

April 30, 2025

City of Brantford Sanitary Collection System

Annual Performance Report 2024
ECA No. 063-W601



Contents

System Owner

The Corporation of the City of Brantford

Reporting Period

January 1st, 2024, to December 31st, 2024

Report prepared by

The Corporation of the City of Brantford

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Glossary of Terms and Abbreviations

Collection System Overflow ('CSO' / 'overflow'): A discharge to the environment at designed location(s) from the Authorized System

Contaminant: has the same meaning as defined in section 1 of the EPA

CCTV: Closed Circuit Television

Director: A person appointed by the Minister, pursuant to section 5 of the EPA for the purpose of Part II.1 of EPA (Environmental Compliance Approvals)

CCME: Canadian Council of Ministers of the Environment

Director: A person appointed by the Minister, pursuant to section 5 of the EPA for the purpose of Part II.1 of EPA (Environmental Compliance Approvals)

ECA: Environmental Compliance Approval issued by the Ministry of the Environment, Conservation, and Parks

Forcemain: A pipe that conveys wastewater under pressure out of a wastewater 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

Lateral Sewer Block (SB): When an obstruction in a private or public line slows or stops the flow of wastewater through the line.

MECP: Ministry, of the Environment, Conservation and Parks

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

Maintenance Hole (M/H): A structure that provides access to a sewer system for inspection, cleaning, maintenance, sampling, or flow monitoring

Ministry: The Ministry of the Minister and includes all employees or other persons acting on its behalf

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

pH: Measure of the alkalinity or acidity in water

SAC: Spills Action Centre

SDWT: Significant Drinking Water Threat

Spill: As defined in Part X of the Environmental Protection Act, is a discharge a) into the natural environment, b) from or out of a structure, vehicle or other container; or c) that is abnormal in quality or quantity in light of all of the circumstances of the discharge

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

STP: Sewage Treatment Plant, also known as Wastewater Treatment Plant ('WWTP')

Total Ammonia Nitrogen (TAN): A measure of the amount of ammonia (nitrogen pollution) in water

Total Phosphorus (TP): An essential nutrient used by microorganisms for growth. Excess amounts can lead to environmental issues like algae over-growth

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

Trunk Sewer: A larger 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

WWPS: Wastewater Pumping Station

1.0 Introduction

This report has been prepared in accordance with the terms and requirements set out in the City of Brantford's Ministry of the Environment, Conservation and Parks (MECP) Environmental Compliance Approval (ECA) for a Municipal Sewage Collection System #063-W601 issued on October 20th, 2022.

This report covers the period from January 1st 2024 to December 31st, 2024, and will be made available on the City of Brantford's website by June 1st, 2025. Hard copies will be made available by request by contacting the City of Brantford's Environmental Services Department.

ECA #063-W601 outlines the terms and conditions for operating the Sanitary Collection System. Schedule E, Section 4.6 of the ECA mandates the submission of an Annual Performance Report to the Director. This report includes monitoring data, operational challenges, inspections, maintenance, repairs, calibration, overflows/spills, public complaints and other operational information in respect to the system.

