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March 31<sup>st</sup>, 2025

Dear Environmental Services Customer,

We are pleased to provide the 2024 Annual Performance Report for the City of Stratford's Wastewater Collection System, which services the City's Water Pollution Control Plant. This report has been completed in accordance with the Environmental Compliance Approval #074-W601, Schedule E Section 4.6, issued October 6, 2022, and issued to the City of Stratford.

This report covers the period from January 1, 2024 to December 31, 2024 and will be made available on the City of Stratford website. Hard copies will also be available at our 82 Erie St. office on the 3<sup>rd</sup> floor.

For any questions or additional information regarding the report, please contact me at (519) 271-0250 ext. 222.

Yours truly,

A handwritten signature in black ink, appearing to read "S Beech". The signature is written in a cursive style.

Sean Beech  
Manager of Environmental Services



# 2024

## ANNUAL PERFORMANCE REPORT

### City of Stratford Wastewater Collection System

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## **Executive Summary**

The City of Stratford Wastewater Collection System (WWC) is owned and operated by the City of Stratford in accordance with Environmental Compliance Approval #074-W601, issued October 6, 2022. The wastewater collection system consists of approximately 180 kms of sanitary sewers, and 11 sewage pumping stations. The WWC system also includes all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances that are essential for the operation of the works. The Collection System is designated as a Class 2 system.

Throughout the reporting period (January 1, 2024 to December 31, 2024), operations staff worked diligently completing several maintenance, rehabilitation and renewal projects to ensure the adequacy of the City's wastewater system infrastructure.

No Ministry of Environment, Conservation and Parks (MECP) inspections occurred during the reporting period.

### **2024 Annual Performance Report – Wastewater Collection System**

In accordance with the Environmental Compliance Approval #074-W601, Schedule E Section 4.6, The City of Stratford, as the Owner of the Municipal Wastewater Collection System, shall prepare and submit a performance report to the Ministry of the Environment, Conservation and Parks (MECP) on an annual basis.

Schedule E Section 4.6 of the ECA requires the Annual Performance Report to contain the following elements:

- (a) a summary and interpretation of all required monitoring data, including an overview of the success and adequacy of the Works and to determine if modifications to the system are required,
- (b) a description of any operating problems encountered, and corrective actions taken,
- (c) a summary of all calibration, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of collection system,
- (d) a summary of any complaints received during the reporting period and any steps taken to address the complaints,
- (e) a summary of alterations to the Authorized System within the reporting period authorized by the ECA including a list of

alterations that pose a Significant Drinking Water Threat.

- (f) a summary of any collection system overflow or spills of sewage that occurred in the reporting period,
- (g) a summary of efforts made to reduce collection system overflows, spills and/or bypasses.

This following report was generated from the records maintained by The City of Stratford Wastewater Collection System (WWC) for the calendar year 2024.

### **(a) Interpretation of Monitoring Data**

Licensed operators observe and monitor the sewage pumping stations regularly, during station checks/inspections and while performing scheduled preventative maintenance activities. Operators take all reasonable steps to ensure the proper operation and servicing of the Works and associated equipment, with all relevant observations documented in the digital logbooks (e.Ris). Please refer to Appendix A for examples of our e.Ris logbook system.

Monitoring and inspection of the wastewater collection system includes annual programs consisting of; sanitary main flushing and camera work, acoustic sewer inspections, and maintenance hole repair/replacement. All programs help to sustain an effective Capital Works program that coordinates with the Municipalities Water and Wastewater Rate Study on all assets associated with the wastewater collection system.

The table on the following page details the monitoring activities performed by WWC staff during the reporting period. Based on the data collected and reviewed, it has been determined that the system is performing adequately to meet demand and maintenance requirements. At this time there are no required major modifications required for the collection system. Continuous improvement and optimization will continue to be a priority for staff and management.

