

Tuesday March 31, 2026

Jim Moss, Director, Development and Operations  
Town of Shelburne  
203 Main Street East  
Shelburne, Ontario, L9V 3K7

**RE: 2025 Annual Sewage Performance Report (ECA 6413-ABLQQS) and Municipal Sewage Collection System ECA (CLI ECA 109-W601) – Town of Shelburne**

Dear Mr. Moss,

Please see attached for the following 2025 Annual Sewage and Collection System Performance Reports prepared by the Ontario Clean Water Agency on behalf of the Town of Shelburne for the:

- Shelburne Waste Water Treatment Plant
- Town of Shelburne Municipal Sewage Collection System

This report was prepared in accordance with the Amended Environmental Compliance Approval Number 6413-ABLQQS – Issued July 19, 2016 section 10(6) and Municipal Sewage Collection System ECA Number 109-W601, Issue Number 1- Issued July 27, 2022. Your receipt of this report by or before March 31, satisfies the regulatory requirements:

- ECA 6413-ABLQQS that “The owner shall prepare and submit a performance report to the Water Supervisor on an annual basis, within (90) days following the end of the period reported upon” and;
- ECA 109-W601 that “The Owner shall prepare an annual performance report for the Authorized System is submitted to the Director on or before March 31st of each year and covers the period from January 1st to December 31st of the preceding calendar year.

The Report requirements of ECA 6413-ABLQQS can be found within the ECA as per section 10(6.a-l) and the reporting requirements for ECA 109-W601 can be found in Schedule E, Section 4.6.3 to 4.6.9.

In addition, ECA 109-W601 requires that report shall be made available, on request and without charge, to members of the public who are served by the Authorized System; and made available, **by June 1** of the same reporting year, to members of the public without charge by publishing the report on the Internet, if the Owner maintains a website on the Internet. We kindly ask that notification is provided once the report is posted on the Town’s Municipal website.

Lastly, the Ministry has indicated that the Municipal Collection System ECA Annual Reports can either be prepared as a separate report or as a subsection of the Annual Sewage Report for the Wastewater Treatment Facility, attached you will find one report that satisfies the reporting requirements of both Environmental Compliance Approvals.

Should you require further clarification on the information found within the Annual Sewage Performance Report, please feel free to contact me.

Sincerely,



Jenna Porter  
Senior Operations Manager – North Highlands Hub  
OCWA, Georgian Highlands Region

# 2025 ANNUAL SEWAGE REPORT

SHELBURNE WASTEWATER  
TREATMENT PLANT &  
COLLECTION SYSTEM

For the period of  
January 1<sup>st</sup>, 2025 to December 31<sup>st</sup>, 2025

Prepared for the Corporation of the Town of Shelburne by the Ontario Clean Water Agency



*A People Place, A Change of Pace*  
**SHELBURNE**  
ONTARIO, CANADA



**ONTARIO CLEAN WATER AGENCY**  
**AGENCE ONTARIENNE DES EAUX**

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## 1. System Description

The Shelburne Wastewater Treatment Plant (WWTP) is an extended aeration sewage treatment plant (STP) with tertiary treatment and is located at 300 Centennial Road in the Town of Shelburne, Ontario. The WWTP is owned by the Town of Shelburne and the Operating Authority is the Ontario Clean Water Agency. The WWTP is operated under amended ECA #6413-ABLQQS as a municipal sewage works for the collection, transmission, treatment and disposal of sewage, under a plant rated capacity of 3,420 m<sup>3</sup>/d. The WWTP serves a community of approximately 10,001 persons. The community first obtained a waste disposal system in 1968 with the construction of a 5.5 ha lagoon and associated gravity collection and pumping system. Consistent growth over the years lead to the construction in 1981, of the current wastewater treatment system. The expansion consisted of a new trunk sewer, pumping facilities, secondary and tertiary treatment and modifications to the existing lagoons, which now provide storm and effluent holding during excess storm flows, plant upsets and maintenance.

The facility consisted of a wet well, a manual screen, grit channels, an oxidation ditch, one secondary clarifier, four effluent sand filters and a chlorine contact chamber. The oxidation ditch used two brush rotors. The facility operated as an extended aeration plant in this configuration from 1981 until December 1999.

A major expansion (Phase 1) took place at the Shelburne WWTP in 1999, changing the configuration of the plant and the method of treating wastewater. The plant underwent construction starting in April 1999 with the start-up of the new process in December of 1999. The Shelburne WWTP is still an extended aeration plant. As an extended aeration plant it is designed to remove suspended solids, CBOD<sub>5</sub> and phosphorus from the wastewater. Major improvements included two aeration tanks constructed with fine bubble diffusers. The sludge treatment system consists of a two stage aerobic sludge digestion system with a total storage volume of 580m<sup>3</sup>, equipped with coarse bubble aeration system and supernatant decanting. The former oxidation ditch was converted to a sludge storage facility with approximately six months storage.

Sludge loading facilities provide for transfer of digested aerobic sludge to trucks. Digested sludge is land-applied as farm fertilizer.

The major process units consist of: equalization and influent works, aeration tanks, secondary clarifiers, disk filtration, UV disinfection, and aerobic biosolids digesters and sludge holding tank, chemical dosing (Aluminum Sulfate) and plant air (blowers). This facility receives residential, commercial, institutional and industrial wastewater and provides a level of treatment to meet the requirements of Amended Environmental Compliance Approval - #6413-ABLQQS with discharge into the Besley Drain, a minor tributary of the Boyne River. The Boyne River empties into the Nottawasaga River, ultimately meeting Georgian Bay.

A "Process Flow Schematic" is included in **Appendix A** of this report.

An overview of Shelburne Wastewater Treatment Plant can be found in Table 1:

**Table 1.** Shelburne Wastewater Treatment Plant Overview

<b>Facility Name</b>	Shelburne Wastewater Treatment Plant
<b>Facility Type</b>	Extended Air STP with Tertiary Treatment
<b>Plant Classification</b>	WWT III, WWC II
<b>Works Number</b>	110000659
<b>Design Capacity</b>	3,420 m <sup>3</sup> /day
<b>Designed Peak</b>	8,921 m <sup>3</sup> /day
<b>Receiving Water</b>	Besley Drain to Boyne River to Nottawasaga River
<b>Environmental Compliance Approval</b>	6413-ABLQQS , issued July 19, 2016

## 2. Monitoring Data and Comparison to Effluent Limits

As per Section 10(6)(a) of ECA 6413-ABLQQS, a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Effluent Limits of Condition 7, including an overview of the success and adequacy of the Works is required.

### 2.1 ECA Monitoring Program

The following tables outlines the hauled sewage, influent and effluent monitoring program at the Shelburne WWTP as required by the most current ECA for the reporting period. There are additional in-house samples taken and analyzed throughout the year in order to help with process performance monitoring, adjustment, and optimization. These parameters were analyzed by an accredited analytical laboratory (SGS Canada Inc., Lakefield, Ontario). The sampling frequencies meet the requirements set out in Section 9 of ECA 6413-ABLQQS.

**Table 2.** Hauled Sewage Water Quality Monitoring Program and Sampling Points - as per ECA 6413-ABLQQS Section 9(3)

Parameter	Sample Type	Minimum Frequency
BOD <sub>5</sub> <sup>2A</sup>	Grab	Monthly
Total Suspended Solids <sup>2A</sup>	Grab	Monthly
Total Phosphorus <sup>2A</sup>	Grab	Monthly
Total Kjeldahl Nitrogen <sup>2A</sup>	Grab	Monthly

<sup>2A</sup>Refer to **Appendix B** for monthly sample results.

**Table 3.** Raw Sewage (Influent) Water Quality Monitoring Program and Sampling Points - as per ECA 6413-ABLQQS Section 9(3)

Parameter	Sample Type	Minimum Frequency
BOD <sub>5</sub> <sup>3A</sup>	Composite	Monthly
Total Suspended Solids <sup>3A</sup>	Composite	Monthly
Total Phosphorous <sup>3A</sup>	Composite	Monthly
Total Kjeldahl Nitrogen <sup>3A</sup>	Composite	Monthly

<sup>3A</sup>Refer to **Appendix B** for monthly sample results.

**Table 4.** Final Effluent Water Quality Monitoring Program and Sampling Points- *as per ECA 6413-ABLQQS Section 9(3)*

Parameter	Sample Type	Minimum Frequency
CBOD <sub>5</sub> <sup>4A</sup>	Composite	Weekly
Total Suspended Solids <sup>4A</sup>	Composite	Weekly
Total Phosphorous <sup>4A</sup>	Composite	Weekly
Total Ammonia Nitrogen <sup>4A</sup>	Composite	Weekly
<i>E. Coli</i> <sup>4A</sup>	Grab	Weekly
pH	Grab/Probe	Weekly
Temperature	Grab/Probe	Weekly

<sup>4A</sup>Refer to **Appendix B** for monthly sample results.

## 2.2 Effluent Objectives and Effluent Limits

The following tables outline the final effluent objectives, limits and loadings at the Shelburne WWTP as per its ECA. The applicable effluent parameters are either “concentrations” expressed as milligrams per litre or “loadings” expressed as kilograms per day. As per Section 7, concentration Limits for CBOD<sub>5</sub>, TSS, TP, and TAN are reportable based on a monthly average effluent concentration, *E.Coli* based on a monthly Geometric Mean Density, pH based on a Single Sample Result, and the Loading Limits are reportable based on a Monthly Average Waste Loading.

**Table 5.** Final Effluent Design Objectives - *as per Section 6(1) of ECA 6413-ABLQQS*

Effluent Parameter	Concentration Objective (mg/L)
CBOD <sub>5</sub>	4.0
Total Suspended Solids	4.0
Total Phosphorous	0.12
Total Ammonia Nitrogen	
June 01 to Sept 30	0.5
Oct 01 to May 31	2.0
<i>E.coli</i>	150 CFU /100 mL (monthly Geometric Mean Density)
pH	maintained between 6.5 to 8.5, inclusive, at all times

**Table 6.** Final Effluent Design Limits - *as per Section 7(1) of ECA 6413-ABLQQS*

Effluent Parameter	Average Concentration Limit (mg/L)	Average Waste Loading Limit (kg/day)
CBOD <sub>5</sub>	5.0	17.1
Total Suspended Solids	5.0	17.1
Total Phosphorous	0.25	0.86
Total Ammonia Nitrogen		
Jun 01 to Sep 30	0.8	2.7
Oct 01 to May 31	2.4	8.2
<i>E.coli</i>	200 CFU /100 mL (monthly Geometric Mean Density)	n/a

Effluent Parameter	Average Concentration Limit (mg/L)	Average Waste Loading Limit (kg/day)
pH	maintained between 6.0 to 9.5, inclusive, at all times	

As per the ECA, effluent objectives are non-enforceable design targets, while effluent limits are enforceable compliance requirements

### 2.3 Effluent Monitoring Data: Comparison to Objectives and Limits

Analytical and monitoring data for the Shelburne Wastewater Treatment Facility is stored in OCWA’s data management system (WISKI). Annual and monthly averages for flows, CBOD<sub>5</sub>, Suspended Solids, Total Phosphorous, Nitrogen-series and *E.coli* can be found in **Appendix B**. A comparison of analytical data from effluent samples to the effluent objectives and effluent limits shown in the below tables.

**Table 7.** Effluent Sampling Results: Monthly CBOD<sub>5</sub> and CBOD<sub>5</sub> Loading Concentrations<sup>7A</sup>

	CBOD <sub>5</sub>					
	Monthly Average Concentration (mg/L)	Within Objectives (4.00 mg/L)	Within Limits (5.00 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (kg/d)	Within Limits (17.10 kg/d)
<b>January</b>	<2.00	Yes	Yes	<4.99	n/a	Yes
<b>February</b>	<2.75	Yes	Yes	<6.40	n/a	Yes
<b>March</b>	3.25	Yes	Yes	10.72	n/a	Yes
<b>April</b>	4.00	Yes	Yes	16.67	n/a	Yes
<b>May</b>	2.75	Yes	Yes	8.08	n/a	Yes
<b>June</b>	<2.00	Yes	Yes	<4.83	n/a	Yes
<b>July</b>	<2.00	Yes	Yes	<4.60	n/a	Yes
<b>August</b>	<2.25	Yes	Yes	<4.82	n/a	Yes
<b>September</b>	<2.00	Yes	Yes	<4.19	n/a	Yes
<b>October</b>	<2.00	Yes	Yes	<4.30	n/a	Yes
<b>November</b>	<2.50	Yes	Yes	<4.73	n/a	Yes
<b>December</b>	<2.00	Yes	Yes	<4.45	n/a	Yes

<sup>7A</sup>As per the ECA, CBOD<sub>5</sub> Concentration Averaging Calculator is a Monthly Average Effluent Concentration

<sup>7A</sup>As per the ECA, CBOD<sub>5</sub> Loading Limits Concentration Averaging Calculator is a Monthly Average Daily Effluent Loading

**Table 8:** Effluent Sampling Results: TSS and TSS Loading Concentrations<sup>8A</sup>

	Total Suspended Solids					
	Monthly Average Concentration (mg/L)	Within Objectives (4.00 mg/L)	Within Limits (5.00 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (kg/d)	Within Limits (17.10 kg/d)
<b>January</b>	2.50	Yes	Yes	6.24	n/a	Yes
<b>February</b>	4.58	<b>No</b>	Yes	10.67	n/a	Yes

	<b>Total Suspended Solids</b>					
	Monthly Average Concentration (mg/L)	Within Objectives (4.00 mg/L)	Within Limits (5.00 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (kg/d)	Within Limits (17.10 kg/d)
<b>March</b>	<4.06	<b>No</b>	Yes	<13.38	n/a	Yes
<b>April</b>	<3.36	Yes	Yes	<14.02	n/a	Yes
<b>May</b>	4.88	<b>No</b>	Yes	14.31	n/a	Yes
<b>June</b>	<2.75	Yes	Yes	<6.64	n/a	Yes
<b>July</b>	<2.45	Yes	Yes	<5.64	n/a	Yes
<b>August</b>	<2.50	Yes	Yes	<5.36	n/a	Yes
<b>September</b>	<2.25	Yes	Yes	<4.72	n/a	Yes
<b>October</b>	2.60	Yes	Yes	5.59	n/a	Yes
<b>November</b>	<2.00	Yes	Yes	<4.73	n/a	Yes
<b>December</b>	<2.00	Yes	Yes	<4.45	n/a	Yes

<sup>8A</sup>As per the ECA, TSS Concentration Averaging Calculator is a Monthly Average Effluent Concentration

<sup>8A</sup>As per the ECA, TSS Loading Limits Concentration Averaging Calculator is a Monthly Average Daily Effluent Loading

**Table 9:** Effluent Sampling Results: TP and TP Loading Concentrations<sup>9A</sup>

	<b>Total Phosphorus</b>					
	Monthly Average Concentration (mg/L)	Within Objectives (0.12 mg/L)	Within Limits (0.25 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (kg/d)	Within Limits (0.86 kg/d)
<b>January</b>	0.04	Yes	Yes	0.11	n/a	Yes
<b>February</b>	0.08	Yes	Yes	0.19	n/a	Yes
<b>March</b>	0.10	Yes	Yes	0.34	n/a	Yes
<b>April</b>	0.09	Yes	Yes	0.39	n/a	Yes
<b>May</b>	0.09	Yes	Yes	0.26	n/a	Yes
<b>June</b>	0.07	Yes	Yes	0.17	n/a	Yes
<b>July</b>	0.06	Yes	Yes	0.13	n/a	Yes
<b>August</b>	0.05	Yes	Yes	0.11	n/a	Yes
<b>September</b>	0.07	Yes	Yes	0.15	n/a	Yes
<b>October</b>	0.05	Yes	Yes	0.11	n/a	Yes
<b>November</b>	0.04	Yes	Yes	0.11	n/a	Yes
<b>December</b>	0.05	Yes	Yes	0.12	n/a	Yes

<sup>9A</sup>As per the ECA, TP Concentration Averaging Calculator is a Monthly Average Effluent Concentration

<sup>9A</sup>As per the ECA, TP Loading Limits Concentration Averaging Calculator is a Monthly Average Daily Effluent Loading

**Table 10: Effluent Sampling Results: TAN and TAN Loading Concentrations<sup>10A</sup>**

	<b>Total Ammonia Nitrogen (Ammonia Nitrogen + Ammonium Nitrogen)</b>									
	Monthly Average Concentration (mg/L)	Within Objectives (Jun 01-Sept 30 0.50 mg/L)	Within Objectives (Oct 01-May 31 2.00 mg/L)	Within Limits (Jun 01-Sept 30 0.80 mg/L)	Within Limits (Oct 01-May 31 2.4 mg/L)	Monthly Average Loading (kg/d)	Within Objectives (Dec 01-Apr 30 kg/d)	Within Objectives (May 01-Nov 30 kg/d)	Within Limits (June 01-Sept 30 2.70 kg/d)	Within Limits (Oct 01-May 31 8.20 kg/d)
<b>January</b>	<0.25	n/a	Yes	n/a	Yes	<0.62	n/a	n/a	n/a	Yes
<b>February</b>	<0.38	n/a	Yes	n/a	Yes	<0.87	n/a	n/a	n/a	Yes
<b>March</b>	<0.28	n/a	Yes	n/a	Yes	<0.91	n/a	n/a	n/a	Yes
<b>April</b>	<0.72	n/a	Yes	n/a	Yes	<3.00	n/a	n/a	n/a	Yes
<b>May</b>	<0.25	n/a	Yes	n/a	Yes	<0.73	n/a	n/a	n/a	Yes
<b>June</b>	<0.10	Yes	n/a	Yes	n/a	<0.24	n/a	n/a	Yes	n/a
<b>July</b>	<0.10	Yes	n/a	Yes	n/a	<0.23	n/a	n/a	Yes	n/a
<b>August</b>	<0.13	Yes	n/a	Yes	n/a	<0.27	n/a	n/a	Yes	n/a
<b>September</b>	<0.10	Yes	n/a	Yes	n/a	<0.21	n/a	n/a	Yes	n/a
<b>October</b>	<0.44	n/a	Yes	n/a	Yes	<0.95	n/a	n/a	n/a	Yes
<b>November</b>	<0.10	n/a	Yes	n/a	Yes	<0.24	n/a	n/a	n/a	Yes
<b>December</b>	<0.10	n/a	Yes	n/a	Yes	<0.22	n/a	n/a	n/a	Yes

