Ontario Clean Water Agency
Agence Ontarienne Des Eaux

HURON WOODS
DRINKING WATER SYSTEM

Large Municipal Residential

SCHEDULE 22
SUMMARY REPORT

For the period of
JANUARY 1, 2018 TO DECEMBER 31, 2018

Prepared by the Ontario Clean Water Agency
For The Corporation of the Town of South Bruce Peninsula

Summary

This report is a summary of water quality and quantity information submitted in accordance with Schedule 22 of Ontario's Drinking Water System Regulation for the reporting period of January 1, 2018 to December 31, 2018 for the Huron Woods Drinking Water System located in the Town of South Bruce Peninsula. The summary includes the following information:

- Any requirements of the Act and Regulation, Orders or System Approval(s) that the system failed to meet during the reporting period and the measures taken to correct each failure.
- A summary of the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows.
- A comparison of the average and monthly maximum daily flows to the approved capacity specified in the System Approval.

Issues of Non-Compliance

An MECP Drinking Water System Inspection was performed on December 5, 2018. On December 21, 2018 the inspection report was issued with a rating of 100%.

The following is a summary of the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water license, and any orders applicable to the system that were not met at any time during the period covered by the report; as well as the duration of the failure and the measures that were taken to correct the failure:

* There were no non-compliances during the reporting period.

Refer to the Section 11 Annual Report for a summary of any Adverse Water Quality Incident(s) which occurred during the reporting period.

Assessment of Flowrates and Quantity of Water Supplied

The following tables summarize the quantities (Table 1) and flow rates (Table 2) of the water supplied during the period covered by the report, including monthly average and maximum daily flows as well as a comparison of the summary to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water license.

As per Municipal Drinking Water License (MDWL) 094-103 (Issue Number: 3, expires March 17, 2020), the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed a rated capacity of 743 m^3/day. There is no maximum allowable limit listed in the MDWL for the flowrate of water that flows into a treatment subsystem, however, raw water flowrate has been included in this report (Table 3).

Table 1. Treated Water Monthly Average and Maximum Daily Flows and Comparison to Rated Capacity for 2018

	Treated Water Flow			
2018	**Average Flow (m^3/day)**	**Percent of Rated Capacity**	**Maximum Flow (m^3/day)**	**Percent of Rated Capacity**
January	36.3	4.9%	44.3	6.0%
February	38.1	5.1%	52.8	7.1%
March	33.1	4.5%	51.0	6.9%
April	34.1	4.6%	58.4	7.9%
May	38.7	5.2%	49.6	6.7%
June	45.0	6.1%	68.7	9.3%
July	59.5	8.0%	87.3	11.8%
August	48.6	6.5%	69.0	9.3%
September	37.2	5.0%	51.7	7.0%
October	33.2	4.5%	47.3	6.4%
November	29.3	3.9%	37.7	5.1%
December	28.8	3.9%	37.8	5.1%

Table 2. Treated Water Monthly Average and Maximum Flowrates for 2018

2018	**Treated Water**	
	Average Flowrate (l/s)	**Maximum Flowrate (l/s)**
January	0.474	2.600
February	0.479	2.900
March	0.452	9.300
April	0.467	2.700
May	0.523	3.100
June	0.597	3.600
July	0.745	3.800
August	0.629	4.000
September	0.507	3.200
October	0.452	2.600
November	0.418	3.800
December	0.419	3.700

Table 3. Raw Water Monthly Average and Maximum Flowrates for 2018

2018	**Raw Water**	
	Average Flowrate (l/s)	**Maximum Flowrate (l/s)**
January	4.328	5.2
February	4.678	5.1
March	4.624	5.1
April	4.717	5.1
May	4.700	5.1
June	4.630	5.1
July	4.677	5.2
August	4.519	5.3
September	3.890	5.3
October	3.794	5.3
November	3.603	5.3
December	3.603	5.2

Ontario Clean Water Agency
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HURON WOODS
DRINKING WATER SYSTEM

Small Municipal Residential

SECTION 11
ANNUAL REPORT

For the period of
JANUARY 1, 2018 TO DECEMBER 31, 2018

Prepared by the Ontario Clean Water Agency
For The Town of South Bruce Peninsula

Drinking Water System Number:	220007775
Drinking Water System Name:	Huron Woods Drinking Water System
Drinking Water System Owner:	Town of South Bruce Peninsula
Drinking Water System Category:	Small Municipal Residential *(January 1, 2018 – November 12, 2018)* transitioned to Large Municipal Residential *(November 13, 2018 - onwards)*
Reporting Period:	January 1, 2018 to December 31, 2018

Does the Drinking Water System serve more than 10,000 people?

