Petawawa Wastewater System

Waterworks # 120000587

Annual Report

Prepared For: Town of Petawawa

Reporting Period of January 1st – December 31st, 2025

Issued: Feb 20, 2026

Revision: 0

Operating Authority:

OCWA

ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX

This report has been prepared to meet the requirements set out in:

Document	Document #	Issue Date	Issue Number
Facility ECA	A-500-3113268754	November 16, 2021	Version 1.0
ECA for Municipal Sewage Collection System	199-W601	November 2, 2022	1.0

Table of Contents

1 Revision History

Date	Rev #	Revisions	Revised By
26-Feb-2025	0	Issued 2025 Report	Brenda Royce, PCT
6-Feb-2026	0	Issued 2026 Report	Brenda Royce, PCT

2 Operations and Compliance Reliability Indices

Compliance Event	Details
Ministry of Environment Inspections	• Last inspection was Feb 3, 2015
Ministry of Labour Inspections	• None
Non-Compliance	• None
Community Complaints	Two (2) Events • all sewer plugged issues
Spills	• None
Overflows	• None
By-Pass	• None

3 Process Description

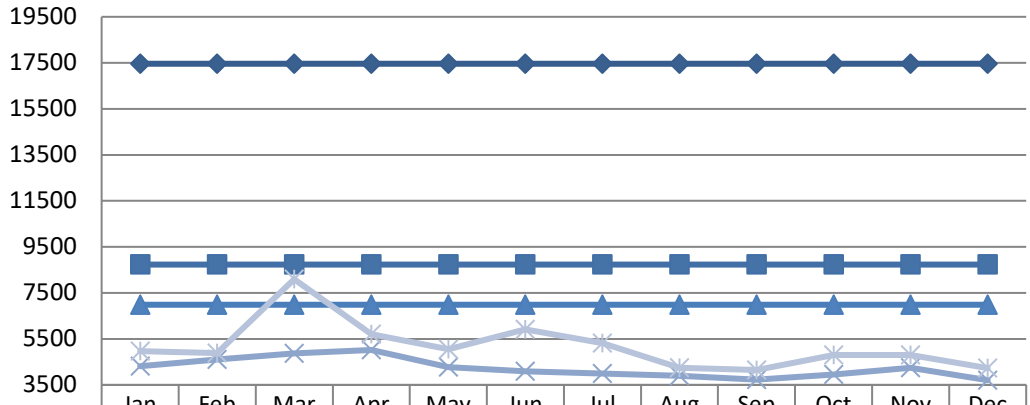
Petawawa's Wastewater Treatment Facility is a secondary treatment process that includes primary treatment (screening, grit removal, pre-aeration, scum removal, sedimentation or primary clarification), secondary treatment using sequencing batch reactivator (SBR) technology (activated sludge process combining biological and physical treatments), UV disinfection, sludge thickening process with the use of anaerobic sludge digestion, as well as a full bio-solids utilization program. This facility uses technology that is a biological process, so that no chemicals or chemical by-products are passed on to the receiving stream, which is the Ottawa River.

The Petawawa WPCP is still presently being transformed into a Net Zero Resource Recovery Facility by upgrading its anaerobic digesters to divert waste from landfill and boost biogas production for use as electricity , making the plant energy neutral or positive (Net Zero), and reducing GHG emissions. This will involve the utilization of biogas in a Combined Heat and Power (CHP) unit for the purpose of making the WWTP Net Zero. This project also aims to find beneficial usage of remaining biogas as clean fuel in the future.

4 Treatment Flows

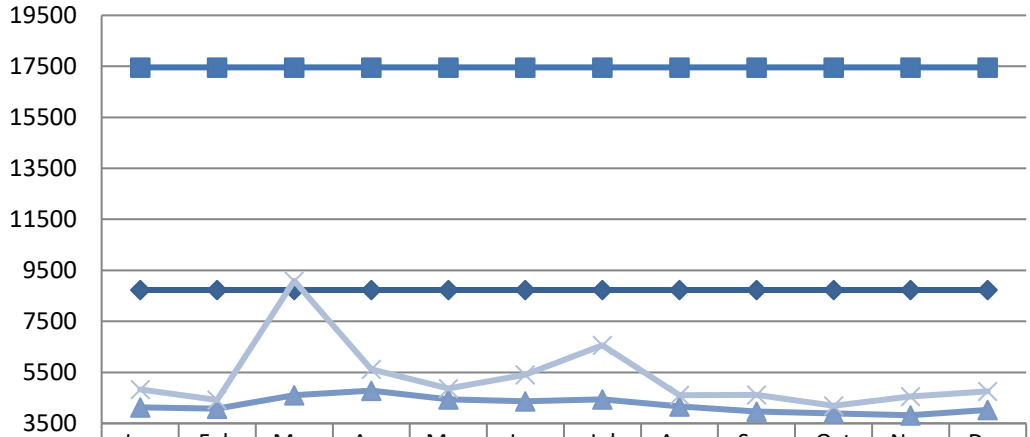
Based on the 2025 average daily raw flow, the plant is operating at 48.3% of the design capacity.

4.1 Raw Flow (m3/d)



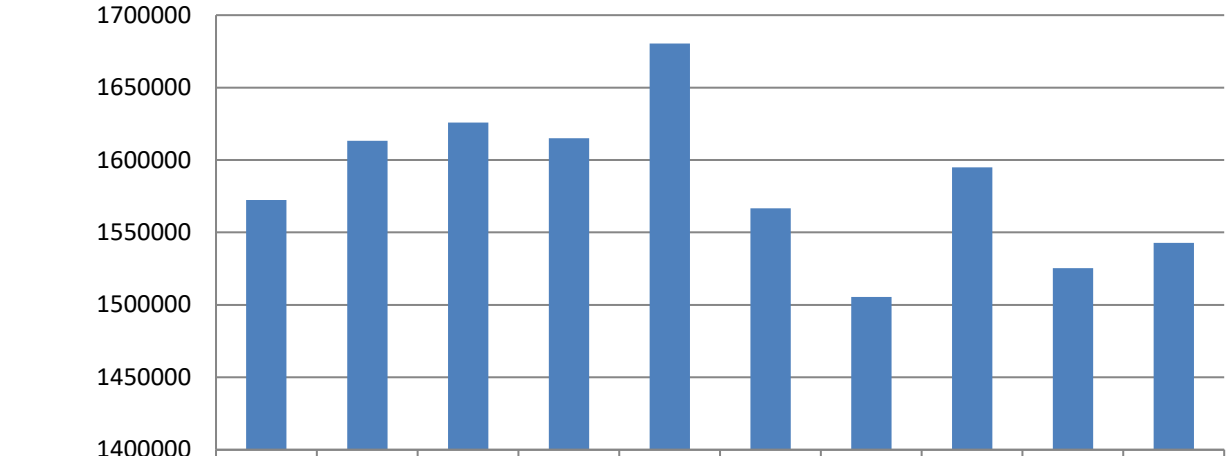
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Peak Daily	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460
Rated Capacity	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730
80%	6984	6984	6984	6984	6984	6984	6984	6984	6984	6984	6984	6984
Average Daily Flow	4307	4601	4876	5019	4265	4090	3997	3889	3729	3956	4237	3705
Maximum Daily Flow	4972	4885	8093	5704	5055	5912	5321	4249	4148	4799	4806	4232

4.2 Effluent Flow (m3/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rated Capacity	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730	8730
Peak Daily	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460	17460
Average Daily Flow	4133	4073	4605	4785	4437	4363	4446	4162	3960	3893	3818	4030
Maximum Daily Flow	4834	4422	9090	5626	4871	5405	6568	4599	4619	4190	4559	4759

4.2.1 *Annual Comparison (m3)*



	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Total Annual Flow	1572358	1613333	1625923	1615003	1680503	1566748	1505473	1594943	1525264	1542709

4.3 Imported Waste/Sewage

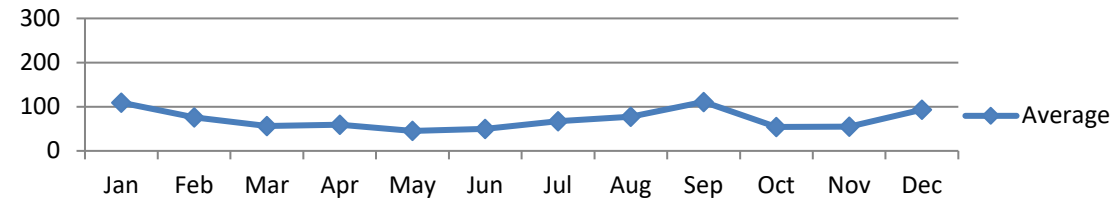
There is no imported wastes accepted at this facility during 2025.

