# Fenelon Falls Water Pollution Control Plant

Works # 110001612

# Annual Wastewater Performance Report

Prepared For: The City of Kawartha Lakes

Reporting Period of January 1st – December 31st, 2023

Issued: March 28, 2024

Revision: 0

Operating Authorities:

# 2023 Performance Report for the Fenelon Falls Water Pollution Control Plant

The Fenelon Falls Water Pollution Control Plant, unless noted within this report, complies with all requirements of the regulating authorities and operates under:

- Environmental Compliance Approval (ECA) No. 3688-BW3RGB issued January 15, 2021
- Environmental Compliance Approval (ECA) No. 141-W601 issued October 12, 2022

The Fenelon Falls Water Pollution Control Plant (WPCP) operates under Amended Environmental Compliance Approval (ECA) No. 3688-BW3RGB issued on January 15th, 2021. Condition 11.4 of this ECA requires the following:

The Owner shall prepare performance reports on a calendar year basis and submit to the District Manager by March 31 of the calendar year following the period being reported upon. The reports shall contain, but shall not be limited to, the following information pertaining to the reporting period:

a) a summary and interpretation of all Influent monitoring data, and a 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 or 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 and any steps taken to address the complaints;

j) a summary of all Bypasses, 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 modification.

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.

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 Environmental Compliance Approval Number 141-W601 for the City of Kawartha Lakes Wastewater Collection System, including the Fenelon Falls Sewage Collection System, stipulates that the Owner shall prepare an annual performance report for the Authorized System that includes:

**Schedule E – Reporting (4.6)**

a) a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.
b) a summary of any operating problems encountered and corrective actions taken.
c) a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.
d) a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.
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.

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.
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.
   ii. Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timelines.
   iii. An assessment of the effectiveness of each action taken.
   iv. An assessment of the ability to meet Procedure F-5-1 or Procedure F-5-5 objectives (as applicable) and if able to meet the objectives, an overview of next steps and estimated timelines to meet the objectives.
   v. Public reporting approach including proactive efforts

**Environmental Compliance Approval (ECA) No. 3688-BW3RGB**

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 2023, 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,

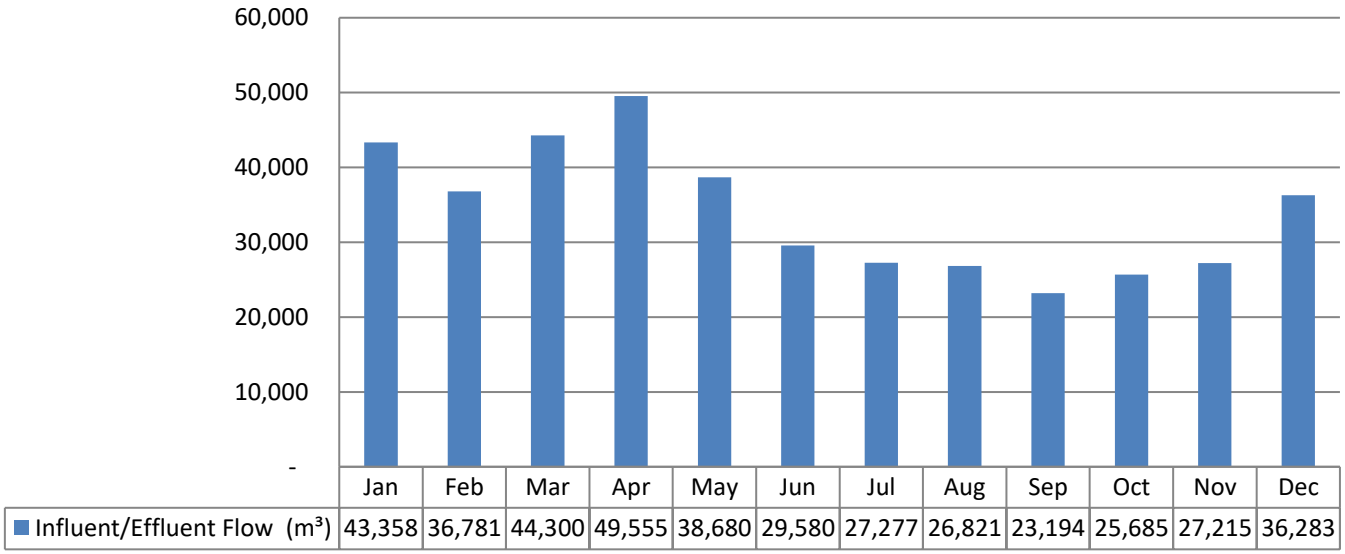
a training program focused on providing the right skills to staff - also captured and tracked by the use of an electronic database and a multi-skilled, flexible workforce.

**(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 1,800m³/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 STP so that the annual average daily influent is within the Rated Capacity. The 2023 annual average daily influent flow was 1,119.81 m³/day or 62% of the Rated Capacity.

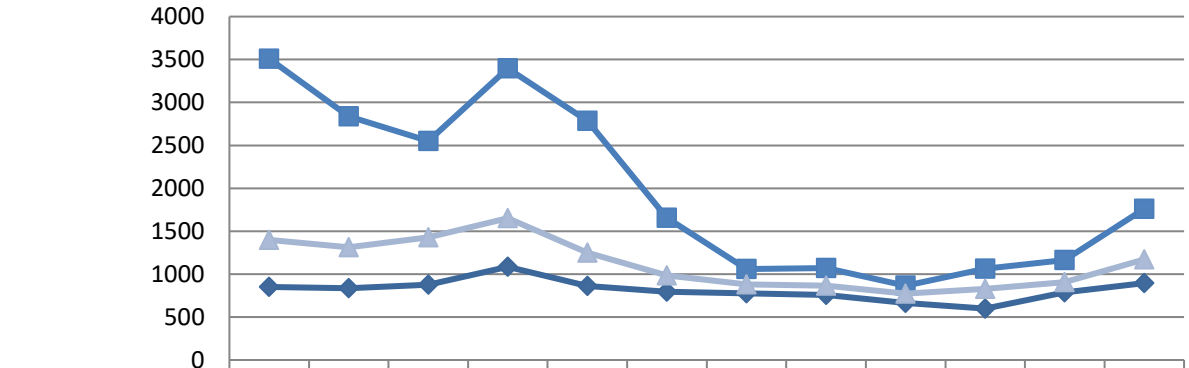
The total influent/effluent flow in 2023 was 408,729 m³.

**Graph 1: 2023 Influent/Effluent Flow Monthly Totals**



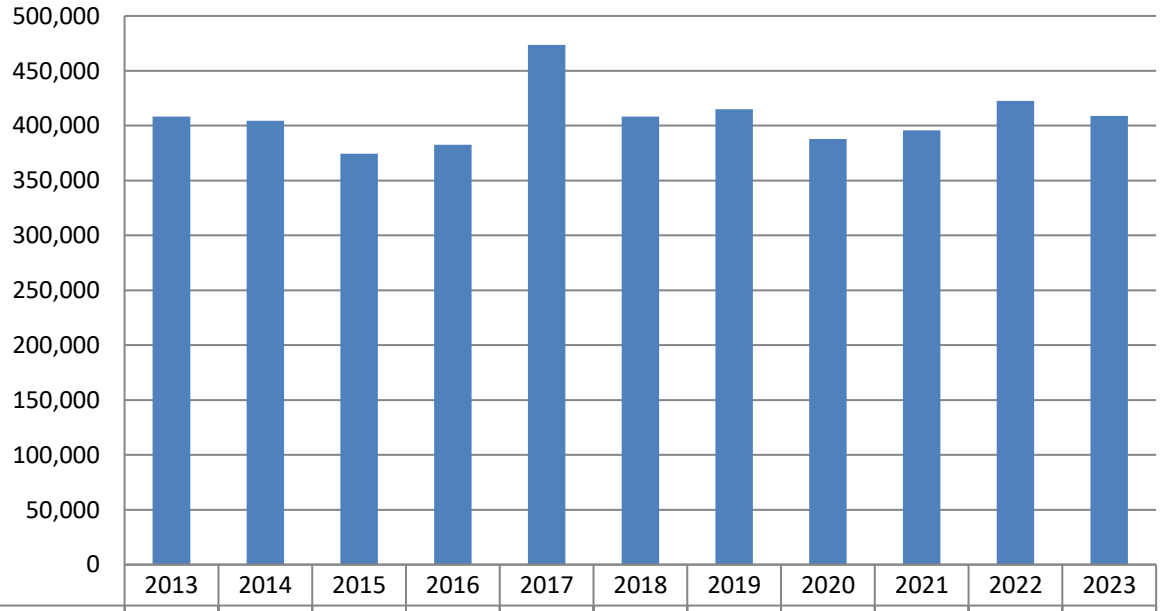

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Influent/Effluent Flow (m³) | 43,358 | 36,781 | 44,300 | 49,555 | 38,680 | 29,580 | 27,277 | 26,821 | 23,194 | 25,685 | 27,215 | 36,283 |

**Graph 2: Influent/Effluent Daily Minimum, Maximum and Average Flows**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min ($m^3$/day) | 850 | 835 | 877 | 1085 | 862 | 794 | 775 | 756 | 665 | 599 | 789 | 897 |
| Max ($m^3$/day) | 3509 | 2837 | 2549 | 3397 | 2785 | 1656 | 1060 | 1071 | 865 | 1064 | 1164 | 1761 |
| Avg($m^3$/day) | 1399 | 1314 | 1429 | 1652 | 1248 | 986 | 880 | 865 | 773 | 829 | 907 | 1170 |

**Graph 3: Historical Influent/Effluent Flows from 2013 to 2023**



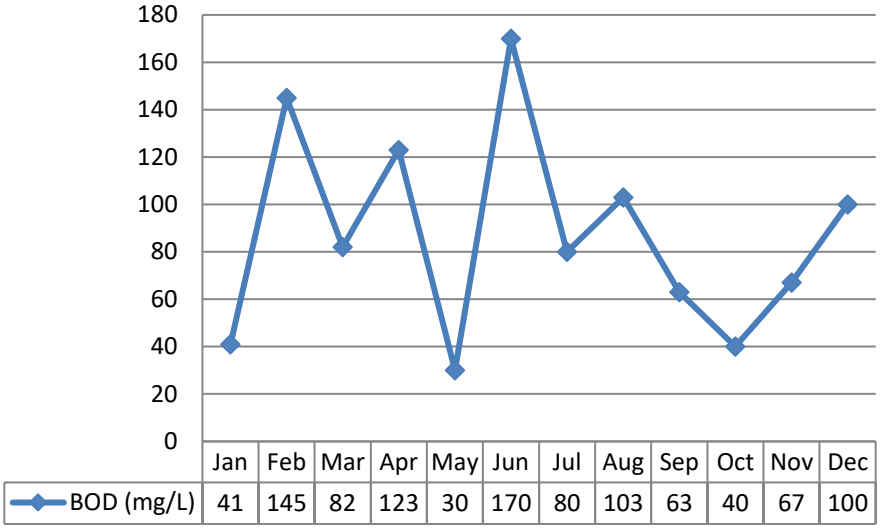

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Influent/Effluent Flow ($m^3$) | 408,263 | 404,553 | 374,327 | 382,636 | 473,489 | 408,287 | 415,037 | 387,815 | 395,861 | 422,498 | 408,729 |

## Influent Monitoring - Sewage Characteristics

### Biochemical Oxygen Demand (BOD5)

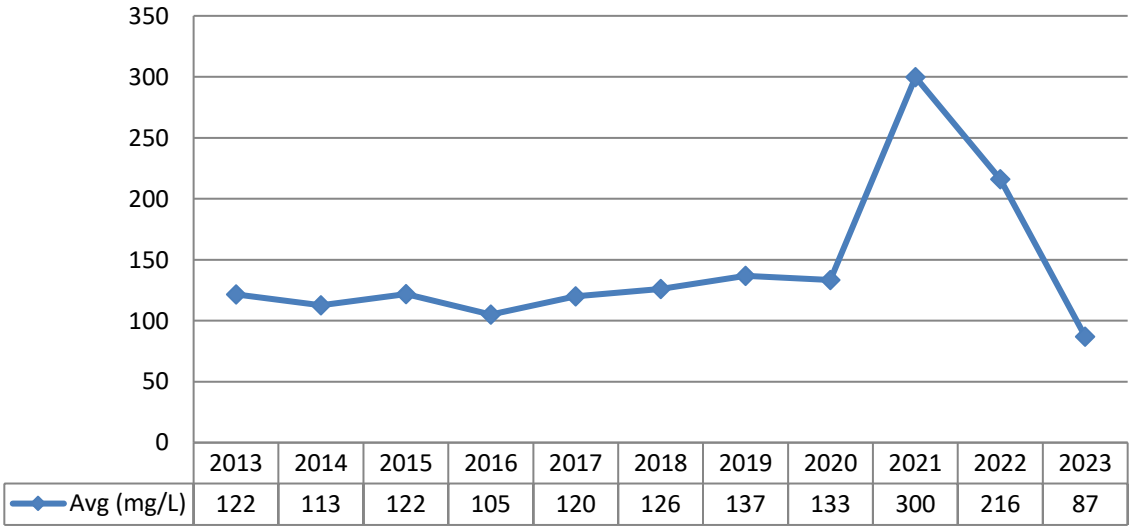
ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Biochemical Oxygen Demand (BOD5). The Biochemical Oxygen Demand (BOD5) monthly average results ranged from 30 mg/L to 170 mg/L.

**Graph 4: 2023 Monthly BOD5 Influent Concentration Comparisons**




**Biochemical Oxygen Demand Historical Trends**

**Graph 5: Historical Influent Biochemical Oxygen Demand Concentration Comparisons**

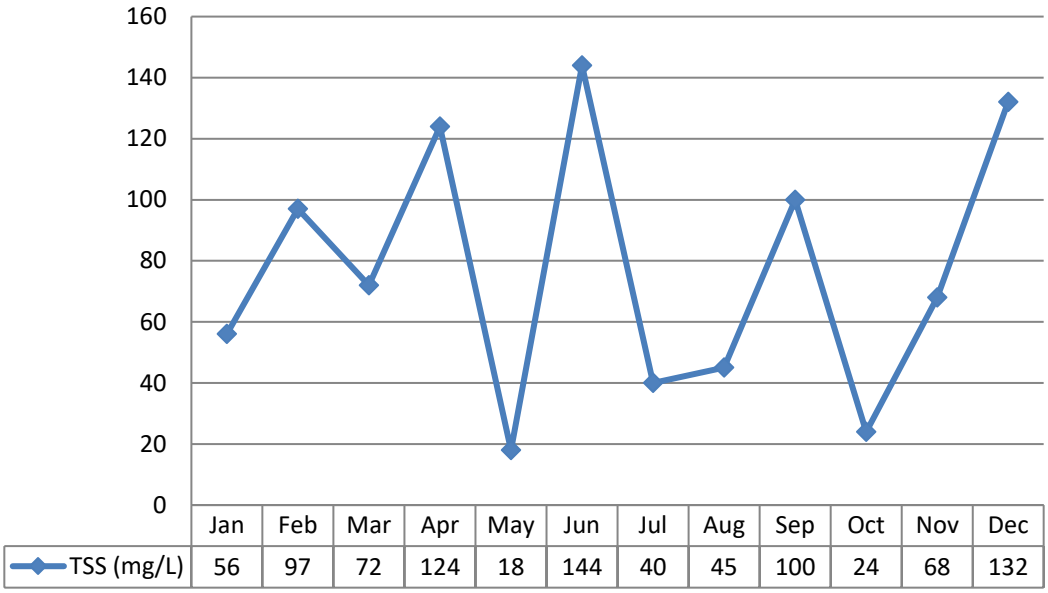



The Biochemical Oxygen Demand (BOD5) annual average has been relatively consistent for the past ten years but has experienced an increase in 2021 and 2022 with a decrease in 2023.

**Total Suspended Solids**

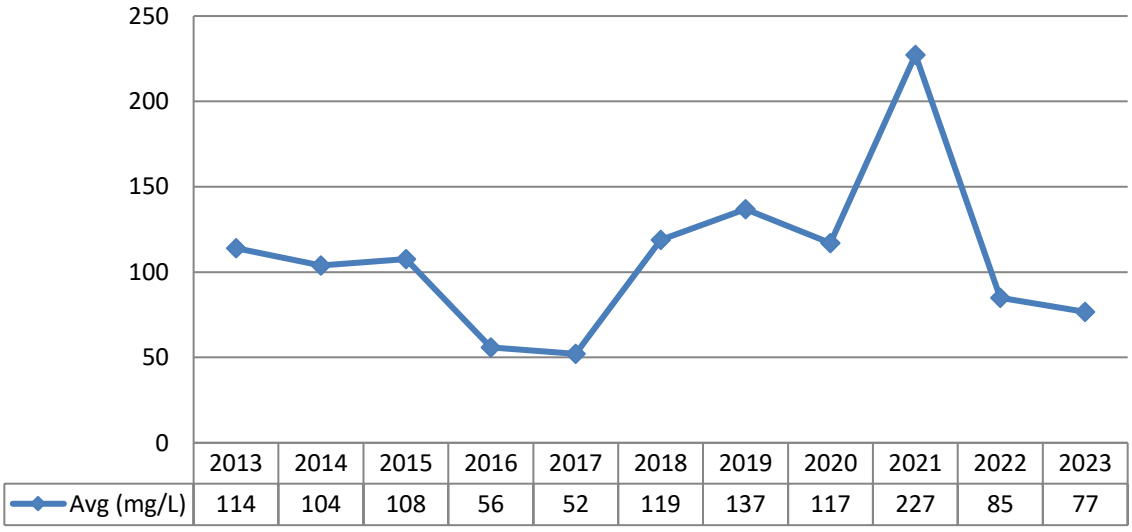
ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Total Suspended Solids. The monthly results ranged from 18mg/L to 144mg/L.

**Graph 6: 2023 Monthly Total Suspended Solids Influent Concentration Comparisons**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TSS (mg/L) | 56 | 97 | 72 | 124 | 18 | 144 | 40 | 45 | 100 | 24 | 68 | 132 |

**Graph 7: Historical Influent Total Suspended Solids Concentration Comparisons**




| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg (mg/L) | 114 | 104 | 108 | 56 | 52 | 119 | 137 | 117 | 227 | 85 | 77 |

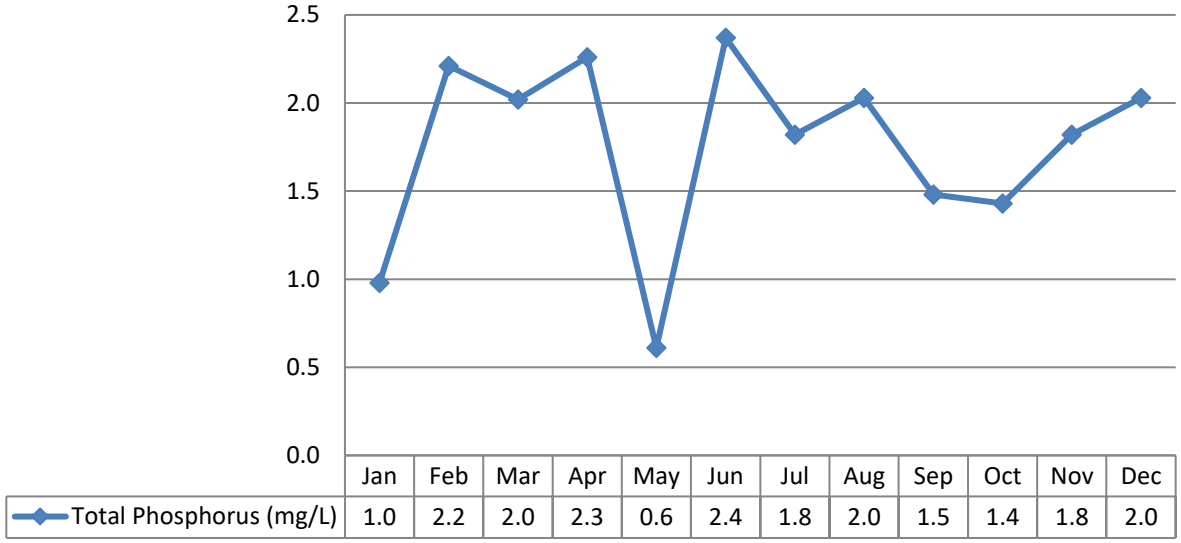
## Total Suspended Solids Historical Review

The Total Suspended Solids annual average has been between 52mg/L and 227mg/L showing a slight decrease in 2016 - 2017, an increase in 2021 and a decrease in 2022 and 2023.