No.

Is your annual report available to the public at no charge on a web site on the Internet?

Yes.

Location where the Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection:

Town of South Bruce Peninsula
315 George Street
Wiarton, Ontario
N0H 2T0
519-534-1400

Drinking-Water Systems (if any), which receive all of their drinking water from your system:

n/a.

Did you provide a copy of the annual report to all Drinking-Water System owners that are connected to you and to whom you provide all of its drinking water?

n/a.

Indicate how system users are notified that the annual report is available, and is free of charge:

X	Public access/notice via the web
X	Public access/notice via Government Office
	Public access/notice via a newspaper
	Public access/notice via Public Request
	Public access/notice via a Public Library
	Public access/notice via other method: _____

Description of Drinking Water System:

The Huron Woods Drinking Water System is a Class II Water Treatment and Class I Water Distribution System.

The Huron Woods Drinking Water System is supplied by a deep drilled overburden GUDI well (Well 6). The well pumphouse houses the treatment and control facilities which include:

- Sodium hypochlorite oxidation/disinfection system (iron oxidation prior to filtration, primary disinfection and post chlorination)
- Iron and Managenese Removal (via greensand filters)
- Cartridge filtration (as pretreatment for the UV disinfection system)
- Ultra Violet Disinfection System
- Residuals Management (backwash wastewater holding tank)
- Reservoir/clearwell (for storage and for achieving the required contact time)
- Hydropneumatic pressure tanks (to maintain pressure)
- SCADA system (to control process equipment functions within the plant)
- Diesel generator set (back-up power supply)

List of water treatment chemicals used during the reporting period:

- Sodium Hypochlorite 12%

Significant expenses were incurred to:

X	Install required equipment
X	Repair required equipment
X	Replace required equipment
	No significant expenses were incurred

- **Description of expenses:**

- Replaced Proximity sensor UV #1
- Installed cellular internet service, remote access to plant and data logger.
- Amabel-Sauble options evaluation study

Details on the notices submitted in accordance with subsection 18 (1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 and reported to Spills Action Centre:

Date of Incident	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
n/a	n/a	n/a	n/a	n/a	n/a

Table 1. Microbiological testing done under Schedule 10, 11 or 12 of Regulation 170/03 during this reporting period.

Location	Number of Samples	Range of E.coli Results		Range of Total Coliforms Results		Number of HPC Samples	Range of HPC Samples	
		Minimum	Maximum	Minimum	Maximum		Minimum	Maximum
Well 6 (RW6)	18	0	0	0	0	n/a	n/a	n/a
Treated (TW)	7	0	0	0	0	7	0	0
Distribution (DW)	59	0	0	0	0	52	0	2

NOTE: The Huron Woods DWS transitioned form Small to Large Municipal Residential System on November 13th 2018.
Under O.Reg 170/03, the owners of a Small Municipal Residential Systems (SMR) and the operating authority for the system shall ensure that raw water samples are taken once every month and a distribution sample taken once every week.
The owners of a Large Municipal Residential Systems (LMR) and the operating authority for the system shall ensure that raw water, treated water and distribution water (at least eight distribution samples per month depending on population size) samples are taken once every week.

Table 2. Operational testing done under Schedule 7, 8 or 9 during the period covered by this Annual Report.

	Number of Grab Samples	Range of Results	
		Minimum	Maximum
Turbidity, On-Line (NTU) - Filter	8760	0	0.49
Free Chlorine Residual, On-Line (mg/L) – TW (Treated Water)	8760	1.10	1.70
Free Chlorine Residual, In-House (mg/L) – DW (Distribution Water)	146	0.93	1.48

NOTE: Record the unit of measure if it is not milligrams per litre.
NOTE: For continuous monitors use 8760 as the number of samples
NOTE: The Huron Woods DWS transitioned form Small to Large Municipal Residential System on November 13th 2018.
Under O.Reg 170/03, the owners of a Small Municipal Residential Systems (SMR) and the operating authority for the system shall ensure that two (2) distribution water free chlorine residual samples are taken twice every week.
The owners of a Large Municipal Residential Systems (LMR) and the operating authority for the system shall ensure that seven (7) distribution water free chlorine residual samples are taken every week. Unless at least one sample is taken on each day of the week, 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 and at least three of the samples must be taken on a second day of the week, at least 48 hours after the last sample was taken on the day previously referred to.

