

# OLIPHANT DRINKING WATER SYSTEM

Small Municipal Residential

SCHEDULE 22 SUMMARY REPORT

For the period of JANUARY 1, 2022 TO DECEMBER 31, 2022

Drinking Water System Regulation: O. Reg 170/03 Schedule 22 Summary Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

This report was prepared in accordance with the requirements of <u>O.Req 170/03, Schedule 22, Summary Reports for Municipalities</u> for the following system and reporting period:

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

| 220007695                           |
|-------------------------------------|
| Oliphant Drinking Water System      |
| Town of South Bruce Peninsula       |
| Small Municipal Residential         |
| January 1, 2022 – December 31, 2022 |

#### 1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on August 10, 2022 for the period covering October 14, 2021 to August 10, 2022. On September 15, 2022 the Inspection Report was issued. An Inspection Summary Rating Record (IRR) of 100% has been 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 2021/2022 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 | <b>Corrective Actions</b> |
|----------|----------|---------------------------|
| 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.

Drinking Water System Regulation: O. Reg 170/03 Schedule 22 Summary Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

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 <sup>3</sup> /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 2022

|           | Treated Water Flow    |                                 |                             |                                 |                      |
|-----------|-----------------------|---------------------------------|-----------------------------|---------------------------------|----------------------|
| Timeframe | Average Flow (m³/day) | Percent of<br>Rated<br>Capacity | Maximum<br>Flow<br>(m³/day) | Percent of<br>Rated<br>Capacity | Total<br>Volume (m³) |
| January   | 18.1                  | 24.1%                           | 21.9                        | 29.2%                           | 562                  |
| February  | 16.4                  | 21.9%                           | 18.9                        | 25.2%                           | 460                  |
| March     | 15.6                  | 20.8%                           | 20.0                        | 26.7%                           | 482                  |
| April     | 16.3                  | 21.7%                           | 19.6                        | 26.1%                           | 488                  |
| May       | 24.8                  | 33.1%                           | 39.5                        | 52.7%                           | 767                  |
| June      | 25.2                  | 33.6%                           | 35.0                        | 46.7%                           | 757                  |
| July      | 23.7                  | 31.6%                           | 34.4                        | 45.9%                           | 736                  |
| August    | 21.3                  | 28.4%                           | 30.6                        | 40.8%                           | 659                  |
| September | 21.1                  | 28.1%                           | 29.2                        | 38.9%                           | 632                  |
| October   | 21.7                  | 28.9%                           | 25.8                        | 34.4%                           | 672                  |
| November  | 21.6                  | 28.8%                           | 30.4                        | 40.5%                           | 649                  |
| December  | 20.7                  | 27.6%                           | 26.0                        | 34.7%                           | 643                  |
| 2022      | 20.5                  | 27.3%                           | 39.5                        | 52.7%                           | 7,507                |

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.

Drinking Water System Regulation: O. Reg 170/03 Schedule 22 Summary Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for 2022

|           | Treated Water Flowrate   |                          |  |
|-----------|--------------------------|--------------------------|--|
| Timeframe | Average Flowrate (L/sec) | Maximum Flowrate (L/sec) |  |
| January   | 1.14                     | 4.01                     |  |
| February  | 1.32                     | 4.10                     |  |
| March     | 1.07                     | 4.01                     |  |
| April     | 1.17                     | 4.28                     |  |
| May       | 1.18                     | 4.08                     |  |
| June      | 1.30                     | 4.22                     |  |
| July      | 1.29                     | 4.21                     |  |
| August    | 1.19                     | 4.09                     |  |
| September | 1.25                     | 4.05                     |  |
| October   | 1.31                     | 3.97                     |  |
| November  | 1.32                     | 3.93                     |  |
| December  | 1.17                     | 4.04                     |  |
| 2022      | 1.23                     | 4.80                     |  |

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.



