
Stormwater Management Program Inspection & Maintenance Policy

NORTHEAST OHIO REGIONAL SEWER DISTRICT



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I. Definitions

Culverted Stream: A closed conveyance structure designed to carry stormwater and through which stormwater flows.

Basin: A stormwater control measure designed to store water for a limited period of a time and provide peak flow attenuation. To be considered a regional basin, a basin must be in line with the Regional Stormwater System and must fulfill the function of causing a significant reduction in peak flow of water through the Regional Stormwater System as determined by the District.

Dam: A barrier constructed across an open channel to control or impound the flow of water; may be part of large regional basin facility.

District-owned Assets: Those Regional Stormwater System assets that are legally owned and operated by the District.

I&M Activities: Inspection and maintenance activities that include, but are not limited to, the inspection, assessment, cleaning, structural maintenance, aesthetic maintenance, emergency repairs, and water quality and habitat maintenance of Regional or Local Stormwater System assets to ensure their stormwater conveyance functionality.

Local Stormwater System: The entire system of watercourses, stormwater conveyance structures, or Stormwater Control Measures owned and/or operated by a private entity or a unit of local government other than the District. The Local Stormwater System shall include those watercourses, stormwater conveyance structures, or Stormwater Control Measures not designated as part of the Regional Stormwater System.

Local Stormwater System Assets: Those stormwater conveyance structures, channels, and control measures that are owned and/or operated by a private entity or a unit of local government other than the District, including all assets not designated as part of the Regional Stormwater System.

Open Channel: A natural or artificial uncovered conveyance structure through which stormwater flows.

Regional Stormwater System: The entire system of watercourses, stormwater conveyance structures, and Stormwater Control Measures in the District's stormwater service area that are owned and/or operated by the District or over which the District has right of use for the management of stormwater, including both naturally occurring and constructed facilities. The Regional Stormwater System shall generally include those watercourses, stormwater conveyance structures, and Stormwater Control Measures receiving drainage from three hundred (300) acres of land or more. The District shall maintain a map of the Regional Stormwater System that shall serve as the official delineation of such system.

Regional Stormwater System Assets: Those stormwater conveyance structures, channels, and control measures that drain three hundred (300) acres of land or more or are owned by the District.

Stormwater Control Measures (SCMs): An activity, measure, structure, device, or facility that helps to achieve stormwater management objectives including, without limitation, schedules of activities, prohibitions of practices, operation and maintenance procedures, treatment requirements, and other practices to prevent or reduce the pollution of water resources, to control stormwater volume and/or rate, or to otherwise limit impacts to the Regional Stormwater System. SCMs shall be designed to minimize maintenance and reduce the potential for failure.

Transportation Crossings: Any structures, including bridges, which facilitate the flow of stormwater beneath roads, railroads and other transportation facilities.

II. Introduction

The Northeast Ohio Regional Sewer District (District) strives to protect and preserve the Regional Stormwater System through its Stormwater Management Program (SMP). In support of this goal, the District performs inspection, maintenance, and emergency repair activities on Regional Stormwater System assets to ensure their conveyance capacity as well as the protection of public safety and real property. These activities are performed as they relate to the District's objectives (see Section III) and as financial resources are available. This report documents the District's policies for funding and performing inspection and maintenance activities on components of the Regional Stormwater System.

III. District Inspection and Maintenance Objectives

The goal of the District's inspection and maintenance activities under the Stormwater Management Program is to protect and preserve the conveyance capacity of the Regional Stormwater System, as well as protect public safety and real property. This policy was developed to ensure that District inspection and maintenance activities remain aligned with this primary goal, while setting service expectations that are reasonable and viable.

This body of policies was developed to meet the following objectives for the Regional Stormwater System:

- Develop and implement sound, sustainable maintenance practices for stormwater control measures;
- Protect, preserve, and enhance the Regional Stormwater System while controlling costs;
- Prevent premature construction outlay through preventive and predictive maintenance;
- Increase response and repair speed and improve capabilities; and
- Encourage coordination with member communities on activities within their borders.

In addition, these policies are intended to coordinate with the stream monitoring, planning & modeling, and construction programs to achieve multi-objective floodplain and stream system management, and to support other areas of the stormwater management program.

IV. Regional Stormwater System I&M Overview

1. Non District-owned Assets

The following table summarizes the District’s responsibility for inspection, maintenance activities, and emergency repairs for a variety of Regional Stormwater System assets not owned by the District. The District will be responsible for funding and carrying out facility inspection and assessment, as well as cleaning activities under its maintenance program. Inspections will take place to ensure the conveyance capacity of the asset and identify structural integrity issues (e.g. erosion) that could impact the operation of the Regional Stormwater System. District inspections are not intended to replace inspections otherwise mandated by local, state, or federal requirements (i.e. bridge, culvert, or dam inspections by facility owners and operators).

Activities the District will perform are indicated in the cells labeled “District” for each asset type in the table below. For other maintenance and repair activities, the approach to and funding for the activity varies by asset type. Cases A through E, which encompass the varying approaches, are described below. Section V-1 below describes inspection and maintenance activities that the District will perform for each asset, based on these cases.

