Bobcaygeon Wastewater System

2024 Annual Wastewater Performance Report

Wastewater System Works Number: 110002498

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

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

OCWA
ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

Annual Wastewater Performance Report
City of Kawartha Lakes

Kawartha Lakes
Jump In

Table of Contents

2024 Annual Wastewater System Performance Report

Executive Summary

The Bobcaygeon Water Pollution Control Plant (WPCP) is an extended aeration sewage treatment plant with a rated capacity of 3,055 m³/day, located at 127 Boyd Street in Bobcaygeon. The treatment system is comprised of two parallel process trains and discharges effluent into the Big Bob Channel. The facility is owned by the City of Kawartha Lakes with the treatment system and sewage pumping stations operated by Ontario Clean Water Agency and the remaining collection system operated by City staff. The treatment system is operated in accordance with Environmental Compliance Approval (ECA) #3028-AEUKDQ issued April 10, 2017 and the collection system is operated in accordance with the Consolidated Linear Infrastructure Environmental Compliance Approval #141-W601 issued June 20, 2023. The wastewater system is classified as a Class II Wastewater Treatment and Class II Wastewater Collection subsystems under O. Reg. 129/04.

The facility's treatment trains are each equipped with extended aeration tanks, secondary clarifiers and UV disinfection. Sludge digestion is accomplished in a common aerated digester equipped with supernatant return to the plant's headworks.

The plant's headworks consist of a common coarse bar screen, three grit channels operating in parallel and individual comminutors for each treatment train. Screened and degritted sewage flows into each of the treatment trains aeration tanks where air is constantly injected into the sewage in order to maintain aerobic conditions. Alum is added in the aeration tanks to aide in phosphorous removal. Mixed liquor from the aeration tanks is gravity fed to the secondary clarifiers. Solids are settled in the bottom of the secondary clarifiers and the clarified liquid at the top is directed through the UV chambers prior to entering a common effluent chamber before being discharged to the receiving waters in the Big Bob Channel. A portion of the settled solids (Return Activated Sludge or RAS) in the bottom of the secondary clarifier is pumped back to the aeration tanks while the remaining sludge (Waste Activated Sludge or WAS) is pumped to the aerobic digester tank for further biological stabilization and digestion by the addition of air. Stabilized sludge or biosolids are then hauled by a licensed waste hauler for land application.

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

The City of Kawartha Lakes and Ontario Clean Water Agency prepares a report summarizing system operation and performance for every municipal wastewater system annually. This report has been prepared to satisfy the reporting requirements within Environmental Compliance

Approval (ECA) #3028-AEUKDQ and Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) #141-W601. Unless otherwise noted within this report, the Bobcaygeon Sewage Works complies with all requirements of the regulating authorities and the approvals it operates under.

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

Reporting Requirements – Wastewater Treatment Plant

In accordance with the amended ECA #3028-AEUKDQ, Section 11(4) – REPORTING, the owner shall prepare a performance report on a calendar basis and submit to the Ministry of Environment, Conservation and Parks by March 31 of the calendar year following the period being reported upon.

Section 11(4) – REPORTING

The performance report is required to contain the following:

a) a summary and interpretation of all monitoring data and a comparison to the Final Effluent limits outlined in Compliance Limits condition, including an overview of the success and adequacy of the Works;
b) a description of any operating problems encountered and corrective actions taken;
c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;
d) a summary of any effluent quality assurance or control measures undertaken in the reporting period;
e) a summary of the calibration and maintenance carried out on all effluent monitoring equipment;
f) a description of efforts made and results achieved in meeting the Design Objectives of Condition 6;
g) a tabulation of the volume of sludge generated in the reporting period, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;
h) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
i) a summary of all By-pass, spill or abnormal discharge events;
j) a copy of all Notice of Modifications submitted to the Water Supervisor as a result of Schedule B, Section 1, with a status report on the implementation of each modification;
k) a report summarizing all modifications completed as a result of Schedule B, Section 3; and

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

Section 6(3)

ECA #3028-AEUKDQ Section 6(3) states "The Owner shall make an assessment of the issues and recommendation of pro-active actions if any is required under the following situations and include in the annual report to the Water Supervisor:

a) when any of the design objectives is not achieved consistently;
b) when the Annual Average Daily Flow reaches 80% of the Rated Capacity."

The following is a report from the records maintained by the Ontario Clean Water Agency for the Bobcaygeon Wastewater Treatment Plant for the calendar year 2024:

Summary of Monitoring Data to Limits and Objectives

(a,f) Overall, the plant process ran well in 2024. The following tables summarize the monthly effluent quality results in comparison to the effluent limits, Condition 7 of Environmental Compliance Approval #3028-AEUKDQ (issued April 10, 2017).

Attached as **Appendix I** is a copy of the 2024 Performance Assessment Report (PAR) and loading calculations for Bobcaygeon WWTP, for the facility's combined final effluent. The PAR contains: a tabulation of all monthly average raw sewage and final effluent sample results obtained during the reporting period, a tabulation of average daily flows, and monthly volumes for the reporting period, and a tabulation of calculated total loading of BOD/$CBOD_5$, suspended solids, total phosphorus, and ammonia + ammonium as Nitrogen concentrations in the final effluent.

The Bobcaygeon WWTP has a Rated Capacity of 3,055 m^3/day and a Peak Capacity of 10,440 m^3/day. The total final effluent flow for 2024 was 624,432 m^3 and the average daily flow was 1,706.10 m^3/day, which is 55.9% of the rated capacity.

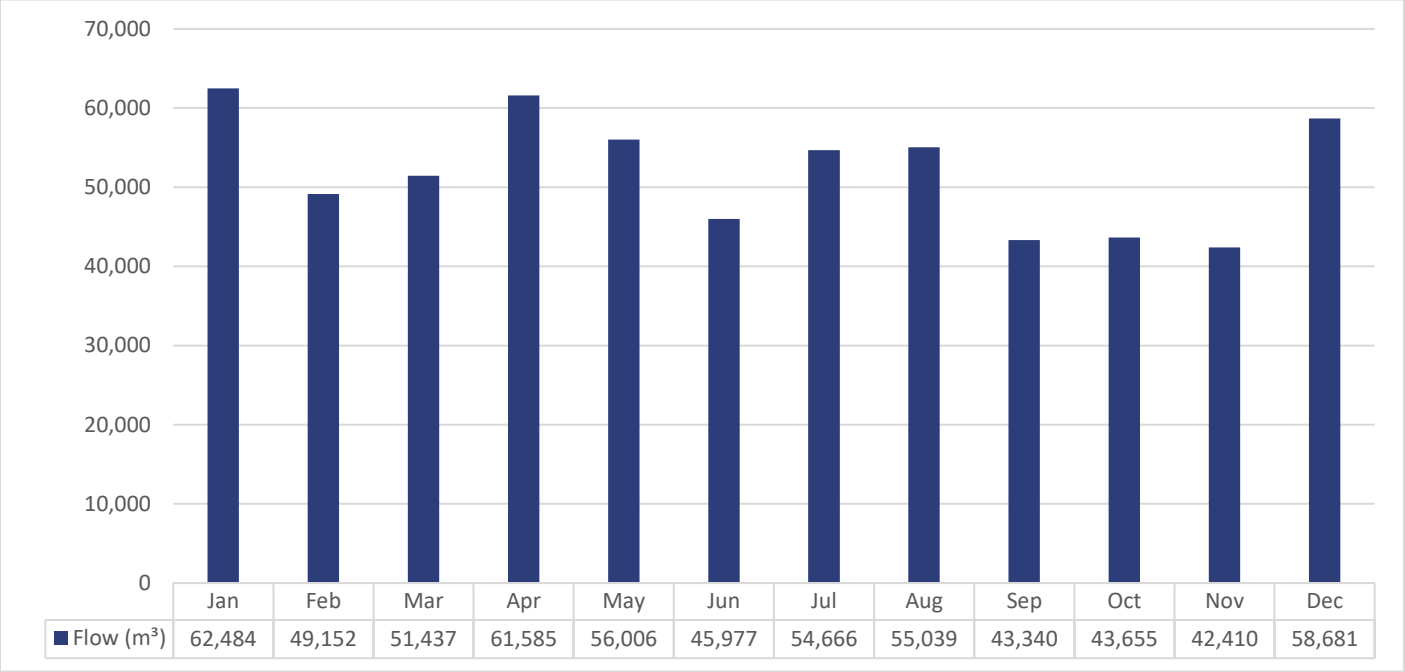
In 2022, CCTV inspections were completed along with sanitary sewer flushing of the entire collection system. The findings of the CCTV inspections were reviewed by an engineering consultant who assigned a priority ranking based on low, medium or high for each deficiency identified. A contract was awarded in 2023, to make the necessary repairs to the deficiencies identified. Various repair methods were utilized including, specialty cleaning such as hydraulic reaming and robotic cutting, injection grouting, cured in place pipe liners and mechanical spot repairs. The construction was completed in 2024.

These repairs can be seen in the total flow reduction from 2023 to 2024. OCWA will continue ongoing efforts to work in partnership with the City of Kawartha Lakes to reduce I&I to reduce the flows to the wastewater treatment plant.

OCWA initiated a biosoilids study for the Bobcaygen WWTP in 2024. The report has a comprehensive review of the performance of the facility and its capacity of sludge storage/optimization. This report

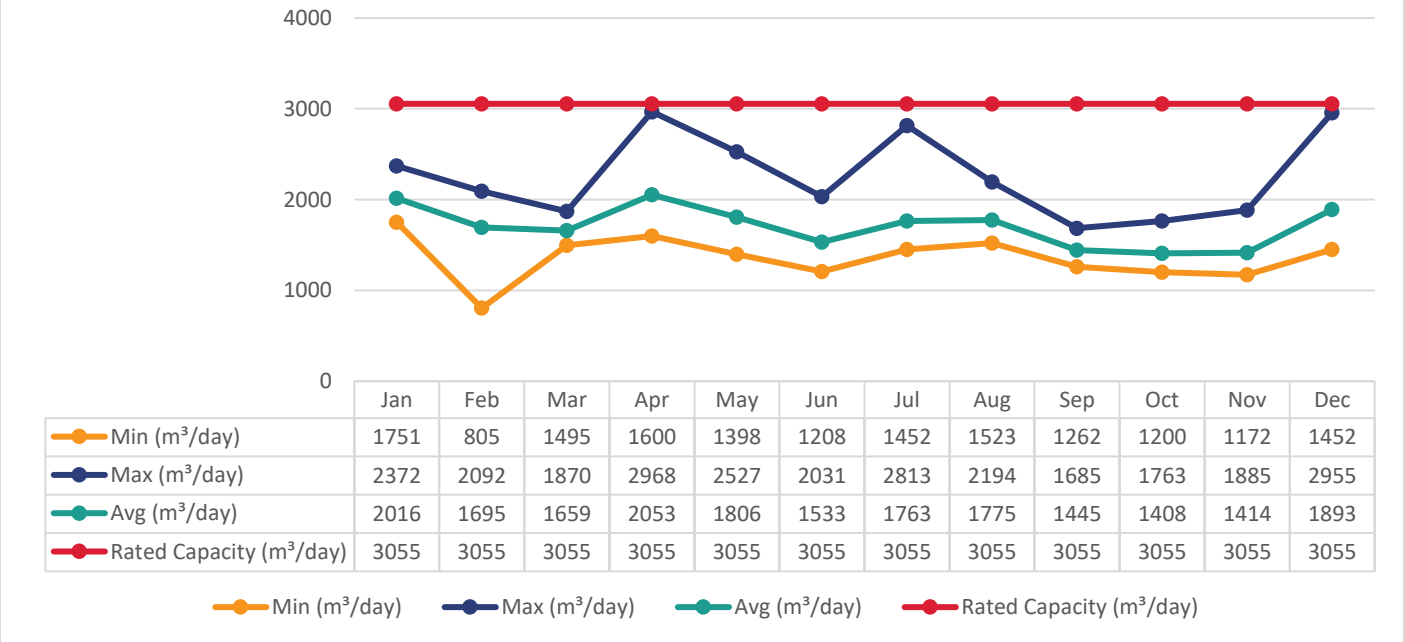
provides key findings through review of background information, plant treatment, sludge production, storage and removal to establish opportunities for improvement of sludge storage. It has been recommended to increase sludge storage by adding an additional storage tank and other options for sludge thickening.

Graph 1. 2024 Final Effluent Flow Monthly Totals



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Flow (m^3)	62,484	49,152	51,437	61,585	56,006	45,977	54,666	55,039	43,340	43,655	42,410	58,681

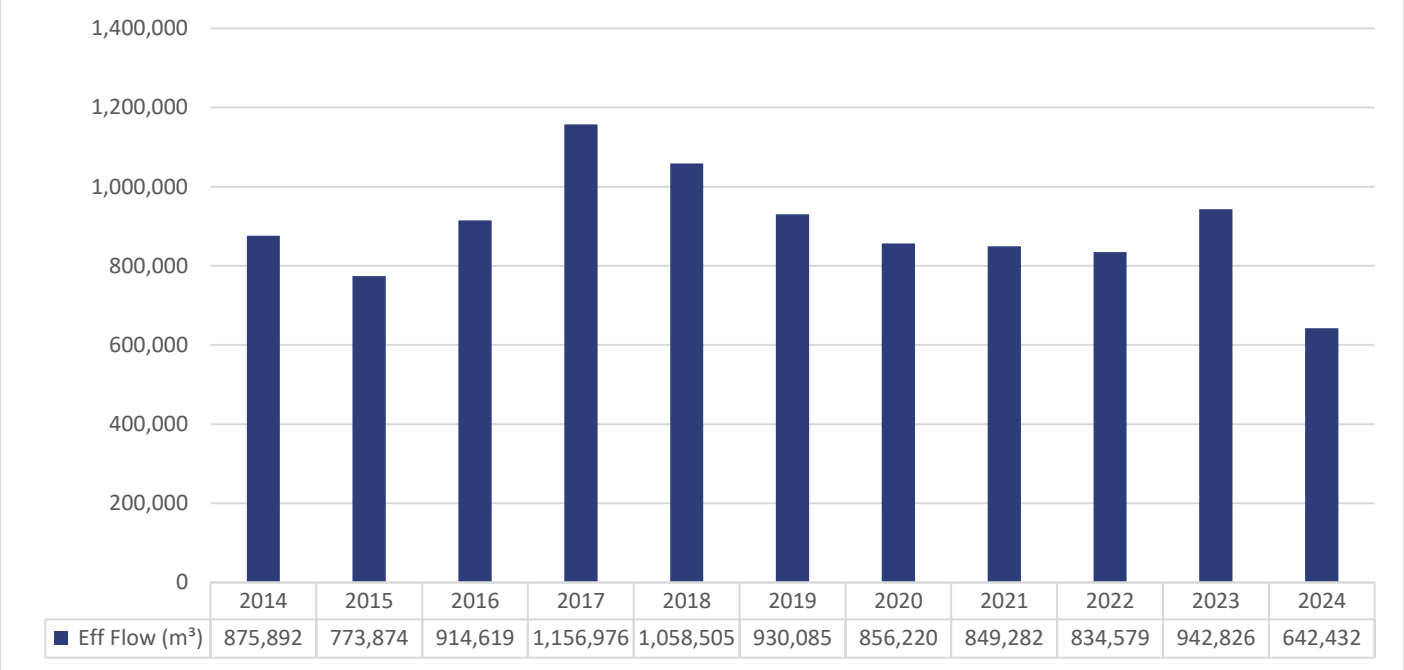
Graph 2. 2024 Final Effluent Daily Minimum, Maximum and Average Flows



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min (m^3/day)	1751	805	1495	1600	1398	1208	1452	1523	1262	1200	1172	1452
Max (m^3/day)	2372	2092	1870	2968	2527	2031	2813	2194	1685	1763	1885	2955
Avg (m^3/day)	2016	1695	1659	2053	1806	1533	1763	1775	1445	1408	1414	1893
Rated Capacity (m^3/day)	3055	3055	3055	3055	3055	3055	3055	3055	3055	3055	3055	3055

Note: The Rated Capacity is calculated as an annual average daily flow rate, which was met in 2024.

Graph 3. Historical Effluent Flows from 2014 - 2024



	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Eff Flow (m^3)	875,892	773,874	914,619	1,156,976	1,058,505	930,085	856,220	849,282	834,579	942,826	642,432

The total effluent flow has decreased by 33.77% from 2023-2024. The City of Kawartha Lakes completed collection system repairs late 2023 early 2024. These repairs can be seen in the total flow reduction from 2023 into 2024.

