

2025

**Wastewater Collection System
annual report**



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Wastewater Collection System annual report

The Regional Municipality of Peel (Peel) is committed to providing a high level of service in the collection, treatment, and management of wastewater. Peel diligently monitors its sewer network and operates its treatment processes effectively to meet or surpass discharge quality criteria, to protect the environment now and into the future.

Our commitment

- Protecting and preserving the environment, including the prevention of pollution, through effective operation and management of the Wastewater Systems that incorporates quality assurance and control practices
- Acting promptly and responsibly in addressing incidents or conditions that pose a risk to the public or environment
- Collaborating with internal and external stakeholders to ensure our services consider their environmental and quality concerns

If you have any questions about this report, please contact the Wastewater Compliance team at 905-791-7800 extension 4685 or [email at publicworkscustserv@peelregion.ca](mailto:publicworkscustserv@peelregion.ca).

Executive summary

The Wastewater Collection System (collection system) collects wastewater from the customers in the cities of Mississauga, Brampton, and parts of Town of Caledon. The collection system is comprised of two systems: South Peel Wastewater Collection system, a class 3 wastewater collection system, and the Inglewood Wastewater Collection system, a class 1 wastewater collection system under Ontario Regulation 129/04. The collection system is owned and operated by Peel, and in 2025, was operated under Environmental Compliance Approval (Approval) number 009-W601.

This report summarizes the monitoring results for the collection system required by the Approval and describes the operational performance.

Peel received **170** complaints and requests for information associated with the collection system. Of these, **75** were related to sewer back-ups caused by obstruction in Peel sewer laterals, **49** associated with maintenance hole issues such as dislodged or broken covers, and **38** associated with odour concerns, **3** of which were found related to the wastewater collection system. Peel staff have investigated and satisfactorily addressed the reported concerns, as described in section [4.3.9](#).

During the reporting period, there were **12 spill events** associated to the collection system, including **6** overflows, **4** of which occurred in April, and **2** in December that were caused by wet weather events, as described in section [4.4](#).

2025 Summary

Peel Region

Brampton, Caledon, and Mississauga

1.58 million
residents

provided with water and wastewater services

200,000
businesses

Wastewater Collection System



3,773km

of **sewage pipes** throughout Peel's collection system



233

billion litres of wastewater treated

Equal to volume of

255

Olympic swimming size pools per day



\$148 million

Infrastructure expenditure



32

Wastewater pumping stations

Collect and move wastewater throughout the system

2

Septage receiving stations

Directing the waste into the main treatment process for further purification



112

Licensed operators maintain and operate the collection system

Glossary of terms and abbreviations

Chemical scrubber: A pollution control device that injects chemicals to remove unwanted pollutants from gas.

Ferrous chloride: A chemical compound added to wastewater to control odours.

Forcemain: A pipe that conveys wastewater under pressure out of a sewage pumping station.

Inflow and Infiltration (I&I): Inflow is the water that enters the sewer system through improper connection such as foundation drains, downspouts, manhole covers, etc. Infiltration is the water that enters sewer system through defective (leaky) pipes, joints, connections, or manholes.

m³: cubic metres. 1 m³ = 1000 litres.

ML: megalitres. 1 ML = 1000 m³.

MLD: megalitres per day. 1 ML = 1 million litres.

Lateral sewer: A smaller sewer that collects wastewater directly from homes and buildings and conveys it to a larger connector sewer.

Mainline sewer: A pipe that collects wastewater from smaller laterals and conveys it to a larger trunk sewer.

Maintenance hole (MH): A structure that provides access to a sewer system for inspection, cleaning, maintenance, sampling, or flow monitoring.

Overflow: A controlled discharge of wastewater to the environment from a location designed for this purpose.

pH: Measure of alkalinity or acidity in water.

Spill: An unplanned discharge of wastewater to the environment from any location that is not specifically designed for this purpose.

Total ammonia nitrogen (TAN): A measure of the amount of ammonia in wastewater.

Total phosphorous (TP): An essential nutrient used by microorganisms for growth.

Total suspended solids (TSS): Suspended particles (organic and inorganic material) present in the water sample.

Trunk sewer: A large sewer that collects wastewater from mainline sewers and conveys it to a pumping station or directly to the wastewater treatment plant.

Wastewater: Water that has been used and discharged by homes, businesses, and industries. Everything we flush down a toilet or pour down a drain, collectively.

WRRF: Water resource recovery facility.

WWTP: Wastewater treatment plant.