5 Raw Sewage Quality

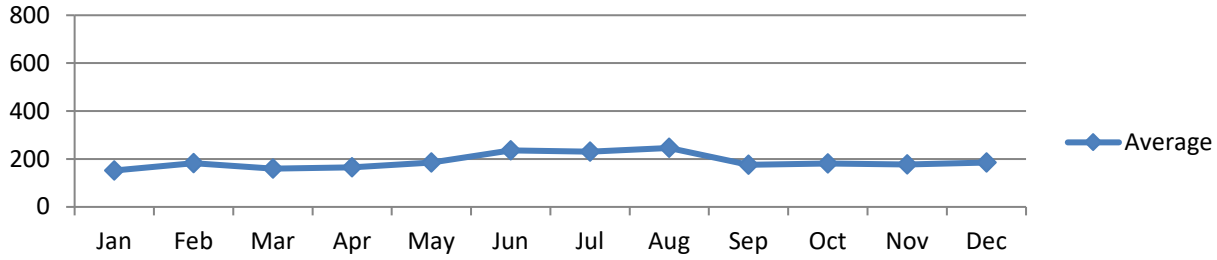
Current year minimum, maximum and averages are available in Appendix A – Performance Assessment Report.

5.1 Influent Trending

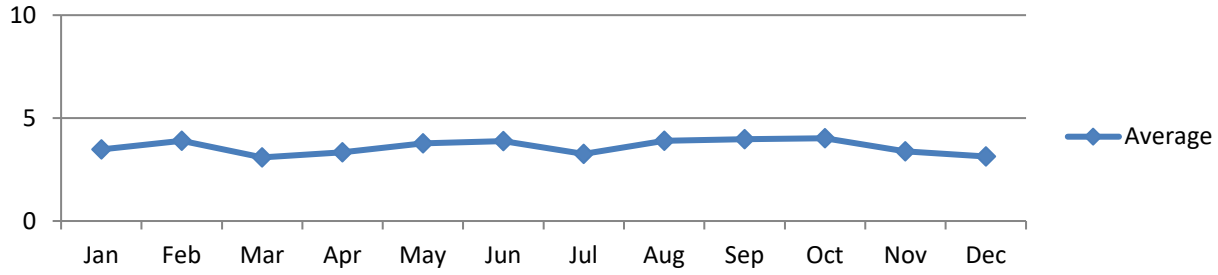
5.1.1 *BOD5*



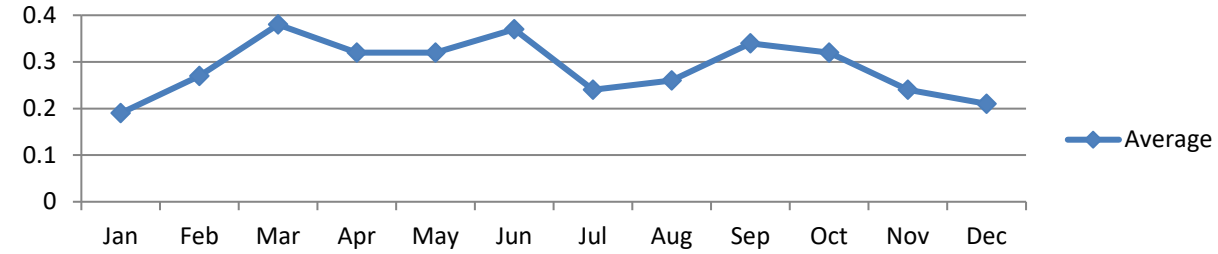
5.1.2 *Total Suspended Solids*



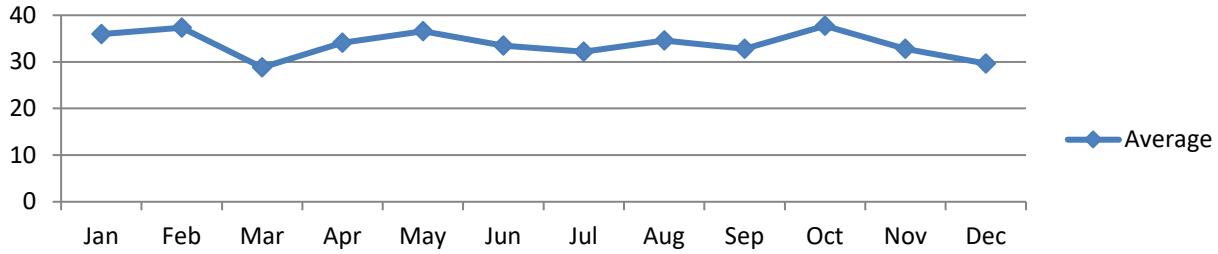
5.1.3 *Total Phosphorus*



5.1.4 *Un-Ionized Ammonia*



5.1.5 *Total Kjeldahl Nitrogen (TKN)*



5.2 Imported Waste Quality

There are no imported wastes accepted at this facility.

6 Effluent Quality

6.1 Effluent Quality Assurance and Control Measures Taken

This system is part of OCWA's Laurentian View Cluster. The cluster is supported by the Eastern Regional Hub, and corporate resources. Operational Services are delivered by OCWA staff that live and work in the community. The systems are operated to meet compliance with applicable regulations. The system has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents and are updated, as required. These documents are also part of OCWA's Quality & Environmental Management System.

The process is reviewed and maintained by certified operators. These operators complete in-house rounds and testing to monitor the process. All Sampling and Analysis follow approved methods and protocols for sampling, analysis and recording as specified in the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works", the Ministry's publication, "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" and the publication, "Standard Methods for the Examination of Water and Wastewater".

All final effluent samples collected during the reporting period to meet legislated sampling requirements, are submitted to Eurofins laboratory in Ottawa for analysis, with the exception of disinfection residuals and temperature. Eurofins laboratory in Ottawa has been deemed accredited by the Canadian Association for Laboratory Accreditation (CALA), meeting strict provincial guidelines including an extensive quality assurance/quality control program. By choosing this laboratory, the Ontario Clean Water Agency is ensuring appropriate control measures are undertaken during sample analysis. The disinfection residuals and temperature parameters are analyzed in the field at the time of sample collection by certified operators, to ensure accuracy and precision of the results obtained.

OCWA uses several computer systems, which include:

- Process Data Management (PDM)
    - This database program consolidates all operational data from a variety of sources including field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.
- Maximo – OCWA's Work Management System (WMS)
    - This program is used to track and schedule maintenance activities for all equipment in the system. Also, it is used to assign tasks for specific operational tasks.
- SCADA
    - The SCADA system allows for process optimization and data logging, process trending, remote alarming.

The operations team also has access to a network of operational compliance and process specialists to assist for emerging process issues. This aids in establishing additional control measures to ensure a quality effluent product.

Detailed individual sample results for, both raw sewage and final effluent, can be requested from the operating authority.

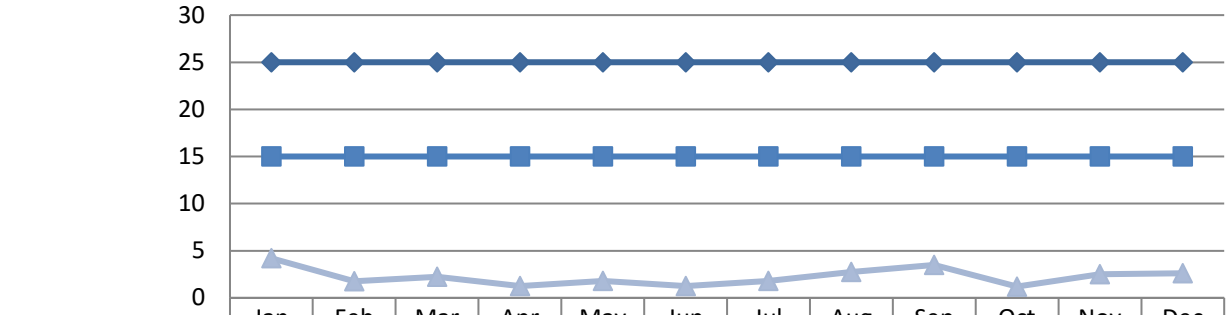
6.2 CBOD5

Compliance Limit for this parameter MET.

