

2024 PERFORMANCE REPORT

Owen Sound Wastewater Collection System

Reporting Period: January 1 – December 31, 2024

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1.0 INTRODUCTION

The City of Owen Sound was issued Environmental Compliance Approval number 092-W601 for its municipal sewage collection system on December 15th, 2022. Condition 4.6 from Schedule E of the ECA requires the Owner to prepare an annual performance report for the Authorized System. This report must be submitted to the Director on or before March 31st of each year and covers the period from January 1st to December 31st of the preceding calendar year.

1.1 Background

This City of Owen Sound maintains a wastewater collection system that includes approximately 118km of gravity sewers, 3.6km of force main, 7 minor and 1 major pump station. All wastewater flows to the Class III Ministry of Environment, Conservation and Parks (MECP) rated Wastewater Treatment Plant for secondary treatment through its Biological Aerated Filtration system, then outfalls into Owen Sound Bay (Georgian Bay).

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 2024.

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 3 dates that overflow incidents occurred in the reporting period due to heavy rainfall. These incidents were reported to SAC, Grey-Bruce Public Health Unit, Owen Sound Water Treatment Plant and the local MECP Inspector. Details of these overflows are described in section 2.8.

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. This data is discussed in a separate Annual Performance Report for the City's Wastewater Treatment Plant (ECA No. 1994-CERHEG).

2.4 Condition 4.6.4 – Operating Problems & Corrective Actions

This condition includes a summary of any operating problems encountered and corrective actions taken.

To avoid duplication, these are explained in the next section.

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.

Only the Westside and East Bayshore pump stations have flow monitoring equipment and backup emergency power. The calibration and maintenance records are attached.

Routine monthly flap gate and interceptor inspections were completed. Annual maintenance of Sanitary pump stations was completed including cleaning of wet wells, and pumps were unplugged as required. Operators perform daily checks of the major Westside Sewage Pump Station and weekly checks of the other minor stations.

A deteriorated section of sewer pipe was replaced on 17th Street East from 16th to 18th Avenue East.

The City hired Rapid Assessment Technology Services Inc (RATS) to provide an Acoustic Assessment of the sanitary sewers in Zone 4. They screened 23.5km of sanitary sewer. Zones that were rated as poor were then flushed, as well as other known problem areas of the city.

On September 14, 2024, the 27th Street West sewage pump station's main power feed was destroyed by a directional drilling operation. The on-call operator responded, confirmed that there was no overflow then with the assistance of the Wastewater Superintendent organized temporary septage haulage and the setup of an emergency generator for power supply until the main power feed was restored October 8, 2024.

2.6 Condition 4.6.6 – Summary of Complaints

This condition requires a summary of complaints related to the Sewage Works and any steps taken to address the complaints.

In 2024 there were three (3) customer complaints of sewer odour. Operators followed the SOP and logged these complaints. Operators investigated each situation, the issues were resolved, and the customers were satisfied.

There was also a complaint of a hydrocarbon smell at a business in the 200 block of 10th Street East. This was investigated with Wastewater Collection staff, the Owen Sound Fire Department and local MECP officials.

There were also 19 sewer lateral problems that were investigated and addressed by City staff (or a plumbing contractor if related to private plumbing issues).

2.7 Condition 4.6.7 – Alterations to Collection System, and those posing a Significant Drinking Water Threat

Project	Status
22ns St W Storm Water Improvements 22P.20	SW1 Signed 2024/05/14. Completed Q4 2025
26th St E A E Sewer Upgrade 22P.21	SW1 Signed 2024/05/14. Completed Q4 2025
Alpha Street	Form 1, SW1, SS1 Signed 2024/01/18. Completed Q4 2025
DRP	SW1 Signed 2024/02/24. Completed Q4
17th St E	SS1 Signed 2024/01/18. Completed Q2

2.8 Condition 4.6.8 – Overflows and Spills

This condition includes a summary of all Collection System Overflow(s) and Spill(s) of Sewage.

The following table shows the Collection System overflows for 2024 caused by heavy rain. There was no disinfection or known adverse impact from these overflows. Samples taken at OS-19A are representative of CSO locations OS-22, OS-12, OS-11, OS-16 & OS-17, as per MECP written correspondence.

