



TOWN OF
GRIMSBY

Grimsby Sanitary Sewage 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-W601

Grimsby Sanitary Sewage System - 2023 Performance Report

This report summarizes the annual performance of the Grimsby Sanitary Sewage System (Grimsby Sanitary System) in accordance with Environmental Compliance Approval #065-W601, Schedule E Condition 4.6 from January 1 to December 31, 2023.

Description of Sanitary Sewage System

The Grimsby Sanitary System is a stand-alone municipal sewage collection system which conveys one hundred percent (100%) of its wastewater to the Region of Niagara's (Region) Baker Road Wastewater Treatment Plant (Baker Road WWTP). The Grimsby Sanitary Sewer System and the Baker Road WWTP are components of the larger Baker Road Wastewater System (Baker Road System).

The Baker Road System services the Town of Grimsby, the communities of Beamsville, Campden, Jordan, Jordan Station, and Vineland in the Town of Lincoln, and the community of Smithville in the Township of West Lincoln. The Baker Road System services a population of 55,800 people and 24,140 jobs (Statistics Canada, 2016). The Baker Road System is a two-tier wastewater treatment and collection system. The Region is responsible for the treatment and trunk conveyance of flow through the Region's network of pumping stations, forcemains, and major trunk sewers. The lower tier municipalities (Grimsby, Lincoln and West Lincoln) are responsible for the collection of wastewater flows from customers through the municipally owned and operated local collection system(s), with the Grimsby Sanitary System being one of them.

The Grimsby Sanitary System collects wastewater from approximately 29,534 customers within the Town of Grimsby and consists of approximately 113 km of Town-owned mainline sewers ranging in size from 150 mm to 1800mm in diameter.

Report Distribution

As required under Schedule E - Condition 4.7 of ECA 065-W601, 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 Sanitary System is overseen by the Public Works Department, with the Environmental Services Division being responsible for day-to-day operation and maintenance (i.e. sewer flushing programs, maintenance hole inspections, sewer lateral inquiries, etc.) and the Engineering Division managing long term programs (i.e. asset condition assessments, infiltration and inflow reduction, rehabilitation programs, etc.).

Annual Sewer Inspection Program

The Town performs an annual flushing and inspection program for the Grimsby Sanitary System, consisting of sanitary 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's level of service for the inspection program is to have all mainline sewers inspected once every 7 years.

Sewer Flushing Program

Licensed wastewater operators perform annual flushing program each spring in areas of the system that have been identified as “problematic” through past incidents and inspections. The rest of the Grimsby Sanitary System has been divided up into four (4) quadrants. One (1) of the four (4) quadrants is flushed annually, with all four (4) quadrants being flushed once every four (4) years. Flushing is conducted using the Town’s hydrovac/water flushing truck. High-pressure, high-volume water and specially designed nozzles are used to clear the system of built-up debris that has the potential to reduce system efficiency. During the flushing program, operators inspect each maintenance hole that is being accessed for flushing. Any deficiencies that are identified are prioritized for future rehabilitation programs.

Summary of Monitoring Programs

Table A details the monitoring activities performed by Grimsby staff 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
Spring Sewer Flushing	Flushing of mainline sewers in problematic areas (obstructions, sags, grease build-up, etc.).	Staff completed annual (spring) flushing activities in problematic areas.
Annual Sewer Flushing	Annual flushing of mainline sewers in quadrants of the system.	Staff flushed the Downtown/Central quadrant in 2023.
Maintenance Hole (MH) Inspections	MH inspections are completed during the spring and annual flushing program.	Staff inspected 576 maintenance holes during the reporting period.
Tideflex Units & Overflow Outlets	Tideflex Units and Overflow Outlets are inspected every two (2) months and cleaned as necessary.	Staff inspected, cleaned, and flushed all locations.
CCTV Inspections	CCTV inspection program is completed so that all mainline sewers are inspected once every 7 years. Mainline sewer pipes are flushed as part of the inspection process.	Approximately 10,240 metres of mainline sewers were inspected in 2023 by the Town’s contractor and reports provided to the Engineering Division.
Dry & Wet Weather Flow Assessment	Contracted GM Blue Plan in 2023 to perform assessment.	Submitted to the MECP on February 1, 2024

Operational Issues and Corrective Actions

All maintenance was performed on behalf of the Owner, by licensed 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 Town’s license.

As noted in Table B, there were no operational issues identified during the reporting period.

Table B – Summary of Operational Issues and Corrective Actions

Date	Description	Corrective Actions
N/A	N/A	N/A

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
Maintenance Holes	Staff completed repairs on maintenance holes as required during the reporting period. Examples of repairs completed include lid replacements, parging repairs, and ladder replacements.
Fall Arrest Equipment	All fall arrest and lifting devices were inspected during the reporting period.
Air Quality Monitoring Devices	All portable air quality monitoring devices were inspected and calibrated during the reporting period.
Trench Boxes	All trench boxes were inspected during the reporting period.
Property Laterals	One (1) property in the Town had a sewer lateral repaired / replaced during the reporting period.

