

Chesterville Wastewater System

Sewage Works # 110000114

Annual Report

Prepared for: Township of North Dundas

Reporting Period of January 1st – December 31st 2025

Issued: March 25, 2026

Revision: 0

Operating Authority:



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

Document	Document #	Issue Date	Issue Number
Facility ECA	6657-BPYPVL	June 1, 2020	n/a
ECA for Municipal Sewage Collection System	180-W601	October 27, 2022	1

Table of Contents

1	Revision History	1
2	Operations and Compliance Reliability Indices	1
3	System Process Description.....	1
4	Wastewater System Flows	2
5	Raw Sewage Quality	3
6	Effluent Quality.....	5
7	Operating Issues	9
8	Maintenance	10
9	Sludge Generation	12
10	Summary of Complaints.....	12
	Appendix A – Performance Assessment Reports.....	A
	Appendix B – Details of Abnormal Sewage Discharge Events	B
	Appendix C – ECA Annual Report Requirements	C

1 Revision History

Date	Rev#	Revisions
2026-03-25	0	Annual Report Issued

2 Operations and Compliance Reliability Indices

Compliance Event	# of Events
Environment Canada Inspections	0
Ministry of Environment Inspections	0
Ministry of Labour Inspections	0
Non-Compliance	3
Community Complaints	2
Spills/Overflows/Bypass'	0/0/0
Sewer Main Blockages	0

3 System Process Description

Chesterville’s wastewater system consists of a gravity fed sanitary sewage collection system with three pumping stations and a wastewater treatment lagoon. The main pumping station is located on Water Street and discharges directly to the lagoon. There is also a pumping station located on Lori Lane which was constructed in the early 1990’s to service the Thompson subdivision. A third pumping station is located at the lagoon and services the industrial site located at 171 Main Street North. This pumping station is currently offline.

Chesterville’s sewage treatment system was originally constructed in the 1970’s and included only one lagoon cell until a second cell was added in 1981. Substantial upgrades to the system took place between 2014 and 2015. A second wet well was added at the main pumping station, increasing the pumping capacity to 145 l/s, and a continuous chemical feed system for phosphorus removal was added along a new forcemain from the pumping station to the lagoons. The lagoon system was expanded by incorporating the former Nestle lagoon cells, creating a five cell system, and the existing municipal lagoon cells were converted to polishing/effluent storage ponds with the addition of aeration to both cells.

The lagoon system’s design capacity was increased from 1046 m³/d to 1660 m³/d following the upgrades. However, the Ministry required that testing be undertaken to confirm the lagoon would be able to perform to the required effluent criteria when the facility reached the new rated capacity. The testing took place and a report was submitted, but not deemed by the Ministry to provide enough evidence that the lagoon would be able to meet all necessary requirements when operating at full capacity. Rather than extend the timeline to continue the testing, the Ministry removed the performance testing requirement from the ECA and replaced it with a requirement in the annual report to review performance as flows

increase. The amended ECA # 6657-BPYPVL was issued June 1, 2020.

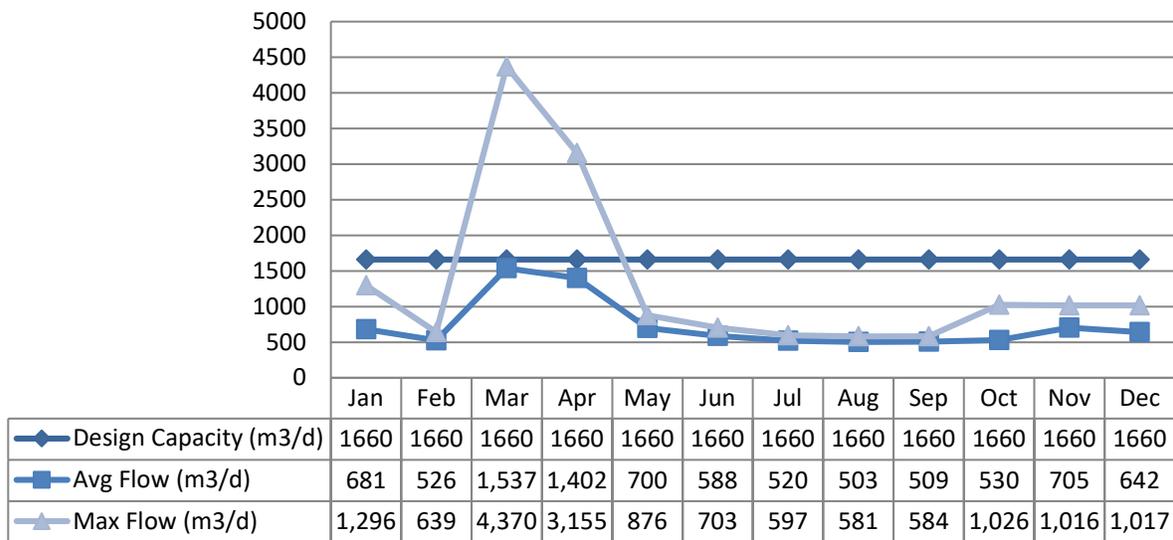
Effluent from the lagoons is discharged in the spring and in the fall via a 600 mm diameter pipe which extends from the treatment facility to an outlet in the South Nation River.