Compliance Objective for this parameter MET.

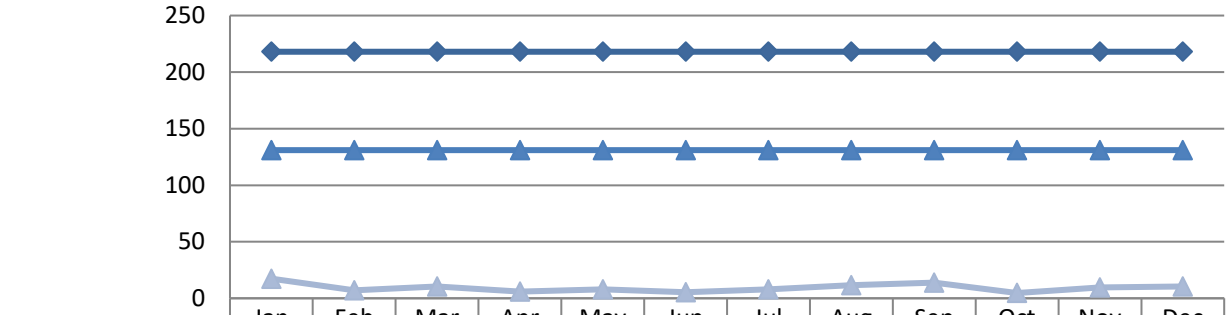
Compliance Objective was met > 50% of the time.

6.2.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25	25	25	25	25	25	25	25	25	25	25	25
ECA Objective	15	15	15	15	15	15	15	15	15	15	15	15
Average	4.2	1.75	2.25	1.3	1.8	1.25	1.8	2.75	3.5	1.2	2.5	2.6

6.2.2 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	218	218	218	218	218	218	218	218	218	218	218	218
ECA Objective	131	131	131	131	131	131	131	131	131	131	131	131
Average	17.36	7.128	10.4	5.981	7.987	5.454	8.002	11.447	13.86	4.671	9.5	10.477

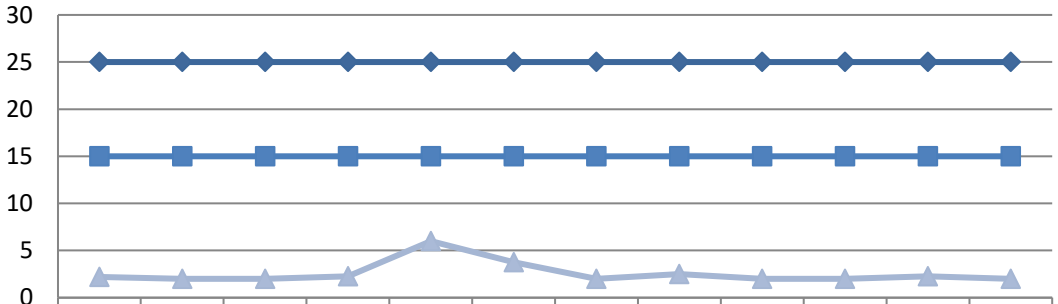
6.3 Total Suspended Solids

Compliance Limit for this parameter MET.

Compliance Objective for this parameter MET.

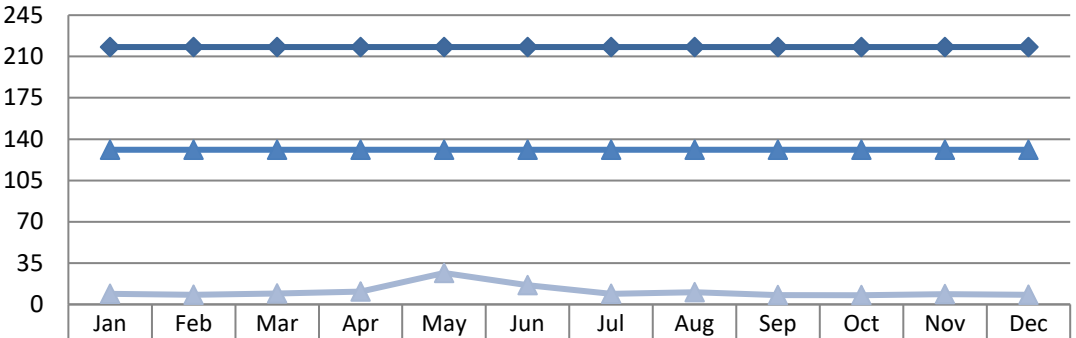
Compliance Objective was met >50% of the time.

6.3.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25	25	25	25	25	25	25	25	25	25	25	25
ECA Objective	15	15	15	15	15	15	15	15	15	15	15	15
Average	2.2	2.0	2.0	2.3	6.0	3.8	2.0	2.5	2.0	2.0	2.3	2.0

6.3.2 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	218	218	218	218	218	218	218	218	218	218	218	218
ECA Objective	131	131	131	131	131	131	131	131	131	131	131	131
Average	9.093	8.1	9.2	10.8	26.6	16.4	8.891	10.4	7.92	7.785	8.591	8.06

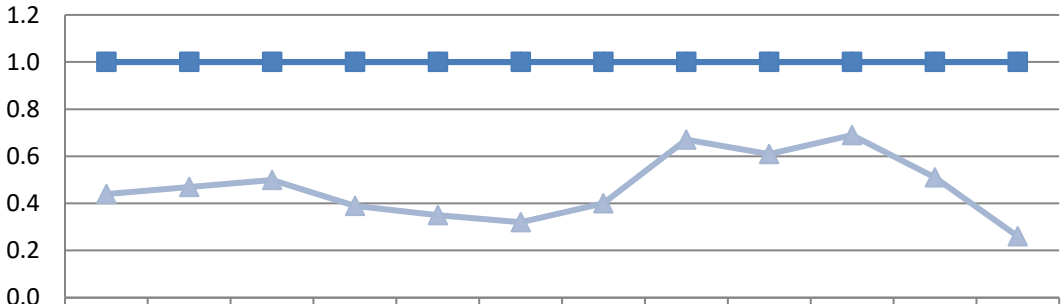
6.4 Total Phosphorus

Compliance Limit for this parameter MET.

Compliance Objective for this parameter MET.

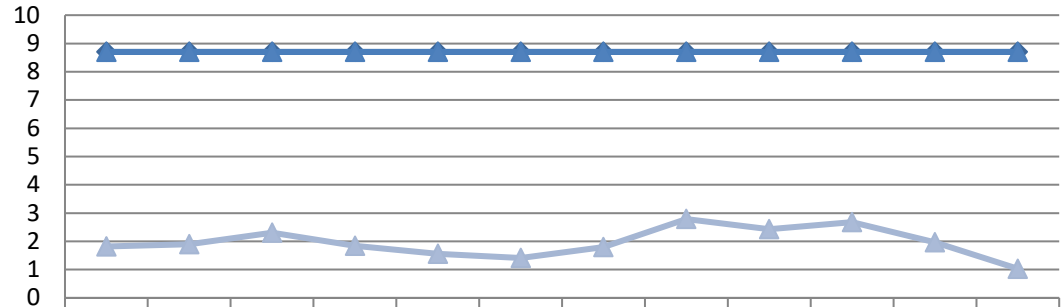
Compliance Objective was met >50% of the time.

