



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

AMABEL-SAUBLE WATER TREATMENT

Large Municipal Residential Drinking Water System

SCHEDULE 22 SUMMARY REPORT

**For the period of
JANUARY 1, 2015 TO DECEMBER 31, 2015**

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, 2015 to December 31, 2015 for the Amabel-Sauble 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

The following lists the requirements of the Act, Regulations, System Approval(s) and any Order that the system failed to meet during the reporting period and the measures taken to correct each failure:

- No actions are required.

An MOECC Drinking Water System Inspection was performed on June 9, 2015. On July 23, 2015 the report for this inspection was issued, the Amabel-Sauble Drinking Water System received an inspection rating of 100%, and no non-compliances were issued.

Assessment of Flowrates and Quantity of Water Supplied

The quantities and flowrates of water supplied during the reporting period covered by this report, including monthly average and maximum flowrates, flows and a comparison to the rated capacity can be found in Table 1. The rated capacity for the Amabel-Sauble WTP is 687 m³/day as per the Municipal Drinking Water License. Average and maximum flows and flowrates for treated water are shown in Table 1 and were used to compare to the rated capacity of the plant.

Table 1. Average and Maximum Flowrate, Flow and Comparison to Rated Capacity by Month for 2015 for Treated Water

2015	Treated Water Flow				Treated Water Flowrate	
	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity	Average Flowrate (l/s)	Maximum Flowrate (l/s)
January	93.29	14%	105.79	15%	1.08	53.95
February	115.16	17%	223.82	33%	1.33	9.17
March	102.29	15%	123.27	18%	1.19	61.62
April	106.26	15%	119.48	17%	1.23	57.33
May	143.13	21%	217.96	32%	1.68	75.77
June	146.95	21%	221.79	32%	1.70	7.93
July	171.68	25%	231.23	34%	1.99	8.02
August	171.29	25%	251.07	37%	1.98	57.36
September	154.46	22%	404.44	59%	1.79	53.95
October	123.61	18%	146.97	21%	1.43	25.68
November	113.20	16%	148.72	22%	1.31	7.38
December	62.11	9%	75.32	11%	0.72	6.31



**Ontario Clean Water Agency
Agence Ontarienne Des Eaux**

AMABEL-SAUBLE TREATMENT SYSTEM

Large Municipal Residential Drinking Water System

SECTION 11 ANNUAL REPORT

**For the period of
JANUARY 1, 2015 TO DECEMBER 31, 2015**

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

Drinking Water System Number:	220007917
Drinking Water System Name:	Amabel-Sauble Well Supply
Drinking Water System Owner:	Town of South Bruce Peninsula
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2015 to December 31, 2015

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
Warton, 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

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

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

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Public access/notice via the web |
| <input checked="" type="checkbox"/> | Public access/notice via Government Office |
| <input type="checkbox"/> | Public access/notice via a newspaper |
| <input type="checkbox"/> | Public access/notice via Public Request |
| <input type="checkbox"/> | Public access/notice via a Public Library |
| <input type="checkbox"/> | Public access/notice via other method: _____ |

Description of Drinking Water System:

The Amabel-Sauble Well Supply Drinking Water System is a Class 2 Treatment and a Class 2 Water Distribution System.

The Amabel-Sauble Well Supply Drinking-Water System has a 150 mm diameter, 102 meter deep drilled well equipped with a submersible pump rated at 4 L/s, a second 150 mm diameter 86.9 meter deep drilled well with a submersible pump rated at 4 L/s, and a third 200 mm diameter, 105.4 meter deep drilled well which is and is equipped with a 4 L/s capacity submersible pump and is used only as a standby source. 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.

