



City of Orillia
2025 Annual Wastewater Collection System
Performance Report

March 2026
Environmental Services Division
Environment and Infrastructure Services Department

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1.0 Introduction

Condition 4.6 from Schedule “E” of Environmental Compliance Approval (ECA) No. 125-W601 (Issue 3 dated September 18, 2024) requires the preparation of an annual performance report for the City’s wastewater collection system.

1.1 Background

The City maintains a wastewater collection system that includes 161 km of gravity sewers, 11.4 km of force main, 2,400 maintenance holes (MH), 19 City-owned sanitary pump stations, and 1 privately owned sanitary pump station, which the City is contracted to operate and maintain. All wastewater flow is directed to one central pumping station at James Street West, which is then pumped directly to the Wastewater Treatment Center (WWTC).

The City of Orillia Pumping Station System is part of the City’s sanitary collection system, which is classified by the Ontario Ministry of the Environment, Conservation and Parks (MECP) as a Class 2 system. This system discharges to the City’s WWTC, a conventional activated sludge treatment plant that discharges to Lake Simcoe.

Significant funding is allocated for collection system maintenance and improvements.

2.0 Discussion of ECA Conditions

2.1 Condition 4.6.1 – Report Preparation

This condition requires the submission of an annual performance report for the City’s wastewater collection system by March 31st of each year. The report is to cover the period from January 1 to December 31 of the preceding calendar year. This report covers 2025.

2.2 Condition 4.6.2 – Collection System Overflow or Spills of Sewage

This condition requires the submission to the District Manager of this annual report noting any collection system overflow or spills of sewage that occurred in the reporting period. There were two overflows and two spills in 2025. Details of these are described in Section 2.8. Each were reported to Spills Action Centre and the Simcoe Muskoka District Health Unit.

2.3 Condition 4.6.3 – Summary of Monitoring Data & Interpretation

This condition requires the submission of any monitoring data and an evaluation of this. Monitoring data for the sewage treated through the WWTC is discussed in a separate Annual Performance Report for the City’s Wastewater Treatment Centre (ECA No. 1336-CTTL3V).

2.4 Condition 4.6.4 – Operating Problems & Corrective Actions

This condition requires discussion of any operating problems encountered and corrective actions taken. Discussion is broken out between the sanitary pumping stations and the linear

collection system works.

2.4.1 Sanitary Pumping Stations

There were no operating problems encountered at the sanitary pump stations apart from power outages during inclement weather and equipment failures described below.

The following is a discussion of issues addressed at the City's sanitary pump stations:

1. James St. SPS experienced numerous failures for both in-channel grinders throughout the year of 2025. Due to the number of issues encountered, the City is looking to implement additional measures and processes for the removal of rags from the wastewater stream. The following summarizes the date the issues started, the date it was returned to service, and which grinder experienced the failure:
 - a) Grinder 1 from December 4, 2024 – March 19, 2025;
 - b) Grinder 1 from May 1, 2025 – June 4, 2025;
 - c) Grinder 2 from May 3, 2025 – November 24, 2025;
 - d) Grinder 1 from July 3, 2025 – July 15, 2025; and
 - e) Grinder 1 from September 9, 2025 – October 17, 2025.
2. Between March 28, 2025, and April 4, 2025, the City experienced widespread power loss and unprecedented flows at all pumping stations in the sanitary collection system. Those stations that encountered overflows or spills during this period have been documented as required under condition 4.6.8. At the time, the City combated these issues by implementing 24-hour shifts and securing portable generators for those stations without a dedicated standby generator onsite. Furthermore, multiple vacuum trucks and septage haulers were contracted to assist in managing the flows at those stations that were unable to maintain acceptable wet well levels.
3. On May 14, 2025, the grinder at the Septage Receiving Station at the James St. Sanitary Pump Station (SPS) experienced a catastrophic failure and was rendered inoperable. Alterations to the process piping were made to accommodate continued unloading. The City is currently in the process of tendering a contract for the supply and installation of replacement receiving equipment. This failure is credited for many of the additional grinder failures at the James St. SPS downstream.
4. On May 28, 2025, pump 2 at the Forest South SPS experienced a failure. The pump was reversed and worked temporarily, before experiencing issues the next day. The wet well at the station was then cleaned on June 3, when it was discovered that the associated process piping and check valves had severe leaks, causing the contents of the force main to constantly drain back into the wet well. Repairs were made and the valves were replaced on December 17, 2025.
5. On May 21, 2025, it was found that pump 1 at the Tudhope Park SPS was not pumping. It had an elevated runtime, suggesting the pump had been operating in

such a manner for some time. Further investigation found that the impeller had separated from the shaft. Repairs were made and both pumps were serviced. Additional works were completed on August 18, 2025, and December 8, 2025, respectively, modifying the benching in the station to accommodate newer pumps and replacing the check valves.