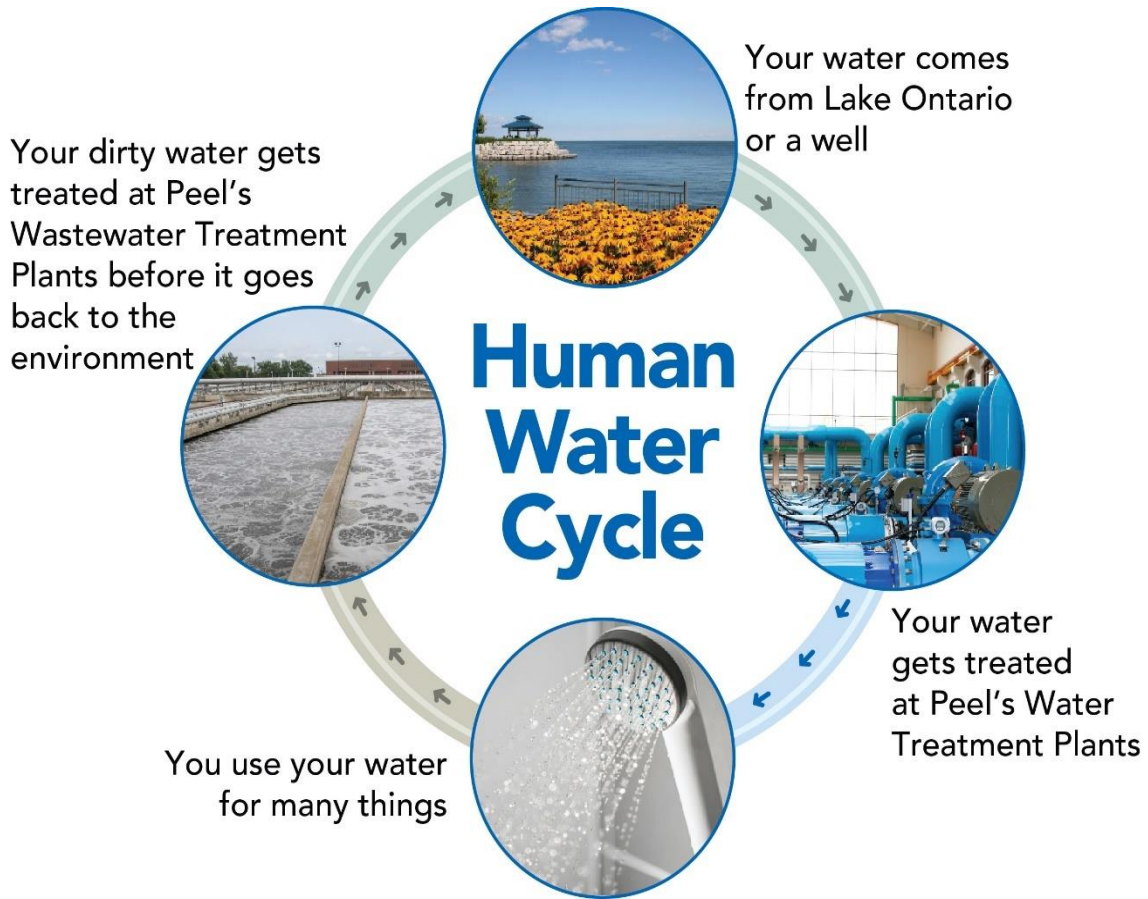
1. Water management in Peel Region

Peel owns the water and wastewater systems that serve its population. This includes water treatment, storage and distribution, and wastewater collection, pumping and treatment.

Peel has two drinking water sources: Lake Ontario and groundwater wells in Caledon. Peel retains services of the Ontario Clean Water Agency (OCWA) under a contract to operate, maintain and manage the lake-based drinking water treatment facilities and its water storage and pumping system. Peel operates the groundwater-based water treatment systems and distribution watermain networks. Similarly, on the wastewater side, OCWA is contracted to operate the large wastewater treatment plants on the shore of Lake Ontario, while Peel operates the wastewater collection system, pumping stations, and the treatment facility in the community of Inglewood, in the Town of Caledon.

This water cycle, shown in [Figure 1](#), starts when source water is pumped into our water treatment plants and undergoes treatment to meet the [Ontario Drinking Water Quality Standards](#). Treated drinking water is distributed through a network of pipes, storage facilities and pumping stations to homes and businesses. Used water goes down the drains into the wastewater collection system, where a series of pipes collect and convey wastewater to the treatment plants. Although a predominantly gravity-based network, pumping stations are needed to move wastewater from low lying areas. Wastewater undergoes multi-stage treatment to comply with the strict provincial and federal standards before release to the environment. Peel is committed to high standards of treated wastewater quality since it gets discharged into Lake Ontario, which is the source of drinking water for Peel and many neighbouring municipalities.

Figure 1. Water and Wastewater Cycle



For more information, refer to the [annual wastewater reports](#) for our other wastewater systems and our [annual water quality reports](#) to learn about water treatment and distribution.

2. Introduction

Wastewater systems in Ontario are governed by the Ministry of the Environment, Conservation and Parks (Ministry) and are also subject to federal legislation.

The wastewater collection system receives wastewater from residences and businesses that are connected to the municipal sewer pipe network and conveys it to the wastewater treatment plant where it is treated to reduce contaminants, nutrients, and pathogens before it is released to the environment. The Environmental Compliance Approval (Approval), issued under the [Environmental Protection Act](#), is a facility-specific document through which the Ministry sets discharge quality limits for that facility based on the sensitivity of the receiving waters. To comply with the Approval, Peel prepares an annual report covering the operation and overall performance of the wastewater system.

This report provides a performance summary for the period from January 1 to December 31, 2025, for the Wastewater Collection Systems, to fulfill the annual performance reporting requirements set out in the Approval number 009-W601.

The collection system is comprised of two separate collection systems: South Peel Wastewater Collection system, a class 3 wastewater collection system, and the Inglewood Wastewater Collection system, a class 1 wastewater collection system under [Ontario Regulation 129/04](#), and serves over 1.58 million customers across Mississauga, Brampton, and parts of the Caledon. It is owned and operated by Peel. This system collects municipal wastewater from residences and businesses, as well as landfill leachate from the Chinguacousy Landfill and former Britannia Landfill and conveys it to the Peel's three wastewater treatment plants -- G. E. Booth Water Resource Recovery Facility (WRRF), Clarkson WRRF or Inglewood (WWTP). Peel also receives wastewater from the City of Toronto and York Region through inter-municipal servicing agreements.

All of Peel's wastewater collection system assets are captured within a single Approval. The portion of the collection system that serves the community of Inglewood (in Caledon) directs Inglewood's communal wastewater to the Inglewood WWTP and the portion of the collection system that serves Mississauga, Brampton, and the east side of Caledon is connected to Peel's larger South Peel collection system that directs wastewater south to the G. E. Booth and Clarkson WRRFs on the shore of Lake Ontario. Refer to [Figure 2](#) for a map of the Peel's wastewater collection system.

2.1 Compliance

The Approval is a facility-specific document and is the legal instrument that sets requirements for municipal system owners and operating agencies with regards to operation and management, level of treatment, monitoring and recording, routine and event reporting, and effluent quality notification. In accordance with the Approval, major changes to treatment process or equipment are communicated to the Ministry.

The Ministry performs periodic inspections on all wastewater systems, comprised of facility visits and review of information and data for the inspection period. Inspection scope generally covers procedural documentation review, staff competency, process operation and monitoring, and corrective actions to operational events. Peel is committed to ensuring environmental protection and compliance with legislative requirements. We maintain transparency by reporting all findings of potential non-compliance incidents and outcomes of internal assessment to the Ministry local district office. For more information refer to section [5.1](#).

3. Collection system overview

The collection system consists of a series of underground pipes that collect wastewater from residences and businesses throughout Peel and depending on location, convey the wastewater to one of three treatment facilities, i.e., G.E. Booth and Clarkson WRRF located in the City of Mississauga, on the shore of Lake Ontario, or Inglewood WWTP in the Town of Caledon. [Figure 2](#) shows a map of Peel's wastewater collection.

