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March 31st, 2025

Dear Environmental Services Customer,

We are pleased to provide the 2024 Annual Performance Report for the City of Stratford's Stormwater Management System. This report has been completed in accordance with the Environmental Compliance Approval #074-S701, Schedule E Section 5.2, issued October 20, 2022, and issued to the City of Stratford.

This report covers the period from January 1, 2024 to December 31, 2024 and will be made available on the City of Stratford website by June 1, 2025. Hard copies will also be available at our 82 Erie St. office on the 3rd floor.

For any questions or additional information regarding the report, please contact me at (519) 271-0250 ext. 222.

Yours truly,

A handwritten signature in black ink, appearing to read "S Beech". The signature is written in a cursive, flowing style.

Sean Beech
Manager of Environmental Services



2024

ANNUAL PERFORMANCE REPORT

City of Stratford Stormwater
Management System

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Executive Summary

The City of Stratford Stormwater Management System (SWM) is owned and operated by the City of Stratford in accordance with Environmental Compliance Approval #074-S701, issued October 20, 2022. The SWM system consists of approximately 172 kms of storm sewers, 212 km of ditches and 1 stormwater pumping station. The SWM system also includes all other controls, electrical equipment, SWM ponds, oil/grit separators, appurtenances that are essential for the operation of the works.

Throughout the reporting period (January 1, 2024 to December 31, 2024), staff worked diligently completing several maintenance, rehabilitation and renewal projects to ensure the adequacy of the City's stormwater system infrastructure.

No Ministry of Environment, Conservation and Parks (MECP) inspections occurred during the reporting period.

2024 Annual Performance Report – Stormwater Management System

In accordance with the Environmental Compliance Approval #074-S701, Schedule E Section 5.2, The City of Stratford, as the Owner of the Municipal Stormwater Management System, shall prepare and submit a performance report to the Ministry of the Environment, Conservation and Parks (MECP) on an annual basis.

Schedule E Section 5.2 of the ECA requires the Annual Performance Report to contain the following elements:

- (a) a summary and interpretation of all monitoring data, including an overview of condition and operational performance of the Works and any Adverse Effects on the Natural Environment,
- (b) a summary and interpretation of environmental trends based on all monitoring information and data for the previous five (5) years,
- (c) a summary of any operating problems encountered, and corrective actions taken,
- (d) a summary of all inspections, maintenance and repairs carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Authorized System,
- (e) a summary of the calibration and maintenance carried out on all monitoring equipment,
- (f) a summary of any complaints related to the Works received

during the reporting period and steps taken to address the complaints,

- (g) 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
- (h) a summary of all spills or abnormal discharge events,
- (i) a summary of actions taken, including timelines, to improve or correct performance of any aspect of the Authorized System; and
- (j) Includes a summary of the status of actions for the previous reporting year.

The following report was generated from the records maintained by The City of Stratford Stormwater Management System for the calendar year of 2024.

(a) Interpretation of Monitoring Data

City staff observe and monitor the Romeo Street Storm Pumping Station regularly during station checks/inspections and while performing scheduled preventative maintenance activities. Staff exercise due diligence in ensuring the Works and the related equipment are properly operated and maintained and any observations are being recorded in our work order system and the facility digital logbook (e.Ris). Please refer to Appendix A for examples of our e.Ris logbook system.

Monitoring and inspection of the SWM system includes annual programs consisting of; storm main flushing and camera work, stormwater management facility inspections and maintenance hole repair/replacement. All programs help to sustain an effective Capital Works program that coordinates with the City's maintenance objectives.

The data chart on the following page details the monitoring activities performed by staff during the reporting period. Based on the data collected and reviewed, it has been determined that the system is performing adequately to meet demand and maintenance requirements. At this time there are no required major modifications required for the SWM system. Continuous improvement and optimization will continue to be a priority for staff and management.