## Total Phosphorus

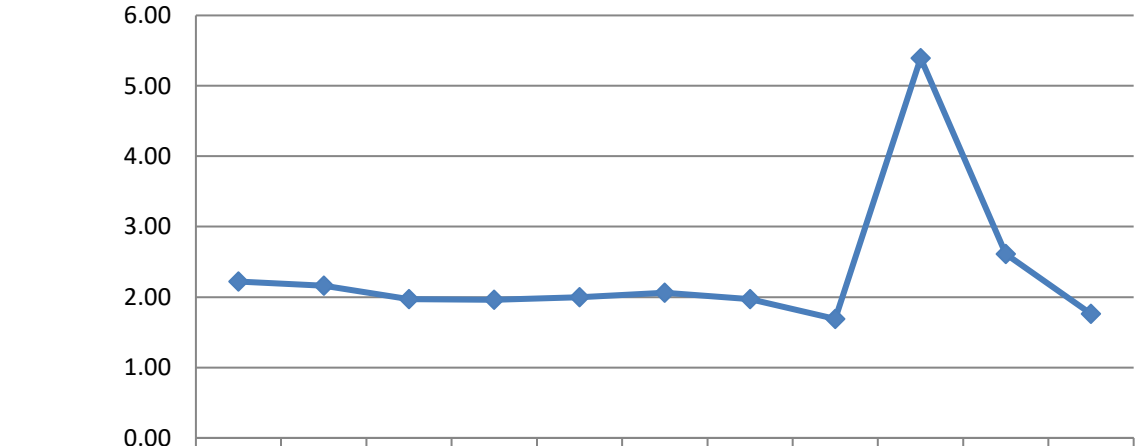
ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Total Phosphorus. The monthly results ranged from 0.98mg/L to 2.37mg/L.

**Graph 8: 2023 Monthly Total Phosphorus Influent Concentration Comparisons**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus (mg/L) | 1.0 | 2.2 | 2.0 | 2.3 | 0.6 | 2.4 | 1.8 | 2.0 | 1.5 | 1.4 | 1.8 | 2.0 |

**Graph 9: Historical Influent Total Phosphorus Concentration Comparisons**




| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Avg (mg/L) | 2.22 | 2.16 | 1.97 | 1.96 | 2.00 | 2.06 | 1.97 | 1.69 | 5.39 | 2.61 | 1.76 |

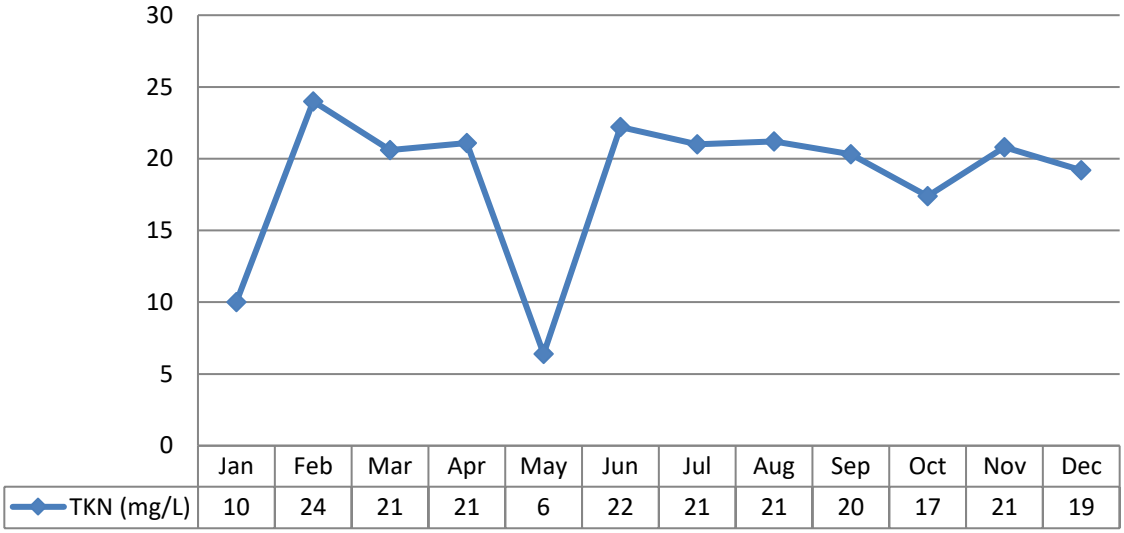
## Total Phosphorus Historical Trends

The Total Phosphorus annual average in the raw has trended downward since 2012 decreasing from 2.59 mg/L to 1.69mg/L; however, experienced an increase in 2021 while 2022 and 2023 concentration showed a decrease.

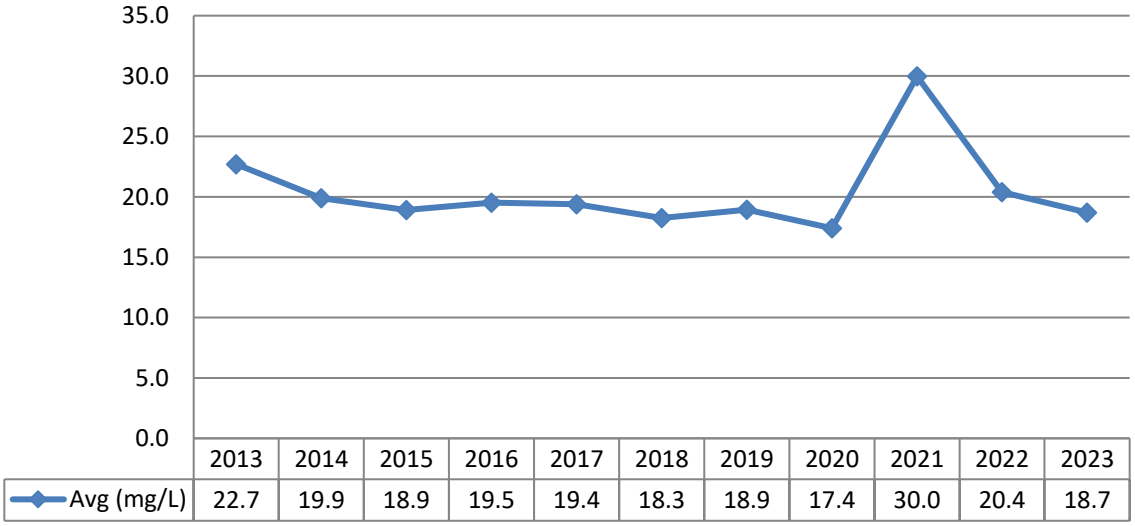
## Total Kjeldahl Nitrogen (TKN)

ECA No. 3688-BW3RGB requires at least one composite sample be collected and analyzed monthly for Total Kjeldahl Nitrogen. The monthly Total Kjeldahl Nitrogen results ranged from 6.4mg/L to 22.3mg/L.

**Graph 10: 2023 Monthly Total Kjeldahl Nitrogen Influent Concentration Comparisons**




**Graph 11: Historical Influent Total Kjeldahl Nitrogen Concentration Comparisons**




**Total Kjeldahl Nitrogen Historical Review**

The Total Kjeldahl Nitrogen annual average was fairly consistent with a decreasing trend from above 22.7 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.

Refer to **Appendix I** for Performance Assessment Report which summarizes Influent (raw) BOD5, TSS, TP, and TKN Results.

**(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 a 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 2023 is summarized below and compared to ECA No. 3688-BW3RGB.

Flows are continuous 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 2023 was 408,729m³. The effluent flow summary and interpretation are included in a. above with the influent flow summary and interpretation.

**Carbonaceous Biochemical Oxygen Demand (CBOD5) and Total Suspended Solids (TSS)**

ECA No. 3688-BW3RGB has an annual average concentration limit of 25mg/L for CBOD5 and TSS. The annual average results for 2023 are presented in the following table.

**Table 1: CBOD5 and Suspended Solids 2023 Effluent Concentration Results Comparison to Limit**

| Effluent Parameter | Annual Average Limit (mg/L) | Annual Average (mg/L) | Compliant Y/N |
|---|---|---|---|
| CBOD5 | 25 | 2.95 | Y |
| Total Suspended Solids | 25 | 7.33 | Y |

ECA No. 3688-BW3RGB has an annual average concentration objective of 15 mg/L for CBOD5 and TSS. The annual average results for 2023 are presented in the following table.

**Table 2: CBOD5 and Suspended Solids 2023 Effluent Concentration Results Comparison to Objectives**

| Effluent Parameter | Annual Average Objective (mg/L) | Annual Average (mg/L) | Objective Met Y/N |
|---|---|---|---|
| CBOD5 | 15 | 2.95 | Y |
| Total Suspended Solids | 15 | 7.33 | Y |

ECA No. 3688-BW3RGB has an annual average daily effluent loading limit of 45.0 kg/day for CBOD5 and TSS. The annual average daily loading results for 2023 are presented in the following table.

**Table 3: CBOD5 and Suspended Solids 2023 Effluent Loading Results Comparison to Limits**

| Effluent Parameter | Annual Average Daily Loading Limit (mg/L) | Annual Average Daily Loading (mg/L) | Compliant Y/N |
|---|---|---|---|
| CBOD5 | 45 | 3.31 | Y |
| Total Suspended Solids | 45 | 8.21 | 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 2023 were calculated as required. The plant had emergency partial bypassing of the sand filters due to weather occurring December 31, 2022- January 6, 2023 and April 05 – 11, 2023. Bypass and Overflow information is included in item 'j' of this report. Results are presented in the following table.

**Table 4: Total Phosphorus 2023 Monthly Average Concentrations Comparison to Limit**

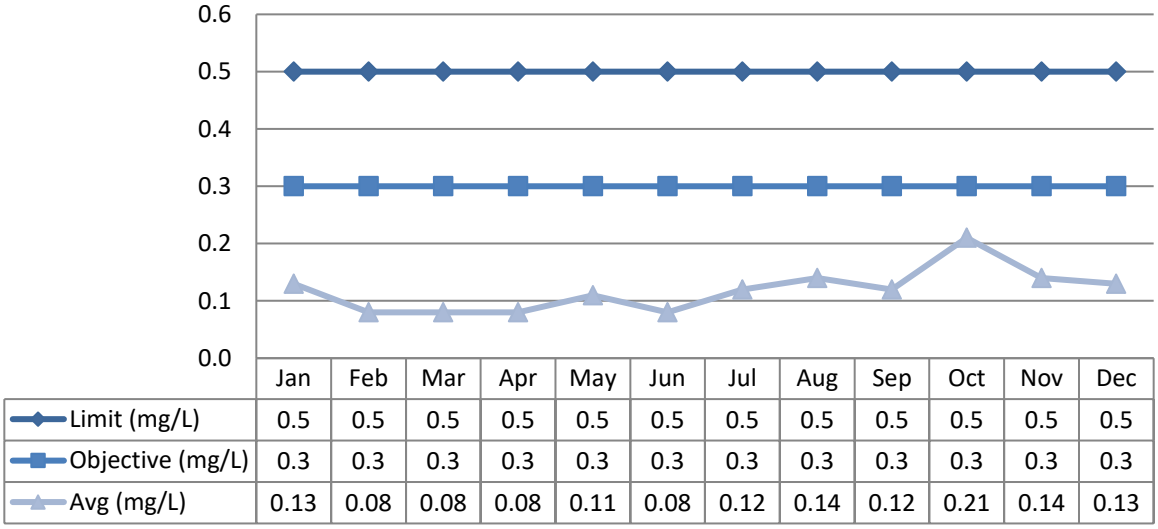
| Month | Monthly Average Limit (mg/L) | Effluent Monthly Average (mg/L) | Compliant Y/N |
|---|---|---|---|
| **January** | 0.5 | 0.13 | N |
| **February** | 0.5 | 0.08 | Y |
| **March** | 0.5 | 0.08 | Y |
| **April** | 0.5 | 0.08 | Y |
| **May** | 0.5 | 0.11 | Y |
| **June** | 0.5 | 0.08 | Y |
| **July** | 0.5 | 0.12 | Y |
| **August** | 0.5 | 0.14 | Y |
| **September** | 0.5 | 0.12 | Y |
| **October** | 0.5 | 0.21 | Y |
| **November** | 0.5 | 0.14 | Y |
| **December** | 0.5 | 0.13 | Y |

ECA No. 3688-BW3RGB has a monthly average concentration objective of 0.3 mg/L for Total Phosphorus. The monthly average results for 2023 were calculated as required and are presented in the following table.

**Table 5: Total Phosphorus 2023 Monthly Average Concentrations Comparison to Objective**

| Month | Monthly Average Objective (mg/L) | Effluent Monthly Average (mg/L) | Objective Met Y/N |
|---|---|---|---|
| **January** | 0.3 | 0.13 | Y |
| **February** | 0.3 | 0.08 | Y |
| **March** | 0.3 | 0.08 | Y |
| **April** | 0.3 | 0.08 | Y |
| **May** | 0.3 | 0.11 | Y |
| **June** | 0.3 | 0.08 | Y |
| **July** | 0.3 | 0.12 | Y |
| **August** | 0.3 | 0.14 | Y |
| **September** | 0.3 | 0.12 | Y |
| **October** | 0.3 | 0.21 | Y |
| **November** | 0.3 | 0.14 | Y |
| **December** | 0.3 | 0.13 | Y |

**Graph 12: 2023 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) | 0.13 | 0.08 | 0.08 | 0.08 | 0.11 | 0.08 | 0.12 | 0.14 | 0.12 | 0.21 | 0.14 | 0.13 |

ECA No. 3688-BW3RGB has a monthly average daily loading limit of 0.9 kg/d for Total Phosphorus. The monthly average results for 2023 were calculated as required for each approval and are presented in the following table.

**Table 6: Total Phosphorus 2023 Monthly Average Daily Loading Comparison to Limit**

| Month | Monthly Average Daily Loading Limit (kg/d) | Effluent Monthly Average Daily Loading (kg/d) | Compliant Y/N |
|---|---|---|---|
| **January** | 0.9 | 0.19 | Y |
| **February** | 0.9 | 0.11 | Y |
| **March** | 0.9 | 0.11 | Y |
| **April** | 0.9 | 0.13 | Y |
| **May** | 0.9 | 0.14 | Y |
| **June** | 0.9 | 0.07 | Y |
| **July** | 0.9 | 0.11 | Y |
| **August** | 0.9 | 0.12 | Y |
| **September** | 0.9 | 0.09 | Y |
| **October** | 0.9 | 0.18 | Y |
| **November** | 0.9 | 0.12 | Y |
| **December** | 0.9 | 0.16 | Y |

**Total Ammonia Nitrogen (TAN)**

ECA No. 3688-BW3RGB has monthly Total Ammonia Nitrogen (TAN) concentration limits a based on seasonal periods within the annual year. The following table compares monthly results to the limits for seasonal concentrations. The plant had emergency partial bypassing of the sand filters due to weather occurring December 31, 2022- January 6, 2023 and April 05 – 11, 2023. Bypass and Overflow information is included in item j of this report.

**Table 7: Total Ammonia Nitrogen 2023 Monthly Average Concentration Comparison to Limits**

| Month | Monthly Average Concentration Limit (mg/L) | Effluent Monthly Average (mg/L) | Compliant Y/N |
|---|---|---|---|
| **January** | 7.0 | <0.10 | Y |
| **February** | 7.0 | 0.20 | Y |
| **March** | 7.0 | 1.68 | Y |
| **April** | 3.5 | <0.92 | Y |
| **May** | 3.5 | 1.56 | Y |
| **June** | 3.5 | <0.30 | Y |
| **July** | 3.5 | <0.10 | Y |
| **August** | 3.5 | <1.42 | Y |

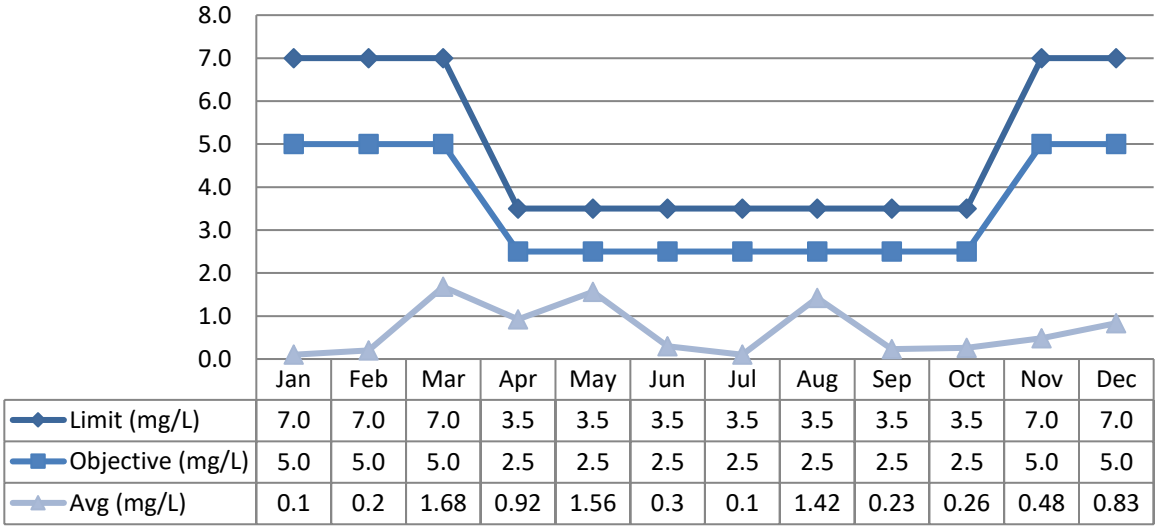
| Month | Monthly Average Concentration Limit (mg/L) | Effluent Monthly Average (mg/L) | Compliant Y/N |
|---|---|---|---|
| **September** | 3.5 | <0.23 | Y |
| **October** | 3.5 | <0.26 | Y |
| **November** | 7.0 | <0.48 | Y |
| **December** | 7.0 | <0.83 | Y |

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. As previously noted, the plant had emergency partial bypassing of the sand filters due to weather occurring December 31, 2022- January 6, 2023 and April 05 – 11, 2023. Bypass and Overflow information is included in item j of this report.

**Table 8: Total Ammonia Nitrogen 2023 Monthly Average Concentration Comparison to Objectives**

| Month | Monthly Average Concentration Objective (mg/L) | Effluent Monthly Average (mg/L) | Objective Met Y/N |
|---|---|---|---|
| **January** | 5.0 | <0.10 | Y |
| **February** | 5.0 | 0.20 | Y |
| **March** | 5.0 | 1.68 | Y |
| **April** | 2.5 | <0.92 | Y |
| **May** | 2.5 | 1.56 | Y |
| **June** | 2.5 | <0.30 | Y |
| **July** | 2.5 | <0.10 | Y |
| **August** | 2.5 | <1.42 | Y |
| **September** | 2.5 | <0.23 | Y |
| **October** | 2.5 | <0.26 | Y |
| **November** | 5.0 | <0.48 | Y |
| **December** | 5.0 | <0.83 | Y |

**Graph 13: 2023 Monthly Final Effluent Total Ammonia Nitrogen Concentration Comparisons**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Limit (mg/L) | 7.0 | 7.0 | 7.0 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 7.0 | 7.0 |
| Objective (mg/L) | 5.0 | 5.0 | 5.0 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 5.0 | 5.0 |
| Avg (mg/L) | 0.1 | 0.2 | 1.68 | 0.92 | 1.56 | 0.3 | 0.1 | 1.42 | 0.23 | 0.26 | 0.48 | 0.83 |

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 results. As previously noted, the plant had emergency partial bypassing of the sand filters due to weather occurring December 31, 2022- January 6, 2023 and April 05 – 11, 2023. Bypass and Overflow information is included in item j of this report.

