2024 ANNUAL PERFORMANCE REPORT

VICTORIA HARBOUR WASTEWATER TREATMENT PLANT

For the period of
January 1st, 2024 to December 31st, 2024

Prepared for the Corporation of the Township of Tay by the Ontario Clean Water Agency

TAY TOWNSHIP
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ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

REQUIREMENTS FOR ANNUAL PERFORMANCE REPORT

This annual performance report was prepared in accordance with Amended Environmental Compliance Approval No. 3389-A5BKJJ as per Section 10.(6) items a) through l) for the for the Victoria Harbour Wastewater Treatment Plant and with Environmental Compliance Approval #129-W601, Issue 1 for the Tay Township Municipal Collection System.

ECA No. 3389-A5BKJJ- SECTION 10. REPORTING REQUIREMENTS

(6) The Owner shall prepare and submit a performance report to the Water Supervisor on an annual basis, within ninety (90) days following the end of the period being reported upon. The reports shall contain, but shall not be limited to, the following information:

(a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;

(b) a description of any operating problems encountered and corrective actions taken;

(c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;

(d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;

(e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment; and

(f) a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 5.

(g) 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;

(h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;

(i) a summary of all By-pass, spill or abnormal discharge events;

(j) 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;

(k) a report summarizing all modifications completed as a result of Schedule B, Section 3; and

(l) any other information the Water Supervisor requires from time to time;

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This annual performance report was prepared in accordance with Amended Environmental Compliance Approval No. 3389-A5BKJJ as per Section 10.(6) items a) through l) for the for the Victoria Harbour Wastewater Treatment Plant and with Environmental Compliance Approval #129-W601, Issue 1 for the Tay Township Municipal Collection System as per Section 4.0 elements 4.6 through 4.7 during the 'Reporting Period' of January 1, 2024 to December 31, 2024.

1. System Description

The Victoria Harbour Wastewater Treatment Plant (WWTP) is a Class II Treatment and Class II Collection facility. The Victoria Harbour WWTP is an extended aeration process with tertiary treatment that serves the Township of Tay. The major process units consist of inlet works including an automated fine screen vortex grit separator, cloth media disk filtration, aeration tanks, clarifier, treated with chemical dosing for phosphorus removal and UV disinfection. Sludge management consists of aerobic digesters with a sludge holding tank. The WWTP discharges the treated effluent via its outfall into Sturgeon Bay. The facility is equipped with standby power in the event of a power failure.

An overview of the Victoria Harbour Wastewater Treatment Plant can be found in the following table:

Table 1. Victoria Harbour Wastewater Treatment Plant System Overview

Facility Name:	Victoria Harbour Wastewater Treatment Plant
Facility Type:	Extended Aeration with Clarification, Aerobic Digesters, Filtration and UV Disinfection
Plant Classification:	Class II WWT, Class II WWC
Works Number:	110004174
Rated Capacity:	2,364 m^3/d
Discharge Point:	Sturgeon Bay
Environmental Compliance Approval:	3389-A5BKJJ (Issued: February 1, 2016)

2. Monitoring Data and Comparison with ECA Objectives and Limits

ECA 3389-A5BKJJ, section 10(6)(a) requires:

"A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;"

Where: Condition 7 is *"imposed to ensure that the effluent discharged from the Works to the Sturgeon Bay meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving water body."*

2.1 Discharge Data Report (MECP)

The Ontario Clean Water Agency (OCWA) has an agreement with the MECP to submit quarterly discharge data for all OCWA operated municipal sewage treatment facilities 45 days at the end of each quarter. Monitoring data is submitted via the Ministry of Environment Wastewater System (MEWS). The MECP has these reports stored in a shared location where MECP Inspectors can obtain and review them. There are no limits/objectives for discharge for the quarterly Discharge Data Report.

2.2 Monitoring Report (WSER)

A monitoring report required under the Wastewater Systems Effluent Regulation (WSER) is submitted on a quarterly basis to the Government of Canada via the Effluent Regulatory Reporting Information System (ERRIS). The quarterly monitoring report requires that the following information be reported for the Victoria Harbour WWTP:

- Number of days effluent was deposited
- Total volume of effluent deposited
- Average CBOD (limit of 25 mg/L)
- Average concentration of suspended solids (limit of 25 mg/L)

The monitoring reports can be found within the ERRIS. During the reporting period, all results for average $CBOD_5$ and concentration of suspended solids were below the limits set out in WSER. Testing is performed annually every April for Acute Lethality of the effluent to Rainbow Trout. The 2024 results showed 0% mortality.

2.3 Influent ECA Monitoring Program Requirements

The following table (Table 2) outlines the influent water quality monitoring program 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).

Table 2. Influent Water Quality Monitoring Program and Sampling Points- ***as per ECA 3389-A5BKJJ Section 9(3)- Table 3- Influent Monitoring- Inlet Works***

Influent Monitoring		
Parameter	**Sample Type**	**Frequency**
Biochemical Oxygen Demand (BOD_5)	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

2.4 Raw Sewage (Influent) Characteristics: Summary and Interpretation of Reporting Year

The following parameters in Table 3 are not reportable as they do not have limits or objectives but are monitored as required by the ECA and used to characterize the contents of incoming sewage flow.

A summary of the influent laboratory results can be found in the following table for samples taken and analyzed during the reporting period. Sample results are based on a monthly composite sample taken and analyzed by an accredited external laboratory (SGS Canada Inc., Lakefield, Ontario). Twelve (12) influent samples were analyzed for the reporting period.

Table 3: Raw Sewage (Influent) Quality Analysis for 2024

Month	Monthly Influent Concentrations (mg/L)			
	BOD_5	**Total Suspended Solids**	**Total Phosphorus**	**Total Kjeldahl Nitrogen**
January	110.00	131.00	1.81	18.00
February	60.00	33.00	1.08	16.50
March	93.00	158.00	1.63	22.50
April	132.00	152.00	3.61	29.20
May	94.00	74.00	1.24	14.10
June	90.00	251.00	1.30	20.40
July	110.00	108.00	2.42	30.40
August	105.00	70.00	1.81	21.90
September	134.00	131.00	1.94	26.60
October	105.00	162.00	1.93	21.70
November	107.00	134.00	1.96	22.70
December	153.00	175.00	2.66	21.00
2024 Annual Average	**107.75**	**131.58**	**1.95**	**22.08**

Influent Laboratory analysis for the reporting year based on samples at the inlet of the works averaged a Biochemical Oxygen Demand (BOD_5) concentration of 107.75 mg/L, a Total Suspended Solids (TSS) concentration of 131.58 mg/L, a Total Phosphorus (TP) concentration of 1.95 mg/L and a Total Kjeldahl Nitrogen concentration of 22.08 mg/L.

The results from 2024 are similar in comparison to the results from the reporting year. The average BOD_5 concentration in 2024 was 107.75 mg/L (4.83 mg/L higher than in 2023). The annual average concentration of TSS in 2024 was 131.58 mg/L (25.84 mg/L higher in 2023). The annual average concentration of TP in 2024 was 1.95 mg/L (0.11 mg/L lower in 2023). The annual average concentration for TKN in 2024 was 22.08 mg/L (3.02 mg/L lower in 2023).

2.5 Raw Sewage (Influent) Flow: Summary and Interpretation of Reporting Year

The Rated Capacity listed in the most current ECA for Victoria Harbour WWTP is 2,364 cubic metres per day (m^3/day). Typically the Rated Capacity listed in an ECA is determined based on the highest average annual flow during which the sewage treatment plant can consistently meet site specific effluent quality criteria (as per the Ontario Design Guidelines for Sewage Works); this is usually dictated by the most limiting treatment/process unit in the system. ECA No. 3389-A5BKJJ, Section 6(2) requires the Owner to use its best efforts to (b) operate the works within the Rated Capacity of the Works.

The Peak Flow Rate is the maximum rate of sewage flow for which the plant or process unit was designed. Each process in the treatment system will have its own Peak Flow Rate. The Peak Flow Rate a treatment system is determined by the process unit with the lowest Peak Flow Rate. For Victoria Harbour WWTP, the Plant Peak Flow Rate is limited by Effluent Filter, which has a Peak Flow Rate of 6,600 cubic metres per day.

2.6 Comparison of Influent Flow to Rated Capacity

A summary of influent flow data and comparison to the Rated Capacity during the reporting period can be found in the below table and graph. Based on the definition of the Rated Capacity, a single exceedance does not necessarily result in a non-compliance event, however, if a system continually exceeds its Rated Capacity, this could result in reduced treatment efficiency and lead to effluent objective exceedances.

