Fenelon Falls Wastewater System

2024 Annual Wastewater Performance Report

Wastewater System Works Number: 110001612

Wastewater System Operating Authorities: City of Kawartha Lakes and Ontario Clean Water Agency

Reporting Period: January 1st – December 31st, 2024

OCWA

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Annual Wastewater Performance Report

City of Kawartha Lakes

Kawartha Lakes
Jump In

Table of Contents

2024 Annual Wastewater System Performance Report

Executive Summary

The Fenelon Falls Water Pollution Control Plant (WPCP) has a rated capacity of 1,800 m³/day, located at 216 Ellice Street in Fenelon Falls. The facility is owned by the City of Kawartha Lakes with the treatment system and sewage pumping stations operated by Ontario Clean Water Agency and the remaining collection system operated by City staff. The treatment system is operated in accordance with Environmental Compliance Approval (ECA) #3688-BW3RGB issued January 15, 2021 and the collection system is operated in accordance with the Consolidated Linear Infrastructure Environmental Compliance Approval #141-W601 issued June 20, 2023. The wastewater system is classified as a Class II Wastewater Treatment and Class II Wastewater Collection subsystems under O. Reg. 129/04.

The preliminary treatment system is comprised of grit removal and screening, which includes a comminutor and flow divider chamber which divides flows between an oxidation ditch and the aeration tank. The secondary treatment system includes an oxidation ditch, with a flow divider chamber at the outlet, dividing the flow between the two secondary clarifiers. Each aeration tank is equipped with fine bubble aeration system. The secondary clarifiers have sludge and scum removal mechanisms.

Final effluent is discharged from the UV/filter building to the outfall chamber and discharges to the Fenelon River.

Sludge is directed to aerated sludge holding tanks where the sludge or biosolids are then hauled by a licensed waste hauler for land application.

The Fenelon Falls wastewater collection system consists of a series of gravity sewers, three pumping stations and associated forcemains directing raw sewage to the wastewater treatment plant.

The City of Kawartha Lakes and Ontario Clean Water Agency prepares a report summarizing system operation and performance for every municipal wastewater system annually. This report has been prepared to satisfy the reporting requirements within Environmental Compliance Approval (ECA) #3688-BW3RGB and Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) #141-W601. Unless otherwise noted within this report, the Fenelon Falls Sewage Works complies with all requirements of the regulating authorities and the approvals it operates under.

The annual reports will be available to residents at the City of Kawartha Lakes Public Works Administration Office by appointment and the City's website. Notification that the reports are available free of charge will be made on the City of Kawartha Lakes website. The City of Kawartha Lakes Public Works Administration Office is located at 322 Kent Street West in Lindsay, Ontario.

Reporting Requirements – Wastewater Treatment Plant

In accordance with the amended ECA #3688-BW3RGB, Section 11(4) – REPORTING, the owner shall prepare a performance report on a calendar basis and submit to the Ministry of Environment, Conservation and Parks by March 31 of the calendar year following the period being reported upon.

Section 11(4) – REPORTING

The performance report is required to contain the following:

a) a summary and interpretation of all Influent monitoring data, and review of the historical trend of the sewage characteristics and flow rates;
b) a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;
c) a summary of all operating issues encountered and corrective actions taken;
d) a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus, mechanism forming part of the Works;
e) a summary of any effluent quality assurance or control measures undertaken;
f) a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;
g) a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:
    i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;
    ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;
h) a tabulation of the volume of sludge generated, 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;
i) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
j) a summary of all By-pass, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;

k) a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modifications;
l) a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted; and
m) a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

The above information is incorporated in the following report format and submitted to the District Manager of the Peterborough District Office of the Ministry of the Environment, Conservation and parks as per the requirements of ECA No. 3688-BW3RGB.

During the period of 2024, the Ontario Clean Water Agency (OCWA) operated the Fenelon Falls WPCP, Francis Street Pumping Station (SPS), Colborne Street SPS and Ellice Street SPS on behalf of the Corporation of the City of Kawartha Lakes. OCWA's goals have remained consistent during this period and remain consistent with the following priorities:

- provide quality assurance, safety and environmental compliance of facility operations;
- assist our clients in achieving compliance;
- provide advice on up-to-date technology in Operations and Maintenance service delivery.

This report will show that the Ontario Clean Water Agency has made every attempt to achieve its goals through its operational performance. This performance was enhanced through the use of an electronic process data collection database, an electronic maintenance and work order database, an electronic operational excellence database, a training program focused on providing the right skills to staff – also captured and tracked by the use of an electronic database and a multi-skilled, flexible workforce.

The following is a report from the records maintained by the Ontario Clean Water Agency for the Fenelon Falls Water Pollution Control Plant for the calendar year 2024.

Summary of Influent Monitoring Data

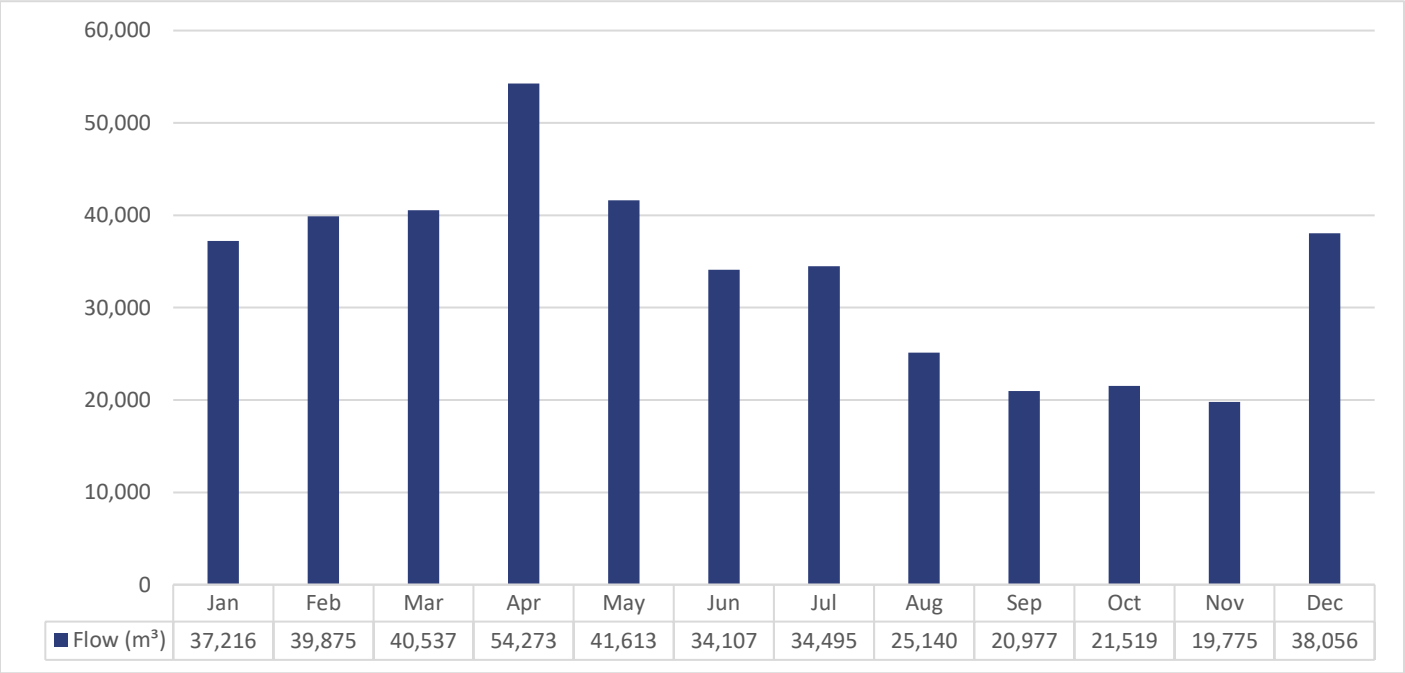
(a) Environmental Compliance Approval (ECA) No. 3688-BW3RGB requires a summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

The Fenelon Falls WPCP has a Rated Capacity of 1,800 m^3/day. Flows are continuously measured through the plant effluent flow meter located upstream of the sand filters. The influent and effluent streams are considered not significantly different in flow rates and quantities so the effluent flow measurements are also used for influent flow measurements. ECA No. 3688-BW3RGB requires everything practicable be undertaken to operate the sewage treatment plant so that the

annual average daily influent is within the Rated Capacity. The 2024 annual average daily influent flow was 1113.61 m³/day or 62% of the Rated Capacity.

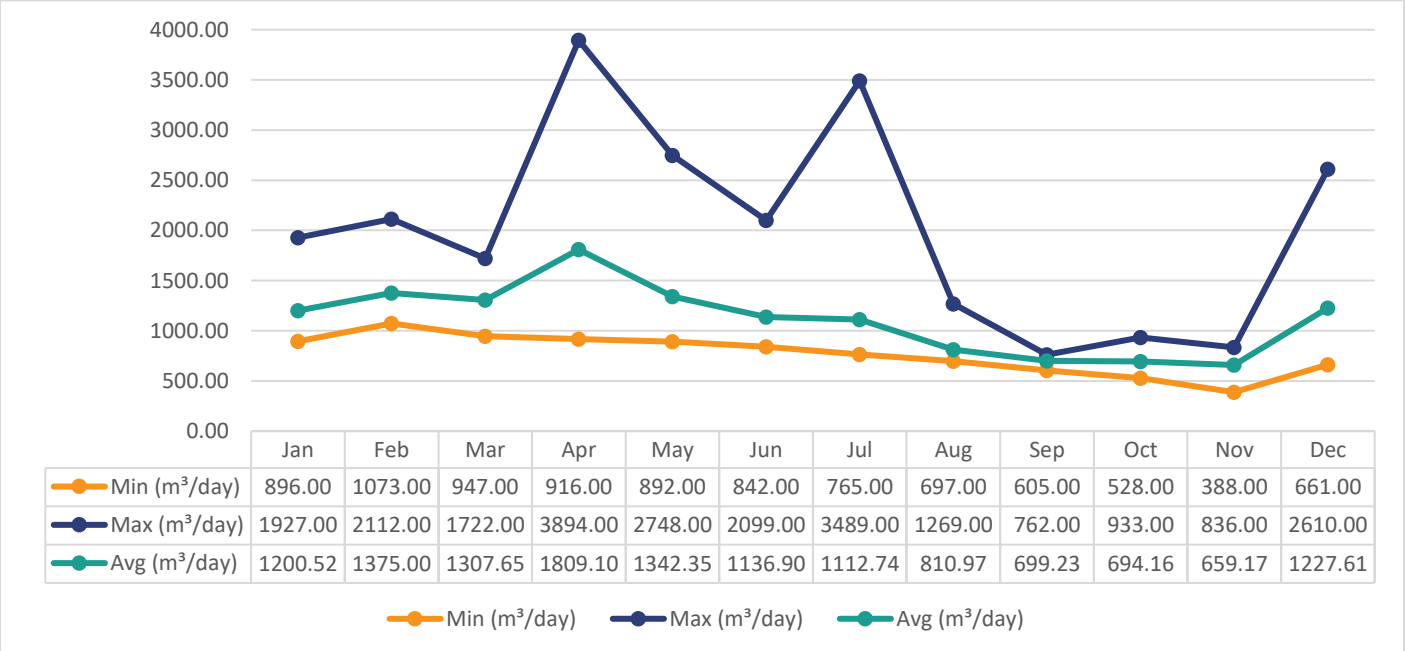
The total influent/effluent flow in 2024 was 407,583 m³.

Graph 1. 2024 Influent/Effluent Flow Monthly Totals



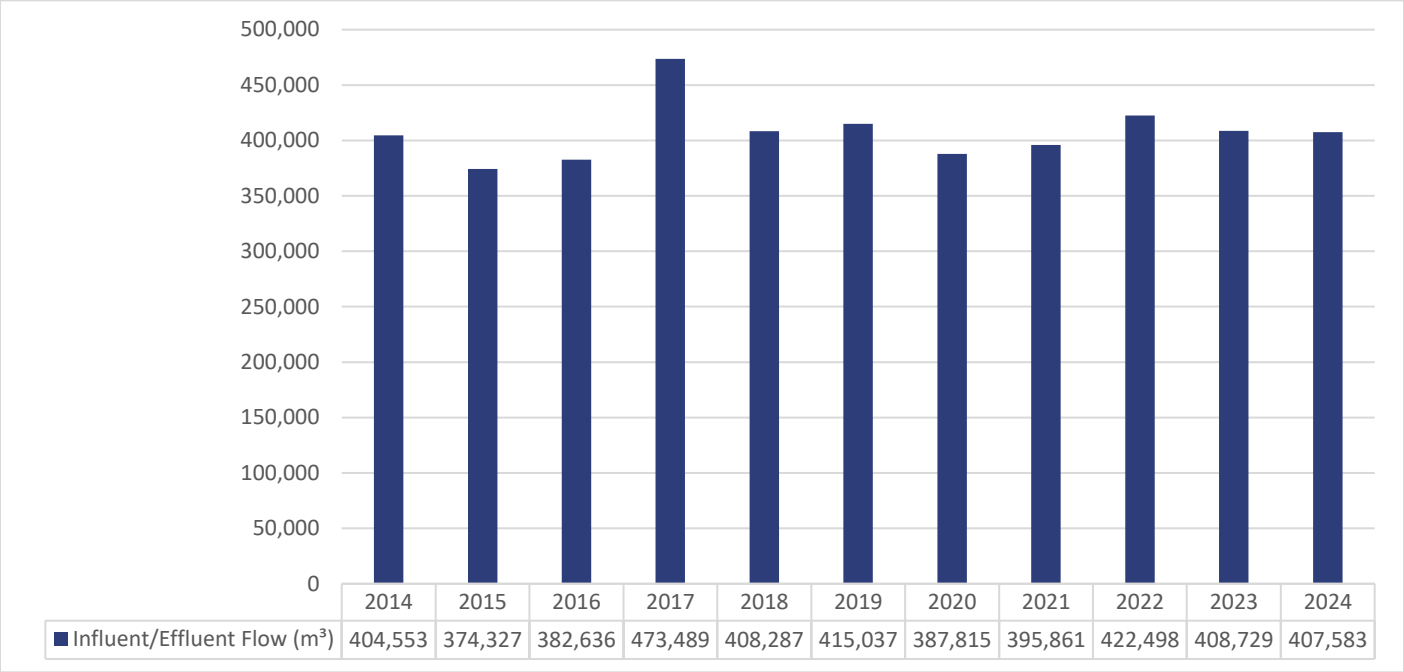
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flow (m³)	37,216	39,875	40,537	54,273	41,613	34,107	34,495	25,140	20,977	21,519	19,775	38,056

Graph 2. 2024 Influent/Effluent Daily Minimum, Maximum and Average Flows



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min (m³/day)	896.00	1073.00	947.00	916.00	892.00	842.00	765.00	697.00	605.00	528.00	388.00	661.00
Max (m³/day)	1927.00	2112.00	1722.00	3894.00	2748.00	2099.00	3489.00	1269.00	762.00	933.00	836.00	2610.00
Avg (m³/day)	1200.52	1375.00	1307.65	1809.10	1342.35	1136.90	1112.74	810.97	699.23	694.16	659.17	1227.61

Graph 3. Historical Influent/Effluent Flows from 2014 - 2024



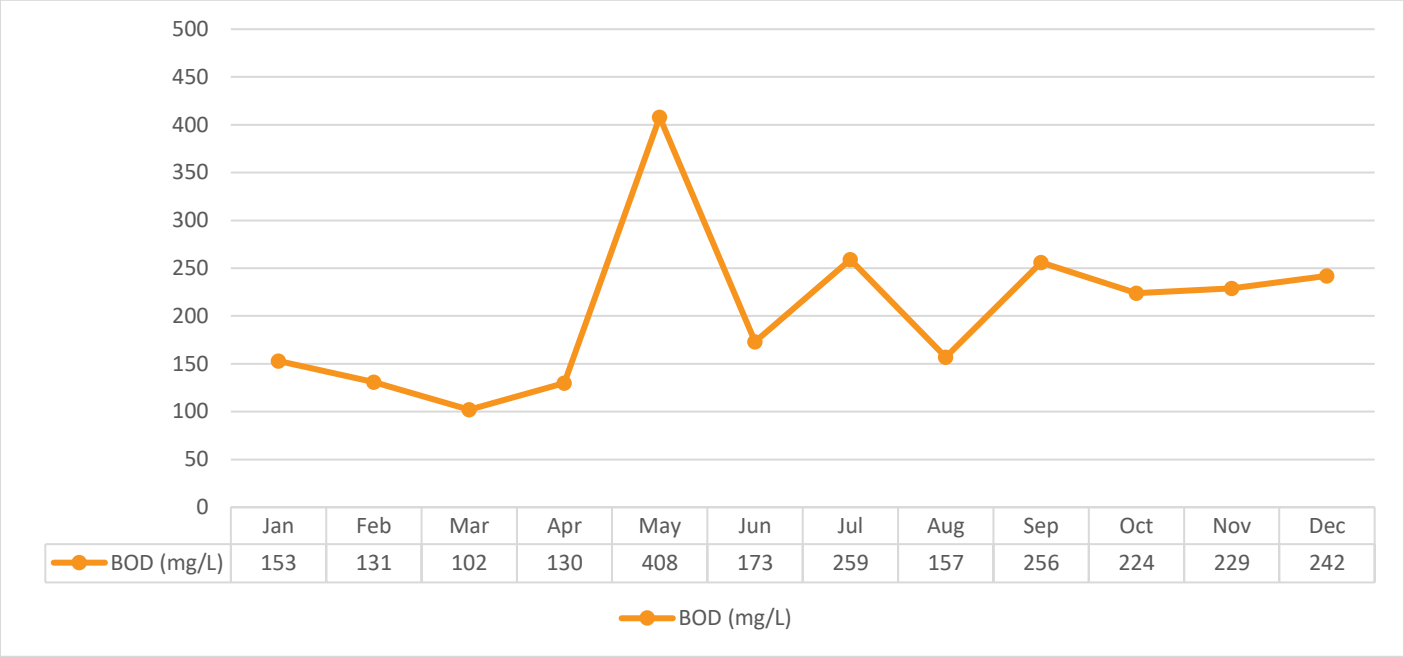
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Influent/Effluent Flow (m^3)	404,553	374,327	382,636	473,489	408,287	415,037	387,815	395,861	422,498	408,729	407,583

Influent Monitoring – Sewage Characteristics

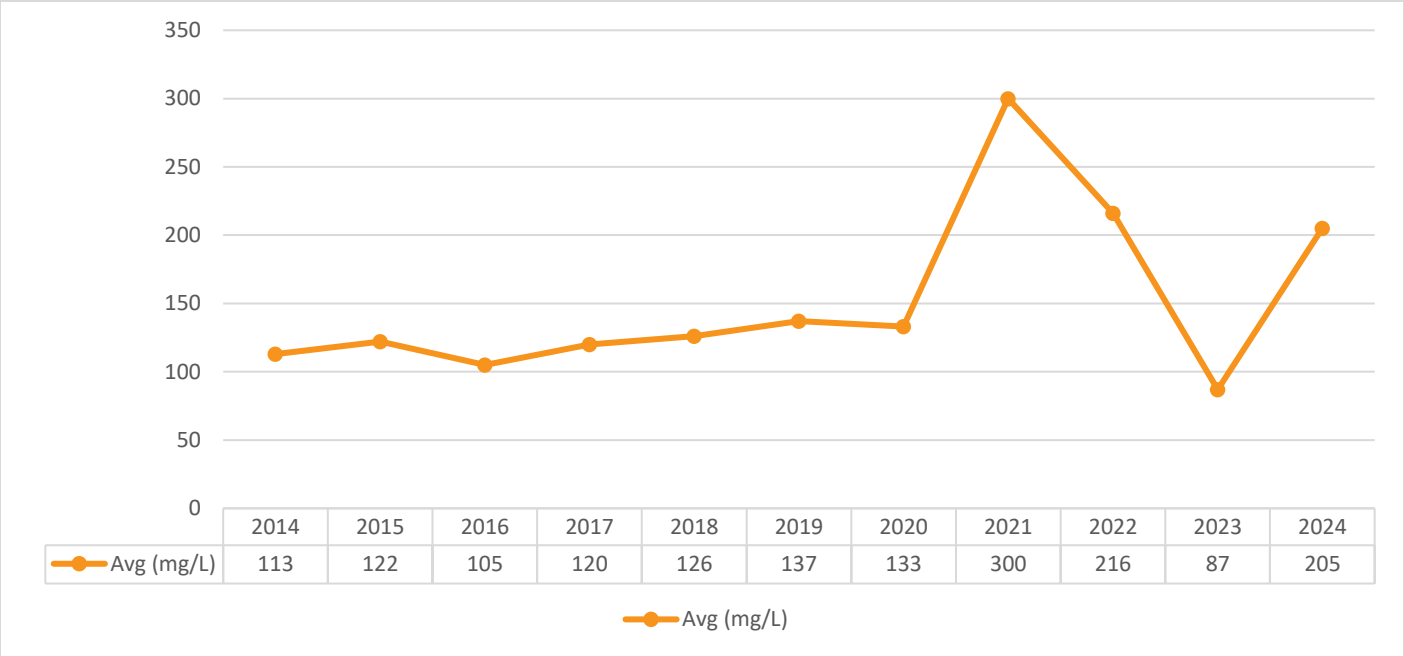
Biochemical Oxygen Demand (BOD_5)

ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Biochemical Oxygen Demand (BOD_5). The Biochemical Oxygen Demand (BOD_5) monthly average results ranged from 102 mg/L to 408 mg/L.

Graph 4. 2024 Monthly BOD_5 Influent Sample Results



Graph 5. Historical Influent Average Biochemical Oxygen Demand Results 2014 - 2024

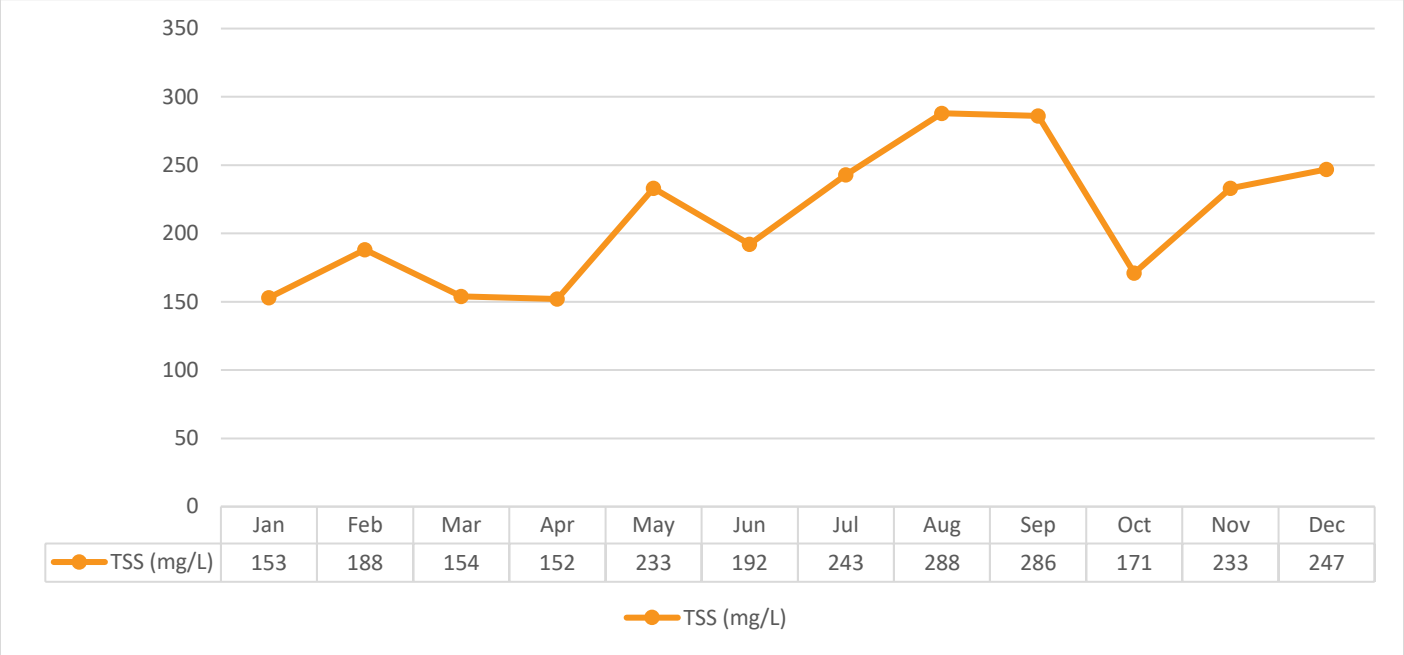


The Biochemical Oxygen Demand (BOD_5) annual average has been relatively consistent for the past ten years but has experienced fluctuations since 2021.

