

Williamsburg Wastewater System

Waterworks # 120002013

Annual Report

Prepared By The Municipality of South Dundas

Reporting Period of January 1st – December 31st 2025

Issued: March 4th, 2026

Revision: 0

Operating Authority:



The Municipality of
SOUTH DUNDAS

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

Document	Document #	Issue Date	Issue Number
Facility ECA	3-0456-84-887	January 28, 1992	N/A
ECA for Municipal Sewage Collection System	165-W601	June 2, 2023	1.0

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1 Revision History

Date	Rev#	Revisions	Revised By
March 04, 2026	0	Annual Report Issued	Chelsea Fletcher, PCT Municipality of South Dundas

2 Operations and Compliance Reliability Indices

Compliance Event	# of Events
Ministry of Environment Inspections	No MECP inspection in 2025
Ministry of Labour Inspections	No MOL inspection in 2025
Non-Compliance	No Non-compliance in 2025
Community Complaints	No community complaints in 2025
Spills	No spills reported in 2025
Overflows	No overflow events reported in 2025
Bypass	No bypass events reported in 2025.
Sewer Main Blockages	No sewer main blockages in 2025

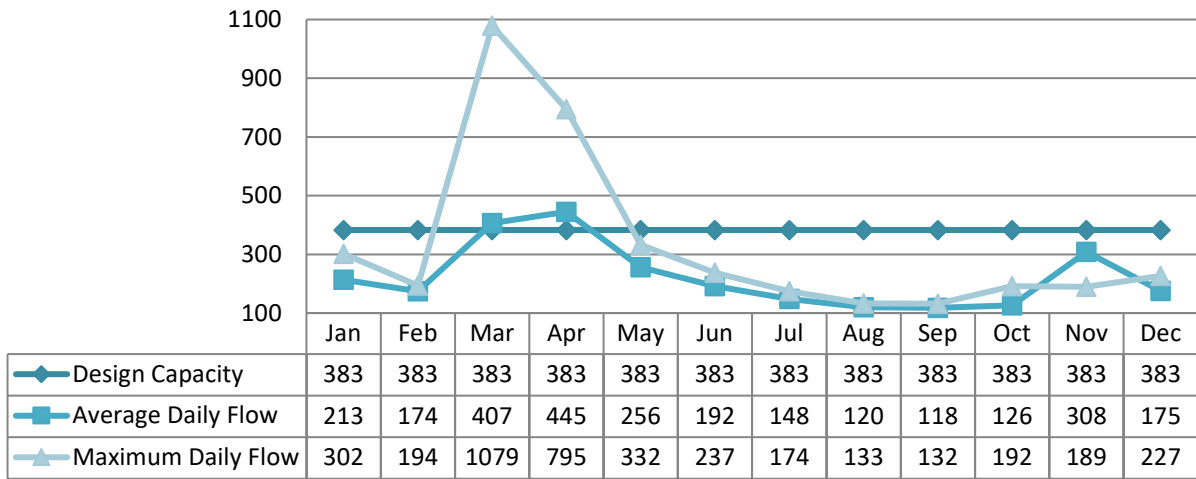
3 Process Description

Williamsburg's wastewater system is owned and operated by the Municipality of South Dundas. It consists of a gravity fed collection system, two sewage pumping stations and a wastewater treatment lagoon. The two-cell facultative lagoon system is a Class I wastewater treatment system. Effluent from the lagoon is discharged annually to the McMartin Drain between March 15th and April 21st in accordance with the facility's Certificate of Approval.