Title V of the District’s Code of Regulations allows the District access to all Regional Stormwater System assets for inspection purposes. For all other activities, performance will be contingent upon the District’s ability to obtain access to the asset.

Table 1. Summary of District I&M Activities Policy along the Regional Stormwater System

	Open Channel	Basins	Culverted Streams	Transportation Crossings	Dams
Facility Inspection and Assessment	District	District	District	District	District
Maintenance Program: Cleaning Activities	District	District	District	District	District
Maintenance Program: Structural Maintenance	Case A	Case B	Case B	Case B	Case B
Maintenance Program: Aesthetic Maintenance	Case D	Case E	Case D	Case D	Case E
Maintenance Program: Water Quality & Habitat Maintenance	Case C	Case C	Case C	Case C	Case C
Emergency Repairs	Case A	Case B	Case B	Case B	Case B

Case A

Activities that have been classified as Case A are deemed a high priority due to their direct bearing on the SMP core mission. Case A activities are carried out to mitigate conditions in which stormwater conveyance, public safety, or property are likely to be threatened. In general, the District intends to carry out Case A activities without seeking funding from any external parties. However, these activities are subject to funding availability, project size, and other factors.

Case B

Activities that have been classified as Case B are deemed a high priority due to their direct bearing on the SMP core mission. Case B activities are carried out to mitigate conditions in which stormwater conveyance, public safety, or property is likely to be threatened. The District will seek to inform the asset owner and share project costs, as assets for which activities are categorized as Case B are likely to have an owner who is otherwise interested in the proper function of the asset. The timeliness of maintenance activities classified as Case B can be improved through increased willingness of the asset owner, or another third party, to share costs.

Case C

Activities that have been classified as Case C are important to the District's goal of improving water quality and environmental health, but are indirectly related to the SMP goal of maintaining stormwater conveyance. As such, case C activities may be carried out when possible as part of routine cleaning activities.

Case D

Activities that have been classified as Case D are deemed a lower priority due to their indirect relationship to the SMP core mission. Case D activities may be carried out by the District under extraordinary circumstances. However, the District will first seek to notify the owner and encourage resolution of the issue without directly funding or performing the activity.

Case E

Activities that have been classified as Case E are deemed a lower priority due to their indirect relationship to the SMP core mission. Case E activities may be carried out when they are incidental to routine cleaning or repair activities already taking place. The District will seek to notify the owner and encourage resolution without directly funding or performing the activity.

2. District-owned Assets

The District will fund and carry out (through contractual agreement, if applicable) all cleaning, inspection, maintenance, repair, and replacement activities on District-owned assets necessary to maintain adequate stormwater conveyance. In cases of damage or destruction not caused by regional stormwater (e.g. as the result of a traffic accident), the District may hold other parties financially responsible for these activities.

V. Regional Stormwater System Assets

For all Regional Stormwater System assets, the District will conduct inspection, maintenance, and emergency repair activities in accordance with this policy to maintain their conveyance capacity and structural integrity. Funding availability and time may limit the District's ability to perform certain activities that are not considered crucial to fulfilling the District's core mission. The District's responsibility for inspection and maintenance activities as they pertain to each asset type are described herein.

1. I&M Activities by Regional System Asset Type

a. Open Channels

For assets classified as open channels, the District will be responsible for the inspection and cleaning of the asset to a degree that ensures the conveyance capacity of the channel. These are not intended to replace inspections otherwise mandated by local, state, or federal requirements. The District will remove accumulated trees, brush, litter and debris that block the cross-section and restrict conveyance of stormwater of the Regional Stormwater System in accordance with level of service standards.

The District will also fund and carry out structural maintenance and emergency repair activities integral to conveyance, such as stream bank stabilization, as it identifies such needs. In general, the District intends to carry out these activities without seeking funding from any external parties. However, these activities are subject to funding availability, project size, and other factors.

The District will not perform aesthetic maintenance activities, including litter or man-made debris removal (such as shopping carts) or dredging, except for under extraordinary circumstances. However, the District will seek to notify the owner and encourage resolution without direct involvement. At the District's discretion, it may provide water quality or habitat maintenance activities as part of routine cleaning activities.

b. Basins

For all assets classified as regional basins, the District will inspect the structural and mechanical integrity of, and clean, the basin and associated structures and embankments on a routine schedule to a degree that ensures the conveyance capacity of the basin. This includes regular removal of accumulated debris around outfall structures.

Activities performed may include management of vegetation and stabilization of embankments and spillways as they support conveyance and protection of human health and property. To address structural maintenance needs as well as emergency repairs, the District will seek to inform the asset owner. In some cases, the District may seek to share project costs with the owner.

The District will not perform aesthetic maintenance activities, including litter or man-made debris removal or dredging, unless they are incidental to routine cleaning activities, as these activities further the fulfillment of the District's mission. At the District's discretion, it may appropriate provide water quality or habitat maintenance activities as part of routine cleaning activities.

c. Culverted Streams

For assets classified as culverted streams, the District will be responsible for the inspection and cleaning needs of the asset, contingent upon resource availability, to ensure the conveyance capacity of the culverted stream. The District will perform preventative maintenance cleaning of culverted streams to remove accumulated sediment and debris. Inspections and cleaning will take place to ensure the conveyance capacity of the asset, rather than its structural integrity or other characteristics. These inspections are not intended to replace inspections or maintenance otherwise mandated by local, state, or federal requirements.

