

ANNUAL PERFORMANCE REPORT

ENVIRONMENTAL COMPLIANCE APPROVAL No. 2362-9KPPV6

STONEMANOR (CENTRE VESPRA) WASTEWATER TREATMENT PLANT

**FOR THE PERIOD:
JANUARY 1, 2025 – DECEMBER 31, 2025**

Prepared by the Ontario Clean Water Agency



REQUIREMENTS FOR ANNUAL PERFORMANCE REPORT

This annual performance report was prepared in accordance with Amended Environmental Compliance Approval No. 2362-9KPPV6 for Centre Vespra (Stonemanor) Wastewater Treatment Plant as per Section 11.(6).

11. REPORTING

The Owner shall prepare and submit a performance report to the Water Compliance Supervisor, on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the commencement of operation of the Works and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:

- (a) a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, 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 field equipment;
- (f) a description of efforts made and results achieved in meeting the Effluent 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; and
- (j) any other information the Water Supervisor requires from time to time.

Table of Contents

1. System Description	4
2. Monitoring Data Influent	5
2.1 Influent ECA Monitoring Program.....	5
2.2 Raw Sewage (Influent) Characteristics: Summary and Interpretation of Reporting Year	6
2.3 Raw Sewage (Influent) Flow: Summary and Interpretation of Reporting Year	7
2.3.1 Comparison of Influent Flow to Rated Capacity and Plant Peak Flow Rate	7
3. Effluent Monitoring.....	8
3.1 Effluent ECA Monitoring Program	9
3.2 Effluent Monitoring Data: Summary and Interpretation of Reporting Year and Comparison to Objectives and Limits	10
3.3 Effluent Flow: Summary and Interpretation of Reporting Year.....	13
3.4 Success & Adequacy of the System	14
4. Operational Issues and Corrective Actions	15
5. Repair & Maintenance Activities	16
5.1 Work Management System	17
5.2 Preventative Maintenance.....	17
5.3 Repairs and Improvements.....	17
6. Quality Assurance and Control Measures.....	18
6.1 Adherence to Provincial Regulations	18
6.2 Use of Accredited Laboratories.....	18
6.3 Operation by Licensed Operators	18
6.4 Sampling and Analysis.....	19
6.5 In-house Analysis	19
6.6 Calibrations	19
7. Calibration and Maintenance – Monitoring Equipment.....	19
8. Design Objective Requirements.....	19
9. Sludge Production	20
9.1 Volume of Sludge Generated	21
10. Community Complaints.....	22

2025 Annual Performance Report

The Corporation of the Township of Springwater: Centre Vespra Wastewater Treatment Plant

ECA No. 2362-9KPPV6 (Issue Date: March 13, 2015)

Reporting Period: January 1, 2025 to December 31, 2025

11. By-pass, Spill or Abnormal Discharge Events Summary.....	22
11.1 By-pass Events.....	23
11.2 Spill Events	23
11.3 Abnormal Discharge Events	23
12. Other Information.....	24

List of Appendices

Appendix A – Performance Assessment Report

Appendix B – Calibration Reports

Appendix C – Sludge Quality Analysis

The enclosed 2025 Annual Performance Report for the Stonemanor (Centre Vespra) Wastewater Treatment Plant summarizes the performance and related activities in accordance with Environmental Compliance Approval No. 2362-9KPPV6 Section 11.(6) elements (a) through (j) during the reporting period of January 1, 2025 to December 31, 2025.

1. System Description

The Stonemanor (Centre Vespra) Wastewater Treatment Plant (WWTP) is a Sequencing Batch Reactor (SBR) wastewater treatment plant for the collection, transmission, treatment and disposal of domestic sewage to service the residential development of up to 660 residential units and 1.8 ha commercial block within the Community of Centre Vespra, Township of Springwater. The Works is owned by the Township of Springwater and operated on behalf of the Owner by the Ontario Clean Water Agency (OCWA). The WWTP has a Rated Capacity of 844 m³/day and a Peak Flow Rate of 2,954 m³/day.

Treatment begins with a flow balancing tank equipped with two submersible pumps (one duty, one standby) that feed into the Inlet Works. The inlet channel is equipped with an in-channel screw-type screen and a bypass channel with a manual bar screen. Influent is then directed towards the Sequencing Batch Reactor (SBR) package treatment plant, with any overflow returning to the flow balancing tank.

Three parallel SBR systems operate together to provide the plant's total rated capacity of 844 m³/day. Each system includes:

- An anaerobic primary settling/sludge storage chamber with a sludge removal pump and surface overflow pipes discharging to the Surge Anoxic Mix (SAM) chamber,
- An integrated surge anoxic mix (ISAM) chamber with two jet pumps for filling the main SBR chamber and activated sludge recirculation to the anaerobic chamber, with an emergency overflow pipe to the main SBR
 - Bulk carbon may be added here via a chemical metering pump
- An SBR chamber equipped with a jet mixer and a fixed solids-excluding decanter discharging into the secondary effluent tank,

The chemically treated effluent collects into the Secondary Effluent Tank and is pumped to the continuous contact sand filter, which is equipped with a bypass line to the Final Effluent Tank. Compressed air for the sand filters is provided by two compressed air systems located in the Generator Room.

The Final Effluent Tank collects all treated effluent and, using submersible sewage pumps, discharges to a common header with four branch forcemains leading to four subsurface disposal beds, containing four runs each, for a combined capacity of 844 m³/day.

Sludge collected from the sludge storage chamber is pumped to a sludge holding tank with a capacity of 2010 m³, with an adjacent Sludge Mixing Building for sludge decanting, recirculation, and loading for disposal. Two air blowers provide air for the sludge mixing process.

An overview of The Centre Vespra (Stonemanor) WWTP can be found in the following table:

Table 1: Centre Vespra (Stonemanor) WWTP System Overview

Facility Name	Centre Vespra (Stonemanor) Wastewater Treatment Plant
Facility Type	SBR Treatment System with Sand Filtration, Chemical Phosphorus Removal, and Chemical MicroC Supplementary Dosing
Plant Classification	Class II Wastewater Treatment
Works Number	150003322
Rated Capacity	844 m ³ /d
Discharge Point	Subsurface Disposal Beds
Environmental Compliance Approval	2362-9KPPV6 (Issued: March 13, 2015)

2. Monitoring Data Influent

Where ECA 2362-9KPPV6, Section 11.(6)(a) requires:

“A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;”

2.1 Influent ECA Monitoring Program

The following table outlines the monitoring program at the Centre Vespra (Stonemanor) Wastewater Treatment Plant (WWTP) as required by the ECA for the reporting period. The influent parameters specified in Table 2 were analyzed by an accredited analytical laboratory (SGS Canada Inc., Lakefield, Ontario).

Table 2: Influent Water Quality Monitoring Program and Sampling Points- as per ECA 2362-9KPPV6, Section 9(3)(Table3)

Parameters	Sample Type	Minimum Frequency
Biochemical Oxygen Demand (BOD ₅) ^{2A}	Composite	Monthly
Total Suspended Solids (TSS) ^{2A}	Composite	Monthly
Total Phosphorus (TP) ^{2A}	Composite	Monthly
Total Kjeldahl Nitrogen (TKN) ^{2A}	Composite	Monthly
pH	Grab	Monthly

Note: As per the ECA, the sampling location is the inlet works

^{2A} Refer to Appendix A 2025 Annual Performance Report for monthly sample results.

2.2 Raw Sewage (Influent) Characteristics: Summary and Interpretation of Reporting Year

The following parameters in Table 3 do not have limits or objectives but are monitored on a regular basis as required by the ECA and used to characterize the contents of incoming sewage flow.

Table 3: Raw Sewage (Influent) Quality Analysis for 2025

Timeframe	Monthly Influent Concentrations (mg/L)			
	BOD ₅ ^{3A}	Total Suspended Solids ^{3A}	Total Phosphorus ^{3A}	Total Kjeldahl Nitrogen ^{3A}
January	351.00	400.00	7.16	52.50
February	685.00	537.00	7.80	67.00
March	301.00	286.00	6.97	56.00
April	389.00	248.00	6.66	54.00
May	277.00	197.00	5.93	50.70
June	335.00	196.00	7.07	61.70
July	387.00	196.00	7.31	61.70
August	310.00	152.00	6.51	59.70
September	360.00	234.00	7.46	68.40
October	298.00	254.00	10.00	105.00
November	276.00	250.00	5.47	53.10
December	258.00	176.00	5.61	48.40
2025 Annual Average	352.25	260.50	7.00	61.52

Note: BOD₅ = Biochemical Oxygen Demand

^{3A} Refer to Appendix A 2025 Annual Performance Report for monthly sample results.

Laboratory analysis throughout the year averaged a Biochemical Oxygen Demand (BOD₅) of 352.25 mg/L, a Total Suspended Solids (TSS) concentration of 260.50 mg/L, a Total Phosphorus (TP) concentration of 7.00 mg/L, a, and a Total Kjeldahl Nitrogen concentration of 61.52 mg/L.

The highest observed concentrations for TP, BOD₅, TSS, and TKN occurred during the months of January, February, and October, 2025.

