

2023 SECTION 22 SUMMARY REPORT

OLIPHANT
DRINKING WATER SYSTEM



For the period of:
JANUARY 1, 2023 TO DECEMBER 31, 2023

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

This report was prepared in accordance with the requirements of [O.Reg 170/03, Schedule 22, Summary Reports for Municipalities](#) for the following system and reporting period:

Drinking-Water System Number:	220007695
Drinking-Water System Name:	Oliphant Drinking Water System
Drinking-Water System Owner:	Town of South Bruce Peninsula
Drinking-Water System Category:	Small Municipal Residential
Period being reported:	January 1, 2023 – December 31, 2023

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on June 20, 2023 for the period covering August 11, 2022 to June 20, 2023. On August 9, 2023 the Inspection Report was issued and a final inspection rating of 100% was received.

The following is a summary of non-compliances noted in the MECP Inspection Report, as well as the duration and the measures that were taken to correct the non-compliance. If any self-reported non-compliances were included in the inspection report, they will be noted in Table 1.

Table 1. Non-Compliances and Corrective Actions noted in the 2022/2023 MECP Inspection Report

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
N/A	N/A	N/A

The following table (Table 2) is a summary of any incidents that the Operating Authority interpreted as instances where any requirements of the Act, the regulations, the system's approval, drinking water works permit (DWWP), municipal drinking water licence (MDWL), and any orders applicable were not met. The Operating Authority reported the following incidents to the MECP and confirmation of whether the incidents are considered non-compliances are noted in the MECP Inspection Report and included in Table 1.

Table 2. Self-Reported Incidents and Corrective Actions for the Reporting Period

Incident	Duration	Corrective Actions
N/A	N/A	N/A

For information on any Adverse Water Quality Incident(s) that may have occurred during the reporting period, please refer to the Oliphant Drinking Water System Annual Report (Section 11).

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables summarize the quantities and flow rates of water supplied during the reporting period, including monthly averages and maximum daily flows as well as a comparison to the rated capacity and flow rates approved in the system's approval, DWWP or MDWL.

The Oliphant Water Treatment Plant stopped treating water on January 16, 2011 and began receiving transported water from the Wiarton Water Treatment Plant, by the direction of the Town of South Bruce Peninsula. Water transported from the Wiarton Water Treatment Plant is pumped into the clearwell of the Oliphant Water Treatment Plant.

2.1 Treated Water

Municipal Drinking Water License (MDWL):	094-105 (Issue Number: 5)
Allowable Rated Capacity:	75 m ³ /day
Allowable Flowrate into Treatment System:	N/A

As per the MDWL, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the listed rated capacity. However, the MDWL allows a system to be operated temporarily at a maximum daily volume and/or a maximum flowrate above the values set out in the MDWL for the purposes of fighting a large fire or for the maintenance of the drinking water system.

Table 3. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for 2023

Treated Water Flow					
Timeframe	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity	Total Volume (m ³)
January	21.0	28.0%	26.2	34.9%	562
February	21.3	28.4%	52.1 ^{3a}	69.5%	460
March	18.1	24.1%	22.8	30.4%	482
April	18.2	24.3%	23.0	30.7%	488
May	22.3	29.7%	33.8	45.1%	767
June	27.0	36.0%	45.8	61.1%	757
July	25.5	34.0%	35.3	47.1%	736
August	22.0	29.3%	26.1	34.8%	659
September	19.7	26.3%	28.3	37.7%	632
October	18.6	24.8%	26.7	35.6%	672
November	16.3	21.7%	23.1	30.8%	649
December	16.0	21.3%	24.0	32.0%	643
2023	20.5	27.3%	52.1^{3a}	69.5%	7,482

^{3a}Maximum daily flow in February was a result of a leak in distribution system on February 8-9, 2023.

A review of flow information for the reporting period indicates that the drinking water system operated within the rated capacity specified in the MDWL, for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

