

US EPA ARCHIVE DOCUMENT

APPENDIX C

Capacity, Management, Operation and Maintenance Plan Performance Criteria

Kansas City, Missouri (“the City”) shall implement its Capacity, Management, Operations and Maintenance (“CMOM”) Plan and submit a CMOM annual report, pursuant to Section IX of the Consent Decree, demonstrating compliance with the CMOM Plan performance criteria as follows:

I. Collection Systems Management

A. Organizational Structure

1. The City shall maintain an Organizational Structure that provides delineated job responsibilities, ensures effective employee-supervisor ratios, and guarantees adequate staff is in place to accomplish the responsibilities of the Water Services Department (“WSD”) throughout this Consent Decree. This structure shall be consulted during the annual budget process to determine staffing needs and allocate operational expenses appropriately.

2. The City shall maintain job descriptions and organizational charts and effectively communicate job responsibilities to WSD staff, and acquire and maintain the level of skills and abilities necessary to perform the responsibilities of the WSD.

B. Communication and Customer Service

1. The City shall maintain a communication and customer service program that will inform and educate customers, WSD staff, and the community about wastewater collection, treatment and water quality issues.

2. The City shall address incoming inquiries, requests, and complaints in a timely fashion and effectively communicate WSD activities to staff and the public. Specifically, the City shall:

- a. Track all customer service requests; and
- b. Develop and implement written Standard Operating Procedures (“SOPs”) for customer service requests by December 31, 2010 that satisfy the requirements of this Consent Decree and its Appendices.

C. Legal Authority

1. The City shall retain legal authority to conduct the following:

- a. Charge fees to all users of the sewer system, whether or not they are located within the City limits;

- b. Set rates for different classifications of sewer system users.
- c. Enter into agreements with communities outside the City limits for wastewater services;
- d. Measure and/or calculate the volumes of wastewater received from customers outside of the City limits;
- e. Solicit bids, select contractors, and construct public sanitary and combined sewers;
- f. Set standards for the use of private septic tanks or cesspools, including the cleaning of the tanks and the disposal of collected materials;
- g. Maintain the approved pretreatment program pursuant to 40 C.F.R. Part 403 and the Current NPDES Permits
- h. Prohibit the discharge of flammable or other hazardous materials into the sewer system;
- i. Regulate the release of oil and grease into the sewer system by setting acceptable discharge concentrations and setting surcharge rates for higher concentrations of discharged oil and grease;
- j. Require the pretreatment of waste from industrial or commercial users in order to protect the POTW;
- k. Require industrial or commercial users to report on their releases into the sewer system;
- l. Inspect the facilities of industrial or commercial users to determine the types and quantities of materials being released into the sewer system; and
- m. Implement the City's approved pretreatment program against any industrial or commercial users who violate the terms of the ordinance or permits issued.

2. The City shall retain its ability to regulate the connection of private sewers to the public system by entering into contracts, assessing fees, requiring adherence to the City's Standard Specifications, and requiring bonds.

3. The City shall retain the authority to deny a building permit or sewer connection permit if it is determined the receiving sewers have inadequate capacity.

4. The City shall maintain Standard Specifications for the design and construction of new or upgraded sanitary and combined sewers.

D. Acquisition Considerations

1. The design and construction of infrastructure that is acquired into the sewer system shall comply with the City's technical specifications and construction

standards. This shall apply to prospective infrastructure from both new construction and privately-owned systems being considered for a transfer of ownership to the City.

2. The City shall:

- a. Establish a formal, written policy and guidelines for assuming ownership of preexisting infrastructure; and
- b. Ensure proper recordkeeping and documentation is performed.

E. Information Management System

1. The City shall maintain an Information Management System (“IMS”) that provides tools for tracking collection systems’ performance, costs, and work orders, and measures the effectiveness and efficiency of operation and maintenance (“O&M”) activities.

2. The City shall have adequate and effective computer-based tools to manage and track collection system data, written SOPs to ensure documentation of pertinent collection system data, and staff competent in using IMS tools. The City shall also provide IMS training and continue to move forward with mobile data entry research.

