**

The Corporation of the Town of South Bruce Peninsula By-Law No. 71-2003 identifies, in part, that all new water connections shall include installation of a backflow prevention device at the point closest to the connection between the municipal and private water service line; and all existing water connections that also have another source of water (sand point, well, etc.) shall have installed a backflow prevention device.
- **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.**
- **The owner had implemented a program for the flushing of watermains as per industry standards.**
- **Records confirmed that disinfectant residuals were routinely checked at the extremities and "dead ends" of the distribution system.**
- **A program was in place for inspecting and exercising valves.**

Distribution System

- **There was a program in place for inspecting and operating hydrants.**
The Corporation of the Town of South Bruce Peninsula By-Law Number 120-2015, being a By-Law to Regulate the Use of Municipally owned Fire Hydrants is in place for inspecting and operating hydrants.
- **There was a by-law or policy in place limiting access to hydrants.**
The Corporation of the Town of South Bruce Peninsula By-Law Number 120-2015, being a By-Law to Regulate the Use of Municipally owned Fire Hydrants is in place for inspecting and operating hydrants.
- **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.**

Operations Manuals

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

Logbooks

- **Logbooks were properly maintained and contained the required information.**
- **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.**
- **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.**
- **Clean-up equipment and materials were in place for the clean up of spills.**
- **Standby power generators were tested under normal load conditions.**

Security

- All storage facilities were completely covered and secure.
- Air vents and overflows associated with reservoirs and elevated storage structures were equipped with screens.
- The owner had provided security measures to protect components of the drinking water system.

Perimeter fencing with a lockable access gate surrounds the pump house and treatment facility which has lockable doors and is equipped with an intruder alarm and signage restricting access to the site. Wells PW1 and PW2 are locked and have perimeter fencing and lockable access gates restricting access to the wells. The Winburk well is locked and signage restricts access to the site. At the time of inspection there was no apparent visual evidence of unauthorized access and/or vandalism.

Consumer Relations

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

Certification and Training

- The overall responsible operator had been designated for each subsystem.
The ORO for the Amabel-Sauble DWS is James Learn, with back-up being provided by Andrew Bellamy.
- Operators-in-charge had been designated for all subsystems which comprised the drinking water system.
- All operators possessed the required certification.
- Only certified operators made adjustments to the treatment equipment.
- An adequately licenced operator 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.
- All microbiological water quality monitoring requirements for distribution samples were being met.
Section 10-2 of Schedule 10, O.Reg. 170/03, requires 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 being taken in each week and tested for Escherichia coli and total coliforms, with at least 25 per cent of the samples required to be taken are tested for general bacteria population expressed as colony counts on a heterotrophic plate count (HPC). This requirement has been met.
- All microbiological water quality monitoring requirements for treated samples were being met.
Section 10-3 of Schedule 10, O.Reg.170/03 requires the Owner and the Operating Authority ensure samples are collected at least once every week from the system's treated water at the point of entry into the distribution system. The samples collected are required to be tested for E.Coli and total coliform, and general bacteria populations expressed as colony counts on a heterotrophic plate count. This requirement has been met.

Water Quality Monitoring

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

Sampling and testing for inorganic parameters has been conducted for the drinking water system in accordance with Schedule 13-2 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in Schedule 23; this requirement has been met. The most recent samples were collected on January 6, 2020 and there were no concerns identified from the results.

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

Sampling and testing for organic parameters has been conducted for the drinking water system in accordance with Schedule 13-4 of Ontario Regulation 170/03. The regulation requires that samples are to be collected every 12 months and tested for each parameter listed in Schedule 24; this requirement has been met. The most recent samples were collected on January 6, 2020 and there were no concerns identified from the results.

- **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 (1) of Schedule 13, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the drinking water system's distribution system that is connected to the drinking water system, that is likely to have an elevated potential for the formation of Haloacetic Acids (HAAs), and tested for HAAs. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period.

The standard for HAAs is expressed as a Running Annual Average (RAA), where the RAA is defined as the average for quarterly HAAs results for a DWS. HAAs will generally form at the beginning of the distribution system. Sampling for the inspection period occurred on April 6 (5.9 ug/L), July 6 (5.3 ug/L) and October 6, 2020 (7.1 ug/L). The inspection review period RAA concentration for HAAs in the Amabel-Sauble DWS is 6.1 ug/L. The Ontario Drinking Water Quality Standard is a RAA concentration of 80 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, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one distribution sample is taken every 3 months from a point in the DWS distribution system, or in plumbing that is connected to the DWS, that is likely to have an elevated potential for the formation of Trihalomethanes (THMs), and tested for THMs. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period.