Table A – Summary of Monitoring Programs

Program Title	Program Description	Adverse Effects on the Natural Environment?
Storm Sewer Flushing	Combination of reactive flushing due to storm main obstructions and mains flushed because of scheduled flushing as per O&M Manual frequency.	No
Oil/Grit Separator Inspections	Semi Annual and post “Significant Rain Event” Inspections.	No
Ditch Inlet Inspections	Semi Annual and post “Significant Rain Event” Inspections.	No
Outfall Inspection	Semi Annual and post “Significant Rain Event” Inspections.	No
SWM Pond Inspection	Semi Annual and post “Significant Rain Event” Inspections.	No
SWM Pumping Station Inspection	Weekly inspections of the operating and health and safety components of the Romeo Underpass Stormwater Pumping Station	No
Catch Basin Cleaning	Half of the City catch basins are cleaned every year depending on North/South CB locations. This work is completed by an external hydrovac contractor.	No

(b) Interpretation of Environmental Trends

Prior to the implementation of the new CLI-ECA, the City did not have these monitoring programs in place as defined in the new O&M Manual. There were some annual checks completed on the SWM Ponds for example, but work was not tracked in the same format that we now have in place with digital forms and record keeping.

The consistent program that has been in place is the catch basin cleaning and storm main flushing. Staff have identified no abnormal conditions from the historical storm main flushing. Catch basin cleaning is completed by an external contractor and there have been no abnormal conditions reported.

Staff are expecting this section of the Annual Performance Report to be more informative after the first few years of the new monitoring programs being in effect with proper documentation. At that time there will be reliable and consistent data that can be compared and interpreted.

Table B – Environmental Trends

Monitoring Data	Environmental Trend	Interpretation and Comments
N/A	N/A	N/A

(c) Operating Problems and Corrective Actions

The table below provides a summary of operating problems that required immediate corrective action to allow the system to function as designed. Most of the work completed on SWM appurtenances during this reporting period are covered in section D under repairs and maintenance.

Table C – Operating Problems and Corrective Actions

Operating Problem	Corrective Action	Date
N/A	N/A	N/A

(d) Inspections Maintenance and Repairs

The table below is a summary of all inspections, maintenance and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Authorized System.

All maintenance was performed on behalf of the Owner, by trained staff or qualified contracted services providers who exercise due diligence in ensuring the Works and the related equipment are properly operated and maintained to achieve compliance with the Approval.

Table D – Summary of Maintenance and Repairs

Work Order	Work Description	Work Type	Completion Date
ST-24-0001	Catch Basin Repair- Sim 01987 Waddell at Greenwood	C/B Connection Repair/Replace	2/8/2024
ST-24-0002	Semi-Annual Ditch/Ditch Inlet Inspections	Catch Basin Repair	7/8/2024
ST-24-0003	Maintenance Hole Lid Replacement- MH 00663	Maintenance Hole Replacement	1/9/2024
ST-24-0004	Semi-Annual Storm Pond Outlet Inspections	Catch Basin Repair	1/10/2024
ST-24-0005	Catch Basin Rebuilds- Huron Street	C/B Repairs	6/25/2024