Total Suspended Solids (TSS)

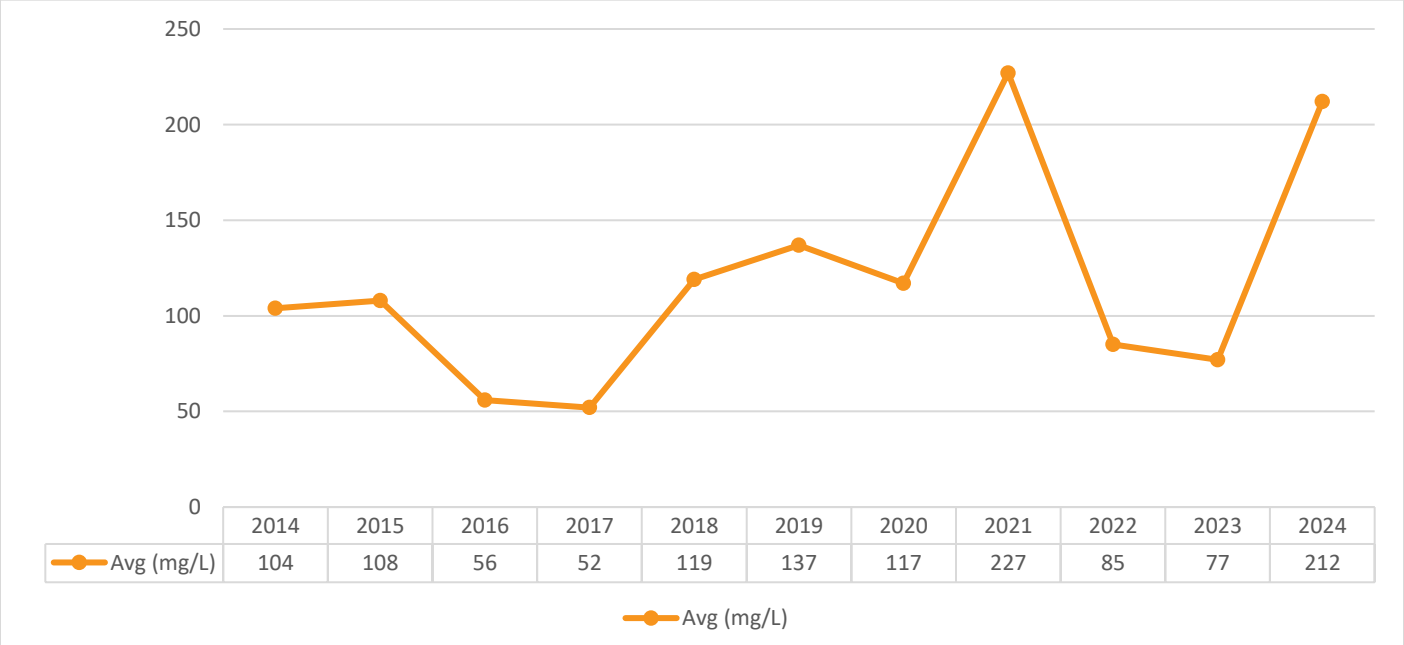
ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Total Suspended Solids. The monthly results ranged from 152 mg/L to 288 mg/L.

Graph 6. 2024 Monthly Total Suspended Solids Influent Sample Results



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TSS (mg/L)	153	188	154	152	233	192	243	288	286	171	233	247

Graph 7. Historical Influent Total Suspended Solids Results 2014 - 2024



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Avg (mg/L)	104	108	56	52	119	137	117	227	85	77	212

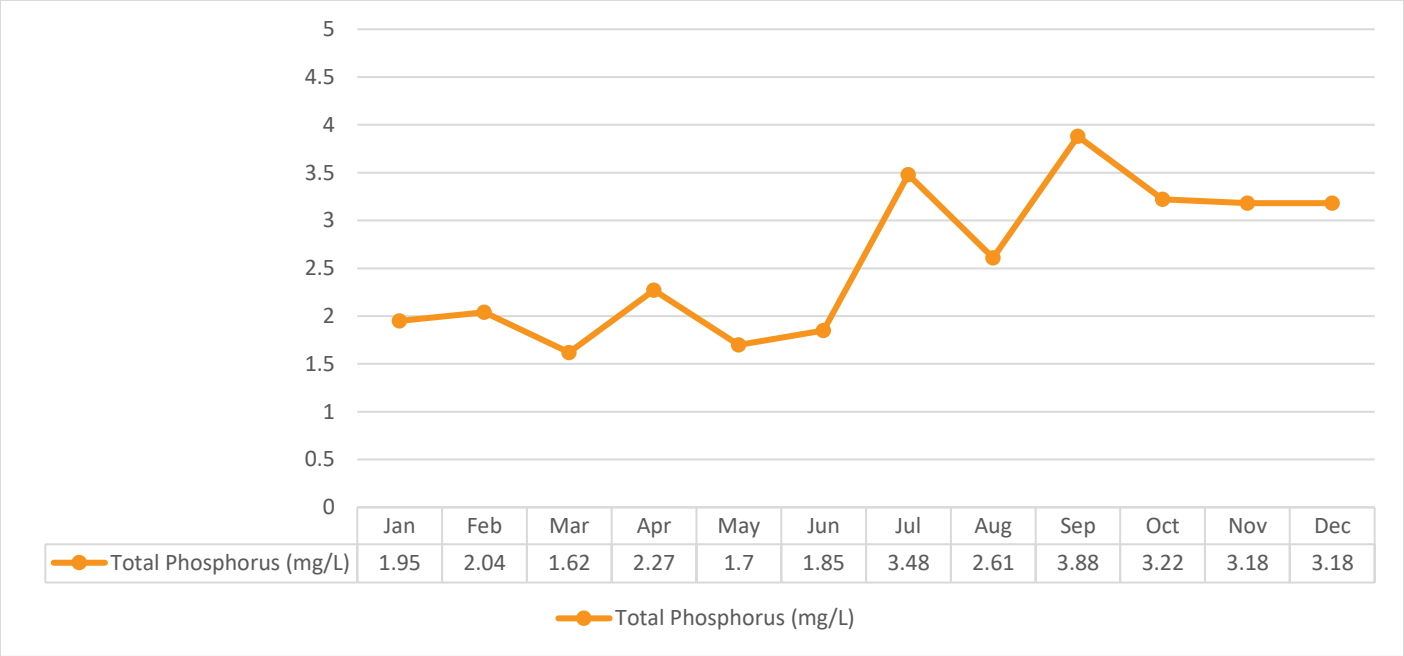
Total Suspended Solids Historical Review

The Total Suspended Solids annual average has been between 52 mg/L and 227 mg/L showing a slight decrease in 2016 – 2017, followed by spikes in 2021 & 2024.

Total Phosphorus (TP)

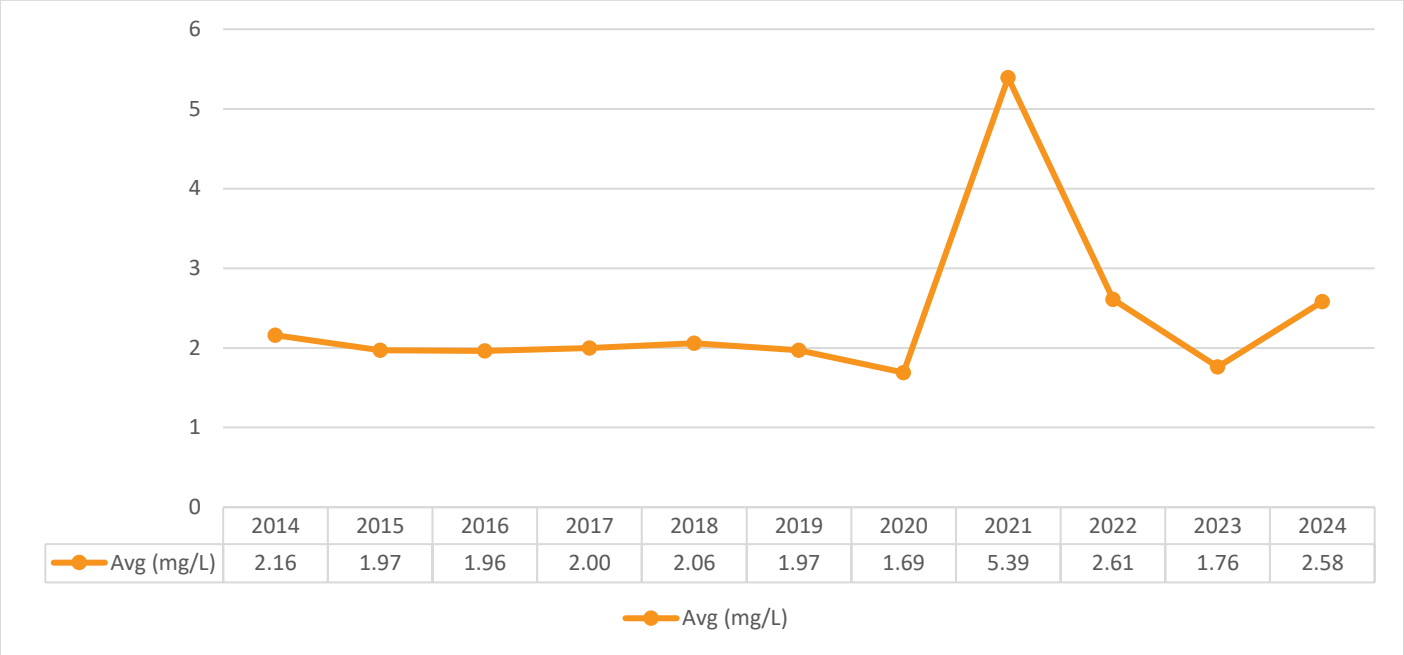
ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Total Phosphorus. The monthly results ranged from 1.70 mg/L to 3.88 mg/L.

Graph 8. 2024 Monthly Total Phosphorus Influent Sample Results



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Phosphorus (mg/L)	1.95	2.04	1.62	2.27	1.7	1.85	3.48	2.61	3.88	3.22	3.18	3.18

Graph 9. Historical Influent Total Phosphorus Results 2014 - 2024



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Avg (mg/L)	2.16	1.97	1.96	2.00	2.06	1.97	1.69	5.39	2.61	1.76	2.58

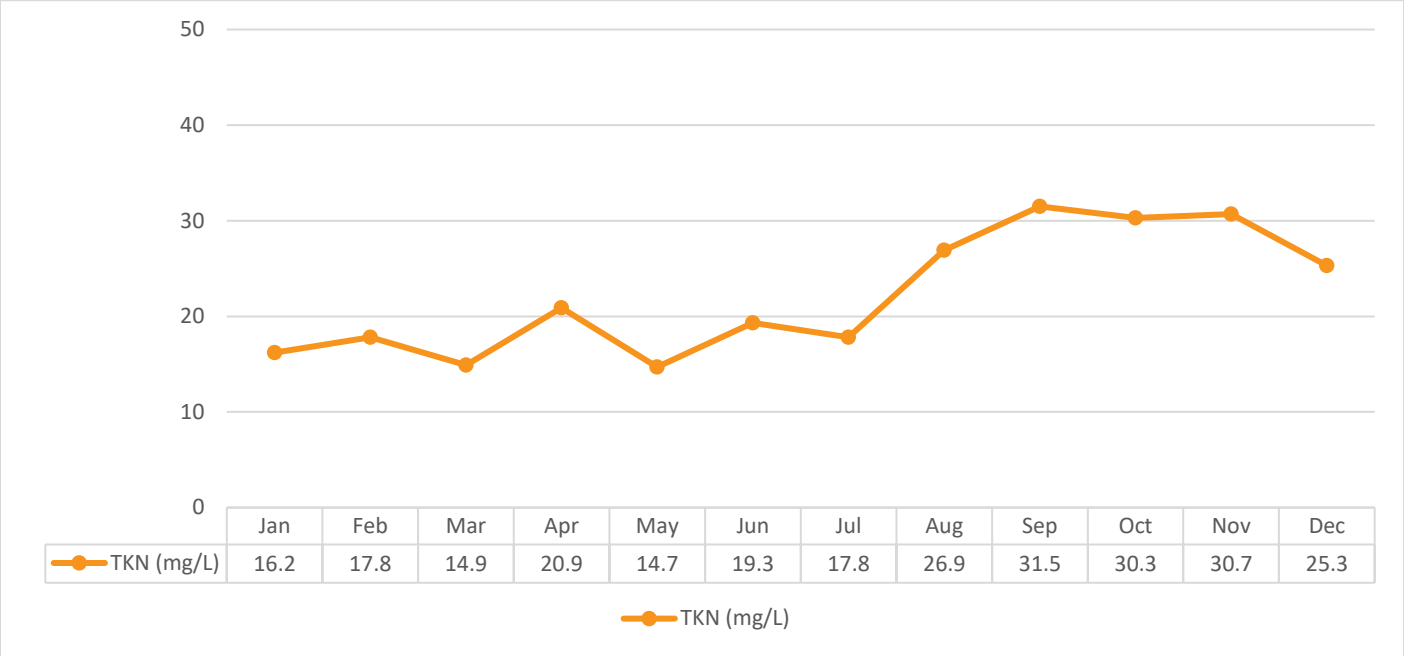
Total Phosphorus Historical Trends

The Total Phosphorus annual average in the raw has trended downward since 2014 decreasing from 2.16 mg/L to 1.69 mg/L; however, experienced an increase in 2021, while 2022-2024 concentrations show a decrease from 2021 but indicate a slight increase from 2020.

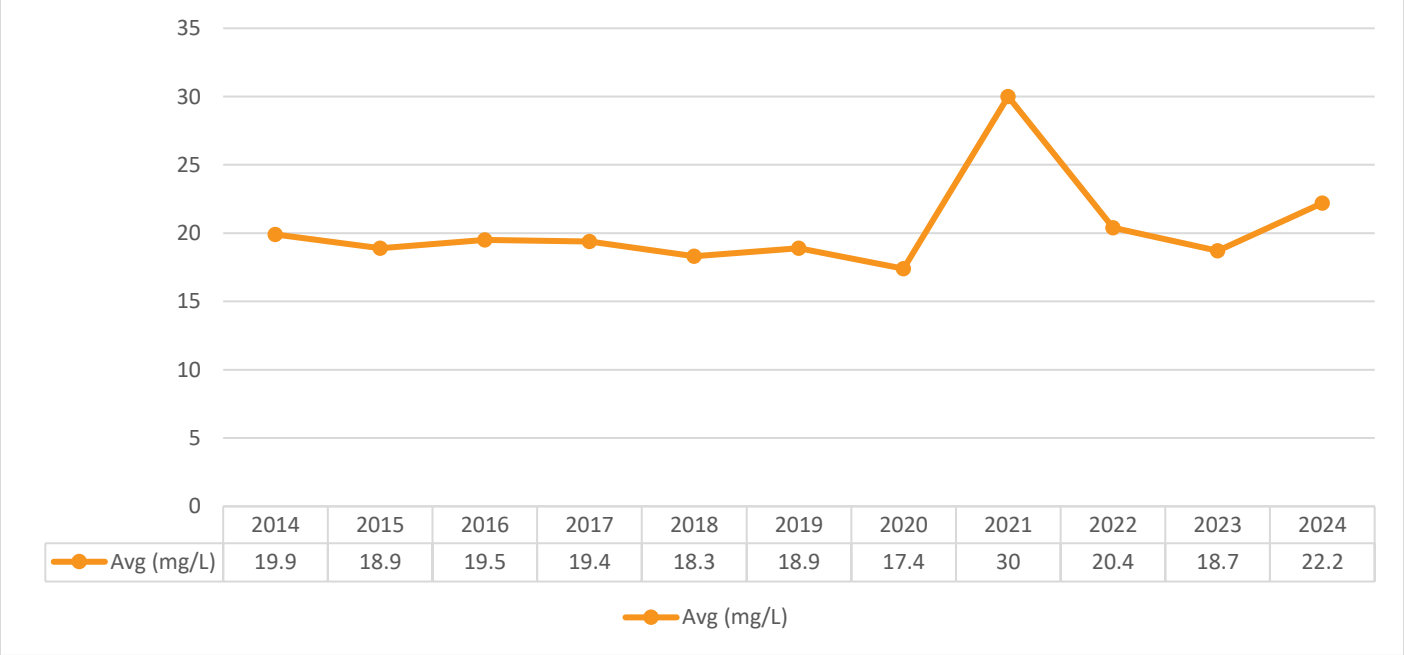
Total Kjeldahl Nitrogen (TKN)

ECA No. 3688-BW3RGB requires at least one composite sample to be collected and analyzed monthly for Total Kjeldahl Nitrogen. The monthly Total Kjeldahl Nitrogen results ranged from 14.7 mg/L to 31.5 mg/L.

Graph 10. 2024 Monthly Total Kjeldahl Nitrogen Influent Sample Results



Graph 11. Historical Influent Total Kjeldahl Nitrogen Results 2014 - 2024



Total Kjeldahl Nitrogen Historical Review

The Total Kjeldahl Nitrogen annual average was fairly consistent with a decreasing trend from 19.9 mg/L to a low of 17.4 mg/L in 2020, however, experienced an increase in 2021 while 2022 and 2023 concentrations returned to historical levels. In comparison, 2024 has experienced a slight increase.

Refer to **Appendix I** for Performance Assessment Report which summarizes Influent (raw) BOD_5, TSS, TP and TKN Results.

Summary of Effluent Monitoring Data

(b) Environmental Compliance Approval (ECA) No. 3688-BW3RGB requires a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works.

The Final Effluent Monitoring Data for 2024 is summarized below and compared to ECA No. 3688-BW3RGB.

Flows are continuously measured through the plant effluent flow meter. The influent and effluent streams are considered not significantly different in flow rates and quantities so the effluent flow measurements are also used for influent flow measurements.

The total influent/effluent flow in 2024 was 407,583 m^3. The effluent flow summary and interpretation are included in (a) above with the influent flow summary and interpretation.

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$) and Total Suspended Solids (TSS)
ECA No. 3688-BW3RGC has an annual average concentration limit of 25 mg/L for $CBOD_5$ and TSS. The annual average results for 2024 are presented in the following table.

Table 1. $CBOD_5$ and Suspended Solids 2024 Effluent Concentration Results Comparison to Limit

Effluent Parameter	Annual Average Limit (mg/L)	Annual Average (mg/L)	Compliance Y/N
$CBOD_5$	25	6.52	Y
Total Suspended Solids	25	23.11	Y

ECA No. 3688-BW3RGB has an annual average concentration objective of 15 mg/L for $CBOD_5$ and TSS. The annual average results for 2024 are presented in the following table.

Table 2. $CBOD_5$ and Suspended Solids 2024 Effluent Concentration Results Comparison to Objectives

Effluent Parameter	Annual Average Objective (mg/L)	Annual Average (mg/L)	Objective Met Y/N
$CBOD_5$	15	6.52	Y
Total Suspended Solids	15	23.11	N

ECA No. 3688-BW3RGB has an annual average daily effluent loading limit of 45.0 kg/day for $CBOD_5$ and TSS. The annual average daily loading results for 2024 are presented in the following table.

Table 3. $CBOD_5$ and Suspended Solids 2024 Effluent Loading Results Comparison to Limits

Effluent Parameter	Annual Average Daily Loading Limit (kg/day)	Annual Average Daily Loading (kg/day)	Compliant Y/N
$CBOD_5$	45	7.26	Y
Total Suspended Solids	45	25.74	Y

Total Phosphorus (TP)

ECA No. 3688-BW3RGB has a monthly average concentration limit of 0.5 mg/L for Total Phosphorus. The monthly average results for 2024 were calculated as required. Results are presented in the following table.

Table 4. Total Phosphorus 2024 Monthly Average Concentrations Comparison to Limit

	Monthly Average Limit (mg/L)	Effluent Monthly Average (mg/L)	Compliant Y/N
January	0.5	0.10	Y
February	0.5	0.10	Y
March	0.5	0.11	Y
April	0.5	0.79	N
May	0.5	0.38	Y
June	0.5	0.24	Y
July	0.5	0.48	Y
August	0.5	0.23	Y
September	0.5	0.28	Y

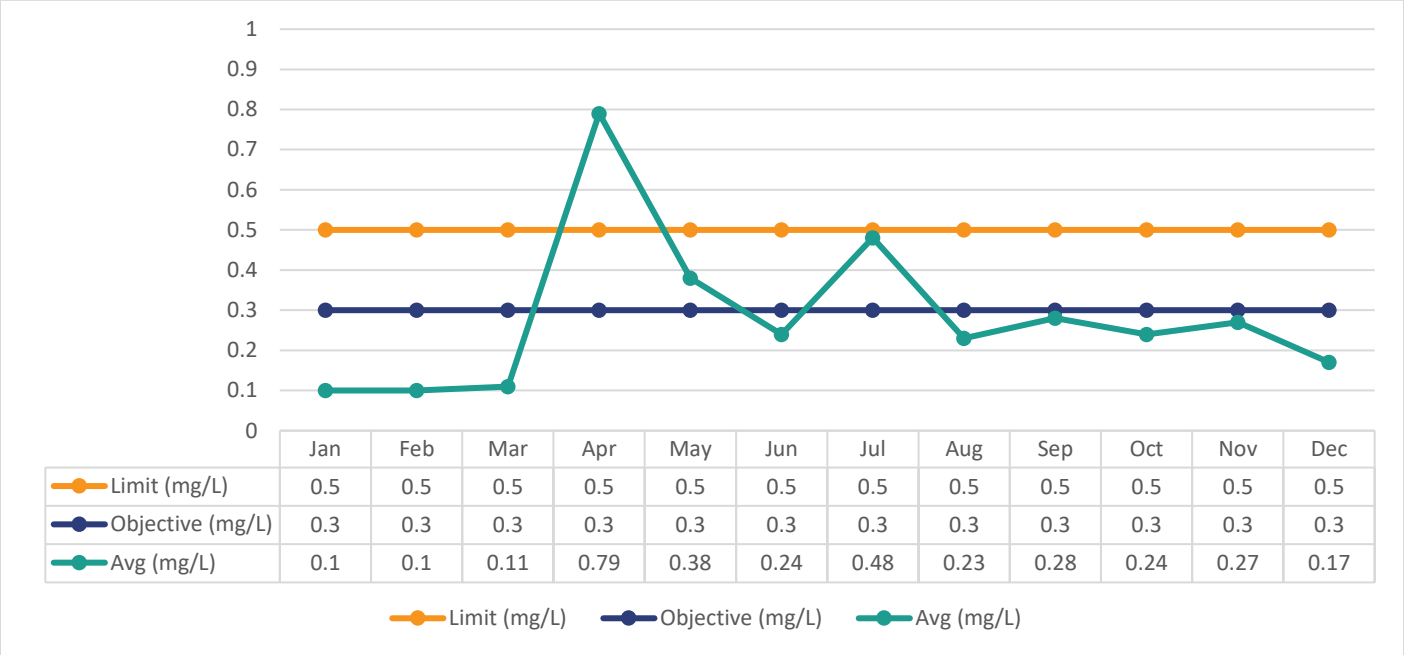
	Monthly Average Limit (mg/L)	Effluent Monthly Average (mg/L)	Compliant Y/N
October	0.5	0.24	Y
November	0.5	0.27	Y
December	0.5	0.17	Y

ECA No. 3688-BW3RGB has a monthly average concentration objective of 0.3 mg/L for Total Phosphorus. The monthly average results for 2024 were calculated as required and are presented in the following table.

Table 5. Total Phosphorus 2024 Monthly Average Concentrations Comparison to Objective

	Monthly Average Objective (mg/L)	Effluent Monthly Average (mg/L)	Objective Met Y/N
January	0.3	0.10	Y
February	0.3	0.10	Y
March	0.3	0.11	Y
April	0.3	0.79	N
May	0.3	0.38	N
June	0.3	0.24	Y
July	0.3	0.48	N
August	0.3	0.23	Y
September	0.3	0.28	Y
October	0.3	0.24	Y
November	0.3	0.27	Y
December	0.3	0.17	Y

Graph 12. 2024 Monthly Final Effluent Total Phosphorus Concentration Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Objective (mg/L)	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Avg (mg/L)	0.1	0.1	0.11	0.79	0.38	0.24	0.48	0.23	0.28	0.24	0.27	0.17

ECA No. 3688-BW3RGB has a monthly average daily loading limit of 0.9 kg/d for Total Phosphorus. The monthly average results for 2024 were calculated as required for each approval and are presented in the following table.