4 Wastewater System Flows

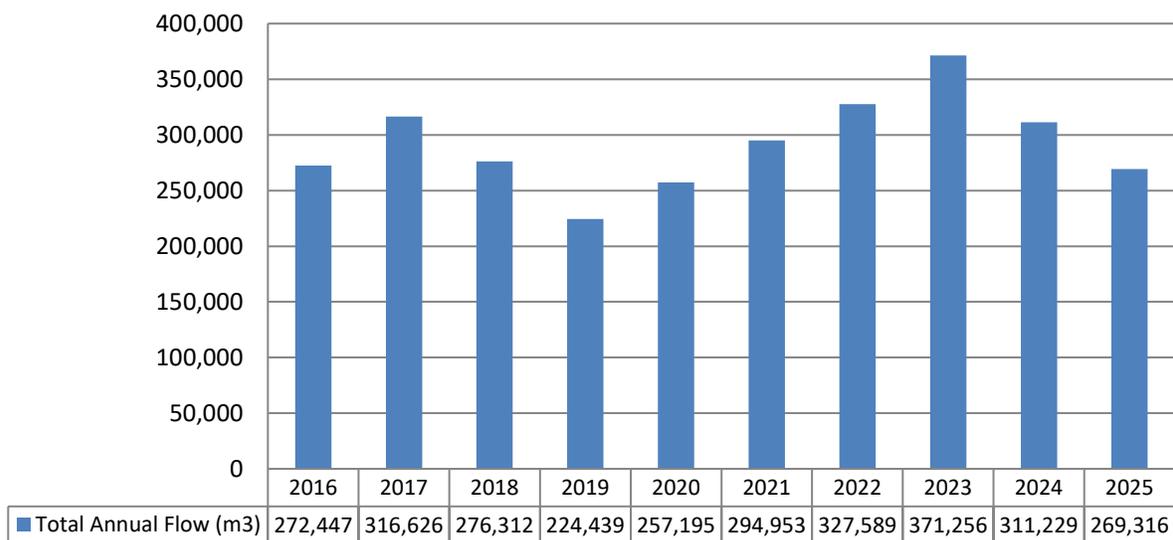
The hydraulic flows reaching the sewage lagoons in 2025 averaged 738 m³/day which represents 44 % of the 1,660 m³/day design capacity.

4.1 Raw Flows

2025 Raw Flows (m³/d):



Annual Raw Flow Comparison (m³):



4.2 Effluent Flow

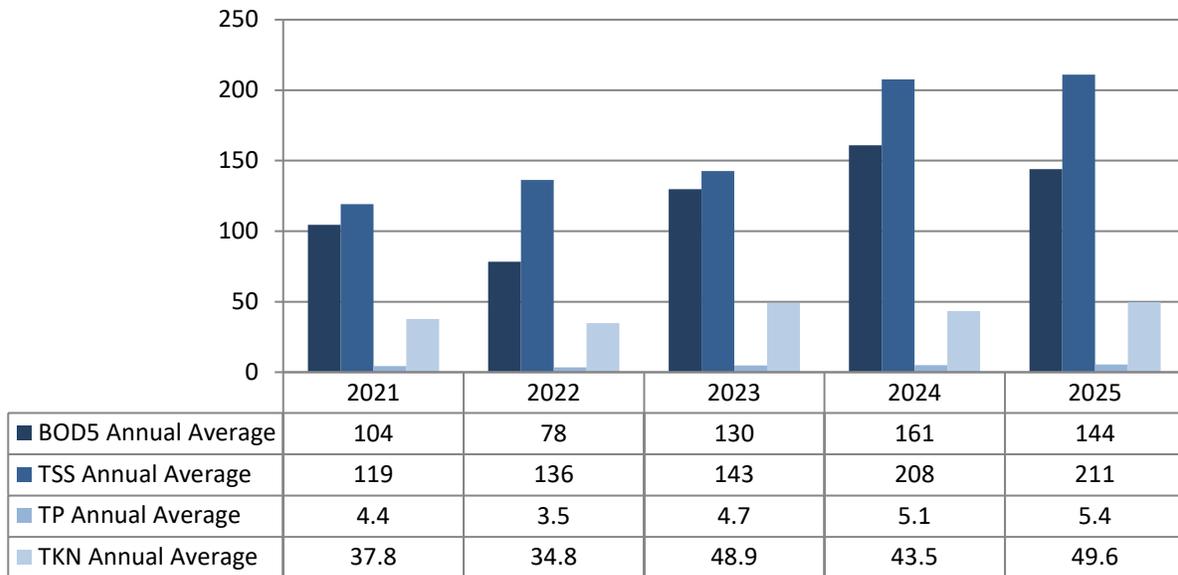
Discharge Period	Start Date	End Date	Volume Discharged (m ³)
Spring Discharge	April 11, 2025	April 30, 2025	201,790
Fall Discharge*	N/A	N/A	N/A
Total Flow Discharged			201,790

*No fall discharge needed in 2025

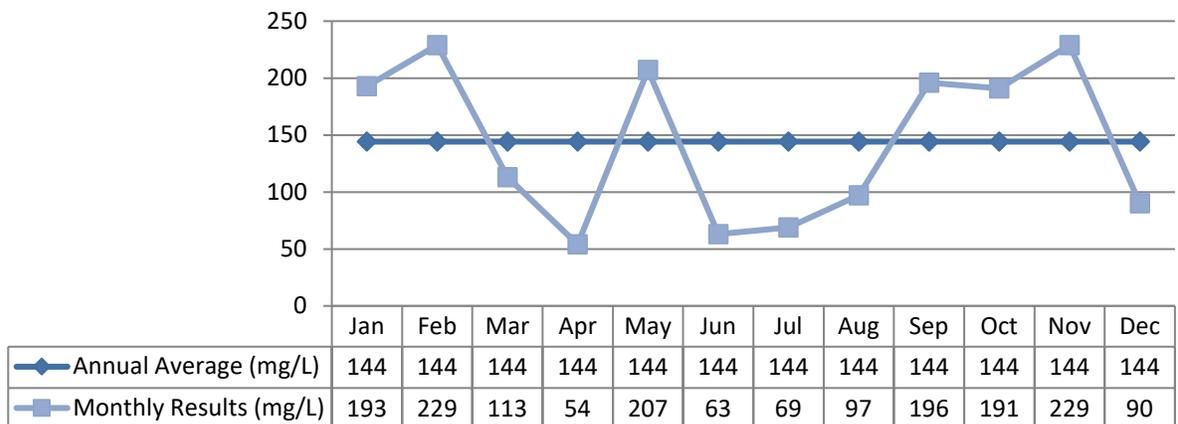
5 Raw Sewage Quality

2025 monthly results are available in Appendix A – Performance Assessment Reports.