Table 4. Raw Sewage (Influent) Flow Data during Reporting Period

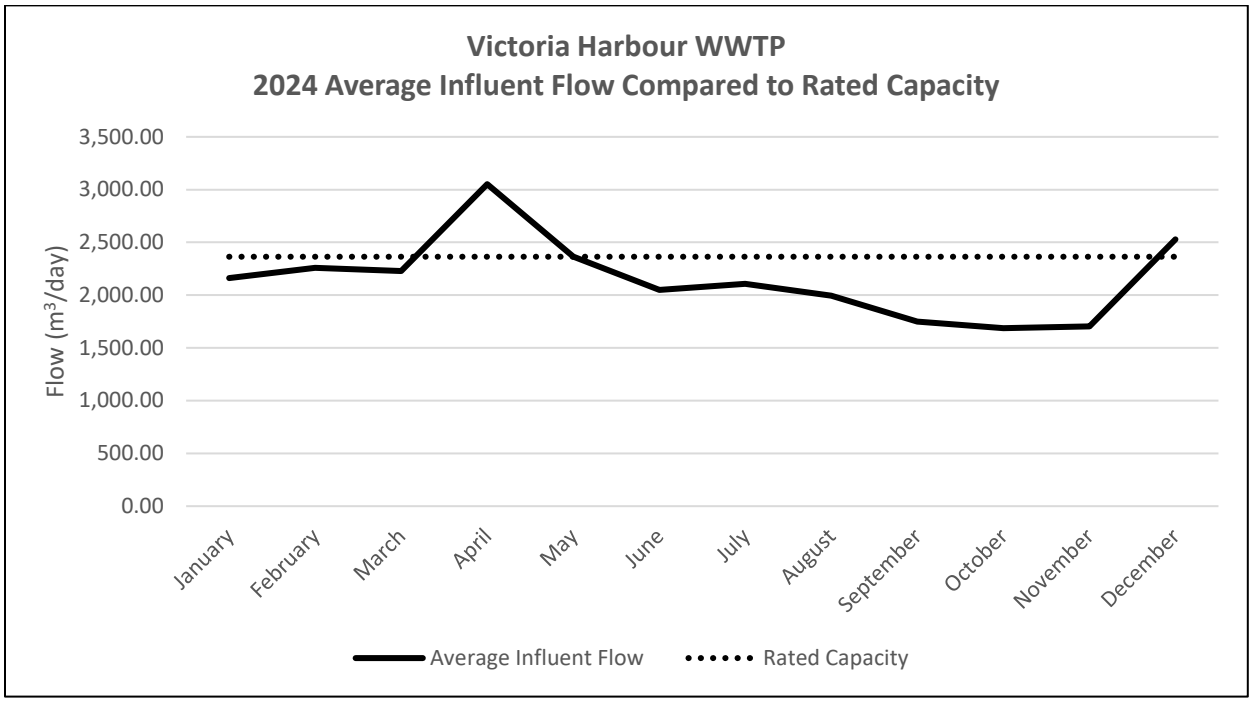
Month	Average Influent Flow (m^3/day)	% of Rated Capacity (2,364 m^3/day)	Maximum Influent Flow (m^3/day)	% of Plant Peak Flow Rate (6,600 m^3/day)	Total Influent Flow (m^3)
January	2,160.97	91.41%	2,601.00	39.41%	66,990.00
February	2,257.45	95.49%	2,770.00	41.97%	65,466.00
March	2,227.10	94.21%	2,811.00	42.59%	69,040.00
April	3,051.63	129.09%	5,080.00	76.97%	91,549.00
May	2,365.94	100.08%	3,671.00	55.62%	73,344.00
June	2,050.83	86.75%	2,912.00	44.12%	61,525.00
July	2,106.65	89.11%	3,349.00	50.74%	65,306.00
August	1,994.48	84.37%	2,329.00	35.29%	61,829.00
September	1,748.90	73.98%	2,102.00	31.85%	52,467.00
October	1,686.94	71.36%	1,883.00	28.53%	52,295.00
November	1,702.70	72.03%	1,956.00	29.64%	51,081.00
December	2,528.10	106.94%	5,684.00	86.12%	78,371.00

2024	**2,156.46**	**91.22%**	**5,684.00**	**86.12%**	**789,263.00**

Note: As per the ECA, 'Rated Capacity' is defined as "the Average Daily Flow for which the Works are approved to handle".

Note: As per the ECA, 'Average Daily Flow' is defined as "the cumulative total sewage flow to the sewage works during a calendar year divided by the number of days during which sewage was flowing to the sewage works that year".

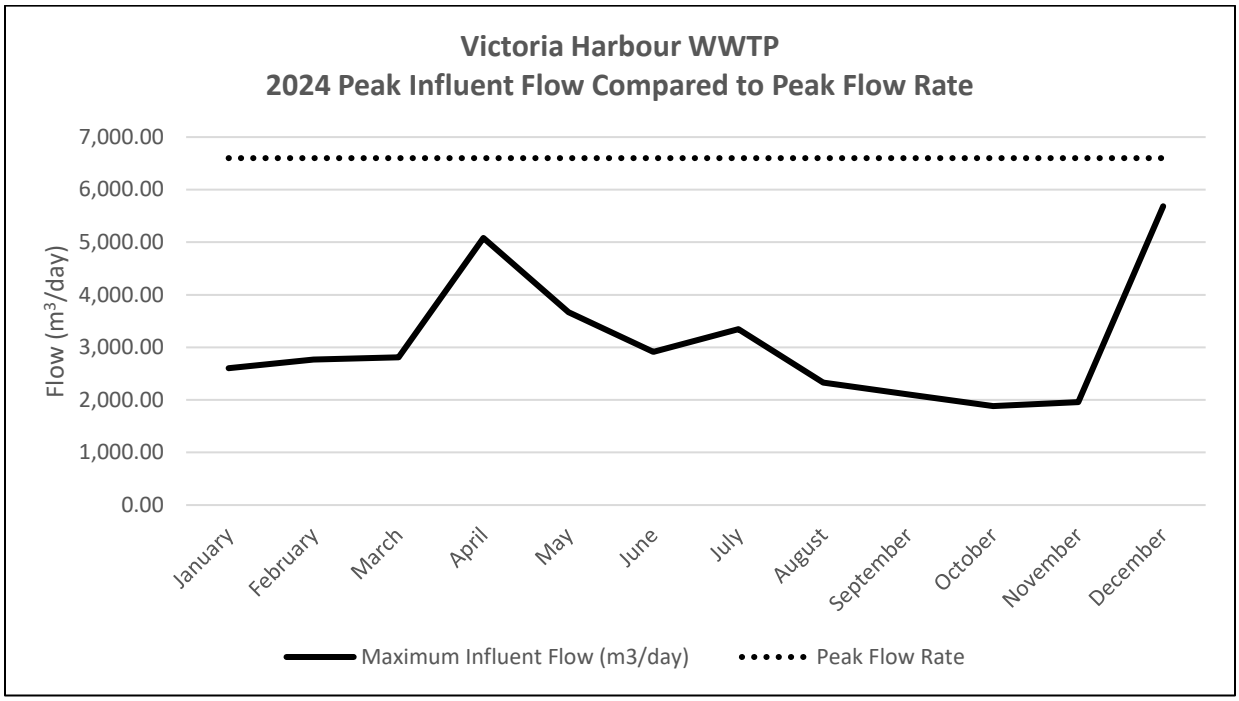
Figure 1. Average Influent Flow Compared to Rated Capacity during the Reporting Period



The average flow of 2,156.46 m^3/day is based on the total flow for the reporting period divided by the number of operational days (i.e. 365) as per the 'Average Daily Flow' definition in the ECA.

If the Annual Average Daily Flow reaches/exceeds 80% of the Rated Capacity, current best practice is to assess issues and provide recommendations for proactive actions. For 2024, the Annual Average Daily Flow was above 80% of the 'Rated Capacity' at 91% of the 'Rated Capacity'. The highest recorded peak flow event of 5,684.00 m^3 occurred on December 30, 2024, it is suspected that warmer weather and snowmelt contributed to higher than usual flows.

Figure 2. Peak Influent Flow Compared to Peak Flow Rate during the Reporting Period



Currently, OCWA Engineering is evaluating the facility for future expansion upgrades that will increase the rated capacity of the plant. The Plant Peak Flow Rate of 6,600 m^3/day was not exceeded during the reporting year.

Refer to Appendix A for detailed monthly raw sewage (influent) flows to the facility.

2.7 Effluent ECA Monitoring Program

The following table outlines the monitoring programs at the Victoria Harbour 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.

Table 5. Effluent Water Quality Monitoring Program and Sampling Points- ***as per ECA 3389-A5BKJJ Section 9(3)- Table 4- Effluent Monitoring- Effluent Outfall***

Effluent Monitoring		
Parameter	**Sample Type**	**Frequency**
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly

Effluent Monitoring		
Parameter	**Sample Type**	**Frequency**
E. Coli	Grab	Weekly
pH	Grab	Weekly
Temperature	Grab	Weekly

The following tables outline the final effluent objectives, limits and loadings at the Victoria Harbour 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 $CBOD_5$, TSS and TP 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 of TP are reportable based on a Monthly Average Daily Effluent Loading.

2.8 ECA Compliance Objectives and Limits

The following tables outline the effluent water quality compliance objectives and limits at the Victoria Harbour WWTP as per its ECA.

Table 6: Final Effluent Design Objectives- ***as per ECA 3389-A5BKJJ Section 6(1)- Table 1 Effluent Objectives***

Effluent Parameters	**Concentration Objective** (mg/L unless otherwise indicated)
Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)	10.0
Total Suspended Solids	10.0
Total Phosphorus	0.3
Total Ammonia Nitrogen- (May 1 – October 31)	8.0
Total Ammonia Nitrogen- (November 1 – April 30)	10.0
E. Coli	100 organisms/100 mL
pH	7.0 to 9.0, inclusive, at all times

Table 7: Final Effluent Design Limits ***as per ECA 3389-A5BKJJ Section 7(1)- Table 2 Effluent Limits***

Effluent Parameters	**Average Concentration Limit** (mg/L unless otherwise indicated)	**Average Waste Loading Limit** (kg/day unless otherwise indicated)	**Reportable**
$CBOD_5$	15.0	--	Monthly
Total Suspended Solids	15.0	--	Monthly
Total Phosphorus	0.5	1.18	Monthly
E. Coli	200 organisms/100 mL	--	Monthly
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times			

2.9 Effluent Monitoring Data: Summary and Interpretation of Reporting Year and Comparison to Objectives and Limits

ECA 3389-A5BKJJ, section 10(6)(a) requires:

"A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;"

Where: 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 occur and before the compliance limits of Condition 7 are exceeded."

Where: Condition 7 is "imposed to ensure that the effluent discharged from the Works to the Sturgeon Bay meets the Ministry's effluent quality requirements thus minimizing environmental impact on the receiver and to protect water quality, fish and other aquatic life in the receiving water body."

The following tables summarizes the effluent water quality for the reporting period compared with the ECA compliance objectives and limits.

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 2024 reporting period:

- $CBOD_5$ monthly average effluent concentration
- Total Suspended Solids monthly average effluent concentration
- Total Phosphorus monthly average effluent concentration
- Total Phosphorus monthly average daily effluent loading
- Total Ammonia Nitrogen monthly average effluent concentration
- *E.Coli* monthly geometric mean density concentration

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:

- pH – in 61 out of 106 sample throughout the reporting period

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 are not reportable.