6.4.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
ECA Objective	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Average	0.4	0.5	0.5	0.4	0.4	0.3	0.4	0.7	0.6	0.7	0.5	0.3

6.4.2 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
ECA Objective	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Average	1.8	1.9	2.3	1.8	1.6	1.4	1.8	2.8	2.4	2.7	2.0	1.0

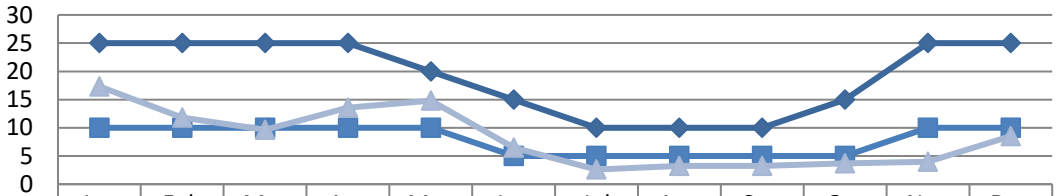
6.5 Total Ammonia Nitrogen

Compliance Limit for this parameter MET.

Compliance Objective for this parameter was not MET (5 times).

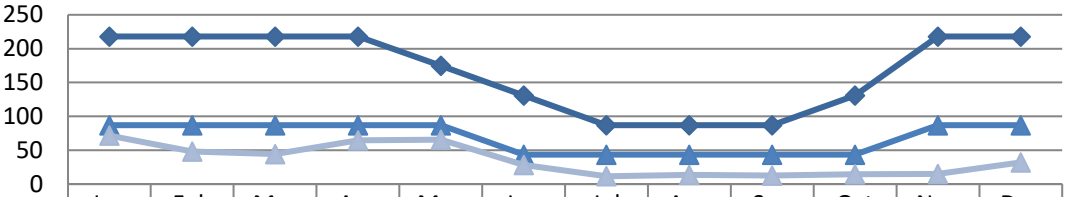
Compliance Objective was met <50% of the time.

6.5.1 Concentration (mg/L)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	25	25	25	25	20	15	10	10	10	15	25	25
ECA Objective	10	10	10	10	10	5	5	5	5	5	10	10
Average	17	12	10	14	15	6	3	3	3	4	4	8

6.5.2 Loading (kg/d)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	218	218	218	218	175	131	87	87	87	131	218	218
ECA Objective	87.0	87.0	87.0	87.0	87.0	43.5	43.5	43.5	43.5	43.5	87.0	87.0
Average	71.6	48.1	44.5	64.8	65.7	28.1	11.56	13.5	12.8	14.4	15.1	32.2

6.6 Acute Lethality

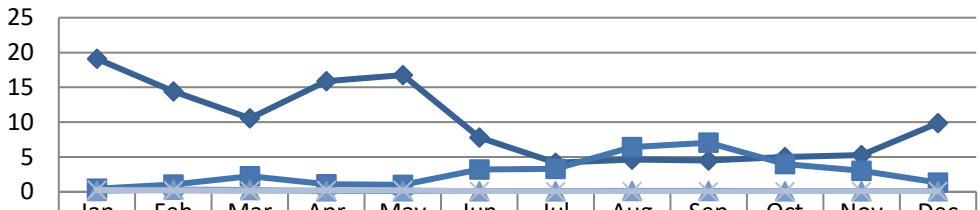
There was one (1) sample collected in 2025 and tested for acute lethality for Rainbow Trout. This sampling is required federally. Results are displayed as % mortality. An adverse result is a > 50% mortality rate.

Compliance Limit for this parameter was MET.

Date	Rainbow Trout
May 5, 2025	0

6.7 Un-Ionized Ammonia/Nitrate/Nitrite/TKN

There are no compliance or objective limits for these parameters.

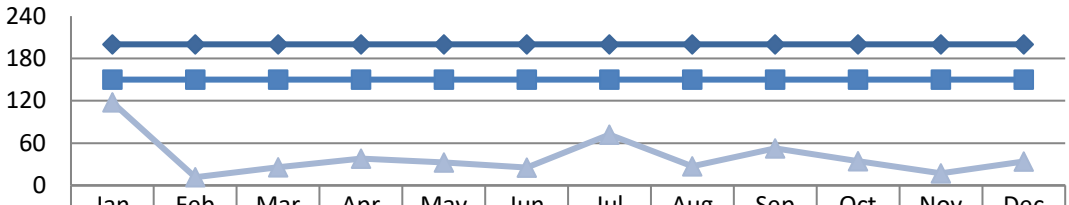


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TKN	19.09	14.41	10.55	15.89	16.8	7.79	4.18	4.64	4.49	5.02	5.28	9.87
Nitrate	0.45	1.07	2.24	1.08	1.02	3.2	3.32	6.41	7.05	4.01	3.02	1.32
Nitrite	0.150	0.330	0.250	0.100	0.100	0.100	0.100	0.120	0.110	0.100	0.100	0.100
Un-ionized Ammonia	0.26	0.18	0.12	0.21	0.22	0.07	0.02	0.02	0.02	0.03	0.04	0.10

6.8 E-coli

Compliance Limit for this parameter MET.
Compliance Objective for this parameter MET.
Compliance Objective was met >50% of the time.

6.8.1 Geometric Mean (cfu/100mL)



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
ECA Limit	200	200	200	200	200	200	200	200	200	200	200	200
ECA Objective	150	150	150	150	150	150	150	150	150	150	150	150
Average	117.65	11.6	25.8	38.07	32.77	25.15	71.9	27.0	52.6	34.40	16.95	34.0

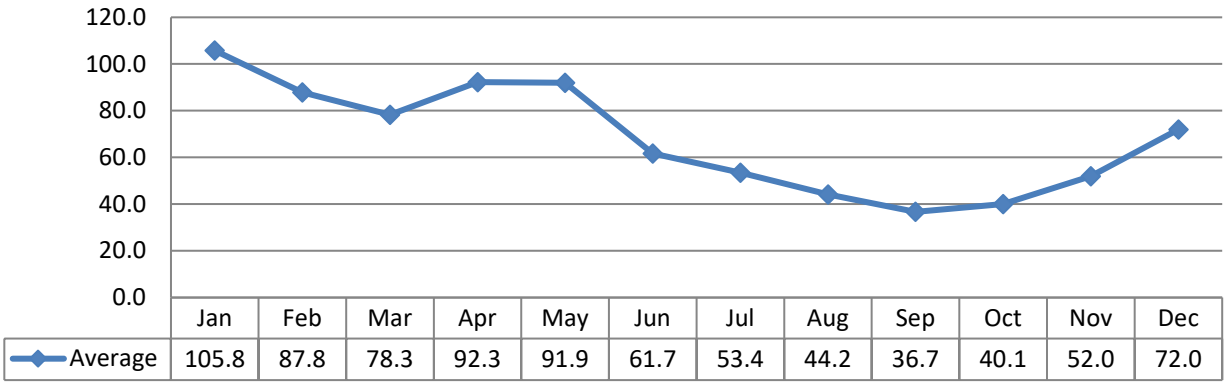
6.9 pH

Compliance Limit range for this parameter is 6.0 - 9.5. The parameter MET.
Each instance the pH is outside of that range, it is reported as a non-compliance.
Compliance Objective range for this parameter is 6.5 - 8.5. The parameter MET.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum	7.61	7.60	7.52	7.56	7.65	7.52	7.07	7.04	6.80	7.24	7.41	7.46
Minimum	7.06	6.81	6.88	7.17	7.13	6.86	6.80	6.64	6.55	6.63	6.97	7.11

6.10 Alkalinity

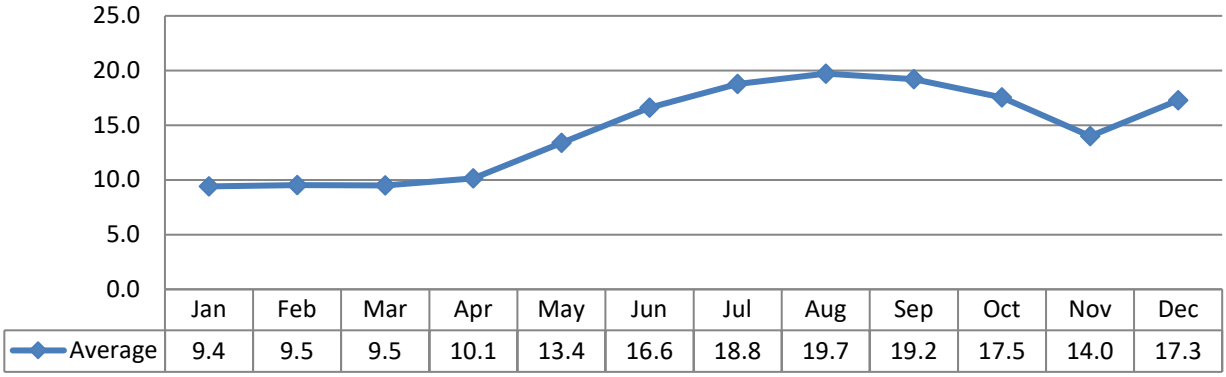
Alkalinity is required to be tested, but there are no compliance limits for this parameter.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	105.8	87.8	78.3	92.3	91.9	61.7	53.4	44.2	36.7	40.1	52.0	72.0

6.11 Temperature

Temperature is required to be tested, but there are no compliance limits for this parameter.



