



2023

**MIDLAND MUNICIPAL STORMWATER
MANAGEMENT SYSTEM**

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Executive Summary

The Midland Municipal Stormwater Management System is owned and operated by the Town of Midland in accordance with Environmental Compliance Approval Number 122-S701 issued on July 13th, 2022.

The Midland Municipal Stormwater Management (SWM) System serving the Town of Midland's drainage area, is a mostly separate system for stormwater, only 1.8 km of sewer is combined sanitary and storm servicing compared to the 74.3 km of storm sewer within the South Georgian Bay Shoreline and Wye River watersheds. The Town of Midland Municipal SWM System consists of storm sewers, culverts, ditches, Stormwater Management Facilities and outlets within the Authorized System.

Throughout the reporting period of January 1, 2023 to December 31, 2023, the Town of Midland has been working towards reporting and conducting required maintenance activities, and collecting data for rehabilitation projects to ensure the efficacy and longevity of the Town of Midland's stormwater system infrastructure.

2023 Annual Performance Report – Municipal Stormwater Management System

In accordance with the Environmental Compliance Approval Number 122-S701, Schedule E Section 5.2, The Town of Midland shall prepare an annual performance report for the Authorized System which shall include:

- 1) A summary of all monitoring data along with an interpretation of the data and an overview of the condition and operational performance of the Authorized System and any Adverse Effects on the Natural Environment.
- 2) A summary and interpretation of environmental trends based on all monitoring information and data for the previous five (5) years.
- 3) A summary of any operating problems encountered and corrective actions taken.
- 4) 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.
- 5) A summary of the calibration and maintenance carried out on all monitoring equipment.
- 6) A summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.
- 7) 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.
- 8) A summary of all Spills or abnormal discharge events.
- 9) A summary of actions taken, including timelines, to improve or correct performance of any aspect of the Authorized System; and
- 10) A summary of the status of actions for the previous reporting year.

The following information within the balance of this report is taken from records maintained by The Town of Midland for the calendar year of 2023.

1. Summary of Monitoring Data Interpretation

Monitoring and inspection of the SWM system includes annual programs as outlined in the Town of Midland Municipal Stormwater Management System Operations & Maintenance Manual, which consists of stormwater management facility inspections, maintenance including conveyance systems. Outfall inspection and maintenance programs on maintenance hole and catch basin. The monitoring programs help to sustain an effective Capital Work Program and budgeting and setting the Town’s maintenance objectives.

A summary of the monitoring programs conducted by staff can be found in the chart below for the during reporting period.

Table 1 – Summary of Monitoring Programs

Monitoring Programs	Program Description	Adverse Effects on the Natural Environment?
SWM Pond Inspections	Annual and post “Significant Rain Event” Inspections	No
Ditch Inlet Inspections	Annual and post “Significant Rain Event” Inspections	No
Outfall Inspections	Annual and post “Significant Rain Event” Inspections	No
Storm Sewer Flushing	Combination of reactive flushing due to storm main obstructions and mains flushed because of scheduled flushing as per the O&M Manual	No
Catch Basin Cleaning	Annually cleaned, works are conducted by a third-party contractor	No

2. Interpretations of Environmental Trends

Upon receipt and enactment of the new monitoring standards for CLI-ECA The Town of Midland commence monitoring which will set the base level for year over year monitoring and trend setting. With implementation of the current CLI-ECA and with the creation of a town owned O&M Manual we now have a standard to follow and have implemented software to digitally create the inspection reports called GoCanvas.

The Town of Midland have an annual flushing and cleaning program in place for catch basins and storm mains which were conducted by staff and recently contracted to a third-party contractor. The Town of Midland has not had any abnormal conditions reported throughout the inspections in the past. As an organization we are working towards consistent record keeping of dates and locations and including inspections as part of this process.

