



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

**OLIPHANT  
WATER TREATMENT PLANT**

**Small Municipal Residential Drinking Water System**

**SCHEDULE 22  
SUMMARY REPORT**

**For the period of  
JANUARY 1, 2011 TO DECEMBER 31, 2011**

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, 2011 to December 31, 2011 for the Oliphant 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 October 18, 2011 which was routine and announced resulted in an Inspection Report Rating of 97.14%

- 1. Records did not indicate that the treatment equipment was operated in a manner that achieved the design capabilities required under Ontario Regulation 170/03 or a Permit, Licence or Approval issued under Part V of the SDWA at all times that water was being supplied to consumers.**

As per the Procedure for Disinfection of Drinking Water in Ontario, 4 log removal of viruses, 3 log removal of giardia and 2 log removal of cryptosporidium oocysts is required for primary disinfection of a GUDI source. For the Oliphant drinking water system primary disinfection is achieved through the use of chemically assisted filtration, UV disinfection and chlorination. Chloraminated water is used for secondary disinfection and stored in the clearwells. It was determined during the 2010-2011 drinking water inspection that records of continuous monitoring for free chlorine residual in the treated water were not available. The absence of these monitoring records was addressed during the 2010-2011 drinking water inspection. Once continuous monitoring for free chlorine residual of the treated water was implemented it was determined that the use of chloraminated water for backwashing was interfering with the disinfection process downstream of the filters. As a result, the owner stopped producing water at the Oliphant drinking water system. In January 2011 the owner began transporting water in bulk from the Warton water treatment plant to the Oliphant water treatment plant for distribution.

**Action(s) Required:**

By January 31, 2012 the Owner shall provide a written plan to Provincial Officer, Lisa Williamson, summarizing what actions, if any, the Municipality plans to take to begin the production of treated water at the Oliphant drinking water system.

**Response:**

Since production of water at the Oliphant drinking water system was brought to a halt, Associated Engineering was retained by the Town to review the Oliphant WTP design and past performance and to conduct a treatability study to identify mitigation measures with the end goal being to return the Oliphant WTP back into service. The Oliphant WTP Peer Review and Treatability Study report was drafted and recommendations were forwarded to the Town.

The Town is presently reviewing Associated Engineering's recommendations and considering implementation options".

**2. All changes to the system registration information were not provided within ten (10) days of the change.**

The Warton drinking water system was not identified as supplying drinking water to the system on the Drinking Water Systems information profile. The contacts also required updating on the profile.

**Action(s) Required:**

By January 31, 2011 the owner shall submit written notice to the Ministry of all changes to the Oliphant drinking water system profile information.

**Response:**

On January 3, 2012, OCWA PCT David Trombley submitted system profile changes as prescribed in the most recent MOE inspection report to the ministry through electronic format. Notice of the submission was sent to Provincial Officer Lisa Williamson on January 3, 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:

Oliphant Water Treatment Plant

Month	Average Day Flow	% of Rated Capacity 327 m3/d	Maximum Day Flow	% of Rated Capacity 327 m3/d
January	29.50	9.02	176.0	53.82
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

**Note:** The Oliphant Water Treatment Plant stopped treating water on January 16, 2011 and began receiving transported water from the Warton Water Treatment Plant by direction of the Town of South Bruce Peninsula.

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Drinking-Water System Number:	220007695
Drinking-Water System Name:	Oliphant
Drinking-Water System Owner:	Town of South Bruce Peninsula
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2011 to December 31, 2011

**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 \_\_\_\_\_

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## Describe your Drinking-Water System

- 2 Raw water submersible well pump with flow restrictor
- Clarifier Vessel
- 2 Pressure Filtration Vessels
- 2 Clearwells
- 2 Highlift pumps and 1 Backwash pump
- Disinfection system consisting of UV, Sodium hypochlorite and secondary disinfection using ammonium sulphate.
- Chemical system consisting of coagulant, polymer and potassium permanganate
- PLC/SCADA system
- Standby power diesel generator

**Note: As of January 20<sup>th</sup> 2011 the Oliphant Water Treatment Plant began receiving all of it's treated water from the Wiaraton Water Treatment Plant and continued to received all of it's treated water for the remainder of this reporting period.**

## List all water treatment chemicals used over this reporting period

- Sodium Hypochlorite
- PAC
- Polymer
- Potassium Permanganate
- Ammonium Sulphate

## Were any significant expenses incurred to?

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

## 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
	None to Report				

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**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	1	0 - 0	0 - 0		
Raw - RWW2	1	0 - 0	0 - 0		
Distribution - DW	52	0 - 0	0 - 0	52	0 - 5

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

	Number of Grab Samples	Range of Results (#-#)	<i>NOTE: For continuous monitors use 8760 as the number of samples.</i>
Filter Turbidity NTU	8760	#1 0.00 – 0.78 #2 0.00 – 0.69	
Chlorine	8760	0.68 – 1.50 Free (Post transported water) 2.13 – 2.99 Total (Pre transported water)	
Chlorine Residual Distribution System	106	0.48 – 1.35 Free (Post transported water) 1.21 – 2.86 Total (Pre transported water)	

*NOTE: Record the unit of measure if it is **not** milligrams per litre. As of January 19<sup>th</sup> 2011 secondary disinfection no longer utilizes chloramination with ammonium sulphate.*

**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	Unit of Measure
C of A 37193-7CDRY5	Suspended Solids	Annual average	2.0	mg/L