Table 1. South Peel Wastewater Collection System sanitary sewers

Pipe diameter (millimetres)	Length (kilometres)
1 to 300	2,900
301 to 500	300
501 to 950	300
951 to 1,650	170
Greater than 1,650	50

Table 2. South Peel Wastewater Collection System forcemains

Pipe diameter (millimetres)	Length (kilometres)
1 to 300	25
301 to 500	10
501 to 950	20

Table 3. Inglewood Wastewater Collection System sanitary sewers and forcemains

System type	Pipe diameter (millimetres)	Length (kilometres)
Sanitary sewers	1 to 300	4
Forcemains	1 to 300	0.4

Sewage Pumping Stations (SPS) and facilities, listed in [Appendix A - Facilities](#), are equipped with stand-by power generators or configured to receive power from a portable stand-by generator to ensure critical equipment can continue to operate in the event of a power failure.

The collection system is comprised of two separate systems:

1. The South Peel Wastewater Collection System conveys sewage to G.E. Booth and Clarkson WRRFs for treatment prior to its final discharge to Lake Ontario. The South Peel Wastewater Collection System consists of:

- 32 sewage pumping stations
 - One odour control facility
 - Two septage receiving stations
2. The Inglewood Wastewater Collection System conveys sewage from the community of Inglewood to the Inglewood WWTP for treatment prior to its final discharge to the Credit River. The Inglewood Wastewater Collection System consists of:
- 4 km of sewers and forcemains
 - 1 sewage pumping station (see [Appendix A - Facilities.](#))

The South Peel Wastewater Collection System is further divided into East and West trunk sewer systems.

- The East trunk sewer system conveys sewage to the G.E. Booth WFFR for treatment prior to its final discharge to Lake Ontario. The East trunk sewer system services the east side of Mississauga, Brampton, and parts of Caledon, including Bolton.
- The West trunk sewer system conveys sewage to the Clarkson WRRF, discharging its treated effluent to Lake Ontario. The West trunk sewer system services the west side of Mississauga, Brampton, and southern parts of Caledon.

The South Peel Wastewater Collection System also receives wastewater from the City of Toronto and York Region through inter-municipal servicing agreements, as described below:

- York-Peel Servicing Agreement: wastewater from York Region is pumped from the Humber SPS to Peel's collection system through 14 km twin 900-millimetre forcemains at Highway 427 and Steeles Avenue East. The forcemains discharge to Peel's gravity sewer network, which ultimately flows to the G.E. Booth WRRF. As wastewater from York is received in Peel, it passes through the York-Peel Odour Control Facility (see description below). Peel receives an annual average of 13,180,000 m³ of wastewater from York Region.
- Toronto-Peel Servicing Agreement: there are currently three locations where wastewater flows across the municipal boundary from the City of Toronto to Peel's wastewater collection system. Peel receives an annual average of 11,016,000 m³ of wastewater from Toronto.

Volumes from York Region and Toronto account for approximately 10% of flows in Peel.

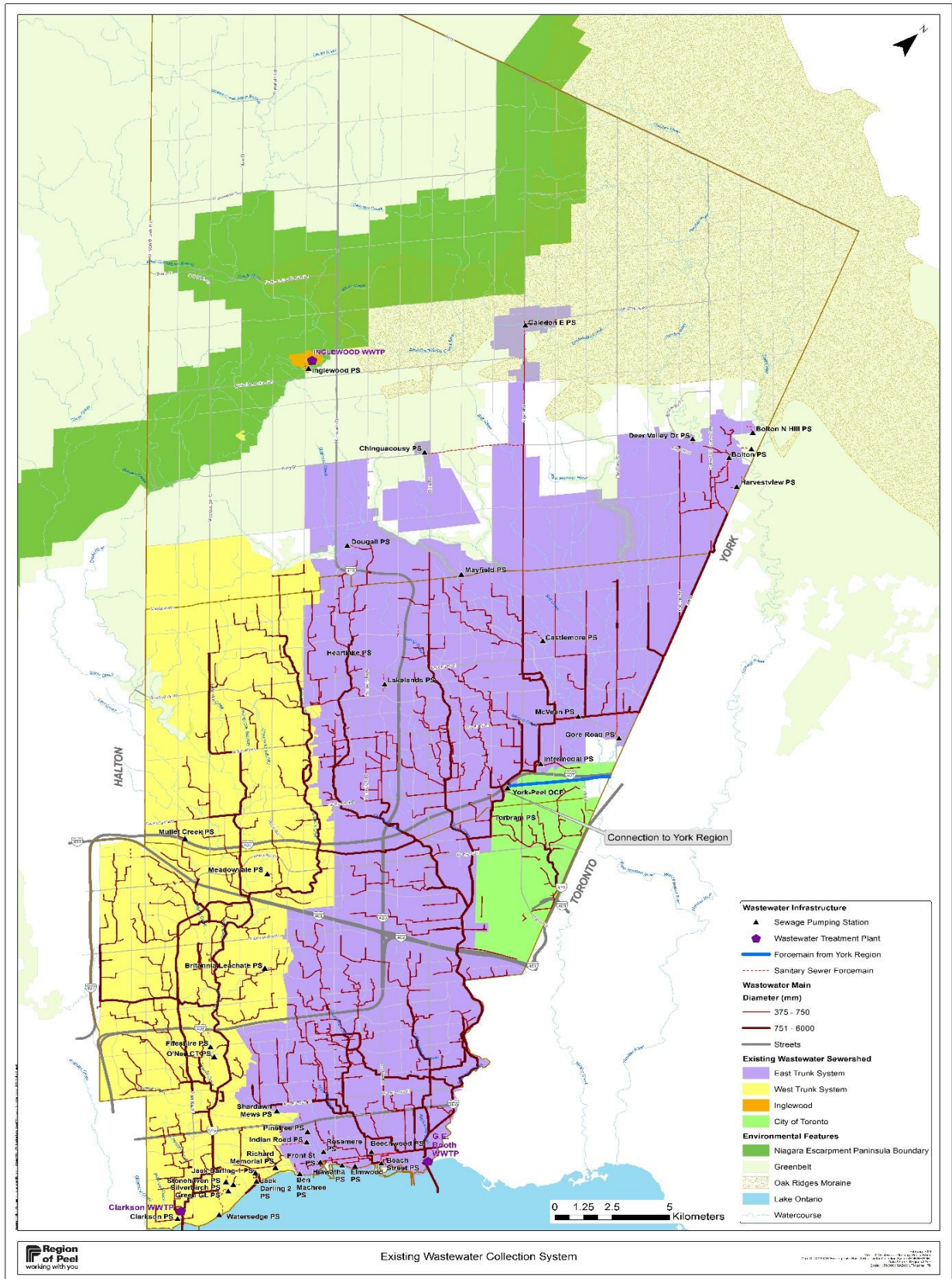
York-Peel Odour Control Facility

The York-Peel Odour Control Facility, located at Steeles Avenue (between Airport Road and Torbram Road) in the City of Brampton, treats odours caused by hydrogen sulphide generated in wastewater along the journey through the forcemains from York Region. There are two odour control technologies used at this facility:

