SANITATION DISTRICT NO. 1

December 19, 2008

Acting Director of the Division of Enforcement
Department for Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
601 D street NW
Washington, DC 20005
DOJ Case No. 90-5-1-1-08591

Chief, Water Program Enforcement Branch
Water Management Division
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

Re: Consent Decree Case No. 2:05-cv-00199-WOB

Dear Gentlemen:

Pursuant to the above-referenced Consent Decree, Sanitation District No. 1 (SD1) is required to submit annual reports on the implementation of its Capacity, Management, Operations, and Maintenance (CMOM) programs. These reports are due no later than December 31 each year.

The Consent Decree was entered on April 18, 2007 and required the District to submit four separate CMOM documents within the first year – the Grease Control Program, the Sewer Overflow Response Plan (SORP), the CMOM Self-assessment, and the Pump Station Operation Plan for Backup Power. Each of these submittals received regulatory approval during 2008. Updates to these programs are now included in the CMOM Annual Report, as it is not required for the program updates to be submitted as separate documents.

A certification as required by the Consent Decree is also enclosed (Consent Decree paragraph 38).

1045 EATON DRIVE • FT. WRIGHT, KENTUCKY 41017-9681 • PH: (859) 578-7450 • FAX: (859) 331-2436

I am confident in the integrity of the enclosed document, and I am certain that its content not only satisfies regulatory requirements, but also helps further the mission and vision of SD1 by establishing aggressive, proactive, achievable measures to protect water resources and enhance the quality of life in Northern Kentucky.

If you have any questions or concerns, do not hesitate to contact me at 859-578-7465 or by email at jeger@sd1.org.

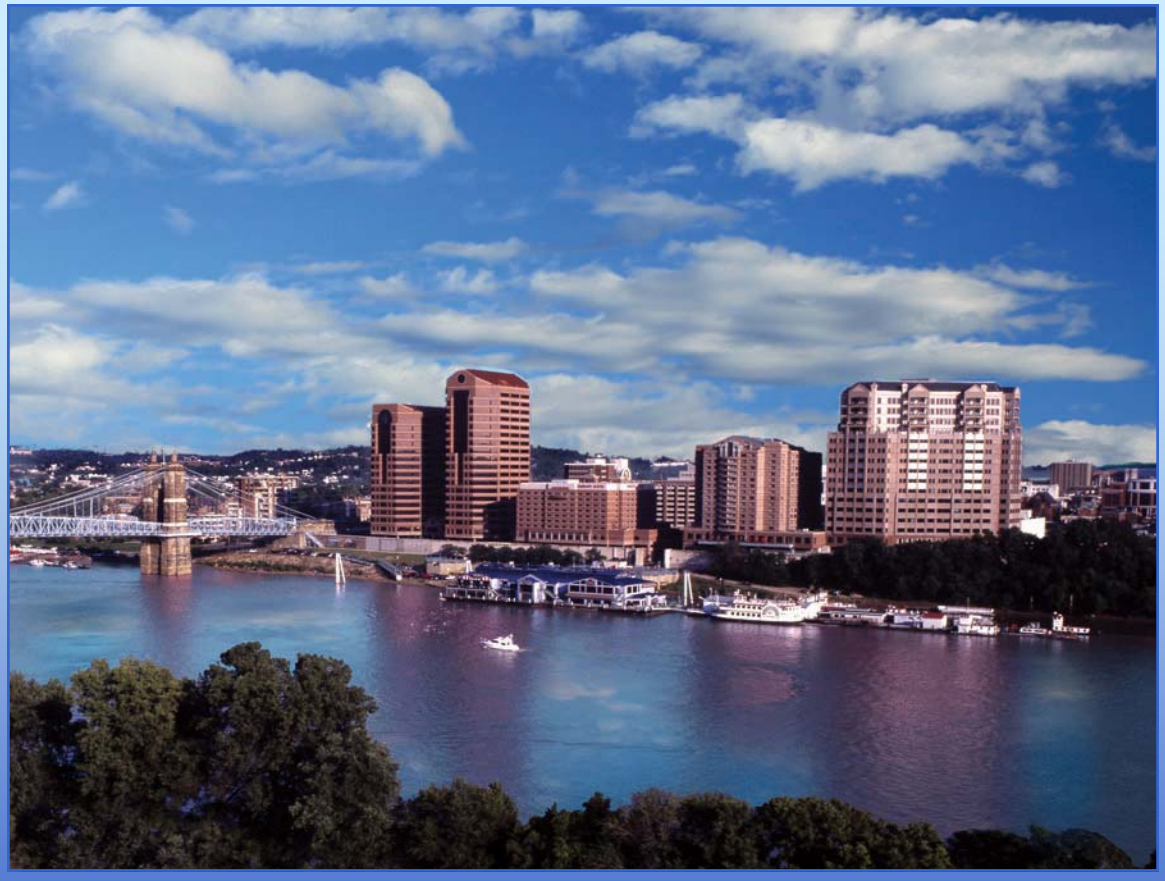
Best regards,

Jeffery A. Eger
General Manager

JAE/mf
Enclosures

Capacity, Management, Operations, & Maintenance (CMOM) Annual Report

Sanitation District No. 1
December 19, 2008



SANITATION DISTRICT NO. 1

CERTIFICATION

Capacity, Management, Operations, & Maintenance (CMOM)
FY 2008 Annual Report

Consent Decree Case No. 2:05-cv-00199-WOB

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jeffery A. Eger
General Manager

12/19/08
Date

COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 19 day of December, 2008 by Jeffery A. Eger, General Manager of Sanitation District. No. 1.

Linda Hamberg
NOTARY PUBLIC

State-at-Large County, Kentucky

My commission expires: May 9, 2010

1045 Eaton Drive • Ft. Wright, Kentucky 41017-9681 • Ph: (859) 578-7450 • Fax: (859) 331-2436

CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE ANNUAL REPORT

December 19, 2008

Sanitation SD1 No. 1
1045 Eaton Drive
Ft. Wright, KY 4101

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LIST OF ACRONYMS AND ABBREVIATIONS

Cabinet	Kentucky Energy and Environment Cabinet
CCTV	Closed Circuit Television
CMOM	Capacity, Management, Operations, and Maintenance
CSAP	Continuous Sewer Assessment Program
CSO	Combined Sewer Overflow
EPA	Environmental Protection Agency
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
FY	Fiscal Year
gbaMS	GBA Master Series (information tracking system)
GIS	Geographic Information System
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
PM	Preventive Maintenance
SCREAM™	Sewer Condition Risk Evaluation Analysis Model™
SD1	Sanitation District No. 1
SOP	Standard Operating Procedures
SORP	Sewer Overflow Response Plan
SQL	Structured Query Language
SSO	Sanitary Sewer Overflow

SECTION 1: INTRODUCTION

1.1 Overview & Report Period

On April 18, 2007, Sanitation District No. 1 (SD1) entered into a Consent Decree with the U.S. Environmental Protection Agency (EPA) and the Kentucky Energy and Environment Cabinet (Cabinet) to address sanitary sewer overflows (SSOs) and combined sewer overflows (CSOs) in an effort to improve water quality throughout SD1's service area. A significant component of the Consent Decree that will aid in achieving these goals is the development of formal Capacity, Management, Operations, and Maintenance (CMOM) programs. SD1's CMOM programs are designed to manage the collection systems' assets and operations in a manner that maximizes efficiency and reduces the potential for overflow occurrences. Proper planning and management of CMOM programs can result in a reduction of the number, frequency, and volume of SSOs and CSOs.

Pursuant to the Consent Decree, SD1 is required to submit annual reports on its implementation of the CMOM programs. This report describes implementation of SD1's CMOM programs during Fiscal Year (FY) 2008, which began on July 1, 2007 and ended on June 30, 2008.

1.2 CMOM Program Structure

SD1 has been performing informal CMOM activities for several years; however, these activities were structured into formal CMOM programs during the self-assessment in 2007. During the self-assessment process, a written purpose, goals, and recommended improvements were established for each program. SD1 currently has 34 CMOM programs, which are identified in Table 1.1.

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Table 1.1 CMOM Program Activities

Management Programs	Operations Programs
• Organizational Structure	• Emergency Preparedness & Response
• Communication & Customer Service	• Safety
• Legal Authority	• Budgeting
• Acquisition Considerations	• Engineering
• Information Management System (IMS)	• Call Before You Dig
• Training	• Water Quality Monitoring
• System Mapping	• Compliance
• SSO Reporting & Notification	• Mobile Waste Haulers
Maintenance Programs	• Pump Station Operations
• Manhole Repairs	• Pump Station Emergencies
• Rehabilitation & Replacement	• Pump Station Force Mains PM
• Mainline Sewer Repairs	• Odor & Corrosion Control
• Sewer Cleaning	• Continuous Sewer Assessment
• Equipment & Tools Maintenance	• Smoke & Dye Testing
• Pump Station Maintenance	• Flow Monitoring
• Maintenance of Rights-of-way	• CCTV Inspection
Capacity Programs	• Manhole Inspections
• Capacity Assessment & Assurance	
• New Connection Tap-In	

1.3 CMOM Program Resources

SD1 currently employs 243 full-time staff members, six part-time staff members, and a number of interns, co-ops, and temporary personnel. There are seven main areas of operation: Executive Administration, Human Resources & Administration, Plant Operations, Plant Maintenance, Collection Systems, Capital Improvement & Inspections, and Engineering & Water Resource Management. SD1's organizational charts can be found in Appendix A. Each department is involved in the implementation of at least one of the 34 programs.

Although each department plays a role in program implementation, Collection Systems, Capital Improvements, Engineering & Water Resource Management, Plant Operations, and Plant Maintenance personnel are the most heavily involved. The Collection Systems Department is divided into two subgroups – customer service and construction. The customer service group is responsible for dispatch duties, trouble call investigations, sewer overflow response, catch basin cleaning, and sewer assessment activities. There are currently 41 employees in the customer service group, which is approximately six more than last year. This addition of customer service personnel was due to the increased responsibilities associated with SD1's new Continuous Sewer Assessment Program (CSAP) and Nine Minimum Controls program requirements. Refer to Section 3 of this report for more detailed information about CSAP.

The Collection Systems construction group is responsible for managing inventory; performing light maintenance work on equipment; assisting customer service crews as needed during sewer overflow responses; repairing, raising, and replacing manholes; conducting immediate and/or short-term line repair work; and stocking, delivering, and refueling equipment. There are currently 35 employees in the construction group of the Collection Systems Department. In addition to the customer service and construction crew members, the department is led by the Director of Collection Systems and supported by one administrative assistant. SD1's Assistant General Manager & Director of Capital Improvements provides direct oversight of the entire Collection Systems Department.

The Capital Improvements group consists of 18 full-time employees, including one administrative assistant, two project managers, three program managers, two project engineers, two project coordinators, and eight flow monitoring personnel. In addition, this department is provided with direct oversight by SD1's Assistant General Manager & Director of Capital Improvements.

The Engineering & Water Resource Management group consists of 16 full-time employees, one part-time employee, and two interns. Ten of these employees work in watershed and storm water management, eight in plan review, and one in regulatory compliance. In addition, these groups are led by the Assistant General Manager & Director of Engineering, who is a registered Professional Engineer. There are a total of five registered Professional Engineers and three certified Engineers-in-Training employed at SD1.

The Plant Operations group consists of 50 full-time personnel, three part-time personnel, and two co-ops. Twenty-seven of these employees work in Dry Creek Wastewater Treatment Plant operations, eleven work in Eastern Regional Water Reclamation Facility operations and small plants, eight work in pump station operations, and nine work in laboratory services and industrial monitoring.

The Plant Maintenance group consists of twenty-six full-time employees and one part-time employee. This group tends to all of the maintenance, HVAC, and electrical needs at each of SD1's major assets, including treatment plants and pump stations. Both the Plant Operations and Plant Maintenance groups are led by SD1's Operations Manager and are provided with direct oversight by the Assistant General Manager & Director of Engineering.

For a detailed description of changes to SD1's organizational structure during the current reporting period, refer to Section 8.4 of this report.

SECTION 2: COLLECTION SYSTEMS

2.1 Overview & Major Components

SD1's sewer system covers approximately 200 square miles and serves approximately 98,000 customer accounts. SD1's collection and treatment systems are composed of approximately:

- 49,586 manholes
- 3,769 catch basins in the combined sewer system
- 1,580 miles of sewer lines
- 141 pump stations (11 of which are owned by the City of Walton and operated by SD1 through a contract, and 2 of which are owned by the Airport and operated by SD1 through a contract)
- 15 flood pump stations
- 8 small wastewater treatment plants (4 of which are owned by separate entities and operated under contract by SD1)
- 2 regional WWTPs

SD1's sewer system conveys wastewater from private laterals connected to homes, businesses, and industries through a series of gravity lines, pumped systems, and interceptors to a WWTP. The service area consists of both combined and separate systems. The combined sewers are located primarily in the river cities. A map of the service area and major components can be found in Appendix B.

2.2 Operations & Maintenance

SD1 has continued to effectively utilize its computerized maintenance management system, GBA Master Series (gbaMS), to schedule and track its O&M activities. This program is used to manage and track fieldwork, schedule preventive maintenance (PM) activities, log customer complaints and the resulting repair work, and maintain detailed data and history on repairs of SD1's assets. It is also used to inventory equipment and supplies. The following summarizes some of the major activities performed by SD1 customer service and construction crews during FY 2008:

- 46 Sewer Line Replacements (manhole to manhole)
- 75 Sewer Line Point Repairs
- 80 Catch Basins Rebuilt
- 66 Catch Basin Repairs
- 971 Catch Basins Cleaned
- 377 Manhole Repairs/Replacements
- 79 Restoration Projects
- 1,561 Crew Visits Resulting from Trouble Calls
- 755,732 Feet of Sewer Lines Televised (by both internal and external crews)

- o 499,268 feet of this total inspection footage was completed under the new CSAP (see Section 3)
- o 256,464 feet of this total footage was completed prior to the onset of the CSAP (from July 1, 2008 – December 31, 2008)

In addition, SD1 has a maintenance contract with Building Crafts to assist with construction activities throughout the service area. During FY 2008, Building Crafts completed 95 line replacements, 15 point repairs, 85 manhole replacements, and 20 manhole repairs.

Preventive Maintenance

At the beginning of FY 2008, there were 359,500 feet of main line sewers on a PM list of pipe to be cleaned twice a year. Due to the onset of the CSAP (see Section 3) and the prioritized approach associated with this program, SD1 decided to take a critical look at the pipe on this list to determine whether or not there was still the need for each line to be cleaned on a routine schedule. To initiate this assessment process, SD1 discontinued the PM schedule that was in place at the time and moved those pipes to a priority list to undergo initial inspection under the CSAP. All of these lines have now undergone an initial closed-circuit televised (CCTV) inspection, have received Maintenance and Structural scores, and have been moved onto the next process of the CSAP based on their scores. This process will eventually lead to a new PM list based on the methodology of the CSAP rather than the old PM program, which lacked a structured plan for re-inspection and re-assessment. Under the new program, cleaning activities are executed in a cost-effective manner on pipes that need cleaning and on a schedule that is appropriate for each pipe.

Private Laterals

Out of the 1,561 trouble call responses made during FY 2008, approximately 31% were due to homeowner lateral blockages. SD1's Board of Directors has adopted several amendments to the Sewer Lateral Repair and Illegal Connection Inspection and Enforcement Policy over the past two years. The purpose of these amendments, made in November 2006, March 2008, and August 2008, were to expand SD1's funding for repairs to sections of private laterals located beneath the public roadway and to more comprehensively address the repair and maintenance of laterals by eliminating illegal storm water connections into the sanitary sewer system, which can overload the sewers and contribute to SSOs. The most recent version of this policy can be found in its entirety in Appendix C. SD1 will continue to assess its role in addressing and funding private source issues and make future amendments and/or implement new policies and programs as deemed necessary.

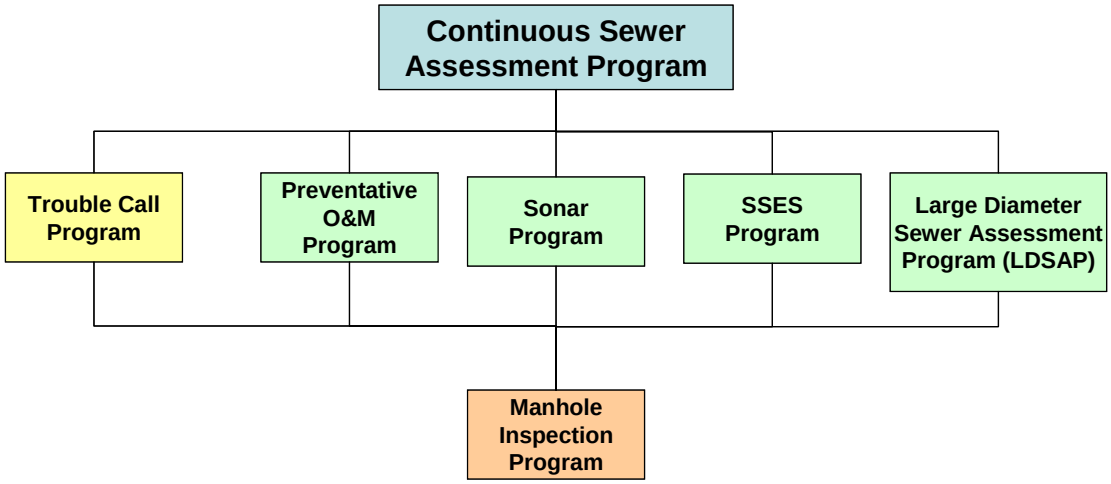
SECTION 3: CONTINUOUS SEWER ASSESSMENT PROGRAM

3.1 Program Overview

Over the past year, SD1 has been working diligently to develop and implement a formal CSAP. The purpose of this program is to utilize a proactive and coordinated asset management-based approach to assessing the condition and life cycle of SD1's infrastructure and managing rehabilitation/replacement of the system. Implementation of this program has enabled SD1 to more effectively and proactively prioritize and implement system inspection, cleaning, and rehabilitation/replacement needs. Intended results of these proactive operations are the abilities to identify and address wet weather inflow and infiltration sources, assure sufficient capacity in both dry and wet weather, and reduce SSO and CSO occurrences.

SD1 has identified six O&M programs that are incorporated into the larger-scale CSAP. Each of the programs include an assessment phase using appropriate inspection technologies such as CCTV, zoom camera (Aquazoom), smoke & dye testing, sonar, and visual inspection followed by an action phase such as cleaning and rehabilitation/replacement. Figure 3.1 represents the overall structure of the O&M programs. A detailed process diagram of the entire program can be found in Appendix D.

Figure 3.1 Structure of Continuous Sewer Assessment O&M Programs



Prioritized Approach

Through the CSAP, it is anticipated that SD1 will inspect the equivalent length of its entire collection system in the first five years of program implementation (2008-2013) when priority re-inspections are taken into consideration. Program scheduling is based

on the areas where past structural, maintenance, and work order history have demonstrated the highest need and priority to be inspected, cleaned, and/or rehabilitated or replaced. The priority sewers were identified and the inspections scheduled to focus on areas with known problems or that are likely to have a high concentration of service and/or structural problems. The first five years of the program will include inspecting and re-inspecting (depending on the initial condition found) the following:

- All major interceptors and large combined sewers with Aquazoom and Sonar programs
- All sewers within 50 feet of major creeks
- All sewers downstream of SSOs
- All sewers in basins that have infiltration and inflow percentages greater than 10%

Based on the initial inspection results, the following actions are taken:

- Sewers with high maintenance scores in need of cleaning are cleaned and scheduled for re-inspection in approximately six months to one year (see the CSAP process diagram in Appendix D). If needed, sewers are cleaned again upon re-inspection and may be evaluated for a permanent repair depending on the cause of the debris.
- Sewers in good condition with no need for cleaning and/or repair are scheduled for re-inspection in one, three, or five years depending on the inspection scores for the pipes.
- Sewers with high structural scores in need of repair are brought into the Rehabilitation/Replacement program to be properly addressed. Sewers are scheduled to be rehabilitated or replaced either immediately (if the pipe is found to be collapsed), or part of a basin-wide rehabilitation/replacement project. These sewers are also coordinated with our Watershed Plans to ensure that Watershed Plan projects are properly incorporated into the sewers' overall solution.

The lower priority sewers and newer sewers will be inspected after year five of the program. SD1's CSAP follows an asset management-based approach and provides us the data we need to target cleaning and rehabilitation and replacement of the sewers with the highest need. The re-inspection process allows SD1 to make better cleaning and/or rehabilitation decisions, which results in a more cost-effective program that will reduce the risk of service-related overflows compared to taking a linear inspection and cleaning approach (start at the top of the system and work your way down). This CSAP is also coordinated with SD1's Watershed Plans and the updating of those plans every five years. The first round of Watershed Plans is required to be submitted to the Cabinet and EPA by June 30, 2009.

Scoring

SD1 converted to a new defect coding system in December 2007 that utilizes the Sewer Condition Risk Evaluation Analysis Model™ (SCREAM) tool. SCREAM™ is a sewer and manhole condition assessment tool developed by CH2MHill. The software provides

a standardized defect coding system and a definitive scoring and ranking process for both sewers and manholes, eliminating subjectivity by the operator. The scores for each pipe segment and manhole are based on a scale of 1-100 for both structural and maintenance conditions, which allows for a better understanding of assigning relative risks of failure. SD1 uses this SCREAM™ evaluation process for the inspections associated with the CSAP.

3.2 Program Implementation (Year 1)

SD1's proposed CSAP was approved by the Cabinet and EPA on May 14, 2008. The original program submitted for regulatory approval can be found within the CMOM Self-assessment Report, which can be downloaded from SD1's website: http://www.sd1.org/documents/documents.asp?id=168&PageFrom=getDocs.

The program runs on a calendar year and commenced on January 1, 2008. The remainder of this section describes CSAP activities performed between January 1, 2008 and June 30, 2008 (which is the end of the reporting period for this annual report, as it is on a fiscal year schedule).

Data Integration & Automation

SD1 has devoted significant time to developing key data collection, integration, and automation methodologies to allow the six O&M programs to functionally support each other per the program process diagram (Appendix D) to meet the assigned performance goals and targets of the CSAP.

As stated previously, gbaMS is central to many daily functions of SD1. As such, one of the goals of CSAP is to utilize gbaMS as the primary tool for data collection and automation with much of the key data integrated with the Geographic Information System (GIS) for ease of use in decision-making.

Prior to implementation of the CSAP, field data was either collected directly within gbaMS mobile master or was entered on hard copies in the field and then entered into gbaMS by office staff. In the early planning stages of the CSAP, SD1 recognized the need to improve this data handling process by integrating and automating the movement of field data into gbaMS along with generating automated future actions and work orders within gbaMS. SD1 selected CH2M HILL's SCREAM™ inspection analysis methodology and Structured Query Language (SQL) database integration logic because it allows the results of single or multiple inspection technologies, such as smoke testing and CCTV performed on the same asset, to be scored and compared to other assets. The methodology and logic also allows existing CCTV and sonar pipe inspection activities using the National Association of Sewer Service Companies' Pipeline Assessment and Certification Program CCTV codes to be mapped to the SCREAM™ codes for standardized SCREAM™ scoring and export to gbaMS for additional analysis and next action determination via SD1's CSAP Process Diagram.

The gbaMS and CH2M HILL SCREAM™ data reside in SQL 2005, in their own databases that share data with each other. A template database was created and is utilized for storing and performing quality assurance and quality control of contractor data collected with the Pipeline Assessment and Certification Program codes. Data from the template database is then brought into the gbaMS and SCREAM™ databases. An additional interim CSAP database was created and serves as a hub, to pull and store data from the gbaMS and the SCREAM™ databases to determine and apply the next action decision-making logic outlined by the CSAP process diagram. SQL-server stored procedures apply the logic and generate next actions such as a list of prioritized pipes and manholes needing immediate rehabilitation or replacement, future sonar and CCTV pipe re-inspections, future cleaning activities at differing intervals, and prioritized groups of pipes and manholes that require rehabilitation/replacement as part of a larger-scale basin-wide project. Currently the interim database requires manual entry of the data from the gbaMS database and then the next action is automatically determined by the programming logic. Work orders for each pipe are then manually generated based on the next action.

SD1 is currently working to automate the CSAP database to eliminate the need for manual data entry and manual work order generation. The CSAP database is anticipated to be fully automated within the first quarter of calendar year 2009. Once fully automated, a pipe will be inspected in the field and entered in real-time in gbaMS and the SCREAM™ databases via broadband wireless connections (for SD1 crews) and the template database for contractor crews (Contractor data will continue to undergo quality assurance/quality control before data entry to gbaMS), the pipe will then be automatically scored and the next action automatically generated based on the programmed CSAP process diagram logic. The programming will also provide automatic work order generation and work scheduling activities to increase efficiency and ensure our collection system continues to be inspected, cleaned, and rehabilitated/replaced in a timely and cost-effective manner. Information such as the following is taken into account when work is scheduled:

- SCREAM™ scores
- Number of pipes scheduled to need inspection or O&M that month
- Location of assets (basin, street, and x/y coordinate)
- Amount of footage to be inspected per year
- Number of crews available

Much of the data input into the CSAP database and output from the CSAP database provide more insight when placed in GIS and observed on a map via a GIS interface. In the coming months, the gbaMS and GIS database(s) will be analyzed for relationships and data commonalities and a data and process flow model will be developed to represent the CSAP and GIS data integration.

