

Staff Report

Report To: Operations Committee
Report From: Bryce McDonald, Manager of Water and Wastewater
Meeting Date: March 20, 2025
Report Code: OP-25-002
Subject: 2024 Annual Wastewater Reports

Recommendations:

THAT in consideration of Staff Report OP-24-002 respecting the 2024 Annual Wastewater Reports, the Operations Committee recommends that City Council receive the report for information purposes.

Highlights:

- 2024 Yearly Average Daily Flow was 11,342 cubic metres per day: a typical average, representing 46% of the plant's capacity.
- There were three (3) individual dates when the system experienced wet-weather-related Combined Sewage Overflows (CSOs) from the system.
- All Effluent Objectives were met except for one (1) Objective exceedance for Total Phosphorus (limit of 0.5mg/l) in July of 2024. The July average was 0.68mg/l.

Strategic Plan Alignment:

This report supports the delivery of Core Service.

Climate and Environmental Implications:

This supports the objectives of the City's Corporate Climate Change Adaptation Plan by creating conditions to minimize health and safety risks.

Previous Report/Authority:

Annual Reports for Water and Wastewater Systems are requirements of Provincial Legislation.

Background:

Annually, Owen Sound is required to compile Annual Performance Reports in conformance with the Environmental Compliance Approvals issued to the Wastewater Treatment Plant and Collections system. The reports will be made available to the public on the City's website by June 1st annually. It remains a public document that can be viewed as part of Committee minutes or upon request. The report describes the treatment system processes, compliance status, and results.

Analysis:

Flows: The Wastewater Treatment Plant's Average Daily Flow for 2024 was 11,342 m³/d, 46% of the plant's capacity of 24,545 m³/d. This is a typical average value, down slightly from 2023.

Overflows: Combined Sewer Overflow (CSO) locations in the system are monitored during wet weather events. Three wet weather overflow events in 2024 resulted in a total of 10339 m³.

Treatment Plant Performance: The Wastewater Plant had (1) Final Effluent Objective exceedance. The WWTP exceeded the Final Effluent Objective for Total Phosphorus of 0.5mg/l in July 2024; the July average was 0.68mg/l. This was reported verbally and in writing to the local Ministry of the Environment, Conservation and Parks (MECP) office and chemical dosing was adjusted accordingly.

Federal Toxicity Testing: Acute toxicity testing sampling and analysis were undertaken as required. Quarterly, 20-litre samples are taken and sent to a third-party laboratory where rainbow trout fry is exposed to the effluent. The effluent lethality rate is consistently 0%.

Low Chlorine Residual Events: Five (5) instances of low chlorine residuals were reported to the downstream user (the Water Treatment Plant) as required by the Environmental Compliance Approval for the Wastewater Treatment Plant (WWTP). This is the same as 2023.

Wastewater Quality Management System (WWQMS): Activities and audit results were reported to the Committee in a separate report at the February 2025 Operations Committee meeting as part of the management review process.

Biosolids Hauled and Leachate Treated: In 2024, 11,502 m³ of biosolids were hauled and land-applied in accordance with the Nutrient Management Act, and 16,443 m³ of leachate was hauled from the former Genoe Landfill Site to the Owen Sound WWTP for treatment.

Basement Isolation Storm Sewer Disconnection and Weeping Tile Sump Pump Subsidy: This section of the report discusses the uptake of the program. This program helps to reduce extraneous flows. Five (5) properties participated in the program in 2024.

Financial Implications:

There are no financial impacts arising from this report, as it is provided for informational purposes.

Communication Strategy:

Provincial Regulations have provided the attached 2024 Performance Report to the Ministry of Environment, Conservation, and Parks.

Consultation:

This report was written after a discussion with the Superintendent of Wastewater.

Attachments:

2024 Wastewater Treatment Plant Performance Report
2024 Wastewater Collection Performance Report

Recommended by:

Bryce McDonald, Manager of Water and Wastewater
Lara Widdifield, Director of Public Works and Engineering

Submission approved by:

Tim Simmonds, City Manager

For more information on this report, please contact Bryce McDonald, Manager of Water and Wastewater, at bmcDonald@owensound.ca or 519-376-4274 ext. 3224.