Table 6. Total Phosphorus 2024 Monthly Average Daily Loading Comparison to Limit

	Monthly Average Daily Loading Limit (kg/d)	Effluent Monthly Average Daily Loading (kg/d)	Compliant Y/N
January	0.9	0.125	Y
February	0.9	0.141	Y
March	0.9	0.144	Y
April	0.9	1.427	N
May	0.9	0.513	Y
June	0.9	0.273	Y
July	0.9	0.534	Y
August	0.9	0.189	Y
September	0.9	0.192	Y
October	0.9	0.164	Y
November	0.9	0.175	Y
December	0.9	0.209	Y

Total Ammonia Nitrogen (TAN)

ECA No. 3688-BW3RGB has monthly Total Ammonia Nitrogen (TAN) concentration limits based on seasonal periods within the annual year. The following table compares monthly results to the limits for seasonal concentrations.

Table 7. Total Ammonia Nitrogen 2024 Monthly Average Comparison to Limit

	Monthly Average Concentration Limit (mg/L)	Effluent Monthly Average (mg/L)	Compliant Y/N
January	7.0	0.68	Y
February	7.0	0.63	Y
March	7.0	0.10	Y
April	3.5	0.26	Y
May	3.5	0.36	Y
June	3.5	1.53	Y
July	3.5	0.23	Y
August	3.5	0.15	Y
September	3.5	1.30	Y
October	3.5	1.02	Y
November	7.0	3.23	Y
December	7.0	0.90	Y

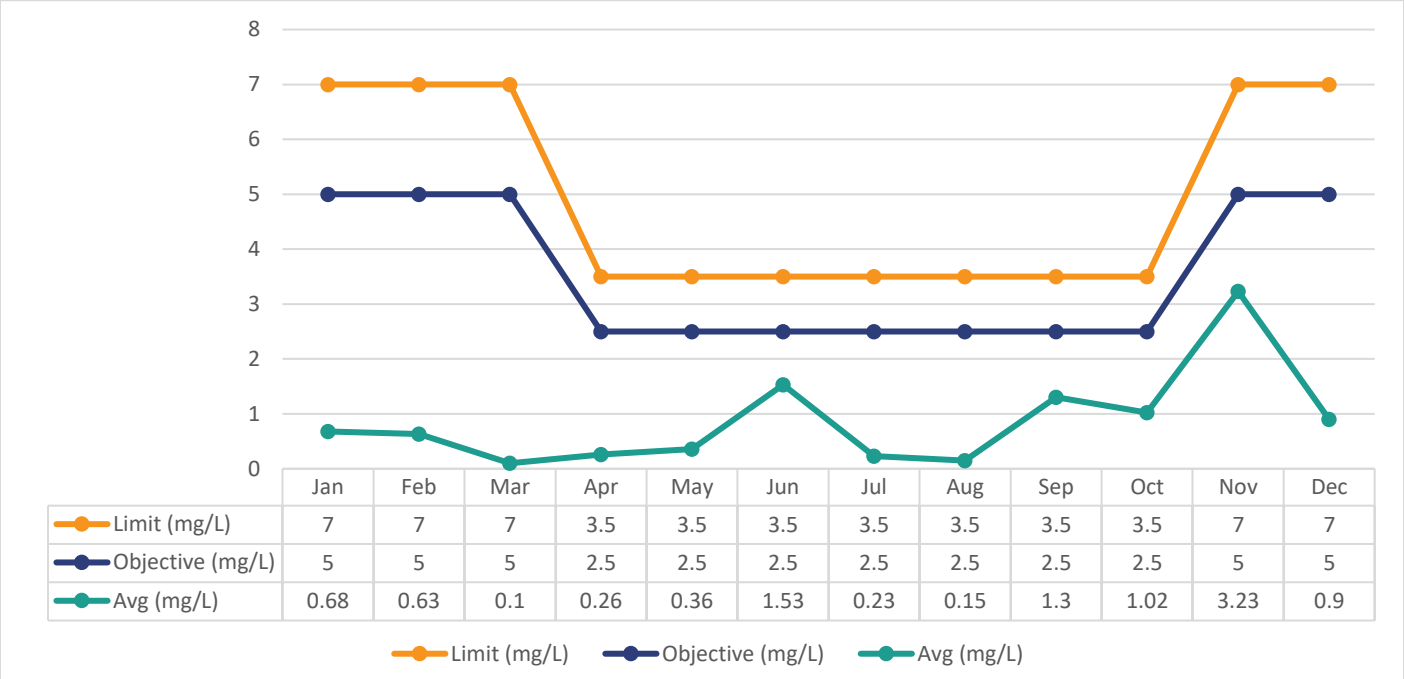
Total Ammonia Nitrogen (TAN) concentration objectives are calculated monthly based on seasonal periods within the annual year for ECA No. 3688-BW3RGB. The following table compares all results to the objectives for seasonal concentrations.

Table 8. Total Ammonia Nitrogen 2024 Monthly Average Concentration Comparison to Objectives

	Monthly Average Concentration Objective (mg/L)	Effluent Monthly Average (mg/L)	Objective Met Y/N
January	5.0	0.68	Y
February	5.0	0.63	Y
March	5.0	0.10	Y
April	2.5	0.26	Y
May	2.5	0.36	Y
June	2.5	1.53	Y
July	2.5	0.23	Y
August	2.5	0.15	Y

	Monthly Average Concentration Objective (mg/L)	Effluent Monthly Average (mg/L)	Objective Met Y/N
September	2.5	1.30	Y
October	2.5	1.02	Y
November	5.0	3.23	Y
December	5.0	0.90	Y

Graph 13. 2024 Monthly Final Effluent Total Ammonia Nitrogen Concentration Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	7	7	7	3.5	3.5	3.5	3.5	3.5	3.5	3.5	7	7
Objective (mg/L)	5	5	5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	5	5
Avg (mg/L)	0.68	0.63	0.1	0.26	0.36	1.53	0.23	0.15	1.3	1.02	3.23	0.9

Total Ammonia Nitrogen (TAN) monthly average daily loading limits are calculated based on seasonal periods within the annual year for ECA No. 3688-BW3RGB. The following table compares all results to the limits for monthly average daily loading result.

Table 9. Total Ammonia Nitrogen 2024 Monthly Average Daily Loading Results Comparison to Limits

	Monthly Average Daily Loading Limit (kg/d)	Effluent Monthly Average Daily Loading (kg/d)	Compliant Y/N
January	12.6	0.816	Y
February	12.6	0.859	Y
March	12.6	0.131	Y
April	6.3	0.475	Y

	Monthly Average Daily Loading Limit (kg/d)	Effluent Monthly Average Daily Loading (kg/d)	Compliant Y/N
May	6.3	0.483	Y
June	6.3	1.743	Y
July	6.3	0.250	Y
August	6.3	0.122	Y
September	6.3	1.212	Y
October	6.3	0.708	Y
November	12.6	2.128	Y
December	12.6	1.105	Y

E. Coli

ECA #3688-BW3RGB has a compliance monthly geometric mean density limit of 200 cfu/100 mL. Many wastewater treatment facilities must test for and report results using a 'Geometric Mean' (average) of all the test results obtained during a specific reporting period. The geometric mean calculation is different than a normal arithmetic mean (average) calculation and is considered to be a more accurate calculation. A geometric mean, unlike an arithmetic mean, tends to dampens the effect of very high or low values which might bias the mean if a straight average (arithmetic mean) were calculated.

The following provides a monthly geometric mean density values of E. coli in effluent for each month in 2024.

Table 10. E. Coli 2024 Results Comparison to Limit

	Monthly Geometric Mean Density of E. coli (org/100 mL)	Compliant with Limit of 200 cfu/100 mL Y/N
January	3.29	Y
February	4.38	Y
March	3.56	Y
April	3.56	Y
May	4.41	Y
June	3.72	Y
July	12.88	Y
August	12.11	Y
September	12.07	Y
October	2.00	Y
November	2.00	Y
December	3.39	Y

ECA No. 3688-BW3RGB has a monthly geometric mean E. coli objective of 150 cfu/100 mL. The following provides monthly geometric mean density values of E. coli in effluent for each month in 2024 compared to the objective.

Table 11. E. Coli 2024 Results Comparison to Objective

	Monthly Geometric Mean Density of E. coli (org/100 mL)	Met Objective of 150 cfu/100 mL Y/N
January	3.29	Y
February	4.38	Y
March	3.56	Y
April	3.56	Y
May	4.41	Y
June	3.72	Y
July	12.88	Y
August	12.11	Y
September	12.07	Y
October	2.00	Y
November	2.00	Y
December	3.39	Y

pH

ECA #3688-BW3RGB has a pH compliance limit within the range of 6.0 to 9.5, inclusive, for every single sample result. Every pH reading in 2024 was within the compliance limits. A summary of effluent pH measurements recorded in 2024 is provided in **Appendix I.** The pH of the final effluent ranged from 6.16 – 8.26 throughout 2024 which is within the ECA compliance limit at all times.

ECA No. 3688-BW3RGB has a pH objective within the range of 6.5 to 9.0, inclusive, for every single sample result. The pH of the final effluent ranged from 6.16 – 8.26 throughout 2024, which is not within the ECA compliance objective at all times.

Un-ionized Ammonia

The concentration of un-ionized ammonia is calculated using the TAN concentration, field pH and field temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended. Un-ionized ammonia results are provided in **Appendix I.**

The results in the preceding tables show the limits for concentrations and loadings of final effluent $CBOD_5$, Total Ammonia Nitrogen, E. Coli results met the limits and objectives of ECA No. 3688-BW3RGB. Total Suspended Solids limits were met, with the exception of the objective limits. Total

Phosphorus limits for concentrations and loadings were met, except for the month of April, coinciding with exceeding objective limits for April, May & July. For pH results, 181 of 183 samples met the limits required by ECA No. 3688-BW3RGB.

Refer to **Appendix I** for Performance Assessment Report and Summary of Effluent $CBOD_5$, TSS, TP, TAN, TKN, E. Coli and pH Results. Also included in **Appendix I** are the un-ionized ammonia results for 2024.

Operational Challenges and Corrective Actions

(c) The following table describes all operating problems encountered during the reporting period and the corrective actions taken.

Table 12. Fenelon Falls WPCP Operational Challenges

Month	Challenges	Corrective Actions
April	Emergency Partial Sand Filter Bypass due to heavy rain event Apr 12 – Apr 15	Monitored flows, additional staff called to assist, the detention tank at the Ellice St. SPS was utilized, Shepherds Environmental contacted to haul sewage from Francis St SPS to the sewage treatment plant. Composite samples collected over the duration of the event. Notifications made to SAC & MOH.
	Emergency Partial Sand Filter Bypass due to heavy rain event Apr 29 – May 1	Monitored flows, additional staff called to assist, the detention tank at the Ellice St. SPS was utilized, Shepherds Environmental contacted to haul sewage from Francis St SPS to the sewage treatment plant. Composite samples collected over the duration of the event. Notifications made to SAC & MOH.
June	Emergency Partial Sand Filter Bypass due to heavy rain event June 23 – June 24	Monitored flows and tertiary filters. Composite samples collected over the duration of the event. Notifications made to SAC & MOH.
	Emergency Partial Sand Filter Bypass due to heavy rain event June 29 – June 30	Monitored flows and tertiary filters. Composite samples collected over the duration of the event.

Month	Challenges	Corrective Actions
		Notifications made to SAC & MOH.
July	Emergency Partial Sand Filter Bypass due to a combination of electrical and mechanical issues in conjunction with a heavy rain event Jul 1 – Jul 12	Monitored flows and sand filters. Bypass valve adjusted throughout event to ensure flow to the sand filters. Electrical components replaced. Maintenance completed on the sand filters (lancing to loosen the sand). Composite samples collected over the duration of the event. Notifications made to SAC & MOH

Maintenance Summary

(d) OCWA uses a Work Maintenance System (WMS) to schedule normal maintenance activities and track repairs. WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventative maintenance is carried out and assets are maintained to manufacturer's and/or industry standards. Emergency and capital repair maintenance is completed and added to the system.

Refer to **Appendix II: Maintenance Summary** for work order and maintenance summary.

Effluent Quality Assurance or Control

(e) Effluent quality assurance is maintained in several ways. Laboratory samples are sent to accredited laboratory (SGS Canada Inc. – Lakefield) for analysis of all effluent parameters. Sampling calendars are issued to the operator which denote frequency of sampling. Calendars are used as a tracking mechanism throughout the month to ensure all required samples are collected. These calendars are submitted to the Process Compliance Technician at the end of each month for review. Raw and effluent samples are collected as per ECA No. 3688-BW3RGB and the results are reviewed on a regular basis to ensure compliance with the site's objectives and limits.

Effluent control measures include in-house sampling and testing for operational parameters such as pH, temperature, phosphorus, dissolved oxygen, 30-minute settling and Mixed Liquor Suspended Solids (MLSS). In-house testing provides real time results, which are evaluated to determine if process changes are necessary to enhance operational performance. All in-house sampling and analysis are performed by certified operations staff utilizing approved methods and protocols for sampling, analysis and recording, as specified in the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works", the Ministry's publication, "Protocol for the Sampling and Analysis of Industrial/Municipal

Wastewater" and the publication, "Standard Methods for the Examination of Water and Wastewater".

Work orders are scheduled through an asset maintenance management system to ensure preventative and corrective maintenance is completed and recorded by operations staff. A summary is attached as **Appendix II**. Flow meters are calibrated annually and the 2024 calibration report is provided in **Appendix III**.

OCWA conducts internal audits of facilities and develops Action Plans to ensure deficiencies are identified and corrected. OCWA has developed comprehensive manuals detailing operations, maintenance, instrumentation and emergency procedures. To ensure facilities are operated in compliance with applicable legal requirements, facility staff has access to a network of compliance and support professions at the hub, regional and corporate level.

Work orders illustrating all scheduled and preventative maintenance to be completed are issued to the operator and/or mechanic. OCWA conducts internal audits of the facility and develops Action Plans to ensure deficiencies are identified.

Continuous phosphorus removal is achieved with the dosing of aluminum sulfate. A summary of its use and dosing rates for 2024 is provided in the following table.

Table 13. 2024 Summary of Aluminum Sulfate Usage and Dosage

Month	Total Aluminum Sulfate Used (Kg)	Aluminum Sulfate Average Dosage (mg/L)
January	1996.9	55.45
February	1940.5	49.94
March	2178.70	68.55
April	2094.9	44.55
May	1812.0	46.84
June	2639.54	63.41
July	2114.40	68.49
August	2064.40	83.63
September	2081.20	99.54
October	2042.5	97.29
November	1347.3	67.30
December	1538.70	45.41

Calibrations

(f) a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

Refer to **Appendix III** for 2024 calibration reports.

Best Efforts to Achieve Design Objectives of Condition 6

(g) a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

(i) when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;

(ii) when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;

Continuous efforts were made to meet the Effluent Objectives in 2024:

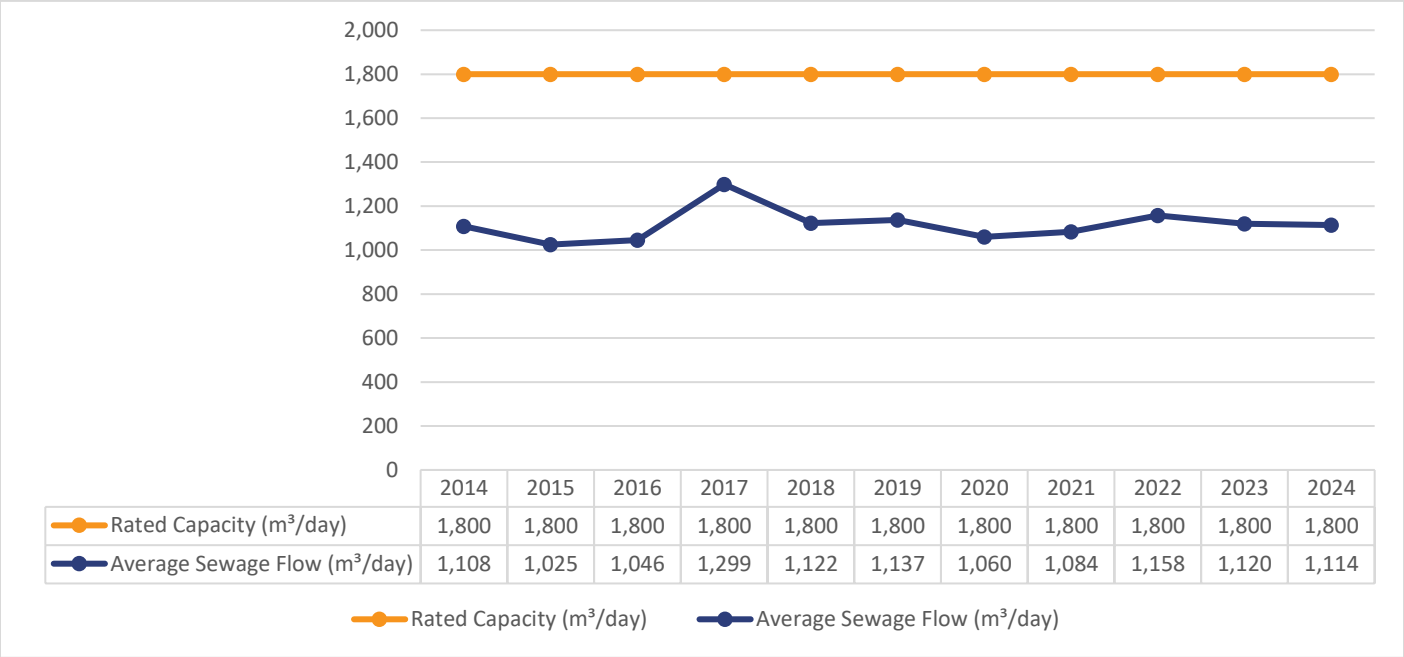
- Development of the sampling plan which meets or exceeds the minimum sample requirements as required in the ECA;
- Visual Inspection of the entire process while performing rounds including visual inspection of effluent to ensure it did not contain oil or other substance in amounts sufficient to create a visible film or sheen on the surface of the receiving waters, and which was essentially free of any floating material;
- Influent monitoring;
- Ensuring that chemicals are being dosed as required;
- Calibration of lab equipment;
- Annual calibration of the flow meters;
- Oxidation ditch increased DO monitoring;
- Ensure UV is providing disinfection, both banks on regardless of flow rates;
- Performing preventative maintenance activities in accordance with work order schedules;
- Performing in-house lab tests;
- Monitoring treatment processes by performing regular laboratory analysis and review of lab results;
- Biosolids monitoring.

Effluent design objectives were met 100% of the time for $CBOD_5$, TAN, and E. coli monthly concentrations. The pH objective was met 98.9% in 2024, Total Suspended Solids was met 75% while Total Phosphorus was met 80.3% in 2024.

The ECA states the plant has a Rated Capacity of 1,800 m^3/day. The Rated Capacity means the Average Daily Flow for which the plant is approved to treat. The Average Daily Flow is determined by the cumulative total sewage flow into the plant during a calendar year, which is then divided by the number of days during which sewage flowed into the plant. The annual average daily influent flow for 2024 is 1,113.61m^3/day or 61.9% of the Rated Capacity.

The following graph shows the plant has been operating within the Rated Capacity for the past ten years.

Graph 14. Average Sewage Flow and Rated Capacity Comparisons



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Rated Capacity (m³/day)	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
Average Sewage Flow (m³/day)	1,108	1,025	1,046	1,299	1,122	1,137	1,060	1,084	1,158	1,120	1,114

Sludge

(h) A tabulation of the volume of sludge generated, 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;

Attached is **Appendix IV: Sludge/Biosolids Summary** that contains quantities of organics, inorganics, E. coli and volumes of Biosolids/sludge generated for the reporting period, which was a total of 2,676.42 m³. This is a slight increase from 2023 when 2,389.5 m³ of biosolids were hauled. The anticipated volume for the next reporting period is not expected to be appreciably different from this reporting period.

Biosolids from the Fenelon Falls WPCP were hauled, stored and land applied by Shepherd Environmental Services in 2024 and will be again in 2025. The biosolids are hauled to fields with a valid NASM Plan (NASM Plan 61442, 60384) or to A710160 Shepherd Environmental Storage Lagoon.

Complaints

(i) a summary of any complaints received and any steps taken to address the complaints;

Table 14. Complaints Received Summary for 2024

Date	Issue	Actions Taken
July 29, 2024	Resident complained about diesel fumes from standby generator at Ellice St. SPS.	Generator was replaced, but had been delayed due to delivery timeline of generator, and having gas connection by Enbridge complete.
November 1, 2024	Resident complained about sewage odour in basement following sewer flushing program led by Engineering.	Reminded other City departments that public notification is required when sewer flushing is being completed.

By-pass, Spill or Abnormal Discharge Events

(j) A summary of By-passes, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and Abnormal Discharge Events;

Bypasses

Table 15. Bypass Summary for 2024

Date	Type of Event	Total Volume (m^3)	Disinfect Y/N	Samples Collected Y/N	Reason
April 12 – April 15, 2024	Partial Sand Filter Bypass	7,149	Y	Y	Wet Weather Event
April 26 – May 1, 2024	Partial Sand Filter Bypass	3,518	Y	Y	Wet Weather Event
June 23 – June 24, 2024	Partial Sand Filter Bypass	698	Y	Y	Wet Weather Event
June 29 – June 30, 2024	Partial Sand Filter Bypass	1,025	Y	Y	Wet Weather Event
July 1 – July 12, 2024	Partial Sand Filter Bypass	2,477	Y	Y	Wet Weather Event

Spills

There were not any spills at the Fenelon Falls WPCP during 2024.

Overflows

There were not any overflows at the Fenelon Falls WPCP or pumping stations in 2024.

Abnormal Discharge Events

There were not any abnormal discharge events at the Fenelon Falls WPCP in 2024.

Refer to **Appendix V: Bypasses, Overflows, Spills or Abnormal Events** for copies of the quarterly Bypass and Overflow reports, and Notice of Exceedance submitted to the Ministry of Environment, Conservation and Parks.

Notice of Modifications to Sewage Works

(k) summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification.

No Notice of Modifications was submitted in 2024 to the District Manager as a result of Schedule B, Section 1.

Conformance with Procedure F-5-1

(l) a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted;

The City of Kawartha Lakes continues to work on a Master Servicing and Capacity Assessment for all facilities analyzing existing capacity and future growth requirements. Sanitary sewer flushing is conducted on an annual basis (3 years of dead ends/trouble areas and 4th year is a full system flush). During this program, any manholes with infiltration issues are identified and are included in operational maintenance contracts for grouting, frame and cover replacements, etc.

In 2024, a collection system rehabilitation program was undertaken following the prior year's CCTV inspection of the entire system, and an analysis by a consulting engineer to identify and categorize any deficiencies found. A full list of the locations and repairs made as part of this contract can be found in **Appendix VII: 2024 Fenelon Falls Capital Repairs List.** The overall cost of this project was $254,557.

In 2025, full sanitary sewer flushing will be performed, and a budget of $30,000 has been allocated to make any operational repairs such as grouting and frame and cover repairs.

Deviation from Monitoring Program

(m) a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

ECA No. 3688-BW3RGB Schedule D Monitoring Program describes the requirement for sample collection at the following locations, frequencies and by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 16. Influent – Influent Sampling Point

Parameter	Type of Sample	Minimum Sampling Frequency
BOD_5	24 hour composite	Monthly
Total Suspended Solids	24 hour composite	Monthly
Total Phosphorus	24 hour composite	Monthly
Total Kjeldahl Nitrogen	24 hour composite	Monthly

Table 17. Final Effluent – Final Effluent Sampling Point

Parameter	Type of Sample	Minimum Sampling Frequency
$CBOD_5$	24 hour composite	Weekly
Total Suspended Solids	24 hour composite	Weekly
Total Phosphorus	24 hour composite	Weekly
Total Ammonia Nitrogen	24 hour composite	Weekly
Total Kjeldahl Nitrogen	24 hour composite	Weekly
Nitrate as Nitrogen	24 hour composite	Weekly
Nitrite as Nitrogen	24 hour composite	Weekly
E. coli	Grab	Weekly
pH*	Grab/Probe/Analyzer	Weekly
Temperature*	Grab/Probe/Analyzer	Weekly
Un-ionized Ammonia**	As Calculated	Weekly

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

The Following tables provide a summary of the number of samples collected each month for those parameters required for analysis.