Both detailed and summary reports will be compiled for the aforementioned results and will be accessed in three ways. The results will be visible through the gbaMS

application, through the CSAP administrative interface, and created in SQL Server Reporting services and available through SD1's portal.

There are several benefits associated with this data integration and automation effort:

- The automated decision logic increases productivity by efficiently handling and analyzing large amounts of data according to the CSAP logic.
- The standardized contractor inspection data with the template database and automated quality assurance/quality control increases data value by avoiding poor or incomplete data and ensuring only correct data enters our system.
- The user-friendly field forms and data entry procedures make for a smooth transition for staff. This project has also created access to common information across multiple staff levels.
- The convenient reporting and viewing of system condition and required activities across asset types and basins facilitates performance and cost monitoring and compliance reporting.

SD1 has made significant progress on this data integration and automation project and plans to complete all remaining tasks throughout the subsequent reporting period.

Program Resources

SD1 is using a combination of both internal and external resources to implement the CSAP. Significant time has been spent during this first year determining how to balance the use of in-house expertise as well as outside assistance. In response to the required activities of the CSAP and other Consent Decree-related tasks, SD1 hired eight new Collection Systems customer service crew members and purchased three new CCTV trucks, which are currently on order. Once the three new trucks arrive, SD1 will have a total of six CCTV trucks, one of which will only be used as a back-up if one of the five operating CCTV trucks is out of service. SD1 also entered into a contract with Sewer Optical Services to televise 720,000 feet of pipe within the first year of the program (January 2008 – December 2008) and Inframetrics to Aquazoom 157,293 feet of pipe located in the combined sewer system within the first year. This was intended to complement the approximately 350,000 feet of pipe slated for internal crews to televise during the first year. In addition, SD1 began a Force Main and Air Release Valve Assessment and PM Program in June 2008. As part of this work, a contractor will be televising approximately 300,000 feet of gravity sewer downstream of force main discharges to assess condition. This combination of resources will enable SD1 to meet or exceed its goal of inspecting approximately 1.1 million feet of pipe during the first year of the program.

Sewer Inspections

Table 3.1 outlines the amount of pipe inspected between the time when the CSAP commenced through the end of the current reporting period.

Table 3.1 CSAP Inspection Footage
(January 1, 2008 through June 30, 2008)

Inspection Method	Inspection Footage
CCTV (Initial inspection)	326,000
CCTV (Re-inspection)	90,000
CCTV (Sewers downstream of force mains)	0*
Aquazoom (Large diameter pipe)	83,268
TOTAL	**499,268**

*This project did not commence until August 2008, which is after the current reporting period. Results will be included in the FY 2009 CMOM Annual Report.

Sewer Cleaning

During the current reporting period, approximately 113,695 feet of pipe were cleaned in coordination with the CSAP process logic demonstrated in Appendix D (pipes with Maintenance scores greater than 60). As previously stated, prior to the onset of the CSAP, there were approximately 359,500 feet of main line sewers on a PM list to be cleaned twice a year. With this new program now in place, it was necessary to take a critical look at the pipe on this list to determine whether or not there was still the need for each line to be cleaned on a routine schedule. All of these lines have now undergone an initial CCTV inspection, have received Maintenance and Structural scores, and have been moved onto the next process of the CSAP based on their scores (see Appendix D for the CSAP process diagram). This process will eventually lead to a new PM list based on the methodology of the CSAP rather than the old PM program, which lacked a structured plan for re-inspection and re-assessment. Under the new program, cleaning activities are executed in a cost-effective manner on pipes that need cleaning and on a schedule that is appropriate for each pipe.

Rehabilitation/Replacement

As demonstrated in the process diagram in Appendix D, any pipe that receives a Structural score greater than 80 is placed into the rehabilitation/replacement portion of the CSAP. As the flow chart shows, sewers that become part of the rehabilitation program are given a priority ranking of 1-3 based on factors such as criticality, Sewer System Evaluation Survey status, condition, and proximity to planned watershed projects. The map in Appendix E displays the pipe segments that have been placed in the rehabilitation/replacement portion of the CSAP during this first year of the program.

While this individual priority ranking is critical, it is only the first step in the timing and method of subsequent rehabilitation or replacement. Groups of pipes and manholes must be selected for inclusion into real world projects. There are more factors and decisions needed to develop these discrete projects for implementation. The following are some guiding principles that SD1 has developed during the current reporting period to identify rehabilitation project extents and timing:

- Sewer collapses, which are defined as >50% pipe cross-sectional area loss due to material collapse, will be repaired or replaced immediately.
- Individual projects within each sewer basin will not be developed until a significant amount of data is collected and assessed within each basin. Having a bigger picture of overall needs for each basin and how the needs vary across basins will allow for better prioritization and planning. The previous approach taken was a "find-and-fix" type of method that resulted in significant opportunity costs.
- The projects that will be developed will tend to be large in scale and will be focused within sewer basins. This approach maximizes efficiencies and minimizes construction costs. In addition, it allows better integration with the implementation of SD1's Watershed Plan projects by maximizing the chance of having holistic solutions. This provides the ability for a project to simultaneously address hydraulic, blockage, and structural issues.
- Rehabilitation/replacement decisions will be made using an asset management approach and will be integrated with other ongoing programs that may significantly impact the timing and method of repair.
- Project prioritization will strongly consider watershed priorities but these will not be the only factor. Other priority factors include:
    - Average "priority score" of pipes in the project area, which includes criticality, condition, and proximity to detailed watershed project
    - Proximity to detailed watershed solution
    - Hydraulic level of service
    - Criticality (if needed for consideration beyond priority score use)
    - Service issues (e.g., high concentration of root intrusion)
    - Available budget

These criteria are not necessarily comprehensive and may be modified as the Rehabilitation & Replacement program is implemented and matures.

In addition to the CSAP rehabilitation/replacement efforts that commenced during FY 2008, SD1 and Building Crafts personnel completed a total of 141 line replacements, 90 point repairs, and 482 manhole repairs/replacements. SD1 spent approximately $10.4 million on rehabilitation/replacement projects during the current reporting period.

SECTION 4: SEWER OVERFLOW RESPONSE PLAN

4.1 Overview

SD1 received regulatory approval of the Sewer Overflow Response Plan (SORP) on May 14, 2008. This plan is an operational document that emphasizes emergency response activities to contain, mitigate, and clean residuals from overflows. The long-range objective of the SORP is to provide a framework whereby proper documentation

of each event will help establish permanent overflow abatement programs to be incorporated into SD1's Watershed Plans.

4.2 Training

SD1 has made significant progress over the past year moving forward with educating employees on the newly revised SORP and associated procedures. A comprehensive training program has been developed, and every employee at SD1 has received his or her appropriate level of training over the course of the past year. The training program consists of the following eight modules:

- Module 1: SORP Overview
- Module 2: How SD1 Becomes Aware of an Overflow
- Module 3: SORP Response and Resources
- Module 4: Notification
- Module 5: Initial Response
- Module 6: Mitigation of Condition
- Module 7: Field Documentation
- Module 8: Review of Clean-up, Containment, and Field Documentation

While developing the SORP training program, it was determined that the majority of SD1 employees would only need to be provided with a basic overview of the program, while others involved in the execution of the SORP require more in-depth training. To meet the various learning needs of SD1 employees, two levels of training were established – the Awareness Level and the Operations Level. Employees involved in SORP at the Awareness Level, which includes slightly more than half of the workforce, receive SORP-related information through sources such as the organization's website and Intranet site, management meeting minutes that are distributed to each employee, and various other informational pieces distributed to employees throughout the year.

Employees involved in SORP at the Operations Level are required to attend an initial seven-hour training covering all eight modules, as well as annual refresher courses. Operations Level trainees also receive continuous hands-on training in the field during actual overflow response events. Personnel in collection systems construction and customer service, plant operations, and CIP inspections are involved in SORP at the Operations Level. Upon completion of the training sessions, each Operations Level trainee is required to confirm their knowledge through a written test.

A thorough SORP Trainer's Guide and Workbook were developed as part of the new training program and are available to all employees via the Collection Systems Intranet site. Copies of these informational materials are also distributed during training sessions.

4.3 Annual Review

Under the Consent Decree, SD1 is required to perform annual reviews of the SORP and make adjustments as necessary. Specifically, Section 36(c) states that:

> **36.(c) Specific CMOM Program Development – Sewer Overflow Response Plan ("SORP").** …By no later than each anniversary date of the approval of the SORP, the District shall annually review the SORP and propose changes as appropriate subject to Cabinet/EPA review and approval.

SD1's first annual review of the SORP is currently taking place. Any proposed revisions to the SORP that result from this review process will be submitted to the Cabinet/EPA prior to the May 14, 2009 deadline.

SECTION 5: GREASE CONTROL PROGRAM

5.1 Preventive Maintenance

At the beginning of FY 2008, there were approximately 82,000 feet of main line sewers on a PM list of pipe to be cleaned twice a year, due to grease. As stated previously, all of these lines have now undergone an initial CCTV inspection under the new CSAP and have been moved onto the next process of the program based on their Maintenance and Structural scores (refer to Section 3 of this report for additional information regarding the CSAP.). This process will eventually lead to a new PM list based on the methodology of the CSAP.

5.2 Inspections

SD1's Industrial Monitoring Department performs inspections of local Food Service Establishments (FSE) that may be contributing to the buildup of fats, oils, and grease (FOG) in the collection system. During this inspection, the FSE is provided a Restaurant/Food Service Grease Handling Questionnaire that must be completed and returned to SD1 within two weeks. The questionnaire is used to help gain insight into the potential of FOG to enter the collection system through that particular FSE. If the potential is established, the FSE is issued a Food Service Discharge Permit. Random inspections are conducted to ensure compliance with the permit and with SD1's Rules and Regulations.

FSEs are initially inspected in known FOG problem areas, where maintenance and inspection data reveal that the condition of the lines and pump stations are significantly stressed due to the buildup of FOG. In addition, FSEs are inspected when contributing wastewater to a line found overflowing due to a blockage caused by FOG. By looking at

the collection systems in this manner, SD1 can prioritize which areas to focus on and target inspections to FSEs that have the greatest potential impact of reducing FOG.

Over the past few years, SD1 has focused its inspections efforts in the areas surrounding the Richwood Pump Station and Cold Spring Pump Station, both of which have considerable historical problems associated with FOG. In FY 2009, SD1 will extend this strategy by identifying other pump stations stressed by the buildup of FOG and will investigate the FSEs that contribute wastewater to those stressed pump stations.

SD1 currently has 34 permitted FSEs throughout the service area, five of which were added during FY 2008. Within one year of a permit's issue date, at least one follow-up inspection is conducted at each permitted FSE. As a result of these inspections, SD1 issued six Notices of Violation in response to non-compliance with the Food Service Discharge Permit to the following FSEs:

- Snappy Tomato Pizza (Richwood, KY)
- Burger King (Richwood, KY)
- Waffle House (Richwood, KY)
- Arby's (Richwood, KY)
- Penn Station (Richwood, KY)
- Raymond's Hong Kong Café (Richwood, KY)

Each Richwood location listed above was permitted prior to the current reporting period. The two main areas of FSE non-compliance during FY 2008 were: (1) not properly maintaining the required FOG folder, and (2) not cleaning grease traps as often as the permit requires. The FOG folder maintained on-site at the permitted FSE must include the following:

- Food Service Discharge Permit
- Cleaning logs for under-sink and interior floor grease traps
- Copies of all receipts for grease hauled off site
- Copy of the FSE's contract with a grease hauler
- Specifications of all grease traps used at the facility
- Past Notices of Violation and correspondence with SD1

5.3 Grease Trap Waste Disposal

One of the purposes of SD1's Mobile Waste Haulers CMOM Program is to provide a regulated process for properly disposing and treating FOG from grease traps to prevent blockages in SD1's collection and conveyance system. All individuals or companies that haul waste to the Dry Creek Wastewater Treatment Plant must apply for and obtain a Domestic Holding Tank Waste Hauler Discharge Permit. Permits are issued on an annual basis and provisions of the permit must be adhered to at all times. Any mobile waste hauler disposing grease trap waste at the plant is required to submit a Domestic Holding Tank Waste Hauler Manifest, which provides a detailed description of each load

on their truck. During FY 2008, there were 555,833 gallons of grease hauled to and disposed of at the Dry Creek plant.

5.4 Grease Control Program: Proposed Phased Implementation Plan

SD1 received regulatory approval of the Grease Control Program: Proposed Phased Implementation Plan on January 8, 2008. Once this plan is complete, the newly revised Grease Control Program will include components such as ordinances, design standards, and expanded permitting, inspection and enforcement protocols. The enhancements made under the new Grease Control Program will aid in maximizing sewer capacity and reducing sewer overflows within the collection systems.

The program is constructed through the implementation of four phases, each lasting 12 months. For a description of the tasks to be completed during each phase, refer to Appendix F. Phase 1 of this newly revised program, which commenced upon approval, is currently being implemented and tracked as part of SD1's regulatory compliance measures. The deadline for completion of all Phase 1 tasks is January 8, 2009. A detailed description of the progress made in completing these tasks for the current reporting period (ending June 30, 2008) can be found in Appendix F.

SECTION 6: PUMP STATION BACKUP POWER

SD1 received regulatory approval of the Pump Station Operation Plan for Backup Power on May 14, 2008 and has made significant progress assessing and implementing backup power solutions throughout the service area. For a detailed update on the progress made on this program during the current reporting period, refer to Appendix G.

SECTION 7: SELF-ASSESSMENT PROGRAM UPDATES

SD1 performed an extensive self-assessment of each CMOM program in mid-2007, involving approximately 75 employees in a series of interviews and team planning workshops. During this process, SD1 employees identified nearly 100 improvements to collection system activities that would aid in more effectively achieving regulatory compliance and reducing SSO and CSO occurrences throughout the service area. The CMOM Self-assessment was approved by the Cabinet/EPA on May 14, 2008. A comprehensive listing of the recommended improvements identified during the self-assessment can be found in Appendix H. Each of these tasks, aside from those identified as "ongoing", were scheduled to be completed during FY 2008 in order to bring SD1's CMOM Program into compliance.

Throughout FY 2008, SD1 employees were assigned to each task and required to inform the Regulatory Compliance Program Manager of progress made toward

accomplishing each improvement by submitting a CMOM Program Update Form each report cycle (see Appendix I for a copy of this form). There were six report cycles throughout the year. In addition to the Update Form, employees were also required to submit any supporting documentation that helped demonstrate accomplishment of the task, which included items such as emails, meeting minutes, standard operating procedures (SOP), etc. All Update Forms and supporting documentation turned in during the report cycles are kept on file at SD1.

Nearly all recommendations listed in Appendix H were completed during FY 2008. Those listed as "ongoing" are either long-term goals that will continue to progress during subsequent report periods, or are tasks that are continuous and do not have a firm start and end date. There are ten recommended improvements that were not completed during the current reporting period for various reasons and require further explanation, which is provided in Table 7.1. Any task in Appendix H not listed in the table below and not designated as "ongoing" has reached 100% completion.

Table 7.1 Current Status of Remaining CMOM Recommended Improvements

CMOM Program	I.D.	Task	Current Status
Communication & Customer Service	CCS-1	Track all trouble calls by logging them into the gbaMS database system.	This task will be evaluated as part of the Information Management Systems (IMS) Assessment described in task IMS-2 to determine if this need exists. SD1 currently logs all trouble calls that require a response into gbaMS.
Communication & Customer Service	CCS-7	Evaluate SD1's current basement backup policy to identify areas where adjustments should be made.	This task is currently in the evaluation stage. Information has been collected from the insurance company regarding claims, payments, etc. from the past five years. There is a meeting scheduled for January 2009 to decide whether or not revisions to the current policy need to be explored.
Acquisition Considerations	N/A	Assess the use of gbaMS for inputting new construction inspection reports and applicable photos.	Construction photos are being saved to an internal hard drive within the appropriate capital-coded folder. This system has been determined to work well and there is currently no use for gbaMS for this purpose. The value in using gbaMS for new construction inspection reports is still being assessed.
IMS	IMS-3	Determine the most effective method for tracking labor hours spent on O&M activities.	This task will now be rolled into the overall IMS assessment described in task IMS-2. The intent of this task was not necessarily to track all employees' O&M hours, but rather the labor hours spent on collection systems O&M activities. SD1 is currently moving in the direction of using work orders to document time spent on CSAP activities. This will evolve as the program continues to be further developed.

CMOM Program	I.D.	Task	Current Status
IMS	IMS-6	Assess the use of the Inspection module in gbaMS for new construction inspections. Begin utilizing the Pump Station Inspection module in gbaMS for pump station inspections. Input smoke & dye testing results into gbaMS. Link CCTV video to gbaMS. Promote more extensive use of the Facility module in gbaMS.	The use of gbaMS for new construction inspections is still being assessed. Work on using gbaMS for pump station inspections will commence once the annual updates to gbaMS are instituted. Smoke and dye testing results have historically been logged in gbaMS; however, CH2MHill has recently written a data input application that provides SD1 with the capability of entering smoke and dye testing data collected from outside contractors into gbaMS. SD1 ran a pilot test to determine the feasibility of linking CCTV video to gbaMS and the results were successful. These procedures are now moving forward. Until the transition is complete, the footage is captured on DVD, converted to an .ai file, and linked to gbaMS. The use of broadband will eliminate a step and will enable the footage to be directly inputted into gbaMS from the field. The use of the Facility Module within gbaMS has been promoted and is being slightly more used now than in the past for items such as Public Service Park and administrative office inventory.
System Mapping	SM-2	Develop an SOP to be submitted to developers and contractors for obtaining proposed digital files for new construction and capital improvement projects and updated as-builts once construction is complete.	A draft SOP has been developed and is currently under review. Staff is currently working out issues such as timing of submission and enforcement.
Budgeting	BU-2	Begin to develop a more effective process to track the life cycle of new and replaced infrastructure from this point forward.	This task should have been originally identified as “ongoing.” We are making progress on this task by using Wenn Soft to break out assets in a more detailed manner. We are using the assets at the new Eastern Regional Water Reclamation Facility as a starting point for this task. The type of process being used for the assets at this facility will be extended to all new and replaced infrastructure from this point forward. We have also cleaned up our vehicle list and matched the fleet with a life cycle.

CMOM Program	I.D.	Task	Current Status
Engineering	EN-2	Upload technical specifications to SD1's website.	It was determined that updates needed to be made to the specifications prior to uploading them onto the website. This process is near completion and the specifications will be available on SD1's website in the near future.
Pump Station Operations	PSO-4	Begin using the Pump Station Inspection module in gbaMS to record and track pump station inspections.	The utilization of gbaMS for pump station inspections will commence once the annual updates to gbaMS are instituted. It is anticipated that these updates will make this transition occur more smoothly.
Rehabilitation & Replacement	RR-2	Visually map (by flow chart) the work orders for the Construction Foreman, and assess the amount of time currently spent on each category of work orders.	SD1 staff is currently working on this task. A draft of this work flow exists and is being assessed. Crews are still working on backlogged tasks, and it is anticipated that the work flow may look much different in a few months once the backlog is complete.

SECTION 8: CMOM PROGRAM HIGHLIGHTS

Implementation of SD1's 34 CMOM programs over the past year has greatly contributed to proper management and maintenance of the collection systems. Comprehensive overflow data can be found in SD1's Quarterly Reports, which are submitted to state and federal regulators and can be downloaded from the following page of SD1's website:
http://www.sd1.org/documents/documents.asp?id=168&PageFrom=getDocs

The eight CMOM programs highlighted throughout the remainder of this report underwent the most notable developments during the current reporting period.

8.1 Budgeting

The purpose of SD1's Budgeting Program is to provide structured processes that enable all operating departments to execute SD1's mission and vision in a fiscally responsible manner and provide cost-effective services to ratepayers. The Budgeting Program provides SD1 with a clear understanding of the organization's financial needs and obligations, which results in the ability to adequately manage debt service and plan for future needs. This program also helps SD1 personnel categorize expenses and properly manage assets and infrastructure.

User Fees
During FY 2008, SD1's Board of Directors and the Judges Executive of Boone, Campbell and Kenton counties approved a 20 percent rate increase, effective April 1, 2008. In addition, there were also adjustments made to various fees such as capacity connection fees, sludge hauling permits, and sludge dumping fees. The impact of the

Consent Decree will be evaluated on a regular basis to determine when additional debt needs to be issued and to evaluate future rate and fee adjustments necessary to ensure water quality advancements are made in this region.

Capital and O&M Expenditures

The un-audited capital expenditures for FY 2008 totaled approximately $75.1 million, and the un-audited O&M expenditures for FY 2008 totaled approximately $24.2 million. Looking forward, capital spending will greatly increase to meet the requirements set forth in the Consent Decree. There is more than $500 million budgeted for capital improvements over the next five years, as demonstrated in Table 8.1.

Table 8.1 Five-Year Capital Improvement Program Budget (FY 2009 – FY 2013)

Fiscal Year	Projected Capital Spending
2009	$91,711,194
2010	$108,442,985
2011	$115,037,231
2012	$119,684,231
2013	$99,377,478

Rate Structure & Rate Impact Analysis

During the current reporting period, SD1 initiated a comprehensive rate structure and rate impact analysis project. This project was initiated in order to adequately prepare for the increased financial obligations associated with SD1's Consent Decree requirements. The five phases of the project are listed below:

- Phase 1: Review existing rate structure and compare against regional survey results
- Phase 2: Evaluate alternative wastewater rate structures
- Phase 3: Review basis of billing customers (i.e., billing factors)
- Phase 4: Recommend annual adjustment to rates given O&M and capital needs
- Phase 5: Review rate impacts and prepare a financial affordability impact study

The remainder of this section highlights some of the results of this comprehensive analysis.

Revised Billing Methodology

After the drought this region endured during the summer of 2007, many SD1 customers noticed significant spikes in their quarterly bills. Several customers requested that SD1 look into alternate ways of billing in order to avoid high spikes in the future. As a result of the rate study and the request of SD1's customers, starting July 1, 2009, all residential sanitation bills will be based on water meter readings from the previous winter. This winter usage billing method will provide customers with a consistent, level billing that will allow them to more precisely budget for their quarterly sanitation bill. It will also ensure that customers will be fairly billed for the water used in their homes. Research was conducted on the pros and cons of several different utility billing

methods, including those used by other communities. In addition, a rate focus group, made up of local leaders and citizens, was formed to provide input on various alternatives. The general consensus of the focus group was to implement a winter usage rate.

The current billing method will stay in effect until the summer of 2009 in order to provide adequate time to update the billing system, analyze customer winter usage rates, evaluate future revenue needs, and ensure a smooth transition. During this time of transition, SD1 will work diligently to develop and modify the utility billing system to meet the requirements of this new methodology. As a result of these new billing procedures, SD1 will no longer offer the special meter program after 2008.

Commercial and industrial users will continue to be billed based on their water consumption for each quarter. The five-tier system has been adjusted down to three tiers, with the rest of the current method remaining intact. History and research show that this method is very beneficial and fair for non-residential customers.

Low Income Assistance Program & Monthly Billing
In an effort to help reduce the financial burden placed on the ratepayers of Northern Kentucky, SD1 is working on the development of a Low Income Assistance Program. Additionally, SD1 is evaluating the feasibility of switching over to a monthly billing cycle as opposed to the quarterly cycle that is currently in place. This is intended to help customers better plan for and manage the increasing costs of sanitary sewer services.

8.2 Capacity Assessment & Assurance

The purpose of SD1's Capacity Assessment & Assurance Program is to determine the overall capacity of the collection, transmission, and treatment components of our system, identify areas that are lacking adequate capacity, and develop programs and solutions to provide sufficient capacity in these areas. This program provides staff with a holistic understanding of our system's capacity, which allows for better management, design, and control of the system.

One integral component of this program in which SD1 has made significant progress toward over the past year is the development of hydraulic models. In preparation for the development of the Watershed Plans required under the Consent Decree to be submitted by June 2009, SD1 committed to further developing existing hydraulic models to provide support for this submittal. Several items were identified as critical to the success of the Watershed Plans development and were instrumental to the planning of SD1's modeling program:

- Confirmed model accuracy across the main trunk and interceptor system
- Detailed understanding of the severity of significant SSO and CSO locations
- Understanding and ability to represent impact of new development on wet weather inflow/infiltration in separate systems

- Conversion of the models to enable the simulation of antecedent moisture conditions
- Use of the models for continuous simulation for input into water quality models and to estimate level of service
- Ability to simulate seasonal variation in wet weather response
- Ability to interface output with receiving water quality models
- Use of calibration parameters amenable to representation of impacts of green infrastructure

To achieve these goals, SD1 and a team of consultants worked together to develop a comprehensive flow monitoring program that ran from June 2007 – June 2008. Across the system, more than 250 flow meters were installed and monitored for the full 12 months. The time period was necessary to observe all of the seasonal changes within the system and to develop a comprehensive collection of storm events under various antecedent conditions.

The backbone of the flow meter network was on the main trunks and interceptors. This overall system coverage was important to understand the magnitude of regional solutions that may be a part of SD1's plans. Additional locations were selected based on an initial prioritization of SSOs and CSOs. The goal of the monitoring was to develop a detailed understanding of the critical locations within the system and to assess the magnitude and frequency of these overflows. In addition, flow monitors were located downstream of recent developments within the separate sanitary system to estimate the impact of inflow/infiltration from new construction.

The flow monitoring data collected was utilized for the calibration of the hydraulic models across all of the seasons. A total of seven wet weather periods (encompassing > 12 storm events) between June 2007 and March 2008 were selected for use in model calibration; April through June 2008 was selected for independent validation. The calibration was judged through a comparison of peak flow, volume, and peak depth occurring in all of the storm events. The calibration events ranged from high intensity, short duration events to short intensity, long duration events occurring during both the dry summer months and winter months.

