

Capacity, Management, Operations and Maintenance (CMOM) Requirements

Section 1:

1.1 Overview

Collection System Users own and operate sewer systems that convey wastewater to ReWa for treatment. ReWa has developed a Wet Weather Program that achieves a selected level of service by cost-effectively reducing infiltration and inflow (I/I) in the Collection System and increasing the conveyance capacity of the ReWa trunk system. The planned I/I reduction will occur in the leakiest areas of the Regional Sewer System. It is important that the Collection System Users maintain I/I in non-targeted parts of their system to current levels over the long-term through effective CMOM programs.

Collections Systems Users shall develop and implement a CMOM program for their entire system. The program shall be submitted to ReWa for their review and approval.

The following are the minimum required elements¹:

- A. Program Goals
 - B. Organizational Structure, Legal Authority, and Governance
 - C. System Description
 - D. SSO Response and Reporting
 - E. SSO Characterization and Resolution
 - F. Cleaning and Inspection
 - G. Root Control
 - H. Easement Maintenance
 - I. Pump Station and Force Main Operation and Maintenance
 - J. Condition Assessment
 - K. Rehabilitation and Replacement
 - L. Flow Monitoring
 - M. Capacity Management
 - N. Fats, Oils, and Grease Control
 - O. Capital Project Planning, Design, and Construction
 - P. Financial Budgeting and Cost Analysis
 - Q. I/I Reduction Program
 - R. Performance Evaluation (Annual)
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¹ Additional consideration will be given to Subdistricts that have recently been consolidated and/or regionalized.

1.2 Program Goals

The CMOM Program shall have a set of overarching goals that guide the development of each of the program elements.

1.3 Organization Structure, Legal Authority, and Governance

The organizational structure shall be presented along with organizational charts illustrating the various functions of the organization. The legal authority to own, operate, and maintain a sanitary sewer system shall be discussed along with the related powers granted to exercise that authority. The governance of the organization shall be addressed, including the governing body that sets and enforces policy.

1.4 System Description

The collection system assets of the Collection System User shall be cataloged along with relevant asset data. Data shall include linear feet of sewer main by diameter and pipe material, number of manholes, number of laterals, number and capacity of pump stations, and linear feet of force mains by diameter and material type. The CMOM document shall contain tables containing this information along with service area maps showing the system. Collection System Users shall also provide this information to ReWa in GIS format.

1.5 SSO Response and Reporting

The process for responding to and reporting sanitary sewer overflows (SSO) shall be described along with clear roles and responsibilities. Key points of contact for notification shall be identified. Key performance indicators for response time and reporting deadlines shall be identified along with appropriate targets.

1.6 SSO Characterization and Resolution

The process for validating the underlying cause of SSOs and referring them for resolution shall be described. For example, the initial cause for a given SSO may be identified as grease. An inspection of the sewer might reveal a sag in the line that causes grease to accumulate. The sag gets referred to the repair program to be fixed hence resolving the SSO.

1.7 Cleaning and Inspection

Resources assigned to clean and inspect sewer lines, manholes, and public laterals shall be identified. Separate goals for cleaning and inspection shall be established, and progress monitored on an annual basis.

1.8 Root Control

Resources for control and removal of roots from the public system shall be identified. Treatment/removal frequencies shall be specified or identified in the inspection program element.

1.9 Easement Maintenance

Resources shall be identified for maintaining sewer easements outside of road rights of way. An annual target for clearing easements shall be established and monitored. The goal of this element is to ensure access to manholes and sewer lines for inspection, cleaning, and repair.

1.10 Pump Station and Force Main Operations and Maintenance

Resources and processes for operating and maintaining pump stations and force mains shall be identified. Frequencies shall be established and monitored for routine inspection and maintenance based on station criticality, capacity, and response time. Larger, more critical stations shall be inspected more frequently. Wet weather operating procedures for pump stations shall be documented. Back-up pumping through emergency generators or portable pumps shall be provided for critical stations.

1.11 Condition Assessment

The resources and process for assessing the condition of sewer system assets shall be described. The techniques (CCTV, smoke testing, etc.) used along with frequencies or triggers shall be identified. Sewer mains, manholes, force mains, and public laterals shall be included. This program element will be focused on non I/I reduction areas in the Wet Weather Program. The goal of this program element is to identify sources of I/I and structural deficiencies to be repaired.