Table 18. Number of Raw Sewage Parameters Tested in 2024

	BOD_5	TSS	Total P	TKN
January	1	1	1	1
February	1	1	1	1
March	1	1	1	1
April	1	1	1	1
May	1	1	1	1
June	1	1	1	1
July	1	1	1	1
August	1	1	1	1
September	1	1	1	1
October	1	1	1	1
November	1	1	1	1
December	1	1	1	1

Table 19. Number of Final Effluent Sewage Parameters Tested in 2024

	$CBOD_5$	TSS	TP	TAN	TKN	Nitrite as N	Nitrate as N	E. Coli	pH	Temp °C	Un-ionized Ammonia
Jan	5	5	5	5	5	5	5	5	18	18	5
Feb	4	4	4	4	4	4	4	4	13	13	4
Mar	4	4	4	4	4	4	4	4	14	14	4
Apr	8	8	8	8	4	4	4	4	16	16	4
May	5	5	5	5	5	5	5	5	16	16	5
Jun	6	6	6	6	4	4	4	4	15	15	4
Jul	14	14	14	14	5	5	5	5	15	15	5
Aug	4	4	4	4	4	4	4	4	15	15	4
Sep	6	6	6	6	6	6	6	4	13	13	6
Oct	5	5	5	5	5	5	5	5	16	15	5
Nov	7	7	7	7	7	7	7	4	13	13	7
Dec	5	5	5	5	4	5	5	5	20	20	4

The required number of influent and final effluent samples were collected at the specified locations and frequencies during the reporting period as per ECA No. 3688-BW3RGB Schedule D. The following are deviations from the scheduled sampling calendar in 2024:

January – sample day shifted due to composite sampler failure

February – sample day shifted due to composite sampler failure

April – additional sampling during partial sand filter bypass

May – sample day shifted due to operator oversight

June – additional sampling during partial sand filter bypass

July – additional sampling during partial sand filter bypass

- sample day shifted due to operator oversight

September – additional sampling for process optimization

November – additional sampling for process optimization

- sample day shifted due to force main isolation

ECA No. 3688-BW3RGB Schedule C prescribes the following sampling requirements for Sludge/Biosolids as shown in the following table.

Table 20. Sludge/Biosolids – Holding Tank/Truck Loading Bay

Parameter	Type of Sample	Minimum Sampling Frequency
Total Solids	Grab	Quarterly
Total Phosphorus	Grab	Quarterly
Total Ammonia Nitrogen	Grab	Quarterly
Nitrate as Nitrogen	Grab	Quarterly
Metal Scan -Arsenic -Cadmium -Cobalt -Chromium -Copper -Lead -Mercury -Molybdenum -Nickel -Potassium -Selenium -Zinc	Grab	Quarterly

Table 21. Number of Sludge/Biosolids Parameters Tested in 2024

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Total Solids	2	1	1	1	1	2	2	1	1	1	2	0
TP	2	1	1	1	1	2	2	1	1	1	2	0
TAN	2	1	1	1	1	2	2	1	1	1	2	0

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Nitrate as Nitrogen	2	1	1	1	1	2	2	1	1	1	2	0
Arsenic	2	1	1	1	1	2	2	1	1	1	2	0
Cadmium	2	1	1	1	1	2	2	1	1	1	2	0
Cobalt	2	1	1	1	1	2	2	1	1	1	2	0
Chromium	2	1	1	1	1	2	2	1	1	1	2	0
Copper	2	1	1	1	1	2	2	1	1	1	2	0
Lead	2	1	1	1	1	2	2	1	1	1	2	0
Mercury	2	1	1	1	1	2	2	1	1	1	2	0
Molyb-denum	2	1	1	1	1	2	2	1	1	1	2	0
Nickel	2	1	1	1	1	2	2	1	1	1	2	0
Potassium	2	1	1	1	1	2	2	1	1	1	2	0
Selenium	2	1	1	1	1	2	2	1	1	1	2	0
Zinc	2	1	1	1	1	2	2	1	1	1	2	0

Sludge/biosolids samples are collected typically once per month when sludge/biosolids are hauled from the facility.

The 2024 sample schedule for the Fenelon Falls WPCP is provided in **Appendix VI**.

Reporting Requirements – Wastewater Collection System

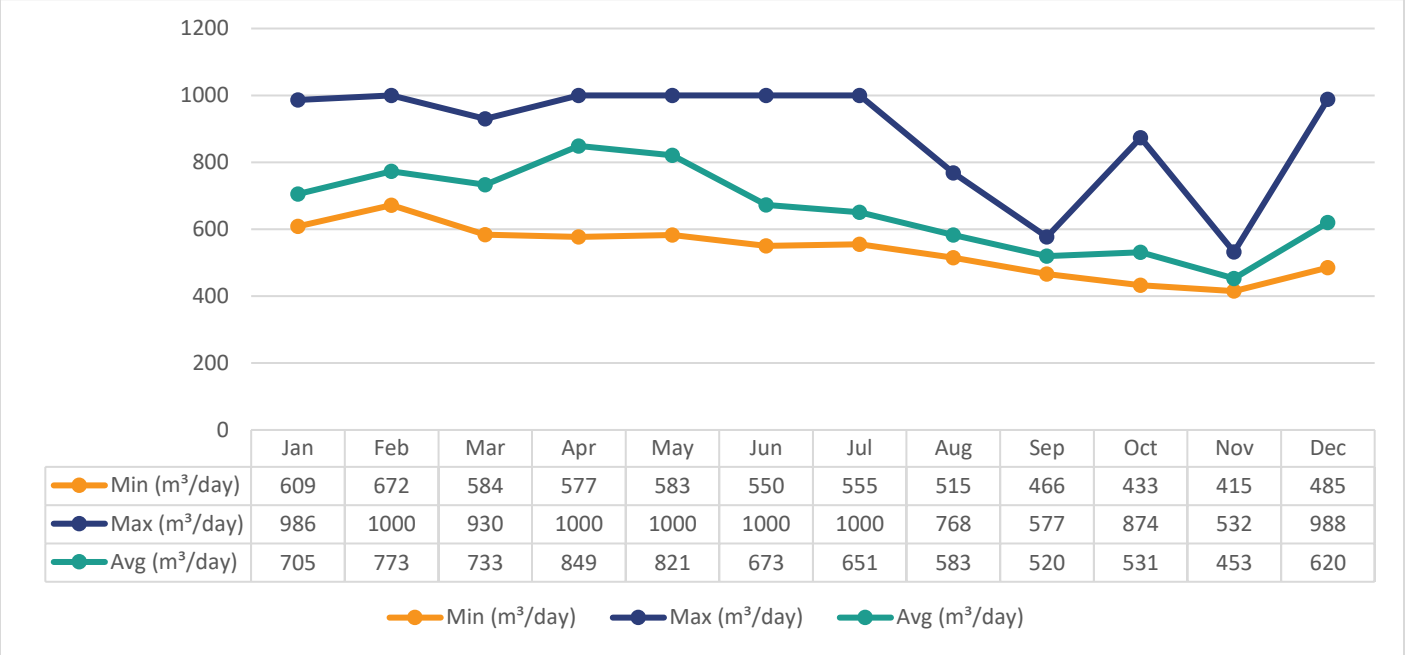
In accordance with the Consolidated Linear Infrastructure – Environmental Compliance Approval #141-W601 the owner shall prepare a performance report on a calendar basis and submit to the Ministry of Environment, Conservation and Parks by March 31 of the calendar year following the period being reported upon.

4.6 (a) a summary of all required monitoring data along with an interpretation of the data and any conclusions drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.

The Fenelon Falls Sewage Collection System consists of works for the collection and transmission of sewage, comprising approximately 13.4 km in total linear length of gravity sewers discharging to three sewage pumping stations, eventually leading to the Fenelon Falls Water Pollution Control Plant.

See the below graph for a summary of the flow meter data gathered at the Fenelon Falls Sewage Pumping Station 1 & 2:

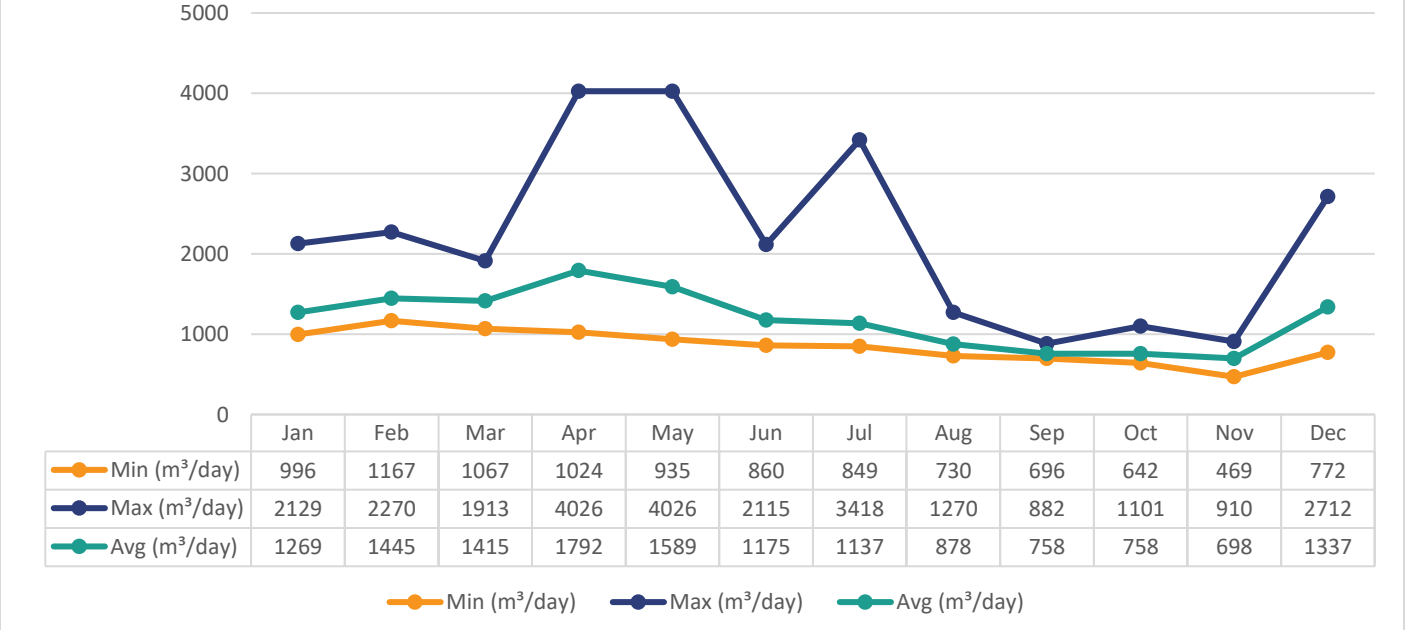
Graph 15. Fenelon Falls Sewage Pumping Station 2 (Colborne St.) Daily Minimum, Maximum and Average Flows



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min (m³/day)	609	672	584	577	583	550	555	515	466	433	415	485
Max (m³/day)	986	1000	930	1000	1000	1000	1000	768	577	874	532	988
Avg (m³/day)	705	773	733	849	821	673	651	583	520	531	453	620

Note: The program used to complete the above summary has a maximum daily value the program could capture at the Fenelon Falls Sewage Pumping Station 2. The maximum value the program can capture is: 1000 m³/day.

Graph 16. Fenelon Falls Sewage Pumping Station 1 (Ellice St.) Daily Minimum, Maximum and Average Flows



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min (m³/day)	996	1167	1067	1024	935	860	849	730	696	642	469	772
Max (m³/day)	2129	2270	1913	4026	4026	2115	3418	1270	882	1101	910	2712
Avg (m³/day)	1269	1445	1415	1792	1589	1175	1137	878	758	758	698	1337

Refer to Graph 1. 2024 Influent/Effluent Flow Monthly Totals, Graph 2. Influent/Effluent Daily Minimum, Maximum and Average Flows and Graph 3. Historical Influent/Effluent Flows from 2014 – 2024 for additional information related to the raw water being conveyed from the Fenelon Falls Sewage Collection System to the wastewater treatment facility.

Fenelon Falls Sewage Pumping Station Trends

The flows captured in the above graphs for the Fenelon Falls Sewage Pumping Stations 1 & 2 shows increases in maximum daily flows when high flow events occurred, and reflects the fluctuation in weather patterns. The wet weather flow detention tank located at the Fenelon Falls Sewage Pumping Station 1 was utilized in 2024.

Pumping Station Overflow Monitoring Data

Monitoring Data Evaluation

4.6 (b) a summary of any operating problems encountered and corrective actions taken.

A summary of any operating problems encountered within the Fenelon Falls Sewage Collection System are included in **Table 12. Fenelon Falls WPCP Operational Challenges** above.

4.6 (c) a summary of all calibration, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanisms, or thing forming part of the Municipal Sewage Collection System.

A regular scheduled calibration and maintenance program has been kept up to date as scheduled on a daily, weekly, semi-annual and annual basis. All equipment calibration & maintenance scheduling and standard procedures are provided by Maximo Computerized Maintenance System.

Attached is **Appendix II: Maintenance Summary**, a work order summary report, showing all preventative and corrective maintenance activities performed at the Fenelon Falls Water Pollution Control Plant, including the collection system, during 2024.

Attached is **Appendix III: Calibration Report**, flow meters are calibrated annually.

All other collection system repairs are summarized in the table below and **Appendix VII: 2024 Fenelon Falls Capital Repairs List**:

Table 22. Summary of Major Structure & Equipment Maintenance and Repair

Major Structure	Work Performed
Manhole General Repair	MH 2070 123 Princess St. W – Raise frame and cover to grade MH2071 Queen St. @ Dodd St. – Raise to grade

Major Structure	Work Performed
Manhole Rain Stopper Installation	Installed in three locations not identified specifically on work order MH2138 51 King St. – Replace rain stopper
Manhole Moduloc, Frame and Cover Repair	MH opposite Ellice St. SPS - Repair broken manhole frame and replace cover MH2161 16 Veteran's Way – Replace manhole cover MH2131 – Replace approximately 10" moduloc + repair asphalt around manhole

4.6 (d) a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.

Complaints related to the Fenelon Falls Sewage Collection System and steps taken to address the complaints are included in **Table 14. Complaints Received Summary for 2024**.

4.6 (e) 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.

The table below provides a summary of the projects that saw alterations to the collection system in 2024.

Table 23. Summary of Alterations to Authorized System

Alteration to the Authorized System Project Name	Project Details	Does This Project Pose a Significant Drinking Water Threat (SDWT)?
Ellice Street Reconstruction	Installation of approximately 510 m of sanitary sewer (varying size 200 mm – 525 mm dia.), 9 maintenance holes, and 32 sanitary services.	No

4.6 (f) a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including:

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 impact(s) and any corrective actions, if applicable.

The Fenelon Falls Sewage Collection system did not experience any collection system Overflows or Spills in 2024.

4.6 (g) 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.

The City of Kawartha Lakes continues to work on a Master Servicing Study and Capacity Assessment for all facilities analyzing existing capacity and future growth requirements. Sanitary sewer flushing is conducted on an annual basis (3 years of dead ends/trouble areas and 4th year is full system flush). During this program, any manholes with infiltration issues are identified and are included in operational maintenance contracts for grouting, frame and cover replacements, etc. The CCTV inspection and review completed in 2023, identified a list of deficiencies in the collection system. In 2024, this work was tendered and major rehabilitation work was completed in various areas of the collection system to help reduce I&I. A summary of this work is included in **Appendix VII: 2024 Fenelon Falls Capital Repairs List**.

In addition, where manholes are located in lower lying areas and are at risk of being submerged and contributing to inflow, rain bladders are installed to prevent excess water from entering the system, further reducing the risk of overflow. A summary of this work is included above in Table 22.

ii) Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timeline.

The Fenelon Falls Sewage Collection System does not contain combined sewers and therefore is not required to complete a Pollution Prevention and Control Plan (PPCP).

iii) An assessment of the effectiveness of each action taken.

None to report at this time.

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.

A summary of efforts is included in Section **(l)** of this report.

v) Public reporting approach including proactive efforts

SOP WWC02 Wastewater Bypass/Overflow Notification Procedure has been developed and has been in practice since 2021, which clearly outlines all reporting protocols to both regulatory agencies and the public in various situations. This procedure was developed in consultation with Ontario Clean Water Agency, Ministry of Environment, Conservation and Parks and Ministry of Health.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix I:
2024 Performance Assessment Report

Date mm/dd/yyyy	Un-ionized Ammonia (mg/L)	Total Ammonia Nitrogen (mg/L)	pH - ---	Temperature - °C
01/04/2024	0.015	2.80	7.48	9.40
01/10/2024	< 0.001	0.10	7.54	8.40
01/17/2024	0.001	0.30	7.42	6.80
01/24/2024	< 0.001	0.10	7.35	7.20
01/31/2024	< 0.001	< 0.10	7.35	7.80
02/07/2024	< 0.001	0.20	7.50	7.00
02/14/2024	0.004	1.90	7.10	7.50
02/22/2024	< 0.001	0.30	7.24	8.50
02/28/2024	< 0.001	< 0.10	7.47	8.20
03/06/2024	< 0.001	< 0.10	7.35	9.40
03/13/2024	< 0.001	< 0.10	7.35	8.10
03/20/2024	< 0.001	< 0.10	7.34	7.20
03/27/2024	< 0.001	< 0.10	7.30	8.50
04/03/2024	< 0.001	< 0.10	7.21	8.90
04/10/2024	< 0.001	0.10	7.21	9.90
04/17/2024	0.021	1.40	7.91	10.20
04/24/2024	< 0.001	< 0.10	7.65	11.30
05/01/2024	< 0.001	< 0.10	7.85	10.90
05/08/2024	< 0.001	< 0.10	7.63	13.80
05/15/2024	< 0.001	< 0.10	7.55	14.30
05/22/2024	0.004	0.50	7.39	16.10
05/29/2024	0.009	1.00	7.56	15.00
06/05/2024	0.027	4.60	7.27	17.20
06/12/2024	0.007	1.70	7.12	16.10
06/19/2024	0.026	2.20	7.48	20.20
06/26/2024	< 0.001	< 0.10	7.67	17.90
07/03/2024	0.008	0.50	7.36	18.30
07/10/2024	< 0.001	< 0.10	7.30	20.00
07/17/2024	< 0.001	< 0.10	7.51	19.60
07/24/2024	0.006	0.50	7.47	19.90
07/31/2024	< 0.001	< 0.10	7.09	21.20
08/07/2024	< 0.001	< 0.10	7.21	19.80
08/14/2024	< 0.001	< 0.10	7.66	19.80
08/21/2024	< 0.001	< 0.10	7.33	18.40
08/28/2024	0.002	0.30	7.24	21.20
09/04/2024	0.092	9.60	7.44	18.40
09/11/2024	< 0.001	< 0.10	7.51	18.10
09/18/2024	< 0.001	< 0.10	7.41	19.30
09/24/2024	0.002	0.40	7.71	20.60
09/25/2024	< 0.001	< 0.10	7.01	19.00
10/02/2024	< 0.001	0.30	6.71	18.70
10/09/2024	0.004	0.70	7.28	15.70

10/16/2024	0.022	1.10		
10/23/2024	0.006	1.20	7.21	16.90
10/30/2024	0.002	1.80	6.65	14.40
11/06/2024	< 0.001	0.40	6.46	15.60
11/13/2024	< 0.001	0.90	6.59	12.50
11/14/2024	0.005	1.10		
11/21/2024	0.045	5.60	7.79	13.00
11/22/2024	0.045	5.00		
11/27/2024	0.055	6.00	7.61	12.30
11/28/2024	0.036	3.60	7.61	12.60
12/04/2024	0.005	1.00	7.04	10.70
12/11/2024	0.012	1.30	7.64	12.10
12/18/2024	0.003	0.10	7.33	11.70
12/24/2024	< 0.001	< 0.10	7.27	8.90

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Performance Assessment Report Standard ECA

From 1/1/2024 to 12/31/2024

5886 FENELON FALLS WASTEWATER TREATMENT FACILITY 110001612

	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 m³/d	37,216.00	39,875.00	40,537.00	54,273.00	41,613.00	34,107.00	34,495.00	25,140.00	20,977.00	21,519.00	19,775.00	38,056.00	407,583.00			0.00
Raw Flow: Avg - Raw m³/d	1,200.52	1,375.00	1,307.65	1,809.10	1,342.35	1,136.90	1,112.74	810.97	699.23	694.16	659.17	1,227.61		1,113.61		1,800.00
Raw Flow: Max - Raw m³/d	1,927.00	2,112.00	1,722.00	3,894.00	2,748.00	2,099.00	3,489.00	1,269.00	762.00	933.00	836.00	2,610.00			3,894.00	0.00
Raw Flow: Count - Raw 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 - Eff m³/d	37,216.00	39,875.00	40,537.00	54,273.00	41,613.00	34,107.00	34,495.00	25,140.00	20,977.00	21,519.00	19,775.00	38,056.00	407,583.00			0.00
Eff. Flow: Avg - Eff m³/d	1,200.52	1,375.00	1,307.65	1,809.10	1,342.35	1,136.90	1,112.74	810.97	699.23	694.16	659.17	1,227.61		1,113.61		
Eff. Flow: Max - Eff m³/d	1,927.00	2,112.00	1,722.00	3,894.00	2,748.00	2,099.00	3,489.00	1,269.00	762.00	933.00	836.00	2,610.00			3,894.00	0.00
Eff Flow: Count - Eff 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
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw mg/L	153.00	131.00	102.00	130.00	408.00	173.00	259.00	157.00	256.00	224.00	229.00	242.00		205.33	408.00	0.00
Raw: # of samples of BOD5 - Raw mg/L	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
Carbonaceous Biochemical Oxygen Demand: CBOD																
Eff: Avg cBOD5 - Final Effluent including Bypass mg/L	< 3.20	< 11.25	< 4.25	< 11.75	< 6.00	< 9.17	< 7.14	< 4.00	< 5.83	< 3.60	< 4.71	< 5.20		< 6.52	< 11.75	25.00
Eff.Flow : Weighted Avg cBOD5 - Final Effluent including Bypass mg/L	0.00	0.00	0.00	< 6.45	< 4.11	< 4.32	< 5.49	0.00	0.00	0.00	0.00	0.00		< 4.97	< 6.45	25.00
Eff: # of samples of cBOD5 - Final Effluent including Bypass mg/L	5.00	4.00	4.00	8.00	5.00	6.00	14.00	4.00	6.00	5.00	7.00	5.00	73.00			0.00
Loading: cBOD5 - Final Effluent including Bypass kg/d	< 3.842	< 15.469	< 5.557	< 21.257	< 8.054	< 10.422	< 7.948	< 3.244	< 4.079	< 2.499	< 3.108	< 6.384		< 7.26	< 21.26	
Loading Flow Weighted: cBOD5 - Final Effluent including Bypass kg/d	0.000	0.000	0.000	< 11.673	< 5.518	< 4.909	< 6.106	0.000	0.000	0.000	0.000	0.000		< 5.53	< 11.67	
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw mg/L	153.00	188.00	154.00	152.00	233.00	192.00	243.00	288.00	286.00	171.00	233.00	247.00		211.67	288.00	0.00
Raw: # of samples of TSS - Raw mg/L	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 including Bypass mg/L	7.80	7.00	10.25	60.38	30.20	16.33	< 34.43	9.75	15.00	10.40	18.14	13.40		23.11	60.38	25.00
Eff.Flow : Weighted Avg TSS - Final Effluent including Bypass mg/L	0.00	0.00	0.00	26.11	12.53	8.35	8.73	0.00	0.00	0.00	0.00	0.00		12.76	26.11	25.00
Eff: # of samples of TSS - Final Effluent including Bypass mg/L	5.00	4.00	4.00	8.00	5.00	6.00	14.00	4.00	6.00	5.00	7.00	5.00	73.00			0.00
Loading: TSS - Final Effluent including Bypass kg/d	9.364	9.625	13.403	109.224	40.539	18.569	< 38.310	7.907	10.489	7.219	11.959	16.450		25.74	109.22	
Loading Flow Weighted: TSS - Final Effluent including Bypass kg/d	0.000	0.000	0.000	47.241	16.824	9.490	9.713	0.000	0.000	0.000	0.000	0.000		14.21	47.24	
Total Phosphorus: TP																
Raw: Avg TP - Raw mg/L	1.95	2.04	1.62	2.27	1.70	1.85	3.48	2.61	3.88	3.22	3.18	3.18		2.58	3.88	0.00
Raw: # of samples of TP - Raw mg/L	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 including Bypass mg/L	0.10	0.10	0.11	0.79	0.38	0.24	0.48	0.23	0.28	0.24	0.27	0.17		0.33	0.79	0.50
Eff.Flow : Weighted Avg TP - Final Effluent including Bypass mg/L	0.00	0.00	0.00	0.37	0.22	0.14	0.20	0.00	0.00	0.00	0.00	0.00		0.21	0.37	0.50
Eff: # of samples of TP - Final Effluent including Bypass mg/L	5.00	4.00	4.00	8.00	5.00	6.00	14.00	4.00	6.00	5.00	7.00	5.00	73.00			0.00
Loading: TP - Final Effluent including Bypass kg/d	0.125	0.141	0.144	1.427	0.513	0.273	0.534	0.189	0.192	0.164	0.175	0.209		0.34	1.43	
Loading Flow Weighted: TP - Final Effluent including Bypass kg/d	0.000	0.000	0.000	0.674	0.301	0.159	0.222	0.000	0.000	0.000	0.000	0.000		0.23	0.67	
Nitrogen Series																
Raw: Avg TKN - Raw mg/L	16.20	17.80	14.90	20.90	14.70	19.30	17.80	26.90	31.50	30.30	30.70	25.30		22.19	31.50	0.00
Raw: # of samples of TKN - Raw mg/L	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