Table 8: Effluent Sampling Results: $CBOD_5$

Month	**Monthly Average** (mg/L)	**Within Limits?** (15.0 mg/L)	**Within Objectives?** (10.0 mg/L)
January	4.00	Yes	Yes
February	2.50	Yes	Yes
March	5.00	Yes	Yes
April	3.60	Yes	Yes
May	4.00	Yes	Yes
June	3.00	Yes	Yes
July	4.00	Yes	Yes
August	4.00	Yes	Yes
September	4.00	Yes	Yes
October	4.00	Yes	Yes
November	3.50	Yes	Yes
December	3.80	Yes	Yes
2024 Average	**3.79**	**--**	**--**

**As per the ECA, CBOD5 Concentration Averaging Calculator is a Monthly Average Effluent Concentration*

Table 9: Effluent Sampling Results: TSS

Month	**Monthly Average** (mg/L)	**Within Limits?** (15.0 mg/L)	**Within Objectives?** (10.0 mg/L)
January	2.80	Yes	Yes
February	4.50	Yes	Yes
March	2.50	Yes	Yes
April	3.20	Yes	Yes
May	4.25	Yes	Yes
June	5.25	Yes	Yes
July	2.40	Yes	Yes
August	2.00	Yes	Yes
September	2.50	Yes	Yes
October	2.60	Yes	Yes
November	2.50	Yes	Yes
December	3.20	Yes	Yes
2024 Average	**3.11**	**--**	**--**

**As per the ECA, TSS Concentration Averaging Calculator is a Monthly Average Effluent Concentration*

Table 10: Effluent Sampling Results: TP and TP Loading Concentrations

Month	Total Phosphorus Concentration			Total Phosphorus Waste Loading		
	Monthly Average (mg/L)	**Within Limits?** (0.5 mg/L)	**Within Objectives?** (0.3 mg/L)	**Monthly Average** (kg/day)	**Within Limits?** (1.18 kg/day)	**Within Objectives?** (N/A)
January	0.04	Yes	Yes	0.08	Yes	--
February	0.03	Yes	Yes	0.07	Yes	--
March	0.03	Yes	Yes	0.06	Yes	--
April	0.03	Yes	Yes	0.09	Yes	--
May	0.04	Yes	Yes	0.08	Yes	--
June	0.07	Yes	Yes	0.13	Yes	--
July	0.03	Yes	Yes	0.07	Yes	--
August	0.03	Yes	Yes	0.05	Yes	--
September	0.03	Yes	Yes	0.04	Yes	--
October	0.03	Yes	Yes	0.05	Yes	--
November	0.03	Yes	Yes	0.04	Yes	--
December	0.05	Yes	Yes	0.12	Yes	--
2024	**0.03**	**--**	**--**	**0.07**	**--**	**--**

**As per the ECA, TP Concentration Averaging Calculator is a Monthly Average Effluent Concentration*

**As per the ECA, TP Loading Limits Concentration Averaging Calculator is a Monthly Average Daily Effluent Loading.*

Table 11: Effluent Sampling Results: Total Ammonia Nitrogen (TAN)

Month	**Monthly Average Concentration** (mg/L)	**Within Monthly Objective?** (8.0 mg/L May 1 - Oct 31) (10.0 mg/L Nov 1 - Apr 30)	**Within Monthly Compliance Limit?** (N/A)
January	0.68	Yes	N/A
February	1.12	Yes	N/A
March	1.40	Yes	N/A
April	0.84	Yes	N/A
May	1.75	Yes	N/A
June	3.32	Yes	N/A
July	0.18	Yes	N/A
August	1.37	Yes	N/A
September	0.85	Yes	N/A
October	0.30	Yes	N/A
November	0.10	Yes	N/A
December	1.84	Yes	N/A

**As per the ECA, there are no limits for TAN Concentration, only objective limits*

Table 12: Effluent Sampling Results: *E.Coli* Concentrations

Month	**Monthly Geometric Mean Density** (mg/L)	**Within Monthly Objective?** (100 CFU/100 mL)	**Within Monthly Compliance Limit?** (200 CFU/100 mL)
January	2.00	Yes	Yes
February	1.68	Yes	Yes
March	1.68	Yes	Yes
April	2.00	Yes	Yes
May	2.00	Yes	Yes
June	2.00	Yes	Yes
July	2.00	Yes	Yes
August	2.00	Yes	Yes
September	1.68	Yes	Yes
October	2.00	Yes	Yes
November	2.00	Yes	Yes
December	2.00	Yes	Yes

**As per the ECA, E.Coli Concentration Averaging Calculator is a Monthly Geometric Density*

Table 13. Effluent Quality Data during Reporting Period: pH

Month	**pH**			
	Min.	**Max.**	**Within Objective?** (7.0 – 9.0) Inclusive, at all times	**Within Limits?** (6.0 – 9.5) Inclusive, at all times
January	6.8	7.0	No[13A]	Yes
February	6.7	7.0	No[13A]	Yes
March	6.7	7.0	No[13A]	Yes
April	6.7	7.1	No[13A]	Yes
May	6.3	6.8	No[13A]	Yes
June	6.9	7.2	No[13A]	Yes
July	6.7	7.2	No[13A]	Yes
August	6.7	7.2	No[13A]	Yes
September	6.6	7.3	No[13A]	Yes
October	6.8	7.5	No[13A]	Yes
November	7.1	7.6	Yes	Yes
December	7.2	7.4	Yes	Yes

[13A] Note: A new pH probe was in use in October through the end of the reporting year, the following in-house pH samples were within the objective after October 4, 2024.

Refer to the below section (Section 2.10) for a comparison of effluent discharge data compared to the ECA objectives, limits and loadings with relation to the success and adequacy of the system.

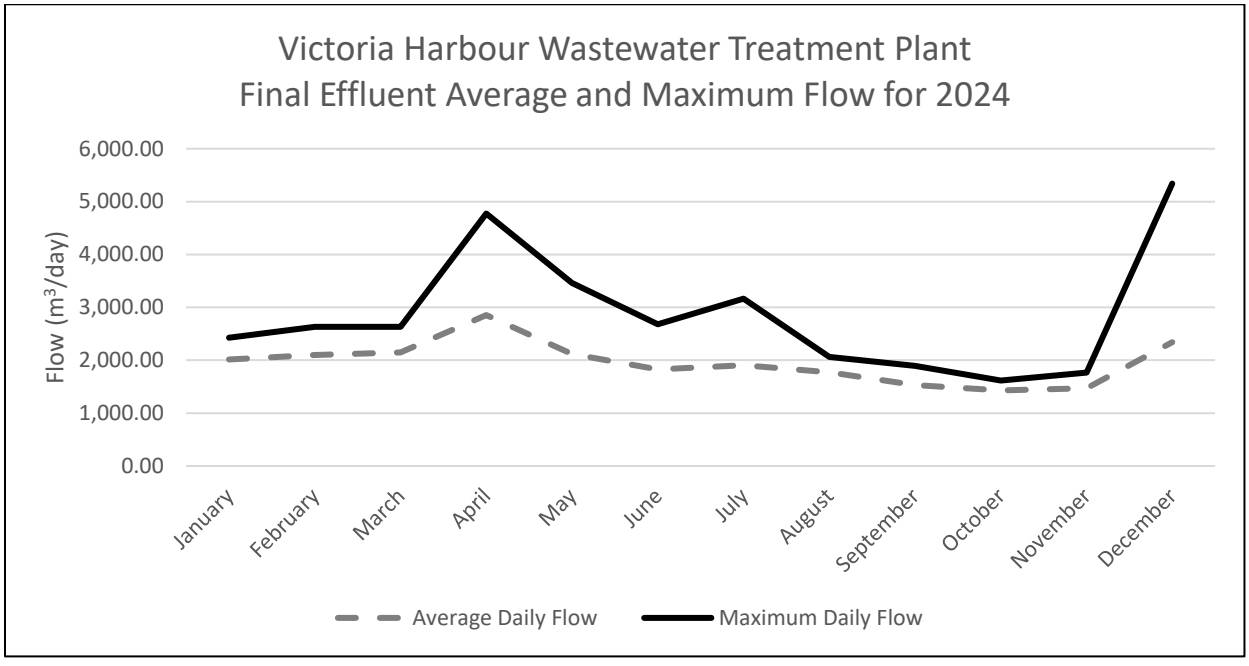
2.10 Effluent Flow: Summary and Interpretation of Reporting Year

The following table (Table 14) outlines the final effluent average daily flow data in 2024 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 2024

Month	Average Daily Effluent (m^3/day)	Peak Daily Effluent (m^3/day)	Total (m^3/day)
January	2,011.90	2,424.00	62,369.00
February	2,100.59	2,634.00	60,917.00
March	2,145.16	2,630.00	66,500.00
April	2,854.10	4,774.00	85,623.00
May	2,116.10	3,460.00	65,599.00
June	1,825.17	2,680.00	54,755.00
July	1,903.23	3,162.00	59,000.00
August	1,771.87	2,060.00	54,928.00
September	1,527.70	1,892.00	45,831.00
October	1,429.48	1,616.00	44,314.00
November	1,469.00	1,765.00	44,070.00
December	2,339.03	5,341.00	72,510.00
2024 Average	**1,957.42**	**5,341.00**	**716,416.00**

Figure 3: Average Daily and Peak Daily Final Effluent Flow by Month for 2024



During the reporting period, the average annual daily flow for final effluent to outfall (Sturgeon Bay) was 1,957.42 m^3/day. The maximum peak final effluent daily flow was 5,684.00 m^3/day, which occurred on December 30, 2024 corresponding with the maximum peak daily influent flows.

2.11 Success & Adequacy of the System

ECA 3389-A5BKJJ, Section 10.(5)(a) requires:

"A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;"

In 2024, the Victoria Harbour WWTP produced effluent with the following removal rates:

Parameter	2024
Total Suspended Solids	96.70%
Total Phosphorus	97.75%

During the reporting period, Victoria Harbour WWTP provided effective wastewater treatment, producing effluent with removal rates for Total Suspended Solids at 96.70% and 97.75% for Total Phosphorus.

