



Grimsby Stormwater Management System

The Corporation of the Town of Grimsby

2023 Annual Performance Report

January 1 to December 31, 2023

Ministry of the Environment, Conservation and Parks

ECA # 065-S701

Grimsby Stormwater Management System - 2023 Performance Report

This report summarizes the annual performance of the Grimsby Stormwater Management System (Grimsby Stormwater System) in accordance with Environmental Compliance Approval #065-S701, Schedule E Condition 5.2 from January 1 to December 31, 2023.

Description of Stormwater Management System

The Grimsby Stormwater System is a municipal stormwater management system which convey's stormwater to the final receiver, Lake Ontario.

The Stormwater Management System serving the Town of Grimsby is a separate system for stormwater within the Lake Ontario watershed. The system consists of storm sewers, culverts, ditches, management facilities and outlets to Lake Ontario. All privately and regionally owned connections and systems, as well as any municipal drains (constructed under the Ontario Municipal Drainage Act) are not covered under the Town's CLI-ECA and are not discussed in this report. Overall, the system consists of conveyance pipe, ditches, and various treatment types including ponds and oil and grit separators before runoff is discharged to its final receiver in Lake Ontario. Much of the existing system has predated contemporary stormwater management standards, hence the Town is continuously evaluating opportunities to improve quality and quantity control of the system to lessen the impacts during major events.

The Grimsby Stormwater System (Town Owned) consists of approximately one hundred (100) kilometers (km) of conveyance pipe, twenty-six (26) km of culverts, an unknown length of ditches/swales, nineteen (19) Oil and Grit Separators, and ten (10) Dry/Wet Storm Ponds.

Report Distribution

As required under Schedule E - Condition 5.3 of ECA 065-S701, the annual report will be available to the public at no charge on the Town's website or through Public Request by June 1st of the reporting year.

Summary of Monitoring Data (if applicable)

The Grimsby Stormwater System is overseen by the Public Works Department, with the Transportation Services Division being responsible for day-to-day operation and maintenance (i.e. mainline sewer flushing, ditch maintenance, small culvert installations/replacements, etc.) and the Engineering Division managing long term programs (i.e. annual facility assessments, asset condition assessments, rehabilitation programs, etc.).

Sewer Inspection Program

The Town is in the process of completing a flushing and inspection program for the Grimsby Stormwater System consisting of storm sewer mainline flushing and camera (CCTV) inspections. The purpose of these inspections is to identify infrastructure that have structural or other noted deficiencies. Information collected during the inspections is reviewed and analyzed by a CCTV contractor. An assessment condition rating report is provided to the Town to support future infrastructure repairs and replacement projects. Deficiencies found during the CCTV inspections are prioritized and addressed through rehabilitation programs. The Town has completed year one (1) of the four (4) year program to assess all mainline sewers within the Grimsby Stormwater System.

Summary of Monitoring Programs

Table A details the monitoring activities performed during the reporting period. Based on the data collected and reviewed, it has been determined that the system is performing effectively and as designed. At this time there are no required major modifications required for the collection system.

Table A – Summary of Monitoring Programs

Program Title	Program Description	Program Data from Reporting Period	Adverse Effects on the Natural Environment
Storm Sewer Flushing	Reactive flushing due to obstructions or other CCTV findings.	Approximately 20,907 metres of mainline sewers were flushed and inspected in 2023 by the Town’s contractor. Reports were provided to the Engineering Division.	No
Oil/Grit Separators	Annual inspection and cleaning program. Additional condition assessment project.	Post annual inspection, 8 OGS units were cleaned in 2023. All units to be inspected in 2024.	No
Ditches and Culverts	Routine inspections and maintenance.	Inspections performed during routine road patrols. Operational issues address as required.	No
Inlet and Outlet Inspections	Routine and pre/post significant weather event inspections and maintenance.	Staff performed inspections in response to weather report assessments. Post-event inspections completed after all significant weather events.	No
SWM Ponds	Routine inspections and maintenance. Additional condition assessment project.	Routine inspection and cleaning were performed, including seasonal management of vegetation. Condition assessment completed for all Dry/Wet Ponds. Vineyard Valley Pond was cleaned by the qualified contractor.	No
Catch Basins	Annual inspection and cleaning program.	All catch basins were inspected and cleaned in 2023.	No
CCTV Inspections	The Town has a 4-year project for CCTV.	20,907 meters of mainline storm sewer were inspected.	No

Operational Issues and Corrective Actions

All maintenance was performed on behalf of the Owner, by qualified Operators or qualified contracted service 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 B summarizes the operating problems which required immediate corrective actions.

Table B – Summary of Operational Issues and Corrective Actions

Date	Description	Corrective Actions
January 3 rd , 2023 - January 4 th , 2023	Ditch Inlet Structure was obstructed during heavy rainfall events. Stormwater diverting overland into adjacent parking lot.	Staff attended area during and post the event(s). The debris causing the obstruction was removed. Areas affected by diverted stormwater were cleaned.