Performance Assessment Report Standard ECA

From 1/1/2024 to 12/31/2024

Eff: Avg TAN - Final Effluent including Bypass mg/L	< 0.68	< 0.63	< 0.10	< 0.26	< 0.36	< 1.53	< 0.23	< 0.15	< 1.73	1.02	3.23	< 0.90		< 0.87	< 3.23	
Eff.Flow : Weighted Avg TAN - Final Effluent including Bypass mg/L	0.00	0.00	0.00	< 0.37	< 0.36	< 2.06	< 0.26	0.00	0.00	0.00	0.00	0.00		< 1.02	< 2.06	
Eff: # of samples of TAN - Final Effluent including Bypass mg/L	5.00	4.00	4.00	8.00	5.00	6.00	14.00	4.00	6.00	5.00	7.00	5.00	73.00			0.00
Loading: TAN - Final Effluent including Bypass kg/d	< 0.816	< 0.859	< 0.131	< 0.475	< 0.483	< 1.743	< 0.250	< 0.122	< 1.212	0.708	2.128	< 1.105		< 0.97	< 2.13	
Loading Flow Weighted: TAN - Final Effluent including Bypass kg/d	0.000	0.000	0.000	< 0.676	< 0.479	< 2.343	< 0.287	0.000	0.000	0.000	0.000	0.000		< 1.14	< 2.34	
Eff: Avg NO3-N - Eff mg/L	8.45	8.44	10.59	11.17	10.78	7.12	11.93	9.18	9.83	14.44	18.24	11.70		10.99	18.24	0.00
Eff: # of samples of NO3-N - Eff mg/L	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	6.00	5.00	7.00	5.00	58.00			0.00
Eff: Avg NO2-N - Eff mg/L	< 0.06	< 0.09	< 0.03	< 0.05	< 0.06	< 0.28	< 0.11	< 0.06	< 0.13	0.11	< 0.22	< 0.12		< 0.11	< 0.28	0.00
Eff: # of samples of NO2-N - Eff mg/L	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	6.00	5.00	7.00	5.00	58.00			0.00
Disinfection																
Eff: GMD E. Coli - Eff cfu/100mL	3.29	4.38	3.56	3.56	4.41	3.72	12.88	12.11	12.07	2.00	2.00	3.39				200.00
Eff: # of samples of E. Coli - Eff cfu/100mL	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix II:
Maintenance Summary Report

Work Order	Description	Location	Asset	Status	Work Type	Classification	Reported Date
1536447	DEFERRED, 5886, Ellice SPS, Replacement Generator	5886-SPEL-F-PG-ENGN	0000158539	APPR	CAP	REFURBISH/REPLACE	1/1/24 00:00:00
2091973	DEFERRED to 2023, 5886, Fenelon Falls WWT, Blower 02 Replacement (CKL PO911826OS)	5886-WWFF-P-ST-AERA	0000192897	CLOSE	CAP	REFURBISH/REPLACE	1/1/24 00:00:00
2091978	DEFERRED, 5886, Francis SPS, Install Permenant Generator	5886-SPFR-P		APPR	CAP	REFURBISH/REPLACE	1/1/24 00:00:00
3067978	DEFERRED, 5886, Ellice SPS, Pump Cent 01, Rebuild	5886-SPEL-P	0000158546	CLIENT	CAP	REFURBISH/REPLACE	1/1/24 00:00:00
3291936	5886, Fenelon Falls WWT, Clarifier Gearbox and Motor Replacement	5886-WWFF-P-ST-CLAR		CLIENT	CAP	REFURBISH/REPLACE	1/1/24 00:00:00
3847780	5886, Ellice SPS, Transducer Failed, Replace	5886-SPEL-P-PC	0000291195	CLOSE	CORR	REFURBISH/REPLACE	3/7/24 12:41:15
3850006	5886, Fenelon Falls WWT, UV Bulbs, Replacement	5886-WWFF-F		CLOSE	CORR	REFURBISH/REPLACE	3/19/24 08:35:33
3850995	5886, Fenelon Falls WWT, Sprocket, Replacement	5886-WWFF-P-TT-FILT	0000158505	CLOSE	CORR	REFURBISH/REPLACE	3/25/24 09:11:28
3851379	5886, Fenelon Falls WWT, Verify Bypass Flow Meter FT390, Install	5886-WWFF-P-PC	0000306230	CLOSE	CORR	REFURBISH/REPLACE	3/27/24 12:49:29
4144574	5886, Fenelon Falls WWT, Oxidation Ditch Rotor, Repair	5886-WWFF-P-ST-AERA	0000158448	COMP	CORR	REFURBISH/REPLACE	9/17/24 13:16:15
4145754	5886, Fenelon Falls WWT, Facility, Safety Equipment, Emergency Light Out of Serivce	5886-WWFF-F-SY		CLOSE	CORR	HEALTH AND SAFETY	9/24/24 12:12:10
4195455	5886, Fenelon Falls WWT, Turbo Blower, Install	5886-WWFF-P-ST-AERA		COMP	CAP	REFURBISH/REPLACE	10/21/24 09:03:03
4276948	5886, Fenelon Falls WWT, Plumbing Leak in Basement Domestic to Chemical Room, Repair	5886-WWFF-F		COMP	CORR	REFURBISH/REPLACE	12/5/24 14:17:20
4278565	5886, Ellice SPS, ESA Corrective Action: Station Main Disconnect - Move Filing Cabinet/Garbage	5886-SPEL-F		COMP	CORR	COMPLIANCE	12/12/24 12:07:59

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix III:
Flow Calibration Report

Franklin Empire Inc,
550 Braidwood Ave. Unit 4
Peterborough ON K9J 1W1, CANADA

Tel: (705) 745-1626
Fax: (705) 745-3493

OCWA Kawartha

2024 Calibrations Fenelon Falls WW

CALIBRATION REPORT

Report No.: OCWA K24 FIT-402

Date: Sept/3/2024

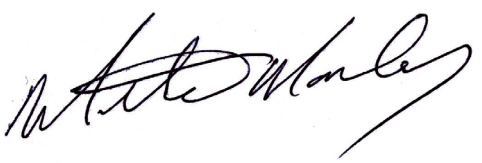
SITE:	Fenelon Falls WWTP	**SERVICE DATE:**	Sept/3/2024
PROCESS AREA:	Basement	**TECHNICIAN:**	Mitch Manley
INSTR. TAG:	FIT-402	**JOB REFERENCE:**	OCWA K24
MANUFACTURER:	Krohne		
MODEL:	IFC 010D		
SERIAL No.:	A0044687		
OCWA CODE No.:	0000158514		

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	GS 8 (X val)	**Type or EGU:**	mA	L/S
Min:	0.00	**Min:**	4.00	0.00
Max:	4.17	**Max:**	20.00	25.00
DN (mm):	100			
GK=1 GKL=2	2			
GK:	5.014			
Constant:	4177.44			

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P**	**Output**	**%Error**	**Output**	**%Error**
0.00	0	4.00	4.00	0.00%	4.00	0.00%
0.50	A	5.92	5.94	0.34%	5.94	0.34%
1.00	B	7.84	7.86	0.26%	7.86	0.26%
2.00	C	11.68	11.71	0.26%	11.71	0.26%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
2023 Calibrations F	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 16, 2024	Mar. 26, 2024	

Comments: 103.0, open to ground, total 47676 m3

CERTIFIED BY: 

CALIBRATION REPORT

Report No.: OCWA K24 FIT-301

Date: Sept/3/2024

SITE:	Fenelon Falls WWTP	**SERVICE DATE:**	Sept/3/2024
PROCESS AREA:	Effluent Flow	**TECHNICIAN:**	Mitch Manley
INSTR. TAG:	FIT-301	**JOB REFERENCE:**	OCWA K24
MANUFACTURER:	Krohne		
MODEL:	IFC 020F/D/6		
SERIAL No.:	A00/12028		
OCWA CODE No.:	0000158519		

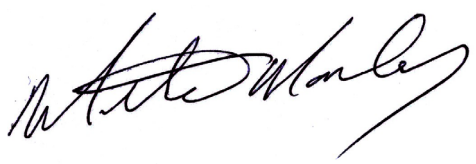
Input	**(Test)**
Type:	GS 8 (X val)
Min:	0.00
Max:	4.40
DN (mm):	250
GK=1 GKL=2	1
GK:	2.280
Constant:	4177.44

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	L/S
Min:	4.00	0.00
Max:	20.00	150.00

			Before Calibration		**After Calibration**	
Input (Y pos)	**Knob Setting**	**Calc. O/P**	**Output**	**%Error**	**Output**	**%Error**
0.00	0	4.00	3.99	0.00%	3.99	0.00%
0.50	A	5.82	5.79	-0.52%	5.79	-0.52%
1.00	B	7.64	7.60	-0.52%	7.60	-0.52%
2.00	C	11.28	11.24	-0.35%	11.24	-0.35%

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
2023 Calibrations F	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 16, 2024	Mar. 26, 2024	

Comments: 103.1 ohms , open to ground, Total 883852

CERTIFIED BY: 

CALIBRATION REPORT

Report No.: OCWA K24 FIT-Bypass

Date: Sept/3/2024

SITE:	Fenelon Falls WWTP
PROCESS AREA:	Bypass Flow
INSTR. TAG:	FIT-Bypass
MANUFACTURER:	Siemens
MODEL:	FST 030
SERIAL No.:	PBD R 3294546
OCWA CODE No.:	0000306230

SERVICE DATE:	Sept/3/2024
TECHNICIAN:	Mitch Manley
JOB REFERENCE:	OCWA K24

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	C1 H	**Type or EGU:**	mA	L/S
Spacing:	19.117 in	**Min:**	4.00	0.00
Wall:	0.168	**Max:**	20.00	
OD (in):	16.2			
Sonic Vel	1432 m/s			
Damping:	5.000			
User Cal:	0.82			

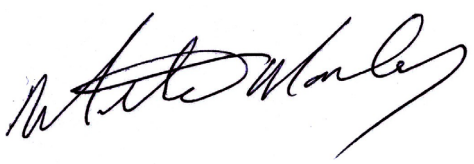
			Before Calibration		**After Calibration**	
Test Flow (l/s)	**Mag Reading**	**Calc. flow**	**Output**	**%Error**	**Output**	**%Error**
11.90	11.9	11.9	12.0		12.0	
13.20	13.2	13.2	13.7		13.7	

Calibration Equipment			
Type:	DMM	Simulator	
Manufacturer:	Fluke	Krohne	
2023 Calibrations F	Model 87	GS 8B	
Serial No.:	13440128	U1127700020705	
Last Cal. Date:	Feb. 16, 2024	Mar. 26, 2024	

Comments: Tested by comparison to Mag meter upstream of clamp-on meter.
Bypass = Final effluent - clamp on flow to filters

mA output was slightly jumpy

Checked Receive Signal 3.4.1.2

CERTIFIED BY: 

CALIBRATION REPORT

Report No.: OCWA K24 WEL_PIT_101

Date: Sept/3/2024

SITE:	Ellice St SPS, Fenelon Falls
PROCESS AREA:	Discharge Pressure
INSTR. TAG:	WEL_PIT_101
MANUFACTURER:	Siemens
MODEL:	Sitrans P DSIII
SERIAL No.:	IXHD089009751
OCWA CODE No.:	0000306039

SERVICE DATE:	Sept/3/2024
TECHNICIAN:	Mitch Manley
JOB REFERENCE:	OCWA K24

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	KPA	**Type or EGU:**	SCADA	KPA
	0.00	**Min:**	0.00	0.00
	400.00	**Max:**	400.00	400.00

			Before Calibration		**After Calibration**	
Input	**Input %**	**Calc. O/P**	**Output**	**%Error**	**Output**	**%Error**
0	0.00%	0.00	0.0	0.00%	0.0	0.00%
100	25.00%	100.00	99.5	-0.50%	99.5	-0.50%
200	50.00%	200.00	199.5	-0.25%	199.5	-0.25%
300	75.00%	300.00	300.1	0.02%	300.1	0.02%
400	100.00%	400.00	399.8	-0.05%	399.8	-0.05%

Calibration Equipment			
Type:	Pressure Calibrator	DMM	
Manufacturer:	Crystal	Fluke	
2023 Calibrations F	XP2i 300 PSI	Model 87	
Serial No.:	153455	13440128	
Last Cal. Date:	Nov. 3, 2023	Feb. 16, 2024	

Comments:

AS FOUND: PASS **AS LEFT:** PASS

CERTIFIED BY:

Flowmeter Verification Certificate Transmitter

OCWA Kawartha	Fenlon Falls WWTP
Customer	Plant
Sludge Flow	FENLON-F
Order code	Tag Name
PROMAG 53 W DN100	1.2687 - 1.2687
Device type	K-Factor
F3080516000	4
Serial number	Zero point
V2.03.00	V1.05.03
Software Version Transmitter	Software Version I/O-Module
09/03/2024	11:11 AM
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	**Simubox Details**
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2024	03/2024
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

FieldCheck - Result Tab Transmitter

Customer	**OCWA Kawartha**	Plant	**Fenlon Falls WWTP**
Order code	**Sludge Flow**	Tag Name	**FENLON-F**
Device type	**PROMAG 53 W DN100**	K-Factor	**1.2687 - 1.2687**
Serial number	**F3080516000**	Zero point	**4**
Software Version Transmitter	**V2.03.00**	Software Version I/O-Module	**V1.05.03**
Verification date	**09/03/2024**	Verification time	**11:11 AM**

Verification Flow end value (100 %): 31.416 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	1.571 l/s (5%)	1.50 %	-0.60 %
✓		3.142 l/s (10.0%)	1.00 %	-0.61 %
✓		15.708 l/s (50.0%)	0.60 %	-0.01 %
✓		31.416 l/s (100%)	0.55 %	0.03 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.002 mA
✓		4.800 mA (5%)	0.05 mA	0.002 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.010 mA
✓		12.000 mA (50.0%)	0.05 mA	0.004 mA
✓		20.000 mA (100%)	0.05 mA	0.014 mA
–	Pulse Output 1	---	---	---
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.379 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	26.188 mV

Legend of symbols

✓	✗	–	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**OCWA Kawartha**	Plant	**Fenlon Falls WWTP**
Order code	**Sludge Flow**	Tag Name	**FENLON-F**
Device type	**PROMAG 53 W DN100**	K-Factor	**1.2687 - 1.2687**
Serial number	**F3080516000**	Zero point	**4**
Software Version Transmitter	**V2.03.00**	Software Version I/O-Module	**V1.05.03**
Verification date	**09/03/2024**	Verification time	**11:11 AM**

Curent Output	**Assign**	**Current Range**	**Value 0_4mA**	**Value 20 mA**		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 l/s	40.00 l/s		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	7.571 l/P	Passive/Positive	100.01 ms		

Actual System Ident. 127.0

SIEMENS MAGFLO® Verification Certificate

Customer:

Name	OCWA Kawartha
Address	Fenelon Falls WWTP
Phone	
Email	

MAGFLO® Identification:

TAG No./Name	0
Sensor Code No.	7ME658
Sensor Serial No.	860103U017
Transmitter Code No.	7ME691
Transmitter Serial No.	N1H9150044
Location	Ellice St SPS

Results:

Verification file name or No.		0000291194
Transmitter		Passed
Sensor	Insulation	Passed
	Magnetic Circuit	Passed

Velocity	Current Output			Frequency Output		
Theoretical	Theoretical	Actual	Deviation	Theoretical	Actual	Deviation
0.5m/s	4.800mA	4.808mA	1.00%	0.500kHz	0.502kHz	0.48%
1.0m/s	5.600mA	5.606mA	0.38%	1.000kHz	1.001kHz	0.14%
3.0m/s	8.800mA	8.805mA	0.09%	3.000kHz	3.002kHz	0.05%
	Current Output 4-20mA			Frequency Output 0-10kHz		

Transmitter Settings:

Basic	Qmax.	80.0000 l/s
	Flow Direction	Positive
	Low flow Cut-off	1.50%
	Empty Pipe	ON
Output	Current Output	ON (4-20mA)
	Time Constant	5.0 Sec.
	Relay Output	Error Level
	Digital Output	OFF
	Frequency Range	N/A
	Time Constant	N/A
	Volume/pulse	0.0 US G/p
	Pulse width	0.066 sec.
	Pulse polarity	Positiv
Totalizer 1 value before test		903367.3125 m³
Totalizer 1 value after test		903367.3125 m³
Totalizer 2 value before test		4226.77148438 m³
Totalizer 2 value after test		4226.77148438 m³
Operating time in days		2710

Sensor Details:

Size	DN 200 8 IN
Cal. Factor	32.04983521
Correction Factor	1.0
Excitation Freq.	3.75Hz

Verificator Details (083F5061)

Serial No.	000711N218
Device No.	90994
Software Version	1.40
PC-Software Version	5.01
Cal. date	2023.11.03
ReCal. date	2024.11.03

Comments

These tests verify that the flowmeter is functioning within 2% deviation of the original test parameters.

Verification is traceable to National and International Standards.

Date and signature

2024.09.03 M Manley

Flowmeter Verification Certificate Transmitter

OCWA Kawartha	Fenlon Falls SPS
Customer	Plant
Fenlon Falls SPS Flow	--------
Order code	Tag Name
PROMAG 50 W DN200	1.0406 - 1.0406
Device type	K-Factor
F5158619000	-1
Serial number	Zero point
V2.04.00	V1.04.10
Software Version Transmitter	Software Version I/O-Module
09/03/2024	12:06
Verification date	Verification time

Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

FieldCheck Details	**Simubox Details**
550149	
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2024	03/2024
Last Calibration Date	Last Calibration Date

Date Operator's Sign Inspector's Sign

Overall results:

The achieved test results show that the instrumment is completely functional, and the measuring results lie within +/- 1% of the original calibration. [1)]

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test.

Endress+Hauser
People for Process Automation

FieldCheck - Result Tab Transmitter

Customer	**OCWA Kawartha**
Order code	**Fenlon Falls SPS Flow**
Device type	**PROMAG 50 W DN200**
Serial number	**F5158619000**
Software Version Transmitter	**V2.04.00**
Verification date	**09/03/2024**

Plant	**Fenlon Falls SPS**
Tag Name	**--------**
K-Factor	**1.0406 - 1.0406**
Zero point	**-1**
Software Version I/O-Module	**V1.04.10**
Verification time	**12:06**

Verification Flow end value (100 %): 125.664 l/s
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	Test Transmitter			
✓	Amplifier	6.283 l/s (5%)	1.50 %	-0.57 %
✓		12.566 l/s (10.0%)	1.00 %	-0.03 %
✓		62.832 l/s (50.0%)	0.60 %	-0.04 %
✓		125.665 l/s (100%)	0.55 %	0.00 %
✓	Current Output 1	4.000 mA (0%)	0.05 mA	0.001 mA
✓		4.800 mA (5%)	0.05 mA	0.002 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.011 mA
✓		12.000 mA (50.0%)	0.05 mA	0.002 mA
✓		20.000 mA (100%)	0.05 mA	0.011 mA
–	Pulse Output 1	---	---	---
		Start value	**Limits range**	**Measured value**
	Test Sensor			
✓	Coil Curr. Rise	13.300 ms	0.000..27.625 ms	23.490 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.001 mV	29.437 mV

Legend of symbols

✓	✗	–	?	!
Passed	Failed	not tested	not testable	Attention

FieldCheck: Parameters Transmitter

Customer	**OCWA Kawartha**	Plant	**Fenlon Falls SPS**
Order code	**Fenlon Falls SPS Flow**	Tag Name	**--------**
Device type	**PROMAG 50 W DN200**	K-Factor	**1.0406 - 1.0406**
Serial number	**F5158619000**	Zero point	**-1**
Software Version Transmitter	**V2.04.00**	Software Version I/O-Module	**V1.04.10**
Verification date	**09/03/2024**	Verification time	**12:06**

Curent Output	**Assign**	**Current Range**	**Value 0_4mA**	**Value 20 mA**		
Terminal 26/27	VOLUME FLOW	4-20 mA active	0.0 l/s	80.00 l/s		
Pulse Output	**Assign**	**Pulse Value**	**Output signal**	**Pulse width**		
Terminal 24/25	VOLUME FLOW	10.000 gal/P	Passive/Positive	100.01 ms		

Actual System Ident. 127.0

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix IV:
Sludge/Biosolids Summary

Biosolids Quality Report

Facility: FENELON FALLS WASTEWATER TREATMENT FACILITY

Solids & Nutrients | **Period: 01/01/2024 to 12/31/2024** | **Works: 5886 / Digestor Type: Aerobic**

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

Facility Works Number:	110001612	Receiver:	Fenelon River
Facility Owner:	Municipality: City of Kawartha Lakes	Service Population:	2000
Facility Classification:	Class 2 Wastewater Treatment	Total Design Capacity:	6120 m3/day

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

Month	Hauled Vol. Total (m^3)	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	271.75	16,900.00	595.00	7.60	3.00	3.00	920.00	5.30	79.00
Feb	65.44	15,400.00	370.00	4.80	3.00	3.00	984.00	3.90	59.00
Mar	207.22	11,500.00	220.00	19.40	3.00	3.00	902.00	11.20	47.00
Apr	139.05	16,700.00	320.00	80.40	3.00	3.00	1,090.00	41.70	62.00
May	174.60	22,400.00	500.00	63.20	3.00	3.00	1,160.00	33.10	75.00
Jun	340.08	17,600.00	395.00	41.20	3.00	3.00	1,042.00	22.10	58.50
Jul	412.80	14,600.00	450.00	32.95	3.00	3.00	848.00	17.98	63.50
Aug	145.30	18,900.00	410.00	42.10	3.00	3.00	1,050.00	22.55	74.00
Sep	181.84	30,200.00	780.00	171.00	3.00	3.00	1,760.00	87.00	84.00
Oct	203.70	12,200.00	320.00	70.40	3.00	3.00	844.00	36.70	49.00
Nov	381.90	18,950.00	488.00	67.30	3.00	3.00	1,230.00	35.15	59.50
Dec	152.74								
Average	223.04	17,759.09	440.73	54.58	3.00	3.00	1,075.45	28.79	64.59
Total	2,676.42	195,350.00	4,848.00	600.35	33.00	33.00	11,830.00	316.68	710.50

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix V:
Bypasses, Overflows, Spills or Abnormal Events

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q1 = January, February, March

Did a Bypass occur during this quarter:

Yes☐ No ☑

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	
	b. the date and time of the beginning of the Bypass	
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	
4.4	a. the date and time of the end of the Bypass;	
	b. the estimated or measured volume of Bypass.	
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.	No occurrence of Bypass

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q1= January, February, March

Did an Overflow occur during this quarter:

Yes☐ No ☑

Condition 5. Overflow		Event
5.3	a. the type of the Overflow (emergency or planned)	
	b. the date and time of the beginning of the Overflow	
	c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasses and the reason(s) why the Overflow was not avoided.	
5.4	a. the date and time of the end of the Overflow;	
	b. the estimated or measured volume of Overflow.	
5.5	a. Overflow event in Sewage Treatment Plant, grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, E. coli. , except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.	
	b. at a sewage pumping station in the collection system, at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.	
5.6	…The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.	No Occurrence of Overflow.