In 2024 the Victoria Harbour WWTP provided effective wastewater treatment. The bacteriological quality of the effluent complied with the ECA monthly geometric mean density of less than 200 *E.Coli* organisms per 100 mL sample of effluent discharged from the plant. The range of monthly geometric mean density of organisms for 2024 was between 1.68 and 2.00 organisms per 100 mL under normal operating conditions, which indicates effective effluent disinfection. pH was also maintained between 6.0 and 9.0 for the reporting period, however there were instances that it fell outside of the objective (7.0 – 9.0) in 61 single samples. This occurred in the months of January through October. A new pH probe was utilized in October to the end of the reporting period, and the single sample pH results measured using the new probe were within both the limits and objectives for the remainder of October to the end of the year..

This WWTP was in compliance with all of the effluent concentration and loading limits for the reporting year, under normal operating conditions, for all parameters. Based on the monitoring program and effluent quality data, the Victoria Harbour WWTP provided effective treatment for the 2024 reporting year.

For 2024 best efforts were used to operate the works within the rated capacity of the system. For the reporting period, the annual average daily influent flow was 2,156.46 m^3, which was below the Rated Capacity at 91%. Currently, OCWA Engineering is evaluating the facility for future expansion upgrades that will increase the rated capacity of the plant. The Plant Peak Flow Rate of 6,600 m^3/day, was not exceeded for the reporting year.

Best efforts were also made to ensure that the effluent from the works was free of floating and settleable solids and did not contain oil or any other substances in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving waters.

3. Operational Issues and Corrective Actions

ECA 3389-A5BKJJ, section 10.6, element (b) requires:

"A description of any operating problems encountered and corrective actions taken;"

There were no operating problems encountered during the reporting period.

4. Maintenance Activities

ECA 3389-A5BKJJ, section 10.6, element (c) requires:

"A summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming a part of the works;"

4.1 Work Management System

Planned maintenance, including scheduled and non-scheduled maintenance activities are scheduled 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 Generator Testing
- Monthly Analyzer/pH/DO Probe Calibrations
- Monthly Headworks Maintenance
- Monthly Inspection/Maintenance of Aeration Blowers
- Monthly Alarm Testing
- Monthly UV Inspections/Maintenance

- Monthly Clarifier Maintenance/Cleaning
- Annual Pump Maintenance
- Quarterly Floc Tank Mixer Inspection/Maintenance
- Annual Air Scrubber Maintenance
- Annual Clarifier Drive Unit Maintenance
- Annual Generator Maintenance
- Annual Transfer Pumps Maintenance

4.3 Repairs and Improvement

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

- Start Capacitor Replacement
- Stop Float Replacement
- Low Level Replacement
- Aerator Replacement
- Valve Installation

5. Effluent Quality Assurance

ECA 3389-A5BKJJ, section 10.6, element (d) requires:

"A summary of any effluent quality assurance or control measures undertaken in the reporting period;"

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

5.1 Adherence to Provincial Regulations

The Ontario Clean Water Agency operates the Victoria Harbour 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 (Lakefield) Canada Inc.

5.3 Operation by Licensed Operators

Victoria Harbour 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 maintaining process control. All in-house monitoring equipment is calibrated based on the manufacturer's recommendations. The Operators of the facility continue to use their expertise in order to meet our objective of no exceedances of the ECA Effluent Compliance Limits and OCWA will continue to make best efforts to meet the ECA Effluent Objectives.

5.6 Calibrations

Third-party and in-house calibrations are 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.

6. Calibration of Monitoring Equipment

ECA 3389-A5BKJJ, section 10.6, element (e) requires:

"A summary of the calibration and maintenance carried out on all effluent monitoring equipment;"

The flow meters used to measure raw sewage (influent) and final effluent at Victoria Harbour WWTP were calibrated on June 7, 2024 by Indus Control. All program parameters received a passing inspection. Refer to Appendix B for detailed calibration records/reports.

7. Sludge Production & Disposal

ECA 3389-A5BKJJ, section 10.6, element (g) requires:

"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;"

During the reporting period, a total volume of 5,732.60 m^3 of sludge produced at the Victoria Harbour WWTP was hauled by Wessuc Inc. & Region of Huronia Environmental Services (ROHES). The sludge was either delivered to lagoons for storage or applied as soil conditioner to agricultural land to Non-Agricultural Source Material Plan (NASM Plan) sites/locations which were approved by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) under Ontario Regulation 338/09. NASM Plans under the Nutrient Management Act are issued to the owner (farmer) who is responsible for managing this plan with assistance from the NASM Plan Developer.

Refer to Table 15 for a tabulation of the hauled sludge and the locations of where the sludge was disposed and Appendix C a detailed record of specific sludge haulage dates and volumes.

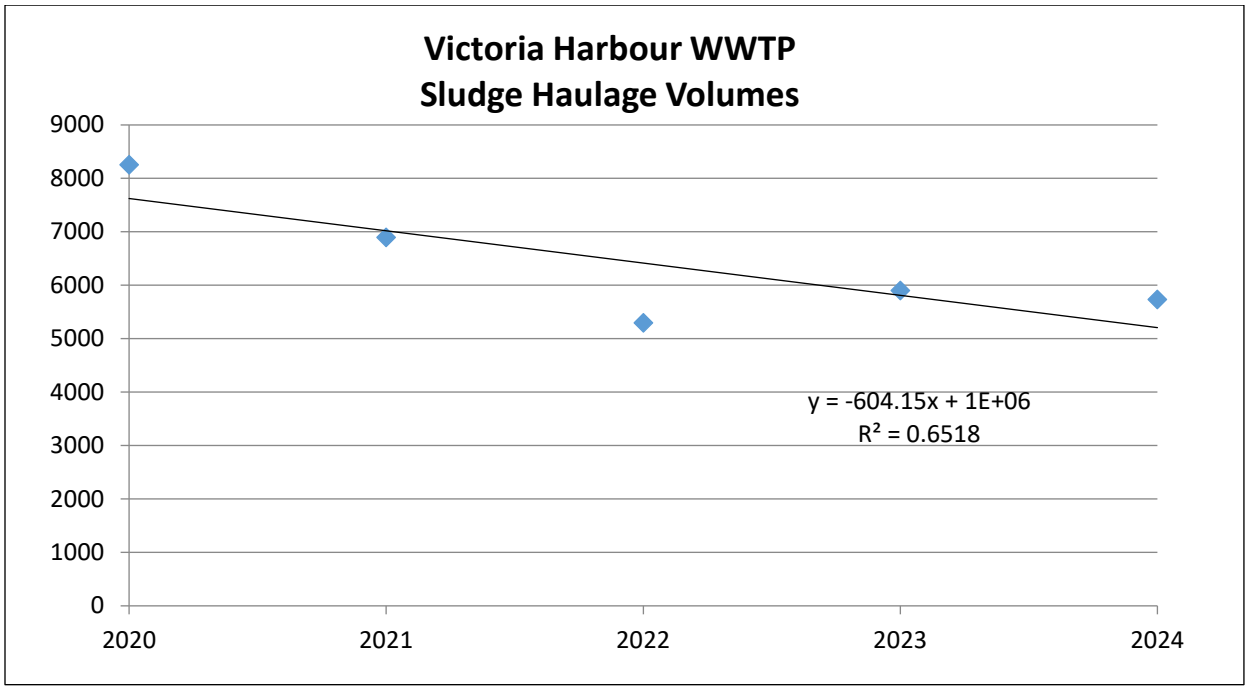
Table 15. Sludge Hauling during the Reporting Period

Month	Hauled to Location	NASM #	Volume of Sludge (m^3)
January	Lagoon	N/A	480.00
February	Lagoon	N/A	480.00
March	Lagoon	N/A	270.00
April	Lagoon	N/A	798.00
May	Lagoon	N/A	613.20
June	Lagoon	N/A	378.00
July	Lagoon	N/A	777.20
August	Lagoon	N/A	42.00
	SD Corners-Field:1	24760	330.40
September	Home-Field:F1	24506	378.00
October	Lagoon	N/A	63.00
	Cornelius/McGann-Field:1	61806	330.40
	Home South-Field:F1	24536	252.00
November	Lagoon	N/A	204.40
December	Lagoon	N/A	336.00
Total Sludge Haulage in 2024			**5,732.60**

During the reporting period, a total volume of 5,732.60 m^3 of sludge was hauled from Victoria Harbour WWTP to ROHES storage lagoon or to field. Compared to 2023, this was a decrease of approximately 3% (5,897.50 m^3). Process adjustments are continuously made by staff, including the optimization of the decanting/dewatering process.

Typically, to estimate the volume of sludge generated in the next reporting period, a linear regression using data from previous years is used. However, given the low R^2 value (0.65, see Figure 4) the regression model would not be able to accurately estimate sludge volumes for 2025. The closer the R^2 value is to 100%, the better the regression model fits to the data. Operations staff will continue to optimize the dewatering process to reduce the relative volume of sludge.

Figure 4: Victoria Harbour Wastewater Treatment Plant Sludge Haulage Volumes



Biosolids produced at the Victoria Harbour WWTP met all the quality criteria specified in the Regulation for the reporting period. A summary of the Victoria Harbour WWTP sludge quality with a comparison to quality criteria can be referenced in Appendix D.

8. Community Complaints

ECA 3389-A5BKJJ, section 10.6, element (h) requires:

"A summary of any complaints received during the reporting period and any steps taken to address the complaints;"

There is a standard operating procedure (SOP) in place that outlines the steps required for receiving and addressing community complaints. All complaints are to be discussed and/or investigated, and resolved as required. The community complaint is logged in detail in the facility logbook and then various details are entered into OCWA's electronic Work Management System (WMS). This database contains the history of all complaints with the relevant information enclosed.

For the reporting period, there were no community complaints received.

