

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 28, 2020

Sent by Email: brad.mcroberts@southbrucepeninsula.com

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

Attention: Brad McRoberts, CAO

Dear Mr. McRoberts:

Re: 2019/2020 Huron Woods Drinking Water System Inspection Report Number 1-KVMWF

Municipal Drinking Water Licence Number 094-103, Issue Number 3

Drinking Water Works Permit Number 094-203, Issue Number 3

The enclosed report documents findings of the inspection that was performed on January 14, 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.

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,

A handwritten signature in black ink, appearing to read 'Bob Graham', with a stylized flourish at the end.

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
Megan Edney, Process Compliance Technician, OCWA
Mark Smith, Water Compliance Supervisor, MECP
Dr. Ian Arra, Medical Officer of Health, GBHU

c: File SI-BR-SBP -FD-540 (2019)



Ministry of the Environment, Conservation and Parks

**HURON WOODS DRINKING WATER SYSTEM
Inspection Report**

Site Number:	220007775
Inspection Number:	1-KVMWF
Date of Inspection:	Jan 14, 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:	Operating Authority	Name:	Megan Edney
Phone:	(519) 534-1600	Fax:	
Email:	medney2@ocwa.com		
Title:	Process Compliance Technician (OCWA).		

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:	Brad McRoberts
Phone:	(519) 534-1400 x122	Fax:	(519) 534-4976
Email:	tsbpcao@bmts.com		
Title:	Chief Administrative Officer		

INSPECTION DETAILS:

Site Name:	HURON WOODS DRINKING WATER SYSTEM
Site Address:	86 BIRCH Street 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:	Ministry of the Environment Owen Sound Area Office
Category:	Large Municipal Residential
Site Number:	220007775
Inspection Type:	Announced
Inspection Number:	1-KVMWF
Date of Inspection:	Jan 14, 2020
Date of Previous Inspection:	Dec 05, 2019

COMPONENTS DESCRIPTION

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

Site (Name): Well 6

Type: Source **Sub Type:** GUDI

Comments:

Well 6 is an overburden well drilled to a depth of 16.6 metres. The well has a 250 mm diameter casing and is equipped with a submersible well pump rated at 5.3 L/s at a TDH (total dynamic head) of 15 metres. The water discharges to a 50 mm diameter header into the pumphouse.

Well 6 (identified as Well 4 on PTTW 6262-86RPTX) is the primary production well supplying the Huron Woods drinking water system.

Site (Name): Well 1
Type: Source **Sub Type:** GUDI

Comments:

NOTE Well#1 has been removed from the PTTW February 2016.

Well 1 is a bedrock well drilled to a depth of 123.4 metres. The well has a 125 mm diameter casing and is equipped with a submersible deep well pump rated at 1.21 L/s at a TDH of 83.3 metres. The water discharges to a 50 mm header into the pumphouse. Well 1 is maintained as a backup source.

Site (Name): Well 2
Type: Source **Sub Type:** GUDI

Comments:

NOTE Well#2 has been removed from the PTTW February 2016

Well 2 is a bedrock well drilled to a depth of 45.1 metres. The well has a 125 mm diameter casing and is equipped with a submersible well pump rated at 0.6 L/s at a TDH of 74.2 metres. The water flows to a 50 mm diameter raw water header discharging to the pumphouse. Well 2 is maintained as a backup source.

Site (Name): Well 3
Type: Source **Sub Type:** GUDI

Comments:

NOTE Well#3 has been removed from the PTTW February 2016.

Well 3 is a bedrock well drilled to a depth of 109.7 metres. The well has a 125 mm diameter casing and is equipped with a submersible pump rated at 1.51 L/s at a TDH of 105 metres. The well discharges to a 50 mm diameter header into the pumphouse.

Well 3 is maintained as a backup source.

Site (Name): Test Well 2 (TW2 or PW1)
Type: Source **Sub Type:** GUDI

Comments:

The Engineer's Report indicates that this well is not connected to the drinking water system, however there is a raw water header that extends to the pumphouse. The final connection has not been made and the report indicates that the well is not equipped with pumps.

During an expansion in 1999 to include the Walker Estates subdivision this well was made available. The well can only be utilized should the Huron Woods water system exceed its rated capacity.

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

Comments:

Treatment for the Huron Woods drinking water system includes: iron and manganese removal (sodium hypochlorite with greensand filtration), cartridge filtration (5 micron), UV disinfection and chlorination (sodium hypochlorite).

The CT calculation was provided by the Operating Authority. According to the Procedure for Disinfection of Drinking Water in Ontario for a 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 = 232m³
 Auto shutdown of Highlift pump = 60%
 Baffle ratio = 0.1
 Flow rate = 5.3 L/sec. (0.318 m³/min)
 Effective Contact time = (232 x 0.6 x 0.1) / 0.318
 Effective Contact Time = 13.92 / 0.318 = 43.7 min
 CT (required) = Disinfection Residual Concentration (mg/L) x Effective contact time (min)
 Thus 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 / 43.7 = 0.183

A minimum Free Chlorine Concentration of 0.19 mg/L is required to meet primary disinfection with a minimum clearwell volume of 13.92 m³ (60%).