Influent concentrations varied throughout the year, with higher values generally occurring during winter and early spring and lower values observed during summer and early fall. These variations are consistent with typical fluctuations seen in residential wastewater systems.

An elevated TKN concentration was recorded in October (105 mg/L) and represents a short-term increase compared to other months.

February exhibited the highest BOD₅ and TSS concentrations of the year. This reflects a period of increased influent strength relative to other months in 2025.

The pH of the influent was maintained between 5.80 and 8.31 during the reporting year.

2.3 Raw Sewage (Influent) Flow: Summary and Interpretation of Reporting Year

Rated Capacity as defined by the ECA refers to the Average Daily Flow for which the Works are approved to handle. The Rated Capacity for the WWTP is 844 m³/day. As per the ECA, Peak Flow Rate means the maximum rate of sewage flow for which the plant or process unit was designed. The Peak Flow Rate for the WWTP is 2,954 m³/day.

Based on the definition of the Rated Capacity, a single exceedance does not necessarily result in a non-compliance event, however, if a system continually exceeds its Rated Capacity, this could result in reduced treatment efficiency and lead to effluent objective exceedances.

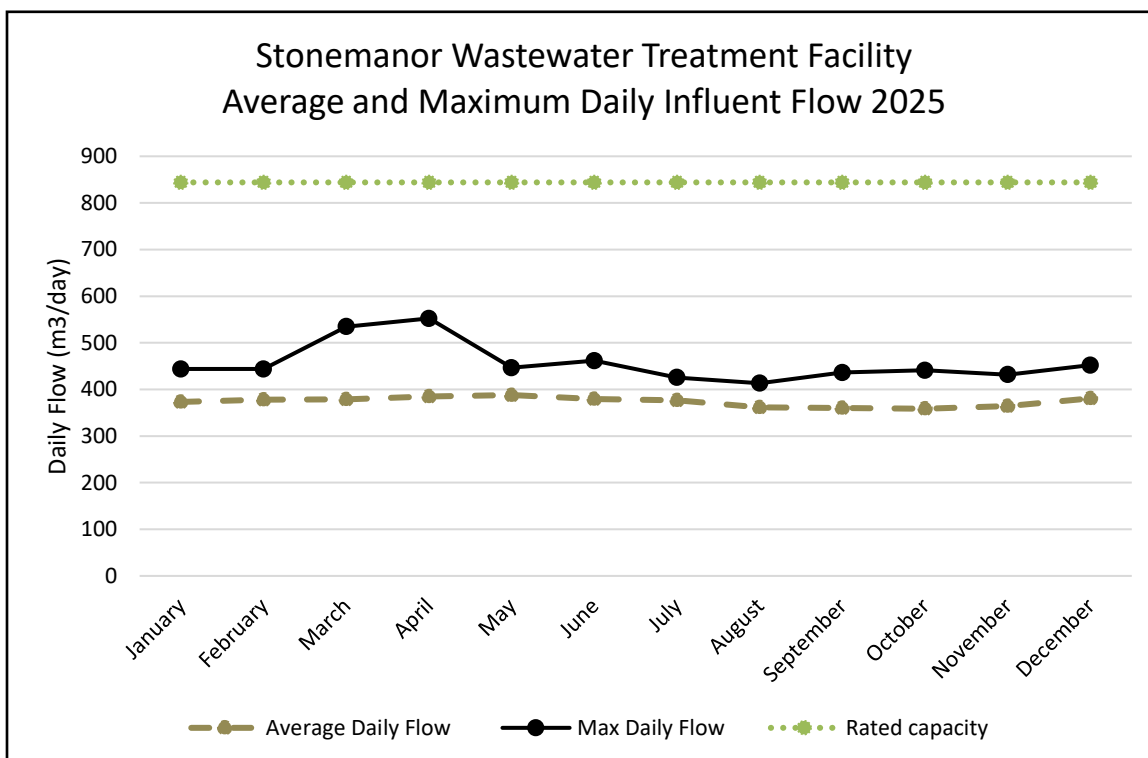
2.3.1 Comparison of Influent Flow to Rated Capacity and Plant Peak Flow Rate

The following table and graph outline the average and maximum daily average raw sewage (influent) flow by month during the reporting period with a comparison of the influent flow data to the plant Rated Capacity and Plant Peak Flow Rate.

Table 4: 2025 Raw Sewage (Influent) Flow Average and Maximum Daily Flow Data with Comparison to the Rated Capacity and Peak Flow Rate

Timeframe	Average Daily Flow (m ³ /day)	% of Rated Capacity (844 m ³ /d)	Peak Flow (m ³ /day)	% of Rated Capacity (844 m ³ /d)	Total Flow (m ³)
January	373.17	44.21%	443.60	52.56%	11,568.40
February	378.21	44.81%	443.80	52.58%	10,589.80
March	378.71	44.87%	534.80	63.36%	11,739.90
April	385.00	45.62%	552.30	65.44%	11,550.10
May	387.94	45.96%	446.40	52.89%	12,026.00
June	379.25	44.94%	461.50	54.68%	11,377.60
July	376.28	44.58%	425.50	50.41%	11,664.70
August	361.50	42.83%	413.20	48.96%	11,206.40
September	360.12	42.67%	436.10	51.67%	10,803.50
October	358.55	42.48%	440.90	52.24%	11,115.10
November	364.21	43.15%	431.80	51.16%	10,926.20
December	380.71	45.11%	452.00	53.55%	11,802.00
2025	373.62	44.27%	552.30	65.44%	136,369.70

Graph 1: Daily Average and Maximum Influent Flow Compared with the Rated Capacity for 2025



The average daily influent flow for 2025 was 373.64 m³/day, approximately 44.27% of the WWTP's rated capacity. The maximum daily influent flow was 552.30 m³/day, approximately 65.44% of the rated capacity.

The highest observed peak flow was 552.30 m³/day on April 3, while the highest monthly total flow occurred in May at 12,026.00 m³. Total influent flow for the year was 136,369.70 m³.

3. Effluent Monitoring

Where ECA 2362-9KPPV6, Section 11.(6)(a) requires:

"A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;"

3.1 Effluent ECA Monitoring Program

The following tables outline the effluent water quality monitoring program at the Centre Vespra (Stonemanor) WWTP including sampling points, frequencies, compliance limits and objectives as per the ECA. In addition to the monitoring program, in-house samples are collected and analyzed throughout the year to support process control, optimization, and operational decision-making.

Table 5: Water Quality Monitoring Program and Effluent Sampling Points- as per ECA 2362-9KPPV6, Section 9(3)(Table 4)

Parameter	Sample Type	Minimum Frequency
Carbonaceous Biochemical Oxygen Demand (CBOD ₅) ^{5A}	Composite	Weekly
Total Suspended Solids ^{5A}	Composite	Weekly
Total Phosphorus ^{5A}	Composite	Weekly
Total Ammonia Nitrogen ^{5A}	Composite	Weekly
Nitrate Nitrogen ^{5A}	Composite	Weekly
pH	Grab	Weekly

Note: As per the ECA, sampling location is the final effluent tank (prior to discharge to beds)

^{5A} Refer to Appendix A 2025 Annual Performance Report for monthly sample results.

The following table outlines the effluent limits at The Centre Vespra (Stonemanor) WWTP as per its ECA.

Table 6: Environmental Compliance Approval Final Effluent Limits- 2362-9KPPV6, Section 7(1)(Table 2)

Effluent Parameter	Averaging Calculator	Concentration Limits
CBOD ₅	Monthly Average Effluent Concentration	15.0 mg/L
Total Suspended Solids (TSS)	Monthly Average Effluent Concentration	15.0 mg/L
Total (Ammonia + Nitrate) Nitrogen	Monthly Average Effluent Concentration	4.2 mg/L
pH of the effluent maintained between 6.0 to 9.5, inclusive, at all times		

The ECA final effluent objective concentrations are outlined in the following table (Table 7).

Table 7: Environmental Compliance Approval Final Effluent Objective - 2362-9KPPV6, Section 6(1)(Table 1)

Effluent Parameter	Averaging Calculator	Objective Limits
CBOD ₅	Monthly Average Effluent Concentration	12.0 mg/L
Total Suspended Solids (TSS)	Monthly Average Effluent Concentration	12.0 mg/L
Total (Ammonia + Nitrate) Nitrogen	Monthly Average Effluent Concentration	3.5 mg/L
pH of the effluent maintained between 6.5 to 8.5, inclusive, at all times		

Note: Effluent objectives are non-enforceable design targets intended to support proactive operational adjustments. Exceedances of objectives are not considered non-compliance events.

3.2 Effluent Monitoring Data: Summary and Interpretation of Reporting Year and Comparison to Objectives and Limits

A review of the effluent monitoring data indicates that pH remained within the ECA compliance limits of 6.0 to 9.5 for the entire 2025 reporting period. The effluent also met the ECA objective range of 6.5 to 8.5 in 10 of 12 months, with June and July showing minimum values slightly below the objective but still within compliance limits.