Sampling for the inspection period occurred on April 6 (28 ug/L), July 6 (27 ug/L), and October 6, 2020 (38 ug/L). The inspection review period RAA concentration for THMs in the Amabel-Sauble DWS is 31 ug/L. The Ontario Drinking Water Quality Standard is a RAA concentration of 100 ug/L.

- **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, O.Reg.170/03 requires the Owner and Operating authority to ensure that at least one water sample is taken every three months and tested for nitrates and nitrites. Section 6-1.1 of Schedule 6, O.Reg.170/03 requires that these samples be taken at least 60 days, and not more than 120 days, after a sample was taken for that purpose in the previous three month period. The Owner complied with these requirements when they conducted the required monitoring on April 6, July 6, and October 6, 2020. There were no concerns identified with the sample results.

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

Water Quality Monitoring

Section 13-8 of Schedule 13, O.Reg.170/03 requires that the Owner and the Operating Authority ensure that a treated water sample is taken every 60 months and is tested for sodium. The last sodium sample occurred on January 6, 2020 with a result of 14.3 mg/L.

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

Section 13-9 of Schedule 13, O.Reg.170/03 requires the Owner and the Operating Authority to ensure that at least one water sample is taken every 60 months and tested for Fluoride. The last Fluoride sample occurred on January 6, 2020 with a result of 1.35 mg/L.

- **The required daily samples were being taken at the end of the fluoridation process.**
- **The owner ensured that water samples were taken at the prescribed location.**
- **All water quality monitoring requirements imposed by the MDWL or DWWP issued under Part V of the SDWA were being met.**

Wastewater from the backwash process for the iron and manganese filter system is discharged to a wastewater holding tank where suspended solids are permitted to settle. MDWL Schedule C, Table 3 identifies that the annual average concentration of Backwash Wastewater Facility Suspended Solids discharged from the holding tank shall not exceed 25 mg/L and the annual average concentration of total chlorine residual shall not exceed 0.02 mg/L. Table 7 identifies that Backwash Wastewater Suspended Solids and total chlorine residual parameters shall be comprised of manual composite samples taken monthly at the point of discharge from the filter backwash tank. During the inspection review period this requirement has been met.

The annual average concentration of Backwash Wastewater Suspended Solids during the inspection time period did not exceed 25 mg/L and the annual average concentration of total chlorine residual did not exceed 0.02 mg/L.

- **All sampling requirements for lead prescribed by schedule 15.1 of O. Reg. 170/03 were being met.**
- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**
- **Turbidity was being tested at least once every month from each well that is supplying water to the system.**
- **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).**

Reporting & Corrective Actions

- **Corrective actions (as per Schedule 17) had been taken to address adverse conditions, including any other steps that were directed by the Medical Officer of Health.**
- **All required notifications of adverse water quality incidents were immediately provided as per O. Reg. 170/03 16-6.**
- **All required written notices of adverse water quality incidents were provided as per O. Reg. 170/03 16-7.**

Reporting & Corrective Actions

- In instances where written notice of issue resolution was required by regulation, the notice was provided as per O. Reg. 170/03 16-9.
- All reporting requirements for lead sampling were complied with as per schedule 15.1-9 of O. Reg. 170/03.
- When the primary disinfection equipment, other than that used for chlorination or chloramination, has failed causing an alarm to sound or an automatic shut-off to occur, a certified operator responded in a timely manner and took appropriate actions.
- 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.
- All changes to the system registration information were provided within ten (10) days of the change.

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:
Robert Graham

Signature: (Provincial Officer)



Reviewed & Approved By:
Mark Smith

Signature: (Supervisor)



Review & Approval Date:

January 19, 2021

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.



**Ministry of the Environment, Conservation and Parks
Drinking Water Inspection Report**

APPENDIX A

INSPECTION SUMMARY RATING RECORD



**Ministry of the Environment, Conservation and Parks
Drinking Water Inspection Report**

APPENDIX B

REFERENCE GUIDE FOR STAKEHOLDERS

Ministry of the Environment - Inspection Summary Rating Record (Reporting Year - 2020-2021)

DWS Name:	AMABEL-SAUBLE DRINKING WATER SYSTEM
DWS Number:	220007917
DWS Owner:	South Bruce Peninsula, The Corporation Of The Town Of
Municipal Location:	The South Bruce Peninsula

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Detailed
Inspection Date: November 26, 2020
Ministry Office: Owen Sound District Office