9. By-Pass, Spill or Abnormal Discharge Events

ECA 3389-A5BKJJ, section 10.6, element (i) requires:

"A summary of all By-pass, spill or abnormal discharge event;"

Quarterly by-pass reports were submitted to the ministry as required in the ECA for the reporting period on April 17, 2024, July 12, 2024, October 28, 2024, and January 1, 2025.

9.1 By-pass Events

There were no reportable bypass events during the reporting period.

9.2 Spill or Abnormal Discharge Events

There were no reportable spill or abnormal discharge events for this reporting period.

10. Notice of Modifications (Limited Operational Flexibility)

ECA 3389-A5BKJJ, section 10.6, element (j) requires:

"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;" w*here Schedule B, Section 1 is the *"Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works."*

There were no Notices of Modifications required to be submitted to the Water Supervisor during the reporting period.

11. Summary of Modifications

ECA 3389-A5BKJJ, section 10.6, element (k) requires:

"A report summarizing all modifications completed as a result of Schedule B, Section 3;" where Schedule B, Section 3 includes: *"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 the Equivalent Equipment, are considered 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 are included in Section 4 of this report.

12. Other Information

ECA 3389-A5BKJJ, section 10.6, element (l) requires:

"Any other information the Water Supervisor requires from time to time."

There was no information required by the Water Supervisor during the reporting period.

Annual Flow & Effluent Quality Summary for 2024

Appendix A

With Daily Raw Influent Flows for 2024

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Performance Assessment Report

From 1/1/2024 to 12/31/2024 11:59:59 PM

1675 VICTORIA HARBOUR WASTEWATER TREATMENT FACILITY 120003227

	1 / 2024	2/ 2024	3/ 2024	4/ 2024	5/ 2024	6/ 2024	7/ 2024	8/ 2024	9/ 2024	10/ 2024	11/ 2024	12/ 2024	<--Total-->	<--Avg-->	<--Max-->	<-Criteria->
Flows																
Raw Flow: Total - Raw Sewage m³/d	66,990.00	65,466.00	69,040.00	91,549.00	73,344.00	61,525.00	65,306.00	61,829.00	52,467.00	52,295.00	51,081.00	78,371.00	789,263.00			0.00
Raw Flow: Avg - Raw Sewage m³/d	2,160.97	2,257.45	2,227.10	3,051.63	2,365.94	2,050.83	2,106.65	1,994.48	1,748.90	1,686.94	1,702.70	2,528.10		2,156.46		
Raw Flow: Max - Raw Sewage m³/d	2,601.00	2,770.00	2,811.00	5,080.00	3,671.00	2,912.00	3,349.00	2,329.00	2,102.00	1,883.00	1,956.00	5,684.00			5,684.00	0.00
Raw Flow: Count - Raw Sewage m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Eff. Flow: Total - Final Effluent m³/d	62,369.00	60,917.00	66,500.00	85,623.00	65,599.00	54,755.00	59,000.00	54,928.00	45,831.00	44,314.00	44,070.00	72,510.00	716,416.00			0.00
Eff. Flow: Avg - Final Effluent m³/d	2,011.90	2,100.59	2,145.16	2,854.10	2,116.10	1,825.17	1,903.23	1,771.87	1,527.70	1,429.48	1,469.00	2,339.03		1,957.42		
Eff. Flow: Max - Final Effluent m³/d	2,424.00	2,634.00	2,630.00	4,774.00	3,460.00	2,680.00	3,162.00	2,060.00	1,892.00	1,616.00	1,765.00	5,341.00			5,341.00	0.00
Eff Flow: Count - Final Effluent m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Eff: Avg cBOD5 - Final Effluent mg/L	< 4.00	< 2.50	< 5.00	< 3.60	< 4.00	< 3.00	< 4.00	< 4.00	< 4.00	< 4.00	< 3.50	< 3.80		< 3.79	< 5.00	
Eff: # of samples of cBOD5 - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: cBOD5 - Final Effluent kg/d	< 8.048	< 5.251	< 10.726	< 10.275	< 8.464	< 5.476	< 7.613	< 7.087	< 6.111	< 5.718	< 5.142	< 8.888		< 7.42	< 10.73	
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw Sewage mg/L	110.00	60.00	93.00	132.00	94.00	90.00	110.00	105.00	134.00	105.00	107.00	153.00		107.75	153.00	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
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw Sewage mg/L	131.00	33.00	158.00	152.00	74.00	251.00	108.00	70.00	131.00	162.00	134.00	175.00		131.58	251.00	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	< 2.80	4.50	< 2.50	3.20	4.25	5.25	< 2.40	2.00	< 2.50	2.60	< 2.50	< 3.20		< 3.11	< 5.25	
Eff: # of samples of TSS - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TSS - Final Effluent kg/d	< 5.633	9.453	< 5.363	9.133	8.993	9.582	< 4.568	3.544	< 3.819	3.717	< 3.673	< 7.485		< 6.09	< 9.58	
Percent Removal: TSS - Raw Sewage %	97.86	86.36	98.42	97.89	94.26	97.91	97.78	97.14	98.09	98.40	98.13	98.17		96.70	98.42	0.00
Total Phosphorus: TP																
Raw: Avg TP - Raw Sewage mg/L	1.81	1.08	1.63	3.61	1.24	1.30	2.42	1.81	1.94	1.93	1.96	2.66		1.95	3.61	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	< 0.03	< 0.03	< 0.03	< 0.04	< 0.07	< 0.04	< 0.03	< 0.03	< 0.04	< 0.03	0.05		< 0.04	< 0.07	0.50
Eff: # of samples of TP - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TP - Final Effluent kg/d	< 0.080	< 0.068	< 0.064	< 0.091	< 0.085	< 0.132	< 0.072	< 0.053	< 0.046	< 0.054	< 0.044	0.122		< 0.08	< 0.13	1.180
Percent Removal: TP - Raw Sewage %	97.79	96.99	98.16	99.11	96.77	94.42	98.43	98.34	98.45	98.03	98.47	98.05		97.75	99.11	0.00

Nitrogen Series																
Raw: Avg TKN - Raw Sewage mg/L	18.00	16.50	22.50	29.20	14.10	20.40	30.40	21.90	26.60	21.70	22.70	21.00		22.08	30.40	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	0.68	1.13	1.40	0.84	1.75	3.33	< 0.18	1.38	< 0.85	< 0.30	< 0.10	1.84		1.11	3.33	
Eff: # of samples of TAN - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TAN - Final Effluent kg/d	1.368	2.363	3.003	2.397	3.703	6.069	< 0.343	2.436	< 1.299	< 0.429	< 0.147	4.304		2.18	6.07	
Eff: Avg NO3-N - Final Effluent mg/L	7.55	9.11	8.94	8.09	9.06	5.46	11.06	11.93	14.55	15.06	16.35	8.14		10.44	16.35	0.00
Eff: # of samples of NO3-N - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg NO2-N - Final Effluent mg/L	1.03	0.46	0.27	0.22	0.47	0.42	0.29	0.44	0.22	0.18	< 0.06	1.57		0.47	1.57	0.00
Eff: # of samples of NO2-N - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Disinfection																
Eff: GMD E. Coli - Final Effluent cfu/100mL	2.00	1.68	1.68	2.00	2.00	2.00	2.00	2.00	1.68	2.00	2.00	2.00				
Eff: # of samples of E. Coli - Final Effluent	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00

Calibration Reports for 2024

Appendix B

With Flow Meter Reports

IndusControl Inc.
151 Superior Blvd, Unit #13
Mississauga, ON, L5T 2L1.

VERIFICATION REPORT- **SINTRANS LUT 400**
OPEN CHANNEL FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSTRIAL ROAD
Plant Name:	Victoria Harbour WWTP		VICTORIA HARBOUR,ON L0K2A0

Device Information		Service Information	
Make:	Siemens	Date:	June 7, 2024
Model:	SINTRANS LUT440	Report No:	CO1541-2406-35
Order Code:	7ML50/500CA111DA0-7	Job No:	CO1541-2406
Serial No.:	PBD/H9130253		
Tag :	LIT/FIT-201	Flow Details	
Asset Id :	0000350319	Unit:	L/S
		Flow Range:	0-225 L/S
		Current Output:	4-20 mA
		4 mA Set Point	0
		20 mA Set Point	225

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (L)	1864.93	1868.52
FLOW (L/S)	34.87	23.08

Maintenance Checklist				Remarks
Visual Inspection:	☑	OK	☐ NOT OK	
Electrical Inspection:	☑	OK	☐ NOT OK	

Programming Parameter of Instrument

Parameter	Value	Parameter	Value
Sensor Mode	Flow	4 mA Set Point	0.00
Transducer	XRS-10	20 mA Set Point	225
Unit	m	Flowrate Unit	L/S
Low Calibration Point	1.171 m	Method of Flow calculation	Ratio Metric
High Calibration Point	0.3 m	Low Flow Cutoff	0.001m
Sensor Offset	0 m	Zero Head Offset	0m
Maximum Head	0.572	Flow Exponent	1.53

Test Point Report

Reference Distance (m)	Measured Distance (m)	Calculated Flow (L/s)	UUT Flow Display (L/s)	Calculated (mA)	Measured (mA)	Deviaiton (L/s)
0.166	0.165	33.89	33.91	6.88	6.78	0.02
0.170	0.168	35.15	35.20	8.90	8.88	0.05

Calculations

Flow Calculations

$Q = q_{cal} (h/h_{cal})^{Exp}$ Where, Q= Discharge Flow, qcal = max flow, h = head, hcal = max head

Exp = 1.5 , Hence,

Q = 225(0.159/0.572)^1.53

Q = 31.73

Instrument Test Information and Results

Input(%)	Calculated Flow (l/sec)	Calculated O/P (mA)	HMI Display (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.00	4.01	0.00
25	56.25	8.00	56.65	7.99	-0.40
50	112.50	12.00	112.74	11.98	-0.24
75	168.75	16.00	168.82	15.99	-0.07
100	225.00	20.00	224.98	20.02	0.02

Information of Tools used for Verification of the Instruments

Device Description:	Manufacturer	Model
Electrical Multimeter	Fluke	179

* Refer Calibration Tools Certificates submittal for more Information

Verification Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Overall Remarks:	Program parameters verified. Measurement working as per specification