A review of the remaining effluent parameters shows that the system demonstrated strong overall performance, meeting ECA compliance limits in most months, with only a limited number of exceedances occurring during the periods listed below:

- CBOD5 monthly average exceeded the limit of 15.0 mg/L in February to June and August to October 2025.
- Total Suspended solids monthly average exceeded the limit of 15.0 mg/L in May, June, and August 2025.
- Total (Ammonia + Nitrate) Nitrogen monthly average exceeded the limit of 4.2 mg/L in March, April, and July 2025.
- Total Nitrogen objectives (3.5 mg/L) were exceeded in January, March, April, and July, while limits were exceeded only in March, April, and July.

All exceedances were reported to the MECP. Operational context and corrective actions associated with these exceedances are provided in Section 4.

Effluent quality trends indicate that exceedances were concentrated in late winter and spring, a period associated with a period often associated with seasonal variations in influent characteristics, and reduced process control during periods of equipment downtime. These factors contributed to elevated CBOD5, TSS and Total nitrogen concentrations during these months.

Effluent quality improved in the latter part of the year, with all parameters meeting compliance limits in November and December, reflecting restored real-time process monitoring, improved SBR process stability and optimization of carbon dosing and aeration control

The following tables summarize monthly and data in comparison to the applicable ECA objectives and limits for the reporting period. Refer to *Appendix A 2025 Annual Performance Report* for a more detailed description of monthly sample results.

Table 8: Effluent Sampling Results: CBOD₅ Concentrations

2025 Annual Performance Report

The Corporation of the Township of Springwater: Centre Vespra Wastewater Treatment Plant

ECA No. 2362-9KPPV6 (Issue Date: March 13, 2015)

Reporting Period: January 1, 2025 to December 31, 2025

Timeframe	Average (mg/L)	Within Limits? (15.0 mg/L)	Within Objectives? (12.0 mg/L)
January	10.25	Yes	Yes
February	15.75 ^{8A}	No	No
March	19.25 ^{8A}	No	No
April	21.80 ^{8A}	No	No
May	20.75 ^{8A}	No	No
June	29.25 ^{8A}	No	No
July	8.20	Yes	Yes
August	17.50 ^{8A}	No	No
September	28.75 ^{8A}	No	No
October	22.60 ^{8A}	No	No
November	4.50	Yes	Yes
December	5.40	Yes	Yes
2025 Annual Average	16.81	--	--

^{8A}As per the ECA, CBOD₅ Concentration Averaging Calculator is a Monthly Average Effluent Concentration

^{8A}Non-compliances for Monthly Average CBOD₅ exceedances were reported to the MECP on April 28, 2025, (for February), April 8, 2025 (for March), May 15, 2025 (for April), June 18, 2025 (for May), July 23, 2025 (for June), September 11, 2025 (for August), October 10, 2025 (for September), and November 12, 2025 (for October). See Section 4.0 Operational Issues for more information

Table 9: Effluent Sampling Results: Total Suspended Solids

Timeframe	Average (mg/L)	Within Limits? (15.0 mg/L)	Within Objectives? (12.0 mg/L)
January	3.50	Yes	Yes
February	8.25	Yes	Yes
March	11.00	Yes	Yes
April	11.80	Yes	Yes
May	16.25 ^{9A}	No	No
June	17.50 ^{9A}	No	No
July	11.20	Yes	Yes
August	17.25 ^{9A}	No	No
September	7.50	Yes	Yes
October	4.40	Yes	Yes
November	6.25	Yes	Yes
December	4.40	Yes	Yes
2025 Annual Average	9.79	--	--

^{9A}As per the ECA, TSS Concentration Averaging Calculator is a Monthly Average Effluent Concentration

^{9A}Non-compliances for Monthly Average Total Suspended Solids exceedances were reported to the MECP on June 18, 2025 (for May), July 23, 2025 (for June), and September 11, 2025 (for August). See Section 4.0 Operational Issues for more information.

Table 10: Effluent Sampling Results: Total (Ammonia + Nitrate) Nitrogen

Timeframe	Average (mg/L)	Within Limits? (4.2 mg/L)	Within Objectives? (3.5 mg/L)
January	3.74	Yes	No
February	0.74	Yes	Yes
March	4.25 ^{10A}	No	No
April	6.45 ^{10A}	No	No
May	0.56	Yes	Yes
June	2.34	Yes	Yes
July	4.24 ^{10A}	No	No
August	2.98	Yes	Yes
September	0.33	Yes	Yes
October	0.42	Yes	Yes
November	2.49	Yes	Yes
December	1.04	Yes	Yes
2025 Annual Average	2.42	--	--

*As per the ECA, Total Nitrogen Concentration Averaging Calculator is a Monthly Average Effluent Concentration

^{10A}Non-compliances for Monthly Average Total Nitrogen exceedances were reported to the MECP on April 9, 2025 (for March), May 15, 2025 (for April), and August 20, 2025 (for July). See Section 4.0 Operational Issues for more information.

Table 11: Effluent Sampling Results: pH

Timeframe	Minimum	Maximum	Within Limits? (6.0 to 9.5)	Within Objectives? (6.5 to 8.5)
January	6.60	7.82	Yes	Yes
February	6.50	7.70	Yes	Yes
March	6.50	7.60	Yes	Yes
April	6.50	7.27	Yes	Yes
May	6.53	6.90	Yes	Yes
June	6.40	7.38	Yes	No
July	6.40	7.45	Yes	No
August	6.50	7.20	Yes	Yes
September	6.20	7.40	Yes	Yes
October	6.67	7.50	Yes	Yes
November	6.69	7.40	Yes	Yes
December	6.50	7.80	Yes	Yes

*As per the ECA, pH Averaging Calculator is a Single Sample Result, inclusive, at all times

The following table represents parameters that do not have objectives and limits in the ECA but are required to be sampled as part of the monitoring program. A summary of the monthly sampling results is included in the table below.

Table 12: Additional Effluent Sampling Results: Total Phosphorus and Nitrate Nitrogen

Month	Monthly Average Concentration Total Phosphorus (mg/L)	Monthly Average Concentration Nitrate Nitrogen (mg/L)
January	0.08	1.46
February	0.07	0.39
March	0.11	0.30
April	0.17	5.71
May	0.11	0.36
June	0.14	1.66
July	0.34	4.02
August	0.51	2.88
September	0.26	0.18
October	0.25	0.24
November	0.16	0.06
December	0.07	0.06
2025 Average	0.19	1.44

3.3 Effluent Flow: Summary and Interpretation of Reporting Year

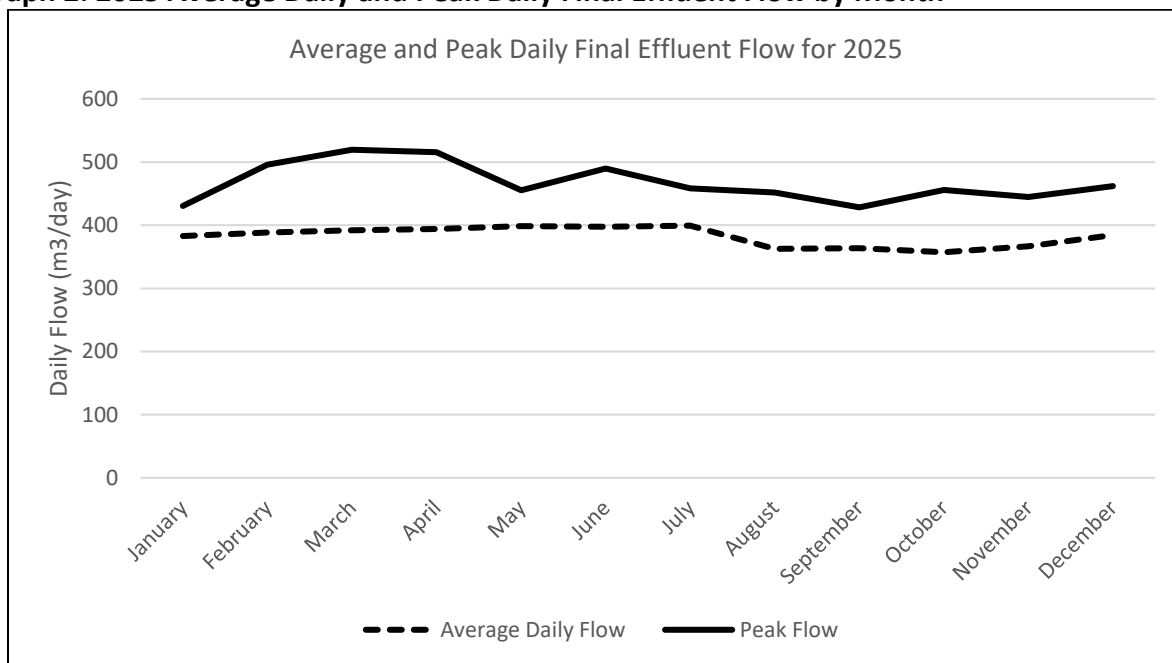
The following table and graph outline the final effluent average daily flow, peak daily flow and total monthly flow for the reporting year.