List of water treatment chemicals used during the reporting period:

- Sodium Hypochlorite 12%

Significant expenses were incurred to:

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

Description of expenses:

- Variable frequency drive was replaced

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
Raw (Well 1)	52	0	0	0	4	n/a	n/a	n/a
Raw (Well 2)	52	0	0	0	0	n/a	n/a	n/a
Raw (Well 3)	52	0	0	0	0	n/a	n/a	n/a
Treated (TW)	52	0	0	0	0	52	0	4
Distribution (DW)	104	0	0	0	0	52	0	2

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 1	8760	0.026	0.051
Free Chlorine Residual, On-Line (mg/L) - TW	8760	0.92	1.64

Free Chlorine Residual, In-House (mg/L) - DW	420	0.58	1.78
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NOTE: Record the unit of measure if it is not milligrams per litre.
 NOTE: For continuous monitors use 8760 as the number of samples

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 094-101 (Issue 2)	Total Suspended Solids (Filter backwash - composite)	Quarterly, 2015	3 mg/L	25 mg/L

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

Parameter	Sample Date (mm/dd/yyyy)	Sample Result	Exceedance
Antimony: Sb (ug/L) - TW	1/11/2015	<MDL 0.02	No
Arsenic: As (ug/L) - TW	1/11/2015	0.7	No
Barium: Ba (ug/L) - TW	1/11/2015	292	No
Boron: B (ug/L) - TW	1/11/2015	117	No
Cadmium: Cd (ug/L) - TW	1/11/2015	<MDL 0.003	No
Chromium: Cr (ug/L) - TW	1/11/2015	0.03	No
Mercury: Hg (ug/L) - TW	1/11/2015	0.01	No
Selenium: Se (ug/L) - TW	1/11/2015	<MDL 1.0	No
Uranium: U (ug/L) - TW	1/11/2015	0.183	No
Fluoride (mg/L) - TW	1/11/2015	1.48	No
Nitrite (mg/L) - TW	1/12/2015	<MDL 0.003	No
Nitrite (mg/L) - TW	4/13/2015	<MDL 0.003	No
Nitrite (mg/L) - TW	7/13/2015	<MDL 0.003	No
Nitrite (mg/L) - TW	10/19/2015	<MDL 0.003	No
Nitrate (mg/L) - TW	1/12/2015	0.022	No
Nitrate (mg/L) - TW	4/13/2015	0.019	No
Nitrate (mg/L) - TW	7/13/2015	0.016	No
Nitrate (mg/L) - TW	10/19/2015	0.016	No
Sodium: Na (mg/L) - TW	1/11/2015	13.8	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.

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 (ug/L)	4 ¹	0.07	0.38	0

NOTE: This system qualifies for the plumbing exemption as per Ontario Regulation 170/03 Schedule 15.1-5 (9) (10). This system also qualifies for reduced distribution sampling. Every 3 years, 4 distribution samples are taken during each sampling period and sampled for lead. The most current sampling session was in 2013 for the summer period (June 15th to October 15th) and 2014 for the winter period (December 15th to April 15th). The next sampling session will be 2016 for the summer period and 2017 for the winter period.

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

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW	1/11/2015	<MDL 0.02	No
Aldicarb (ug/L) - TW	1/11/2015	<MDL 0.01	No
Aldrin+Dieldrin (ug/L) - TW	1/11/2015	<MDL 0.01	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	1/11/2015	<MDL 0.01	No

¹ Sample results from the lead sampling winter period of 2014.