Table A – Summary of Monitoring Programs

Program Title	Program Description	Program Data From Reporting Period
Acoustic Sewer Inspections	Acoustic signals are sent through a sewermain segment between two MH's (transmitter and receiver). A score is given that will indicate if there are any obstructions to flow in the pipe that may need to be addressed.	Using the Sewer Line Rapid Assessment Tool (SL-Rat) Staff completed 6858m of sewer main inspections during the reporting period.
Sewermain Flushing	Combination of reactive flushing due to sewer obstructions and mains flushed based of the SL-Rat inspection data.	Staff flushed approximately 1987m during the reporting period.
Maintenance Hole (MH) Inspections	MH condition assessments completed at the same time as SL-Rat Inspections.	Staff inspected 86 maintenance holes during the reporting period.
Maintenance Hole Washdowns	Flushing and hydrovac cleaning of known MH's with elevation or flow issues as a means of preventing flow obstructions.	There are 46 known MH structures on this maintenance list. They were all flushed once in 2024.
Backflow Valve Inspections	The City has engineered backflow valves installed at critical points in the collection system on the north and south sides of the Avon River to prevent local main surcharges in the event of an issue in the trunk sewer.	Staff completed all of the quarterly inspections and operation of the back flow valves which total 90 BFV inspections during the reporting period.
Air Release Valve Inspections	Inspections on air release valves that are connected to forcemains within the collection system.	Staff inspected the six system ARV's twice during the reporting period.
Generator Tests	Testing the portable and permanent WWC generators at the pump stations and the PW facility.	Staff inspected all 11 portable and permanent generators monthly during the reporting period.
Pumping Station and SCADA Alarm Inspections	General and detailed pumping station inspections at all eleven sites. These inspections look at health and safety and operational parameters.	Each pumping station was inspected weekly. A confined space dry/wet well inspection was completed once a month. Twice a year, staff tested all alarm components at the stations (floats, SCADA etc.).

**(b) Operating Problems and Corrective Actions**

All maintenance activities, carried out on behalf of the Owner by licensed Operators or qualified contractors, focused on ensuring the system and its components were operated and maintained in accordance with regulatory requirements and the conditions of the Approval.

Table B – Summary of Operating Problems and Corrective Actions

<b>Operational Issue</b>	<b>Date</b>	<b>Corrective Action Taken</b>
<b>Douro SPS:</b> Dry well sump pump needs replacing.	July 3, 2024	R&M energy services installed new sump pump in the dry well on Aug 30, 2024.
<b>Douro SPS:</b> Confined space entry to fix High float.	Jan 22, 2024	Raised the float and refastened it on Jan 22, 2024
<b>Downie SPS:</b> Box heater needed repair	Feb 7, 2024	BKS Electric contracted to repair on Feb 11, 2024
<b>Downie SPS:</b> Low float and pressure transducer not functioning	June 5, 2024	Issue referred to City electrician. Reconfigured pump start, hi level floats, and calibrated all level set points on June 7, 2024.
<b>Dunn SPS:</b> Box heater needed repair	Feb 11, 2024	BKS Electric contracted to repair on Feb 11, 2024
<b>Erie St SPS:</b> Pump 1 to be replaced. Pump 2 not working in sequence	Feb 1, 2024	Internal electrician updating station controls, VFDs, and new panel for operations. New pump for pump 1 is ongoing.
<b>Lorne SPS:</b> Pump 1 and 2 float not working	Sept 19, 2024	Issue referred to City electrician. The electrician arrived onsite and resolved the issue same day.
<b>Lorne SPS:</b> Low float alarms	May 20, 2024	Low float slipped into lower position and was leaning on the bottom of the wet well. Transducer probe was cleaned and proper position was verified. City electrician changed level readings on May 21, 2024.
<b>Taylor SPS:</b> wires visible inside conduit. Water able to infiltrate during rain events.	Sept 26, 2024	Bung was installed in open conduit that is leading to the wet well.