<sup>10A</sup>As per the ECA, TAN Concentration Averaging Calculator is a Monthly Average Effluent Concentration

<sup>10A</sup>As per the ECA, TAN Loading Limits Concentration Averaging Calculator is a Monthly Average Daily Effluent Loading

**Table 11: Effluent Sampling Results: E.coli Concentrations**

	<b>E.coli</b>		
	Monthly Geometric Mean Density (CFU/100mL)	Within Objectives (150 CFU/100mL)	Within Limits (200 CFU/100mL)
<b>January</b>	1.00	Yes	Yes
<b>February</b>	2.34	Yes	Yes
<b>March</b>	1.00	Yes	Yes
<b>April</b>	1.00	Yes	Yes
<b>May</b>	1.00	Yes	Yes
<b>June</b>	1.00	Yes	Yes
<b>July</b>	1.00	Yes	Yes
<b>August</b>	1.00	Yes	Yes
<b>September</b>	1.00	Yes	Yes
<b>October</b>	1.00	Yes	Yes

	<i>E.coli</i>		
	Monthly Geometric Mean Density (CFU/100mL)	Within Objectives (150 CFU/100mL)	Within Limits (200 CFU/100mL)
<b>November</b>	1.00	Yes	Yes
<b>December</b>	1.00	Yes	Yes

**Table 12:** Effluent Sampling Results: pH

	pH			
	pH Monthly Minimum	pH Monthly Maximum	Within Objectives (6.5-8.5)	Within Limits (6.0-9.5)
<b>January</b>	7.48	7.74	Yes	Yes
<b>February</b>	7.38	7.64	Yes	Yes
<b>March</b>	7.50	7.59	Yes	Yes
<b>April</b>	7.47	7.61	Yes	Yes
<b>May</b>	7.52	7.69	Yes	Yes
<b>June</b>	7.61	7.72	Yes	Yes
<b>July</b>	7.65	7.73	Yes	Yes
<b>August</b>	7.69	7.82	Yes	Yes
<b>September</b>	7.62	7.77	Yes	Yes
<b>October</b>	7.59	7.73	Yes	Yes
<b>November</b>	7.53	7.68	Yes	Yes
<b>December</b>	7.54	7.78	Yes	Yes

**Table13:** Effluent Sampling Results: Temperature

	Temperature	
	Monthly Minimum (°C)	Monthly Maximum (°C)
<b>January</b>	11.10	12.50
<b>February</b>	6.80	12.20
<b>March</b>	10.90	11.60
<b>April</b>	10.20	15.30
<b>May</b>	16.00	17.80
<b>June</b>	17.10	21.60
<b>July</b>	20.80	23.00
<b>August</b>	21.10	23.70
<b>September</b>	20.90	22.30
<b>October</b>	18.30	22.10
<b>November</b>	15.40	17.40
<b>December</b>	14.30	17.30

A review of the effluent monitoring data shows that the following parameters were within the objectives (as applicable) and limits set out in the most current ECA for the duration of the 2025 reporting period:

- CBOD5 monthly average daily effluent concentration
- CBOD5 monthly average daily effluent loading
- TSS monthly average daily effluent loading
- TP monthly average daily effluent concentration
- TP monthly average daily effluent loading
- TAN monthly average effluent concentration
- TAN monthly average daily effluent loading
- *E.coli* monthly geometric mean density
- pH single sample results

The TSS objective exceedances observed in February, March, and May 2025 were attributed to high influent flows and filter performance limitations during wet weather events. Corrective actions included increased filter backwashing, operational adjustments to RAS/WAS rates, and additional maintenance on the cloth filters. All TSS effluent limits were met.

A review of the effluent monitoring data shows that the following parameters were within the limits set out in the most current ECA for the duration of reporting period but were unable to meet the objectives in the following instances:

- TSS monthly average effluent concentration – February, March and May 2025

It should be noted that as per the ECA, the objectives are non-enforceable design objectives to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs. Exceedances of objectives is not reportable.

A review of the effluent monitoring data shows that the all parameters were within the limits set out in the most current ECA.

## 2.4 Effluent Flow: Summary and Interpretation of Reporting Year

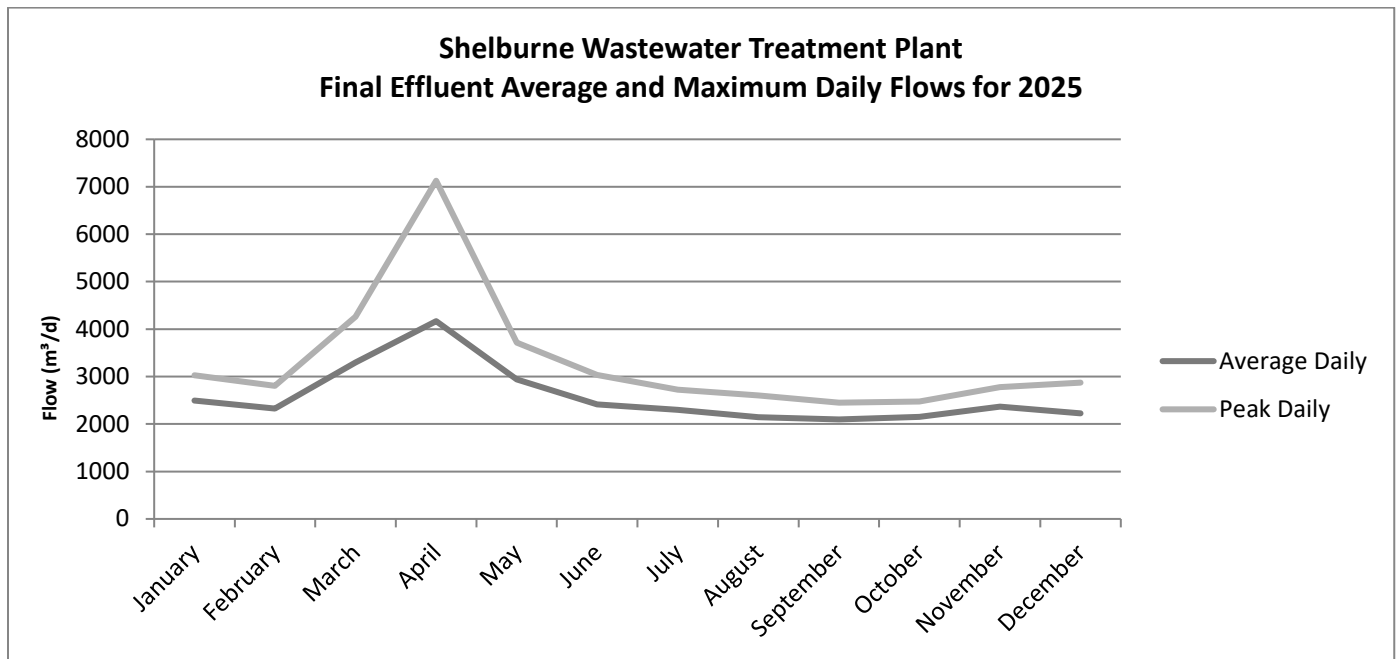
The following table (Table 14) outlines the final effluent average daily flow data in 2025 and the graph shows the final effluent daily and peak final effluent flow by month for the reporting period.

**Table 14:** Final Effluent Average Daily Flow and Peak Flow Data by Month for 2025

Month	Average Daily (m <sup>3</sup> /day)	Peak Daily (m <sup>3</sup> /day)	Total (m <sup>3</sup> /day)
January	2494.57	3029.20	77331.80
February	2328.70	2803.60	65203.60
March	3299.33	4262.00	102279.30
April	4167.78	7127.20	125033.50
May	2936.30	3714.80	91025.40
June	2414.66	3036.30	72439.90

Month	Average Daily (m <sup>3</sup> /day)	Peak Daily (m <sup>3</sup> /day)	Total (m <sup>3</sup> /day)
July	2298.40	2720.90	71250.50
August	2141.84	2604.90	66396.92
September	2096.64	2449.90	62899.10
October	2148.49	2477.70	66603.30
November	2364.27	2774.90	70928.20
December	2223.75	2873.00	68936.10
<b>2025 Average</b>	2576.24	-	-
<b>2025 Maximum</b>	-	7127.20	-
<b>2025 Total</b>	-	-	940327.62

**Graph 1: Average Daily and Peak Daily Final Effluent Flow by Month for 2025**



## 2.5 Additional Monitoring Parameters

The following parameters in Table 15 are not reportable as they do not have limits or objectives but are monitored on a regular basis (see Section 2.1 for sampling frequency) as required by Amended ECA #6413-ABLQQS and used to characterize the contents of incoming sewage flow. A summary of the influent laboratory results can be seen in Table 15 for samples taken and analyzed during the reporting period. Sample results are based on monthly 24 hour composite samples and analyzed by an accredited external laboratory. A total of 12 influent samples were analyzed for the reporting period.

A review of the information for the reporting year compared to 2024 shows:

- Overall, in 2025 raw sewage quality for the parameters listed below show the majority of the parameter results were higher when compared to 2024.

- BOD<sub>5</sub> – annual average was 560.25 mg/L in 2024 and was higher in 2025 at 648.83 mg/L.
- TSS – annual average was 1150.67 mg/L in 2024 and was lower in 2025 at 1081.67 mg/L.
- TP – annual average was 6.31 mg/L in 2024 and was higher in 2025 at 7.75 mg/L.
- TKN – annual average was 51.23 mg/L in 2024 and was higher in 2025 at 55.08 mg/L.

**Table 15: Raw Sewage (Influent) Quality Analysis for 2025**

Parameter	Average (mg/L)	Minimum (mg/L)	Maximum (mg/L)
BOD <sub>5</sub> <sup>15A</sup>	648.83	359.00	1130.00
Total Suspended Solids <sup>15A</sup>	1081.67	400.00	2540.00
Total Phosphorous <sup>15A</sup>	7.75	3.05	17.80
Total Kjeldahl Nitrogen <sup>15A</sup>	55.08	36.00	78.00

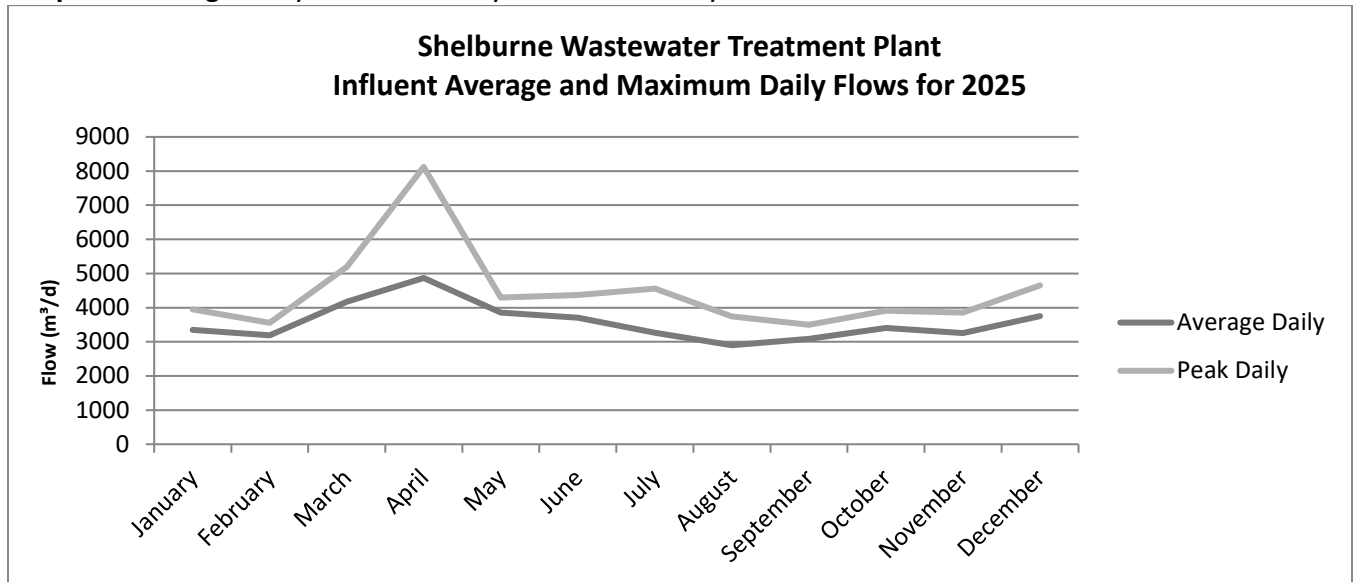
<sup>15A</sup>Refer to **Appendix B** for monthly sample results.

The following table (Table 16) outlines the influent average daily flow data in 2025 and the graph shows the influent daily and peak influent flow by month for the reporting period.

**Table 16: Influent Average Daily Flow and Peak Flow Data by Month for 2025**

Month	Average Daily (m <sup>3</sup> /day)	Peak Daily (m <sup>3</sup> /day)	Total (m <sup>3</sup> /day)
January	3352.37	3944.30	103923.40
February	3186.65	3557.30	89226.10
March	4176.70	5195.30	129477.70
April	4868.99	8120.50	146069.80
May	3850.83	4291.60	119375.70
June	3701.52	4371.00	111045.60
July	3266.73	4555.20	101268.60
August	2898.80	3740.40	89862.67
September	3084.04	3498.20	92521.20
October	3404.01	3910.30	105524.30
November	3259.20	3853.70	97776.10
December	3752.88	4651.60	116339.40
<b>2025 Average</b>	3568.25	-	-
<b>2025 Maximum</b>	-	8120.50	-
<b>2025 Total</b>	-	-	1302410.57

**Graph 2: Average Daily and Peak Daily Influent Flow by Month for 2025**



The following parameters do not have limits or objectives but are monitored, as needed, when septage is received at the facility. Table 17 summarizes the monitoring data for the reporting period.

**Table 17: Hauled Sewage Quality Analysis for 2025<sup>17A</sup>**

Parameter	Average (mg/L)	Minimum (mg/L)	Maximum (mg/L)
BOD <sub>5</sub>	>4278.13	1360.00	>8200.00
Total Suspended Solids	13012.50	1340.00	22800.00
Total Phosphorous	100.88	21.60	198.00
Total Kjeldahl Nitrogen	550.06	148.00	864.00

<sup>17A</sup>Refer to **Appendix C** for sample results.

## 2.6 Success and Adequacy of the Works

In 2025, the Shelburne WWTP produced effluent with the following removal rates:

Parameter	Average Removal Rate for 2025
Carbonaceous Biochemical Oxygen Demand	99.62%
Total Suspended Solids	99.64%
Total Phosphorus	98.75%

During the reporting period, Shelburne WWTP provided effective wastewater treatment, producing effluent with average removal rates for CBOD<sub>5</sub> at 99.62%, 99.64% for Total Suspended Solids, and 98.75% for Total Phosphorus. Although TSS effluent objectives were exceeded in February, March and May 2025, all effluent limits were met and corrective actions were implemented promptly.

For the reporting period, the annual average effluent CBOD<sub>5</sub> concentration was <2.42 mg/L. The annual average effluent TSS concentration was 3.36 mg/L. The annual average effluent Total Phosphorus

concentration was 0.07 mg/L. All effluent limits specified in the ECA were achieved throughout the 2025 reporting period.

The bacteriological quality of the effluent complied with the ECA requirement of <200 Colony Forming Units (CFU) per 100 mL sample. The maximum geometric mean density for 2025 was 2.34 CFU per 100 mL, indicating adequate effluent disinfection for the year.

The total raw sewage volume of wastewater treated in 2025 was 1,302,410.57 m<sup>3</sup>. The annual average daily flow of raw sewage was 3,568.25 m<sup>3</sup>/day was 104.33% of the design flow (3,420 m<sup>3</sup>/day). The maximum peak flow of 8,120.50 m<sup>3</sup>/day occurred on April 3, 2025 due to higher precipitation and snowmelt. This represents a peak flow of 2.4 times the rated capacity. The wastewater treatment plant operated within the rated capacity 47.12% of the time (172 out of 366 days of the year). The average daily flow has approached 80% of the rated capacity and the Town of Shelburne has been notified. This notification satisfies the ECA requirement to inform the Owner when annual average daily flow exceeds 80% of the rated capacity.

One (1) by-pass event occurred during the reporting period, as described in Section 10 of this report. The bypass event did not result in any exceedance of effluent limits, and UV disinfection remained in operation during the event.

Filter performance challenges during high-flow periods were managed through increased maintenance, operational adjustments, and use of storm retention capacity. With future upgrades proposed for the Works this will increase design capacity to accommodate the growth.

### **3. Operating Issues and Corrective Actions**

As per Section 10(6)(b) of ECA 6413-ABLQQS, *a description of any operating problems encountered and corrective actions taken* is required.

During the reporting period the facility encountered operating problems/situations with wet weather events that affected the quality of the effluent leaving the plant.

Operational adjustments during high-flow events included increased monitoring of clarifier blanket levels, adjustments to RAS and WAS rates, increased filter backwashing frequency, and temporary use of the storm retention ponds to manage peak flows. These actions helped maintain effluent quality during periods of elevated influent flow.

The facility continues to experience significant I&I during snowmelt and excessive rainfall events. As noted above, the influent flows are regularly exceeding the design capacity. The storm retention ponds do allow for temporary relief, though it is becoming increasingly difficult to return flow from them while still accepting regular influent flows. Subsequently, the cloth filters are the bottleneck in the process and become overwhelmed quickly. The filters are not performing as designed and continuous maintenance and repairs are being conducted. The Town of Shelburne and the SBA Engineering team have been made aware of these issues and have confirmed they will continue with the I&I investigations on the gravity-fed part of the collection system.

The filter performance limitations described above contributed to the TSS objective exceedances observed in February, March, and May 2025. Corrective actions included additional filter maintenance and operational adjustments, which ensured that all TSS effluent limits were met.

