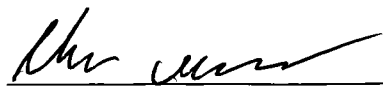




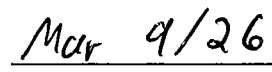
Township of Enniskillen
Oil City Wastewater Collection System and Lagoon

**Annual Performance Report of Operations
YEAR - 2025**

Managed, Operated, and Maintained by
The Township of Enniskillen



Signature, ORO



Date

Overview

The Township of Enniskillen Oil City Sewer Collection system is a Class one (1) collection system and operated under the Environmental Compliance Approval Number: 028-W601 Issued September 28, 2022.

ECA Issue Date September 28th, 2022

Application for ECA Review Due Date September 15, 2028

Certificates of Classification on file are:

- **Wastewater Treatment Facility Class 1 4951 Issued March 23, 2009**
- **Wastewater Collection Facility Class 1 4836 Issued March 23, 2009**

MECP performed an inspection of the wastewater system on August 22, 2018.

Pump Stations

| System Name | Wastewater System Number | Location | ECA Number | Issue Date |
|--------------------------|---------------------------------|---------------------------|-------------------|-------------------|
| Oil City Pumping Station | 4836 | 3123 Main Street Oil City | 1-0245-70-742196 | Oct 1 1974 |

Collection System

The Oil City Wastewater Collection System consists of works for the collection and transmission of sewage, consisting of 2,496 m of trunk sewers, a sewage pumping station and 1,189 m of forcemain, with discharge into the Oil City Lagoon.

Alarm System

The Oil City pump station is equipped with an alarm system to alert the Operator of pump failures, high levels or hydro outages. The alarm system is tested on a monthly basis.

Sampling & Monitoring data

Oil City Wastewater lagoon samples are taken monthly
 SGS Research Laboratory conducts sample analysis

Monthly Sample Results - Oil City Wastewater Collection

Year **2024**

| Month | Sample Date | BOD5 (BOD5) [mg/l [mg/l] | Total Suspended Solids [mg/l] | Phosphorus (total) [mg/l] | TKN [as N mg/l] |
|-----------|-------------------|-----------------------------|----------------------------------|------------------------------|--------------------|
| January | January 15 2025 | 295 | 237 | 6.91 | 62.3 |
| February | February 19 2025 | 190 | 259 | 7.34 | 70.2 |
| March | March 10 2025 | 246 | 839 | 5.52 | 48.1 |
| April | April 23 2025 | 226 | 604 | 7.55 | 57.3 |
| May | May 22 2025 | 168 | 94 | 4.28 | 29.7 |
| June | June 11 2025 | 295 | 252 | 7.24 | 59.5 |
| July | July 23 2025 | 177 | 95 | 5.7 | 43.8 |
| August | August 20 2025 | 247 | 142 | 5.3 | 36.7 |
| September | September 17 2025 | 160 | 80 | 8.41 | 70.9 |
| October | October 22 2025 | 184 | 61 | 3.85 | 32.6 |
| November | November 19 2025 | 224 | 51 | 4.93 | 45 |
| December | December 18 2025 | 148 | 101 | 7.32 | 70.9 |

The raw sewage samples taken in 2025 appeared to be within normal, expected ranges for the Oil City Collection

Oil City Pump Station monitoring data

Readings are taken at the Oil City pump stations on a regular basis.
 The last reading of each month will be reported in this annual report.
 The readings will be compared to the prior year to observe any abnormal situations.

| Month | 2024 | | 2025 | |
|-----------|---------|-------|---------|-------|
| | Reading | Total | Reading | Total |
| | (m3) | (m3) | (m3) | (m3) |
| January | 43265 | 1010 | 50679 | 580 |
| February | 43832 | 567 | 51195 | 516 |
| March | 44369 | 537 | 51827 | 632 |
| April | 45128 | 759 | 52695 | 868 |
| May | 45751 | 623 | 53250 | 555 |
| June | 46329 | 578 | 53729 | 479 |
| July | 47111 | 782 | 54318 | 589 |
| August | 47668 | 557 | 54770 | 452 |
| September | 48167 | 499 | 55195 | 425 |
| October | 48660 | 493 | 55676 | 481 |
| November | 49315 | 655 | 55956 | 280 |
| December | 50099 | 784 | 56620 | 664 |
| | | 7,844 | | 6,521 |

The Oil City lagoon is approval for annual discharge.