<b>Taylor SPS:</b> Station needs new generator. Installation of bollards for new generator	Dec 9, 2024	RM Energy Services on site to hook up new generator on Dec 11, 2024.
<b>Taylor SPS:</b> No power to the modem. UPS failed.	Mar 11, 2024	Internal electrician installed new UPS on March 12, 2024.
<b>Vivian SPS:</b> Leaks visible in dry well around pump 2 stack.	May 27, 2024	R&D sealed leaks in dry well on Aug 21, 2024.
<b>Vivian SPS:</b> Power failure.	Feb 28, 2024	Generator running. Issue referred to city electrician who identified that duct heater needed to be repaired.
<b>Vivian SPS:</b> Pump 1 need service maintenance	March 14, 2024	Pump 1 reinstalled in dry well Aug 30, 2024.
<b>WWC System:</b> Sink hole investigation	Multiple Dates	Staff completed 9 Sink hole investigations during this period.
<b>WWC System:</b> Dye tests	Multiple Dates	Staff conducted 14 dye tests this year for property owners to identify connection issues.
<b>WWC System:</b> Surcharge sewer mains	Multiple Dates	Staff responded to 7 surcharge calls and resolved all issues at the time of response.
<b>WWC System:</b> Spill from garbage truck on Erie St.	Nov 22, 2024	ES responded to the spill at 1:30 Nov 22. Public works swept absorbent.
<b>WWC System:</b> Spill at Lorne Ave from Truck.	Oct 17, 2024	Absorbent applied by ES team. No impact to the environment. Street sweeper dispatched to clean the road.
<b>WWC System:</b> Smoke Tests	Multiple Dates	Staff conducted 5 smoke tests for property owners to identify connection issues.
<b>WWC System:</b> Spill at Nethercott	Sept 24, 2024	Team arrived at 7:30am and applied absorbents. Storm manholes were inspected for oil, but no sign.
<b>WWC System:</b> SCADA – no phone line connectivity at Burritt P.S	June 27, 2024	Bell services called, issue was fixed with connection at junction box.

<b>WWC System:</b> Bubbles flowing into Creek at Country Club	Sept 5, 2024	Investigated manholes. Follow-up to find source of pollution is ongoing.
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**(c) Major Structure & Equipment Calibration, Maintenance and Repair**

The table below provides a summary of activities carried out on major structures and collection system works that were not covered under the operational issues section (b) of this report.

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

Major Structure	Work Performed in 2024
Wet Well Hatch Access: Safety Grating	New steel safety grates were fabricated and installed at all SPS access points that were identified during a Health and Safety inspection as having inadequate fall protection.
Pump Replacement	Vivian Station pump replacement Aug 30, 2024.
Pressure Transducer	RM Electrical Services replaced transducers at Downie, Lorne, and Quinlan Pump Station.

**(d) Complaints**

The number of complaints received during the Reporting Period, regarding the Wastewater Collection System, was fourteen (14). Complaints are itemized below with corresponding steps taken to address the complaints.

Table D – Summary of Complaints

Complaint and Location	Date	Resolution
Orr Dam Outfall– Foam build up	Dec 30, 2024	Dye tests have been conducted and the investigation is ongoing.
YMCA – Basement flooding	Nov 27, 2024	Referred YMCA to R&D Development Group.
Gemmel Crt – Service Backup	Nov 24, 2024	Obstruction visible in manhole. Shot water into the services and obstruction was released.
Vivian & Mornington – odour	Nov 18 & 19, 2024	Jaren advised homeowners that odour was caused by agriculture.
Player St – Back up	Oct 12, 2024	Mains were clear. No sign of surcharge in sanitary.

Falstaff St - Odour	Sept 6, 2024	No signs of issues upon visit. Sewer mains on Milton, Falstaff, and Nile St were clear. Directed resident to call back if issue persists.
Vanevery St - Odour	Sept 4, 2024	Resident called to report gas or sewer smell. Enbridge gas sent crew to test for gas in manholes and air. No detection found.
Mornington St- Odour	Aug 25, 28, 29, 2024	Resident called about odour near Quinlan. Bioxide refilled and dosage set to 1. Left washroom water running to increase flow to wet well.
Brunswick St – Loss of Sewer services	Aug 23, 2024	Contractor deemed problem was internal and that they would conduct the repair immediately.
Gordon St - Odour	Aug 19, 2024	Sewer odour investigation. Sanitary and storm manholes were all clear. Sewer gas smell in the basement, advised homeowner to prime floor drain with bleach.
Murray Hill Rd Stormwater Backed up	Aug 2, 2024	Recommended disconnecting rainwater leaders and going to grade. Discussion installation of sump pump. Referred to engineering for subsidy inquiries.
Sewer back up at Polley PI	July 29, 2024	Referred homeowner to plumbing contractor.
Rain event – water in basement	July 16, 2024	Homeowner had water entering their basement. Discussion installing sump pump.
Quinlan odour	July 10, 2024	Increased odour deterrent (bioxide) at Quinlan Station.
Inverness St – Sewer back up	May 10, 2024	Sanitary main was clear when inspected.
Nile St. sewer back up	April 30, 2024	Camera inspection showed no obstructions. High velocity cleaning solved the issue.
Princess St. Spill complaint	April 24, 2024	Spill in the backyard of home. Homeowner referred to Manager of Environmental Services. Determine to be private issue.
Player St and Downie St Sewer back up	March 11, 2024	Provided info on replacement options for sanitary service and referred them to City Engineering Department.
Hickory Lane – Sewer back up	Feb 23, 2024	City mains were all clear. Plumber required.
Avonwood Dr – odour in basement	Feb 15, 2024	Homeowner explained everything was okay at time of callback. Provided some direction and told him to call if their was a reoccurrence.