**Table 9: Total Ammonia Nitrogen 2023 Monthly Average Daily Loading Results Comparison to Limits**

| Month | Monthly Average Daily Loading Limit (kg/d) | Effluent Monthly Average Daily Loading (kg/d) | Compliant Y/N |
|---|---|---|---|
| **January** | 12.6 | <0.14 | Y |
| **February** | 12.6 | <0.26 | Y |
| **March** | 12.6 | <2.39 | Y |
| **April** | 6.3 | <2.65 | Y |
| **May** | 6.3 | <1.95 | Y |
| **June** | 6.3 | <0.30 | Y |
| **July** | 6.3 | <0.09 | Y |
| **August** | 6.3 | <1.23 | Y |
| **September** | 6.3 | <0.17 | Y |
| **October** | 6.3 | <0.22 | Y |
| **November** | 12.6 | <0.43 | Y |
| **December** | 12.6 | <0.97 | Y |

## E. Coli

ECA No. 3688-BW3RGB has a compliance monthly geometric mean density limit of 200 cfu/100mL. 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 dampen the effect of very high or low values which might bias the mean if a straight average (arithmetic mean) were calculated.

The following provides monthly geometric mean density values of E. Coli in effluent for each month in 2023.

**Table 10: E. Coli 2023 Results Comparison to Limit**

| Month | Monthly Geometric Mean Density of E. Coli (org/100mL) | Compliant with Limit of 200 cfu/100 mL Y/N |
|---|---|---|
| **January** | 2 | Y |
| **February** | 1 | Y |
| **March** | 3 | Y |
| **April** | 4 | Y |
| **May** | 2 | Y |
| **June** | 2 | Y |
| **July** | 2 | Y |
| **August** | 2 | Y |
| **September** | 2 | Y |
| **October** | 2 | Y |
| **November** | 2 | Y |
| **December** | 4 | Y |

ECA No. 3688-BW3RGB has a monthly geometric mean E. Coli objective of 150 cfu/100mL. The following provides monthly geometric mean density values of E. Coli in effluent for each month in 2023 compared to the objective.

**Table 11: E. Coli 2023 Results Comparison to Objective**

| Month | Monthly Geometric Mean Density of E. Coli (org/100mL) | Met Objective of 150 cfu/100mL Y/N |
|---|---|---|
| **January** | 2 | Y |
| **February** | 1 | Y |
| **March** | 3 | Y |
| **April** | 4 | Y |
| **May** | 2 | Y |
| **June** | 2 | Y |

| Month | Monthly Geometric Mean Density of E. Coli (org/100mL) | Met Objective of 150 cfu/100mL Y/N |
|---|---|---|
| **July** | 2 | Y |
| **August** | 2 | Y |
| **September** | 2 | Y |
| **October** | 2 | Y |
| **November** | 2 | Y |
| **December** | 4 | Y |

**pH**

ECA No. 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 2023 was within the compliance limits. A summary of effluent pH measurements recorded in 2023 is provided in **Appendix I**.

**Table 12: pH 2023 Results Comparison to Limit**

| Limit 6.0 – 9.5 | ECA No. 3688-BW3RGB Every Single Sample Result Compliant Y/N |
|---|---|
| Results range: 6.42 – 7.81 | Y |

ECA No. 3688-BW3RGB has a pH objective within the range of 6.0 to 9.5, inclusive, for every single sample result.

**Table 13: pH 2023 Results Comparison to Objective**

| Objective 6.5 – 9.0 | ECA No. 3688-BW3RGB Every Single Sample Result Objective Met Y/N |
|---|---|
| Results range: 6.42 – 7.81 | N |

Field pH results were below the lower objective of 6.5 as follows:

June 08 6.42
June 26 6.48

**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 the final effluent CBOD5, Total Ammonia Nitrogen, Total Phosphorus and Total Suspended Solids were met. E. Coli results met the limits and objectives of ECA No. 3688-BW3RGB. All results for pH met the limits required by ECA No. 3688-BW3RGB; however, two results for field pH were below the lower objective of 6.5 as noted earlier in this report.

Refer to **Appendix I** for Performance Assessment Report and Summaries of Effluent CBOD5, TSS, TP, TAN, TKN, E. Coli, and pH Results. Also included in **Appendix I** are the un-ionized ammonia results for 2023.

**(c)** a summary of all operating issues encountered and corrective actions taken;

The following table describes all operating problems encountered during the reporting period and the corrective actions taken. Please note, the first challenge noted in the below table was reported in the Fenelon Falls WPCP 2022 Annual Report but a portion of the challenge occurred in 2023, see below for details.

**Table 14: Summary of Operating Issues**

| Date | Challenges | Corrective Actions |
|---|---|---|
| **Dec 31 2022 – Jan 6, 2023** | Unseasonably warm temperatures, heavy rain/storm events after significant snowfall accumulation resulted in high flows – secondary treatment and disinfection provided; however, sand filters hydraulically overloaded and required partial bypassing. | Flows, process monitored throughout event – samples collected and analyzed as per ECA requirements. Detention tank utilized, additional staff called in to assist. Notifications made to MOH and SAC. |
| **April 5-11, 2023** | A heavy rainfall event and snow melt resulted in high flows-secondary treatment and disinfection provided; however, sand filters hydraulically overloaded and required partial bypassing | Flows, process monitored throughout event – samples collected and analyzed as per ECA requirements. Detention tank utilized, additional staff called in to assist, additional hauling by licensed sewage hauler from Francis St. SPS to plant. Notifications made to MOH and SAC. |
| **April 5-6, 2023** | A heavy rainfall event and snow melt caused high flows resulting in raw sewage overflow at Colborne St. SPS. | Monitored flows, detention tank utilized, additional staff called in to assist, additional hauling by licensed sewage hauler from Francis St SPS to plant to help reduce volume. Notifications made to MOH and SAC. |

**(d)** a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;

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 preventive 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** for work order and maintenance summary.

**(e)** a summary of any effluent quality assurance or control measures undertaken;

Effluent quality assurance is maintained in several ways. Laboratory samples are sent to accredited laboratory (SGS Lakefield) for analysis of all effluent parameters. Sampling calendars issued to the operator denote frequency of sampling and these calendars are submitted to the Process Compliance Technician at the end of each month. 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 then 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 our 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 2023 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 professionals at the hub, region and corporate level.
Continuous phosphorus removal is achieved with the dosing of aluminum sulphate. A summary of its use and dosing rates for 2023 is provided in the following table.

**Table 15: Coagulant Use and Dosing 2023**

| Month | Aluminum Sulphate (kg) | Aluminum Sulphate Average Dosage (mg/L) |
|---|---|---|
| **January** | 1927.58 | 52.25 |
| **February** | 1472.70 | 52.41 |
| **March** | 1887.80 | 48.91 |
| **April** | 1653.50 | 35.59 |
| **May** | 1817.90 | 50.83 |
| **June** | 1710.60 | 60.76 |
| **July** | 1580.00 | 58.16 |
| **August** | 1669.50 | 62.64 |
| **September** | 1756.80 | 75.99 |
| **October** | 1806.00 | 71.14 |
| **November** | 1700.60 | 63.02 |
| **December** | 1916.98 | 54.90 |

**(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 2023 calibration reports.

**(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 2023:

1. Development of the sampling plan which meets or exceeds the minimum sample requirements as required in the ECA;
2. 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;

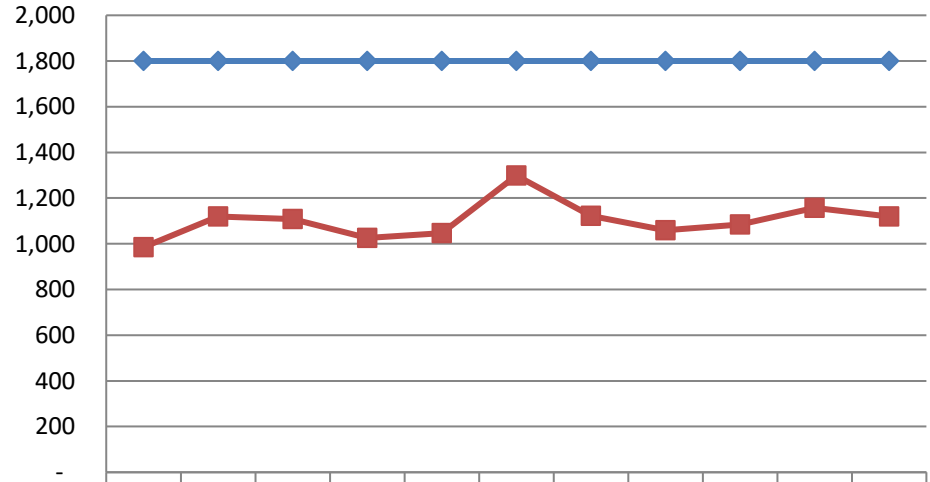
3. Influent monitoring;
4. Ensuring that chemicals are being dosed as required;
5. Calibration of lab equipment;
6. Annual calibration of flow meters;
7. Oxidation ditch increased DO monitoring;
8. Ensure UV is providing disinfection, both banks on regardless of flow rates;
9. Performing preventative maintenance activities in accordance with work order schedules;
10. Performing in-house lab tests;
11. Monitoring treatment processes by performing regular laboratory analysis and reviewing of lab results;
12. Biosolids monitoring

Effluent design objectives were met 100% of the time for CBOD, Total Suspended Solids, TAN, Total Phosphorus monthly concentration and E. Coli. The pH objective was met 98.9% in 2023. Two partial sand filter bypasses that occurred in January and April were sampled as required by ECA No. 3688-BW3RGB. One overflow occurred at the Colborne St. SPS in April and was sampled as required by ECA No. 141-W601. Details of the bypasses and sampling results are included under Condition 'j'.

The ECA states the plant has a Rated Capacity of 1,800 m³/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 2023 is 1,119.81 m³/day or 62% 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**




| | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2020 | 2021 | 2022 | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 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) | 985 | 1,119 | 1,108 | 1,025 | 1,046 | 1,299 | 1,122 | 1,060 | 1,084 | 1,158 | 1,120 |

**(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 2,389.5 $m^3$. This is a slight decrease from 2022 when 2,439.6$m^3$ 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 Shepherds Environmental in 2023 and will be again in 2024. The Biosolids are hauled to fields with a valid NASM Plan (NASM Plan 23771) or to A710160 Shepherds Environmental Storage Structure.

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

**Table 16: Complaints Received Summary for 2023**

| Date | Issue | Actions Taken |
|---|---|---|
| | None received for 2023 | |

**(j)** a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;

The following table summarizes all Bypasses, Overflows and other situations outside of Normal Operating Conditions and spills and abnormal discharge events that occurred in 2023. The Operations Event Forms and sampling results for these events are provided in **Appendix V**. All were reported to MOH, MECP and the City.

**Table 17: 2023 Summary of Events as per Condition 11.4 j**

| Date 2023 | Type of Event | Total Volume ($m^3$) | Disinfect (Y/N) | Samples Collected (Y/N) | Reason |
|---|---|---|---|---|---|
| Dec 31, 2022 – Jan 6, 2023 | Partial Sand Filter Bypass | 3,381 | Y | Y | Wet weather event |
| April 5 – 11, 2023 | Partial Sand Filter Bypass | 2,417 | Y | Y | Wet weather event |

| Date 2023 | Type of Event | Total Volume ($m^3$) | Disinfect (Y/N) | Samples Collected (Y/N) | Reason |
|---|---|---|---|---|---|
| April 5 – 6, 2023 | Colborne St. SPS Overflow | 2,220 | N | Y | Wet weather event |

ECA No. 3688-BW3RGB requires submission of quarterly summary reports of any Bypass Events and Overflows Events. Copies of these reports are provided in **Appendix V**.

**(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 2023 to the District Manager as a result of Schedule B, Section 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 Fenelon Falls Sewage Pumping Station #1 Ellice St. SCADA programming was updated in 2023 to include a high flow mode to allow more than one pump to operate at one time automatically to send wastewater to the Fenelon Falls Water Pollution Control Plant once a sand filter bypass has been initiated. Previous to the updated SCADA programming, only one pump could be operated at one time automatically at the Fenelon Falls Sewage Pumping Station #1 Ellice St. More than one pump could be operated manually, with operations monitoring levels and flows.

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 4$^{th}$ 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. In 2023 the entire collection system was flushed and CCTV inspected. The CCTV inspection records were reviewed by an engineering consultant who prepared a deficiency list, and assigned a priority ranking to each one. Any repair work identified will be tendered in 2024. Below is a summary of operational manhole rehabilitation that was undertaken in 2023 to help reduce I&I.

**Manhole Rehabilitation**

MH2133 John St. – Manhole Grouting

MH2026 91 Queen St. – Replace 14” Moduloc + New Frame and Cover
MH2054 Queen St. @ John St. – Replace 12” Moduloc + New Frame and Cover
MH2036 Clifton @ Head St. – Replace 6” Moduloc + New Frame and Cover
MH2094 93 Francis St. East – Replace 8” Moduloc + New Frame and Cover
MH2015 Lindsay St @ Green St. – Replace 8” Moduloc + New Frame and Cover
MH2182 13 Eva St. – Replaced cracked manhole lid
MH2043 8 Ellice St. – Replace Frame and Cover
MH2677 68 Ellice St. – Replace Frame and Cover

**Rain Bladder Installs**
MH2117 Francis St. W
Market St. @ Francis St. W
140 Lindsay St.
John St. (between Francis and Bond)

**(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 18: 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 19: 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 20: Number of Raw Sewage Parameters Tested in 2023**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $BOD_5$ | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| TSS | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Total P | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| TKN | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

**Table 21: Number of Final Effluent Parameters Tested in 2023**

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $cBOD_5$ | 10 | 4 | 4 | 10 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| TSS | 10 | 4 | 4 | 10 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| Total P | 10 | 4 | 4 | 10 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| Total Ammonia Nitrogen | 10 | 4 | 4 | 10 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| TKN | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| Nitrite as N | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| Nitrate as N | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| E. Coli | 5 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 4 |
| pH | 17 | 13 | 15 | 13 | 16 | 15 | 15 | 16 | 13 | 15 | 14 | 15 |
| Temp $^oC$ | 17 | 13 | 15 | 13 | 16 | 15 | 15 | 16 | 13 | 15 | 14 | 15 |
| Unionized Ammonia (calculated) | 10 | 4 | 4 | 4 | 5 | 4 | 4 | 5 | 4 | 5 | 4 | 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. There following are deviations from the scheduled sampling calendar in 2023:

January - additional sampling during partial sand filter bypassing
April - Sample day shifted due to timing of ending of partial sand filter bypass event/bypass sampling.
October - Sample day shifted due to the new statutory holiday of the National Day of Truth and Reconciliation

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

**Table 22: 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<br>- Arsenic<br>- Cadmium<br>- Cobalt<br>- Chromium<br>- Copper<br>- Lead<br>- Mercury<br>- Molybdenum<br>- Nickel<br>- Potassium<br>- Selenium<br>- Zinc | Grab | Quarterly |

**Table 22: Number of Sludge/Biosolids Parameters Tested in 2023**

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

| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Selenium | 0 | 2 | 1 | 0 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |
| Zinc | 0 | 2 | 1 | 0 | 2 | 1 | 1 | 2 | 1 | 1 | 1 | 1 |

Sludge/biosolids samples are collected typically once per month when sludge/biosolids are hauled from the facility with the exception of January and April 2023. Sludge was not required to be hauled during these months. This meets the required minimum number samples at the specified location and frequency during the reporting period as required by ECA No. 3688-BW3RGB Schedule D.

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

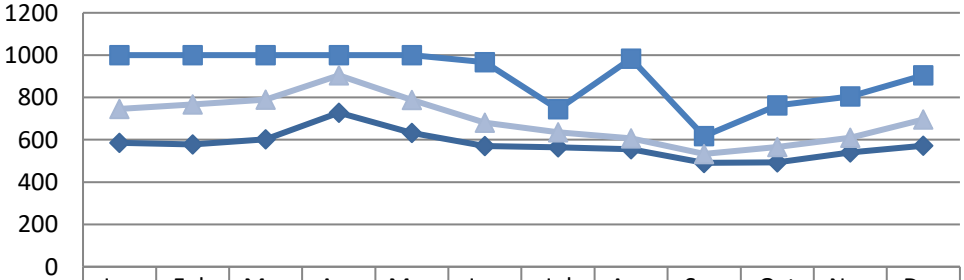
## Environmental Compliance Approval (ECA) No. 141-W601

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

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 graphs for a summary of the flow meter data gathered at the Fenelon Falls Sewage Pumping Station 2 & 3:

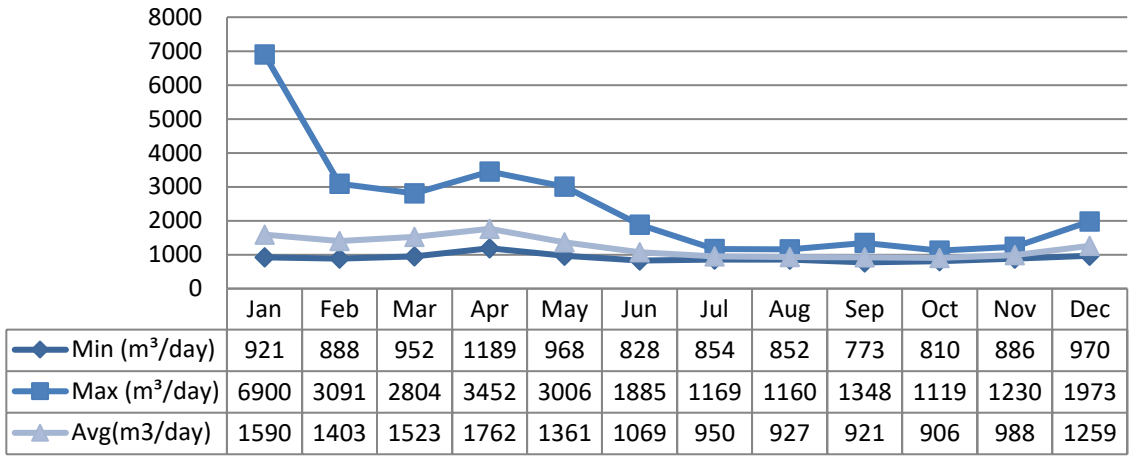
**Graph 15: Fenelon Falls Sewage Pumping Station 2 Daily Minimum, Maximum and Average Flows**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min (m³/day) | 585 | 578 | 602 | 728 | 633 | 570 | 564 | 556 | 491 | 493 | 540 | 572 |
| Max (m³/day) | 1000 | 1000 | 1000 | 1000 | 1000 | 966 | 744 | 983 | 617 | 762 | 805 | 905 |
| Avg(m³/day) | 747 | 768 | 790 | 904 | 789 | 681 | 635 | 607 | 533 | 566 | 610 | 696 |

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 3 Daily Minimum, Maximum and Average Flows**




| | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Min (m³/day) | 921 | 888 | 952 | 1189 | 968 | 828 | 854 | 852 | 773 | 810 | 886 | 970 |
| Max (m³/day) | 6900 | 3091 | 2804 | 3452 | 3006 | 1885 | 1169 | 1160 | 1348 | 1119 | 1230 | 1973 |
| Avg(m3/day) | 1590 | 1403 | 1523 | 1762 | 1361 | 1069 | 950 | 927 | 921 | 906 | 988 | 1259 |

Refer to Graph 1: 2023 Influent/Effluent Flow Monthly Totals, Graph 2: Influent/Effluent Daily Minimum, Maximum and Average Flows and Graph 3: Historical Influent/Effluent Flows from 2013 to 2023 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 show increases in maximum daily flows when high flow events occurred in January and April. The wet weather flow detention tank located at the Fenelon Falls Sewage Pumping Station 1 was utilized in 2023.