	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average	9.4	9.5	9.5	10.1	13.4	16.6	18.8	19.7	19.2	17.5	14.0	17.3

7 Monitoring Schedule

The 2025 Calendar can be viewed in Appendix B.

7.1 Deviations

Date	Details	Cause of Deviation
Jan 1, 2025	All samples were taken on Jan 2nd instead of the Jan 1st	No samples were taken on Jan 1st due to holidays. Samples were taken on Dec 30th, Dec 31st, and Jan 2nd
Feb 6, 2025	Operator missed taking the RS Primary Treatment and TWAS samples for the digester sludge with the sludge holding tank samples	Operator misread the Sample Calendar which read, “Digester Sludge including Sludge Holding Tank Sample”, thinking this sample is not taken since the digesters are out-of-service at the plant, but the sample is still taken. The sample calendar was edited to be more obvious.
Apr 15-17, 2025	Samples taken on Apr 14-16 instead and Acute Lethality sample was not taken on Apr	STAT holiday that changed sampling dates. Acute Lethality sample taken on May 5th with plant performing better with final effluent results

Date	Details	Cause of Deviation
	16th	
Jun 30, 2025	Samples taken on this date	PCT missed having this day on the schedule
Jul 3, 2025	Sludge Holding Tank Samples and E. Coli sample taken on the 3rd instead of the 4th	Suited operations better due to other activities going on at the plant
Aug 1, 2025	No samples taken, as per schedule	Samples were taken on Jul 29-31st instead – not needing to be taken on Aug 1st
Aug 21, 2025	Sludge Holding Tank Samples and E. Coli sample taken on the 21st instead of the 14th	Suited operations better due to other activities going on at the plant
Oct 1st - 3rd	No samples taken on Oct 3rd, as per schedule	Samples were done on Sept 30th, Oct 1st & 2nd instead, due to the STAT holiday
Oct 30, 2025	Final Effluent E. Coli samples was taken as required and sent to Lab	Courier did not deliver the sample in time, so re-samples were collected on Nov 5th & Nov 6th
Dec 22 &29	Final Effluent E. Coli samples were taken, but not on Dec 24th & Dec 31st as per schedule	Suited operations better due to other activities going on at the plant and time of the year with holidays

8 Operating Issues/Problems

- There were no minor or major issues at the plant during this reporting year.

8.1 Effluent Quality Non-Compliance Summary

Month	Exceedance of	Limit	Value	Corrective Action
Jan 2025	Final Effluent TAN Objective	10 mg/L	17 mg/L	Increased dissolved oxygen to the SBR's for more aeration time
Feb 2025	Final Effluent TAN Objective	10 mg/L	12 mg/L	
Apr 2025	Final Effluent TAN Objective	10 mg/L	14 mg/L	
May 2025	Final Effluent TAN Objective	10 mg/L	15 mg/L	
Jun 2025	Final Effluent TAN Objective	5 mg/L	6 mg/L	

8.2 Summary of Abnormal Sewage Discharge Events

Abnormal Discharge Events include Bypass', Overflows, Diversions and Spills of Sewage. Summary Details are included in Appendix C.

8.3 Spills (Other than Sewage)

Date	Location	Details	Volume (m3)	Start Date and Time	End Date and Time
N/A					

9 Maintenance

Routine planned maintenance activities are scheduled in WMS and include:

- Inspect, adjust and calibrate process control equipment to ensure proper operation of water distribution systems, pumps, chemical feeders, and all other equipment installed at the facilities.
- Carry out a routine maintenance program including greasing and oiling as specified in the lubrication schedule.
- Perform day-to-day maintenance duties to equipment including checking machinery and electrical equipment when required.
- Maintain an equipment inventory
- Maintain accurate records of work conducted, activities, and achievements.

Planned maintenance activities are communicated to the person responsible for completing the task through the issuance of WMS work orders. Work orders are automatically generated on a schedule as determined based on manufacturer's recommendations and site specific operational and maintenance needs and are assigned directly to the appropriate operations personnel. This schedule is set up by the designated WMS Primary. Work orders are completed and electronically entered into WMS by the person responsible for completing the task.

Unplanned maintenance is conducted, as required.

9.1 Normal Maintenance and Repairs

(Weekly/Monthly/Quarterly/Annually Work Orders for the various activities – listed once)

Work Order	Details
4302629	Monthly Health & Safety checks of plant, first aid kit, fire extinguishers and eye wash stations
4303678	Monthly check of diesel generator at plant by test running with no load, checking batteries and fluid levels
430648	Annual maintenance by contractor of generator at Renfrew Street SPS
4305262/4305624/4305266/4375661	Monthly DO analyzer probe inspections at the SBR's (4)
4312302	Yearly inspection of raw portable sampler
4312364	Yearly inspection of final effluent sampler
4325425	Monthly check of diesel generator at plant by test running with no load, checking batteries and

	fluid levels
4325457	Monthly testing of alarms/dialer in control room with Falcon Security
4325461	Monthly check of diesel generator at East Street SPS by test running with no load, checking batteries and fluid levels
4325481	Monthly check of diesel generator at Earl Street SPS by test running with no load, checking batteries and fluid levels
4325509/4325516/4325570	Monthly inspections of 3 gas engine portable generator by test running and checking fluids
4325528/4325545	Monthly 2 boiler inspections by testing water, changing filters, adding corrosion inhibitor
4327296	Monthly activities for building and ground maintenance
4333422/4335182/4336707/4338235	Weekly pumping station checks
4355042	Monthly H&S plant inspection and report provide to SOM
4417826	Quarterly inspection of mobile spill kit inventory of supplies
4426837/4428298	Clean up of shop areas, organize from winter work
4447592	Quarterly H&S Equipment check
4486829	Cleaning ends of UV banks
4486830	Flushing of clarifier #1 influent line and weir for better flow
4508324	Yearly Chemical review
4537348/4537360/4537372/4537384/4537396/4537408	Yearly inspection of grating, railings and kick plates at plant and the SPS's
4553677	Asset Management task of locating and identifying assets to be tagged and added into Maximo database
4578036	Annual Corporate H&S Checklist done for plant
4757001	Annual inspection of lifting equipment by contractor
4857207	Monthly clean out of manhole on boulevard in front of Mulvihill Drug Mart after a town repair

9.2 Emergency Maintenance and Repairs

Work Order	Details
4426695	Call-in due to bypass float tripping; 2 screw pumps already running (no actual bypass) and SBR's were in storm mode, level went down and float returned to normal location
448862	Call-in due to power outage at Renfrew Street Sewage Pumping Station (SPS)
4490281	Call-in for High wet well alarm at Harry Street SPS
4337284	Call-in for bar screen tripping on overload
4337285	Call-in for second time bar screen tripping out on overload
4382698	Call-in for Digester 3 & 4 Gallery Flood Alarm due to sump pump failure