6. On June 19, 2025, during routine checks, the dry well of the Fittons West SPS was found to be filled with several feet of sewage. Sump pumps were brought in, and an entry was made. It was found that two of the pumps had deteriorated significantly and had developed sizeable holes in the volutes. Vacuum trucks were contracted to control the incoming flows, and several attempts were made to repair the pumps over the course of the week. However, due to advanced wear and corrosion, none proved viable. A project had already been initiated for the retrofit and upgrading of the station and was in the process of being awarded. As no temporary or permanent repairs could be made, and as the project would require temporary bypassing of the station, Atlas Dewatering was contracted for the supply of temporary diesel fueled bypass pumps. These were installed and connected using fused HDPE on June 28, 2025, and remain in place until completion of the upgrades project in late 2026.
7. On September 9, 2025, the channel grinder at the Champlain SPS failed, requiring replacement. A new unit of differing make and configuration was put on order. The new unit was received in January of 2026, with installation completed in February.

2.4.2 Sanitary Collection Linear Works

1. There were six sewer lateral repairs in 2025. These repairs varied between spot repairs and full replacements.
2. There were three unplanned maintenance hole (MH) frame repairs in 2025. These are usually caused by snowplow strikes and deteriorating concrete and brick chimneys.
3. On March 19, 2025 – Hilda and Bayview Parkway, City staff discovered a water leak in the ditch resulting from a broken sewer force main. The 150mm force main was repaired using a repair clamp and the spill was cleaned up using a vac truck.
4. On July 15, 2025 – MH 623 James St. W - Reports of sewage coming from MH 623 on James St. W. were received by City staff. The City responded with the Rodding machine to rod both directions to remove additional grease blockage. Approximately 5 m³ of sewage was spilled. The road, catch basin and any evidence of sewage was cleaned using a vac truck. 5L of sodium hypochlorite was used to disinfect the storm catch basin and road.

2.5 Condition 4.6.5 – Calibration, Maintenance and Repairs

This condition requires a summary of all calibration, maintenance and repairs carried out in the reporting year on major equipment and infrastructure. Manufacturers recommend an

annual calibration for influent and effluent monitoring equipment. IndusControl Inc. was contracted to carry out calibrations in 2025. The annual instrumentation calibration reports for 2025 are included as an attachment to this report and include both influent and effluent flow monitors.

Repairs carried out on major structures for pump stations included:

- Routine maintenance occurred at the pump stations including wet well cleanings, float replacements and UPS battery replacements.

Repairs carried out on major structures for the linear infrastructure included:

- Routine maintenance on mains, force mains, and MH structures including backflushing, cleaning, rodding, and inspecting. Repairs to frame and covers were made to various MH structures.

In 2023, the City proceeded with a CCTV inspection program to evaluate potential sanitary sewer mains that could be rehabilitated with a new liner. There were 11 sections of sewer main that were re-lined in 2025. Going forward, this program will continue to evaluate sanitary sewer mains ahead of the rehabilitation of the roadworks to confirm lining is a viable option over requiring a full replacement of the sanitary sewer.

Additionally, as of 2025, the City began work on a CCTV inspection program aimed at inspecting all sanitary and storm sewers on a 10-year cycle. In 2025, this focused on targeted areas of the collection system known to experience a higher incident of operational issues. Approximately 900 meters of the sanitary sewer system was inspected in 2025 under this program. In coordinating with other divisions, the City plans to greatly expand this program in 2026 and integrate the data into its asset management system. Furthermore, this program is anticipated to greatly benefit the relining program, identifying areas well in advance and allowing for a greater portion of said programs' budget to be allocated to actual relining works.

The City utilizes CityWide primarily for tracking work orders, however, it has been found that the linear works is simpler to track in GIS (ESRI ArcGIS). As such, there is a combination of the two systems utilized depending on linear mains and appurtenances or vertical works.