ST-24-0006	SWMP- Major Weather Event Outfall Inspections	SWM Facility Inspections	1/26/2024
ST-24-0007	Ditch Inlet Cleaning - Lorne Ave at Linton Ave.	Ditch Cleaning & Inspection	3/23/2023
ST-24-0008	Avon West SWMP- Rod/ Clean Out Outlet	SWM Facility Maintenance	1/31/2024
ST-24-0009	CCTV- 120 Normandy- Storm Service	Storm System Investigations	1/31/2024
ST-24-0010	Storm Sewer Flushing - Drainage Area B24/25	Storm Flushing	12/27/2024
ST-24-0011	Manhole Repair – 17 Kemp- MH10943	Storm Replacement/Repair	3/13/2024
ST-24-0012	Storm Sewer Flushing - Drainage Area B29	Storm Flushing	3/26/2024
ST-24-0013	Catch Basin Cleaning and CCTV Investigation- AHDC	Stormwater Maintenance	2/23/2024
ST-24-0014	CCTV Huron Stormmain- Avondale to Huntington	Storm System Investigation	3/18/2024
ST-24-0016	West Gore- Culvert Blockage	Storm System Maintenance	3/13/2024
ST-24-0017	Storm Pipe Investigation- King St. Storm Arch for Engineering	Storm System Investigation	3/15/2024
ST-24-0018	Storm Pipe Investigation- Lorne Ave. Future Development for Engineering	Storm System Investigation	3/15/2024
ST-24-0019	Storm Sewer Flushing - Drainage Area B29	Storm Flushing	8/22/2024
ST-24-0020	Storm MH and C/B Repair- Greenwood and Whitelock	Catch Basin/MH Repair	5/2/2024
ST-24-0021	Catch Basin Repair - Burritt At Oxford 04247	Catch Basin Repair	5/15/2024
ST-24-0022	Catch Basin Repair- 132 Mowat- 02603	Catch Basin Repair	5/16/2024
ST-24-0023	Ditch Inlet Cleaning - Lorne Ave- DIB00124	Stormwater Maintenance	4/24/2024
ST-24-0024	SWMP- Semi-Annual Spring Inspections	SWM Facility Inspections	4/15/2024
ST-24-0025	Whyte Ave Sinkhole/ Storm Lead Repair- CB00700	Catch Basin Repair	4/18/2024
ST-24-0027	211 Lorne Ave West- Ditch Inlet/Storm Lead Repair	Storm Replacement/Repair	5/16/24
ST-24-0028	219 Lorne Ave East- Ditch Inlet/Storm Lead Repair	Storm Replacement/Repair	5/10/2024
ST-24-0030	MH Frame Replacement- Campbell Court MH 10249	Storm Replacement/Repair	5/16/2024
ST-24-0031	Culvert flushing- Quinlan Road	Culvert Maintenance	4/29/2024
ST-24-0032	Catch Basin Repair - 92 Briarhill- 01714	Catch Basin Repair	5/3/2024
ST-24-0033	34 Arden Park Catch Basin/ Curb Repair	Catch Basin Repair	9/19/2024
ST-24-0034	Catch Basin Repair - 40 Perth Street	Catch Basin Repair	6/25/2024
ST-24-0035	Storm Sewer Flushing - Drainage Area B30	Storm Flushing	10/11/2024
N/A	Annual Fall Arrest and Lifting Device Inspections- Romeo Storm Pumping Station	Health and Safety	02/01/2024
ST-24-0036	SWMP- Vegetation Removal	SWMP Maintenance	05/29/2024
ST-24-0037	244 Water St. Catch Basin Repair 03543/03542	Catch Basin Repair	5/31/2024
ST-24-0038	Dye Test- 160 Erie Street Sinkhole	Storm System Investigation	9/11/2024
ST-24-0039	Storm pipe replacement/repair- 634 Erie St.	Storm Replacement/Repair	6/4/2024
ST-24-0040	Catch Basin Repair - Haig Street-00358	Storm Replacement/Repair	6/3/2024
ST-24-0041	Storm Manhole Repair- Douro Street- MH12276, 12859	Storm Manhole Repair	6/4/2024
ST-24-0042	Storm Manhole Repair- Crawford Street- MH 10174-5	Storm Manhole Repair	6/5/2024
ST-24-0043	Catch Basin Repair - William Street	Catch Basin Repair	6/6/2024
ST-24-0044	Catch Basin Repair - 66 Queen Street	Catch Basin Repair	6/27/2024
ST-24-0045	Ditch work- Behind Purolator-324 Burritt Street	Ditch Cleaning & Inspection	6/13/2024
ST-24-0046	Catch Basin Repair - Romeo Underpass	Catch Basin Repair	6/14/2024

