Newmarket

Town of Newmarket
2025 Annual Wastewater Collection System Performance Report

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Executive Summary

In 2022, the Corporation of the Town of Newmarket was issued the Consolidated Linear Infrastructure Environmental Compliance Approval, **ECA Number 124-W601**. One of the requirements made under that ECA is to complete an Annual Performance report.

This 2025 Annual Performance Report (the Report) **provides the results of the operation and maintenance of the Newmarket Wastewater Collection System,** Facility # 2256 (the Collection System).

The Report identifies baseline information to assist the Town with ongoing monitoring, reporting and continual improvement of the system performance.

The Town's sanitary sewage is collected and conveyed primarily via gravity to the Duffin Creek Water Pollution Plant, located in the City of Pickering. The Duffin Creek Plant is jointly owned by the Regional Municipalities of York and Durham and is operated by Durham Region.

The Town of Newmarket Wastewater Collection system includes approximately 286.72 kilometres of sanitary sewer and six (6) Sewage Pumping Stations (SPS).

In 2025, the Town complied with all Ministry of the Environment, Conservation and Parks (MECP) regulatory requirements as per the Environmental Compliance Approvals (ECA). This involves monitoring, reporting and record-keeping. In addition, performance indicators were identified, such as, sewer back-ups, spills, overflows, flow monitoring, alarm response and complaints from the public.

In 2025, the Town had no reported sewage blockage(s) in the collection system that resulted in either property damage or a spill into the environment. In addition, the Town responded to 85 blockages in private sewer connections (i.e., laterals); and 0 odour complaints.

Introduction

The Report is prepared to satisfy reporting requirements identified by the Ministry of the Environment, Conservation and Parks (MECP) as related to Sewage Collection Systems, specifically the Consolidated Linear Infrastructure - Environmental Compliance Approval (CLI-ECA) the report also provides benefits and efficiencies to the Town such as pre-authorizations for minor modifications, expansions, and alterations to the system.

Report Overview

The Town of Newmarket provides sanitary collection services to an approximate population of 87,942. This Report is organized to address the following aspects of the Town's Collection System: Estimate provided by 2021 Census Data.

1. An overview of the Collection System performance including compliance with ECA requirements, and identification of operational indicators.
2. A description of the maintenance activities carried out in 2025.
3. An overview of the Town and Region's support programs for the Collection System.
4. A description of the monitoring equipment used and calibration frequencies.

Description of the Collection System

Both York Region and the Town of Newmarket own, operate, and maintain wastewater infrastructure within the municipal boundaries of the Town of Newmarket, in 2020, the Town-Region Water / Wastewater Asset Ownership Agreement was established. This agreement outlines and governs the jurisdiction over the Town of Newmarket, and the Regional Municipality of York owned Assets. This agreement is intended to delineate the ownership boundary of Regional Infrastructure in areas of non-exclusive jurisdiction, as defined in *Section 11* of the *Municipal Act, 2001* (i.e., Town owned areas, with region owned infrastructure).

This agreement allows the Region to efficiently manage, operate, maintain, monitor, plan and construct Regional Infrastructure in areas of non-exclusive jurisdiction (i.e., Town owned sanitary collection system, or Town owned water distribution system).

The Newmarket Wastewater Sanitary Collection System, owned and operated by the Town of Newmarket, is classified by the MECP as a Class II Wastewater Collection System. The Collection System serves approximately 87,942* residents. The Collection System includes:

- 284.37 km of Gravity Sewers (Table 1)
- 2.35km of Force mains
- 6 sewage pumping stations (SPS)
- 21332 assumed lateral connections (households, industrial, commercial, institutional)
- 4573 maintenance holes (MH)
- 1 odour/corrosion control system

A map of the Collection System is below.