### OLIPHANT DRINKING WATER SYSTEM

Small Municipal Residential

#### SECTION 11 ANNUAL REPORT

For the period of JANUARY 1, 2022 TO DECEMBER 31, 2022

Drinking Water System Regulation: O. Reg 170/03

Section 11 Annual Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

This report was prepared in accordance with the requirements of <u>O.Reg 170/03, Section 11</u>, <u>Annual reports</u> 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       |
| <b>Drinking Water System Category:</b> | Small Municipal Residential         |
| Reporting Period:                      | January 1, 2022 – December 31, 2022 |

#### 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, NOH 2TO
- https://www.southbrucepeninsula.com/en/town-hall/water-and-sewerreports.aspx#2021

### 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?

| V   |  |  |
|-----|--|--|
| Yes |  |  |
|     |  |  |

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

| Χ | Public access/notice via the web           |
|---|--|
| Χ | Public access/notice via Government Office |
|   | Public access/notice via a newspaper       |

| Section 11 Annual Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System |
|--|
| X Public access/notice via Public Request Public access/notice via a Public Library Public access/notice via other method:   |
| Description of Drinking Water System (O.Reg 170/03, Section 11.(6)(a)):  |

The Oliphant Water Treatment Plant currently transports all of its drinking water from the Wiarton Water Treatment Plant. The equipment that is currently being used consists of:

- 2 Clearwells
- 2 Highlift pumps
- Secondary Disinfection by Sodium Hypochlorite
- PLC/SCADA system
- Standby power diesel generator

Drinking Water System Regulation: O. Reg 170/03

NOTE: Starting January 20<sup>th</sup>, 2011, the Oliphant Water Treatment Plant began receiving its treated water from the Wiarton Water Treatment Plant.

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 v | were incurre | ed to: |
|-------------|------------|--------------|--------|
|-------------|------------|--------------|--------|

|   |   | Install required equipment            |
|---|---|---------------------------------------|
| > | ( | Repair required equipment             |
|   |   | Replace required equipment            |
| > | ( | 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)):

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/ Result & Unit |     | Resolution |  |  |  |  |
|----------------------------|--------------------------|-----|------------|--|--|--|--|
| N/A                        | N/A                      | N/A | N/A        |  |  |  |  |

Drinking Water System Regulation: O. Reg 170/03 Section 11 Annual Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

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<br>of | Range of E. Coli or Fecal Results |      | Range of Total Coliform Results |      | Number<br>of HPC | Range<br>Sam |      |
|--------------|--------------|-----------------------------------|------|---------------------------------|------|------------------|--------------|------|
|              | Samples      | Min.                              | Max. | Min.                            | Max. | Samples          | Min.         | Max. |
| Distribution | 52           | 0                                 | 0    | 0                               | 0    | 52               | 0            | 4    |

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 | Range of Results |      |
|---|-----------|------------------|------|
| Parameter & Location                              | Samples   | Min.             | Max. |
| Free Chlorine Residual, Treated Water* (mg/L)     | 8760      | 1.09             | 1.88 |
| Free Chlorine Residual, Distribution Water (mg/L) | 105       | 0.70             | 1.40 |

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

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<br>& Issue Date<br>(yyyy/mm/dd) | Parameter                                    | Date<br>Sampled | Number<br>of<br>Samples | Annual<br>Average | Allowable<br>Annual<br>Average |
|--|--|-----------------|-------------------------|-------------------|--------------------------------|
| March 6, 2020<br>094-102 (Issue 4)               | Total Suspended Solids<br>(Filter backwash)  | N/A             | N/A*                    | N/A               | 25 mg/L                        |
| March 6, 2020<br>094-102 (Issue 4)               | Total Chlorine Residual<br>(Filter backwash) | N/A             | N/A*                    | N/A               | 0.02 mg/L                      |

