2025 PERFORMANCE REPORT

OWEN SOUND WASTEWATER TREATMENT PLANT

REPORTING PERIOD: JANUARY 1- DECEMBER 31, 2025

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Background

The Owen Sound Wastewater Treatment Plant was originally constructed in 1962 and expanded in 1978. The Headworks of the plant was upgraded in 2010 to include automated bar screens and grit removal. The City then undertook a 48-million-dollar Secondary Treatment Biological Aerated Filtration (BAF) System upgrade that reached substantial completion on August 24, 2017. The WWTP has a rated capacity of 24,545 m^3/d and a Peak Daily Flow Rate of 65,000 m^3/d. This report is written as a requirement under section 11 (4) of the Amended Environmental Compliance Approval Number 1994-CERHEG for the Owen Sound Wastewater Treatment Plant.

Reporting Section 11(4) (a): Summary/Interpretation of Influent & Imported Sewage Quality

Weekly composite samples are taken at the Inlet Works building and sent to an accredited lab as part of the Influent Monitoring requirement of the ECA.

Table 1 shows the monthly averages of the required parameters.

Influent grab samples are taken and analyzed in-house by plant operators for pH and temperature. The recorded influent pH range was between 6.95-8.13, and the temperature range was 8.8-20.1 degrees Celsius.

Table 1 **Influent Monitoring**

Month	Raw BOD5	Raw TSS	Raw A+A(N)	Raw TKN	Raw TP
2025	(mg/l)	(mg/l)	(mg/l)	(mg/l)	(mg/l)
Jan Avg.	163	257.5	20.68	28.13	4.5
Feb Avg.	202.75	256.5	21.83	27.73	4.15
Mar Avg.	134.25	153.25	9.98	13.75	2.09
Apr Avg.	106.4	156.4	11.18	15.5	2.16
May Avg.	206.25	240.25	21.63	25.48	3.79
Jun Avg.	137.25	205	24.2	27.98	4.22
Jul Avg.	178	243.2	25.18	29.8	4.13
Aug Avg.	189.75	230.75	26.15	29.6	4.51
Sep Avg	176.5	258.5	30.3	34.98	5.14
Oct Avg.	204.2	246	29.44	35.4	4.8
Nov Avg.	162.5	254	25.5	31.63	3.98
Dec Avg.	189.8	436.2	20.26	26.6	3.89
Annual Avg.	***170.89***	***244.80***	***22.19***	***27.22***	***3.95***

Table 2 **Influent 5-Year Trend**

Year	Average Daily Flow (M3)	Raw BOD5	Raw TSS	Raw NH3	Raw TP
2021	13344	108.60	135.50	35.80	1.65
2022	11639	186.00	229.80	19.20	2.91
2023	12744	155.50	179.40	16.79	2.52
2024	11342	160.40	187.40	19.70	3.12
2025	12082	170.89	244.80	22.19	3.95

While there is little ability to control the raw sewage characteristics, seasonal variations occur due to temperature and precipitation fluctuations affecting the influent dilution levels.

Leachate is the liquid that drains or 'leaches' from a landfill. The main leachate parameter of concern is ammonia, which the earlier Primary Sewage Treatment plant could not remove. Previously, leachate from the Genoe Landfill Site was trucked to other Wastewater Plants for treatment. The Secondary upgrade to the WWTP allows The City to accept this material with minimal to no impact on the treated effluent. The leachate is dumped into the Collection System on the industrial collector main near the Public Works Facility. It is conveyed by gravity to the WWTP while mixing with other incoming sewage. This helps prevent any shock to the plant that could be caused by dumping leachate directly into it.

17,923m^3 of leachate was hauled from the Genoe Landfill and treated by the WWTP in 2025, compared to 16,443m^3 in 2024. Treating Leachate internally saves the costs incurred by trucking the substance to neighbouring municipalities for treatment.