Minimum Sampling Requirements

ECA #3028-AEUKDQ (issued April 10, 2017) Condition 9(3) 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 1. Influent Sampling Point

Parameters	Sample Type	Frequency
BOD_5	Composite	Monthly
Total Suspended Solids	Composite	Monthly
Total Phosphorus	Composite	Monthly
Total Kjeldahl Nitrogen	Composite	Monthly

Table 2. Final Effluent Sampling Point

Parameters	Sample Type	Frequency
BOD_5	Composite	Weekly

Parameters	Sample Type	Frequency
Total Suspended Solids	Composite	Weekly
Total Phosphorus	Composite	Weekly
Total Ammonia Nitrogen	Composite	Weekly
E. Coli	Grab	Weekly
pH	Grab	Weekly
Temperature	Grab	Weekly
Acute Lethality to Rainbow Trout and Daphnia magna	Grab	Quarterly

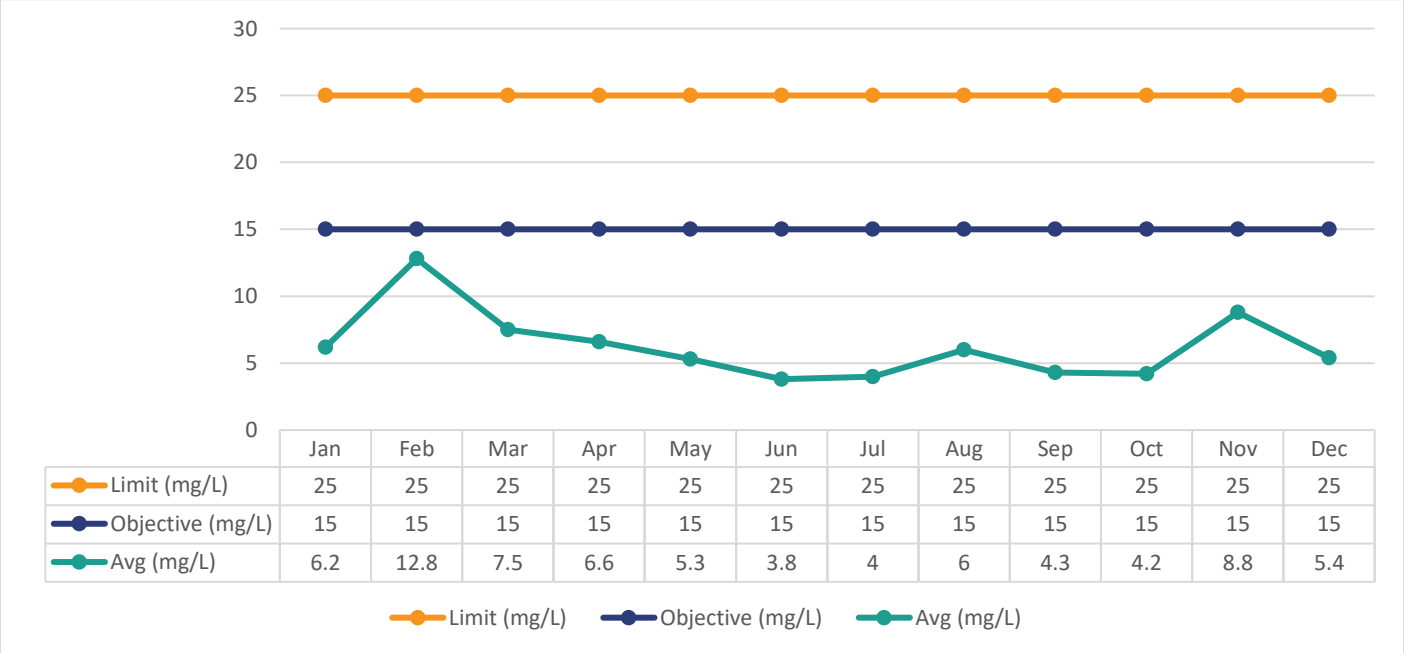
Effluent Parameter Summary

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

ECA #3028-AEUKDQ sets the $CBOD_5$ monthly average concentration limit at 25.0 mg/L and the monthly average waste loading at 76.4 kg/day. The monthly $CBOD_5$ average concentration results and monthly average waste loading results were in compliance with the limits and objectives outlined in ECA #3028-AEUKDQ in every month in 2024.

$CBOD_5$ Monthly Average Concentration
The $CBOD_5$ monthly average concentration limit and monthly concentration objective were met each month in 2024.

Graph 4. 2024 Monthly $CBOD_5$ Final Effluent Concentration Comparisons



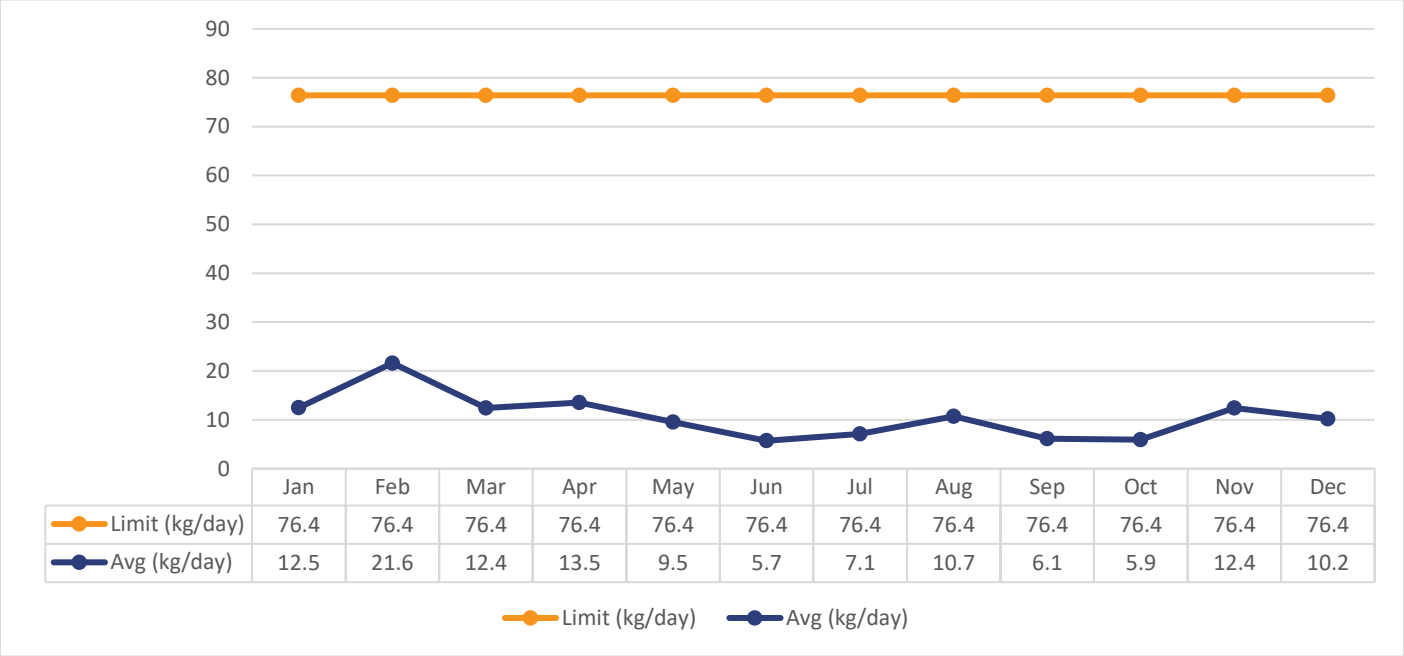
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	25	25	25	25	25	25	25	25	25	25	25	25
Objective (mg/L)	15	15	15	15	15	15	15	15	15	15	15	15
Avg (mg/L)	6.2	12.8	7.5	6.6	5.3	3.8	4	6	4.3	4.2	8.8	5.4

The Bobcaygeon WWTP was able to consistently meet the Effluent Objectives and Limits for $CBOD_5$ throughout 2024.

$CBOD_5$ Monthly Average Waste Loading

The monthly $CBOD_5$ monthly average waste loading limit was met each month in 2024.

Graph 5. 2024 Monthly Final Effluent $CBOD_5$ Average Waste Loading Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/day)	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4
Avg (kg/day)	12.5	21.6	12.4	13.5	9.5	5.7	7.1	10.7	6.1	5.9	12.4	10.2

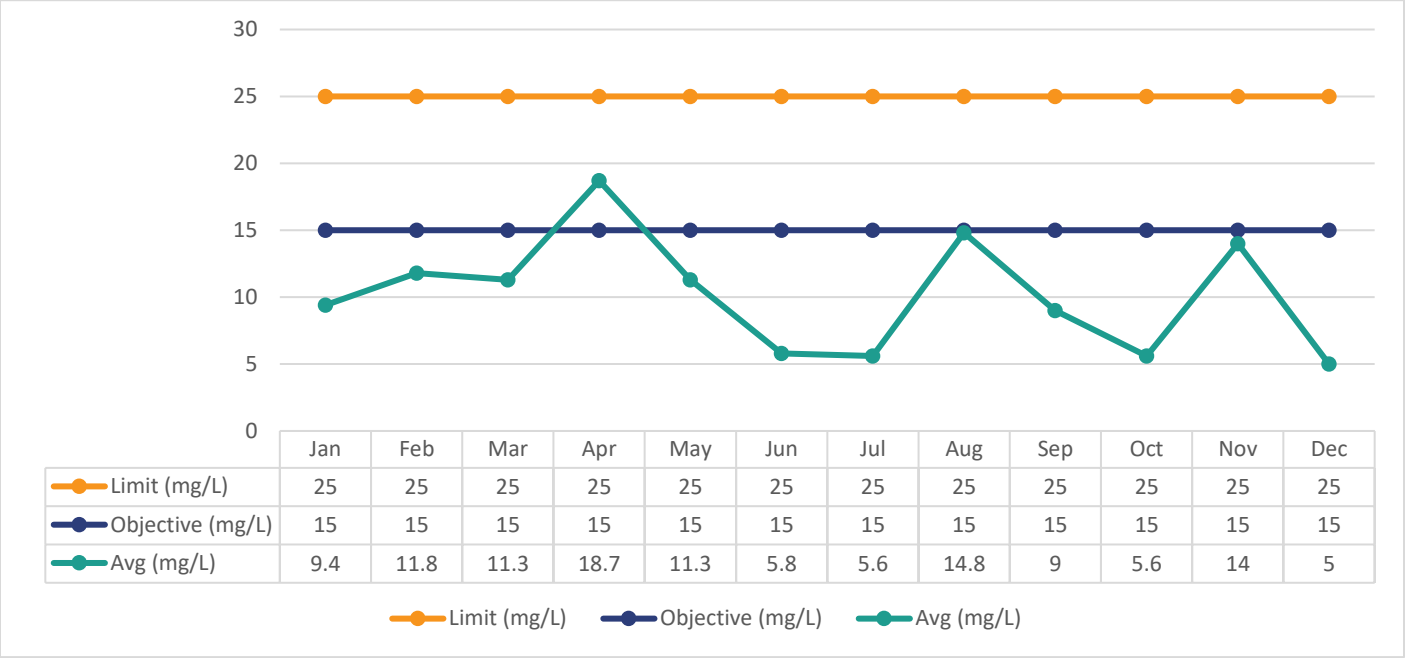
Total Suspended Solids (TSS)

ECA #3028-AEUKDQ sets the Total Suspended Solids monthly average concentration limit at 25.0 mg/L and the monthly average waste loading at 76.4 kg/day. The monthly Total Suspended Solids average concentration results and monthly average waste loading results throughout 2024 were in compliance with the limits outlined in ECA #3028-AEUKDQ. The monthly objective was higher in April 2024 due to snow melt/higher flows and the local dairy increasing productivity.

Total Suspended Solids Monthly Average Concentration

The Total Suspended Solids monthly average concentration limit was met each month in 2024.

Graph 6. 2024 Monthly TSS Final Effluent Concentration Comparisons

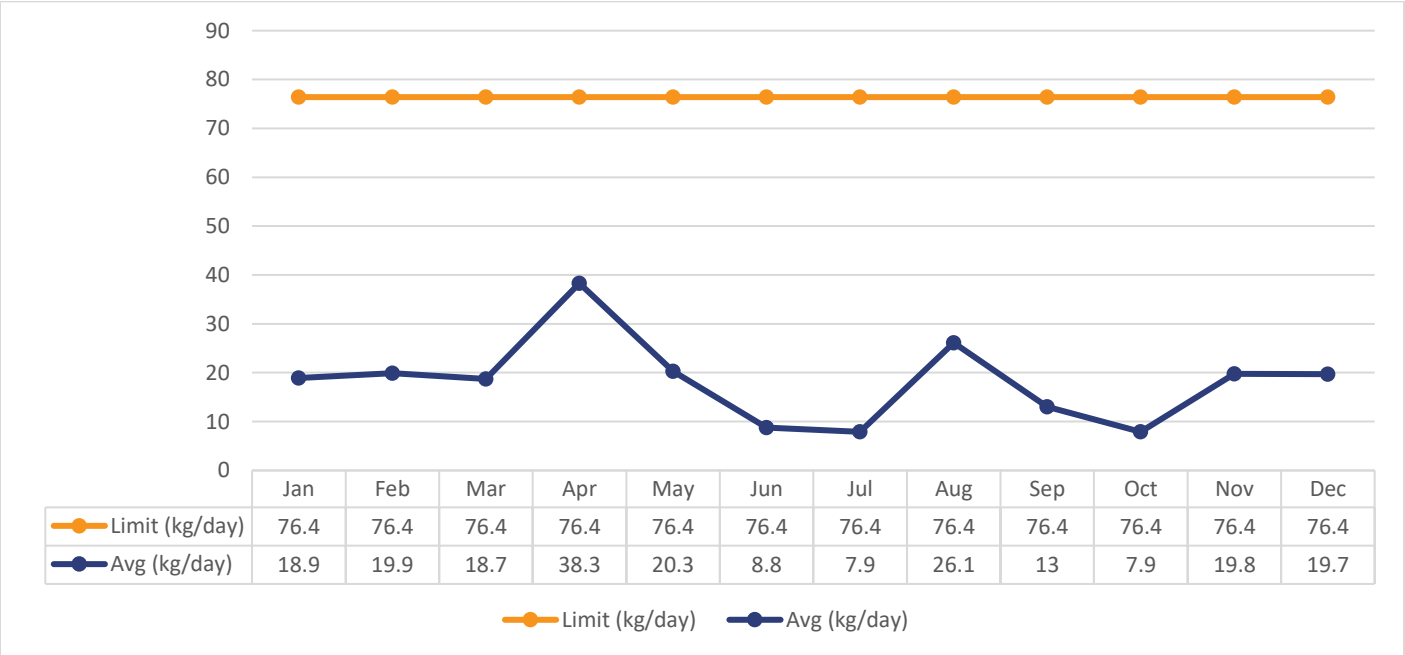


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	25	25	25	25	25	25	25	25	25	25	25	25
Objective (mg/L)	15	15	15	15	15	15	15	15	15	15	15	15
Avg (mg/L)	9.4	11.8	11.3	18.7	11.3	5.8	5.6	14.8	9	5.6	14	5

Total Suspended Solids Monthly Average Waste Loading Limits

The monthly Total Suspended Solids monthly average waste loading limit was met each month in 2024.

Graph 7. 2024 Monthly Final Effluent TSS Average Waste Loading Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/day)	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4	76.4
Avg (kg/day)	18.9	19.9	18.7	38.3	20.3	8.8	7.9	26.1	13	7.9	19.8	19.7

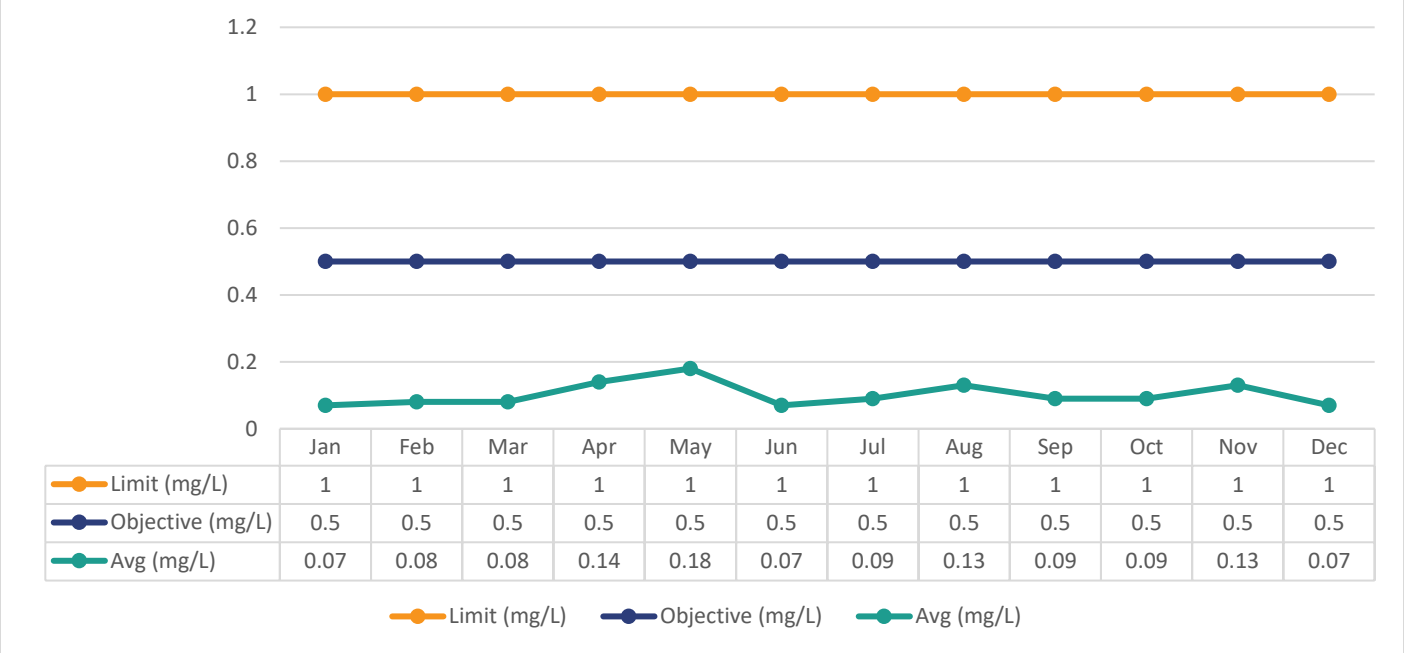
Total Phosphorus (TP)

ECA #3028-AEUKDQ sets the Total Phosphorus annual monthly concentration limit at 1.0 mg/L and the monthly average waste loading at 1.3 kg/day. The monthly Total Phosphorus average concentration results and monthly average waste loading results throughout 2024 were in compliance with the limits and objectives.