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Antimony	01/10/11	< 0.02	ug/L	No
Arsenic	01/10/11	0.3	ug/L	No
Barium	01/10/11	595	ug/L	No
Boron	01/10/11	33	ug/L	No
Cadmium	01/10/11	< 0.03	ug/L	No
Chromium	01/10/11	< 0.5	ug/L	No
Mercury	01/10/11	< 0.02	ug/L	No
Selenium	01/10/11	< 1.0	ug/L	No
Uranium	01/10/11	0.008	ug/L	No
Nitrite - TW	01/10/11	0.010	mg/L	No
Nitrite - TW	04/11/11	< 0.005	mg/L	No
Nitrite - TW	07/04/11	< 0.005	mg/L	No
Nitrite - TW	10/11/11	< 0.005	mg/L	No
Nitrate - TW	01/10/11	0.029	mg/L	No
Nitrate - TW	04/11/11	0.292	mg/L	No
Nitrate - TW	07/04/11	0.264	mg/L	No
Nitrate - TW	10/11/11	0.238	mg/L	No
Sodium	01/10/11	0.13	mg/L	No
Fluoride	01/10/11	0.24	mg/L	No

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

Parameter	Sample Date	Result Value	Unit of Measure	Exceedance
Alachlor	01/10/11	< 0.02	ug/L	No
Aldicarb	01/10/11	< 0.01	ug/L	No
Aldrin + Dieldrin	01/10/11	< 0.01	ug/L	No
Atrazine + N-dealkylated metabolites	01/10/11	< 0.01	ug/L	No
Azinphos-methyl	01/10/11	< 0.02	ug/L	No
Bendiocarb	01/10/11	< 0.01	ug/L	No
Benzene	01/10/11	< 0.32	ug/L	No
Benzo(a)pyrene	01/10/11	< 0.004	ug/L	No
Bromoxynil	01/10/11	< 0.33	ug/L	No
Carbaryl	01/10/11	< 0.01	ug/L	No
Carbofuran	01/10/11	< 0.01	ug/L	No
Carbon Tetrachloride	01/10/11	< 0.16	ug/L	No
Chlordane (Total)	01/10/11	< 0.01	ug/L	No
Chlorpyrifos	01/10/11	< 0.02	ug/L	No



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Cyanazine	01/10/11	< 0.03	ug/L	No
Diazinon	01/10/11	< 0.02	ug/L	No
Dicamba	01/10/11	< 0.20	ug/L	No
1,2-Dichlorobenzene	01/10/11	< 0.41	ug/L	No
1,4-Dichlorobenzene	01/10/11	< 0.36	ug/L	No
Dichlorodiphenyltrichloroethane (DDT) + metabolites	01/10/11	< 0.01	ug/L	No
1,2-Dichloroethane	01/10/11	< 0.35	ug/L	No
1,1-Dichloroethylene (vinylidene chloride)	01/10/11	< 0.33	ug/L	No
Dichloromethane	01/10/11	< 0.35	ug/L	No
2-4 Dichlorophenol	01/10/11	< 0.15	ug/L	No
2,4-Dichlorophenoxy acetic acid (2,4-D)	01/10/11	< 0.19	ug/L	No
Diclofop-methyl	01/10/11	< 0.40	ug/L	No
Dimethoate	01/10/11	< 0.12	ug/L	No
Dinoseb	01/10/11	< 0.03	ug/L	No
Diquat	01/10/11	< 1.0	ug/L	No
Diuron	01/10/11	< 0.03	ug/L	No
Glyphosate	01/10/11	< 6	ug/L	No
Heptachlor + Heptachlor Epoxide	01/10/11	< 0.01	ug/L	No
Lindane (Total)	01/10/11	< 0.01	ug/L	No
Malathion	01/10/11	< 0.02	ug/L	No
Methoxychlor	01/10/11	< 0.01	ug/L	No
Metolachlor	01/10/11	< 0.01	ug/L	No
Metribuzin	01/10/11	< 0.02	ug/L	No
Monochlorobenzene	01/10/11	< 0.30	ug/L	No
Paraquat	01/10/11	< 1	ug/L	No
Parathion	01/10/11	< 0.02	ug/L	No
Pentachlorophenol	01/10/11	< 0.15	ug/L	No
Phorate	01/10/11	< 0.01	ug/L	No
Picloram	01/10/11	< 0.25	ug/L	No
Polychlorinated Biphenyls(PCB)	01/10/11	< 0.04	ug/L	No
Prometryne	01/10/11	< 0.03	ug/L	No
Simazine	01/10/11	< 0.01	ug/L	No
***THM	2011	47.5	ug/L	No
Temephos	01/10/11	< 0.01	ug/L	No
Terbufos	01/10/11	< 0.01	ug/L	No
Tetrachloroethylene	01/10/11	< 0.35	ug/L	No
2,3,4,6-Tetrachlorophenol	01/10/11	< 0.14	ug/L	No
Triallate	01/10/11	< 0.01	ug/L	No
Trichloroethylene	01/10/11	< 0.43	ug/L	No
2,4,6-Trichlorophenol	01/10/11	1.3	ug/L	No
2,4,5-Trichlorophenoxy acetic acid (2,4,5-T)	01/10/11	< 0.22	ug/L	No
Trifluralin	01/10/11	< 0.02	ug/L	No
Vinyl Chloride	01/10/11	< 0.17	ug/L	No

\*\*\* Annual average. THM annual running average

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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
THM	66	mg/L	10/17/11
Barium	595	mg/L	01/10/11

## 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	NA	NA	0
Distribution	NA	NA	0

\*\*\*Relief has been granted C of A PB220007695RR-01