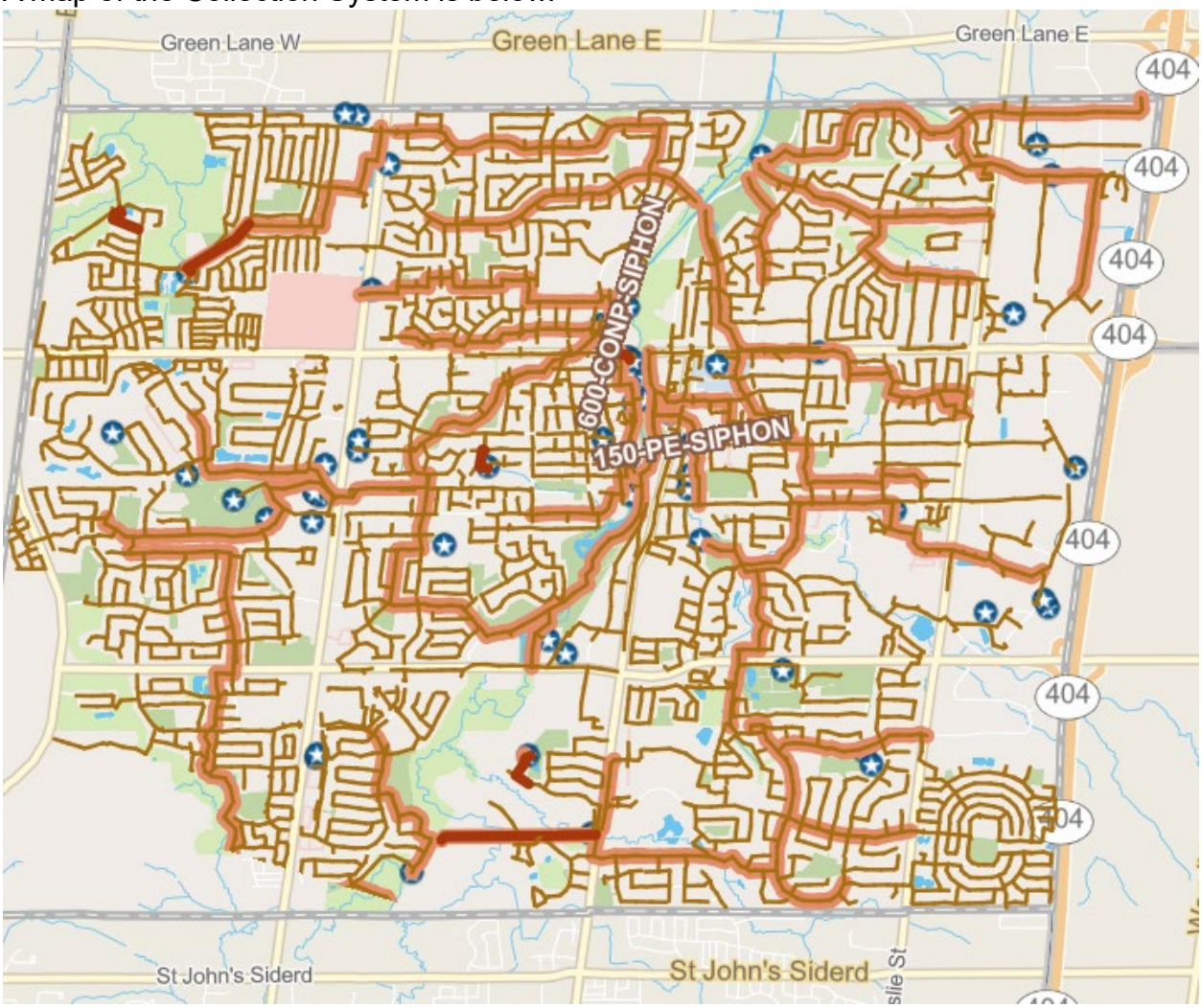

Table 1. Wastewater Collection System by Length

System Type	Pipe Diameter (mm)	Length (km)	Total Length (km)
Gravity Sewers	40 – 250	225.1	
	300 – 500	47.57	**284.37**
	525 – 1,050	11.7	
	≥ 1,200	0	
Force mains	0 – 250	0.81	
	300 - 500	1.55	**2.35**
	≥ 525	0	
		Total Length	**286.72**

Performance Overview

The following Key Performance Indicators were selected to provide an overview of the Collection System performance:

- The Town's compliance with the ECA requirements, which includes Contingency Plans and Emergency Response to overflow, by-pass, spill, and surcharge events, and the associated monitoring and reporting.
- Alarm system analyses to monitor the operation of the sewage pumping stations (SPS)
- Regional flow monitoring comparisons to Town flow monitoring to address system upsets associated with the trunk sewers and its connection to the Town of Newmarket sewage collection system.
- Complaints received from the public.