**(e) Alterations to the Authorized System**

The table on the following page summarizes the projects that saw alterations to the collection system in 2024. Several of the major capital projects from the reporting period were water only and not sanitary. However, there were new developments that connected to the system in 2024. This is expected to increase in the 2025 Performance Report.

Table E – Summary of Alterations to the Authorized System

Alteration to the Authorized System Project Name	Project Details	Does This Project Pose a Significant Drinking Water Threat (SDWT)?
Stratford Fairgrounds Subdivision	Approximately 800m of 200mm diameter sanitary sewer in the Stratford Fairgrounds subdivision. Existing 375mm diameter sanitary on Britannia Street is the outlet; approx. 100m of sewer to be reconstructed between the subdivision and Briarhill Drive. The subdivision consists of a mix of residential unit types on two internal streets.	No
Knightsbridge PH2	392m of 200mm sanitary sewer, connecting into Knightsbridge Phase 1 at O.J. Gaffney Drive.	No

**(f) Summary of Collection System Overflows or Spills of Sewage**

There were zero (0) environmental incidents such as by-passes, spills, or abnormal discharges from the collection system to be reported for 2024.

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

Overflow or Spill Location	Date	Volume and Duration	Loadings (TSS, BOD, TP, KJN, E.coli)	Disinfection (if applicable)	Adverse Impacts/ Corrective Actions
N/A	N/A	N/A	N/A	N/A	N/A

**(g) Summary of Efforts Made to Reduce Overflows, Spills and Bypasses**

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

Overflow/Spill/Bypass Reduction Project	Project Description	Does This Project Pose a Significant Drinking Water Threat (SDWT)?
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Albert St. Reconstruction	The replacement of existing sewer mains and laterals which lower the inflow and infiltration into the collection system.	No
Sewermain Relining	The City relined approximately 1.65km of existing sewer mains in the reporting period which will result in reduced inflow and infiltration.	No
Subsidy Programs	Ten properties disconnected their weeping tile of their homes from the sanitary lateral and installed a sump pump. Eight properties had their sewer laterals relined. These were all completed under the City's sewer subsidy programs and result in reduced collection system I&I.	No
Dish Installations	Staff installed five MH's that are in low elevation spots. The dishes will reduce the inflow and infiltration into the collection system	No
City Wide Leak Program	The City water department completed a system wide leak survey on potable water system components. Several leaks were found and repaired which will affect inflow and infiltration into the wastewater collection system.	No

**Pollution Prevention Control Plan (PPCP)**

The City has a PPCP from 2007 that was amended in 2016. This section of the Annual Performance Report highlights the ongoing work within the City of Stratford to improve its sanitary and collection system.

Upon completion of the flow monitoring program, sanitary sewer system model update, and update to the City's Sanitary Master Plan in 2024, the City will present a complete updated Pollution Prevention and Control Plan to comply with all the requirements of MOE Procedure F-5-5.

PPCP Project	Project Details	Effectiveness of Action Taken
Sewer Re-lining	Annual Program with approximately \$800,000/year budgeted to complete sanitary main relining. This program has been in place since 2015.	Reduced I&I with the relining rehabilitation of older, failing sanitary mains.
Sanitary Master Plan	The update of the Sanitary Master Plan was awarded in 2022 to Civica Consulting. The plan is anticipated to be completed in 2025. The sanitary model will also be updated as part of this project and will include a Flow Monitoring Report.	This plan will provide detailed recommendations on the sanitary system performance. It will also contain data relating to flow I&I and recommendations to reduce this issue.