Table 3. Summary of additional testing and sampling carried out in accordance with the requirement of an approval, order or other legal instrument.

Date of Order of MDWL	Parameter	Date Sampled	Result	MDWL Allowable Annual Average Concentration
March 19, 2015 094-103 (Issue 2)	Total Suspended Solids (Filter backwash - composite)	2018 (Quarterly)	2.5 mg/L	25 mg/L

Table 4. Summary of Inorganic parameters tested during this reporting period or most recent sample results

Parameter	Sample Date (yyyy/mm/dd)	Sample Result	Exceedance
Antimony: Sb (µg/L) - TW	2016/01/10	<MDL 0.02	No
Arsenic: As (µg/L) - TW	2016/01/10	<MDL 0.2	No
Barium: Ba (µg/L) - TW	2016/01/10	19.2	No
Boron: B (µg/L) - TW	2016/01/10	15.5	No
Cadmium: Cd (µg/L) - TW	2016/01/10	0.003	No
Chromium: Cr (µg/L) - TW	2016/01/10	<MDL 0.03	No
Mercury: Hg (µg/L) - TW	2016/01/10	<MDL 0.01	No
Selenium: Se (µg/L) - TW	2016/01/10	<MDL 0.04	No
Uranium: U (µg/L) - TW	2016/01/10	0.031	No
Fluoride (mg/L) - TW	2017/01/09	0.17	No
Nitrite (mg/L) - TW	2018/01/08	<MDL 0.003	No
Nitrite (mg/L) - TW	2018/04/09	<MDL 0.003	No
Nitrite (mg/L) - TW	2018/07/09	<MDL 0.003	No
Nitrite (mg/L) - TW	2018/10/01	<MDL 0.003	No
Nitrate (mg/L) - TW	2018/01/08	0.008	No
Nitrate (mg/L) - TW	2018/04/09	0.008	No
Nitrate (mg/L) - TW	2018/07/09	0.006	No
Nitrate (mg/L) - TW	2018/10/01	0.006	No
Sodium: Na (mg/L) - TW	2017/01/09	7.51	No

NOTE: There is no "MAC" for Sodium. The aesthetic objective for sodium in drinking water is 200 mg/L. The local Medical Officer of Health should be notified when the sodium concentration exceeds 20 mg/L so that this information may be communicated to local physicians for their use with patients on sodium restricted diets.

NOTE: Schedule 23 samples are to be taken every 60 months for SMR, and annually for LMR. The most recent sampling session was in January 2016 for Schedule 23 and the next sampling session is scheduled for January 2019. Sodium and Fluoride samples are to be collected every 60 months. The most recent sampling session for Sodium was in January 2017, the next sampling session is scheduled for January 2022. The most recent sampling session for Fluoride was in January 2017, the next sampling session is scheduled for January 2022.

Table 5. Summary of lead testing under Schedule 15.1 during this reporting period.

Location Type	Number of Samples	Range of Lead Results		Number of Exceedances
		Minimum	Maximum	
Plumbing	n/a	n/a	n/a	n/a
Distribution (µg/L)	4	0.15	0.90	0

NOTE: This system qualifies for the plumbing exemption as per Ontario Regulation 170/03 Schedule 15.1-5 (9) (10). Two (2) distribution lead samples are taken during each sampling periods (i.e. 4 distribution samples for the year). Distribution lead sampling occurs every 36 months. The most recent distribution lead sampling occurred in 2018. The next round of lead sampling is scheduled for 2021.

Table 6. Summary of Organic parameters sampled during this reporting period or most recent sample results.