Total Phosphorus Monthly Average Concentration

The monthly Total Phosphorus monthly average concentration limit and monthly concentration objective were met each month in 2024.

Graph 8. 2024 Monthly Total Phosphorus Final Effluent Concentration Comparisons

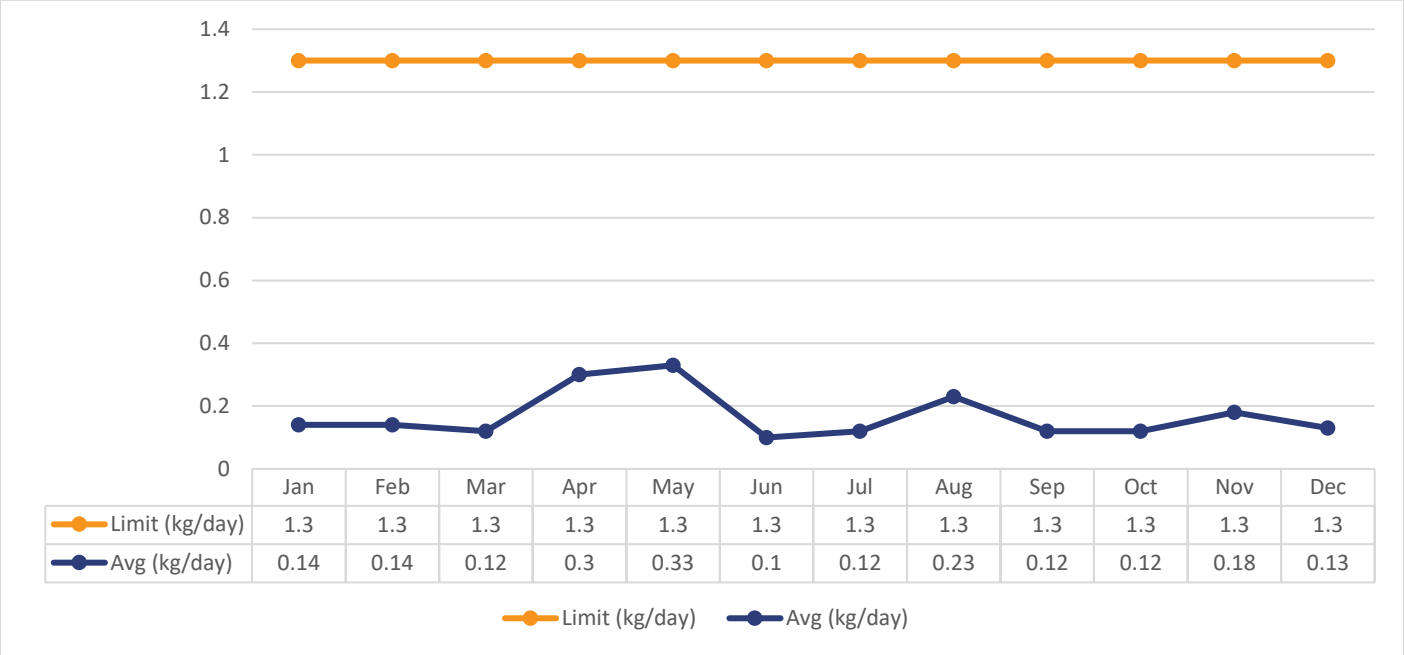


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	1	1	1	1	1	1	1	1	1	1	1	1
Objective (mg/L)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Avg (mg/L)	0.07	0.08	0.08	0.14	0.18	0.07	0.09	0.13	0.09	0.09	0.13	0.07

Total Phosphorus Monthly Average Waste Loading Limits

The monthly Total Phosphorus monthly average waste loading limit was met each month in 2024.

Graph 9. 2024 Monthly Final Effluent Total Phosphorus Average Waste Loading Comparisons

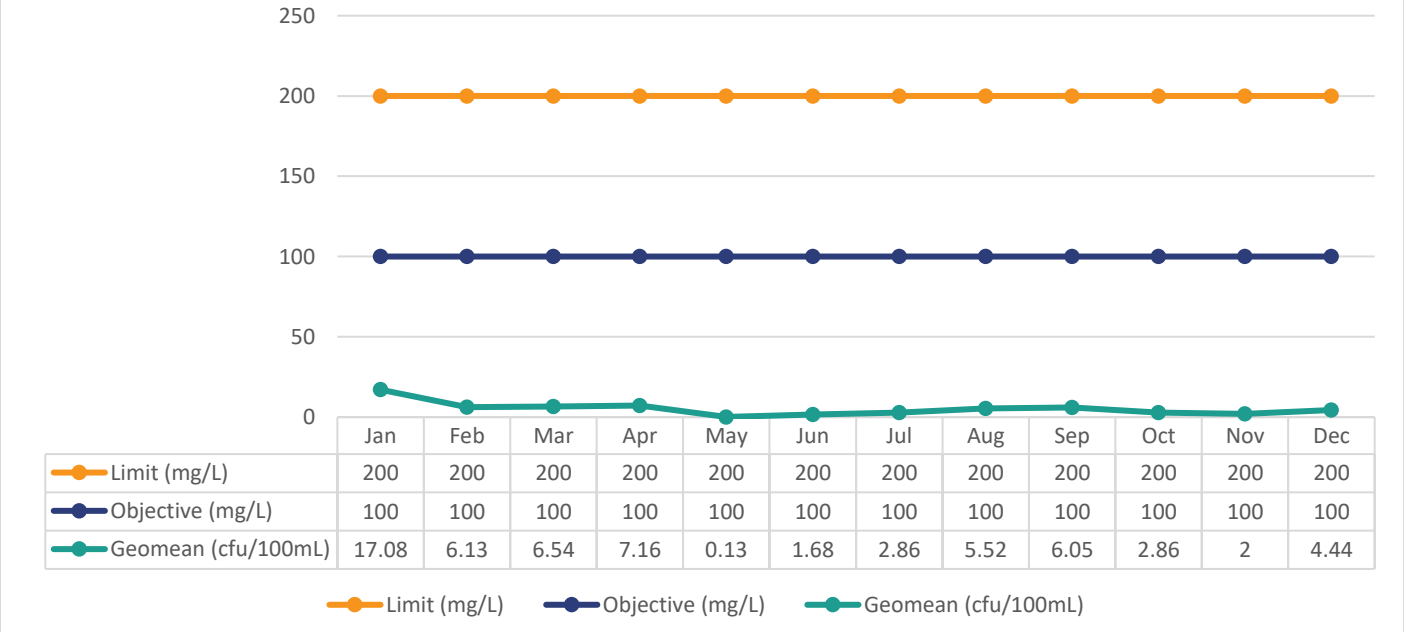


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (kg/day)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Avg (kg/day)	0.14	0.14	0.12	0.3	0.33	0.1	0.12	0.23	0.12	0.12	0.18	0.13

E. Coli

ECA #3028-AEUKDQ sets the monthly geometric mean density of E. Coli at 200 cfu/100mL and the monthly geomean limit was met each month in 2024.

Graph 10. 2024 Monthly E. Coli Final Effluent Geometric Mean Comparisons

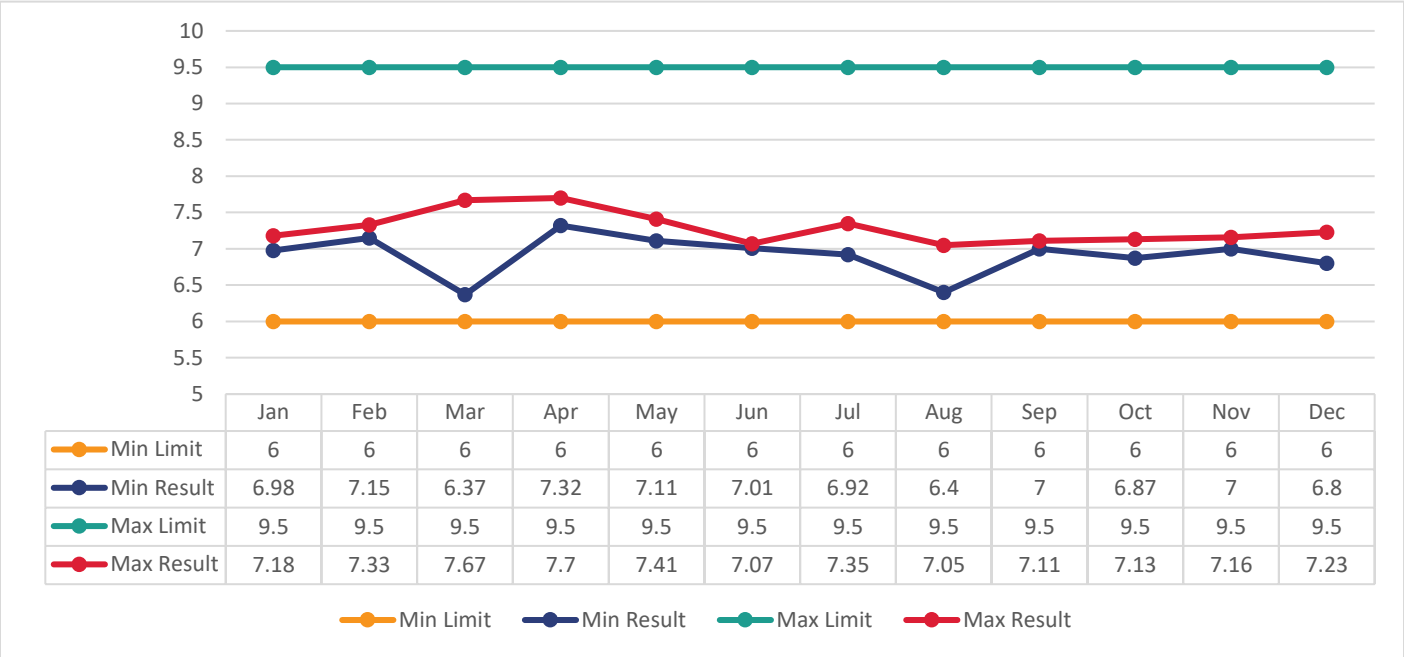


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Limit (mg/L)	200	200	200	200	200	200	200	200	200	200	200	200
Objective (mg/L)	100	100	100	100	100	100	100	100	100	100	100	100
Geomean (cfu/100mL)	17.08	6.13	6.54	7.16	0.13	1.68	2.86	5.52	6.05	2.86	2	4.44

pH

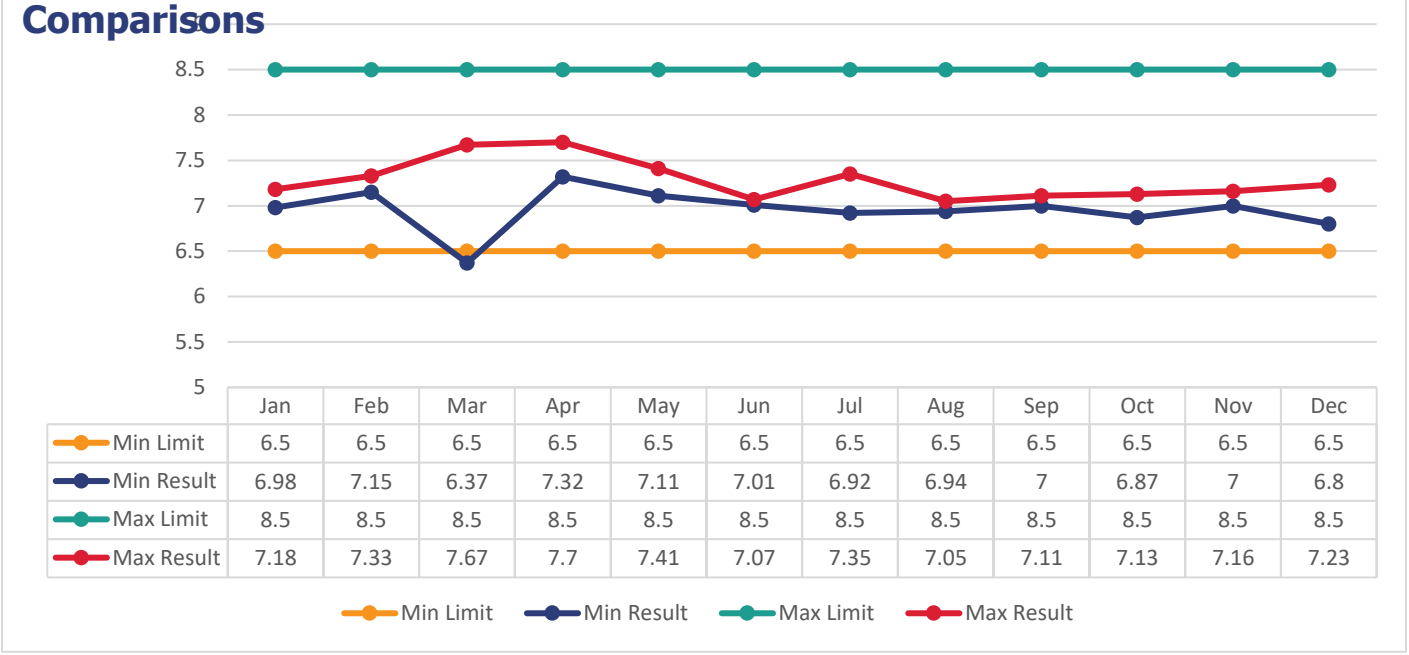
ECA #3028-AEUKDQ has a pH compliance limit within the range of 6.0 to 9.5, inclusive, at all times. The pH of the final effluent ranged from 6.37 – 7.70 throughout 2024, which is within the ECA compliance limit at all times. The monthly objective concentration range of 6.5–8.5 was not met in March of 6.37 was due to increase in productivity of the local dairy.

Graph 11. 2024 Monthly pH Final Effluent Concentration Limit Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Limit	6	6	6	6	6	6	6	6	6	6	6	6
Min Result	6.98	7.15	6.37	7.32	7.11	7.01	6.92	6.4	7	6.87	7	6.8
Max Limit	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5	9.5
Max Result	7.18	7.33	7.67	7.7	7.41	7.07	7.35	7.05	7.11	7.13	7.16	7.23

Graph 12. 2024 Monthly pH Final Effluent Concentration Objectives Comparisons



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Min Limit	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Min Result	6.98	7.15	6.37	7.32	7.11	7.01	6.92	6.94	7	6.87	7	6.8
Max Limit	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5	8.5
Max Result	7.18	7.33	7.67	7.7	7.41	7.07	7.35	7.05	7.11	7.13	7.16	7.23

Acute Lethality to Rainbow Trout and Daphnia Magna

Quarterly effluent samples were collected for analysis for acute lethality to Rainbow Trout and Daphnia Magna and a summary of the result are provided in **Appendix II: Acute Lethality Summary**. Samples were collected on February 14, April 17, September 17 and October 4, 2024. All of the 2024 samples resulted in 0% mortality rate for both Rainbow Trout and Daphnia magna.

Operational Challenges and Corrective Actions

(b) In 2024, a biosolids study was conducted and completed for the Bobcaygeon WWTP due to the storage restrictions, increase in solids, and use of one digester that is not able to operate with air blowers due to the odour complaints when running. The study was completed and the recommendations for additional storage is being taken into consideration for capital upgrades.

Table 3. Bobcaygeon WWTP Operational Challenges

Month	Challenges	Corrective Actions
January	DO Levels	Turn on the additional blowers to increase DO and increase wasting.
	UV Faults	Changed bulbs, wiped sleeves, and cleaned sensors.

Month	Challenges	Corrective Actions
	Scum Box Heat Trace	Electrician to inspect tripped breaker.
	WAS Failure	Valve frozen. Heat lamps put on WAS to thaw.
	Composite Sampler Unable to Pull Sample	Investigate suction end, replace suction tubing and test sampler pump. Collect manual composite sample while composite sampler down.
	Digester Capacity	Haul sludge before continue to waste.
February	DO Level	Increase blower operation to increase DO.
	Scum Pump 2	Inspect pump, keeps tripping, not clogged.
	WAS Failure	Frozen. Heat lamps put on WAS to thaw.
	UV Failure	Solids carry over. Increase wasting.
	Digester Capacity	Haul sludge before continue to waste.
March	High Flows	Seasonal high flows due to the weather. Local Dairy increase productivity.
	Raw Composite Sampler Unable to Collect Sample	Plugged with grit, flushed out and tested, now operational.
	UV Faults	Replace UV bulks. Multiple UV faults as a result of high flows. Assess UV intensity, sample if solids overflowing, waste solids, clean UV sensor and weirs.
	Clarifier Scraper and Scum Box not Removing Scum	Skimmer not removing scum and scum box pump being serviced. Secondary pump installed while repaired to pump out.
	Alum not Pumping to Train 1	Flush lines and now pumping alum. Possible blockage.
	Digester Capacity	Haul sludge before continue to waste.