F. Geographic Information System Mapping

1. The City shall maintain a Geographic Information System (“GIS”) Mapping Program that ensures a comprehensive inventory of the sewer system is maintained, that it is assembled and presented in a manner conducive for use, and that it is easily accessible by WSD personnel who depend on the data for both performance and planning purposes. The mapping software shall identify several collection system components and attributes, including, but not limited to, gravity sewer, force main, and pipe attributes; property lines and parcels; manholes and access points; diversion structures, flow splitters, and outfalls; ownership of infrastructure; sewer easements; stormwater inlets; impervious surfaces; aerial photography; wastewater facilities (including pump stations, flood pump stations, and WWTPs); and planimetric features (including contours, roads, surface water, and land use).

2. The GIS Mapping Program shall be updated regularly.

G. Sanitary Sewer Overflow (“SSO”) Reporting and Notification

The City shall maintain an SSO reporting and notification program that ensures that discharges from the City’s sewer system are properly documented, stored in a data management system, and properly reported to appropriate regulatory authorities and as appropriate the affected public which includes persons with the

potential to come in contact with the sewage. This SSO reporting program shall include a listing of all Building/Private Property Backups discovered by or reported to the City that have occurred. This tabular listing should also include the date of the Building/Private Backup incident, the location by (specific address), source of notification (property owner, field crew, etc.) the general cause(s) of the Building/Private Backup, and actions taken or suggested by the City to halt, mitigate, and prevent future incidents. The City shall follow its Current NPDES Permits for verbal and written notification to the NPDES permitting authority that a SSO has occurred.

II. Collection Systems Operation

A. Budgeting

The City shall ensure adequate fiscal and personnel resources to operate and maintain its wastewater collection and treatment system.

B. Engineering

1. The City shall maintain an Engineering Program that shall conduct the following activities:

- a. Assess and monitor the collection system infrastructure;
- b. Assess the collection system capacity;
- c. Identify, plan, design, and manage the construction of improvements; and
- d. Review improvements and additions to the collection system for compliance with the City's technical specifications and construction standards.

2. The activities of the Engineering Program shall provide that:

- a. The design conveyance and integrity of the collection system is maintained;
- b. Infiltration and Inflow ("I/I") that significantly contributes to the SSOs is removed from the system or otherwise addressed;
- c. SSOs are minimized; and
- d. Wet weather Combined Sewer Overflows ("CSOs") are controlled in accordance with the Nine Minimum Controls ("NMC") program and the Overflow Control Plan.

C. Water Quality Monitoring

The City shall develop a long-term Water Quality Monitoring Program that will be implemented as part of the Overflow Control Plan post-construction monitoring requirements set forth in Appendix "D."

D. Pretreatment Program

The City shall continue to implement its approved pretreatment program pursuant to 40 C.F.R. Part 403 and the Current NPDES Permits.

E. Pump Station Operations

The City shall maintain reliable operation of the pump stations by:

1. Conducting routine inspections;
2. Troubleshooting when situations arise;
3. Performing preventative maintenance;
4. Retaining appropriate records of pump station inspections and performance; and
5. Remotely monitoring pump station operations through the use of remote dialers and a Supervisory Control and Data Acquisition ("SCADA") system. This monitoring shall be done twenty four hours a day, seven days a week.

F. Pump Station Emergencies

1. The City shall maintain a formal emergency response plan which includes emergency response procedures that crews must follow in pump station emergencies. The City shall maintain guidelines that specify who to call and when to call based on the time of day, weather conditions, and nature of the issue.

2. Emergency response shall be provided by the City staff and/or additional resources as needed. This system shall be maintained to ensure quick response is available twenty-four hours per day, seven days per week.

3. The City shall ensure equipment is available to respond to pump station emergencies.

4. Records associated with pump station emergencies shall be completed and maintained.

G. Force Mains

By October 31, 2011, the City shall:

1. Develop an inventory and accurately map force mains and air relief valves (“ARVs”) into a GIS database;
2. Develop condition assessments for force mains and ARVs;
3. Investigate corrosion issues in conjunction with the condition assessment process;
4. Perform preventative maintenance when needed to protect the integrity of the infrastructure; and
5. Document force main maintenance activities in an IMS.