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

Version: 19-12

IndusControl Inc
3170 Ridgeway Dr, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSRIAL ROAD
Plant Name:	Victoria Harbour WWTP		VICTORIA HARBOUR, ON L0K2A0

Device Information		Service Information	
Make:	KROHNE	Date:	June 7, 2024
Model:	IFC100	Report No:	CO1541-2406-36
Order Code:	N/A	Job No:	CO1541-2406
Serial No.:	A15011061		
Tag:	FIT302		
Job Location:	Wash water waste		
Asset Id	350375		

Sensor Details		Flow Details	
Line size:	80 mm 3 inch	Unit:	L/SEC
GKL:	5.2021	Flow Range:	0 - 35
Mounting	Remote	Current Output:	4-20 mA
		4 mA Set Point	0
		20 mA Set Point	35

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	193895.45	193897.09
FLOW (l/sec)	0	0

Maintenance Checklist			Remarks
Visual Inspection:	☑ OK	☐ NOT OK	
Electrical Inspection:	☑ OK	☐ NOT OK	
Sensor Installation:	☑ OK	☐ NOT OK	
Transmitter Installation:	☑ OK	☐ NOT OK	

Instrument Test Information and Results

Set-Point as Per Calibration KIT	Calculated Flow (l/sec)	Calculated O/P (mA)	UUT Display (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.000	4.01	0.00
A	1.99	4.91	2.050	4.90	-0.06
B	3.99	5.82	3.950	5.82	0.04
C	7.97	7.64	7.980	7.65	-0.01
D	19.93	13.11	19.950	13.12	-0.02

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 2
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Krohne	Fluke	NA
Model No:	GS8B	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Overall Remarks:	Measurement working as per specification

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

IndusControl Inc
3170 Ridgeway Dr, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSRIAL ROAD
Plant Name:	Victoria Harbour WWTP		VICTORIA HARBOUR, ON L0K2A0

Device Information		Service Information	
Make:	KROHNE	Date:	June 7, 2024
Model:	IFC100	Report No:	CO1541-2406-37
Order Code:	N/A	Job No:	CO1541-2406
Serial No.:	A16038207		
Tag:	FIT301		
Job Location:	Sewage water		
Asset Id	0000350376		

Sensor Details		Flow Details	
Line size:	200 mm 8 inch	Unit:	L/SEC
GKL:	7.9688	Flow Range:	0 - 150
Mounting	Remote	Current Output:	4-20 mA
		4 mA Set Point	0
		20 mA Set Point	150

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (m3)	5749158.66	5749163.96
FLOW (l/sec)	10.2	28.1

Maintenance Checklist			Remarks
Visual Inspection:	☑ OK	☐ NOT OK	
Electrical Inspection:	☑ OK	☐ NOT OK	
Sensor Installation:	☑ OK	☐ NOT OK	
Transmitter Installation:	☑ OK	☐ NOT OK	

Instrument Test Information and Results

Set-Point as Per Calibration KIT	Calculated Flow (l/sec)	Calculated O/P (mA)	UUT Display (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.015	4.00	-0.02
A	19.08	6.03	19.040	5.59	0.04
B	38.15	8.07	38.120	8.02	0.03
C	76.31	12.14	76.240	12.13	0.07

Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 2
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Krohne	Fluke	NA
Model No:	GS8B	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Overall Remarks:	Measurement working as per specification

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

Version: 19-12

IndusControl Inc
3170 Ridgeway Dr, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSRIAL ROAD
Plant Name:	Victoria Harbour WWTP		VICTORIA HARBOUR, ON L0K2A0

Device Information		Service Information	
Make:	Siemens	Date:	June 7, 2024
Model:	Multiranger 100	Report No:	CO1541-2406-38
Order Code:	7ML50331AA002A	Job No:	CO1541-2406
Serial No.:	PBD/H 8100252		
Tag:	LIT 302	Flow Details	
Job Location:	Reservior-1	Unit:	cm
Asset Id:	0000350407	Range:	0 -110
		Current Output:	4-20 mA
Sensor Details		4 mA Set Point	0
Unit:	Meter	20 mA Set Point	110
Sensor Mode	Level		
Transducer	XPS-10		

Inst. Reading	AS FOUND	AS LEFT
Level (cm)	61.7	62.14

Maintenance Checklist			Remarks
Visual Inspection:	☑ OK	☐ NOT OK	
Electrical Inspection:	☑ OK	☐ NOT OK	
Sensor Installation:	☑ OK	☐ NOT OK	
Transmitter Installation:	☑ OK	☐ NOT OK	

Instrument Test Information and Results

Input (%)	Calculated Level (cm)	Calculated Input (mA)	UUT Display (cm)	UUT Measured Output (mA)	Deviation (cm)
0	0.00	4.00	0.00	4.01	0.00
25	27.50	8.00	27.55	8.07	-0.05
50.0	55.00	12.00	55.02	11.99	-0.02
75	82.50	16.00	82.58	15.93	-0.08
100	110.00	20.00	110.03	20.02	-0.03

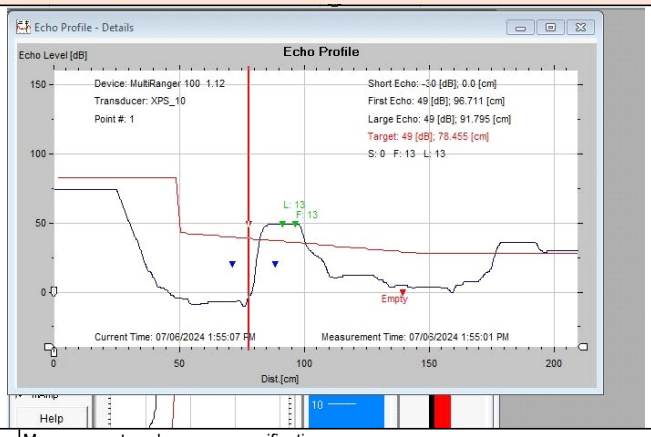
Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	NA	NA
Manufacturer:	Fluke	NA	NA
Model No:	179	NA	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Echo Profile



Overall Remarks:	Measurement works as per specification

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

IndusControl Inc.
151 Superior Blvd, Unit #13
Mississauga, ON, L5T 2L1.

VERIFICATION REPORT
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSRIAL ROAD
Plant Name:	Victoria harbour WWTP		VICTORIA HARBOUR, ON L0K2A0

Device Information		Service Information	
Make:	Siemens	Date:	June 7, 2024
Model:	Multiranger 200	Report No:	CO1541-2406-39
Order Code:	7ML1033-2AA00-2A	Job No:	CO1541-2406
Serial No.:	PBD/FN 090385		
Tag:	LIT 202	Flow Details	
Channel:	Channel-2	Unit:	Meter
Asset Id:	0000350320	Range:	0 -1.310
		Current Output:	4-20 mA
Sensor Details		4 mA Set Point	0
Unit:	Meter	20 mA Set Point	1.310
Sensor Mode	Level		
Transducer	XRS-15		

Inst. Reading	AS FOUND	AS LEFT
Level (Meter)	0.61	0.40

Maintenance Checklist			Remarks
Visual Inspection:	☑ OK	☐ NOT OK	
Electrical Inspection:	☑ OK	☐ NOT OK	
Sensor Installation:	☑ OK	☐ NOT OK	
Transmitter Installation:	☑ OK	☐ NOT OK	

Instrument Test Information and Results

Input (%)	Calculated Level (Meter)	Calculated Input (mA)	UUT Display (Meter)	UUT Measured Output (mA)	Deviation (m)
0	0.000	4.00	0.000	4.01	0.000
25	0.328	8.00	0.240	8.02	0.088
50.0	0.655	12.00	0.650	12.04	0.005
75	0.983	16.00	0.985	16.05	-0.002
100	1.310	20.00	1.311	20.03	-0.001

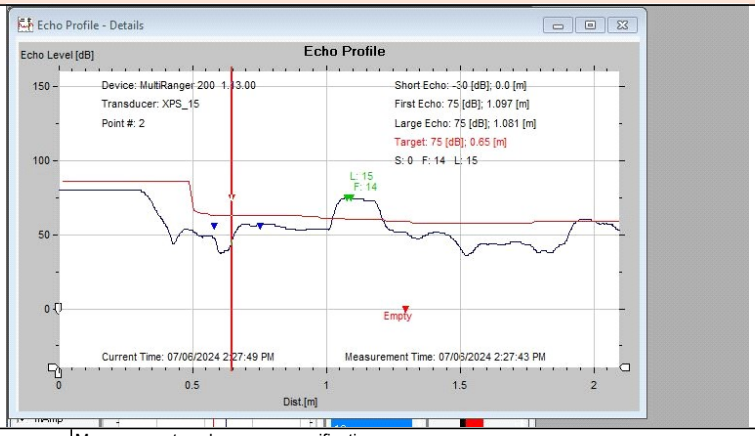
Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	NA	NA
Manufacturer:	Fluke	NA	NA
Model No:	179	NA	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Echo Profile



Overall Remarks:	Measurement works as per specification.

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

IndusControl Inc.
151 Superior Blvd, Unit #13
Mississauga, ON, L5T 2L1.