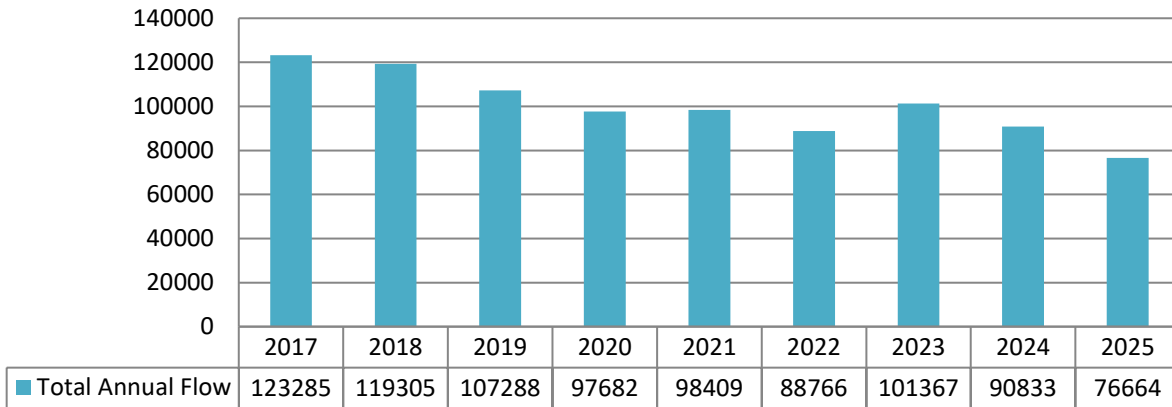
4 Treatment Flows

The hydraulic flows reaching the sewage lagoons in 2025 averaged 223.5 m³/day which represents 58.4% of the 383 m³/day design capacity.

4.1 Raw Flow (m3/d)



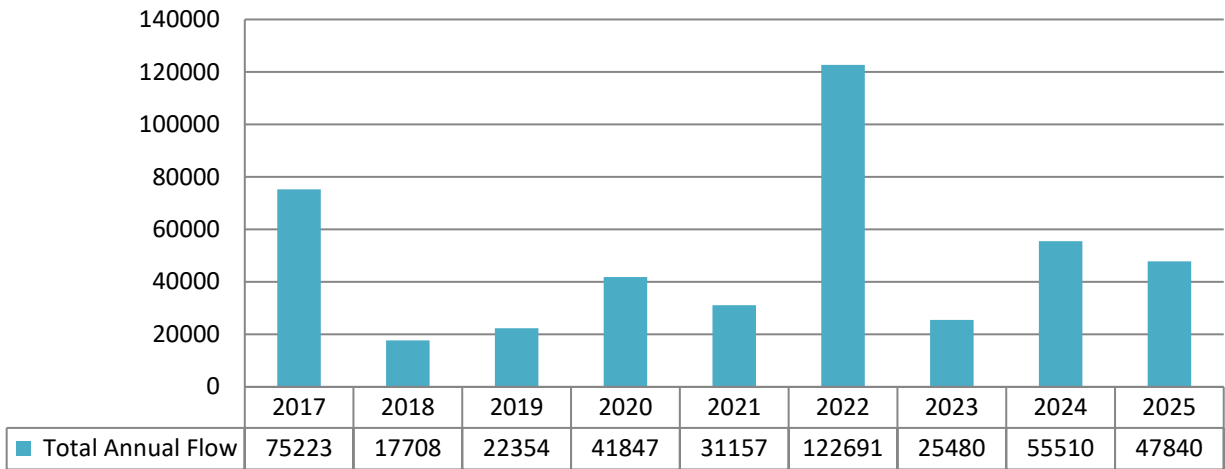
4.1.1 Annual Comparison (m3)



4.2 Discharge Flow

Discharge Period	Start Date	End Date	Volume Discharged (m3)
Annual Discharge	April 7th, 2025	April 15th, 2025	47,840

4.3 Annual Comparison (m3)



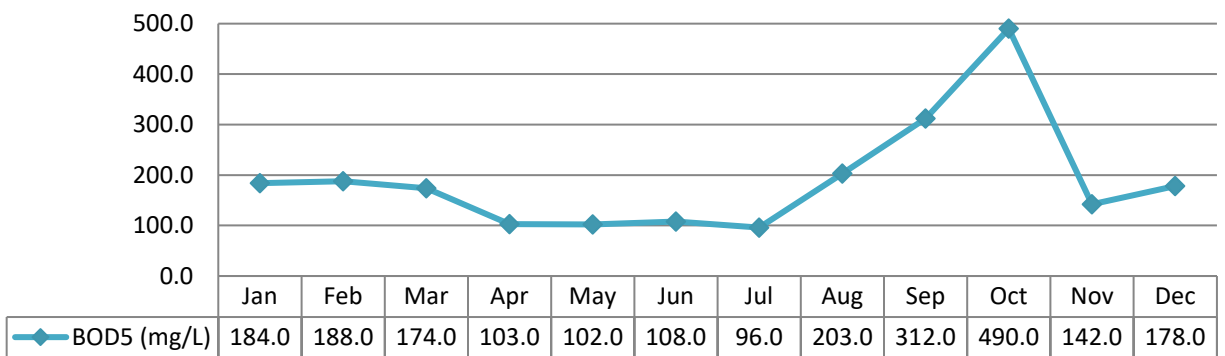
4.4 Imported Waste/Sewage

There was no imported waste or sewage accepted at this facility in 2025.