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q2= April, May, June

Did an Overflow occur during this quarter:

Yes☐ No ☑

Condition 5. Overflow		Event
5.3	a. the type of the Overflow (emergency or planned)	
	b. the date and time of the beginning of the Overflow	
	c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasses and the reason(s) why the Overflow was not avoided.	
5.4	a. the date and time of the end of the Overflow;	
	b. the estimated or measured volume of Overflow.	
5.5	a. Overflow event in Sewage Treatment Plant, grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, E. coli. , except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.	
	b. at a sewage pumping station in the collection system, at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.	
5.6	…The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.	No Occurrence of Overflow.

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q2 = April, May, June

Did a Bypass occur during this quarter:

Yes☑ No ☐

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	SAC # 1-5OH6BE- emergency partial sand filter bypass due to weather
	b. the date and time of the beginning of the Bypass	April 12, 2024 at 08:56
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	Primary, Secondary, majority of effluent through Post-Secondary sand filters while a portion of the effluent bypassed the Post Secondary sand filters; all effluent through UV disinfection.
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	Flows & process monitored throughout the event, utilized detention tank; - Shepherds Environmental onsite hauling from Francis St. SPS to the sewage treatment plant; - Composite samples collected over the duration of the event
4.4	a. the date and time of the end of the Bypass;	April 15, 2024 at 07:30
	b. the estimated or measured volume of Bypass.	7, 149 m^3 estimate
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	24 hour composite samples collected - sampler started April 12, 2024 at 08:56 with last sample finishing at 08:56 on April 15, 2024 to cover duration of event. Operations Event Form Summary attached, and lab results with summary.
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient	Monthly limits met for April 2024 with the exception of Total Phosphrus Monthly average effluent concentration and monthly average daily effluent loading for April 2024. See attached Fenelon Falls WWTP April 2024 PAR, Exceedance letter and Schedule F calculations.

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q2 = April, May, June

Did a Bypass occur during this quarter:

Yes☑ No ☐

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	SAC # 1-6BM81U emergency partial sand filter bypass due to weather
	b. the date and time of the beginning of the Bypass	April 29, 2024 at 08:53
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	Primary, Secondary, majority of effluent through Post-Secondary sand filters while a portion of the effluent bypassed the Post Secondary sand filters; all effluent through UV disinfection.
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	Flows & process monitored throughout the event, utilized detention tank; - Shepherds Environmental onsite hauling from Francis St. SPS to the sewage treatment plant; - Composite samples collected over the duration of the event
4.4	a. the date and time of the end of the Bypass;	May 1, 2024 @ 07:24
	b. the estimated or measured volume of Bypass.	3,518 m^3 estimate
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	24 hour composite samples collected - sampler started April 29, 2024 at 08:53 with the sample finishing at 08:53 on May 1, 2024 to cover duration of event. Operations Event Form Summary attached, and lab results with summary.
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient	Monthly limits met for April 2024 with the exception of Total Phosphrus Monthly average effluent concentration and monthly average daily effluent loading for April 2024. See attached Fenelon Falls WWTP April 2024 PAR, Exceedance letter and Schedule F calculations.

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q2 = April, May, June

Did a Bypass occur during this quarter:

Yes☑ No ☐

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	SAC # 1-81XW56- emergency partial sand filter bypass due to weather
	b. the date and time of the beginning of the Bypass	June 23, 2024 at 20:31
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	Primary, Secondary, majority of effluent through Post-Secondary sand filters while a portion of the effluent bypassed the Post Secondary sand filters; all effluent through UV disinfection.
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	Flows & tertiary filters monitored throughout the event; additional staff called to assist; - Composite samples collected over the duration of the event
4.4	a. the date and time of the end of the Bypass;	June 24, 2024 at 07:10
	b. the estimated or measured volume of Bypass.	698 m^3 estimate
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	24 hour composite samples collected - sampler started June 23, 2024 at 20:31 with the sampler finishing at 20:31 on June 24, 2024 to cover duration of event. Operations Event Form Summary attached, and lab results with summary.
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.	Compliant with ECA - monthly limits met for June 2024. See attached Performance Report for June 2024.

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q2 = April, May, June

Did a Bypass occur during this quarter:

Yes☑ No ☐

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	SAC # 1-8E3ZOK- emergency partial sand filter bypass due to weather
	b. the date and time of the beginning of the Bypass	June 29, 2024 at 22:35
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	Primary, Secondary, majority of effluent through Post-Secondary sand filters while a portion of the effluent bypassed the Post Secondary sand filters; all effluent through UV disinfection.
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	Flows & tertiary filters monitored throughout the event; - Composite samples collected over the duration of the event
4.4	a. the date and time of the end of the Bypass;	June 30, 2024 at 21:31
	b. the estimated or measured volume of Bypass.	1,025.5 m^3 estimate
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	24 hour composite samples collected - sampler started June 29, 2024 at 22:35 with the sampler finishing at 22:35 on June 24, 2024 to cover duration of event. Operations Event Form Summary attached, and lab results with summary.
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.	Compliant with ECA - monthly limits met for June 2024. See attached Performance Report for June 2024.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Box 279
Bobcaygeon, ON
K0M 1A0

April 16, 2024

David Bradley, District Manager
Peterborough District Office
Ministry of Environment, Conservation and Parks
300 Water Street South, 2nd Floor, South Tower
Peterborough ON K9J 3C7

Dear David Bradley:

Re: Fenelon Falls WPCP Q1 2024 Bypass and Overflow Event Reports

Amended Environmental Compliance Approval #3688-BW3RGB Conditions 4 and 5 issued January 15, 2021, for the Fenelon Falls WCPC require Bypass and Overflow quarterly reports be submitted to the District Manager. These reports are to be submitted no later than February 15, May 15, August 15, and November 15 each year for Events that occurred during the preceding quarter.

No Bypass or Overflow Events occurred at the Fenelon Falls WPCP during the first quarter of 2024 – reports are attached.

Please contact me if you have any questions or comments.

Best regards,

Christine Craig
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha-Trent Region
(705) 731-9579

Attachments

cc: J. Manning, Sr. Operations Manager, OCWA Kawartha-Trent Regional Hub
A. Hayter, Supervisor Water & Wastewater, CKL
J. Mulligan, Safety, Process & Compliance Manager (A), OCWA Kawartha Hub
W. Henneberry, Regional Hub Manager (A), OCWA Kawartha-Trent Regional Hub
K. Lorente, Regional Hub Manager, OCWA Kawartha-Trent Regional Hub
H. Fletcher, Water Inspector, MECP – Peterborough District Office

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Operations Event Form

Project: Fenelon Falls WPCP
Location: 216 Ellice St., Fenelon Falls, ON
Date: April 12- April 15, 2024

Nature of Event: Emergency Partial Sand Filter Bypass

Details of Event: A heavy rain event in Fenelon Falls, resulted in high flows which caused the plant to become hydraulically overloaded - secondary treatment and disinfection provided; however, the sand filters hydraulically overloaded and required partial bypassing. Fenelon River is the receiving body of water.

Call SAC: 1-800-268-6060

Time SAC notified: April 12, 2024 @ 09:28 **SAC Incident Number:** 1-5OH6BE

Name of Person at SAC: Lorianne Green

District Health Unit Notified (time): April 12, 2024 @ 09:24 **-** Left Message

Name of Person at Health Unit: PHI, Emmelime returned call April 12, 2024 @ 09:36 & 12:11. PHI requested a call back upon completion of event.

Other Contacts (Managers, Client, MECP, MOH): J. Manning Sr. Ops. Mgr., Owner-CKL, and appropriate OCWA staff.

Volume of Partial Sand Filter Bypass: Estimated volume based upon flow meter readings: ~7, 149 m^3

Start: April 12, 2024 @ 08:56 **Finish:** April 15, 2024 @ 07:30 **Duration:** 70 hours, 34 minutes

MOH called on April 15, 2024 @ 12:08 to report partial bypass stopped- Left message. Provided estimated volume and duration of event via email to the MOH email: inspections@hkpr.on.ca.

SAC contacted at end of event on April 15, 2024 @ 12:20 spoke with Haiden McDonald - provided estimated volume and duration of event

Samples: Final Effluent - CBOD, TSS, Total Phosphorus, Total Ammonia Nitrogen, composite samples collected over the duration of the event.

Corrective Action Taken:

- Monitored flows, additional staff called to assist, the detention tank at the Ellice St. SPS was utilized, Shepherds Environmental contacted to haul sewage from Francis St SPS to the sewage treatment plant.

- Composite samples collected over the duration of the event.

Prepared By: C. Craig

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

Works #: 110001612
Project : PO#017018

22-April-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 16 April 2024
LR Report: **CA12717-APR24**

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					13-Apr-24 08:56
Temperature Upon Receipt [°C]	---	---	---	---	9.0
Field pH [no unit]	---	---	---	---	7.33
Field Temperature [celcius]	---	---	---	---	9.2
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	17-Apr-24	17:07	22-Apr-24	13:41	46
Total Suspended Solids [mg/L]	18-Apr-24	08:55	19-Apr-24	14:06	301
Phosphorus (total) [mg/L]	18-Apr-24	14:57	19-Apr-24	13:44	3.99
Ammonia+Ammonium (N) [as N mg/L]	17-Apr-24	20:16	18-Apr-24	13:50	0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00036887888

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

Works #: 110001612
Project : PO#017018

22-April-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 16 April 2024
LR Report: **CA12716-APR24**

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					14-Apr-24 08:56
Temperature Upon Receipt [°C]	---	---	---	---	9.0
Field pH [no unit]	---	---	---	---	7.38
Field Temperature [celcius]	---	---	---	---	9.6
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	17-Apr-24	17:07	22-Apr-24	13:41	< 4
Total Suspended Solids [mg/L]	18-Apr-24	08:55	19-Apr-24	14:06	7
Phosphorus (total) [mg/L]	18-Apr-24	14:57	19-Apr-24	13:39	0.13
Ammonia+Ammonium (N) [as N mg/L]	17-Apr-24	20:16	18-Apr-24	13:50	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00036887886

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

Works #: 110001612
Project : PO#017018

22-April-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 16 April 2024
LR Report: **CA12718-APR24**

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					15-Apr-24 08:56
Temperature Upon Receipt [°C]	---	---	---	---	9.0
Field pH [no unit]	---	---	---	---	7.40
Field Temperature [celcius]	---	---	---	---	9.0
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	17-Apr-24	17:07	22-Apr-24	13:41	5
Total Suspended Solids [mg/L]	18-Apr-24	15:26	19-Apr-24	15:58	24
Phosphorus (total) [mg/L]	18-Apr-24	14:57	19-Apr-24	13:45	0.30
Ammonia+Ammonium (N) [as N mg/L]	17-Apr-24	20:16	18-Apr-24	13:50	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00036878995

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Operations Event Form

Project: Fenelon Falls WPCP
Location: 216 Ellice St., Fenelon Falls, ON
Date: April 29- May 1, 2024

Nature of Event: Emergency Partial Sand Filter Bypass

Details of Event: A heavy rain event in Fenelon Falls, resulted in high flows which caused the plant to become hydraulically overloaded - secondary treatment and disinfection provided; however, the sand filters hydraulically overloaded and required partial bypassing. Fenelon River is the receiving body of water.

Call SAC: 1-800-268-6060

Time SAC notified: April 29, 2024 @ 09:42 **SAC Incident Number:** 1-6BM81U

Name of Person at SAC: Sophia Bobryk

District Health Unit Notified (time): April 29, 2024 @ 09:35 **-** Left Message, 11:03 – email to inspections@hkpr.on.ca, 12:04 – Left message

Name of Person at Health Unit: PHI, Elaina returned call April 29, 2024 @ 13:43. PHI requested a call back upon completion of event.

Other Contacts (Managers, Client, MECP, MOH): J. Manning Sr. Ops. Mgr., Owner-CKL, and appropriate OCWA staff.

Volume of Partial Sand Filter Bypass: Estimated volume based upon flow meter readings: ~3,518 m^3

Start: April 29, 2024 @ 08:53 **Finish:** May 1, 2024 @ 07:24 **Duration:** 46 hours, 31 minutes

MOH called on May 1, 2024 @ 08:48 to report partial bypass stopped- Left message. Provided estimated volume and duration of event via email to the MOH email: inspections@hkpr.on.ca.

SAC contacted at end of event on May 1, 2024 @ 08:50 spoke with Akiko – provided notice event had ended and estimated volume

Samples: Final Effluent - CBOD, TSS, Total Phosphorus, Total Ammonia Nitrogen, composite samples collected over the duration of the event.

Corrective Action Taken:

- Monitored flows, additional staff called to assist, the detention tank at the Ellice St. SPS was utilized, Shepherds Environmental contacted to haul sewage from Francis St SPS to the sewage treatment plant.

- Composite samples collected over the duration of the event.

Prepared By: J. Mulligan

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

Works #: 110001612
Project : PO#017018

07-May-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 01 May 2024
LR Report: **CA12033-MAY24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					30-Apr-24 08:53
Temperature Upon Receipt [°C]	---	---	---	---	14.0
Field pH [no unit]	---	---	---	---	8.26
Field Temperature [celcius]	---	---	---	---	8.2
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	01-May-24	17:05	06-May-24	14:38	23
Total Suspended Solids [mg/L]	02-May-24	08:23	03-May-24	08:05	110
Phosphorus (total) [mg/L]	02-May-24	15:15	03-May-24	10:05	1.17
Ammonia+Ammonium (N) [as N mg/L]	02-May-24	17:57	03-May-24	12:50	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003702633

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

Works #: 110001612
Project : PO#017018

09-May-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 01 May 2024
LR Report: **CA12034-MAY24**

Copy: #2

CERTIFICATE OF ANALYSIS

Final Report - Revised

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp	6: Eff Eff-Final Effluent-Bacti	7: Eff Eff-Final Effluent-Comp
Sample Date & Time					01-May-24 08:53	01-May-24 08:53	01-May-24 08:53
Temperature Upon Receipt [°C]	---	---	---	---	14.0	14.0	14.0
Field pH [no unit]	---	---	---	---	---	7.85	7.85
Field Temperature [celcius]	---	---	---	---	---	10.9	10.9
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	01-May-24	17:05	06-May-24	14:38	14	---	---
Total Suspended Solids [mg/L]	02-May-24	08:23	03-May-24	08:05	105	---	---
Phosphorus (total) [mg/L]	02-May-24	15:15	03-May-24	10:05	1.05	---	---
Ammonia+Ammonium (N) [as N mg/L]	02-May-24	17:57	03-May-24	12:50	< 0.1	---	---
E. Coli [cfu/100mL]	01-May-24	15:22	03-May-24	09:26	---	52	---
Total Kjeldahl Nitrogen [as N mg/L]	07-May-24	17:08	08-May-24	09:42	---	---	< 0.5
Unionized Ammonia [mg/L as N]	07-May-24	19:23	08-May-24	12:57	---	---	< 0.001
Ammonia+Ammonium (N) [as N mg/L]	07-May-24	19:23	08-May-24	12:54	---	---	< 0.1
Nitrite (as N) [mg/L]	07-May-24	17:59	08-May-24	18:48	---	---	< 0.03
Nitrate (as N) [mg/L]	07-May-24	17:59	08-May-24	18:48	---	---	6.91
Nitrate + Nitrite (as N) [mg/L]	07-May-24	17:59	08-May-24	18:48	---	---	6.91

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

*Report revised - analyses added for "Eff Eff-Final Effluent-Comp" sample as per client email.

OnLine LIMS

00037060888

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

Works #: 110001612
Project : PO#017018
LR Report : **CA12034-MAY24**

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00037060888

Fenelon Falls WWTF - Monthly Average Effluent Concentration Flow Weighted Arithmetic Mean for Total Phosphrus April 2024

Monthly TP Concentration Limit = 0.5mg/L NBPD = Non Bypass Days BPD = Bypass Days

	Flow [m³/d]					
Date	NBPD	BPD	Date		NBPD	BPD
04/01/24	925		04/03/24		0.12	
04/02/24	916		04/10/24		0.18	
04/03/24	1199		04/13/24			3.99
04/04/24	2181		04/14/24			0.13
04/05/24	2310		04/15/24			0.3
04/06/24	2026		04/17/24		0.21	
04/07/24	1703		04/24/24		0.21	
04/08/24	1443		04/30/24			1.17
04/09/24	1383					
04/10/24	1329					
04/11/24	1426					
04/12/24		3592				
04/13/24		3262	Monthly Average:		0.2	1.4
04/14/24		2466				
04/15/24		2171				
04/16/24	1,798.00					
04/17/24	1,624.00					
04/18/24	1766					
04/19/24	1778					
04/20/24	1698					
04/21/24	1570					
04/22/24	1417					
04/23/24	1298					
04/24/24	1286					
04/25/24	1286					
04/26/24	1176					
04/27/24	1181					
04/28/24	1205					
04/29/24		2964				
04/30/24		3894				
	35924	18,349.00				
avg	1809.1					

[(Monthly Average NBPD Effluent Concentration x Total Monthly NBPD Flow) + (Monthly Average BPD Effluent Concentration x Total Monthly BPD Flow)] / (Total Monthly NBPD Flow + Total Monthly BPD Flow)

Monthly ave NBPD eff concentration x Total Monthly NBPD Flow =	6466.32
Monthly ave BPD eff concentration x Total Monthly BPD Flow =	25642.73
add above together	32109.05
Total Monthly NBPD flow + Total Monthly BPD Flow =	54273.00

divide by total flows Apr flow weighted ave: 0.59 ECA Limit = 0.5 mg/L

Apr ave daily flow: 1809.10 Apr monthly average daily loading: 1.07 ECA Limit = 0.9 kg/d

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

May 07, 2024

David Bradley
District Manager, Peterborough District Office
Ministry of the Environment, Conservation and Parks
300 Water Street South, 2nd Floor, South Tower
Peterborough, ON
K9J 3C7

Dear David Bradley:

Re: Fenelon Falls WPCP Total Phosphorus Monthly Average Effluent Concentration and Monthly Average Daily Effluent Loading Exceedance – April 2024

Further to my voicemail earlier today, May 07, 2024, I am submitting written notification of the exceedance of the total phosphorus monthly average effluent concentration and monthly average daily effluent loading as required by ECA No. 3688-BW3RGB, issued January 15, 2021 for the Fenelon Falls WPCP. The ECA sets a limit of 0.5 mg/L for total phosphorus monthly average effluent concentration and 0.90 kg/d for total phosphorus monthly average daily effluent loading. Completing the calculation using the flow-weighted arithmetic mean set out in Schedule F of the ECA, the April 2024 monthly averages are:

- Monthly average effluent concentration: 0.59 mg/L
- Monthly average daily effluent loading: 1.07 kg/d.

The Fenelon Falls WWTP experienced sand filter bypasses from April 12-15, 2024 and April 29 - May 1, 2024 due to high flows from rainfall events. The flows and process were monitored throughout the event however there was a single result for total phosphorus of 3.99 mg/L on April 13, 2024.

Please do not hesitate to contact me with any questions.

Best regards,

Christine Craig
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha Hub
(705) 731-9579

cc: J. Manning, OCWA – Sr. Operations Manager
J. Mulligan, OCWA – (A) Safety, Process & Compliance Mgr.
L. Nicholson, OCWA - General Manager
K. Lorente, OCWA- Regional Manager
R. Junkin, OCWA- VP Operations
A. Hayter, City of Kawartha Lakes, Manager Water & Wastewater
H. Fletcher, Water Compliance Officer, MECP Peterborough

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q3= July, August, September

Did an Overflow occur during this quarter:

Yes☐ No ☑

Condition 5. Overflow		**Event**
5.3	a. the type of the Overflow (emergency or planned)	
	b. the date and time of the beginning of the Overflow	
	c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasses and the reason(s) why the Overflow was not avoided.	
5.4	a. the date and time of the end of the Overflow;	
	b. the estimated or measured volume of Overflow.	
5.5	a. Overflow event in Sewage Treatment Plant, grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, E. coli. , except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.	
	b. at a sewage pumping station in the collection system, at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.	
5.6	…The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.	No Occurrence of Overflow.

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q3 = July, August, September

Did a Bypass occur during this quarter:

Yes☑ No ☐

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	SAC # 1-8FGYRA- emergency partial sand filter bypass due to a combination of electrical and mechanical issues in conjunction with a heavy rain event.
	b. the date and time of the beginning of the Bypass	July 1, 2024 at 22:10
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	Primary, Secondary, majority of effluent through Post-Secondary sand filters while a portion of the effluent bypassed the Post Secondary sand filters; all effluent through UV disinfection.
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	Flows & process monitored throughout the event; Bypass valve adjusted throughout event to ensure flow to the sand filters; Electrical components replaced; Maintenance completed on sand filters (lancing to loosen the sand); Composite samples collected over the duration of the event.
4.4	a. the date and time of the end of the Bypass;	July 12, 2024 at 07:25
	b. the estimated or measured volume of Bypass.	2477 m^3 estimate
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	24 hour composite samples collected - sampler started July 1, 2024 at 22:10 with last sample finishing on July 12, 2024 to cover duration of event. Operations Event Form Summary attached, and lab results with summary.
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.	Compliant with ECA - monthly limits met for July 2024. See attached Performance Report for July 2024.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Operations Event Form

Project: Fenelon Falls WPCP
Location: 216 Ellice St., Fenelon Falls, ON
Date: June 23- June 24, 2024
Nature of Event: Emergency Partial Sand Filter Bypass

Details of Event: A heavy rain event in Fenelon Falls, resulted in high flows which caused the tertiary filters to become hydraulically overloaded - secondary treatment and disinfection provided; however, the sand filters hydraulically overloaded and required partial bypassing. Fenelon River is the receiving body of water.

Call SAC: 1-800-268-6060

Time SAC notified: June 23, 2024 @ 21:07 **SAC Incident Number:** 1-81XW56

Name of Person at SAC: John

District Health Unit Notified (time): June 23, 2024 @ 21:10 **–** Message Left

Name of Person at Health Unit: PHI, Emmelime Topping returned call June 23, 2024 @ 21:38. PHI requested a call back upon completion of the event.

Other Contacts (Managers, Client, MECP, MOH): J. Manning Sr. Ops. Mgr., Owner-CKL, and appropriate OCWA staff.

Volume of Partial Sand Filter Bypass: Estimated volume based upon flow meter readings: ~698 m^3

Start: June 23, 2024 @ 20:31 **Finish:** June 24, 2024 @ 07:10 **Duration:** 10 hours, 39 minutes

MOH called on June 24, 2024 @ 07:47 to report partial bypass stopped- Left message. PHI, Emmelime Topping returned call June 24, 2024 @ 07:57. Provided estimated volume and duration of event via email to the MOH email: inspections@hkpr.on.ca.

SAC contacted at end of event on June 24, 2024 @ 10:24 spoke with Zohal Akbari - provided estimated volume and duration of event.

Samples: Final Effluent - CBOD, TSS, Total Phosphorus, Total Ammonia Nitrogen, composite sample collected over the duration of the event.

Corrective Action Taken:

- Monitored flows and tertiary filters, additional staff called to assist.
- Composite sample collected over the duration of the event.

Prepared By: C. Craig

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Operations Event Form

Project: Fenelon Falls WPCP
Location: 216 Ellice St., Fenelon Falls, ON
Date: June 29-30, 2024
Nature of Event: Emergency Partial Sand Filter Bypass

Details of Event: A heavy rain event in Fenelon Falls, resulted in high flows which caused the tertiary filters to become hydraulically overloaded - secondary treatment and disinfection provided; however, the sand filters hydraulically overloaded and required partial bypassing. Fenelon River is the receiving body of water.

Call SAC: 1-800-268-6060

Time SAC notified: June 29, 2024 @ 22:54 **SAC Incident Number:** 1-8E3ZOK

Name of Person at SAC: Sophia Bobryk

District Health Unit Notified (time): June 29, 2024 @ 22:52 **–** Message Left

Name of Person at Health Unit: PHI, Bud Ivy returned call June 29, 2024 @ 23:04. PHI requested a call back upon completion of the event.

Other Contacts (Managers, Client, MECP, MOH): J. Manning Sr. Ops. Mgr., Owner-CKL, and appropriate OCWA staff.