Typical work orders for the pumping stations include visual inspection of the equipment, oil changes, filter replacements, valve exercising, greasing mechanical equipment, and oil checks. Typical work orders for the linear works include visual inspections, flushing, rodding, and adjustments to grade for the MH frames and lid.

The City is committed to maintaining and inspecting its collection system. The following programs are exercised annually:

- Spring/fall rodding of known areas of concern.
- Annual backflushing of known areas of concern.
- Weekly flushing and inspection of known areas of concern.
- Maintenance Hole inspections.

2.6 Condition 4.6.6 – Summary of Complaints

This condition requires a summary of complaints received in the reporting year from the public and any steps taken to address them. In 2025, 42 complaints were received related to the sanitary collection system. All complaints were fully investigated by City staff. 37 of these complaints were directly related to private plumbing issues (Blocked lateral). The remainder of these were odours (2), water running under floor (1), noise coming from drain (1), broken MH lids (0), sewer main plugged (0), and broken sewer main (1).

In 2025, there were no complaints received related to the sanitary pump stations.

2.7 Condition 4.6.7 – Alterations to Collection System

As per Schedule D of ECA 125-W601, “Alterations” include the following items (excluding repairs):

- a) An extension of the system,
- b) A replacement or retirement of part of the system, or
- c) A modification of, addition to, or enlargement of the system.

In 2025, the following alterations were made to the collection system:

Extensions of the System

- None

Replacements/Retirements of Part of the System

- 295 meters of replacement sanitary sewer was installed on Jarvis St.
- 42 meters of replacement sanitary sewer was installed on Colborne St. East
- 406 meters of sanitary sewer was removed (Old Trunk main).

Modification of, Addition to, or Enlargement of the System

- None

None of the alterations posed a significant drinking water threat.

2.8 Condition 4.6.8 – Overflows and Spills

There were two overflows and/or spills of sewage at two separate sanitary pumping stations in 2025. Both were related to the ice storm in the Spring of 2025 and were the result of extraordinary flow conditions and the loss of power.

There were two sanitary spills reported within the collection system in 2025. One was a result of congealed grease build-up at 220 James Street West; one was due to a 150mm cast iron force main ring break at Hilda and Bayview Parkway.

This condition requires discussion of any overflow and spills from the sanitary collection

system. There were two sanitary spills reported within the collection system in 2025. The spills were reported to Spills Action Centre (SAC) and Simcoe Muskoka District Health Unit (SMDHU). Details of these events are as follows:

1. **SAC Reference Number 1-KFAX1-P – March 19, 2025 – Hilda and Bayview**
City staff discovered a water leak in the ditch resulting from a broken sewer force main. The 150mm force main was repaired using a repair clamp and the spill was cleaned up using a vac truck.
2. **SAC Reference Number 1-P3D5DZ July 15, 2025 – MH 623 James St.** Reports of sewage coming from MH 623 on James St. W were received by City staff. The City responded with the Rodding machine to rod both directions to remove additional grease blockage. Approximately 5 m³ of sewage was spilled. The road, catch basin and any evidence of sewage was cleaned using a vac truck. 5L of sodium hypochlorite was used to disinfect the storm catch basin and road. The City hired a contractor to CCTV the sewer section and the property owner is aware of the situation. The restaurant in question has been mandated to clean their interceptors on a monthly basis until June 2026, at which point the frequency shall be reassessed by the City.
3. **SAC Reference Number 1-NASY01 – April 3, 2025 – 155 Fittons Rd West**
Reports were received of backups in the area at approximately 1:53 pm and raw sewage was observed overflowing from MH 1870. Upon investigation, it was discovered that the pumps at the pumping station were not working due to extremely high flows which flooded the level sensor in the wet well, thereby providing inaccurate readings to SCADA. The pumps were put into manual at approximately 3:00 pm and the spill instantly receded. It is estimated that approximately 67 m³ of raw sewage was spilled into the ditch. Spill absorbent material was placed in the area. The material was later removed on April 5, 2025, and sodium hypochlorite was applied.
4. **SAC Reference Number 1-N7VP76 – April 3, 2025 – 406 Bayview Parkway**
Bayview Sewage Pumping Station began to overflow the equalization chamber at 5:00 am on April 3, 2025. This continued until 5:00 pm the same day and was a direct result of the heavy rains experienced beginning April 2nd and ending April 3rd. The estimated overflow volume was 216 m³. City staff remained onsite throughout the overflow event, making efforts to manage the flows with haulers and careful operation of the station's pumps and equalization chamber. Possible private residents in the area not on the City's drinking water system were informed of the event with notices at their door.