1.12 Rehabilitation and Replacement (R&R)

The resources and processes for rehabilitating and/or replacing sewer assets shall be described. This program element is focused on areas outside of I/I reduction areas that will be dealt with in the Wet Weather Program. The techniques used shall be described along with the decision-making framework to identify and prioritize R&R activities. The goals of this program element are to avoid failures that might result in SSOs and to keep I/I in non I/I reduction areas to levels comparable to current conditions. Planned spending levels shall be identified along with the source(s) of funding.

1.13 Flow Monitoring

The resources and processes for monitoring flow in the sewer system shall be described. This program element shall support the inspection and rehabilitation elements by identifying areas where I/I is increasing and needs to be addressed. Flow data shall be shared with ReWa upon request in both raw and quality controlled forms.

1.14 Capacity Management

The resources and processes related to accepting new flows into the sewer system shall be described. Techniques and tools for determining if the system has adequate capacity to accept new flows shall be identified. The interface between ReWa and the subdistrict shall be defined.

1.15 Fats, Oils, and Grease (FOG) Control

The resources and processes for FOG control shall be described. Methods for source control to prevent FOG from entering the system shall be described. Outreach and inspection programs for dealing with food service establishments (FSEs) shall be defined. Interfaces with ReWa shall be described. Performance measures and targets shall be established and monitored.

1.16 Capital Project Planning, Design and Construction

The resources and processes for the planning, design and construction of sewer system capital projects shall be described. Methods for setting and monitoring capital budgets shall be established.

1.17 Financial Budgeting and Cost Analysis

The resources and processes for preparing and monitoring financial budgets shall be described. Methods of financing shall be described. Expected sources of capital funding shall be identified. Operational budget setting and monitoring shall be described. The goal of this program element is to define spending levels necessary for a sustainable system and the related rates necessary to support this goal.

1.18 I/I Reduction Planning

The resources and processes for reducing I/I in non-Wet Weather Program areas shall be described. The goal of this program is to keep I/I at near current levels over the long term. This element is supported by the flow monitoring and condition assessment elements.

1.19 Program Evaluation (Initial)

The CMOM Program shall be submitted to ReWa for initial review by November 28, 2021. Each program element shall be described, and the associated resources identified. Performance measures that are being tracked shall be defined along with associated target values. Any information systems used in the elements shall also be identified.

1.20 Performance Evaluation (Annual)

The resources and processes necessary to perform a comprehensive performance assessment of the CMOM Program shall be described. Performance measures for program elements shall be analyzed and compared with target values. Trends over time (4 years) shall be included for both target values and actuals. For elements that fail to achieve target values, remedial measures shall be developed to correct the performance in the subsequent year. Program changes shall be identified and submitted to ReWa for review and approval. Collection Systems shall submit the Annual Performance Assessment to ReWa not later than March 31st for the preceding calendar year.

Minimum performance measures shall include the following:

Measure	Target Description
1. SSO Response Time	Time from notification to arrival on site, Hours
2. SSO Reporting	Reporting SSO per DHEC requirements, %
3. Sewer Cleaning	Percent of system cleaned annually (Both routine and hot spot), %
4. Sewer and Manhole Inspection	Percent of system inspected per PACP and MACP annually, %
5. Pump Station Inspection	Frequency of pump station inspections, times per week
6. Easement Maintenance	Percent of off-road easements maintained per year, %
7. FOG Notifications	Number of FOG incidents reported to ReWa per year, number (tracking)
8. SSO Analysis	Annual tracking of SSOs by cause
9. New Capacity Requests	Number and flow new capacity requests annually, #, MGD (tracking)
10. Sewer Rehabilitation	Length of sewer rehabbed annually, LF
11. Point Repairs	Number of Point Repairs annually, #
12. I/I Resolution	Time to resolve severe I/I defects, days from discovery
13. Lateral Repairs / Replacements	Number of Laterals repaired or replaced annually, #

For each performance measure, the Collection System User shall establish a target value in accordance with industry best practice. Performance measures indicated as “tracking” do not need a target value but should be tracked for trends over time. Target values shall be adjusted if the Annual Performance Assessment indicates a need for better performance.