Parameter	Sample Date	Result Value	Exceedance
Azinphos-methyl (ug/L) - TW	1/11/2015	<MDL 0.02	No
Bendiocarb (ug/L) - TW	1/11/2015	<MDL 0.01	No
Benzene (ug/L) - TW	1/11/2015	<MDL 0.32	No
Benzo(a)pyrene (ug/L) - TW	1/11/2015	<MDL 0.004	No
Bromoxynil (ug/L) - TW	1/11/2015	<MDL 0.33	No
Carbaryl (ug/L) - TW	1/11/2015	<MDL 0.01	No
Carbofuran (ug/L) - TW	1/11/2015	<MDL 0.01	No
Carbon Tetrachloride (ug/L) - TW	1/11/2015	<MDL 0.16	No
Chlordane: Total (ug/L) - TW	1/11/2015	<MDL 0.01	No
Chlorpyrifos (ug/L) - TW	1/11/2015	<MDL 0.02	No
Cyanazine (ug/L) - TW	1/11/2015	<MDL 0.03	No
Diazinon (ug/L) - TW	1/11/2015	<MDL 0.02	No
Dicamba (ug/L) - TW	1/11/2015	<MDL 0.2	No
1,2-Dichlorobenzene (ug/L) - TW	1/11/2015	<MDL 0.41	No
1,4-Dichlorobenzene (ug/L) - TW	1/11/2015	<MDL 0.36	No
1,2-Dichloroethane (ug/L) - TW	1/11/2015	<MDL 0.35	No
1,1-Dichloroethylene (ug/L) - TW	1/11/2015	<MDL 0.33	No
Dichloromethane (Methylene Chloride) (ug/L) - TW	1/11/2015	<MDL 0.35	No
2,4-Dichlorophenol (ug/L) - TW	1/11/2015	<MDL 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	1/11/2015	<MDL 0.19	No
Diclofop-methyl (ug/L) - TW	1/11/2015	<MDL 0.4	No
Dimethoate (ug/L) - TW	1/11/2015	<MDL 0.03	No
Dinoseb (ug/L) - TW	1/11/2015	<MDL 0.36	No
Diquat (ug/L) - TW	1/11/2015	<MDL 1.0	No
Diuron (ug/L) - TW	1/11/2015	<MDL 0.03	No
Glyphosate (ug/L) - TW	1/11/2015	<MDL 1.0	No
Heptachlor+hepachlor epoxide (ug/L) - TW	1/11/2015	<MDL 0.01	No
Lindane (ug/L) - TW	1/11/2015	<MDL 0.01	No
Malathion (ug/L) - TW	1/11/2015	<MDL 0.02	No
Methoxychlor (ug/L) - TW	1/11/2015	<MDL 0.01	No
Metolachlor (ug/L) - TW	1/11/2015	<MDL 0.01	No
Metribuzin (ug/L) - TW	1/11/2015	<MDL 0.02	No
Monochlorobenzene (Chlorobenzene) (ug/L) - TW	1/11/2015	<MDL 0.3	No
Paraquat (ug/L) - TW	1/11/2015	<MDL 1.0	No
Parathion (ug/L) - TW	1/11/2015	<MDL 0.02	No
PCB (ug/L) - TW	1/11/2015	<MDL 0.04	No
Pentachlorophenol (ug/L) - TW	1/11/2015	<MDL 0.15	No
Phorate (ug/L) - TW	1/11/2015	<MDL 0.01	No
Picloram (ug/L) - TW	1/11/2015	<MDL 1.0	No
Prometryne (ug/L) - TW	1/11/2015	<MDL 0.03	No
Simazine (ug/L) - TW	1/11/2015	<MDL 0.01	No
Temephos (ug/L) - TW	1/11/2015	<MDL 0.01	No
Terbufos (ug/L) - TW	1/11/2015	<MDL 0.01	No
Tetrachloroethylene (ug/L) - TW	1/11/2015	<MDL 0.35	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	1/11/2015	<MDL 0.2	No
Triallate (ug/L) - TW	1/11/2015	<MDL 0.01	No
Trichloroethylene (ug/L) - TW	1/11/2015	<MDL 0.44	No
2,4,6-Trichlorophenol (ug/L) - TW	1/11/2015	<MDL 0.25	No
2,4,5-T (ug/L) - TW	1/11/2015	<MDL 0.22	No
Trifluralin (ug/L) - TW	1/11/2015	<MDL 0.02	No
Vinyl Chloride (ug/L) - TW	1/11/2015	<MDL 0.17	No
Alachlor (ug/L) - TW	1/11/2015	<MDL 0.02	No
Trihalomethane: Total (ug/L) Annual Average - DW	1/1/2015	34.000	No

*Annual average of THMs

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
n/a	n/a	n/a	n/a

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)