### Pumping Station Overflow Monitoring Data

The Fenelon Falls Sewage Collection system had one Overflow in 2023. Please see Table 17: 2023 Summary of Events as per Condition 3.4.1 (b) and 4.2.1 along with The Operations Event Form and sampling results for the event provided in **Appendix V**. Below is a summary of the sample results from the samples collected during the one Overflow in 2023:

**Table 23: 2023 Overflow Sample Summary**

| Date | BOD (mg/L) | TSS (mg/L) | Total Phosphorus (mg/L) | Total Kjeldahl Nitrogen (mg/L) | E. Coli (org/100mL) |
|---|---|---|---|---|---|
| **April 5, 2023** | 29.0 | 21.0 | 0.66 | 5.1 | NDOGEC* |
| **April 6, 2023** | 26.0 | 36.0 | 1.04 | 8.7 | NDOGEC* |

*NDOGEC: No Data: Overgrown with E. Coli

### Monitoring Data Evaluation

As the annual average daily influent flow of the Fenelon Falls WWTP was 1,119.81 m³/day or 62% of the Rated Capacity and the single Overflow event within the sewage

collection system was caused by a heavy rainfall event and melting snow, the monitoring data does not indicate the need for future modifications at this time.

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

**Table 24: 2023 Operating Problems & Corrective Actions**

| Date | Operating Problem | Corrective Action(s) |
|---|---|---|
| **April 5-6, 2023** | A heavy rainfall event and snow melt caused high flows resulting in raw sewage overflow at Colborne St. SPS. | Monitored flows, detention tank utilized, additional staff called in to assist, additional hauling by licensed sewage hauler from Francis St SPS to plant to help reduce volume.<br>Notifications made to MOH and SAC. |

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

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 preventive and corrective maintenance activities performed at the Fenelon Falls Water Pollution Control Plant, including the collection system, during 2023.

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

**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 16: Complaints Received Summary for 2023.

**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.**

There were no Alterations made to the Fenelon Falls Sewage Collection System in 2023.

**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 had one Overflow. Please see Table 17: 2023 Summary of Events as per Condition 11, 4(j) in ECA 3688-BW3RGB and The Operations Event Form and sampling results for the event is provided in **Appendix V**.

**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 4$^{th}$ 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. In 2023 the entire collection system was flushed and CCTV inspected. The CCTV inspection records were reviewed by an engineering consultant who prepared a deficiency list, and assigned a priority ranking to each one. Any repair work identified will be tendered in 2024. Below is a summary of operational manhole rehabilitation that was undertaken in 2023 to help reduce I&I.

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.

MH2133 John St. – Manhole Grouting
MH2026 91 Queen St. – Replace 14” Moduloc + New Frame and Cover
MH2054 Queen St. @ John St. – Replace 12” Moduloc + New Frame and Cover
MH2036 Clifton @ Head St. – Replace 6” Moduloc + New Frame and Cover
MH2094 93 Francis St. East – Replace 8” Moduloc + New Frame and Cover
MH2015 Lindsay St @ Green St. – Replace 8” Moduloc + New Frame and Cover
MH2182 13 Eva St. – Replaced cracked manhole lid
MH2043 8 Ellice St. – Replace Frame and Cover
MH2677 68 Ellice St. – Replace Frame and Cover
MH2117 Francis St. W – rain bladder installation
MH2120 Market St. @ Francis St. W – rain bladder installation
MH2174 140 Lindsay St. – rain bladder installation
MH2158 John St. (between Francis and Bond) – rain bladder installation

In 2024, there is a capital project to rehabilitate sections of the collection system that were identified as deficient in the CCTV inspections completed in 2023. This

work has a budget of $400,000. In addition, $35,000 has been budgeted for operational repairs.

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

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 Waterwater 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.

# Appendix I

## Performance Assessment Report

## Effluent Field pH

## Effluent Un-Ionized Ammonia Results

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

# Performance Assessment Report Standard ECA

From 1/1/2023 to 12/31/2023



## 5886 FENELON FALLS WASTEWATER TREATMENT FACILITY 110001612

| | 1 / 2023 | 2/ 2023 | 3/ 2023 | 4/ 2023 | 5/ 2023 | 6/ 2023 | 7/ 2023 | 8/ 2023 | 9/ 2023 | 10/ 2023 | 11/ 2023 | 12/ 2023 | <--Total--> | <--Avg--> | <--Max--> |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Flows** | | | | | | | | | | | | | | | |
| Raw Flow: Total - Raw m³/d | 43,358.00 | 36,781.00 | 44,300.00 | 49,555.00 | 38,680.00 | 29,580.00 | 27,277.00 | 26,821.00 | 23,194.00 | 25,685.00 | 27,215.00 | 36,283.00 | 408,729.00 | | |
| Raw Flow: Avg - Raw m³/d | 1,398.65 | 1,313.61 | 1,429.03 | 1,651.83 | 1,247.74 | 986.00 | 879.90 | 865.19 | 773.13 | 828.55 | 907.17 | 1,170.42 | | 1,119.81 | |
| Raw Flow: Max - Raw m³/d | 3,509.00 | 2,837.00 | 2,549.00 | 3,397.00 | 2,785.00 | 1,656.00 | 1,060.00 | 1,071.00 | 865.00 | 1,064.00 | 1,164.00 | 1,761.00 | | | 3,509.00 |
| Raw Flow: Count - Raw m³/d | 31.00 | 28.00 | 31.00 | 30.00 | 31.00 | 30.00 | 31.00 | 31.00 | 30.00 | 31.00 | 30.00 | 31.00 | 365.00 | | |
| Eff. Flow: Total - Eff m³/d | 43,358.00 | 36,781.00 | 44,300.00 | 49,555.00 | 38,680.00 | 29,580.00 | 27,277.00 | 26,821.00 | 23,194.00 | 25,685.00 | 27,215.00 | 36,283.00 | 408,729.00 | | |
| Eff. Flow: Avg - Eff m³/d | 1,398.65 | 1,313.61 | 1,429.03 | 1,651.83 | 1,247.74 | 986.00 | 879.90 | 865.19 | 773.13 | 828.55 | 907.17 | 1,170.42 | | 1,119.81 | |
| Eff. Flow: Max - Eff m³/d | 3,509.00 | 2,837.00 | 2,549.00 | 3,397.00 | 2,785.00 | 1,656.00 | 1,060.00 | 1,071.00 | 865.00 | 1,064.00 | 1,164.00 | 1,761.00 | | | 3,509.00 |
| Eff Flow: Count - Eff m³/d | 31.00 | 28.00 | 31.00 | 30.00 | 31.00 | 30.00 | 31.00 | 31.00 | 30.00 | 31.00 | 30.00 | 31.00 | 365.00 | | |
| **Biochemical Oxygen Demand: BOD5** | | | | | | | | | | | | | | | |
| Raw: Avg BOD5 - Raw mg/L | 41.00 | 145.00 | 82.00 | 123.00 | 30.00 | 170.00 | 80.00 | 103.00 | 63.00 | 40.00 | 67.00 | 100.00 | | 87.00 | 170.00 |
| 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 | | |
| **Carbonaceous Biochemical Oxygen Demand: CBOD** | | | | | | | | | | | | | | | |
| Eff: Avg cBOD5 - Final Effluent including Bypass mg/L | < 4.00 | < 2.75 | < 2.00 | < 3.00 | < 3.40 | < 2.25 | < 2.25 | < 2.00 | < 2.25 | < 3.40 | < 2.50 | < 3.50 | | < 2.95 | < 4.00 |
| Eff.Flow : Weighted Avg cBOD5 - Final Effluent including Bypass mg/L | < 3.44 | < 2.75 | < 2.00 | < 2.70 | < 3.40 | < 2.25 | < 2.25 | < 2.00 | 0.00 | 0.00 | 0.00 | 0.00 | | < 2.75 | < 3.44 |
| Eff: # of samples of cBOD5 - Final Effluent including Bypass mg/L | 10.00 | 4.00 | 4.00 | 10.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 63.00 | | |
| Loading: cBOD5 - Final Effluent including Bypass kg/d | < 5.595 | < 3.612 | < 2.858 | < 4.956 | < 4.242 | < 2.219 | < 1.980 | < 1.730 | < 1.740 | < 2.817 | < 2.268 | < 4.096 | | < 3.31 | < 5.59 |
| Loading Flow Weighted: cBOD5 - Final Effluent including Bypass kg/d | < 4.815 | < 3.612 | < 2.858 | < 4.466 | < 4.242 | < 2.219 | < 1.980 | < 1.730 | 0.000 | 0.000 | 0.000 | 0.000 | | < 3.08 | < 4.82 |
| **Total Suspended Solids: TSS** | | | | | | | | | | | | | | | |
| Raw: Avg TSS - Raw mg/L | 56.00 | 97.00 | 72.00 | 124.00 | 18.00 | 144.00 | 40.00 | 45.00 | 100.00 | 24.00 | 68.00 | 132.00 | | 76.67 | 144.00 |
| 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 | | |
| Eff: Avg TSS - Final Effluent including Bypass mg/L | 14.20 | 4.75 | 4.25 | < 5.30 | 6.20 | 6.00 | < 3.75 | 5.60 | 4.50 | 9.40 | 7.75 | 8.50 | | 7.33 | 14.20 |
| Eff.Flow : Weighted Avg TSS - Final Effluent including Bypass mg/L | 8.79 | 4.75 | 4.25 | < 5.57 | < 6.20 | < 6.00 | < 3.75 | < 5.60 | 0.00 | 0.00 | 0.00 | 0.00 | | 6.42 | 8.79 |
| Eff: # of samples of TSS - Final Effluent including Bypass mg/L | 10.00 | 4.00 | 4.00 | 10.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 63.00 | | |
| Loading: TSS - Final Effluent including Bypass kg/d | 19.861 | 6.240 | 6.073 | < 8.755 | 7.736 | 5.916 | < 3.300 | 4.845 | 3.479 | 7.788 | 7.031 | 9.949 | | 8.21 | 19.86 |
| Loading Flow Weighted: TSS - Final Effluent including Bypass kg/d | 12.300 | 6.240 | 6.073 | < 9.196 | < 7.736 | < 5.916 | < 3.300 | < 4.845 | 0.000 | 0.000 | 0.000 | 0.000 | | 7.19 | 12.30 |
| **Total Phosphorus: TP** | | | | | | | | | | | | | | | |
| Raw: Avg TP - Raw mg/L | 0.98 | 2.21 | 2.02 | 2.26 | 0.61 | 2.37 | 1.82 | 2.03 | 1.48 | 1.43 | 1.82 | 2.03 | | 1.76 | 2.37 |
| 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 | | |
| Eff: Avg TP - Final Effluent including Bypass mg/L | 0.13 | 0.08 | 0.08 | 0.08 | 0.11 | 0.08 | 0.12 | 0.14 | 0.12 | 0.21 | 0.14 | 0.13 | | 0.12 | 0.21 |
| Eff.Flow : Weighted Avg TP - Final Effluent including Bypass mg/L | 0.10 | 0.08 | 0.08 | 0.08 | 0.11 | 0.08 | 0.12 | 0.14 | 0.00 | 0.00 | 0.00 | 0.00 | | 0.12 | 0.14 |
| Eff: # of samples of TP - Final Effluent including Bypass mg/L | 10.00 | 4.00 | 4.00 | 10.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 63.00 | | |
| Loading: TP - Final Effluent including Bypass kg/d | 0.187 | 0.105 | 0.111 | 0.132 | 0.140 | 0.074 | 0.106 | 0.119 | 0.089 | 0.177 | 0.122 | 0.155 | | 0.13 | 0.19 |
| Loading Flow Weighted: TP - Final Effluent including Bypass kg/d | 0.139 | 0.105 | 0.111 | 0.132 | 0.140 | 0.074 | 0.106 | 0.119 | 0.000 | 0.000 | 0.000 | 0.000 | | 0.13 | 0.14 |
| **Nitrogen Series** | | | | | | | | | | | | | | | |
| Raw: Avg TKN - Raw mg/L | 10.10 | 24.00 | 20.60 | 21.10 | 6.40 | 22.20 | 21.00 | 21.20 | 20.30 | 17.40 | 20.80 | 19.20 | | 18.69 | 24.00 |
| 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 | | |
| Eff: Avg TAN - Final Effluent including Bypass mg/L | < 0.10 | < 0.20 | < 1.68 | < 0.92 | < 1.56 | < 0.30 | < 0.10 | < 1.42 | < 0.23 | < 0.26 | < 0.48 | < 0.83 | | < 0.67 | < 1.68 |
| Eff.Flow : Weighted Avg TAN - Final Effluent including Bypass mg/L | < 0.10 | < 0.20 | < 1.68 | < 1.61 | < 1.56 | < 0.30 | < 0.10 | < 1.42 | 0.00 | 0.00 | 0.00 | 0.00 | | < 0.73 | < 1.68 |
| Eff: # of samples of TAN - Final Effluent including Bypass mg/L | 10.00 | 4.00 | 4.00 | 10.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 63.00 | | |
| Loading: TAN - Final Effluent including Bypass kg/d | < 0.140 | < 0.263 | < 2.394 | < 1.520 | < 1.946 | < 0.296 | < 0.088 | < 1.229 | < 0.174 | < 0.215 | < 0.431 | < 0.966 | | < 0.75 | < 2.39 |
| Loading Flow Weighted: TAN - Final Effluent including Bypass kg/d | < 0.140 | < 0.263 | < 2.394 | < 2.651 | < 1.946 | < 0.296 | < 0.088 | < 1.229 | 0.000 | 0.000 | 0.000 | 0.000 | | < 0.82 | < 2.65 |
| Eff: Avg NO3-N - Eff mg/L | 11.54 | 10.46 | 7.15 | 4.59 | 8.71 | 13.48 | 16.33 | 13.12 | 16.50 | 16.70 | 12.03 | 8.20 | | 11.57 | 16.70 |
| Eff: # of samples of NO3-N - Eff mg/L | 5.00 | 4.00 | 4.00 | 4.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 52.00 | | |
| Eff: Avg NO2-N - Eff mg/L | < 0.04 | 0.08 | 0.11 | 0.18 | 0.16 | < 0.05 | < 0.03 | < 0.14 | < 0.05 | < 0.07 | < 0.05 | < 0.05 | | < 0.08 | < 0.18 |
| Eff: # of samples of NO2-N - Eff mg/L | 5.00 | 4.00 | 4.00 | 4.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 52.00 | | |
| **Disinfection** | | | | | | | | | | | | | | | |
| Eff: GMD E. Coli - Eff cfu/100mL | 2.30 | 1.41 | 3.13 | 4.43 | 2.00 | 2.38 | 2.00 | 2.00 | 1.68 | 2.00 | 2.00 | 3.87 | | | |
| Eff: # of samples of E. Coli - Eff cfu/100mL | 5.00 | 4.00 | 4.00 | 4.00 | 5.00 | 4.00 | 4.00 | 5.00 | 4.00 | 5.00 | 4.00 | 4.00 | 52.00 | | |

Fenelon Falls WPCP 2023 Final Effluent Field pH Results

| Date (mm/dd/yy) | pH |
|---|---|
| 01/04/23 | 7.30 |
| 01/05/23 | 7.59 |
| 01/06/23 | 7.64 |
| 01/09/23 | 7.45 |
| 01/10/23 | 7.04 |
| 01/11/23 | 6.93 |
| 01/13/23 | 7.17 |
| 01/16/23 | 7.18 |
| 01/17/23 | 7.06 |
| 01/18/23 | 7.04 |
| 01/20/23 | 6.98 |
| 01/23/23 | 7.07 |
| 01/24/23 | 7.16 |
| 01/25/23 | 7.22 |
| 01/27/23 | 7.17 |
| 01/30/23 | 7.31 |
| 01/31/23 | 6.96 |
| 02/02/23 | 6.75 |
| 02/06/23 | 6.81 |
| 02/07/23 | 6.73 |
| 02/08/23 | 6.82 |
| 02/10/23 | 7.11 |
| 02/13/23 | 7.23 |
| 02/14/23 | 7.17 |
| 02/15/23 | 7.16 |
| 02/21/23 | 6.90 |
| 02/22/23 | 6.86 |
| 02/23/23 | 7.00 |
| 02/27/23 | 7.12 |
| 02/28/23 | 6.95 |
| 03/02/23 | 6.92 |
| 03/03/23 | 6.93 |
| 03/07/23 | 6.88 |
| 03/08/23 | 6.97 |
| 03/09/23 | 6.91 |
| 03/13/23 | 7.03 |
| 03/15/23 | 6.97 |
| 03/17/23 | 6.99 |
| 03/20/23 | 6.98 |
| 03/21/23 | 7.02 |
| 03/23/23 | 7.17 |
| 03/27/23 | 7.15 |
| 03/28/23 | 7.03 |
| 03/29/23 | 7.08 |

| Date (mm/dd/yy) | pH |
|---|---|
| 03/31/23 | 7.28 |
| 04/03/23 | 7.15 |
| 04/04/23 | 7.26 |
| 04/05/23 | 7.10 |
| 04/06/23 | 7.31 |
| 04/11/23 | 7.12 |
| 04/12/23 | 6.97 |
| 04/13/23 | 7.01 |
| 04/17/23 | 7.11 |
| 04/18/23 | 6.98 |
| 04/21/23 | 7.05 |
| 04/24/23 | 7.08 |
| 04/25/23 | 6.84 |
| 04/26/23 | 7.05 |
| 05/01/23 | 7.37 |
| 05/02/23 | 7.81 |
| 05/04/23 | 7.76 |
| 05/05/23 | 7.29 |
| 05/08/23 | 7.58 |
| 05/09/23 | 7.53 |
| 05/12/23 | 7.19 |
| 05/15/23 | 7.25 |
| 05/16/23 | 7.04 |
| 05/17/23 | 7.07 |
| 05/19/23 | 6.98 |
| 05/23/23 | 7.65 |
| 05/24/23 | 7.04 |
| 05/25/23 | 7.22 |
| 05/29/23 | 7.38 |
| 05/31/23 | 6.84 |
| 06/01/23 | 7.06 |
| 06/02/23 | 6.93 |
| 06/05/23 | 7.05 |
| 06/06/23 | 6.90 |
| 06/08/23 | 6.42 |
| 06/12/23 | 6.60 |
| 06/13/23 | 6.72 |
| 06/14/23 | 6.65 |
| 06/15/23 | 6.65 |
| 06/19/23 | 6.74 |
| 06/20/23 | 6.61 |
| 06/21/23 | 6.56 |
| 06/26/23 | 6.48 |
| 06/28/23 | 6.94 |
| 06/30/23 | 7.00 |

| Date (mm/dd/yy) | pH |
|---|---|
| 07/04/23 | 6.66 |
| 07/05/23 | 6.65 |
| 07/06/23 | 6.60 |
| 07/07/23 | 6.68 |
| 07/10/23 | 6.92 |
| 07/11/23 | 6.52 |
| 07/12/23 | 6.99 |
| 07/13/23 | 6.79 |
| 07/18/23 | 6.95 |
| 07/19/23 | 6.96 |
| 07/20/23 | 6.93 |
| 07/24/23 | 7.12 |
| 07/25/23 | 6.91 |
| 07/27/23 | 6.87 |
| 07/31/23 | 7.09 |
| 08/01/23 | 7.44 |
| 08/03/23 | 7.04 |
| 08/04/23 | 7.58 |
| 08/08/23 | 7.08 |
| 08/09/23 | 7.27 |
| 08/10/23 | 7.43 |
| 08/14/23 | 7.48 |
| 08/15/23 | 7.26 |
| 08/16/23 | 7.17 |
| 08/18/23 | 7.23 |
| 08/22/23 | 7.17 |
| 08/24/23 | 7.12 |
| 08/25/23 | 7.25 |
| 08/28/23 | 7.31 |
| 08/29/23 | 7.24 |
| 08/31/23 | 7.25 |
| 09/05/23 | 7.21 |
| 09/06/23 | 7.08 |
| 09/07/23 | 7.14 |
| 09/12/23 | 7.31 |
| 09/13/23 | 7.19 |
| 09/14/23 | 6.74 |
| 09/18/23 | 7.27 |
| 09/19/23 | 7.02 |
| 09/20/23 | 7.09 |
| 09/21/23 | 7.11 |
| 09/26/23 | 6.90 |
| 09/28/23 | 6.79 |
| 09/29/23 | 7.25 |

| Date (mm/dd/yy) | pH |
|---|---|
| 10/03/23 | 6.52 |
| 10/04/23 | 7.17 |
| 10/05/23 | 7.08 |
| 10/10/23 | 7.36 |
| 10/11/23 | 6.51 |
| 10/12/23 | 7.31 |
| 10/16/23 | 6.90 |
| 10/17/23 | 7.52 |
| 10/18/23 | 7.46 |
| 10/20/23 | 7.52 |
| 10/24/23 | 7.60 |
| 10/25/23 | 7.26 |
| 10/26/23 | 7.24 |
| 10/30/23 | 7.37 |
| 10/31/23 | 7.39 |
| 11/02/23 | 7.76 |
| 11/07/23 | 7.15 |
| 11/08/23 | 7.40 |
| 11/09/23 | 7.44 |
| 11/14/23 | 7.29 |
| 11/15/23 | 7.53 |
| 11/16/23 | 7.42 |
| 11/17/23 | 7.31 |
| 11/21/23 | 7.35 |
| 11/22/23 | 7.38 |
| 11/24/23 | 7.49 |
| 11/27/23 | 7.40 |
| 11/28/23 | 7.56 |
| 11/29/23 | 7.45 |
| 12/01/23 | 7.51 |
| 12/04/23 | 7.41 |
| 12/05/23 | 7.41 |
| 12/06/23 | 7.38 |
| 12/08/23 | 7.44 |
| 12/11/23 | 7.67 |
| 12/12/23 | 7.38 |
| 12/13/23 | 7.63 |
| 12/18/23 | 7.45 |
| 12/19/23 | 7.56 |
| 12/20/23 | 7.42 |
| 12/21/23 | 7.40 |
| 12/27/23 | 7.46 |
| 12/28/23 | 7.48 |
| 12/29/23 | 7.50 |