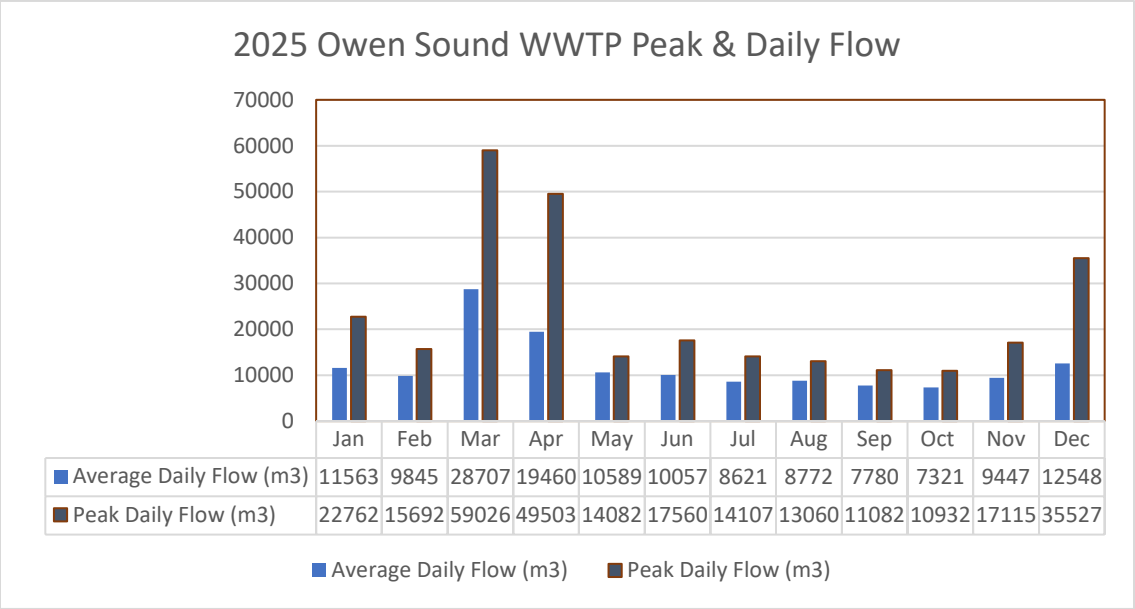
Table 3- **Leachate Influent Volumes 2025**

Month	m3
Jan	2519.5
Feb	1512
Mar	3811.5
Apr	3055.5
May	1575
Jun	945
Jul	1323
Aug	567
Sep	441
Oct	315
Nov	567
Dec	1291.5
Total	17,923

Reporting Section 11(4) (b): Summary and Interpretation of All Final Effluent Monitoring Data and Comparison to Design Objectives and Limits

The following figures show the Average Day, Peak Daily, and Instantaneous Flow, Monthly Flow, and Annual Historical Flow through the Wastewater Treatment Plant.

Figure 1

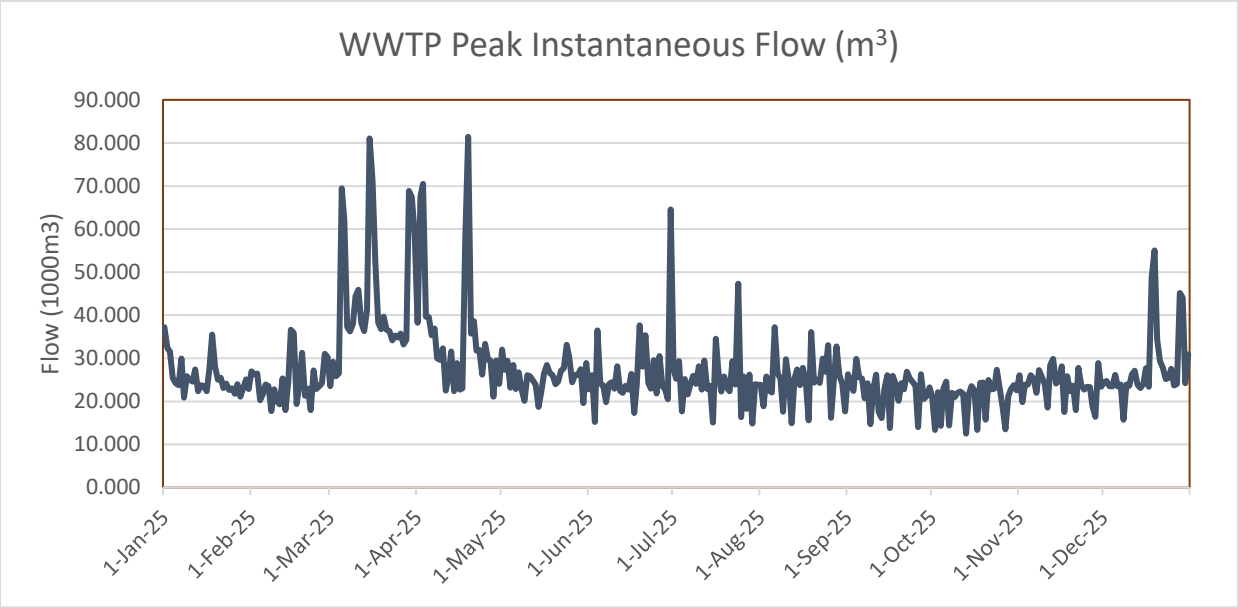


	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average Daily Flow (m3)	11563	9845	28707	19460	10589	10057	8621	8772	7780	7321	9447	12548
Peak Daily Flow (m3)	22762	15692	59026	49503	14082	17560	14107	13060	11082	10932	17115	35527

Flow trends for the Owen Sound WWTP were in the typical range.