- A counter current packed bed tower wet chemical scrubber is used to remove particles and chemicals from the air. Sodium hydroxide and sodium hypochlorite solutions are sprayed within the scrubber to help eliminate odours.
- An injection system adds a small amount of ferrous chloride into the wastewater stream downstream of the scrubber for hydrogen sulfide control to reduce odours and pipe corrosion as the wastewater continues its journey through the sewer system.

Sampling is performed at this facility to understand the composition of the wastewater coming from York Region. The samples are sent to an accredited laboratory for analysis.

Figure 2. Wastewater Collection System map



4. Operational performance

4.1 Summary and interpretation of monitoring data

4.1.1 Flow monitoring

Flows are measured for all pumping stations using flow or level monitors. In addition, more than 400 flow monitors are installed throughout the sewer system to assess high-risk areas, support programs such as the [Downspout Disconnection Program](#) to reduce stormwater inflow to the sanitary sewer, improve the accuracy of the hydraulic model, forecast population growth-related capacity needs, and identify opportunities to enhance the resilience of the sanitary sewage system.

Flow monitors are also placed in some of the engineered overflow connections to storm water, which serve as a flow relief during high flow events to prevent the system from backing up into residents' homes and causing flooding. Overflows from the sewer system or the pumping stations are reported to the Ministry. More information on overflows is provided in section [4.4](#).

4.2 Operating problems encountered and corrective actions taken

4.2.1 Heavy Flow Events

On April 2, 2025, Peel experienced a heavy wet weather event causing increased flows in the sanitary system, resulting in multiple overflows. This event triggered hundreds of alarms, requiring operations staff to prioritize their response, in conjunction with influx of residential complaints. The event overwhelmed the system, and reporting to the Ministry was made promptly as the information was confirmed. Additional details are available in section [4.4](#).

4.2.2 Inflow and Infiltration (I&I)

Peel's Inflow and Infiltration (I/I) Remediation Strategy divides the wastewater system into 40 distinct sewer sheds, known as Blocks. These Blocks are prioritized based on their risk of sewage overflows to the environment, potential for basement flooding, and capacity limitations affecting future growth. The highest priority Blocks were addressed during the first phase of work from 2019 to 2022. The next phase, spanning 2023 to 2026, is now underway and focuses on the

subsequent set of priority Blocks. In 2024, Peel completed a reprioritization with planning underway for the 2027-2030 phase.

Current work includes investigations, hydraulic assessments and development of targeted remediation measures such as downspout disconnection, removal of cross connections, sealing of maintenance holes, sewer lining, infrastructure upsizing, and construction of wastewater storage facilities. Remedial actions with the greatest return on investment are prioritized to maximize system resilience. Peel also continues to refine its design and construction standards to ensure new infrastructure meets higher performance and durability requirements. Peel's planning approach focuses on wet-weather flow management and resiliency planning, with consideration for long-term growth, flood protection, and sustainability.

4.3 Summary of maintenance activities and expenditures

4.3.1 Maintenance of linear infrastructure

Maintenance of the linear infrastructure involves performing inspections, sewer cleaning, and repairs.

Inspections are conducted on sewers and maintenance holes. The sewers are inspected using closed circuit television (CCTV) units. When a structural issue is identified in the sewer main, sewer lateral or maintenance hole, it is triaged and repaired according to the level of risk and priority. A summary of the maintenance and inspection activities completed is provided in [Table 4](#).

Table 4. Linear maintenance performed

Description	Quantity
Length of sewer inspected using CCTV	267 km
Length of sewer flushed	778 km
Laterals repaired	115
Laterals replaced	5
Maintenance holes inspected	6,013
Maintenance holes repaired	124
Sewer main relining	3 km
Sewer main replacement or new connection	8 km

4.3.2 Collection system facilities

The wastewater collection system facilities under Approval number 009-W601 include:

- 32 sewage pumping stations
- York-Peel Odour Control Facility
- Two septage receiving stations

Peel has the following maintenance programs for these facilities:

1. Preventive maintenance is conducted on a routine basis to maintain the equipment in good working order and lessen the likelihood of failure,
2. Corrective maintenance is conducted to correct deficiencies discovered during routine inspections or preventive maintenance activities and return equipment to working order,
3. Unplanned (emergency) maintenance is conducted in response to equipment failure.

4.3.3 Trouble spot maintenance program

One potential cause of sanitary sewer overflow or odour issues is sewer backup. A sewer backup occurs when the sewer becomes fully or partially blocked by an obstruction. To mitigate issues at locations that regularly become obstructed, Peel has a trouble spot maintenance program. Trouble spots are cleaned using high pressure water spray or mechanical reaming (rotational cutting) on a set schedule to prevent blockages. In the reporting year, 8 blockages were cleared. Mainline sewer pipes that are cleaned as a part of the regular preventive maintenance program are addressed in a prioritized manner. Pipe age and type, and discovery of defects in the sewer pipe are some of the criteria used to determine priority.

4.3.4 Sanitary sewer pipe replacement program (State of Good Repair)

Peel's overall infrastructure is aging, requiring more investment in preventive and planned maintenance. In response, Peel has established a comprehensive asset management program, which includes sanitary sewer pipe assessment and renewal. The program includes ongoing upgrades of the Peel's sanitary sewer system to ensure long-term integrity and sustainability. The program involves repair or replacement of existing sanitary services to improve flow, minimize potential for spills and overflows to the environment, minimize the risk of backups into homes, and upsize if required to meet future planning needs; all to provide an acceptable level of service to our customers.