With these new programs in place, we will be better equipped to conduct regular reporting compliance. It will also aid the Town of Midland with best practices from environmental conservation initiatives and demonstrate transparency and our efforts towards environmentally conscious practices. We are expecting after a few years to be able to collect reliable data in an efficient way and to have more informative opinions on Environmental Trends.

Table 2 – Environmental Trends

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

3. Operating Problems and Corrective Actions

The table below provides a summary of the operating problems which required immediate corrective actions to allow the system to function as designed. The operating problems outlined below were observed while conducting Annual Inspections. The Town of Midland uses software called Citywide to prepare and issue work orders for all corrective actions needed, once completed another inspection is conducted to close out the work order.

Table 3 – Operating Problems and Corrective Actions

Asset	Operating Problems	Corrective Actions	Date
SOF 47	525mm CSP Outfall is completely covered in sediment	Ditching operations to remove sediment and expose end pipe and install rip rap around ditch banks and pipe end.	11/14/2024
SOF 7	Vindin/Ontario SOF pipe is completely full of sediment	Outfall is to be hydrovac'd and all sediment to be cleaned, and pipe from upstream CB to be flushed	To be completed second quarter of 2024

4. 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 any items as it relates to the overall Authorized System.

The Town of Midland utilizes GoCanvas to record all inspections conducted on the SWM System. Please refer to Appendix A for examples of SWM Facility Inspection, and Outfall Inspection. Work Orders are then produced in City Wide for require maintenance and repairs.

All repairs are completed on behalf of the Town of Midland by trained staff or qualified contractors to ensure compliance with the Approval.

Table 4 – Summary of Work Order for Maintenance and Repairs

Work Order	Work Description	Work Order Type	Date
WO-1398	Ditches in front of 455, 405, 395, and 330 Cranston Crescent leading to STRMPND 4 are over half full of sediment. Ditches are to be cleared of all sediment and ditches to reinstate proper flow.	Ditching	03/15/2023
WO-1385	1196 Harbourview Dr. at concrete box culvert there is snow fence located within the creek which is to be removed.	Ditch/Culvert Maintenance	03/13/2023
WO-1384	SOF 55 – Frontenac Ave./Hallen Pl. storm outfall is covered with leaves and debris from yard waste, this should be removed, and blockages cleared.	Stormwater Outfall	03/12/2023

WO-1383	SOF 63 – 337 Christine Dr. Throughout the outfall ditch there is garbage and debris including a couch. Debris should be removed from the ditch.	Stormwater Outfall	03/12/2023
WO-1295	STRMPND 13 – Aberdeen Blvd. remove silt fencing and u-posts around Storm Pond.	Storm pond	03/11/2023
WO-0892	STRM MH584 at Wilson Pkwy has some asphalt which is undermined and requires repairs.	Boulevard Repair	09/05/2023
WO-0619	STRMPND 2 – William St. – Clear gates of overgrowth, remove all cut wood and debris from the pond area, remove wood from outlet structure.	Storm pond	06/21/2023
WO-0618	STRMPND 14 – 361 Park Ave. Clear gates of the overgrowth, clean the two inlets of all the overgrowth.	Storm pond	06/21/2023
WO-0615	STRMPND 12 – 855 Coral Springs, Clear gates of overgrowth, clean up garbage and debris from the pond – especially along the fence behind neighboring yards, clear overgrowth from the double headwall, outlet pipe, and catch basin.	Storm pond	06/21/2023
WO-0614	STRMPND 5 – 586 King Street (Little Lake) Clear two gates of overgrowth vines and shrubs, clear over growth creating a pathway to the inlet pipe, clear overgrowth from the inlet pipe, clean debris left from previously cut branches, remove picnic table from outside the storm pond and clean beer cans and garbage on the south east corner of the pond.	Storm pond	06/21/2023
WO-0604	STRMPND 1 – 823 Sarah Blv. Access gates to Storm Water Facility have become overgrown with weeds, grass, vines and shrubs, remove vines and overgrowth from Hicken Bottom Outlet Structure.	Storm pond	06/19/2023

5. Calibration and Maintenance of Monitoring Equipment

At this time this section does not apply to the Town of Midland as we do not have anything to report in this section.