Table 13: Final Effluent Average Daily and Peak Flow Data by month for 2025

Timeframe	Average Daily Flow (m ³ /day)	Peak Flow (m ³ /day)	Total Flow (m ³)
January	383.04	430.70	11,874.20
February	388.21	495.80	10,869.80
March	392.01	519.50	12,152.30
April	394.03	515.40	11,820.90
May	398.47	455.50	12,352.70
June	397.39	489.90	11,921.60
July	399.35	458.40	12,380.00
August	362.56	452.00	11,239.50
September	363.37	428.30	10,901.20
October	357.20	455.80	11,073.20
November	366.43	444.80	10,993.00
December	384.46	461.70	11,918.30
2025	382.21	519.50	139,496.70

The average effluent daily flow for 2025 was 382.21 m³/day. The highest recorded peak flow was 519.50 m³/day, and occurred on March 17, 2025. Total effluent flow for the 2025 year was 139,496.70 m³.

Graph 2: 2025 Average Daily and Peak Daily Final Effluent Flow by Month



3.4 Success & Adequacy of the System

In 2025, the Centre Vespra (Stonemanor) WWTP demonstrated strong overall treatment performance during the 2025 reporting period. Average annual removal efficiencies for key parameters are summarized below:

Parameter	Average Removal Rate for 2025
BOD ₅	94.96%
Total Suspended Solids (TSS)	95.40%
Total Phosphorus (TP)	97.31%

These removal rates demonstrate that the biological treatment processes operated effectively throughout the year, with strong performance for TSS and TP and consistently high BOD₅ reduction. Overall, the system provided reliable secondary treatment and the Works continued to operate as designed while supporting ongoing optimization efforts.

Based on the monitoring program and effluent quality data, Centre Vespra (Stonemanor) WWTP provided effective treatment for the majority of the reporting period for TSS. TSS compliance limits were met in all months except May, June and August 2025. TN objectives were met in all

months with the exception of March, April, and July, 2025. Operational adjustments and corrective actions were implemented promptly to address these events, as detailed in Section 4.

The Works maintained a pH within the ECA limits for the entire of the reporting period, with minor deviations from the ECA objectives in June and July.

Throughout the reporting period, Centre Vespra (Stonemanor) WWTP experienced CBOD5 limit exceedances during eight months of the year. These exceedances were associated with equipment limitations and process control constraints described in Section 4.

Overall, effluent quality trends indicate that the Works provided effective and reliable secondary treatment for much of the reporting period, supported by strong removal efficiencies and improvements observed later in the year. Ongoing optimization efforts continue to support enhanced system performance.

Refer to **Appendix A** for detailed performance assessment report.

4. Operational Issues and Corrective Actions

Where ECA 2362-9KPPV6, Section 11(6)(b) and ECA 7394-AQYTCN, Section 9(3)(b) requires:
“A summary of all operating issues encountered and corrective actions taken;”

Centre Vespra (Stonemanor) WWTP effluent quality was within the ECA effluent limits for the 2025 reporting period, with the exception of CBOD5, which exceeded for 8 months of the reporting year, as well as three Total Suspended Solids exceedances and three Total Nitrogen exceedances.

The facility has undergone several optimization initiatives in recent years to support long-term performance. OCWA’s Innovation, Process Optimization and Technical Services team (IPOTS) completed a facility optimization in 2018 and provided additional support in Q4 2023. In 2024, H2Flow, Fluidyne, and Parkson representatives conducted an on-site system review and provided operational recommendations. Additional sampling was implemented to better characterize influent loading, which has been consistently higher than the original design values for BOD₅ and Total Nitrogen. The local Operations team will continue to work with POTs, the Township, and third-party specialists to address system deficiencies and implement optimization recommendations.

Detailed monthly effluent results are provided in Section 3, Tables 11 to 13. All exceedances were reported to the MECP. A summary of the final effluent limit exceedances and associated operational and corrective responses is provided below.

Summary of Final Effluent Limit Exceedances (Monthly Average)

Parameter	Months Exceeded	Results (mg/L)	ECA Limit (mg/L)
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CBOD ₅	February – June, August –October	15.75 - 29.25	15.0
TSS	May, June, August	16.25 – 17.50	15.0
TN	March, April, July	4.24–6.45	4.2

Issued Identified (Applicable to All Parameters)

- ChemScan unit was offline from February to June due to motor failure and DC inverter issues, limiting real-time process control and optimization of MicroC dosing, SBR cycles, and DO control.
- Reduced process control during ChemScan downtime contributed to elevated CBOD₅, TSS, and TN concentrations.
- Solids accumulation in the sand filter radials in September caused short-circuiting and reduced filtration performance.
- Influent loading (BOD₅ and Total Nitrogen) continued to exceed original design assumptions, contributing to process stress.
- Flow imbalance between ISAM SBR trains affected biological treatment consistency.

Corrective Actions Taken (Applicable to All Parameters):

- Adjusted MicroC dosing, wasting rates, DO setpoints, and anoxic cycle timers to improve biological performance.
- ChemScan motor repaired (week of May 13, 2025) and DC inverter replaced; unit returned to service July 14, 2025, restoring real-time process monitoring and control.
- Sand filters isolated, chlorinated, and media washed for 24 hours (week of September 29, 2025) to address short-circuiting.
- Univar conducted jar testing on October 31, 2025 to optimize carbon dosing strategies.
- EOSI (MicroC manufacturer) provided updated dosing recommendations on January 15, 2026; adjustments implemented.
- AECOM is designing improvements to correct flow imbalance between ISAM SBR trains to support stable biological treatment.
- Additional sampling and process review implemented to better characterize influent loading and support optimization.

5. Repair & Maintenance Activities

Where ECA 2362-9KPPV6, Section 11(6)(c) requires:

“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;”

5.1 Work Management System

A computerized Work Management System (WMS) is utilized to schedule and document maintenance activities. The WMS allows users to:

- Enter detailed asset information
- Generate and process work orders
- Access maintenance and inspection procedures
- Plan, schedule, and document all asset related tasks and activities
- Access maintenance records and asset histories

Scheduled preventative maintenance work orders are automatically generated by the WMS and are assigned to the applicable Operations staff. The WMS also allows for the creation of real-time emergency and corrective work orders for any unscheduled maintenance that may occur.

5.2 Preventative Maintenance

The following preventative maintenance activities were completed throughout 2025:

- Annual Sewage Pumping Station Cleanouts
- Sand filter Cleaning and Maintenance
- Tile Bed Inspections
- Backflow Device inspections
- Electrical Inspection/Service
- Pump Inspection/Service
- Lifting Device Inspection
- Tank Inspections
- Dissolved Oxygen Analyzer Inspection/Service
- Flow Meter Inspection/Service
- Generator Inspection/Service

5.3 Repairs and Improvements

There were a number of repairs and/or improvements made in 2025. They are as follows:

- Retrofit valves to accept new explosion proof actuators/Rotork upgrade
- ChemDcan pump replacement
- BNR Pump refurbishment
- RedLion HMI unit replacement
- Alarm cellular panel upgrade
- Filter feed pump 1 EP3 repairs
- SBR 2 jet mixing pump 2 repairs
- Compressor repairs

- Biosolids Tank inspection and temporary repairs
- Installation of contactor UPS fail (redundant power supply)
- Probe power supply module replacement
- Generator repairs/ATS recommissioning
- Float switch replacement

6. Quality Assurance and Control Measures

Where ECA 2362-9KPPV6, Section 11(6)(d) requires:

"A summary of any effluent quality assurance or control measures undertaken in the reporting period;"

Quality assurance and control measures undertaken during the reporting period included adherence to provincial regulations, use of accredited laboratories, operation by licensed Operators, scheduled sampling and analysis, in-house laboratory analysis and calibration of monitoring equipment. These measures support accurate effluent monitoring and help ensure that compliance data is reliable and representative of actual plant performance. The sections below provide further details of these measures.

6.1 Adherence to Provincial Regulations

The Ontario Clean Water Agency operates the Centre Vespra (Stonemanor) WWTP in accordance with provincial regulations and the Environmental Compliance Approval.

6.2 Use of Accredited Laboratories

Analytical tests to monitor the effluent quality are conducted by a laboratory audited by the Canadian Association for Laboratory Accreditation Inc. (CALA) and accredited by the Standards Council of Canada (SCC). Accreditation ensures that the laboratory has acceptable laboratory protocols and test methods in place. It also requires the laboratory to provide evidence and assurances of the proficiency of the analysts performing the test methods. During the reporting period, all chemical sample analyses were conducted by SGS (Lakefield) Canada Inc.

6.3 Operation by Licensed Operators

The Centre Vespra (Stonemanor) WWTP was operated and maintained by licensed Operators. The mandatory licensing program for operators of sewage treatment facilities in Ontario is regulated under the Ontario Water Resources Act (OWRA) Regulation 435/93 and Ontario Regulation 129/04. A Licensed individual has successfully passed the licensing exam and meets the education and experience requirements set out in the regulation.