Site (Name): Distribution System
Type: Other **Sub Type:** Other
Comments:

Treated water is directed to the distribution system via a 150 mm diameter discharge header which connects to the 75 mm diameter and 100 mm diameter watermains along Birch Street. The water distribution system serves one hundred service connections along Birch Street, Frederick Lane, Maple Port Crescent, Graham Crescent and Walker Way. The water system is approved to service one hundred and twenty-two connections.

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 related 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 report is based on a "focused" inspection of the system. Although the inspection involved fewer activities than those normally undertaken in a detailed inspection, it contained critical elements required to assess key compliance issues. This system was chosen for a focused inspection because the system's performance met the ministry's criteria, most importantly that there were no deficiencies as identified in O.Reg. 172/03 over the past 3 years. The undertaking of a focused inspection at this drinking water system does not ensure that a similar type of inspection will be conducted at any point in the future.

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 January 14, 2020, Ministry of the Environment, Conservation and Parks (MECP) Provincial Officer Bob Graham conducted an announced focused inspection of the Huron Woods Drinking Water System (DWS). The Huron Woods 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) and OCWA Operator Daniel Caesar. During the inspection review period, from December 6, 2018 to the date of inspection, January 14, 2020, there were no Adverse Water Quality Incidents (AWQIs) reported to the MECP Spills Action Centre.

The Huron Woods DWS operates under Municipal Drinking Water Licence Number 094-103, Issue Number 3 (MDWL) and Drinking Water Works Permit Number 094-203, Issue Number 3 (DWWP), dated March 14, 2018.

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 Huron Woods DWS consists of four (4) drilled wells 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 1, 2 and 3 were removed as sources from the PTTW # 7701-A6SPYQ in February 2016 and are used for monitoring purposes only. Well 6 is the sole production well. Land use(s) immediately adjacent to the drilled wells are predominantly residential and as such the Huron Woods DWS wells are located in close proximity to septic systems servicing the residential development. 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 Huron Woods DWS area.

- **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.**

Source

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 Huron Woods DWS. Well inspection and maintenance procedures are included in Appendix B of the Operations and Maintenance Manual.

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.**

The DWS has three water meters:

- One raw water meter for the raw water header;
- One total raw water meter located after the common header from all four production wells (currently inactive given Wells 1, 2 and 3 are not in use); and,
- One treated water meter prior to treated water exiting the pumphouse.

Flow meters were calibrated on June 10, 2019 by IndusControl Incorporated.

- **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 Huron Woods DWS is 743 cubic meters per day. Permit To Take Water (PTTW 7701-A6SPYQ) was issued to the Owner on February 12, 2016. Table A of the PTTW identifies that the holder of the PTTW shall only take water from Well 4 at a maximum rate of 318 L/minute and 457,632 L/day (It is noted that Well 6 is identified as Well 4 in the PTTW).

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.

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.**

Schedule A of the Huron Woods DWWP (Drinking Water System Description) identifies that the sodium hypochlorite oxidation/disinfection system for the DWS shall consist of six (6) metering pumps, two (2) of which (a duty and standby) are dedicated to post chlorination with an injection point at the high lift header. At the time of inspection, only one (1) post chlorination metering duty pump was installed. The standby metering pump, although available "on the shelf" on site, was not installed. In consultation with an MECP Senior Water Engineer, the "on the shelf" standby metering pump is deemed suitable at this time, however corrective wording in the next DWWP renewal will be required to accurately reflect the equipment installed in accordance with Schedule A of the DWWP.

- **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 Huron Woods 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 October 24, 2011 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

Treatment Processes

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 lowest free chlorine residual in the distribution system was 1.01 mg/L, exceeding 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.

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.**

- **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 water system has two (2) Ferrosand Filter system units with an iron-oxidizing sodium hypochlorite feed system with injection point located prior to the Ferrosand Filter units. One (1) cartridge filter housing, pretreatment for the ultraviolet disinfection system, with 5 micron cartridge filters. Continuous monitoring of turbidity is measured via one analyzer located downstream of the cartridge filters and UV units.

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

Subsection 7-2 (3) and (4) of schedule 7, O.Reg.170/03 identifies 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 and are tested immediately for free chlorine residual if the system provides chlorination. Records provided during the inspection indicate that the owner complied with these requirements, testing free chlorine residual for secondary disinfection monitoring purposes 2 days each week and at least 48 hours apart.

- **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.