Modeling procedures were developed to be able to simulate the impacts of rainfall on SD1's system and to incorporate the effects of seasonal antecedent moisture conditions. Wallingford Software's InfoWorks models were setup to use observed precipitation and estimated evaporation to simulate the rise and fall of the local groundwater levels over the calibration period. In this way, the model was setup to be able to effectively simulate storms occurring during both dry and wet periods. When judging solutions against projected water quality improvements, this is important because the impacts of overflows on water quality may vary by season (i.e. an overflow in July may be worse for water quality because the stream levels are lower than in January). The use of the models helps to fully illustrate the impacts of wet weather

overflows on water quality under all conditions, delineating impacts in both the recreation and non-recreation season.

In addition to existing model calibration, the flow meter data from downstream of new developments was used to estimate a set of inflow/infiltration parameters for use in simulating future development. SD1's service area is expected to grow substantially within the next 20 years and the planning of new facilities must include an allowance for wet weather response that is appropriate. In these new development flow meters, the wet weather response observed during periods of higher groundwater (November – March) was much larger (about 4x) than that observed during the first half of the monitoring period in the summer months. A comprehensive set of parameters was developed to account for that seasonal variation and ensure that any future development predicted would include the observed relationship between groundwater conditions and wet weather response typical of recent developments in Northern Kentucky.

With the extensive work to collect the flow monitoring data, SD1's models were not only calibrated to accurately represent the magnitude of system overflows but also to correctly approximate the seasonal variation in the system. The models were set up to track the time-series hydrographs of overflows so that data could be provided for use in water quality modeling. Use of detailed calibration parameters also allows for a model that can be used to effectively model the impacts of green infrastructure on the system. Since the different types of inflow/infiltration are represented within the model parameters, the use of green infrastructure can be well-represented based on the volume of rainfall it is projected to address.

As SD1 finalizes its Watershed Plans, it is well positioned to use its models for examining the best combination of projects to improve water quality in the Northern Kentucky service area with confidence that the recommended projects are based on an extensive data set and a well calibrated model, with flexibility to explore all different solution sets. In addition to the use of the models for planning future capital improvements, the models are also being used to provide information about the current performance of SD1's system and to confirm available capacity for new development. Given the system-wide extent of the model, SD1 has elected to use the models to provide estimates of the overflow locations within the system for quarterly reporting purposes.

8.3 Communication & Customer Service

The purpose of SD1's Communication & Customer Service Program is to inform and educate staff, external customers, and community groups about the services we offer, including:

- Wastewater collection and treatment
- Storm water management
- Flood protection and drainage

- Industrial monitoring
- Water quality monitoring
- Environmental education

Several internal and external communication initiatives took place during the current reporting period, the highlights of which are included throughout the remainder of this section.

Conference & Community Group Presentations

As an ongoing educational initiative and a means to share industry information, SD1 staff and consultants make many presentations throughout the year regarding CMOM and other Consent Decree-related information. The target audiences of these presentations include stakeholders at both the local and national level. The following list highlights the name and venue of some of the presentations that took place during FY 2008:

- 3 Rivers Wet Weather Sewer Conference – "The Outfall You Know is Better Than the Outfall You Don't: Characterizing CSOs and SSOs for Watershed Planning Northern Kentucky" (10/2/08)
- Water Environment Federation's 2007 Annual Technical Program – "The Role of Adaptive Watershed Management in Wet Weather Consent Decrees" (10/17/07)
- Water Environment Federation National Policy Forum on Wet Weather Management Futures – "Wet Weather Management Practices" (1/22/2008)
- Kentucky Tennessee Water Environment Association's 2008 Watershed Conference – "Watershed Planning and Consent Decree Progress" (1/30/08)
- Home Builder's Association of Northern Kentucky's 2008 Going Green Home Products Expo – "Healthy Streams: Start at Home" (2/8/08-2/10/08)
- Ohio-Kentucky-Indiana Regional Conservation Council – "Watershed Planning and Consent Decree Progress" (3/31/08)
- Tennessee Water Resources Association Symposium – "Northern Kentucky Watersheds: Challenges and Solutions" (4/15/08)
- The Wet Weather Partnership and The National Association of Clean Water Agencies' Green Solutions, Water Quality Compliance Strategies and Key Long-Term Control Plan Development Workshop – "Sanitation District No. 1: Watershed Approach to Complying with Federal Overflow Control Consent Decree" (4/17/08)
- Kenton County Government Academy – "Northern Kentucky Watersheds: Challenges and Solutions" (4/21/08)
- Kentucky Society of Professional Engineers' 2008 Annual Convention – "An Update of the Consent Decree Implementation" (4/24/08)
- Northern Kentucky Chamber of Commerce's Transportation and Infrastructure Subcommittee Meeting – "Watershed Planning and SD1's Consent Decree" (5/28/08)
- Kentucky Environmental Quality Commission – "Watershed Planning and SD1's Consent Decree" (5/28/08)

- Five Cities Plus 2008 Conference – "Green Infrastructure" (6/5/08)
- Ohio River Valley Water Sanitation Commissions' Publicly Owned Treatment Works Subcommittee Meeting – "Watershed Planning and SD1's Consent Decree" (6/5/08)

Watershed Community Council

On August 30, 2007, the SD1 hosted a public Watershed Summit to inform the community about watershed protection efforts underway in Northern Kentucky. The first hour of the event was held in an open-house format, providing an opportunity for local environmental organizations to share their mission and watershed protection initiatives with the public. A total of 18 local organizations participated by hosting a booth at the open house. Following this portion of the evening, SD1 provided a formal presentation regarding their watershed-based Consent Decree. As part of the presentation, an expert panel, including representatives from EPA and the Cabinet, discussed the benefits of watershed approaches to improving water quality.

In addition to the educational component of the night, the Summit also served as a kick-off for the formation of a Watershed Community Council. SD1 chose to create this council to help facilitate open, thoughtful discussion and information sharing opportunities amongst a diverse group of stakeholders in Northern Kentucky regarding the SD1's watershed planning process. After an overwhelming response of applications from several key stakeholder groups such as environmentalists, local leaders, developers, and citizens, SD1 decided to invite all 55 applicants to become members of the council.

The council met three times over the course of FY 2008. SD1 plans to continue these meetings on a quarterly basis, however, the number of meetings held per year will ultimately depend upon the amount of relevant information to be discussed.

Customer Service Survey Door Hangers

One of the recommended improvements for the Communication & Customer Service CMOM Program that resulted from the 2007 self-assessment was to develop a template for project-specific customer evaluations to measure the success of SD1's customer service efforts. Public Relations personnel at SD1 have been working diligently over the past year to develop surveys to be distributed as door hangers to affected residents during trouble call responses and construction projects. Copies of the completed surveys can be found in Appendix J. SD1 will be distributing the surveys and collecting results beginning with the subsequent reporting period. Any significant findings or customer service efforts that are tailored in response to this feedback will be included in the FY 2009 CMOM Annual Report.

"Not Down My Drain!" Bill Insert

During the current reporting period, every SD1 residential customer received a "Not Down My Drain!" bill insert informing them of proper disposal methods for common

household products and grease that can clog sewer lines and cause overflows. A copy of the bill insert can be found in Appendix K.

Lakeside Park Illicit Discharge and Inflow/Infiltration Investigation

SD1 creates project-specific informational pieces for affected residents on an as-needed basis. One considerable project that commenced during the current reporting period that required a significant customer outreach and educational campaign was the Lakeside Park Illicit Discharge and Inflow/Infiltration Investigation. This area was found to have both sanitary sewage in the storm water system and large amounts of storm water overwhelming the sanitary system during heavy rains. SD1 determined that repairing both systems at the same time would allow for efficient use of resources and minimize the impact to residents. Both public and private sources throughout the entire project area, which consists of approximately 100 homes, needed to be tested to identify contributing sources of inflow/infiltration and to assess the condition of the systems. The educational campaign created for this project included a letter sent to every affected resident, a town hall meeting, and an informational slide show posted to SD1's website. Residents were not only informed of the details of the testing that needed to be conducted, but were also provided with educational information explaining the scope and severity of the water quality issues in their neighborhood.

8.4 Organizational Structure

The purpose of SD1's Organizational Structure Program is to provide delineated job responsibilities, outline opportunities for advancement, ensure effective employee-supervisor ratios, and guarantee adequate staff is in place to accomplish the mission and vision of SD1. This program also works in conjunction with the annual budget process to determine staffing needs and allocate operational expenses appropriately.

Throughout FY 2008, several changes to staff composition and responsibilities occurred that enhance the efficiency and success of SD1's CMOM programs:

- The Director of CIP was promoted to Assistant General Manager & Director of CIP, which helped to build a stronger relationship between CIP and Collection Systems. This employee now oversees both of these departments and ensures they are working cooperatively to implement several of SD1's Consent Decree activities. In addition, one employee in CIP was designated as the "liaison" between the two departments and serves as a communication bridge for personnel.
- In response to the required activities of the CSAP and other Consent Decree-related tasks, SD1 hired eight new Collection Systems customer service crew members.
- The Collection Systems crews have been restructured to be more task-specific in an effort to better organize and delineate responsibilities. The customer service staff is now divided into the following focus areas: Administration; CSAP; Trouble Call/Customer Service/Daily Work; Cleaning PM Work; Storm Water (the positions for this crew have not yet been filled). The construction staff is now

divided into the following focus areas: Administration; Vehicle/Equipment Maintenance; Private Lateral Repair Crews; Sewer Repair Crews; Manhole Repair Crew; Catch Basin Repair Crew.

- Three new operators were hired at the Dry Creek Wastewater Treatment Plant, which now enables there to be at least two operators in the control room during wet weather.
- One employee in plant operations has been given the responsibility to review all System Release Reports prior to entry into gbaMS to ensure all fields have been filled in with the appropriate level of detail.

8.5 Pump Station Force Mains Preventive Maintenance

SD1 has made significant progress in the development of a formal Pump Station Force Main PM Program. The purpose of this program mirrors the CSAP, in that it utilizes a proactive and coordinated asset management-based approach to assess the condition of force mains and subsequent improvements based upon a combination of criticality and risk of failure. Through implementation of this program, SD1 can more effectively and proactively prioritize and implement the necessary predictive, preventive, and corrective maintenance required to sustain the reliability of force mains. These proactive measures cost-effectively ensure that all force mains throughout the service area are operating at maximum efficiency, thereby reducing the risk of sewage discharges.

During FY 2008, SD1 contracted professional engineering services to aide in the development and implementation of this comprehensive program. Table 8.2 describes the major tasks assigned to this project and the progress made on each task during the current reporting period. Tasks 1 through 4 focus on understanding what the assets are and where they are located. The information obtained from these efforts will be used in Task 5 to create the prioritized PM program. Future progress made toward developing this program will be included as part of the CMOM Annual Report that is required to be submitted under the Consent Decree by December 31, 2009.

Table 8.2 Pump Station Force Main PM Program Development Tasks
(July 1, 2007 through June 30, 2008)

Task	Scope of Work	Status
1	Identify all drawings and records available on SD1's force mains and pump stations.	Task complete.
2	Identify the field location and alignment of all SD1 pump stations, force mains and air release valves, and map these locations in GIS and gbaMS.	Started fieldwork to locate force mains. Anticipated completion by December 2009.

Task	Scope of Work	Status
3	Perform CCTV inspection on all manholes and sewers 1 mile downstream of a force main discharge to assess damage that may be present from corrosive force main effluent and provide recommend improvements.	No work initiated. Anticipated completion by end of FY 2009.
4	Perform a condition assessment for each pump station and force main on SD1's list of high priority force mains that are in need of immediate attention.	No work initiated. Anticipated completion by end of FY 2009.
5	Work with SD1 to develop a PM program for all of the force mains and air release valves.	No work initiated. Anticipated completion by end of FY 2009.

8.6 Safety

The purpose of SD1's award-winning Safety Program is to ensure that appropriate measures are taken to eliminate or control the exposure of SD1 employees and the general public to hazards that may cause physical harm, and to comply with local, state, and federal safety codes and legislation. Performing daily operations in a safe manner not only protects our workforce and the community, but also demonstrates fiscal prudence, high employee morale, and results in financial savings for our ratepayers.

Safety Training

One of the recommended improvements that came out of the 2007 CMOM Self-assessment was to produce and distribute a Safety Training Calendar at the beginning of the year that identifies class offerings, instructors, times, and dates of classes throughout the year. This calendar was produced and is available to SD1 employees via the Intranet site. Monthly email notifications are also sent out to SD1 employees to notify them of upcoming trainings and who is required to attend. Attendance at safety training classes is tracked with Training Tracker software to ensure that each employee meets his or her annual safety training requirements. Table 8.3 below outlines the safety training classes offered during the 2008 calendar year.

Table 8.3 2008 Safety Training Program

Safety Training Class	Targeted Groups
First Aid/CPR w/AED • Adult First Aid • Adult CPR w/AED • Blood Born Pathogens	Dry Creek—Operations, Maintenance, Laboratory/Industrial Monitoring, Small Plants, Eastern Regional Water Reclamation Facility Collection Systems—Construction, Customer Service Field Technical Service—Operations, Maintenance Engineering—Flow Monitoring Administration—Safety Storm Water—Illicit Discharge

Safety Training Class	Targeted Groups
Hazwoper—Technician Level • Chemical Profiling (MSDS) • Table Top Exercise • Air Monitoring (AMI) Overview • Decontamination • Spill Control (SPCC) • Chemical Protective Clothing (CPC) and Levels of Protection • Practical-(CPC) Dress out • Practical-Decontamination Line	SD1 Emergency Response Team
Electrical Safety • Lockout/Tag out • Assured Grounding • Arc Flash NFPA 70E	Dry Creek—Operations, Maintenance, Small Plants Eastern Regional Water Reclamation Facility Collection Systems—Construction, Customer Service Field Technical Services—Operations, Maintenance
Hazard Communication and Employee Right to Know • Damming and Dykes • Safe Handling of Hazardous Chemicals • Material Safety Data Sheets/Locations • Temporary Use Containers • Lab Safety • Storage of Flammable and Combustible Liquids • Spill Prevention Control and Countermeasures and Storm Water Pollution Prevention Plan Kit Locations • Understanding National Fire Protection Association Hazard Recognition Labels	Dry Creek—Operations, Maintenance, Laboratory/Industrial Monitoring, Small Plants, Eastern Regional Water Reclamation Facility Collection Systems—Construction, Customer Service Field Technical Services—Operations, Maintenance Engineering—Flow Monitoring Administration—Safety Storm Water—Illicit Discharge
Permit Required Confined Space Entry Rescue • Confined Space-Permit Required • Fall Protection/Prevention • iTX atmospheric monitoring • Lockout/Tag out • Hazard Communication • Entry Equipment-Simulator • Communication • Rescue/SKED • Permit Required Confined Space Forms • Self Contained Breathing Apparatus/Supplied Air Respirator • Ventilation (Personal Protection-Open Surface Tanks) • Compressed Gasses • Traffic Control/Flagger	Dry Creek—Operations, Maintenance, Laboratory/Industrial Monitoring, Eastern Regional Water Reclamation Facility Collection Systems—Construction, Customer Service Field Technical Services—Operations, Maintenance Engineering—Flow Monitoring, Inspectors Administration—Safety Storm Water—Illicit Discharge

Safety Training Class	Targeted Groups
Traffic Control Flagger Operations • Traffic Control/Excavation Permit • Record Keeping • Flagging • Signaling • Hot Weather Training • Work Zone Setup • Signs • Changing Conditions • Short term vs. Long term • Speed Classification	Dry Creek—Designated employees from Operation and Maintenance. Collection Systems—Construction, Customer Service Engineering—Flow Monitoring, Inspectors Field Technical Service—Operations, Maintenance
Forklift and DOT/CDL • Driver Safety • Random Inspections • Reasonable Suspicion • Securing Loads • Construction Equipment Vehicle Safety • Minor Repairs • Removal from Service: Lock out Tag out • Coaching the Experienced Driver • Department of Transportation Commercial Drivers License Pre-Trip inspection • Record Keeping	Dry Creek—Designated employees from Operations and Maintenance Collection Systems—Designated employees from construction and customer service Field Technical Services—Operations, Maintenance
Cranes and Hoists • Mobile • Stationary • Fixed • Cable Inspection • Slings • Signaling-Hand Signals • Overhead Line Safety • Periodic/Annual Inspection • Record Keeping	Dry Creek—Operations, Maintenance, Eastern Regional Water Reclamation Facility Collection Systems—Construction Field Technical Services—Operations, Maintenance
Power Operated Hand Tools • Cords and Plugs • Hazardous Conditions • Wet Conditions • Inspection • Storage • Guarding • Generators, Transformers, and Rectifiers • Carbon Monoxide • Confined Spaces • Guards • Operating Controls and Switches • Electric Tools Pneumatic Tools Liquid Fuel Tools Powder-Actuated Tools Hydraulic Power Tools • Portable Abrasive Wheel Tools	Dry Creek—Maintenance Collection Systems—Construction Field Technical Services—Maintenance

Safety Training Class	Targeted Groups
Office Safety • Surge Protectors/Power Strips • Personal Heaters • Ergonomics • Extension Cords • Storage • Emergency Exits	Dry Creek—Staff Collection Systems—Staff Field Technical Services—Staff Engineering—Staff, Project Managers Administration—All Storm Water—Illicit Discharge
Contract Employer Responsibilities • Types of Contractors • Working with Employees • Contractual Violations • Intervention	Collection System—Construction Engineering—Flow Monitoring, Inspectors
Swift Water and Boating Safety • Understanding Hazards • Locations Found • Working Around • Rescue • Throw Ropes • Life Rings • Personal Floatation Devices	Dry Creek—Operations, Maintenance, Industrial Monitoring, Small Plants, Eastern Regional Water Reclamation Facility Collection Systems—Customer Service Field Technical Services—Operations, Maintenance Engineering—Flow Monitoring Administration—Facilities Storm Water—Illicit Discharge
Fire Safety and Emergency Action Planning • Portable Fire Extinguishers • Emergency Action Plan • Employee Alarm Systems • Fire Detection Systems • Emergency Crisis Coordination Team • Emergency Action and Notification Plan • Fixed Extinguishing Fire Protection Systems • Homeland Security • National Incident Management System • Safety and Security • Medical Emergency Protocol • Safe Place Program • Emergency Communication • Fire Prevention • Flammable and Combustible Storage	ALL SD1 EMPLOYEES
Scaffolding, Ladders, Powered Platforms • Fall Protection and Prevention • Set-up • Walking/Working Surfaces • Ladder Securing/Safety • Inspection	Dry Creek—Maintenance Collection Systems—Construction Field Technical Services—Maintenance
Hazwoper—Operations Level • Chemical Protective Clothing and Levels of Protections • Chemical Profiling (MSDS) • Air Monitoring (AMI) Overview • Spill Control (SPCC)	Dry Creek—Operations and Maintenance

Safety Training Class	Targeted Groups
Excavation/Trenching Safety • Trench and Shoring • Call Before You Dig • Underground Lines • Overhead Lines • Rescue Notification Awareness • Public Safety • Slips/Trips/Falls • Ladder Safety • Contract Employer Responsibilities • Atmospheric Monitoring • Traffic Control/Excavation Permit • Hot Work Permit-Flammable/Spark Producing • Atmospheric Sampling-Confined Space • Cold Weather Training	SD1 Emergency Response Team Collection Systems—Construction Engineering—Inspectors

Performance Indicators

A variety of indicators are used to measure the success of the Safety Program, including the number of Friendly Reminders and Safety Violations issued, as well as the number of loss-time injuries and Occupational Safety and Health Administration (OSHA) recordable incidents. Friendly Reminders are issued to employees when they fail to comply with safety policies and procedures. Accumulation of Friendly Reminders results in stronger enforcement measures. During FY 2008, the Safety Department issued a total of 18 Friendly Reminders and three Safety Violations to SD1 personnel.

OSHA statistics are tracked per calendar year. During calendar year 2007, SD1 had 17 recordable incidents/accidents, of which only one resulted in loss-time. So far, there have been eight recordable incidents/accidents in 2008, with zero loss-time injuries.

Recognition

During the current reporting period, SD1's Safety Program received recognition for its information management practices and involvement with the American Red Cross. SD1 was presented with the 2008 Environmental Support Solutions Excellence Award for outstanding achievement in Environmental, Health & Safety and Crisis information management. Additionally, the Cincinnati Area Chapter of the American Red Cross presented SD1 with the Proud Provider Plaque at their April 2008 Board of Directors meeting. The Proud Provider Plaque recognizes organizations for their efforts to provide quality health, safety and preparedness training. SD1 currently has five certified Red Cross instructors who give their time and talents to teaching lifesaving skills to employees.

8.7 Training

The purpose of SD1's Training Program is to build an elite, professional, and proactive workforce capable of executing the mission and vision of SD1 in a safe, timely, and

cost-effective manner. This comprehensive Training Program results in several benefits for the organization, including:

- Ensuring the safety of our employees and the community we serve
- Increasing job satisfaction, employee morale, and workforce engagement by providing opportunities for personal and professional growth
- Keeping staff up-to-date on industry trends, as well as certification and license requirements
- Maintaining the efficiency and consistency of job performance, which consequently upholds the quality of our work and yields a greater return on investment
- Meeting and exceeding the expectations of our ratepayers and governing bodies by ensuring fiscally responsible, efficient, and well-informed operations

SD1 employees are provided with a wide array of training opportunities throughout the year, including safety training, technical skills training, and soft skills training in areas such as communication and leadership. Additionally, SD1 recognizes the value in providing CMOM-specific training opportunities for staff and Board members and has chosen to make this "training" available through a variety of meetings, workshops, and other internal educational efforts that occur throughout the year. During the current reporting period, SD1 staff and Board members were educated about CMOM program activities through the following:

<u>Employee CMOM Update Meeting (July 2007)</u>

- Number of employees in attendance = 55
- Length = 2 hours
- Topics:
    - CMOM project team
    - Purpose / overview of CMOM
    - Consent Decree CMOM requirements
    - CMOM program elements (breakdown of categories and programs)
    - Coordination plan and timeline for self-assessment
    - Summary of preliminary findings resulting from spring interviews
    - Preview of upcoming CMOM workshops
    - Q&A

<u>CMOM Self-assessment Workshops (July & August 2007)</u>

- Number of employees that participated = 75
- Number of workshops held = 43
- Length = 2-8 hours depending on the CMOM program
- Topics: Critical assessment of SD1's 34 CMOM programs

<u>Data Management Meeting to Kick-off IMS Assessment (November 2007)</u>

- Number of employees in attendance = 33
- Length = 2.5 hours

- Topics:
    - Importance of effective data management
    - Discussion regarding SD1's major data storers
    - Description of organization-wide IMS assessment
    - Training needs

GIS Training (November 2007)

- Number of employees in attendance = Approximately 50
- Length = Many 1-2 hour classes offered throughout the course of one week
- Topics:
    - General computer skills
    - GIS Viewer
    - ArcPad
    - ArcReader
    - ArcMap
    - ArcMap/gbaMS interaction
    - GIS Viewer/gbaMS interaction

SCREAM™ Training (December 2007)

- Number of employees in attendance = 39
- Topics: Engineering, inspection, and field personnel were trained on the SCREAM™ pipe and manhole defect coding system. Training took place both in the office and in the field.

Employee CMOM Update Meeting (February 2008)

- Number of employees in attendance = 39
- Length = 1 hour
- Topics:
    - Current status of submitted CMOM program (regulatory comments received)
    - Report cycles and update forms
    - Upcoming deadlines
    - Summer planning sessions
    - Q&A

CMOM Discussion at Professional Development Day (February 2008)

- Number of employees in attendance = Entire organization (approximately 250)
- Length = 8 hours
- Topics Covered During the Program that Pertain to CMOM:
    - SSO/CSO overview and challenges
    - CMOM submittal updates
    - Strategic planning

Management & Leadership Meetings
SD1 holds weekly management meetings and monthly leadership meetings for the purpose of keeping the leadership team informed of all SD1-related business. CMOM activities are often discussed at these meetings. Meeting minutes are distributed organization-wide and are often discussed by managers at individual team meetings.

Board of Directors Meetings
Board members are kept informed of CMOM activities on a regular basis during monthly-scheduled Board and Caucus meetings. Each meeting agenda specifically designates time for a Consent Decree update. In addition, many bids relating to CMOM programs are included in the agenda for discussion and formal approval. Listed below are just some of the CMOM-related contracts discussed and awarded by the Board during the current reporting period:

- Pump Station Standby Power Improvements Phases 2, 3, and 4
- Continuous Sewer Assessment Program, Data Integration, and Automation Assistance
- Pump Station Force Main and Air Release Valve Preventative Maintenance
- Information Management Systems Assessment
- 2008 Sewer and Manhole Inspection Services

Refer to Section 4.2 for a description of SORP training and Section 8.6 for a description of safety training that took place during the current reporting period.

8.8 Water Quality Monitoring

Watershed Characterization
SD1 has two distinct monitoring programs that aid in characterizing the watersheds – the Watershed Monitoring Program and the Outfall Sampling Program. The purpose of the Watershed Monitoring Program is to collect and assess instream water quality, macroinvertebrate, fish and habitat data throughout the study area. This program includes dry weather baseline monitoring in all watersheds (approximately 75 locations), and wet weather event-based and biological monitoring in major watersheds (approximately 60 locations). The purpose of the Outfall Sampling Program is to provide data on pollutant concentrations in the SSOs, CSOs, and storm water discharges in order to effectively characterize SD1's infrastructure. This program is currently being instituted at 20 outfall locations throughout the system.