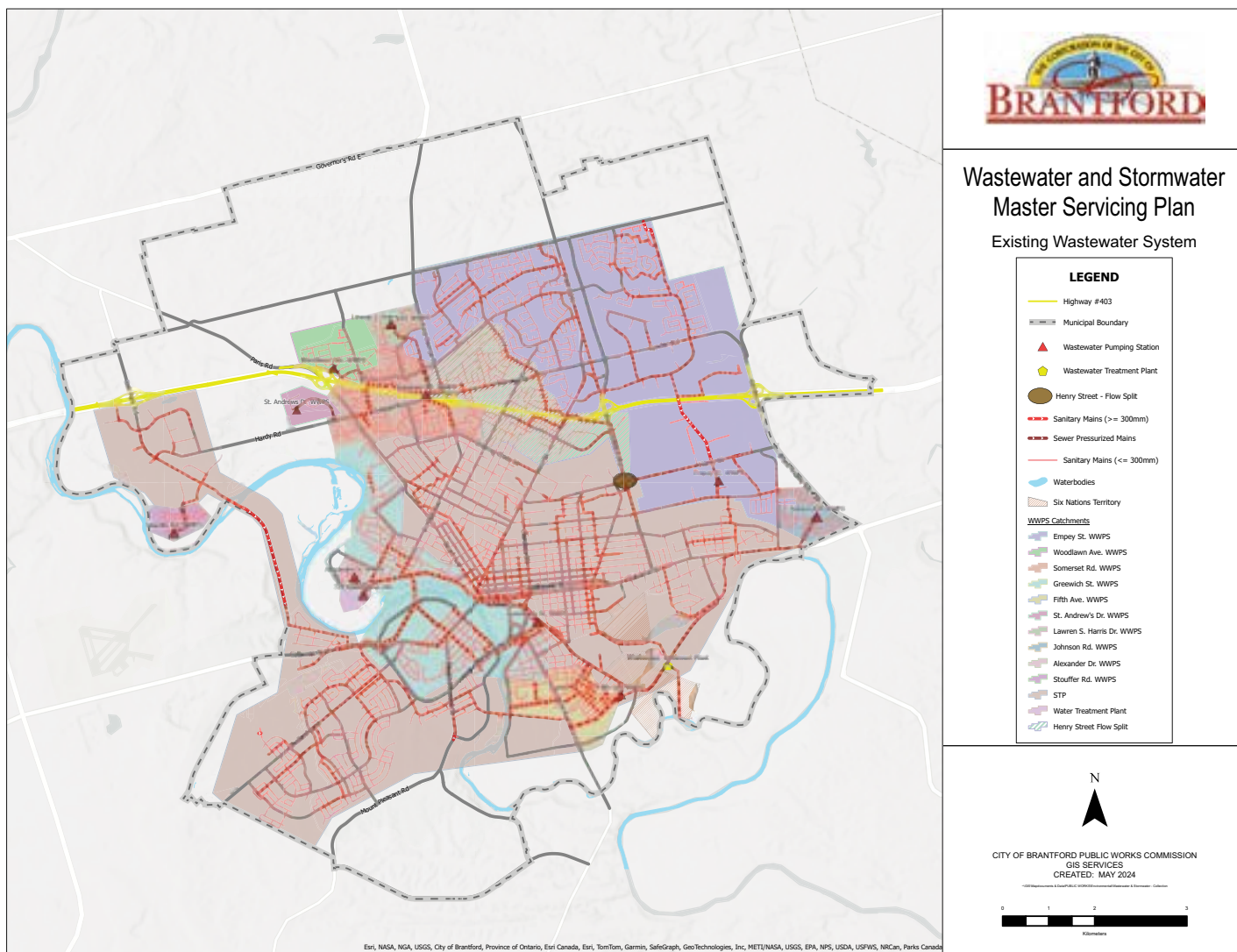
For the reporting period, City Staff worked diligently completing several maintenance, rehabilitation and renewal projects to ensure the adequacy of the City's Sanitary Collection System. No Ministry of the Environmental, Conservation and Parks inspections occurred during this time.

2.0 Sanitary Collection System Overview

The Corporation of the City of Brantford ("The City") owns, maintains, and operates a Class 2 Wastewater Collection System designed for the collection and transmission of sewage, consisting of approximately 449 kilometers of sanitary sewers, 8 siphons, 10 wastewater pumping stations (WWPS), 8 forcemains and related instrumentation and control systems that transmit sewage to the City of Brantford Wastewater Treatment Plant (WWTP) for treatment prior to discharging into the Grand River. The Sanitary Collection System does not include any Combined Sewage Structures

The collection system generally drains from the north to the south and from west of the Grand River to the east. There are 11 sanitary sewer catchments serviced by the following: Stauffer Rd WWPS, Empey Street WWPS, Woodlawn Rd WWPS, Somerset Rd WWPS, Greenwich WWPS, Fifth Ave WWPS, St. Andrew's Ave WWPS, Lawren S. Harris WWPS, Johnson Rd WWPS, Alexander WWPS, and the WWTP. Figure 1 provides an overview of the Sanitary Collection System.