Albert St. Reconstruction Phase 2	Phase 2 budget was completed in 2024 and the project will come into effect 2025.	Replacement of this aging infrastructure will show a decrease in collection system I&I.
Subsidy Programs	The City budgets annually for subsidy programs available to resident for the disconnection of weeping tile systems from the sanitary system. In addition, there are subsidies available for the replacement and rehabilitation of sewer laterals.	Each year we are seeing more residents use the subsidies for relining the laterals. The City intends to have more public outreach to make residents aware of these programs as they all contribute to reduced I&I.

**Appendix A**

Examples of e.Ris Digital Forms and Maintenance Tracking:

**Vivian Station Check**

Save New 2024-01-23 13:27:00

Comments & History Value

**Wet Well**

Wet Well Inspection	<input type="checkbox"/>	CSE
Wet Well Condition General Components (Ventilation, Structure, Piping, Grating, Ladders Etc.)	<input type="checkbox"/>	No Concerns
Cleaning Required Grease Build Up/Debris	<input type="checkbox"/>	Yes
Cleaning Complete	<input type="checkbox"/>	Yes
Float Ball Inspection Proper Position/Clean & Unobstructed	<input type="checkbox"/>	No Concerns
Hi Level Float Test Physical Test of Float and Active Alarm	<input type="checkbox"/>	1:01pm
Grating Clean, Clear of Debris or Obstructions	<input type="checkbox"/>	Cleaned
Call Thru Test Contact SFD prior to Test	<input type="checkbox"/>	No

**Station/Dry Well**

Ventilation	<input type="checkbox"/>	No Concerns
Heating/Cooling	<input type="checkbox"/>	No Concerns
Gen Fuel	<input type="checkbox"/>	Enter value..
Gen Fluids	<input type="checkbox"/>	Select value...
Gen Battery	<input type="checkbox"/>	Select value...
Gen Hours	<input type="checkbox"/>	Enter value..
Dry Well Alarm Test	<input type="checkbox"/>	No
Dehumidifier	<input type="checkbox"/>	No Concerns
Sump Pump	<input type="checkbox"/>	No Concerns
Gen Test Vivian Generator Test Form	<input type="checkbox"/>	No

**Control Panel**

Breakers/Disconnects On/Not Tripped	<input type="checkbox"/>	No Concerns
Panel Lights	<input type="checkbox"/>	No Concerns
Pump 1 Amps Hand Start (Unless Running or Well Level is too Low)	<input type="checkbox"/>	14
Pump 1 Hours	<input type="checkbox"/>	2251
Pump 2 Amps	<input type="checkbox"/>	Enter value..
Pump 2 Hours	<input type="checkbox"/>	Enter value..
Pump 3 Amps	<input type="checkbox"/>	18
Pump 3 Hours	<input type="checkbox"/>	1372
Pump 4 Amps	<input type="checkbox"/>	18
Pump 4 Hours	<input type="checkbox"/>	1425
Combo Hours	<input type="checkbox"/>	27
Milltronics	<input type="checkbox"/>	No Concerns

**Pumps/Piping/Valves**

Pump 1 Condition Sound & Visual/Mechanical Condition, Piping & Valves (Gate, Check & ARV)	<input type="checkbox"/>	No Concerns
Pump 2 Condition	<input type="checkbox"/>	No Concerns
Pump 3 Condition	<input type="checkbox"/>	No Concerns
Pump 4 Condition	<input type="checkbox"/>	No Concerns

**Comments**

Comments Please Note All Concerns	<input type="checkbox"/>	Brame electric here to fix bathroom heater //
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Thursday, January 18, 2024

☰	10:30	Service Investigation	Sanitary main on Cobourg St. measured @ ~ 7". Inspected basement, no c.o. access to service. Window to floor measurement ~ 56".	Mike Baker	2024-01-18 14:55:03
☰	08:30	Service Investigation Other Sanitary Activities	Prep for repairs to sanitary sewer lateral @ 26 Trow Ave.	Mike Baker	2024-01-18 14:51:38
☰	08:00	Other Sanitary Activities	Brett, Vivian bathroom reno.	Mike Baker	2024-01-18 08:21:24
👤	00:00		00:00:00-23:59:59 ORO: Sean Beech (sbeech) 00:00:00-23:59:59 OIC/Lead Hand: Mike Baker (pub-mb) 07:30:00-15:30:00 Operator: Brett Wallace (bwallace) 07:30:00-15:30:00 OIT: Josh Jongerden (jjongerden)	Mike Baker	2024-01-18 07:54:18