Month	Challenges	Corrective Actions
April	High Flows	Seasonal high flows due to heavy rain and increase productivity from local dairy.
	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors. GFI tripping, reset GFI, 2 GFI's replaced.
	Scum Pit Clogged	Flush line and cleared clog.
	DO Levels	Increase blower operation.
	Digester Capacity	Haul sludge before continue to waste.
May	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors.
	High Flows	High flows due to heavy rainfall.
	DO Levels	Increase blower operation.
	Train 1 Pipe Blockage	Cleared grease and rags from inlet for Train 1.
	Digester Capacity	Haul sludge before continue to waste.
	SPS #10 Pump 2 Fail	Remove clog in pump.
	SPS #6 Control Panel Fail	Loose wires.
	SPS #7 Pump 1	Replacement
June	High Flows	High flows due to heavy rainfall.
	DO Level	Decreased MLSS in aeration tanks.
	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors.
	Digester Capacity	Haul sludge before continue to waste.
	SPS #10 Pump 2 Fail	Remove clog in pump.
	SPS #3 level	Fix low level float. High flows from surge pump.
	SPS #4 Pump 2 not stop	Pump #2 control stop.

Month	Challenges	Corrective Actions
July	Leak on Digester	Hole on top of digester repaired.
	High Flows	High flows due to summer season, increase usage and weather.
	DO Levels	Increase blower operation.
	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors.
	Digester Capacity	Haul sludge before continue to waste.
August	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors, replace UV board.
	Train #2 Scum Trough Clogged	Unclogged.
	SPS #1 Milltronics Failure	Fuse older not engaged. Repair and working.
	High Flows	Storms creating higher flows and plant washout.
	SCADA Down	Restart and check plant.
	Train #2 Failure	Put in manual and start back up.
	Blower #2 Failure	Fuse replaced.
	Blower #1 Failure	Replaced seal.
	DO Levels	Increase wasting.
	Digester Capacity	Haul sludge before continue to waste.
September	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors.
	High Flows	High flows due to heavy rainfall.
	Digester Capacity	Haul sludge before continue to waste.
	Digester Decant Rod Failure	Inspect, order parts to repair.

Month	Challenges	Corrective Actions
	WAS not Recording Flow	Due to resetting of SCADA from it being frozen, set the WAS to disabled, enabled and working.
	SPS #6 Level	Milltronics not reading correctly due to foam. Turn off pumps to reduce foam.
	SPS #9 Milltronics Level Reading	Requested Milltronics replacement.
October	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors, and replace bulbs.
	High Flows	High flows due to heavy rainfall.
	Aeration Blower #3 Failure	Belts replaced.
	Scum Pit #2 Clogged	Unclog.
	Digester Capacity	Haul sludge before continue to waste.
	Digester Decant Rod Failure	Can only decant to certain point, waiting on parts.
November	UV Faults	Multiple UV faults as a result of high flows. Assess UV intensity, waste solids, clear opposite bar screen, clean UV sensors, and replace bulbs.
	High Flows	High flows due to heavy rainfall.
	DO Levels	Increase wasting.
	Digester Decant Rod Failure	Waiting for parts. Can only decant to certain level.
	Digester Capacity	Haul sludge before continue to waste.
	Alum Line Leak	Replace fittings.
	Blower #2 Failure	Replace belts.
	Decant Pumps Plugged	Unplug pumps and working.
	Train #1 Scum Pump Clogged	Unclog pump and working.
	SPS #10 Heat Trace	Replace circuit board.
December	DO Levels	Increase wasting, increase blower operation.

Month	Challenges	Corrective Actions
	Digester Decant Rod Failure	Waiting on parts and non-hazardous conditions, can only decant to certain level.
	Digester Capacity	Haul sludge before continue to waste.
	Scum Pits Clogged	Remove debris.
	Train #2 Pump Failure	Replace Pump.
	UV Alarm	Assess UV intensity, waste solids, increase RAS.
	Raw Composite Sampler Failure	Reset GFI, heat trace line heating up line and remove clog in line.
	SPS #10 Pump 2 Failure	Remove clog in pump.
	High Flows	Heavy rainfall causing high flows.
	SPS #9 Milltronics Failure	Pump down wet well, replace Milltronics.
	Aeration Clarifier Blockage	Remove blockage.
	Decant Pipe Failure	Replace pipe with crack in it.

Maintenance Summary

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

Refer to **Appendix III: Maintenance Summary** for details of equipment upgrades, repairs and service performed in 2024.

Effluent Quality Assurance or Control

(d) Effluent quality assurance is maintained in several ways. Laboratory samples are sent to an accredited laboratory (SGS Canada Inc. – Lakefield) for analysis of all effluent parameters. Sampling calendars are issued to the operator which denote frequency of sampling. Calendars are used as a tracking mechanism throughout the month to ensure all required samples are collected. These calendars are submitted to the Process Compliance Technician at the end of each month for review. Raw and effluent samples are collected as per the Amended Environmental Compliance

Approval and the results are reviewed on a regular basis to ensure compliance with the site's objectives and limits.

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

Continuous phosphorus removal is achieved with the dosing of aluminum sulfate.

Table 4. 2024 Summary of Aluminum Sulfate Usage and Dosage

Month	Total Aluminum Sulfate Used (Kg)	Aluminum Sulfate Average Dosage (mg/L)
January	2348.04	37.62
February	1957.14	42.69
March	2061.59	40.09
April	2535.67	41.41
May	2340.59	41.79
June	1937.44	42.32
July	2312.61	42.73
August	2303.6	41.85
September	1849.91	42.72
October	1719.2	39.39
November	1745.84	41.31
December	2378.72	40.61

Calibrations

(e) Calibrations on effluent monitoring equipment were performed by Franklin Empire on September 4, 2024 for equipment located at the Bobcaygeon Wastewater Treatment Plant. Please see **Appendix IV: Calibration Report**.

Records of maintenance carried out on effluent monitoring equipment can be found in **Appendix III: Maintenance Summary.**

Best Efforts to Achieve Design Objectives of Condition 6

(f) OCWA uses a number of best efforts to achieve the Effluent Objectives. Effluent quality assurance and control measures include in-house sampling and testing for operational parameters such as suspended solids, pH, phosphorus, dissolved oxygen, etc. In-house testing provides real time results which are then used to enhance process and operational performance. OCWA also collects raw sewage and effluent samples as per the ECA and reviews these results on a regular basis to ensure compliance with ECA objectives and limits.

OCWA uses a computerized maintenance management system which generates work orders to ensure maintenance of equipment is proactively performed. In addition, OCWA provides regular status reports to the Owner which includes operational data, equipment inventory, financial statements, maintenance activities and capital improvement recommendations.

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 have access to a network of operational compliance and support experts at the cluster, regional and corporate level.

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

- Sampling effluent as per the ECA.
- Visual Inspection of the effluent while performing rounds.
- Influent monitoring.
- Ensuring that chemicals are being dosed.
- Calibration of lab equipment.
- Annual calibration of the flow meters.
- Performing preventative maintenance activities in accordance with work order schedules.
- Performing in-house lab tests on days that data is collected.
- Monitoring treatment processes by performing regular laboratory analysis and review of lab results.
- Sludge monitoring of primary clarifiers & adjustments to pumping volume based on tank levels to reduce solids carryover to the secondary clarifiers.
- Visual review of microbiological activity of activated sludge to ensure appropriate F/M ratio.

Effluent Samples

Carbonaceous Biochemical Oxygen Demand ($CBOD_5$)

ECA #3028-AEUKDQ sets the $CBOD_5$ monthly average concentration objective at 15.0 mg/L

Table 5. 2024 Monthly $CBOD_5$ Final Effluent Concentration Objective Comparisons

	Average Concentration (mg/L)	Concentration Objective Target (mg/L)	Objective Achieved
January	6.20	15.0	Yes
February	12.75	15.0	Yes
March	7.50	15.0	Yes
April	6.60	15.0	Yes
May	5.25	15.0	Yes
June	3.75	15.0	Yes
July	4.00	15.0	Yes

	Average Concentration (mg/L)	Concentration Objective Target (mg/L)	Objective Achieved
August	6.00	15.0	Yes
September	4.25	15.0	Yes
October	4.20	15.0	Yes
November	8.75	15.0	Yes
December	5.40	15.0	Yes

Total Suspended Solids (TSS)

ECA #3028-AEUKDQ sets the Total Suspended Solids monthly average concentration objective at 15.0 mg/L. In the month of April the objective was not achieved due to snow melt/heavy rains and the local dairy increasing their productivity.

Table 6. 2024 Monthly TSS Final Effluent Concentration Objective Comparisons

	Average Concentration (mg/L)	Concentration Objective Target (mg/L)	Objective Achieved
January	9.40	15.0	Yes
February	11.75	15.0	Yes
March	11.25	15.0	Yes
April	18.67	15.0	No
May	11.25	15.0	Yes
June	5.75	15.0	Yes
July	5.60	15.0	Yes
August	14.75	15.0	Yes
September	9.00	15.0	Yes
October	5.60	15.0	Yes
November	14.00	15.0	Yes
December	10.40	15.0	Yes

Total Phosphorus (TP)

ECA #3028-AEUKDQ sets the Total Phosphorus monthly average concentration objective at 0.5 mg/L

Table 7. 2024 Monthly Total Phosphorus Final Effluent Concentration Objective Comparisons

	Average Concentration (mg/L)	Concentration Objective Target (mg/L)	Objective Achieved
January	0.07	0.5	Yes
February	0.08	0.5	Yes
March	0.08	0.5	Yes
April	0.14	0.5	Yes
May	0.18	0.5	Yes
June	0.07	0.5	Yes
July	0.09	0.5	Yes
August	0.13	0.5	Yes
September	0.09	0.5	Yes
October	0.09	0.5	Yes
November	0.13	0.5	Yes
December	0.07	0.5	Yes

E. Coli

ECA #3028-AEUKDQ sets the monthly E. Coli geometric mean objective at 100 cfu/100 mL.

Table 8. 2024 Monthly E. Coli Final Effluent Concentration Objective Comparisons

	Geometric Mean (cfu/100mL)	Concentration Objective Target (cfu/100mL)	Objective Achieved
January	17.08	100	Yes
February	6.13	100	Yes
March	6.54	100	Yes
April	7.16	100	Yes
May	3.13	100	Yes
June	1.68	100	Yes
July	2.86	100	Yes
August	5.52	100	Yes
September	6.05	100	Yes
October	2.86	100	Yes
November	2.00	100	Yes
December	4.44	100	Yes

pH

The pH of the effluent was within the ECA design objectives of 6.50 to 8.50 inclusive at all times, with the exception of March 2024. The pH of the effluent ranged from 6.37 – 7.70 throughout 2024. In March, the minimum was below the minimum objective of 6.37 due to the increased production of the local dairy.

Table 9. 2024 Monthly pH Final Effluent Concentration Objective Comparisons

	Minimum	Maximum	Objective Achieved
January	6.98	7.18	Yes
February	7.15	7.33	Yes
March	6.37	7.67	No
April	7.32	7.70	Yes
May	7.11	7.41	Yes
June	7.01	7.07	Yes
July	6.92	7.35	Yes
August	6.94	7.05	Yes
September	7.00	7.11	Yes
October	6.87	7.13	Yes
November	7.00	7.16	Yes
December	6.80	7.23	Yes

Unionized Ammonia

Unionized ammonia has an objective of 0.1 mg/L (100 µg/L). Using total ammonia nitrogen, along with field pH and temperature, the following are the results for the monthly calculated unionized ammonia average. The final unionized ammonia average was less than the objective each month.

Table 10. 2024 Monthly Unionized Ammonia Final Effluent Concentration Objective Comparisons

	Average Concentration (µg/L)	Concentration Objective (µg/L)	Objective Achieved
January	14.21	100	Yes
February	25.08	100	Yes
March	15.67	100	Yes
April	50.34	100	Yes
May	9.15	100	Yes
June	10.67	100	Yes
July	6.32	100	Yes

	Average Concentration (µg/L)	Concentration Objective (µg/L)	Objective Achieved
August	25.63	100	Yes
September	19.16	100	Yes
October	8.70	100	Yes
November	7.07	100	Yes
December	5.25	100	Yes

Temperature

The final effluent temperature ranged from 4.4°C to 23.1°C.

Influent Samples

Influent sampling is completed in order to make the necessary process adjustments to stay within the Final Effluent Objectives and Limits set in the ECA.

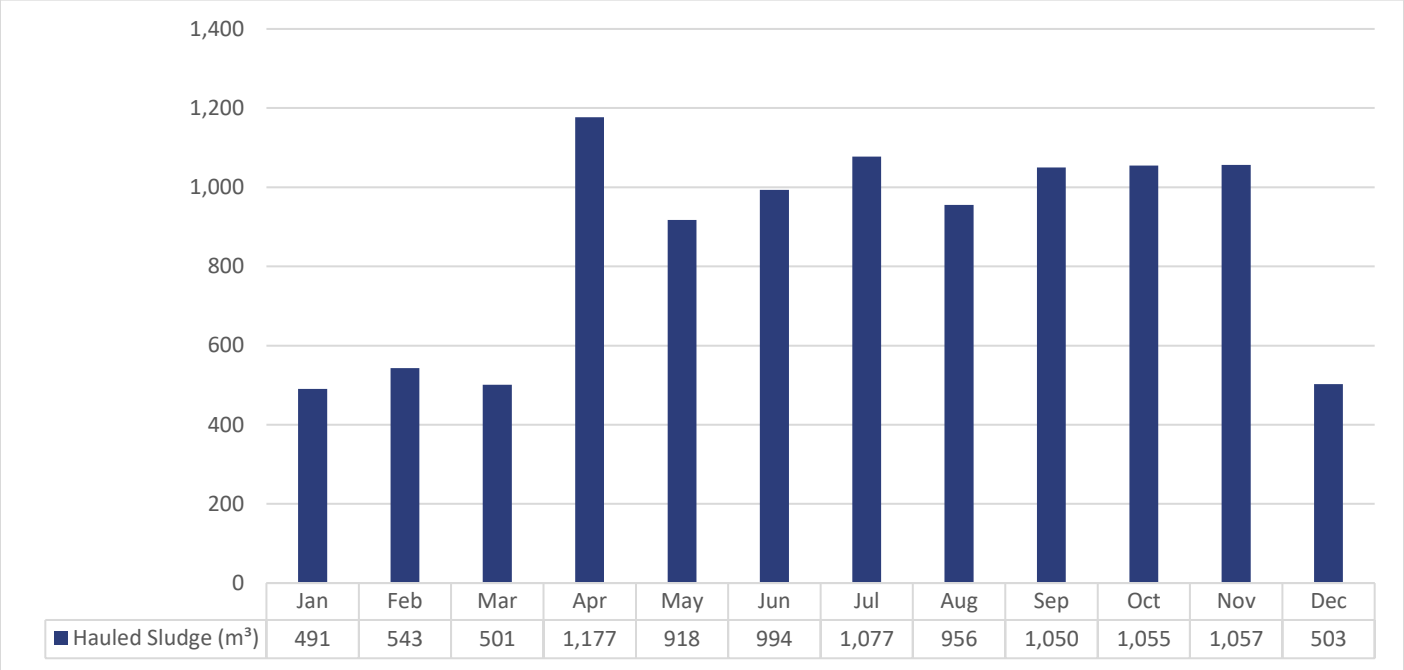
Table 11. 2024 Monthly Influent Sample Results Concentration Averages

	Carbonaceous Biochemical Oxygen Demand – $CBOD_5$ (mg/L)	Biochemical Oxygen Demand – BOD_5 (mg/L)	Total Suspended Solids – TSS (mg/L)	Total Kjeldahl Nitrogen – TKN (mg/L)	Total Phosphorus – TP (mg/L)
January	584.40	638.40	318.40	25.64	3.70
February	512.25	552.50	306.25	34.30	4.25
March	677.50	838.50	536.00	41.93	6.10
April	519.40	606.40	584.20	42.14	7.26
May	654.25	828.25	516.50	40.40	6.86
June	644.50	713.25	526.00	52.50	7.25
July	352.80	507.60	255.60	40.24	5.28
August	831.25	959.75	602.50	50.55	6.34
September	675.00	836.25	427.75	55.75	9.45
October	561.40	695.80	344.20	46.82	7.45
November	824.25	1186.50	622.50	49.25	6.69
December	436.40	413.00	317.20	34.60	4.89

Sludge

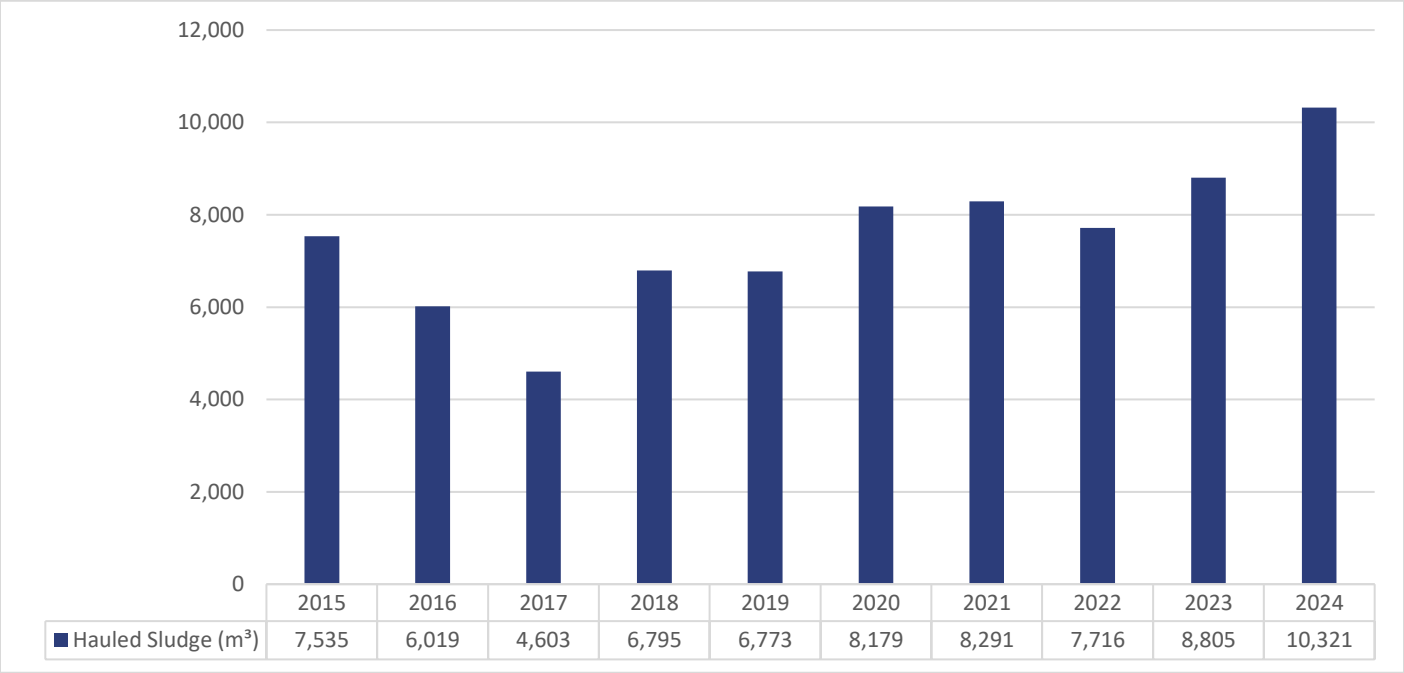
(g) The total volume of sludge generated in 2024 was 10,320.67 m³, which was a 17.22% increase in the amount of sludge generated in 2023. Shepherd Environmental Services has been contracted to haul, land apply and store the Biosolids on their approved sites and certified holding lagoon during the winter.

