



2024 Authorized Municipal Stormwater Management System Annual Performance Report

April 2025

Town of Aurora



Table of Contents

1	Authorized Municipal Stormwater Management System Overview	1
2	Authorized Municipal Stormwater Management System Inspections and Monitoring Done during 2024.....	1
3	Inspection & Monitoring Results in 2024.....	3
4	Summary of Alterations to the Authorized Municipal Stormwater Management System and Actions Taken to Improve or Correct Performance	4

1 Authorized Municipal Stormwater Management System Overview

The authorized municipal stormwater management system operates under the authority of Environmental Compliance Approval (ECA) number 115-S701. A detailed description of the authorized municipal stormwater management system is provided in the ECA.

The Town's authorized municipal stormwater management system is comprised of storm sewers, drain collector sewers, ditches and swales, oil/grit separators, and stormwater management facilities including low impact developments (Table 1).

Table 1. – Summary of Stormwater Management System

Description	Quantity
Storm Sewers	360.4 km
Drain Collectors	13.5 km
Ditches and Swales	33.2 km
Stormwater Management Low Impact Development (LID) Facilities / Sites	9
Stormwater Management Facility Wet Ponds	48
Stormwater Management Facility Dry Ponds	23
Super Pipe Storage Facilities (underground stormwater storage facility)	40
Oil Grit Separators	41

2 Authorized Municipal Stormwater Management System Inspections and Monitoring Done during 2024

Storm Sewer Inspections & Monitoring

The Town's Condition Assessment strategy sees up to 10% of the gravity sewer inventory being assessed annually. This is an opportunity to renew, rehabilitate and extend the life of the Town's

sewer infrastructure.

The Town uses assessment condition rating and risk model analysis to determine future infrastructure rehabilitation and replacement projects based on risk.

Stormwater Management (SWM) Facility Inspections

Stormwater management (SWM) facilities are inspected on an annual basis following the protocol as per the Town of Aurora Stormwater Management Operations and Maintenance Manual, including wet pond, dry pond, and low impact development (LID) SWM facilities.

Along with an annual inspection program, operational performance of SWM facility wet ponds is conducted through manual water level measurement infrastructure as well as a hydraulic monitoring program.

Hydraulic assessments are used to evaluate several key functions of SWM facilities including inlet / outlet function and evidence of clogging or leaking, design drawdown time, and design normal water level. The hydraulic functioning of the SWM facility wet ponds were assessed using water level monitoring via pressure sensors (level loggers), relating the data with design water levels facilitated by use of a staff gauge. The Town maintains 13 level loggers that are rotated between SWM facility wet ponds on an approximately four-year rotation. As of 2024, all Town owned SWM facility wet ponds have had their hydraulic function assessed with level loggers at least once.

SWM facility pond (wet pond and dry pond) assessments include an inspection of all SWM facility pond structural asset features, as well as inspections for erosion, invasive vegetation and wildlife, nuisance odour and algae, and SWM facility pond function based on water elevation. Sediment accumulation surveys were conducted on all SWM facility ponds in 2020 / 2021 in order to determine available SWM facility pond volume and estimate sediment volume to inform maintenance prioritization. SWM facility ponds are surveyed every 5 years depending on how close the SWM facility pond is to the clean-out threshold. Five SWM facility ponds were surveyed in 2024 to establish a baseline sediment volume.

Inspections and monitoring being completed are sewer and SWM facility focused. Inspections and monitoring of how the Aurora authorized municipal SWM system is performing on a watershed level is still to be determined through discussions with MECP.

Monitoring Equipment Calibrations:

To support inspections and hydraulic monitoring, manual water level infrastructure installed in stormwater management (SWM) wet pond facilities (42 facilities) were resurveyed in the spring of 2024 to confirm elevation.

Water level loggers utilized for hydraulic monitoring are downloaded monthly and a manual water

level measurement is collected and used to calibrate the logger water level data record.

3 Inspection & Monitoring Results in 2024

Stormwater Management (SWM) Facility Wet and Dry Pond Inspection and Operation Summary:

Sixty-five (65) stormwater management (SWM) facility wet and dry ponds were inspected in 2024. Some notables during the inspection were:

- 10 SWM facility ponds have a sediment accumulation volume within them that may reduce their stormwater treatment efficiency.
- 4 SWM facility ponds have outlet structures that are not draining efficiently and may require cleaning.
- 3 SWM facility ponds have outlet pond structures, pipes, or concrete headwalls that require structural maintenance and repair.
- 5 SWM facility ponds have erosion occurring within them that require maintenance.
- 1 SWM facility pond needed maintenance of its access road.
- 1 SWM facility pond had a beaver impacting the SWM facility pond function that required the beaver and lodging removed.

Storm Water Management (SWM) Facility Low Impact Development (LID) Sites Inspection and Operation Summary:

Nine (9) stormwater management (SWM) facility Low Impact Development (LID) Sites were inspected in 2024 two of which have features identified as potentially not performing as per design expectation requiring further investigation and possible remediation.

Sewer Operation:

No major sewer back-ups, flooded basements or major road drainage issues reported. No sewer pipe failures identified.

Linear sewer condition assessments completed in 2024.

Public Complaints

There were no public complaints related to the authorized municipal stormwater management system in 2024.

Summary of any Spills

There were no known spills into the Town's authorized municipal stormwater management system.