The Average Daily Flow for 2025 was 12,082 m^3/d, 49.2% of the plant's capacity of 24,545 m^3/d.

Figure 2



2025 spring flows were much higher than in 2024. The highest peak instantaneous flow was 81,406$m^{3,}$ recorded on April 19th, 2025, due to heavy rain accumulating 44mm of precipitation in just two hours.

Figure 3

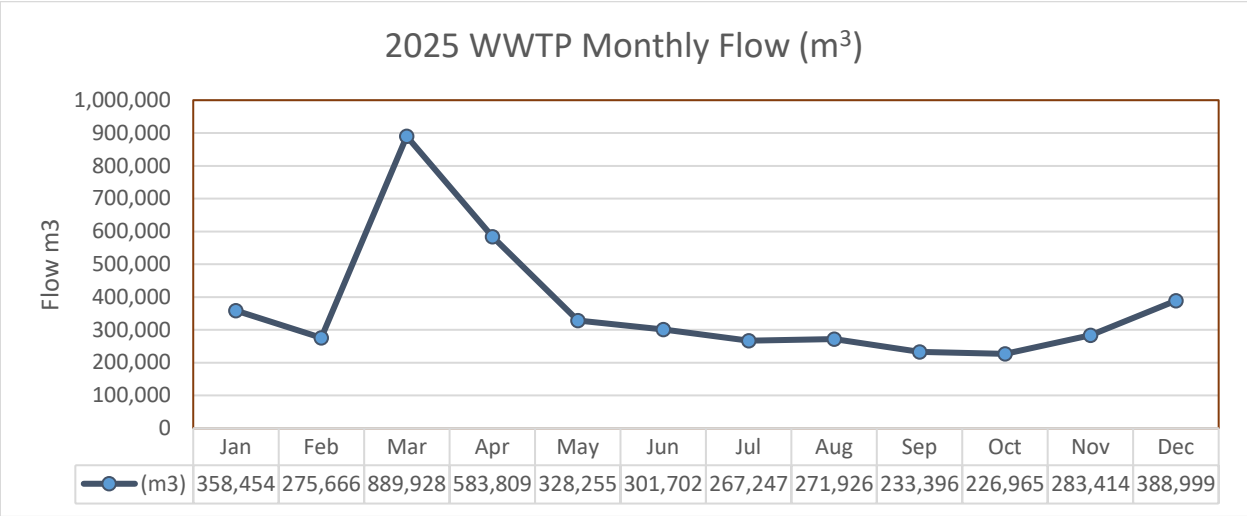
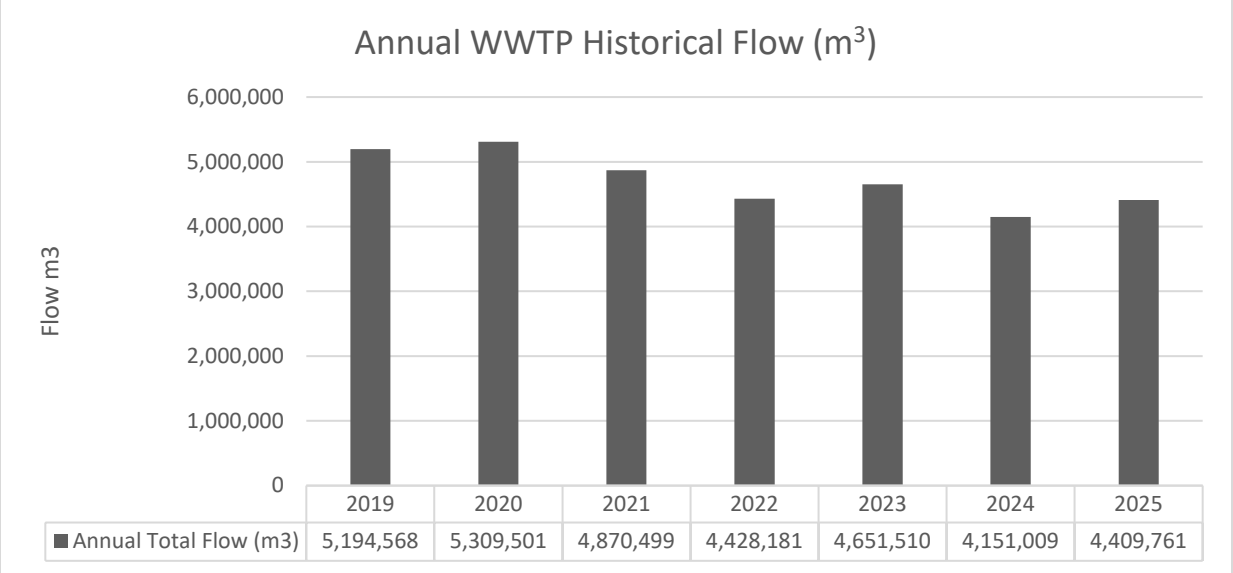