Alum is added to the lagoon prior to discharge to meet set parameters as outlined in Procedure F-5-1.

When levels are acceptable as per Procedure F-5-1 the lagoon is discharged and the required samples are taken. If levels are not within the acceptable parameters or abnormal circumstances occur, the Operator works with MECP for approval of lagoon discharge.

An annual report of the discharge is prepared and sent to the MECP.

In 2025 we had significant amounts of precipitation which led to the necessity to release the lagoon earlier than the normal fall timeline. Staff worked with the MECP to set sample requirements and timelines. The lagoon was treated with alum on prior to the discharge. Results of the discharge are included in this annual report.

The regular fall discharge took place from November 19 to 25, 2025 discharging approximately 7,770 m³ of effluent which is what is normally expected to occur during the regular fall discharge. The lagoon was treated with alum on November 5 2025 prior to discharge. Results of the November 2025 discharge are included in this annual report.

| May 2025 Lagoon discharge | | Start of discharge (1 hour after discharging starts) | | Effluent (results) | Fox Creek Upstream (results) | Fox Creek Downstream (results) |
|---------------------------|-------|---|--|--------------------|------------------------------|--------------------------------|
| Date | Time | | | | | |
| May 12 2025 | | | | | | |
| | 7:05 | PH | | 7.36 | 7.6 | 7.88 |
| | 7:11 | Temperature | | 16.2 | 12.9 | 14.6 |
| | 7:20 | Total Suspended Solids (TSS) | | 7 | 13 | 34 |
| | | CBOD | | 12 | 9 | 15 |
| | | Alkalinity | | 108 | 148 | 128 |
| | | Total phosphorus | | 0.12 | 0.42 | 0.33 |
| | | Nitrate | | <.06 | 0.19 | 0.42 |
| | | Nitrite | | 0.04 | <.03 | <.03 |
| | | Total Kjeldahl Nitrogen | | 9.2 | <.05 | 5.4 |
| | | Total Ammonia Nitrogen | | 8.2 | <.01 | 4.6 |
| | | Near end of discharge | | | | |
| May 12 2025 | 17:16 | | | | | |
| | 17:27 | PH | | 7.27 | 7.94 | 7.43 |
| | 17:19 | Temperature | | 22.5 | 22.9 | 21.8 |
| | | Total Suspended Solids (TSS) | | 12 | 8 | 15 |
| | | CBOD | | 5 | <.4 | <.4 |
| | | Alkalinity | | 103 | 160 | 128 |
| | | Total phosphorus | | 0.13 | <.03 | 0.08 |
| | | Nitrate | | <.06 | 0.19 | 0.39 |
| | | Nitrite | | 0.05 | <.03 | 0.04 |
| | | Total Kjeldahl Nitrogen | | 8.9 | <.05 | 5.5 |
| | | Total Ammonia Nitrogen | | 8.1 | <.01 | 5 |
| | | Start of discharge (1 hour after discharging starts) | | | | |
| May 13 2025 | | | | | | |
| | 7:06 | PH | | 7.07 | 7.27 | 7.05 |
| | 7:16 | Temperature | | 20.5 | 18.2 | 19.9 |
| | 7:11 | Total Suspended Solids (TSS) | | 5 | 10 | 18 |
| | | CBOD | | 7 | 5 | 7 |
| | | Alkalinity | | 111 | 154 | 118 |
| | | Total phosphorus | | 0.17 | <.03 | 0.28 |
| | | Nitrate | | <.06 | 0.2 | 0.11 |
| | | Nitrite | | 0.04 | 0.06 | 0.03 |
| | | Total Kjeldahl Nitrogen | | 9.4 | <.05 | 8.1 |
| | | Total Ammonia Nitrogen | | 8.3 | <.1 | 7.2 |
| | | Second 12 Hour Event | | | | |
| Date | Time | | | | | |
| May 13 2025 | | | | | | |
| | 7:06 | PH | | 7.07 | 7.27 | 7.05 |
| | 7:16 | Temperature | | 20.5 | 18.2 | 19.9 |
| | 7:11 | Total Suspended Solids (TSS) | | 5 | 10 | 18 |
| | | CBOD | | 7 | 5 | 7 |
| | | Alkalinity | | 111 | 154 | 118 |
| | | Total phosphorus | | 0.17 | <.03 | 0.28 |
| | | Nitrate | | <.06 | 0.2 | 0.11 |
| | | Nitrite | | 0.04 | 0.06 | 0.03 |
| | | Total Kjeldahl Nitrogen | | 9.4 | <.05 | 8.1 |
| | | Total Ammonia Nitrogen | | 8.3 | <.1 | 7.2 |