Peel determines priority of sanitary sewer pipe rehabilitation and replacement based on the following factors:

- Pipe condition
- Pipe age
- Pipe size and material type
- Pipe breaks and leak history
- Hydraulic performance of the pipe
- Planned provincial, regional and municipal projects
- Annual budget constraints
- Operational demands
- Risk of asset failure

Most sanitary sewer pipe replacement projects are undertaken in partnership and coordination with other road, storm water and watermain renewal projects for improved cost effectiveness and to minimize public disruption. Using multiple criteria, Peel plans the sanitary sewer pipe renewal program based on sound asset management principles, in a financially responsible manner. For more information about this program, please see the [2025 Enterprise Asset Management Plan](#).

4.3.5 Sanitary trunk sewer conditions assessment and rehabilitation

Peel owns, maintains and operates an extensive trunk sewer network with pipes ranging from 750 mm to 3,150 mm in diameter. Understanding the performance of the wastewater system is a crucial step in Peel's efforts to maintain system capacity and plan for future growth. Peel performs annual condition assessments on portions of its trunk sewer network to evaluate system performance and guide long term planning. These assessments inform the rehabilitation program, supported by a 10-year capital budget of \$420 million.

In 2025, several significant wastewater condition assessment and rehabilitation initiatives were advanced, including the following:

- Completed condition assessments of key trunk sewers including the East Brampton trunk sewer, the Levi Creek trunk sewers, the Brampton-Bolton trunk sewer, and the Albion-Vaughan trunk sewer. The results of these assessments led to new renewal projects, including the Spring Creek trunk sewer rehabilitation.

- Use of drones and 3D scanning technology to capture detailed imagery of maintenance holes and trunk sewers.
- Initiated a program to protect maintenance holes located in erosion-prone floodplains. This program identified several high-risk maintenance holes, including one failed structure near the Credit River in Mississauga, that was abandoned in the summer.

These projects aim to maintain target service levels, improve system resiliency and longevity, and reduce site specific infiltration, such as leaking pipe joints. The East trunk sewer and Energy Dissipation and Chamber Rehabilitation project was awarded combined federal and provincial funding and achieved final commissioning in late 2025.

The recent twinning of the East Brampton and West sanitary trunk sewers added capacity and facilitated the condition assessment and rehabilitation of the existing trunk sewer to extend its life. Following the condition assessment of the East Brampton sanitary trunk sewer, Peel began detailed design work and rehabilitation is currently underway using a phased approach.

4.3.6 Quality assurance and quality control (QA and QC)

Peel operates a QA/QC program for maintenance holes condition assessment. Approximately 3% of all maintenance hole condition assessments are randomly selected to be re-inspected to assess accuracy of the information collected. Peel performs a similar QA/QC program for the sewer main flushing program, with CCTV inspection conducted on 1% of sewer mains flushed.

4.3.7 Expenditure information

Staff determine capital spending priorities to eliminate unnecessary expenditures while maintaining infrastructure. [Table 5](#) summarizes the major expenditures in 2025.

Table 5. Significant expense for the South Peel wastewater collection system

Activity type	Description of work	Expenditure
Repair	Sanitary pumping station rehabilitation works	\$5,240,000
Repair	Sanitary sewer spot repairs	\$818,500
Repair	Maintenance hole repair/rehabilitation	\$359,500
Repair	Sanitary sewer relining	\$939,100
Replacement/Installation	Sanitary sewer replacements and new construction	\$145,942,000

4.3.8 Summary of calibration and maintenance equipment

Calibration and maintenance are performed annually on flow monitoring equipment, according to manufacturer's recommendations. The monitoring equipment was satisfactorily calibrated by a third-party agency in 2025 in all sewage pumping stations.

4.3.9 Summary of complaints

The Approval requires that Peel log all resident complaints, investigate, and resolve them. Peel makes every effort to respond to customers and satisfactorily address their concerns and enquiries. A database is used to record details including information collected from the customer on the nature of the enquiry and action taken by Peel. There were 170 complaints recorded in 2025 related to the operation of the wastewater collection system, with the vast majority of reports being related to sewer back-ups due to obstructions in sewer laterals. A breakdown of public complaints received can be found in Table 6.

Peel takes proactive action to reduce odours throughout the collection system through the odour control program. Areas that regularly experience collection system odours are investigated, and odour control dishes are placed in the maintenance holes to help stop odorous gases from escaping into the environment.

Table 6. Summary of complaints received for the collection system

Type of complaint	Description	Number of complaints	Corrective actions taken
Mainline sewer back-up	Sewage back-ups due to obstructions in mainline sewers	8	Operator dispatched to confirm the location and state of the sewer. Flusher trucks used to release the backup and flush.
Sewer lateral back-up	Sewage back-ups due to obstructions in sewer laterals	75	Operator dispatched to confirm and locate the appropriate service point in the home. Sewer trucks used for mechanical rodding to release the backup.
Sanitary odour	Sewage-like odours associated with wastewater collection system	38	Operator dispatched to check the locations. Assets associated with the collection system checked and work was done to resolve the odour, as needed.
Maintenance hole issues	Maintenance hole issues such as dislodged or broken covers	49	Operator dispatched to assess the damage. Depending on the requirements, repairs performed, ranging from fixing a lid to an extensive repair with a multi-person crew.

4.4 Summary of sewage pumping station overflows, spills or abnormal discharge events

Occasional weather events such as heavy rainfall and snow melt can result in flow rates that burden the collection system and may be higher than those for which the plant was designed. These challenges, as well as the need for planned maintenance and construction activities, may result in a planned or unplanned discharge to the environment.

An overflow is a spill of wastewater to the environment from a designed location within the collection system. An overflow occurs when rainwater, groundwater intrusion and/or emergency situations result in additional flows entering sanitary sewers that overwhelm the system. Overflows from the sewage pumping stations, while not desirable, are sometimes necessary to help prevent basement and surface flooding and to protect the downstream treatment plants.

When possible, samples are collected and tested to characterize wastewater discharge. Parameters tested for overflow events include BOD₅, TSS, TP, TKN, and *E. coli*.

A spill is an unplanned discharge of wastewater to the environment. In 2025, a total of 12 spills, including overflows, were reported with 11 spills originating from the collection system and one from a sewage transfer station.

Five of these incidents occurred in April during a wet weather event described in section [4.2.1](#). The spills are summarized in [Table 7](#).