6.4 Sampling and Analysis

The Ontario Clean Water Agency followed a sampling and analysis schedule that meets the requirements of the ECA.

6.5 In-house Analysis

In-house analysis were conducted by Licensed Operators for monitoring purposes using Standard Methods. The data generated from these tests is used to determine the treatment efficiency while maintaining process control. All in-house monitoring equipment is calibrated based on the manufacturer's recommendations. Operators continue to apply their expertise to support consistent process performance and make best efforts to meet the ECA Effluent Objectives.

6.6 Calibrations

Third-party and in-house calibrations are completed on various equipment and monitoring and analysis items as required based on manufacturer's recommendations. Refer to Section 7 for more information regarding calibration of monitoring equipment.

7. Calibration and Maintenance – Monitoring Equipment

Where ECA 2362-9KPPV6, Section 11(6)(e) and ECA 7394-AQYTCN, Section 9(3)(d) requires:
"A summary of the calibration and maintenance carried out on all monitoring equipment;"

The raw water and effluent flow meters were successfully calibrated by FLOWMETRIX Technical Services on June 5, 2025. Additional calibration was done on several Hach DR units and a HQ40d unit. These calibrations were conducted by Indus Control on July 23, 2025.

Refer to **Appendix B** for calibration reports.

8. Design Objective Requirements

Where ECA 2362-9KPPV6, Section 11(6)(f):

"A description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6"

- i. *When any of the design objectives are not achieved more than 50% of the time in a year, or there is an increasing trend of deterioration of Final Effluent quality;*
- ii. *When Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;"*

A summary of the effluent quality as it relates to the ECA Condition 6 Objectives is as follows:

- CBOD₅ Objective (12.0 mg/L): The objective was met in January, July, November, and December. Elevated concentrations in other months were associated with operational constraints described in Section 4, and corrective actions were implemented accordingly.
- TSS Objective (12.0 mg/L): The objective was met in nine months of the year, with exceedances occurring in May, June, and August. Additional operational context and corrective actions are provided in Section 4.
-
- Total Ammonia Nitrogen + Nitrate-Nitrogen Objective (3.5 mg/L): The objective was met in nine months of the year, with exceedances in March, April, and July. Additional operational context and corrective actions are provided in Section 4.
- pH Objective (6.50–7.50): pH met the objective range in 10 out of 12 months, with minor deviations in June and July. pH remained within the ECA compliance limits for the entire reporting period.
- Annual Average Daily Influent Flow: The 2025 annual average influent flow was 373.64 m³/day, representing 44% of the Rated Capacity, well below the 80% threshold requiring additional reporting.

The CBOD₅ objective was not achieved more than 50% of the time; however, there was no indication of a deterioration trend, and effluent quality improved in the latter part of the year following operational adjustments. All other parameters met their design objectives more than 50% of the time.

As per ECA 2362-9KPPV6 Section 6 (1) (c), OCWA used best efforts to ensure that the Effluent was essentially free of floating and settleable solids, and did not contain oil or any other substance in amounts sufficient to create a visible film or sheen or foam or discolouration on the receiving subsurface tile beds throughout 2025. Regular visual inspections from the Operations staff were completed.

9. Sludge Production

Where ECA 2362-9KPPV6, Section 11(6)(g) requires:

“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;”

The biosolids produced at The Centre Vespra (Stonemanor) WWTP were hauled by ROHES and applied to OMAFRA approved “NASM Plans” (NASM Plan #'s 24399, 24293, 25125, 25249, 23455 & 2345) based on Ontario Regulation 338/09 made under the Nutrient Management Act, 2002. NASM Plans under the NMA are issued to the owner (farmer) who is responsible for managing this plan with assistance from the NASM Plan Developer.

9.1 Volume of Sludge Generated

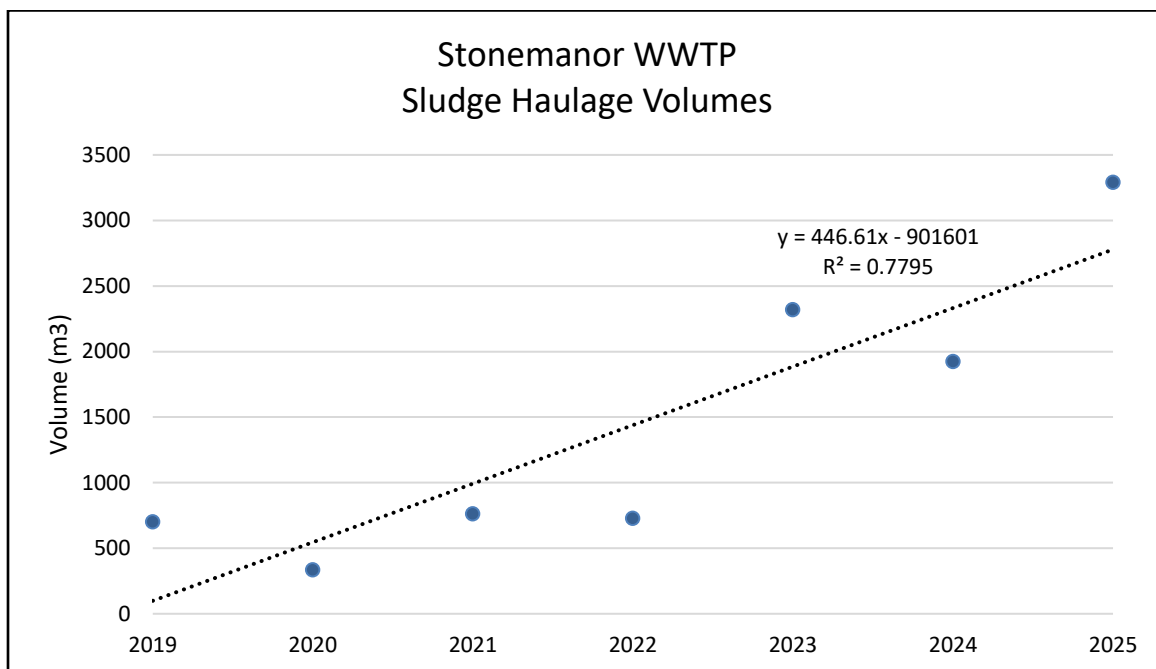
Table 14: Biosolids Haulage from the Stonemanor WWTP in 2025

Date	Hauler	Sludge Disposal Location	Volume (m ³)
January 22, 2025	ROHES	ROHES Lagoons	282.8
January 23, 2025	ROHES	ROHES Lagoons	162.6
August 25, 2025	ROHES	ROHES Lagoons	378.0
August 27, 2025	ROHES	ROHES Lagoons	798.0
September 2, 2025	ROHES	ROHES Lagoons	504.0
September 12, 2025	ROHES	ROHES Lagoons	242.0
September 15, 2025	ROHES	ROHES Lagoons	42.0
October 21, 2025	ROHES	ROHES Lagoons	210.0
October 20, 2025	ROHES	ROHES Lagoons	672.0
2025 Total Volume Hauled			3,291.40

The 3,291.40 m³ of hauled sludge in 2025 is a 71% increase in volume in comparison to 2024, which had 1,926.40 m³ of hauled sludge. Typically, to estimate the volume of sludge generated in the next reporting period, a linear regression using data from previous years is used. However, given the limited R² value (77.95%, see Figure 1) the regression model would not necessarily be able to accurately estimate sludge volumes for 2026. As such, for 2026, it is anticipated that sludge production will be similar or slightly higher than 2025 volumes, based on recent operational trends.

Biosolids produced at The Centre Vespra (Stonemanor) WWTP met all the quality criteria specified in the regulations for the reporting period. A summary of the Stonemanor WWTP sludge quality with a comparison to quality criteria can be referenced in *Appendix C*.

Figure 1. Centre Vespra (Stonemanor) WWTP Sludge Hauling Volumes



10. Community Complaints

Where ECA 2362-9KPPV6, Section 11(6)(h) requires:

"A summary of any complaints received during the reporting period and any steps taken to address the complaints;"

One noise complaint was received from a local resident during the reporting period regarding continuous noise originating from the wastewater treatment plant. Operations staff investigated the concern and determined that the sound was primarily associated with the facility's ventilation fans. These fans are essential components of the plant's safety systems, providing critical air circulation, preventing gas accumulation, and maintaining safe working conditions for staff.

A review of the ventilation system confirmed that noise levels were within industry standards and applicable guidelines. The Township is currently assessing potential sound-mitigation options to further reduce off-site impacts, including the installation of acoustic louvers, dampers, or other noise-attenuation measures as appropriate.

11. By-pass, Spill or Abnormal Discharge Events Summary

Where ECA 2362-9KPPV6, Section 11, Part 6. i. requires

“A summary of all By-pass, spill or abnormal discharge events;”

Quarterly by-pass reports were submitted to the MECP, as required in the ECA for the reporting period on May 8, 2025, August 8, 2025, November 5, 2025, and February 6, 2026.

11.1 By-pass Events

There were no by-pass events during the reporting period.

11.2 Spill Events

There was one spill event during the reporting period.