Volume of Partial Sand Filter Bypass: Estimated volume based upon flow meter readings: ~1025.5 m^3

Start: June 29, 2024 @ 22:35 **Finish:** June 30, 2024 @ 21:13 **Duration:** 22 hours, 38 minutes

MOH called on June 30, 2024 @ 21:33 to report partial bypass stopped- Left message. PHI, Bud Ivy returned call June 30, 2024 @ 21:37. Provided estimated volume and duration of event.

SAC contacted at end of event on June 30, 2024 @ 21:31, provided estimated volume and duration of event.

Samples: Final Effluent - CBOD, TSS, Total Phosphorus, Total Ammonia Nitrogen, composite sample collected over the duration of the event.

Corrective Action Taken:

- Monitored flows and tertiary filters.
- Composite sample collected over the duration of the event.

Prepared By: C. Craig

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

Works #: 110001612
Project : PO#017018

02-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 25 June 2024
LR Report: **CA13925-JUN24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					24-Jun-24 10:31
Temperature Upon Receipt [°C]	---	---	---	---	10.0
Field pH [no unit]	---	---	---	---	7.73
Field Temperature [celcius]	---	---	---	---	9.7
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	26-Jun-24	17:22	02-Jul-24	11:12	< 4
Total Suspended Solids [mg/L]	27-Jun-24	14:18	28-Jun-24	14:15	18
Phosphorus (total) [mg/L]	25-Jun-24	16:15	26-Jun-24	11:07	0.29
Ammonia+Ammonium (N) [as N mg/L]	25-Jun-24	20:28	26-Jun-24	10:08	0.3

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

00037626207

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

Works #: 110001612
Project : PO#017018

09-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 03 July 2024
LR Report: **CA12958-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					30-Jun-24 22:35
Temperature Upon Receipt [°C]	---	---	---	---	10.5
Field pH [no unit]	---	---	---	---	7.78
Field Temperature [celcius]	---	---	---	---	18.6
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	04-Jul-24	16:57	09-Jul-24	15:03	37
Total Suspended Solids [mg/L]	04-Jul-24	07:35	05-Jul-24	12:03	52
Phosphorus (total) [mg/L]	03-Jul-24	16:43	04-Jul-24	13:50	0.66
Ammonia+Ammonium (N) [as N mg/L]	03-Jul-24	20:21	04-Jul-24	10:35	0.3

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003775424

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Box 279
Bobcaygeon, ON
K0M 1A0

October 29, 2024

David Bradley, District Manager
Peterborough District Office
Ministry of Environment, Conservation and Parks
300 Water Street South, 2nd Floor, South Tower
Peterborough ON K9J 3C7

Dear David Bradley:

Re: Fenelon Falls WPCP Q3 2024 Bypass and Overflow Event Reports

Amended Environmental Compliance Approval #3688-BW3RGB Conditions 4 and 5 issued January 15, 2021, for the Fenelon Falls WCPC require Bypass and Overflow quarterly reports be submitted to the District Manager. These reports are to be submitted no later than February 15, May 15, August 15, and November 15 each year for Events that occurred during the preceding quarter.

There was one partial Bypass of the Post-Secondary Sand Filters that occurred in the third quarter of 2024 (July, August, and September). Details of this Event are attached. No Overflow Events occurred at the Fenelon Falls WPCP during the third quarter of 2024 – report is attached.

Please contact me if you have any questions or comments.

Best regards,

Christine Craig
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha-Trent Region
(705) 731-9579

Attachments

cc: J. Manning, Sr. Operations Manager, OCWA Kawartha Hub
N. Lamiot, Process & Compliance Technician, OCWA Kawartha Hub
A. Hayter, Supervisor Water & Wastewater, CKL
A. McCann, Safety, Process & Compliance Manager, OCWA Kawartha Hub
L. Nicholson, General Manager, OCWA Kawartha-Trent Regional Hub
K. Lorente, Regional Hub Manager, OCWA Kawartha-Trent Regional Hub
H. Fletcher, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q4 = October, November, December

Did a Bypass occur during this quarter:

Yes☐ No ☑

Condition 4. Bypasses		Event
4.3	a. the type of the Bypass (emergency or planned)	
	b. the date and time of the beginning of the Bypass	
	c. the treatment process(es) gone through prior to the Bypass and the treatment process(es) bypassed;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and the reason(s) why the Bypass was not avoided.	
4.4	a. the date and time of the end of the Bypass;	
	b. the estimated or measured volume of Bypass.	
4.5	For any Bypass Event, the Owner shall collect daily sample(s) of the Final Effluent, inclusive of the Event and analyze for all effluent parameters outlined in Compliance Limits condition that require composite samples following the same protocol specified in the Monitoring and Recording condition for the regular samples. The sample(s) shall be in addition to the regular Final Effluent samples required under the monitoring and recording condition. If the Event occurs on a scheduled monitoring day, the regular sampling requirements prevail. If representative sample for the effluent parameter(s) that require grab sample cannot be obtained, they shall be collected after the Event at the earliest time when situation returns to normal.	
4.6	. …The summary reports shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5) and either a statement of compliance or a summary of the non-compliance notifications submitted as required under Paragraph 1 of Condition 11. If there is no Bypass Event during a quarter, a statement of no occurrence of Bypass is deemed sufficient.	No occurrence of Bypass

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Operations Event Form

Project: Fenelon Falls WPCP
Location: 216 Ellice St., Fenelon Falls, ON
Date: July 1, 2024- July 12, 2024
Nature of Event: Emergency Partial Sand Filter Bypass

Details of Event: A combination of electrical and mechanical issues in conjunction with a heavy rain event in Fenelon Falls, resulted in the sand filters to become hydraulically overloaded - secondary treatment and disinfection were provided; however, the sand filters hydraulically overloaded and required partial bypassing. Fenelon River is the receiving body of water. Maintenance was recently completed on the sand filters topping up with filter media. During a duration of approximately 13 hours from July 1st to July 2nd there was a time where no flow was directed to the sand filters; however disinfection was being provided. The alarm company did not notify the on-call operator of a sand filter alarm at the site. SAC was provided an update and a message was left with MOH on July 2nd. MOH PHI, Alim called back at 15:59- an update was provided. The sand filters were placed back in service with the bypass valve being adjusted so that flow was going through the sand filters.

Call SAC: 1-800-268-6060

Time SAC notified: July 1, 2024 @ 22:34 **SAC Incident Number:** 1-8FGYRA

Name of Person at SAC: Jonathan

District Health Unit Notified (time): July 01, 2024 @ 22:31 **–** Message Left

Name of Person at Health Unit: PHI, Bud Ivy returned call July 01, 2024 @ 22:32.

Other Contacts (Managers, Client, MECP, MOH): J. Manning Sr. Ops. Mgr., Owner-CKL, and appropriate OCWA staff.

Volume of Partial Sand Filter Bypass: Estimated volume based upon flow meter readings: ~2477 m^3

Start: July 01, 2024 @ 22:10 **Finish:** July 12, 2024 @ 07:25 **Duration:** 249 hours, 15 minutes

MOH called on July 12, 2024 @ 07:58 to report partial bypass stopped- Left message. PHI, Neha Gandi returned call July 12, 2024 @ 09:30.

SAC contacted at end of event on July 12, 2024 @ 08:01 spoke with Dhara- provided estimated volume and duration of event.

Samples: Final Effluent - CBOD, TSS, Total Phosphorus, Total Ammonia Nitrogen, composite samples collected over the duration of the event.

Corrective Action Taken:

- Monitored flows and sand filters.
- Bypass valve adjusted throughout event to ensure flow to the sand filters.
- Electrical components replaced.
- Maintenance completed on the sand filters (lancing to loosen the sand).
- Composite samples collected over the duration of the event.

Prepared By: C. Craig & R. Rohrbasser

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

Works #: 110001612
Project : PO#017018

09-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 03 July 2024
LR Report: **CA12955-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					02-Jul-24 22:10
Temperature Upon Receipt [°C]	---	---	---	---	10.5
Field pH [no unit]	---	---	---	---	7.54
Field Temperature [celcius]	---	---	---	---	19.5
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	04-Jul-24	16:57	09-Jul-24	15:03	22
Total Suspended Solids [mg/L]	05-Jul-24	09:36	05-Jul-24	15:38	188
Phosphorus (total) [mg/L]	04-Jul-24	15:06	05-Jul-24	15:50	2.29
Ammonia+Ammonium (N) [as N mg/L]	03-Jul-24	20:21	04-Jul-24	10:35	0.9

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003775422

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

Works #: 110001612
Project : PO#017018

09-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 03 July 2024
LR Report: **CA12954-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp	6: Eff Eff-Final Effluent-Comp	7: Eff Eff-Final Effluent-Bacti
Sample Date & Time					03-Jul-24 10:00	03-Jul-24 10:00	03-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	10.5	10.5	10.5
Field pH [no unit]	---	---	---	---	---	7.63	---
Field Temperature [celcius]	---	---	---	---	---	18.4	---
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	04-Jul-24	16:57	09-Jul-24	15:03	12	---	---
Total Suspended Solids [mg/L]	04-Jul-24	07:35	05-Jul-24	12:03	24	---	---
Phosphorus (total) [mg/L]	03-Jul-24	16:43	04-Jul-24	13:50	0.32	---	---
Total Kjeldahl Nitrogen [as N mg/L]	03-Jul-24	17:03	08-Jul-24	11:24	---	1.3	---
Unionized Ammonia [mg/L as N]	03-Jul-24	20:21	04-Jul-24	10:35	---	0.008	---
Ammonia+Ammonium (N) [as N mg/L]	03-Jul-24	20:21	04-Jul-24	10:35	0.6	0.5	---
Nitrite (as N) [mg/L]	05-Jul-24	09:05	09-Jul-24	12:44	---	0.21	---
Nitrate (as N) [mg/L]	05-Jul-24	09:05	09-Jul-24	12:44	---	3.46	---
Nitrate + Nitrite (as N) [mg/L]	05-Jul-24	09:05	09-Jul-24	12:44	---	3.67	---
E. Coli [cfu/100mL]	03-Jul-24	19:46	08-Jul-24	07:45	---	---	12

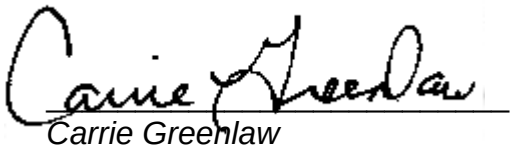
Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

OnLine LIMS

0003775414

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

Works #: 110001612
Project : PO#017018
LR Report : **CA12954-JUL24**



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003775414

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

Works #: 110001612
Project : PO#017018

10-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 04 July 2024
LR Report: **CA12168-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					04-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	12.0
Field pH [no unit]	---	---	---	---	7.78
Field Temperature [celcius]	---	---	---	---	19.8
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	04-Jul-24	16:57	09-Jul-24	15:03	< 4
Total Suspended Solids [mg/L]	06-Jul-24	12:21	08-Jul-24	15:00	14
Phosphorus (total) [mg/L]	05-Jul-24	16:09	08-Jul-24	13:42	0.22
Ammonia+Ammonium (N) [as N mg/L]	08-Jul-24	18:07	09-Jul-24	13:08	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003776615

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

Works #: 110001612
Project : PO#017018

15-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 07 July 2024
LR Report: **CA14323-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					05-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	12.5
Field pH [no unit]	---	---	---	---	7.73
Field Temperature [celcius]	---	---	---	---	20.3
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	09-Jul-24	16:22	15-Jul-24	10:56	< 4
Total Suspended Solids [mg/L]	11-Jul-24	11:53	12-Jul-24	11:24	10
Phosphorus (total) [mg/L]	10-Jul-24	15:16	11-Jul-24	11:18	0.16
Ammonia+Ammonium (N) [as N mg/L]	09-Jul-24	20:37	10-Jul-24	09:03	0.2

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003782465

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

Works #: 110001612
Project : PO#017018

15-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 07 July 2024
LR Report: **CA14322-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					06-Jul-24
Temperature Upon Receipt [°C]	---	---	---	---	12.5
Field pH [no unit]	---	---	---	---	7.64
Field Temperature [celcius]	---	---	---	---	20.1
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	09-Jul-24	16:22	15-Jul-24	10:56	< 4
Total Suspended Solids [mg/L]	11-Jul-24	15:27	12-Jul-24	11:36	< 2
Phosphorus (total) [mg/L]	10-Jul-24	15:16	11-Jul-24	11:18	0.07
Ammonia+Ammonium (N) [as N mg/L]	09-Jul-24	20:37	10-Jul-24	09:03	< 0.1

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003782463

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

Works #: 110001612
Project : PO#017018

15-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 08 July 2024
LR Report: **CA14324-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					07-Jul-24
Temperature Upon Receipt [°C]	---	---	---	---	18.0
Field pH [no unit]	---	---	---	---	7.47
Field Temperature [celcius]	---	---	---	---	21.7
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	09-Jul-24	16:22	15-Jul-24	10:56	< 4
Total Suspended Solids [mg/L]	11-Jul-24	15:27	12-Jul-24	11:36	< 2
Phosphorus (total) [mg/L]	10-Jul-24	15:16	11-Jul-24	11:18	0.05
Ammonia+Ammonium (N) [as N mg/L]	09-Jul-24	20:37	10-Jul-24	09:03	< 0.1

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003782469

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

Works #: 110001612
Project : PO#017018

16-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 10 July 2024
LR Report: **CA12354-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent - Comp
Sample Date & Time					08-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	15.0
Field pH [no unit]	---	---	---	---	7.66
Field Temperature [celcius]	---	---	---	---	20.8
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	11-Jul-24	16:45	16-Jul-24	12:08	< 4
Total Suspended Solids [mg/L]	13-Jul-24	13:17	15-Jul-24	13:17	8
Phosphorus (total) [mg/L]	12-Jul-24	15:07	15-Jul-24	10:16	0.13
Ammonia+Ammonium (N) [as N mg/L]	12-Jul-24	19:19	15-Jul-24	11:13	< 0.1

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003784721

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

Works #: 110001612
Project : PO#017018

16-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

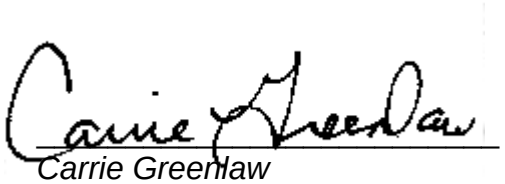
Date Rec. : 10 July 2024
LR Report: **CA12355-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					09-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	15.0
Field pH [no unit]	---	---	---	---	7.71
Field Temperature [celcius]	---	---	---	---	21.2
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	11-Jul-24	16:45	16-Jul-24	12:08	< 4
Total Suspended Solids [mg/L]	13-Jul-24	13:17	15-Jul-24	13:17	4
Phosphorus (total) [mg/L]	12-Jul-24	15:07	15-Jul-24	10:16	0.10
Ammonia+Ammonium (N) [as N mg/L]	12-Jul-24	19:19	15-Jul-24	11:13	< 0.1



Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003784727

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

Works #: 110001612
Project : PO#017018

17-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 10 July 2024
LR Report: **CA12356-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp	6: Eff Eff-Final Effluent-Comp	7: Eff Eff-Final Effluent-Bacti
Sample Date & Time					10-Jul-24 10:00	10-Jul-24 10:00	10-Jul-24 07:20
Temperature Upon Receipt [°C]	---	---	---	---	15.0	15.0	15.0
Field pH [no unit]	---	---	---	---	---	7.30	---
Field Temperature [celcius]	---	---	---	---	---	20.0	---
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	11-Jul-24	16:45	16-Jul-24	12:08	< 4	---	---
Total Suspended Solids [mg/L]	12-Jul-24	14:49	15-Jul-24	11:35	8	---	---
Phosphorus (total) [mg/L]	12-Jul-24	15:07	15-Jul-24	10:16	0.21	---	---
Total Kjeldahl Nitrogen [as N mg/L]	12-Jul-24	17:23	15-Jul-24	14:31	---	1.0	---
Unionized Ammonia [mg/L as N]	12-Jul-24	19:19	15-Jul-24	11:13	---	< 0.001	---
Ammonia+Ammonium (N) [as N mg/L]	12-Jul-24	19:19	15-Jul-24	11:13	< 0.1	< 0.1	---
Nitrite (as N) [mg/L]	16-Jul-24	13:30	17-Jul-24	10:47	---	< 0.03	---
Nitrate (as N) [mg/L]	16-Jul-24	13:30	17-Jul-24	10:47	---	13.8	---
Nitrate + Nitrite (as N) [mg/L]	16-Jul-24	13:30	17-Jul-24	10:47	---	13.8	---
E. Coli [cfu/100mL]	10-Jul-24	18:35	15-Jul-24	11:43	---	---	< 2

Note: Provincial unionized ammonia calculated from field pH and temperature provided on the chain of custody form.

Carrie Greenlaw
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003785630

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

Works #: 110001612
Project : PO#017018

22-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 15 July 2024
LR Report: **CA13592-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					11-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	10.0
Field pH [no unit]	---	---	---	---	7.61
Field Temperature [celcius]	---	---	---	---	20.7
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	16-Jul-24	17:16	22-Jul-24	12:10	< 12
Total Suspended Solids [mg/L]	16-Jul-24	11:51	17-Jul-24	13:51	82
Phosphorus (total) [mg/L]	16-Jul-24	15:21	17-Jul-24	13:25	1.09
Ammonia+Ammonium (N) [as N mg/L]	15-Jul-24	19:09	16-Jul-24	10:23	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003790936

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

Works #: 110001612
Project : PO#017018

22-July-2024

OCWA-Kawartha (Fenelon Falls WWTF)
Attn : Christine Craig

PO Box 279, Boyd St. E
Bobcaygeon, ON
K0M 1A0, Canada

Phone: 705-887-3596
Fax:

Date Rec. : 15 July 2024
LR Report: **CA13593-JUL24**

Copy: #1

CERTIFICATE OF ANALYSIS
Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: TeBy TeBy-Final Effluent-Comp
Sample Date & Time					12-Jul-24 10:00
Temperature Upon Receipt [°C]	---	---	---	---	10.0
Field pH [no unit]	---	---	---	---	7.81
Field Temperature [celcius]	---	---	---	---	20.1
Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L]	16-Jul-24	17:16	22-Jul-24	12:11	10
Total Suspended Solids [mg/L]	16-Jul-24	13:59	17-Jul-24	14:01	121
Phosphorus (total) [mg/L]	16-Jul-24	15:21	17-Jul-24	13:25	1.56
Ammonia+Ammonium (N) [as N mg/L]	15-Jul-24	19:09	16-Jul-24	10:23	< 0.1

Hawley Anderson, Hon.B.Sc
Project Specialist,
Environment, Health & Safety

OnLine LIMS

0003790939

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Box 279
Bobcaygeon, ON
K0M 1A0

August 13, 2024

David Bradley, District Manager
Peterborough District Office
Ministry of Environment, Conservation and Parks
300 Water Street South, 2nd Floor, South Tower
Peterborough ON K9J 3C7

Dear David Bradley:

Re: Fenelon Falls WPCP Q2 2024 Bypass and Overflow Event Reports

Amended Environmental Compliance Approval #3688-BW3RGB Conditions 4 and 5 issued January 15, 2021, for the Fenelon Falls WCPC require Bypass and Overflow quarterly reports be submitted to the District Manager. These reports are to be submitted no later than February 15, May 15, August 15, and November 15 each year for Events that occurred during the preceding quarter.

There were four partial Bypasses of the Post-Secondary Sand Filters that occurred in the second quarter of 2024 (April, May, June). Details of these Events are attached. No Overflow Events occurred at the Fenelon Falls WPCP during the second quarter of 2024 – report is attached.

Please contact me if you have any questions or comments.

Best regards,

Christine Craig
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha-Trent Region
(705) 731-9579

Attachments

cc: J. Manning, Sr. Operations Manager, OCWA Kawartha-Trent Regional Hub
A. Hayter, Supervisor Water & Wastewater, CKL
J. Mulligan, Safety, Process & Compliance Manager (A), OCWA Kawartha Hub
L. Nicholson, General Manager, OCWA Kawartha-Trent Regional Hub
K. Lorente, Regional Hub Manager, OCWA Kawartha-Trent Regional Hub
H. Fletcher, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2024

Q4= October, November, December

Did an Overflow occur during this quarter:

Yes☐ No ☑

Condition 5. Overflow		Event
5.3	a. the type of the Overflow (emergency or planned)	
	b. the date and time of the beginning of the Overflow	
	c. the point of the Overflow from the Works, the treatment process(es) gone through prior to the Overflow, the disinfection status of the Overflow and whether the Overflow is discharged through the effluent disposal facilities or an alternate location;	
	d. the effort(s) done to maximize the flow through the downstream treatment process(es) and Bypasses and the reason(s) why the Overflow was not avoided.	
5.4	a. the date and time of the end of the Overflow;	
	b. the estimated or measured volume of Overflow.	
5.5	a. Overflow event in Sewage Treatment Plant, grab sample(s) of the Overflow, one near the beginning of the Event and one every eight (8) hours for the duration of the Event, and have them analyzed at least for CBOD5, total suspended solids, total phosphorus, total ammonia nitrogen, nitrate as N, nitrite as N, total Kjeldahl nitrogen, E. coli. , except that raw sewage and primary treated effluent Overflow shall be analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen only.	
	b. at a sewage pumping station in the collection system, at least one (1) grab sample representative of the Overflow Event and have it analyzed for BOD5, total suspended solids, total phosphorus and total Kjeldahl nitrogen.	
5.6	…The summary report shall contain, at a minimum, the types of information set out in Paragraphs (3), (4) and (5). If there is no Overflow Event during a quarter, a statement of no occurrence of Overflow is deemed sufficient.	No Occurrence of Overflow.

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Box 279
Bobcaygeon, ON
K0M 1A0

February 13, 2025

David Bradley, District Manager
Peterborough District Office
Ministry of Environment, Conservation and Parks
300 Water Street South, 2nd Floor, South Tower
Peterborough ON K9J 3C7

Dear David Bradley:

Re: Fenelon Falls WPCP Q4 2024 Bypass and Overflow Event Reports

Amended Environmental Compliance Approval #3688-BW3RGB Conditions 4 and 5 issued January 15, 2021, for the Fenelon Falls WCPC require Bypass and Overflow quarterly reports be submitted to the District Manager. These reports are to be submitted no later than February 15, May 15, August 15, and November 15 each year for Events that occurred during the preceding quarter.

No Bypass or Overflow Events occurred at the Fenelon Falls WPCP during the fourth quarter of 2024 – reports are attached.

Please contact me if you have any questions or comments.