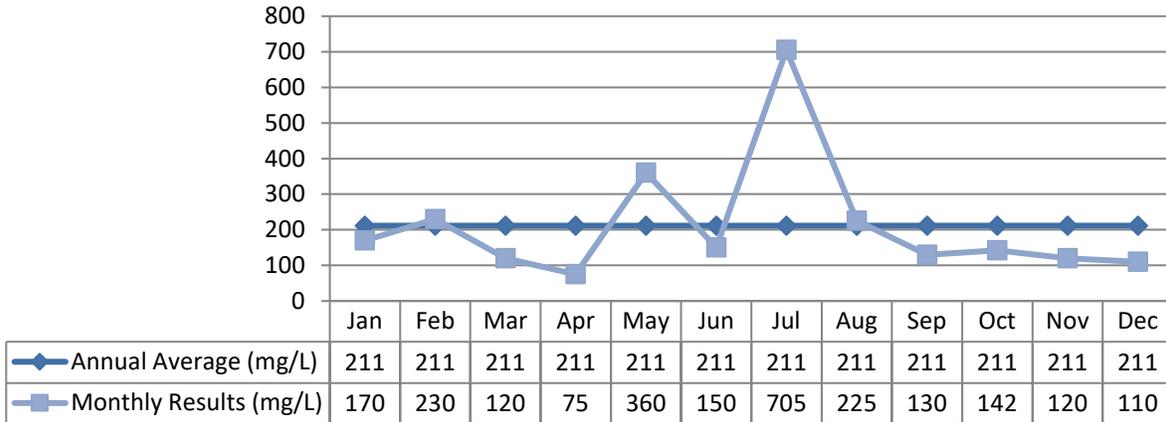
Annual Comparison (mg/L):



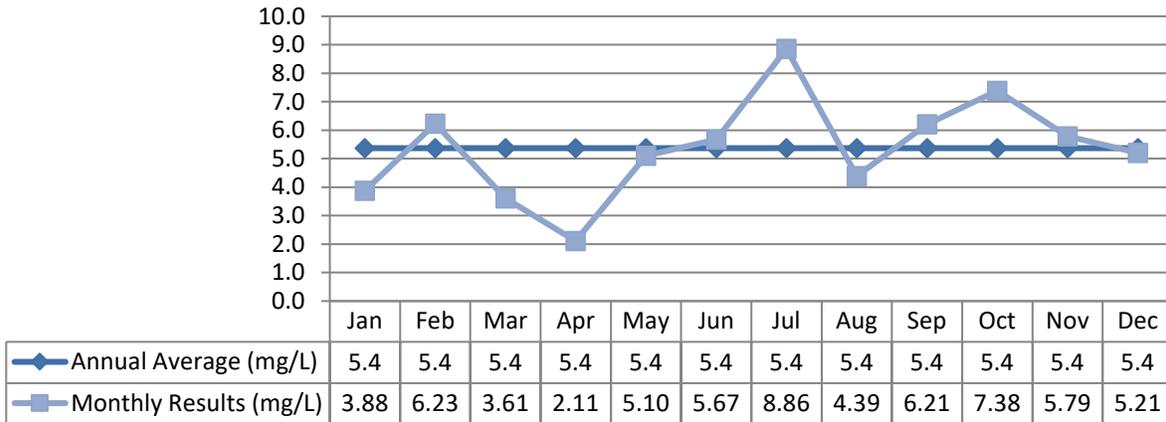
5.1 Biochemical Oxygen Demand (5-Day)