Table 7. Summary of spills from the collection system

Date	Location	Description	Estimated volume / duration	Corrective actions taken	Spills Action Centre reference
Feb 5	3615 Morningstar Drive, Mississauga	Spill from maintenance hole due to blockage	Unknown	Blockage released, and flushed	1-H1EWD5
Feb 18	Hurontario Street, North of Fairview Road West	Spill from maintenance hole due to blockage	Unknown	Blockage released, and flushed	1-HKN8KB
Apr 2	Cavendish Creek	A severe wet weather event resulting in 4 overflows in sanitary system maintenance holes connecting to the storm system. At Hewick Meadows, the maintenance hole was carried off by surcharge.	62.1 m ³	No sanitary debris discovered	1-N9P6VB
Apr 2	Clarkson GO Weir Overflow		944 m ³	No sanitary debris discovered	1-N9IN7T
Apr 2	The Credit Woodlands Overflow		27.3 m ³	NA	1-NEW9Q0
Apr 2	Stavebank Overflow		0.004 m ³	NA	1-NEW9VI
Apr 2	Hewick Meadows Park		Unknown	Maintenance hole cover replaced and secured.	1-N84EK2
Sep 4	Sir Richards Rd. and Courier Lane	Spill from maintenance hole due to heavy rain	0.175 m ³	Sewer path flushed.	1-PGLBJI
Oct 9	McVean SPS	Small sewage leak from newly installed forcemain	0.168 m ³	Flows were redirected to reduce stress on forcemain. Impacted soils excavated and disposed of.	1-PM5EEV
Oct 17	Torbram SPS	Septic service hauler spill while discharging at station	<0.1 m ³	Spill was cleaned up.	1-PN9Z6P
Dec 28	Clarkson GO Overflow	Linear spill from overflow/outfall due to heavy rain	280.6 m ³	Inspected location, no sanitary debris discovered.	1-PZ3JOF

Dec 28	Stavebank Overflow	Linear spill from overflow/outfall due to heavy rain	16.9 m ³	Inspected location, no sanitary debris discovered.	1-PZ3JOF
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Overflow and spill events are reported to the Ministry’s Spills Action Centre and the Medical Officer of Health when required. Reporting of the December 28 overflow event was delayed due to mixed communication among the responding teams.

Several overflow notifications and flow monitoring systems exist in various points of Peel’s wastewater collection system. Operations staff respond to overflow alarms at the pumping stations and initiate the required reporting. Peel also has alarms that indicate near overflow conditions in the system (system overflows), which operations staff must verify in the field. Through a formal review of event response, staff identified opportunities and recommendations that Peel continues to implement.

In late 2025, in accordance with province-wide requirement, Peel initiated the installation of signage at publicly accessible locations downstream of collection system overflow outfalls identified in the Approval. The signage identifies sanitary sewer overflow locations and provides information on potential public health and safety risks associated with wet weather events. Peel plans to complete installation of all signs by May 31, 2026. For more information, please visit [Peel website](#).

4.5 Notice of modifications

Under the Approval, minor modifications are pre-authorized and need only be recorded on the appropriate form and retained. A summary of the types of alteration completed in the reporting year is provided in [Table 8](#). None of these alterations posted a significant threat to the drinking water system.

Table 8. Preauthorized modifications forms

Form type	Description	Completed
SS1	Form SS1 documents preauthorized alterations to sanitary sewer mains and forcemains, i.e., addition, modification, replacement, or extension to system’s pipes	22
SS2	Form SS2 documents preauthorized alterations to the components of the collection system, i.e., addition, modification, or replacement of components of the system	0

or sewage pumping stations;

A1	Form A1 documents preauthorized alterations to equipment with emissions to air, e.g., addition, modification, or replacement of venting for odour control or emergency generators	0
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Repair and maintenance activities are exempt from the documentation requirements and may be performed as needed to maintain the collection system in good working order.

Peel undertakes construction projects to upgrade or enhance the collection system to meet demands related to industrial and commercial growth in Peel that may alter incoming wastewater volume or loading (strength), and to integrate new technologies. Under the Approval, minor modifications and system extension are preauthorized, provided they meet the conditions specified. Major modifications that are not preauthorized require an amendment to the Approval and are listed in the Approval as Additional Approved Works. There were no amendments to the Approval in the reporting year.

4.6 Efforts to achieve conformance with Ministry’s treatment and collection system requirements (Procedure F-5-1)

As Peel’s population continues to grow, volumes of wastewater are expected to continue to increase. In addition, flows rise during wet weather and snow melt events due to infiltration of water into the collection system. Climate change causes an increase in the frequency and severity of these wet weather events. Increased flows influence treatment effectiveness. Another influence is industrial discharges into the collection system. Peel’s Water and Wastewater 10-Year Plan includes ongoing capital improvements to the treatment plants and collection system to improve flow management to protect neighbourhoods from flooding, maintain treatment capacity, and meet all regulatory limits for treated effluent. Peel has several avenues by which it is working to address these challenges to the wastewater system, including sewer conditions assessment and rehabilitation as described in section 4.3.5.

G.E. Booth Water Resource Recovery Facility

Peel recognizes that the plant capacity is approaching 90% of design, which increases the possibility of bypass occurrences and potential impacts to effluent quality during high flows. To address high flows to G.E. Booth WRRF, there is a

project underway to divert flows from east to west (away from G.E. Booth WRRF and towards Clarkson WRRF). The project is expected to be completed and flow diversion operational in 2027. The preliminary flow diversion strategy under this project is to re-direct approximately 70 MLD. More information on this project is available on [Peel's construction website](#). Information specific to environmental assessments being performed by Peel are available on the [Environmental Assessment website](#).

Peel continues working to reduce inflow and infiltration in the collection system that contributes to peak flows during high flow events. See section [4.2.2](#) for more information.

Industrial Wastes

Peel's [Wastewater Bylaw \(53-2010\)](#) sets concentration limits for discharges to the sanitary sewer, which subsequently protects the wastewater treatment plants from industry impacts, and provides information on agreements and spills to the environment. The bylaw applies to the industrial, commercial, and institutional (ICI) sectors as well as residences, and establishes penalties for offences of up to \$100,000 for businesses.