**Fenelon Falls WPCP 2023 Final Effluent Un-Ionized Ammonia Results**

| Date (mm/dd/yy) | Total Ammonia Nitrogen (mg/L) | Field pH | Field Temp (ºC) | Un-ionized Ammonia (mg/L) |
|---|---|---|---|---|
| 01/01/23 | <0.1 | 7.42 | 8.4 | <0.001 |
| 01/02/23 | <0.1 | 7.34 | 9.7 | <0.001 |
| 01/03/23 | <0.1 | 7.97 | 7.5 | <0.001 |
| 01/04/23 | <0.1 | 7.51 | 10.0 | <0.001 |
| 01/05/23 | <0.1 | 7.65 | 8.1 | <0.001 |
| 01/06/23 | 0.1 | 7.64 | 9.1 | <0.001 |
| 01/10/23 | <0.1 | 7.04 | 9.9 | <0.001 |
| 01/17/23 | 0.1 | 7.06 | 9.1 | <0.001 |
| 01/24/23 | <0.1 | 7.16 | 10.2 | <0.001 |
| 01/31/23 | <0.1 | 6.96 | 9.4 | <0.001 |
| 02/07/23 | 0.2 | 6.73 | 8.8 | <0.001 |
| 02/14/23 | 0.2 | 7.17 | 8.2 | <0.001 |
| 02/22/23 | 0.2 | 7.15 | 7.2 | <0.001 |
| 02/28/23 | 0.2 | 6.95 | 8.3 | <0.001 |
| 03/07/23 | 4.2 | 6.75 | 9.2 | 0.004 |
| 03/14/23 | 2 | 6.73 | 8.7 | 0.002 |
| 03/21/23 | 0.2 | 7.02 | 6.9 | <0.001 |
| 03/28/23 | 0.3 | 7.03 | 8.0 | <0.001 |
| 04/04/23 | <0.1 | 7.26 | 8.6 | <0.001 |
| 04/13/23 | 2 | 7.01 | 10.0 | 0.004 |
| 04/18/23 | 3.6 | 6.98 | 9.2 | 0.006 |
| 04/25/23 | 2.6 | 6.84 | 10.5 | 0.003 |
| 05/02/23 | 1.1 | 7.81 | 9.5 | 0.013 |
| 05/09/23 | 0.4 | 7.53 | 11.0 | 0.003 |
| 05/16/23 | 0.9 | 7.04 | 13.1 | 0.002 |
| 05/24/23 | 4.9 | 7.04 | 13.6 | 0.001 |
| 05/30/23 | 0.5 | 6.85 | 15.5 | 0.000 |
| 06/06/23 | <0.1 | 6.5 | 15.9 | <0.001 |
| 06/13/23 | 0.9 | 6.72 | 16.6 | 0.001 |
| 06/20/23 | 0.1 | 6.61 | 17.3 | <0.001 |
| 06/27/23 | <0.1 | 6.88 | 18.0 | <0.001 |
| 07/05/23 | <0.1 | 6.65 | 19.5 | <0.001 |
| 07/11/23 | <0.1 | 6.52 | 19.6 | <0.001 |
| 07/18/23 | <0.1 | 6.95 | 19.6 | <0.001 |
| 07/25/23 | 0.1 | 6.91 | 19.9 | <0.001 |
| 08/01/23 | <0.1 | 7.44 | 19.1 | <0.001 |
| 08/09/23 | 0.9 | 7.27 | 19.7 | 0.006 |
| 08/15/23 | 5.9 | 7.26 | 19.6 | 0.041 |
| 08/22/23 | <0.1 | 7.17 | 19.3 | <0.001 |
| 08/29/23 | <0.1 | 7.26 | 19.2 | <0.001 |
| 09/06/23 | <0.1 | 7.08 | 21.5 | <0.001 |
| 09/12/23 | <0.1 | 7.31 | 19.9 | <0.001 |
| 09/19/23 | 0.6 | 7.02 | 18.8 | 0.002 |
| 09/26/23 | <0.1 | 6.5 | 18.6 | <0.001 |
| 10/04/23 | <0.1 | 7.17 | 19.4 | <0.001 |
| 10/11/23 | <0.1 | 6.51 | 16.8 | <0.001 |
| 10/17/23 | 0.9 | 7.52 | 18.5 | 0.010 |
| 10/24/23 | <0.1 | 7.6 | 15.0 | <0.001 |
| 10/31/23 | <0.1 | 7.39 | 14.3 | <0.001 |
| 11/07/23 | <0.1 | 7.15 | 14.4 | <0.001 |
| 11/15/23 | 0.5 | 7.53 | 12.6 | 0.004 |
| 11/21/23 | 0.5 | 7.35 | 10.4 | 0.002 |
| 11/28/23 | 0.8 | 7.56 | 10.5 | 0.005 |
| 12/05/23 | 0.5 | 7.41 | 10.1 | 0.002 |
| 12/12/23 | <0.1 | 7.38 | 10.6 | <0.001 |
| 12/19/23 | 0.2 | 7.06 | 9.7 | <0.001 |
| 12/28/23 | 2.5 | 7.48 | 10.2 | 0.014 |

# Appendix II

## Work Order and Maintenance Summary

Fenelon Falls WPCP 2023 Work Order Summary

| Work Order | Description | Location | Asset | Status | Work Type | Classification | Reported Date |
|---|---|---|---|---|---|---|---|
| 941126 | DEFERRED 5886, Ellice SPS, HS02, Install Davit for Retrieval Device for Drywell | 5886-SPEL-F | | CLOSE | CORR | HEALTH AND SAFETY | 1/1/23 00:00:00 |
| 2500955 | DEFERRED, 5886, Colborne SPS, Pump Controls, Repair | 5886-SPCB-P | | CLOSE | CORR | REFURBISH/REPLACE | 1/1/23 00:00:00 |
| 3153596 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 1/1/23 01:30:06 |
| 3153603 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 1/1/23 01:30:12 |
| 3153610 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 1/1/23 01:30:17 |
| 3153617 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 1/1/23 01:30:23 |
| 3153624 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 1/1/23 01:30:28 |
| 3153643 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 1/1/23 01:30:42 |
| 3153662 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 1/1/23 01:30:55 |
| 3153681 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 1/1/23 01:31:07 |
| 3153912 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 1/1/23 01:34:16 |
| 3155024 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 1/1/23 01:49:59 |
| 3155356 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 1/1/23 01:56:31 |
| 3167342 | Actuator Electric Inspection/Service (1y) - 5886 Ellice SPS - KTN | 5886-SPEL | | CLOSE | PM | REFURBISH/REPLACE | 1/1/23 05:47:34 |
| 3178216 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 1/1/23 08:17:49 |
| 3179789 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 1/1/23 08:40:05 |
| 3181043 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 1/1/23 08:57:44 |
| 3182632 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 1/1/23 09:19:33 |
| 3183191 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 1/1/23 09:27:41 |
| 3201651 | 5886, Fenelon Falls WWT, Facility, Bypass Event | 5886-WWFF-F | | CLOSE | CALL | REFURBISH/REPLACE | 1/4/23 10:36:30 |
| 3202135 | 5886, Ellice SPS, Wet Well High, Alarm | 5886-SPEL | | CLOSE | CALL | REFURBISH/REPLACE | 1/6/23 07:36:41 |
| 3202176 | 5886, Fenelon Falls WWT, Ellice High Level, Alarm | 5886-WWFF-F | | CLOSE | CALL | REFURBISH/REPLACE | 1/6/23 09:28:04 |
| 3202182 | 5886, Fenelon Falls WWT, Ellice High Level, Alarm | 5886-WWFF-F | | CLOSE | CALL | REFURBISH/REPLACE | 1/6/23 09:41:05 |
| 3204554 | 5886, Fenelon Falls WWT, Filter 3, Fault | 5886-WWFF-P-TT | | CLOSE | CALL | COMPLIANCE | 1/18/23 08:37:37 |
| 3204588 | 5886, Fenelon Falls WWT, Ellice SPS Detention Tank Reprog ramming (2 Pumps in Auto) | 5886-WWFF-F-IT | 0000208587 | CLOSE | CAP | COMPLIANCE | 1/18/23 10:56:49 |

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|---|---|---|---|---|---|---|---|
| 3205510 | 5886, Fenelon Falls WWT, Tertiary Filter 3 Fault, Alarm | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | REFURBISH/REPLACE | 1/23/23 10:20:56 |
| 3205540 | 5886, Fenelon Falls WWT, Building Exit and Emergency Ligh ting, Repair | 5886-WWFF-F | | CLOSE | CORR | REFURBISH/REPLACE | 1/23/23 12:02:12 |
| 3180078 | Compressor Air #1 Inspection/Service by Contractor (1y) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | REFURBISH/REPLACE | 2/1/23 00:00:00 |
| 3155343 | Compressor Air #2 Inspection/Service by Contractor (1y) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | REFURBISH/REPLACE | 2/1/23 00:00:00 |
| 2775859 | 5886, Fenelon Falls WWT, Replacement Pump RAS 3 Plant 2 | 5886-WWFF-P-ST | 0000158457 | CLOSE | CORR | REFURBISH/REPLACE | 2/1/23 00:00:00 |
| 3209540 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 2/1/23 00:54:40 |
| 3209542 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 2/1/23 00:54:42 |
| 3209549 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 2/1/23 00:54:47 |
| 3209556 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 2/1/23 00:54:52 |
| 3209563 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 2/1/23 00:54:58 |
| 3209582 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 2/1/23 00:55:10 |
| 3209601 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 2/1/23 00:55:23 |
| 3209620 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 2/1/23 00:55:36 |
| 3209803 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 2/1/23 00:57:43 |
| 3210615 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 2/1/23 01:19:58 |
| 3210876 | Filter Air Compressor #2 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 2/1/23 01:24:01 |
| 3210883 | MCC Insp/Service (3y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 2/1/23 01:24:07 |
| 3210886 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 2/1/23 01:24:11 |
| 3226960 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 2/1/23 06:22:59 |
| 3227839 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 2/1/23 06:35:39 |
| 3228000 | Filter Air Compressor #1 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 2/1/23 06:37:53 |
| 3228619 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 2/1/23 06:46:42 |
| 3229653 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 2/1/23 07:02:48 |
| 3230102 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 2/1/23 07:11:17 |
| 3247614 | 5886, Fenelon Falls WWT, Rotor Motor and Belt Replaceme nt | 5886-WWFF-P-ST-AERA | 0000158449 | CLOSE | CORR | REFURBISH/REPLACE | 2/27/23 07:16:58 |
| 3250447 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 3/1/23 01:02:34 |
| 3250449 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 3/1/23 01:02:37 |

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|---|---|---|---|---|---|---|---|
| 3250456 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 3/1/23 01:02:43 |
| 3250463 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 3/1/23 01:02:49 |
| 3250470 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 3/1/23 01:02:55 |
| 3250489 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 3/1/23 01:03:08 |
| 3250508 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 3/1/23 01:03:21 |
| 3250527 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 3/1/23 01:03:37 |
| 3250723 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 3/1/23 01:08:09 |
| 3251528 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 3/1/23 01:30:34 |
| 3251896 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 3/1/23 01:37:42 |
| 3252141 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Colborne SPS - KTN | 5886-SPCB-P | 0000295845 | CLOSE | PM | REFURBISH/REPLACE | 3/1/23 01:41:19 |
| 3252156 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Ellice SPS - KTN | 5886-SPEL-P | 0000295850 | CLOSE | PM | REFURBISH/REPLACE | 3/1/23 01:41:29 |
| 3252171 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Francis SPS - KTN | 5886-WWFF-P | 0000158563 | CLOSE | PM | REFURBISH/REPLACE | 3/1/23 01:41:40 |
| 3269892 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 3/1/23 07:03:20 |
| 3270248 | Grit Channel & Various Pit Clean-out by Contractor (6m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 3/1/23 07:09:51 |
| 3270780 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 3/1/23 07:17:50 |
| 3271571 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 3/1/23 07:28:31 |
| 3272583 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 3/1/23 07:42:12 |
| 3273101 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 3/1/23 07:49:02 |
| 3288263 | 5886, Fenelon Falls WWT, UV Sensor Failure, Alarm | 5886-WWFF-P-DI-ULVL | | CLOSE | CALL | REFURBISH/REPLACE | 3/6/23 10:08:03 |
| 3288382 | 5886, Fenelon Falls WWT, UV Sensor Fail, | 5886-WWFF-P-DI-ULVL | | CLOSE | CORR | REFURBISH/REPLACE | 3/7/23 07:41:32 |
| 3290311 | 5886, Ellice SPS, High Level, Alarm | 5886-SPEL-P-PC | | CLOSE | CALL | REFURBISH/REPLACE | 3/20/23 09:27:19 |
| 3290604 | 5886, Fenelon Falls WWT, Tertiary Filter Bypass Flow Meter , Install | 5886-WWFF-P-TT-FILT | | CLOSE | CAP | REFURBISH/REPLACE | 3/22/23 08:08:11 |
| 3291311 | 5886, Fenelon Falls WWT, Clarifier 2 General, Alarm | 5886-WWFF-P-ST-CLAR | | CLOSE | CALL | REFURBISH/REPLACE | 3/27/23 09:00:07 |
| 3291845 | 5886, Fenelon Falls WWT, Raw Composite Sampler, Replac ement (CKL PO# 911535 OP) | 5886-WWFF-P | 0000158508 | CLOSE | CAP | REFURBISH/REPLACE | 3/30/23 14:17:05 |
| 3294792 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 4/1/23 00:51:58 |
| 3294812 | Sampler Insp/Service (1y) - 5886 - KTN | 5886-WWFF-P | 0000306207 | CLOSE | PM | REFURBISH/REPLACE | 4/1/23 00:52:15 |
| 3294818 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 4/1/23 00:52:20 |

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|---|---|---|---|---|---|---|---|
| 3294825 | Sampler Insp/Service (1y) - 5886 - KTN | 5886-WWFF-P | 0000158508 | CLOSE | PM | REFURBISH/REPLACE | 4/1/23 00:52:25 |
| 3294834 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 4/1/23 00:52:32 |
| 3294841 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 4/1/23 00:52:37 |
| 3294848 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 4/1/23 00:52:44 |
| 3294867 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 4/1/23 00:52:57 |
| 3294886 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 4/1/23 00:53:09 |
| 3294905 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 4/1/23 00:53:22 |
| 3295116 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 4/1/23 00:55:50 |
| 3296120 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 4/1/23 01:09:37 |
| 3296393 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 4/1/23 01:13:33 |
| 3296804 | FEP Site Plan Review (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | COMPLIANCE | 4/1/23 01:19:06 |
| 3296813 | Aerator #2 Insp/Service (1y) - 5886 - KTN | 5886-WWFF-P | | CLOSE | PM | REFURBISH/REPLACE | 4/1/23 01:19:15 |
| 3306328 | UPS Inspection/Service (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 4/1/23 03:16:42 |
| 3316192 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 4/1/23 05:47:25 |
| 3317401 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 4/1/23 06:02:24 |
| 3318406 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 4/1/23 06:14:26 |
| 3319665 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 4/1/23 06:28:46 |
| 3320164 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 4/1/23 06:34:34 |
| 3320891 | Pump Cent & VFD Inspection (1y) - 5886 RASP #1 - KTN | 5886-WWFF-P-SH | | CLOSE | PM | INSPECTION | 4/1/23 06:42:43 |
| 3320905 | Blower & VFD Inspection (1y) - 5886 Blower #2 - KTN | 5886-WWFF-P-ST-AERA | | CLOSE | PM | INSPECTION | 4/1/23 06:42:53 |
| 3320912 | Blower & VFD Inspection (1y) - 5886 Blower #3 - KTN | 5886-WWFF-P-ST-AERA | | CLOSE | PM | INSPECTION | 4/1/23 06:42:58 |
| 3320919 | Blower & VFD Inspection (1y) - 5886 Blower #4 - KTN | 5886-WWFF-P-SH | | CLOSE | PM | INSPECTION | 4/1/23 06:43:03 |
| 3320926 | Pump Submersible & VFD Inspection (1y) - 5886 RASP #2 - KTN | 5886-WWFF-P-SH | | CLOSE | PM | INSPECTION | 4/1/23 06:43:08 |
| 3320933 | Pump Cent & VFD Inspection (1y) - 5886 Ellice SPS Pump #1 - KTN | 5886-SPEL-P | | CLOSE | PM | INSPECTION | 4/1/23 06:43:12 |
| 3320940 | Drive VFD Insp (1y) - 5886 Aeration Ditch Rotor - KTN | 5886-WWFF-P-ST-AERA | 0000291404 | CLOSE | PM | REFURBISH/REPLACE | 4/1/23 06:43:17 |
| 3320946 | Pump Cent & VFD Inspection (1y) - 5886 Ellice SPS Pump #2 - KTN | 5886-SPEL-P | | CLOSE | PM | INSPECTION | 4/1/23 06:43:21 |
| 3320960 | Pump Submersible & VFD Inspection (1y) - 5886 RASP #3 - KTN | 5886-WWFF-P-SH | | CLOSE | PM | INSPECTION | 4/1/23 06:43:31 |
| 3328158 | ESA Inspection By Contractor (6m) - 5886- KTN | 5886-WWFF-F | | CLOSE | PM | CALIBRATION | 4/1/23 08:19:31 |