ST-24-0047	Catch Basin Repair - 372 Huron Street	Catch Basin Repair	6/21/2024
ST-24-0048	Catch Basin Repair - 400 Huron Street	Catch Basin Repair	6/18/2024
ST-24-0049	Catch Basin Repair - 511 Huron Street	Catch Basin Repair	9/9/2024
ST-24-0050	Storm Water Pond Grass Cutting- Access Roads	SWMP Maintenance	6/19/2024
ST-24-0051	Catch Basin Repair - 40 Perth Street	Catch Basin Repair	6/25/2024
ST-24-0052	Spill Response- 154 Norfolk Salt Spill in CB	Spills Response	6/24/2024
ST-24-0053	Catch Basin Repair - 23 Perth Street	Catch Basin Repair	6/26/2024
ST-24-0054	Catch Basin Repair - Willow at Walsh	Catch Basin Repair	6/26/2024
ST-24-0055	Catch Basin Repair - 261 Norfolk Street	Catch Basin Repair	6/28/2024
ST-24-0056	Catch Basin Repair - 388 Downie Street	Catch Basin Repair	7/22/2024
ST-24-0057	Rain Event - Weather Alert	Other Storm and C/B Activities	7/23/2024
ST-24-0058	Landfill- Cell 3 Pump Out	Other Storm and C/B Activities	7/11/2024
ST-24-0059	Extendcomm - Calls during Event	Other Storm and C/B Activities	7/23/2024
ST-24-0060	Ditch Inlet Cleaning - Lorne Ave at Linton Ave.	Ditch Cleaning & Inspection	7/17/2024
ST-24-0061	Manhole Frame Replacement- 288 Woods MH10407	Storm Replacement/Repair	8/12/2024
ST-24-0062	Culvert Replacement - North of CH Meier Blvd	Culvert Repair	7/18/2024
ST-24-0063	Catch Basin Repair - 45 Brunswick	Catch Basin Repair	8/22/2024
ST-24-0064	Storm Drain Maintenance - Waldie and Hislop	Municipal Drain Repairs	9/3/2024
ST-24-0065	Storm Catch Basin - 48 MacDonald investigating and maintenance	Catch Basin Cleaning	8/2/2024
ST-24-0066	Catch Basin Repair - 20 Jones Street	Catch Basin Repair	8/12/2024
ST-24-0067	Catch Basin Repair - 171 Willow Street	Catch Basin Repair	8/12/2024
ST-24-0068	Vac Out Repaired Catch Basins- Various locations	Storm M/H Maintenance	8/22/2024
ST-24-0069	Erie catchbasin repair	Catch Basin Repair	8/21/2024
ST-24-0070	Parge and patch CB on Douro	Catch Basin Repair	8/23/2024
ST-24-0071	Culvert flushing- Lorne Ave West	Culvert Maintenance	8/28/2024
ST-24-0072	Drainage Maintenance - Lorne at Home	Ditch Cleaning & Inspection	9/10/2024
ST-24-0073	CCTV- 659 Huron Street	Camera Investigation (Storm)	9/20/2024
ST-24-0074	Catch Basin Repair - 31 Centre Street	Catch Basin Repair	9/6/2024
ST-24-0076	Reset manhole on Griffith	Storm M/H Maintenance	9/11/2024
ST-24-0077	Internal Support - Community Services	C/B Connection Repair/Replace	11/1/2024
ST-24-0078	Debris Removal from Franklin Street MH 12660	Storm M/H Maintenance	9/17/2024
ST-24-0079	206 Queen catch basin flush	Storm Flushing	9/18/2024
ST-24-0080	Catch Basin Cleaning @ 410 Glendon Rd.	Catch Basin Cleaning	9/23/2024
ST-24-0081	Storm Sewer Flushing - Drainage Area B31	Storm Flushing	9/26/2024
ST-24-0082	Oil Spill - Nethercott Clean up	Other Storm and C/B Activities	9/24/2024
ST-24-0083	Storm Sewer Flushing - Drainage Area B32	Storm Flushing	11/5/2024
ST-24-0084	Forman / Briarhill hill Catchbasin repair	Catch Basin Repair	10/1/2024
ST-24-0085	CCTV Storm Sewer @ 176 Caledonia St.	Camera Investigation (Storm)	10/2/2024