## **4. Maintenance Activities**

As per Section 10(6)(c) of ECA 6413-ABLQQS, *a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanisms or thing forming part of the works* is required.

### **4.1 Work Management System**

Planned maintenance, including scheduled and non-scheduled maintenance activities are captured using a computerized Work Management System (WMS) that allows user to:

- Enter detailed asset information
- Generate and process work orders
- Access maintenance and inspection procedures
- Plan, schedule, and document all asset related tasks and activities
- Access maintenance records and asset histories

Work Orders are automatically generated by the WMS program and are assigned to the applicable Operations staff accordingly.

### **4.2 Preventative Maintenance Activities**

There were a number of preventative maintenance tasks completed throughout the reporting period. They are as follows:

- Monthly panel alarm and generator testing
- Monthly UV inspection and servicing
- Annual generator inspections and load testing
- Annual calibrations (flow meters, gas detectors, pH meters, D.O. meter etc.)
- Annual lifting device inspection
- Annual pump inspections and servicing

### **4.3 Major Maintenance, Repairs and Improvements**

There were a number of major maintenance, repairs and/or improvements completed throughout the reporting period. They are as follows:

- Bar screen repairs
- Biosolids mixing pump repair
- Decant pump repair
- Filter feed pump #1 VFD replacement
- Furnace replacement
- Grit vortex blower replacement
- RAS pump 3 repair

- SCADA computer replacement
- South clarifier rehabilitation
- UV sensor replacement

## **5. Effluent Quality Assurance and Control**

As per Section 10(6)(d) of ECA 6413-ABLQQS, *a summary of any effluent quality assurance or control measures undertaken in the reporting period* is required:

Quality assurance and control measures undertaken during the reporting period include adherence to provincial regulations, use of accredited laboratories, and operation of the system by licensed operators, scheduled sampling and analysis, in-house laboratory analysis, and calibration and preventative maintenance of equipment. The sections below provide further details of these measures.

### **5.1 Adherence to Provincial Regulations**

The Ontario Clean Water Agency operates the WWTP in accordance with provincial regulations and the Environmental Compliance Approval.

### **5.2 Use of Accredited Laboratories**

Analytical tests to monitor the effluent quality are conducted by a laboratory audited by the Canadian Association for Laboratory Accreditation Inc. (CALA) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods. During the reporting period, all chemical sample analyses were conducted by SGS Canada Inc.

### **5.3 Operation by Licensed Operators**

The Shelburne WWTP was operated and maintained by licensed Operators. The mandatory licensing program for operators of sewage treatment facilities in Ontario is regulated under the Ontario Water Resources Act (OWRA) Regulation 435/93 and Ontario Regulation 129/04. A Licensed individual has successfully passed the licensing exam and meets the education and experience requirements set out in the regulation.

### **5.4 Sampling and Analysis**

The Ontario Clean Water Agency followed a sampling and analysis schedule that meets the requirements of the ECA.

### **5.5 In-house Analysis**

In-house analysis were conducted by Licensed Operators for monitoring purposes using standard methods. The data generated from these tests is used to determine the treatment efficiency while effectively maintaining process control. All in-house monitoring equipment is calibrated based on the manufacturer's recommendations. Using their expertise, Operators of the facility make best efforts to stay within the ECA Effluent Objectives and Limits.

## 5.6 Calibrations

Third-party and in-house calibrations were completed on various equipment and monitoring and analysis items as required based on manufacturer's recommendations. Refer to Section 6 for more information regarding calibration of monitoring equipment. All QA/QC activities supported consistent compliance with effluent limits throughout the reporting period.

## 6. Calibration and Maintenance Procedures

As per Section 10(6)(e) of ECA 6413-ABLQQS, *a summary of the calibration and maintenance carried out on all effluent monitoring equipment is required.*

All in-house monitoring equipment is calibrated/verified as per manufacturer's recommendations. Monitoring and metering equipment is also calibrated by a third party on an annual basis. Preventative maintenance is scheduled for all equipment at the sewage treatment plant and pumping stations at regular frequency (frequency depends on the equipment and type of maintenance). Maintenance activities are scheduled within the work management system (Maximo), upon completion, Operators set the work order to complete. On a monthly basis, preventative work orders are reviewed for completion.

SCG Flowmetrix successfully calibrated the flow-measuring equipment on August 20 and 22, 2025. The calibration reports can be found in Appendix D. All flowmeter calibrations completed in 2025 were found to be within acceptable tolerances.

## 7. Efforts and Results Achieved in Meeting Effluent Objectives

As per Section 10(6)(f) of ECA 6413-ABLQQS, *a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6 is required.*

Condition 6 is imposed *"to establish non-enforceable effluent quality objectives which the Owner is obligated to use best efforts to strive towards on an ongoing basis. These objectives are to be used as a mechanism to trigger corrective action proactively and voluntarily before environmental impairment occurs and before the compliances limits of Condition 7 are exceeded."*

OCWA as the Operating Authority (on behalf of the Owner) has made best efforts to stay within the Effluent Objectives in the ECA. These efforts are supported through:

- Continuous monitoring equipment
- Regular plant inspections/checks
- In-house sampling and testing
- Laboratory (3<sup>rd</sup> party) analysis of influent and effluent samples
- Data review
- Process optimization and adjustments (as required)
- Scheduled/preventative maintenance
- Repairs as necessary

Although TSS effluent objectives were exceeded in February, March, and May 2025, corrective actions were implemented promptly, and all effluent limits were achieved.

A summary of the effluent quality in comparison to the effluent objectives can be found in Tables 7-13 of section 2.3 of this report. These results show that sewage treatment operations for 2025 provided effluent quality that were within most of the effluent objectives outlined in the ECA and minimized environmental impairment, (with the exception of TSS) despite the operational issues noted in Section 3 above. Corrective actions were implemented by the Operating Authority and included minor operational changes, additional maintenance and equipment repairs.

## 8. Sludge Production and Disposal

As per Section 10(6)(g) of ECA 6413-ABLQQS, a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed is required.

Digested sludge produced at the Shelburne WWTP is land-applied in accordance with the Nutrient Management Act 2002 and Ontario Regulation 267/03 by Saugeen Agri. Service under Certificate of Approval - Waste Management System #9566-6HYKC3.

Grab samples of digested (aerobic) sludge are collected and tested as required. In 2025, sludge sample analysis was carried out by SGS Canada Inc. Sludge analysis showed that the sludge met the quality criteria specified in the Ontario Guidelines for the Utilization of Biosolids and Other Wastes on Agricultural Land (Guidelines). A summary of sludge sample results is provided in **Appendix C** of this report, along with septage data for the reporting period.

The Town of Shelburne has an arrangement/agreement for the haulage, acceptance and processing of liquid biosolids material from the Shelburne Wastewater Treatment Plant with Lystek International Corp. Volumes of biosolids hauled from the Shelburne Wastewater Treatment Plant to Lystek are noted in table 18 below.

The following NASM approved sites were utilized in 2025:

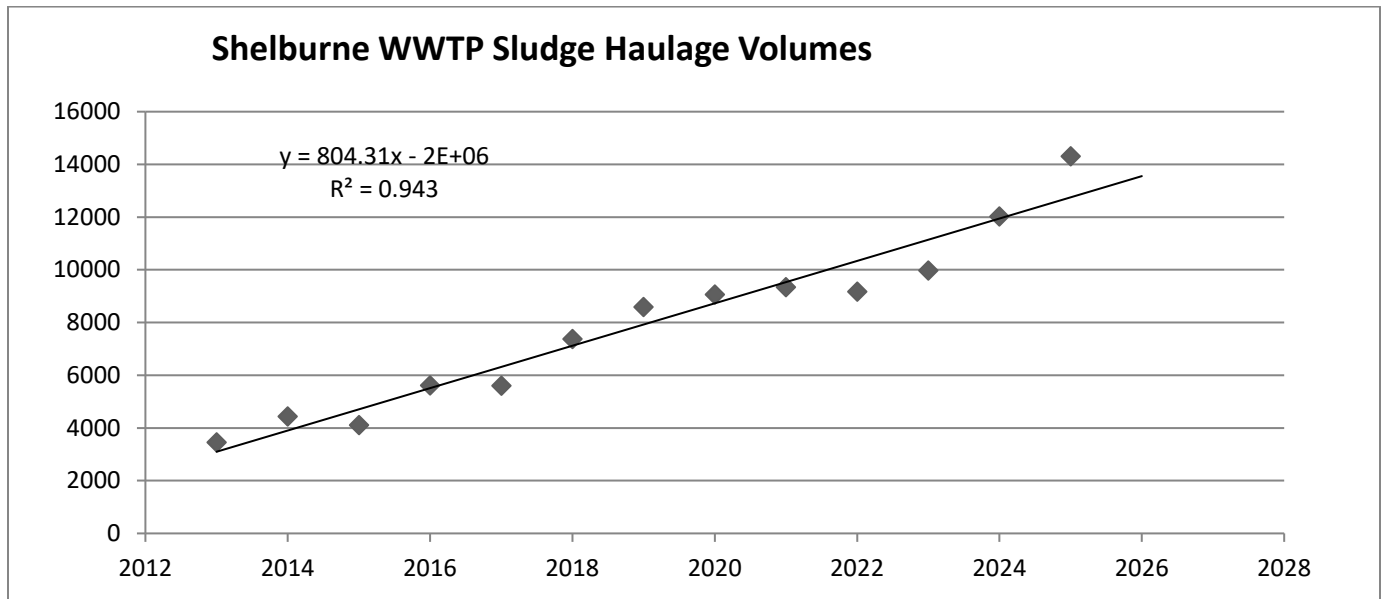
**Table 18.** Volume of Sludge Generated from Shelburne Wastewater Treatment Plant in 2025

Site	Site Location	Volume of Biosolids (m <sup>3</sup> )	Hauler
NASM Submission ID: 61320	Denco Farms	3729.00	Saugeen Agri.
NASM Submission ID: 25079	Leroy May	1124.00	Saugeen Agri.
NASM Submission ID: 25202	Neil Versteegen – Windmill Farm	326.00	Saugeen Agri.
NASM Submission ID: 61330	Brian Besley – Townline Farm	3936.00	Saugeen Agri.
NASM Submission ID: 61330	Brian Besley – Friedman Farm	1628.00	Saugeen Agri.
NASM Submission ID: 61330	Brian Besley – Deb’s Farm	1597.00	Saugeen Agri.
Lystek International Corp.	Dundalk, On	2083.00	Saugeen Agri.

For 2025, a total volume of 14,423.00 m<sup>3</sup> of biosolids was hauled from the Shelburne WWTP. 2,083.00 m<sup>3</sup> was hauled to Lystek international Corp. and a total volume of 12,340.00 m<sup>3</sup> of sludge was land applied to the above fields.

Based on historical sludge production volumes and annual average daily flows from 2013 to 2025, a linear regression model ( $R^2 = 94.30\%$ ) was used to project the anticipated sludge volume for 2026. The model predicts a sludge production volume of approximately 13,900 m<sup>3</sup>.

**Graph 3.** Shelburne Wastewater Treatment Plant Haulage Volumes (2013 to 2025)



## 9. Community Complaints

As per Section 10(6)(h) of ECA 6413-ABLQQS, a summary of any complaints received during the reporting period and any steps taken to address the complaints is required.

A standard operating procedure (SOP) is in place for addressing complaints received from the community. All complaints are addressed and documented in the facility logbook. Community complaint information is entered in OCWA’s electronic work management system (Maximo). This system contains all the required information and history of all complaints.

There was no community complaints received by OCWA for the reporting period.

## 10. By-pass, Spill or Abnormal Discharge Events

As per Section 10(6)(i) of ECA 6413-ABLQQS, a summary of all By-pass, spill or abnormal discharge events (additionally events outside of Normal Operating Conditions) is required.

During the reporting period for the Shelburne WWTP, there was one (1) by-pass events, no spill events, no abnormal discharge events or no overflows events that occurred. In addition, ECA #6413-ABLQQS

requires that quarterly bypass/overflow event reports be submitted to the Water Supervisor. All 2025 quarterly reports were submitted to the Water Supervisor by the deadlines specified in the ECA.

### 10.1 By-pass Events

There was one (1) by-pass event that occurred during the reporting period. Refer to **Appendix E** for further details.

Date of the Event(s)	Estimated or Measured Volume (M <sup>3</sup> )	Duration of the Event(s)	Location of the Event(s)	Reason for the Event(s)	Level of treatment the bypass(es)/overflow(s) received and disinfection status	Samples Collected
Start: April 3, 2025 10:28AM  End: April 4, 2025 14:27PM	10,638m <sup>3</sup>	28 Hours	Shelburne Waste Plant	Due to significant weather related high precipitation causing high flows	Partially Treated Effluent – Effluent filters bypassed with UV disinfection	Samples were taken according to ECA# 6413-ABLQQS on April 3, 2025 at the start of the bypass and April 4, 2025 on completion of bypass.  Note: E.Coli samples were received and processed after the recommended holding time of 48 hours. As the E. coli samples exceeded the recommended 48-hour holding time, results may not fully represent actual conditions but were reviewed for operational awareness.

The bypass event did not result in any exceedance of effluent limits, and UV disinfection remained operational throughout the event.

### 10.2 Spill and/or Abnormal Discharge Events

There was no reportable spill event that occurred during the reporting period

### 10.3 Events Outside of Normal Operating Conditions

For the reporting period, there was no events that occurred outside of the normal operating conditions that affected the quality of the effluent leaving the plant.

## **11. Notice of Modifications**

As per Section 10(6)(j) of ECA 6413-ABLQQS, *a copy of all Notice of Modifications submitted to the Water Supervisor as a result of Schedule B, Section 1, with a status report on the implementation of each modification* is required.

There were no notice of modification submitted to the Water Supervisor during the reporting period.

## **12. Summary of Completed Modifications**

As per Section 10(6)(k) of ECA 6413-ABLQQS, *a report summarizing all modifications completed as a result of Schedule B, Section 3* is required.

Where: Schedule B, Section 3 is the *“Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works” that allows for pre-approved normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment.*

Refer to Section 4 of this report for a list of normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment.

No modifications under Schedule B, Section 3 were completed during the reporting period beyond routine maintenance activities described in Section 4.

## **13. Additional Information**

As per Section 10(6)(l) of ECA 6413-ABLQQS, *any other information the Water Supervisor requires from time to time* is required.

There were no written requests from the Water Supervisor for any other information during the reporting period.

## 14. Municipal Sewage Collection System- Annual Performance Report

This report was prepared in accordance with the requirements of the Environmental Compliance Approval for a Municipal Sewage Collection Systems, Schedule E, Section 4.6.1.

<b>Municipal Sewage Collection System ECA #</b>	109-W601, Issue 1
<b>Sewage Works</b>	Town of Shelburne Wastewater Collection and Treatment System
<b>Collection System Owner</b>	The Corporation of the Town of Shelburne
<b>Reporting Period</b>	January 1, 2025 to December 31, 2025

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

**Yes**

*Note: As per Schedule E, Section 4.7.1 of CLI-ECA #109-W601, the annual performance report must be made available, on request and without charge, to members of the public who are served by the Authorized System; and 4.7.2 must be made available, by June 1<sup>st</sup> of the same reporting year, to members of the public without charge by publishing the report on the Internet, if the Owner maintains a website on the Internet.*

**Location where Annual Performance Report required under CLI-ECA #109-W601 Schedule E will be available for inspection. (CLI-ECA #109-W601, Schedule E, Section 4.6.1 & 4.7.1):**

- Town of Shelburne Office, 203 Main Street Shelburne, Ontario, L9V 3K7
- <https://www.shelburne.ca/living-here/water-and-sewer/water-and-sewer-by-laws-policies-and-reports/>

Pursuant to Schedule E, sections 4.6.3 to 4.6.9, this Annual Performance Report shall:

- a) If applicable, includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.
- b) If applicable, include a summary of any operating problems encountered and corrective actions taken.
- c) Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.
- d) Include a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.
- e) Include a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.
- f) Include a summary of all Collection System Overflow(s) and Spill(s) of Sewage.
  - i. Dates;

- ii. Volumes and durations;
  - iii. If applicable, loadings for total suspended solids, BOD, total phosphorus, and total kjeldahl nitrogen and sampling results for E.Coli;
  - iv. Disinfection, if any; and
  - v. Any adverse impacts(s) and any corrective actions, if applicable
- g) Includes a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable:
- i. A description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.
  - ii. Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timelines.
  - iii. An assessment of the effectiveness of each action taken.
  - iv. An assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives.
  - v. Public reporting approach including proactive efforts.

## 14.1 Description of the Works

The Town of Shelburne Wastewater Collection and Treatment System is Owned by the Town of Shelburne and operated by the Town of Shelburne (Collection) and Ontario Clean Water Agency (OCWA) (Treatment). The Shelburne Wastewater Collection and Treatment system consists of works for the collection and transmission of sewage, consisting of trunk sewer collection mains, sewage pumping stations and forcemains that discharge into the west and east system collection mains, and to the Shelburne Sewage Treatment Plant. The sewage pumping stations in the Authorized system include:

- Fiddler's Glen Pumping Station (PS) – located at 901 Greenwood Cres, Shelburne. Consists of a concrete wet well, two submersible grinder pumps and connected to a forcemain discharging to the Shelburne STP. The PS is equipped with emergency storage, SCADA control system and a stand-by diesel generator in case of power failure.
- Hyland Village Pumping Station (PS) – located at 363 Stewart Street, Shelburne. Consists of a concrete wet well, two submersible grinder pumps and connected to a forcemain discharging to the collection system at the most northern manhole in the west end of Shelburne, and then eventually to the Shelburne STP. The PS is equipped with emergency storage, SCADA control system and a stand-by diesel generator in case of power failure.
- Fieldgate Pumping Station (PS) – located at 600 Red Elm Road, Shelburne. Consists of a concrete wet well, three submersible grinder pumps and connected to a forcemain discharging to the sanitary collection system at the most easterly manhole on Industrial Road on the east side of Shelburne, and then eventually to the Shelburne STP. The PS is equipped with emergency storage, SCADA control system and a stand-by diesel generator in case of power failure.