| | | | Near end of discharge | Effluent (results) | Fox Creek Upstream (results) | Fox Creek Downstream (results) |
|--------------|-------|--|--------------------------------|-------------------------|------------------------------------|--------------------------------------|
| May 13 2025 | | | | | | |
| Eff | 17:15 | | PH | 7.21 | 7.5 | 7.32 |
| US | 17:27 | | Temperature | 22.8 | 20.8 | 21.3 |
| DS | 17:22 | | Total Suspended Solids (TSS) | 10 | 10 | 11 |
| | | | CBOD | 8 | 4 | 8 |
| | | | Alkalinity | 112 | 172 | 138 |
| | | | Total phosphorus | 0.32 | 0.2 | 0.09 |
| | | | Nitrate | <.06 | 0.22 | 0.28 |
| | | | Nitrite | 0.04 | <.03 | <.03 |
| | | | Total Kjeldahl Nitrogen | 9.5 | <.05 | 4.8 |
| | | | Total Ammonia Nitrogen | 8.4 | <.01 | 4 |
| Date | Time | | Day Following Second discharge | Downstream (results) | | |
| May 14 2025 | | | | | | |
| Fox Creek DS | 7:30 | | PH | 7.53 | | |
| | | | Temperature | 18.3 | | |
| | | | Total Suspended Solids (TSS) | 13 | | |
| | | | CBOD | <4 | | |
| | | | Alkalinity | 166 | | |
| | | | Total phosphorus | 0.28 | | |
| | | | Nitrate | 0.47 | | |
| | | | Nitrite | <.03 | | |
| | | | Total Kjeldahl Nitrogen | <.05 | | |
| | | | Total Ammonia Nitrogen | <.01 | | |

Oil City Lagoon - WW#110001738
 Lagoon Discharge - Annual Reporting
 File: SI-LA-EN-400

Reporting Period Ending
 (Select One)

| March | April | May | June | September | October | November | December |
|-------|-------|-----|------|-----------|---------|----------|----------|
| | | | | | | x | |

Proposed Lagoon Discharge Date

Proposed Treatment Option

Lagoon Discharge Date
 (start and end dates)