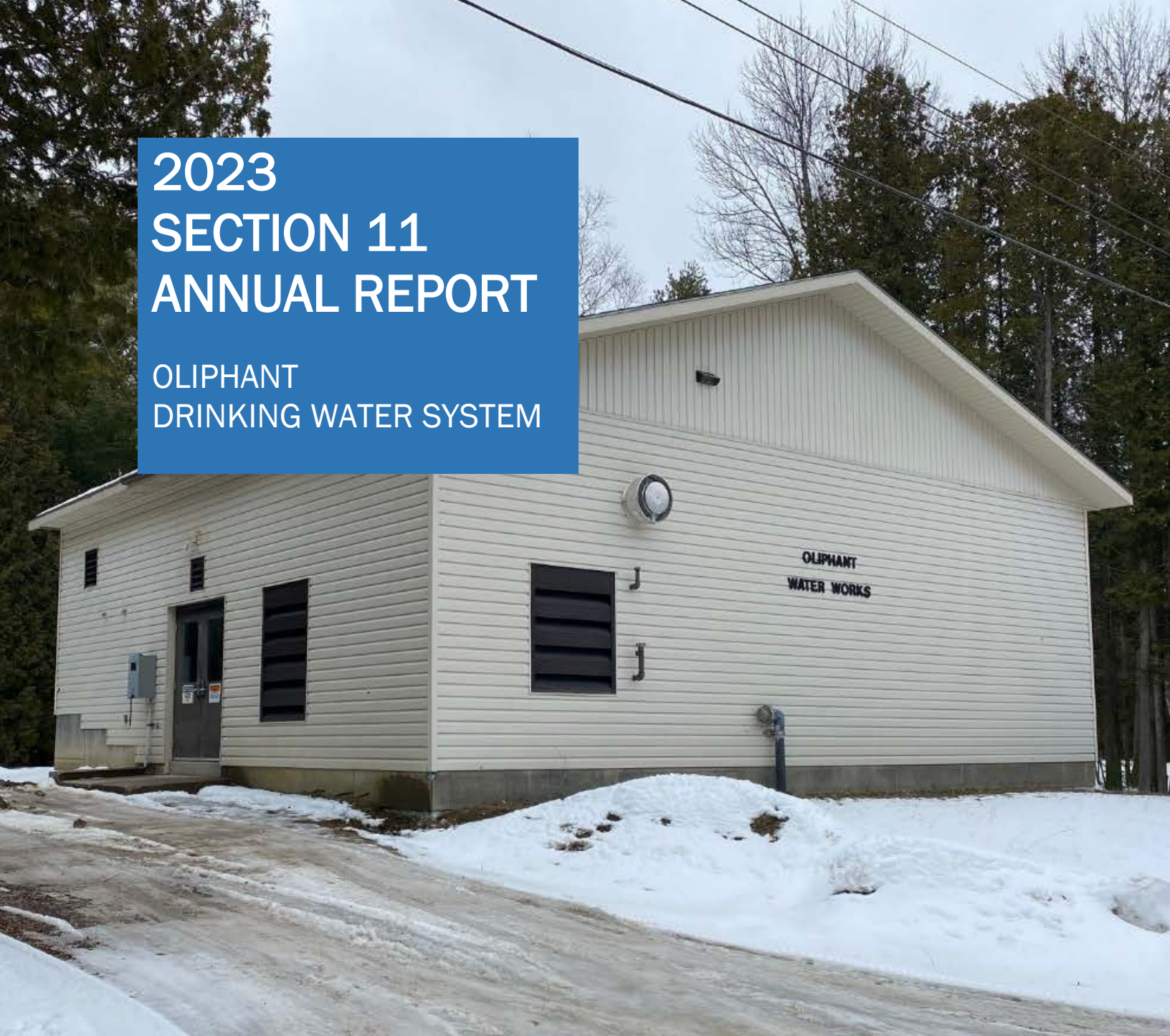
Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for 2023

Treated Water Flowrate		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	1.28	3.85
February	1.16	4.13
March	1.07	3.90
April	0.95	3.46
May	1.19	4.08
June	1.26	3.82
July	1.24	4.16
August	1.23	4.40
September	1.21	4.04
October	1.11	4.05
November	1.06	4.03
December	0.80	3.77
2023	1.13	4.40

The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into a treatment subsystem.

2023 SECTION 11 ANNUAL REPORT

OLIPHANT
DRINKING WATER SYSTEM



For the period of:
JANUARY 1, 2023 TO DECEMBER 31, 2023

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



This report was prepared in accordance with the requirements of [O.Reg 170/03, Section 11, Annual reports](#) for the following system and reporting period:

Drinking Water System Number:	220007695
Drinking Water System Name:	Oliphant Drinking Water System
Drinking Water System Owner:	Town of South Bruce Peninsula
Drinking Water System Category:	Small Municipal Residential
Reporting Period:	January 1, 2023 – December 31, 2023

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

No

Is your Annual Report available to the public at no charge on a website on the Internet?

Yes

Note: If a large municipal residential system serves more than 10,000 people, the owner of the system shall ensure that a copy of every report prepared under this section is available to the public at no charge on a website on the Internet. O. Reg. 170/03, Section 11. (10)

Location where Summary Report required under O. Reg 170/03, Schedule 22 will be available for inspection. (O. Reg 170/03, Section 11.(6)(5)):

- Town of South Bruce Peninsula, 315 George Street, Wiarton ON, N0H 2T0
- <https://www.southbrucepeninsula.com/en/town-hall/water-and-sewer-reports.aspx>

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

Drinking Water System Name	Drinking Water System Number
N/A	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

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 checked="" 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: _____ |

Note: The owner of a drinking water system shall ensure that a copy of an annual report for the system is given, without charge, to every person who requests a copy. ((O.Reg 170/03, Section 11.(7)).