Maximum Question Rating: 730

Inspection Module	Non-Compliance Rating
Source	0 / 14
Permit To Take Water	0 / 12
Capacity Assessment	0 / 42
Treatment Processes	0 / 110
Process Wastewater	0 / 20
Distribution System	0 / 4
Operations Manuals	0 / 42
Logbooks	0 / 30
Certification and Training	0 / 49
Water Quality Monitoring	0 / 152
Reporting & Corrective Actions	0 / 96
Treatment Process Monitoring	0 / 159
TOTAL	0 / 730

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 - 2020-2021)

DWS Name: AMABEL-SAUBLE DRINKING WATER SYSTEM
DWS Number: 220007917
DWS Owner: South Bruce Peninsula, The Corporation Of The Town Of
Municipal Location: The South Bruce Peninsula

Regulation: O.REG 170/03
Category: Large Municipal Residential System
Type Of Inspection: Detailed
Inspection Date: November 26, 2020
Ministry Office: Owen Sound District Office

Maximum Question Rating: 730

Inspection Risk Rating | 0.00%

FINAL INSPECTION RATING: | 100.00%

Key Reference and Guidance Material for Municipal Residential Drinking Water Systems

Many useful materials are available to help you operate your drinking water system. Below is a list of key materials owners and operators of municipal residential drinking water systems frequently use.

To access these materials online click on their titles in the table below or use your web browser to search for their titles. Contact the Ministry if you need assistance or have questions at 1-866-793-2588 or waterforms@ontario.ca.

For more information on Ontario's drinking water visit www.ontario.ca/drinkingwater



PUBLICATION TITLE	PUBLICATION NUMBER
FORMS: Drinking Water System Profile Information Laboratory Services Notification Adverse Test Result Notification	012-2149E 012-2148E 012-4444E
Taking Care of Your Drinking Water: A Guide for Members of Municipal Councils	Website
Procedure for Disinfection of Drinking Water in Ontario	Website
Strategies for Minimizing the Disinfection Products Trihalomethanes and Haloacetic Acids	Website
Filtration Processes Technical Bulletin	Website
Ultraviolet Disinfection Technical Bulletin	Website
Guide for Applying for Drinking Water Works Permit Amendments, & License Amendments	Website
Certification Guide for Operators and Water Quality Analysts	Website
Guide to Drinking Water Operator Training Requirements	9802E
Community Sampling and Testing for Lead: Standard and Reduced Sampling and Eligibility for Exemption	Website
Drinking Water System Contact List	7128E01
Ontario's Drinking Water Quality Management Standard - Pocket Guide	Website
Watermain Disinfection Procedure	Website
List of Licensed Laboratories	Website

Principaux guides et documents de référence sur les réseaux résidentiels municipaux d'eau potable

De nombreux documents utiles peuvent vous aider à exploiter votre réseau d'eau potable. Vous trouverez ci-après une liste de documents que les propriétaires et exploitants de réseaux résidentiels municipaux d'eau potable utilisent fréquemment. Pour accéder à ces documents en ligne, cliquez sur leur titre dans le tableau ci-dessous ou faites une recherche à l'aide de votre navigateur Web. Communiquez avec le ministère au 1-866-793-2588, ou encore à waterforms@ontario.ca si vous avez des questions ou besoin d'aide.



Pour plus de renseignements sur l'eau potable en Ontario, consultez le site www.ontario.ca/eaupotable

TITRE DE LA PUBLICATION	NUMÉRO DE PUBLICATION
Renseignements sur le profil du réseau d'eau potable	012-2149F
Avis de demande de services de laboratoire	012-2148F
Avis de résultats d'analyse insatisfaisants et de règlement des problèmes	012-4444F
Prendre soin de votre eau potable - Un guide destiné aux membres des conseils municipaux	Site Web
Marche à suivre pour désinfecter l'eau potable en Ontario	Site Web
Stratégies pour minimiser les trihalométhanes et les acides haloacétiques de sous-produits de désinfection	Site Web
Filtration Processes Technical Bulletin (en anglais seulement)	Site Web
Ultraviolet Disinfection Technical Bulletin (en anglais seulement)	Site Web
Guide de présentation d'une demande de modification du permis d'aménagement de station de production d'eau potable	Site Web
Guide sur l'accréditation des exploitants de réseaux d'eau potable et des analystes de la qualité de l'eau de réseaux d'eau potable	Site Web
Guide sur les exigences relatives à la formation des exploitants de réseaux d'eau potable	9802F
Échantillonnage et analyse du plomb dans les collectivités : échantillonnage normalisé ou réduit et admissibilité à l'exemption	Site Web
Liste des personnes-ressources du réseau d'eau potable	Site Web
L'eau potable en Ontario - Norme de gestion de la qualité - Guide de poche	Site Web
Procédure de désinfection des conduites principales	Site Web
Laboratoires autorisés	Site Web