

# **Collection System Capacity, Management, Operation, and Maintenance Programs**

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# Collection System Capacity, Management, Operation, and Maintenance (CMOM) Programs

## ● Basis of this presentation

- ▶ GUIDE FOR EVALUATING CAPACITY, MANAGEMENT, OPERATION, AND MAINTENANCE (CMOM) PROGRAMS AT SANITARY SEWER COLLECTION SYSTEMS
- ▶ EPA 305-B-05-002
- ▶ January 2005



# Collection System Management



- ▶ **Organizational Structure**
- ▶ **Training**
- ▶ **Internal Communication**
- ▶ **Customer Service**
- ▶ **Management Information Systems**
- ▶ **SSO Notification Program**
- ▶ **Legal Authority**



## **Collection System Operation**

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- ▶ **Budgeting**
- ▶ **Monitoring**
- ▶ **Hydrogen Sulfide Monitoring and Control**
- ▶ **Safety**
- ▶ **Emergency Preparedness and Response**
- ▶ **Modeling**
- ▶ **Mapping**
- ▶ **New Construction**
- ▶ **Pump Stations**



# **Equipment and Collection System Maintenance**



- ▶ **Maintenance Budgeting**
- ▶ **Planned and Unplanned Maintenance**
- ▶ **Sewer Cleaning**
- ▶ **Parts and Equipment Inventory**



## **Sewer System Capacity Evaluation -**



- ▶ Testing and Inspection**
- ▶ Flow Monitoring**
- ▶ Sewer System Testing**
- ▶ Sewer System Inspection**

# Sewer System Rehabilitation

- ▶ **Elimination of SSOs**
- ▶ **Reduce I/I**
- ▶ **I/I Reduction Strategy: Move from lowest to highest \$/gallon of I/I eliminated, in project scheduling (“pick the easiest fruit first”)**



**Typical Documents to Review;  
Table Example, by one Permittee**





Capacity	Management	Operations	Maintenance
<ul style="list-style-type: none"> <li>• Information relating to system capacity</li> <li>• Performance data</li> <li>• POTW Flow Records</li> <li>• Capital improvement projects (CIP) plan (including funding and planned improvements)</li> <li>• Collection system master plan</li> <li>• Infiltration/Inflow studies</li> </ul>	<ul style="list-style-type: none"> <li>• Organization chart(s) and chain of communication for reporting SSOs</li> <li>• Program goals</li> <li>• Staffing plans, crew assignments and schedules</li> <li>• Job descriptions</li> <li>• Sewer Use Ordinance, Grease Control Ordinance</li> <li>• Legal authority establishing control of system equipment and its maintenance</li> <li>• O&amp;M budget with cost centers for wastewater collection</li> <li>• Recent annual report if available</li> <li>• Management Policies and Procedures</li> <li>• Information systems</li> <li>• Training plan</li> <li>• Training and certification records</li> <li>• Public education materials</li> <li>• Procurement process</li> <li>• Policy and procedures for trenching, confined space, lockout tagout, PPE</li> <li>• CMOM program audits</li> </ul>	<ul style="list-style-type: none"> <li>• Detailed maps/schematics of the collection system and pump stations</li> <li>• O&amp;M manuals</li> <li>• Inspection strategy, forms, and records</li> <li>• SSO reports detailing location, receiving water, volume, cause, start and stop date and time, system component, corrective action, and actions to mitigate impacts</li> <li>• Safety manual</li> <li>• Emergency response plan/SOP (awareness, notification, training, and emergency response)</li> <li>• SCADA and other alarm system information</li> <li>• Materials management program</li> <li>• Vehicle management</li> <li>• Overall map of system showing facilities such as pump stations, treatment plants, major gravity</li> <li>• Odor and corrosion control strategy</li> <li>• Root control program</li> <li>• Sampling procedures</li> </ul>	<ul style="list-style-type: none"> <li>• Routine reports regarding system O&amp;M activities</li> <li>• Work order management system</li> <li>• Maintenance tasks and frequencies</li> <li>• Replacement parts inventory</li> <li>• Performance measures for inspection, cleaning, repair, rehabilitation sewers, and force mains</li> <li>• Preventive maintenance cleaning strategy</li> <li>• Problem diagnosis records</li> <li>• Repair, rehabilitation, replacement strategy for pipes and pump stations</li> <li>• Record of citizen complaints and emergencies (normal hours and after hours)</li> <li>• Notifications to public health agencies, NPDES authority, and other entities</li> </ul>

# EPA Web Pages; SSO and CMOM

**General Web Page on SSO and CMOM (show page):**

**<http://cfpub.epa.gov/npdes/sso/featuredinfo.cfm>**

**CMOM Self Assessment Checklist (show page):**

**<http://www.epa.gov/npdes/pubs/cmomselfreview.pdf>**

**Guide for Evaluation Capacity, Management, and  
Operation, and Maintenance (CMOM) Programs at  
Sanitary Sewer Collection Systems (show page):**

**[http://www.epa.gov/npdes/pubs/cmom\\_guide\\_for\\_collect  
ion\\_systems.pdf](http://www.epa.gov/npdes/pubs/cmom_guide_for_collection_systems.pdf)**



**The End**



- **Thanks for your attention**