Instream water quality and overflow data is collected to help characterize watersheds in SD1's study area. This data plays an integral role in the watershed planning process SD1 is using to prioritize, design, and implement solutions to address SSOs and CSOs throughout the systems. This data helps SD1 better understand the condition of the streams, as well as the constituents in the overflows through pollutant concentrations and loadings and the impact that the discharges have on the surrounding environment. The data was also used to help develop the hydraulic models discussed in Section 8.2, as well as three water quality models that are currently under development.

SD1 is using its monitoring data in the development of Watershed Characterization Reports for 13 major watersheds (Fourmile, Twelvemile, Threemile, Taylor, Pleasant Run, Dry Creek, Banklick, Licking, Big Bone, Gunpowder, Woolper, Elijahs, and Sand Run) and three minor watersheds (Ohio East, Ohio North and Ohio West) within the study area. These reports will provide a comprehensive description of the condition of each watershed. SD1 has also developed a Watershed Assessment Tool that contains a comprehensive inventory of pollutant sources across the 16 watersheds and 128 subwatersheds within SD1's study area. This tool assesses watersheds by pollutant loadings, caused by various point and non-point sources, which aids in the ranking of watersheds and ultimately the prioritization and development of controls.

Drafts of each characterization report are currently under final review, and the development of the Watershed Assessment Tool has been completed for bacteria analysis. SD1 is currently working toward making the assessment tool functional for solids and phosphorus analysis as well. Both the reports and the Watershed Assessment Tool are used to assist SD1 with its watershed planning efforts and will be incorporated into SD1's Watershed Plans, due June 30, 2009 to state and federal regulators.

Water Quality Models

Water quality models are tools for simulating base flow conditions or the effects of precipitation and transport of pollutants from the ground surface through pipe and channel networks into receiving waters. Both single-event and continuous simulation may be performed on catchments having storm sewers and natural drainage for prediction of flows, stages and pollutant concentrations. SD1 currently has three water quality models under development – the Ohio River/Licking River Model (EFDC - Environmental Fluid Dynamics Code), the Taylor Creek Model (SWMM5 - Storm Water Management Model), and the Banklick Creek Model (HSPF - Hydrologic Simulation Program - FORTRAN). The Ohio River Model is being developed in partnership with the Metropolitan Sewer District of Greater Cincinnati. These models are currently 90% complete, with final calibration and validation protocols underway. These models serve as essential planning tools when developing cost-effective alternatives to reducing overflow occurrences and improving water quality in rivers and streams within SD1's study area.

Industrial Pretreatment Monitoring Program

The purpose of the Industrial Pretreatment Monitoring Program is to monitor discharges from industrial users throughout the service area to ensure compliance with Article 5 of SD1's Sanitary Rules and Regulations and to protect SD1's sanitary sewer system, treatment plants, employees, and the receiving waters. During FY 2008, there were 60 Notices of Violation issued to SD1's permitted industries. Refer to Appendix L for a summary report describing these violations in more detail. SD1 has an Enforcement Response Plan in place to address each violation appropriately. Typically, the first Notice of Violation issued on a particular issue is verbal (and documented in a

computerized program management system), the second violation is written, then each subsequent violation is attached with a fine. Fines can range anywhere from $500 to $1000 depending upon the violation. Most issues are resolved before fines escalate. If the problem persists, an industry is put on a compliance schedule.

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APPENDIX A:

Organizational Charts

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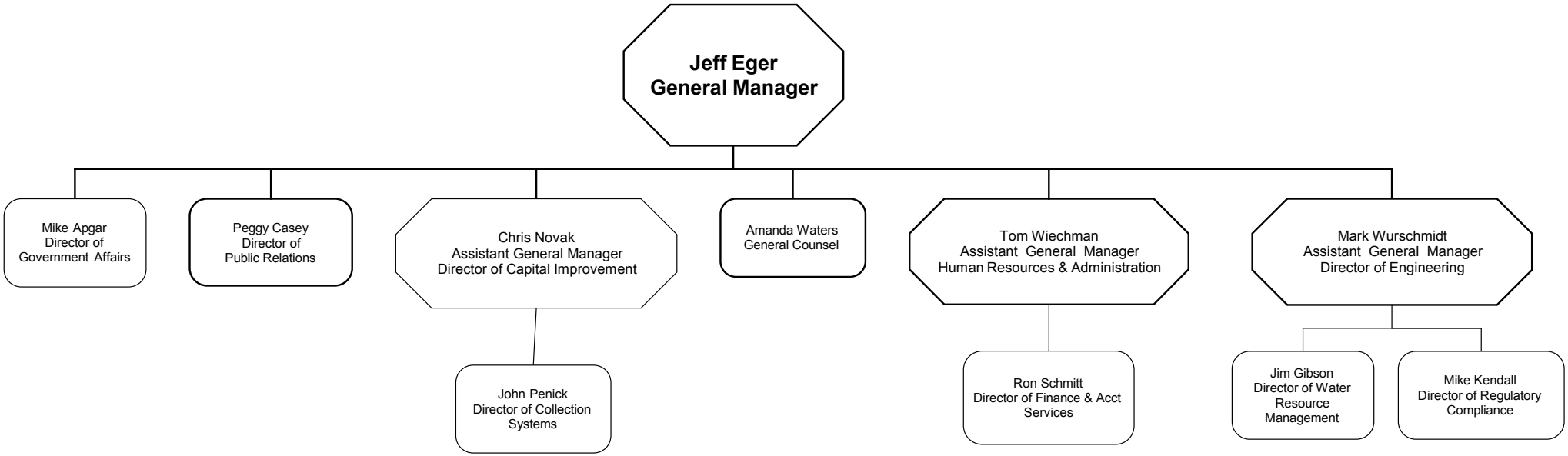
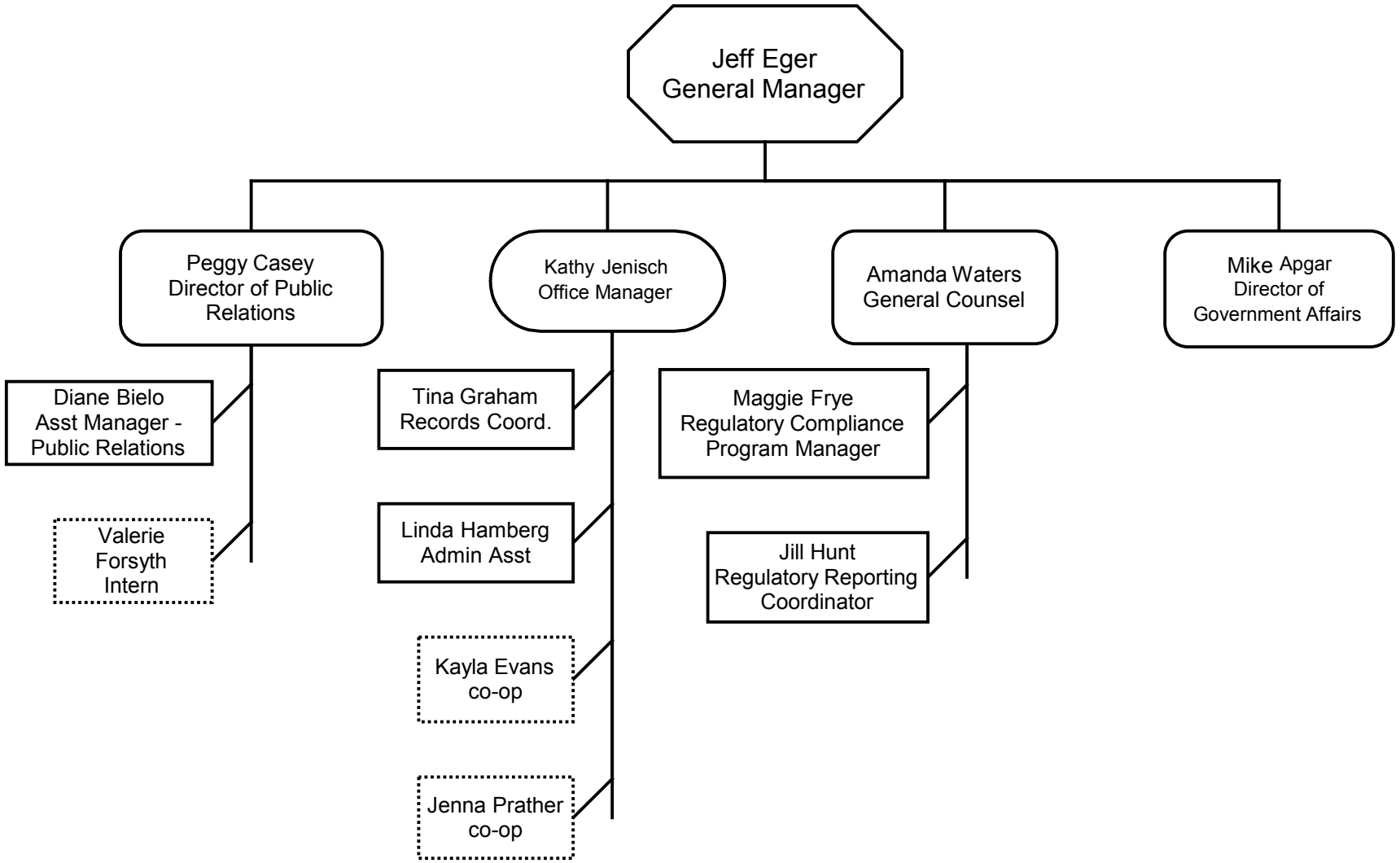
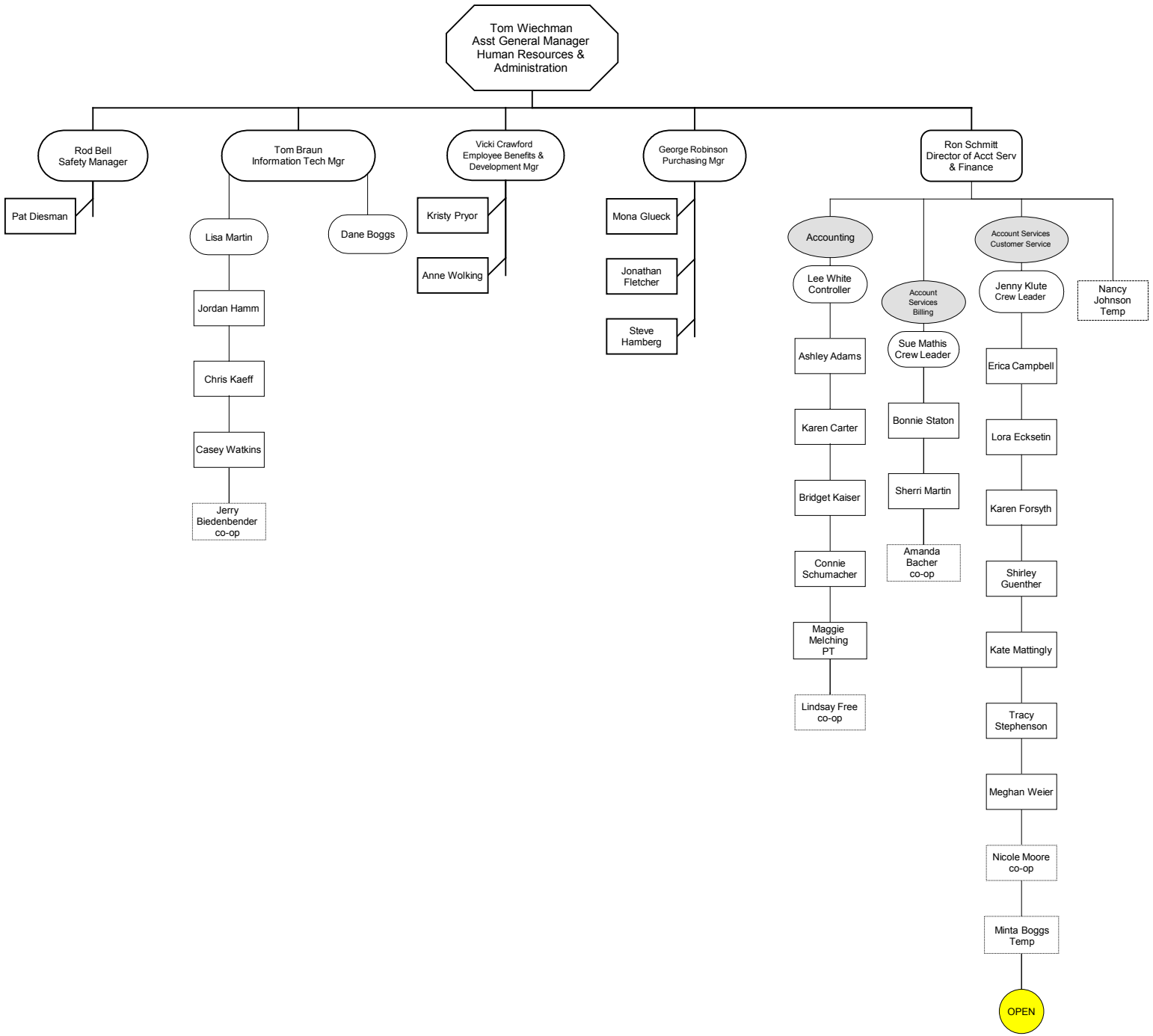
Sanitation District No. 1
General Management



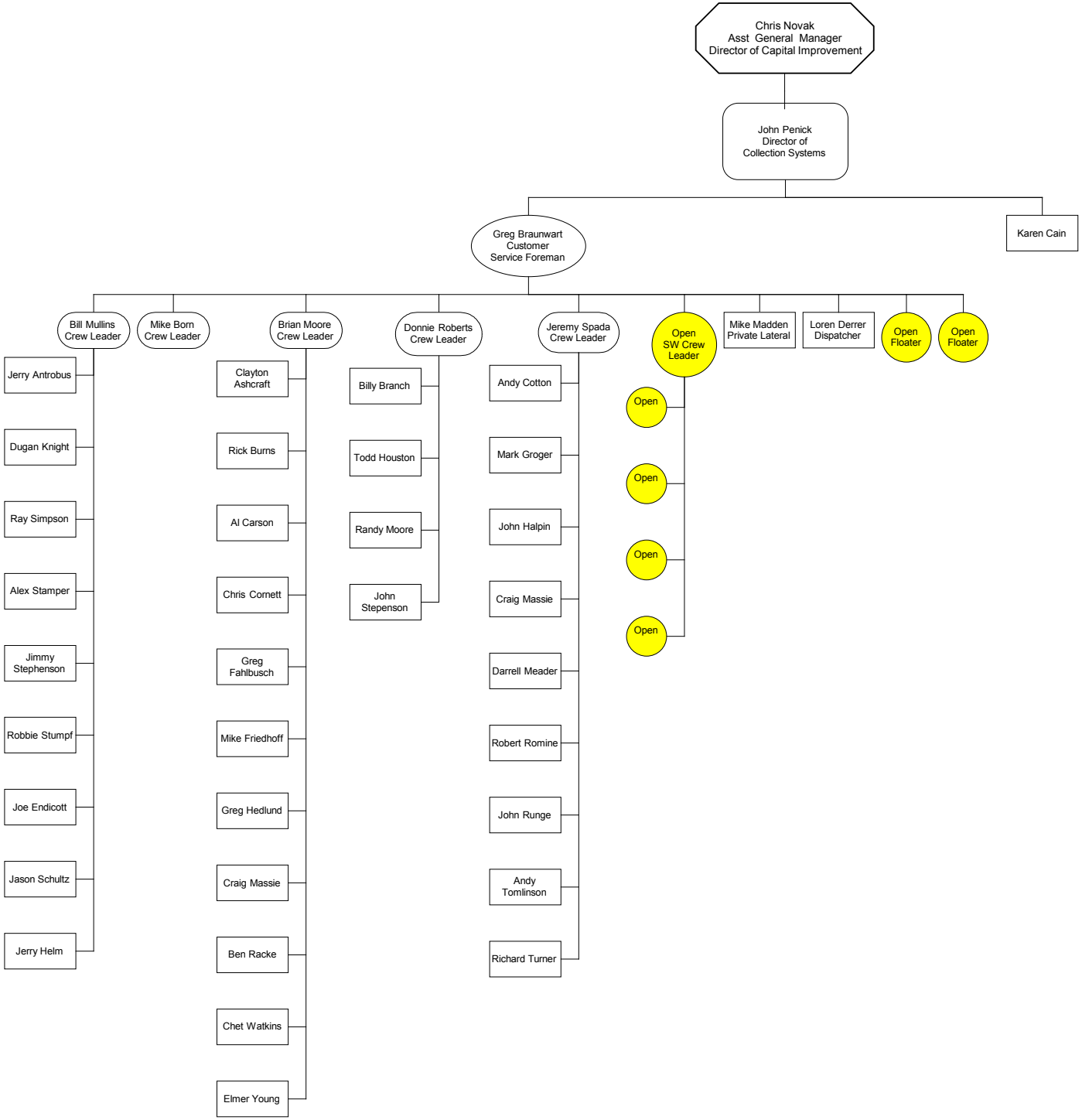
Sanitation District No. 1
Administration



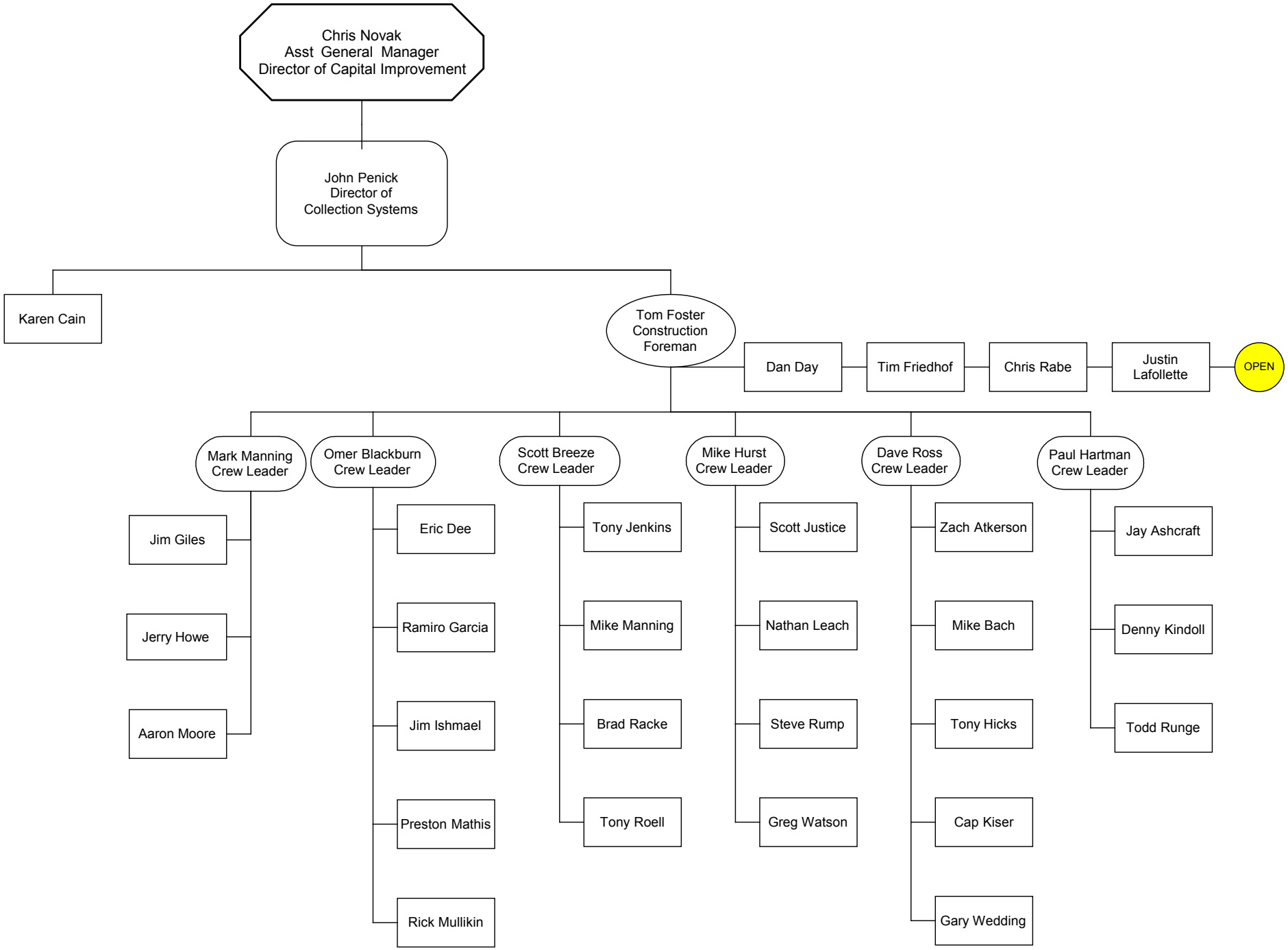
Sanitation District No. 1
Human Resources & Administration



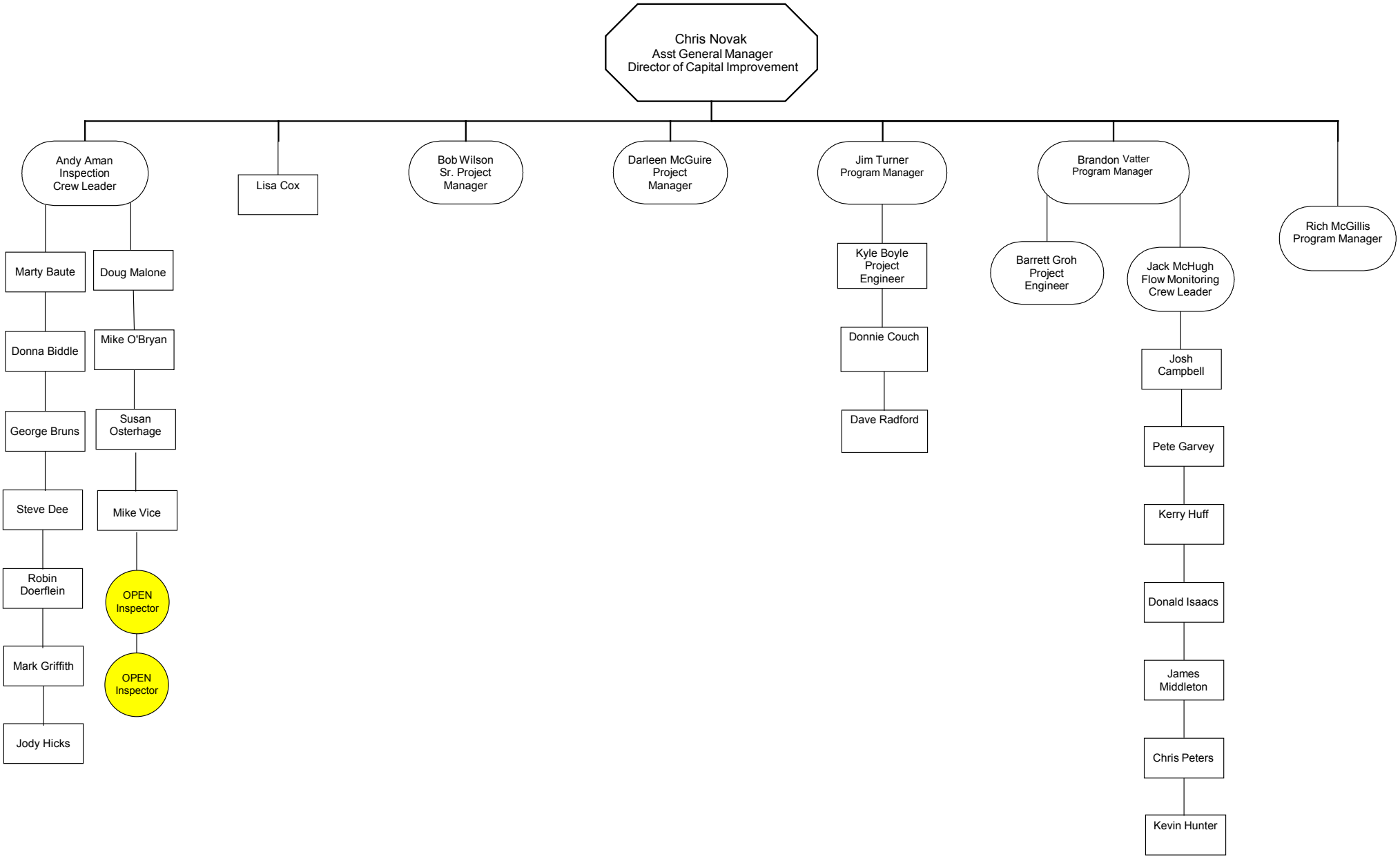
Sanitation District No. 1
Collection Systems - Customer Service