January 21, 2025 – Sludge Leak at Sludge Storage Tank

At approximately 10:00 a.m., OCWA staff observed sludge on the snow adjacent to the sludge storage tank. The material originated from a small hole in one of the tank panels, where sludge had accumulated and frozen along the back side of the building. All spilled material remained contained on-site and did not migrate off the property.

Corrective Actions:

- Operations staff responded to the incident and shut off the blowers and mixer to the sludge storage tank to investigate.
- Operations staff determined the leak was coming from a small hole in the panel of the tank. The mixer pump was turned back on to prevent freezing of the tank contents.
- OCWA staff took samples as per the ECA and sent it to SGS laboratories and analyzed.
- Region of Huronia Environmental Services was contacted to respond to clean-up and pump down storage tank to below the level of the leak so that repairs could be completed.
- Greatario completed repairs on Thursday January 23rd, 2025. Replacement of the anodes and damaged tank sheets is scheduled for 2026 as part of the permanent repair plan.

Notifications

- Verbal and written notifications of the spill were made to SAC, MOH and MECP in accordance with regulatory requirements on the following dates: January 21, January 22, and January 28, 2025.

11.3 Abnormal Discharge Events

There were no abnormal discharge events during the reporting period.

12. Other Information

Where ECA 2362-9KPPV6, Section 11(6)(i) requires:

“Any other information the District Manager requires from time to time.”

There was no additional information required by the District Manager for the 2025 reporting year.

Appendix A

Performance Assessment Report

1361 STONEMANOR WASTEWATER TREATMENT FACILITY 150003322																	
	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	11,568.40	10,589.80	11,739.90	11,550.10	12,026.00	11,377.60	11,664.70	11,206.40	10,803.50	11,115.10	10,926.20	11,802.00	136,369.70			0.00	
Raw Flow: Avg - Raw Sewage m³/d	373.17	378.21	378.71	385.00	387.94	379.25	376.28	361.50	360.12	358.55	364.21	380.71		373.62		844.00	
Raw Flow: Max - Raw Sewage m³/d	443.60	443.80	534.80	552.30	446.40	461.50	425.50	413.20	436.10	440.90	431.80	452.00			552.30	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	11,874.20	10,869.80	12,152.30	11,820.90	12,352.70	11,921.60	12,380.00	11,239.50	10,901.20	11,073.20	10,993.00	11,918.30	139,496.70			0.00	
Eff. Flow: Avg - Final Effluent m³/d	383.04	388.21	392.01	394.03	398.47	397.39	399.35	362.56	363.37	357.20	366.43	384.46		382.18		0.00	
Eff. Flow: Max - Final Effluent m³/d	430.70	495.80	519.50	515.40	455.50	489.90	458.40	452.00	428.30	455.80	444.80	461.70			519.50	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	10.25	15.75	19.25	21.80	20.75	29.25	8.20	17.50	28.75	22.60	4.50	5.40		16.81	29.25	15.00	
Eff: # of samples of cBOD5 - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	
Loading: cBOD5 - Final Effluent kg/d	3.926	6.114	7.546	8.590	8.268	11.624	3.275	6.345	10.447	8.073	1.649	2.076		6.42	11.62		
Biochemical Oxygen Demand: BOD5																	
Raw: Avg BOD5 - Raw Sewage mg/L	351.00	685.00	301.00	389.00	277.00	335.00	387.00	310.00	360.00	298.00	276.00	258.00		352.25	685.00	0.00	
Raw: # of samples of BOD5 - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00	
Percent Removal: BOD5 - Raw Sewage %	97.08	97.70	93.60	94.40	92.51	91.27	97.88	94.35	92.01	92.42	98.37	97.91		94.96	98.37	0.00	
Total Suspended Solids: TSS																	
Raw: Avg TSS - Raw Sewage mg/L	400.00	537.00	286.00	248.00	197.00	196.00	196.00	152.00	234.00	254.00	250.00	176.00		260.50	537.00	0.00	
Raw: # of samples of TSS - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00	
Eff: Avg TSS - Final Effluent mg/L	3.50	8.25	11.00	11.80	16.25	17.50	11.20	17.25	7.50	4.40	6.25	4.40		9.79	17.50	15.00	
Eff: # of samples of TSS - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	
Loading: TSS - Final Effluent kg/d	1.341	3.203	4.312	4.650	6.475	6.954	4.473	6.254	2.725	1.572	2.290	1.692		3.74	6.95		
Percent Removal: TSS - Raw Sewage %	99.13	98.46	96.15	95.24	91.75	91.07	94.29	88.65	96.79	98.27	97.50	97.50		95.40	99.13	0.00	
Total Phosphorus: TP																	
Raw: Avg TP - Raw Sewage mg/L	7.16	7.80	6.97	6.66	5.93	7.07	7.31	6.51	7.46	10.00	5.47	5.61		7.00	10.00	0.00	
Raw: # of samples of TP - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00	
Eff: Avg TP - Final Effluent mg/L	0.08	0.07	0.11	0.17	0.11	0.14	0.34	0.51	0.26	0.25	0.16	0.07		0.19	0.51		
Eff: # of samples of TP - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	
Loading: TP - Final Effluent kg/d	0.030	0.028	0.041	0.066	0.043	0.056	0.135	0.183	0.095	0.088	0.058	0.025		0.07	0.18		
Percent Removal: TP - Raw Sewage %	98.92	99.07	98.49	97.48	98.19	98.02	95.38	92.24	96.48	97.54	97.12	98.82		97.31	99.07	0.00	
Nitrogen Series																	
Raw: Avg TKN - Raw Sewage mg/L	52.50	67.00	56.00	54.00	50.70	61.70	61.70	59.70	68.40	105.00	53.10	48.40		61.52	105.00	0.00	
Raw: # of samples of TKN - Raw Sewage	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	12.00			0.00	
Eff: Avg TAN - Final Effluent mg/L	2.28	0.35	3.95	0.74	0.20	0.68	0.22	0.10	0.15	0.18	2.43	0.98		0.98	3.95		
Eff: # of samples of TAN - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	
Loading: TAN - Final Effluent kg/d	0.871	0.136	1.548	0.292	0.080	0.268	0.088	0.036	0.055	0.064	0.889	0.377		0.38	1.55		
Eff: Avg NO3-N - Final Effluent mg/L	1.46	0.39	0.30	5.71	0.36	1.66	4.02	2.88	0.18	0.24	0.06	0.06		1.44	5.71	0.00	
Eff: # of samples of NO3-N - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	
Eff: Avg NO2-N - Final Effluent mg/L	0.39	0.60	0.47	0.92	0.36	0.04	0.73	1.79	0.33	0.40	0.04	0.07		0.51	1.79	0.00	
Eff: # of samples of NO2-N - Final Effluent	4.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	4.00	5.00	4.00	5.00	52.00			0.00	



Appendix B

Calibration Reports

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL		EQUIPMENT DETAIL	
CUSTOMER	OCWA-North Simcoe	[MUT] MANUFACTURER	ENDRESS & HAUSER
CONTACT	Michelle Neal	MODEL	Promag 53
	Senior Operations Manager	CONVERTER S/N:	K5250719000
	1128 Flos Rd 10 E	FUSE	Pull Plug on Unit
	Elmvale ON L0L 1P0		
	T: 705 715 1411	PLANT ID	Stonemanor WWTP
	E:mneal@ocwa.com	METER ID	Raw Flow
		FIT ID	FIT-201
		CLIENT TAG	n/a
		OTHER	OCWA: 291618
		GPS COORDINATES	n/a
VER. BY - FM Charles Francisco			
Quality Management Standards Information -		VERIFICATION DATE	June 5th 2025
Reference equipment and instrumentation used to		CAL. FREQUENCY	Annual
conduct this verification test is found in our AC-		CAL. DUE DATE	June 2026
QMS document at the time this test was			
conducted.			

PROGRAMMING PARAMETERS			FORWARD TOTALIZER INFORMATION		
DIAMETER (DN)	mm	150	AS FOUND	758619.3	M3
F.S. FLOW - MAG	LPS	176.709	AS LEFT	758633.3	M3
F.S. RANGE - O/P	LPS	60.000	DIFFERENCE	14	M3
TUBE k-FACTOR		1.07610	TEST CRITERIA		
TUBE zero		3	AS FOUND CERTIFICATION TEST		Yes
			FORWARD FLOW DIRECTION		Yes
			ALLOWABLE [%] ERROR		15
			COMPONENTS TESTED		
			CONVERTER DISPLAY		Yes
			mA OUTPUT		Yes
			TOTALIZER		Yes
			ACCURACY BASED ON [% o.r.]		Yes
			ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.		