Graph 13. 2024 Monthly Sludge Volumes



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Hauled Sludge (m³)	491	543	501	1,177	918	994	1,077	956	1,050	1,055	1,057	503

Graph 14. Historical Sludge Volume Comparisons



	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Hauled Sludge (m³)	7,535	6,019	4,603	6,795	6,773	8,179	8,291	7,716	8,805	10,321

The anticipated volume of biosolids for the next reporting period is expected to appreciably similar to this reporting period and no change is expected from the current sludge handling methods and disposal areas currently utilized.

Refer to **Appendix V: Biosolids Summary** for biosolids sampling results.

Complaints

(h) a summary of any complaints received and any steps taken to address the complaints.

Table 12. 2024 Complaints Received

Date	Issue	Actions Taken
June 17, 2024	Resident reported odour coming from sewage plant.	Biosolids hauling occurred on June 13 & 14th, and although measures are taken to reduce the impacts of odours to residents, there is still some odour emanated.
September 19, 2024	Resident reported odour around Anne St., and mentioned coming from sewage pumping station.	Further contact with resident was attempted to obtain more information and call was not returned. Not other reports of odour in area during this time.

By-pass, Spill or Abnormal Discharge Events

(i) A summary of By-pass, Spill or Abnormal Discharge Events

Bypasses

There were not any bypasses at the Bobcaygeon WWTP during 2024.

Spills

There was one spill at the Bobcaygeon WWTP during 2024. It occurred on July 25 2024, at the digester. A 1" hole in the top of the digester spilled decant on the ground. It was contained and cleaned up, with approximately 2-3 m^3 total volumes spilled. A sample was taken for BOD_5, TSS, Total Phosphorous, NH3+NH4, and E.coli. Refer to **Appendix VI: Bypass, Overflow, Spills or Abnormal Events** for Report.

Overflows

There were not any overflows at the Bobcaygeon WWTP or pumping stations in 2024.

Abnormal Discharge Events

There were not any abnormal discharge events at the Bobcaygeon WWTP in 2024.

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

Notice of Modifications to Sewage Works

(j) There were not any Notices of Modifications to Sewage Works initiated, worked on or completed in 2024.

Schedule B, Section 3 Modifications

(k) A summary of all modifications completed as a result of Schedule B, Section 3 are included in **Appendix III: Maintenance Summary**

Additional Request by Water Supervisor

(l) The Water Supervisor has not requested any additional information be included in this report.

Reporting Requirements – Wastewater Collection System

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

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

There are no required monitoring data requirements for the Bobcaygeon Sewage Collection System.

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

A summary of any operating problems encountered within the Bobcaygeon Sewage Collection System are included in **Table 3. Bobcaygeon WWTP Operational Challenges** above.

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

Calibrations on effluent monitoring equipment were performed by Franklin Empire in September 4, 2024 for equipment located at the Bobcaygeon Wastewater Treatment Plant and associated Pumping Stations, as required. Refer to **Appendix IV: Calibration Reports**.

Attached is **Appendix III: WMS Work Order Summary**, a Work Order Summary report, showing all preventative and corrective maintenance activities performed at the Bobcaygeon WWTP, including the collection system, during 2024.

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.

A summary of complaints received for the entire Bobcaygeon Sewage System are included in **Table 12. 2024 Complaints Received** above.

4.6 (e) a summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.

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

Table 13. Summary of Alterations to Authorized System

Alteration to the Authorized System Project Name	Project Details	Does This Project Pose a Significant Drinking Water Threat (SDWT)?
Riverside Heights Development – Phase 3	Installation of 200 mm PVC sanitary sewer main on Cedartree Lane (144.4 m north of intersection of Hemlock Cres. to 250.6 m north of intersection of Hemlock Cres.) and Hemlock Crescent (100.6 m north of intersection of Cedartree Lane on west leg of Hemlock Cres. to 104.5 m north of intersection of Cedartree Lane on east leg of Hemlock Cres.)	No

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

i) Dates;

ii) Volumes and durations

iii) If applicable, loadings for total suspended solids, BOD, total phosphorus, and total Kjeldahl nitrogen, and sampling results for E. coli;

iv) Disinfection, if any; and

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

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

4.6 (g) a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable:

i) A description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.

Annually manhole inspections are completed by City operations staff within the collection systems to identify any deficiencies that may result in excess flows increasing the risk of potential overflows. In an effort to reduce all excess flows, the City has an annual manhole rehabilitation program which includes but is not limited to grouting; moduloc replacement; and frame and cover replacements.

Operationally, 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.

During the 2024 reporting period there were not incidents of a bypass or overflow within the sanitary sewer system or the WWTP. However, the following operational activities were performed to help reduce overflow potential.

MH1683 416 Front Street West – Replace frame and cover

MH1866 394 Front Street West – Replace frame and cover

MH1715 10 Prince St. East – Install rain stopper

MH1660 37 Snake Point Road – Install rain stopper

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

N/A

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

N/A

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.

N/A

v) Public reporting approach including proactive efforts

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

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix I:
Performance Assessment Report

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Performance Assessment Report

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

6005 BOBCAYGEON WASTEWATER TREATMENT PLANT 110002498

	1 / 2024	2/ 2024	3/ 2024	4/ 2024	5/ 2024	6/ 2024	7/ 2024	8/ 2024	9/ 2024	10/ 2024	11/ 2024	12/ 2024	<--Total-->	<--Avg-->	<--Max-->	<-Criteria->
Flows																
Raw Flow: Total - Raw m³/d	62,484.00	49,152.40	51,436.60	61,585.00	56,006.00	45,977.00	54,666.00	55,039.00	43,340.00	43,655.00	42,410.00	58,681.00	624,432.00			0.00
Raw Flow: Avg - Raw m³/d	2,015.61	1,694.91	1,659.25	2,052.83	1,806.65	1,532.57	1,763.42	1,775.45	1,444.67	1,408.23	1,413.67	1,892.94		1,706.10		
Raw Flow: Max - Raw m³/d	2,372.00	2,092.00	1,870.00	2,968.00	2,527.00	2,031.00	2,813.00	2,194.00	1,685.00	1,763.00	1,885.00	2,955.00			2,968.00	0.00
Raw Flow: Count - Raw m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Eff. Flow: Total - Eff m³/d	62,484.00	49,152.40	51,436.60	61,585.00	56,006.00	45,977.00	54,666.00	55,039.00	43,340.00	43,655.00	42,410.00	58,681.00	624,432.00			0.00
Eff. Flow: Avg - Eff m³/d	2,015.61	1,694.91	1,659.25	2,052.83	1,806.65	1,532.57	1,763.42	1,775.45	1,444.67	1,408.23	1,413.67	1,892.94		1,706.10		
Eff. Flow: Max - Eff m³/d	2,372.00	2,092.00	1,870.00	2,968.00	2,527.00	2,031.00	2,813.00	2,194.00	1,685.00	1,763.00	1,885.00	2,955.00			2,968.00	0.00
Eff Flow: Count - Eff m³/d	31.00	29.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	366.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Raw: Avg cBOD5 - Raw mg/L	584.40	512.25	677.50	519.40	654.25	664.50	352.80	831.25	675.00	561.40	824.25	436.40		607.78	831.25	0.00
Raw: # of samples of cBOD5 - Raw	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg cBOD5 - Eff mg/L	6.20	12.75 <	7.50 <	6.60 <	5.25 <	3.75 <	4.00 <	6.00 <	4.25 <	4.20 <	8.75 <	5.40		6.13	12.75	25.00
Eff: # of samples of cBOD5 - Eff	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: cBOD5 - Eff kg/d	12.497	21.610 <	12.444 <	13.549 <	9.485 <	5.747 <	7.054 <	10.653 <	6.140 <	5.915 <	12.370 <	10.222		10.46	21.61	
Percent Removal: cBOD5 - Raw %	98.94	97.51	98.89	98.73	99.20	99.44	98.87	99.28	99.37	99.25	98.94	98.76		98.93	99.44	0.00
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw mg/L	638.40	552.50	838.50	606.40	828.25	713.25	695.80	959.75	836.25	695.80	1,186.50	413.00		731.35	1,186.50	0.00
Percent Removal: BOD5 - Raw %	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		0.00		0.00
Total Suspended Solids: TSS																
Raw: Avg TSS - Raw mg/L	318.40	306.25	536.00	584.20	516.50	526.00	344.20	602.50	427.75	344.20	622.50	317.20		446.43	622.50	0.00
Raw: # of samples of TSS - Raw	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TSS - Eff mg/L	9.40	11.75	11.25	18.67	11.25	5.75 <	5.60	14.75	9.00 <	5.60	14.00	10.40		10.65	18.67	25.00
Eff: # of samples of TSS - Eff	5.00	4.00	4.00	6.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	54.00			0.00
Loading: TSS - Eff kg/d	18.947	19.915	18.667	38.320	20.325	8.812 <	7.886	26.188	13.002 <	7.886	19.791	19.687		18.17	38.32	
Percent Removal: TSS - Raw %	97.05	96.16	97.90	96.80	97.82	98.91	98.37	97.55	97.90	98.37	97.75	96.72		97.58	98.91	0.00
Total Phosphorus: TP																
Raw: Avg TP - Raw mg/L	3.70	4.25	6.10	7.26	6.86	7.25	7.45	6.34	9.45	7.45	6.69	4.89		6.29	9.45	0.00
Raw: # of samples of TP - Raw	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TP - Eff mg/L	0.07	0.08	0.08	0.14	0.18	0.07 <	0.09	0.13	0.09	0.09	0.13	0.07		0.10	0.18	1.00
Eff: # of samples of TP - Eff	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TP - Eff kg/d	0.141	0.140	0.124	0.296	0.330	0.100 <	0.124	0.231	0.123	0.124	0.184	0.125		0.16	0.33	
Percent Removal: TP - Raw %	98.11	98.06	98.77	98.02	97.34	99.10	98.82	97.95	99.10	98.82	98.06	98.65		98.42	99.10	0.00
Nitrogen Series																
Raw: Avg TKN - Raw mg/L	25.64	34.30	41.93	42.14	40.40	52.50	46.82	50.55	55.75	46.82	49.25	34.60		42.84	55.75	0.00
Raw: # of samples of TKN - Raw	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TAN - Eff mg/L	6.76	8.18	6.93	9.88	2.65	2.58	2.64	5.68	4.53	2.64 <	0.30	3.56		4.61	9.88	
Eff: # of samples of TAN - Eff	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TAN - Eff kg/d	13.626	13.856	11.490	20.282	4.788	3.946	3.718	10.076	6.537	3.718 <	0.424	6.739		7.86	20.28	
Disinfection																
Eff: GMD E. Coli - Eff cfu/100mL	17.08	6.13	6.54	7.16	3.13	1.68	2.86	5.52	6.05	2.86	2.00	4.44				200.00
Eff: # of samples of E. Coli - Eff	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix II:
Acute Lethality Results

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 254015
Sample Number : 81369

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-02-14
Location :	Bobcaygeon ON	Sampling Time :	07:20
Substance :	Final Effluent	Date Received :	2024-02-15
Sampling Method :	Grab	Time Received :	12:40
Sampled By :	M. James	Temperature at Receipt :	8 °C
Sample Description :	Clear, light yellow.	Date Tested :	2024-02-16

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	7.8 days
Organism Batch :	Dm24-02	Average Brood Size :	29.2
Culture Mortality :	0.7% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2024-02-13	LC50 :	6.4 g/L
Organism Batch :	Dm24-02	95% Confidence Limits :	6.2 - 6.6 g/L
Analyst(s) :	FM	Historical Mean LC50 :	6.3 g/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	5.8 - 6.9 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 254015
Sample Number : 81369

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	7.0	7.0	859	21	82	200 mg/L

0 HOURS

Date & Time : 2024-02-16 9:15
Analyst(s) : FM (SV)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	7.0	7.0	859	21	82	200
100	B	0	0	7.0	7.0	859	21	82	200
100	C	0	0	7.0	7.0	859	21	82	200
Control	A	0	0	8.2	8.6	449	21	100	150
Control	B	0	0	8.2	8.6	449	21	100	150
Control	C	0	0	8.2	8.6	449	21	100	150

Notes:

24 HOURS

Date & Time : 2024-02-17 9:30
Analyst(s) : FM (JGR)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	21
100	B	–	0	–	–	–	21
100	C	–	0	–	–	–	21
Control	A	–	0	–	–	–	21
Control	B	–	0	–	–	–	21
Control	C	–	0	–	–	–	21

Notes:

48 HOURS

Date & Time : 2024-02-18 9:40
Analyst(s) : FM (JGR)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	8.3	7.7	884	21
100	B	0	0	8.3	7.7	862	21
100	C	0	0	8.3	7.6	865	21
Control	A	0	0	8.3	8.3	471	21
Control	B	0	0	8.3	8.2	455	21
Control	C	0	0	8.3	8.2	456	21

Notes:

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2024-02-22

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 254015
Sample Number : 81369

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-02-14
Location :	Bobcaygeon ON	Sampling Time :	07:20
Substance :	Final Effluent	Date Received :	2024-02-15
Sampling Method :	Grab	Time Received :	12:40
Sampled By :	M. James	Temperature at Receipt :	8 °C
Sample Description :	Clear, light yellow.	Date Tested :	2024-02-16

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	40.5 mm
Organism Batch :	T24-02	Range of Fork Lengths :	37 - 45 mm
Control Sample Size :	10	Mean Wet Weight :	0.6 g
Cumulative stock tank mortality rate :	0% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Sample Treatment :	None	Volume Tested (L) :	20
pH Adjustment :	None	Number of Replicates :	1
Test Aeration :	Yes	Organisms Per Replicate :	10
Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Pre-Aeration :	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T24-02	LC50 :	3975 mg/L
Date Tested :	2024-02-07	95% Confidence Limits :	3644 - 4336 mg/L
Analyst(s) :	NWP, JGR, KP, PC, AJS	Historical Mean LC50 :	3833 mg/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	2823 - 5204 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 254015
Sample Number : 81369

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	7.0	7.1	894	15	77
After 30 min pre-aeration :	7.3	7.6	887	15	82

0 HOURS

Date & Time 2024-02-16 12:15
Analyst(s) : NWP (SV)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	7.3	7.6	887	15	82
Control	0	0	8.3	9.6	675	15	100

Notes:

24 HOURS

Date & Time 2024-02-17 11:30
Analyst(s) : JGR

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2024-02-18 12:45
Analyst(s) : PG

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2024-02-19 12:00
Analyst(s) : PG

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

96 HOURS

Date & Time 2024-02-20 12:45
Analyst(s) : NWP (AJS)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	8.2	8.9	881	16
Control	0	0	8.2	8.8	630	16

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : JL
Date : 2024-02-21

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 254519
Sample Number : 82051

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-04-16
Location :	Bobcaygeon ON	Sampling Time :	09:51
Substance :	Final Effluent	Date Received :	2024-04-17
Sampling Method :	Grab	Time Received :	13:30
Sampled By :	M. James	Temperature at Receipt :	13 °C
Sample Description :	Clear, yellow	Date Tested :	2024-04-18