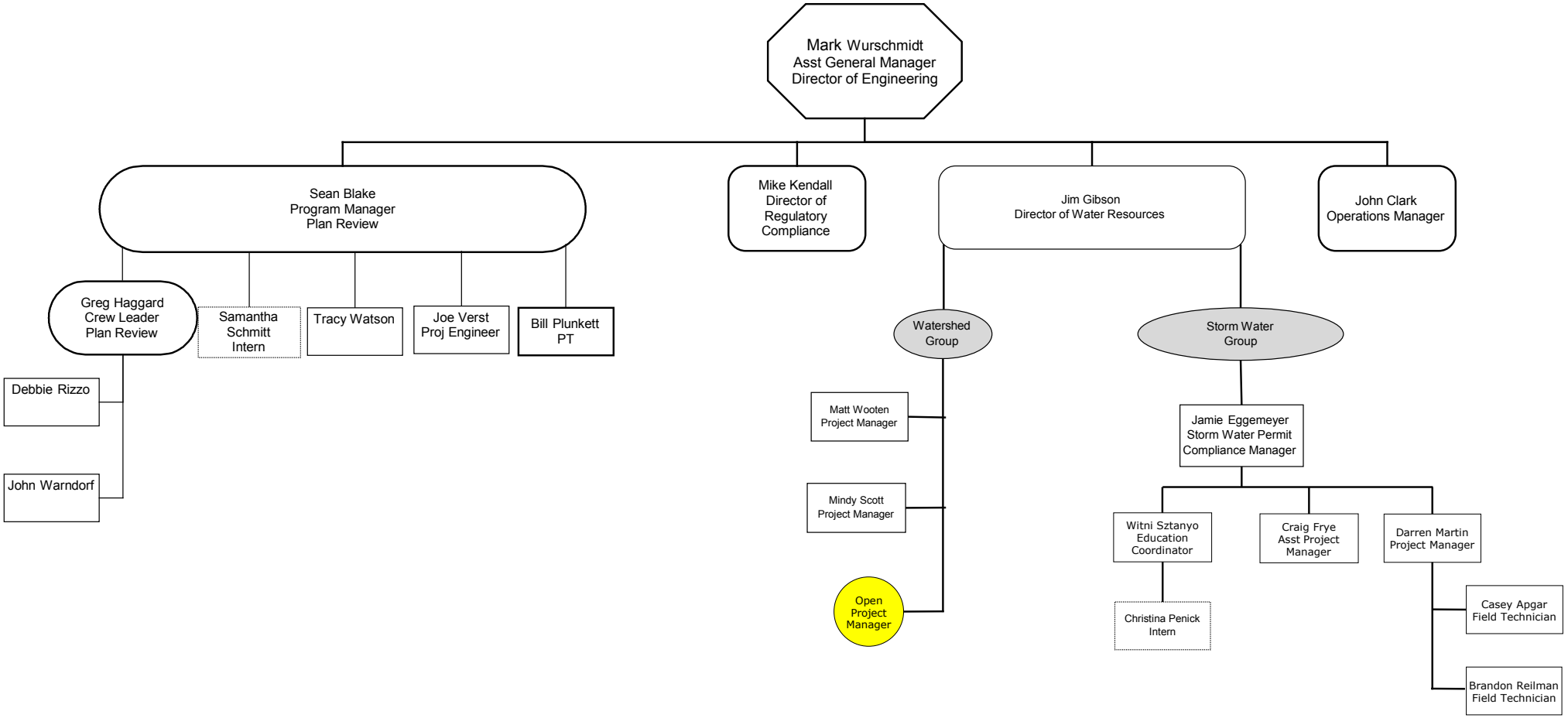
Sanitation District No. 1
Collection Systems - Construction



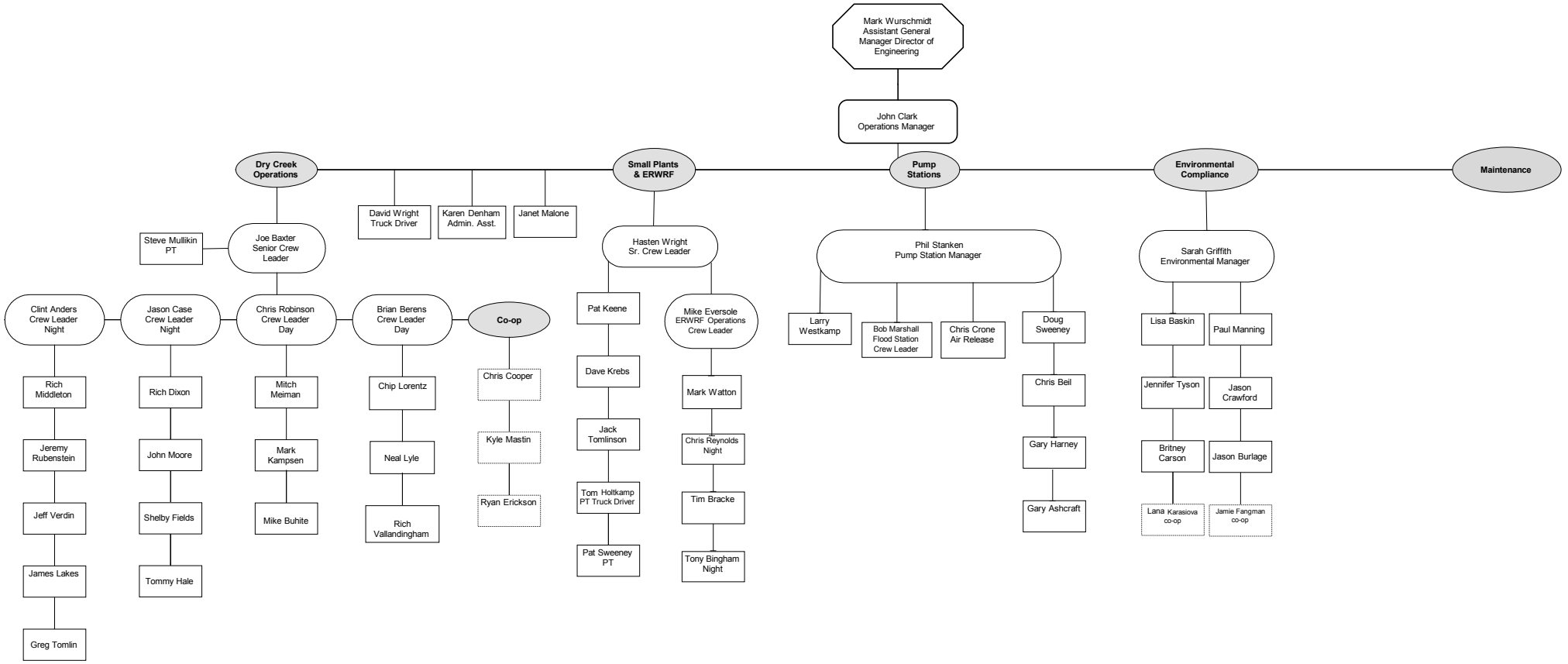
Sanitation District No. 1
Capital Improvement / Inspections



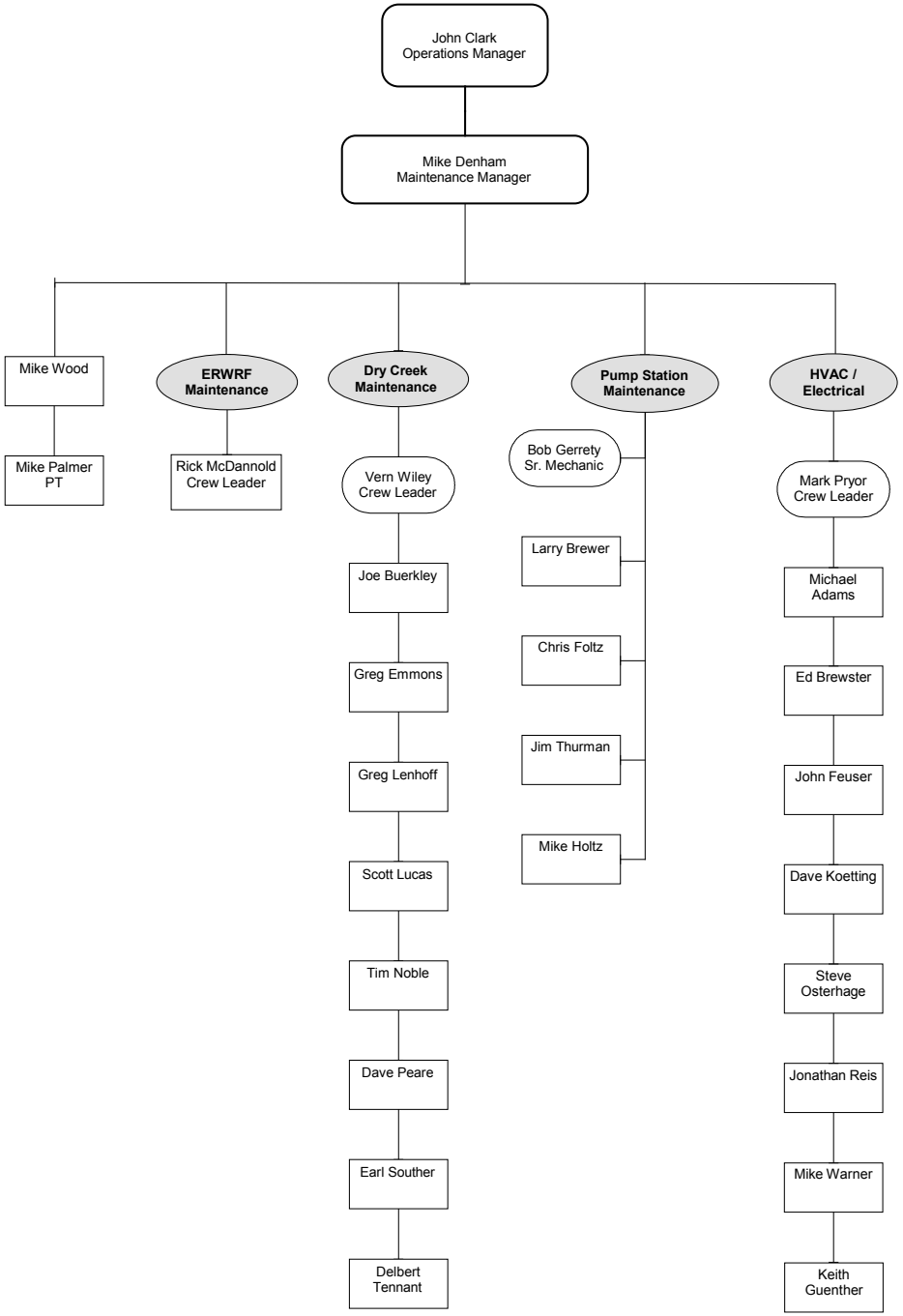
Sanitation District No. 1
Engineering / Water Resource Management Group



Sanitation District No. 1
Dry Creek Operations



Sanitation District No. 1
Maintenance



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APPENDIX B:

Map of Service Area

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Sanitation District No. 1 Service Area

This GIS Data is deemed reliable and every effort has been made to ensure accuracy; however, the Data is provided "as is" without warranty of accuracy, timeliness, reliability or completeness. Map elements do not represent a legal survey of the land. Use of this Data for any purpose should be with acknowledgment of its limitations, including the fact that the Data is dynamic and is in a constant state of maintenance. Field investigation may be necessary.

Map Document: (C:\avdata\ArcGIS_projects\service_map_updates10_07.mxd)
updated 11/18/08

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APPENDIX C:

Sewer Lateral Repair and Illegal Connection Inspection and Enforcement Policy

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SANITATION DISTRICT NO. 1
SEWER LATERAL REPAIR AND ILLEGAL CONNECTION INSPECTION AND ENFORCEMENT POLICY

BACKGROUND

Since the consolidation of the sanitary sewer system in 1995, the Sanitation District No. 1 (the District) policy relating to ownership and maintenance of building sewers (also known as sewer laterals) was stated in Article 7, Section 701.1.G, of the District's Rules and Regulations:

> The owner of the premises, served by a sewer shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer.

This regulation fully complies with Kentucky law. Nevertheless, the result of this regulation was that in certain instances, property owners were being required to perform excavation and repair work beneath public roadways. Accordingly, the District provided some assistance to property owners faced with this difficult and costly situation with subsequent revisions to Article 7, Section 701.1.G, of the District's Rules and Regulations and sewer lateral Policy amendments made between 1995 and 2004. Article 7, Section 701.1.G, of the Rules and Regulations currently states:

> The owner of the premises, served by a sewer shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer unless the building sewer is located under a public roadway. If the building sewer is damaged under the paved roadway, the District will share in the cost repair as determined by the Board of Directors.

At the November 21, 2006 Board Meeting, the Board of Directors adopted, as an interpretation of Section 701.1.G, the following Sewer Lateral Policy:

> The owner of the premises, served by a sewer shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer**.** However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Repair Policy, that the private sewer lateral is not functioning as a result of a structural problem occurring at a section of the private lateral located beneath the public roadway, the Sanitation District will repair the structural problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner.

At the March 25, 2008 and August 19, 2008 Board Meetings, the Board of Directors revised the Policy to more comprehensively address the repair and maintenance of laterals to help protect waterways by addressing illegal storm water connections into the sanitary sewer system that can overload sanitary sewers and contribute to sanitary sewer overflows. The revised Policy applies to lateral defects and illegal connections identified by property owners and/or the District.

On August 19, 2008, the Board of Directors adopted, as a revised interpretation of Section 701.1.G, the following Sewer Lateral Policy:

> The owner of the premises served by a sewer shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer**.** However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Repair Policy, that the private sewer lateral is not functioning as a result of a problem occurring at a section of the private lateral located beneath the public roadway that cannot be corrected through routine sewer cleaning or similar maintenance activities, the Sanitation District will repair the problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner.

DEFINITIONS

A. Illegal Connections: Defined by Article 3, Sections 302.1 and 302.2, of the District's Rules and Regulations as the direct or indirect discharge of surface water, groundwater, roof runoff, subsoil drains or subsurface drainage to the sanitary sewer system.

B. Inflow and Infiltration (I/I): Refers to rainwater and groundwater that enters the sanitary sewer system from a variety of sources such as defective private sewer laterals, roof downspouts, yard drains, foundation drains, stairwell drains, and sump pumps.

C. Private Sewer Lateral: This policy shall only apply to private laterals 6 inches in diameter and smaller.

D. Property Owner: Refers to both commercial and residential property owners.

E. Public Roadway: Defined as the public road from edge of pavement to edge of pavement, including the abutting street curb or the abutting sidewalk, if present, and excluding segments of driveways within the right-of-way.

LATERAL PROBLEM WITHIN PUBLIC ROADWAY IDENTIFIED BY PROPERTY OWNER

A. Purpose: To provide some assistance to property owners faced with the obligation to perform excavation and repair work of private laterals beneath public roadways.

B. Applicability: This section of the Policy only applies when the District has been notified by the property owner that the sewer lateral is not functioning properly and when it is conclusively demonstrated to the District, in accordance with the provisions of this Policy, that the malfunction is a result of a problem with the private sewer lateral at a point beneath the public roadway that cannot be corrected through routine sewer cleaning or similar maintenance activities. Ownership and maintenance responsibilities shall remain with the individual property owner from the building to the public sewer, including the length of sewer lateral beneath the public roadway. The District may, in its sole discretion, approve projects that do not meet the above-mentioned criteria.

C. Problem Identification: The property owner is responsible for hiring a licensed plumber to identify the location of the lateral line and, specifically, the location of the problem. Locating the problem should be accomplished through the use of a "locating device." Measuring distances to the problem is not considered an adequate method to locate the problem. Once the location of the problem has been identified, the plumber should clearly mark the location on the surface of the ground with spray paint or by other appropriate means.

If requested, the plumber will provide the District with a videotape of the sewer lateral, which clearly shows the problem causing the sewer lateral malfunction.

The District may, in its sole discretion, waive the problem identification requirements on a case-by-case basis.

Note: *In all cases, the property owner is responsible for 100% of the costs associated with locating the private sewer lateral problem.*

D. District Review: The District will review the available information, and determine if the information provided is in accordance with the requirements of this Policy. If the information is sufficient, the District will approve the project for repair. If additional information is required, District representatives will notify the property owner of the additional requirements.

E. Performance of Repair Work: The District will perform the necessary repair work within the public roadway. As part of the repair work the District may televise the lateral and perform all necessary smoke and/or dye testing to assess the condition of the lateral and the presence of any illegal connections.

If the work necessary to repair the structural failure extends beyond the public roadway, the District will notify the property owner that he/she must hire a licensed plumber to perform the work outside the roadway at the owner's expense. If the District discovers any illegal connections during its assessment of the lateral, the District may notify owner that these connections must be removed in accordance with the District's Sanitary Rules and Regulations and Section III of this Policy.

Note: *In all cases, the District reserves the right to require the installation of a vertical cleanout riser near the edge of pavement.*

F. Indemnity: The property owner must agree to indemnify and hold the District harmless from any causes of action, claims, liability, judgment or expenses, including attorneys' fees and the costs of investigation and litigation, arising out of the project.

DISTRICT ILLEGAL CONNECTION INSPECTION AND ENFORCEMENT PROGRAM

A. **Purpose:** The elimination of inflow and infiltration (I/I) into the separate sanitary sewer system from surface water, groundwater, roof runoff, subsoil drains, and subsurface drainage is essential to the efficient operation of the District's collection, transmission, and treatment systems. The District's Illegal Connection Inspection and Enforcement Program is intended to proactively and aggressively control and eliminate I/I through system testing, repair and replacement of defective private laterals and removal of illegal connections. The health, safety, welfare and best interests of the District's ratepayers requires that such sources of I/I be eliminated as expeditiously as possible to aid in eliminating sanitary sewer overflows and water quality degradation. Only those property owners that cooperate in the timely repair of the lateral or elimination of the illegal connections shall be eligible for financial assistance in the form of financing and/or grant money (See Section IV of this Policy).

B. **Applicability**: This Section of the Policy applies to all illegal connections such as defective private laterals, roof downspouts, yard drains, foundation drains, stairwell drains and sump pumps. This Section applies only to the separate sanitary sewer system. While inflow and infiltration (I/I) is a serious issue for the District, it is generally not an area of concern in the combined sewer system because there is typically not a separate storm sewer system to receive flow from disconnected I/I sources (downspouts, driveway drains, etc.).

C. **Authority:** The District has authority to implement and enforce this program pursuant to KRS 220.320, KRS 220.322, KRS 220.510 and Articles 3, 7, 9 and 10 of the District's Sanitary Rules and Regulations.[1]

D. **Inspection:** In conjunction with the District's normal operation and maintenance practices or construction activities, the District may notify property owners that the

private lateral must be inspected. The District shall attempt to obtain written permission to inspect the private lateral via smoke/dye testing and/or Closed Circuit Television Inspection (CCTV).

If property owner refuses to grant permission, he/she becomes ineligible for financial assistance. The District will either attempt to obtain evidence of the violation using an unobtrusive method such as smoke testing, visual observation of the flow in the lateral during a rain event, etc. or shall document the property owner's refusal to grant permission. The property owner shall then be informed that should the District discover an illegal connection and/or should the property owner experience a structural failure in the future, the property owner shall be responsible for all costs of maintenance, operation, cleaning, repair and reconstruction of the private lateral from the building to the point of connection with the public sewer, including that portion located within the public roadway.

E. **Notification and Enforcement:**

1. After identification of a defect(s) and/or illegal connection(s), the District may give written notice to the property owner of the property where such source is located or to the occupant thereof by first class mail or hand delivery, in accordance with Section 701.2.B of the Rules and Regulations. It shall be sufficient if the notice is addressed to and mailed or delivered to the person or persons in whose name application was made for water service for that location.
2. If the defect(s) in the private lateral is located beneath the public roadway, Section II of this Policy may apply.
3. If the defect(s) and/or illegal connection(s) to the private lateral are located outside the public roadway, the person or persons so notified shall within thirty (30) calendar days of the date of mailing or delivery of such notice deliver to the District, 1045 Eaton Drive, Ft Wright, Kentucky 41017, a plan, prepared by a licensed plumber, to address the defect(s) and/or remove the illegal connection(s). The plan shall include a detailed description of the work to be performed, a drawing showing the defect(s) and/or illegal connection(s) and the method of its elimination if feasible and a cost estimate for the work. If elimination is deemed not possible or practicable, the plan shall provide a written demonstration of infeasibility (repair costs alone are insufficient to demonstrate infeasibility of elimination).
4. District staff shall review each plan and approve or deny same within thirty (30) calendar days after receipt. Notice of this action shall be promptly communicated to the person submitting the plan. If the submitted plan is denied by the District staff, the notified person or persons shall submit a revised plan acceptable to the District within thirty (30) calendar days for review and approval.
5. After receipt of notification of plan approval, the person submitting same shall have sixty (60) calendar days in which to complete the work outlined in the approved plan and notify the District of such completion. Upon receipt of notice

of completion, the District shall inspect the work and retest the lateral and system.

6. Failure to comply: If the property owner fails to comply within the time frames indicated above and fails to request and receive an extension of time pursuant to subsection g below, the District may utilize any of the following enforcement actions:
   a. In accordance with Section 302.3 of the Rules and Regulations, “Should the owner of such an illegally connected premises fail to remove the illegal connection within 90 days of being notified by the General Manager to do so, the General Manager may cause the connection to be removed and the cost thereof to be billed to the owner of the premises.”
   b. Assess administrative fines of up to $1,000 per day pursuant to KRS 220.320 and Section 1001.2.A of the Rules and Regulations.
   c. Institute an action in court pursuant to KRS 220.320 and Section 1001.2.B of the Rules and Regulations. The available remedies shall include:
      1. Injunctive relief;
      2. Cost recovery to recover the cost associated with noncompliant acts of a user;
      3. Civil penalties of up to $1,000 per day per violation; and
      4. Termination of wastewater treatment service.
   d. If the District incurs costs for services rendered, it may, by notice in writing, shut off water service to said premises in accordance with KRS 220.510. Furthermore, KRS 220.322(4) states that **“**Charges [for disconnections, reconnections, or relocations of sewers] not paid when due may cause the board of directors to compel payment in the manner authorized in this chapter and the rules and regulations of the district.”
7. Extensions of time: The General Manager may, for good cause shown, grant an extension of any of the deadlines set out in this Policy, provided that the request for the extension is received prior to the expiration of the deadline. The extension shall be issued in writing and shall specify the date of its termination.

FINANCING AND GRANT PROGRAM FOR DEFECTIVE PRIVATE LATERAL REPAIRS AND REMOVAL OF ILLEGAL CONNECTIONS OUTSIDE PUBLIC ROADWAY

A. **Purpose:** To provide financing and/or funds to eligible property owners faced with the obligation to perform excavation and repair work of private laterals outside public roadways.

B. **Financing:** For removal of illegal connections and/or repairs to damaged laterals outside the "public roadway" as defined above, the property owner will obtain the services of a licensed plumber. The District may at its discretion advance funds for payment of the plumber's invoice and offer a finance option to allow the property owner to repay the District with interest at a rate of two basis points above prime over a term not to exceed fifteen (15) years. Furthermore, the property owner shall grant a consensual lien to the District to be placed on the property in order to guarantee payment recovery.

C. **District Grant Program for Sanitary Service Improvement Projects**: As part of its Consent Decree with the U.S. EPA and Commonwealth of Kentucky, the District has developed a program to reimburse qualified residential property owners for a portion of the cost of certain sanitary sewer improvement projects. Candidate projects would include the repair or replacement of failing sanitary service laterals and the installation of new sanitary service connections to District sewer mains. Approved residential property owners may be eligible to receive grants of up to $2,000 towards such projects, depending on their income level. Routine operation and maintenance projects such as root-cutting or cleaning are not included in this program. Per the Consent Decree, this program will expire in April 2012.

D. **Eligibility:**
   1. Financing - Property owners that cooperate in the timely repair of the lateral or elimination of the illegal connections are eligible for financing.
   2. Grant Program – Residential property owners with incomes at or below the low income level as established by the U.S. Department of Housing and Urban Development (HUD) are eligible to apply for funding through this program. Proof of income documentation must be included with the project application.

[1] PRIVATE SEWER LATERAL AND ILLEGAL CONNECTION ENFORCEMENT AUTHORITY

KRS 220.322(1)(a). The board may adopt rules requiring owners of property to disconnect storm water inflows to sanitary sewers maintained and operated by the district and not operated as a combined sewer, or to connections with these sewers.
KRS 220.322(2). Any inflow required to be disconnected under a rule adopted pursuant to this chapter shall constitute a nuisance subject to injunctive relief and abatement.
KRS 220.322(4). The board shall require in its rules regarding disconnections, reconnections, or relocations of sewers the reimbursement of moneys expended. This shall be done by the district assessing a charge to the property owner for immediate payment or payments in installment with interest as determined by the board not to exceed 10%.
KRS 220.322(4). Charges for disconnections, reconnections, or relocations of sewers not paid when due may cause the board of directors to compel payment in the manner authorized in this chapter and the rules and regulations of the district.
KRS 220.510. "In case of failure of any user to pay for services rendered, the board may compel payment and may enjoin further use until the payment is made, or it may institute an action in any court having jurisdiction …or the board may, by notice in writing, signed by the chairman or any member of said board, notify the [entity] which furnishes water to the user's premises, to shut off the water service to said premises, until such time as all delinquent charges, plus a reasonable charge for turning off the water service, against said user, are paid in full."

The Sanitary Rules and Regulations outline the District's procedures for inspection and rehabilita

tion of private sewer laterals and the appeals and enforcement processes.
Article 3, Section 302.1. "No person shall discharge or cause to be discharged, either directly or indirectly, to the sanitary sewer system, surface water, groundwater, roof runoff, subsoil drains or subsurface drainage."
Article 3, Section 302.2. "Any such connections made … shall be considered illegal and shall be subject to immediate removal by the owner of the premises so connected and at such owner's expense."
Article 3, Section 302.3. "Should the owner of such an illegally connected premises fail to remove the illegal connection within 90 days of being notified by the General Manager to do so, the General Manager may cause the connection to be removed and the cost thereof to be billed to the owner of the premises."
Article 7, Section 701.2.B. "No person or public corporation shall make direct connection of roof downspouts, exterior or interior foundation drains, area drains or other sources of surface runoff or groundwater directly to a public sanitary sewer. Upon discovery of such improper sources, the District may notify the property owner to remove any improper connection within 30 days of notification and return the public sewer and associated appurtenances to a satisfactory condition."

