



**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, 2010 TO DECEMBER 31, 2010**

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, 2010 to December 31, 2010 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 05/05/10 as Routine with Inspection Rating of 96.9%

1. **The operations and maintenance manuals did not contain plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.**

Action(s) Required:

Please refer to section 2

Response: Please see the required actions listed in item 2 below.

2. **The operations and maintenance manuals did not meet the requirements of the Permit, Licence or Approval issued under Part V of the SDWA. As stated above alterations to the operation of the drinking water system have been made; however, the changes have not been reflected in the operations and maintenance manual. Section 16.3 of Licence 094-101 states that procedures necessary for the operation and maintenance of any alterations to the drinking water system shall be incorporated into the operations and maintenance manual or manuals prior to those alterations coming into operation.**

Action(s) Required:

By no later than July 30, 2010, the owner and operating authority shall update the operations and maintenance manual to reflect the operational changes required as a result of the change in status of Wells PW1 and PW2.

Response: Completed 30/07/10

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	January 1 to December 31
Average Day Flow (m ³ /day)	144.2
Maximum Day Flow (m ³ /day)	567.52
*Average Flow Rate (L/sec)	1.69
*Maximum Flow Rate (L/sec)	6.56
Design Capacity (m ³ /day)	687.0
Approved Flow Rate (L/sec)	7.95
% (Average Day/Design Capacity)	20.98
% (Maximum Day/Design Capacity)	82.61
% (Average Flow Rate/Approved Flow Rate)	21.26
% (Maximum Flow Rate/Approved Flow Rate)	82.52

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Drinking-Water System Number:
Drinking-Water System Name:
Drinking-Water System Owner:
Drinking-Water System Category:
Period being reported:

220007917
Amabel-Sauble Well Supply
Town of South Bruce Peninsula
Large Municipal Residential
January 1, 2010 to December 31, 2010

Complete if your Category is Large Municipal Residential or Small Municipal Residential

Does your Drinking-Water System serve more than 10,000 people? Yes [] No [X]

Is your annual report available to the public at no charge on a web site on the Internet? Yes [X] No []

Location where 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

Complete for all other Categories.

Number of Designated Facilities served:

Did you provide a copy of your annual report to all Designated Facilities you serve?

Yes [] No []

Number of Interested Authorities you report to:

Did you provide a copy of your annual report to all Interested Authorities you report to for each Designated Facility?

Yes [] No []

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 _____

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 considered to be GUDI and is used only as a standby source and is equipped with a 6.05 L/s capacity 10 HP submersible pump. The Amabel-Sauble Water Treatment Plant houses the treatment and control facilities including:

- 1 Iron Removal with two pressure vessels containing anthracite and catalytic media.
- 2 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.
- 3 Additional Disinfection System consisting of one cartridge filter housing prior to the one UV disinfection unit. This additional disinfection unit is only needed when the former Winburk well is being used, as it is deemed a GUDI well and requires additional disinfection.
- 4 Clearwell/Storage Tank with high lift and backwash pumps.
- 5 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.
- 6 Standby Power consisting of generator with a 32 hour double wall sub-base fuel tank.

There is also:

- One programmable logic controller and associated SCADA system for control of plant operations
- Chlorine residual analyzer
- Treated water turbidity analyzer
- Filtered Water turbidity analyzer
- 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

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Describe:

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
NA					

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	51	0 - 0	0 - 0		
Raw - RWW2	52	0 - 0	0 - 0		
Raw - RWW3	52	0 - 0	0 - 0		
Treated - TW	52	0 - 0	0 - 0	52	0 - 3
Distribution - DW	104	0 - 0	0 - 0	52	0 - 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 (#-#)
Filter Turbidity	8760	0.02-1.95
Chlorine	8760	0.75-1.48
Chlorine Residual Distribution System	364	0.54-1.38

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

*NOTE: Record the unit of measure if it is **not** milligrams per litre. High filter turbidity attributed by flow set-up during commissioning, no adverse conditions observed.*