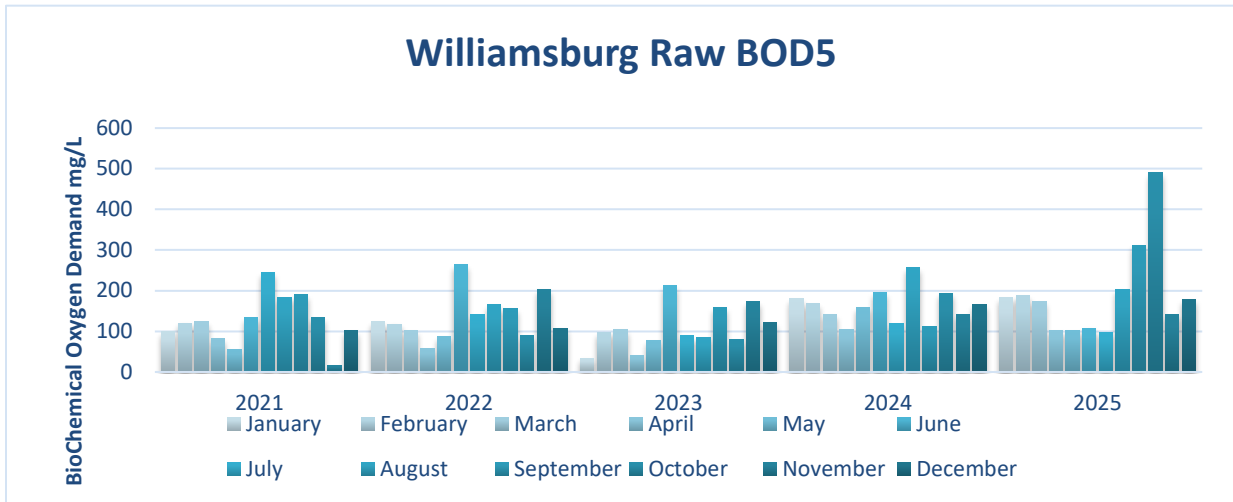
5 **Raw Sewage Quality**

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

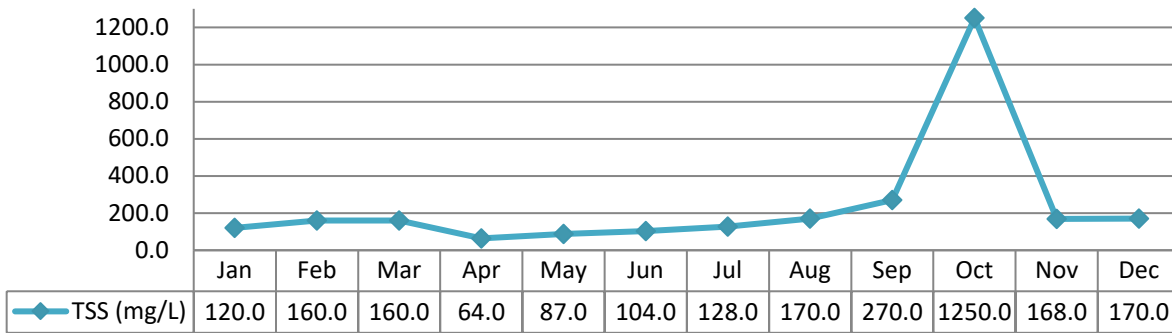
5.1.1 BOD5 (mg/L)