All ICI facilities are inspected by Peel staff at a minimum once every 2 years, resulting in thousands of inspections being completed annually. The inspections are used to assess the discharges from the facility and its compliance with the bylaw as well as the effect on the wastewater collection and treatment systems. Upon discovery of a spill into the sanitary sewer, or notification from an industry of a release, Peel wastewater systems are notified so staff can implement protective actions. For more information about the bylaw enforcement, please visit our website at [Wastewater Bylaw](#).

4.7 Other information required by the Ministry Water Supervisor

There was no other information requested by the Ministry Water Supervisor in 2025.

5. Performance management programs

5.1 Ministry inspections

Wastewater system inspections are performed periodically by the Ministry to ensure systems are operating as required and complying with the terms and conditions of their Approvals. Performance data is reviewed against the compliance objectives and limits. The inspections also verify that Peel meets sampling, testing and treatment standards and staff competency requirements. Additional inspections can be triggered through a variety of factors such as frequency of events or inconsistent system performance (e.g., increased number of spills or reportable incidents), in response to a complaint or concern, or as part of a follow-up from prior non-compliances.

There was no Ministry inspection of the Peel's wastewater collection system in 2025.

Peel conducts regular internal compliance checks to confirm that operational performance meets all regulatory requirements. Any self-declared findings that indicate potential non-compliance are reported to the Ministry through courtesy notification.

During the reporting period, there was one instance of non-compliance noted with a weekly site visit to the Fifeshire Sewage Pumping Station missed in the week of August 11th to 18th. While the Approval requires only an annual inspection of sewage pumping stations, Peel's internal practice, as documented in the Operations and Maintenance Manual, mandate weekly visits. No alarms were triggered during the missed week, and trending data showed no abnormal conditions or operational concerns. Corrective actions included a reminder to staff and review of internal procedures to ensure weekly pump station inspections are consistently completed.

5.2 Wastewater integrated management system

Peel has developed and implemented the Wastewater Integrated Management System (WWIMS) to create a systematic approach towards pollution prevention, adopt quality work and enhance performance to assist with fulfilling compliance obligations. Based on the principles of ISO 9001 (Quality Management Systems) and ISO 14001 (Environmental Management Systems), the WWIMS aims to apply best management practices to the operation of the Peel-operated wastewater

collection and treatment systems. The scope of Peel's WWIMS includes the Wastewater Collection System and the Inglewood Wastewater Treatment Plant.

In July 2024, Peel announced self-declaration of conformance to ISO 14001 and ISO 9001 standards for its Wastewater Integrated Management System (WWIMS). This significant milestone reflects the hard work and ongoing commitment to environmental protection and quality assurance. The WWIMS meets all the requirements set out within ISO 14001 and 9001, without depending on third party (external) certification.

The WWIMS enhances service reliability and accountability. This approach leads to improved operational efficiency and performance, risk management, and stakeholder confidence, ultimately contributing to the sustainable and effective operation of our wastewater systems. The WWIMS provides an effective framework for operational excellence, guidance to building and managing policies, procedures, and processes, and fostering a culture of continual improvement.

The 2025 internal audit was conducted in September and all sections of the WWIMS manual were confirmed to be in full conformance with ISO 14001 and ISO 9001 standards. Three Opportunities for Improvement were identified, focused primarily on administrative enhancements related to communication and climate change preparedness.

Also in 2025, the annual WWIMS risk assessment review was completed, encompassing 146 activity assessments. Of these activities, 12 were designated as Significant Environmental Aspects (SEAs), activities that have or could have one or more significant environmental impacts. The SEAs are ranked to support the development of Objectives and Targets, which guide efforts to reduce or eliminate associated risks. Objectives and Targets are assessed with stakeholders for each SEA, and are monitored and tracked on a quarterly basis.

Appendix A - Facilities

Table 9. List of pumping stations and facilities in South Peel wastewater collection system

Serial number	Sewage pumping station (SPS)	Location
1	Beach Street SPS	City of Mississauga
2	Beechwood SPS	City of Mississauga
3	Ben Machree SPS	City of Mississauga
4	Bolton North Hill SPS	Town of Caledon
5	Bolton SPS	Town of Caledon
6	Caledon East SPS	Town of Caledon
7	Castlemore SPS	City of Brampton
8	Clarkson SPS	City of Mississauga
9	Dougall SPS	Town of Caledon
10	Elmwood SPS	City of Mississauga
11	Fifeshire SPS	City of Mississauga
12	Front Street SPS	City of Mississauga
13	Gore Road SPS	City of Brampton
14	Harvestview SPS	Town of Caledon
15	Hiawatha SPS	City of Mississauga
16	Indian Road SPS	City of Mississauga
17	Intermodal SPS	City of Brampton
18	Jack Darling Memorial Park 1 SPS	City of Mississauga
19	Jack Darling Memorial Park 2 SPS	City of Mississauga
20	Lakelands SPS	City of Brampton
21	Mayfield SPS	City of Brampton
22	McVean SPS	City of Brampton
23	Meadowvale SPS	City of Mississauga
24	Mullet Creek SPS	City of Brampton
25	O'Neil SPS	City of Mississauga
26	Pinetree SPS	City of Mississauga
27	Richards Memorial SPS	City of Mississauga
28	Rosemere SPS	City of Mississauga
29	Shardawn Mews SPS	City of Mississauga
30	Silver Birch Trail SPS	City of Mississauga
31	Stonehaven SPS	City of Mississauga
32	Watersedge SPS	City of Mississauga

Table 10. List of pumping stations and facilities in Inglewood wastewater collection system

Serial number	Sewage pumping station (SPS)	Location
1	Inglewood SPS	Town of Caledon

Table 11. List of odour control and septage facilities

Serial number	Facility	Location
1	Torbram Septage Receiving Station	City of Brampton
2	Mullet Creek Septage Receiving Station	City of Brampton
3	York-Peel Odour Control Facility	City of Brampton

Appendix B - Frequently asked questions

Where does water go after it is used?

After you use water to wash dishes and clothes, brush your teeth, shower or flush the toilet, the used water (wastewater) that goes down your drains flows through a series of underground sewer pipes to the wastewater treatment plants.

The wastewater is treated to remove contaminants and kill disease-causing microorganisms before being discharged into the environment. Peel owns two water resource recovery facilities (WRRF): G.E. Booth WRRF and Clarkson WRRF, both discharging into Lake Ontario, and the Inglewood wastewater treatment plant, discharging into the Credit River. These three plants serve the cities of Mississauga and Brampton and the Town of Caledon.