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|---|---|---|---|---|---|---|---|
| 3337949 | 5886, Ellice SPS, Wet Well High, Alarm | 5886-SPEL | | CLOSE | CALL | REFURBISH/REPLACE | 4/3/23 08:43:50 |
| 3338004 | 5886, Ellice SPS, High Level Alarm Monitor Flows | 5886-SPEL | | CLOSE | CALL | COMPLIANCE | 4/3/23 10:45:33 |
| 3338008 | Duplicate | 5886-WWFF-P-PC | | CAN | CALL | COMPLIANCE | 4/3/23 10:50:54 |
| 3338012 | 5886, Ellice SPS, High Level Alarm | 5886-SPEL-F | | CLOSE | CALL | COMPLIANCE | 4/3/23 10:58:08 |
| 3338284 | 5886, Ellice SPS, Wet Well High, Alarm | 5886-SPEL-P | | CLOSE | CALL | COMPLIANCE | 4/4/23 11:14:07 |
| 3338710 | 5886, Francis SPS, Pump 2 Fault, Alarm | 5886-SPFR-P | | CLOSE | CALL | COMPLIANCE | 4/6/23 13:20:15 |
| 3339337 | 5886, Colborne SPS, Overflow SAC Incident #: 1-34X4M0 | 5886-SPCB | | CLOSE | CALL | COMPLIANCE | 4/11/23 07:58:52 |
| 3339340 | 5886, Fenelon Falls WWT, Sand Filter Bypass SAC Incident # : 1-34X4L0 | 5886-WWFF-P-DI | | CLOSE | CALL | COMPLIANCE | 4/11/23 08:04:56 |
| 3340341 | 5886, Fenelon Falls WWT, UV Fault, Alarm | 5886-WWFF-P-DI-ULVL | | CLOSE | CALL | REFURBISH/REPLACE | 4/17/23 08:32:28 |
| 3341120 | 5886, Fenelon Falls WWT, Filter, Alarm | 5886-WWFF-P | | CLOSE | CALL | COMPLIANCE | 4/23/23 08:34:05 |
| 3344802 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 5/1/23 00:57:50 |
| 3344804 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 5/1/23 00:57:52 |
| 3344811 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 5/1/23 00:58:00 |
| 3344818 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 5/1/23 00:58:05 |
| 3344825 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 5/1/23 00:58:11 |
| 3344844 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 5/1/23 00:58:29 |
| 3344863 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 5/1/23 00:58:42 |
| 3344882 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 5/1/23 00:58:55 |
| 3345065 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 5/1/23 01:01:26 |
| 3345865 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 5/1/23 01:13:51 |
| 3346142 | Filter Air Compressor #2 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 5/1/23 01:18:22 |
| 3346149 | Lifting Devices & Fall Arrest Inspection by Contractor (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 5/1/23 01:18:27 |
| 3346153 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 5/1/23 01:18:33 |
| 3361784 | Dehumidifier Service by Contractor (1y) - 5886 - KTN | 5886-WWFF-F-HV | 0000158518 | CLOSE | PM | REFURBISH/REPLACE | 5/1/23 04:41:30 |
| 3364282 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 5/1/23 05:51:40 |
| 3365150 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 5/1/23 06:03:24 |
| 3365330 | Filter Air Compressor #1 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 5/1/23 06:05:49 |
| 3365999 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 5/1/23 06:14:42 |
| 3366621 | Air Conditioning Unit Service by Contractor (1y) - 5886 - KTN | 5886-WWFF-F-HV | | CLOSE | PM | REFURBISH/REPLACE | 5/1/23 06:22:26 |
| 3367060 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 5/1/23 06:28:05 |

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| 3367522 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 5/1/23 06:34:48 |
| 3373931 | ESA Inspection By Contractor (1y) - 5886 Colborne SPS - KTN | 5886-SPCB-F | | CLOSE | PM | CALIBRATION | 5/1/23 08:23:25 |
| 3373937 | ESA Inspection By Contractor (1y) - 5886 Ellice SPS - KTN | 5886-SPEL-F | | CLOSE | PM | CALIBRATION | 5/1/23 08:23:30 |
| 3373947 | ESA Inspection By Contractor (1y) - 5886 Francis SPS - KTN | 5886-SPFR | 0000306084 | CLOSE | PM | CALIBRATION | 5/1/23 08:23:40 |
| 3385664 | 5886, Fenelon Falls WWT, Workshop Compressor, Refurbish | 5886-WWFF-F | | CLOSE | CORR | REFURBISH/REPLACE | 5/17/23 12:14:42 |
| 3386187 | 5886,Fenelon Falls WWT, Train # 1 Fault, Carriage Misalignment, Alarm | 5886-WWFF-F-PD | 0000158498 | CLOSE | CALL | REFURBISH/REPLACE | 5/21/23 20:21:22 |
| 3386603 | 5886, Fenelon Falls WWT, Filter 1 Fault, Alarm | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | REFURBISH/REPLACE | 5/24/23 07:30:45 |
| 3390481 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 6/1/23 00:55:17 |
| 3390483 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 6/1/23 00:55:19 |
| 3390490 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 6/1/23 00:55:24 |
| 3390497 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 6/1/23 00:55:30 |
| 3390504 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 6/1/23 00:55:36 |
| 3390523 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 6/1/23 00:55:49 |
| 3390542 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 6/1/23 00:56:03 |
| 3390561 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 6/1/23 00:56:16 |
| 3390744 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 6/1/23 00:58:41 |
| 3391607 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 6/1/23 01:10:35 |
| 3391842 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 6/1/23 01:15:11 |
| 3411205 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 6/1/23 06:04:02 |
| 3412510 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 6/1/23 06:22:12 |
| 3413280 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 6/1/23 06:34:06 |
| 3414349 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 6/1/23 06:49:28 |
| 3414880 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 6/1/23 06:57:21 |
| 3434681 | 5886, Fenelon Falls WWT,Train#1 Filter, Alarm | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | COMPLIANCE | 6/21/23 05:58:18 |
| 3439325 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 7/1/23 01:05:13 |
| 3439327 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 7/1/23 01:05:15 |
| 3439334 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 7/1/23 01:05:21 |

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| 3439341 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 7/1/23 01:05:28 |
| 3439348 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 7/1/23 01:05:33 |
| 3439367 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 7/1/23 01:05:46 |
| 3439386 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 7/1/23 01:05:58 |
| 3439405 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 7/1/23 01:06:11 |
| 3439616 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 7/1/23 01:08:56 |
| 3440564 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 7/1/23 01:22:33 |
| 3440818 | Valve Backflow Preventer Testing/Inspection by Contractor (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 7/1/23 01:26:37 |
| 3440834 | Online Process Equipment Calibration Service by Contracto r (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | CALIBRATION | 7/1/23 01:26:49 |
| 3440839 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 7/1/23 01:26:53 |
| 3458776 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 7/1/23 05:47:46 |
| 3459902 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 7/1/23 06:03:20 |
| 3460774 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 7/1/23 06:14:39 |
| 3462050 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 7/1/23 06:30:21 |
| 3462519 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 7/1/23 06:36:23 |
| 3479410 | 5886, Fenelon Falls WWT, Filter 2, Alarm | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | COMPLIANCE | 7/4/23 08:13:47 |
| 3479469 | 5886, Fenelon Falls WWT, Filter 1 Fault | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | COMPLIANCE | 7/4/23 09:47:36 |
| 3480107 | 5886, Fenelon Falls WWT, Filter, Alarm | 5886-WWFF-P-TT-FILT | | CLOSE | CALL | COMPLIANCE | 7/6/23 02:15:00 |
| 3481398 | 5886, Fenelon Falls Colborne Low Level Alarm | 5886-SPCB-P-PC | | CLOSE | CALL | COMPLIANCE | 7/11/23 18:29:37 |
| 3481715 | 5886, Fenelon Falls WWT, Sludge Hauling Hose, Repair | 5886-WWFF-F | | CLOSE | CORR | REFURBISH/REPLACE | 7/13/23 09:06:45 |
| 3482089 | 5886,Colborne SPS,SCADA, Alarm | 5886-SPCB-P | 0000295844 | CLOSE | CALL | REFURBISH/REPLACE | 7/17/23 00:05:31 |
| 3486905 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 8/1/23 00:54:38 |
| 3486907 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 8/1/23 00:54:40 |
| 3486914 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 8/1/23 00:54:45 |
| 3486921 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 8/1/23 00:54:51 |
| 3486928 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 8/1/23 00:54:56 |
| 3486947 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 8/1/23 00:55:09 |
| 3486966 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 8/1/23 00:55:30 |
| 3486985 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 8/1/23 00:55:46 |
| 3487196 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 8/1/23 00:58:14 |

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| 3488037 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 8/1/23 01:10:01 |
| 3488255 | Filter Air Compressor #2 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 8/1/23 01:13:21 |
| 3488262 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 8/1/23 01:13:28 |
| 3504840 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 8/1/23 04:59:59 |
| 3505661 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 8/1/23 05:51:30 |
| 3505829 | Filter Air Compressor #1 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 8/1/23 05:53:46 |
| 3506361 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 8/1/23 06:01:19 |
| 3507367 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 8/1/23 06:15:14 |
| 3507824 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 8/1/23 06:21:45 |
| 3522692 | 5886, Colborne SPS, SCADA Communication Fail | 5886-SPCB-P-PC | | CLOSE | CALL | REFURBISH/REPLACE | 8/2/23 14:34:04 |
| 3525064 | 5886, Colborne SPS, SCADA, Alarm | 5886-SPCB-P-PC | | CLOSE | CALL | COMPLIANCE | 8/14/23 05:42:15 |
| 3526376 | 5886, Fenelon Falls WWT, Filter Sand Train One, Alarm | 5886-WWFF-P-TT-FILT | 0000158497 | CLOSE | CALL | REFURBISH/REPLACE | 8/22/23 08:38:55 |
| 3527651 | 5886, Colborne SPS, Low Wet Well Level, Alarm | 5886-SPCB-P-PC | | CLOSE | CALL | COMPLIANCE | 8/30/23 11:32:54 |
| 3530327 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 9/1/23 00:55:42 |
| 3530332 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 9/1/23 00:55:48 |
| 3530339 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 9/1/23 00:55:54 |
| 3530346 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 9/1/23 00:56:00 |
| 3530353 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 9/1/23 00:56:07 |
| 3530372 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 9/1/23 00:56:20 |
| 3530399 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 9/1/23 00:56:41 |
| 3530418 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 9/1/23 00:56:55 |
| 3530604 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 9/1/23 00:59:28 |
| 3531407 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 9/1/23 01:11:31 |
| 3531672 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 9/1/23 01:15:50 |
| 3532186 | HS09 Chemical Review (1y) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 9/1/23 01:23:20 |
| 3532193 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Colborne SPS - KTN | 5886-SPCB-P | 0000295845 | CLOSE | PM | REFURBISH/REPLACE | 9/1/23 01:23:27 |
| 3532208 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Ellice SPS - KTN | 5886-SPEL-P | 0000295850 | CLOSE | PM | REFURBISH/REPLACE | 9/1/23 01:23:41 |
| 3532223 | Tank Wetwell Cleaning/Inspection (6m) - 5886 Francis SPS - KTN | 5886-WWFF-P | 0000158563 | CLOSE | PM | REFURBISH/REPLACE | 9/1/23 01:23:52 |

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| 3550317 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 9/1/23 06:25:45 |
| 3550728 | Grit Channel & Various Pit Clean-out by Contractor (6m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 9/1/23 06:31:27 |
| 3551275 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 9/1/23 06:39:20 |
| 3552165 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 9/1/23 06:52:09 |
| 3553311 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 9/1/23 07:12:55 |
| 3553819 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 9/1/23 07:19:36 |
| 3572729 | 5886,Colborne SPS,SCADA Loss of Communication, Alarm | 5886-SPCB-P-PC | 0000291209 | CLOSE | CALL | REFURBISH/REPLACE | 9/11/23 07:15:24 |
| 3573036 | 5886,Fenelon Falls WWT, Train # 3 Fault, Alarm | 5886-WWFF-P-TT-FILT | 0000158505 | CLOSE | CALL | REFURBISH/REPLACE | 9/13/23 07:16:11 |
| 3578875 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 10/1/23 00:56:55 |
| 3578877 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 10/1/23 00:56:57 |
| 3578884 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 10/1/23 00:57:02 |
| 3578891 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 10/1/23 00:57:07 |
| 3578898 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 10/1/23 00:57:12 |
| 3578917 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 10/1/23 00:57:24 |
| 3578936 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 10/1/23 00:57:36 |
| 3578955 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 10/1/23 00:57:48 |
| 3579166 | Engine Gas Portable - (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-BACK | 0000208585 | CLOSE | PM | INSPECTION | 10/1/23 01:00:28 |
| 3580111 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 10/1/23 01:12:52 |
| 3580422 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 10/1/23 01:17:21 |
| 3580755 | Engine Diesel Inspection/Service by Contractor (1y) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | REFURBISH/REPLACE | 10/1/23 01:21:42 |
| 3580761 | Engine Diesel Inspection/Service by Contractor (1y) - 5886 Ellice SPS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | REFURBISH/REPLACE | 10/1/23 01:21:46 |
| 3580767 | Engine Diesel Inspection/Service by Contractor (1y) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | REFURBISH/REPLACE | 10/1/23 01:21:51 |
| 3580773 | Engine Diesel Inspection/Service by Contractor (1y) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | REFURBISH/REPLACE | 10/1/23 01:21:55 |
| 3598793 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 10/1/23 06:03:57 |
| 3600318 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 10/1/23 06:23:19 |
| 3601378 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 10/1/23 06:37:05 |
| 3602681 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 10/1/23 06:52:59 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3603222 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 10/1/23 06:59:40 |
| 3620909 | 5886, Fenelon Falls WWT, Train #3 Fault, Alarm | 5886-WWFF-P-TT | | CLOSE | CALL | REFURBISH/REPLACE | 10/4/23 10:45:12 |
| 3623518 | 5886, Fenelon Falls WWT, Scum Pit Valve, Inspection | 5886-WWFF-P-ST-CLAR | | CLOSE | OPER | INSPECTION | 10/18/23 13:35:19 |
| 3623894 | 5886, Colborne SPS, Loss of Communication and Ellice Inter lock, Alarm | 5886-SPCB-P-PC | | CLOSE | CALL | COMPLIANCE | 10/20/23 14:24:29 |
| 3624214 | 5886, Ellice SPS, Communication Fail, Alarm | 5886-SPEL-F | | CLOSE | CALL | REFURBISH/REPLACE | 10/23/23 12:08:23 |
| 3624302 | 5886, Ellice SPS, Communication Fail, Alarm | 5886-SPEL | | CLOSE | CALL | REFURBISH/REPLACE | 10/24/23 08:43:54 |
| 3625376 | 5886 Fenelon Falls WWTP - Colborne SPS Scada alarm | 5886-SPCB-F | | CLOSE | CALL | REFURBISH/REPLACE | 10/30/23 14:39:32 |
| 3628078 | Building and Grounds Maintenance (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 11/1/23 00:58:06 |
| 3628080 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 11/1/23 00:58:09 |
| 3628087 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158515 | CLOSE | PM | INSPECTION | 11/1/23 00:58:15 |
| 3628094 | UV Light Cleaning & Insp. (1m) - 5886 - KTN | 5886-WWFF-P-DI-ULVL | 0000158517 | CLOSE | PM | INSPECTION | 11/1/23 00:58:21 |
| 3628101 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 11/1/23 00:58:27 |
| 3628120 | Engine Diesel (1m) - 5886 Ellice PS - KTN | 5886-SPEL-F-PG-ENGN | 0000158539 | CLOSE | PM | INSPECTION | 11/1/23 00:58:42 |
| 3628139 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 11/1/23 00:59:04 |
| 3628158 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 11/1/23 00:59:18 |
| 3629155 | Tertiary Treatment Operational Activities (1m) - 5886 - KTN | 5886-WWFF-P-TT | | CLOSE | PM | INSPECTION | 11/1/23 01:15:07 |
| 3629382 | Filter Air Compressor #2 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 11/1/23 01:18:54 |
| 3629389 | Tank Alum Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | REFURBISH/REPLACE | 11/1/23 01:19:00 |
| 3644489 | Chemical Feed System Insp (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | INSPECTION | 11/1/23 04:57:16 |
| 3645742 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 11/1/23 05:36:14 |
| 3645905 | Filter Air Compressor #1 (3m) - 5886 - KTN | 5886-WWFF-P-TT-FILT | | CLOSE | PM | INSPECTION | 11/1/23 05:38:16 |
| 3646445 | Analyzer DO Inspection/Cleaning (1m) - 5886 - KTN | 5886-WWFF-P-PC | 0000306067 | CLOSE | PM | INSPECTION | 11/1/23 05:45:25 |
| 3647469 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 11/1/23 05:58:18 |
| 3647918 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 11/1/23 06:04:07 |
| 3662607 | 5886, Fenelon Falls WWT, Train #2,  Alarm | 5886-WWFF-P-TT | | CLOSE | CALL | REFURBISH/REPLACE | 11/6/23 09:01:54 |
| 3665776 | 5886, Fenelon Falls WWT, UV Fault, Alarm | 5886-WWFF-P-DI-ULVL | | CLOSE | CALL | REFURBISH/REPLACE | 11/23/23 09:59:34 |
| 3669297 | Alarm Dialer (1m) - 5886 - KTN | 5886-WWFF-F-IT | 0000158494 | CLOSE | PM | INSPECTION | 12/1/23 00:51:48 |
| 3669318 | Engine Diesel (1m) - 5886 - KTN | 5886-WWFF-F-PG-ENGN | 0000158522 | CLOSE | PM | INSPECTION | 12/1/23 00:52:06 |
| 3669356 | Engine Diesel (1m) - 5886 Colborne SPS - KTN | 5886-SPCB-F-PG-ENGN | 0000192454 | CLOSE | PM | INSPECTION | 12/1/23 00:52:34 |
| 3669375 | Engine Diesel (1m) - 5886 Portable - KTN | 5886-WWFF-F-PG-ENGN | 0000295831 | CLOSE | PM | INSPECTION | 12/1/23 00:52:48 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3687252 | HS03 H & S Equipment Check (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | PM | HEALTH AND SAFETY | 12/1/23 05:32:48 |
| 3688919 | Operator PDM Entry & Review (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | COMPLIANCE | 12/1/23 05:55:23 |
| 3689390 | Corporate Facility Workplace H & S Inspection (1m) - 5886 - KTN | 5886-WWFF | | CLOSE | OPER | HEALTH AND SAFETY | 12/1/23 06:01:36 |
| 3705723 | 5886, Colborne SPS, SCADA, Alarm | 5886-SPCB-P-PC | | CLOSE | CALL | REFURBISH/REPLACE | 12/15/23 07:42:01 |

# Appendix III

## 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

# 2023 Calibrations Fenelon Falls WW

# CALIBRATION REPORT

**Report No.:** OCWA K23 FIT-402

**Date:** 22-Aug-23

| | |
|---|---|
| **SITE:** | Fenelon Falls WWTP |
| **PROCESS AREA:** | Basement |
| **INSTR. TAG:** | FIT-402 |
| **MANUFACTURER:** | Krohne |
| **MODEL:** | IFC 010D |
| **SERIAL No.:** | A0044687 |
| **OCWA CODE No.:** | 0000158514 |

| | |
|---|---|
| **SERVICE DATE:** | August 22, 2023 |
| **TECHNICIAN:** | Mitch Manley |
| **JOB REFERENCE:** | OCWA K23 |

| **Input** | **(Test)** |
|---|---|
| **Type:** | GS 8 (X val) |
| **Min:** | 0.00 |
| **Max:** | 4.17 |
| **DN (mm):** | 100 |
| **GK=1 GKL=2** | 2 |
| **GK:** | 5.014 |
| **Constant:** | 4177.44 |

| **Output** | **(Signal)** | **(Process)** |
|---|---|---|
| **Type or EGU:** | mA | L/S |
| **Min:** | 4.00 | 0.00 |
| **Max:** | 20.00 | 25.00 |

| | | | **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 | 7.88 | 0.51% | 7.88 | 0.51% |
| 2.00 | C | 11.68 | 11.73 | 0.43% | 11.73 | 0.43% |
| | | | | | | |
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**Calibration Equipment**

| | | | |
|---|---|---|---|
| **Type:** | DMM | Simulator | |
| **Manufacturer:** | Fluke | Krohne | |
| **2023 Calibrations F** | Model 87 | GS 8B | |
| **Serial No.:** | 13440128 | U1127700020705 | |
| **Last Cal. Date:** | Feb. 17, 2023 | Mar. 27, 2023 | |