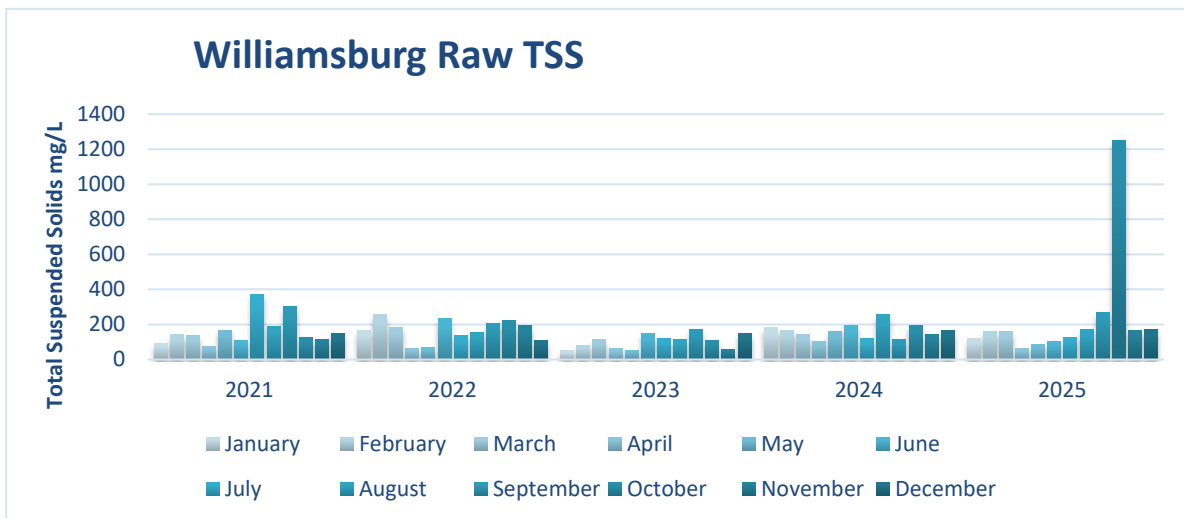
5.1.2 5-year BOD5 (mg/L)



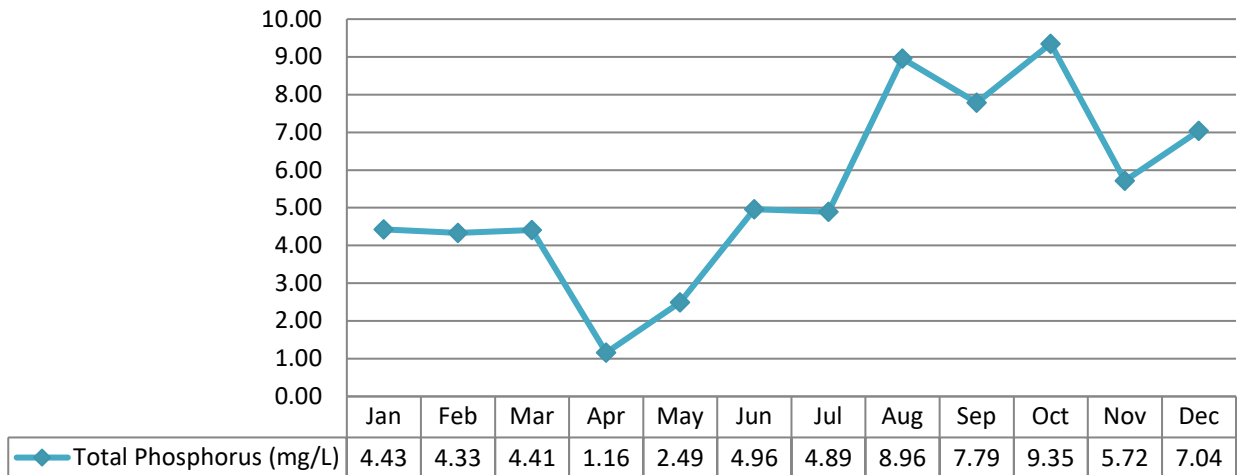
5.1.3 Total Suspended Solids (mg/L)