Figure 4



***Provincial*:**

Weekly composite samples are taken at the WWTP outfall and sent to an accredited lab for required Effluent Monitoring analysis. The WWTP ECA establishes effluent objectives and limits. The following tables show these and the achieved monthly averages for the required parameters.

Table 4 **CBOD5**

Month 2025	Monthly Average Concentration Objective (mg/l)	Monthly Average Concentration Limit (mg/l)	Monthly Average Concentration Result (mg/l)
Jan	12	15	8.5
Feb	12	15	12.25
Mar	12	15	5.25
Apr	12	15	4.6
May	12	15	5.5
Jun	12	15	6
Jul	12	15	6
Aug	12	15	9.25
Sep	12	15	9
Oct	12	15	7.6
Nov	12	15	6.5
Dec	12	15	7.6

Effluent CBOD5 concentration was over objective in February, but no limits were exceeded.

Table 5 **Total Suspended Solids**

Month 2025	Monthly Average Concentration Objective (mg/l)	Monthly Average Concentration Limit (mg/l)	Monthly Average Concentration Result (mg/l)
Jan	12	15	11.25
Feb	12	15	9.25
Mar	12	15	7.0
Apr	12	15	5.4
May	12	15	5.5
Jun	12	15	6
Jul	12	15	6.8
Aug	12	15	9.5
Sep	12	15	13.25
Oct	12	15	10
Nov	12	15	6.75
Dec	12	15	5.6

Effluent TSS concentration was over objective in September, but no limits were exceeded.

Table 6 **Total Ammonia-N**

Month 2025	Monthly Average Concentration Objective (mg/l)	Monthly Average Concentration Limit (mg/l)	Monthly Average Concentration Result (mg/l)
Jan	3.2	5	1.23
Feb	3.2	5	1.65
Mar	3.2	5	1.13
Apr	3.2	5	1.64
May	1.6	3	1.85
Jun	1.6	3	1.38
Jul	1.6	3	1.30
Aug	1.6	3	1.38
Sep	1.6	3	1.03
Oct	1.6	3	0.86
Nov	1.6	3	1.30
Dec	3.2	5	1.60

Effluent Total Ammonia-N concentration was over objective in May, but no limits were exceeded.

Table 7 **Total Phosphorus**

Month 2025	Monthly Average Concentration Objective (mg/l)	Monthly Average Concentration Limit (mg/l)	Monthly Average Concentration Result (mg/l)
Jan	0.8	1	0.40
Feb	0.8	1	0.48
Mar	0.8	1	0.32
Apr	0.8	1	0.31
May	0.5	0.8	0.31
Jun	0.5	0.8	0.33
Jul	0.5	0.8	0.43
Aug	0.5	0.8	0.36
Sep	0.5	0.8	0.48
Oct	0.8	1	0.41
Nov	0.8	1	0.26
Dec	0.8	1	0.38

No Effluent Total Phosphorus concentration objective or limits were exceeded.

Table 8 **E. Coli**

Month 2025	Monthly Average Concentration Objective (count/100mL)	Monthly Average Concentration Limit (count/100mL)	Monthly Average Concentration Result (count/100mL)
Jan	150	200	20
Feb	150	200	17
Mar	150	200	214
Apr	150	200	58
May	150	200	5
Jun	150	200	3
Jul	150	200	4
Aug	150	200	3
Sep	150	200	1
Oct	150	200	7
Nov	150	200	1
Dec	150	200	17

Note: Monthly Geometric Mean Density

Effluent E.Coli Monthly Average Concentration Limit was exceeded in March and reported to MECP District Manager.