Work Order	Details
4659890	Call-in for Zone 8 and 12 flood alarms due to heavy rains
4661132	Call-in due to SBR #2 air valve failing to open and close
4762305	Zone 8 building service alarm with a trending loss for 1 min 7 sec
4763368	Harry Street SPS communication to SCADA issue
4490283	Harry Street SPS AC power failure
4553615	Call-in due boiler low water supply temperature alarm
4555128	Call-in due to control building low temperature alarm
4607757	Call-in due to garage communication loss alarm
4609588	Call-in due to bar screen mechanical blockage
4816127	Call-in due to E-stop on bar screen was accidently hit by contractor on-site
4861592	Call-in due to control building intrusion alarm
4862350	Call-in due to Harry Street SPS high wet well level alarm
4863216	Call-in due to Renfrew Street SPS general alarm
4909790	Call-in due to HI HI wet well level alarm

9.3 Flow Meter Calibrations and Maintenance

Location	Date of Calibration	Additional Maintenance
Influent Flow Meter	Oct 6, 2025	
Effluent Flow Meter	Oct 6, 2025	
Collection Flow Meters	N/A	

9.4 Authorized Alterations in Collection System

Work Order	Details	Significant Drinking Water Threat (Y/N)
N/A		

9.5 Notice of Modifications

Date	Process	Modification	Status
N/A			

10 Sludge Generation

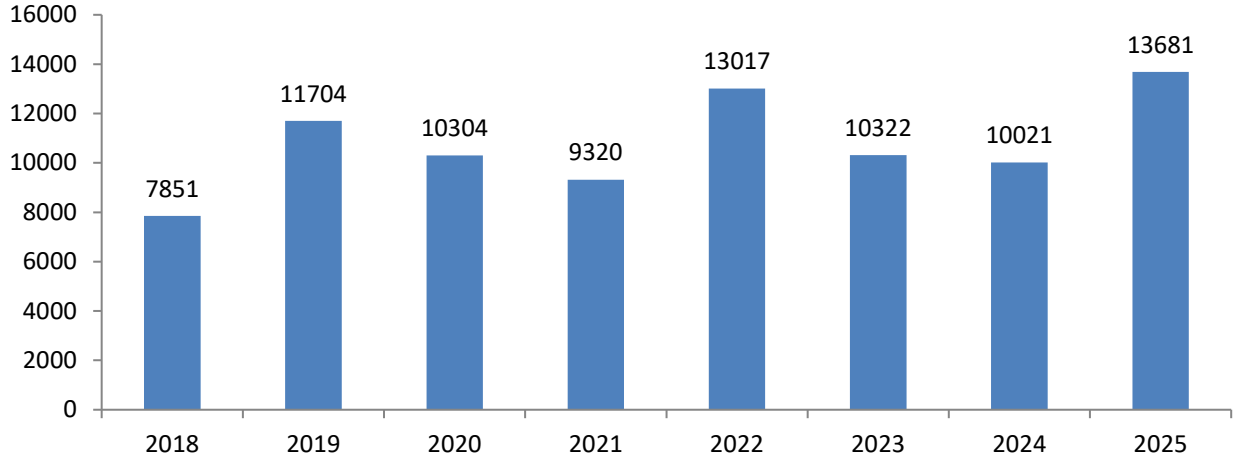
10.1 Sludge Volume Generation Summary

Month	Volume m3
January	
February	
March	
April	
May	6 288
June	
July	
August	
September	
October	2 475
November	4 918
December	
TOTAL	**13 681**

10.2 Sludge Disposal Summary

Date	Disposal Location	Approval Number	Total Volume (m3)
May 12-16,2025	Scott Tabbert – Biggs Farm & Moore Farm	25039 / 24707	3 285
May 20-22, 2025	Scott Tabbert – Moore Farm Greg Splinter – Hales Creek Farm (Topsoil Farm)	24707 / 24768	2 475
May 27, 2025	Greg Splinter – Hales Creek Farm (Topsoil Farm)	24768	528
Oct 27-30, 2025	Adam Yantha – Dave Yantha Farm	62947	2 475
Nov 3-4, 2025	Adam Yantha – Dave Yantha Farm	62947	1 681
Nov 6-7, 2025	Scott Tabbert – Biggs Farm	25039	3 237

10.3 Annual Comparison (m3/year)



It is anticipated that sludge volumes will remain similar to the 2025 volumes.

11 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
Dutch Drive	Jul 14, 2025	Sewer plugged	Sewer lateral was broken on landowner side, so they would have to get someone to fix it
Pine Place	Nov 4, 2025	Sewer plugged	Checked manhole on cul-de-sac and all was clear

Appendix A

Appendix A - Performance Assessment Report (PAR)

Performance Assessment Report

From 1/1/2025 to 12/31/2025 11:59:59 PM

5571 PETAWAWA WASTEWATER TREATMENT FACILITY 120000587

	1 / 2025	2/ 2025	3/ 2025	4/ 2025	5/ 2025	6/ 2025	7/ 2025	8/ 2025	9/ 2025	10/ 2025	11/ 2025	12/ 2025	<--Total-->	<--Avg-->	<--Max-->	<-Criteria->
Flows																
Raw Flow: Total - Raw Sewage m³/d	133,504.00	128,830.00	151,160.00	150,557.00	132,207.00	122,707.00	123,915.00	120,573.00	111,855.00	122,634.00	127,124.00	114,854.00	1,539,920.00			0.00
Raw Flow: Avg - Raw Sewage m³/d	4,306.58	4,601.07	4,876.13	5,018.57	4,264.74	4,090.23	3,997.26	3,889.45	3,728.50	3,955.94	4,237.47	3,704.97		4,218.96		8,730.00
Raw Flow: Max - Raw Sewage m³/d	4,972.00	4,885.00	8,093.00	5,704.00	5,055.00	5,912.00	5,321.00	4,249.00	4,148.00	4,799.00	4,806.00	4,232.00			8,093.00	0.00
Raw Flow: Count - Raw Sewage m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00
Eff. Flow: Total - Final Effluent m³/d	128,135.00	114,040.00	142,769.00	143,538.00	137,555.00	130,890.00	137,815.00	129,037.00	118,797.00	120,668.00	114,548.00	124,917.00	1,542,709.00			0.00
Eff. Flow: Avg - Final Effluent m³/d	4,133.39	4,072.86	4,605.45	4,784.60	4,437.26	4,363.00	4,445.65	4,162.48	3,959.90	3,892.52	3,818.27	4,029.58		4,226.60		8,730.00
Eff. Flow: Max - Final Effluent m³/d	4,834.00	4,422.00	9,090.00	5,626.00	4,871.00	5,405.00	6,568.00	4,599.00	4,619.00	4,190.00	4,559.00	4,759.00			9,090.00	0.00
Eff Flow: Count - Final Effluent m³/d	31.00	28.00	31.00	30.00	31.00	30.00	31.00	31.00	30.00	31.00	30.00	31.00	365.00			0.00
Carbonaceous Biochemical Oxygen Demand: CBOD																
Eff: Avg cBOD5 - Final Effluent mg/L	< 4.20	< 1.75	< 2.25	< 1.25	< 1.80	< 1.25	< 1.80	< 2.75	3.50	< 1.20	< 2.50	< 2.60		2.25	4.20	25.00
Eff: # of samples of cBOD5 - Final Effluent	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: cBOD5 - Final Effluent kg/d	< 17.360	< 7.128	< 10.362	< 5.981	< 7.987	< 5.454	< 8.002	< 11.447	13.860	< 4.671	< 9.546	< 10.477		9.49	17.36	
Biochemical Oxygen Demand: BOD5																
Raw: Avg BOD5 - Raw Sewage mg/L	109.20	75.75	56.25	59.50	45.20	49.50	67.00	77.50	111.00	54.40	55.25	93.40		71.42	111.00	0.00
Raw: # of samples of BOD5 - Raw Sewage	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg BOD5 - Final Effluent mg/L	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	< 1.00	0.00		< 1.00	< 1.00	
Eff: # of samples of BOD5 - Final Effluent	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00			0.00
Loading: BOD5 - Final Effluent kg/d	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	< 3.818	0.000		< 4.23	< 3.82	
Percent Removal: BOD5 - Raw Sewage %	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 Sewage mg/L	152.00	182.75	159.25	165.50	185.60	236.50	231.00	246.00	175.25	181.80	176.75	185.20		189.55	246.00	0.00
Raw: # of samples of TSS - Raw Sewage	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Eff: Avg TSS - Final Effluent mg/L	< 2.20	< 2.00	< 2.00	< 2.25	< 6.00	< 3.75	< 2.00	< 2.50	< 2.00	< 2.00	< 2.25	< 2.00		< 2.60	< 6.00	25.00
Eff: # of samples of TSS - Final Effluent	5.00	4.00	4.00	4.00	5.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	53.00			0.00
Loading: TSS - Final Effluent kg/d	< 9.093	< 8.146	< 9.211	< 10.765	< 26.624	< 16.361	< 8.891	< 10.406	< 7.920	< 7.785	< 8.591	< 8.059		< 11.01	< 26.62	
Percent Removal: TSS - Raw Sewage %	98.55	98.91	98.74	98.64	96.77	98.41	99.13	98.98	98.86	98.90	98.73	98.92		98.63	99.13	0.00