View [Peel Region's wastewater video](#) for more information on how wastewater is treated.

Why am I experiencing a sewage odour outside my house?

The sewage odor outside your house could be from a variety of sources. It could be that the sewer is backed up close to your property. If your property is located close to a lake, algal blooms also cause odours. Other sources of odour might include: scheduled treatment plant maintenance coupled with prevailing winds, nearby farming activities, or odours from waste management facilities or industries.

If you are noticing odours near your property, please call Peel Region at 905-791-7800.

Why am I experiencing a sewage odour inside my house?

If you notice an odour of sewage coming from a drain in your house, it is recommended to pour a cupful of bleach into the drain, let it sit for 10-15 minutes and then rinse it down with plenty of water. If this does not resolve the odour problem, please call Peel Region at 905-791-7800 for further investigation.

What is the difference between a storm sewer and sanitary sewer?

Wastewater that goes down drains inside homes and buildings enters the sanitary sewer system, which sends it to a wastewater treatment facility for treatment before it is released to the environment. Sanitary sewer systems in Mississauga, Brampton and Caledon are maintained by Peel.

Rainwater and melting snow are called storm water. Stormwater enters storm grates on the road and enters the storm sewer pipes that run beneath the roadways. These pipes discharge the storm water to local waterways, like streams, creeks, and lakes. The majority of storm sewer is maintained by the local municipality: the cities of Brampton and Mississauga and the Town of Caledon. Peel maintains storm sewers on regional roads.

Refer to the [Peel Region website](#) for more information about wastewater and storm water.

What happens to industrial wastewater?

Some companies treat their own wastewater and release it directly into the environment or into Peel's sanitary sewer (wastewater collection system). Wastewater released into the sanitary sewer joins all other wastewater collected (from households and building drains) and flows to one of the wastewater treatment plants. Industrial wastewater can be hazardous or contain substances that may damage sewer infrastructure or upset the treatment process. Therefore, all wastewater released and all businesses that release it into Peel sewers must comply with Peel's [Wastewater Bylaw](#). To ensure compliance, industrial facilities are examined by inspectors from Peel's Environmental Control department. Thousands of inspections are completed each year.

What must not be disposed down the toilet or poured down the drain?

It is important to understand that what goes down the drain or the toilet may have negative impacts on the wastewater system and the environment. Fats, oils, and grease should never be poured down the drain because these materials are known to cling to pipe walls. Over time, their accumulation can build up to such high levels that the sewer can become blocked. Another reason to avoid disposing fats, oils, and grease into drains or toilets is that they are not effectively broken down during the wastewater treatment process. Instead, Peel

recommends that household fats, oils and grease should be collected and properly disposed as [per the fats, oils, grease disposal at home instructions](#). To learn more about Peel's [community recycling centres' web page](#).

It is also important not to dispose items down the toilet that could get stuck in or damage the sewer systems. Sticks, rags, paper towels, personal hygiene products, diapers, disposable wipes, household hazardous waste and pharmaceuticals should not be disposed by simply flushing down the toilet. Any unused or expired pharmaceuticals can be returned to your local pharmacy. For more information on how to properly dispose of items that damage the wastewater refer to [idontflush.ca](#).

What causes a sanitary sewer backup?

Most sewer backups occur when sewer pipes get blocked. Sewer pipes can become clogged with excess fats, oils, greases, food wastes, coffee grounds, hair, toilet paper, soap residue, or inappropriate materials being flushed down the toilet or drain. Even sanitary wipes that are labelled "flushable" will in fact clog pipes, sewers, and screens at the treatment plants. To help reduce sanitary sewer blockages and prevent backups, it is recommended to properly dispose of these items and other materials that can harden or settle within the sewer pipes.

Sanitary sewer backups can also occur when tree roots grow into or through sewer lines. These roots may be from trees that are outside your property boundaries. The only solution to this problem is to cut away the roots and then replace the pipeline.

If you notice a sewer backup in your home, call Peel Region at 905-791-7800 extension 4409, or 1-888-919-7800 for residents in Caledon. If the problem area is determined to be on private property, there is a flat fee for the service call.

More information about wastewater and storm water is available on the Peel [webpage](#).

How safe is the treated wastewater that is released into Lake Ontario?

To meet environmental compliance criteria in Ontario, all wastewater must be treated before being returned to the environment. Peel's wastewater treatment facilities, G.E. Booth, Clarkson, and Inglewood, are operated and maintained

under strict regulations and the effluent discharged into the environment must meet location-specific, provincial, and federal standards.

Which pipes are mine and which are Peel Region's responsibility?

See the information at [homeowner and regional responsibilities of wastewater infrastructure](#).

What is optional water and sewer line insurance program?

The pipes on the private side of the property line belong to the property owner. Sometimes these pipes may get damaged or blocked, which can result in costly plumbing bills. Peel endorses a voluntary pipe insurance program. For more information can be found on the [pipe protection plan webpage](#).

How can I find out what work is taking place in my neighbourhood?

Peel maintains an interactive mapping tool on our [website](#) where the public can see the status of current and upcoming water projects that could result in water interruption. At this site, you can sign up to receive email notices with project updates.

Similarly, we publish a summary of [water outages](#). If you are unexpectedly without water, you can check this site to learn what is happening and view the answers to frequently asked questions.

Other sources for more information about wastewater and related issues



Peel Region

10 Peel Centre Dr., Brampton ON L6T 4B9

Wastewater-related questions:

Phone: 905-791-7800 extension 4685

Website: peelregion.ca/wastewater

E-mail: Publicworkscustserv@peelregion.ca

Water and Sanitary Sewer and Septic Protection Plans:

[Peel Wastewater Bylaw](#) or [Service line warranties](#)



Government of Ontario

Ministry of the Environment, Conservation and Parks

Public Information Centre

Phone: 416-325-4000

Toll-Free: 1-800-565-4923

Website: ontario.ca/environment



Government of Canada

Environment and Climate Change Canada Inquiry Centre

Phone: 819-997-2800

Toll-Free: 1-800-668-6767

Website: ec.gc.ca

Health Canada

General Inquiries Telephone: 613-957-2991

Toll free: 1-866-225-0709

Website: canada.ca/en/health-canada