The Shelburne Wastewater Collection and Treatment System contains no combined sewage pumping stations, no combined sewage storage structures or combined storage tanks. The authorized collection system also contains no authorized combined sewer collection system overflow points and three authorized sanitary sewer overflow points (one at each of the pumping stations listed above).

Prior to July 27, 2022, Fiddler's Glen Pumping Station was captured under ECA #0160-8P2QV6, Hyland's Village Pumping Station was captured under ECA #2719-B62QMQQ and Fieldgate Pumping Station was captured under ECA #0116-8P2QV6. On July 27, 2022, Municipal Sewage Collection System ECA Number 109-W601, Issue 1, was issued to the Shelburne Wastewater Collection and Treatment System incorporating all Pumping Stations, sewers, separate sewers and forcemains into one Consolidated Linear Infrastructure ECA. As such, all prior ECAs, issued by the Director for Sewage Works are considered revoked and replaced by ECA Number 109-W601.

#### **14.2 Summary of Monitoring Data and Interpretation**

No monitoring data was required to be collected within the municipal sewage collection system for the reporting year, as the CLI-ECA does not prescribe routine sampling or flow monitoring requirements for the collection system.

#### **14.3 Summary of Operating Problems Encountered and Corrective Actions Taken**

There were no operating problems encountered within the municipal sewage collection system for the reporting year. Operational issues related to high influent flows and wet weather impacts are discussed in Section 3 of this report; however, these issues did not originate within the collection system and did not require corrective actions within the municipal sewage collection system.

#### **14.4 Summary of Calibration, Maintenance, and Repairs**

The following is a list of maintenance, repairs or calibrations completed during the reporting period.

##### Fiddler's Glenn SPS

- Monthly generator inspection and load testing
- Cleaned floats and valve exercising in wet well
- Low level float replacement
- Annual wet well inspection and clean out
- Annual 3<sup>rd</sup> party generator inspection and maintenance

##### Hyland Development SPS

- Cleaned floats
- Pump ground water from valve chamber
- Monthly generator inspection and load testing
- Annual wet well inspection and clean out
- Annual 3<sup>rd</sup> party generator inspection and maintenance

##### Fieldgate SPS

- Cleaned floats

- Pump ground water from valve chamber
- Monthly generator inspection and load testing
- Annual wet well inspection and clean out
- Annual 3<sup>rd</sup> party generator inspection and maintenance

All calibration, maintenance, and repair activities ensured that the sewage pumping stations operated as designed throughout the reporting period. No equipment failures resulted in overflows or service interruptions.

#### **14.5 Community Complaints Received in Relation to the Sewage Works**

All complaints are addressed and documented in the facility logbook. Community complaint information is entered in OCWA's WMS database system "Maximo". This system contains all the required information and history of all complaints.

There were no complaints received by OCWA during the reporting period.

#### **14.6 Alterations to the Authorized System**

There were no alterations to the Authorized System under Schedule B, Section 1 or Section 3 of the CLI-ECA during the reporting period.

#### **14.7 Summary of Collection System Overflow(s) and Spill(s) of Sewage**

There were no collection system overflow(s) or spill(s) events that occurred during the reporting period

#### **14.8 Efforts Made to Reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses**

This section summarizes the efforts to reduce the risk of collection system overflows, spills, sewage treatment plant (STP) overflows, and STP bypasses during the 2025 reporting period. The information below is provided in accordance with the CLI-ECA requirements and includes completed and proposed projects, an assessment of effectiveness, alignment with Procedure F-5-1 objectives, and the Town's public reporting approach.

##### **14.8.1 Projects Undertaken and Completed, Expenditures, and Proposed Projects**

A detailed summary of 2025 calibration, maintenance, and repair activities, is provided in Section 4 and Section 6 of this report. These activities include routine preventative maintenance and annual calibration of monitoring equipment. These efforts support conformance with Procedure F-5-1 and contribute to the reduction of bypass and overflow risks within the Authorized System.

## **14.8.2 Pollution Prevention and Control Plan (PPCP)**

The Town of Shelburne collection system doesn't contain combined sewers, therefore a pollution prevention and control plan is not required for the system.

## **14.8.3 Effectiveness of Actions Taken**

The Town maintains several operational controls that effectively reduce the likelihood of collection system overflows and bypasses. Sewage pump stations are equipped with alarm monitoring for high-flow events, enabling timely operator response to abnormal conditions. Preventative maintenance procedures are also in place to ensure reliable pump station performance, including:

- Annual pump and pump station inspections
- Annual third-party generator inspections and load testing
- Annual wet well cleanouts and inspections

These measures, combined with the maintenance and calibration activities summarized in Section 13 and Section 16.4, were effective in preventing any bypass or overflow events during the 2025 reporting period.

## **14.8.4 Ability to Meet Procedure F-5-1 Objectives**

Based on current system performance and the absence of bypass or overflow events in 2025, the operational intent of Procedure F-5-1 is being met.

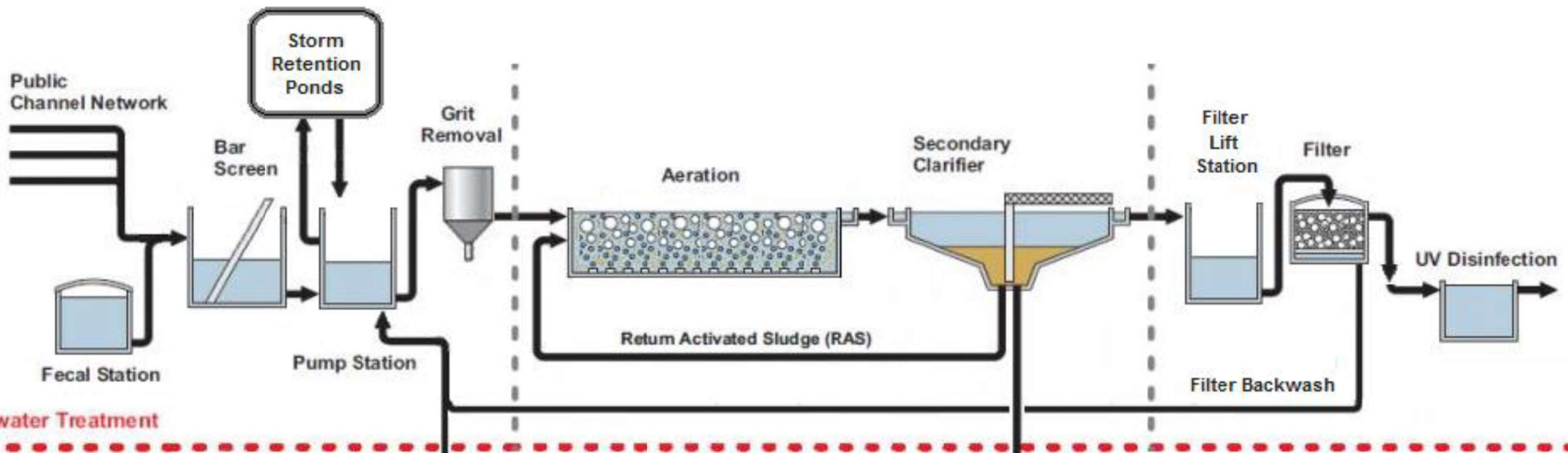
## **14.8.5 Public Reporting Approach**

OCWA and the Town complete all required notifications and reporting in accordance with applicable regulatory requirements and established procedures. OCWA also informs the Town of Shelburne, as the Owner, of any reportable events to ensure timely communication, documentation, and follow-up. Although no bypasses or overflows occurred in 2025, both OCWA and the Town remain committed to transparent reporting and effective communication should an event occur in the future.

# Appendix A

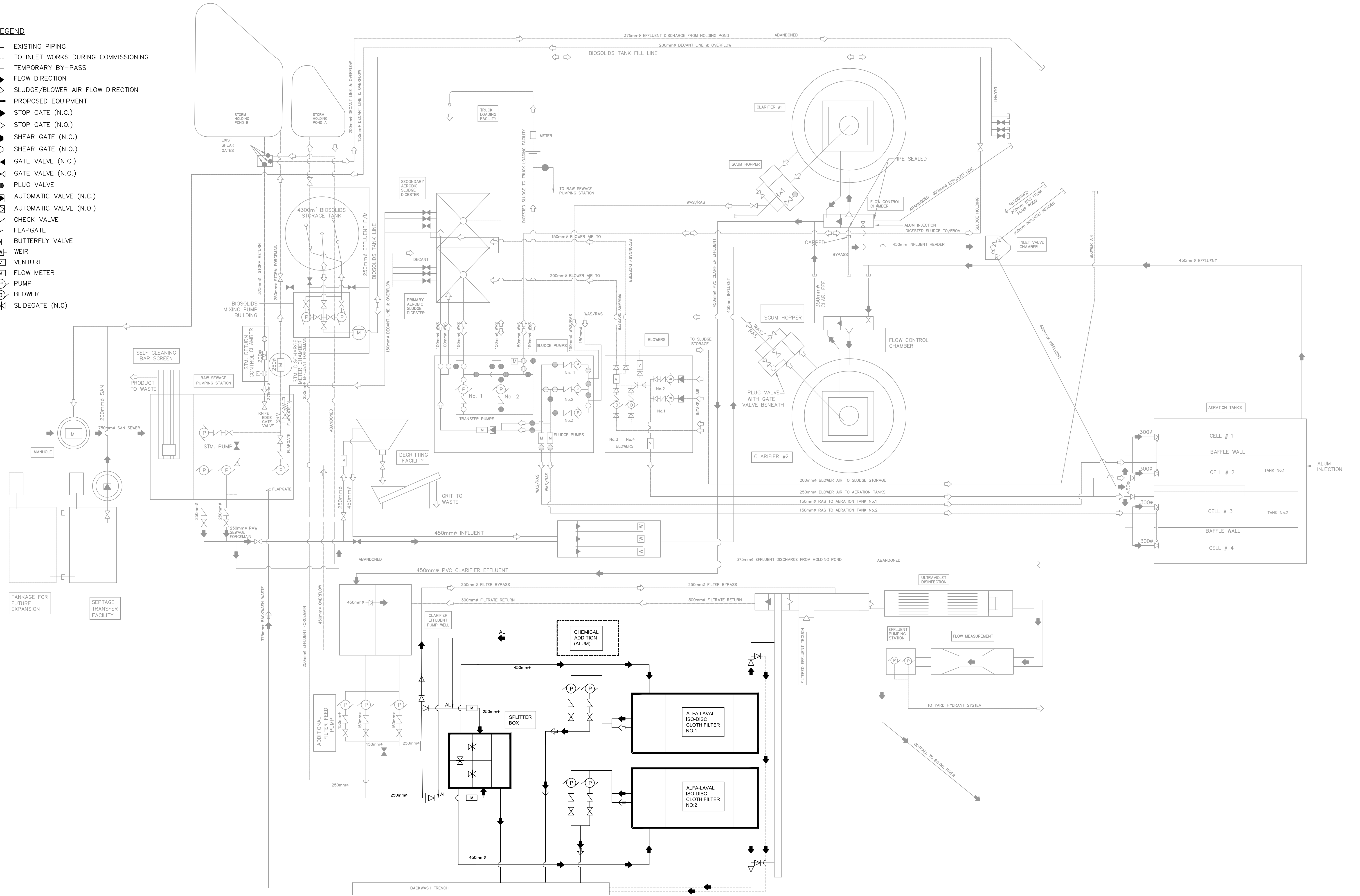
## Process Flow Schematic

# Process Diagram



**LEGEND**

- EXISTING PIPING
- - - - TO INLET WORKS DURING COMMISSIONING
- - - - TEMPORARY BY-PASS
- FLOW DIRECTION
- ↻ SLUDGE/BLOWER AIR FLOW DIRECTION
- ▭ PROPOSED EQUIPMENT
- ▭ STOP GATE (N.C.)
- ▭ STOP GATE (N.O.)
- SHEAR GATE (N.C.)
- SHEAR GATE (N.O.)
- ⊗ GATE VALVE (N.C.)
- ⊘ GATE VALVE (N.O.)
- ⊙ PLUG VALVE
- ⊙ AUTOMATIC VALVE (N.C.)
- ⊙ AUTOMATIC VALVE (N.O.)
- ∨ CHECK VALVE
- ∨ FLAPGATE
- ∨ BUTTERFLY VALVE
- ∨ WEIR
- ∨ VENTURI
- ∨ FLOW METER
- ⊙ PUMP
- ⊙ BLOWER
- ⊙ SLIDEGATE (N.O.)



1. THIS DRAWING IS THE EXCLUSIVE PROPERTY OF S. BURNETT & ASSOCIATES LIMITED AND THE REPRODUCTION OF ANY PART WITHOUT PRIOR WRITTEN CONSENT OF THIS OFFICE IS STRICTLY PROHIBITED.  
 2. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.  
 3. THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT.  
 4. DO NOT SCALE THE DRAWINGS.

No.	DATE	ISSUE / REVISION	No.	DATE	ISSUE / REVISION
1.	05/04/2016	33% SUBMISSION	6.	14/06/2016	ISSUED REQUEST FOR PROPOSAL
2.	20/04/2016	66% SUBMISSION	7.	08/08/2016	ISSUED FOR CONSTRUCTION
3.	25/04/2016	ISSUED FOR MOE REVIEW	8.	26/01/2018	AS-BUILT
4.	26/04/2016	ISSUED FOR NVCA REVIEW			
5.	30/05/2016	REVISED AS PER NVCA COMMENTS			

CLIENT  
**TOWN OF SHELBURNE**

PROJECT  
**WATER POLLUTION CONTROL PLANT  
TERTIARY FILTER REPLACEMENT UPGRADES**

TITLE  
**GENERAL PROCESS FLOW SCHEMATIC  
TEMPORARY BY-PASS & UPGRADES**

		<b>S. BURNETT &amp; ASSOCIATES LIMITED</b> ENGINEERING AND ENVIRONMENTAL SERVICES 230 BROADWAY, UNIT 203 ORANGEVILLE, ONTARIO L9W 5G4 TELEPHONE: 519-941-2949 FAX: 519-941-2036	
DESIGNED BY <b>D.D.</b>	DRAWN BY <b>B.U.</b>	VERIFIED BY <b>S.B.</b>	DRAWING No. <b>G4</b>
SCALE <b>NTS</b>	PROJECT No. <b>M15003</b>		

PROF. STAMP

## Appendix B

# Performance Assessment Report

2025

**5773 SHELBURNE WASTEWATER TREATMENT FACILITY 110000659**

	1/ 2025	2/ 2025	3/ 2025	4/ 2025	5/ 2025	6/ 2025	7/ 2025	8/ 2025	9/ 2025	10/ 2025	11/ 2025	12/ 2025	<--Total-->	<--Avg-->	<--Max-->	<-Criteria-->
--	---------	---------	---------	---------	---------	---------	---------	---------	---------	----------	----------	----------	-------------	-----------	-----------	---------------

**Flows**

Raw Flow: Total - Raw Sewage m³/d	103,923.40	89,226.10	129,477.70	146,069.80	119,375.70	111,045.60	101,268.60	89,862.67	92,521.20	105,524.30	97,776.10	116,339.40	1,302,410.57			0.00
Raw Flow: Avg - Raw Sewage m³/d	3,352.37	3,186.65	4,176.70	4,868.99	3,850.83	3,701.52	3,266.73	2,898.80	3,084.04	3,404.01	3,259.20	3,752.88		3,568.25		3,420.00
Raw Flow: Max - Raw Sewage m³/d	3,944.30	3,557.30	5,195.30	8,120.50	4,291.60	4,371.00	4,555.20	3,740.40	3,498.20	3,910.30	3,853.70	4,651.60			8,120.50	0.00
Raw Flow: Count - Raw Sewage m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00
Eff. Flow: Total - Final Effluent m³/d	77,331.80	65,203.60	102,279.30	125,033.50	91,025.40	72,439.90	71,250.50	66,396.92	62,899.10	66,603.30	70,928.20	68,936.10	940,327.62			0.00
Eff. Flow: Avg - Final Effluent m³/d	2,494.57	2,328.70	3,299.33	4,167.78	2,936.30	2,414.66	2,298.40	2,141.84	2,096.64	2,148.49	2,364.27	2,223.75		2,576.24		
Eff. Flow: Max - Final Effluent m³/d	3,029.20	2,803.60	4,262.00	7,127.20	3,714.80	3,036.30	2,720.90	2,604.90	2,449.90	2,477.70	2,774.90	2,873.00			7,127.20	0.00
Eff Flow: Count - Final Effluent m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00

**Carbonaceous Biochemical Oxygen Demand: CBOD**

Raw: Avg cBOD5 - Raw Sewage mg/L	413.00	200.00	341.00	498.00	609.00	576.00	125.00	375.00	360.00	541.00	337.00	391.00		397.17	609.00	0.00
Raw: # of samples of cBOD5 - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg cBOD5 - Final Effluent mg/L	< 2.00	< 2.75	< 3.25	< 4.00	< 2.75	< 2.00	< 2.00	< 2.25	< 2.00	< 2.00	< 2.00	< 2.00		< 2.42	< 4.00	5.00
Eff: # of samples of cBOD5 - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00
Loading: cBOD5 - Final Effluent kg/d	< 4.989	< 6.404	< 10.723	< 16.671	< 8.075	< 4.829	< 4.597	< 4.819	< 4.193	< 4.297	< 4.729	< 4.447		< 6.24	< 16.67	17.100
Percent Removal: cBOD5 - Final Effluent %	99.52	98.63	99.05	99.20	99.55	99.65	98.40	99.40	99.44	99.63	99.41	99.49			99.65	0.00

**Biochemical Oxygen Demand: BOD5**

Raw: Avg BOD5 - Raw Sewage mg/L	410.00	432.00	601.00	1,000.00	1,130.00	906.00	618.00	717.00	359.00	698.00	378.00	537.00		648.83	1,130.00	0.00
Raw: # of samples of BOD5 - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg BOD5 - Final Effluent mg/L	2.50	3.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00		< 2.15	< 3.00	
Loading: BOD5 - Final Effluent kg/d	6.236	6.986	< 6.599	< 8.336	< 5.873	< 4.829	< 4.597	< 4.284	< 4.193	< 4.297	< 4.729	< 4.447		< 5.55	< 8.34	
Percent Removal: BOD5 - Final Effluent %	99.39	99.31	99.67	99.80	99.82	99.78	99.68	99.72	99.44	99.71	99.47	99.63			99.82	0.00