Performance Assessment Report

From 1/1/2025 to 12/31/2025 11:59:59 PM

Total Phosphorus: TP

Raw: Avg TP - Raw Sewage mg/L		3.47		3.89		3.09		3.33		3.78		3.88		3.26		3.89		3.97		4.02		3.38		3.14		3.59		4.02	0.00
Raw: # of samples of TP - Raw Sewage		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00
Eff: Avg TP - Final Effluent mg/L		0.44		0.47		0.50		0.39		0.35		0.32		0.40		0.67		0.61		0.69		0.51		0.26		0.46		0.69	1.00
Eff: # of samples of TP - Final Effluent		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00
Loading: TP - Final Effluent kg/d		1.815		1.896		2.309		1.847		1.564		1.411		1.793		2.788		2.425		2.683		1.964		1.032		1.96		2.79	
Percent Removal: TP - Raw Sewage %		87.34		88.04		83.75		88.41		90.68		91.66		87.62		82.78		84.59		82.84		84.77		91.86		87.03		91.86	0.00

Nitrogen Series

Raw: Avg TKN - Raw Sewage mg/L		35.98		37.31		28.80		34.11		36.56		33.47		32.21		34.55		32.82		37.73		32.83		29.61		33.81		37.73	0.00
Raw: # of samples of TKN - Raw Sewage		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00
Eff: Avg TAN - Final Effluent mg/L		17.32		11.82		9.67		13.55		14.81		6.45		2.60		3.25		3.24		3.71		3.96		8.49		8.24		17.32	25.00
Eff: # of samples of TAN - Final Effluent		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00
Loading: TAN - Final Effluent kg/d		71.571		48.141		44.546		64.842		65.706		28.125		11.559		13.542		12.844		14.422		15.101		34.214		34.82		71.57	
Eff: Avg NO3-N - Final Effluent mg/L	<	0.45		1.07		2.24		1.08		1.02		3.20		3.32		6.41		7.05	<	4.01		3.02		1.32		< 2.85	<	7.05	0.00
Eff: # of samples of NO3-N - Final Effluent		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00
Eff: Avg NO2-N - Final Effluent mg/L	<	0.15		0.33		0.25	<	0.10	<	0.10	<	0.10	<	0.10	<	0.12	<	0.11	<	0.10	<	0.10	<	0.10		< 0.14	<	0.33	0.00
Eff: # of samples of NO2-N - Final Effluent		13.00		12.00		12.00		14.00		13.00		13.00		14.00		12.00		13.00		14.00		12.00		15.00	157.00				0.00

Disinfection

Eff: GMD E. Coli - Final Effluent cfu/100mL		117.65		11.58		25.76		38.07		32.77		25.15		71.92		26.96		52.59		34.40		16.95		33.99					200.00
Eff: # of samples of E. Coli - Final Effluent		5.00		4.00		4.00		4.00		5.00		4.00		5.00		4.00		4.00		4.00		5.00		5.00	53.00				0.00

Appendix B

Appendix B – 2025 Monitoring Schedule

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

PETAWAWA WASTEWATER TREATMENT
Sample Schedule 2025

January	Week 1	**Wednesday Stat-1st**	1-3
	Week 2		6-10
	Week 3		13-17
	Week 4		20-24
	Week 5		27-31
February	Week 1		3-7
	Week 2		10-14
	Week 3	**Monday Stat-17th**	17-21
	Week 4		24-28
	Week 5		
March	Week 1		3-7
	Week 2		10-14
	Week 3		17-21
	Week 4		24-28
	Week 5		31

April	Week 1		1-4
	Week 2		7-11
	Week 3	**Friday Stat-18th**	14-18
	Week 4	**Monday Stat-21st**	21-25
	Week 5		28-30
May	Week 1		1-2
	Week 2		5-9
	Week 3		12-16
	Week 4	**Monday Stat-19th**	19-23
	Week 5		26-30
June	Week 1		2-6
	Week 2		9-13
	Week 3		16-20
	Week 4		23-27
	Week 5		30

July	Week 1	**Tuesday Stat-1st**	1-4
	Week 2		7-11
	Week 3		14-18
	Week 4		21-25
	Week 5		28-31
August	Week 1		1
	Week 2	**Monday Stat-4th**	4-8
	Week 3		11-15
	Week 4		18-22
	Week 5		25-29
September	Week 1	**Monday Stat-1st**	1-5
	Week 2		8-12
	Week 3		15-19
	Week 4		22-26
	Week 5	**Tuesday Stat-30th**	29-30

October	Week 1		1-3
	Week 2		6-10
	Week 3	**Monday Stat-13th**	13-17
	Week 4		20-24
	Week 5		27-31
November	Week 1		3-7
	Week 2	**Tuesday Stat-11th**	10-14
	Week 3		17-21
	Week 4		24-28
	Week 5		
December	Week 1		1-5
	Week 2		8-12
	Week 3		15-19
	Week 4	**Thurs/Fri Stats-25th/26th**	22-26
	Week 5		29-31

Revisions

Date	Revision#	Author	Revision
03-Dec-2018	0	B.Royce	Created
18-Dec-2019	1	B.Royce	Edited for 2020
04-Nov-2020	2	B.Royce	Edited for 2021
01-Dec-2021	3	B.Royce	Dec 2021 calendar to have Raw Grab done weekly and added Full Run and Reg Run sampling
08-Dec-2021	4	B.Royce	Edited for 2022
05-Dec-2023	5	B.Royce	Edited for 2023
08-Dec-2023	6	B.Royce	Edited for 2024
09-Dec-2024	7	B.Royce	Edited for 2025
19-Mar-2025	8	B.Royce	2025 Calendar edited to have Digester Sludge samples taken once per month with 5 bottles needed, and SHT done twice per month with a box whiten to show when those samples are taken

WSER - Wastewater Systems Effluent Regulations
Annual Lethality Testing for Rainbow Trout
>2500 - <17500 (ADF) Average Day Effluent Flow of Previous Year - Bi-weekly Sampling of TSS & CBOD5

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **January 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 1 of 12
Reviewed by: Brenda Royce (PCT)		Approved by: Senior Ops Manager

Sample days = Tues., Wed., Thurs. *In the event of STAT sample day moved to next working day* **STAT - Wednesday, Jan. 1st**	Week 1			Week 2			Week 3			Week 4			Week 5		
	Stat - Wed 1st														
	31	**2**	**3**	**7**	**8**	**9**	**14**	**15**	**16**	**21**	**22**	**23**	**28**	**29**	**30**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread sludge in April, take 2 samples in January to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **February 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 2 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Monday, Feb. 17th

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Stat - Mon 17th								
	4	**5**	**6**	**11**	**12**	**13**	**18**	**19**	**20**	**25**	**26**	**27**			
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread in April, take 2 samples in February to meet the 60-day requirement
If planning to spread in May, take 2 samples in February to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **March 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 3 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

	Week 1			Week 2			Week 3			Week 4			Week 5		
				4	5	6	11	12	13	18	19	20	25	26	27
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
If planning to spread sludge in April, take 2 samples in March to meet the 30-day requirement
If planning to spread in May, take 2 samples in March to meet the 60-day requirement
If planning to spread in June, take 2 samples in March to meet the 90-day requirement
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **April 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 4 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STATS - Friday, Apr. 18th & Monday, Apr. 21st