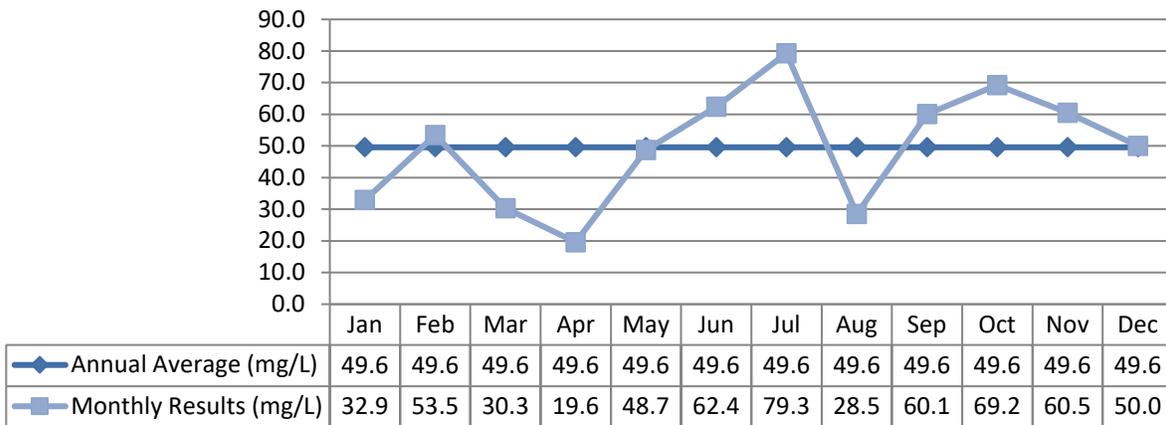
5.2 Total Suspended Solids



5.3 Total Phosphorus



5.4 Total Kjeldahl Nitrogen



6 Effluent Quality

The average concentrations of carbonaceous biochemical oxygen demand (CBOD₅), total phosphorus (TP) and total ammonia nitrogen (TAN) remained below the effluent objectives and limits outlined in the facility's ECA during the spring lagoon discharge. However, the average concentration of total suspended solids (TSS) exceeded the effluent limit during the spring discharge and the 2025 annual average daily effluent loading for TP exceeded the ECA Limit. The spring start of discharge effluent sample was lethal to *Daphnia Magna* and not lethal to Rainbow Trout. The spring end of discharge effluent sample was not lethal to either *Daphnia Magna* or Rainbow Trout.

Effluent pH remained within the limits and objectives specified in the ECA for all effluent samples collected during the spring discharge in 2025. The objective level of non-detectable was met for undissociated hydrogen sulphide (H₂S) during the spring discharge period, since all hydrogen sulphide results were less than the detection limit.

The results from the spring discharge period are tabulated below. No fall discharge was needed in 2025. Please refer to the Performance Assessment Reports in Appendix A for details.

6.1 Effluent Quality Assurance or Control Measures

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

Effluent control measures include pre-discharge sampling and testing of lagoon cell contents prior to seasonal discharges. The samples are collected by OCWA's competent and licensed staff using approved methods and protocols for sampling including those 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 effluent samples collected during the reporting period to meet legislated sampling requirements were submitted to Caduceon in Ottawa for analysis, with the exception of pH, temperature and un-ionized ammonia. Caduceon is accredited by the Canadian Association for Laboratory Accreditation (CALA). Accredited labs must meet strict provincial guidelines including an extensive quality assurance/quality control program. By choosing these laboratories, OCWA is ensuring appropriate control measures are undertaken during sample analysis.

The pH and temperature parameters were analyzed in the field at the time of sample collection by certified operators to ensure accuracy and precision of the results obtained. Un-ionized ammonia was calculated using the total ammonia nitrogen concentration, pH and temperature as required by the facility's ECA.

OCWA uses several computer systems which include:

- Process Data Management (PDM)

- This database program consolidates all operational data from a variety of sources including field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.
- Maximo – OCWA’s Work Management System (WMS)
 - This program is used to track and schedule maintenance activities for all equipment in the system. It is also used to assign tasks for specific operational tasks.
- Wonderware (OUTPOST5)
 - Wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming.

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

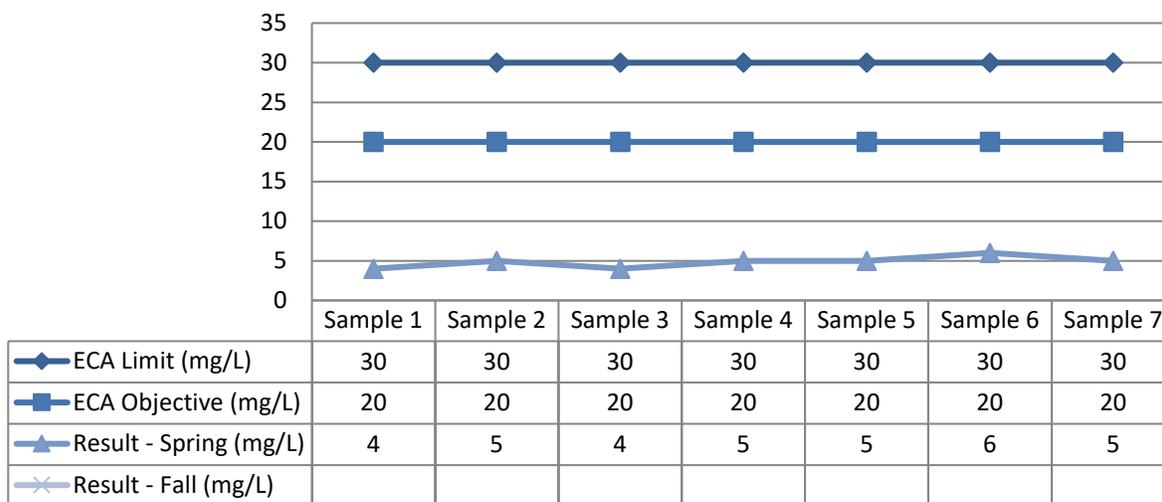
Detailed individual sample results for both raw sewage and final effluent can be requested from the operating authority.

6.2 Carbonaceous Biochemical Oxygen Demand (5-Day)

Discharge Period	Seasonal Average (mg/L)	Objective (mg/L)	Objective Exceedance (Y/N)	Limit (mg/L)	Limit Exceedance (Y/N)
Spring	4.9	20	N	30	N
Fall*	N/A	20	N	30	N

*No fall discharge needed in 2025

Effluent CBOD₅ Results:



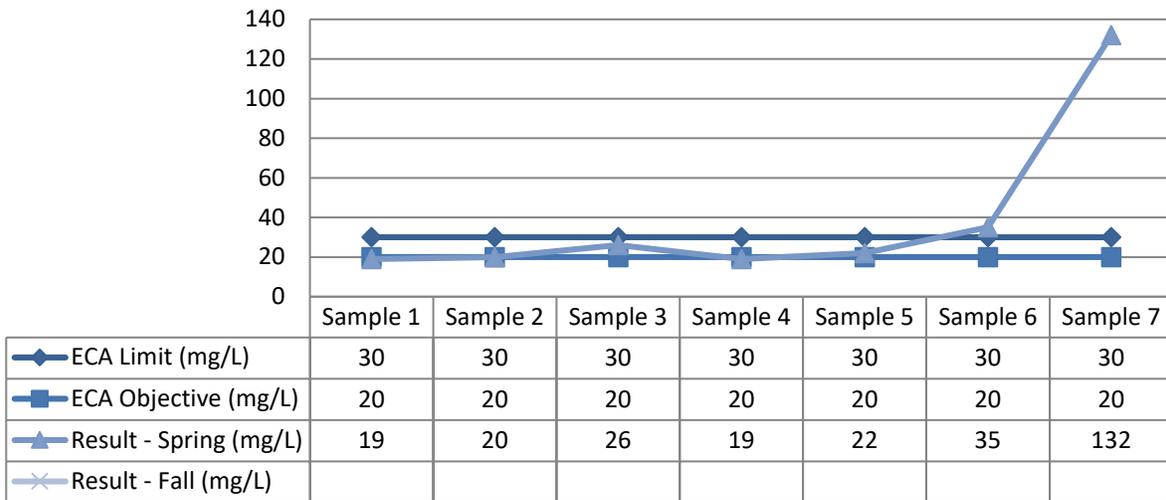
6.3 Total Suspended Solids

Discharge Period	Seasonal Average (mg/L)	Objective (mg/L)	Objective Exceedance (Y/N)	Limit (mg/L)	Limit Exceedance (Y/N)
Spring	39.0	20	Y*	30	Y*
Fall**	N/A	20	N	30	N

*Please refer to the ‘Operating Issues’ section of this report for details.

**No fall discharge needed in 2025

Effluent TSS Results:



6.4 Total Phosphorus

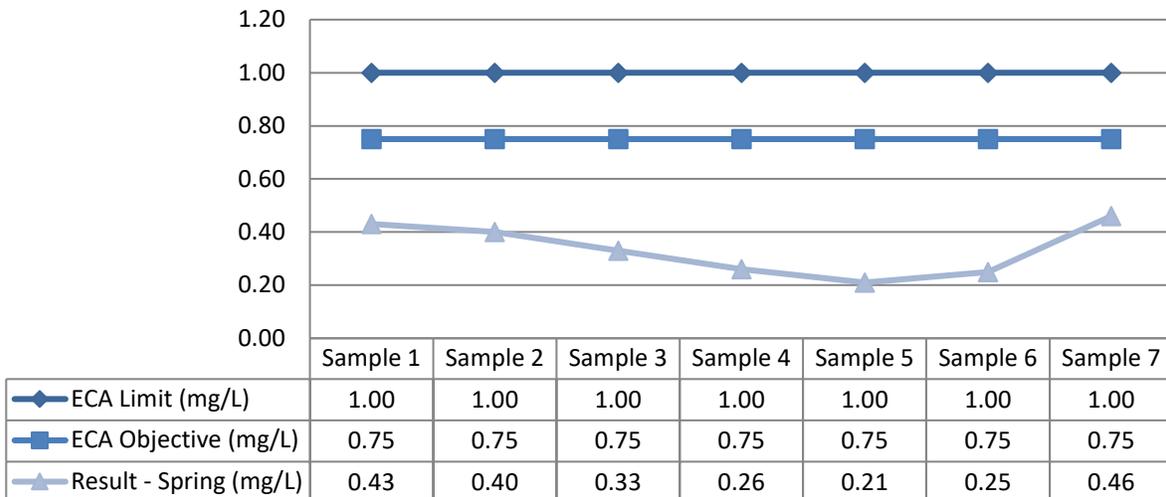
Discharge Period	Seasonal Average (mg/L)	Objective (mg/L)	Objective Exceedance (Y/N)	Limit (mg/L)	Limit Exceedance (Y/N)
Spring	0.33	0.75	N	1.00	N
Fall**	N/A	0.75	N	1.00	N

Discharge Period	Annual Average (mg/L)	Limit (kg/d)	Exceedance (Y/N)
2025	3.37	1.66	Y*

*Please refer to the 'Operating Issues' section of this report for details.

**No fall discharge needed in 2025

Effluent TP Results:



