

# Staff Report



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To	General Committee
Subject	2024 Municipal Stormwater Management System Annual Report
Date	April 16, 2025
Ward	All
From	D. Friary, Director of Operations
Executive Member Approval	B. Araniyasundaran, P.Eng., PMP, General Manager of Infrastructure and Growth Management
CAO Approval	M. Prowse, Chief Administrative Officer
Staff Report #	OPR001-25

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## Recommendation(s):

The Staff Report OPR001-25, regarding the City of Barrie's Municipal Stormwater Management System be received for information purposes, including:

1. City of Barrie Municipal Stormwater Management System Annual Operating Report 2024 (Annual Report).
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## Executive Summary:

The purpose of this Staff Report is to:

- a) **Summarize the Municipal Stormwater Management System (MSWMS) operating year of January 1 through December 31, 2024;** to provide information to City Council on the performance of the System; and to satisfy the regulatory requirement of the Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) No. 014-S701, Schedule E, Section 5 issued for the Corporation of the City of Barrie (the City of Barrie) MSWMS, on June 19, 2024. This report is a compilation of information that demonstrates the City of Barrie's commitment to provide acceptable levels of service, while remaining transparent, financially accountable, and focused on continuous improvement;
- b) **Provide a summary to Council which includes updates, changes, and information related to the requirements of the ECA and the Operations Quality Management System (OpsQMS);** and
- c) **Solicit from Council an acknowledgement** of their receipt of the Annual Report.

**The ECA dictates minimum reporting requirements**, specifically the Owner must: prepare an Annual Report no later than April 30th of each year. The report must provide a summary of: monitoring data, and calibration and maintenance of monitoring equipment; operating problems encountered, and corrective actions taken; inspection, maintenance, and repairs of major assets; complaints and actions taken to address the complaints'; alterations to the MSWMS; spills and abnormal discharge events; actions taken to improve or correct performance of the MSWMS; status of action items for the previous reporting year; and the Annual Report is published to the Owner's website for public access.

### **Key Findings:**

**The City of Barrie continues to employ the OpsQMS, a quality management system (QMS), to meet ECA requirements for the MSWMS, based on the CSA W211 Management Standard for Stormwater Systems.** OpsQMS documents policies and procedures for effective MSWMS management, enhances public safety by addressing risks, and aims for environmental improvements. The City of Barrie commits to responsible stormwater management through OpsQMS, including compliance with laws, system maintenance, impact minimization, and public consultation.

**Operating expenses of the MSWMS increased from \$2.47M in 2023 to \$3.907M in 2024. This represents a year-over-year increase of \$1.43M.** In 2024, the operating expenses for the MSWMS was budgeted at \$3.16M dollars, of which \$3.90M was spent, representing approximately 123% of the projected operating budget was expended. The configuration of the MSWMS continues to evolve, as the City evolves through new development, redevelopment, and renewal works completed through City projects and the development community. This reflects the findings of the 2021 Asset Management Plan which noted that operations and maintenance needs, associated with a growing asset portfolio, increase operating expenditures and new infrastructure asset types (i.e. Low Impact Development practices). Further noting that the City of Barrie has historically underinvested in stormwater assets, an unsustainable practice that will result in more risk in the form of flooding events, infrastructure failures and loss of service.

**The City of Barrie emphasizes responsible asset stewardship to ensure assets are well-maintained, meeting or surpassing their intended lifespan while functioning properly.** The City of Barrie has implemented data-driven inspection and maintenance programs to preventively maintain assets, improving safety, reliability, and cost-effectiveness. Prioritization considers capital plans and potential flooding risks. Critical issues are escalated to develop safe, reliable, and cost-efficient repair plans. Maintenance activities include annual programming for baseline service levels, major maintenance based on inspections, and emergency response for sudden asset deterioration, such as sinkholes or flooding. In 2024, emergency works to address drainage issues in the Bear Creek Wetland east of Marta Crescent were completed to protect surrounding residential property and community safety. The City of Barrie conducts comprehensive inspection and maintenance programs for various assets like LIDs, culverts, and SWMF. Inspections tracked in their Computerized Maintenance Management System (CMMS), are mainly conducted by City Operations staff, with some specialized inspections outsourced. Utilizing GIS-supported methodologies ensures efficiency and standardized data generation. Deficiencies identified during inspections lead to maintenance work orders, actioned through the CMMS. The CMMS facilitates asset management, budget planning, and service level tracking, promoting consistent processes and continuous improvement. In 2024, 13,891 inspections were completed on stormwater assets, resulting in 14,274

maintenance activities, examples include: inspection, cleaning, and repairs of catchbasins, MTDs, and LIDs; inspection and repairs of culvert and watercourses; and inspection, repairs and sediment removal from SWMFs.