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	8.2 days
Organism Batch :	Dm24-06	Average Brood Size :	31.2
Culture Mortality :	1.7% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2024-04-09	LC50 :	6.1 g/L
Organism Batch :	Dm24-06	95% Confidence Limits :	5.8 - 6.3 g/L
Analyst(s) :	FM, AA, JN	Historical Mean LC50 :	6.3 g/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	5.9 - 6.8 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 254519
Sample Number : 82051

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	7.2	8.5	808	21	99	220 mg/L

0 HOURS

Date & Time : 2024-04-18 13:05
Analyst(s) : AA (JW)/JW

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	7.2	8.5	808	21	99	220
100	B	0	0	7.2	8.5	808	21	99	220
100	C	0	0	7.2	8.5	808	21	99	220
Control	A	0	0	8.3	8.5	481	21	100	150
Control	B	0	0	8.3	8.5	481	21	100	150
Control	C	0	0	8.3	8.5	481	21	100	150

Notes:

24 HOURS

Date & Time : 2024-04-19 12:30
Analyst(s) : JGR

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	21
100	B	–	0	–	–	–	21
100	C	–	0	–	–	–	21
Control	A	–	0	–	–	–	21
Control	B	–	0	–	–	–	21
Control	C	–	0	–	–	–	21

Notes:

48 HOURS

Date & Time : 2024-04-20 13:30
Analyst(s) : SF

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	8.3	7.8	805	21
100	B	0	0	8.3	7.9	804	21
100	C	0	0	8.3	8.0	797	21
Control	A	0	0	8.3	8.1	484	21
Control	B	0	0	8.3	8.1	484	21
Control	C	0	0	8.2	8.2	482	21

Notes:

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2024-04-24

NAUTILUS ENVIRONMENTAL
Suite 122, 704 Mara Street
Point Edward, ON
N7V 1X4
Tel. (519) 339-8787

TOXICITY TEST REPORT

Rainbow Trout
EPS 1/RM/13

Work Order : 254519
Sample Number : 82051

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-04-16
Location :	Bobcaygeon ON	Sampling Time :	09:51
Substance :	Final Effluent	Date Received :	2024-04-18
Sampling Method :	Grab	Time Received :	16:30
Sampled By :	M. James	Temperature at Receipt :	12.4 °C
Sample Description :	Clear, yellow	Date Tested :	2024-04-19

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	43.2 mm
Organism Batch :	LF240306-1	Range of Fork Lengths :	40 - 47 mm
Control Sample Size :	10	Mean Wet Weight :	0.8 g
Cumulative stock tank mortality rate :	0.1% (previous 7 days)	Organism Loading Rate :	0.4 g/L
Control organisms showing stress :	0.0% (at test completion)		

TEST CONDITIONS

Test Type :	Single Concentration	Number of Replicates :	1
Sample pH Adjustment :	No	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 0.26 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	20 L
Control Pre-aeration/Aeration Rate :	6.5 ± 0.26 mL/min/L	Volume of Control :	20 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Zinc	LC50 :	0.47 mg/L
Organism Batch :	LF240306	95% Confidence Limits :	0.35 - 0.62 mg/L
Date Tested :	2024-04-25	Historical Mean LC50 :	0.32 mg/L
Statistical Method :	Spearman-Kärber	Warning Limits (± 2SD) :	0.14 - 0.72 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____

Project Manager

Work Order : 254519
Sample Number : 82051

TEST DATA

	pH	Dissolved O_2 (mg/L)	O_2 Saturation (%)[3]	Conductivity (µmhos/cm)	Temperature (°C)
Initial Water Chemistry (100%) :	6.9	6.9	69	840	15
After 30 min pre-aeration :	7.1	7.7	77	858	15

0 HOURS

Date & Time 2024-04-19 12:30
Analyst(s) : DS

Concentration	Dead	Impaired	pH	Dissolved O_2	O_2 Saturation[3]	Conductivity	Temperature
100%	0	0	7.1	7.7	77	858	15
Control	0	0	8.0	9.4	95	226	15

Notes:

24 HOURS

Date & Time 2024-04-20 9:30
Analyst(s) : KK

Concentration	Dead	Impaired	pH	Dissolved O_2	O_2 Saturation[3]	Conductivity	Temperature
100%	0	0	–	–	–	–	–
Control	0	0	–	–	–	–	–

Notes:

48 HOURS

Date & Time 2024-04-21 9:10
Analyst(s) : KK

Concentration	Dead	Impaired	pH	Dissolved O_2	O_2 Saturation[3]	Conductivity	Temperature
100%	0	0	–	–	–	–	–
Control	0	0	–	–	–	–	–

Notes:

72 HOURS

Date & Time 2024-04-22 9:45
Analyst(s) : DS

Concentration	Dead	Impaired	pH	Dissolved O_2	O_2 Saturation[3]	Conductivity	Temperature
100%	0	0	–	–	–	–	–
Control	0	0	–	–	–	–	–

Notes:

96 HOURS

Date & Time 2024-04-23 11:40
Analyst(s) : DS

Concentration	Dead	Impaired	pH	Dissolved O_2	O_2 Saturation[3]	Conductivity	Temperature
100%	0	0	8.2	9.3	94	898	15
Control	0	0	7.8	9.4	95	235	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : KP
Date : 2024-04-26

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 255377
Sample Number : 83246

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-07-18
Location :	Bobcaygeon ON	Sampling Time :	08:28
Substance :	Train 1+2 Final Comp Grab	Date Received :	2024-07-19
Sampling Method :	Grab	Time Received :	15:15
Sampled By :	Z. White	Temperature at Receipt :	24 °C
Sample Description :	Clear, pale yellow	Date Tested :	2024-07-20

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	7.8 days
Organism Batch :	Dm24-13	Average Brood Size :	32.3
Culture Mortality :	3.0% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2024-07-16	LC50 :	6.3 g/L
Organism Batch :	Dm24-13	95% Confidence Limits :	5.8 - 6.8 g/L
Analyst(s) :	GR, JN, AA	Historical Mean LC50 :	6.3 g/L
Statistical Method :	Binomial	Warning Limits (± 2SD) :	5.9 - 6.8 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 255377
Sample Number : 83246

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	7.4	7.6	547	21	89	150 mg/L

0 HOURS

Date & Time : 2024-07-20 8:30
Analyst(s) : NM/NWP (NM)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	7.4	7.6	547	21	89	150
100	B	0	0	7.4	7.6	547	21	89	150
100	C	0	0	7.4	7.6	547	21	89	150
Control	A	0	0	8.3	8.5	477	21	100	140
Control	B	0	0	8.3	8.5	477	21	100	140
Control	C	0	0	8.3	8.5	477	21	100	140

Notes:

24 HOURS

Date & Time : 2024-07-21 8:30
Analyst(s) : NM

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	21
100	B	–	0	–	–	–	21
100	C	–	0	–	–	–	21
Control	A	–	0	–	–	–	21
Control	B	–	0	–	–	–	21
Control	C	–	0	–	–	–	21

Notes:

48 HOURS

Date & Time : 2024-07-22 8:30
Analyst(s) : GR/AA (JGR)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	8.4	8.4	553	20
100	B	0	0	8.3	8.3	549	20
100	C	0	0	8.3	8.3	545	20
Control	A	0	0	8.3	8.4	484	20
Control	B	0	0	8.3	8.4	484	20
Control	C	0	0	8.3	8.4	478	20

Notes:

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2024-07-23

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 255377
Sample Number : 83246

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-07-18
Location :	Bobcaygeon ON	Sampling Time :	08:28
Substance :	Train 1+2 Final Comp Grab	Date Received :	2024-07-19
Sampling Method :	Grab	Time Received :	15:15
Sampled By :	Z. White	Temperature at Receipt :	24 °C
Sample Description :	Clear, pale yellow	Date Tested :	2024-07-20

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	40.0 mm
Organism Batch :	T24-14	Range of Fork Lengths :	37 - 42 mm
Control Sample Size :	10	Mean Wet Weight :	0.5 g
Cumulative stock mortality rate :	0% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Test Type :	Single concentration	Number of Replicates :	1
Sample pH Adjustment :	None	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	20 L
Control Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Volume of Control :	18 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T24-14	LC50 :	3803 mg/L
Date Tested :	2024-07-01	95% Confidence Limits :	3330 - 4339 mg/L
Analyst(s) :	DT	Historical Mean LC50 :	4325 mg/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	3594 - 5203 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 255377
Sample Number : 83246

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	7.3	6.9	535	15	72
After 30 min pre-aeration :	7.4	7.6	532	15	81

0 HOURS

Date & Time 2024-07-20 8:45
Analyst(s) : DT

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	7.4	7.6	532	15	81
Control	0	0	8.3	9.6	720	14	97

Notes:

24 HOURS

Date & Time 2024-07-21 8:00
Analyst(s) : DT

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2024-07-22 8:45
Analyst(s) : SV/GR (NM)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2024-07-23 8:30
Analyst(s) : GR (SV)

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	16
Control	0	0	–	–	–	16

Notes:

96 HOURS

Date & Time 2024-07-24 8:40
Analyst(s) : DT

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	8.1	8.9	535	15
Control	0	0	8.3	9.2	676	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : JJ
Date : 2024-07-25

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT

Daphnia magna
EPS 1/RM/14

Work Order : 256080
Sample Number : 84355

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-10-04
Location :	Bobcaygeon ON	Sampling Time :	10:51
Substance :	Combined EFF 1&2 Final	Date Received :	2024-10-07
Sampling Method :	Grab	Time Received :	15:20
Sampled By :	Z. White	Temperature at Receipt :	17 °C
Sample Description :	Clear, light yellow.	Date Tested :	2024-10-09

Test Method : Reference Method for Determining Acute Lethality of Effluents to *Daphnia magna* . Environment Canada EPS 1/RM/14 (Second Edition, December 2000, with February 2016 amendments).

48-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Immobility	0.0 %
	Mean Mortality	0.0 %
100%	Mean Immobility	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Species :	*Daphnia magna*	Time to First Brood :	7.2 days
Organism Batch :	Dm24-19	Average Brood Size :	34.9
Culture Mortality :	3.0% (previous 7 days)		

TEST CONDITIONS

Sample Treatment :	None	Number of Replicates :	3
pH Adjustment :	None	Organisms per Replicate :	10
Pre-aeration Rate :	~30 mL/min/L	Organisms per Test Level :	30
Duration of Pre-Aeration :	0 minutes	Organism Loading Rate :	15.0 mL/organism
Test Aeration :	None	Impaired Control Organisms :	0.0%
Hardness Adjustment :	None	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Sodium Chloride		
Date Tested :	2024-10-11	LC50 :	6.3 g/L
Organism Batch :	Dm24-19	95% Confidence Limits :	5.8 - 6.8 g/L
Analyst(s) :	JGR, NM, SSF	Historical Mean LC50 :	6.3 g/L
Statistical Method :	Binomial	Warning Limits (± 2SD) :	5.8 - 7.0 g/L

COMMENTS

- All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 256080
Sample Number : 84355

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)*	Hardness (as $CaCO_3$)
Initial Chemistry (100%) :	7.3	6.8	579	21	81	130 mg/L

0 HOURS

Date & Time : 2024-10-09 11:50
Analyst(s) : MK (NM)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation*	Hardness
100	A	0	0	7.3	6.8	579	21	81	130
100	B	0	0	7.3	6.8	579	21	81	130
100	C	0	0	7.3	6.8	579	21	81	130
Control	A	0	0	8.3	8.6	520	20	100	150
Control	B	0	0	8.3	8.6	520	20	100	150
Control	C	0	0	8.3	8.6	520	20	100	150

Notes:

24 HOURS

Date & Time : 2024-10-10 11:30
Analyst(s) : MK (SV)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	–	0	–	–	–	20
100	B	–	0	–	–	–	20
100	C	–	0	–	–	–	20
Control	A	–	0	–	–	–	20
Control	B	–	0	–	–	–	20
Control	C	–	0	–	–	–	20

Notes: Some test organisms in the Control replicates B and C were floating but mobile.

48 HOURS

Date & Time : 2024-10-11 11:45
Analyst(s) : MK (JGR)

Concentration (%)	Replicate	Dead	Immobile	pH	Dissolved O_2	Conductivity	Temperature
100	A	0	0	8.3	8.2	589	20
100	B	0	0	8.3	8.2	591	20
100	C	0	0	8.3	8.2	591	20
Control	A	0	0	8.3	8.4	523	20
Control	B	0	0	8.3	8.3	526	20
Control	C	0	0	8.3	8.3	526	20

Notes: Some test organisms in the Control replicate C were floating but mobile.

Number immobile does not include number dead.

"–" = not measured/not required
* adjusted for temperature and barometric pressure

Test Data Reviewed By : EM
Date : 2024-10-16

NAUTILUS ENVIRONMENTAL
B-11 Nicholas Beaver Road
Puslinch, ON N0B 2J0
Tel. (519) 763-4412
Fax. (519) 763-4419

TOXICITY TEST REPORT
Rainbow Trout
EPS 1/RM/13

Work Order : 256080
Sample Number : 84355

SAMPLE IDENTIFICATION

Company :	Ontario Clean Water Agency, Kawartha Hub	Sampling Date :	2024-10-04
Location :	Bobcaygeon ON	Sampling Time :	10:51
Substance :	Combined EFF 1&2 Final	Date Received :	2024-10-07
Sampling Method :	Grab	Time Received :	15:20
Sampled By :	Z. White	Temperature at Receipt :	17 °C
Sample Description :	Clear, light yellow.	Date Tested :	2024-10-09

Test Method(s) : Reference Method for Determining Acute Lethality of Liquid Effluents to Rainbow Trout. Environment Canada, EPS 1/RM/13 (2nd Edition, December 2000, with May 2007, February 2016, and December 2023 amendments).

96-HOUR TEST RESULTS

Substance	Effect	Value
Control	Mean Impairment	0.0 %
	Mean Mortality	0.0 %
100%	Mean Impairment	0.0 %
	Mean Mortality	0.0 %

The results reported relate only to the sample tested and as received.

TEST ORGANISM

Test Organism :	*Oncorhynchus mykiss*	Mean Fork Length :	37.6 mm
Organism Batch :	T24-21	Range of Fork Lengths :	33 - 40 mm
Control Sample Size :	10	Mean Wet Weight :	0.5 g
Cumulative stock mortality rate :	0% (previous 7 days)	Organism Loading Rate :	0.3 g/L
Control organisms showing stress :	0 (at test completion)		

TEST CONDITIONS

Test Type :	Single concentration	Number of Replicates :	1
Sample pH Adjustment :	None	Organisms Per Replicate :	10
Sample Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Organisms Per Test Level :	10
Duration of Sample Pre-Aeration :	30 minutes	Volume of Sample :	18 L
Control Pre-aeration/Aeration Rate :	6.5 ± 1 mL/min/L	Volume of Control :	18 L
Duration of Control Pre-aeration:	30 minutes	Test Method Deviation(s) :	None

REFERENCE TOXICANT DATA

Toxicant :	Potassium Chloride		
Organism Batch :	T24-21	LC50 :	3392 mg/L
Date Tested :	2024-10-05	95% Confidence Limits :	3054 - 3749 mg/L
Analyst(s) :	GR, NWP, AJS	Historical Mean LC50 :	3556 mg/L
Statistical Method :	Linear Regression (MLE)	Warning Limits (± 2SD) :	2558 - 4944 mg/L

COMMENTS

•All test validity criteria as specified in the test method were satisfied.