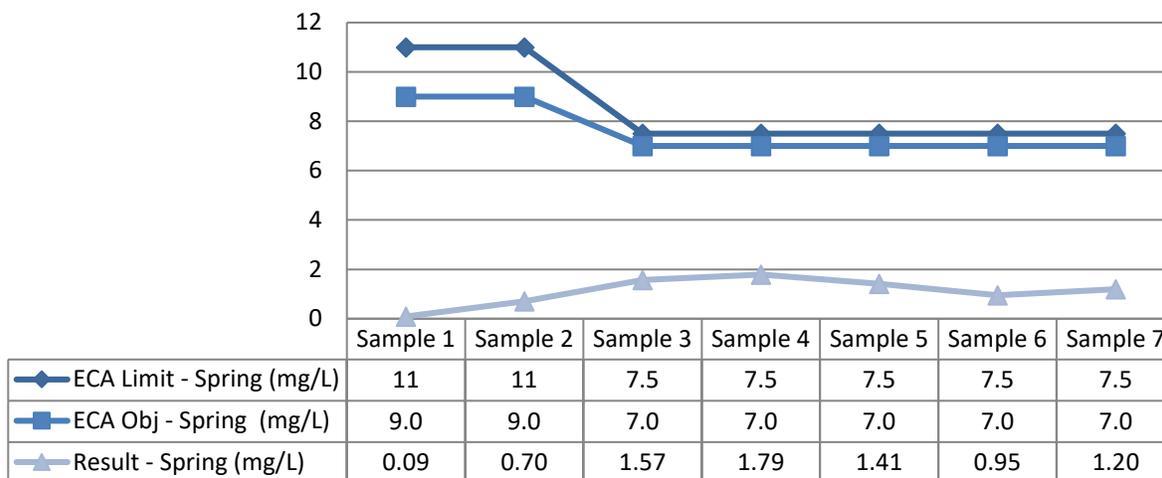
6.5 Total Ammonia Nitrogen

Discharge Period	Seasonal Average (mg/L)	Objective (mg/L)	Objective Exceedance (Y/N)	Limit (mg/L)	Limit Exceedance (Y/N)
Spring (Mar 1 – Mar 31)*	N/A	9.0	N	11.0	N
Spring (Apr 1 – Apr 30)	1.1	7.0	N	7.5	N
Fall (Nov 1 – Dec 16)**	N/A	4.5	N	5.5	N

*Spring discharge from April 11 – 30, 2025

**No fall discharge needed in 2025

Effluent TAN Results for Spring Discharge Period:



6.6 Undissociated Hydrogen Sulphide

Discharge Period	Seasonal Average (mg/L)	Objective (mg/L)	Objective Exceedance (Y/N)	Limit (mg/L)	Limit Exceedance (Y/N)
Spring	Non-Detectable	Non-Detectable	N	0.02	N
Fall*	N/A	Non-Detectable	N	0.02	N

*No fall discharge needed in 2025

Effluent Undissociated H₂S Results for Spring Discharge Period:

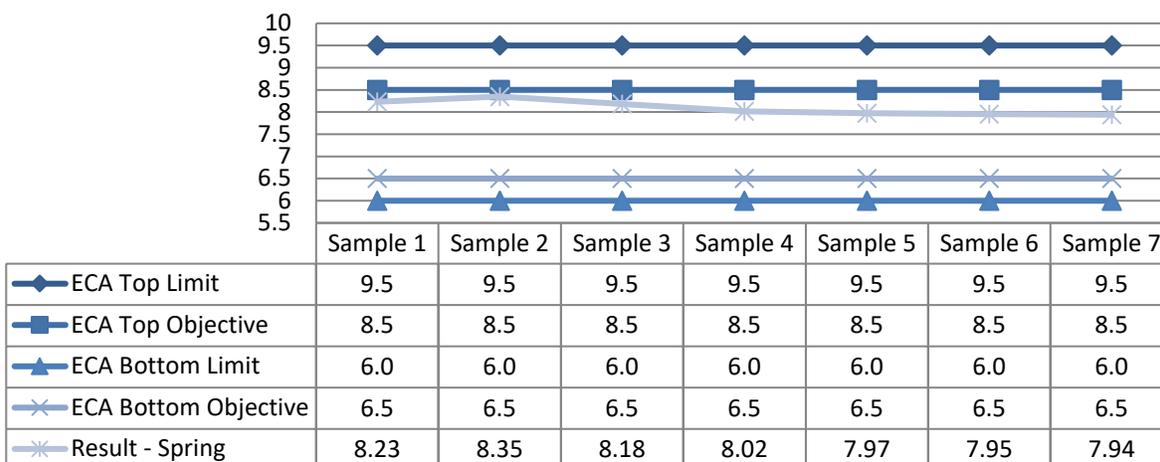
	11-Apr	14-Apr	17-Apr	22-Apr	25-Apr	28-Apr	30-Apr	Average
S ²⁻ (mg/L)	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.16	ND
pH	8.23	8.35	8.18	8.02	7.97	7.95	7.94	8.09
Temp	7.5	9.8	7.9	11.4	12.6	14.6	12.0	10.8
% Undissociated H ₂ S (from table)	-	-	-	-	-	-	-	-
Undissociated H ₂ S (mg/L)	ND							

6.7 pH

Discharge Period	Seasonal Average	Objective	Objective Exceedance (Y/N)	Limit	Limit Exceedance (Y/N)
Spring	8.09	6.5 – 8.5	N	6.0 – 9.5	N
Fall*	N/A	6.5 – 8.5	N	6.0 – 9.5	N

*No fall discharge needed in 2025

Effluent pH Results:



6.8 Acute Lethality

There were two samples collected in 2025 and tested for acute lethality (Rainbow Trout and Daphnia Magna). Results are displayed as % mortality. An adverse result is a >50% mortality rate.

In accordance with the ECA, sampling can be reduced to once annually (alternating spring and fall) after four consecutive discharges indicated the effluent was not lethal. Given these sample results, the reduced sampling frequency no longer applies. Sampling will occur during both the spring and fall discharge for at least the next 4 consecutive discharge periods.

Sample Period	Rainbow Trout	Daphnia Magna
Spring Discharge - Start	0 %	53.3 %
Spring Discharge - End	0 %	0 %

7 Operating Issues

7.1 Effluent Quality Non-Compliance Summary

Date	Exceedance of	Limit	Value	Corrective Action
Spring Discharge	Total Suspended Solids (TSS)	30 mg/L	39.0 mg/L	Seven samples were collected over the course of the discharge. The sample that was collected at the very end of the discharge caused the seasonal average TSS exceedance.
Spring Discharge (start of discharge)	Acute Lethality <i>Daphnia magna</i>	50 %	53.3 %	Although 53% mortality was observed for <i>Daphnia magna</i> , there was 0% mortality to Rainbow Trout and the acute lethality sample collected at the end of the discharge resulted in 0% mortality to both species. The 53 % mortality was likely caused by the alum dosing the day prior to commencing the discharge.

