



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

**AMABEL-SAUBLE
WATER TREATMENT PLANT**

Large Municipal Residential Drinking Water System

**SCHEDULE 22
SUMMARY REPORT**

**For the period of
JANUARY 1, 2012 TO DECEMBER 31, 2012**

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, 2012 to December 31, 2012 for the Amabel-Sauble Water Treatment Plant located in the Town of South Bruce Peninsula.

The summary includes:

1. 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.
2. A summary of the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows.
3. 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 table 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:

MOE Compliance Inspection commencing April 11, 2012, which was routine and announced resulted in an Inspection Report Rating of 97.37%.

Actions Required:

The owner had not ensured that all equipment was installed in accordance with Schedule A and Schedule C of the Drinking Water Works Permit.

By no later than June 29, 2012 provide confirmation to the Provincial Officer authoring this report that the Drinking Water Works License and Permit have been reviewed and contact has been made with MOE Approvals Branch to determine if an amendment is required for any variances identified and/or additionally found during review.

The Municipal Drinking Water License and Drinking Water Works Permit for the Amabel-Sauble Drinking Water System was reviewed by OCWA Staff upon discovery of the discrepancies identified during the most recent drinking water system inspection. On April 19, 2012 OCWA sent an e-mail correspondence to the Ministry of the Environment Approvals Branch (Aziz Ahmed) outlining the discrepancies, requesting guidance in the actions required to correct them. OCWA was contacted by MOE Review Engineer Michael Catalano where it was determined that the discrepancies regarding the Chlorine dosing pumps and day tanks that a letter of explanation accompanied by supporting documentation asking to have the Drinking Water Works Permit (DWWP) updated would be sufficient however the addition of the second (2nd) UV reactor would require an application for an administrative amendment to the DWWP. OCWA personnel collected supporting documentation and submitted the required requests and applications on July 30, 2012.

ASSESSMENT OF FLOW RATES AND QUANTITIES OF WATER SUPPLIED

The following table lists the quantities and flow rates of the water supplied during the reporting period covered by this report, including monthly average and maximum daily flows and a comparison to the rated capacity and flow rates specified in the system approval:

Amabel-Sauble Water Treatment Plant

Month	Average Day Flow	% of Rated Capacity 687 m3/d	Maximum Day Flow	% of Rated Capacity 687 m3/d
January	86.46	12.58	146.02	21.25
February	86.82	12.64	196.7	28.63
March	79.15	11.52	121.31	17.66
April	90.12	13.12	123.96	18.04
May	115.01	16.74	249.53	36.32
June	118.2	17.21	244.31	35.56
July	179.66	26.15	296.32	43.13
August	131.77	19.18	264.4	38.49
September	118.45	17.24	270.54	39.38
October	71.71	10.44	134.64	19.60
November	67.94	9.89	122.74	17.87
December	88.59	12.90	434.87	63.30

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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
Period being reported:	January 1, 2012 to December 31, 2012

<p><u>Complete if your Category is Large Municipal Residential or Small Municipal Residential</u></p> <p>Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]</p> <p>Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []</p> <p>Location where Summary Report required under O. Reg. 170/03 Schedule 22 will be available for inspection.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 5px;"> Town of South Bruce Peninsula 315 George Street Wiarton, Ontario N0H 2T0 519-534-1400 </div>	<p><u>Complete for all other Categories.</u></p> <p>Number of Designated Facilities served: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </p> <p>Did you provide a copy of your annual report to all Designated Facilities you serve? Yes [] No []</p> <p>Number of Interested Authorities you report to: <div style="border: 1px solid black; width: 100px; height: 20px; margin: 5px 0;"></div> </p> <p>Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility? Yes [] No []</p>
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List Drinking-Water Systems, which receive all of their drinking water from your system:

N/A

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

Yes [] No [] N/A [X]

Indicate how you notified system users that your 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 _____

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Describe your Drinking-Water System

Class II Water Treatment
Class II Water Distribution

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 150 mm diameter, 87 meter deep drilled well which is and is equipped with a 6.05 L/s capacity 10 HP 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 all water treatment chemicals used over this reporting period

- Sodium Hypochlorite 12%

Were any significant expenses incurred to?