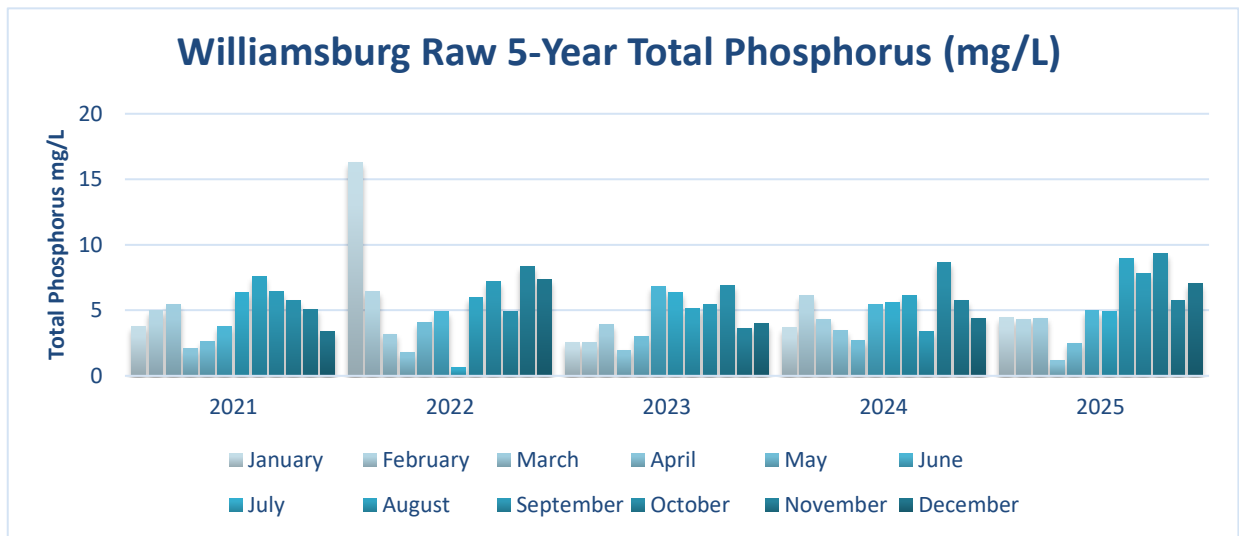
5.1.4 5-year Total Suspended Solids (mg/L)



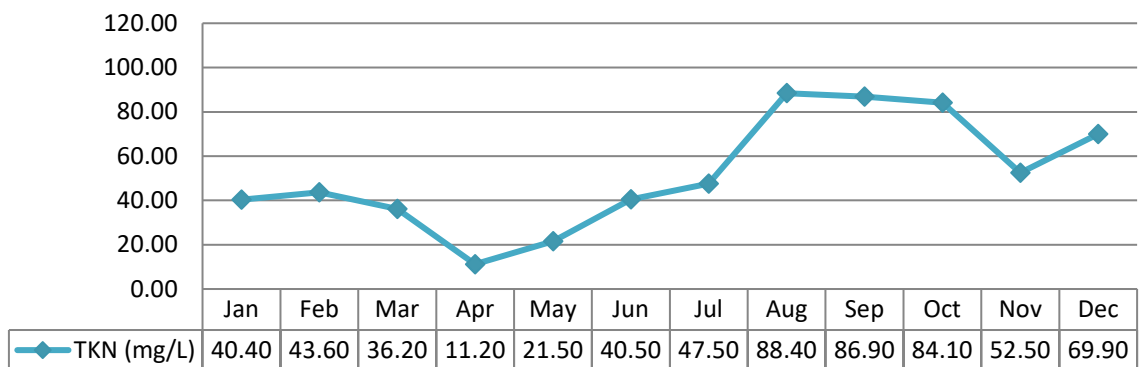
5.1.5 Total Phosphorus (mg/L)



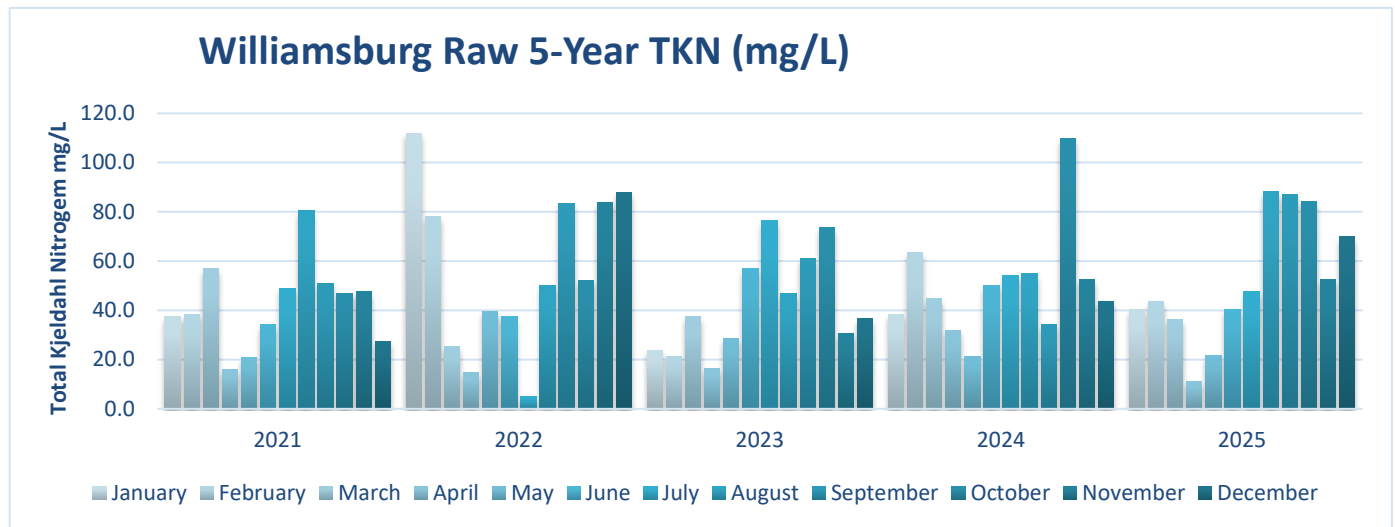
5.1.6 5-year Total Phosphorus (mg/L)