Approved By : _____
Project Manager

Work Order : 256080
Sample Number : 84355

TEST DATA

	pH	Dissolved O_2 (mg/L)	Conductivity (µmhos/cm)	Temperature (°C)	O_2 Saturation (%)[3]
Initial Water Chemistry (100%) :	7.0	6.8	544	15	70
After 30 min pre-aeration :	7.1	7.3	550	15	77

0 HOURS

Date & Time 2024-10-09 12:40
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature	O_2 Saturation[3]
100%	0	0	7.1	7.3	550	15	77
Control	0	0	8.1	9.6	729	15	98

Notes:

24 HOURS

Date & Time 2024-10-10 12:45
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

48 HOURS

Date & Time 2024-10-11 11:30
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

72 HOURS

Date & Time 2024-10-12 11:25
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	–	–	–	15
Control	0	0	–	–	–	15

Notes:

96 HOURS

Date & Time 2024-10-13 11:45
Analyst(s) : NWP

Concentration	Dead	Impaired	pH	Dissolved O_2	Conductivity	Temperature
100%	0	0	7.9	9.3	553	15
Control	0	0	8.1	9.5	687	15

Notes:

"–" = not measured/not required
Number impaired does not include number dead.
[3] adjusted for temperature and barometric pressure

Test Data Reviewed By : FS
Date : 2024-10-14

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix III:
Maintenance Summary

Work Order	Description	Location	Asset	Status	Work Type	Classification	Target Start	Reported Date
3706170	DEFERRED 6005, SPS 6, Pump # 3 Door Switch Broke, Replace	6005-SPS6		INPRG	CORR	REFURBISH/REPLACE	12/18/23 14:52:13	1/1/24 14:52:13
3806243	6005, Bobcaygeon WWT, Antenna for New Cellular Internet, Install	6005-WWBC-F-IT		COMP	CORR	REFURBISH/REPLACE		2/22/24 12:04:34
3948343	6005, Bobaygeon WWT, Alarm Dialer, Trouble, Communication Loss	6005-WWBC-F-IT	0000208063	COMP	CORR	REFURBISH/REPLACE		5/8/24 11:25:53
3999024	6005, Bobcaygeon WWT, Remove AC Unit From Office, Install Window Pane	6005-WWBC-F		COMP	CORR	REFURBISH/REPLACE		6/12/24 08:18:17
3999300	6005, SPS 3, Pump Submersible 01, Replacement	6005-SPS3	0000291175	COMP	CAP	REFURBISH/REPLACE		6/14/24 09:22:50
4001305	6005, SPS 3, Pump # 2 Hour Meter Broken,Order/Replace	6005-SPS3		APPR	CORR	REFURBISH/REPLACE		6/24/24 11:04:46
4001306	DEFERRED 6005, Bobcaygeon WWT, Decant Control Cabinet Disconnect Broken,Order/Replace	6005-WWBC-F		NEW	CORR	REFURBISH/REPLACE	6/24/24 11:08:44	6/24/24 11:08:44
4052185	6005, Bobcaygeon WWT, Biosolids Study	6005-WWBC-F		APPR	CAP	REFURBISH/REPLACE		7/31/24 12:22:27
4141585	6005, Bobcaygeon WWT, Blower #2 Fault, Investigate/Repair	6005-WWBC-P-ST-AERA		COMP	CORR	REFURBISH/REPLACE		9/4/24 14:20:59
4141588	6005, SPS 10, Exhaust Fan Failure, Investigate / Replace	6005-SP10		COMP	CORR	REFURBISH/REPLACE		9/4/24 14:30:17
4144390	6005, Bobcaygeon WWT, Digester Decant Actuator Failure, Replace	6005-WWBC-P-PI	0000204789	INPRG	CAP	REFURBISH/REPLACE		9/16/24 12:59:55
4144920	6005, SPS 9, Miltronics Meter Level Wetwell Reader Failure, Replace/Repair	6005-SPS9	0000208900	COMP	CORR	REFURBISH/REPLACE		9/19/24 14:29:48
4146109	6005, Bobcaygeon WWT, Anne Street Junction Box Damaged, To be Repaired by Contractor	6005-WWBC		COMP	CORR	REFURBISH/REPLACE		9/26/24 14:13:37
4192963	6005, Bobcaygeon WWT, Pump Down Tests at SPS 5 and SPS 6	6005-WWBC		COMP	CORR	INSPECTION		10/8/24 08:33:37
4194515	6005, Bobcaygeon WWT, Scum Pit Clogged Not Draining to Pump Pit, Clean Out	6005-WWBC-P-ST	0000329040	COMP	CORR	REFURBISH/REPLACE		10/15/24 10:56:42
4224688	6005, SPS 6, Tank, Wetwell SPS 06, Cleanout	6005-SPS6	0000291159	COMP	CORR	REFURBISH/REPLACE		11/1/24 08:25:34
4225522	6005, SPS 9, Tank, Wetwell, Cleanout	6005-SPS9	0000106179	COMP	CORR	REFURBISH/REPLACE		11/1/24 08:39:50
4235461	6005, SPS 10, Pump 2 Fault, Investigate / Repair	6005-SP10		COMP	CORR	REFURBISH/REPLACE		11/7/24 08:37:28
4236710	6005, Bobcaygeon WWT, Pump Leak Near Out Flow, Repair	6005-WWBC-P-ST	0000208893	APPR	CORR	REFURBISH/REPLACE		11/12/24 09:15:28
4239109	6005, Bobcaygeon WWT, Train 1 UV Sensor Intermittency, Troubleshoot	6005-WWBC-P-DI-ULVL		COMP	CORR	REFURBISH/REPLACE		11/28/24 08:10:58
4239244	6005, Bobcaygeon WWT, Grit Channel, Clarifier Weir, Cleaning	6005-WWBC-P-HW-GRIT		COMP	CORR	REFURBISH/REPLACE		11/29/24 07:11:54
4276571	6005, Bobcaygeon WWT, ESA Action: PVC Conduit on Holding Tank Requires Support	6005-WWBC-F		NEW	CORR	REFURBISH/REPLACE		12/3/24 06:41:57
4276594	6005, Bobcaygeon WWT, Heaters In Garage Not Functioning, Repair	6005-WWBC-F-HV	0000295997	APPR	CORR	REFURBISH/REPLACE		12/3/24 10:31:13
4276936	6005, Bobcaygeon WWT, Facility Flood Lights, Repair	6005-WWBC-F		COMP	CORR	REFURBISH/REPLACE		12/5/24 13:56:02
4277097	6005, Bobcaygeon WWT, DO #1 Analyzer Sensor Fail	6005-WWBC-P-PC-SECT	0000291114	APPR	CORR	REFURBISH/REPLACE		12/6/24 11:38:00
4278109	6005, Bobcaygeon WWT, Fallen Pole Light, Repair	6005-WWBC-F		COMP	CORR	REFURBISH/REPLACE		12/9/24 07:54:16
4278176	6005, SPS 10, Heat Trace Ground Fault, Investigate/Flash Circuit Board	6005-SP10		APPR	CORR	REFURBISH/REPLACE		12/9/24 13:29:46
4278583	6005, SPS 10, Pump 2 Fault, Investigate/Repair	6005-SP10	0000106183	COMP	CORR	REFURBISH/REPLACE		12/12/24 15:16:23
4278584	6005, SPS 10, Heat Trace Controller 1 Replacement	6005-SP10		NEW	CORR	REFURBISH/REPLACE		12/12/24 15:41:41
4280554	6005, Bobcaygeon WWT, Decant Pipe Repair	6005-WWBC-P-SH-DGST	0000291391	APPR	CORR	REFURBISH/REPLACE		12/24/24 10:14:04
4280557	6005, SPS 9, Meter Level, Replace	6005-SPS9	0000208900	COMP	CORR	REFURBISH/REPLACE		12/24/24 10:47:48
3205784	DEFERRED 6005, Bobcaygeon WWT, Panelview Firmware, Update	6005-WWBC-F-PD	0000208891	CLOSE	CORR	REFURBISH/REPLACE	1/24/23 14:33:11	1/1/24 14:33:11
3483970	DEFERRED 6005, SPS 10, Exhaust Fan Failure, Troubleshoot	6005-SP10		CLOSE	CORR	REFURBISH/REPLACE	7/28/23 08:42:08	7/1/24 08:42:08
3523090	DEFERRED 6005, Bobcaygeon WWT, Generator Junction Box Damaged, Replace	6005-WWBC-F-PD		CLOSE	CORR	REFURBISH/REPLACE	8/4/23 08:25:45	1/1/24 08:25:45
3574116	DEFERRED 6005, SPS 6, Block Heater, Replacement	6005-SPS6	0000291308	CLOSE	CORR	REFURBISH/REPLACE	9/19/23 11:37:57	1/1/24 11:37:57
3575245	DEFERRED 6005, Bobcaygeon WWT, Pump Submersible, Repair	6005-WWBC-F	0000291218	CLOSE	CORR	REFURBISH/REPLACE	9/26/23 12:27:47	1/1/24 12:27:47
3621191	DEFERRED 6005, Bobcaygeon WWT, Overhead Door, Replacement	6005-WWBC-F		CLOSE	CAP	REFURBISH/REPLACE	10/5/23 12:50:24	1/1/24 12:50:24
3704128	DEFERRED 6005, Bobcaygeon WWT, ESA Inspection Defects, Repairs	6005-WWBC-F		CLOSE	CORR	REFURBISH/REPLACE	12/8/23 00:00:00	1/1/24 14:45:39
3761395	6005, Bobcaygeon WWT, Alum Line Issues, Repair	6005-WWBC-F		CLOSE	CORR	REFURBISH/REPLACE		1/9/24 07:18:04

3761918	6005, SPS 7, Pump and Pipe, Replacement	6005-SPS7	0000204887	CLOSE	CAP	REFURBISH/REPLACE		1/11/24 14:00:01
3765505	6005, Bobcaygeon WWT, Garage Door Wiring, Repair	6005-WWBC-F		CLOSE	CORR	REFURBISH/REPLACE		1/31/24 07:23:34
3804751	6005, Bobcaygeon WWT, Scum Pump Failure,	6005-WWBC-P-ST	0000329040	CLOSE	CORR	REFURBISH/REPLACE		2/12/24 12:02:52
3804995	6005, Bobcaygeon WWT, Blower Positive Displacement 2, Oil Leak,	6005-WWBC-P-SH-DGST	0000329093	CLOSE	CORR	REFURBISH/REPLACE		2/14/24 13:41:50
3848851	6005, Bobcaygeon WWT, GFI Plugs Burnt, Replacement	6005-WWBC-P-DI-ULVL	0000208950	CLOSE	CORR	PREDICTIVE MAINTENANCE		3/11/24 14:07:37
3849820	6005, Bobcaygeon WWT, DSC, Trouble, Communication Fail	6005-WWBC-F-IT	0000208063	CLOSE	CORR	REFURBISH/REPLACE		3/18/24 07:08:53
3850257	6005, Bobcaygeon WWT, Grit Channel, Weir Cleaning	6005-WWBC-P-PI	0000106040	CLOSE	CORR	REFURBISH/REPLACE		3/20/24 07:02:13
3903333	6005, Bobcaygeon Wastewater Collection, Carbon Vent, Install	6005-WCBC	0000329135	CLOSE	CAP	REFURBISH/REPLACE		4/23/24 13:40:14
3949145	6005, SPS 11, Alarm Noise From Panel, Investigate/Repair	6005-SP11		CLOSE	CORR	REFURBISH/REPLACE		5/9/24 09:13:29
3950416	6005, Bobcaygeon WWT, Train 2 Harness, Replacement	6005-WWBC-P-DI-ULVL	0000208954	CLOSE	CORR	REFURBISH/REPLACE		5/16/24 13:06:51
3952736	6005, SPS 6, Intermittent Control Cabinet Power Failure, Investigate/Repair	6005-SPS6		CLOSE	CORR	REFURBISH/REPLACE		5/30/24 13:17:03
3952738	6005, SPS 10, Pump 2 Fault, Investigate / Repair	6005-SP10		CLOSE	CORR	REFURBISH/REPLACE		5/30/24 13:22:58
3997130	6005, Bobcaygeon WWT, IT UPS Battery Failure, Replace	6005-WWBC-F-IT		CLOSE	CORR	REFURBISH/REPLACE		6/4/24 07:35:11
3997701	6005, SPS 3, Multiple High Level Alarms, Troubleshoot/Repair	6005-SPS3		CLOSE	CORR	REFURBISH/REPLACE		6/7/24 11:24:54
3999025	6005, Bobcaygeon WWT, Hut GFCI Tripping, Investigate/Replace	6005-WWBC-F		CLOSE	CORR	REFURBISH/REPLACE		6/12/24 08:28:24
3999184	6005, SPS 9, Alarm Dialer, Replacement	6005-SPS9	0000106194	CLOSE	CORR	REFURBISH/REPLACE		6/13/24 13:27:32
3999186	6005, SPS 10, Alarm Dialer, Replacement	6005-SP10	0000106185	CLOSE	CORR	REFURBISH/REPLACE		6/13/24 13:38:20
3999187	6005, SPS 2, Alarm Dialer, Replacement	6005-SPS2	0000106231	CLOSE	CORR	REFURBISH/REPLACE		6/13/24 13:41:44
4000032	6005, SPS 1, UPS Battery Fail, Replace	6005-SPS1		CLOSE	CORR	REFURBISH/REPLACE		6/17/24 08:06:25
4000120	6005, Bobcaygeon WWT, Alarm Panel, Troubleshooting	6005-WWBC-F-IT	0000208063	CLOSE	CORR	REFURBISH/REPLACE		6/17/24 12:50:43
4000196	6005, Bobcaygeon WWT, Alarm Dialer, Connection Issues	6005-WWBC-F-IT	0000208063	CLOSE	CORR	REFURBISH/REPLACE		6/14/24 06:12:19
4002014	6005, SPS 4, Pump 2 Running constantly in AUTO, Investigate/Repair	6005-SPS4		CLOSE	CORR	REFURBISH/REPLACE		6/28/24 09:37:07
4049623	6005, SPS 10, Combustion Actuator Failures, Investigate/Replace	6005-SP10		CLOSE	CORR	REFURBISH/REPLACE		7/16/24 15:15:03
4051802	6005, Bobcaygeon WWT, Digester Wall, Repair	6005-WWBC-P-SH-DGST	0000291391	CLOSE	CORR	REFURBISH/REPLACE		7/29/24 07:30:34
4093558	5779, Bobcaygeon WT, Train 1 Module 8 Indicator Lights Dead, Investigate/Replace Board	6005-WWBC-P-DI		CLOSE	CORR	REFURBISH/REPLACE		8/12/24 14:56:38
4094199	6005, Bobcaygeon WWT, SCADA Computer Crash, Repair	6005-WWBC-F-IT	0000208895	CLOSE	CORR	REFURBISH/REPLACE		8/16/24 14:32:03
4094873	6005, Bobcaygeon WWT, Aeration Blower 1 Oil Leak	6005-WWBC-P-SH-DGST	0000329165	CLOSE	CORR	REFURBISH/REPLACE		8/20/24 12:21:47
4095994	6005, Bobcaygeon WWT, Blower # 2 Inhibited, Investigate/Repair	6005-WWBC-P-ST-AERA		CLOSE	CORR	REFURBISH/REPLACE		8/27/24 08:18:57
4096002	6005, SPS 3, Hatch, Repair	6005-SPS3		CLOSE	CORR	REFURBISH/REPLACE		8/27/24 09:09:39
4141292	6005, Bobcaygeon WWT, GFCI Fail, Replacement	6005-WWBC-F-PD	0000208952	CLOSE	CORR	REFURBISH/REPLACE		9/3/24 12:43:50
4141581	6005, SPS 3, Pump 2 Overload Tripped, Test/Reset	6005-SPS3		CLOSE	CORR	REFURBISH/REPLACE		9/4/24 14:13:26
4141594	6005, Bobcaygeon WWT, Decant Pump # 2 Overload Tripped, Investigate/Reset	6005-WWBC-P		CLOSE	CORR	REFURBISH/REPLACE		9/4/24 14:46:30
4278579	6005, SPS 10, Pump 2 Fault, Investigate / Repair	6005-SP10	0000106183	CAN	CORR	REFURBISH/REPLACE		12/12/24 15:04:45

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix IV:
Calibration Reports

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

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

OCWA Kawartha

2024 Calibrations Bobcaygeon WWTP

CALIBRATION REPORT

Report No.: OCWA 2024 FIT 402

Date: 24-Sept-04

SITE:	Bobcaygeon WWTP	**SERVICE DATE:**	24-Sept-04
PROCESS AREA:	WWTP Train 2 Outfall		
INSTR. TAG:	FIT 402	**TECHNICIAN:**	M Manley
MANUFACTURER:	Toshiba		
MODEL:	LF424	**JOB REFERENCE:**	OCWA 2024
SERIAL No.:	54241656		
OCWA CODE:	0000208987		

Input	**(Test)**	**Output**	**(Signal)**	**(Process)**
Type:	%	**Type or EGU:**	mA	m3/d
Min:	0.00	**Min:**	4.00	0.00
Max:	100.00	**Max:**	20.00	3500.00
Size	12" 12 hz			
Ex Curr	0.1664A			

			Before Calibration		**After Calibration**	
%	**mA**	**Calculated**	**mA**	**m3/day**	**mA**	**m3/day**
0	4.00	0	4.00	8.4	4.00	8.4
50	12.00	1750	11.98	1756.6	11.98	1756.6
100	20.00	3500	19.99	3500.0	19.99	3500.0

Calibration Equipment			
Type:	DMM		
Manufacturer:	Fluke		
Model:	Model 87		
Serial No.:	13440128		
Last Cal. Date:	Feb. 16, 2024		

Comments: No available velocity simulator for these mag flowmeters, performend internal flow cal using transmitter. Excitation 0.1663A.