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Stat - Fri 18th			***Stat - Mon 21st***					
	1	**2**	**3**	**8**	**9**	**10**	**15**	**16**	**17**	**22**	**23**	**24**	**29**	**30**	
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE - Acute Lethality Test **** For WSER**															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 Sludge holding samples MUST be completed monthly until the end of the hauling season
If planning to spread sludge in May, take 2 samples in March to meet the 30-day requirement
If planning to spread in May, take 2 samples in March to meet the 60-day requirement
If planning to spread in June, take 2 samples in March to meet the 90-day requirement
****Sample to be sent by Purolator Courier to Aquatox - BE SURE TO USE APPROPRIATE CHAIN OF CUSTODY & SAMPLING FOR RAINBOW TROUT ONLY!!**
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **May 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 5 of 12
Reviewed by: Brenda Royce (PCT)		Approved by: Senior Ops Manager

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Monday, May 19th

	Week 1			Week 2			Week 3			Week 4			Week 5		
										Stat - Mon 19th					
	1			**6**	**7**	**8**	**13**	**14**	**15**	**20**	**21**	**22**	**27**	**28**	**29**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **June 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 6 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

	Week 1			Week 2			Week 3			Week 4			Week 5		
	3	**4**	**5**	**10**	**11**	**12**	**17**	**18**	**19**	**24**	**25**	**26**			
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **July 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 7 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Tuesday, July 1st	Week 1			Week 2			Week 3			Week 4			Week 5		
	2	**3**	**4**	**8**	**9**	**10**	**15**	**16**	**17**	**22**	**23**	**24**	**29**	**30**	**31**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes

2 sludge holding samples must be completed monthly until the end of the hauling season

This schedule is for guidance purposes only

Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **August 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 8 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Monday, August 4th

	Week 1			Week 2			Week 3			Week 4			Week 5		
				Stat - Mon 4th											
			1	**5**	**6**	**7**	**12**	**13**	**14**	**19**	**20**	**21**	**26**	**27**	**28**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **September 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 9 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STATS - Monday, Sept. 1st & Tues. Sept. 30th

	Week 1			Week 2			Week 3			Week 4			Week 5		
	Stat - Mon 1st												***Stat - Tues 30th***		
	2	**3**	**4**	**9**	**10**	**11**	**16**	**17**	**18**	**23**	**24**	**25**			
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **October 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 10 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Monday, October 13th

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Stat - Mon 13th								
	1	**2**	**3**	**7**	**8**	**9**	**14**	**15**	**16**	**21**	**22**	**23**	**28**	**29**	**30**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS Ontario Clean Water Agency	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **November 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 11 of 12
Reviewed by: Brenda Royce (PCT)		Approved by: Senior Ops Manager

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STAT - Tuesday, November 11th

	Week 1			Week 2			Week 3			Week 4			Week 5		
							Stat - Tues 11th								
				4	**5**	**6**	**12**	**13**	**14**	**18**	**19**	**20**	**25**	**26**	**27**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite - (2 samples/week) 1 bottle required															
RS Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite - (2 samples/week) 1 bottle required															
FE Composite ALL (includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/month) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

QEMS #NAME?	External Laboratory Sample Schedule **PETAWAWA WASTEWATER TREATMENT** **December 2025**	Issued: 9-Dec-2024 Rev.#: 7 Page 12 of 12
Reviewed by: Brenda Royce (PCT)	Approved by: Senior Ops Manager	

Sample days = Tues., Wed., Thurs.

In the event of STAT sample day moved to next working day

STATS - Thurs. Dec. 25th & Fri. Dec. 26th

	Week 1			Week 2			Week 3			Week 4			Week 5		
										Stats - Thurs/Fri - 25th/26th					
	2	**3**	**4**	**9**	**10**	**11**	**16**	**17**	**18**	**22**	**23**	**24**	**29**	**30**	**31**
	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded	Sampled Received Uploaded
Final Bacti - EC (1sample/week) 1 bottle required															
RS Composite (Reg Run) - (2 samples/week) 1 bottle required															
RS Composite (Full Run - includes BOD5 & TSS) - (1 sample/week) 2 bottles required															
FE Composite (Reg Run) - (2 samples/week) 1 bottle required															
FE Composite (Full Run - includes CBOD5 & TSS) - (1 sample/week) 2 bottles required															
Raw Grab (1 sample/week) 1 bottle required															
Digester Sludge Samples - (1 sample/month) 5 bottles required															
Sludge Holding Tank (2 samples/month) 1 bottle required															
Sludge Holding Tank - E. Coli - (2 samples/month) 1 bottle required															

GMD =

Additional Samples/Notes
2 sludge holding samples must be completed monthly until the end of the hauling season
This schedule is for guidance purposes only
Please refer to all regulatory requirements that affect the sampling schedule

Appendix C

Appendix C - Details of Abnormal Sewage Discharge Events

(NONE TO REPORT FOR 2025)

Event Details Summary

Facility By-pass

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Collection Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Spills of Sewage

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
N/A								

Collection System Monitoring Data

Event Date	Event Location	Volume (m3)	Parameter	mg/L	Source Loading	Any Adverse Impacts & Corrective Actions
N/A			BOD			
			Total Suspended Solids			
			Total Phosphorus			
			Total Kjeldahl Nitrogen (TKN)			
			E.Coli			

Appendix D

Appendix D - ECA Annual Report Requirements

Facility ECA # A-500-3113268754 **Section 11(4)**	**Section in Report**
a summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;	Raw Sewage Quality Treatment Flows
a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, and a comparison to the design objectives and compliance limits in this approval, including an overview of the success and adequacy of the Works	Treatment Flows Effluent Quality
a summary of all operating issues encountered and corrective actions taken;	Operating Issues and Problems
a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;	Maintenance
a summary of any effluent quality assurance or control measures undertaken;	Maintenance
a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;	Maintenance
a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations: when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity	Effluent Quality Treatment Flows
a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next reporting period and a summary of the locations to where the sludge was disposed;	Sludge Generation
a summary of any complaints received and any steps taken to address the complaints;	Summary of Complaints
a summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;	Operating Issues and Problems Appendix – Details of Abnormal Discharges
a summary of all completed under Notice of Modifications to Sewage Works Paragraph 1 d of Condition 10, including a report on status of implementation of all modification;	Maintenance
a summary of efforts made to achieve conformance with including Procedure F-5-1 but not limited to projects undertaken and completed in the sanitary sewer system that result in overall elimination including expenditures and proposed projects to eliminate with estimated budget forecast for the year following Bypass/Overflows that for which the report is submitted;	N/A – Collection System reporting is now under the CLI ECA reporting requirements.
any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works;	Maintenance
a summary of any deviation from the monitoring schedule and reasons for the	Monitoring Schedule

Facility ECA # A-500-3113268754 **Section 11(4)**	**Section in Report**
current reporting year and a schedule for the next reporting year;.	

Collection ECA # 189-W601 - Schedule E	**Section in Report**
4.6.3 If applicable, includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.	Operating Issues and Problems
4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.	Operating Issues and Problems
4.6.5 Includes a summary of all calibration, maintenance, and repairs carried out on any major structure, Equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.	Maintenance
4.6.6 Includes a summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.	Summary of Complaints
4.6.7 Includes 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.	Maintenance
4.6.8 Includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage, including: a) Dates; b) Volumes and durations; c) If applicable, loadings for total suspended solids, BOD, total phosphorus, and total Kjeldahl nitrogen, and sampling results for E.coli; d) Disinfection, if any; and e) Any adverse impact(s) and any corrective actions, if applicable.	Operating Issues and Problems Appendix D
4.6.9 Includes a summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses, including the following items, as applicable: a) 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. b) Details of the establishment and maintenance of a PPCP, including a summary of project progresses compared to the PPCP's timelines. c) An assessment of the effectiveness of each action taken. d) 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. e) Public reporting approach including proactive efforts.	Maintenance Operating Issues and Problems