Best regards,

Natalie Lamiot
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha-Trent Region
(705) 760-5968

Attachments

cc: J. Manning, Sr. Operations Manager, OCWA Kawartha-Trent Hub
C. Craig, Process & Compliance Technician, OCWA Kawartha-Trent Hub
A. Hayter, Supervisor Water & Wastewater, CKL
A. McCann, Safety, Process & Compliance Manager, OCWA Kawartha-Trent Hub
L. Nicholson, General Manager, OCWA Kawartha-Trent Regional Hub
K. Lorente, Regional Hub Manager, OCWA Kawartha-Trent Regional Hub
H. Fletcher, Water Inspector, MECP – Peterborough District Office

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix VI:
Sample Schedule

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

January 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
	1 New Year's Day Stat	2	3 ☐ Weekly ☐ Monthly	4	5	6
7	8	9	10 ☐ Weekly	11	12	13
14	15	16	17 ☐ Weekly	18	19	20
21	22	23	24 ☐ Weekly	25	26	27
28	29	30	31 ☐ Weekly		Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

February 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40			1	2	3
4	5	6	7 ☐ Weekly ☐ Monthly	8	9	10
11	12	13	14 ☐ Weekly	15	16	17
18	19 Family Day Stat	20	21 ☐ Weekly	22	23	24
25	26	27	28 ☐ Weekly	29		

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

March 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40				1	2
3	4	5	6 ☐ Weekly ☐ Monthly	7	8	9
10	11	12	13 ☐ Weekly	14	15	16
17	18	19	20 ☐ Weekly	21	22	23
24	25	26	27 ☐ Weekly	28	29 Good Friday Stat	30
31						

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____

April 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
	1 Easter Monday Stat	2	3 ☐ Weekly ☐ Monthly	4	5	6
7	8	9	10 ☐ Weekly	11	12	13
14	15	16	17 ☐ Weekly	18	19	20
21	22	23	24 ☐ Weekly	25	26	27
28	29	30		Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40	

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

May 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40		1 ☐ Weekly ☐ Monthly	2	3	4
5	6	7	8 ☐ Weekly	9	10	11
12	13	14	15 ☐ Weekly	16	17	18
19	20 Victoria Day Stat	21	22 ☐ Weekly	23	24	25
26	27	28	29 ☐ Weekly	30	31	

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

June 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
						1
2	3	4	5 ☐ Weekly ☐ Monthly	6	7	8
9	10	11	12 ☐ Weekly	13	14	15
16	17	18	19 ☐ Weekly	20	21	22
23	24	25	26 ☐ Weekly	27	28	29
30				Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40	

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

July 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
	1 Canada Day Stat	2	3 ☐ Weekly ☐ Monthly	4	5	6
7	8	9	10 ☐ Weekly	11	12	13
14	15	16	17 ☐ Weekly	18	19	20
21	22	23	24 ☐ Weekly	25	26	27
28	29	30	31 ☐ Weekly	Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40	

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

August 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
	Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40		1	2	3
4	5 Civic Holiday Stat	6	7 ☐ Weekly ☐ Monthly	8	9	10
11	12	13	14 ☐ Weekly	15	16	17
18	19	20	21 ☐ Weekly	22	23	24
25	26	27	28 ☐ Weekly	29	30	31

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

September 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
1	2 Labour Day Stat	3	4 ☐ Weekly ☐ Monthly	5	6	7
8	9	10	11 ☐ Weekly	12	13	14
15	16	17	18 ☐ Weekly	19	20	21
22	23	24	25 ☐ Weekly	26	27	28
29	30 National Day for Truth & Reconciliation Stat				Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE:

October 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40	1	2 ☐ Weekly ☐ Monthly	3	4	5
6	7	8	9 ☐ Weekly	10	11	12
13	14 Thanksgiving Day Stat	15	16 ☐ Weekly	17	18	19
20	21	22	23 ☐ Weekly	24	25	26
27	28	29	30 ☐ Weekly	31		

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____
(all collection and submission complete as per ECA,etc. + any special requirements)

November 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40				1	2
3	4	5	6 ☐ Weekly ☐ Monthly	7	8	9
10	11 Remembrance Day Stat	12	13 ☐ Weekly	14	15	16
17	18	19	20 ☐ Weekly	21	22	23
24	25	26	27 ☐ Weekly	28	29	30

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Sample Calendar

Fenelon Falls WPCP Org #5886 – Works #110001612

Influent (Raw) and Effluent Samples must be collected on the day indicated on Calendar. If day has to be switched (i.e. composite sampler failed), the reason must be noted in the logbook and an email sent to the ORO, PCT & Sr. Ops Manager

Daily: Record all operational parameters on daysheet/logbook.

Influent Monitoring (Raw)		
Parameters	**Sample Type**	**Frequency**
BOD5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Biosolids Monitoring (when hauling)		
Parameters	**Sample Type**	**Frequency**
Total Solids	Grab	Once/month
Total Phosphorus	Grab	Once/month
Total Ammonia Nitrogen	Grab	Once/month
Metals Scan*	Grab	Once/month
E. Coli	Grab	Once/month

* Arsenic, Cadmium, Cobalt, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Potassium, Selenium, Zinc

Final Effluent Monitoring		
Parameters	**Sample Type**	**Frequency**
CBOD5	Composite	Weekly
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
Total Kjeldahl Nitrogen	Composite	Weekly
Nitrate as Nitrogen	Composite	Weekly
Nitrite as Nitrogen	Composite	Weekly
E. coli	Grab	Weekly
Field pH	Grab	Weekly
Field Temperature	Grab	Weekly
Un-ionized Ammonia	calculated	Weekly

OPERATOR SIGN-OFF: _____

DATE: _____

December 2024

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
1	2	3	4 ☐ Weekly ☐ Monthly	5	6	7
8	9	10	11 ☐ Weekly	12	13	14
15	16	17	18 ☐ Weekly	19	20	21
22 *Please review SGS's Holiday schedule prior to sampling	23	24 ☐ Weekly	25 Christmas Day Stat	26 Boxing Day Stat	27	28
29	30	31			Sample Collection Time Frames (Days)	Weekly >5 & <10 Monthly >20 & <40

Appendix VII:
2024 Fenelon Falls Capital Repairs List

Annex 4 - Fenelon Falls Capital Works Repair List
City of Kawartha Lakes

From	To	Priority Ranking	Length	Owner	Street Location	Figure	Size (mm)	Material	Quick Rating			Pipe Rating			Pipe Rating Index			REPAIR INDEX																		Estimated Repair Costs	Final Repair Costs	Repair Notes	Post-Project Repair Notes	Report Link	Video Link	Updated Report Link	Updated Video Link
									Structural Quick Rating	O&M Pipe Rating	Overall Quick Rating	Structural Score	O&M Score	Overall Pipe Rating	Structural Pipe Rating Index	O&M Pipe Rating Index	Overall Pipe Rating Index	Weighted Score	LL (Ea)	Performed LL (Ea)	HC (m)	Performed HC (m)	SC-RC (Ea)	Performed SC-RC (Ea)	SC-HR (m)	Performed SC-HR(m)	IG (Ea)	Performed IG (Ea)	MSR (Ea)	Performed MSR (Ea)	CIPP (m)	Performed CIPP (m)	CIPP-T (Ea)	Performed CIPP-T (Ea)	CSR (Ea)	Performed CSR (Ea)										
MH2039	MH2137	High	106.20	Fenelon Falls	BOND ST E	5	200	ACC	5.1	5.1	5.2	8.0	13.0	21.0	4.0	2.6	3.0	21							106	106	2	2			1	1	1	1			$22,160.00	$17,610.00	Hydraulic Remaing @ 7.74m, 12.37m and 15.73m, Injection grouting @ 7.74m, lateral CIPP @ 7.74m, injection grouting @ 12.37m, CIPP 1m x 200mm @ 15.73		Report	Video	Report	Video
MH2132	MH2164	High	73.30	Fenelon Falls	WEST ST S	8	200	ACC	5.2	5.1	5.3	10.0	7.0	17.0	5.0	3.5	4.2	17							73	73	2	2				3					$10,180.00	$18,055.00	Hydraulic reaming, Injection grouting @ 44.22m, 54.07m	CO-01 add CIPP - SR over hole at 29.1m. CO-02 Install CIPP @ 44.07m and 54.07m.	Report	Video	Report	Video
MH2143	MH2831	High	107.60	Fenelon Falls	FRANCIS ST E	6	200	ACC	5.1	2.1	5.1	11.0	2.0	13.0	3.7	2.0	3.2	13				107			107	0					3	3					$21,420.00	$14,180.00	Hydraulic reaming, CIPP 1m x 200mm covering holes at 82.68m, 83.56m, 88.14m	Investigation video provided by Contractor. Reviewed July 25th. CO-01 add 107m of heavy flush to Contractor to complete the segment repair, remove 107m of Hydraulic Reaming.	Report	Video	Report	Video
MH2077	MH2121	High	59.97	Fenelon Falls	LOUISA ST	2,3	200	ACC	2.1	2.1	2.2	3.0	2.0	5.0	1.5	2.0	1.7	10	1	1					60	60					2	2					$14,800.00	$9,900.00	Lateral Launch Investigation @ 43.53m, CIPP 1m x 200mm @ 45.30m, hydraulic reaming @ 58.9m, CIPP 1m x 200mm @ 58.9m	Lateral Launch Video.	Report	Video	Report	Video
MH2088	MH2678	Medium	102.05	Fenelon Falls	ELLICE ST	8	200	ACC	3.1	4.1	4.1	3.0	6.0	9.0	3.0	3.0	3.0	9							103	0	2	0									$11,980.00	$0.00	Injection grouting @ 3.6m, Hydraulic reaming @ 70.53m, hydraulic reaming at 101.42m, injection grouting @ 101.42m	Under Construction - No access - CO-01 REMOVED FROM SCOPE	Report	Video		
MH2020	MH2133	Medium	67.05	Fenelon Falls	JOHN ST	2	250	ACC	2.1	4.1	4.1	2.0	6.0	8.0	2.0	3.0	2.7	8					1	1			1	1									$4,900.00	$5,100.00	Injection Grouting @ 1m Robotic Cutting to remove obstruction @ 66.84m		Report	Video	Report	Video
MH2046	MH2063	Medium	106.42	Fenelon Falls	LOUISA ST	2	200	ACC	2.1	2.2	2.3	3.0	4.0	7.0	1.5	2.0	1.8	7							106	106	1	1			1	1					$14,260.00	$9,810.00	Hydraulic reaming near MH 2046, Injection Grouting and CIPP 1m x 200mm @ 0.19m		Report	Video	Report	Video
MH2048	MH2127	Medium	61.14	Fenelon Falls	BOND ST W	2	200	ACC	1.1	4.1	4.1	1.0	8.0	9.0	1.0	2.7	2.2	7					1	1	61	61					1	2	1	0			$15,660.00	$10,535.00	Hydraulic Remaing @ 4.21m, 6.26m, CIPP 1m x 200mm, CIPP t liner, 100mm diam @ 6.28m, Robotic cutting @ 52.14m	CO-01 Injection Grouting @ 6.28m Appproved to continue July 23rd. Contractor unable to repair approved leak as it is too far up the lateral. RFQ -001 approved in CO-01. CIPP-T liner removed from scope. CO-03 Add CIPP to cover Crack at 1m.	Report	Video	Report	Video
MH2166	MH2037	Medium	109.50	Fenelon Falls	NORTH ST	7	200	ACC	3.1	5.1	5.1	13.0	5.0	18.0	2.2	5.0	2.6	7									1	1									$2,900.00	$2,800.00	No action for Sag, Injection grouting of infiltration @ 27.57m		Report	Video	Report	Video
MH2067	MH2141	Medium	80.00	Fenelon Falls	PRINCES' ST W	1	200	ACC	0.0	3.1	3.1	0.0	7.0	7.0	0.0	2.3	2.3	6																	1	1	$4,500.00	$4,700.00	Hydraulic Reaming at MH 2141 to remove deposits, Robotic cutting at lateral @ 34.52m		Report	Video	Report	Video
MH2119	MH2048	Medium	18.34	Fenelon Falls	BOND ST W	2	200	ACC	0.0	2.3	2.3	0.0	6.0	6.0	0.0	2.0	2.0	6							18	18											$1,080.00	$630.00	Hydraulic reaming throughout.		Report	Video	Report	Video
MH2130	MH2059	Medium	32.90	Fenelon Falls	NORTH ST	7	200	ACC	2.1	4.1	4.1	2.0	4.0	6.0	2.0	4.0	3.0	6									1	1									$2,900.00	$2,800.00	Injection grouting @ 28.06m		Report	Video	Report	Video
MH2116	MH2043	Medium	60.64	Fenelon Falls	ELLIOT ST	4,7	450	ACC	0.0	5.1	5.1	0.0	5.0	5.0	0.0	5.0	5.0	5									1	1									$4,000.00	$4,500.00	Injection grouting @ 1m.		Report	Video	Report	Video
MH2133	MH2158	Medium	67.34	Fenelon Falls	JOHN ST	2	300	ACC	0.0	5.1	5.1	0.0	5.0	5.0	0.0	5.0	5.0	5																	1	1	$2,500.00	$3,500.00	Injection grouting in structure MH 2133		Report	Video	N/A	Video
MH2136	MH2064	Medium	96.80	Fenelon Falls	LINDSAY ST	4,7	200	ACC	1.1	4.1	4.1	1.0	4.0	5.0	1.0	4.0	2.5	5									2	3									$5,800.00	$8,400.00	Injection grouting @ 1m, injection grouting at offset @ 80.09	CO-01 Additional Leak noted in the lateral at 62.02m wark approved July 19.	Report	Video	Report	Video
MH2665	MH2116	Medium	61.65	Fenelon Falls	NORTH ST	7	200	ACC	1.1	4.1	4.1	1.0	4.0	5.0	1.0	4.0	2.5	5									1	1				1	1				$7,900.00	$7,800.00	CIPP - T liner 100mm @ 30.42m, Injection grouting at offset @ 37m		Report	Video	Report	Video
MH2775	MH2096	Medium	92.60	Fenelon Falls	JANLISDA ST	6	200	PVC	3.1	2.1	3.1	3.0	2.0	5.0	3.0	2.0	2.5	5							97	97					1	1					$10,820.00	$6,695.00	Hydraulic Reaming, CIPP 1m x 200mm @ 5.34m covering break,		Report	Video	Report	Video

									Quick Rating			Pipe Rating			Pipe Rating Index				REPAIR INDEX																								
From	To	Priority Ranking	Length	Owner	Street Location	Figure	Size (mm)	Material	Structural Quick Rating	O&M Pipe Rating	Overall Quick Rating	Structural Score	O&M Score	Overall Pipe Rating	Structural Pipe Rating Index	O&M Pipe Rating Index	Overall Pipe Rating Index	Weighted Score	LL (Ea)	Performed LL (Ea)	HC (m)	Performed HC (m)	SC-RC (Ea)	Performed SC-RC (Ea)	SC-HR (m)	Performed SC-HR(m)	IG (Ea)	Performed IG (Ea)	MSR (Ea)	Performed MSR (Ea)	CIPP (m)	Performed CIPP (m)	CIPP-T (Ea)	Performed CIPP-T (Ea)	CSR (Ea)	Performed CSR (Ea)	Estimated Repair Costs	Final Repair Costs	Repair Notes	Post-Project Repair Notes	Report Link	Video Link	Updated Report Link	Updated Video Link
MH2027	MH2068	Low	14.46	Fenelon Falls	PRINCES' ST W	1	200	ACC	1.1	3.1	3.1	1.0	3.0	4.0	1.0	3.0	2.0	4																	1	1	$2,500.00	$2,500.00	Hydraulic reaming in MH 2027		Report	Video	Report	Video
MH2037	MH2058	Low	116.45	Fenelon Falls	NORTH ST	4,7	200	ACC	2.1	2.5	2.6	2.0	10.0	12.0	2.0	2.0	2.0	4							116	116	1	1									$9,860.00	$6,280.00	Hydraulic Reaming @ 78.29m then injection grouting @ 78.29m		Report	Video	Report	Video
MH2059	MH2665	Low	26.30	Fenelon Falls	NORTH ST	7	200	ACC	0.0	4.1	4.1	0.0	8.0	8.0	0.0	2.7	2.7	4							26	26	1	1									$4,460.00	$3,580.00	Hydraulic Reaming, Injection grouting @ 25.09m		Report	Video	Report	Video
MH2071	MH2054	Low	81.81	Fenelon Falls	QUEEN ST	2	200	ACC	0.0	4.1	4.1	0.0	4.0	4.0	0.0	4.0	4.0	4			82	82	1	1													$5,280.00	$4,260.00	Robotic cutting @ 81.15m, heavy cleaning thoroughout.		Report	Video	Report	Video
MH2142	MH2482	Low	55.20	Fenelon Falls	BOND ST E	5,6	200	ACC	0.0	4.1	4.1	0.0	4.0	4.0	0.0	4.0	4.0	4																	1	1	$2,500.00	$2,500.00	Hydraulic Reaming at MH 2482		Report	Video	N/A	Video
MH2147	MH3010	Low	47.21	Fenelon Falls	QUEEN ST	2,3	200	ACC	0.0	4.1	4.1	0.0	4.0	4.0	0.0	4.0	4.0	4																	1	1	$2,500.00	$2,500.00	Injection grouting of infiltration in MH 3010		Report	Video	Report	Video
MH2029	MH2044	Low	72.32	Fenelon Falls	LOUISA ST	2	200	ACC	0.0	3.1	3.1	0.0	3.0	3.0	0.0	3.0	3.0	3																	1	0	$2,500.00	$0.00	Hydraulic Reaming in MH 2029	CO-02 removed from scope	Report	Video		
MH2081	MH2049	Low	74.45	Fenelon Falls	SHORT ST	2,3	200	ACC	3.1	0.0	3.1	3.0	0.0	3.0	3.0	0.0	3.0	3													1	1					$5,000.00	$3,300.00	CIPP 1m x 200mm @ 65.13m		Report	Video	Report	Video
MH2131	MH2173	Low	96.30	Fenelon Falls	WEST ST S	4	200	ACC	3.1	0.0	3.1	3.0	0.0	3.0	3.0	0.0	3.0	3									1	1									$2,900.00	$2,800.00	Injection grouting @ 81.54m		Report	Video	Report	Video
MH2185	MH2148	Low	126.90	Fenelon Falls	MURRAY ST	8	200	PVC	3.1	0.0	3.1	3.0	0.0	3.0	3.0	0.0	3.0	3									1	1				1					$2,900.00	$6,100.00	Injection Grouting @ 1.12m	CO-03 added CIPP to re-inforce longitudinal crack @1m post repair.	Report	Video	Report	Video
MH2831	MH2041	Low	81.35	Fenelon Falls	FRANCIS ST E	6	200	ACC	0.0	3.1	3.1	0.0	3.0	3.0	0.0	3.0	3.0	3		1		81	1	1								1					$2,000.00	$8,730.00	Robotic Cutting of roots @ 67.14	CO-02 install a T-Liner to prevent further root penetration at Lateral. CO-03 Remove T-Liner install and instead perform a Lateral Launch Investigation to understand where roots originate and whether the Lateral is live. After investigation, the lateral is decommissioned and the Contractor has placed a CIPP - SR over the lateral.	Report	Video	Report	Video
MH2014	MH2096	Low	47.60	Fenelon Falls	FRANCIS ST E	6	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$2,500.00	Hydraulic Reaming in MH 2096		Report	Video	Report	Video
MH2017	MH2159	Low	105.70	Fenelon Falls	KING ST	4,7	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2022	MH2054	Low	69.54	Fenelon Falls	JOHN ST	2	250	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$2,500.00	Hydraulic reaming near MH 2054		Report	Video	Report	Video
MH2025	MH2133	Low	108.00	Fenelon Falls	BOND ST W	2	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2043	MH2089	Low	94.35	Fenelon Falls	ELLICE ST	6,7	450	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2															1	0			$7,000.00	$0.00	Defective tap @ 73.87m CIPP t-liner 100mm diam.	CO-02 removed from scope due to Construction on Ellice, lateral replacement is captured within the Road Reconstruction Scope.	Report	Video		
MH2052	MH2015	Low	106.25	Fenelon Falls	GREEN ST W	7	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2			106	106															$4,240.00	$3,180.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2055	MH2138	Low	81.30	Fenelon Falls	KING ST	4	200	ACC	2.2	0.0	2.2	4.0	0.0	4.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2068	MH2022	Low	67.89	Fenelon Falls	JOHN ST	1	250	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2													1	1					$5,000.00	$3,300.00	CIPP 1m x 250mm @ 3.35m	Removed from scope for budgetary reasons. Contractor completed ahead of Change Order 01. CO-02 added back into Contract by DMW.	Report	Video	Report	Video
MH2070	MH2067	Low	119.50	Fenelon Falls	PRINCES' ST W	1	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2							119.5	119.5			1	0		2					$14,170.00	$10,185.00	Hydraulic reaming @ 118.63m MSR @ 118.63m	CO-03 added CIPP SR to address offset joint at 116.56. CO-04 Contractor performed a CIPP SR instead of a Mechanical Spot Repair. Adjusted in Contract in CO-04	Report	Video	Report	Video
MH2072	MH2100	Low	94.46	Fenelon Falls	MURRAY ST	7	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2			94	94															$3,760.00	$2,820.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2073	MH2023	Low	91.15	Fenelon Falls	FRANCIS ST W	2	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2076	MH2100	Low	79.55	Fenelon Falls	ELLIOT ST	4,7	450	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2							80	80											$4,800.00	$2,400.00	Hydraulic Reaming @ 9.84m		Report	Video	Report	Video
MH2089	MH2154	Low	90.25	Fenelon Falls	ELLICE ST	7	450	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$1,250.00	Hydraulic reaming at MH 2154	Removed from scope for Construction. Contractor completed work after removal from Scope. CO-02 CKL agreed to pay 50%	Report	Video	N/A	Video
MH2093	MH2088	Low	99.75	Fenelon Falls	ELLICE ST	8	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$1,250.00	Hydraulic reaming at MH 2093	Removed from scope for Construction. Contractor completed work after removal from Scope. CO-02 CKL agreed to pay 50%	Report	Video	N/A	Video
MH2112	MH2140	Low	73.50	Fenelon Falls	BOND ST E	5	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2							74	74											$4,440.00	$2,220.00	Hydraulic reaming @ 16.36m		Report	Video	Report	Video
MH2121	MH2029	Low	57.15	Fenelon Falls	LOUISA ST	2	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																					Hydraulic Reaming at MH 2029 - Repeat deficiency		Report	Video		
MH2030	MH2027	Low	101.51	Fenelon Falls	ALBERT ST	1	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$2,500.00	Hydraulic Reaming at MH 2130		Report	Video	Report	Video
MH2135	MH2015	Low	85.55	Fenelon Falls	LINDSAY ST	7	200	ACC	0.0	2.0	2.0	0.0	30.0	30.0	0.0	2.0	2.0	2			86	86															$3,440.00	$2,580.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2139	MH2155	Low	84.27	Fenelon Falls	CLIFTON ST	3	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2141	MH2162	Low	78.26	Fenelon Falls	PRINCES' ST W	1	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$2,500.00	Hydraulic Reaming at MH 2162		Report	Video	N/A	Video
MH2148	MH2169	Low	123.60	Fenelon Falls	MURRAY ST	7	200	PVC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2155	MH2053	Low	76.85	Fenelon Falls	CLIFTON ST	3	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2																	1	1	$2,500.00	$2,500.00	Hydraulic Reaming in MH 2155		Report	Video	N/A	Video
MH2158	MH2023	Low	69.06	Fenelon Falls	JOHN ST	2	300	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2181	MH2165	Low	41.00	Fenelon Falls	JANLISDA ST	6	200	PVC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2					1	0													$2,000.00	$0.00	Robotic cutting of intruding seal @ 13.78m	CO-02 Remove from Scope as the intrusion is not blocking flow and may lead to further issues.	Report	Video		
MH2167	MH2130	Low	115.40	Fenelon Falls	ALBERT ST	1	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2			115	115															$4,600.00	$3,450.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2169	MH2072	Low	97.00	Fenelon Falls	MURRAY ST	7	200	PVC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2			97	97															$3,880.00	$2,910.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2173	MH2090	Low	72.50	Fenelon Falls	HELEN ST	4,7	200	ACC	0.0	2.0	2.0	0.0	24.0	24.0	0.0	2.0	2.0	2			73	73															$2,920.00	$2,190.00	Heavy Cleaning throughout.		Report	Video	Report	Video
MH2182	MH2166	Low	77.15	Fenelon Falls	EVA ST	7	200	ACC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					No action required.		Report	Video		
MH2481	MH2482	Low	108.00	Fenelon Falls	DEANE ST	5	200	PVC	2.1	0.0	2.1	2.0	0.0	2.0	2.0	0.0	2.0	2																					Sag - no repair recommended		Report	Video		
MH2482	MH2112	Low	16.65	Fenelon Falls	BOND ST E	5,6	200	ACC	0.0	2.1	2.1	0.0	2.0	2.0	0.0	2.0	2.0	2							16	16											$960.00	$480.00	Hydraulic Reaming , focused @ 16m		Report	Video	Report	Video
MH2026	MH2071	Low	67.82	Fenelon Falls	QUEEN ST	1	200	ACC	1.1	0.0	1.1	1.0	0.0	1.0	1.0	0.0	1.0	1									1	1									$2,900.00	$2,800.00	Injection Grouting at offset joint @ 1.15m		Report	Video	Report	Video
MH2140	MH2176	Low	72.70	Fenelon Falls	BOND ST E	5	200	ACC	1.1	0.0	1.1	1.0	0.0	1.0	1.0	0.0	1.0	1									1	1									$2,900.00	$2,800.00	Injection grouting of offset @ 26.67		Report	Video	Report	Video
MH2144	MH2180	Low	75.90	Fenelon Falls	CLIFTON ST	5	200	ACC	1.1	0.0	1.1	1.0	0.0	1.0	1.0	0.0	1.0	1									1	1									$2,900.00	$2,800.00	Injection grouting at offset @ 41.19m		Report	Video	Report	Video
MH2161	MH2130	Low	46.65	Fenelon Falls	VETERANS WAY	7	200	ACC	1.1	0.0	1.1	1.0	0.0	1.0	1.0	0.0	1.0	1									1	1									$2,900.00	$2,800.00	Injection grouting at offset @ 7.32m		Report	Video	Report	Video