To address structural maintenance needs as well as emergency repairs, the District will seek to inform the asset owner and, in some cases, share project costs. Repairing cracks and other structural or repair activities will be performed when they support the goals of stormwater conveyance and protection of public safety and real property.

The District will not perform aesthetic maintenance activities, including graffiti removal, except for under extraordinary circumstances. However, the District will seek to notify the owner and encourage resolution without direct involvement. At the District's discretion, it may provide water quality or habitat maintenance activities as part of routine cleaning activities.

d. Transportation Crossings

For assets classified as transportation crossings, the District will be responsible for the inspection and cleaning needs of the asset, to a degree that ensures the conveyance capacity of the transportation crossing. The District will perform preventative maintenance cleaning of transportation crossings to remove accumulated woody debris, litter and other debris that obstruct the entrance of bridges and culverts. Inspections and cleaning will take place to ensure the conveyance capacity of the asset and not its structural integrity or other characteristics. These inspections are not intended to replace inspections or maintenance otherwise mandated by local, state, or federal requirements.

To address structural maintenance needs as well as emergency repairs, the District will seek to inform the asset owner and, in some cases, share project costs. These activities will be performed when they support the goals of stormwater conveyance and protection of public safety and real property.

The District will not perform aesthetic maintenance activities, including graffiti removal, except under extraordinary circumstances. However, the District will seek to notify the owner and encourage resolution without direct involvement. At the District's discretion, it may provide water quality or habitat maintenance activities as part of routine cleaning activities.

e. Dams

For assets classified as dams, the District will be responsible for the inspection and cleaning of the asset to a degree that ensures the conveyance capacity of the dam. The District will remove accumulated trees, brush, litter and debris that block the cross-section/restrict conveyance of stormwater of the Regional Stormwater System in accordance with level of service standards. Inspections and cleaning will take place to ensure the conveyance capacity of the asset, rather than its structural integrity or other

characteristics. These inspections are not intended to replace inspections or maintenance otherwise mandated by local, state, or federal requirements.

The District will also fund and carry out structural maintenance and emergency repair activities, such as channel stabilization, as these needs are identified. The District intends to carry out these activities without seeking funding from any external parties. However, these activities are subject to funding availability, project size, and other factors.

The District will not perform aesthetic maintenance activities, such as large debris removal and mowing, except as incidental to routine cleaning or repair activities already taking place. The District will seek to notify the owner and encourage resolution of maintenance issues without its direct involvement. At the District's discretion, it may provide water quality or habitat maintenance activities as part of routine cleaning activities.

f. Other Stormwater Control Measures

Similar to the Regional Stormwater System asset classes discussed above, other stormwater control measures will be inspected and cleaned to support stormwater conveyance capacity and protect public safety and real property, given that the asset in question is holding or conveying regional stormwater. Additional activities will be performed at the discretion of the District, and the District will seek to notify the owner and encourage shared project costs (for those aligned with the District's core mission) or resolution without direct involvement (for all others).

VI. Local Stormwater System Assets

For Local Stormwater System assets, operation and maintenance activities are not the responsibility of the District.

The District may conduct inspection and repair activities on assets of the Local Stormwater System that it, at its sole discretion, deems necessary or conducive to the proper and efficient functioning of the Regional Stormwater System. For these assets, inspection and maintenance activities will take place on a schedule determined by the District and through agreement with the Local Stormwater System operator to maintain the stormwater conveyance functionality of the Regional Stormwater System or on an emergency basis as required. The District will coordinate with the Local Stormwater System operator and the property owner prior to entering the property and conducting inspection and maintenance activities.

VII. Maintenance Activity Prioritization

The District will attempt to address all inspection and cleaning needs on a routine basis. For other activities, timing and availability of funds may limit its performance. In determining which activities to prioritize, the District will consider the cost of the activity and its potential benefit to the Regional Stormwater System or to the District. Third party/owner contributions to costs, including the application

by a Member Community of Community Cost-Share Program funds, may increase the prioritization of a particular activity. In addition, these primary considerations will be made:

- 1) Those activities resulting in significant **improvements to the Regional Stormwater System** will be prioritized more highly than others. For example, replacing a section of culverted stream that is already near capacity will have a greater impact than replacing one that is functioning properly.
- 2) **Criticality of the current state of an asset** represents its nearness to the end of its useful life. Timely replacement is preferable to eventual asset failure as it can protect the downstream Regional Stormwater System. Catastrophic failure of an asset would result in the highest criticality ranking because downstream effects may already be occurring.
- 3) The **level of threat to public safety and real property** is an important consideration in all of the District's operations. Activities may be prioritized more highly that will reduce the upstream area's susceptibility of flood events and other impacts of the Regional Stormwater System on public safety and real property.