VERIFICATION REPORT
ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name:	Township of Tay	Site/Plant Address:	150 INDUSRIAL ROAD
Plant Name:	Victoria harbour WWTP		VICTORIA HARBOUR, ON L0K2A0

Device Information		Service Information	
Make:	Siemens	Date:	June 7, 2024
Model:	Multiranger 200	Report No:	CO1541-2406-40
Order Code:	7ML1033-2AA00-2A	Job No:	CO1541-2406
Serial No.:	PBD/FN 090385		
Tag:	LIT 202	Flow Details	
Channel:	Channel-1	Unit:	Meter
Asset Id:	0000350320	Range:	0 -1.300
		Current Output:	4-20 mA
Sensor Details		4 mA Set Point	0
Unit:	Meter	20 mA Set Point	1.300
Sensor Mode	Level		
Transducer	XRS-15		

Inst. Reading	AS FOUND	AS LEFT
Level (Meter)	0.37	0.4

Maintenance Checklist			Remarks
Visual Inspection:	☑ OK	☐ NOT OK	
Electrical Inspection:	☑ OK	☐ NOT OK	
Sensor Installation:	☑ OK	☐ NOT OK	
Transmitter Installation:	☑ OK	☐ NOT OK	

Instrument Test Information and Results

Input (%)	Calculated Level (Meter)	Calculated Input (mA)	UUT Display (Meter)	UUT Measured Output (mA)	Deviation (m)
0	0.000	4.00	0.000	4.01	0.000
25	0.325	8.00	0.329	8.05	-0.004
50.0	0.650	12.00	0.652	11.99	-0.002
75	0.975	16.00	0.982	16.08	-0.007
100	1.300	20.00	1.306	20.06	-0.006

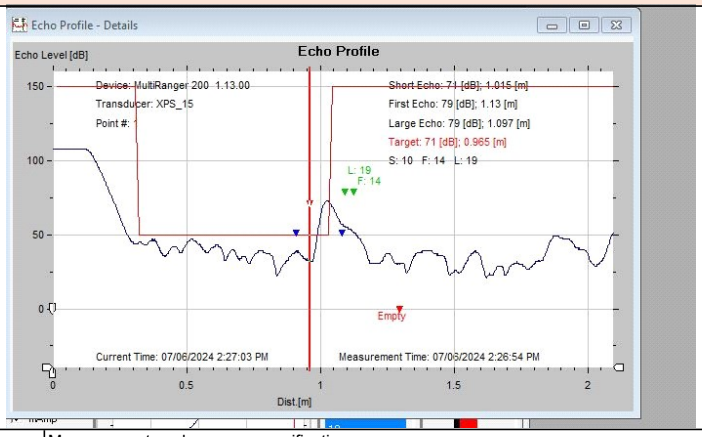
Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	NA	NA
Manufacturer:	Fluke	NA	NA
Model No:	179	NA	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	☑ Passed	☐ Fail	☐ Not Verified

Echo Profile



Overall Remarks:	Measurement works as per specification.

Service Technician :	Chetan Parekh	Stamp/Signature	
Printed Date:	June 7, 2024		

End of Report

Biosolids Quantity and Haulage Records

Appendix C

ROHES
REGION OF HURONIA
Environmental Services (2013) Ltd.

Victoria Harbour WWTP Report

Mon, 01 Jan 2024 To Tue, 31 Dec 2024

Phone: 705-424-9799
Toll Free: 800-268-6060
Fax: 705-424-6075
info@regionofhuronia.com

Deliveries From Victoria Harbour WWTP To Farm Fields								
Delivered	**Ticket**	**NASM**	**Field**	**Drvr**	**Trck**	**Trlr**	**#Loads**	**Volume In M^3**
23 Aug,2024	78042	24760	SD Corners-Field:1	323	T077	TT022	1	36.40
23 Aug,2024	82958	24760	SD Corners-Field:1	317	T083	TT080	1	42.00
23 Aug,2024	83893	24760	SD Corners-Field:1	341	T060	TT100	1	42.00
26 Aug,2024	80730	24760	SD Corners-Field:1	336	T080	TT084	2	84.00
26 Aug,2024	82482	24760	SD Corners-Field:1	317	T083	TT080	1	42.00
28 Aug,2024	82487	24760	SD Corners-Field:1	317	T083	TT080	1	42.00
29 Aug,2024	80736	24760	SD Corners-Field:1	336	T080	TT084	1	42.00
						Totals for August:	**8**	**330.40**
05 Sep,2024	83940	24506	Home-Field:F1	61	T082	TT089	2	84.00
06 Sep,2024	81465	24506	Home-Field:F1	336	T080	TT084	3	126.00
06 Sep,2024	83943	24506	Home-Field:F1	61	T082	TT089	1	42.00
11 Sep,2024	81473	24506	Home-Field:F1	336	T080	TT084	1	42.00
11 Sep,2024	83950	24506	Home-Field:F1	61	T082	TT100	2	84.00
						Totals for September:	**9**	**378.00**
08 Oct,2024	81509	61806	Cornelius/McGann-Field:1	336	T080	TT084	2	84.00
08 Oct,2024	83159	61806	Cornelius/McGann-Field:1	270	T081	TT099	1	42.00
08 Oct,2024	83261	61806	Cornelius/McGann-Field:1	317	T083	TT080	2	84.00
22 Oct,2024	81519	24536	Home South-Field:F1	336	T080	TT084	3	126.00
22 Oct,2024	83171	24536	Home South-Field:F1	270	T081	TT099	3	126.00
						Totals To October:	**11**	**462.00**
						Totals To NASM #24506, Farm 'Home', Field 'F1':	**9**	**378.00**
						Totals To NASM #24536, Farm 'Home South', Field 'F1':	**6**	**252.00**
						Totals To NASM #24760, Farm 'SD Corners', Field '1':	**8**	**330.40**
						Totals To NASM #61806, Farm 'Cornelius/McGann', Field '1':	**5**	**210.00**
						Grand Totals:	**28**	**1,170.40**

ROHES
REGION OF HURONIA
Environmental Services (2013) Ltd.

Victoria Harbour WWTP Report

Mon, 01 Jan 2024 To Tue, 31 Dec 2024

Phone: 705-424-9799
Toll Free: 800-268-6060
Fax: 705-424-6075
info@regionofhuronia.com

Deliveries From Victoria Harbour WWTP To Other Locations							
Delivered	**Ticket**	**To**	**Drvr**	**Trck**	**Trlr**	**#Loads**	**Volume In M^3**
03 Apr,2024	72732	Rohes 9 Lagoon	61	T082	TT099	3	126.00
04 Apr,2024	72733	Rohes 4 Lagoon	61	T082	TT099	3	126.00
08 Apr,2024	72735	Rohes 4 Lagoon	61	T082	TT099	3	126.00
09 Apr,2024	72736	Rohes 4 Lagoon	61	T082	TT099	3	126.00
23 Apr,2024	72747	Rohes 4 Lagoon	61	T082	TT099	3	126.00
23 Apr,2024	79607	Rohes 4 Lagoon	304	T080	TT080	1	42.00
24 Apr,2024	74151	Rohes 4 Lagoon	61	T082	TT099	2	84.00
25 Apr,2024	74155	Rohes 4 Lagoon	61	T082	TT099	1	42.00
					Totals for April:	**19**	**798.00**
10 May,2024	74176	Rohes 4 Lagoon	61	T082	TT100	5	210.00
10 May,2024	74405	Rohes 4 Lagoon	270	T081	TT099	1	42.00
22 May,2024	74423	Rohes 4 Lagoon	270	T081	TT099	3	126.00
22 May,2024	74191	Rohes 4 Lagoon	61	T082	TT100	1	42.00
23 May,2024	73707	Rohes 4 Lagoon	323	T077	TT022	3	109.20
24 May,2024	74427	Rohes 4 Lagoon	270	T081	TT099	2	84.00
					Totals for May:	**15**	**613.20**
03 Jun,2024	79638	Rohes 4 Lagoon	317	T083	TT080	2	84.00
03 Jun,2024	74442	Rohes 4 Lagoon	270	T081	TT099	2	84.00
04 Jun,2024	74445	Rohes 4 Lagoon	270	T081	TT099	1	42.00
05 Jun,2024	81172	Rohes 4 Lagoon	336	T080	TT089	1	42.00
10 Jun,2024	79765	Rohes 4 Lagoon	317	T083	TT080	1	42.00
18 Jun,2024	79772	Rohes 4 Lagoon	317	T083	TT080	1	42.00
19 Jun,2024	74476	Rohes 4 Lagoon	270	T060	TT099	1	42.00
					Totals for June:	**9**	**378.00**
10 Jul,2024	73895	Rohes 9 Lagoon	317	T083	TT080	1	42.00
10 Jul,2024	74498	Rohes 9 Lagoon	270	T081	TT099	3	126.00
17 Jul,2024	80685	Rohes 3 Lagoon	336	T086	TT084	1	42.00
18 Jul,2024	80687	Rohes 3 Lagoon	336	T086	TT084	1	42.00
19 Jul,2024	80554	Rohes 3 Lagoon	61	T082	TT100	1	42.00
24 Jul,2024	80648	Rohes 4 Lagoon	307	T011	TT024	1	38.00
25 Jul,2024	83801	Rohes 4 Lagoon	61	T082	TT100	1	42.00
25 Jul,2024	81648	Rohes 4 Lagoon	323	T077	TT022	2	72.80
26 Jul,2024	81651	Rohes 4 Lagoon	323	T077	TT022	1	36.40
26 Jul,2024	83804	Rohes 4 Lagoon	61	T082	TT100	1	42.00
26 Jul,2024	81550	Rohes 4 Lagoon	270	T081	TT099	1	42.00
26 Jul,2024	80696	Rohes 4 Lagoon	336	T080	TT084	1	42.00
31 Jul,2024	80704	Rohes 4 Lagoon	336	T080	TT084	1	42.00
31 Jul,2024	83810	Rohes 4 Lagoon	61	T082	TT100	3	126.00
					Totals for July:	**19**	**777.20**
08 Aug,2024	82934	Rohes 3 Lagoon	317	T083	TT080	1	42.00
					Totals for August:	**1**	**42.00**
21 Oct,2024	73458	Rohes 5 Lagoon	65	T074	NONE	1	21.00
21 Oct,2024	78011	Rohes 5 Lagoon	339	T076	NONE	1	21.00
21 Oct,2024	82589	Rohes 5 Lagoon	315	T073	NONE	1	21.00
					Totals for October:	**3**	**63.00**
28 Nov,2024	82853	Rohes 7 Lagoon	105	T079	TT053	1	36.40
28 Nov,2024	83650	Rohes 7 Lagoon	61	T082	TT089	1	42.00
29 Nov,2024	81770	Rohes 7 Lagoon	270	T081	TT099	3	126.00
					Totals for November:	**5**	**204.40**
03 Dec,2024	83652	Rohes 7 Lagoon	61	T082	TT089	2	84.00