Description of Drinking Water System (O.Reg 170/03, Section 11.(6)(a)):

The Oliphant Water Treatment Plant is classified as a Class I Water Distribution and Supply System and categorized as a Small Drinking Water System servicing approximately 60 persons. The Oliphant DWS, since January 20, 2011, receives all of its treated drinking water from the Wiarton Water Treatment Plant, which is delivered via transport to the Oliphant pumphouse. Oliphant pumphouse consists of:

- 2 Clearwells
- 2 Highlift pumps
- Secondary Disinfection by Sodium Hypochlorite Re-Chlorination
- PLC/SCADA system
- Standby power diesel generator in case of power failure to the system

List of water treatment chemicals used by the system during the reporting period (O.Reg 170/03, Section 11.(6)(a)):

- Sodium Hypochlorite 12%

Significant expenses were incurred to:

- | | |
|-------------------------------------|---------------------------------------|
| <input checked="" type="checkbox"/> | Install required equipment |
| <input checked="" type="checkbox"/> | Repair required equipment |
| <input checked="" type="checkbox"/> | Replace required equipment |
| <input type="checkbox"/> | No significant expenses were incurred |

Description of major expenses during the reporting period to install, repair or replace required equipment (O.Reg 170/03, Section 11.(6)(e)):

- Reservoir inspection and cleaning
- Replacement turbidity analyzer
- Distribution system repair parts

Summary of any reports/notices submitted to the Ministry and/or Spills Action Centre in accordance with subsection 18(1) of the Safe Drinking-Water Act or section 16-4 of Schedule 16 of O.Reg.170/03 during the reporting period, including a description of any corrective actions taken under Schedule 17 or 18 (O. Reg 170/03, Section 11.(6)(b),(d)):

Incident Date (yyyy/mm/dd)	Parameter/ Notice of	Result & Unit	Summary of Reporting, Corrective Actions & Resolution
N/A	N/A	N/A	N/A

Table 1. Microbiological testing done under the Schedule 11 of Regulation 170/03 during this reporting period (O.Reg 170/03, Section 11.(6)(c)).

Location	Number of Samples	Range of E. Coli or Fecal Results		Range of Total Coliform Results		Number of HPC Samples	Range of HPC Samples	
		Min.	Max.	Min.	Max.		Min.	Max.
Distribution	52	0	0	0	0	52	0	3

^{1a}O.Reg. 170/03 Schedule 11-2.(1)(2)(3) requires that at least one distribution sample is taken every two weeks, if the system provides treatment equipment in accordance with Schedule 1 or 2 and the equipment is operated in accordance with that Schedule; or at least one distribution sample is taken every week, if clause (a) does not apply and be tested for E.Coli, Total Coliforms and if section 1-5 of Schedule 1 or subsection 2-5 (1) of Schedule 2 applies to the system, general bacteria population expressed as colony counts on a heterotrophic plate count. As a best practice, OCWA takes weekly distribution samples at Oliphant DWS.

Table 2. Operational testing done under Schedule 7 of Regulation 170/03 during the period covered by this Annual Report (O. Reg 170/03, Section 11.(6)(c)).

Parameter & Location	Number of Samples	Range of Results	
		Min.	Max.
Free Chlorine Residual, Treated Water (mg/L) ^{2a}	8760	1.08	1.89
Free Chlorine Residual, Distribution Water (mg/L) ^{2b}	107	0.69	1.50

Note: The number of samples used for continuous monitoring units is 8760.

^{2a}Primary disinfection is achieved at the Wiarton WTP. Trim chlorination is performed as needed.

^{2b}O.Reg 170/03 Schedule 7-2.(5) requires a small municipal residential system that provides secondary disinfection to take at least two distribution samples each week and immediately tested for free chlorine residual, if the system provides chlorination and does not provide chloramination. Sampling for distribution free chlorine residual at Oliphant Drinking Water System is taken twice a week.

Table 3. Summary of additional testing and sampling results carried out in accordance with the requirement of an approval, municipal drinking water licence or order (including OWRA) or other legal instrument. (O. Reg 170/03, Section 11.(6)(c))

Legal Instrument & Issue Date (yyyy/mm/dd)	Parameter	Date Sampled	Number of Samples	Annual Average	Allowable Annual Average
2020-03-06 MDWL 094-105 (Issue 4)	Total Suspended Solids (Filter backwash)	N/A	N/A ^{3a}	N/A	25 mg/L
2020-03-06 MDWL 094-105 (Issue 4)	Total Chlorine Residual (Filter backwash)	N/A	N/A ^{3a}	N/A	0.02 mg/L

^{3a}Currently this parameter is not being tested as the filters are not in use. Oliphant WTP receives all of its water via transportation from the Wiarton WTP.