Major Structure & Equipment Calibration, Maintenance and Repairs

Table C provides a summary of activities carried out on major structures and collection system works that were not covered under the operational issues section of this report.

Table C – Major Structure & Equipment Calibration, Maintenance and Repairs

Major Structure or Equipment	Summary of Work Performed in 2023
Fall Arrest Equipment	All fall arrest and lifting devices were inspected during the reporting period.
Stormpond and OGS Inspections	All OGS, as well as Dry/Wet Stormponds were inspected by a consultant. A condition assessment was completed for all Dry/Wet Ponds
Stormpond Cleaning (Vineyard Valley Pond)	Vineyard Valley Pond was assessed for the accumulation of sediment. Based on the assessment findings, cleaning was performed by a qualified contractor.
CCTV and Flushing	Year one (1) of a four (4) year project to assess all mainline storm sewers was completed. Flushing was performed as needed during inspection periods.
OGS Inspections and Cleaning	As a result of the 2023 annual inspections there were eight (8) OGS units cleaned.

Inquiries and Complaints

The Town received thirty-seven (37) complaints during the reporting period, related to the Grimsby Stormwater System. The types of complaints and corresponding steps taken to address them, are described in Table D.

Table D – Summary of Complaints

Complaint Type	Location of Issue (Owner)		Resolution
	Public	Private	
Catch basin blockage	7	-	Staff responded and removed debris as required.
Culvert blockage	13	-	Staff responded and removed debris as required.
Culvert replacement	2	-	Staff inspected culverts and replaced as required.
Ditch blockage	12	-	Staff responded and removed debris as required.
Swale maintenance	1	-	Swale inspected. Grass cutting performed.
Maintenance Holes	1	-	Maintenance hole was damaged and replaced.
Drainage (Region)	1	-	Complaint forwarded to Niagara Region

Summary of Alterations to the Authorized System

Table E summarizes the projects that saw alterations to the collection system. There was one (1) authorized alteration to the Stormwater System in 2023. Capital projects from the reporting period were related water and road infrastructure.

Table E – 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)?
240, 244-248 Main St. E (Teeter Place Extension)	Installation of 250mm orifice plate and Oil/Grit Separator. Project was previously approved under ECA # 6551-CJNHGK	No

Summary of Spills or Abnormal Discharges

There were three (3) spills related to cross-connections discovered through CCTV inspections in 2023. Table F summarizes the incidents and corrective actions taken during the reporting period.

Table F – Summary of Spills or Abnormal Discharges

Spill Location	SAC Incident Number	Date mm-dd-yyyy	Volume (m3) and Duration (estimate)	Adverse Impacts / Corrective Actions
Single Residential Sewer Lateral	1-3QYI85	08-17-2023	54 years 17,459 m3	Single residential sewer lateral was discovered to be connected to the Town's storm sewer system. Lateral(s) were re-routed to ensure proper connection to sanitary and storm mains.

Single Residential Sewer Lateral	1-3V4XZQ	09-14-2023	46 years 11,945 m3	Single residential sewer lateral was discovered to be connected to the Town's storm sewer system. Lateral(s) to be re-routed to ensure proper connection to sanitary and storm mains (2024 Capital Project).
Single Residential Sewer Lateral	1-4HL64S	12-13-2023	21 years 2,896 m3	Single residential sewer lateral was discovered to be connected to the Town's storm sewer system. Lateral(s) to be re-routed to ensure proper connection to sanitary and storm mains (2024 Capital Project).

Summary of Actions Taken to Improve System Performance

Table G summarizes the capital and operating projects undertaken during the reporting period.

Table G – Summary of Performance Improvements

System Performance Improvement	Project Description
Stormwater Management Facilities and Oil and Grit Separator Sediment Assessments	A consultant was retained to undertake sediment surveys and condition assessments at Town owned Stormwater Management Facilities (SWMFs) and Oil & Grit Separator (OGS) units. The objective of the assessment was to determine sediment removal and maintenance requirements.
Computerized Maintenance Management System (CMMS) Implementation	The Town is in the process of implementing a software solution to streamline workflow and support asset management across the corporation.
Stormwater Operations and Maintenance Manual	A consultant was retained to develop and implement an Operations and Maintenance (O&M) Manual for the Stormwater System.

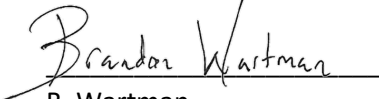
Previous Reporting Year Update

This section of the report highlights the ongoing work within the Town of Grimsby to improve its stormwater management system. As this is the inaugural year for the CLI ECA Annual Performance Report, there are no pre-existing actions or projects to update. New goals and objectives are being developed internally and there will be quantifiable and tangible action items reviewed in the 2024 Performance Report.

Public Reporting

The Stormwater Management System Performance Report will be communicated to the system owner (Council) and posted on the Town's website and made available for public review (free of charge) at Town Hall.

Report Date: April 30, 2024


B. Wartman
Director of Public Works