Date	Exceedance of	Limit	Value	Corrective Action
				Batch dosing is not usually needed since alum is normally dosed on a continual basis at this facility, but continual dosing was not possible for much of 2024 due to issues with a pipe in the alum building that had to be repaired.
2025	Total Phosphorus Loading	1.66 kg/d	3.37 kg/d	<p>The annual average daily effluent loading calculated for Total Phosphorus exceeded the ECA limit of 1.66 kg/d in 2025 although the TP concentration of all samples remained below both the limit and objective specified in the ECA throughout the lagoon discharge period.</p> <p>This annual loading limit cannot reasonably be achieved given the discharge constraints set out in the ECA. Historically, efforts to comply with the total phosphorus loading limit have focused on extending the discharge period as much as possible; however, this approach has not been sufficient to prevent an annual loading exceedance. Given the limitations of the allowable discharge window, it may be appropriate at this time to review the loading limit and consider an exemption from ongoing annual reporting.</p>

7.2 Summary of Abnormal Sewage Discharge Events

Abnormal Discharge Events include Bypasses, Overflows, and Spills of Sewage. No Bypasses, Overflows or Spills of Sewage occurred during the reporting period. 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
None to report.					

8 Maintenance

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer’s and/or industry standards. Maintenance is completed using various tools and operational supports. The Eastern Regional Hub has specialized and certified staff such as Millwrights, Electricians and Instrumentation Specialists to name a few.

OCWA uses a Workplace Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis.

The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.

Routine planned maintenance activities are scheduled in WMS and include:

- Inspect, adjust and calibrate process control equipment to ensure proper operation of sewage collection 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.

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

Unplanned maintenance is conducted as required.

Suggested capital projects and major maintenance recommendations are provided to the Municipality of North Dundas by OCWA annually. This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.

8.1 Maintenance and Repairs Summary

Description
<ul style="list-style-type: none"> - Routine sewer flushing & wet well cleaning completed - Annual service on standby generators completed - Annual inspection of lifting devices completed - Annual backflow preventer inspection completed - Annual flow meter calibration completed - Serviced blowers 1 and 2 at lagoon - Fixed hole in floor from pipe repair in the alum building at lagoon - Batch dosed Cell 4 and 5 in the spring with approximately 80 mg/L of aluminum sulfate - Installed generator at Lori Lane SPS - Replaced UPS at Lori Lane SPS - Removed obstruction from Pump 2 at Lori Lane SPS - Replaced guide rails for both pumps at Lori Lane SPS - Replaced level transducer for wet well 2 at Water St. SPS - Replaced chain and hook plate on Wet well 1 basket at Water St. SPS - Installed two new sewer connections on Elizabeth St

8.2 Flow Meter Calibration and Maintenance

Location	Date of Calibration	Additional Maintenance
Lagoon Effluent Flow Meter	April 15, 2025	N/A
Influent Flow Meter (Water St. SPS)	April 15, 2025	N/A

Location	Date of Calibration	Additional Maintenance
Influent Flow Meter (Emma St. SPS)	Station offline in 2025	N/A

8.3 Authorized Alterations in Collection System

Work Order	Details	Significant Drinking Water Threat (Y/N)
None to Report		

8.4 Notice of Modifications

Date	Process	Modification	Status
None to report			

9 Sludge Generation

Sludge depth is monitored periodically, and plans for sludge removal are made as required for optimal operation of the lagoon system. Sludge levels in all ponds were measured in 2025. The measurements were as follows:

Lagoon Cell	Sludge Depth
Primary Cell No. 1	3 – 4"
Primary Cell No. 2	1 – 4"
Secondary Cell	0 – 2"
Polishing Cell (East)	1 – 3"
Polishing Cell (West)	1 – 6"

9.1 Sludge Disposal Summary

Approximately 6500 m³ of sludge was removed from the West polishing cell in 2019. No sludge was removed or land applied in 2025.

10 Summary of Complaints

Location	Date	Nature of Complaint	Actions Taken
Lori Lane	July 2025	Lateral blockage	Lateral was flushed to remove the blockage
Armstrong Place	August 2025	Lateral blockage	Pipe sleeve insert collapse creating blockage. Replaced section of pipe to complete repair.

Appendix A – Performance Assessment Reports

PERFORMANCE ASSESSMENT REPORT

MONTH	FLOWS			EFFLUENT		Avg. Alum Dosage* (mg/L)	BIOCHEMICAL O ₂ DEMAND			SUSPENDED SOLIDS			PHOSPHORUS			TKN
	Total Flow (m ³)	Avg Day Flow (m ³)	Max Day Flow (m ³)	Effluent Flow (m ³)	Discharge Duration (days)		Avg Raw BOD (mg/L)	Avg Eff CBOD (mg/L)	Percent Removal (%)	Avg Raw SS (mg/L)	Avg Eff SS (mg/L)	Percent Removal (%)	Avg Raw PHOS. (mg/L)	Avg Eff PHOS. (mg/L)	Percent Removal (%)	Avg Raw TKN (mg/L)
JAN	21,105	681	1,296			59	193			170			3.88			32.9
FEB	14,720	526	639			58	229			230			6.23			53.5
MAR	47,654	1,537	4,370			58	113			120			3.61			30.3
APR	42,063	1,402	3,155	201,790	20	68	54	4.9		75	39.0		2.11	0.33		19.6
MAY	21,697	700	876			104	207			360			5.10			48.7
JUN	17,637	588	703			56	63			150			5.67			62.4
JUL	16,105	520	597			73	69			705			8.86			79.3
AUG	15,580	503	581			71	97			225			4.39			28.5
SEPT	15,270	509	584			74	196			130			6.21			60.1
OCT	16,431	530	1,026			75	191			142			7.38			69.2
NOV	21,151	705	1,016			100	229			120			5.79			60.5
DEC	19,903	642	1,017			87	90			110			5.21			50.0
TOTAL	269,316			201,790	20											
AVG		738					144	4.9	96.6	211	39.0	81.6	5.37	0.33	93.9	49.6
MAX			4,370			73.6	229			705			8.86			
CRITERIA		1,660						30			30			1.0		