Table 4. Summary of Inorganic parameters tested during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c))

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Inorganic Parameters – TW ^{4a}	N/A	N/A	N/A	N/A

^{4a}As of January 20, 2011, treated water inorganic testing is not applicable for Oliphant DWS as the system is supplied by treated water from the Wiarton Water Treatment Plant. Please refer to the Wiarton DWS Annual Report for 2023 for a summary of this information.

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Aesthetic Objective (AO)	Exceedance	
				AO	> 20 mg/L
Sodium: Na (mg/L) – TW	N/A	N/A	200	N/A	N/A

Note: MDL = Minimum Detection Limit

Note: As of January 20, 2011, treated water sodium testing is not applicable for Oliphant DWS as the system is supplied with treated water from the Wiarton Water Treatment Plant. Please refer to the Wiarton DWS Annual Report for 2023 for a summary of this information.

Note: There is no regulatory Maximum Allowable Concentration (MAC) Sodium. The aesthetic objective (AO) 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 (O.Reg 170/03, Section 11.(6)(g))

Location/Type & Parameter	Number of Samples ^{5a}	Range of Results		Number of Lead Exceedances (MAC = 10 µ/L)
		Min.	Max.	
Period: January 1 to April 15				
Plumbing – Lead (µg/L) ^{5b}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5c}	N/A	N/A	N/A	N/A
Distribution – Alkalinity (mg/L as CaCO ₃)	1	74	74	N/A
Distribution – pH	1	8.49	8.49	N/A
Period: June 15 to October 15				
Plumbing – Lead (µg/L) ^{5b}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5c}	N/A	N/A	N/A	N/A
Distribution – Alkalinity (mg/L as CaCO ₃)	1	73	73	N/A
Distribution – pH	1	8.37	8.37	N/A
Period: December 15 to 31				
Plumbing – Lead (µg/L) ^{5b}	N/A	N/A	N/A	N/A
Distribution – Lead (µg/L) ^{5c}	N/A	N/A	N/A	N/A

Distribution – Alkalinity (mg/L as CaCO ₃)	N/A	N/A	N/A	N/A
Distribution - pH	N/A	N/A	N/A	N/A

Note: this is required for large municipal residential systems, small municipal residential systems or non-municipal year-round residential system. (O.Reg 170/03, Section 11.(6)(g))

^{5a}*This system follows a reduced sampling schedule (O.Reg. 170/03, Section 15.1.5). The number of sampling points for the system is based on the population served by the system. The number of people served by the system is 60 (as confirmed with the Owner on March 9, 2023), and therefore requires 1 distribution sampling point per sampling period.*

^{5b}*Plumbing samples are not applicable as this system qualifies for the plumbing exemption per O. Reg 170/03 Schedule 15.1-5 (9) (10).*

^{5c}*This system follows a reduced sampling schedule (O.Reg 170/03, Section 15.1.5). Distribution lead samples are collected every 36 months. The most recent set of distribution lead samples were collected within the winter period of December 15, 2020 to April 15, 2021 and summer period of June 15, 2021 to October 15, 2021. The next set of distribution lead samples is scheduled to be collected within the winter period of December 15, 2023 to April 15, 2024 and summer period of June 15, 2024 to October 15, 2024.*

Table 6: Summary of Organic parameters sampled during this reporting period or the most recent sample results (O.Reg 170/03, Section 11.(6)(c)).

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result	Maximum Allowable Concentration (MAC)	Exceedance of MAC
Organic Parameters - TW ^{6a}	N/A	N/A	N/A	N/A
Trihalomethane: Total (µg/L) Annual Average - DW	2023 (Quarterly)	55.3	100.0	No
HAA Total (µg/L) Annual Average - DW	2023 (Quarterly)	21.8	80.0	No

Note: DW = Distribution Water, MDL = Minimum Detection Limit, MAC = Maximum Allowable Concentration

^{6a}*As of January 20, 2011, treated water organic parameter testing is not applicable for Oliphant DWS as the system is supplied with treated water by the Wiarton Water Treatment Plant. Please refer to the Wiarton DWS Annual Report for 2023 for a summary of this information.*

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

Parameter & Location	Sample Date (yyyy/mm/dd)	Sample Result
Trihalomethane: Total (µg/L) Annual Average - DW	2023 (Quarterly)	55.3