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

CERTIFIED BY:

CALIBRATION REPORT

Report No.: OCWA 2024 FIT 202

Date: 24-Sept-04

SITE:	Bobcaygeon WWTP
PROCESS AREA:	WWTP RAS/WAS Train 2
INSTR. TAG:	FIT 202
MANUFACTURER:	Toshiba
MODEL:	LF424
SERIAL No.:	54241658
OCWA CODE:	0000208986

SERVICE DATE:	24-Sept-04
TECHNICIAN:	M Manley
JOB REFERENCE:	OCWA 2024

Input	**(Test)**		**Output**	**(Signal)**	**(Process)**
Type:	%		**Type or EGU:**	mA	m3/d
Min:	0.00		**Min:**	4.00	0.00
Max:	100.00		**Max:**	20.00	6000.00
Size	6"	24 hz			
Ex Curr	0.1732A				

			Before Calibration		**After Calibration**	
%	**mA**	**Calculated**	**mA**	**m3/day**	**mA**	**m3/day**
0	4.00	0	4.00	13.7	4.00	13.70
50	12.00	3000	11.98	3010.0	11.98	3010.0
100	20.00	6000	19.96	6000.0	19.96	6000.0

Calibration Equipment			
Type:	DMM		
Manufacturer:	Fluke		
Model:	Model 87		
Serial No.:	13440128		
Last Cal. Date:	Feb. 16, 2024		

Comments: No available velocity simulator for these mag flowmeters, performend internal flow cal using transmitter.
Excitation 0.1731A.
TOT 2523050 m3

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

CERTIFIED BY:

CALIBRATION REPORT

Report No.: OCWA 2024 FIT 201

Date: 24-Sept-04

SITE:	Bobcaygeon WWTP
PROCESS AREA:	WWTP RAS/WAS Train 1
INSTR. TAG:	FIT 201
MANUFACTURER:	Toshiba
MODEL:	LF424
SERIAL No.:	54241659
OCWA CODE:	0000208985

SERVICE DATE:	24-Sept-04
TECHNICIAN:	M Manley
JOB REFERENCE:	OCWA 2024

Input	**(Test)**
Type:	%
Min:	0.00
Max:	100.00
Size	6"
Ex Curr	0.1038A

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/d
Min:	4.00	0.00
Max:	20.00	6000.00

			Before Calibration		**After Calibration**	
%	**mA**	**Calculated**	**mA**	**m3/day**	**m3/day**	**m3/day**
0	4.00	0	4.00	13.6	4.00	13.6
50	12.00	3000	11.98	3016.0	11.98	3016.0
100	20.00	6000	19.97	6000.0	19.97	6000.0

Calibration Equipment			
Type:	DMM		
Manufacturer:	Fluke		
Model:	Model 87		
Serial No.:	13440128		
Last Cal. Date:	Feb. 16, 2024		

Comments: No available velocity simulator for these mag flowmeters, performend internal flow cal using transmitter.
Excitation 0.1037A.
TOT 2540540 m3

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

CERTIFIED BY:

CALIBRATION REPORT

Report No.: OCWA 2024 FIT 401

Date: 24-Sept-04

SITE:	Bobcaygeon WWTP
PROCESS AREA:	WWTP Outfall Train 1
INSTR. TAG:	FIT 401
MANUFACTURER:	Toshiba
MODEL:	LF424
SERIAL No.:	54241660
OCWA CODE:	0000208984

SERVICE DATE:	24-Sept-04
TECHNICIAN:	M Manley
JOB REFERENCE:	OCWA 2024

Input	**(Test)**
Type:	%
Min:	0.00
Max:	100.00
Size	12" 24 hz
Ex Curr	0.1606A

Output	**(Signal)**	**(Process)**
Type or EGU:	mA	m3/d
Min:	4.00	0.00
Max:	20.00	3500.00

			Before Calibration		**After Calibration**	
%	**mA**	**Calculated**	**mA**	**m3/day**	**m3/day**	**m3/day**
0	4.00	0	4.00	9.0	4.00	9.0
50	12.00	1750	11.99	1758.0	11.99	1758.0
100	20.00	3500	19.98	3500.0	19.98	3500.0

Calibration Equipment			
Type:	DMM		
Manufacturer:	Fluke		
Model:	Model 87		
Serial No.:	13440128		
Last Cal. Date:	Feb. 16, 2024		

Comments: No available velocity simulator for these mag flowmeters, performend internal flow cal using transmitter. Excitation 0.1605A.

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

CERTIFIED BY:

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix V:
Biosolids Summary

Biosolids Quality Report

Facility: BOBCAYGEON WASTEWATER TREATMENT PLANT

Solids & Nutrients **Period: 01/01/2024 to 12/31/2024** **Works: 6005 / Digestor Type: Aerobic**

Ontario Clean Wate
Agence Ontarienne

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

Facility Works Number:	110002498	Receiver:	Big Bob Channel
Facility Owner:	Municipality: City of Kawartha Lakes	Service Population:	2472
Facility Classification:	Class 2 Wastewater Treatment	Total Design Capacity:	10440 m3/day

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

Month	Hauled Vol. (m^3)	Total Solids (mg/L)	Volatile Solids (mg/L)	Total Phosphorus (mg/L)	Total Ammonia Nitrogen (mg/L)	Nitrate as N (mg/L)	Nitrite as N (mg/L)	Total Kjeldahl Nitrogen (mg/L)	Ammonia + Nitrate (mg/L)	Potassium (mg/L)
Parameter Short Name	HauledVol	TS	VS	TP	NH3p_NH4p_N	NO3-N	NO2-N	TKN	Calculation in Report	K
T/S	IH Month.Total	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	- no T/S	Lab Published Month Mean
Jan	490.96	26,000.00	21,700.00	360.00	152.00	3.00	44.00	958.00	77.50	110.00
Feb	542.75	25,700.00	22,300.00	340.00	72.30	3.00	3.00	1,620.00	37.65	110.00
Mar	500.89	33,700.00	28,400.00	446.00	117.00	3.00	3.00	2,180.00	60.00	123.00
Apr	1177.35	26,600.00	21,900.00	370.00	148.00	3.00	3.00	1,885.00	75.50	110.00
May	917.55	21,750.00	17,700.00	285.00	235.00	3.00	3.00	1,285.00	119.00	85.50
Jun	993.75	22,600.00	18,600.00	188.00	247.00	3.00	3.00	1,520.00	125.00	71.00
Jul	1,077.45	16,733.33	14,300.00	233.33	149.67	3.00	3.00	1,226.67	76.33	61.00
Aug	955.65	15,600.00	13,100.00	230.00	111.00	3.00	3.00	1,060.00	57.00	59.00
Sep	1,050.15	14,700.00	13,100.00	220.00	107.00	3.00	3.00	1,120.00	55.00	67.00
Oct	1,054.80	14,100.00	11,500.00	250.00	119.00	3.00	3.00	1,120.00	61.00	70.00
Nov	1,056.60	20,950.00	17,350.00	390.00	126.00	3.00	3.00	1,255.00	64.50	78.00
Dec	502.77	20,250.00	16,650.00	342.50	93.75	3.00	3.00	1,435.00	48.38	82.50
Average	860.06	21,556.94	18,050.00	304.57	139.81	3.00	6.42	1,388.72	71.40	85.58
Total	10,320.67	258,683.33	216,600.00	3,654.83	1,677.72	36.00	77.00	16,664.67	856.86	1,027.00

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

Month	Arsenic (mg/L)	Cadmium (mg/L)	Cobalt (mg/L)	Chromium (mg/L)	Copper (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Lead (mg/L)	Selenium (mg/L)	Zinc (mg/L)
Parameter Short Name	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	Se	Zn
T/S	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean
Jan	0.10	0.06	0.02	0.20	3.60	0.00	0.09	0.15	0.30	0.10	4.00
Feb	0.10	0.01	0.02	0.21	1.80	0.01	0.09	0.16	0.10	0.10	3.00
Mar	0.10	0.01	0.02	0.22	5.70	0.01	0.09	0.17	0.10	0.10	5.00
Apr	0.10	0.01	0.02	0.19	2.20	0.01	0.07	0.15	0.10	0.10	4.00
May	0.10	0.01	0.01	0.14	2.05	0.00	0.05	0.11	0.10	0.10	4.00
Jun	0.10	0.01	0.01	0.08	2.10	0.00	0.05	0.09	0.10	0.10	5.00
Jul	0.10	0.01	0.01	0.14	1.97	0.00	0.05	0.10	0.10	0.10	3.33
Aug	0.10	0.01	0.01	0.09	1.30	0.00	0.05	0.07	0.10	0.10	3.00
Sep	0.10	0.01	0.01	0.08	1.70	0.00	0.05	0.08	0.10	0.10	4.00
Oct	0.10	0.01	0.01	0.07	2.40	0.00	0.05	0.07	0.10	0.10	3.00
Nov	0.10	0.01	0.02	0.16	2.45	0.01	0.07	0.13	0.10	0.10	4.00
Dec	0.10	0.01	0.02	0.12	1.95	0.00	0.06	0.10	0.10	0.10	3.00
Average	0.10	0.01	0.01	0.14	2.43	0.00	0.06	0.11	0.12	0.10	3.78
Max. Permissible Metal Concentrations (mg/kg of Solids)	170.00	34.00	340.00	2,800.00	1,700.00	11.00	94.00	420.00	1,100.00	34.00	4,200.00
Metal Concentrations in Sludge (mg/kg)	4.64	0.45	0.68	6.54	112.94	0.20	2.98	5.30	5.41	4.64	175.25

Biosolids Quality Report

Facility: BOBCAYGEON WASTEWATER TREATMENT PLANT

Last 4 Samples **Period: 01/01/2024 to 12/31/2024** **Works: 6005 / Digestor Type: Aerobic**

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

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

Parameter Short Name	Time Series	11/04/2024	11/05/2024	12/17/2024	12/30/2024	Average	Metal Concentrations in Sludge (mg/kg)	Max. Permissible Metal Concentrations (mg/kg of Solids)
As (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.85	170
Cd (mg/L)	Lab Published	0.01	0.01	0.01	0.01	0.01	0.28	34
Co (mg/L)	Lab Published	0.02	0.02	0.02	0.01	0.02	0.85	340
Cr (mg/L)	Lab Published	0.18	0.14	0.15	0.08	0.14	6.67	2800
Cu (mg/L)	Lab Published	2.50	2.40	2.60	1.30	2.20	106.80	1700
Hg (mg/L)	Lab Published	0.01	0.00	0.00	0.00	0.01	0.27	11
Mo (mg/L)	Lab Published	0.07	0.07	0.07	0.05	0.07	3.16	94
Ni (mg/L)	Lab Published	0.13	0.13	0.13	0.07	0.12	5.58	420
Pb (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.85	1100
Se (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	4.85	34
Zn (mg/L)	Lab Published	4.00	4.00	4.00	2.00	3.50	169.90	4200
TS (mg/L)	Lab Published	18,900.00	23,000.00	24,400.00	16,100.00	20,600.00		
VS (mg/L)	Lab Published	15,600.00	19,100.00	20,100.00	13,200.00	17,000.00		
TP (mg/L)	Lab Published	370.00	410.00	440.00	245.00	366.25		
NO2-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		
TKN (mg/L)	Lab Published	1,340.00	1,170.00	1,790.00	1,080.00	1,345.00		
K (mg/L)	Lab Published	78.00	78.00	95.00	70.00	80.25		
NH3p_NH4p_N (mg/L)	Lab Published	132.00	120.00	123.00	64.50	109.88		
NO3-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix VI:
Bypass, Overflow, Spills or Abnormal Events

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

48 Lagoon Rd
Lindsay, ON K9V 4R3

Tel: 705-738-9734
www.ocwa.com

Brittney Wielgos
Drinking Water Supervisor
Peterborough District Office
Ministry of the Environment, Conservation and Parks
300 Water Street, 2nd Floor, South Tower
Peterborough, ON
K9J 3C7

May 8, 2024

Dear Ms. Wielgos:

Re: Bobcaygeon WWTP 2024 Q1 Bypass and Plant Overflow Event Report

Amended Environmental Compliance Approval #3028-AEUKDQ Sections 4(5) and 5(5) issued April 10, 2017 and Amended Environmental Compliance Approval #4705-AFRJQM Section 4(5) issued April 10, 2017 for the Bobcaygeon WWTP require a quarterly Bypass and Overflow report be submitted to the Water Supervisor no later than February 15, May 15, August 15, and November 15 each year.

There were no incidents of a Plant Overflow Event or Bypass Event at the Bobcaygeon WWTP during the first quarter of 2024 (January, February, and March).

Please contact me if you have any questions or comments.

Best regards,

Julie Mather
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha Hub
(705) 731-9125

CC: Brent Martin, OCWA - Operations Manager
Julie Mulligan, OCWA - SPC Manager (A)
Lynette Nicholson, OCWA – General Manager
Amber Hayter, City of Kawartha Lakes – Manager, Water & Wastewater
Michelle Flaherty, Kawartha Lakes – Contract Coordinator
Brad Jackson, MECP – Water Compliance Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

48 Lagoon Rd
Lindsay, ON K9V 4R3

Tel: 705-738-9734
www.ocwa.com

Brittney Wielgos
Drinking Water Supervisor
Peterborough District Office
Ministry of the Environment, Conservation and Parks
300 Water Street, 2nd Floor, South Tower
Peterborough, ON
K9J 3C7

August 7, 2024

Dear Ms. Wielgos:

Re: Bobcaygeon WWTP 2024 Q2 Bypass and Plant Overflow Event Report

Amended Environmental Compliance Approval #3028-AEUKDQ Sections 4(5) and 5(5) issued April 10, 2017 and Amended Environmental Compliance Approval #4705-AFRJQM Section 4(5) issued April 10, 2017 for the Bobcaygeon WWTP require a quarterly Bypass and Overflow report be submitted to the Water Supervisor no later than February 15, May 15, August 15, and November 15 each year.

There were no incidents of a Plant Overflow Event or Bypass Event at the Bobcaygeon WWTP during the second quarter of 2024 (April, May, and June).

Please contact me if you have any questions or comments.

Best regards,

Julie Mather
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha Hub
(705) 731-9125

CC: Brent Martin, OCWA - Operations Manager
Julie Mulligan, OCWA - SPC Manager (A)
Lynette Nicholson, OCWA – General Manager
Amber Hayter, City of Kawartha Lakes – Manager, Water & Wastewater
Michelle Flaherty, Kawartha Lakes – Contract Coordinator
Brad Jackson, MECP – Water Compliance Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

48 Lagoon Rd
Lindsay, ON K9V 4R3

Tel: 705-738-9734
www.ocwa.com

Brad Jackson
Drinking Water Supervisor
Peterborough District Office
Ministry of the Environment, Conservation and Parks
300 Water Street, 2nd Floor, South Tower
Peterborough, ON
K9J 3C7

October 25, 2024

Dear Mr. Jackson:

Re: Bobcaygeon WWTP 2024 Q3 Bypass and Plant Overflow Event Report

Amended Environmental Compliance Approval #3028-AEUKDQ Sections 4(5) and 5(5) issued April 10, 2017 and Amended Environmental Compliance Approval #4705-AFRJQM Section 4(5) issued April 10, 2017 for the Bobcaygeon WWTP require a quarterly Bypass and Overflow report be submitted to the Water Supervisor no later than February 15, May 15, August 15, and November 15 each year.

There were no incidents of a Plant Overflow Event or Bypass Event at the Bobcaygeon WWTP during the third quarter of 2024 (July, August, and September).

Please contact me if you have any questions or comments.

Best regards,

Katie Campbell
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha Hub
(705) 934-0026

CC: Brent Martin, OCWA - Operations Manager
Allison McCann, OCWA - SPC Manager
Lynette Nicholson, OCWA – General Manager
Karen Lorente, OCWA - Regional Hub Manager
Amber Hayter, City of Kawartha Lakes – Manager, Water & Wastewater
Michelle Flaherty, Kawartha Lakes – Contract Coordinator
Brad Jackson, MECP – Water Compliance Officer

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

48 Lagoon Rd
Lindsay, ON K9V 4R3

Tel: 705-738-9734
www.ocwa.com

Brad Jackson
Drinking Water Supervisor
Peterborough District Office
Ministry of the Environment, Conservation and Parks
300 Water Street, 2nd Floor, South Tower
Peterborough, ON
K9J 3C7

January 2, 2025

Dear Mr. Jackson:

Re: Bobcaygeon WWTP 2024 Q4 Bypass and Plant Overflow Event Report

Amended Environmental Compliance Approval #3028-AEUKDQ Sections 4(5) and 5(5) issued April 10, 2017 and Amended Environmental Compliance Approval #4705-AFRJQM Section 4(5) issued April 10, 2017 for the Bobcaygeon WWTP require a quarterly Bypass and Overflow report be submitted to the Water Supervisor no later than February 15, May 15, August 15, and November 15 each year.

There were no incidents of a Plant Overflow Event or Bypass Event at the Bobcaygeon WWTP during the fourth quarter of 2024 (October, November, and December).

Please contact me if you have any questions or comments.

Best regards,

Katie Campbell
Process & Compliance Technician
Ontario Clean Water Agency
Kawartha Hub
(705) 934-0026

CC: Brent Martin, OCWA - Operations Manager
Allison McCann, OCWA - SPC Manager
Lynette Nicholson, OCWA – General Manager
Karen Lorente, OCWA - Regional Hub Manager
Amber Hayter, City of Kawartha Lakes – Manager, Water & Wastewater
Michelle Flaherty, Kawartha Lakes – Contract Coordinator
Brad Jackson, MECP – Water Compliance Officer

Ontario Clean Water A
Agence Ontarienne D

Operations Event Form

Project: BOBCAYGEON WWTP
Location: BOBCAYGEON 127 BOYD ST
Date: JUL 25 2024

Nature of Event: (By-pass, spill, odor, noise etc...)

DIGESTER SPILL

Details of Event: 1" HOLE IN TOP OF DIGESTER SPILLING SUPERNATANT ON GROUND

Call SAC: 1-800-268-6060

Time SAC notified: 8:18 **SAC Incident Number** 1-9B307L

Name of Person at SAC: JUSTIN CHIN

MECP District Manager Peterborough Notified 705-927-6165 (time): VOICEMAIL @ 8:43

District Health Unit Notified (time): 8:46 LEFT VOICE MAIL KAYLA TROFIMCZEK 10:17

Name of Person at Health Unit: ANJAL SHIVAPPA 10:30

All Other Phone calls placed (Managers, Client, MECP, MOH):

BRENT MARTIN, JULIE MULLIGAN

Volume of By-pass or Spill: 2 - 3 m^3

Bypass Time:

Start: N/A **Finish:** 6:15

Samples Taken? (BOD,TSS,Phos,NH3+NH4, e-coli): YES

Corrective Action Taken: CONTAIN SPILL, CLEANUP

Prepared By: PAT LUCAS

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

Appendix VII:
Community Complaints

There were no formal documented complaints for the Bobcaygeon WWTP in 2024.