Quarter	Location	Date (2024)	Volume (m ³)	BOD5 (mg/l)	TSS (mg/l)	TP (mg/l)	E-Coli cfu/100ml	TKN (mg/l)
2	27th St W	13-Apr	0.16	30	55	0.19	19600UAL	1.1
3	OS-19A	17-Aug	8.5	93	140	1.09	Overgrown	8.1
3	OS-11	18-Aug	2304	*	*	*	*	*
3	OS-12	18-Aug	2814	*	*	*	*	*
3	OS-16	18-Aug	2288	*	*	*	*	*
3	OS-19A	18-Aug	876	24	86	0.39	Overgrown	2.2
3	OS-22	18-Aug	1650					
3	Westside EQ Tank	18-Aug	398.4	25	55	0.39	Not Required	2.7
	Total		10,339.06					

* Representative of OS-19A sample results.

- Overgrown- Refers to bacterial growth covering the surface of the membrane filter or culture media such that colonies are not discrete and therefore cannot be quantified (i.e., there are too many to count reliably.)
- UAL- Sample age exceeds the recommended holding time of 48 hours.

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

This condition requires a discussion of efforts to reduce sanitary collection system (including pump stations) overflows, spills, and bypasses.

a) Projects undertaken for overall overflow reduction are:

- The City of Owen Sound has an ongoing Stormwater Separation Program. This program offers homeowners a subsidy for weeping tile sump pump disconnection of houses that are directly connected to the sanitary sewer.
- Maintaining the current real-time overflow monitoring units at six (6) overflow locations.
- Equipment installed for real time precipitation data gathering that can be used for sewer modelling programs.
- The City tendered a contract for electrical upgrades to the 27th Street West Sewage Pump Station. This is scheduled to be completed in 2025.
- Sewer mains were replaced on Alpha Street as part of the road reconstruction project.

- The City has previously completed some CCTV work to view where sewer repairs and lining are required.
- Dry and wet weather sewer modelling.
- A Sewer Rapid Assessment Tool program was implemented in 2023 to scan one of five sanitary sewer zones on a yearly rotating basis. This instantly provides data to show areas that require flushing on a scale of 0-10.

The estimated budget forecast for sanitary sewer-related projects in 2025 is \$380,000.

b) The City hired WSP Consulting & Engineering who completed a report on the Assessment and Conformance of Procedure F-5-1 and F-5-5 in October 2023. The following are recommendations and next steps provided by WSP and their current status:

- The City should continue to implement ongoing inspection and maintenance programs for the wastewater collection system to meet the F-5-1, F-5-5 and ECA requirements for annual reporting. **(In Progress)**
- The City should continue operations, monitoring and reporting in accordance with the ECA. This includes annual reporting requirements under the ECA which includes documenting CSO events. **(In Progress)**
- In accordance with Procedure F-5-5, the development of a Pollution Prevention and Control Plan (PPCP is a goal recommended by ECA 092-W601 by May 21, 2027. The Plan shall be based on the information collected to date and implementation of new studies and programs to satisfy the requirements, the aim being to demonstrate conformance, to maintain conformance, or to demonstrate how future capital projects will lead to CSO elimination or reduction. **(Not Started)**
- Assessment of conformance to Procedure F-5-5 and the ECA requirements have been reviewed. **(Complete)**
 1. Per MECP correspondence, the assessment requirements do not apply if the bypass(es) or overflow(s) occurred as a result of power outages or equipment failures at the WWTP. Assessment of conformance to Procedure F-5-1 as it pertains to the WWTP was not reviewed.

Next Steps:

1. New studies and programs to support PPCP preparation.
2. Gather outstanding data.
3. Continue operations, maintenance, and reporting as required by the ECA.
4. Complete and/or develop O&M documents for CSO Regulators
5. Identify capital projects that aim to reduce/eliminate CSO and document the schedule for collection system improvements.