ST-24-0086	Storm Sewer Flushing - Drainage Area B33	Storm Flushing	11/5/2024
ST-24-0087	Storm Sewer Flushing Drainage Area B33	Storm Flushing	10/25/2024
ST-24-0088	Manhole re -set Brunswick and Waterloo	Storm M/H Maintenance	10/11/2024
ST-24-0089	Internal Support - Community Services - Parksboard	Work for Other Departments (ST)	10/28/2024
ST-24-0090	Sinkhole Investigation @ Baldor (Lorne Ave.)	Culvert Repair	10/29/2024
ST-24-0091	Sinkhole Investigation @ 659 Huron St.	Culvert Repair	11/13/2024
ST-24-0092	Clearing CBs and Inspecting Ditch Inlets	Ditch Cleaning & Inspection	10/29/2024
ST-24-0093	Internal Support - Community Services Rotary	Work for Other Departments (ST)	10/30/2024
ST-24-0094	Storm Sewer Flushing- B34 Catchment Area	Storm Flushing	11/7/2024
ST-24-0095	CCTV CB Lead @ 615 Erie St.	Camera Investigation (Storm)	11/26/2024
ST-24-0096	Hillcrest - Catch basin repair	Catch Basin Repair	11/7/2024
ST-24-0097	Storm Sewer Flushing Drainage Area B36	Storm Flushing	11/19/2024
ST-24-0099	Beaver Dam Work -2 locations	Ditch Cleaning & Inspection	11/19/2024
ST-24-0100	Storm Sewer Flushing- B35 Catchment Area	Storm Flushing	12/30/2024
ST-24-0101	Sanitary MH Lid Replacement- 69 Whyte (MH000543)	Manhole Repair	11/20/2024
ST-24-0102	Repair CB Lead @ 615 Erie St.	Catch Basin Repair	11/27/2024
ST-24-0103	Manhole Repair - Mowat and West Gore 10537	Storm M/H Maintenance	11/28/2024
ST-24-0104	Training - JD Brule	Training	
ST-24-0105	Spill at PWD - Brine	Other Storm and C/B Activities	

(e) Calibration and Maintenance of Monitoring Equipment

The table below summarizes the calibration and maintenance of monitoring equipment. There is only one pumping station that operates on float level control and does not have miltronics. There is an hour meter which is the only data collection that happens at that site.

Table E – Summary of Calibration and Maintenance of Monitoring Equipment

Monitoring Equipment	Calibration/Maintenance	Date
Underpass SPS Hour meter	The hour meter at the Underpass SWM Pumping Station is not working. This has been assigned to an external electrical contractor and work will be completed in 2024 and reported in the 2024 Performance Report.	12/22/2023

(f) Complaints

There were zero (0) SMW complaints related to the City owned infrastructure during this reporting period. During heavy rain events, there are typically calls that come into the City from residents who

have issue with stormwater flooding in their yards or basement flooding from drainage and sanitary private cross connections. These issues are referred to the City By-law department as the issues are related to private property drainage and not City SWM infrastructure.

Table F – Summary of Complaints

Complaint	Resolution	Date
N/A	N/A	N/A

(g) Alterations to the Authorized System

The table below summarizes the projects that saw alterations to the SWM system in 2023. Several of the projects in the reporting period were water only and not storm. In addition, there were no new developments that connected to the system in 2023. This is expected to be much different in the 2024 Performance Report as the City expects to see more developments and capital projects connecting to the SWM system in 2024.

Table G – Summary of Alterations to the Authorized System

Alteration to the Authorized System Project Name	Project Details	Does This Project Pose a Significant Drinking Water Threat (SDWT)?
Albert. St Reconstruction Capital Project Phase 1	The replacement of all City infrastructure on Albert St. From Waterloo Ave. to Front St. This includes all sanitary, storm , water, roadway, sidewalks, and curb. Specifically, for storm, this saw the replacement of approximately 520m of storm mains and all property storm servicing within the work area to property line.	No

(h) Spills and Discharges

The table below summarizes any spills or abnormal discharges that occurred in the SWM system during the reporting period.

Table H – Spills and Discharges

Spill/Discharge Event	Details	Date
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115 Monteith Ave. Spill	<p>Staff responded to a reported spill called in from the Fire Department at a commercial property fire. Oil from the property was mixing with the water being used by the fire department and was flowing into the nearby catch basin. Staff applied booms and absorbent mats at all applicable catch basins in the area. Staff also hydrovac cleaned all surrounding catch basins.</p> <p>There were no issues observed downstream of the SWM system or in any receiving waters.</p> <p>The Spills Action Centre was contacted, and this spill was reported under Ref # 1-2GDWGL. No further action was required.</p>	01/16/2023
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(i) System Performance Improvements

The table below summarizes the capital and operating projects that were incorporated during the reporting period that had an overall positive impact on system performance.