Treated with alum November 5 2025

Started November 19 2025 @ 8:17 ended November 25 2025 at 7:45

Total Effluent volume to watercourse

7,770 MB

Treatment Date

November 5 2025

Treatment Option/Details

Alum 1000 Imp gallons

| Sample Results | Guideline Criteria for parameter | Contents of Lagoon Prior to Discharge | Effluent Sample 1 During discharge | Effluent Sample 2 During Discharge | Effluent *Additional Sample During Discharge | (use additional columns if necessary) *(if applicable) |
|--|----------------------------------|---------------------------------------|------------------------------------|------------------------------------|--|--|
| Carbonaceous Biochemical Oxygen Demand (BOD5) [mg/L] | 25 | N/A | 4 | | <4 | |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 25 | <4 | | 3 | | 6 |
| Total Suspended Solids (mg/L) | 25 | 7.62 | 8.3 | 8.11 | | |
| pH (no unit) | | <0.03 | 0.09 | 0.08 | | |
| Total Phosphorus (total) [mg/L] | 1 | 2.9 | 3.4 | 3.2 | | |
| Total Kjeldahl Nitrogen (as N) [mg/L] | | N/A | 2.2 | 2.3 | | |
| Ammonia-Ammonium (N) [mg/L] | | N/A | 0.31 | 0.36 | | |
| Nitrite (as N) [mg/L] | | N/A | 0.08 | 0.14 | | |
| Nitrate (as N) [mg/L] | | N/A | 0.39 | 0.5 | | |
| Nitrate + Nitrite (as N) [mg/L] | | N/A | 0.053 | 0.026 | | |
| Un-ionized Ammonia | | | | | | |
| Date of Sample | | Nov 7 2025 | Nov 19 2025 | Nov 24 2025 | | |

Notes/Observations/Comments

Fall lagoon discharge completed

Samples were also taken upstream and downstream of Fox Creek - see attached sample results

No Actions to report this period
 (check here if applicable)

Lagoon discharge

In 2025 the system operated without issue

| Problem/Concern/Issue | Solution |
|------------------------------|-----------------|
| N/A | N/A |

The Oil City Pump station is equipped with two (2) submersible pumps
The pumps are alternately running. There is one (1) pump in storage to serve as back up
if necessary.

There is a 100 mm diameter Electromagnetic Flow meter installed on the forcemain
downstream of the sewage pumping station. The Electromagnetic flow meter is read
on a weekly basis and recorded in the Oil City sewer log book.

This measuring device is to be calibrated at least once every three (3) years. A copy of the
verification report is filed in the Operating Manual.

Last calibration date: February 27, 2025

There is an ultrasonic transmitter to monitor the levels in the pump station.

If the levels go above 1.8 m the alarm is set to alarm out to the operator.

The transmitter is calibrated upon installation and does not need calibration on a regular basis.

The following are list of complaints received for the sewage collection system for the year

N/A - No complaints received for the Oil City Sewer System in 2025.

Alterations to the Authorized System within the reporting period that are authorized by ECA Number 028-W601

N/A - No alterations were made in the system in 2025.

Staff are currently working with the MECP to amend the existing ECA to allow for fall and spring discharges annually. Part of the application process is to complete flow monitoring of Fox Creek in the fall of 2024 and the spring of 2025. The flow monitoring was completed in 2024 and 2025. Staff will continue to work with the MECP on submission of the application to amend the ECA with the goal of submitting in 2026. After the application is submitted, it is estimated to be approximately one year after submission prior to an amended ECA being in place.

**In 2024 the following overflow or spill situations occurred
(State N/A if no events during the year)**

| Date | Event | Description of Events | Solution |
|-------------|--------------|------------------------------|-----------------|
| N/A | N/A | N/A | N/A |

Procedure F-5-1 Determination Of Treatment Requirements For Municipal And Private Sewage Treatment Works

Parameters from the following chart (F-5-1) are guidelines for seasonal discharge of the single cell lagoon.

| Treatment Level and Processes | <u>Effluent Design Objectives 1 (mg/L) - BOD5</u> | <u>Effluent Design Objectives 1 (mg/L) - SS</u> | <u>Effluent Design Objectives 1 (mg/L) - TP</u> | <u>Effluent Design Objectives 1 (mg/L) - (NH3+NH4+)-N</u> | <u>Effluent Guidelines 2 (mg/L) - BOD5</u> | <u>Effluent Guidelines 2 (mg/L) - SS</u> |
|---|---|---|---|---|--|--|
| Seasonal Lagoon with TP removal by batch chemical dosage | 15 | 20 | 0.5 to 1.0 | n/a | 25 | 25 |

The following practices occur to strive to meet guideline paramers:

10 L/month of Shactivate is added to the lagoon as per approvals on file in the Operating Manual.

Alum is added prior to discharging the lagoon.

Jar samples are taken to determine the amount of alum required prior to treatment.