FLOW TUBE SIMULATION							
		0.0	15.0	30.0	45.0	60.0	LPS
		0.0	8.5	17.0	25.5	34.0	% F.S. Flow
		0.0	25.0	50.0	75.0	100.0	% F.S. Range
REF. FLOW RATE		0.000	15.000	30.000	45.000	60.000	LPS
MUT [Reading]		0.000	14.937	29.941	44.896	59.911	LPS
MUT [Difference]		0.000	-0.063	-0.059	-0.104	-0.089	LPS
MUT [% Error]		n/a	-0.42	-0.20	-0.23	-0.15	%
mA OUTPUT		4.000	8.000	12.000	16.000	20.000	mA
MUT [Reading]	min. 4 mA	4.000	7.997	11.986	15.973	19.988	mA
MUT [Difference]	max. 20 mA	0.000	-0.003	-0.014	-0.027	-0.012	mA
MUT [% Error]		0.00	-0.04	-0.12	-0.17	-0.06	%
TOTALIZER				REF. FLOW RATE	60.000	LPS	
				TOTALIZER [MUT]	3.8	M3	
				TEST TIME	63.27	SECONDS	
				TOTALIZER [REF]	3.796	M3	
				ERROR	0.10	%	

COMMENTS			RESULTS		
QUALITY MANAGEMENT STANDARDS INFO.					
[QMS] INFORMATION	IDENT.	ID #	TEST	AVG % o.r.	PASS FAIL
[REFERENCE] FTS	E&H-FC	1	DISPLAY	-0.25	PASS
PROCESS METER	DMM	0	mA OUTPUT	-0.08	PASS
ANALOG METER	AM	N/A	TOTALIZER	0.10	PASS
STOP WATCH	SW	Yes			

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL		EQUIPMENT DETAIL	
CUSTOMER	OCWA-North Simcoe	[MUT] MANUFACTURER	ENDRESS & HAUSER
CONTACT	Michelle Neal	MODEL	Promag 53
	Senior Operations Manager	CONVERTER S/N:	JA061B19000
	1128 Flos Rd 10 E	FUSE	Pull Plug on Unit
	Elmvale ON L0L 1P0		
	T: 705 715 1411	PLANT ID	Stonemanor WWTP
	E:mneal@ocwa.com	METER ID	Secondary Effluent
		FIT ID	FIT-202
		CLIENT TAG	n/a
		OTHER	OCWA: 291619
		GPS COORDINATES	n/a
VER. BY - FM	Charles Francisco	VERIFICATION DATE	June 5th 2025
Quality Management Standards Information -		CAL. FREQUENCY	Annual
Reference equipment and instrumentation used to		CAL. DUE DATE	June 2026
conduct this verification test is found in our AC-			
QMS document at the time this test was			
conducted			

PROGRAMMING PARAMETERS			FORWARD TOTALIZER INFORMATION		
DIAMETER (DN)	mm	100	AS FOUND	8410522	M3
F.S. FLOW - MAG	LPS	78.538	AS LEFT	8410528	M3
F.S. RANGE - O/P	LPS	25.000	DIFFERENCE	6	M3
TUBE k-FACTOR		1.33540	TEST CRITERIA		
TUBE zero		-4	AS FOUND CERTIFICATION TEST		Yes
			FORWARD FLOW DIRECTION		Yes
			ALLOWABLE [%] ERROR		15
			COMPONENTS TESTED		
			CONVERTER DISPLAY		Yes
			mA OUTPUT		Yes
			TOTALIZER		Yes
			ACCURACY BASED ON [% o.r.]		Yes
			ERROR DOCUMENTED IN THIS REPORT: BASED ON % o.r.		

FLOW TUBE SIMULATION							
		0.0	6.3	12.5	18.8	25.0	LPS
		0.0	8.0	15.9	23.9	31.8	% F.S. Flow
		0.0	25.0	50.0	75.0	100.0	% F.S. Range
REF. FLOW RATE		0.000	6.250	12.500	18.750	25.000	LPS
MUT [Reading]		0.000	6.239	12.449	18.751	24.949	LPS
MUT [Difference]		0.000	-0.011	-0.051	0.001	-0.051	LPS
MUT [% Error]		n/a	-0.17	-0.41	0.01	-0.20	%
mA OUTPUT		4.000	8.000	12.000	16.000	20.000	mA
MUT [Reading]	min. 4 mA	3.997	7.957	11.966	15.993	19.989	mA
MUT [Difference]	max. 20 mA	-0.003	-0.043	-0.034	-0.007	-0.011	mA
MUT [% Error]		-0.08	-0.54	-0.28	-0.04	-0.05	%
TOTALIZER				REF. FLOW RATE	25.000	LPS	
				TOTALIZER [MUT]	2.0	M3	
				TEST TIME	81.40	SECONDS	
				TOTALIZER [REF]	2.035	M3	
				ERROR	-1.75	%	

COMMENTS			RESULTS		
QUALITY MANAGEMENT STANDARDS INFO.			TEST	AVG % o.r.	PASS FAIL
[QMS] INFORMATION	IDENT.	ID #			
[REFERENCE] FTS	E&H-FC	1			
PROCESS METER	DMM	0	DISPLAY	-0.20	PASS
ANALOG METER	AM	N/A	mA OUTPUT	-0.20	PASS
STOP WATCH	SW	Yes	TOTALIZER	-1.75	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.

AS FOUND CERTIFICATION
FORWARD FLOW DIRECTION
PASS

CLIENT DETAIL			EQUIPMENT DETAIL		
CUSTOMER	OCWA-North Simcoe		[MUT] MANUFACTURER	ENDRESS & HAUSER	
CONTACT	Michelle Neal		MODEL	Promag 53	
	Senior Operations Manager		CONVERTER S/N:	JA062D19000	
	1128 Flos Rd 10 E		FUSE	Pull Plug on Unit	
	Elmvale ON L0L 1P0				
	T: 705 715 1411		PLANT ID	Stonemanor WWTP	
	E:mneal@ocwa.com		METER ID	Sludge Flow	
			FIT ID	FIT-204	
			CLIENT TAG	n/a	
			OTHER	OCWA: 291640	
			GPS COORDINATES	n/a	
VER. BY - FM Charles Francisco					
Quality Management Standards Information -			VERIFICATION DATE	June 5th 2025	
Reference equipment and instrumentation used to			CAL. FREQUENCY	Annual	
conduct this verification test is found in our AC-			CAL. DUE DATE	June 2026	
QMS document at the time this test was					
conducted.					

PROGRAMMING PARAMETERS			FORWARD TOTALIZER INFORMATION		
DIAMETER (DN)	mm	100	AS FOUND	26208.48	M3
F.S. FLOW - MAG	LPS	78.538	AS LEFT	26212.05	M3
F.S. RANGE - O/P	LPS	20.000	DIFFERENCE	3.57	M3
TUBE k-FACTOR		1.33400	TEST CRITERIA		
TUBE zero		-4	AS FOUND CERTIFICATION TEST		Yes
			FORWARD FLOW DIRECTION		Yes
			ALLOWABLE [%] ERROR		15
			COMPONENTS TESTED		
			CONVERTER DISPLAY		Yes
			mA OUTPUT		Yes
			TOTALIZER		Yes
			ACCURACY BASED ON [% o.r.]		Yes
			ERROR DOCUMENTED IN THIS REPORT; BASED ON % o.r.		

FLOW TUBE SIMULATION							
		0.0	5.0	10.0	15.0	20.0	LPS
		0.0	6.4	12.7	19.1	25.5	% F.S. Flow
		0.0	25.0	50.0	75.0	100.0	% F.S. Range
REF. FLOW RATE		0.000	5.000	10.000	15.000	20.000	LPS
MUT [Reading]		0.000	4.997	9.996	14.995	20.001	LPS
MUT [Difference]		0.000	-0.003	-0.004	-0.005	0.001	LPS
MUT [% Error]		n/a	-0.05	-0.04	-0.03	0.01	%
mA OUTPUT		4.000	8.000	12.000	16.000	20.000	mA
MUT [Reading]	min. 4 mA	3.997	7.993	11.991	15.992	19.988	mA
MUT [Difference]	max. 20 mA	-0.003	-0.007	-0.009	-0.008	-0.012	mA
MUT [% Error]		-0.08	-0.09	-0.08	-0.05	-0.06	%
TOTALIZER				REF. FLOW RATE	20.000	LPS	
				TOTALIZER [MUT]	1.3	M3	
				TEST TIME	66.58	SECONDS	
				TOTALIZER [REF]	1.332	M3	
				ERROR	-0.88	%	

COMMENTS			RESULTS		
QUALITY MANAGEMENT STANDARDS INFO.			TEST	AVG % o.r.	PASS FAIL
[QMS] INFORMATION	IDENT.	ID #			
[REFERENCE] FTS	E&H-FC	1			
PROCESS METER	DMM	0	DISPLAY	-0.03	PASS
ANALOG METER	AM	N/A	mA OUTPUT	-0.07	PASS
STOP WATCH	SW	Yes	TOTALIZER	-0.88	PASS

This report reflects the test results of the overall accuracy for the above flow converter using the specified manufacturers flow tube simulator to within the specified tolerance as identified within this report.