- Install required equipment
- Repair required equipment
- Replace required equipment

Describe:

Replaced 10 HP Well Pump Motor

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Provide 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

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date

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 or Fecal Results (min #) - (max #)	Range of Total Coliform Results (min #) - (max #)	Number of HPC Samples	Range of HPC Results (min #) - (max #)
Raw - RWW1	52	0 - 0	0 - 0		
Raw - RWW2	51	0 - 0	0 - 1		
Raw - RWW3	50	0 - 0	0 - 0		
Treated - TW	52	0 - 0	0 - 0	52	0 - 2
Distribution - DW	104	0 - 0	0 - 0	52	0 - 3

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

	Number of Grab Samples	Range of Results (#-#)
Filter Turbidity	8760	0.00-0.833
Chlorine	8760	0.45-2.07
Chlorine Residual Distribution System	367	0.50-1.30

NOTE: For continuous monitors use 8760 as the number of samples.

*NOTE: Record the unit of measure if it is **not** milligrams per litre.*

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Summary of additional testing and sampling carried out in accordance with the requirement of an approval or order.

Date of order or C of A	Parameter	Date Sampled	Result	C of A Limit	Unit of Measure
C of A 9049-6VURYU	Suspended Solids (composite)	Quarterly	Annual Average < 2.25	25	mg/L

Summary of Inorganic parameters tested during this reporting period or most recent

Parameter	Sample Date	Sample Result	Exceedance
Antimony: Sb (ug/L) - TW	2012/01/16	0.040	No
Arsenic: As (ug/L) - TW	2012/01/16	0.90	No
Barium: Ba (ug/L) - TW	2012/01/16	279.00	No
Boron: B (ug/L) - TW	2012/01/16	108.00	No
Cadmium: Cd (ug/L) - TW	2012/01/16	0.0040	No
Chromium: Cr (ug/L) - TW	2012/01/16	0.60	No
Lead: Pb (ug/L) -			
Mercury: Hg (ug/L) - TW	2012/01/16	< 0.020	No
Selenium: Se (ug/L) - TW	2012/01/16	< 1.00	No
Sodium: Na (mg/L) - TW	2011/01/10	13.50	No
Uranium: U (ug/L) - TW	2012/01/16	0.253	No
Fluoride: (mg/L) – TW (resample)	2011/01/17	1.35	No
Nitrite (mg/L) - TW	2012/01/09	< 0.0050	No
Nitrite (mg/L) - TW	2011/04/02	< 0.0050	No
Nitrite (mg/L) - TW	2011/07/09	< 0.0050	No
Nitrite (mg/L) - TW	2011/10/16	< 0.0050	No
Nitrate (mg/L) - TW	2012/01/09	0.017	No
Nitrate (mg/L) - TW	2011/04/02	0.022	No
Nitrate (mg/L) - TW	2011/07/09	0.029	No
Nitrate (mg/L) - TW	2011/10/16	0.016	No

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Summary of Organic parameters sampled during this reporting period or most recent