<u>General Enforcement Authority</u>
KRS 220.320. Authorizes the board to recover by civil action from any person or public corporation violating the regulations a penalty of $100 to $1,000 for each offense, plus costs. The Board may enforce by mandamus or otherwise all necessary and authorized regulations made by them, and may remove any improper construction or close any connections made improperly or in violation of the regulations.
Article 9, Section 901.4. "The General Manager and other employees of the District shall have the authority to serve notices of violation of these Rules and Regulations. The General Manager shall be responsible for the enforcement of these Rules and Regulations and shall have authority to issue orders and impose penalties as authorized therein, …and shall have any other powers or authority necessary and proper for the enforcement and the achievement of the goals of these Rules and Regulations."
Article 10, Section 1001.1.A. If any person or public corporation is found to be violating any provision of these Rules and Regulations, the General Manager may:
(1) Enforce these regulations by mandamus or otherwise;
(2) Remove any improper construction or close any connections made improperly or in violation of these regulations;
(3) Revoke any permit issued pursuant to these regulations;

(4) Recover by civil action from any person or public corporation violating any regulation, a sum of not less than $100 nor more than $5,000 for each offense, together with costs.

Administrative Enforcement Remedies

Pursuant to Article 10, Section 1001.2.A of the Rules and Regulations, the District may invoke the following remedies:

(1) Notice of Violation (NOV)
(2) Administrative Orders such as:
    - Cease and Desist Orders
    - Show Cause Orders
(3) Administrative Fines
    - General Manager may assess a penalty of up to $1,000 per day for each violation of the District's Rules and Regulations

Judicial Enforcement Remedies

Judicial remedies may be sought pursuant to Article 10, Section 1001.2.B in the following situations: (1) when notices of violation and administrative orders have proven ineffective in returning the violating user to compliance; (2) when emergency situations require injunctive relief to halt or prevent discharges which threaten human health or the environment or interfere with the treatment system or (3) to impose civil penalties and recover losses incurred due to noncompliance. All judicial administrative remedies will be sought at the discretion of the General Manager. The available remedies include:

(1) Injunctive Relief - where an administrative order does not achieve compliance;
(2) Cost Recovery - to recover the cost associated with noncompliant acts of a user;
(3) Civil Penalties - $1,000 per violation for individuals and $5,000 per violation for corporations; and
(4) Termination of Wastewater Treatment Service – the General Manager may terminate or cause to be terminated wastewater treatment system service to any premise if a violation is found to exist.

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APPENDIX D:

Continuous Sewer Assessment Process Diagram

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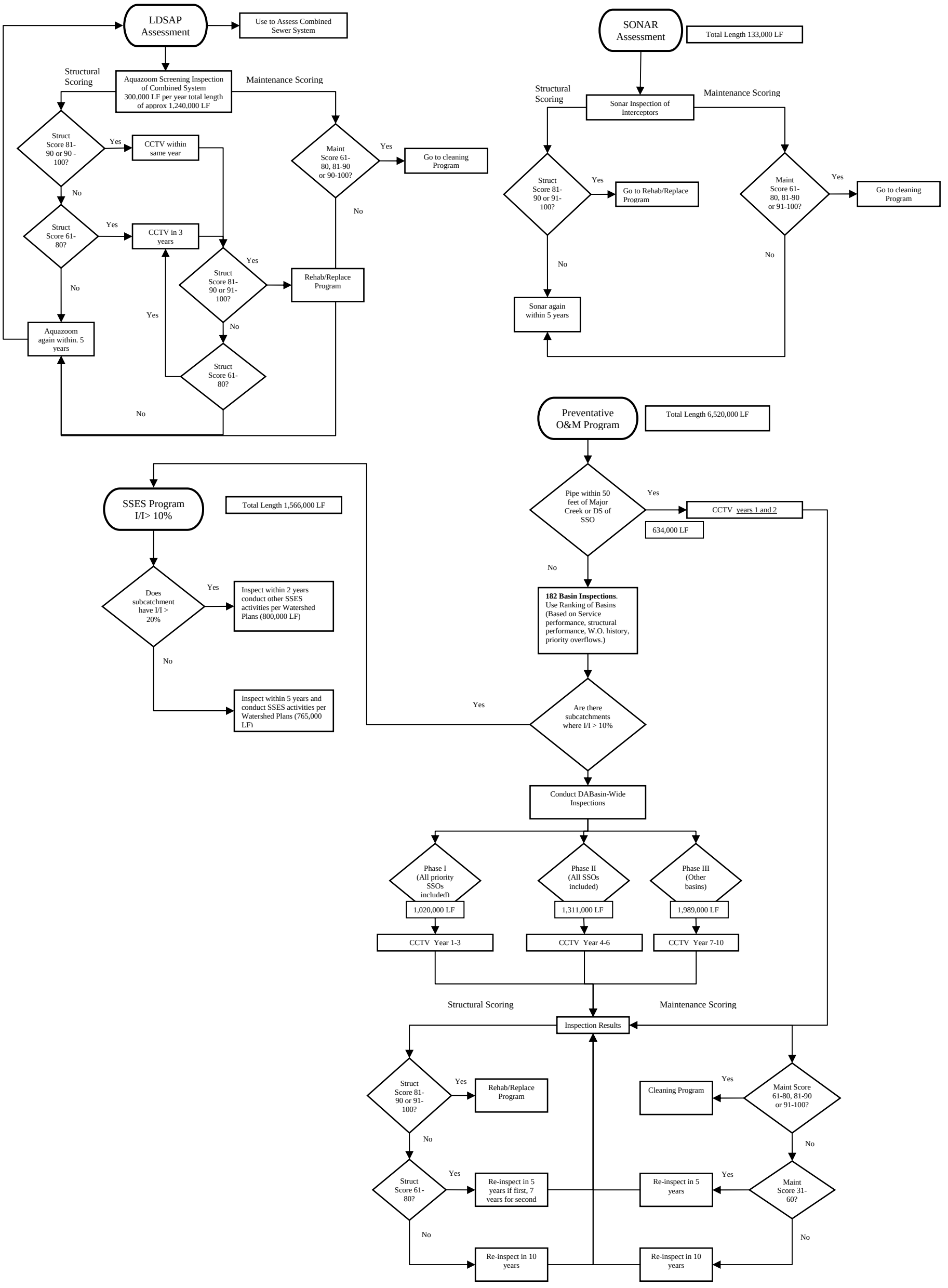
Sanitation District No. 1
Continuous Sewer Assessment Program

Process Diagram
08/11/08

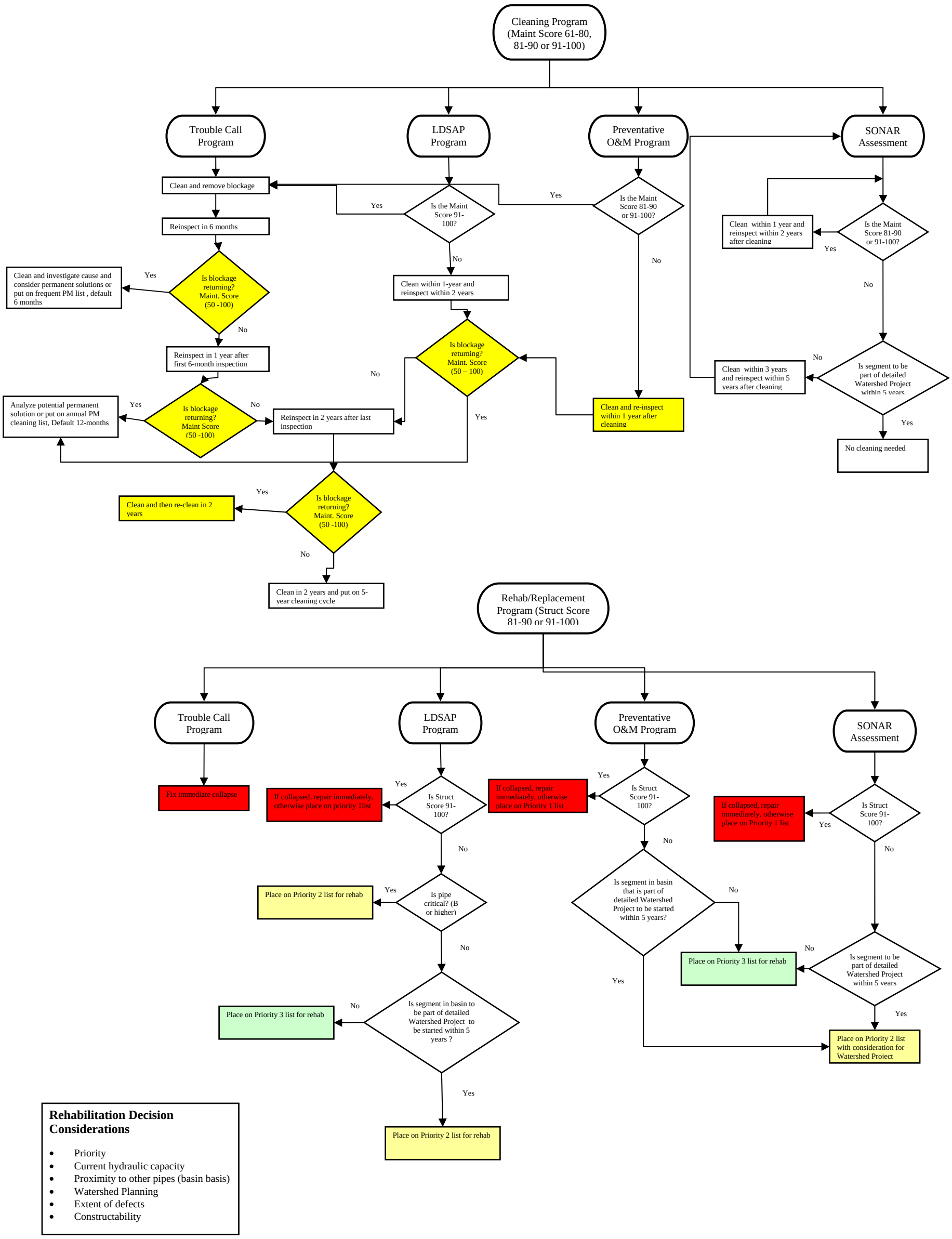
CONFIDENTIAL PRELIMINARY WORKING DRAFT WATERSHED CONSENT DECREE



Sanitation District No. 1
Continuous Sewer Assessment Program

Process Diagram
08/11/08

CONFIDENTIAL PRELIMINARY WORKING DRAFT WATERSHED CONSENT DECREE



Rehabilitation Decision Considerations

- Priority
- Current hydraulic capacity
- Proximity to other pipes (basin basis)
- Watershed Planning
- Extent of defects
- Constructability

APPENDIX E:

CSAP Priority 1, 2, & 3 Pipe Locations

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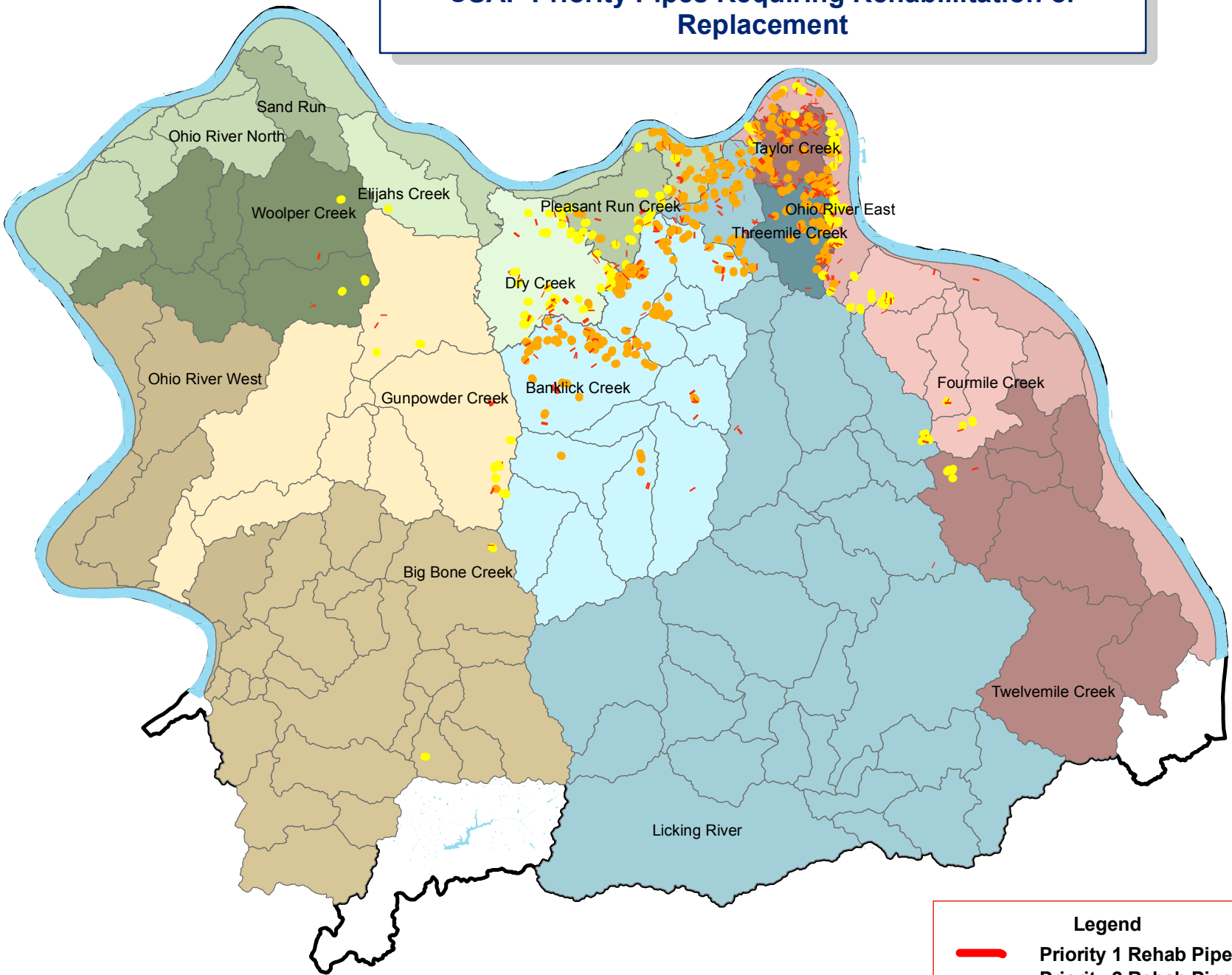
CSAP Priority Pipes Requiring Rehabillitation or Replacement



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APPENDIX F:

Grease Control Program – Phase 1 Updates

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Grease Control Program
Phased Implementation Plan Schedule

Actions	Phase 1 (12 months)*	Phase 2 (12 months)	Phase 3 (12 months)	Phase 4 (12 months)
Conduct Self Assessment				
Review Rules and Regulation/Enforcement				
Design Criteria				
FSE Education				
Public Education				
Compile Data from Self Assessment				
Revise Rules and Regulation/Enforcement Response Plan				
Develop Inspection Protocol				
Approval for Rules and Regulations/Enforcement Response Plan				
Modify Food Service Discharge Permit				
Revise Domestic Holding Tank Waste Hauler Manifest				
Evaluate Staffing and Equipment Requirements				
Public Reading for Rules and Regulation/Enforcement Response Plan				
Permitting				
Performance Indicators				

Shaded areas indicate actions being performed in phase.

*Phase 1 commenced upon Cabinet/EPA's joint approval of SD1's Grease Control Program, which occurred on January 8, 2008.

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Grease Control Program

Phase 1 Progress - FY 2008

Conduct Self-Assessment	
Phase 1 Tasks	**FY 2008 Update**
SD1 will acquire a list of FSEs within the service area that are permitted by the Kentucky Health Department. This will aid in determining the magnitude of FSEs that have the potential to discharge FOG to the SSS. This information will also help establish mailing addresses and points of contact for the FSEs.	Task complete. A list of FSEs was received from the Northern Kentucky Independent Health Department on January 25, 2008.
Field crew personnel currently determine when collection system problems are caused by FOG during a trouble call. This process will be evaluated to determine if the causes of trouble calls are being classified accurately.	Held meeting on 4/28/08 with Collection Systems and gbaMS administrator. Determined that it is very difficult to track this information in gbaMS. Collection Systems confirmed that there have not been any recent trouble calls related to FOG to input into gbaMS. All of the PM work being done related to FOG are historical problems. The current work being done by CH2M Hill in designing software for the CSAP will bettter capture issues by reason/cause and will be able to filter out FOG issues.
Field crew personnel enter trouble call evaluations into gbaMS. The process of entering information into gbaMS will be evaluated to ensure data is accurate, accessible and manageable.	
SD1 currently uses a geographical information mapping system called Arc Viewer. One of the primary functions of Arc Viewer is to show the locations of sanitary sewer lines in the service area. This system will be evaluated to find possible mapping capabilities for areas with FOG problems within the collection system.	No progress to report. Anticipated completion January 2009.

Review Rules & Regulations / Enforcement Response Plan	
Phase 1 Tasks	**FY 2008 Update**
A review of SD1's Rules and Regulations and ERP is being conducted. This review will identify any deficiencies in the legal authority to control the discharge of grease into the SSS. It will also identify deficiencies in the enforcement program. If found, the deficiencies will indicate revisions to be made in Phase 2 of this program.	No progress to report. Anticipated completion January 2009.
SD1 will review the effectiveness of other publicly owned treatment works' (POTWs) Rules and Regulations and ERPs (i.e. Cincinnati MSD, Louisville MSD, and Knoxville Utilities Board). This will provide insight into what is working for utilities in the surrounding area.	Started initial review and research of Cincinnati, Louisville, and Lexington MSD.

Design Criteria	
Phase 1 Tasks	**FY 2008 Update**
SD1 will seek the development of design criteria for grease reduction device standards by the Kentucky Division of Plumbing, Kentucky Health Department and Kentucky Energy and Environment Cabinet.	No progress to report. Anticipated completion January 2009.

Grease Control Program

Phase 1 Progress - FY 2008

FSE Education	
Phase 1 Tasks	**FY 2008 Update**
SD1 has created and distributed BMP posters to be displayed in permitted FSEs and will continue to distribute such posters. The FSEs are required to display these posters in areas where there is potential for FOG to be discharged to the SSS.	This is an ongoing program that is being tracked in Linko FOG.
SD1 will create and send out BMP brochures to all FSEs. The brochure will focus on the harmful effects of FOG in sewer lines and proper grease handling techniques used to minimize the release of FOG into the collection system. These brochures can also be distributed during site visits.	No progress to report. Anticipated completion January 2009.
SD1 will begin researching a compliance assistance workshop for FSEs. An evaluation of other FOG workshops will be conducted to determine content and effectiveness. This workshop will provide FSEs with a comprehensive overview of the Grease Control Program. The workshop will be initiated when all specifics of the program have been established.	No progress to report. Anticipated completion January 2009.
SD1 has met with members of the Kentucky Restaurant Association (KRA) and the Northern Kentucky Restaurant Association (NKRA) to open channels of communication with key stakeholders. SD1 will continue to work to educate these key stakeholders. Their participation and cooperation is valuable. We will encourage the KRA and NKRA to include grease control program information in their newsletters.	A form letter was created and sent 6/2/2008 to the Kentucky Restaurant Association and its Northern Kentucky Chapter. The KRA will review the letter at their 9/9/2008 Board meeting and will decide on a method of distribution to members. If distributed, a list of recipients will be supplied to SD1.

Public Education	
Phase 1 Tasks	**FY 2008 Update**
SD1 has created and distributed door hangers to inform customers when there has been a blockage or obstruction due to FOG in their area. These informational pieces focus on the harmful effects of FOG in sewer lines and proper grease handling techniques used to minimize the release of FOG into the collection system. SD1 will continue to distribute door hangers and letters to customers in areas impacted by FOG related overflows.	Spoke with Public Relations and Education Coordinator to brainstorm distribution ideas. Now looking into the feasibility of some of those ideas (i.e. local groups, volunteer organizations, and mass mailings).
SD1 will create and send out additional bill inserts to all customers within the service area. The bill stuffers will spotlight the harmful effects of FOG in sewer lines and proper grease handling techniques used to minimize the release of FOG into the collection system.	No progress to report. Anticipated completion January 2009.
SD1 will research the “Trap the Grease Program.” This program involves supplying residences with a container for grease rather than pouring it down the drain.	No progress to report. Anticipated completion January 2009.

APPENDIX G:

Pump Station Backup Power Update

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Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
1	Alex Licking	East	118	Permanent Generator		Year 2008		Generator currently operational.
	Allen Fork	North	105	Permanent Generator		Currently Operational		
	American Sign	West	112	Permanent Generator		Year 2008		Generator currently operational.
	Ashford Village	Central	110	Permanent Generator		Currently Operational		
	Ashmont	Central	109	Permanent Generator		Currently Operational		
	Bloomin Springs	North	103	Permanent Generator		Currently Operational		
	Bromley	North	104	Dual Utility Power Feed		Currently Operational		
	Burlington	North	108	Permanent Generator		Currently Operational		
	Highland Acres	West	113	Permanent Generator		Currently Operational		
	Lakeview	Central	92	Dual Utility Power Feed		Currently Operational		
	Lantern Way	West	111	Permanent Generator		Currently Operational		
	Macke	East	119	Permanent Generator		Currently Operational		
	Meyer Rd	East	114	Permanent Generator		Currently Operational		
	Parkside	East	116	Permanent Generator		Currently Operational		
	Pond Creek	East	126	Permanent Generator		Currently Operational		
	Ridgewood Valley	East	44	Permanent Generator		Currently Operational		
	Riley Road	East	127	Permanent Generator		Year 2009		Pump station under construction.
	Sunset	East	117	Permanent Generator		Year 2009		Pump station under design.
	Taylorsport	North	106	Permanent Generator		Currently Operational		
	Treetop Estates	North	107	Permanent Generator		Currently Operational		
	Wolpert Rd	East	115	Permanent Generator		Currently Operational		
	Army Reserve	East	57	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Intitial anaylsis indicated that this station can be eliminated by means of gravity sewer. Cost-effectiveness of solution to be further analyzed before final determination is made.
	Blackstone	West	61	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		This station will be eliminated after the Western Regional collection system is operational.
	Dublin Green No. 1	West	53	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		This station will be eliminated after the Western Regional collection system is operational.
	Eagles Landing	West	54	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Intitial anaylsis indicated that this station can be eliminated by means of gravity sewer. Cost-effectiveness of solution to be further analyzed before final determination is made.
	Evergreen	Central	41	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Intitial anaylsis indicated that this station can be eliminated by means of gravity sewer. Cost-effectiveness of solution to be further analyzed before final determination is made.
	Fowler Creek	West	102	PS Elimination		Year 2013		This station will be eliminated after the Western Regional collection system is operational.
	Gammon Calmet	West	100	PS Elimination		Year 2013		This station will be eliminated after the Western Regional collection system is operational.
	Gunpowder	West	98	PS Elimination		Year 2013		This station will be eliminated after the Western Regional collection system is operational.
	Kahns	East	99	PS Elimination		Year 2007		Eliminated prior to current reporting period with the Eastern Regional collection system.
	Lamphill	East	86	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Evaluation indicated that it is not feasible to eliminate this station by means of gravity sewer. A backup power solution will be identified for this location.

Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
2	Meadow Hill	Central	22	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Evaluation indicated that it is not feasible to eliminate this station by means of gravity sewer. A backup power solution will be identified for this location.
	Mill House Crossing	Central	49	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Evaluation indicated that it is not feasible to eliminate this station by means of gravity sewer. A backup power solution will be identified for this location.
	Ridgefield	North	45	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Currently undergoing initial analysis.
	Riley Road No. 1	East	121	PS Elimination		Year 2009		The new Riley Road Pump Station will be operational by March 2009, at which time these two stations will be eliminated. A permanent generator will be in place at the new station.
	Riley Road No. 2	East	120	PS Elimination		Year 2009		
	Riverwatch PS	North	96	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Gravity sewer currently under construction to eliminate the pump station. Anticipated completion date is September 2008.
	South Park Industrial	North	95	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Intitial anaylsis indicated that this station can be eliminated by means of gravity sewer. Cost-effectiveness of solution to be further analyzed before final determination is made.
	Union	West	94	PS Elimination		Year 2013		This station will be eliminated after the Western Regional collection system is operational.
	War Admiral	West	101	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Gravity sewer currently under design to eliminate the pump station. Anticipated completion date is June 2010.
	Wedgewood Dr	Central	90	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Intitial anaylsis indicated that this station can be eliminated by means of gravity sewer. Cost-effectiveness of solution to be further analyzed before final determination is made.
	Willow Bend No. 2	West	30	PS Elimination Study		PS Elimination Study By Year 2008 and Solution Implementation By Year 2015		Gravity sewer currently under design to eliminate the pump station. Anticipated completion date is June 2010.
3 *(Project 1)*	Centerplex	East	125	Permanent Generator		Year 2008		Generator operational 2/2008.
	Ky Aire	West	123	Permanent Generator		Year 2008		Generator operational 2/2008.
	Levi	West	122	Permanent Generator		Year 2008		Generator operational 2/2008.
	South Hampton	West	124	Permanent Generator		Year 2008		Generator operational 6/2008.
3 *(Project 2)*	Barrs Branch	East	6	Permanent Generator	Portable Generator	Year 2008		Property owner issues; permanent generator not feasible. There is adequate wet well storage at this location. A portable generator hook-up will be provided at this PS.
	Bullitsville	North	1	Permanent Generator		Year 2008		Permanent generator installation phase.
	Highland Heights	East	3	Portable Generator		Year 2008		Permanent generator installation phase.
	Hempsteade	West	5	Portable Generator		Year 2008		Permanent generator installation phase.
	Second Street	Central	7	Permanent Generator		Year 2008		Permanent generator installation phase.
	Skyport	North	9	Permanent Generator		Year 2008		Permanent generator installation phase.
	Thornwilde	North	11	Permanent Generator		Year 2008		Permanent generator installation phase.
	Brookwood	East	4	Permanent Generator		Year 2008	Spring 2009	Permanent generator installation phase.

Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
3 *(Project 3)*	Catalpa	Central	16	Permanent Generator		Year 2008	Spring 2009	Permanent generator installation phase.
	Dublin Green No. 2	West	8	Permanent Generator		Year 2008	Spring 2009	Permanent generator installation phase.
	Maple Ave	Central	12	Permanent Generator		Year 2008	Spring 2009	Permanent generator installation phase.
	Sand Run	North	2	Permanent Generator		Year 2008		Permanent generator installation phase.
3 *(Project 4)*	Airport Exchange Ind Park	North	13	Permanent Generator		Year 2008	Spring 2009	Generator procurement phase.
	Bunning Lane	East	89	Permanent Generator		Year 2008	Spring 2009	Generator procurement phase.
	Cedar Point	East	19	Permanent Generator		Year 2008	Spring 2009	Generator procurement phase.
	Kees	East	18	Permanent Generator	Alternative solution to be determined.	Year 2008	Year 2014	Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution. The generator initially procured for this location will be moved to Lassing Green Pump Station.
	Overlook	East	15	Permanent Generator	Alternative solution to be determined.	Year 2008	Year 2014	Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution. The generator initially procured for this location will be moved to Sycamore Pump Station.
	Riverview Farms	North	17	Permanent Generator	Alternative solution to be determined.	Year 2008	Spring 2009	Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution. The generator initially procured for this location will be moved to the Enzweiller Pump Station.
	Saturn	West	10	Permanent Generator		Year 2008	Spring 2009	Generator procurement phase.
	Stillwater	East	14	Permanent Generator	Alternative solution to be determined.	Year 2008	Year 2014	Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution. The generator initially procured for this location will be moved to Cedar Pump Station.

Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
	Air Park West	North	79	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Arbortech	North	78	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Arborwood	North	32	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Banklick	Central	23	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Brandtly Ridge	Central	48	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Brentwood	North	25	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Brushup Lane	West	51	Permanent Generator	PS Elimination Study	By Year 2014		Gravity sewer currently under design to eliminate the pump station. Anticipated completion date is June 2010. (Project coincides with War Admiral Pump Station solution listed in Category 2)
	Carlisle Ave	East	20	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Cedar	Central	46	Permanent Generator	Alternative solution to be determined.	By Year 2014	Year 2009	Generator procurement phase. (See Category 3 above under Stillwater PS)
	Cinnamon Ridge	West	74	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Cold Spring Crossing	East	81	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Cold Spring Plaza	East	85	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Darma Ct	East	27	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Deer Creek No. 1	North	40	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Deer Creek No. 2	North	68	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Eighth Street	Central	93	Connect to Grid Power		By Year 2014		Currently undergoing initial analysis.
	Fowler Ridge	Central	26	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Gerrard Ave	East	82	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Golf Course	Central	72	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Hampton Ridge	West	33	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Harrison Harbor	East	59	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Harvest Hill	Central	73	Permanent Generator	PS Elimination Study	By Year 2014		Under analysis to be eliminated by means of gravity sewer.
	ICH	Central	35	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	IDI	North	38	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
4	Independence Station Rd	Central	47	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Jefferson Ave	East	83	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Jericho Rd	Central	70	Permanent Generator		By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Jonathan	West	52	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Lassing Green	West	80	Permanent Generator		By Year 2014	Year 2009	Generator procurement phase. (See Categoroy 3 above under Kees PS)
	Leathers Rd	Central	50	Permanent Generator	PS Elimination Study	By Year 2014		Property owner issues; permanent generator not feasible. Under analysis to be eliminated by means of gravity sewer.
	Litton	North	64	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Marshall Rd	Central	66	Permanent Generator		By Year 2014		Currently undergoing initial analysis.

Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
	Mineola Pike	North	34	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Newport Steel Mill	East	84	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Ohio Ave	East	58	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Orchard Estates	West	39	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Parkside No. 2	East	55	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Patton Street	Central	88	Dual Utility Power Feed		By Year 2014		Currently undergoing initial analysis.
	Paul Rd	East	56	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Ria Vista	North	69	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Rosewood Lane	East	28	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Shadow Lake	East	24	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Silver Grove	East	37	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	St Annes	East	67	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Sycamore	West	75	Permanent Generator		By Year 2014	Year 2009	Generator procurement phase. (See Category 3 above under Overlook PS)
	Taylor Mill Rd	Central	71	Permanent Generator	Alternative solution to be determined.	By Year 2014		Property owner issues; permanent generator not feasible. Evaluating alternate backup power solution.
	Wilder	East	76	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Wolf Rd	Central	36	Permanent Generator		By Year 2014		Currently undergoing initial analysis.
	Wyndemere	North	63	Permanent Generator	Portable Generator	By Year 2014		Property owner issues; permanent generator not feasible. There is adequate wet well storage at this location. A portable generator hook-up will be provided at this PS.
	Youell Rd	West	65	Permanent Generator		By Year 2014		Currently undergoing initial analysis.

Category	Pump Station	Basin	Rank	Potential Solution Noted in Original Plan	Changes to Potential Solution	Completion Date Noted in Original Plan	Changes to Completion Date	Status Description as of End of FY 2008 (June 30, 2008)
5	Cardinal Cove	North	42	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Crestview	East	91	PS Elimination Study		By Year 2015		Currently undergoing initial analysis.
	Keavy	Central	29	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Meadow Lane	Central	43	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Ripple Creek	East	87	PS Elimination Study		By Year 2010		Currently undergoing initial analysis.
	Winters Lane No. 2	East	21	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
6	Enzweiller	East	62	Permanent Generator		By Year 2015	Year 2009	Generator procurement phase. (See Category 3 above under Riverview Farms PS)
	Mafred	Central	60	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Richwood	West	97	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Ridgeway	Central	77	Permanent Generator		By Year 2015		Currently undergoing initial analysis.
	Twin Lakes	Central	31	Permanent Generator		By Year 2015		Currently undergoing initial analysis.

APPENDIX H:

CMOM Recommended Improvements

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Sanitation District No. 1 CMOM Program Self-Assessment Recommended Improvements & Implementation Schedule

Management Programs

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
Organizational Structure	Tom Wiechman	Evaluate the Dry Creek WWTP's "Crew Leader In Training" program to determine if it would be beneficial to implement a similar program in the Collection Systems Department.	Evaluation meetings will be held and documented, and a determination will be made.	31-Dec-07	OS-1
		Post job descriptions for Collection Systems crews on the Intranet	Job descriptions for Collection Systems crews will be made available to staff via the Intranet.	29-Feb-08	OS-2
		Evaluate the Society of Human Resource Managers' Senior Professional Human Resource Certification process to determine if it would be beneficial for the Assistant General Manager and the Employee Benefits & Development Manager to obtain this certification	Evaluation meetings will be held and documented, and a determination will be made.	30-Apr-08	OS-3
		Solicit external candidates for open job positions	External candidates will be solicited for open positions.	Ongoing * Task complete Report Cycle 6	OS-4
Communication & Customer Service	Peggy Casey	Track all trouble calls by logging them into the gbaMS database system	See Information Management System (IMS). This will be addressed as part of the organization-wide IMS assessment.	See IMS	CCS-1
		Continue to assess the need for a centralized call center	Evaluation meetings will be held and documented, and a determination will be made.	Ongoing (long-term goal)	CCS-2
		Develop a structured system for communicating daily construction activities to Account Services, Public Relations, Collection Systems and Dry Creek WWTP personnel	System for communicating daily construction activities will be developed.	29-Feb-08	CCS-3
		Develop a template for project-specific customer evaluations to measure the success of the District's customer service efforts	Template will be developed and distributed to appropriate personnel for use.	31-Mar-08	CCS-4
		Create an internal online survey to measure the success of the District's internal communication efforts	Internal online survey will be developed, and a schedule for launch of survey will be determined.	30-Apr-08	CCS-5
		Develop written standard operating procedures (SOPs) for customer complaints and customer notification procedures (for smoke & dye testing, CCTV inspection, and construction/maintenance activities)	Written SOPs will be in place, and appropriate personnel will be trained.	30-Jun-08	CCS-6
		Evaluate the District's current basement back-up policy to identify areas where adjustments should be made	Evaluation meetings will be held and documented, and areas of adjustment identified.	30-Jun-08	CCS-7
		Develop educational campaigns directed toward customers throughout the service area on the following topics - I/I, service lateral maintenance, and basement back-up cleaning procedures. The campaigns will include tactical items such as on-hold messages, website content, bill inserts, or newsletter content.	Written campaign plans and a schedule for implementation will be developed.	Ongoing	CCS-8
Legal Authority	Amanda Waters	Use an outside web development firm to create a Consent Decree Repository on the District's website for all U.S. EPA-approved reports	Repository will be made available to the public via the website and kept up to date.	Pending U.S. EPA approval of reports	LA-1
Acquisition Considerations	Gary Aman & Chris Novak	Begin to develop a New Development I/I Prevention Program for new sewers	New Development I/I Prevention Program for new sewers will be under development.	Ongoing	AC-1
		Begin to develop a written policy and guidelines for assuming ownership of pre-existing infrastructure	Written policy and guidelines will be under development.	Ongoing * Task complete Report Cycle 6	AC-2
		Assess the use of gbaMS for inputting new construction inspection reports and applicable photos	See IMS-2. This will be addressed as part of the organization-wide IMS assessment.	See IMS-2	n/a
IMS	Tom Braun	Assess the data managements needs, IMS practices, and training needs of all operating departments via an employee meeting scheduled for October 31, 2007	Evaluation meeting will be held and documented, and determinations will be made.	31-Oct-07	IMS-1
		Prepare and issue a Scope of Work to recruit an outside firm to conduct a comprehensive, organization-wide assessment of all IMS activities and programs	Scope of Work will be developed and issued.	31-Dec-07	IMS-2

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
		Determine the most effective method for tracking labor hours spent on O&M activities	Evaluation meetings will be held and documented, and a determination made as to the most effective method.	31-Mar-08	IMS-3
		Assess best practices for moving forward with mobile data entry and implement a broadband pilot study with one trouble call crew	"Lessons Learned" debrief meeting will be held to discuss catch basin project, and a determination will be made as to the best practices, and a second broadband study will commence.	31-Dec-07	IMS-4
		Develop a more extensive IMS training program that includes instruction for computer basics, gbaMS, and GIS	A training plan and schedule will be developed.	31-Dec-07	IMS-5
		Assess the use of the Inspection module in gbaMS for new construction inspections. Begin utilizing the Pump Station Inspection module in gbaMS for pump station inspections. Input smoke & dye testing results into gbaMS. Link CCTV video to gbaMS. Promote more extensive use of the Facility module in gbaMS.	gbaMS use will be assesed for new construction inspections, and utilized for pump station inspections, smoke & dye testing results, CCTV footage, and to track facility improvements.	30-Jun-08	IMS-6
Training	Tom Wiechman & Rod Bell	Produce and distribute a 2008 safety training calendar that identifies class offerings, instructors, times, and dates of classes	Training calendar will be produced and distributed to District staff.	7-Jan-08	TR-1
		Generate monthly reports from Training Tracker throughout 2008 for Collection Systems foremen and crew leaders to track training requirements for employees	Monthly Training Tracker reports will be generated and made available to District staff.	Ongoing	TR-2
		Create a Certification Pilot Program for Field Technical Services crews to provide more structure for on-the-job training procedures for new employees. New employees would have to pass a proficiency test to obtain certification. The pilot program would be tested and evaluated for future use by other District departments.	Pilot program will be developed and ready to launch.	30-Jun-08	TR-3
		Explore and identify the most efficient and comprehensive software to track all District training efforts. This assessment will include the current tool - Training Tracker.	Evaluation meetings will be held and documented, and a determination made as to the most effective method.	31-Dec-07	TR-4
		Provide training throughout the remainder of FY 2008 for key administrators of the Training Tracker software to ensure optimal use of the tool	Training course for Training Tracker will be developed and implemented.	30-Jun-08	TR-5
		Communicate with other District departments about how to best use the Training Tracker software and how much information needs to be kept on file. Develop District-wide training tracking procedures and a standardized form for entry. Develop a way to ensure that procedures are being followed.	Evaluation meetings will be held and documented, and a determination made as to how to most effectively use the Training Tracker software. Procedures and forms will then be developed, along with a method of ensuring procedures are followed.	30-Jun-08	TR-6
System Mapping	Lisa Martin	Initiate the GPS pilot program with one CCTV crew	GPS pilot program will be launched.	31-Dec-07	SM-1
		Develop an SOP to be submitted to developers and contractors for obtaining proposed digital files for new construction and capital improvement projects and updated as-builts once construction is complete	SOP will be written and submitted to developers and contractors.	31-Mar-08	SM-2
		Begin updating maps to identify the separate and combined sewer systems, location of flow monitors, and creek names	Updated maps will be available.	Ongoing * task complete: report cycle 5	SM-3

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
		Promote use of the GIS Work Order Form throughout all departments	System will be in place to promote the use of GIS Work Order Forms.	Ongoing	SM-4
		Assess the feasibility of linking scanned drawings and plats to gbaMS in order to interface with ArcGIS	See IMS-2. This will be addressed as part of the organization-wide IMS assessment.	See IMS-2	n/a
SSO Reporting & Notification	Mike Kendall	Revise current internal documentation and data entry procedures and create a step-by-step procedural flow diagram outlining the revised plan in an effort to improve efficiency and consistency of SSO data entered into the gbaMS system	Revised written internal procedures and a step-by-step flow diagram will be created.	30-Jun-08	SRN-1
		Evaluate initial data collection and documentation at SSO overflow sites to determine if data is being compromised due to the response crew's focus on overflow containment	An internal meeting(s) to assess this issue will be held, and the outcome will be summarized in the District's 2008 Consent Decree Annual Report.	30-Jun-08	SRN-2
Operations Programs					
Emergency Preparedness & Response	Greg Braunwart & Donnie Couch	Add a Significant Industrial Users (SIU) layer to GIS so staff can easily identify whether there is an SIU upstream of an overflow	An SIU layer will be added to GIS.	30-Jun-08	EPR-1
		Benchmark other utilities' call-in procedures to identify best practices. Modify our current call-in procedures as appropriate.	Evaluation meetings will be held and documented, and a determination will be made. Call-in procedures will be modified if necessary.	30-Jun-08	EPR-2
Safety	Rod Bell	Begin requiring crew team members to sign a form verifying they have been informed of updates and revisions to safety policies and procedures. Create the verification forms and maintain records of the forms to serve as documentation that appropriate personnel have been notified of the changes.	Crew team members will begin signing verification forms for safety policies and procedures. The forms will be created, and records of signed forms will be maintained.	1-Jan-08	SA-1
		Identify and purchase proper equipment for nighttime traffic control	Proper equipment for nighttime traffic control will be identified and purchased.	31-Mar-08	SA-2
		Distribute an organization-wide safety survey to obtain employee feedback on the District's Safety Program	An organization-wide safety survey will be distributed to obtain employee feedback.	30-Jun-08	SA-3
		Evaluate the Safety Buck Program on a more consistent basis to determine if it is meeting its goals. Modify the program as appropriate.	Evaluation meetings will be held and documented, and a determination will be made. The Safety Buck Program will be modified if necessary.	Ongoing	SA-4
Budgeting	Ron Schmitt	Conduct internal workshops for directors and supervisors involved in the budgeting process	Internal workshops for directors and supervisors will be conducted.	31-Jan-08	BU-1
		Begin to develop a more effective process to track the life cycle of new and replaced infrastructure from this point forward	A process for tracking the life cycle of new and replaced infrastructure will be under development.	30-Jun-08	BU-2
		Provide additional budgeting codes to allow for more detailed expense descriptions for tracking purposes	Additional budgeting codes will be developed.	Ongoing	BU-3
Engineering	Mark Wurschmidt	Develop an approach to addressing the extent of the District's involvement in private source I/I investigations and improvement projects	An approach will be developed and documented.	30-Jun-08	EN-1
		Upload technical specifications to the District's website	Technical specifications will be uploaded to the District's website.	30-Jun-08	EN-2
Water Quality Monitoring	Jim Gibson, Brandon Vatter, & John Clark	There are currently no recommended improvements to the District's Water Quality Monitoring Program.	n/a	n/a	n/a
Call Before You Dig	John Warndorf & Mark Griffith	Assess the benefit of tracking all line marking requests that are received, not just those that generate work orders. If it is deemed beneficial, define the most effective procedures for tracking every call received by the Engineering Technician.	Evaluation meetings will be held and documented, and determinations will be made.	31-Mar-08	CBD-1
		Develop an SOP that contains both administrative tasks and physical inspection tasks associated with the program	An SOP will be developed, and appropriate personnel trained.	30-Jun-08	CBD-2
		Work with the Public Relations group to determine additional communication channels that can be used to advertise the program	Additional communication channels will be discussed and utilized if deemed appropriate.	Ongoing	CBD-3

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
Compliance	John Clark	Develop a more structured and effective method for identifying new industries discharging to the collection systems	A structured and effective method for identifying new industries discharging to the collection system will be developed.	Ongoing	CO-1
Mobile Waste Haulers	John Clark	There are currently no recommended improvements to the District's Mobile Waste Haulers Program.	n/a	n/a	n/a
Pump Station Operations	Phil Stanken	Compile a list of stressed pump stations and assign either an internal or external engineer to perform a critical assessment of the situation	A list of stressed pump stations will be compiled, and an internal or external engineer will be identified to perform a critical assessment.	31-Mar-08	PSO-1
		Hold a coordination meeting with Engineering Plan Review personnel and Engineering inspectors to begin developing an SOP for involving specialized pump station staff members in the review of new pump station plans and drawings and performing inspections during construction of new pump stations	A coordination meeting will be held.	30-Apr-08	PS0-2
		Address staffing issues during the FY 2009 budget process	Staffing issues will be addressed during the FY 2009 budget process.	Spring 2008	PSO-3
		Begin using the pump station inspection module in gbaMS to record and track pump station inspections	The pump station inspection module in gbaMS will be used to record and track pump station inspections.	30-Jun-08	PSO-4
		Begin using Intellution SCADA software to remotely monitor the District's pump stations	The District will use Intellution SCADA software to remotely monitor its pump stations.	Ongoing	PSO-5
Pump Station Emergencies	Dave Hornbeck	Identify an appropriate solution for improving the SCADA system, which is becoming over-burdened and does not have adequate bandwidth to transmit data across the system	An appropriate solution will be developed to improve transmission errors in the SCADA system.	30-Apr-08	PSE-1
		Begin using Intellution SCADA software to remotely monitor the District's pump stations	See PSO-5	See PSO-5	n/a
		Develop a plan to provide more formal training for implementation of the Pump Station Emergencies Program	A plan to provide more formal training for implementation of the Pump Station Emergencies Program will be developed.	30-Jun-08	PSE-2
Pump Station Force Mains Preventive Maintenance	Phil Stanken	Begin to develop a formal Pump Station Force Mains Preventive Maintenance Program by collecting and documenting inventory of all force mains and air relief valves (ARVs) in the gbaMS system and completing a condition assessment	A formal Pump Station Force Mains Preventive Maintenance Program will be under development.	Ongoing	PSF-1
Odor & Corrosion Control	Phil Stanken	Request that Siemens Water Technologies begin mapping odor complaints and feed points in GIS so they can interface with the District's mapping system	Odor complaints will be mapped in GIS.	Dependent upon consultant's ability to purchase GIS software	OCC-1
Smoke & Dye Testing	Greg Braunwart	Develop written SOPs for operational, public notification, and data management procedures related to the Smoke & Dye Testing Program	Written SOPs will be developed, and appropriate personnel trained.	30-Jun-08	SDT-1
		Assess the capability of entering inspection form data, sketches, and project photos into gbaMS	See IMS-6	See IMS-6	n/a
Flow Monitoring	Jack McHugh	Develop written SOPs for internal flow monitoring activities	Written SOPs will be developed, and appropriate personnel trained.	30-Jun-08	FM-1
		Assess data analysis training opportunities for the District's Flow Monitoring crews	Evaluation meetings will be held and documented, and a determination made.	30-Jun-08	FM-2
CCTV Inspection	Greg Braunwart	Develop a formalized and prioritized plan for CCTV work throughout the collection systems, in conjunction with the Continuous Sewer Assessment Program	A plan for CCTV work throughout the collection systems will be developed.	31-Dec-07	CC-1
		Identify and begin to acquire the resources necessary to implement the CCTV inspection schedules outlined in the Continuous Sewer Assessment Program	The resources necessary to implement the CCTV inspection schedules will be identified and will begin to be acquired.	31-Dec-07	CC-2
		Train all applicable staff on how to use the SCREAM™ defect coding system	All applicable staff will be trained on the SCREAM™ defect coding system.	31-Dec-07	CC-3

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
Manhole Inspections	Greg Braunwart	Develop written SOPs for the combined manhole inspection/CCTV procedures	Written SOPs will be developed, and appropriate personnel trained.	30-Jun-08	MI-1
		Promote more consistent use of the Manhole Inspection Form by all District personnel responsible for conducting inspections, including new construction inspectors, special projects crews, CCTV crews, flow monitoring crews, and trouble call crews	System will be in place to promote the use of Manhole Inspection Forms.	30-Jun-08	MI-2
		Develop a formalized and prioritized plan for manhole inspections in conjunction with CCTV inspection schedules identified in the Continuous Sewer Assessment Program	A plan for manhole inspections will be developed.	31-Dec-07	MI-3
		Train all applicable staff on how to use the SCREAM™ defect coding system	All applicable staff will be trained on the SCREAM™ defect coding system.	31-Dec-07	MI-4
		Develop a standardized method for entering manhole inspection data into gbaMS using SCREAM™	Written SOPs will be developed, and appropriate personnel trained.	31-Dec-07	MI-5
Maintenance Programs					
Manhole Repairs	Tom Foster	Fill out a Manhole Inspection Form when performing inspections in the field and enter data into gbaMS at the office	Manhole Inspection Forms will be completed during manhole repairs and entered into gbaMS.	7-Jan-08	MR-1
		Create a more standardized process for selecting the type of repair implemented, which may take the form of written standard operating guidelines (SOGs). Create a more standardized system for I/I removal at frame and casting.	Written SOGs will be developed, and appropriate personnel trained.	30-Mar-08	MR-2
		Improve coordination between the Home Builders Association, cities, counties, and the state on manhole repairs	See MRW-2	See MRW-2	n/a
Rehabilitation & Replacement	Jim Turner & Brandon Vatter	Formalize the Rehabilitation & Replacement thought process associated with the Continuous Sewer Assessment Program	The Rehabilitation & Replacement thought process will be formalized.	31-Dec-07	RR-1
		Visually map (by flow chart) the work orders for the Construction Foreman, and assess the amount of time currently spent on each category of work orders	The flow chart and assessment of time spent on on each category of work orders will be completed.	30-Jun-08	RR-2
		Assign one in-house staff member to filter all work orders and serve as the liaison between the Collection Systems and Engineering Departments	Identify the in-house staff member and assign him or her to this role.	30-Jun-08	RR-3
Mainline Sewer Repairs	John Penick	Develop written SOGs to help determine the type of repair technology used and that specify the parties responsible for making the decision	Written SOGs will be developed, and appropriate personnel trained.	30-Jun-08	MSR-1
		Develop written SOPs for the actual physical repairs performed in house	Written SOPs will be developed, and appropriate personnel trained.	30-Jun-08	MSR-2
Sewer Cleaning	John Penick	Begin to more comprehensively track in gbaMS the specific cause of why sewer lines are put on PM (e.g., roots, grease, debris)	gbaMS will be used to comprehensively track the specific cause of why newly added sewer lines are put on PM.	7-Jan-08	SC-1
		Update sewer lines already in gbaMS to track the specific cause as to why the lines were put on PM (e.g., roots, grease, debris)	gbaMS will be used to track the specific cause of why sewer lines already in the system were put on PM.	Ongoing	SC-2
		Develop written SOPs for sewer cleaning activities	Written SOPs will be developed, and appropriate personnel trained.	30-Jun-08	SC-3
		Hold a meeting between Collection Systems and Industrial Monitoring managers to determine the best method for improving communication regarding grease investigations	Evaluation meetings will be held and documented, and a determination made.	30-Jun-08	SC-4

CMOM Program	Program Leader	Recommendation Summary	Deliverable	Milestone Date	I.D.
Equipment & Tools Maintenance	John Penick	Assess pump station inventory, evaluate stock that is currently maintained, and adjust the capital budget to adequately stock necessary spare parts. Begin managing equipment & tools inventory in gbaMS.	Necessary spare parts will be adequately stocked, and equipment & tools inventory will be managed in gbaMS.	31-Mar-08	ETM-1
		Assess the use of a bar code scanning system to automatically update inventory and reduce inefficiencies of manual logging procedures	Evaluation meetings will be held and documented, and a determination made.	30-Jun-08	ETM-2
		Complete cost analysis research regarding performing equipment maintenance in house, as opposed to using subcontractors for maintenance needs	Cost analysis research will be completed in regard to internal versus external equipment maintenance activities.	30-Jun-08	ETM-3
		Continue to make progress toward purchasing additional property near the District's main office for storage purposes	The District will purchase additional property near the main office for storage purposes.	Ongoing	ETM-4
Pump Station Maintenance	Dave Hornbeck	Develop a more aggressive schedule for pump station PM work, and identify all necessary resources for implementation	A more aggressive schedule for pump station PM work will be developed, and all necessary resources for implementation will be identified.	29-Feb-08	PSM-1
		Identify prospective classes for pump station maintenance personnel at Gateway Community College, and assess the feasibility of attendance at these classes with HR	Gateway Community College courses for pump station maintenance will be identified, and HR will determine if it is feasible for staff to attend.	Ongoing	PSM-2
		Recruit and interview for two open positions in the pump station maintenance crew	Two new crew members for the pump station maintenance crew will be hired.	Ongoing	PSM-3
Maintenance of Rights-of-Way	Chris Novak	Begin to develop a formal Maintenance of Rights-of-Way program by conducting a study of comparable utilities to identify best practices	A formal Maintenance of Rights-of-Way program will begin to be developed.	Ongoing	MRW-1
		Build stronger channels of communication with the Home Builders Association, cities, counties, and the state in regard to coordination of street repairs and paving projects	The District will begin to improve coordination with the Home Builders Association, etc. regarding street repairs and paving projects.	Ongoing	MRW-2
Capacity Programs					
Capacity Assessment & Assurance	Jim Turner & Brandon Vatter	Develop an SOP for inputting submitted plans for new development into a hydraulic model and GIS to determine how it will affect our system	An SOP will be developed for submitted plans to be inputted into a hydraulic model and GIS.	30-Apr-08	CAA-1
		Complete the data collection needed to fully calibrate the five hydraulic models	The five hydraulic models will be fully calibrated, dependent on sufficient rainfall.	30-Jun-08	CAA-2
		Develop a job description for a position to oversee the modeling program and assist with other CIP initiatives, and begin interviewing qualified applicants for this job	A job description will be developed and interviewing will begin.	30-Jun-08	CAA-3
New Connection Tap-In	Gary Aman	Notify internal personnel of any changes to the Certified Tapper Program via email, bulletin boards, field crew meetings, etc.	Internal personnel will be notified of any changes to the Certified Tapper Program.	Ongoing	NCT-1
		Determine the most effective means for providing better documentation of the new connection inspection process	Evaluation meetings will be held and documented, and a determination made.	31-Mar-08	NCT-2
		Send the first regularly scheduled annual letter to all cities informing them of the Abandonment Permit	The first annual letter will be sent.	30-Jun-08	NCT-3
		Complete the internal switch from FoxPro to Access	The switch from FoxPro to Access will be completed.	30-Jun-08	NCT-4

APPENDIX I:

CMOM Update Form

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CMOM Program Updates (Recommended Improvements)

FY 2008

Name:

Date Submitted to Compliance Manager:

CMOM Program:

Recommended Improvement I.D.:

Percent Complete: ☐ 0-20% ☐ 21-40% ☐ 41-60% ☐ 61-80% ☐ 81-99% ☐ 100% ☐ Ongoing

☐ I have no progress to submit for this reporting cycle.