IndusControl Inc
3170 Ridgeway Dr, Unit 11
Mississauga, ON, L5L 5R4

DISSOLVE OXYGEN ANALYZER CALIBRATION/VERIFICATION REPORT

Customer Name	OCWA-Georgian Bay	Address	3168 Dobson Rd, Springwater, ON, L4M 4S4
Plant Name	N/A		
Location	Stonemanner WWTP	Date:	July 23, 2025
OCWA ID	95284	Job No:	CO1643-2507-24
Device Discription	Dissolve Oxygen Analyzer	Report No:	CO1643-2507
Device Information		Sensor Information	
Instrument Make:	Hach	Sensor Make:	Hach
Model/Part No:	HQ40d	Model/Part No:	LDO-101
Serial No:	90900034423	Serial No:	092612592005
Verification / Calibration Test Details			
1 Point Calibration, Air 100%rh Calibration		Slope	106%
		Offset	0.00 mg/l
Overall Test Result:	☒ Passed	☐ Fail	☐ Not Verified
Notes:	Device is working as per specification. Verification Test Passed		
Service Technician :	Sanket Trada	Stamp/Signature	
Printed Date:	July 23, 2025		
End of Report			Version: 19-12



IndusControl Inc
3170 Ridgeway Drive Unit 11
Mississauga, ON, L5L 5R4

PORTABLE COLORIMETER VERIFICATION REPORT

Customer Name	OCWA-Georgian Bay	Address	3168 Dobson Rd, Springwater, ON, L4M 4S4
Plant Name	Stonemanor WWTP		
Location	ANDREAS HASS	Date	July 23, 2025
OCWA ID	345511	Report No	CO1643-2507-12
Device Discription	Pocket Colorimeter	Job No	CO1643-2507

Device Information

Instrument Make:	Hach
Model/Part No:	DR300
Serial No:	22040B001400

Calibration/Verification Test Details

Standard Solution	Calculated Value (ppm)	UUT Display (ppm)	Deviation (ppm)
Blank(0.00)	0.00	0.00	0.00
STD 1(0.23±0.09)	0.23	0.21	-0.02
STD 2(0.94±0.10)	0.94	0.93	-0.01
STD 3(1.64±0.14)	1.64	1.61	-0.03

Information of Device/Instrument use for Verification/Calibration

Device Discription:	DPD-Chlorine LR Spec Check Secondary Standard Kit		
Make:	Hach		
Lot No:	A4205		
Overall Test Result:	☒ Passed	☐ Fail	☐ Not Verified

Notes: Device is working as per specification. Verification Test Passed

Service Technician :	Sanket Trada	Stamp/Signature	
Printed Date:	July 23, 2025		

End of Report

Version: 20-01



IndusControl Inc
3170 Ridgeway Drive Unit 11
Mississauga, ON, L5L 5R4

PORTABLE COLORIMETER VERIFICATION REPORT

Customer Name	OCWA-Georgian Bay	Address	3168 Dobson Rd, Springwater, ON, L4M 4S4
Plant Name	Stonemanor WWTP		
Location	Stonemanor WWTP	Date	July 23, 2025
OCWA ID	324002	Report No	CO1643-2507-03
Device Discription	Pocket Colorimeter	Job No	CO1643-2507

Device Information

Instrument Make:	Hach
Model/Part No:	DR900
Serial No:	160670001014

Calibration/Verification Test Details

Standard Solution	Calculated Value (ppm)	UUT Display (ppm)	Deviation (ppm)
Blank(0.00)	0.00	0.00	0.00
STD 1(0.23±0.09)	0.23	0.2	-0.03
STD 2(0.92±0.10)	0.92	0.87	-0.05
STD 3(1.60±0.14)	1.60	1.55	-0.05

Information of Device/Instrument use for Verification/Calibration

Device Discription:	DPD-Chlorine LR Spec Check Secondary Standard Kit		
Make:	Hach		
Lot No:	A4205		
Overall Test Result:	☒ Passed	☐ Fail	☐ Not Verified

Notes: Device is working as per specification. Verification Test Passed

Service Technician :	Sanket Trada	Stamp/Signature	
Printed Date:	July 23, 2025		

End of Report

Version: 20-01



Appendix C

Biosolids Quality Data

Solids & Nutrients	Metals & Criteria	Last 4 Samples
Facility Works Number:	150003322	Receiver: Subsurface Disposal Beds
Facility Owner:	Municipality: Township of Springwater	Service Population: 2208
Facility Classification:	Class 2 Wastewater Treatment	Total Design Capacity: 844 m3/day

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

Month	Hauled Vol. (m³)	Total Solids (mg/L)	VS (m3)	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	445.40	13,100.00		428.00	29.40	3.00	3.00	810.00	16.20	59.00
Feb		12,500.00		337.00	52.30	3.00	3.00	791.00	27.65	49.30
Mar		15,500.00		486.00	74.30	3.00	3.00	950.00	38.65	64.80
Apr		15,900.00		430.00	22.70	3.00	3.00	890.00	12.85	59.00
May		15,800.00		386.00	11.40	3.00	3.00	715.00	7.20	49.00
Jun		14,900.00		436.00	13.70	3.00	3.00	859.00	8.35	55.00
Jul		2,230.00		50.00	9.80	3.00	3.00	94.00	6.40	38.00
Aug	1,176.00	14,200.00		586.00	3.30	6.00	3.00	384.00	4.65	62.00
Sep	788.00	9,810.00		392.00	1.00	5.00	3.00	315.00	3.00	53.00
Oct	882.00	23,000.00		1,080.00	1.80	39.00	3.00	748.00	20.40	74.00
Nov										
Dec		7,900.00		280.00	66.90	180.00	3.00	780.00	123.45	47.00
Average	822.85	13,167.27		444.64	26.05	22.82	3.00	666.91	24.44	55.46
Total	3,291.40	144,840.00	0.00	4,891.00	286.60	251.00	33.00	7,336.00	268.80	610.10

Solids & Nutrients		Metals & Criteria		Last 4 Samples							
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	0.01	0.02	0.26	3.00	0.00	0.09	0.17	0.10	0.10	8.00
Feb	0.10	0.01	0.02	0.20	2.41	0.01	0.07	0.13	0.10	0.10	6.51
Mar	0.10	0.01	0.02	0.28	3.34	0.01	0.09	0.17	0.10	0.10	8.57
Apr	0.10	0.01	0.02	0.25	3.20	0.01	0.09	0.16	0.10	0.10	9.00
May	0.10	0.01	0.02	0.19	2.60	0.00	0.08	0.12	0.10	0.10	7.00
Jun	0.10	0.01	0.02	0.25	3.10	0.01	0.09	0.15	0.10	0.10	9.00
Jul	0.10	0.01	0.01	0.04	0.20	0.00	0.05	0.04	0.10	0.10	1.00
Aug	0.10	0.01	0.02	0.32	3.90	0.01	0.12	0.19	0.10	0.10	12.00
Sep	0.10	0.01	0.02	0.30	2.40	0.01	0.08	0.14	0.10	0.10	8.00
Oct	0.10	0.02	0.04	0.53	7.80	0.02	0.18	0.33	0.10	0.10	23.00
Nov											
Dec	0.10	0.01	0.01	0.13	1.80	0.00	0.06	0.09	0.10	0.10	5.00
Average	0.10	0.01	0.02	0.25	3.07	0.01	0.09	0.15	0.10	0.10	8.83
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)	7.59	0.57	1.50	18.96	233.02	0.52	6.91	11.69	7.59	7.59	670.26

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

Parameter Short Name	Time Series	08/06/2025	09/03/2025	10/01/2025	12/03/2025	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	7.28	170
Cd (mg/L)	Lab Published	0.01	0.01	0.02	0.01	0.01	0.69	34
Co (mg/L)	Lab Published	0.02	0.02	0.04	0.01	0.02	1.64	340
Cr (mg/L)	Lab Published	0.32	0.30	0.53	0.13	0.32	23.31	2800
Cu (mg/L)	Lab Published	3.90	2.40	7.80	1.80	3.98	289.56	1700
Hg (mg/L)	Lab Published	0.01	0.01	0.02	0.00	0.01	0.69	11
Mo (mg/L)	Lab Published	0.12	0.08	0.18	0.06	0.11	8.01	94
Ni (mg/L)	Lab Published	0.19	0.14	0.33	0.09	0.19	13.66	420
Pb (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	7.28	1100
Se (mg/L)	Lab Published	0.10	0.10	0.10	0.10	0.10	7.28	34
Zn (mg/L)	Lab Published	12.00	8.00	23.00	5.00	12.00	874.16	4200
E. Coli Dry wt (cfu/g)	Lab Published						E. Coli average is the GMD	
TS (mg/L)	Lab Published	14,200.00	9,810.00	23,000.00	7,900.00	13,727.50		
VS (mg/L)	Lab Published							
TP (mg/L)	Lab Published	586.00	392.00	1,080.00	280.00	584.50		
NO2-N (mg/L)	Lab Published	3.00	3.00	3.00	3.00	3.00		
TKN (mg/L)	Lab Published	384.00	315.00	748.00	780.00	556.75		
K (mg/L)	Lab Published	62.00	53.00	74.00	47.00	59.00		
NH3p_NH4p_N (mg/L)	Lab Published	3.30	1.00	1.80	66.90	18.25		
NO3-N (mg/L)	Lab Published	6.00	5.00	39.00	180.00	57.50		