These indicators will be used to establish a baseline to assess the system performance in subsequent years.

Compliance with ECA Requirements

In 2025, the Town complied with all requirements from the existing ECA. Relevant ECA requirements include:

- Improvements to the Collection System Operations and Maintenance Manual
- Notification of the Collection System modifications through the provision of Limited Operational Flexibility

The Town of Newmarket received its approved Environmental Compliance Approval for Municipal Sewage Collection System on November 17th, 2022.

Overflow & Spill Monitoring & Reporting

All overflow and spill events are reported to the MECP, verbally and in writing. These reports include event details including estimates of duration and overflow volume. In 2025, there were Zero (0) sewage backups.

Operation and Maintenance Manual (OMM)

The Town of Newmarket Asset Management group has taken on a multi year project to introduce a computerized maintenance management system (CMMS) for all departments to improve operations. As such, the wastewater OMM is undergoing some updates to include improved standard operating procedures, digital inspection and data collection forms to be utilized in the field and enhancing the Town's GIS system. The end goal is to collect data in an efficient, user-friendly experience where the data collected is better utilized for future operation, maintenance, and replacement programs.

The current OMM includes a description of all operational procedures, repair and maintenance programs, equipment inspections and calibration, the town's emergency response procedures/practices, spill reporting and contingency plans, and the Town's

protocol for receiving and responding to complaints from the public, and any associated standard operating procedures that are applicable.

Operational Alarms

The Town relies on an independent alarm monitoring company to monitor various alarms at each of the Pumping Stations. A.P.I Alarm Monitoring (Inc) performs this task as part of a multi-year contract. Alarms in their monitoring contract include, but are not limited to, illegal entry to the building, pressure and/or flow sensors alarms, backup power/generator sensors, and wet well level sensor alarms.

Flow Monitoring

The Town of Newmarket works with York Region and relies on their flow monitoring program which is comprised of approximately 28 flow monitors strategically located throughout the collection system within Newmarket's municipal boundaries. These flow monitors are meant to provide flow information for Inflow and Infiltration (I/I) analysis of the system and potential effects to the Regional Wastewater Treatment Facilities. These monitors serve as tools to calibrate the Region hydraulic model and assist in identifying I/I issues.

The Regional flow monitors trigger alarms, which the Region relays to the town. These alarms are only informational and not for operating purposes. This information is used to assess systemic I/I issues on parts of the system and to mitigate and reduce risks of potential overflows before they occur.

Summary of Customer Concerns / Call Tracking

Calls and emails are received from the public and are tracked in the Town's Customer Relation Management (CRM) system. Once a concern is received, a CRM Ticket is created and forwarded to staff to investigate and remediate the situation. All work completed as part of the CRM system is tracked through the tickets and recorded under various subtypes and/or activities for analysis and reporting. In 2025, there were approximately 110 calls received by the public associated with the Wastewater Collection System, which included: 6 potential sewer back ups; 85 blockages within residential service laterals; and 19 maintenance hole issues. No odor related calls were received in 2025. (Table 2). All complaints are investigated, and persistent issues are addressed through additional investigation, flushing, repairs of infrastructure, or operational adjustments.

Table 2. Complaints Received in 2025 by Type

Type of Complaint	Complaint Description	No. of Complaints
Mainline Sewer Backup	Sewer backups due to obstructions in mainline sewers	6
Lateral Sewer Backup	Sewer backups due to obstructions in sewer laterals	85
Sanitary Odour	Sanitary odours experienced indoors and outside	0
Maintenance Hole Issues	Issues consisting of raising/lowering lids in roadway, noisy lids, cracked or damaged lids	19

The most common complaints that the Town receives related to the Wastewater Collection System are:

a) lateral sewer backups; and
b) maintenance hole issues

Inflow and Infiltration

In 2012, the Region and all nine lower-tier municipalities approved and adopted the Inflow and Infiltration (I/I) Mitigation and Reduction Strategy (I/I Strategy). Through the I/I Strategy many operational and maintenance programs will be adjusted to address specific I/I areas.