Parameter	Sample Date	Result Value	Exceedance
Alachlor (ug/L) - TW	2012/01/16	< 0.02	No
Aldicarb (ug/L) - TW	2012/01/16	< 0.01	No
Aldrin + Dieldrin (ug/L) - TW	2012/01/16	< 0.01	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2012/01/16	< 0.01	No
Azinphos-methyl (ug/L) - TW	2012/01/16	< 0.02	No
Bendiocarb (ug/L) - TW	2012/01/16	< 0.01	No
Benzene (ug/L) - TW	2012/01/16	< 0.32	No
Benzo(a)pyrene (ug/L) -	2012/01/16	< 0.004	No
Bromoxynil (ug/L) - TW	2012/01/16	< 0.33	No
Carbaryl (ug/L) - TW	2012/01/16	< 0.01	No
Carbofuran (ug/L) - TW	2012/01/16	< 0.01	No
Carbon Tetrachloride (ug/L) - TW	2012/01/16	< 0.16	No
Chlordane:Total (ug/L) - TW	2012/01/16	< 0.01	No
Chlorpyrifos (ug/L) - TW	2012/01/16	< 0.02	No
Cyanazine (ug/L) - TW	2012/01/16	< 0.03	No
Diazinon (ug/L) - TW	2012/01/16	< 0.02	No
Dicamba (ug/L) - TW	2012/01/16	< 0.20	No
1,2-Dichlorobenzene (ug/L) - TW	2012/01/16	< 0.41	No
1,4-Dichlorobenzene (ug/L) - TW	2012/01/16	< 0.36	No
Dichlorodiphenyltrichloroethane(DDT) + metabolites (ug/L) - TW	2012/01/16	< 0.01	No
1,2-Dichloroethane (ug/L) -	2012/01/16	< 0.35	No
1,1-Dichloroethylene (ug/L) -	2012/01/16	< 0.33	No
Dichloromethane (ug/L) -	2012/01/16	< 0.35	No
2,4-Dichlorophenol (ug/L) -	2012/01/16	< 0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2012/01/16	< 0.19	No
Diclofop-methyl (ug/L) - TW	2012/01/16	< 0.40	No

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Dimethoate (ug/L) - TW	2012/01/16	< 0.03	No
Dinoseb (ug/L) - TW	2012/01/16	< 0.36	No
Diquat (ug/L) -	2012/01/16	< 1	No
Diuron (ug/L) - TW	2012/01/16	< 0.03	No
Glyphosate (ug/L) -	2012/01/16	< 6	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW	2012/01/16	< 0.01	No
Lindane: (ug/L) - TW	2012/01/16	< 0.01	No
Malathion (ug/L) - TW	2012/01/16	< 0.02	No
Methoxychlor (ug/L) -	2012/01/16	< 0.01	No
Metolachlor (ug/L) - TW	2012/01/16	< 0.01	No
Metribuzin (ug/L) - TW	2012/01/16	< 0.02	No
Monochlorobenzene (ug/L) -	2012/01/16	< 0.30	No
Paraquat (ug/L) -	2012/01/16	< 1	No
Parathion (ug/L) - TW	2012/01/16	< 0.02	No
Pentachlorophenol (ug/L) - TW	2012/01/16	< 0.15	No
Phorate (ug/L) - TW	2012/01/16	< 0.01	No
Picloram (ug/L) - TW	2012/01/16	< 0.25	No
Polychlorinated Bichenysl(PCB) (ug/L) -	2012/01/16	< 0.04	No
Prometryne (ug/L) - TW	2012/01/16	< 0.03	No
Simazine (ug/L) - TW	2012/01/16	< 0.01	No
THM (ug/L) – DW (Annual Average)	2012	37.0	No
Temephos (ug/L) - TW	2012/01/16	< 0.01	No
Terbufos (ug/L) - TW	2012/01/16	< 0.01	No
Tetrachloroethylene (ug/L) -	2012/01/16	< 0.35	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2012/01/16	< 0.14	No
Triallate (ug/L) - TW	2012/01/16	< 0.01	No
Trichloroethylene (ug/L) -	2012/01/16	< 0.43	No
2,4,6-Trichlorophenol (ug/L) - TW	2012/01/16	< 0.25	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW	2012/01/16	< 0.22	No
Trifluralin (ug/L) - TW	2012/01/16	< 0.02	No
Vinyl Chloride (ug/L) -	2012/01/16	< 0.17	No

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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
Fluoride	1.51	Mg/L	2011/01/17

(Only if DWS category is large municipal residential, small municipal residential, large municipal non residential, small municipal non residential, large non municipal non residential)

Summary of lead testing under Schedule 15.1 during this reporting period

(applicable to the following drinking water systems; large municipal residential systems, small municipal residential systems, and non-municipal year-round residential systems)

Location Type	Number of Samples	Range of Lead Results (min#) – (max #)	Number of Exceedances
Plumbing	0	N/A	N/A
Distribution	0	N/A	N/A

*****System qualifies for Plumbing Exemption – the next distribution lead samples are scheduled to be taken in the summer sampling period of 2013.**