**Comments:** 104.3, open to ground, total 24200 m3

**CERTIFIED BY:**

# CALIBRATION REPORT

**Report No.:** OCWA K23 FIT-301

**Date:** 22-Aug-23

| | |
|---|---|
| **SITE:** | Fenelon Falls WWTP |
| **PROCESS AREA:** | Effluent Flow |
| **INSTR. TAG:** | FIT-301 |
| **MANUFACTURER:** | Krohne |
| **MODEL:** | IFC 020F/D/6 |
| **SERIAL No.:** | A00/12028 |
| **OCWA CODE No.:** | 0000158519 |

| | |
|---|---|
| **SERVICE DATE:** | August 22, 2023 |
| **TECHNICIAN:** | Mitch Manley |
| **JOB REFERENCE:** | OCWA K23 |

| **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 | 4.00 | 0.00% | 4.00 | 0.00% |
| 0.50 | A | 5.82 | 5.80 | -0.34% | 5.80 | -0.34% |
| 1.00 | B | 7.64 | 7.61 | -0.39% | 7.61 | -0.39% |
| 2.00 | C | 11.28 | 11.25 | -0.27% | 11.25 | -0.27% |
| | | | | | | |
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| **Calibration Equipment** | | | |
|---|---|---|---|
| **Type:** | DMM | Simulator | |
| **Manufacturer:** | Fluke | Krohne | |
| **2023 Calibrations F** | Model 87 | GS 8B | |
| **Serial No.:** | 13440128 | U1127700020705 | |
| **Last Cal. Date:** | Feb. 17, 2023 | Mar. 27, 2023 | |

**Comments:** 102.9 ohms , open to ground, Total 433901

**CERTIFIED BY:**

# CALIBRATION REPORT

**Report No.:** OCWA K23 FIT-Bypass

**Date:** 22-Aug-23

| | |
|---|---|
| **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:** | August 22, 2023 |
| **TECHNICIAN:** | Mitch Manley |
| **JOB REFERENCE:** | OCWA K23 |

| **Input** | **(Test)** |
|---|---|
| **Type:** | C1 H |
| **Spacing:** | 19.117 in |
| **Wall:** | 0.168 |
| **OD (in):** | 16.2 |
| **Sonic Vel** | 1432 m/s |
| **Damping:** | 5.000 |
| **User Cal:** | 0.82 |

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

| | | | **Before Calibration** | | **After Calibration** | |
|---|---|---|---|---|---|---|
| **Test Flow (l/s)** | **Mag Reading** | **Calc. flow** | **Output** | **%Error** | **Output** | **%Error** |
| | | | | | | |
| 5.80 | 5.80 | 5.80 | 5.7-6.6 | | 5.7-6.6 | |
| | | | | | | |
| 14.60 | 14.6 | 14.60 | 13.7 - 15.8 | | 13.7 - 15.8 | |
| | | | | | | |
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| **Calibration Equipment** | | | |
|---|---|---|---|
| **Type:** | DMM | Simulator | |
| **Manufacturer:** | Fluke | Krohne | |
| **2023 Calibrations F** | Model 87 | GS 8B | |
| **Serial No.:** | 13440128 | U1127700020705 | |
| **Last Cal. Date:** | Feb. 17, 2023 | Mar. 27, 2023 | |

**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, increased mA output damping to 5 sec.

**CERTIFIED BY:**

# CALIBRATION REPORT

**Report No.:** OCWA K23 WEL_PIT_101

**Date:** 22-Aug-23

| | |
|---|---|
| **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:** | August 22, 2023 |
| **TECHNICIAN:** | Mitch Manley |
| **JOB REFERENCE:** | OCWA K23 |

| **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 | 0.1 | 0.03% | 0.1 | 0.03% |
| 100 | 25.00% | 100.00 | 99.7 | -0.30% | 99.7 | -0.30% |
| 200 | 50.00% | 200.00 | 199.1 | -0.45% | 199.1 | -0.45% |
| 300 | 75.00% | 300.00 | 299.5 | -0.17% | 299.5 | -0.17% |
| 400 | 100.00% | 400.00 | 399.9 | -0.03% | 399.9 | -0.03% |
| | | | | | | |
| | | | | | | |
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| **Calibration Equipment** | | | |
|---|---|---|---|
| **Type:** | Pressure Calibrator | DMM | |
| **Manufacturer:** | Crystal | Fluke | |
| **2023 Calibrations F** | XP2i 300 PSI | Model 87 | |
| **Serial No.:** | 153455 | 13440128 | |
| **Last Cal. Date:** | Dec. 1, 2022 | Feb. 17, 2023 | |

**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 |
| 22.08.2023 | 09:57 |
| 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 |
| 04/2023 | 04/2023 |
| 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** | 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 | **22.08.2023** | Verification time | **09:57** |

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 % | 0.61 % |
| ✓ | | 3.142 l/s (10.0%) | 1.00 % | 0.71 % |
| ✓ | | 15.708 l/s (50.0%) | 0.60 % | 0.08 % |
| ✓ | | 31.416 l/s (100%) | 0.55 % | 0.04 % |
| | | | | |
| ✓ | 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 | -0.008 mA |
| ✓ | | 12.000 mA (50.0%) | 0.05 mA | 0.005 mA |
| ✓ | | 20.000 mA (100%) | 0.05 mA | 0.006 mA |
| | | | | |
| – | Pulse Output 1 | --- | --- | --- |
| | | | | |
| | | **Start value** | **Limits range** | **Measured value** |
| | **Test Sensor** | | | |
| ✓ | Coil Curr. Rise | 5.000 ms | 0.000..14.250 ms | 6.380 ms |
| ✓ | Coil Curr. Stability | | --- | --- |
| ✓ | Electrode Integrity | mV | 0.0..300.001 mV | 29.461 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 | **22.08.2023** | Verification time | **09:57** |

| **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. 123.0

# SIEMENS MAGFLO® Verification Certificate

## Customer:

| | |
|---|---|
| Name | OCWA Kawartha |
| Address | Fenelon Falls WW |
| | |
| | |
| Phone | |
| Email | |

## MAGFLO® Identification:

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

## Results:

| | | |
|---|---|---|
| **Verification file name or No.** | | 00000291194 |
| **Converter** | | Passed |
| **Sensor** | Insulation | Passed |
| | Magnetic Circuit | Passed |

| Velocity | Current Output | | | Frequency Output | | |
|---|---|---|---|---|---|---|
| Theoretical | Theoretical | Actual | Deviation | Theoretical | Actual | Deviation |
| 0.5m/s | 4.800mA | 4.806mA | 0.79% | 0.500kHz | 0.502kHz | 0.37% |
| 1.0m/s | 5.600mA | 5.602mA | 0.14% | 1.000kHz | 1.000kHz | -0.05% |
| 3.0m/s | 8.800mA | 8.807mA | 0.15% | 3.000kHz | 3.003kHz | 0.10% |

Current Output 4-20mA Frequency Output 0-10kHz

## Converter Settings:

**Basic**

| | |
|---|---|
| Qmax. | 80.0 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 | 440979.78125 m³ |
| Totalizer 1 value after test | 440979.84375 m³ |
| Totalizer 2 value before test | 1243.16137695 m³ |
| Totalizer 2 value after test | 1243.16137695 m³ |

## Sensor Details:

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

## Verificator Details (083F5060)

| | |
|---|---|
| Serial No. | 001113N039 |
| Device No. | 91738 |
| Software Version | 1.40 |
| PC-Software Version | 4.02 |
| Cal. date | 2022.12.29 |
| ReCal. date | 2023.12.29 |

## 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

2023.08.22 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 |
| 22.08.2023 | 13:03 |
| 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 |
| 04/2023 | 04/2023 |
| 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** | 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 | **22.08.2023** | Verification time | **13:03** |

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 % | 0.71 % |
| ✓ | | 12.566 l/s (10.0%) | 1.00 % | 0.00 % |
| ✓ | | 62.832 l/s (50.0%) | 0.60 % | 0.05 % |
| ✓ | | 125.665 l/s (100%) | 0.55 % | 0.03 % |
| | | | | |
| ✓ | Current Output 1 | 4.000 mA (0%) | 0.05 mA | 0.000 mA |
| ✓ | | 4.800 mA (5%) | 0.05 mA | 0.000 mA |
| ✓ | | 5.600 mA (10.0%) | 0.05 mA | -0.013 mA |
| ✓ | | 12.000 mA (50.0%) | 0.05 mA | 0.001 mA |
| ✓ | | 20.000 mA (100%) | 0.05 mA | -0.005 mA |
| | | | | |
| – | Pulse Output 1 | --- | --- | --- |
| | | | | |
| | | **Start value** | **Limits range** | **Measured value** |
| | **Test Sensor** | | | |
| ✓ | Coil Curr. Rise | 13.300 ms | 0.000..27.625 ms | 23.533 ms |
| ✓ | Coil Curr. Stability | | --- | --- |
| ✓ | Electrode Integrity | mV | 0.0..300.001 mV | 62.144 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 | **22.08.2023** | Verification time | **13:03** |

| **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. 129.0

# Appendix IV

## Sludge/Biosolids Summary

Ontario Clean Water Agency
Biosolids Quality Report
**Solids and Nutrients**

Facility: FENELON FALLS WASTEWATER TREATMENT FACILITY
Period: 01/01/2023 to 12/01/2023
Facility Owner: *Municipality: City of Kawartha Lakes*
Facility Classification: *Class 2 Wastewater Treatment*

| Month | Total Sludge Hauled (m3) | Avg. Total Solids (mg/L) | Avg. Total Phosphorus (mg/L) | Ammonia (mg/L) | Nitrate (mg/L) | Nitrite (mg/L) | TKN (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 - no T/S** | **K** |
| **T/s** | **IH Month.Total** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | | **Lab Published Month Mean** |
| **Jan** | 0.000 | -- | -- | -- | -- | -- | -- | -- | -- |
| **Feb** | 236.420 | 20,750.000 | 400.000 | 54.800 | 0.300 | 1.150 | 1,419.000 | 27.550 | 62.000 |
| **Mar** | 116.400 | 46,700.000 | 1,100.000 | 101.000 | 0.300 | 0.900 | 2,740.000 | 50.650 | 130.000 |
| **Apr** | 0.000 | -- | -- | -- | -- | -- | -- | -- | -- |
| **May** | 494.700 | 18,000.000 | 421.500 | 35.300 | 0.300 | 0.650 | 937.000 | 17.800 | 77.000 |
| **Jun** | 222.750 | 18,200.000 | 437.000 | 85.700 | 3.000 | 3.000 | 934.000 | 44.350 | 60.000 |
| **Jul** | 174.600 | 17,700.000 | 500.000 | 90.800 | 3.000 | 3.000 | 1,390.000 | 46.900 | 59.000 |
| **Aug** | 465.600 | 15,300.000 | 386.000 | 75.650 | 3.000 | 3.000 | 980.000 | 39.325 | 41.500 |
| **Sep** | 203.700 | 13,600.000 | 336.000 | 11.500 | 3.000 | 3.000 | 730.000 | 7.250 | 38.000 |
| **Oct** | 179.960 | 21,700.000 | 576.000 | 14.700 | 3.000 | 3.000 | 1,190.000 | 8.850 | 49.000 |
| **Nov** | 154.500 | 16,900.000 | 452.000 | 9.600 | 4.000 | 3.000 | 1,010.000 | 6.800 | 49.000 |
| **Dec** | 140.870 | 19,800.000 | 500.000 | 6.000 | 3.000 | 3.000 | 946.000 | 4.500 | 60.000 |
| | | | | | | | | | |
| **Average** | 217.227 | 20,865.000 | 510.850 | 48.505 | 2.290 | 2.370 | 1,227.600 | 25.398 | 62.550 |
| **Total** | 2,389.500 | 208,650.000 | 5,108.500 | 485.050 | 22.900 | 23.700 | 12,276.000 | 253.975 | 625.500 |

Ontario Clean Water Agency
Biosolids Quality Report
**Metals and Criteria**

Facility: FENELON FALLS WASTEWATER TREATMENT FACILITY
Period: 01/01/2023 to 12/01/2023
Facility Owner: *Municipality: City of Kawartha Lakes*
Facility Classification: *Class 2 Wastewater Treatment*

| Month | Arsenic (mg/L) | Cadmium (mg/L) | Cobalt (mg/L) | Chromium (mg/L) | Copper (mg/L) | Mercury (mg/L) | Molybdenum (mg/L) | Nickel (mg/L) | Lead (mg/L) | Selenium (mg/L) | Zinc (mg/L) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Parameter Short Name** | **As** | **Cd** | **Co** | **Cr** | **Cu** | **Hg** | **Mo** | **Ni** | **Pb** | **Se** | **Zn** |
| **T/s** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** | **Lab Published Month Mean** |
| Jan | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Feb | 0.100 | 0.009 | 0.020 | 0.185 | 3.700 | 0.003 | 0.075 | 0.190 | 0.150 | 0.100 | 4.000 |
| Mar | 0.100 | 0.021 | 0.060 | 0.480 | 11.000 | 0.013 | 0.210 | 0.540 | 0.500 | 0.200 | 13.000 |
| Apr | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| May | 0.100 | 0.009 | 0.025 | 0.195 | 4.050 | 0.005 | 0.080 | 0.205 | 0.250 | 0.100 | 6.000 |
| Jun | 0.100 | 0.008 | 0.030 | 0.210 | 4.200 | 0.005 | 0.070 | 0.210 | 0.200 | 0.100 | 5.000 |
| Jul | 0.100 | 0.008 | 0.030 | 0.250 | 4.800 | 0.009 | 0.080 | 0.220 | 0.300 | 0.100 | 6.000 |
| Aug | 0.100 | 0.009 | 0.025 | 0.180 | 4.250 | 0.006 | 0.070 | 0.175 | 0.300 | 0.100 | 6.500 |
| Sep | 0.100 | 0.008 | 0.020 | 0.140 | 3.600 | 0.015 | 0.060 | 0.140 | 0.200 | 0.100 | 6.000 |
| Oct | 0.100 | 0.012 | 0.030 | 0.230 | 5.500 | 0.009 | 0.120 | 0.230 | 0.300 | 0.100 | 10.000 |
| Nov | 0.100 | 0.010 | 0.020 | 0.170 | 4.000 | 0.008 | 0.090 | 0.180 | 0.300 | 0.100 | 7.000 |
| Dec | 0.100 | 0.012 | 0.030 | 0.200 | 4.700 | 0.006 | 0.100 | 0.210 | 0.200 | 0.100 | 7.000 |
| | | | | | | | | | | | |
| Average | 0.100 | 0.010 | 0.029 | 0.224 | 4.980 | 0.008 | 0.096 | 0.230 | 0.270 | 0.110 | 7.050 |
| Max. Permissible Metal Concentrations (mg/kg of Solids) | 170.000 | 34.000 | 340.000 | 2,800.000 | 1,700.000 | 11.000 | 94.000 | 420.000 | 1,100.000 | 34.000 | 4,200.000 |
| Metal Concentrations in Sludge (mg/kg) | 4.793 | 0.501 | 1.390 | 10.736 | 238.677 | 0.376 | 4.577 | 11.023 | 12.940 | 5.272 | 337.886 |

# Appendix V

## Bypass and Overflow Event Reporting

**Ontario Clean Water Agency**
**Agence Ontarienne Des Eaux**

Box 279
Bobcaygeon, ON
K0M 1A0

May 12, 2023

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 2023 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 started in the fourth quarter of 2022 and continued into the first quarter of 2023 (December 31, 2022-January 6, 2023). All information regarding this bypass was included in the 2022 fourth quarterly Bypass and Overflow event report. No other Bypass or Overflow Events occurred at the Fenelon Falls WPCP during the first quarter of 2023 – 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
W. Henneberry, Safety, Process & Compliance Manager, OCWA Kawartha-Trent
G. Redden, General Manager, OCWA Kawartha-Trent Regional Hub
K. Lorente, Regional Hub Manager, OCWA Kawartha-Trent Regional Hub
C. Johnston, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

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: 2023

Q1 = January, February and 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. |

**Ontario Clean Water Agency**
**Agence Ontarienne Des Eaux**

Box 279
Bobcaygeon, ON
K0M 1A0

August 02, 2023

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 2023 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 second quarter of 2023 (April, May, June). Details of this Event are attached.

There was no occurrence of Overflow at the Fenelon Falls WPCP during the second quarter of 2023 (April, May and June). There was one occurrence of a collection system Overflow at the Colborne Street Sewage Pumping Station which was reported as required by the CLI-ECA 141-W601. Although not required as per CLI-ECA 141-W601, the information from the Overflow event at the Colborne Street Sewage Pumping Station has been included as an attachment for reference. Please reach out if you require more details on the Overflow event that occurred at the Colborne Street Pumping Station.

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
G. Redden, General Manager, OCWA Kawartha-Trent Regional Hub
W. Henneberry, Regional Hub Manager (A), OCWA Kawartha-Trent Regional Hub
C. Johnston, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

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 # 1-34X4L0 - emergency partial sand filter bypass due to weather |
| | b. the date and time of the beginning of the Bypass | April 5, 2023 at 20:45 |
| | 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 11, 2023 at 07:34 |
| | b. the estimated or measured volume of Bypass. | 2, 417 $m^3$ 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 5, 2023 at 20:45 with last sample finishing at 20:45 on April 11, 2023 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 April 2023. See attached Performance Report for April 2023. |

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

# Operations Event Form

**Project:** Fenelon Falls WPCP
**Location:** 216 Ellice St., Fenelon Falls, ON
**Date:** April 5- April 11, 2023

**Nature of Event:** Emergency Partial Sand Filter Bypass

**Details of Event:** A heavy rain event (approx. 30mm of rain plus snow melt) in Fenelon Falls, resulted in high flows which caused the plant to become hydraulically overloaded - secondary treatment and disinfection provided; however, 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 5, 2023 @ 22:20 **SAC Incident Number:** 1-34X4L0

**Name of Person at SAC:** Brenda

**District Health Unit Notified (time):** April 5, 2023 @ 22:31 **-** Left Message

**Name of Person at Health Unit:** Neha Gandi, PHI, returned call April 5, 2023 @ 22:37. PHI requested a media release be posted by the City of Kawartha Lakes (CKL) to notify residents of the partial sand filter bypass (notice attached).

**Other Contacts (Managers, Client, MECP, MOH):**

J. Manning Sr. Ops. Mgr., ORO OCWA, C. Craig PCT OCWA, R. Rohrbasser Operator OCWA CKL, and OCWA: W. Henneberry SPC Mgr, G. Redden General Manager, K. Lorente Regional Mgr, & R. Junkin VP Operations

**Volume of Partial Sand Filter Bypass:** Estimated volume based upon flow meter readings and bypass valve opening: ~2, 417 $m^3$

**Start:** April 5, 2023 @ 20:45 **Finish:** April 11, 2023 @ 07:34 **Duration:** 130 hours, 49 minutes

MOH called on April 11, 2023 @ 09:40 to report partial bypass stopped- Left message. PHI, Neha Gandi called back at 10:50, provided estimated volume and duration of event. Requested CKL to update media release to inform residents the partial sand filter bypass has concluded. This was completed.

SAC contacted at end of event on April 11, 2023 @ 09:43 spoke with Justin Chin - 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 fully 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

---

Kawartha Lakes News
4/6/2023 9:07:03 AM

## Fenelon Falls Wastewater System currently bypassing

Kawartha Lakes – Beginning at approximately 10pm on Wednesday April 5, 2023, the Fenelon Falls Wastewater System – Colborne St. Sewage Pumping Station is currently bypassing, releasing raw sewage into the Fenelon River. In addition, the sewage treatment plant is partially bypassing the sand filtration process (tertiary treatment), however effluent is still receiving UV disinfection prior to outlet into the Fenelon River.

The Fenelon Falls Wastewater System is currently receiving higher than normal sewage flows due to extreme wet weather, and the amount of wastewater entering the sewer system has exceeded the capacity of the system. The impact of the spill on water quality will be minimal given dilution due to significant rainfall, however residents drawing water downstream from the Colborne St. Sewage Pumping Station (bottom side of Fenelon locks) should take precautions.

The Haliburton Kawartha Pine Ridge District (HKPR) Health Unit advises residents who draw their water from the Fenelon River to use a proper filtration and disinfection system before consuming the water. Surface water can be contaminated by viruses, bacteria or parasites that can cause illness. Although extra precaution should be taken during the bypass event, it is always important to ensure that surface water is properly treated before drinking or using to be sure it is safe.