Table 9 **Total Residual Chlorine**

Month 2025	Concentration Objective (mg/l)	Monthly Average Concentration Limit (mg/l)	Concentration Achieved (mg/l)
Jan	Non-detectable	0.02	0.001
Feb	Non-detectable	0.02	0.003
Mar	Non-detectable	0.02	0.022
Apr	Non-detectable	0.02	0.007
May	Non-detectable	0.02	0.007
Jun	Non-detectable	0.02	0.007
Jul	Non-detectable	0.02	0.012
Aug	Non-detectable	0.02	0.005
Sep	Non-detectable	0.02	0.007
Oct	Non-detectable	0.02	0.005
Nov	Non-detectable	0.02	0.009
Dec	Non-detectable	0.02	0.008

Total Residual Chlorine monthly averages did not exceed Limit.

Table 10 **Annual Average Waste Loading**

Effluent Parameter	Annual Average Waste Loading Limit(kg/day)	Actual Annual Loading (kg/day)
CBOD5	368	88.68
Total Suspended Solids	368	97.02
Total Ammonia-N (Non-Freezing) (Freezing)	 73.6 122.7	 11.62 23.82
Total Phosphorus (Non-Freezing) (Freezing)	 19.6 24.5	 3.31 6.24

No Annual Average Waste Loading parameters were exceeded.

The pH of the effluent was maintained between 6.0 to 8.5, inclusive, at all times. The annual minimum recorded pH was 6.55 & maximum was 7.95 with an average of 7.17.

In the above charts, any Concentration Results shown in red either exceeded the ECA's Objective or Limit for that parameter. All exceedances were reported to the MECP Water Supervisor.

No Ministry of the Environment, Conservation and Parks (MECP) inspection occurred on the Owen Sound Wastewater System in 2025.

b) ***Federal:***

Final Effluent samples were sent to comply with the Wastewater Systems Effluent Regulations (WSER) acute lethality testing requirements per section 11 of the Regulations.

The Acute Lethality testing requires a 20-litre Final Effluent sample to be sent to an accredited lab quarterly. At the lab, they introduce Rainbow Trout into the effluent in a controlled environment for 96 hours to monitor the fish for impairment and mortality. It is critical to keep the Final Effluent Total Residual Chlorine monthly average concentration less than 0.02 mg/l for compliance and this toxicity test.

Table 11 **Acute Lethality Testing**

Date	Mean Impairment	Mean Mortality
Jan 6, 25	0%	0%
Apr 1, 25	0%	0%
Jul 7, 25	0%	0%
Oct 2, 25	0%	0%

The Acute Lethality testing results were a 0% fish kill.

Reporting Section 11(4) (c): Summary of Operating Issues and Corrective Actions

Under normal conditions, the Biological Aerated Filter (BAF) Secondary Plant produces effluent exceeding the ECA requirements. Issues are rare, but when they occur, troubleshooting requires staff to follow procedures and perform checks unique to the BAF system; conventional Activated Sludge treatment plant practices have no analogous place in the BAF process. Plant data is monitored and analyzed daily and process changes are made as required.

There was one Effluent Limit exceedance in 2025. The local MECP Acting District Manager was notified verbally and in writing. Chemical dosing was adjusted to correct this issue.

Reporting Section 11(4) (d): Summary of Repairs and Maintenance

The following summarizes calibrations, inspections, and other maintenance by 3rd Party Contractors:

- Annual fire extinguisher and emergency light inspection
- Annual lifting device inspection
- Annual backflow/double check valve assembly testing and inspection
- Semi-annual gas monitoring and detection system calibrations
- Annual on-site Stormceptor inspection
- Annual maintenance of BAF compressors
- Annual maintenance and load bank testing of backup power generators
- Annual boiler, digester gas and HVAC maintenance/repairs
- Required elevator inspections and maintenance
- Confined Space and fall arrest equipment annual inspection
- Plant fire inspection by Fire Prevention Officer- Owen Sound Fire Department

- Replace power cable on sump pump 902
- PLC programming changed for proper Boiler #1 operation
- WWTP Scada server hardware upgrade completed
- New unit heater installed in BAF gallery
- Replace leaking pump housing O-rings on BAF-PMP 101 & 401
- Switched Raw Sewage Pump #2 VFD inputs to maintain operation
- Heater fan and thermostat replaced in Flowmeter Room
- Replacement of failed Air Conditioner unit in server room
- Removal and replacement of primary clarifier #3 floor wear strips
- BAF Air Compressor #2 ACP201 cooling line replacement
- Building roofs replaced on digester gas, old barminutor, MCC and raw sludge rooms