PROGRESS MEETINGS HELD AND/OR SCHEDULED			
Date	**Participants**	**Topic Description**	**Outcome Summary**

UPDATE SUMMARY
Please provide a written description of the progress that has been made in meeting the recommended CMOM improvement identified on Page 1.

SUPPORTING DOCUMENTATION	
Please list all documentation that you are submitting with this update form.	
Type of Documentation (Email, Minutes, etc.)	**Description**
1.	
2.	
3.	

Please submit this completed form, along with all applicable documentation, to Maggie Frye by <u>Friday, June 27</u>.

APPENDIX J:

Customer Service Surveys

(This page intentionally left blank for double-sided printing.)

We want to know your thoughts concerning our customer service and the information you received during this construction project. Our goal is:

UNPARALLELED CUSTOMER SERVICE

Please tear off completed survey at perforation and drop in any mailbox.

Customer Name: _____

Address: _____

City/State/Zip: _____

Phone Number: _____

E-mail: _____

1. Did you receive notification prior to the beginning of construction explaining/describing the project and what to expect? ☐ Yes ☐ No

2. The accuracy of the information received regarding what to expect throughout the construction process was:

Excellent Very Good Good Fair Poor

3. The efforts made by SD1 to ensure that both their employees and contractors were easily identifiable were:

Excellent Very Good Good Fair Poor

4.The friendliness and availability of SD1 staff to answer questions was:

Excellent Very Good Good Fair Poor

Additional Comments: _____

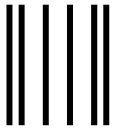
_____

_____

_____

Project Code
(*For Official Use Only*)

IMPORTANT: DO NOT ENLARGE, REDUCE OR MOVE the FIM and POSTNET barcodes. They are only valid as printed!
Special care must be taken to ensure FIM and POSTNET barcode are actual size AND placed properly on the mail piece to meet both USPS regulations and automation compatibility standards.



NO POSTAGE
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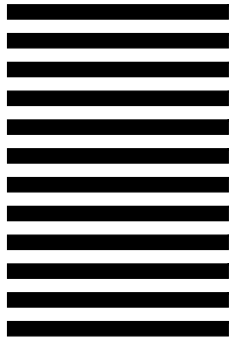


BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 1113 COVINGTON KY

POSTAGE WILL BE PAID BY ADDRESSEE

DIANE BIELO
SANITATION DISTRICT NO 1
1045 EATON DR
FT WRIGHT KY 41017-9053

Artwork for User Defined (4.25" x 8.5")
Layout: \\CNCNOHSXR00\Redir\gmn70b\Desktop\ARTWORK 04\Allstate Postcard BRM 4.25x6.pxt
November 19, 2008 09:18:31

Produced by DAZzle Designer 2002, Version 4.3.08
(c) Envelope Manager Software, www.EnvelopeManager.com, (800) 576-3279
U.S. Postal Service, Serial #NO

We want to know your thoughts concerning our customer service while resolving your current sewer problem.
Our goal is:

UNPARALLELED CUSTOMER SERVICE

Please tear off completed survey at perforation and drop in any mailbox.

Customer Name: _____

Address: _____

City/State/Zip: _____

Phone Number: _____

E-mail: _____

1. How did you contact Sanitation District No. 1 to inform them of your issue?

☐ Phone ☐ E-mail ☐ Other_____

2. Were you aware that there is a 24-hour number you can call to report sewer issues? (859-331-6674)

☐ Yes ☐ No

3. Do you feel that District employees responded to your issue in a timely manner? ☐ Yes ☐ No

How long did it take?_____

4. The level of satisfaction achieved with the resolution offered by Sanitation District No. 1 was:

Excellent Very Good Good Fair Poor

5.The friendliness and availability of Distrcit staff to answer questions was:

Excellent Very Good Good Fair Poor

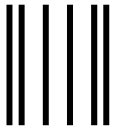
Additional Comments: _____

_____

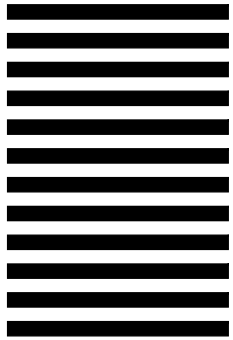
_____

_____

IMPORTANT: DO NOT ENLARGE, REDUCE OR MOVE the FIM and POSTNET barcodes. They are only valid as printed!
Special care must be taken to ensure FIM and POSTNET barcode are actual size AND placed properly on the mail piece to meet both USPS regulations and automation compatibility standards.



NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



BUSINESS REPLY MAIL

FIRST-CLASS MAIL PERMIT NO. 1113 COVINGTON KY

POSTAGE WILL BE PAID BY ADDRESSEE

DIANE BIELO
SANITATION DISTRICT NO 1
1045 EATON DR
FT WRIGHT KY 41017-9053

Artwork for User Defined (4.25" x 8.5")
Layout: \\CNCNOHSXR00\Redir\gmn70b\Desktop\ARTWORK 04\Allstate Postcard BRM 4.25x6.pxt
November 19, 2008 09:18:31

Produced by DAZzle Designer 2002, Version 4.3.08
(c) Envelope Manager Software, www.EnvelopeManager.com, (800) 576-3279
U.S. Postal Service, Serial #NO

APPENDIX K:

"Not Down My Drain!" Bill Insert

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Did you know?

Did you know that what you flush or pour down your drain can affect local waterways and the environment?

Protect Northern Kentucky's watersheds by:

- **Properly disposing household grease (meat fats, lard, cooking oil, shortening, butter and margarine, etc.), diapers, condoms and personal hygiene products in the garbage can.**

  When flushed or washed down the drain, these materials can clog pipes and cause raw sewage to overflow into your home or yard. In addition, when high flows occur in the sewer system during periods of rainfall or snowmelt, these materials can mix with sewage and be discharged directly into basements, public areas or local rivers and streams.

- **Properly disposing household products such as cleansers, beauty products, medicine, auto fluids, used motor oil, paint, and lawn care products at your local household hazardous waste facility.**

  Wastewater treatment plants are designed to treat organic materials, not hazardous chemicals. When flushed or washed down the drain, these hazardous chemicals can diminish the effectiveness of the treatment process, and might allow contaminates to be discharged into local waterways.

RETHINK WATERSHEDS
www.sd1.org

Did you know?

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RETHINK WATERSHEDS
www.sd1.org

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APPENDIX L:

Industrial Pretreatment Program Violations Summary Report

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Sanitation District No. 1
Industrial Pretreatment Program
Violations Summary Report

Event Category that Contain Violation **Filter Criteria:**
All Permits AND
Active Industry DOES Contain ...Yes...
Dates: 07-01-2007 - 06-30-2008 11:59:59 PM

Permit: **002-07** **Southern Graphic Systems, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-R	06-Feb-08	06-Feb-08	Non-Compliance Reporting Violation Late Report SELF - 2nd half 2007 semi annual self monitoring report due Event Due Date: 1/20/2008 Event Complete Date: 2/6/2008	

Permit: **014-07** **Camco Chemical Co. Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	09-Jul-07	23-Aug-07	Repeated pH violations above the 10.0 limit during the July 2007 sampling.	
NC-P	09-Aug-07	26-Sep-07	pH violation The pH fell outside the Sanitation District No. 1's (District) limits of 6.0 to 10.0. The pH of your wastewater discharge on 8-9-07 was found to be above 10.0 for 1 hour and 35 minutes based on your pH and flow records, which were reviewed by the District on 8-15-07. This is a violation or our time frame limits. (refer to the District's Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant). CamcoÆs permit states ôThe flow and pH monitoring systems will be equipped with alarms that will provide a sufficient warning to alert personnel when the system detects values outside desired limits.ö ôAll pH monitoring excursions less than 6.0 or greater than 10.0 must be reported to the Sanitation District within 24 hours of becoming aware of the violation.ö It appears that CamcoÆs alarm system is not as effective as it should be and/or the proper people are not reviewing the pH and flow logs daily.	

NC-O	15-Aug-07	26-Sep-07	Other Type of Non-Compliance - Wastewater Discharge log Sanitation District No. 1 (District) found your facilities discharge log to not be complete or up-to-date during an inspection. Your facilities permit states "Camco must maintain a permanent log to record the time, date and volume for each discharge from the pretreatment system as well as the type of pretreatment preformed". The District's stance is that your facility was negligent in maintaining a permanent log. Your facility had 5
NC-O	15-Aug-07	01-Nov-07	Camco Chemical has been determined by SD1 to have caused the severe foaming event at the DCWWTP on 8/15/07 which continued to foam on 8/16/07.

Permit: **019-07** **Blue Grass Quality Meats**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	03-Dec-07	15-Feb-08	pH Violation The pH fell outside the District's limits of 6.0 to 10.0. The pH violations were recorded above 11.0 for 24 minutes, which is a violation our Rules and Regulations. (see attached graph and also refer to the District's Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant). During the sampling event you informed Jason Crawford that your facility's pH recording system sometimes has glitches and the data cannot be viewed. Also, numerous times our monitoring crew has noticed that your effluent pH monitoring probe has not been working properly or at all. This can be a problem when trying to keep your facility in compliance with the District's Rules and Regulations.	

Permit: **021-07** **Louis Trauth Dairy, LLC**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-O	04-Dec-07	14-Dec-07	Other Type of Non-Compliance pH went about 11.0 for 32 min and above 10 for 1 hour and 9 min	

NC-P	22-Apr-08	13-May-08	The pH fell below the Sanitation District No.1 limit of 5.0, as well as, above 10.0 for an extent of time that violated our time frame limit (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater

Permit: **025-07** **LSI Ky LLC dba LSI Metal**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-R	04-Apr-08	22-Sep-08	1st half 2008 semi-annual report not complete. The permit requirement for doing four consecutive days of sampling was not completed properly. There were only three consecutive days in April and one day in June completed.	

Permit: **028-07** **Duro Bag Manufacturing Company**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	14-Nov-07	25-Jan-08	Copper, total daily limit The daily limit was exceeded in a sample taken on 11/14/2007. The result was 6.190 mg/L while the daily limit is 5.0 mg/L.	

Permit: **033-07** **Schwan's Global Supply Chain, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	18-Sep-07	25-Nov-07	Sampling performed in September 2007 recorded pHs in violation of the District's limits. On 9-18-07 and on 9/19/07, your facility effluent pH went above the District's 10.0 pH time limit of one hour. See the attach pH graph.	

NC-R	24-Nov-07	10-Dec-07	Late Notice of Violation Response. The Notice of Violation Response letter to the pH violation was due by the11/24/07 but was received on 11/25/07. [You must respond in writing as to the nature of the violation and the actions being taken to keep this type of violation from reoccurring. Please keep in mind future violations will incur further enforcement actions. The response letter must be received
NC-P	05-Feb-08	18-Mar-08	The pH was recorded above 10.0 and 11.0 for a period of time that violated the Sanitation District No. 1 (District) Rules and Regulations. (see attached graph and also refer to the District's Rules and Regulations on pH for the Dry Creek Wastewater

Permit: **034-07** **L'Oreal USA Products, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	07-Aug-07	28-Sep-07	Zinc, total daily limit The daily limit was exceeded in a sample taken on 8-7-2007. The result was 5.653 mg/L while the daily limit is 3.5 mg/L.	
NC-P	22-Aug-07	11-Sep-07	Non-compliance parameter violation Foam in the retain samples	
NC-O	06-Mar-08	15-Apr-08	During an inspection of your log book, chart recorder and retain samples, it was noticed that the foam layer in some of your retain samples did not dissipate after the shake test. This is a violation of your Industrial Wastewater Discharge Permit.	

Permit: **036-07** **Ameripride Linen & Apparel Services**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments

NC-P	06-Feb-08	20-Mar-08	Oil & Grease, Hydrocarbons The daily limit was exceeded in a sample taken on 2/6/08. The Result was 62.8 mg/L while the Daily Limit was 50 mg/L.	

Permit: **037-07** **Aristech Acrylics LLC**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	17-Apr-08	30-Apr-08	Non-compliance parameter violation - pH	

Permit: **039-07** **Duro Designer Company, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	21-Aug-07	20-Nov-07	Copper, total daily limit The daily limit was exceeded in a sample taken on 8-21-2007. The result was 5.85 mg/L while the daily limit is 5.0 mg/L.	
NC-P	13-Dec-07	04-Mar-08	Sampling by the District on 12/13/2007 showed a copper result of 6.8 mg/L. The limit for copper is 5.0 mg/L.	

Permit: **050-07** **Highway Transport Chemical, LLC**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	13-Dec-07		Non-compliance parameter violation - Oil & Grease, Hydrocarbons The Technical Review Criteria (TRC) daily limit was exceeded in a sample taken on 12/13/2007. The Result was 96.6 mg/L while	

Permit: **051-07** **Kenton County Airport Board**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-R	20-Apr-08	20-May-08	Late reporting on self monitoring report 1st quarter 2008	

Permit: **054-07** **Perfetti Van Melle USA**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	09-Nov-07	19-Nov-07	Non-compliance parameter violation pH Violation spike below 5	
NC-P	28-Mar-08	04-Jun-08	The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 5.0, as well as, periods of greater than one hour between 5 and 6, which are a violation our Rules and Regulations. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek	

Permit: **057-07** **Mubea Inc. (Industrial Rd)**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	06-Dec-07	10-Jan-08	Zinc, total daily limit The daily limit was exceeded in a self monitoring sample taken on 12/6/2007. The result was 2.72 mg/L while the daily limit is 2.61	
NC-P	08-Feb-08	29-Apr-08	Nickel, total daily limit The daily limit was exceeded in a self monitoring sample taken on 2/8/2008. The result was 12.4 mg/L while the daily limit is 3.98	
NC-P	08-Feb-08	29-Apr-08	Zinc, total daily limit The daily limit was exceeded in a self monitoring sample taken on 2/8/2008. The result was 5.48 mg/L while the daily limit is 2.61	
NC-P	08-Apr-08	05-Jun-08	Zinc, total daily limit The daily limit was exceeded in a self monitoring sample taken on 4/8/2008. The result was 3.28 mg/L while the daily limit is 2.61	
NC-P	11-Apr-08	05-Jun-08	Zinc, total daily limit The daily limit was exceeded in a self monitoring sample taken on 4/11/2008. The result was 3.24 mg/L while the daily limit is 2.61	
NC-R	17-Apr-08	13-May-08	Late response to a NOV - A response was required to be received, by the District, on 4/16/2008. The response was not received until 4/29/2008.	

NC-P	30-Apr-08	05-Jun-08	Zinc, total monthly average. The monthly average limit was exceeded in the month of April 2008. The monthly average result was 1.63 mg/L while the monthly average limit is 1.48 mg/L.	
NC-P	04-Jun-08	15-Jul-08	Zinc, total daily limit The daily limit was exceeded in a self monitoring sample taken on 6/4/2008. The result was 2.85 mg/L while the daily limit is 2.61	

Permit: **059-07** **Northern Kentucky Water District**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	11-Jul-07	04-Oct-07	Copper, total daily limit The daily limit was exceeded in a sample taken on 7-11-2007. The result was 18.89 mg/L while the daily limit is 5.0 mg/L.	

Permit: **060-07** **Givaudan Flavors Corporation**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	02-Oct-07	21-Nov-07	pH violation The pH fell below the Sanitation District No.1 limit of 5.0 (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant). While doing the pH resampling there seemed to be a production type of flow coming from the sanitary line. While this is not a violation it should be addressed and corrected so all of the	
NC-P	30-Nov-07	14-Jan-08	pH violation Your facility notified us that your pH pretreatment system had a pH violation. The pH fell below the Sanitation District No.1 limit of 5.0.	

Permit: **064-07** **Wild Flavors, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	15-Oct-07	29-Nov-07	The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 5.0, which is a violation our Rules and Regulations. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	
NC-P	02-Dec-07		The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 5.0, which is a violation our Rules and Regulations. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	

Permit: **066-07** **Laser Graphic Systems, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-O	15-May-08	19-May-08	Accidental discharge. 400 to 500 gallons of untreated wastewater was accidentally discharged to the sanitary sewer system.	

Permit: **067-07** **Signode Plastic Recycling Alliance**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	25-Jul-07	13-Aug-07	The pH went above the 11.0 limit for 20 mins. The limit is 15 mins. Gave verbal NOV.	

Permit: **068-07** **Messier-Bugatti, USA Carbon**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments

NC-P	08-Feb-08		Non-compliance parameter violation pH Violation between 10 and 11 for over 1 Hour

Permit: **073-07** **Lyons Magnus**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	24-Aug-07	18-Sep-07	pH Violation The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 6.0, for an extent of time that violated our time frame limit. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	
NC-P	13-Feb-08	03-Mar-08	The pH was recorded below 5.0 which is a violation of the District's Rules and Regulations. Also your pH graphs showed these same violations. (See attached graph and also refer to the District's Rules and Regulations on pH for the Dry Creek	

Permit: **076-09** **Sara Lee Foods, Claryville Facility**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	18-Jul-07	04-Oct-07	Copper, total daily limit The daily limit was exceeded in a sample taken on 7-18-2007. The result was 0.449 mg/L while the daily limit is 0.246 mg/L.	
NC-P	15-Oct-07	29-Nov-07	Non-compliance parameter violation Chrome Hex violation (0.3 mg/L)	
NC-P	29-Jan-08	12-Mar-08	Cyanide, total Limit was exceeded. The Result was 0.223 mg/L while the Daily Limit was 0.11 mg/L.	
NC-P	01-Apr-08	02-Apr-08	A Sample taken on 4/1/2008 had a chromium (hexavalent) concentration of 0.3 mg/L, the wastewater discharge limit is 0.2	

Event Category that Contain Violation **Filter Criteria:**
All Permits AND
Active Industry DOES Contain ...Yes...
Dates: 07-01-2007 - 06-30-2008 11:59:59 PM

Permit: **077-07** **H&S Chemical Co., Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	27-Sep-07	12-Oct-07	The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded Above 11.0, for an extent of time that violated our time frame limit, and below 5.0. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment	Asked for a 30 day extension so they can get the work complete. They have already paid and responded to the NOV. Granted and they will keep in touch with me to set up their pH resampling.
NC-P	12-Mar-08	07-Apr-08	The pH of your wastewater was recorded below 5.0, which is a violation of the District's Rules and Regulations and your Industrial Wastewater Discharge Permit. (see the attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	

Permit: **079-07** **Tressa, Inc.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-O	15-Aug-07	15-Aug-07	Permit Violation - Retain Sample on 8/15/07 @ 3:00PM did not dissipate per the permit requirement. Verbal NOV was issued	

Permit: **082-07** **Fortis Security Products**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-R	19-Dec-07	19-Dec-07	Non-Compliance Reporting Violation They did not notify us 48 hours in advance of discharging the batch pretreated wastewater in October of 2007	
NC-R	20-Jan-08	19-Feb-08	Self Monitoring due for the second half 2007was late. The report was due by 1/20/08 but was not received until 1/22/08.	

Sanitation District No. 1
Industrial Pretreatment Program
Violations Summary Report

Event Category that Contain Violation **Filter Criteria:**
All Permits AND
Active Industry DOES Contain ...Yes...
Dates: 07-01-2007 - 06-30-2008 11:59:59 PM

Permit: **083-07** **Club Chef LLC**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-P	11-Sep-07	15-Oct-07	The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 5.0, which is a violation our Rules and Regulations. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	
NC-O	07-Nov-07	16-Dec-07	On 11/7/2007 the sewer system had flow backup into the neighboring building near Club Chef. The cause was found to be a blockage from large amounts of lettuce coming from your facility.	
NC-P	14-Nov-07	20-Nov-07	The pH fell outside the Districts limits of 6.0 to 10.0. The pH violations were recorded below 5.0, which is a violation our Rules and Regulations. (see attached graph and also refer to the Sanitation District No. 1 Rules and Regulations on pH for the Dry Creek Wastewater Treatment Plant).	
NC-P	31-Mar-08		The pH fell below the District's limit of 5.0 numerous times between 3/31/08 through 4/4/08 and above the 10.0 pH limit on 4/3/08. See the attached graph and also refer to the District's Rules and Regulations on pH.	

Permit: **085-07** **Mubea Inc. (8224 Dixie HWY)**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments

NC-P	06-Mar-08	28-Apr-08	Violation Description: Nickel, Total Daily Limit The daily limit was exceeded in a sample taken on 3/6/2008. The result was 5.27 mg/L while the daily limit is 3.98 mg/L. Violation Description: Nickel, Monthly Average The monthly average was exceeded in samples taken from 3/4/2008 through 3/7/2008. The result was 2.388 mg/l while the monthly average limit is 2.380 mg/l. Enforcement Action(s): Written Notice of Violation (NOV) Fine Amount: $0.00

Permit: **087-07** **M C Technology**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments
NC-R	11-Aug-07	24-Aug-07	Non-Compliance Reporting Violation - Late response to two NOV's. The original NOV response for copper violations was required to be received by the District on 6/29/2007. The NOV response was not received. A late reporting NOV was issued and a response for this late violation and the copper violation was required to be received by the District on 8/10/2007. To date	
NC-P	19-Sep-07	27-Nov-07	Cyanide, total Daily Limit was exceeded. The Concentration Result was 5.751 mg/L while the Daily Limit was 3.5 mg/L. On '9/19/2007	
NC-P	20-Sep-07	27-Nov-07	Cyanide, total Daily Limit was exceeded. The Concentration Result was 3.681 mg/L while the Daily Limit was 3.5 mg/L. Sample 'AA93249', Date of '9/20/2007	We reran our cyanide test and determined average of the reruns.

Permit: **089-08** **North Bend Biofuels, LLC.**

Violation Type	Date of NC	Date in Compliance	Violation Description	Internal Comments

NC-O	04-Mar-08	28-Apr-08	A blockage in the sanitary sewer system that caused an overflow. On March 4, 2008 an overflow of our sanitary sewer system occurred. The discharge from your facility was found to be the