Figure 1: Overview of the Sanitary Collection System



The Sanitary Collection System operates under the authority of an Environmental Compliance Approval for a Municipal Sewage Collection System number 063-W601. Regulatory compliance, inspections and reporting are completed through the Ministry of Environment, Conservation, and Parks Guelph District Office. Environmental Services Staff that operate the collection system are required to be licensed as per O.Reg.129/04 Licensing of Sewage Works Operators under the OWRA. All Staff undergo mandatory regulatory training to maintain and upgrades their licenses.

3.0 Operational Performance

As per the ECA, this section's purpose is to provide a summary of significant operational problems encountered and any associated corrective actions that were implemented.

All WWPS in the collection system are monitored by a Supervisory Control and Data Acquisition (SCADA) System that can be accessed remotely, including pumps, flow measuring devices, gas monitors and level measurements which are recorded on a data server located at the Wastewater Treatment Plant. Station alarms are programmed to alert Operations Staff 24/7 of potential operational issues including but not limited to high wet well levels, pump failures, communications failures and standby generator status. Operators respond to station alarms as required to ensure proper operation of the station.

All data and control decisions are recorded and retained for verification and record retention purposes and the data is used to assess performance, compliance and identification of trends and anomalies that require further investigation and or remediation to maintain proper function of the mechanical and control components of the system. In addition to SCADA monitoring, scheduled on-site inspections are completed by Operations Staff to confirm performance. Where issues are identified, work orders are generated for maintenance/repairs.

3.1 Operating Challenges and Corrective Actions

Operating problems that were encountered in the sanitary collection system include:

- **One hundred fifty seven (157) sanitary sewer stoppage/backups complaints received**
– All complaints were investigated and responded to by Operations Staff.
- **Woodlawn WWPS** – Pump #3 and its corresponding suction valve at Woodlawn WWPS failed. The existing pump was losing coolant and needed to be replaced. The work was completed in April 2024.

4.0 Inspections, Maintenance and Repairs

The following section provides an overview of some of the inspection, major maintenance activities and capital upgrades carried out on the Sanitary Collection System for the reporting year.

4.1 Inspections

Inspections are critical for detecting and addressing issues promptly within the sanitary collection system, preventing environmental contamination and ensuring regulatory compliance. The City maintains routine inspection programs to identify potential issues early, maintain integrity and performance of the system while minimizing risks to public health and the environment.

Table 1: Summary of Major Inspection Activities

| Type of Activity | Schedule | Number Completed | Details |
|------------------------------------|------------------------------------|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CCTV Inspections | 7-10 years | ~54.74 km | <ul style="list-style-type: none"> Completed under the CCTV Sewer Inspection Program, includes maintenance holes. Sanitary sewers are flushed prior to CCTV. Priority areas are assessed for repair and assigned for remediation. |
| Siphon Inspections | 1 per year | 7 | <ul style="list-style-type: none"> Visual inspection of Inlets and outlets. |
| Brick Maintenance Hole Inspections | 1 per year | 107 | <ul style="list-style-type: none"> Visual inspection. |
| Air Release Valve Inspections | 1 per year | 3 | <ul style="list-style-type: none"> Visual inspection on air release valves that are connected to forcemains. |
| WWPS Inspections | Ranges from Monthly - Quinquennial | 510 | <ul style="list-style-type: none"> Total of 184 Building Related Preventative Maintenance inspections (includes HVAC, fencing, health and safety, building structure, lighting, etc.) completed for all WWPS. Total of 326 Process Related Inspections (includes pumps, instrumentation, generators, alarms, MCC's, etc.) completed for all WWPS. |
| CSO Inspections | 1 per year | 2 | <ul style="list-style-type: none"> Annual inspections required to check for overflows began in October 2024. |

4.2 Maintenance and Repairs

The City uses preventative maintenance software to manage work orders for all scheduled and unscheduled maintenance activities. Scheduled maintenance work orders are derived from manufacturer operation and maintenance manuals, supplemented by Staff expertise. The work order system efficiently records non-routine and unplanned maintenance activities. Operations Staff document the actions taken, and then subsequent follow-up work is planned and executed to ensure comprehensive maintenance coverage.