**Total Suspended Solids: TSS**

Raw: Avg TSS - Raw Sewage mg/L	730.00	488.00	749.00	1,200.00	1,930.00	1,390.00	540.00	2,540.00	400.00	1,030.00	1,160.00	823.00		1,081.67	2,540.00	0.00
Raw: # of samples of TSS - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TSS - Final Effluent mg/L	2.50	4.58	< 4.06	< 3.36	< 4.88	< 2.75	< 2.45	< 2.50	< 2.25	< 2.60	< 2.00	< 2.00		< 3.36	< 4.88	5.00
Eff: # of samples of TSS - Final Effluent	4.00	12.00	18.00	11.00	8.00	4.00	11.00	4.00	4.00	5.00	4.00	5.00	90.00			0.00
Loading: TSS - Final Effluent kg/d	6.236	10.673	< 13.381	< 14.019	< 14.314	< 6.640	< 5.642	< 5.355	< 4.717	< 5.586	< 4.729	< 4.447		< 8.64	< 14.31	17.100
Percent Removal: TSS - Final Effluent %	99.66	99.06	99.46	99.72	99.75	99.80	99.55	99.90	99.44	99.75	99.83	99.76			99.90	0.00

**Total Phosphorus: TP**

Raw: Avg TP - Raw Sewage mg/L	4.74	4.34	5.63	3.59	13.10	5.62	4.90	17.80	3.05	4.77	17.30	8.20		7.75	17.80	0.00
Raw: # of samples of TP - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TP - Final Effluent mg/L	0.04	0.08	0.10	0.09	0.09	0.07	0.06	0.05	0.07	0.05	0.04	0.05		0.07	0.10	0.25
Eff: # of samples of TP - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00
Loading: TP - Final Effluent kg/d	0.112	0.189	0.337	0.389	0.261	0.167	0.133	0.111	0.154	0.113	0.106	0.116		0.17	0.39	0.860
Percent Removal: TP - Final Effluent %	99.06	98.13	98.19	97.40	99.32	98.77	98.82	99.71	97.60	98.89	99.74	99.36			99.74	0.00

**Nitrogen Series**

Raw: Avg TKN - Raw Sewage mg/L	46.00	50.00	45.00	36.00	65.00	58.00	50.00	78.00	47.00	57.00	66.00	63.00		55.08	78.00	0.00
Raw: # of samples of TKN - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00
Eff: Avg TAN - Final Effluent mg/L	< 0.25	< 0.38	< 0.28	< 0.72	< 0.25	< 0.10	< 0.10	< 0.13	< 0.10	< 0.44	< 0.10	< 0.10		< 0.25	< 0.72	2.40
Eff: # of samples of TAN - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00
Loading: TAN - Final Effluent kg/d	< 0.624	< 0.873	< 0.907	< 3.001	< 0.734	< 0.241	< 0.230	< 0.268	< 0.210	< 0.945	< 0.236	< 0.222		< 0.65	< 3.00	8.200
Eff: Avg NO3-N - Final Effluent mg/L	18.33	19.70	14.10	5.34	11.07	18.83	20.58	16.40	16.30	15.46	15.35	9.90		15.11	20.58	0.00
Eff: # of samples of NO3-N - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00
Eff: Avg NO2-N - Final Effluent mg/L	< 0.11	< 0.41	< 1.39	< 0.41	< 0.10	< 0.06	< 0.03	< 0.03	< 0.09	< 0.15	< 0.12	< 0.11		< 0.25	< 1.39	0.00
Eff: # of samples of NO2-N - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00

**Disinfection**

Eff: GMD E. Coli MPN - Final Effluent MPN	1.00	2.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Eff: # of samples of E. Coli MPN - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00

## Appendix C

# Sludge Haulage Summary, Sludge Quality, and Septage Receiving

2025

Shelburne WWTP - Daily Haulage Summary			
Date	Site	NASM #	Sludge Hauled (m <sup>3</sup> )
<b>April</b>			
23-Apr-25	Denco Farms	61320	158.00
24-Apr-25	Denco Farms	61320	570.00
25-Apr-25	Denco Farms	61320	847.00
28-Apr-25	Denco Farms	61320	749.00
29-Apr-25	Denco Farms	61320	719.00
30-Apr-25	Denco Farms	61320	686.00
<b>June</b>			
23-Jun-25	Leroy May	25079	176.00
24-Jun-25	Leroy May	25079	400.00
25-Jun-25	Leroy May	25079	548.00
<b>September</b>			
9-Sep-25	Neil Verstegen - Windmill Farm	25202	326.00
10-Sep-25	Brian Besley's Townline Farm	61330	861.00
11-Sep-25	Brian Besley's Townline Farm	61330	672.00
12-Sep-25	Brian Besley's Townline Farm	61330	629.00
15-Sep-25	Brian Besley's Townline Farm	61330	885.00
16-Sep-25	Brian Besley's Townline Farm	61330	889.00
<b>November</b>			
19-Nov-25	Brian Besley's Friedman Farm	61330	851.00
20-Nov-25	Brian Besley's Friedman Farm	61330	658.00
21-Nov-25	Brian Besley's Friedman Farm	61330	119.00
24-Nov-25	Brian Besley's Deb's Farm	61330	663.00
25-Nov-25	Brian Besley's Deb's Farm	61330	934.00
<b>Total</b>			<b>12340.00</b>

Biosolids Quality Report

Facility: SHELBURNE WASTEWATER TREATMENT FACILITY



Solids & Nutrients

Period: 01/01/2025 to 12/31/2025

Works: 5773 / Digester Type: Aerobic

<b>Solids &amp; Nutrients</b>	<b>Metals &amp; Criteria</b>	<b>Last 4 Samples</b>
-------------------------------	------------------------------	-----------------------

Facility Works Number:	110000659	Receiver:	Besley Drain to Boyne Creek
Facility Owner:	Corporation/Company: The Corporation of the Town of Shelburne	Service Population:	8994
Facility Classification:	Class 3 Wastewater Treatment	Total Design Capacity:	3420 m3/day

Note: all parameters in this report are derived from the Bslq Station

Month	Hauled Vol. (m³)	Total Solids (mg/L)	Total Phosphorus (mg/L)	Total Ammonia Nitrogen (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Ammonia + Nitrate (mg/L)	Potassium (mg/L)
Parameter Short Name	HauledVol	TS	TP	NH3p_NH4p_N	NO3-N	NO2-N	TKN	Calculation in Report	K
T/S	IH Month.Total	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	- no T/S	Lab Published Month Mean
Jan	120.00	24,200.00	450.00	86.40	3.00	3.00	1,220.00	44.70	81.00
Feb	541.00	23,100.00	358.00	129.00	3.00	3.00	1,290.00	66.00	69.00
Mar	169.00	22,150.00	341.00	153.00	3.00	3.00	1,300.00	78.00	68.10
Apr	4,982.00	16,600.00	232.00	191.00	3.00	3.00	945.00	97.00	61.00
May		35,400.00	563.00	250.00	3.00	3.00	1,680.00	126.50	87.00
Jun	1,124.00	19,800.00	286.00	227.00	3.00	3.00	1,040.00	115.00	58.00
Jul		24,100.00	346.00	411.00	3.00	3.00	1,390.00	207.00	72.00
Aug		23,850.00	389.00	492.00	3.00	3.00	1,460.00	247.50	64.00
Sep	4,262.00	24,100.00	269.00	547.00	3.00	3.00	1,500.00	275.00	64.00
Oct		24,400.00	384.00	291.00	3.00	3.00	1,210.00	147.00	57.00
Nov	3,225.00	23,000.00	371.00	275.00	3.00	3.00	1,130.00	139.00	61.00
Dec		27,700.00	267.00	85.40	3.00	3.00	1,290.00	44.20	61.00
<b>Average</b>	2,060.43	24,033.33	354.67	261.48	3.00	3.00	1,287.92	132.24	66.93
<b>Total</b>	14,423.00	288,400.00	4,256.00	3,137.80	36.00	36.00	15,455.00	1,586.90	803.10

Solids & Nutrients

**Metals & Criteria**

Last 4 Samples

Note: all parameters in this report are derived from the Bslq Station

Month	Arsenic (mg/L)	Cadmium (mg/L)	Cobalt (mg/L)	Chromium (mg/L)	Copper (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Lead (mg/L)	Selenium (mg/L)	Zinc (mg/L)
Parameter Short Name	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Zn
T/S	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean
Jan	0.30	0.01	0.09	0.97	6.80	0.01	0.23	0.57	2.00	0.10	11.00
Feb	0.30	0.01	0.07	0.82	6.10	0.01	0.21	0.46	1.40	0.10	9.00
Mar	0.21	0.01	0.06	0.67	5.44	0.01	0.17	0.38	0.99	0.10	7.16
Apr	0.20	0.01	0.04	0.40	3.50	0.01	0.11	0.25	0.60	0.10	5.00
May	0.30	0.02	0.10	0.98	9.00	0.01	0.28	0.55	1.20	0.10	11.00
Jun	0.20	0.01	0.05	0.55	4.50	0.01	0.15	0.31	0.60	0.10	11.00
Jul	0.20	0.01	0.06	0.70	5.00	0.01	0.18	0.37	0.80	0.10	7.00
Aug	0.20	0.02	0.07	0.71	5.70	0.01	0.20	0.42	0.70	0.10	8.00
Sep	0.20	0.01	0.05	0.49	3.60	0.01	0.14	0.27	0.50	0.10	6.00
Oct	0.20	0.02	0.08	1.10	6.30	0.02	0.22	0.55	1.00	0.10	11.00
Nov	0.20	0.02	0.08	1.00	6.30	0.02	0.22	0.53	0.90	0.10	12.00
Dec	0.20	0.02	0.07	1.00	5.70	0.01	0.21	0.55	1.10	0.10	9.00
Average	0.23	0.01	0.07	0.78	5.66	0.01	0.19	0.43	0.98	0.10	8.93
Max. Permissible Metal Concentrations (mg/kg of Solids)	170.00	34.00	340.00	2,800.00	1,700.00	11.00	94.00	420.00	1,100.00	34.00	4,200.00
Metal Concentrations in Sludge (mg/kg)	9.40	0.56	2.86	32.56	235.58	0.46	8.04	18.07	40.87	4.16	371.57

Solids & Nutrients

Metals & Criteria

**Last 4 Samples**

Note: all parameters in this report are derived from the Bslq Station

Parameter Short Name	Time Series	09/03/2025	10/07/2025	11/04/2025	12/17/2025	Average	Metal Concentrations in Sludge (mg/kg)	Max. Permissible Metal Concentrations (mg/kg of Solids)
As (mg/L)	Lab Published	0.20	0.20	0.20	0.20	0.20	8.06	170
Cd (mg/L)	Lab Published	0.01	0.02	0.02	0.02	0.02	0.67	34
Co (mg/L)	Lab Published	0.05	0.08	0.08	0.07	0.07	2.82	340
Cr (mg/L)	Lab Published	0.49	1.10	1.00	1.00	0.90	36.19	2800
Cu (mg/L)	Lab Published	3.60	6.30	6.30	5.70	5.48	220.77	1700
Hg (mg/L)	Lab Published	0.01	0.02	0.02	0.01	0.02	0.63	11
Mo (mg/L)	Lab Published	0.14	0.22	0.22	0.21	0.20	7.96	94
Ni (mg/L)	Lab Published	0.27	0.55	0.53	0.55	0.48	19.15	420
Pb (mg/L)	Lab Published	0.50	1.00	0.90	1.10	0.88	35.28	1100
Se (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.03	34
Zn (mg/L)	Lab Published	6.00	11.00	12.00	9.00	9.50	383.06	4200
E.Coli Dry Wt (cfu/g)	Lab Published						E. Coli average is the GMD	
TS (mg/L)	Lab Published	24,100.00	24,400.00	23,000.00	27,700.00	24,800.00		
TP (mg/L)	Lab Published	269.00	384.00	371.00	267.00	322.75		
NO2-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		
TKN (mg/L)	Lab Published	1,500.00	1,210.00	1,130.00	1,290.00	1,282.50		
K (mg/L)	Lab Published	64.00	57.00	61.00	61.00	60.75		
NH3p_NH4p_N (mg/L)	Lab Published	547.00	291.00	275.00	85.40	299.60		
NO3-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		

Customized Monthly Vertical Report

Facility Name: SHELBURNE WASTEWATER TREATMENT FACILITY  
Receiver: Besley Drain to Boyne Creek

Facility Org Number: 5773  
Facility Owner: Corporation/Company: The Corporation of the Town of Shelburne

Works: 110000659  
Facility Classification: Class 3 Wastewater Treatment  
Total Design Capacity: 3420 m3/day



From 01/01/2025 to 12/31/2025

Septage																								
	Biochemical Oxygen Demand: BOD5 - mg/L				Carbonaceous Biochemical Oxygen Demand: CBOD5 - mg/L				Septage Received - m³				Total Kjeldahl Nitrogen: TKN - mg/L				Total Phosphorus: TP - mg/L				Total Suspended Solids: TSS - mg/L			
	Lab Count	Lab Mon.Max	Lab Mon.Mean	Lab Mon.Min	Lab Count	Lab Mon.Max	Lab Mon.Mean	Lab Mon.Min	IH Edited Count	IH Mon.Max	IH Mon.Mean	IH Mon.Min	Lab Count	Lab Mon.Max	Lab Mon.Mean	Lab Mon.Min	Lab Count	Lab Mon.Max	Lab Mon.Mean	Lab Mon.Min	Lab Count	Lab Mon.Max	Lab Mon.Mean	Lab Mon.Min
Jan 2025	0.00				0.00				0.00				0.00				0.00				0.00			
Mar 2025	2.00	5690.00	5070.00	4450.00	2.00	4890.00	3935.00	2980.00	2.00	5.45	5.00	4.54	2.00	694.00	532.00	370.00	2.00	105.00	79.00	53.00	2.00	14300.00	8660.00	3020.00
Apr 2025	3.00	3270.00	2110.00	1360.00	3.00	2470.00	1690.00	1260.00	3.00	9.09	9.09	9.09	3.00	634.00	363.67	148.00	3.00	103.00	55.03	21.60	3.00	19800.00	9553.33	4100.00
May 2025	2.00	4210.00	4090.00	3970.00	2.00	3980.00	3005.00	2030.00	2.00	9.09	6.82	4.54	2.00	520.00	340.00	160.00	2.00	70.90	52.85	34.80	2.00	18400.00	9870.00	1340.00
Jun 2025	1.00	> 8200.00	> 8200.00	> 8200.00	1.00	3550.00	3550.00	3550.00	1.00	4.54	4.54	4.54	1.00	808.00	808.00	808.00	1.00	172.00	172.00	172.00	1.00	16300.00	16300.00	16300.00
Aug 2025	1.00	4310.00	4310.00	4310.00	1.00	3430.00	3430.00	3430.00	1.00	4.54	4.54	4.54	1.00	465.00	465.00	465.00	1.00	117.00	117.00	117.00	1.00	19100.00	19100.00	19100.00
Oct 2025	3.00	5870.00	4246.67	2350.00	3.00	4390.00	3313.33	1860.00	3.00	9.09	6.36	4.54	3.00	864.00	810.33	762.00	3.00	198.00	145.33	113.00	3.00	21300.00	20233.33	19000.00
Nov 2025	2.00	7250.00	6690.00	6130.00	2.00	6210.00	5145.00	4080.00	2.00	5.45	5.00	4.54	2.00	782.00	667.00	552.00	2.00	137.00	117.65	98.30	2.00	22800.00	16900.00	11000.00
Dec 2025	2.00	3080.00	2585.00	2090.00	2.00	3250.00	2650.00	2050.00	1.00	5.46	5.46	5.46	2.00	493.00	464.00	435.00	2.00	140.00	112.50	85.00	2.00	7460.00	6290.00	5120.00
Total	16.00				16.00				15.00				16.00				16.00				16.00			
Avg			> 4278.13				3216.25				6.30				550.06				100.88				13012.50	
Max		> 8200.00					6210.00			9.09				864.00				198.00				22800.00		
Min				1360.00				1260.00				4.54				148.00				21.60				1340.00

# Appendix D

## Calibration Reports

2025

### AS FOUND CERTIFICATION

**PASS**

#### CLIENT DETAIL

**CUSTOMER** OCWA - Highlands Hub  
**CONTACT** Jenna Porter / Don Irvine  
 Senior Operations Manager / Process Compliance Technician  
 Cell: 519-323-6760 / Cell: 519-321-9474  
 Email: jporter2@ocwa.com / dirvine@ocwa.com

#### EQUIPMENT DETAIL

**[MUT] MANUFACTURER** Magnehelic  
**MODEL** 2000 Series  
**CONVERTER SERIAL NUMBER** n/a  
  
**PLANT ID** Shelburne WWTP  
**METER ID** Digester Flow  
**FIT ID** N/A  
**CLIENT TAG** N/A  
**OTHER** OCWA# 62546  
**GPS COORDINATES** N44 05.063 W080 11.535  
  
**VERIFICATION DATE** August 22nd 2025  
**CAL. FREQUENCY** Annual  
**CAL. DUE DATE** August 2026

VER. BY - FM Paris Machuk

Quality Management Standards Information -  
 Reference equipment and instrumentation used to  
 conduct this verification test is found in our AC-QMS  
 document at the time this test was conducted.