Non-routine maintenance completed by plant staff:

- Replaced faulty PRI-FIT001 flowmeter
- Replaced Ferric Chloride containment alarm float
- Replaced broken shear pins on scum collectors
- Replaced both gen-set batteries
- Replaced faulty on-line gas detector sensors
- Replaced worn/broken Roto-Pac unit
- Replaced faulty BAF channel level sensor
- Replaced failed BAF effluent pH sensor
- Rebuilt Raw Sludge Pump DIG-PMP132
- Rebuilt Digester Sludge Pump SLG-PMP003
- Replaced worn chain on Clarifier #3 cross-collector
- Heat Exchanger Pump HSD-PMP301 rebuilt
- Hot Water pump HSB-PMP101 & 201 rebuilt
- Final Effluent composite sampler controller sent out for repairs
- Replaced faulty Ferric Chloride pump 101
- BAF analyzer sample sink feed pump replaced

Reporting Section 11(4) (e): Summary of Effluent Quality Assurance or Control Measures Taken

The following in-house lab frequency chart has been developed for WWTP staff as a guideline to aid in Effluent Quality Assurance.

Table 12 **Testing Frequency**

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Raw Sewage	pH			X	X		X	
	Temperature			X	X		X	
	TSS			X	X		X	
	COD			X				
Primary Effluent	TSS		X	X	X	X	X	
	pH		X	X	X	X	X	
	Alkalinity							
	Reactive Phosphorus as "P" (Filtered)		X	X	X	X	X	
	Total Ammonia-N			X	X		X	
BAF Effluent (Effluent Channel)	Total Ammonia-N			X	X		X	
	Nitrate			X	X		X	
	Nitrite			X	X		X	
	pH			X	X		X	
	Dissolved Oxygen			X				
Final Effluent	pH	X	X	X	X	X	X	X
	Temperature	X	X	X	X	X	X	X
	TSS	X	X	X	X	X	X	X
	COD			X				
	Total Ammonia-N			X	X		X	
	Nitrate			X	X		X	
	Total Phosphorus as "P" (Not Filtered)			X	X		X	
	Reactive Phosphorus as "P" (Filtered)	X	X	X	X	X	X	X
	Total Residual Chlorine (Pre-dechlor)	X	X	X	X	X	X	X
	Total Residual Chlorine (Post-dechlor)	X	X	X	X	X	X	X

Weekly regulatory samples are sent to an external accredited lab and analyzed in-house to compare results, which are usually similar. A certified third-party technician inspects and calibrates major effluent monitoring equipment annually. Asset Management software is used at the WWTP as a computerized maintenance management system that generates work orders to complete preventative equipment maintenance.

A Wastewater Quality Management System (WWQMS) was implemented in June 2019. This was a Wastewater System Operational Plan prepared per the Ontario Drinking Water Quality Management Standard. The sixth internal audit on the WWQMS was in November 2025. In this audit there were no non-conformities. New in 2025 the CSA Group with the consultation of the Ministry of Environment Conservation and Parks created and implemented CSA standard W217:25 Ontario Wastewater Management System. The purpose of this Standard is to provide requirements for the quality and environmental management of wastewater systems. It defines a risk-based process for decision-makers responsible for the operation, maintenance, and management of wastewater systems. Due to the implementation of the CSA W217:25 Standard, the internal auditor identified 18 opportunities for improvement. Most of the improvements were to make changes to better reflect the new Wastewater Management System.

Reporting Section 11(4) (f): Calibration and Maintenance of Monitoring Equipment

Annual flow-meter calibrations, online analyzer and lab instrumentation were serviced, calibrated and verified by 3rd Party Contractor

Calibration records are available on request.

Reporting Section 11(4) (g): Efforts Made in Meeting Design Objectives

The WWTP normally meets and surpasses most design objectives, and the average annual daily flow has not yet reached 80% of the rated capacity (24,545 cubic metres per day).

Reporting Section 11(4) (h): Biosolids Volumes and Disposal Locations

Below is a tabulation of the volume and locations where WWTP generated bio-solids were land applied. Approximately 12,500m3 is anticipated to be generated in the next reporting period. The Primary Digester is scheduled for a clean-out in 2026. If this proceeds the bio-solids volume land applied is estimated to be an additional 2000-3000m3.