Comments: Percent removal based on 12 months of raw composite samples

Effluent Sample Results

		SPRING									
DATE		11-Apr	14-Apr	17-Apr	22-Apr	25-Apr	28-Apr	30-Apr	Average	ECA Objective	ECA Limit*
Sample Twice Weekly	CBOD5 (mg/L)	4	5	4	5	5	6	5	4.9	20	30
	TSS (mg/L)	19	20	26	19	22	35	132	39.0	20	30
	TP (mg/L)	0.43	0.40	0.33	0.26	0.21	0.25	0.46	0.33	0.75	1.0
	**NH ₃ (mg/L)	0.09	0.70	1.57	1.79	1.41	0.95	1.20	1.10	7.0	7.5
	S ²⁻ (mg/L)	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.16			
	TKN (mg/L)	2.3	3.4	4.3	4.7	4.2	3.4	4.0			
	NO ₂ (mg/L)	<0.05	<0.05	<0.05	0.09	0.13	0.13	0.11			
	NO ₃ (mg/L)	0.14	0.14	0.46	1.24	1.16	1.19	1.04			
	<i>E.coli</i> (cfu/100mL)	40	10	90	240	100	230	1700			
Unionized NH ₃ calculations	On Site Temperature	7.5	9.8	7.9	11.4	12.6	14.6	12.0			
	On Site pH	8.23	8.35	8.18	8.02	7.97	7.95	7.94			
	NH ₃ -N (lab)	0.09	0.7	1.57	1.79	1.41	0.95	1.20			
	un-ionized NH ₃ -N (calc)	0.002	0.028	0.036	0.001	0.029	0.022	0.022			

* ECA limit. Monthly average concentration shall not exceed the corresponding maximum concentration

** NH₃ Objectives: March - 9.0 mg/L; April - 7.0 mg/L; NH₃ Limits: March - 11.0 mg/L, Apr - 7.5 mg/L

Pre-Discharge Results

	Spring				
	West (4)	East (5)	Cell 3	Cell 2	West (4)
CBOD5 (mg/L)	5	10	<3	<3	
TSS (mg/L)	6	28	4	3	31
TP (mg/L)	2.35	0.89	0.13	0.28	0.90
NH3	6.55	0.49	0.47	2.79	
TKN	13.4	3.3	1.1	3.7	
H2S	<0.08	<0.08	<0.01	0.02	
<i>E. Coli</i>	30	<10	<10	20	
pH	7.9	8.2	8.1	8.1	7.6

Batch dosed Aluminum sulphate in Cell 4 & 5 on April 10th

Un-ionized Ammonia Calculation

Sample Date	Sample Temperature (°C)	Degrees Kelvin	Dissociation Constant pKa	Sample pH on-site	Fraction of Un-ionized Ammonia	Total Ammonia (mg/L) (NH ₃ +NH ₄ +as N)	Un-ionized Ammonia (mg/L)
11-Apr	7.5	280.65	9.82	8.23	0.0252	0.09	0.002
14-Apr	9.8	282.95	9.74	8.35	0.0393	0.7	0.028
17-Apr	7.9	281.05	9.80	8.18	0.0232	1.57	0.036
22-Apr	11.4	284.55	9.68	8.02	0.0212	1.79	0.038
25-Apr	12.6	285.75	9.64	7.97	0.0208	1.41	0.029
28-Apr	14.6	287.75	9.58	7.95	0.0230	0.95	0.022
30-Apr	12.0	285.15	9.66	7.94	0.0185	1.20	0.022

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
None to report.								

Facility Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
None to report.								

Collection Overflow

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
None to report.								

Spills of Sewage

Date	Location	Details	Volume (m3)	Start Time	End Time	Duration (h)	Discharge Receiver	Disinfection Provided
None to report.								

Collection System Monitoring Data

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

Appendix C – ECA Annual Report Requirements

Facility ECA #6657-BPYPVL Section 11(4)	Section in Report
4.a. A summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;	Wastewater System Flows Raw Sewage Quality Appendix A
4.b. A summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works and projected performance as Influent flow increases;	Wastewater System Flows Effluent Quality Appendix A
4.c. A summary of all operating issues encountered and corrective actions taken;	Operating Issues
4.d. A summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus or mechanism forming part of the Works;	Maintenance
4.e. A summary of any effluent quality assurance or control measures undertaken;	Effluent Quality
4.f. A summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;	Maintenance
4.g. A summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations: i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality; ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;	Wastewater System Flows Effluent Quality Operating Issues
4.h. A tabulation of the measured volume of sludge accumulated in the lagoon cells in five year intervals and the estimated volume in the interim years and when sludge was disposed of during the reporting period, a summary of disposal locations and volumes of sludge disposed at each location;	Sludge Generation
4.i. A summary of any complaints received and any steps taken to address the complaints;	Summary of Complaints
4.j. A summary of all Bypasses, Overflows, other situations outside Normal Operating Conditions and spills within the meaning of Part X of EPA and abnormal discharge events;	Operating Issues Appendix B
4.k. A summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification;	Maintenance
4.l. A summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.	Maintenance Operating Issues

Collection ECA #180-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
4.6.4 Includes a summary of any operating problems encountered and corrective actions taken.	Operating Issues
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 Appendix B
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