All maintenance performed on the system is by licensed Operators or Qualified Contractors who exercise due diligence in ensuring the Works and related equipment are properly operated and maintenance to achieve compliance with the ECA.

Table 2 shows a summary of major maintenance and repair activities completed for the Sanitary Collection System. Appendix A includes a table summarizing capital projects completed, on-going, and future for the reporting period.

Table 2: Summary of Major Maintenance and Repair Activities

| Type of Activity | Schedule | Number Completed | Details |
|-------------------------------------------|-------------|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maintenance Hole Repairs and Replacements | As Required | 18 | <ul style="list-style-type: none"> Includes new frame and cover installations, spray lining, parging to stop roots, fill voids and reduce infiltration. |
| Sanitary Mainline Spot Repairs | As Required | 40 | <ul style="list-style-type: none"> Total of 40 mainline sanitary spot repairs identified through CCTV Inspection Program. |
| Sanitary Lateral Repairs | As Required | 31 | <ul style="list-style-type: none"> The City provides Sewer Stoppage services to clear blockages 24/7, if a blockage is found to be on the City portion the City will repair or may be hired by the property owner for private issue.s Includes excavation, spot repairs, and relining. |
| Sanitary Sewer Flushing/Cleaning | Varies | ~109.5 km | <ul style="list-style-type: none"> ~92 km flushed for preventative maintenance. ~17.5km flushed for historically problematic areas. |
| WWPS Major Repairs | As needed | 7 | <ul style="list-style-type: none"> Exterior door replacements throughout various pumping stations. AP installations throughout all locations for WIFI connectivity. Various PLC and HMI upgrades throughout the pumping stations. Woodlawn pump 3 removal, rebuild and replacement. Woodlawn pump 3 suction valve, removal and replacement. |

5.0 Monitoring Data

The City is anticipating the release of the monitoring guidance document from the Ministry, as there are currently no policies specifying the form of monitoring required for the sanitary collection system.

Licensed Operators observe and monitor the WWPS regularly through daily SCADA checks, as well as during station checks/inspections and while performing scheduled preventative maintenance activities. Monitoring of the WWPS trends and routine maintenance schedule has proven to be effective in identifying and preventing issues.

The Collection System is also monitored by Licensed Operators through sanitary main flushing, CCTV, maintenance hole inspections, and responding to complaints.

Table 3: Summary of Monitoring Data

| Type of Activity | Purpose | Details |
|-----------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WWPS Gas Monitoring | Monitor H2S gas generated at WWPS | <ul style="list-style-type: none">• Use the data to understand the characteristic of the wastewater, insight to operational performance.• Operates may make operational adjustments to the WWPS based on data available. |
| WWPS Flow Monitoring | Monitor wastewater flow incoming/discharging from the WWPS | <ul style="list-style-type: none">• SCADA data trending, and alarms received provide insight into the operational performance. |
| WWPS Operational Performance | Daily monitoring of the system performance to ensure proper operation | <ul style="list-style-type: none">• SCADA data trending, and alarms received provide insight into the operational performance. |
| Collection System Flow Monitoring | Monitor wastewater flows in the collection system | <ul style="list-style-type: none">• Use the data for wastewater model updates, identify catchment areas experiencing I&I. |

5.1 10-Year Wet Weather Compared to Dry Weather Assessment Study

As required in Schedule E, Section 8.1 of the ECA, which states “that if there has been one or more of: an STP overflow, STP bypass or a Collection System Overflow within the ten (10) year period starting January 1, 2012 and ending December 31, 2021”, the City is required to complete an assessment of Wet Weather Flows compared to the Dry Weather Flows. The City experienced two (2) STP Overflows on April 20th and May 7th, 2017, therefore, the assessment was undertaken to determine the impact of I&I on the system.