Parameter	Sample Date	Result Value	Exceedance
Alachlor (µg/L) - TW	2016/01/10	<MDL 0.02	No
Atrazine + N-dealkylated metabolites (µg/L) - TW	2016/01/10	<MDL 0.01	No
Azinphos-methyl (µg/L) - TW	2016/01/10	<MDL 0.05	No
Benzene (µg/L) - TW	2016/01/10	<MDL 0.32	No
Benzo(a)pyrene (µg/L) - TW	2016/01/10	<MDL 0.004	No
Bromoxynil (µg/L) - TW	2016/01/10	<MDL 0.33	No
Carbaryl (µg/L) - TW	2016/01/10	<MDL 0.05	No
Carbofuran (µg/L) - TW	2016/01/10	<MDL 0.01	No
Carbon Tetrachloride (µg/L) - TW	2016/01/10	<MDL 0.16	No
Chlorpyrifos (µg/L) - TW	2016/01/10	<MDL 0.02	No
Diazinon (µg/L) - TW	2016/01/10	<MDL 0.02	No
Dicamba (µg/L) - TW	2016/01/10	<MDL 0.2	No
1,2-Dichlorobenzene (µg/L) - TW	2016/01/10	<MDL 0.41	No
1,4-Dichlorobenzene (µg/L) - TW	2016/01/10	<MDL 0.36	No
1,2-Dichloroethane (µg/L) - TW	2016/01/10	<MDL 0.35	No
1,1-Dichloroethylene (µg/L) - TW	2016/01/10	<MDL 0.33	No
Dichloromethane (Methylene Chloride) (µg/L) - TW	2016/01/10	<MDL 0.35	No
2,4-Dichlorophenol (µg/L) - TW	2016/01/10	<MDL 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (µg/L) - TW	2016/01/10	<MDL 0.19	No
Diclofop-methyl (µg/L) - TW	2016/01/10	<MDL 0.4	No
Dimethoate (µg/L) - TW	2016/01/10	<MDL 0.03	No
Diquat (µg/L) - TW	2016/01/10	<MDL 1.0	No
Diuron (µg/L) - TW	2016/01/10	<MDL 0.03	No
Glyphosate (µg/L) - TW	2016/01/10	<MDL 1.0	No
Malathion (µg/L) - TW	2016/01/10	<MDL 0.02	No
Metolachlor (µg/L) - TW	2016/01/10	<MDL 0.01	No
Metribuzin (µg/L) - TW	2016/01/10	<MDL 0.02	No
Monochlorobenzene (Chlorobenzene) (µg/L) - TW	2016/01/10	<MDL 0.3	No
Paraquat (µg/L) - TW	2016/01/10	<MDL 1.0	No
PCB (µg/L) - TW	2016/01/10	<MDL 0.04	No
Pentachlorophenol (µg/L) - TW	2016/01/10	<MDL 0.15	No
Phorate (µg/L) - TW	2016/01/10	<MDL 0.01	No
Picloram (µg/L) - TW	2016/01/10	<MDL 1.0	No
Prometryne (µg/L) - TW	2016/01/10	<MDL 0.03	No
Simazine (µg/L) - TW	2016/01/10	<MDL 0.01	No
Terbufos (µg/L) - TW	2016/01/10	<MDL 0.01	No
Tetrachloroethylene (µg/L) - TW	2016/01/10	<MDL 0.35	No
2,3,4,6-Tetrachlorophenol (µg/L) - TW	2016/01/10	<MDL 0.2	No
Triallate (µg/L) - TW	2016/01/10	<MDL 0.01	No
Trichloroethylene (µg/L) - TW	2016/01/10	<MDL 0.44	No
2,4,6-Trichlorophenol (µg/L) - TW	2016/01/10	<MDL 0.25	No
Trifluralin (µg/L) - TW	2016/01/10	<MDL 0.02	No
Vinyl Chloride (µg/L) - TW	2016/01/10	<MDL 0.17	No
Trihalomethane: Total (µg/L) Annual Average - DW	2018 (Quarterly)	51.0	No
HAA Total (µg/L) Annual Average - DW	2018 (Quarterly)	59.4	n/a

NOTE: Schedule 24 samples are to be taken every 60 months for a SMR and annually for a LMR. The most recent sampling session was in January 2016 for Schedule 24 and the next sampling session is scheduled for January 2019.

Table 7. List any Inorganic or Organic parameter(s) that exceeded half the standard prescribed in Schedule 2 of Ontario Drinking Water Quality Standards.

Parameter	Result Value	Unit of Measure	Date of Sample
Trihalomethane (µg/L) - DW	50.00	µg/L	2018/01/08
Trihalomethane (µg/L) - DW	51.00	µg/L	2018/04/09
Trihalomethane (µg/L) - DW	51.00	µg/L	2018/07/09
Trihalomethane (µg/L) - DW	52.00	µg/L	2018/10/01

NOTE: This is required only if DWS category is large municipal residential, small municipal residential, large municipal non-residential, small municipal non-residential, large non municipal non-residential)