2.9 Condition 4.6.9 – Efforts to Reduce Overflows, Spills and Bypasses

This condition requires discussion of efforts to reduce sanitary collection system (including pumps station) overflows, spills and bypasses. The City of Orillia's sanitary collection system is not combined with the storm sewer system so overflows, spills and bypasses are minimal. The City does see elevated flows from inflow and infiltration, particularly after wet weather events.

Projects undertaken and completed in the sanitary sewer system that reduce the potential for pump station bypasses, pump station and collection system overflows and spills include:

- The City regularly conducts maintenance hole inspection and rehabilitation work to minimize inflow and infiltration.
- In 2025, a targeted list of sanitary sewers were videoed. CCTV camera inspections are used to inform City staff of required repair and replacement planning. Further information may be found in section 2.5.

In 2025, the City did not conduct any additional inflow and infiltration studies, however, one has already been awarded for 2026, and several separate targeted studies are to be completed with the intent of informing the design of SPS upgrades within the next five years.

- a) The City does not have combined sewers and is not required to have a Pollution Prevention and Control Program (PCCP), as defined in this ECA.

The City maintains an Industrial, Commercial and Institutional (ICI) Inspection Program. The purpose of this program is to monitor and enforce provisions set out in the City of Orillia's Sewage - Discharge By-Law (Municipal Code Chapter 1047). An annual report is prepared providing an overview of the ICI inspections conducted and the compliance sampling undertaken to confirm that facilities are complying with Chapter 1047.

- b) In terms of assessing the effectiveness of each action taken, the City proactively established a Wastewater Management System (WMS) in 2023. The system continues to operate, providing an effective system for controlling documents, ensuring competent and trained staff, an internal auditing system, and a mechanism for continual improvement.
- c) The City endeavors to achieve conformance with Procedure F-5-1 (Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works). The City operates a tertiary treatment system at its Wastewater Treatment Centre (WWTC). Please refer to the Annual WWTC Performance Report for more information on conformance with Procedure F-5-1.
- d) Public reporting is discussed in section 2.10 of this report.

2.10 Condition 4.7 Report Availability for the Public

This annual performance report is available to the public at no charge on the City of Orillia's website.

To access the report in person, or for assistance, please visit:

**City of Orillia
City Centre, 1st Floor Reception
50 Andrew St. S., Suite 300 Orillia, ON L3V 7T5**

3.0 Summary

The City maintains an effective wastewater collection system. Significant funding is allocated for collection system maintenance and improvements. The City is in the process of implementing a comprehensive inflow and infiltration program and has established a Wastewater Management System providing consistency and continual improvements of the system.

Attachments

1. Annual Instrumentation Calibration Reports



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Bayview SPS

Site/Plant Address: 406 Bayview park way,
Orillia ON, L3V 6Z9

Device Information
Make: Fisher & Porter
Model: 50XM1000
Order Code: N/A
Serial No.: 9511160559
Tag: FIT01
Job Location: Wet well flow

Service Information
Date: May 29, 2024
Report No: CO1626-2505-26
Job No: CO1626-2505

Flow Details
Unit: m3/day
Flow Range: 0-5702
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 5702

Inst. Reading	AS FOUND	AS LEFT
TOTALIZER (L)	6638290	664947
FLOW (L/SEC)	33.1900	33.0200

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Flow Input (%)	Calculated Flow (m3/day)	Calculated O/P (mA)	UUT Display (m3/day)	UUT Measured Output (mA)	Deviation (%)
0.00	0.00	4.00	0.03	4.00	0.00
25.00	1425.50	8.00	1386.35	7.99	0.01
50.00	2851.00	12.00	2800.00	11.99	0.01
75.00	4276.50	16.00	4401.72	16.02	-0.02
100.00	5702.00	20.00	5685.00	19.99	0.00


Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 2
Device Description:	Electrical Multimeter	NA	NA
Manufacturer:	Fluke	NA	NA
Model No:	179	NA	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.
Limited Verification performed instead of Confined space as informed and confirmed by Brett.