#### PRIMARY DEVICE

**MANUFACTURER** unknown  
**PRIMARY ELEMENT** Venturi  
**DIAMETER** inches ?

#### TEST CRITERIA

**AS FOUND CERTIFICATION TEST** yes  
**ALLOWABLE [%] ERROR** 5  
**ERROR, represented as % F.S.** Yes

#### TRANSMITTER INFORMATION

**LSL (Lower Sensor Limit)** PSI 0.00  
**USL (Upper Sensor Limit)** PSI 15.00

#### SCALING INFORMATION

**LVL (Lower Value Limit)** PSI 0.00  
**UVL (Upper Value Limit)** PSI 0.92  
**Full-scale Diff. Pressure** PSI 0.92  
**Full-scale Flow Rate** LPS 1000.00

#### COMPONENTS TESTED

**CONVERTER DISPLAY** yes  
**mA OUTPUT** NO  
**Flow (F) or Pressure (P)** F  
**OUTPUT - Linear (L) or SQRT (S)** S

#### COMPARISON TESTING

	0.02	0.06	0.23	0.52	0.92	Target Press.
	0.00	6.51	24.97	56.46	99.89	% dP F.S.
<b>REF. PRESSURE, actual</b>	0.00	0.06	0.23	0.52	0.92	PSI
<b>REF. FLOW RATE, calculated</b>		255.24	499.73	751.40	999.46	LPS
MUT [Reading]	0.00	240.00	490.00	750.00	990.00	LPS
MUT [Difference]	0.00	-15.24	-9.73	-1.40	-9.46	LPS
MUT [% Error], PRESSURE	n/a	n/a	n/a	n/a	n/a	% F.S.
MUT [% Error], FLOWRATE		-1.52	-0.97	-0.14	-0.95	% F.S.
<b>mA OUTPUT</b>						
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						

#### ZERO Balance/Equalization Test

**[AF]** PSI ? LPS  
**[AL]** PSI ? LPS

#### QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE]	CRYS	1
PROCESS METER	PM	N/A

#### COMMENTS

Note: Poor resolution on gauge at lower flows.  
 Flows estimated based on visual observation.

Note possible leak on unit - had to maintain pressure on unit to get test points  
 Would recommend budget for replacement.

#### TESTING RESULTS

TEST	AVG % O.R.	PASS FAIL
DISPLAY	-0.90	PASS
mA OUTPUT	N/A	N/A

A reference pressure gauge was used to verify the overall reading accuracy of this device to within the tolerance limits as define above in this report.

### AS FOUND CERTIFICATION

**PASS**

#### CLIENT DETAIL

**CUSTOMER** OCWA - Highlands Hub  
**CONTACT** Jenna Porter / Don Irvine  
 Senior Operations Manager / Process Compliance Technician  
 Cell: 519-323-6760 / Cell: 519-321-9474  
 Email: jporter2@ocwa.com / dirvine@ocwa.com

#### EQUIPMENT DETAIL

**[MUT] MANUFACTURER** Magnehelic  
**MODEL** 2000 Series  
**CONVERTER SERIAL NUMBER** n/a  
  
**PLANT ID** Shelburne WWTP  
**METER ID** Aeration Flow  
**FIT ID** N/A  
**CLIENT TAG** N/A  
**OTHER** OCWA# 62544  
**GPS COORDINATES** N44 05.063 W080 11.535  
  
**VERIFICATION DATE** August 22nd 2025  
**CAL. FREQUENCY** Annual  
**CAL. DUE DATE** August 2026

VER. BY - FM Paris Machuk

Quality Management Standards Information -  
 Reference equipment and instrumentation used to  
 conduct this verification test is found in our AC-QMS  
 document at the time this test was conducted.

#### PRIMARY DEVICE

**MANUFACTURER** unknown  
**PRIMARY ELEMENT** Venturi  
**DIAMETER** inches ?

#### TEST CRITERIA

**AS FOUND CERTIFICATION TEST** yes  
**ALLOWABLE [%] ERROR** 5  
**ERROR, represented as % F.S.** Yes

#### TRANSMITTER INFORMATION

**LSL (Lower Sensor Limit)** psi 0.00  
**USL (Upper Sensor Limit)** psi 15.00

#### SCALING INFORMATION

**LVL (Lower Value Limit)** psi 0.00  
**UVL (Upper Value Limit)** psi 0.92  
**Full-scale Diff. Pressure** psi 0.92  
**Full-scale Flow Rate** LPS 1000.00

#### COMPONENTS TESTED

**CONVERTER DISPLAY** yes  
**mA OUTPUT** no  
 Flow (F) or Pressure (P) F  
 OUTPUT - Linear (L) or SQRT (S) S

#### COMPARISON TESTING

	0.02	0.06	0.23	0.52	0.92	Target Press.
	0.00	6.51	24.97	56.46	100.00	% dP F.S.
<b>REF. PRESSURE, actual</b>	0.00	0.06	0.23	0.52	0.92	psi
<b>REF. FLOW RATE, calculated</b>	0.00	255.24	499.73	751.40	1000.00	LPS
MUT [Reading]	0.00	240.00	490.00	740.00	1000.00	LPS
MUT [Difference]	0.00	-15.24	-9.73	-11.40	0.00	LPS
MUT [% Error], PRESSURE	n/a	n/a	n/a	n/a	n/a	% F.S.
MUT [% Error], FLOWRATE		-1.52	-0.97	-1.14	0.00	% F.S.
<b>mA OUTPUT</b>						
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						

#### ZERO Balance/Equalization Test

[AF] psi ? LPS  
 [AL] psi ? LPS

#### QUALITY MANAGEMENT STANDARDS INFO.

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE]	CRYS	1
PROCESS METER	PM	n/a

#### COMMENTS

Note: Poor resolution on gauge at lower flows.  
 Flows estimated based on visual observation.

#### TESTING RESULTS

TEST	AVG % O.R.	PASS FAIL
DISPLAY	-0.91	PASS
mA OUTPUT	N/A	N/A

A reference pressure gauge was used to verify the overall reading accuracy of this device to within the tolerance limits as define above in this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC010D  
SERIAL NUMBER A99 15693  
FUSE  
PLANT ID Shelburne WWTP  
METER ID WAS Flow  
FIT ID FIT-01  
CLIENT TAG OCWA# 62478  
OTHER n/a  
GPS COORDINATES N44 05.063 W080 11.535  
VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

**PROGRAMMING PARAMETERS**

DIAMETER (DN)	mm	80
F.S. FLOW - MAG	LPS	39.6
F.S. RANGE - O/P	LPS	27.800
CAL. k-FACTOR	GKL	5.16700

**FORWARD TOTALIZER INFORMATION**

AS FOUND	729310	M3
AS LEFT	729314	M3
DIFFERENCE	4	M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST	Yes
FORWARD FLOW DIRECTION	Yes
ALLOWABLE [%] ERROR	5

**COMPONENTS TESTED**

CONVERTER DISPLAY	yes
mA OUTPUT	yes
TOTALIZER	Yes
ACCURACY BASED ON [% o.r.]	yes
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.	

Zero Offset Flow LPS 0.0160

**FLOW TUBE SIMULATION**

		0.0	0.5	1.0	2.0	5.0	m/s
		0.0	5.0	10.0	20.0	50.0	% F.S. Flow
		0.1	7.2	14.3	28.5	71.2	% F.S. Range
<b>REF. FLOW RATE</b>		<b>0.016</b>	<b>1.995</b>	<b>3.974</b>	<b>7.932</b>	<b>19.807</b>	LPS
MUT [Reading]		0.003	2.001	3.996	7.963	19.898	LPS
MUT [Difference]		-0.013	0.006	0.022	0.031	0.091	LPS
MUT [% Error]		-81.25	0.30	0.55	0.39	0.46	%
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.148</b>	<b>6.287</b>	<b>8.565</b>	<b>15.400</b>	mA
MUT [Reading]	min. 4.000 mA	3.992	5.142	6.287	8.575	15.440	mA
MUT [Difference]	max. 20.000 mA	-0.008	-0.006	0.000	0.010	0.040	mA
MUT [% Error]		-0.20	-0.12	0.00	0.11	0.26	%
<b>TOTALIZER - REF. FLOW RATE</b>						<b>19.807</b>	LPS
TOTALIZER [MUT]						2	M3
TEST TIME						100.93	SECONDS
CALC. TOTALIZER						1.999	M3
ERROR						0.05	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.42	PASS
mA OUTPUT	0.01	PASS
TOTALIZER	0.05	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC010D  
SERIAL NUMBER A99 15978  
FUSE On Board Plug  
  
PLANT ID Shelburne WWTP  
METER ID RAS TANK #1  
FIT ID FIT-02  
CLIENT TAG n/a  
OCWA# 62479  
GPS COORDINATES N44 05.063 W080 11.535

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 100  
F.S. FLOW - MAG LPS 62.8  
F.S. RANGE - O/P LPS 66.700  
CAL. k-FACTOR GKL 5.24300

**FORWARD TOTALIZER INFORMATION**

AS FOUND 926648 M3  
AS LEFT 926657 M3  
DIFFERENCE 9 M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
FORWARD FLOW DIRECTION Yes  
ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
mA OUTPUT yes  
TOTALIZER Yes  
ACCURACY BASED ON [% o.r.] yes  
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

Zero Offset Flow LPS 0.0300

**FLOW TUBE SIMULATION**

		0.0	1.0	2.0	5.0	10.0	m/s
		0.0	10.0	20.0	50.0	100.0	% F.S. Flow
		0.0	9.5	18.9	47.1	94.1	% F.S. Range
<b>REF. FLOW RATE</b>		<b>0.03</b>	<b>6.31</b>	<b>12.58</b>	<b>31.41</b>	<b>62.79</b>	LPS
MUT [Reading]		0.03	6.23	12.56	31.37	62.72	LPS
MUT [Difference]		0.00	-0.08	-0.02	-0.04	-0.07	LPS
MUT [% Error]		0.00	-1.20	-0.17	-0.12	-0.10	%
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.513</b>	<b>7.018</b>	<b>11.534</b>	<b>19.061</b>	mA
MUT [Reading] min. 4.000 mA		3.990	5.483	7.000	11.511	19.026	mA
MUT [Difference] max. 20.000 mA		-0.010	-0.030	-0.018	-0.023	-0.035	mA
MUT [% Error]		-0.25	-0.54	-0.26	-0.20	-0.18	%
<b>TOTALIZER - REF. FLOW RATE</b>						<b>62.786</b>	LPS
TOTALIZER [MUT]						5	M3
TEST TIME						79.88	SECONDS
CALC. TOTALIZER						5.015	M3
ERROR						-0.31	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.40	PASS
mA OUTPUT	-0.29	PASS
TOTALIZER	-0.31	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC010D  
SERIAL NUMBER A99 15977  
FUSE Pull Plug on Board  
  
PLANT ID Shelburne WWTP  
METER ID RAS TANK #2  
FIT ID FIT-03  
CLIENT TAG n/a  
OCWA# 62480  
GPS COORDINATES n/a

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 100  
F.S. FLOW - MAG LPS 63.7  
F.S. RANGE - O/P LPS 66.700  
CAL. k-FACTOR GKL 5.31800

**FORWARD TOTALIZER INFORMATION**

AS FOUND 1373714 M3  
AS LEFT 1373724 M3  
DIFFERENCE 10 M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
FORWARD FLOW DIRECTION Yes  
ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
mA OUTPUT yes  
TOTALIZER Yes  
ACCURACY BASED ON [% o.r.] yes  
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

Zero Offset Flow LPS 0.0400

**FLOW TUBE SIMULATION**

		0.0	1.0	2.0	5.0	10.0	m/s	
		0.1	10.1	20.1	50.1	100.1	% F.S. Flow	
		0.1	9.6	19.1	47.8	95.5	% F.S. Range	
<b>REF. FLOW RATE</b>		<b>0.04</b>	<b>6.41</b>	<b>12.77</b>	<b>31.87</b>	<b>63.69</b>	LPS	
MUT [Reading]		0.04	6.48	12.80	31.89	63.77	LPS	
MUT [Difference]		0.00	0.07	0.03	0.02	0.08	LPS	
MUT [% Error]		0.00	1.17	0.23	0.07	0.12	%	
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.537</b>	<b>7.063</b>	<b>11.644</b>	<b>19.279</b>	mA	
MUT [Reading]		min. 4.000 mA	3.996	5.541	7.066	11.659	19.301	
MUT [Difference]		max. 20.000 mA	-0.004	0.004	0.003	0.015	0.022	
MUT [% Error]			-0.10	0.08	0.04	0.13	0.12	
<b>TOTALIZER - REF. FLOW RATE</b>							<b>63.694</b>	LPS
TOTALIZER [MUT]							7	M3
TEST TIME							109.95	SECONDS
CALC. TOTALIZER							7.003	M3
ERROR							-0.04	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.40	PASS
mA OUTPUT	0.05	PASS
TOTALIZER	-0.04	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC010D  
SERIAL NUMBER A99 15979  
FUSE Pull plug on Board  
  
PLANT ID Shelburne WWTP  
METER ID Truck Fill Flow  
FIT ID FIT-04  
CLIENT TAG n/a  
OTHER OCWA# 62618  
GPS COORDINATES n/a

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 100  
F.S. FLOW - MAG LPS 60.4  
F.S. RANGE - O/P LPS 75.000  
CAL. k-FACTOR GKL 5.04500

**FORWARD TOTALIZER INFORMATION**

AS FOUND 119325 M3  
AS LEFT 119333 M3  
DIFFERENCE 8 M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
FORWARD FLOW DIRECTION Yes  
ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
mA OUTPUT yes  
TOTALIZER Yes  
ACCURACY BASED ON [% o.r.] yes  
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

Zero Offset Flow LPS 0.0500

**FLOW TUBE SIMULATION**

		0.0	1.0	2.0	5.0	10.0	m/s
		0.1	10.1	20.1	50.1	100.1	% F.S. Flow
		0.1	8.1	16.2	40.3	80.6	% F.S. Range
<b>REF. FLOW RATE</b>		<b>0.05</b>	<b>6.09</b>	<b>12.13</b>	<b>30.24</b>	<b>60.44</b>	LPS
MUT [Reading]		0.05	6.04	12.05	30.10	60.19	LPS
MUT [Difference]		0.00	-0.05	-0.08	-0.14	-0.25	LPS
MUT [% Error]		0.00	-0.80	-0.64	-0.47	-0.41	%
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.299</b>	<b>6.587</b>	<b>10.452</b>	<b>16.893</b>	mA
MUT [Reading]		min. 4.000 mA	4.006	5.293	6.577	10.437	16.861
MUT [Difference]		max. 20.000 mA	0.006	-0.006	-0.010	-0.015	-0.032
MUT [% Error]			0.15	-0.11	-0.15	-0.14	-0.19
<b>TOTALIZER - REF. FLOW RATE</b>						<b>60.436</b>	LPS
TOTALIZER [MUT]						5	M3
TEST TIME						83.11	SECONDS
CALC. TOTALIZER						5.023	M3
ERROR						-0.46	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.58	PASS
mA OUTPUT	-0.09	PASS
TOTALIZER	-0.46	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

**AS FOUND CERTIFICATION**

**PASS**

CLIENT DETAIL		EQUIPMENT DETAIL	
CUSTOMER	OCWA - Highlands Hub	[MUT] MANUFACTURER	Milltronics
CONTACT	Jenna Porter / Don Irvine Senior Operations Manager / Process Compliance Technician Cell: 519-323-6760 / Cell: 519-321-9474 Email: jporter2@ocwa.com / dirvine@ocwa.com	MODEL	OCM-III
		CONVERTER SERIAL NUMBER	n/a
		PLANT ID	Shelburne WWTP
		METER ID	Effluent Flow
		FIT ID	FIT-05
		OCWA#	62506
		OTHER	n/a
		GPS COORDINATES	N44 05.063 W080 11.535
VER. BY - FM	Paris Machuk	VERIFICATION DATE	August 20th 2025
Quality Management Standards Information - Reference equipment and instrumentation used to conduct this verification test is found in our AC-QMS document at the time this test was conducted.		CAL. FREQUENCY	Annual
		CAL. DUE DATE	August 2026

PROGRAMMING PARAMETERS			TOTALIZER	
THROAT DIMENSION (DN)	inches	9	AS FOUND	M3
EMPTY DISTANCE	m	0.857	AS LEFT	M3
MAX. HEAD	m	0.345	DIFFERENCE	n/a M3
DEAD ZONE	m	0.512	<b>TEST CRITERIA</b>	
BLANKING DISTANCE	m	0.305	AS FOUND CERTIFICATION TEST	Yes
MAX. FLOW	LPS	105.0	ALLOWABLE [%] ERROR	5
F.S. RANGE - O/P	LPS	105.0	<b>COMPONENTS TESTED</b>	
			CONVERTER DISPLAY	yes
			mA OUTPUT	yes
			TOTALIZER	yes
			ACCURACY BASED ON [% o.r.]	no
			ERROR DOCUMENTED IN THIS REPORT; BASED ON % F.S.	

Ultrasonic sensor installed to ensure full scale flow condition

AS FOUND TEST RESULTS		0.0	18.1	46.8	80.8	37.6	% F.S. Range
		0.002	0.113	0.210	0.300	0.182	<b>m</b>
<b>REF. FLOW RATE</b>		<b>0.040</b>	<b>19.050</b>	<b>49.167</b>	<b>84.854</b>	<b>39.499</b>	LPS
MUT [Reading]		0.416	19.270	48.830	83.430	39.890	LPS
MUT [Difference]		0.376	0.220	-0.337	-1.424	0.391	LPS
MUT [% Error]		0.36	0.21	-0.32	-1.36	0.37	%
<b>mA OUTPUT</b>		<b>4.006</b>	<b>6.903</b>	<b>11.493</b>	<b>16.931</b>	<b>10.019</b>	mA
MUT [Reading]	min. 4.000 mA	4.041	6.893	11.408	16.928	10.007	mA
MUT [Difference]	max. 20.000 mA	0.035	-0.010	-0.085	-0.003	-0.012	mA
MUT [% Error]		0.17	-0.05	-0.42	-0.02	-0.06	%
<b>TOTALIZER - REF. FLOW RATE</b>						<b>39.499</b>	LPS
TOTALIZER [MUT]						4	M3
TEST TIME						101.05	SECONDS
CALC. TOTALIZER						3.991	M3
ERROR						0.22	%

COMMENTS	QUALITY MANAGEMENT STANDARDS INFO.			RESULTS		
	[QMS] INFORMATION	IDENT.	ID #	TEST	AVG %FS	PASS FAIL
	[REFERENCE] LEVEL	Sim. BOARD	Yes			
	PROCESS METER	PM	20	DISPLAY	-0.27	PASS
	STOP WATCH	SW	Yes	mA OUTPUT	-0.08	PASS
				TOTALIZER	0.22	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

**AS FOUND CERTIFICATION**  
**FORWARD FLOW DIRECTION**  
**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
 CONTACT Jenna Porter / Don Irvine  
 Senior Operations Manager / Process Compliance Technician  
 Cell: 519-323-6760 / Cell: 519-321-9474  
 Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER ROSEMOUNT  
 MODEL 8712  
 CONVERTER SERIAL NUMBER 0860188157  
 PLANT ID Shelburne WWTP  
 METER ID Raw Sewage Flow  
 FIT ID FIT-06  
 CLIENT TAG n/a  
 OTHER n/a  
 GPS COORDINATES N44 05.063 W080 11.535  
 VERIFICATION DATE August 20th 2025  
 CAL. FREQUENCY Annual  
 CAL. DUE DATE August 2026

VER. BY - FM Paris Machuk

Quality Management Standards Information -  
 Reference equipment and instrumentation used to  
 conduct this verification test is found in our AC-QMS  
 document at the time this test was conducted.

