
MUNICIPAL SEPARATE STORM SEWER SYSTEM OPERATIONS & MAINTENANCE PROGRAM

The City of Norcross's MS4 is made up of the structures and facilities used for collecting, conveying, storing and/or treating stormwater from the source drainage area to the point of final outlet. To assure the stormwater system continues to operate as designed to safely convey stormwater volume, velocity, and quality, it is the City's responsibility to maintain the MS4. An adequate operations and maintenance (O&M) program is essential to maintain the functionality of the system and is a high priority for the City's SWMP. This section outlines the City's procedures for system inspection, maintenance, and documentation.

The proactive O&M program outlined within this document is designed to achieve the following goals:

- Assist the City with meeting local SWMP goals and NPDES Phase I MS4 regulatory compliance requirements
- Reduce citizen complaints
- Improve the conveyance efficiency of the drainage system
- Provide a foundation for the future capital replacement and maintenance program including associated budgeting effort
- Extend the life cycle of the drainage system infrastructure components

Extent of Service Policy

This EOS policy classifies the "responsibility status" of the various drainage infrastructure components based upon system component location and ownership factors. The inventory of the City's drainage system includes a detailed map of the drainage system components that lie within the City's public drainage system as well as private stormwater controls. The City's EOS policy for the O&M program includes all drainage structures and systems within the City's public right-of-way and within easements. Additionally, the City will provide limited inspection services to private detention ponds as these facilities have the potential to adversely impact the public drainage system if they are not functioning as designed. Limited services will include inspection and owner notification if the control requires maintenance.

Municipal Structural Control Inspection & Maintenance

The City of Norcross does not currently have any structural stormwater controls on any municipally-owned property. However, in the event a structural control is constructed on municipal property, the City will be responsible for inspections and maintenance as outlined below.

Public Works Department staff will inspect all municipally-owned stormwater controls (i.e. detention ponds/areas and stormwater wetlands) and perform any maintenance activities that are required to keep these stormwater controls functioning at current levels or better. All material removed will be disposed of at a local landfill. If certain standards are not met during inspection (as defined below), Public Works Department staff will perform applicable maintenance procedures.

Inspection Schedule

- Municipally-owned detention ponds will be inspected on an annual basis and maintenance will be performed in accordance with the general standards outlined below.

General Standards for Required Maintenance

- Trash debris and floatables will be removed from control structures upon inspection.
- Sediment shall be removed before 50% of the capacity has been lost (typically every five to seven years).
- Stormwater structural control facilities shall be maintained according to criteria or procedures presented in Volume 2 of the Georgia Stormwater Management Manual (GSMM). Maintenance requirements are detailed at the end of each structural control design criteria section of the GSMM.

Public Drainage System Inspection & Maintenance

Public Works Department staff will inspect the storm sewer lines, culverts, catch basins, outfalls and any other elements of the public drainage system. The MS4 will be inspected based on a regular schedule. This will not prevent staff from inspecting a suspected problem area, even if it is not within a scheduled area. If certain standards are not met during inspection (as defined below), City staff will perform applicable maintenance procedures including removal of litter, debris, or sediment; re-grading; minor repair; replacement; etc.

Open Drainage System

The City will maintain the open drainage system through the following procedures:

- City staff will inspect the length of the ditch/swale identified within the public right-of-way or as otherwise identified as the responsibility of the City.
- City staff will maintain all open drainage structures identified as being part of the City's maintenance responsibilities through the following procedures:
 - City staff will remove all manmade and natural objects that are causing or could potentially cause a blockage to the system.
 - City staff will manually remove excess emergent vegetation. Bank side vegetation and vegetation in the maintenance right-of-way will be mowed or trimmed, but not removed to protect against erosion. City staff will remove all litter prior to mowing/trimming of vegetation.
 - If the ditch is not draining properly, or exceeds the condition driven maintenance standard for sediment (see below), City staff will re-grade the ditch/swale to match existing pipe invert grades.

Closed Drainage Systems

The City has been divided into 5 geographic areas and the remaining drainage systems in the City will be inspected on a 5-year rotational basis, or one geographic area each year over five years. The City staff person will assess the system for condition, material, water quality issues, and structural issues. Approximately 20% of the secondary drainage systems will be inspected each year for five years, totaling 100% of the system inspected during one permit period. Maintenance activities will be conducted as needed based on the results of the inspection and the condition driven maintenance standards listed below.

Inspection Schedule

- *Open Drainage System* – Swales and ditches will be inspected and maintained on a monthly basis during the growing season (March to November).
- *Closed Drainage Systems* – Secondary drainage systems will be inspected on a geographic area basis. The City has been divided into 5 areas and one area will be inspected every year. Maintenance will be performed as needed.

General Standards for Required Maintenance

- *Ditches* – Drainage ditches shall be inspected and cleaned if accumulated sediment, debris or other deposits exceed 25% of the functional depth. Excess vegetation shall be removed manually if it restricts flow or is unsightly. Vegetation will not be removed intentionally or unintentionally through over-culling. Right-of-way litter shall be removed and properly disposed and turf will be mowed regularly during the growing season.
- *Catch Basins and other inlets* – Catch basins and inlets will be cleaned if accumulated sediment, debris or other deposits are equal to or greater than one-third the depth from the basin to the invert of the lowest pipe into or out of the basin. If catch basins are found to significantly exceed this standard, they should be inspected and cleaned more often. If deposits of concern are rarely found during regular inspections, inspection may be moved to a more infrequent schedule.
- *Storm Drain Lines* – Lines will be inspected as the catch basins are inspected. Storm drain (sewer) pipes shall be cleaned if accumulated sediment, debris or other deposits are blocking more than 35% of the pipe diameter.
- *Culverts* – Woody debris and other blockages will be immediately removed from culverts and other critical conveyance components.
- *Outfalls* – Dry weather flows in the stormwater system observed during inspections that indicate a potential pollution problem, will be investigated for potential illegal dumping and/or illicit connections. If discharge from an outfall is causing erosion, energy dissipaters shall be installed.

Polluted water and debris from line flushing will be captured and properly disposed of through the use of a jet-vac truck (or some other acceptable method to capture the generated effluent water). Litter, sediment, and other pollutants removed from catch basins and culverts will also be collected and disposed of at a local landfill in accordance with applicable procedures.

Complaint Response Maintenance

Complaint response or “remedial” maintenance is performed based on evidence of system impairment or failure identified through citizen complaints or City staff inspection. This maintenance is performed on an as-needed basis and is logged as it is performed through a work order system. This type of maintenance can include sediment/litter removal, vegetation clearing, channel stabilization, and outlet structure repairs.

Upon receipt of a complaint, the City will generate a work order for the individual project. City staff will perform an inspection of the complaint within five business days. The inspector will assess the system for condition, material, water quality issues, structural issues, etc. Maintenance will be recommended, recorded in a work order database, and performed based on the maintenance standards established above. If recommended remedial maintenance calls for more specialized expertise and

equipment then the work order may be transferred to another department or an outside entity specializing in that activity. A database of complaints received and actions taken is maintained by the City. The City's official website contains information on stormwater management issues. The link to this page is <http://www.norcrossga.net>. The website has an area where any citizen can report a storm drain issue. These issues are logged electronically and forwarded to the proper department for investigation and resolution.