Service Technician : Sanket Trada
Printed Date: May 29, 2025

Stamp/Signature 

Customer Name:	City of Orillia	Site/Plant Address:	406 Bayview park way,
Plant Name:	Bayview SPS		Orillia ON, L3V 6Z9

Device Information

Make:	Milltronics
Model:	Multiranger OCM111
Order Code:	N/A
Serial No.:	12861339
Tag:	FIT02
Job Location:	Reservoir flow

Service Information

Date:	May 13, 2025
Report No:	CO1626-2505-27
Job No:	CO1626-2505

Flow Details

Unit:	L/SEC
Flow Range:	5
Current Output:	4-20 mA
4 mA Set Point	0
20 mA Set Point	5

Inst. Reading	AS FOUND	AS LEFT
Totalizer	946550	946550

Maintenance Checklist			Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK	<input type="checkbox"/> NOT OK	

Programming Parameter of Instrument-Point1

Parameter	Value	Parameter	Value
P000	0.00000	P009	0.00
P001	0.000	P010	3
P002	6	P011	0
P004	2	P012	60
P005	104.484	P013	0.00
P006	0.1	P014	0.00
P007	60	P015	1000.00
P008	0	P016	0.00

Instrument Test Information and Results

Input (%)	Calculated Flow (l/sec)	Calculated Input (mA)	O/P Flow on Scada (l/sec)	UUT Measured Output (mA)	Deviation (l/sec)
0	0.00	4.00	0.01	4.00	-0.01
25	1.25	8.00	1.22	7.98	0.03
50	2.50	12.00	2.53	12.02	-0.03
75	3.75	16.00	3.76	16.01	-0.01
100	5.00	20.00	5.00	20.00	0.00


Information of Tools used for Verification of the Instruments

Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Electrical Multimeter	NA	NA
Manufacturer:	Fluke	NA	NA
Model No:	179	NA	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result:	<input checked="" type="checkbox"/> Passed	<input type="checkbox"/> Fail	<input type="checkbox"/> Not Verified
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Overall Remarks: Program parameter verified.
Limited Verification performed.

Service Technician :	Sanket Trada	Stamp/Signature	
Printed Date:	May 13, 2025		



IndusControl Inc.
3170 Ridgeway Drive, Unit 11
Mississauga, ON, L5L 5R4

VERIFICATION REPORT ELECTRO-MAGNETIC FLOW MEASUREMENT

Customer Name: City of Orillia
Plant Name: Champlain SPS

Site/Plant Address: 25 Mulcahy court,
Orillia, ON L3V8B3

Device Information
Make: Rosemount
Model: 8712DR12N0M4
Order Code: N/A
Serial No.: 292635
Tag: FIT1000
Job Location: Champlain SPS

Service Information
Date: May 14, 2024
Report No: CO1626-2505-28
Job No: CO1626-2505

Sensor Details
Line size: 300 mm 12 inch
Flow Cal Tube No.: 11217051109020-05
Mounting: Remote

Flow Details
Unit: L/SEC
Flow Range: 500
Current Output: 4-20 mA
4 mA Set Point: 0
20 mA Set Point: 500

Inst. Reading	AS FOUND	AS LEFT
span(%)	0.0	0.0
FLOW (L/SEC)	0.0	0.0

Maintenance Checklist		Remarks
Visual Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Electrical Inspection:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Sensor Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	
Transmitter Installation:	<input checked="" type="checkbox"/> OK <input type="checkbox"/> NOT OK	

Instrument Test Information and Results					
Test-Point as Per Calibration KIT	Calculated Flow (FPS)	Calculated O/P (mA)	UUT Display (FPS)	UUT Measured Output (mA)	Deviation (FPS)
0.00	0.00	4.00	0.00	4.00	0.00
3.00	3.00	5.60	3.01	5.61	-0.01
10.00	10.00	9.33	10.02	9.35	-0.02
30.00	30.00	20.00	29.99	19.99	0.01

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 3
Device Description:	Calibrator	Electrical Multimeter	NA
Manufacturer:	Rosemount	Fluke	NA
Model No:	8714D	179	NA

* Refer Calibration Tools Certificates submittal for more Information

Overall Test Result: **Passed** **Fail** **Not Verified**

Overall Remarks: Measurement Works within Specification.
Verification Test Passed.

Service Technician : Sanket Trada
Printed Date: May 14, 2025

Stamp/Signature 