The assessment included analyzing the City’s STP flow data, water treatment plant flow data and precipitation data in the ten-year period to draw conclusions. The assessment indicated that most years show that for the months of January to May, wastewater flows to the STP are elevated, which correlate to high precipitation leading to I&I. As the wet weather in the spring subsides and temperatures rise during the summer (June to August), wastewater flows reduce. Significant precipitation during this period tend to cause minimal impacts to wastewater flows as the ground is dry and any rainwater is absorbed into the dry ground.

The assessment also indicated that, during the STP Overflow events the wastewater flows to the STP were elevated, which paired with the already high-water level in the Preliminary Treatment Building (PTB) caused the overflows to occur.

The City’s Hydraulic Wastewater Model, updated in 2021, also supports the assessment. The model indicated that many of the areas within the City’s Sanitary Collection System are subject to extraneous wet weather flow rates exceeding the City’s design allowance. These higher than designed Wet Weather Flows result in reduced sewer and pumping station capacity, and increased pumping station storage and wastewater treatment needs.

Since 2017, the City’s Flow Monitoring Program has evolved over the years to target specific areas and complete field investigations for I/I which includes property assessment, and smoke testing. Since 2024, the City continues to maintain the I&I Source Investigation Program working to identify catchments areas experiencing I&I by monitoring Wet Weather Flows vs Dry Weather Flows within the Sanitary Collection System. Flow monitoring devices are deployed to collect data over a period of time to identify sources of I&I within the system. The devices are relocated as necessary to gather comprehensive data from different sanitary catchment areas.

6.0 Calibrations and Maintenance of Monitoring Equipment

This section provides a summary of calibration and maintenance performed on all monitoring equipment installed in the Sanitary Collection System. The City has a formal instrumentation calibration and inspection program to track the performance and accuracy of all instrumentation control points. Accuracy verification and calibration of monitoring devices are completed annually by a Third-Party Certified Contractor. Table 4 below provides a summary of monitoring devices and the calibration results. Two analyzers were outside the specified tolerance as per manufacture recommendations and required maintenance.

Table 4: Monitoring Equipment Calibration and Maintenance Schedule

| Analyser | Equipment Description | Date Calibrated | Results |
|---------------------------|--------------------------------------------------------------|-----------------|---------|
| Methane Gas Monitor | Fifth Ave. WWPS Gas Monitor – Polytron 5000 | 16-May-24 | Passed |
| Electromagnetic Flowmeter | Fifth Ave. WWPS Effluent Flow Monitor – Promag 500 | 13-September-24 | Failed* |
| Electromagnetic Flowmeter | Fifth Ave. WWPS Effluent Flow Monitor – Promag 500 | 13-September-24 | Failed* |
| Electromagnetic Flowmeter | Alexander Dr. WWPS Effluent Flow Monitor – Rosemount | 13-September-24 | Passed |
| H2S Gas Monitor | Alexander Dr. WWPS Gas Monitor – MSA Ultima X5000 | 15-May-24 | Passed |
| Electromagnetic Flowmeter | Greenwich St. WWPS Effluent Flow Monitor – Promag 50 W | 13-September-24 | Passed |
| Parshall Flume Flowmeter | Stauffer Rd. WWPS Influent Flow Monitor – Multiranger 200 | 13-September-24 | Passed |
| Electromagnetic Flowmeter | Stauffer Rd. WWPS Effluent Flow Monitor – Promag 500 | 13-September-24 | Passed |

*The Fifth Ave WWPS electromagnetic flowmeters both failed the calibration test initially due to issues with the electrode circuit EPD sensor. The City is looking at options to mitigate this and have them calibrated correctly.