**Homes and businesses connected to municipal water from the Fenelon Falls Drinking Water System are not affected and their water continues to be safe to drink.**

Residents will be advised when the bypass event has ended

- 30 -

Media Inquiries

**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

19-April-2023

**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. :** 11 April 2023
**LR Report:** **CA12425-APR23**

**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-Apr-23 20:45 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 10.0 |
| Field pH [no unit] | --- | --- | --- | --- | 7.32 |
| Field Temperature [celcius] | --- | --- | --- | --- | 7.5 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 11-Apr-23 | 16:37 | 17-Apr-23 | 13:08 | < 4 |
| Total Suspended Solids [mg/L] | 12-Apr-23 | 11:27 | 13-Apr-23 | 14:26 | 5 |
| Phosphorus (total) [mg/L] | 18-Apr-23 | 15:23 | 19-Apr-23 | 12:49 | 0.07 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 15:47 | 14-Apr-23 | 10:58 | < 0.1 |

*Carrie Greenlaw*
*Project Specialist,*
*Environment, Health & Safety*

OnLine LIMS

0003304589

**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

19-April-2023

**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. :** 11 April 2023
**LR Report:** **CA12426-APR23**

**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-Apr-23 20:45 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 10.0 |
| Field pH [no unit] | --- | --- | --- | --- | 7.03 |
| Field Temperature [celcius] | --- | --- | --- | --- | 7.7 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 12-Apr-23 | 17:20 | 17-Apr-23 | 15:58 | < 4 |
| Total Suspended Solids [mg/L] | 13-Apr-23 | 07:53 | 14-Apr-23 | 09:55 | 7 |
| Phosphorus (total) [mg/L] | 18-Apr-23 | 15:23 | 19-Apr-23 | 12:49 | 0.08 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 15:47 | 14-Apr-23 | 10:58 | < 0.1 |

*Carrie Greenlaw*
*Project Specialist,*
*Environment, Health & Safety*

OnLine LIMS

0003304598

**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

18-April-2023

**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. :** 11 April 2023
**LR Report:** **CA12427-APR23**

**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-Apr-23 20:45 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 10.0 |
| Field pH [no unit] | --- | --- | --- | --- | 7.01 |
| Field Temperature [celcius] | --- | --- | --- | --- | 7.9 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 12-Apr-23 | 17:20 | 17-Apr-23 | 15:58 | < 4 |
| Total Suspended Solids [mg/L] | 12-Apr-23 | 13:52 | 14-Apr-23 | 09:50 | 5 |
| Phosphorus (total) [mg/L] | 12-Apr-23 | 15:01 | 13-Apr-23 | 12:54 | 0.09 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 15:47 | 14-Apr-23 | 10:59 | 0.1 |

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

OnLine LIMS

0003302480

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

**Works #:** 110001612
**Project :** PO#017018

19-April-2023

**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. :** 11 April 2023
**LR Report:** **CA12423-APR23**

**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-Apr-23 20:45 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 10.0 |
| Field pH [no unit] | --- | --- | --- | --- | 6.96 |
| Field Temperature [celcius] | --- | --- | --- | --- | 8.2 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 12-Apr-23 | 17:20 | 17-Apr-23 | 15:57 | 2 |
| Total Suspended Solids [mg/L] | 13-Apr-23 | 07:53 | 14-Apr-23 | 09:55 | 5 |
| Phosphorus (total) [mg/L] | 18-Apr-23 | 15:23 | 19-Apr-23 | 12:49 | 0.06 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 15:47 | 14-Apr-23 | 10:58 | 0.1 |

*Carrie Greenlaw*
*Project Specialist,*
*Environment, Health & Safety*

OnLine LIMS

0003304578

**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

18-April-2023

**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. :** 11 April 2023
**LR Report:** **CA12424-APR23**

**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 | | | | | 10-Apr-23 20:45 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 10.0 |
| Field pH [no unit] | --- | --- | --- | --- | 6.96 |
| Field Temperature [celcius] | --- | --- | --- | --- | 9.0 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 12-Apr-23 | 17:20 | 17-Apr-23 | 15:57 | < 4 |
| Total Suspended Solids [mg/L] | 13-Apr-23 | 07:53 | 14-Apr-23 | 09:55 | 5 |
| Phosphorus (total) [mg/L] | 13-Apr-23 | 14:40 | 14-Apr-23 | 11:46 | 0.12 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 15:47 | 14-Apr-23 | 10:58 | < 0.1 |

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

OnLine LIMS

0003302477

**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

25-April-2023

**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. :** 12 April 2023
**LR Report:** **CA13343-APR23**

**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 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 11-Apr-23 07:50 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 9.0 |
| Field pH [no unit] | --- | --- | --- | --- | 7.14 |
| Field Temperature [celcius] | --- | --- | --- | --- | 8.4 |
| Carbonaceous Biochemical Oxygen Demand [(CBOD5) mg/L] | 13-Apr-23 | 16:45 | 18-Apr-23 | 15:46 | < 2 |
| Total Suspended Solids [mg/L] | 14-Apr-23 | 10:28 | 17-Apr-23 | 14:08 | 3 |
| Phosphorus (total) [mg/L] | 13-Apr-23 | 14:40 | 14-Apr-23 | 11:54 | 0.06 |
| Ammonia+Ammonium (N) [as N mg/L] | 13-Apr-23 | 17:41 | 14-Apr-23 | 09:13 | 0.4 |

*Report revised - sampling date corrected.

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

OnLine LIMS

0003311197

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

## 5886 FENELON FALLS WASTEWATER TREATMENT FACILITY 110001612

| | | 4 / 2023 | | Monthly Limit |
|---|---|---|---|---|
| **Flows** | | | | |
| Raw Flow: Total - Raw m³/d | | 49,555.00 | | |
| Raw Flow: Avg - Raw m³/d | | 1,651.83 | | |
| Raw Flow: Max - Raw m³/d | | 3,397.00 | | |
| Raw Flow: Count - Raw m³/d | | 30.00 | | |
| Eff. Flow: Total - Eff m³/d | | 49,555.00 | | |
| Eff. Flow: Avg - Eff m³/d | | 1,651.83 | | |
| Eff. Flow: Max - Eff m³/d | | 3,397.00 | | |
| Eff Flow: Count - Eff m³/d | | 30.00 | | |
| **Carbonaceous Biochemical Oxygen Demand: CBOD** | | | | |
| Eff: Avg cBOD5 - Final Effluent including Bypass mg/L | < | 3.00 | | |
| Eff: # of samples of cBOD5 - Final Effluent including Bypass mg/L | | 10.00 | | |
| Loading: cBOD5 - Final Effluent including Bypass kg/d | < | 4.956 | | |
| **Total Suspended Solids: TSS** | | | | |
| Eff: Avg TSS - Final Effluent including Bypass mg/L | < | 5.30 | | |
| Eff: # of samples of TSS - Final Effluent including Bypass mg/L | | 10.00 | | |
| Loading: TSS - Final Effluent including Bypass kg/d | < | 8.755 | | |
| **Total Phosphorus: TP** | | | | |
| Raw: Avg TP - Raw mg/L | | 2.26 | | |
| Raw: # of samples of TP - Raw mg/L | | 1.00 | | |
| Eff: Avg TP - Final Effluent including Bypass mg/L | | 0.08 | | 0.50 |
| Eff: # of samples of TP - Final Effluent including Bypass mg/L | | 10.00 | | |
| Loading: TP - Final Effluent including Bypass kg/d | | 0.132 | | 0.9 |
| **Nitrogen Series** | | | | |
| Raw: Avg TKN - Raw mg/L | | 21.10 | | |
| Raw: # of samples of TKN - Raw mg/L | | 1.00 | | |
| Eff: Avg TAN - Final Effluent including Bypass mg/L | < | 0.92 | | 3.5 |
| Eff: # of samples of TAN - Final Effluent including Bypass mg/L | | 10.00 | | |
| Loading: TAN - Final Effluent including Bypass kg/d | < | 1.520 | | 6.3 |
| Eff: Avg NO3-N - Eff mg/L | | 4.59 | | |
| Eff: # of samples of NO3-N - Eff mg/L | | 4.00 | | |
| Eff: Avg NO2-N - Eff mg/L | | 0.18 | | |
| Eff: # of samples of NO2-N - Eff mg/L | | 4.00 | | |
| **Disinfection** | | | | |
| Eff: GMD E. Coli - Eff cfu/100mL | | 4.43 | | 200.00 |
| Eff: # of samples of E. Coli - Eff cfu/100mL | | 4.00 | | |
| **Eff/pH-every sample result to meet limits** | | | | |
| Max IH | | 7.31 | | 9.5 |
| Min IH | | 6.84 | | 6.0 |

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

Q2 = April, May and June

Did an Overflow occur during this quarter:

Yes☑ No ☐

***Although not required as per CLI-ECA 141-W601, the information from the Overflow event at the Colborne Street Sewage Pumping Station has been included for reference.***

| **Condition 5. Overflow** | | **Event** |
|---|---|---|
| 5.3 | a. the type of the Overflow (emergency or planned) | SAC # 1-34X4Mo - emergency overflow due to heavy rain event - Operations Event Form Summary attached. |
| | b. the date and time of the beginning of the Overflow | April 5, 2023 @ 21:50 |
| | 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; | Overflow at Colborne St. Sewage Pumping Station - raw sewage, no treatment. |
| | 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. | Monitor flows, owner posted notice on social media site. Utilized detention tank. Shepherds Environmental contacted to haul sewage from Francis St SPS to the sewage treatment plant. |
| 5.4 | a. the date and time of the end of the Overflow; | April 6, 2023 @ 09:30 |
| | b. the estimated or measured volume of Overflow. | 2,220 $m^3$ estimate based on duration and flow rate |
| 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. | N/A |
| | 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. | Grab samples collected and lab reports attached. |
| 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. | |

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

**Fenelon Falls Collection System Overflow Event Form - EMERGENCY**

**Location:**

| Column 1 Asset ID | Column 2 Asset Name | Column 3 Overflow Location (Latitude and Longitude) | Column 4 Point of Entry to Receiver (Latitude and Longitude) |
|---|---|---|---|
| N/A | Fenelon Falls Sewage Pumping Station 2- Colborne St. Overflow | 44.535925, -78.736196 | Fenelon River 44.535925, -78.736196 |

**Date(s):** April 5- April 6, 2023

---

**Nature of Event:** Raw sewage overflow at the Fenelon Falls Sewage Pumping Station 2- Colborne St. SPS

**Details of Event:** Heavy rain event (approx. 30mm of rain plus snow melt) caused high flows resulting in raw sewage being overflowed to the Fenelon River.

---

**Call SAC: 1-800-268-6060 Time SAC notified:** 22:20 on April 5, 2023 **SAC Incident #:** 1-34X4Mo

**Name of Person at SAC:** Brenda

**Contact HKPRDHU: Mon – Fri 8:30 -16:30 at 1-866-888-4577 ext. 5006**
**or after hours: 1-888-255-7839**

**Time HKPRDHU notified:** Message left 22:31 on April 5, 2023

**Name of Person at Health Unit:** Neha Gandi, PHI returned call at 22:37. Information provided for: downstream DWS- Southview Estates municipal drinking water system- located 10 km downstream on Stugreon Lake, OCWA operating authority. It was recommended to review the Southview Estates DWS and complete regular operational checks to ensure there are no impacts related to this overflow incident.

PHI requested a media release be posted by the City of Kawartha Lakes (CKL) to notify residents (notice attached).

**All Other Notifications (Managers, PCT, Client, MECP):**

J. Manning Sr. Ops. Mgr., ORO OCWA, C. Craig PCT OCWA, R. Rohrbasser Operator OCWA
CKL, and OCWA: W. Henneberry SPC Mgr, G. Redden General Manager, K. Lorente Regional Mgr, & R. Junkin VP Operations

---

**Volume of Overflow:** ~2, 220 $m^3$ (calculated based on peak flow rate around the time of the start of the overflow)

**Start (date & time):** April 5, 2023 @ 21:50 **Finish (date & time):** April 6, 2023 @ 09:30

SAC updated on April 6, 2023 @ 12:19 spoke with Peter-provided estimated volume and duration of the event.

MOH contacted on April 06, 2023 @ 12:18-message left. PHI, Bernie Mayer called back at 13:40 provided total estimated volumes and duration of event.

**Samples Collected (indicate dates and times):** BOD5, TSS, Total Phos, TKN and E. Coli

**Corrective Action Taken:**

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

- Samples collected every each day of the overflow.

**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

14-April-2023

**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. :** 06 April 2023
**LR Report:** **CA12243-APR23**

**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: SSO SSO-Colborne SPS Overflow @ 20:25 |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 05-Apr-23 22:25 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 7.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 06-Apr-23 | 19:55 | 12-Apr-23 | 12:33 | 29 |
| Total Suspended Solids [mg/L] | 12-Apr-23 | 11:27 | 13-Apr-23 | 14:26 | 21 |
| Phosphorus (total) [mg/L] | 11-Apr-23 | 14:23 | 13-Apr-23 | 07:32 | 0.66 |
| Total Kjeldahl Nitrogen [as N mg/L] | 12-Apr-23 | 07:59 | 13-Apr-23 | 08:25 | 5.1 |
| E. Coli [cfu/100mL] | 06-Apr-23 | 15:54 | 10-Apr-23 | 12:27 | NDOGEC |

NDOGEC - No Data: Overgrown with E.coli

*Report revised - Sampling date/time revised as requested.

*Carrie Greenlaw*
*Project Specialist,*
*Environment, Health & Safety*

OnLine LIMS

0003299768

**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

13-April-2023

**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. :** 06 April 2023
**LR Report:** **CA12242-APR23**

**Copy:** #2

# CERTIFICATE OF ANALYSIS

## Final Report

| Analysis | 1: Analysis Start Date | 2: Analysis Start Time | 3: Analysis Completed Date | 4: Analysis Completed Time | 5: SSO SSO-Colborne SPS Overflow |
|---|---|---|---|---|---|
| Sample Date & Time | | | | | 06-Apr-23 09:25 |
| Temperature Upon Receipt [°C] | --- | --- | --- | --- | 7.0 |
| Biochemical Oxygen Demand (BOD5) [mg/L] | 06-Apr-23 | 19:55 | 12-Apr-23 | 12:33 | 26 |
| Total Suspended Solids [mg/L] | 12-Apr-23 | 11:27 | 13-Apr-23 | 14:26 | 36 |
| Phosphorus (total) [mg/L] | 11-Apr-23 | 14:23 | 13-Apr-23 | 07:32 | 1.04 |
| Total Kjeldahl Nitrogen [as N mg/L] | 12-Apr-23 | 07:59 | 13-Apr-23 | 08:25 | 8.7 |
| E. Coli [cfu/100mL] | 06-Apr-23 | 16:26 | 10-Apr-23 | 12:43 | NDOGEC |

NDOGEC - No Data: Overgrown with E.coli

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

OnLine LIMS

0003298454

**Ontario Clean Water Agency**
**Agence Ontarienne Des Eaux**

Box 279
Bobcaygeon, ON
K0M 1A0

November 06, 2023

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 2023 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 third quarter of 2023 – 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
G. Redden, General Manager, OCWA Kawartha-Trent Regional Hub
W. Henneberry, Regional Hub Manager (A), OCWA Kawartha-Trent Regional Hub
B. Jackson, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

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) | |
| | 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: 2023

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. |

**Ontario Clean Water Agency**
**Agence Ontarienne Des Eaux**

Box 279
Bobcaygeon, ON
K0M 1A0

January 15, 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 Q4 2023 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 2023 – 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
G. Redden, General Manager, OCWA Kawartha-Trent Regional Hub
W. Henneberry, Regional Hub Manager (A), OCWA Kawartha-Trent Regional Hub
B. Jackson, Water Inspector, MECP – Peterborough District Office

Fenelon Falls WPCP - Quarterly Bypass Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

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 |

Fenelon Falls WPCP - Quarterly Overflow Report

Environmental Compliance Approval #3688-BW3RGB

Year: 2023

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. |

# Appendix VI

## Sampling Calendar

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<br>Monthly >20 & <40 | | | 1 | 2 | 3 |
| 4 | 5 | 6 | 7<br>☐ Weekly<br>☐ Monthly | 8 | 9 | 10 |
| 11 | 12 | 13 | 14<br>☐ Weekly | 15 | 16 | 17 |
| 18 | 19<br>Family Day Stat | 20 | 21<br>☐ Weekly | 22 | 23 | 24 |
| 25 | 26 | 27 | 28<br>☐ Weekly | 29 | | |

Ontario Clean Water Agency
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# 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<br>Monthly >20 & <40 | | | | 1 | 2 |
| 3 | 4 | 5 | 6<br>☐ Weekly<br>☐ Monthly | 7 | 8 | 9 |
| 10 | 11 | 12 | 13<br>☐ Weekly | 14 | 15 | 16 |
| 17 | 18 | 19 | 20<br>☐ Weekly | 21 | 22 | 23 |
| 24 | 25 | 26 | 27<br>☐ Weekly | 28 | 29<br>Good Friday<br>Stat | 30 |
| 31 | | | | | | |

Ontario Clean Water Agency
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# 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 | |

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# 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<br>Monthly >20 & <40 | | 1<br>☐ Weekly<br>☐ Monthly | 2 | 3 | 4 |
| 5 | 6 | 7 | 8<br>☐ Weekly | 9 | 10 | 11 |
| 12 | 13 | 14 | 15<br>☐ Weekly | 16 | 17 | 18 |
| 19 | 20<br>Victoria Day<br>Stat | 21 | 22<br>☐ Weekly | 23 | 24 | 25 |
| 26 | 27 | 28 | 29<br>☐ Weekly | 30 | 31 | |

Ontario Clean Water Agency
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# 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<br>Monthly >20 & <40 | |

Ontario Clean Water Agency
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# 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<br>Monthly >20 & <40 | |

Ontario Clean Water Agency
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# 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<br>Monthly >20 & <40 | | 1 | 2 | 3 |
| 4 | 5<br>Civic Holiday<br>Stat | 6 | 7<br>☐ Weekly<br>☐ Monthly | 8 | 9 | 10 |
| 11 | 12 | 13 | 14<br>☐ Weekly | 15 | 16 | 17 |
| 18 | 19 | 20 | 21<br>☐ Weekly | 22 | 23 | 24 |
| 25 | 26 | 27 | 28<br>☐ Weekly | 29 | 30 | 31 |

Ontario Clean Water Agency
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# 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<br>Labour Day Stat | 3 | 4<br>☐ Weekly<br>☐ Monthly | 5 | 6 | 7 |
| 8 | 9 | 10 | 11<br>☐ Weekly | 12 | 13 | 14 |
| 15 | 16 | 17 | 18<br>☐ Weekly | 19 | 20 | 21 |
| 22 | 23 | 24 | 25<br>☐ Weekly | 26 | 27 | 28 |
| 29 | 30<br>National Day for Truth & Reconciliation Stat | | | | Sample Collection Time Frames (Days) | Weekly >5 & <10<br>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<br>Monthly >20 & <40 | 1 | 2<br>☐ Weekly<br>☐ Monthly | 3 | 4 | 5 |
| 6 | 7 | 8 | 9<br>☐ Weekly | 10 | 11 | 12 |
| 13 | 14<br>Thanksgiving Day<br>Stat | 15 | 16<br>☐ Weekly | 17 | 18 | 19 |
| 20 | 21 | 22 | 23<br>☐ Weekly | 24 | 25 | 26 |
| 27 | 28 | 29 | 30<br>☐ 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<br>Monthly >20 & <40 | | | | 1 | 2 |
| 3 | 4 | 5 | 6<br>☐ Weekly<br>☐ Monthly | 7 | 8 | 9 |
| 10 | 11<br>Remembrance Day Stat | 12 | 13<br>☐ Weekly | 14 | 15 | 16 |
| 17 | 18 | 19 | 20<br>☐ Weekly | 21 | 22 | 23 |
| 24 | 25 | 26 | 27<br>☐ 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 |