The City of Owen Sound works with a certified bio-solids contractor to ensure adequate NASM sites are available for bio-solids application.

Table 13 **2025 Bio-Solids Land Applied**

Date 2025	Receiver Location	Volume Applied (m3)
May 7-9 & 12-15	Don Curry- Park Head Farm	5292.84
July 7-8 & 16	Don Houston- Northeast Home & Davidson Farms	1847.24
Oct 2,3,6,14&15	Mike Farrow's Uncle Glen Farm	3282.72
Nov 13-14	Don Houston- Keady Farm	1052.05
	Total Volume Applied	**11474.85**

The 2025 Bio-solids production was on par with the 2024 volume of 11,502m^3.

Reporting Section 11(4) (i): Complaint Summary and Resolution

The WWTP did not receive any complaints in 2025.

Reporting Section 11(4) (j): Bypass/Overflow/Abnormal Events

There were two Bypass Events, as shown below, due heavy rain combined with snowmelt in March, and heavy downpours in April. There were no spills, or abnormal discharges to be reported from the WWTP in 2025.

Table 14

Quarter	Location	Date (2025)	Volume (m^3)	CBOD5	BOD5 (mg/l)	TSS (mg/l)	TP (mg/l)	TKN	Nitrite (as N)	Nitrate (as N)	E-Coli cfu/100ml	TAN (mg/l)
1	Primary Effluent Chamber	15-Mar	481.4		9	15	0.3				7080	0.5
2	Primary Effluent Chamber	19-Apr	504.6	25	N/A	89	1.03	9.3	0.32	0.41	N/A	6.7
	Total		**986.00**									

Reporting Section 11(4) (k): Status of Notices of Modification

There was no Notice of Modification issued in 2025.

Reporting Section 11(4) (l): Summary of Efforts Re: Procedure F-5-1

Efforts made to achieve conformance with Procedure F-5-1, including the sanitary sewer system were:

- Acoustic sewer line assessments by Rapid Assessment Technology Services Inc.
- A CSO point was discovered at 468 14th St W and an overflow monitor was purchased/installed at the location.
- Maintaining the current real-time overflow monitoring units at seven (7) overflow locations. OS-11 monitor replaced.
- East side wet weather sewer flow monitoring and modelling.
- Electrical upgrades to the 27th St West sewage pump station.
- 16th Avenue East sanitary sewer upgrades (ongoing in 2026).
- 9th Ave & 6th St East sanitary sewer upgrades (ongoing in 2026).

The estimated budget forecast for sanitary sewer-related projects in 2026 is $1.9 million.

Reporting Section 11(4) (m): Changes or Updates to Schedules for Proposed Works

There were no uncompleted Proposed Works for 2025.

Reporting Section 11(4) (n): Summary of Deviations from Monitoring Schedule

Tables 15-17 show Monitoring Schedule for odd and even years with weekly and monthly regulatory external sampling.

For this reporting period, the January 21st E. Coli result was higher than normal so a resample was sent on January 23rd. On May 27th the courier delivered samples to the wrong lab resulting in the E. Coli sample being over the 48-hour holding period. An E. Coli resample was sent on May 30th. On October 6th the final effluent 24-hour sampler had a mechanical failure. A spare sampler was put on-line, and samples were sent on October 8th.

Table 15

SOPWWTP-5-WEEKLY SAMPLING AND TESTING

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Gloves must be worn for collecting samples

The following outlines the schedule for **"Odd Years"** weekly in-house sampling and testing:

		Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Raw Sewage	pH			X	X		X	
	Temperature			X	X		X	
	TSS			X	X		X	
	COD			X				
Primary Effluent	TSS		X	X	X	X	X	
	pH		X	X	X	X	X	
	Alkalinity			X				
	Reactive Phosphorus as "P" (Filtered)		X	X	X	X	X	
	Total Ammonia-N			X	X		X	
BAF Effluent (Effluent Channel)	Total Ammonia-N			X	X		X	
	Nitrate			X	X		X	
	Nitrite			X	X		X	
	pH			X	X		X	
	Dissolved Oxygen			X				
Final Effluent	pH	X	X	X	X	X	X	X
	Temperature	X	X	X	X	X	X	X
	TSS	X	X	X	X	X	X	X
	COD			X				
	Total Ammonia-N			X	X		X	
	Nitrate			X	X		X	
	Total Phosphorus as "P" (Not Filtered)			X	X		X	
	Reactive Phosphorus as "P" (Filtered)	X	X	X	X	X	X	X
	Total Residual Chlorine (Pre-dechlor)	X	X	X	X	X	X	X
	Total Residual Chlorine (Post-dechlor)	X	X	X	X	X	X	X