Table I – System Performance Improvements

System Performance Improvement	Project Description
Albert St. Reconstruction	The replacement of existing storm mains and laterals which lower the inflow and infiltration into the SWM system.
Sewermain Relining	The City relined approximately 1.2km of existing storm mains in the reporting period which will result in reduced inflow and infiltration.
Subsidy Programs	\Tthree properties disconnected their weeping tile of their homes from the sanitary lateral and installed a sump pump. Four properties had their sewer laterals relined. These were all completed under the City's sewer subsidy programs and result in reduced system inflow and infiltration.

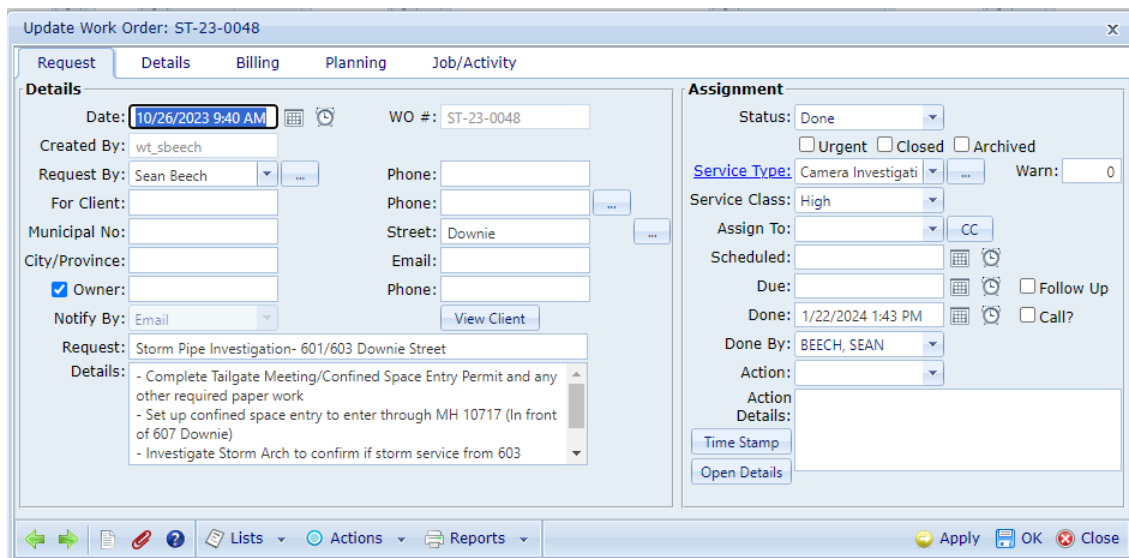
<p>SWM Pond Assessment and Sediment Survey</p>	<p>Matrix Solutions Inc. was retained by the City to complete this assessment of the existing SWM ponds. The assessment provides maintenance and rehabilitation recommendations for the SWM ponds and gives clear direction for budgeting and maintenance planning.</p>
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(j) Previous Reporting Year Update

This section is to include a summary of the status of actions for the previous reporting year. Since this is the inaugural year for the new CLI-ECA and the required Annual Performance Report, there are no preexisting actions for the SWM department. New goals and objectives are being developed internally and there will be quantifiable and tangible action items and performance improvements reviewed in the 2024 Annual Performance Report.

Appendix A

Examples of e.Ris Digital Forms and Maintenance Tracking:



Save New **2023-06-26 10:45:00**

	Comments & History	Value
Date and Time		2023-06-26 10:45:16
Inspection Type		Semi-Annual Inspection
SWM Pond Type		Wet Pond
SWM Pond Name		Crane Ave SWMPs
Asset ID		341300004, 341300005, 34
Vegetation Concerns		No
Obstructions of the Inlet and/or Outlet?		Yes
Evidence of Spills and or Grease Contamination?		No
Presence of Trash Build-Up?		No
Presence of Algae?		Select value...
Presence of Invasive Species?		None Observed

Save New **2023-08-02 11:43:00**

	Comments & History	Value
Date and Time		2023-08-03 11:40:00
Inspection Type		Scheduled Inspection
All vegetation obstructions removed?		No
All debris and garbage removed?		Yes
List all outfalls ID's with erosion issues		No
List all outfalls ID's with structural issues		No
List any other outfalls IDs that require corrective action		Obstruction Removed. Pond Draining as
Inspection Completed By		Enter value..