

Wastewater Collection System Annual Performance Report

03/31/2025

Environmental Compliance Approval Number	037-W601
Name of Municipal Sewage Management System	City of Sarnia Wastewater Collection System
Name of System Owner	The City of Sarnia
Period Reported	01/01/2024 – 31/12/2024

Questions about the Report should be directed to:

City of Sarnia Environmental Services Department. environmental.services@sarnia.ca

Brief Description of the System

The City of Sarnia Sanitary Collection and Treatment System consists of works for the collection and transmission of sewage consisting of 331 km of separated gravity sewers, 19 km of combined sewers, 61 sewage pumping stations, 1 combined sewage overflow (CSO) interceptor facility, and 49 km of forcemains that discharge to either the Sarnia Wastewater Treatment Facility (Sarnia WWTF) or the Bright's Grove Wastewater Treatment Facility (BG WWTF).

Section 1: Required Monitoring Data

Monitoring Data

If applicable includes a summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the authorized system or system operations.

Section 2: Operating Problems

Operational Problems Experienced

Station	Issue Encountered	Action Taken
PS.20	Station Plug Ups	Pump replaced and public education
PS.08	Station Plug ups	Wet well clean out several times, pump replacement scheduled, public education
PS.26	Forcemain Issue	Road culverts cleaned to prevent flooding
PS.24	Forcemain Issue	Protective bollards installed to protect forcemain

Section 3: Calibration and Maintenance of Monitoring Equipment

Calibration and maintenance work for the system is organized by a maintenance management system (Cartegraph). Preventative maintenance is conducted as per equipment manufacturers recommendations. Incidental maintenance is managed by regularly scheduled inspections and recording needed repairs within the maintenance management system.

Inspections, Maintenance and Repairs

Wastewater collection system facilities are inspected and maintained as outlined in the wastewater collection system operations and maintenance manual. Equipment maintenance is scheduled as per the manufacturer's instructions and facilities are maintained to best practice standards.

Linear infrastructure maintained as outlined in "city works" system schedule.

Section 4: Complaints

Summary of Complaints Received and Actions Taken

The Wastewater Collection System received three complaints in the 2024 reporting year. The three odour complaints were short-term Odours observed by a member of the public. One in the Mitton Village neighbourhood and two in the Coronation Park neighbourhood. In all cases staff went to inspect the area of concern but odour had dissipated when staff arrived. A thorough investigation of the area in question was completed and no issue with wastewater infrastructure was noted.

Section 5: Summary of Alterations to the System

Summary of all Alterations to the System

Alteration Type	Number of Alterations	Number of Alterations that Pose a Significant Drinking Water Threat
Pre-Authorized Discharge Contaminant to Atmosphere	3	0
Pre-Authorized Combined Sewers/Partially Separated Sewers/Combined Sewage Storage Tanks and Storage Structures	0	0
Pre-Authorized Separate Sewers/ Nominally Separate Sewers/ Forcemains	3	0
Pre-Authorized Components of the municipal Collection System	0	0
Previously Approved Works	0	0
Schedule C Works	0	0

Significant Alterations

Provide a high-level overview of any major / significant alterations to the system (if any)

Section 6: Collection System Overflow(s) and Spill(s) of sewage

Summary of Spills and Abnormal Discharge Events

Identification and monitoring program for overflows has been undertaken in the 2024 reporting period. Monitoring information for the identified and monitored overflows included below. As overflows are identified as unnecessary, they will be closed off and therefore monitoring locations will change from year to year.

Overflows

Location	Receiver	# of events	Description of Spill / Event	Estimated Duration	Estimated Volume (m3)	Actions Taken
MH1437	Saint Clair River	1	Combined Sewer Overflow	13.75 hrs	2469.40	
MH8471	Saint Clair River	1	Combined Sewer Overflow	1.16 hrs	487.6	
MH2516	Saint Clair River	1	Combined Sewer Overflow	0.33 hrs	0.21	
MH2816	Saint Clair River	45	Combined Sewer Overflow	240.50 hrs	4637.42	
MH8896	Saint Clair River	0	Combined Sewer Overflow	0 hrs	0	
MH2566	Saint Clair River	2	Combined Sewer Overflow	2.33 hrs	4.75	
MH2613	Saint Clair River	32	Combined Sewer Overflow	96.17 hrs	44694.69	
MH2542	Saint Clair River	4	Sanitary Sewer Overflow	4.50 hrs	124.47	
MH2719	Saint Clair River	0	Combined Sewer Overflow	0 hrs	0	
MH2831	Saint Clair River	2	Combined Sewer Overflow	1.33 hrs	360.77	
MH2596	Saint Clair River	42	Combined Sewer Overflow	95.00 hrs	234.63	
MH1109	Saint Clair River	10	Combined Sewer Overflow	43.00 hrs	29.99	
MH8546	Saint Clair River	1	Combined Sewer Overflow	1.17 hrs	4.26	
MH2840	Saint Clair River	0	Combined Sewer Overflow	0 hrs	0	
MH3661	Saint Clair River	13	Combined Sewer Overflow	37.50 hrs	24.87	
MH1125	Saint Clair River	0	Combined Sewer Overflow	0 hrs	0	

Loadings

Loadings based on the surrogate sampling average concentrations of contaminants.

Location	Receiver	Estimated Volume m3	TSS kg	BOD kg	Total Phos. kg	TKN kg	Actions Taken
MH1437	Saint Clair River	2469.4	208.9	10.4	0.34	2.0	
MH8471	Saint Clair River	487.6	41.3	2.0	0.07	0.4	
MH2516	Saint Clair River	0.2	0.1	0.1	0.01	0.1	
MH2816	Saint Clair River	4637.4	392.3	19.5	0.63	3.7	
MH8896	Saint Clair River	0	0	0	0	0	
MH2566	Saint Clair River	4.7	0.4	0.1	0.01	0.1	
MH2613	Saint Clair River	44694.7	3781.2	187.7	6.08	35.3	
MH2542	Saint Clair River	124.5	10.5	0.5	0.02	0.1	
MH2719	Saint Clair River	0	0	0	0	0	
MH2831	Saint Clair River	360.8	30.5	1.5	0.05	0.3	
MH2596	Saint Clair River	234.6	19.8	1.0	0.03	0.2	
MH1109	Saint Clair River	30.0	2.5	0.1	0.01	0.1	
MH8546	Saint Clair River	4.3	0.4	0.1	0.01	0.1	
MH2840	Saint Clair River	0	0	0	0	0	
MH3661	Saint Clair River	24.9	2.1	0.1	0.01	0.1	
MH1125	Saint Clair River	0	0	0	0	0	
Total	Saint Clair River	53073.1	4490.0	222.9	7.22	41.9	

Section 7: Actions Taken to Improve or Correct Performance

Actions Take in Reporting Year

#	Issue	Actions to be Taken	Target Completion Date
1	PS #17 capacity issue	Design work underway on upgrade to PS #17 to increase station capacity to handle flow under wet weather events.	2026

Update on Actions from Previous Reporting Year

#	Issue	Update on Actions Taken	Target Completion Date

Establishment and Maintenance of a PPCP

PPCP development TBD

Procedure F-5-1 and F-5-5

Sewer separation underway in the system. F-5-1 & F-5-5 compliance assessment underway. Objectives to be set as assessment is completed.

Section 8: Additional Notes / Comments

Additional Notes / Comments

Section 9: Making Available to the Public

Details on how the report can be accessed.

A copy of this report can be viewed or obtained on the City's website under Environmental Services.
<https://www.sarnia.ca/environmental-services/>