- **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 0.50 mg/L the SCADA system low low alarm is activated which 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

Treatment Process Monitoring

NTU, which, if triggered, notifies the operator. The SCADA system turbidity analyzer high high alarm set point is set at 0.70 NTU, which, if triggered, locks out the filters 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.**
- **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.**

Routine analyzer maintenance, accuracy verification checks and calibrations are conducted by the operator(s) which are recorded in facility log books and daily SCADA reports. Annual analyzer calibrations were performed by HACH on May 13, 2019.

- **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.

Operations 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

- **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.**

Security

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

The pump house and treatment facility is fenced and has lockable doors equipped with an intruder alarm. The drilled well was 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.

Certification and Training

- **The overall responsible operator had been designated for each subsystem.**

The ORO for the Foreman DWS is James Learn, with back-up being provided by Andrew Bellamy and Greg McCorquodale.

Certification and Training

- **Operators-in-charge had been designated for all subsystems which comprised the drinking water system.**

- **All operators possessed the required certification.**

During the inspection review period OCWA operators working in the Huron Woods DWS included:

ORO James Learn: Class 3 Water Treatment Subsystem, Class 2 Water Distribution Subsystem and Water Quality Analyst Certificate.

Back-up ORO Greg McCorquodale: Class 3 Water Treatment Subsystem, Class 2 Water Distribution and Supply Subsystem.

Back-up ORO Andrew Bellamy: Class 4 Water Treatment Subsystem, Class 3 Water Distribution and Supply Subsystem.

Benjamin Madill: Class 2 Water Treatment Subsystem, Class 2 Water Distribution and Supply Subsystem.

Daniel P. Caesar: Class 1 Water Treatment Subsystem, Class 2 Water Distribution and Supply Subsystem.

Justin D. Porter: Class 1 Water Treatment Subsystem Class 1 Water Distribution and Supply Subsystem.

- **Only certified operators made adjustments to the treatment equipment.**

Water Quality Monitoring

- **All microbiological water quality monitoring requirements for distribution samples were being met.**

For LMR systems 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.**

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:

- (a) *Escherichia coli*;
- (b) total coliforms; and,
- (c) HPC.

This requirement has been met.

- **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 60 months and tested for each parameter listed in Schedule 23; this requirement has been met when the most recent samples were collected on January 8, 2019. There were no concerns identified from the results.

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

Water Quality Monitoring

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 60 months and tested for each parameter listed in Schedule 24; this requirement has been met when samples were collected on January 8, 2019. 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 came into effect on January 1, 2020. It will be 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 January 8, 2019 (53.3 ug/L), April 1, 2019 (60.8 ug/L), July 8, 2019 (58.5 ug/L), October 7, 2019 (63.2 ug/L) and January 6, 2020 (57.4 ug/L). The inspection review period RAA concentration for HAAs in the Huron Woods DWS is 58.64 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 January 8, 2019 (51.0 ug/L), April 1, 2019 (57 ug/L), July 8, 2019 (57 ug/L), October 7, 2019 (62 ug/L) and January 6, 2020 (55 ug/L). The inspection review period RAA concentration for THMs in the Huron Woods DWS is 56.4 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 January 8, 2019, April 1, 2019, July 8, 2019 and October 7, 2019 and January 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.**

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. Records provided by the Owner and reviewed during the inspection indicate that the Owner conducted sampling for sodium on January 9, 2017 with a result of 7.51 mg/L.

Water Quality Monitoring

- **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 Owner last conducted Fluoride sampling on January 9, 2017, and achieved a result of 0.17 mg/l.

- **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 .

Table 7 identifies that Backwash Wastewater Suspended Solids shall be comprised of manual composite samples (reference MDWL Section 4.3 for details) taken quarterly 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 was 3.6 mg/L.

- **Records confirmed that chlorine residual tests were being conducted at the same time and at the same location that microbiological samples were obtained.**

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

- **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.**
- **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.**

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 29, 2020

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 - Inspection Summary Rating Record (Reporting Year - 2019-2020)

DWS Name:	HURON WOODS DRINKING WATER SYSTEM
DWS Number:	220007775
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: Focused
Inspection Date: January 14, 2020
Ministry Office: Owen Sound District Office

Maximum Question Rating: 531

Inspection Module	Non-Compliance Rating
Source	0 / 14
Capacity Assessment	0 / 30
Treatment Processes	0 / 98
Operations Manuals	0 / 28
Logbooks	0 / 14
Certification and Training	0 / 42
Water Quality Monitoring	0 / 112
Reporting & Corrective Actions	0 / 42
Treatment Process Monitoring	0 / 151
TOTAL	0 / 531

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: HURON WOODS DRINKING WATER SYSTEM
DWS Number: 220007775
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: Focused
Inspection Date: January 14, 2020
Ministry Office: Owen Sound District Office

Maximum Question Rating: 531

Inspection Risk Rating | 0.00%

FINAL INSPECTION RATING: | 100.00%



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

APPENDIX B

REFERENCE GUIDE FOR STAKEHOLDERS

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