**The City of Barrie monitors the MSWMS to assess its impact to the surrounding environment through collecting surface water samples, and addressing enquiries and complaints, and promptly responding to spills and abnormal discharge events to safeguard environmental integrity and public health.** Concentrations of key indicator parameters, including Ammonia, Chloride, Nitrate, Nitrite, pH, Phosphorous, and Total Suspended Solids are monitored by laboratory analysis. In 2024, 237 water samples collected from various locations through treatment and natural receiver components of the MSWMS. In 2024, 207 service requests were initiated, primarily for blocked CBs, flooding, damaged sewer grates or MH covers, of which 182 were resolved. This represents a resolution rate of 88%. A total of 62 spills and discharges impacting the MSWMS were documented during the reporting period. Additionally, the ECA requires the City of Barrie to assess the environmental impact of future development; no projects were identified as a Safe Drinking Water Threats (SDWT) for this reporting period for Proposed Alterations, as required by the ECA.

**The City of Barrie achieved several key improvements, in 3 key areas, compliance, monitoring, and maintenance, in 2024.** Achievements including but were not limited to: maintenance of the QMS to support the MSWMS and reporting associated with the Operations and Maintenance Manual; repairing watercourse erosion where impacted from stormwater discharges; repair or replace malfunctioning valves; participate in updating the asset management plan associated with the MSWMS; clean sediment from collection and conveyance infrastructure as preventative measures; address invasive phragmites control where appropriate; in-situ repairs of storm sewers and culverts; conduct bathymetric surveys; SWMF sediment removal; LID bioretention cell retrofits; and culvert repairs and replacements.

**The City of Barrie identified several key improvements, in 3 key areas of compliance, monitoring, and maintenance, to work toward in 2025.** Proposed improvements include but are not limited to: maintenance of the QMS to support the MSWMS and reporting associated with the Operations and Maintenance Manual; repairing watercourse erosion where impacted from stormwater discharges; clean sediment from collection and conveyance infrastructure as preventative measures; address invasive phragmites control where appropriate; in-situ repairs of storm sewers and culverts; conduct bathymetric surveys; SWMF sediment removal; install safety handrails at stormwater management facilities; address drainage impacts on public lands caused by private properties; and culvert repairs and replacements.

### **Financial Implications:**

There are no financial implications for The Corporation resulting from the proposed recommendation.

### **Alternatives:**

As this Staff Report is being presented as a legislative requirement, and for information purposes only, no alternatives are presented.

## Strategic Plan Alignment:

The recommendation(s) included in this Staff Report support the following goals identified in the 2022-2026 Strategic Plan:

Affordable Place to Live		
Community Safety		
Thriving Community		
Infrastructure Investments	X	Maintenance and Continuous Improvement of the MSWMS: Optimizing operational performance and upholding the commitment to the OpsQMS to maintain and continually improving the MSWMS supports Infrastructure Investments by ensuring the reliability, functionality, and longevity of critical infrastructure. Regular maintenance and improvement activities help prevent system failures, reduce overall asset lifecycle costs, and enhance the resilience of the MSWMS, aligning with the City of Barrie's priority of infrastructure investments.
Responsible Governance	X	<p>Compliance with Applicable Legislation and Regulations: Optimizing operational performance and upholding the commitments to the OpsQMS to comply with relevant legislation and regulations ensures the MSWMS operates within legal boundaries. This supports Responsible Governance by demonstrating a commitment to upholding laws and regulations, which is essential for maintaining public trust and accountability.</p> <p>Minimization of Environmental and Public Health Impacts: The commitment to minimizing impacts on the natural environment and public health demonstrates a proactive approach to environmental stewardship and community well-being. By prioritizing environmental and public safety considerations in stormwater management operations, the OpsQMS contributes to Responsible Governance by prioritizing the health and safety of residents and the protection of natural resources.</p> <p>Consultation with or Informing the Public: Engaging with the public and providing information about the MSWMS aligns with Responsible Governance by promoting transparency, accountability, and public</p>

		participation in decision-making processes. Consulting with or informing the public about system establishment or expansion projects fosters community engagement, builds trust, and ensures that stakeholder perspectives are considered in stormwater management initiatives.
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**Additional Background Information and Analysis:**

Additional information is available in the City of Barrie Municipal Stormwater Management System Annual Operating Report 2024, included in Appendix A, for reference.

**Consultation and Engagement:**

There was no public consultation required in relation to this staff report.

**Environmental and Climate Change Impact Matters:**

There are no environmental and/or climate change impact matters related to the recommendation.

**Appendix:**

Appendix A – City of Barrie Municipal Stormwater Management System Annual Operating Report 2024

**Report Author:**

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**File #:**

Not Applicable

**Pending #:**

Not Applicable