The Strategy involves a comprehensive approach to reducing extraneous flows into the sanitary sewer system that considers improved engineering standards for construction and testing of new systems, flow monitoring, modelling micro-watershed surveys, downspout disconnection, smoke/dye testing, CCTV inspections, and collection system repairs.

Maintenance Programs

Linear Infrastructure

The Town has approximately 284.37 kms of gravity sewers and ~2.35 kms of force mains. Maintenance of the linear infrastructure involves inspection of mainline sanitary pipe using a “Sewer Line Rapid Assessment Tool” also known as SL RAT®, performing CCTV inspections, flushing, cleaning the sewers, and spot repairs. The Town of Newmarket utilizes both internal and external resources to assist and carry out the various activities. A summary of the maintenance activities completed are provided in Table 3.

Table 3. Linear Maintenance Performed in 2025

Description	Quantity
Length of Sewer Inspected Using CCTV	9.11 kms
Length of Sewer Flushed (Contracted)	4.52 kms
Length of Sewer Flushed (internal)	2.2 kms
Sanitary Laterals inspected (contracted)	232 ea.
Sanitary Laterals inspected (internal)	56 ea.
Length of Sewer Inspected Using Acoustic Monitoring (SLRat)	23.77kms
Length of Sewer Main rehabilitated	2.6 km

Length of Sewer Inspected Using CCTV

The Town of Newmarket inspected a total of 9.11 km's of sewer main. This work was comprised of operational and capital projects throughout the Town in 2025.

Length of Sewer Flushed

The Town of Newmarket flushed a total of 6.72 km's of sewer main between internal operations (2.2 km) and contracted services (4.52 km).

Sanitary Laterals Inspected

The Town of Newmarket inspected a total of 288 sewer laterals in 2025. These were completed using internal staff and contracted services.

Length of Sewer Inspected Using Acoustic Monitoring (SL RAT)

In 2025, a total of 23.77 km of sewer main was analyzed using radio acoustic telemetry with the SL RAT. Additionally, Town staff inspected 429 maintenance holes in conjunction with the SL RAT program.

Points of Interest (POI) Inspection Program

To mitigate issues at sewer locations that had previous issues or deficiencies, the town will, for a duration, regularly conduct a visual inspection to ensure any corrective actions that have been made remain effective. The Town has identified these locations as a "Point of Interest" inspection program. POIs are regularly inspected and periodically cleaned using high pressure flushing and eventually removed from the list. In 2025, a POI list was maintained. Inspections and/or maintenance activities are documented, and the list is reviewed and updated on a regular basis.

Summary of Alterations to the Authorized System

With the assistance of the Asset Management Team, the Town of Newmarket identified approximately 24 sections of sanitary main that required rehabilitation. Sections of pipe throughout the collection system were identified with potential infiltration and/or leaks and additional sections of pipe that were experiencing various degrees of pipe degradation. Together with our Engineering Capital Delivery Team, contracted services

were obtained to assist with the rehabilitation or replacement of the various pipe segments. In 2025, through combined efforts, nearly 2.6 kms of sanitary main were rehabilitated as part of this project. And additional 70 meters of pipe were completely replaced on a smaller scale project.

Sewage Pumping Stations and Facilities

The Collection System includes: 6 Sewage Pumping Stations (SPS); one of which includes 1 odour control systems; (see tables 4 and 5 for a list of station locations and odor control system)

Table 4. List of Pumping Stations and Facilities Pumping Stations

#	SPS Name	Location
1	Bayview Pumping Station	16300 Bayview Avenue
2	St. Andrews Pumping Station	409 Sydor Court
3	Woodmount Pumping Station	Fronting 249 Woodmount Place
4	Seniors center Pumping Station	474 Davis Drive
5	Northwest Pumping Station	286 Woodspring Avenue
6	Woodland Hills Pumping Station	250 Frederick Curran Lane

Table 5. Odour Control System Locations

#	Odour Control System	SPS Name	Location
1	Bioteg vent pipe Biofilter	Woodland Hills (#6)	250 Frederick Curran Lane

The Town has the following maintenance programs:

1) **Preventative Maintenance** – conducted on a routine basis to maintain the equipment in good working order and lessen the likelihood of failure.

