

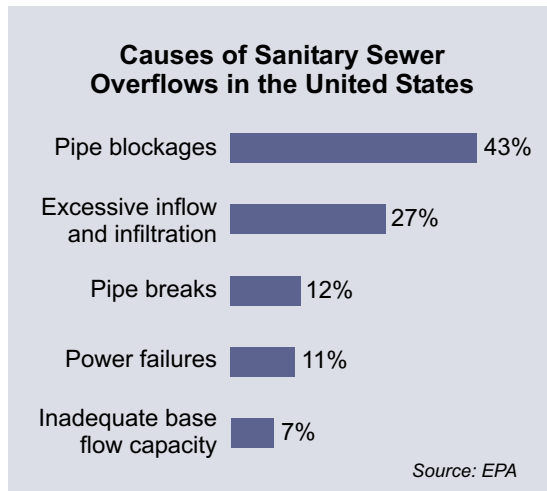
Implementing a Capacity, Management, Operation, and Maintenance Program

Effective management, operation, and maintenance of a sewer collection system are vitally important in the preservation of system capacity. The consequence of insufficient system capacity is sanitary sewer overflows (SSOs). To combat the increasing incidence of SSOs in the U.S., the U.S. EPA has proposed an SSO rule focused on the capacity, management, operation, and maintenance (cMOM) of sanitary sewer collection systems.

Causes of Sewer Overflows

Inadequate sewer collection system base flow capacity causes only 7 percent of the estimated 40,000 SSOs in the United States each year. Although excessive wet weather flows can cause SSOs no matter how well a collection system is operated, inadequate management, operation, and maintenance will greatly contribute to unnecessary SSOs.

To comply with the EPA's proposed SSO rule, which requires the elimination of essentially all overflow events, communities will need to develop cMOM programs addressing pipe blockages, inflow and infiltration, pipe breaks, and power failures that typically cause SSOs.



Many factors limit sewer system capacity and contribute to SSOs.

Regulatory Requirements

The Clean Water Act (CWA) of 1972 prohibits spills to waters of the United States. The proposed SSO rule enforces the same, but requires additional reporting of spills no matter where they occur, including sewer backups into buildings.



cMOM focuses on sewer collection systems with a goal of eliminating sewer overflows.

Reporting requirements will include notification of significant spills (> 1000 gallons) to waterways of the U.S. within 24 hours, monthly reporting of all spills to waters of the U.S., and annual reporting of all spills and building backups.

After adoption of the proposed SSO rule, National Pollutant Discharge Elimination System (NPDES) permit holders and owners of satellite sewer collection systems will be required to implement cMOM programs that:

- ▼ Properly manage, operate, and maintain the sewer collection system.
- ▼ Provide adequate collection system capacity.
- ▼ Respond promptly and effectively to stop or mitigate SSO events.
- ▼ Notify affected parties of an SSO event.
- ▼ Make available the cMOM Program Plan and ongoing audits to the general public.



Knowing the condition of a collection system is integral to meeting SSO regulations.



cMOM Program Requirements

To satisfy the regulatory requirements of the proposed SSO rule, a community will be required to develop a cMOM program that includes:

"Dedicated to creative, responsive, quality solutions for those we serve."

- ▼ **A cMOM Program Summary.** This summary identifies program goals, staff responsibilities and legal authority, collection system documentation, engineering standards, maintenance activities, tracking procedures for reviewing program implementation and effectiveness, and notification requirements.
- ▼ **A System Evaluation and Capacity Assurance Plan (SECAP).** This plan outlines required engineering activities and includes a capital improvement program (CIP) that will bring the sewer collection system into compliance.
- ▼ **An Overflow Response Plan.** This plan establishes operating procedures for detecting an overflow event, responding, and communicating during the event.
- ▼ **Ongoing cMOM Program Audits.** These audits evaluate program implementation and effectiveness, and correct deficiencies in the cMOM program. Audits are required to be made available to the public.

At Carollo, we have found a phased approach is most beneficial to municipalities because of the uncertainties in the upcoming regulations. We are applying a phased approach for several clients. The first phase is a “readiness review” that includes an initial audit. Other phases then follow including program summaries, plans, and in-depth audits. This phased approach allows municipalities to prepare for upcoming regulations, and when finalized, will allow for timely compliance.

Targeted Communities

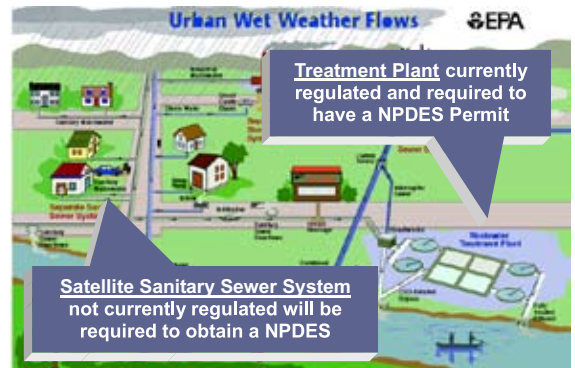
The proposed SSO rule will impact all current NPDES permit holders by requiring them to implement cMOM programs. In addition, communities with satellite sewer collection systems will be required to obtain an NPDES permit.

Streamlined permit conditions and reduced annual reporting requirements will be available for small communities with a discharge less than 1 mgd and/or population less than 10,000.

Satellite Sewer Collection Systems

A satellite sewer collection system discharges its sewer effluent into the treatment works of a downstream NPDES permit holder. The U.S. EPA estimates there are 4,600 satellite sewer collection systems in the United States. The Water Environment Federation (WEF) estimates there are 23,000 to 46,000. Satellite sewer systems are not currently required to hold an NPDES permit.

In the past, satellite sewer collection systems have not been regulated under the NPDES program. The



proposed SSO rule attempts to provide the lacking regulatory framework by requiring owners of satellite sewer collection systems to obtain NPDES permits and implement cMOM programs.

Communities Should Start Now

The SSO rule is currently awaiting review by the Office of Management and Budget (OMB) before being published in the *Federal Register* for public review and comment. Comments will then be incorporated into the final SSO rule for adoption, at which time cMOM requirements for sanitary sewer collection systems will become enforceable after inclusion in a community’s NPDES permit. Communities can ease the impact of these future requirements by starting now to collect and organize cMOM information, taking steps to ensure adequate capacity, and establishing proactive operation and maintenance practices.

Some communities have a head start on cMOM because they already comply with many of the requirements set forth by cMOM. However, other communities are in a reactive maintenance mode. No matter where you are in the process, Carollo can help you formalize a cMOM program necessary to meet regulatory requirements while establishing a proactive maintenance plan.

Experience Counts

cMOM is a program intended to assist communities in maximizing the life of their underground infrastructure assets and to improve public health and the environment by eliminating SSOs.

At Carollo, we consider cMOM one piece of the overall regulatory framework. We help communities develop and implement sewer master plans, SSO elimination programs, asset management plans (that address both cMOM and GASB 34), as well as holistic watershed management programs. Our planning efforts help communities simplify the regulatory framework and improve resource infrastructure and water resource management.