Complete PPCP Submission: by May 21, 2027

1. Develop and Issue PPCP

Implement PPCP

1. Continue annual reporting requirements.
2. Continue to update every 5-10 years as prescribed by the MECP.
3. The City implemented a Wastewater Quality Management System (WWQMS) in 2019. This system will help to track and assess the effectiveness of required action items.
4. See Subsection b) of Schedule E Condition 4.6.9.
5. The Grey Bruce Public Health Unit is always advised of any reportable sewage spills.

2.10 Condition 4.7 -Report Availability for Public

This annual performance report is available on the City of Owen Sound's website www.owensound.ca.

3.0 CALIBRATION REPORTS

Annual generator inspection and flowmeter verification reports for the Westside & East Bayshore Sewage Pump Stations are attached below:



GenWorx

Your Partner in Emergency Power

Certificate Of Completion

THIS ACKNOWLEDGES THAT THE GENERATOR AT
1490 Second Ave, Owen Sound

HAS SUCCESSFULLY BEEN TESTED IN ACCORDANCE WITH CSA282 AND
HAS PASSED THE ANNUAL INSPECTION.

09-10-2024

Test Date

369.6

Unit Hours

Patrick G, Aaron B

Technician(s)

Rich Sarette

Director of Field Service

Patrick Guerin

Field Service Manager



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

VERIFICATION REPORT
FLOW MEASUREMENT

Customer Name:	City of Owen Sound	Site/Plant Address:	1490, 2nd Avenue, West
Plant Name:	WSPS		Owen sound, ON
Device Information		Service Information	
Make:	Kent	Date:	November 6, 2024
Model:	Veriflux	Report No:	CO1568-2411-17
Serial No.:	79/5383/2	Job No:	CO1568-2411
Tag:	N/A		
Job Location:	Station flow	Flow Details	
Asset ID:	75611	Unit:	m3/day
		Flow Range:	0 - 40000 m3/day
		Current Output:	4-20 mA
		4 mA Set Point:	0
		20 mA Set Point:	40000
Sensor Details		Inst. Reading	AS FOUND AS LEFT
Line size:	12"	TOTALIZER (m3)	55681215 55681241
Mounting:	Remote	FLOW (m3/day)	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	Flow Measured on ClampOn Calibrator (m3/day)	UUT Display (m3/day)	Deviation (m3/day)
1	6141.23	6145	3.77
2	6026.56	6030	3.44
3	5976.59	5980	3.41

Information of Tools used for Verification of the Instruments			
Details	Tool/Kit 1	Tool/Kit 2	Tool/Kit 2
Device Description:	Clamp ON Calibrator	Electrical Multimeter	N/A
Manufacturer:	Greyline	Fluke	N/A
Model No:	Pulsar PTFM6.1	179	N/A

* Refer Calibration Tools Certificates submittal for more information

Verification Test Result:	<input checked="" type="checkbox"/> Passed	<input type="checkbox"/> Fail	<input type="checkbox"/> Not Verified
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Overall Remarks: Measurement Works within Specification.

Service Technician :	Sanket Trada	Stamp/Signature	
Printed Date:	November 6, 2024		

Verification report Promag 300

Plant operator: INDUSCONTROL INC.

Device information

Location	Pumping Station
Device tag	FIT-01
Module name	C300-01
Nominal diameter	DN150 / 6"
Device name	Promag 300
Order code	5W3B1F-5FFB/101
Serial number	54007016000
Firmware version	01.01.05



Calibration

Calibration factor	1.1392
Zero point	-1

Verification information

Operating time (counter)	1141d23h16m16s
Date/time (manually recorded)	06.11.24 09:18
Verification ID	5
Verification mode	Internal verification

Overall verification result*

Passed Details see next page

*Result of the complete device functionality test via Heartbeat Technology

Confirmation

Heartbeat Verification verifies the function of the flowmeter within the specified measuring tolerance, over the useful lifetime of the device, with a total test coverage > 94 %, and complies with the requirements for traceable verification according to DIN EN ISO 9001:2008 – Section 7.6 a. (attested by TÜV-SÜD Industrieservices GmbH)

Notes

06.11.24

Date


Operator's signature

Inspector's signature