7.0 Complaints and Responses

The City of Brantford receives customer complaints through the City's Customer Service Call Centre, or sometimes complaints are directed to individual Departments. During the reporting period, a total of 179 complaints were received in regard to both the storm sewer and sanitary collection systems. Table 5 provides a summary of complaints received during the reporting period and steps taken to address the complaints.

Table 5: Summary of Complaints and Actions Taken

| Type of Complaints(s) | Complaints | Actions Taken |
|-----------------------|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stoppage/Back-ups | 157 | <ul style="list-style-type: none">• All complaints were investigated and addressed by City Staff.• Some incidents were identified as private plumbing issues (no issues identified on the City side), but the City performed the work to clear the stoppage/backup.• Some incidents identified issues on the City side, which resulted in maintenance / repairs. |
| Odour Complaints | 13 | <ul style="list-style-type: none">• All complaints were investigated and addressed by City Staff.• Some incidents were identified as private plumbing issues (no issues identified on the City side).• Some incidents identified stoppages/back-up issues, which resulted in maintenance / repairs. |
| Catchbasin Complaints | 9 | <ul style="list-style-type: none">• All complaints were investigated and addressed by City Staff. |

8. Collection System Overflow(s), Spill(s) of Sewage, Sewage Treatment Plant Overflow(s) and Bypass Event(s)

The City of Brantford strives to maintain and operate a Sanitary Collection System so that spills to the natural environment do not occur. However, there are circumstances that arise where a spill occurs due to equipment malfunction, failure, or other emergency situations.

Occasionally, a planned spill may be necessary in order to safely complete required maintenance to critical equipment. In the event that this is necessary, approval from the MECP shall be obtained in advance. All spills to the natural environment are reported to the MECP Spills Action Centre upon discovery. Spills are investigated and written reports are submitted to the MECP, as required by legislation.

During the reporting period, the City did not experience any Collection System Overflows (CSO), Spills of Sewage events during the reporting period. There was an Overflow at the Sewage Treatment Plant (STP) in July 2024. All CSO, Spill of Sewage, STP Overflow or Bypass events that have occurred are summarized in Table 6 will provide a summary of the event(s), including:

- Dates;
- Volumes and durations;
- If applicable, loadings for total suspended solids, BOD, total phosphorus, and total Kjeldahl nitrogen, and sampling results for E.coli;
- Disinfection, if any; and
- Any adverse impacts(s) and any corrective actions, if applicable

The City's sanitary collection system currently has two (2) identified Sanitary Sewer Overflow Points located at Somerset Rd WWPS and Stauffer Rd WWPS. In the event that the sanitary collection system experiences a CSO, surrogate samples will be obtained, where possible, and reporting in accordance with the ECA will be completed. When surrogate sampling is not possible, Schedule E, Section 3.4.1.a.ii states that the minimum contaminants required to sample. The methodology in determining, applying, and analyzing surrogate sampling shall be proposed by the Owner and subject to the written approval of the District Manager.

Table 6: Summary of CSO, Spills of Sewage, STP Overflows and Bypass Events

| Number | Date(s) | Location/ Receiver | Description of Spill / Event | Estimated Duration (Hr) | Estimated Volume (L) | Actions Taken |
|--------|----------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|-------------------------------------------|
| 1. | 07-16-24 | STP to the Grand River | Due to extreme rainfall, high influent flows were received at the WWTP. The raw sewage pumps could not keep up and a Bypass to the receiver occurred. | 1.5 hours | 7,551,000 L | Samples collected as per ECA of the WWTP. |

8.1 Public Reporting Approach

Public reporting is conducted through various means of media platforms, including the City of Brantford public website: <https://www.brantford.ca/en/index.aspx>

- Situations reported through public reporting approach include:
- Annual Performance Reports, posted publicly on the City of Brantford website; and
 - Emergency repairs.