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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 <2.0	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	2010/01/11	0.030	No
Arsenic: As (ug/L) - TW	2010/01/11	1.10	No
Barium: Ba (ug/L) - TW	2010/01/11	269.00	No
Boron: B (ug/L) - TW	2010/01/11	106.00	No
Cadmium: Cd (ug/L) - TW	2010/01/11	< 0.0030	No
Chromium: Cr (ug/L) - TW	2010/01/11	< 0.50	No
Lead: Pb (ug/L) -			
Mercury: Hg (ug/L) - TW	2010/01/11	< 0.020	No
Selenium: Se (ug/L) - TW	2010/01/11	< 1.00	No
Sodium: Na (mg/L) - TW	2010/01/11	12.10	No
Uranium: U (ug/L) - TW	2010/01/11	0.27	No
Fluoride Residual: Mean (mg/L) - TW	2010/01/11	1.38	No
Nitrite (mg/L) - TW	2010/01/11	< 0.0050	No
Nitrite (mg/L) - TW	2010/04/06	< 0.0050	No
Nitrite (mg/L) - TW	2010/07/05	< 0.0050	No
Nitrite (mg/L) - TW	2010/10/04	< 0.0050	No
Nitrate (mg/L) - TW	2010/01/11	0.016	No
Nitrate (mg/L) - TW	2010/04/06	0.014	No
Nitrate (mg/L) - TW	2010/07/05	0.037	No
Nitrate (mg/L) - TW	2010/10/04	0.018	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	2010/01/11	< 0.11	No
Aldicarb (ug/L) - TW	2010/01/11	< 0.30	No
Aldrin + Dieldrin (ug/L) - TW	2010/01/11	< 0.067	No
Atrazine + N-dealkylated metabolites (ug/L) - TW	2010/01/11	< 0.12	No
Azinphos-methyl (ug/L) - TW	2010/01/11	< 0.21	No
Bendiocarb (ug/L) - TW	2010/01/11	< 0.13	No
Benzene (ug/L) - TW	2010/01/11	< 0.32	No
Benzo(a)pyrene (ug/L) -	2010/01/11	<0.004	No
Bromoxynil (ug/L) - TW	2010/01/11	< 0.33	No
Carbaryl (ug/L) - TW	2010/01/11	< 0.16	No
Carbofuran (ug/L) - TW	2010/01/11	< 0.37	No
Carbon Tetrachloride (ug/L) - TW	2010/01/11	< 0.16	No
Chlordane:Total (ug/L) - TW	2010/01/11	< 0.11	No
Chlorpyrifos (ug/L) - TW	2010/01/11	< 0.18	No
Cyanazine (ug/L) - TW	2010/01/11	< 0.18	No
Diazinon (ug/L) - TW	2010/01/11	< 0.081	No
Dicamba (ug/L) - TW	2010/01/11	< 0.20	No
1,2-Dichlorobenzene (ug/L) - TW	2010/01/11	< 0.41	No
1,4-Dichlorobenzene (ug/L) - TW	2010/01/11	< 0.36	No
Dichlorodiphenyltrichloroethane(DDT) + metabolites (ug/L) - TW	2010/01/11	< 0.14	No
1,2-Dichloroethane (ug/L) -	2010/01/11	<0.35	No
1,1-Dichloroethylene (ug/L) -	2010/01/11	<0.33	No
Dichloromethane (ug/L) -	2010/01/11	<0.35	No
2,4-Dichlorophenol (ug/L) -	2010/01/11	<0.15	No
2,4-Dichlorophenoxy acetic acid (2,4-D) (ug/L) - TW	2010/01/11	< 0.19	No
Diclofop-methyl (ug/L) - TW	2010/01/11	< 0.40	No
Dimethoate (ug/L) - TW	2010/01/11	< 0.12	No
Dinoseb (ug/L) - TW	2010/01/11	< 0.36	No
Diquat (ug/L) -	2010/01/11	<1	No

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Diuron (ug/L) - TW	2010/01/11	< 0.087	No
Glyphosate (ug/L) -	2010/01/11	<6	No
Heptachlor+Hepachlor Epoxide (ug/L) - TW	2010/01/11	< 0.11	No
Lindane: (ug/L) - TW	2010/01/11	< 0.056	No
Malathion (ug/L) - TW	2010/01/11	< 0.091	No
Methoxychlor (ug/L) -	2010/01/11	<0.14	No
Metolachlor (ug/L) - TW	2010/01/11	< 0.092	No
Metribuzin (ug/L) - TW	2010/01/11	< 0.12	No
Monochlorobenzene (ug/L) -	2010/01/11	<0.39	No
Paraquat (ug/L) -	2010/01/11	<1	No
Parathion (ug/L) - TW	2010/01/11	< 0.18	No
Pentachlorophenol (ug/L) - TW	2010/01/11	< 0.15	No
Phorate (ug/L) - TW	2010/01/11	< 0.11	No
Picloram (ug/L) - TW	2010/01/11	< 0.25	No
Polychlorinated Bichenys(PCB) (ug/L) -	2010/01/11	<0.04	No
Prometryne (ug/L) - TW	2010/01/11	< 0.23	No
Simazine (ug/L) - TW	2010/01/11	< 0.15	No
THM (ug/L) – DW (Annual Average)	2010	34.25	No
Temephos (ug/L) - TW	2010/01/11	< 0.31	No
Terbufos (ug/L) - TW	2010/01/11	< 0.12	No
Tetrachloroethylene (ug/L) -	2010/01/11	<0.35	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW	2010/01/11	< 0.14	No
Triallate (ug/L) - TW	2010/01/11	< 0.10	No
Trichloroethylene (ug/L) -	2010/01/11	<0,43	No
2,4,6-Trichlorophenol (ug/L) - TW	2010/01/11	< 0.25	No
2,4,5-Trichlorophenoxy acetic acid (ug/L) - TW	2010/01/11	< 0.22	No
Trifluralin (ug/L) - TW	2010/01/11	< 0.12	No
Vinyl Chloride (ug/L) -	2010/01/11	<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

(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	24	0.08 – 3.78	0
Distribution	16	0.05 – 0.25	0

***Relief has been granted C of A PB220007917RR-02