Inquiries and Complaints

The Town received sixty-three (63) complaints during the reporting period, related to the Grimsby Sanitary 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	
Home Sewer - Backup	27	29	<p>Environmental Service staff investigate complaints of using several methods, including CCTV.</p> <p>Where blockages are found on the public portion of the lateral, methods such as augering and flushing are used to clear blockage. Excavation and repairs are completed where necessary.</p> <p>Where blockages are found on the private portion of the lateral, property owners are advised to contact a professional service provider.</p> <p>Where blockages are found on the public or private portion of the lateral, and the cause of the blockage is found to be caused by Town owned tree roots, homeowners are eligible for a lateral replacement reimbursement.</p>
Home Sewer - Odour	-	4	<p>Environmental Service staff investigate complaints of sewer odours using several methods, including CCTV. Property owners are advised of the findings when the cause of the odour is identified on private property.</p>
Main Sewer - Odour (Region)	1	-	<p>Environmental Service staff investigate complaints of sewer odour. Findings are forwarded to the Region of Niagara as applicable.</p>
Main Sewer - Odour	1	-	<p>Environmental Service staff investigate complaints of sewer odour using several methods, including area inspections.</p>
Main Sewer - Maintenance	1	-	<p>Environmental Services staff investigate complaints and complete repairs as necessary.</p>

Summary of Alterations to the Authorized System

Table E summarizes the projects that saw alterations to the collection system. There were no authorized alterations to the Sanitary 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)?
N/A	N/A	N/A

Summary of Collection System Overflows and Spills

There were zero (0) environmental incidents such as overflows, by-passes, or abnormal discharges from the collection system to be reported for 2023. There were three (3) spills related to cross-connections discovered through CCTV inspections in 2023.

Table F – Summary of Collection System Overflows or Spills of Sewage

Overflow or Spill Location	SAC Incident Number	Date mm-dd-yyyy	Volume (m3) and Duration (Estimate)	Loadings (TSS, BOD, TP, KJN, E. Coli)	Disinfection (if applicable)	Adverse Impacts / Corrective Actions
Single Residential Sewer Lateral	1-3QYI85	08-17-2023	54 years 17,459 m3	N/A	N/A	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	N/A	N/A	Single residential sewer lateral was discovered to be connected to the Town's storm sewer system. Lateral(s) scheduled 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	N/A	N/A	Single residential sewer lateral was discovered to be connected to the Town's storm sewer system. Lateral(s) scheduled to be re-routed to ensure proper connection to sanitary and storm mains (2024 Capital Project).

Efforts to Reduce Overflows and Bypasses

Table G below summarizes the efforts made to reduce overflows, spills, and bypasses in 2023.

Table G – Summary of Efforts Made to Reduce Overflows, Spills and Bypasses

Overflow/Spill/Bypass Reduction Project	Project Description	Does this Project Pose a Significant Drinking Water Threat (SDWT)
N/A	N/A	N/A

Baker Road Master Servicing Plan and Pollution Prevention Control Plan

In 2021 the Region of Niagara, in cooperation with Grimsby, Lincoln and West Lincoln, completed the Baker Road PPCP. The PPCP was completed as part of the Region’s larger Master Servicing Plan (MSP) study, which was completed in 2023. The MSP is intended to support the community's growth, while meeting the Ministry of Environment Conservation and Parks (MECP) goals of the F-5-5 Procedure, to reduce combined sewer overflow pollution to the environment. The PPCP and MSP assessed both the existing and future state system performance to determine the nature, cause, and extent of issues, reviewed alternative solutions, and recommended a capital planning for the Region and the lower-tier municipalities.

Infiltration and Inflow Reduction

The PPCP and MSP included a remediation plan for Infiltration and Inflow (I &I). The remediation plan included recommendations for the lower-tier municipalities to carry out sewer flow monitoring and field investigations in an effort to identify areas of the system with high I & I, and subsequently develop a plan to help reduce I & I.

In 2022, the Town of Grimsby began implementing an I & I program in order to move forward on the recommendations of the PPCP and MSP. The program started with the Town completing mainline CCTV and sewer lateral inspections in within areas of the Grimsby Sanitary System which were identified as having higher instances of I & I. In 2024 a consultant was retained to complete a further investigation into the high I&I areas, which includes analyzing the results of CCTV and lateral inspections. Table H outlines the various tasks which have/will be completed as part of the Town’s I & I program.

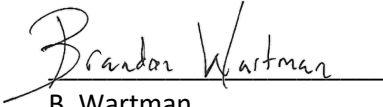
Table H – Summary of Infiltration and Inflow Reduction Program Tasks

Program Title	Program Description	Status
CCTV Inspection - Drainage Area 5 & 7 (2022)	Inspection of mainline sewers, manholes and sewer service laterals (to property line) in areas identified with high I & I.	The project included the inspection of 15.5km of Sewer Mains, 225 Sewer Manholes, and 1,111 Sewer Lateral Connections.
I & I Reduction Study - Drainage Area 5 & 7 (2024)	The Town will use the following investigation techniques to locate unwanted I & I in the identified areas of the system: <ul style="list-style-type: none"> - Study area background review - Resident survey - Sewer flow monitoring - Infrastructure condition assessment - Study area drainage survey - Catch basin dye testing - Sewer smoke testing 	Consultant (GM BluePlan Engineering) has been retained to provide services related to this project. The following timeline has been proposed for 2024: <ul style="list-style-type: none"> - Public Engagement (Spring 2024) - Field Investigation (Spring 2024) - Final Report including outcomes and remedial plan. (Summer 2024)

Public Reporting

The Sanitary System 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

A handwritten signature in cursive script that reads "Brandon Wartman". The signature is written in black ink and is positioned above a horizontal line.

B. Wartman

Director of Public Works