H. Smoke Testing

1. The City shall maintain a standard protocol for smoke testing.
2. Smoke Testing shall be utilized for sewer investigation and to identify specific locations where stormwater is entering the sanitary sewer system.

I. Flow Monitoring

1. The City shall use a flow monitoring program for the purpose of assessing capacity in targeted areas of the sewer system consistent with Appendix “D” of this Consent Decree. Flow monitoring shall assess system capacity during both dry and wet weather in order to assure adequate current and future capacity.
2. Flow monitoring shall provide adequate and accurate data to support the City’s Overflow Control Plan, capacity assessment and assurance analyses, and I/I investigation needs.

J. CCTV Inspection

1. The City shall use CCTV inspections to visually assess the condition of the inside of the collection system using standardized ratings to characterize conditions. CCTV inspections shall be conducted to investigate a known trouble area and as a follow-up to line cleaning.
2. The City shall perform CCTV inspections of at least 70 miles per year, which will be increased to 140 miles per year by 2020. This mileage includes the mileage in the combined sewer system (“CSS”) area as specified in Appendix “B”. Resource levels will be maintained to meet the performance goal.

K. Remote Sewer Inspection Program

1. The City shall maintain a remote sewer inspection program to inspect remote portions of the sanitary sewer system.

III. Collection Systems Maintenance

A. Manhole Repairs

1. The City shall maintain a manhole repair program to assure the structural integrity of manholes in the sewer system, reduce infiltration into manholes, control odor problems at manholes, increase accessibility to buried manholes, and prevent public harm due to structural failures.

2. The manhole repair program shall maintain the sewer system's manholes in a structurally sound condition and limit the occurrence of excessive infiltration into the sewer system at the manholes. WSD shall establish an annual performance goal for the manhole repair program.

B. Mainline Sewer Repairs.

1. The City shall perform physical repairs to the gravity sewer lines, as needed, to maintain adequate capacity, to reduce and eliminate excessive I/I, and to maintain the design conveyance of the pipes in the system.

2. The type of repair method used shall be determined by several factors including, but not limited to, pipe size, pipe type, pipe location, flow, surface conditions, and severity of I/I.

3. The City shall utilize appropriate sewer repair technologies, such as open cut, cured in place lining, horizontal directional drilling, boring and jacking, tunneling, pipe bursting, sliplining, grouting of joints, and point repairs.

4. The repairs shall be coordinated through an "asset management" approach to maintenance. The priority for repairs will be determined through the use of the system-wide CCTV inspection program as well as the other programs described in this CMOM Plan.

C. Sewer Cleaning

1. The City shall maintain a Sewer Cleaning Program to perform preventative maintenance cleaning and emergency cleaning on the gravity sewer system.

2. The City shall perform at least 283 miles of preventative maintenance cleaning per year. This mileage includes the mileage in the CSS area as specified in Appendix “B”.

D. Response Plan

The City shall maintain and implement a Building and Private Property Backup Response Plan that provides for basement backup response procedures and a basement backup preventative program. These procedures will be employed to restore the public sewer line to a functioning condition and perform any cleanup that may be required under applicable law, including the removal of wastewater/sewage, cleaning and disinfecting floors and walls, carpet cleaning, cleaning and disinfecting of all other items amenable to cleaning and disinfecting, and repair, replacement and disposal of damaged materials. These procedures will also include cleaning and disinfection of any areas and items remaining inside of an affected building that were in contact with sewage. The basement backup preventative program will allow for the installation of systems or devices to prevent future basement backups in those eligible properties experiencing the backup of wastewater into buildings due to inadequate capacity in the City’s sewer system.

IV. Collection Systems Capacity

A. Capacity Assessment and Assurance

The City shall maintain procedures for capacity assurance as follows:

1. For new development: The developer’s Engineering Consultant is responsible to certify that the proposed development will not overload the receiving sanitary sewer system. This includes (1) verifying the receiving trunk sewer was sized adequately according to the Kansas City Chapter of the American Public Works Association (“APWA”) standards, and (2) verifying any receiving pump station has sufficient capacity to handle the additional flows.
2. For single taps, the City shall regulate sewer connections and inspect the connections for proper installation.