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 200  
 F.S. FLOW - MAG LPS 387.3  
 F.S. RANGE - O/P LPS 150.000  
 TUBE CAL. FACTOR 1025505911000011

**FORWARD TOTALIZER INFORMATION**

AS FOUND 9852.94 LITER  
 AS LEFT 96852 LITER  
 DIFFERENCE 86999.06 LITER

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
 FORWARD FLOW DIRECTION Yes  
 ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
 mA OUTPUT yes  
 TOTALIZER yes  
 ACCURACY BASED ON [% o.r.] yes  
 ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

VERIFICATOR CAL. FACTOR 1000015010000000  
 [16-digits]

**FLOW TUBE SIMULATION**

	0	3	10	30	ft/s
<b>DISPLAY</b>	0.00	3.00	10.00	30.00	ft/s
MUT Reading	0.00	3.00	10.00	30.01	ft/s
MUT % Error	n/a	0.00	0.00	0.03	%
<b>mA OUTPUT</b>	4.000	5.600	9.333	20.000	mA
MUT Reading	4 mA	5.600	9.336	20.009	mA
MUT % Error	20 mA	0.00	0.03	0.05	%
<b>TOTALIZER</b>				30.00	ft/s
TEST Accumulation				4400.00	ft
TIME				146.53	seconds
CALC. Velocity				30.03	ft/s
% Error				0.09	%

\*All values are for "As Found" values.

**COMMENTS**

	QUALITY MANAGEMENT STANDARDS INFO.			RESULTS		
	[QMS] INFORMATION	IDENT.	ID #	TEST	AVG % o.r.	PASS FAIL
[REFERENCE] FTS	ROS		1			
PROCESS METER	PM		20	DISPLAY	0.01	PASS
ANALOG METER	AM		N/A	mA OUTPUT	0.02	PASS
STOP WATCH	SW		Yes	TOTALIZER	0.09	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

PASS

CLIENT DETAIL		EQUIPMENT DETAIL	
CUSTOMER	OCWA - Highlands Hub	[MUT] MANUFACTURER	ABB
CONTACT	Jenna Porter / Don Irvine Senior Operations Manager / Process Compliance Technician Cell: 519-323-6760 / Cell: 519-321-9474 Email: jporter2@ocwa.com / dirvine@ocwa.com	MODEL	MagMaster
		CONVERTER SERIAL NUMBER	3K62000015306
		FUSE	Panel G - Breaker #4
		PLANT ID	Shelburne WWTP
		METER ID	Storm Flow
		FIT ID	FIT-07
		CLIENT TAG	n/a
		OTHER	n/a
		GPS COORDINATES	N44 05.063 W080 11.535
VER. BY - FM	Paris Machuk	VERIFICATION DATE	August 20th 2025
Quality Management Standards Information - Reference equipment and instrumentation used to conduct this verification test is found in our AC-QMS document at the time this test was conducted.		CAL. FREQUENCY	Annual
		CAL. DUE DATE	August 2026

PROGRAMMING PARAMETERS			FORWARD TOTALIZER INFORMATION		
DIAMETER (DN)	mm	250	AS FOUND	1002181	M3
F.S. FLOW - MAG	LPS	670.8	AS LEFT	1002208	M3
F.S. RANGE - O/P	LPS	200.000	DIFFERENCE	27	M3
TUBE CAL. FACTOR	1	1.36650			
			<b>TEST CRITERIA</b>		
			AS FOUND CERTIFICATION TEST	Yes	
			FORWARD FLOW DIRECTION	Yes	
			ALLOWABLE [%] ERROR	5	
			<b>COMPONENTS TESTED</b>		
			CONVERTER DISPLAY	yes	
			mA OUTPUT	yes	
			TOTALIZER	yes	
			ACCURACY BASED ON [% o.r.]	yes	
			ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.		

FLOW TUBE SIMULATION							
		0.0	0.2	0.5	1.0	2.0	m/s
		0	2	5	10	20	% F.S. Flow
		0.0	6.7	16.8	33.5	67.1	% F.S. Range
<b>REF. FLOW RATE</b>		<b>0.00</b>	<b>13.42</b>	<b>33.54</b>	<b>67.08</b>	<b>134.16</b>	LPS
MUT [Reading]		0.00	13.53	33.66	66.41	134.82	LPS
MUT [Difference]		0.00	0.11	0.12	-0.67	0.66	LPS
MUT [% Error]		n/a	0.85	0.36	-1.00	0.50	%
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.073</b>	<b>6.683</b>	<b>9.366</b>	<b>14.732</b>	mA
MUT [Reading]	min. 4.000 mA	3.994	5.072	6.679	9.372	14.760	mA
MUT [Difference]	max. 20.000 mA	-0.006	-0.001	-0.004	0.006	0.028	mA
MUT [% Error]		-0.15	-0.02	-0.06	0.06	0.19	%
<b>TOTALIZER - REF. FLOW RATE</b>						<b>134.156</b>	LPS
TOTALIZER [MUT]						15	M3
TEST TIME						110.96	SECONDS
CALC. TOTALIZER						14.886	M3
ERROR						0.76	%

COMMENTS	QUALITY MANAGEMENT STANDARDS INFO.	RESULTS		
		TEST	AVG % o.r.	PASS FAIL
NOTE: Reverse totalizer was showing on display -changed to forward totalizer for testing	[QMS] INFORMATION IDENT. ID # [REFERENCE] FTS ABBMM 1	DISPLAY	0.18	PASS
NOTE: random characters coming and going through display - indication of possible failure - budget for replacement	PROCESS METER PM 20 ANALOG METER AM N/A STOP WATCH SW Yes	mA OUTPUT	0.00	PASS
		TOTALIZER	0.76	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

**AS FOUND CERTIFICATION**
**FORWARD FLOW DIRECTION**
**PASS**
**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
 CONTACT Jenna Porter / Don Irvine  
 Senior Operations Manager / Process Compliance Technician  
 Cell: 519-323-6760 / Cell: 519-321-9474  
 Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER ABB  
 MODEL MagMaster  
 CONVERTER SERIAL NUMBER 3K62000015305  
 FUSE Panel G - Breaker #6  
 PLANT ID Shelburne WWTP  
 METER ID Storm Return Flow  
 FIT ID FIT-08  
 CLIENT TAG n/a  
 OTHER n/a  
 GPS COORDINATES N44 05.063 W080 11.535  
 VERIFICATION DATE August 20th 2025  
 CAL. FREQUENCY Annual  
 CAL. DUE DATE August 2026

VER. BY - FM Paris Machuk  
 Quality Management Standards Information -  
 Reference equipment and instrumentation used to  
 conduct this verification test is found in our AC-QMS  
 document at the time this test was conducted.

**PROGRAMMING PARAMETERS**

DIAMETER (DN)	mm	200
F.S. FLOW - MAG	LPS	468.4
F.S. RANGE - O/P	LPS	100.000
TUBE CAL. FACTOR	1	1.49102

**FORWARD TOTALIZER INFORMATION**

AS FOUND	1041308	M3
AS LEFT	1041328	M3
DIFFERENCE	20	M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST	Yes
FORWARD FLOW DIRECTION	Yes
ALLOWABLE [%] ERROR	5

**COMPONENTS TESTED**

CONVERTER DISPLAY	yes
mA OUTPUT	yes
TOTALIZER	yes
ACCURACY BASED ON [% o.r.]	yes
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.	

**FLOW TUBE SIMULATION**

		0.0	0.2	0.5	1.0	2.0	m/s	
		0	2	5	10	20	% F.S. Flow	
		0.0	9.4	23.4	46.8	93.7	% F.S. Range	
<b>REF. FLOW RATE</b>		<b>0.00</b>	<b>9.37</b>	<b>23.42</b>	<b>46.84</b>	<b>93.68</b>	LPS	
MUT [Reading]		0.00	9.46	23.50	47.06	94.23	LPS	
MUT [Difference]		0.00	0.09	0.08	0.22	0.55	LPS	
MUT [% Error]		n/a	0.98	0.34	0.47	0.58	%	
<b>mA OUTPUT</b>		<b>4.000</b>	<b>5.499</b>	<b>7.747</b>	<b>11.495</b>	<b>18.989</b>	mA	
MUT [Reading]	min. 4.000 mA	3.992	5.499	7.751	11.510	19.039	mA	
MUT [Difference]	max. 20.000 mA	-0.008	0.000	0.004	0.015	0.050	mA	
MUT [% Error]		-0.20	0.00	0.05	0.13	0.26	%	
<b>TOTALIZER - REF. FLOW RATE</b>		<b>ENTER Totalizer test velocity if different from above in m/s 2.0</b>					<b>93.683</b>	LPS
TOTALIZER [MUT]							8	M3
TEST TIME							85.01	SECONDS
CALC. TOTALIZER							7.964	M3
ERROR							0.45	%

**COMMENTS**
**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ABBMM	1
PROCESS METER	PM	20
ANALOG METER	AM	N/A
STOP WATCH	SW	N/A

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.59	PASS
mA OUTPUT	0.05	PASS
TOTALIZER	0.45	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

**AS FOUND CERTIFICATION**  
**FORWARD FLOW DIRECTION**  
**PASS**
**CLIENT DETAIL**

CUSTOMER OCWA - West Highlands Hub  
 CONTACT David Jorge  
 Process Compliance Technician  
 p: 519-925-1938 x 225  
 c: 519-938-6909  
 e: djorge@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER ABB  
 MODEL MagMaster  
 CONVERTER SERIAL NUMBER 3K62000015302  
 FUSE Panel G - Breaker #8  
 PLANT ID Shelburne WWTP  
 METER ID Sludge Transfer Flow  
 FIT ID FIT-09  
 CLIENT TAG n/a  
 OTHER n/a  
 GPS COORDINATES N44 05.063 W080 11.535  
 VERIFICATION DATE August 20th 2025  
 CAL. FREQUENCY Annual  
 CAL. DUE DATE August 2026

VER. BY - FM Paris Machuk

Quality Management Standards Information -  
 Reference equipment and instrumentation used to  
 conduct this verification test is found in our AC-QMS  
 document at the time this test was conducted.

**PROGRAMMING PARAMETERS**

DIAMETER (DN)	mm	200
F.S. FLOW - MAG	LPS	468.7
F.S. RANGE - O/P	LPS	80.000
TUBE CAL. FACTOR	1	1.49194

**FORWARD TOTALIZER INFORMATION**

AS FOUND	39243	M3
AS LEFT	39250	M3
DIFFERENCE	7	M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST	Yes
FORWARD FLOW DIRECTION	Yes
ALLOWABLE [%] ERROR	5

**COMPONENTS TESTED**

CONVERTER DISPLAY	yes
mA OUTPUT	yes
TOTALIZER	yes
ACCURACY BASED ON [% o.r.]	yes
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.	

**FLOW TUBE SIMULATION**

		0.0	0.1	0.2	0.5	1.0	m/s	
		0	1	2	5	10	% F.S. Flow	
		0.0	5.9	11.7	29.3	58.6	% F.S. Range	
<b>REF. FLOW RATE</b>		<b>0.00</b>	<b>4.69</b>	<b>9.37</b>	<b>23.44</b>	<b>46.87</b>	LPS	
MUT [Reading]		0.00	4.71	9.45	23.55	47.06	LPS	
MUT [Difference]		0.00	0.02	0.08	0.11	0.19	LPS	
MUT [% Error]		n/a	0.49	0.81	0.49	0.40	%	
<b>mA OUTPUT</b>		<b>4.000</b>	<b>4.937</b>	<b>5.875</b>	<b>8.687</b>	<b>13.374</b>	mA	
MUT [Reading]	min. 4.000 mA	3.990	4.933	5.878	8.691	13.371	mA	
MUT [Difference]	max. 20.000 mA	-0.010	-0.004	0.003	0.004	-0.003	mA	
MUT [% Error]		-0.25	-0.09	0.05	0.05	-0.02	%	
<b>TOTALIZER - REF. FLOW RATE</b>							<b>46.871</b>	LPS
TOTALIZER [MUT]							4	M3
TEST TIME							84.96	SECONDS
CALC. TOTALIZER							3.982	M3
ERROR							0.45	%

**COMMENTS**
**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	ABBMM	1
PROCESS METER	PM	20
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	0.55	PASS
mA OUTPUT	-0.05	PASS
TOTALIZER	0.45	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC100  
SERIAL NUMBER C16501184  
FUSE On Board Plug  
  
PLANT ID Shelburne WWTP  
METER ID Lower Clarifier  
FIT ID FIT-014  
CLIENT TAG n/a  
OCWA# n/a  
GPS COORDINATES N44 05.063 W080 11.535

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 250  
F.S. FLOW - MAG LPS 619.8  
F.S. RANGE - O/P LPS 150.000  
CAL. k-FACTOR GKL 8.28520

**FORWARD TOTALIZER INFORMATION**

AS FOUND 926648 M3  
AS LEFT 926657 M3  
DIFFERENCE 9 M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
FORWARD FLOW DIRECTION Yes  
ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
mA OUTPUT no  
TOTALIZER Yes  
ACCURACY BASED ON [% o.r.] yes  
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

Zero Offset Flow LPS 0.0000

**FLOW TUBE SIMULATION**

		0.0	0.5	1.0	2.0	m/s
		0.0	5.0	10.0	20.0	% F.S. Flow
		0.0	20.7	41.3	82.6	% F.S. Range
<b>REF. FLOW RATE</b>		<b>0.00</b>	<b>30.99</b>	<b>61.98</b>	<b>123.96</b>	LPS
MUT [Reading]		0.00	30.31	61.58	123.56	LPS
MUT [Difference]		0.00	-0.68	-0.40	-0.40	LPS
MUT [% Error]		n/a	-2.20	-0.65	-0.32	%
<b>mA OUTPUT</b>						
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						
<b>TOTALIZER - REF. FLOW RATE</b>					<b>123.962</b>	LPS
TOTALIZER [MUT]					9	M3
TEST TIME					73.17	SECONDS
CALC. TOTALIZER					9.070	M3
ERROR					-0.78	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-1.06	PASS
mA OUTPUT	N/A	N/A
TOTALIZER	-0.78	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION

FORWARD FLOW DIRECTION

**PASS**

**CLIENT DETAIL**

CUSTOMER OCWA - Highlands Hub  
CONTACT Jenna Porter / Don Irvine  
Senior Operations Manager / Process Compliance Technician  
Cell: 519-323-6760 / Cell: 519-321-9474  
Email: jporter2@ocwa.com / dirvine@ocwa.com

**EQUIPMENT DETAIL**

[MUT] MANUFACTURER Krohne  
MODEL IFC100  
SERIAL NUMBER C16501544  
FUSE On Board Plug  
  
PLANT ID Shelburne WWTP  
METER ID Upper Clarifier  
FIT ID FIT-014  
CLIENT TAG n/a  
OCWA# n/a  
GPS COORDINATES N44 05.063 W080 11.535

VER. BY - FM Daniel Kettlewell

Quality Management Standards Information -  
Reference equipment and instrumentation used to  
conduct this verification test is found in our AC-  
QMS document at the time this test was  
conducted.

VERIFICATION DATE August 20th 2025  
CAL. FREQUENCY Annual  
CAL. DUE DATE August 2026

**PROGRAMMING PARAMETERS**

DIAMETER (DN) mm 250  
F.S. FLOW - MAG LPS 649.9  
F.S. RANGE - O/P LPS 150.000  
CAL. k-FACTOR GKL 8.68720

**FORWARD TOTALIZER INFORMATION**

AS FOUND 926648 M3  
AS LEFT 926657 M3  
DIFFERENCE 9 M3

**TEST CRITERIA**

AS FOUND CERTIFICATION TEST Yes  
FORWARD FLOW DIRECTION Yes  
ALLOWABLE [%] ERROR 5

**COMPONENTS TESTED**

CONVERTER DISPLAY yes  
mA OUTPUT no  
TOTALIZER Yes  
ACCURACY BASED ON [% o.r.] yes  
ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.