5.1.7 Total Kjeldahl Nitrogen (mg/L)



5.1.8 5-year Total Kjeldahl Nitrogen (mg/L)



5.2 Imported Waste Quality

There were no imported wastes accepted at this facility in the 2025 reporting period.

6 Effluent Quality

For the 2025 discharge period, there were no exceedances of the concentration limits outlined in the facility's Certificate of Approval. The results from the spring discharge can be found tabulated in the Performance Assessment Reports attached in Appendix A.

6.1 Effluent Quality Assurance and Control Measures Taken

This system is part of the Municipality of South Dundas. The Municipality's Compliance and Operational Services are delivered by Municipal staff that work to protect the community and public health. 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.

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 Caduceon Ottawa for analysis, with the exception of pH and temperature. Caduceon 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 Municipality of South Dundas is ensuring appropriate control measures are undertaken during sample analysis. The pH 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.

South Dundas uses a data management system maintained by staff, which includes:

- SharePoint – Municipality of South Dundas Water/Wastewater Site.
 - This online database 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.

The operations team also has access to in-house Operational Compliance and Process Technicians (PCTs) to assist for emerging process issues. This aids in establishing additional control measures to ensure a quality effluent product.

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

6.2 Effluent Quality Summary

Parameter	April Result (mg/L)	Limit (mg/L)	Exceedance
BOD	3.6	30	No
Total Suspended Solids	9.2	30	No
Total Phosphorus	0.30	N/A	N/A
Total Ammonia Nitrogen	0.19	N/A	N/A
pH	7.91-8.53	N/A	N/A

7 **Operating Issues/Problems**

There were no operating issues in the 2025 reporting period.

7.1 Effluent Quality Non-Compliance Summary

Date	Exceedance of	Limit	Value	Corrective Action
No ECA limits were exceeded in 2025				

7.2 Summary of Abnormal Sewage Discharge Events

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

7.3 Spills (Other than Sewage)

Date	Location	Details	Volume (m3)	Start Date and Time	End Date and Time
No spills to report on in 2025					

8 Maintenance

Routine planned maintenance activities:

- 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.

Unplanned maintenance is conducted as required.

8.1 Normal Maintenance and Repairs

Maintenance/Repair
<ul style="list-style-type: none"> - Wet wells cleaned every quarter - Annual generator load test - Flow meter calibration

8.2 Emergency Maintenance and Repairs

Maintenance/Repair	Details
No emergency maintenance in 2025	

8.3 Flow Meter Calibrations and Maintenance

Location	Date of Calibration	Additional Maintenance
FIT-01 Williamsburg SPS Flow	May 23 rd 2025	None.

8.4 Authorized Alterations in Collection System

Alteration	Details	Significant Drinking Water Threat (Y/N)
No alterations were made in 2025		

8.5 Notice of Modifications

Date	Process	Modification	Status
No modifications made in 2025.			

9 Sludge Generation

Sludge depth is monitored periodically across the lagoon, and plans for sludge removal are made as required for optimal operation of the wastewater system.

10 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
No complaints in 2025.			

Appendix B

Appendix B - Details of Abnormal Sewage Discharge Events

Event Details Summary

Facility Bypass

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No bypasses of Williamsburg Sewage Lagoon to report in 2025.								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No facility overflows to report in 2025.								

Collection Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No collection overflows to report in 2025.								

Spills of Sewage

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
No spills of sewage to report in 2025.								

Appendix C

Appendix C - ECA Annual Report Requirements

Facility ECA # 3-0456-84-887	Section in Report
No section in the CofA references an annual report.	N/A

Collection ECA # # 165-W601 Schedule E	
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
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