<sup>\*</sup>Currently this parameter is not being tested as the filters are not in use. Oliphant WTP has its water transported 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<br>(yyyy/mm/dd) | Sample<br>Result | Maximum Allowable Concentration (MAC) | Exceedance of MAC |
|----------------------|-----------------------------|------------------|---------------------------------------|-------------------|
| N/A                  | N/A                         | N/A              | N/A                                   | N/A               |

Note: Starting January 20<sup>th</sup>, 2011, the Oliphant Water Treatment Plant began receiving its treated water from the Wiarton Water Treatment Plant so Schedule 23, Nitrate/Nitrite and Sodium and Fluoride samples are not required. Please refer to the Wiarton DWS Annual Report for this summary.

<sup>\*</sup>Primary disinfection is achieved at the Wiarton WTP. Trim chlorination is performed as needed.

Drinking Water System Regulation: O. Reg 170/03 Section 11 Annual Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

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                     | Range of<br>Results |      | Number of Lead<br>Exceedances |  |  |  |
|--|-------------------------------|---------------------|------|-------------------------------|--|--|--|
|  | Samples                       | Min.                | Max. | (MAC = 10 μ/L)                |  |  |  |
| Period: Ja   | nuary 1 to April 1            | L <b>5</b>          |      |                               |  |  |  |
| Plumbing – Lead (μg/L) <sup>a</sup>                    | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Lead (μg/L) <sup>b</sup>                | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> ) | 1                             | 79                  | 79   | N/A                           |  |  |  |
| Distribution – pH                                      | 1                             | 8.46                | 8.46 | N/A                           |  |  |  |
| Period: Jur  | Period: June 15 to October 15 |                     |      |                               |  |  |  |
| Plumbing – Lead (μg/L) <sup>a</sup>                    | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Lead (μg/L) <sup>b</sup>                | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> ) | 1                             | 74                  | 74   | N/A                           |  |  |  |
| Distribution – pH                                      | 1                             | 8.33                | 8.33 | N/A                           |  |  |  |
| Period: D  | ecember 15 to 3               | 1                   |      |                               |  |  |  |
| Plumbing – Lead (μg/L) <sup>a</sup>                    | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Lead (μg/L) <sup>b</sup>                | N/A                           | N/A                 | N/A  | N/A                           |  |  |  |
| Distribution – Alkalinity (mg/L as CaCO <sub>3</sub> ) | 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.

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<br>(yyyy/mm/dd) | Sample<br>Result | Maximum Allowable Concentration (MAC) | Exceedance<br>of MAC |
|--|-----------------------------|------------------|---------------------------------------|----------------------|
| Trihalomethane: Total (ug/L) Annual Average - DW | 2022/01/01                  | 48.00            | 100.0                                 | No                   |
| HAA Total (ug/L) Annual<br>Average - DW          | 2022/01/01                  | 22.70            | 80.0                                  | No                   |

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

<sup>&</sup>lt;sup>a</sup>Plumbing samples are not applicable as this system qualifies for the plumbing exemption per O. Reg 170/03 Schedule 15.1-5 (9) (10).

<sup>&</sup>lt;sup>b</sup>Distribution lead samples are taken every 36 months. The next set of distribution lead samples is scheduled to be sampled during the winter period of December 15, 2023 to April 15, 2024 and summer period of June 15, 2024 to October 15, 2024.

Drinking Water System Regulation: O. Reg 170/03 Section 11 Annual Report: January 1, 2022 to December 31, 2022 Town of South Bruce Peninsula: Oliphant Drinking Water System

Note: Starting January 20<sup>th</sup>, 2011, the Oliphant Water Treatment Plant began receiving its treated water from the Wiarton Water Treatment Plant so Schedule 24 samples are not required. Please refer to the Wiarton DWS Annual Report for this summary.

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<br>(yyyy/mm/dd) | Sample Result |  |
|----------------------|-----------------------------|---------------|--|
| N/A                  | N/A                         | N/A           |  |