The general maintenance performed at facilities includes weekly inspections, wet well cleaning, mechanical inspection, and electrical inspections. A description of inspection and preventative maintenance activities is provided in Table 6 below.

In 2025, a Condition assessment was completed by a third-party consultant at our 6 Pumping Stations. Findings included enhancements to some of the current maintenance activities currently being performed along with a comprehensive future-forward capital replacement plan to ensure the reliable and smooth operation of the pumping stations. Actions are being taken in 2026 to begin addressing the recommendations provided.

2) **Corrective Maintenance** – conducted to correct deficiencies discovered during routine inspections or preventative maintenance activities and return to working order state.

In 2025, During routine inspections, it was identified that portions of the fuel systems at both the Bayview pumping station and the Northwest pumping station required

modifications of certain components to be brought up to current TSSA standards. As of December 2025, all the components of the fuel system at the forementioned Pumping Stations were completed.

3) **Emergency Maintenance** – conducted in response to the Alarm system - high priority alarms, or through observed emergencies within the System.

In May of 2025, during routine inspections, it was identified that a component of our monitoring system at our Bayview station was beginning to malfunction. As a result of inspection and service, our Programmable Logic Controller (PLC) and HMI (Human Machine Interface) were in need or replacement. A plan was put in place to upgrade the current PLC and HMI to up-to-date models. The PLC and HMI installed are both future ready and compatible with current programmable or automated processes should the need arise to upgrade other components.

Table 6. Description of Facilities Inspections & Preventative Maintenance Activities

Activity	Description	Frequency
Standby Generator Test	Completed monthly and quarterly by staff and contractor to ensure generator operability in case of power failure. Deficiencies are documented on work order, station logbook and generator form for follow up.	Monthly (Town), Quarterly/Semi/ (contractor)
Standby Generator Load Test	The full load test is completed annually through contracted services. The generator is tested under full load of the facility for a longer period to ensure the generator can perform properly during a loss of power event.	Annual (contractor)
Wet Well Cleaning	Completed in spring and fall. Wet Well is pumped down and pressure washed to remove debris, grease and build-up.	Semi-annual (contractor)
Odour Control Units - Inspection	Units are inspected and filters are changed as needed.	Annual inspection/ changed as required (Town)
Building Maintenance and Cleaning	Activity includes standard custodial maintenance, restocking of supplies and visual inspection of structure and property	Monthly (Town)
SPS Inflow Screen Maintenance	Check for debris and clean out as needed. Bayview pumping station screens cleaned twice a week, Northwest once a week	Weekly (Town)
Facility Valve Inspection	Visual inspection and exercising of the valves, recorded on a Maintenance Activity Worksheet	Monthly (Town)
Facility QA/QC Inspections	A walkthrough of all sewage pumping stations. Supports the daily Inspection program to ensure that the facilities are being well kept and clean. Findings are reported back in a station logbook, and they are tracked and addressed.	Daily/Weekly/ Monthly (Town)

Facility Backflow Preventor Inspections	Annual Inspection. Tested and inspected and a Maintenance Activity Worksheet is completed to record findings	Annually (Town Plumber)
Overflow Inspections	Overflow inspections are completed monthly at all applicable overflows associated with the sewage pumping stations. The visual inspection is completed. Any deficiencies are reported, and corrective action is taken to mitigate the overflows capabilities.	Monthly (Town)

Equipment Calibration

Flow meters, level sensors and pressure sensors are used within our pumping stations to assist in monitoring various processes and functions. To ensure proper functioning of the monitoring equipment, the equipment is calibrated on a regular basis by a certified third-party contractor. The number of flow meters, level sensors and pressure sensors used in the Collection System, along with their calibration frequency, is provided in Table 7 below.

Table 7. Equipment Calibration Frequency

Type of Equipment	Location	Count	Calibration Frequency
Flow Meters	- Bayview P.S. (1) - Woodland Hills P.S. (1)	2	Annual
Ultrasonic Sensor	- Northwest (2) - Woodmount (1) - Bayview (1)	4	Annual
Hydrostatic Sensor	- Bayview (1) - Woodland Hills P.S. (2)	3	Annual