Environmental Impacts & Trends

The Ministry of the Environment, Conservation and Parks (MECP) is currently developing guidance on the monitoring efforts required under the ECA to assess the environmental impact of the authorized municipal stormwater management system on receiving waters. Once finalized the Town will develop and implement an appropriate monitoring program, the results of which will be included in future annual reports.

4 Summary of Alterations to the Authorized Municipal Stormwater Management System and Actions Taken to Improve or Correct Performance

Alterations and Corrective Actions Taken in 2024

Alterations and corrective actions taken in 2024 are listed Table 4.1

Table 4.1 Alterations & Corrective Actions Completed in 2024

Date	Location (Latitude & Longitude)	Description
2024	Poplar Crescent, from Henderson Drive (east intersection) to Henderson Drive (west intersection) Latitude-Longitude: 43.98202 -79.46831	Approximately 775m of existing storm sewer was removed and replaced. Addition of an oil grit separator to provide additional water quality treatment is in service.
2024	Gurnett Street Cross-Culvert Latitude-Longitude: 43.99477 -79.46470	Cross culvert rehabilitated with 28mm thick spray-on polymer liner inside the cross culvert
2024	Keyhole Development (Mattamy Phase 4) Forest Grove Court Latitude-Longitude: 44.02995 -79.42634	Approximately 477m of new storm sewers, 45m of stormwater infiltration gallery and enhanced grassed swale, and one (1) new stormwater management facility dry pond with drainage catchment area of approximately 2.74 hectares now in service.

Date	Location (Latitude & Longitude)	Description
2024	Arbors Phase 2 Latitude-Longitude: 44.01986 -79.42396	Approximately 1,003m of new storm sewers in service on Radial Drive, Durblee Avenue, Sparks Street, Capreol Avenue, and Towns Lane
2024	10% of the Town's gravity sewer inventory being assessed	Sewer pipe condition assessment

Maintenance, Repairs, Actions Taken in 2024

Maintenance activities conducted in 2024 are summarized in Table 4.2 below.

Table 4.2. Maintenance and Repair Activities completed in 2024 on the Authorized Municipal Stormwater Management (SWM) System

Maintenance or Repair Activity	Description or Amount of Activity
Oil Grit Separator (OGS) Clean Out	10
Catch Basins Cleaned Out	1,465
Maintenance Hole, Catch basin, and Sewer/lateral Repairs	19 maintenance holes, 60 catch basins, and 28 laterals repaired
Updated SWM facility Pond Name and Warning Signage Installed	Signage installed at 74 SWM facility ponds
Vegetation Clearing / Phragmites Removal	12 SWM facility ponds
SWM Facility Pond General Maintenance and Repairs (SWM facility pond structures, pipes, and erosion maintenance and repairs)	9 SWM facility ponds
Access Road Clearing	1 SWM facility pond
Sediment Accumulation Survey	5 SWM facility ponds
Beaver and Beaver Lodging Removal	1 SWM facility pond

Alterations and Corrective Actions Planned for 2025

Alterations and corrective actions planned for 2025 are listed in Table 4.2 below.

Table 4.2 Alterations and Corrective Actions Planned for 2025

Date	Location	Description of Upgrade Planned
2025	McLeod Drive; Lacey Court; Marksbury Court; Gilbank Drive Latitude-Longitude: 43.99680 -79.48715	Lacey Court - 2m storm sewer spot repair Marksbury Court – 2m storm sewer spot repair; approximately 106m of 300mm diameter storm sewer and 43m of 525mm diameter storm sewer to be structurally lined. Gilbank Drive – 20m of storm sewer spot repairs; New Double Catch Basin (DCB) and DCB lead to improve concrete curb drainage McLeod Drive – 22 existing catch basins to be replaced with 23 new catch basins with sumps; 2m of storm sewer spot repair; and 1 storm sewer tee and service lateral replacement.
2025	Centre Street (Yonge Street to Spruce Street)	Storm sewer and catch basin replacement
2025	Aurora Stormwater Management Facility Wet Pond C1 Just east of 305 Wellington Street East Latitude-Longitude: 44003351 -79.449002	Stormwater management facility wet pond sediment removal
2025	Aurora Stormwater Management Facility Wet Pond C4 Just north of 14778 Bayview Avenue (Transformer Station) Latitude-Longitude: 43.996916 -79.442548	Stormwater management facility wet pond sediment removal and outlet structure repair

2025	Aurora Stormwater Management Facility Wet Pond SC2 385 Vandorf Sideroad – rear of 22-46 Monkman Court Latitude-Longitude: 43.984568 -79.441743	Stormwater management facility wet pond sediment removal and outlet structure repair
2025	Aurora Stormwater Management Facility Wet Pond WC5 Located in open space lands Rear of 55, 59 Watts Meadow, 62, 64 McClenny Dr, 9-15 Willis Drive Latitude-Longitude: 43.979502 -79.483356	Stormwater management facility wet pond sediment removal and outlet structure repair
2025	Temperance Street – Cross Culvert Repair Latitude-Longitude: 43.99483 -79.46472	Existing open bottom three-sided concrete box culvert rehabilitated.
2025	Town wide – Stormwater & Stream Management Master Plan Update	Preparation of Stormwater & Stream Management Master Plan Update
2025	10% of the Town's gravity sewer inventory being assessed	Sewer pipe condition assessment 2025.

Status of Planned Alterations and Actions from Previous Reporting Period:

This is the first annual performance report prepared related to the authorized municipal stormwater management system, therefore there are no previous reporting actions to provide a status on.