8.2 Efforts Made to Reduce CSO, Spills, STP Overflows, and Bypass Events

This section is to provide a summary of efforts made to reduce CSO, Spills, STP Overflows, and Bypass events, including the following items, as applicable:

- A description of projects undertaken and completed in the Authorized System that result in overall overflow reduction or elimination including expenditures and proposed projects to eliminate overflows with estimated budget forecast for the year following that for which the report is submitted.
- An assessment of the effectiveness of each action taken.
- Public reporting approach including proactive efforts.

There was one (1) STP Overflows, or Bypass event which occurred during the reporting period (see Table 6). The City has taken proactive steps to reduce the likelihood of these types of events, a summary of efforts taken are provided in Table 7.

Table 7: Efforts Taken to Reduce/Prevent System Overflows, Spills, and Bypasses

| Activity | Description | Description |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sewer Use By-law Program | <ul style="list-style-type: none">• Regulates the discharge of sewage entering the City's Collection Systems.• Education and outreach program designed to inform dischargers about the City of Brantford's sewer systems and what they can do to help reduce impacts to the environment, and Sewage Treatment Plant.• Monitor, control and reduce the impact of spills. | <ul style="list-style-type: none">• Successfully contributed to the GRCA Children's Water Festival. 4th grade classes from schools in Brantford, Brant and Six Nations were educated on the different storm water and sanitary systems within Brantford.• 27 Industrial Inspections, 3 Automotive Shop Inspections and 44 Restaurant Inspections successfully completed in 2024. All issues were immediately addressed and future inspection timelines based on inspection results.• 1 new Compliance Agreement and 5 Compliance Agreement Amendments were created in 2024 to help bring industry discharge to within bylaw limits. |
| I&I Source Investigation and Remediation Program | <ul style="list-style-type: none">• Quantifying I&I and planning for the remediation and long-term performance of the collection system.• Smoke testing and dye testing, as required. | <ul style="list-style-type: none">• 29 sanitary flow monitoring devices installed in the sanitary collection system.• 33 stormwater flow monitoring devices installed in the stormwater collection.• Areas requiring further investigation identified.• Remedial actions on-going. |

| Activity | Description | Description |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Sanitary Sewer Flushing Program | <ul style="list-style-type: none"> Preventative maintenance program to remove debris, sediment, grease and other build-up found within the sanitary collection system. | <ul style="list-style-type: none"> Successfully completed 109.5 km of sanitary sewers flushed. |
| CCTV Sewer Inspection Program | <ul style="list-style-type: none"> Employs the use of proactive closed-circuit television (CCTV) inspections to identify Cross Connections/Illegal Connections. Maintenance based on issues identified, may include manhole repairs, sewer relining. | <ul style="list-style-type: none"> Reducing I&I to improve the performance of the existing collection system. |
| Private Sewer Lateral Replacement Grant Program | <ul style="list-style-type: none"> Annual Program. The City budgets annually for the grant program which is available to residents to assist with the cost of replacing old sanitary sewer laterals on private property, or the disconnection of weeping tile systems from the sanitary. | <ul style="list-style-type: none"> Reduces the number of leaky sanitary laterals allowing I&I into the sanitary collection system, and cross connections. |
| Sewer Lateral Rehabilitation and Repairs Program | <ul style="list-style-type: none"> Annual Program. The Program covers the costs for replacing sanitary laterals (City side) identified in poor condition by the CCTV Inspection Program. | <ul style="list-style-type: none"> Reduces the number of leaky sanitary laterals allowing I&I into the sanitary collection system, and cross connections. |
| Wastewater Pumping Station Contingency Planning | <ul style="list-style-type: none"> The City is currently in the progress of completing Contingency Plans for WWPS – 3 Plans complete thus far. Outcome of assignment is delivery of a practical plan for maintaining station flows thereby mitigating risk when planned or unplanned station outages and disruptions occur. | <ul style="list-style-type: none"> Unable to assess effectiveness, Contingency Plan has not been put to use yet. |
| Wastewater System Financial Sustainability Plan | <ul style="list-style-type: none"> Reoccurring Program, scheduled every 6 years – next Plan in 2026. Legislated under the Safe Drinking Water Act, a Financial Plan is encouraged for Wastewater Systems. The Financial Plan shall be a forecasted period of at least six (6) years but planning for longer horizons is encouraged. | <ul style="list-style-type: none"> Successful operational and capital budget forecasting. |