6. Complaints

The Town of Midland has had two (2) complaints as it relates to the SWM Facilities during this reporting period. During heavy rain events, there are typical calls received from residents regarding yard flooding, at times we have also received call regarding blocked or plugged catch basins which are promptly cleared.

Table 6 - Summary of the Complaints

Complaint	Resolution	Date
SR-2092 A ton of water coming down olive street. The culverts are not properly working and it is all flowing into my shop at 169 Elizabeth	Operations was dispatched to provide ditching and catch basing cleaning/flushing	08/22/2023
Email received from a resident regarding STRMPND 13 Aberdeen of an animal who is creating blockages at the outlet, and water levels are growing in the pond.	Operations cleared the blockage and installed a cone grate which is to alleviate blockage.	05/24/2023

7. Alterations of the Authorized System

With the newly integrated CLI-ECA The Town of Midland worked diligently in 2023 to inspect and determine the required maintenance and remediation works needed for the SWM system to remain fully functional. We have found a few assets which require attention and they been incorporated into the 2024 Approved budget and are not outlined below.

The table below is a summary of the Alterations to the Authorized System for 2023.

Table 7 – Summary of Alterations to the Authorized System

Complaint	Resolution	Date
Queen Street Reconstruction Project	Replacement of Town of Midland infrastructure along Queen Street from Hugel Ave to Elizabeth. This includes all sanitary, storm, water, roadway, sidewalks and curb.	08/30/2023

8. Spills or Abnormal Discharge Events

Over the course of 2023 the Town of Midland has not had any reported spills or abnormal discharge events that have occurred in the SWM system.

Table 8 – Summary of spills and discharge events

Spill/Discharge Events	Details	Date
STRPND 17 – Little Lake Park	During a rain fall event there was a breach of the emergency overflow weir.	04/05/2023

9. System Performance Improvements or Corrections

Continuously improving the performance of our SWM System is a priority for the Town. Understanding our Authorized Systems fully and monitoring performance we have over the course of 2023 developed a strategic plan and ensure budget requirements are met for our needs in 2024. This reporting year was a little more reactive implementing our O&M Manuals and the CLI-ECA, we did however manage to complete several corrections and improvements to the performance of the system as outlined in the chart below.

Table 9 – System Improvements and Corrections

System Performance Improvements	Project Description
Signage Installation	Installation of required signage as per Schedule E – 3.3 at all SWM Facilities
Queen Street Reconstruction Project	Replacement of Town of Midland infrastructure along Queen Street from Hugel Ave to Elizabeth. This includes all sanitary, storm, water, roadway, sidewalks and curb.
Ditching Operations	Ditching operations from Cranson Crescent to STRMPND 4
STRMPND 28 – Riverwalk Cleaning	Cleaning and remediation works completed by developer on Riverwalk SWM Facility prior to the town assumption.
SOF 9 and MH 2535 Cleaning	Divers cleaning sediment from 40m of 1.8m dia. SW outfall pipe

10. Status of Actions taken the Previous Reporting Year

July 13th, 2022, the CLI-ECA was received and implemented at the Town of Midland, and since that time we have been working to implement its requirements. Fall of 2022 we were able to formulate inspection reports based on the requirements in the CLI-ECA Schedule E 3.1.5. We have conducted inspections on all Stormponds and their conveyance systems, becoming familiar with their operations through the seasons and at peak demand. Moving in to 2023 we were able to add outfalls inspection to that list and complete O&M and Signage. We have developed a list of the critical infrastructure repairs and maintenance requirements needed to optimize performance of our system and to keep it fully functioning. We have developed budgets for the works, and have received approval from council on our budgetary demands for these works and are currently working on a tender proposal for the design of several outfall projects.