The following outlines the weekly external sampling and testing (normally sent Tuesday's):

Table 16

SOPWWTP-5-WEEKLY SAMPLING AND TESTING

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RAW INFLUENT 24-HOUR COMPOSITE

- 2 x PET bottles from 24 hr. sampler
- 1 x COD bottle from 24 hr. sampler
- 1 x NH_3 + NH_4 (Total Ammonia Nitrogen) from 24 hr. sampler (add pH and temperature from grab sample to bottle)

Raw Influent		
Parameters	**Sample Type**	**Minimum Frequency**
BOD5	24 Hour Composite	Weekly
Total Suspended Solids	24 Hour Composite	Weekly
Total Phosphorus	24 Hour Composite	Weekly
Total Ammonia Nitrogen	24 Hour Composite	Weekly
pH	Grab	Weekly
Temperature	Grab	Weekly

TREATED EFFLUENT (CONTACT CHAMBER) 24-HOUR COMPOSITE

- 3 x PET bottles from 24 hr. sampler
- 1 x COD bottle from 24 hr. sampler
- 1 x NH_3 + NH_4 (Total Ammonia Nitrogen) from 24 hr. sampler (add pH and temperature from grab sample to bottle)
- 1 x Bacti grab sample

Final Effluent		
Parameters	**Sample Type**	**Minimum Frequency**
CBOD5	24 Hour Composite	Weekly
Total Suspended Solids	24 Hour Composite	Weekly
Total Phosphorus	24 Hour Composite	Weekly
Total Ammonia Nitrogen	24 Hour Composite	Weekly
Total Kjeldahl Nitrogen	24 Hour Composite	Monthly
Nitrate as Nitrogen	24 Hour Composite	Monthly
Nitrite as Nitrogen	24 Hour Composite	Monthly
E. coli	Grab	Weekly
Total Residual Chlorine	Grab	Daily
pH	Grab	Weekly
Temperature	Grab	Weekly
Un-Ionized Ammonia	As Calculated	Monthly

Note: During public health pandemics refer to ERP-7.1 for additional P.P.E requirements

Revision History

#	yyyy-mm-dd	**Description** (current version details plus two previous revisions' details)	By
00	2024-11-01	Initial release of this updated SOP format	Andrew Smart
01	2024-12-18	Made alternating sample day to meet requirement on ECA	Andrew Smart
02	2026-01-28	Added raw influent and final effluent sampling tables	Andrew Smart

Table 17

SOPWWTP-14-MONTHLY SAMPLING AND TESTING

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The following sampling is to be collected normally during the first sampling of the month.

The solids holding tanks mixing systems should be manually turned on at least 1 to 1.5 Hours prior to collecting sample to ensure a homogeneous mix. Then returned to auto after the sampling is completed.

Gloves must be worn for collecting samples.

PRIMARY EFFLUENT GRAB SAMPLES

- 2 x PET bottle from primary effluent chamber
- 1 x NH_3 + NH_4 (Total Ammonia Nitrogen) from effluent chamber (add pH and temperature from grab sample to chain of custody)

BAF EFFLUENT GRAB SAMPLES

- 1 x PET bottle from BAF sampling sink
- 1 x NH_3 + NH_4 (Total Ammonia Nitrogen) from BAF effluent sampling sink (add pH and temperature from grab sample to chain of custody)

BIOSOLIDS SAMPLING GRAB SAMPLES

- 1 x PET bottles from primary digester sampling sink
- 1 x PET bottle from solids holding tank #1 mixing pump (If solids are being stored)
- 1 x PET bottle from solids holding tank #2 mixing pump (If solids are being stored)

Biosolids		
Parameters	**Sample Type**	**Minimum Frequency**
Total Solids	Grab	Quarterly
Total Phosphorus	Grab	Quarterly
Total Ammonia Nitrogen	Grab	Quarterly
Nitrate as Nitrogen	Grab	Quarterly
Metal Scan • Arsenic • Cadmium • Cobalt • Chromium • Copper • Lead • Mercury • Molybdenum • Nickel • Potassium • Selenium • Zinc	Grab	Quarterly

Revision History

#	yyyy-mm-dd	**Description** (current version details plus two previous revisions' details)	By
00	2025-11-21	Initial release of this document	Andrew Smart
01	2026-01-28	Added biosolids sampling table	Andrew Smart