Deliveries From Victoria Harbour WWTP To Other Locations							
Delivered	**Ticket**	**To**	**Drvr**	**Trck**	**Trlr**	**#Loads**	**Volume In M^3**
04 Dec,2024	83653	Rohes 7 Lagoon	61	T082	TT089	2	84.00
04 Dec,2024	81772	Rohes 7 Lagoon	270	T081	TT099	2	84.00
05 Dec,2024	81773	Rohes 7 Lagoon	270	T081	TT099	1	42.00
05 Dec,2024	83654	Rohes 7 Lagoon	61	T082	TT089	1	42.00
					Totals for December:	**8**	**336.00**
					Totals To Rohes 3 Lagoon:	**4**	**168.00**
					Totals To Rohes 4 Lagoon:	**52**	**2,146.40**
					Totals To Rohes 5 Lagoon:	**3**	**63.00**
					Totals To Rohes 7 Lagoon:	**13**	**540.40**
					Totals To Rohes 9 Lagoon:	**7**	**294.00**
					Grand Totals:	**79**	**3,211.80**

Wessuc Inc. Victoria Harbour WWTP Hauling					
Load Type	**In**	**Out**	**Volume**	**Location**	**Goes to/from**
Pick-Up	03/15/24 7:16	03/15/24 7:41	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	03/15/24 9:56	03/15/24 10:14	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	03/15/24 12:27	03/15/24 12:44	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	03/14/24 6:43	03/14/24 7:04	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	03/14/24 9:24	03/14/24 10:50	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	03/14/24 12:04	03/14/24 12:15	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/27/24 7:50	02/27/24 8:38	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/27/24 10:40	02/27/24 10:55	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/27/24 13:30	02/27/24 13:50	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/27/24 16:20	02/27/24 16:38	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/26/24 12:40	02/26/24 12:55	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/26/24 15:40	02/26/24 16:00	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/08/24 7:00	02/08/24 7:20	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/08/24 7:45	02/08/24 8:00	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/08/24 12:45	02/08/24 13:00	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/01/24 6:59	02/01/24 7:18	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	02/01/24 9:56	02/01/24 10:17	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/31/24 7:10	01/31/24 7:29	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/31/24 10:14	01/31/24 10:32	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/31/24 12:55	01/31/24 13:14	40	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/09/24 6:34	01/09/24 6:52	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/09/24 9:27	01/09/24 9:58	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/09/24 12:33	01/09/24 12:51	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/09/24 16:18	01/09/24 16:59	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/08/24 6:54	01/08/24 8:04	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/08/24 10:32	01/08/24 10:58	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/08/24 13:21	01/08/24 13:45	45	2021-1077 Victoria Harbour WWTP	ROHES
Pick-Up	01/08/24 16:09	01/08/24 16:31	45	2021-1077 Victoria Harbour WWTP	ROHES

Sludge Quality Data for 2024

Appendix D

With Metal and Total Solids Concentration Graphs

Biosolids Quality Report

Facility: VICTORIA HARBOUR WASTEWATER TREATMENT FACILITY

Solids & Nutrients

Period: 01/01/2024 to 12/31/2024

Works: 1675 / Digestor Type: Anaerobic

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Solids & Nutrients | **Metals & Criteria** | **Last 4 Samples**

Facility Works Number: 120003227

Receiver:

Facility Owner:

Service Population:

Facility Classification:

Total Design Capacity:

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

Month	Hauled Vol. (m^3)	Total Solids (mg/L)	Volatile 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**	**VS**	**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**	**Lab Published Month Mean**	**- no T/S**	**Lab Published Month Mean**
Jan	480.00	17,700.00	13,700.00	450.00	2.00	50.00	3.00	836.00	26.00	50.00
Feb	480.00	16,100.00	11,900.00	400.00	6.10	3.00	3.00	849.00	4.55	62.00
Mar	270.00	15,100.00	10,900.00	350.00	5.50	18.00	3.00	773.00	11.75	58.00
Apr	798.00	13,700.00	9,520.00	400.00	2.60	3.00	3.00	774.00	2.80	80.00
May	613.20	22,500.00	15,700.00	410.00	17.40	3.00	3.00	978.00	10.20	67.00
Jun	378.00	13,500.00	10,000.00	330.00	104.00	3.00	3.00	882.00	53.50	59.00
Jul	777.20	22,400.00	14,500.00	580.00	107.00	3.00	3.00	1,260.00	55.00	78.00
Aug	372.40	16,700.00	10,100.00	430.00	13.80	3.00	3.00	714.00	8.40	60.00
Sep	378.00	16,800.00	12,100.00	360.00	55.60	3.00	3.00	795.00	29.30	53.00
Oct	645.40	16,200.00	9,640.00	370.00	5.20	24.00	3.00	587.00	14.60	47.00
Nov	204.40	24,200.00	15,900.00	630.00	15.30	71.00	3.00	905.00	43.15	56.00
Dec	336.00	17,300.00	11,800.00	452.00	5.20	150.00	6.00	700.00	77.60	50.00
Average	477.72	17,683.33	12,146.67	430.17	28.31	27.83	3.25	837.75	28.07	60.00
Total	5,732.60	212,200.00	145,760.00	5,162.00	339.70	334.00	39.00	10,053.00	336.85	720.00

Biosolids Quality Report

Facility: VICTORIA HARBOUR WASTEWATER TREATMENT FACILITY

Metals & Criteria

Period: 01/01/2024 to 12/31/2024

Works: 1675 / Digestor Type: Anaerobic

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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	0.10	0.01	0.03	0.16	3.00	0.00	0.06	0.19	0.10	0.10	7.00
Feb	0.10	0.01	0.03	0.14	2.80	0.00	0.07	0.19	0.10	0.10	6.00
Mar	0.10	0.02	0.03	0.15	2.80	0.00	0.06	0.19	0.10	0.10	7.00
Apr	0.10	0.01	0.03	0.15	3.20	0.00	0.06	0.20	0.10	0.10	7.00
May	0.10	0.01	0.03	0.17	3.40	0.00	0.07	0.21	0.10	0.10	7.00
Jun	0.10	0.01	0.03	0.14	2.50	0.00	0.05	0.15	0.10	0.10	6.00
Jul	0.10	0.01	0.05	0.28	5.00	0.00	0.10	0.30	0.20	0.10	12.00
Aug	0.10	0.01	0.04	0.22	3.60	0.00	0.07	0.24	0.20	0.10	9.00
Sep	0.10	0.01	0.04	0.16	2.70	0.00	0.06	0.19	0.20	0.10	8.00
Oct	0.10	0.01	0.04	0.17	2.80	0.00	0.05	0.18	0.20	0.10	8.00
Nov	0.10	0.01	0.05	0.24	4.50	0.00	0.09	0.28	0.30	0.10	12.00
Dec	0.10	0.01	0.03	0.16	3.30	0.00	0.07	0.20	0.20	0.10	8.00
Average	0.10	0.01	0.04	0.18	3.30	0.00	0.07	0.21	0.16	0.10	8.08
Min. Acceptable Ammonia + Nitrate Nitrogen to Metal Ratio	100.00	500.00	50.00	6.00	10.00	1,500.00	180.00	40.00	15.00	500.00	4.00
Ammonia + Nitrate Nitrogen to Metal Ratio in Sludge	280.71	2,830.67	783.37	157.41	8.51	13,474.00	415.86	133.67	177.29	280.71	3.47

Biosolids Quality Report

Facility: VICTORIA HARBOUR WASTEWATER TREATMENT FACILITY

Last 4 Samples

Period: 01/01/2024 to 12/31/2024

Works: 1675 / Digestor Type: Anaerobic

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Solids & Nutrients **Metals & Criteria** **Last 4 Samples**

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

Parameter Short Name	Time Series	09/03/2024	10/01/2024	11/04/2024	12/02/2024	Average	Metal Concentrations in Sludge (mg/kg)	Max. Permissible Metal Concentrations (mg/kg of Solids)
As (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	5.37	170
Cd (mg/L)	Lab Published	0.01	0.01	0.01	0.01	0.01	0.52	34
Co (mg/L)	Lab Published	0.04	0.04	0.05	0.03	0.04	2.15	340
Cr (mg/L)	Lab Published	0.16	0.17	0.24	0.16	0.18	9.80	2800
Cu (mg/L)	Lab Published	2.70	2.80	4.50	3.30	3.33	178.52	1700
Hg (mg/L)	Lab Published	0.00	0.00	0.00	0.00	0.00	0.12	11
Mo (mg/L)	Lab Published	0.06	0.05	0.09	0.07	0.07	3.62	94
Ni (mg/L)	Lab Published	0.19	0.18	0.28	0.20	0.21	11.41	420
Pb (mg/L)	Lab Published	0.20	0.20	0.30	0.20	0.23	12.08	1100
Se (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	5.37	34
Zn (mg/L)	Lab Published	8.00	8.00	12.00	8.00	9.00	483.22	4200
E.Coli Dry Wt (cfu/g)	Lab Published	202,381.00	20,370.00	45,455.00	75,145.00	61,257.69	E. Coli average is the GMD	
TS (mg/L)	Lab Published	16,800.00	16,200.00	24,200.00	17,300.00	18,625.00		
VS (mg/L)	Lab Published	12,100.00	9,640.00	15,900.00	11,800.00	12,360.00		
TP (mg/L)	Lab Published	360.00	370.00	630.00	452.00	453.00		
NO2-N (mg/L)	Lab Published	3.00	3.00	3.00	6.00	3.75		
TKN (mg/L)	Lab Published	795.00	587.00	905.00	700.00	746.75		
K (mg/L)	Lab Published	53.00	47.00	56.00	50.00	51.50		
NH3p_NH4p_N (mg/L)	Lab Published	55.60	5.20	15.30	5.20	20.33		
NO3-N (mg/L)	Lab Published	3.00	24.00	71.00	150.00	62.00		