Zero Offset Flow LPS 0.0000

**FLOW TUBE SIMULATION**

		0.0	0.5	1.0	2.0	m/s
		0.0	5.0	10.0	20.0	% F.S. Flow
		0.0	21.7	43.3	86.7	% F.S. Range
<b>REF. FLOW RATE</b>		0.00	32.49	64.99	129.98	LPS
MUT [Reading]		0.00	32.42	64.98	129.90	LPS
MUT [Difference]		0.00	-0.07	-0.01	-0.08	LPS
MUT [% Error]		n/a	-0.23	-0.01	-0.06	%
<b>mA OUTPUT</b>						
MUT [Reading] min. 4.000 mA						
MUT [Difference] max. 20.000 mA						
MUT [% Error]						
<b>TOTALIZER - REF. FLOW RATE</b>					129.976	LPS
TOTALIZER [MUT]					9	M3
TEST TIME					69.26	SECONDS
CALC. TOTALIZER					9.002	M3
ERROR					-0.02	%

**COMMENTS**

**QUALITY MANAGEMENT STANDARDS INFO.**

[QMS] INFORMATION	IDENT.	ID #
[REFERENCE] FTS	KRO	1
PROCESS METER	PM	0
ANALOG METER	AM	N/A
STOP WATCH	SW	Yes

**RESULTS**

TEST	AVG % o.r.	PASS FAIL
DISPLAY	-0.10	PASS
mA OUTPUT	N/A	N/A
TOTALIZER	-0.02	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

## Appendix E

# Bypass/Overflow Incident Report

2025

**From:** [Melissa Cortes](#)  
**To:** [moe.sac.moe@ontario.ca](mailto:moe.sac.moe@ontario.ca); [Ec.FA-LP-On.ec@canada.ca](mailto:Ec.FA-LP-On.ec@canada.ca); [jmoss@shelburne.ca](mailto:jmoss@shelburne.ca); [dmorrissey@shelburne.ca](mailto:dmorrissey@shelburne.ca); [martha.weber@ontario.ca](mailto:martha.weber@ontario.ca)  
**Cc:** [Jenna Porter](#); [Don Irvine](#); [-GHRH-SPCM@ocwa.com \(Mailing List\)](mailto:-GHRH-SPCM@ocwa.com); [Karla Young](#); [Caralynn McRae](#); [Richard Junkin](#); ["Phil Wong"](#); ["PHI Intake"](#); [Suhail Auzam](#); [Manan Barot](#); [Alex Solomonov](#); [Monika Kowalska](#); ["Ian Ockenden"](#); ["Rob Matthews"](#)  
**Subject:** RE: Shelburne WWTP-Environmental Incident #1-N7YORI - April 3, 2025  
**Date:** April-17-25 3:53:00 PM  
**Attachments:** [Apr 3, 2025 Bypass Report CA14307-APR25.pdf](#)  
[Apr 4, 2025 Bypass Report CA14309-APR25.pdf](#)

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Good afternoon,

Please find attached lab result from the samples collected for the below Tertiary Bypass Incident (Incident# 1-N7YORI) that occurred at the Shelburne WWTP.

Thank you,

Melissa

## Melissa Cortes (she/her)

Process & Compliance Technician  
North & South Highlands Hubs, Georgian Highlands Region  
300 Centennial Road  
Shelburne ON, L9V 2Z4  
Cell: 519-938-6909 Email: [mcortes@ocwa.com](mailto:mcortes@ocwa.com)



---

**From:** Melissa Cortes  
**Sent:** April-07-25 12:49 PM  
**To:** [moe.sac.moe@ontario.ca](mailto:moe.sac.moe@ontario.ca); [Ec.FA-LP-On.ec@canada.ca](mailto:Ec.FA-LP-On.ec@canada.ca); [jmoss@shelburne.ca](mailto:jmoss@shelburne.ca); [dmorrissey@shelburne.ca](mailto:dmorrissey@shelburne.ca); [martha.weber@ontario.ca](mailto:martha.weber@ontario.ca)  
**Cc:** Jenna Porter <[JPorter2@ocwa.com](mailto:JPorter2@ocwa.com)>; Don Irvine <[DIrvine@ocwa.com](mailto:DIrvine@ocwa.com)>; -GHRH-SPCM@ocwa.com (Mailing List) <[-GHRH-SPCM@ocwa.com](mailto:-GHRH-SPCM@ocwa.com)>; Karla Young <[KYoung@ocwa.com](mailto:KYoung@ocwa.com)>; Caralynn McRae <[CMcRae@ocwa.com](mailto:CMcRae@ocwa.com)>; Richard Junkin <[RJunkin@ocwa.com](mailto:RJunkin@ocwa.com)>; 'Phil Wong' <[phil.wong@wdgpublichealth.ca](mailto:phil.wong@wdgpublichealth.ca)>; 'PHI Intake' <[PHI.Intake@wdgpublichealth.ca](mailto:PHI.Intake@wdgpublichealth.ca)>; Suhail Auzam <[SAuzam@ocwa.com](mailto:SAuzam@ocwa.com)>; Manan Barot <[MBarot@ocwa.com](mailto:MBarot@ocwa.com)>; Alex Solomonov <[ASolomonov@ocwa.com](mailto:ASolomonov@ocwa.com)>; Monika Kowalska <[MKowalska@ocwa.com](mailto:MKowalska@ocwa.com)>; 'Ian Ockenden' <[iockenden@nvca.on.ca](mailto:iockenden@nvca.on.ca)>; 'Rob Matthews' <[rmatthews@shelburne.ca](mailto:rmatthews@shelburne.ca)>  
**Subject:** Shelburne WWTP-Environmental Incident #1-N7YORI - April 3, 2025

**Regarding:** Written Notification concerning the Shelburne WWTP Tertiary Bypass on April 3, 2025.

**SAC Reference Number:** 1-N7YORI  
**Date:** April 3, 2025  
**Facility:** Shelburne WWTP  
**Location:** 300 Centennial Road, Shelburne, ON  
**Treatment Processes bypassed:** Effluent Filters  
**Time Bypass Started:** April 3, 2025 10:28

**Time Bypass Ended:** April 4, 2025 14:27

**Duration of Incident:** 28 hrs

**Bypass Contents:** Partially Treated Effluent

**Volume:** Approx. 10,638m<sup>3</sup>

**Location of Release:** Through the regular outfall to the Beasley Drain to Boyne River to Nottawasaga River

**Description of Incident/Reason for Tertiary Bypass:** Due to significant weather-related high flows (high precipitation and snow melt)

**Actions Taken:** Due to the many days of consistent weather-related high flows, the storm ponds were reaching capacity. In order to control the wet-well level, both raw sewage pumps were required to run together to avoid collection system backups. In doing this, the filters quickly reached high level and a bypass around them was required. Once flows subsided the bypass valves were closed and normal operations resumed. Samples were taken on April 3, 2025 on start of bypass and on April 4, 2025 on completion of bypass.

**Samples Collected:** Samples were taken according to ECA #6413-ABLQQS on April 3, 2025 on start of bypass and on April 4, 2025 on completion of bypass.

#### **Reporting:**

April 3, 2025 at 11:31 Melissa Cortes (OCWA) notified Akiko Date (SAC).

April 3, 2025 at 11:36 Melissa Cortes (OCWA) notified Martha Weber (MECP).

April 3, 2025 at 11:41 Melissa Cortes (OCWA) notified Alivia Jenkins (WDG Health Unit). Alivia called back (12:27) and confirmed receipt of message and bypass information.

April 3, 2025 at 11:52 Melissa Cortes (OCWA) notified Chris Hibberd (Nottawasaga Conservation Authority) via email, Ian Ockenden (Nottawasaga Conservation Authority) returned email acknowledging receipt April 3, 2025 at 15:37.

April 3, 2025 at 12:22 Jenna Porter (OCWA) Jim Moss (Owner)

April 4, 2025 at 15:04 Manan Barot (OCWA) notified Edhilvia (SAC) bypass had ended and volume.

Please find attached the Environmental Incident Report, the laboratory results from the bypass samples will be forwarded when received.

Melissa Cortes (she/her)

Process & Compliance Technician

North & South Highlands Hubs, Georgian Highlands Region

300 Centennial Road

Shelburne ON, L9V 2Z4

Cell: 519-938-6909 Email: [mcortes@ocwa.com](mailto:mcortes@ocwa.com)



# Ontario Clean Water Agency Environmental Incident Report

Facility ID: 5773 EIncidentReport  
Facility Name: Shelburne Wastewater Treatment Plant  
Address: 300 Centennial Street  
City: Shelburne  
Province: Ontario  
Postal Code: L9V 2Z4  
Date of Occurrence: 04/03/2025  
Time of Occurrence: 10:28:00 AM

## Nature of the Incident

Level 1 Contingency  Level 2 Contingency  Level 3 Contingency [Click here To Show the Definitions](#)

Incident affected:  Air  Water  Land  Nothing

What was discharged or emitted?

- |  |  |
|--|--|
| <input type="checkbox"/> Chlorine                              | <input type="checkbox"/> Oil/Diesel/Gas                                |
| <input type="checkbox"/> Sodium Hypochlorite                   | <input checked="" type="checkbox"/> Untreated or partly treated sewage |
| <input type="checkbox"/> Calcium Chloride                      | <input type="checkbox"/> Odours  |
| <input type="checkbox"/> Aluminum Compounds (Specify in Other) | <input type="checkbox"/> Water   |
| <input type="checkbox"/> Arsenic                               | <input type="checkbox"/> Iron Coagulants                               |
| <input type="checkbox"/> Fluoride                              |  |

Other: \_\_\_\_\_

## If this was a discharge, spill or emission...

If a liquid, approximately what quantity was released?: 10638000 Litres

If a gas, approximately what quantity was released?: \_\_\_\_\_

If a solid, approximately what quantity was released?: \_\_\_\_\_ Kg

What was the source of release?:

Due to significant weather-related high flows (high precipitation and snow melt)

Where did the release go?:

Through the regular outfall to the Beasley Drain to Boyne River to Nottawasaga River

If it entered a watercourse:  Yes  No

If it went off site:  Yes  No

Duration of the release?: 28 Hours

Is the release now stopped?:  Yes  No

Was there any damage? (i.e. property and/or environmental):  Yes  No  N/A

If "Yes", describe below and fill out "Insurance Claim" report

**Action(s) Taken**

What actions were taken to control the incident?

Due to the many days of consistent weather-related high flows, the storm ponds were reaching capacity. In order to control the wet-well level, both raw sewage pumps were required to run together to avoid collection system backups. In doing this, the filters quickly reached high level and a bypass around them was required. Once flows subsided the bypass valves were closed and normal operations resumed. Samples were taken on April 3, 2025 on start of bypass and on April 4, 2025 on completion of bypass.

What actions have been taken to remediate the incident?

Storm pond return flow has been increased during times of lower flows to increase available storage room. This plant is seeing flows that are regularly exceeding the daily design capacity. There has been a plant upgrade submittal by SBA Engineering to address the Town of Shelburne's growing population. Discussions and actions plans have been implemented with the Town as well as SBA to further investigate any I&I in the Town, although a significant I&I reduction program has already been completed in the last 5 years.

Was this a reportable spill or discharge?:  Yes  No

If "Yes", at what time was it first reported to the MOE?

April 3, 2025 at 11:36 Melissa Cortes (OCWA) notified Martha Weber (MECP).

Was it reported to the MOE district office?:  Yes  No

If "Yes", which office/location and who was the contact?: Guelph District Office

Was it reported to MOE SAC?:  Yes  No

If "Yes", at what time was it reported to MOE SAC?:

April 3, 2025 at 11:31 Melissa Cortes (OCWA) notified Akiko Date (SAC).

Was it reported to Municipality?:  Yes  No

If "Yes", at what time was it reported to Municipality?:

April 3, 2025 at 12:22 Jenna Porter (OCWA) Jim Moss (Owner)

**External Assistance/Involvement**

Was corporate or area office assistance requested?:  Yes  No

If "Yes", was it received?:  Yes  No

Was external emergency assistance requested?:  Yes  No

If "Yes", from who?:  Fire Department  Equipment Suppliers  Canutec  
 Ambulance or Hospital  MOE  Coast Guard  
 Police  Municipality

Other: \_\_\_\_\_

Was there any media involvement?:  Yes  No

If "Yes", who?: \_\_\_\_\_

Was the public affected?:  Yes  No

If "Yes", how?: \_\_\_\_\_

Updated By: [Melissa Cortes](#) 04/07/2025 12:46:30 PM

**Comments:**

Regarding: Written Notification concerning the Shelburne WWTP Tertiary Bypass on April 3, 2025.

SAC Reference Number: 1-N7Y0RI

Date: April 3, 2025

Facility: Shelburne WWTP

Location: 300 Centennial Road, Shelburne, ON

Treatment Processes bypassed: Effluent Filters

Time Bypass Started: April 3, 2025 10:28

Time Bypass Ended: April 4, 2025 14:27

Duration of Incident: 28 hrs

Bypass Contents: Partially Treated Effluent

Volume: Approx. 10,638m3

Location of Release: Through the regular outfall to the Beasley Drain to Boyne River to Nottawasaga River

Description of Incident/Reason for Tertiary Bypass: Due to significant weather-related high flows (high precipitation and snow melt)

Actions Taken: Due to the many days of consistent weather-related high flows, the storm ponds were reaching capacity. In order to control the wet-well level, both raw sewage pumps were required to run together to avoid collection system backups. In doing this, the filters quickly reached high level and a bypass around them was required. Once flows subsided the bypass valves were closed and normal operations resumed. Samples were taken on April 3, 2025 on start of bypass and on April 4, 2025 on completion of bypass.

Samples Collected: Samples were taken according to ECA #6413-ABLQOS on April 3, 2025 on start of bypass and on April 4, 2025 on completion of bypass.

Reporting:

April 3, 2025 at 11:31 Melissa Cortes (OCWA) notified Akiko Date (SAC).

April 3, 2025 at 11:36 Melissa Cortes (OCWA) notified Martha Weber (MECP).

April 3, 2025 at 11:41 Melissa Cortes (OCWA) notified Alivia Jenkins (WDG Health Unit). Alivia called back (12:27) and confirmed receipt of message and bypass information.

April 3, 2025 at 11:52 Melissa Cortes (OCWA) notified Chris Hibberd (Nottawasaga Conservation Authority) via email, Ian Ockenden (Nottawasaga Conservation Authority) returned email acknowledging receipt April 3, 2025 at 15:37.

April 3, 2025 at 12:22 Jenna Porter (OCWA) Jim Moss (Owner)

April 4, 2025 at 15:04 Manan Barot (OCWA) notified Edhylvia (SAC) bypass had ended and volume.



**SGS Canada Inc.**  
 P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - K0L 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

**Works #:** 110000659  
**Project :** PO#017844

16-April-2025

**OCWA-Highlands North (Shelburne WPCP)**

Attn : Jenna Porter

**Date Rec. :** 08 April 2025  
**LR Report:** CA14307-APR25

136 Main St. E  
 Shelburne, ON  
 L9V 3K5, Canada

**Copy:** #1


Phone: 519-925-1938 ext. 225  
 Fax:

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1:	2:	3:	4:	9:	10:
	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	Eff Eff-Final Effluent Bypass Grab	Eff Eff-Final Effluent Bypass (Bacti) Grab
Sample Date & Time					03-Apr-25 11:42	03-Apr-25 11:42
Temperature Upon Receipt [°C]	---	---	---	---	6.0	6.0
Field Temperature [celcius]	---	---	---	---	---	11.2
Field pH [no unit]	---	---	---	---	---	7.23
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	09-Apr-25	16:56	14-Apr-25	14:36	< 4	---
Total Suspended Solids [mg/L]	10-Apr-25	10:22	11-Apr-25	08:23	16	---
pH [No unit]	09-Apr-25	14:41	10-Apr-25	10:55	7.82	---
Alkalinity [mg/L as CaCO3]	09-Apr-25	14:41	10-Apr-25	10:55	213	---
Phosphorus (total) [mg/L]	09-Apr-25	18:14	10-Apr-25	13:49	0.170	---
Total Kjeldahl Nitrogen [as N mg/L]	09-Apr-25	16:08	10-Apr-25	13:49	1.2	---
Ammonia+Ammonium (N) [as N mg/L]	09-Apr-25	19:00	16-Apr-25	10:05	0.2	---
Nitrite (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	0.46	---
Nitrate (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	7.56	---
Nitrate + Nitrite (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	8.02	---
Ecoli [mpn/100mL]	09-Apr-25	12:24	10-Apr-25	14:20	---	100

\*E. Coli was received/processed after the recommended holding time of 48 hours. Result maybe unreliable.

  
 Carrie Greenlaw  
 Project Specialist,  
 Environment, Health & Safety



**SGS Canada Inc.**  
 P.O. Box 4300 - 185 Concession St.  
 Lakefield - Ontario - KOL 2H0  
 Phone: 705-652-2000 FAX: 705-652-6365

**Works #:** 110000659  
**Project :** PO#017844

14-April-2025

**OCWA-Highlands North (Shelburne WPCP)**

Attn : Jenna Porter

**Date Rec. :** 08 April 2025  
**LR Report:** CA14309-APR25

136 Main St. E  
 Shelburne, ON  
 L9V 3K5, Canada

**Copy:** #1

Phone: 519-925-1938 ext. 225  
 Fax:

# CERTIFICATE OF ANALYSIS

## Final Report

Analysis	1:	2:	3:	4:	9:	10:
	Analysis Start Date	Analysis Start Time	Analysis Completed Date	Analysis Completed Time	Eff Eff-Final Effluent Bypass Grab	Eff Eff-Final Effluent Bypass (Bacti) Grab
Sample Date & Time					04-Apr-25 12:55	04-Apr-25 12:55
Temperature Upon Receipt [°C]	---	---	---	---	6.0	6.0
Field Temperature [celcius]	---	---	---	---	---	9.9
Field pH [no unit]	---	---	---	---	---	7.63
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	09-Apr-25	16:56	14-Apr-25	14:37	82	---
Total Suspended Solids [mg/L]	09-Apr-25	12:50	10-Apr-25	14:00	82	---
pH [No unit]	10-Apr-25	08:16	10-Apr-25	15:37	7.61	---
Alkalinity [mg/L as CaCO3]	10-Apr-25	08:16	10-Apr-25	15:37	313	---
Phosphorus (total) [mg/L]	09-Apr-25	18:14	10-Apr-25	13:49	1.62	---
Total Kjeldahl Nitrogen [as N mg/L]	09-Apr-25	16:08	10-Apr-25	13:49	14.8	---
Ammonia+Ammonium (N) [as N mg/L]	09-Apr-25	19:00	10-Apr-25	12:42	13.1	---
Nitrite (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	< 0.03	---
Nitrate (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	< 0.06	---
Nitrate + Nitrite (as N) [mg/L]	10-Apr-25	08:31	10-Apr-25	16:44	< 0.06	---
Ecoli [mpn/100mL]	09-Apr-25	12:24	10-Apr-25	14:20	---	198630

\*E. Coli was received/processed after the recommended holding time of 48 hours. Result maybe unreliable.

  
 Carrie Greenlaw  
 Project Specialist,  
 Environment, Health & Safety