| Activity | Description | Description |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ROW Reconstruction Capital Projects | <ul style="list-style-type: none"> Reconstruction projects include the replacement of sanitary and storm sewers in the ROW and laterals to property line. | <ul style="list-style-type: none"> Improve performance of the existing collection system by increasing capacity, extending service life, and reducing I&I. |
| WWPS Capital Upgrades | <ul style="list-style-type: none"> Upgrades to the Empey St. and St. Andrews Dr. pumping stations to meet future demands / growth. | <ul style="list-style-type: none"> Improves the pumping capacity, emergency storage, system reliability at the two (2) pump stations. |

9.0 Summary of Pre-Authorized Alterations to the System

During the reporting period there were no Director Notifications required.

Table 8 provides a summary of Sanitary Collection System Alterations completed during the reporting period and alterations classified as Significant Drinking Water Threats. This includes components, Equipment, or Sewage Works that are being altered.

Table 8: Summary of Sanitary Collection System Alterations

| Alteration Type | No. of Alterations | No. of Alteration that Pose Significant Drinking Water Threat |
|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------|
| Pre-Authorized Separate Sewers, Forcemains | 3 | 0 |
| Pre-Authorized Components | 1 | 0 |
| Pre-Authorized Equipment for Discharging a Contaminant of Concern to the Atmosphere | 0 | 0 |
| Previously Approved Works | 0 | 0 |
| Schedule C Works | 0 | 0 |

9.1 Alterations that Pose Significant Drinking Water Threats

For the reporting period there were 0 projects identified under the Sanitary Collection System ECA that were identified as Significant Drinking Water Threats. Further details regarding projects identified as Significant Drinking Water Threats can be found in the Annual Significant Drinking Water Threat Assessment Report for Proposed Alterations prepared prior to October 21st each year.

9.2 Major/Significant Alterations

For the reporting period, the major/significant alterations to the sanitary collection system ECA included:

- St. Andrew's Dr. Wastewater Pumping Station (WWPS) Upgrades to install emergency storage tank, emergency bypass connection on existing forcemain and mechanical, structural and electrical upgrades to wet well chamber, valve chamber and control building.
- West Brant Heights Phase 2/3 Subdivision includes townhouses and single-family home community by Lindvest currently under construction at 346 Shellard Lane, Brantford. Included pre-authorized alterations to the Municipal Sanitary Collection System; sanitary sewers.

10.0 Other Relevant Documents

10.1 Wastewater Master Plan – 2051 Volume IV

The City of Brantford completed a Master Servicing Plan (MSP) Update to 2051 in November 2021. The objective of the MSP is to provide a comprehensive plan that incorporates all facets of the management, expansion and funding of the water, wastewater and stormwater systems for the entire City to the year 2051. This document reviewed in detail plans to 2051 and more broad implications beyond 2051.

10.2 10-Year Capital Project Forecast

The City of Brantford maintains a 10-year capital forecast which incorporates upcoming projects for the period of 2023 – 2032. Within this capital forecast are projects that will assist in eliminating infrastructure that has reached the end of its lifecycle and upgrade compromised materials to the latest design standards.

A full detailed overview of the City's 10-Year Capital Forecast can be found on the City's website.

11.0 References

1. 2024 Annual Significant Drinking Water Threat Assessment Report for Proposed Alterations, written by Source Water Protection Department
2. 2024 Calibration Reports
3. Cartegraph Work Orders and Service Requests
4. Customer Relationship Management (CRM) System Requests
5. Sanitary Operation & Maintenance (O&M) Manual