Sanitation District No. 1
December 31, 2015

Capacity, Management, Operations, & Maintenance (CMOM) FY 2015 Annual Report

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SD1
Managing Northern Kentucky's
Wastewater and Storm Water

December 31, 2015

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

Ms. Denisse Diaz, Chief
NPDES Permitting and Enforcement Branch
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

To Whom It May Concern:

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 SD1 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 has received regulatory approval. 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).

To the best of my knowledge and belief, the enclosed report is true, accurate, and complete, and further demonstrates SD1's commitment to the mission of protecting and enhancing the water resources and 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 drager@sd1.org.

Best regards,

David E. Rager
Executive Director

DER/wck
Enclosures

CERTIFICATION

Capacity, Management, Operations, & Maintenance (CMOM)
FY 2015 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.

David E. Rager
Executive Director

12/21/15
Date

COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 21 day of December, 20 15 by David E. Rager, Executive Director of Sanitation District. No. 1.

Angela M. Cook
Notary Public
Kentucky, State at Large
Comm. Exp. 07-30-16
Notary ID 471543

Angela M. Cook
NOTARY PUBLIC

Kenton County, Kentucky

My commission expires: 7-30-16

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CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE FY 2015 ANNUAL REPORT

December 31, 2015

Sanitation District No. 1
1045 Eaton Drive
Ft. Wright, KY 41017

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LIST OF ACRONYMS AND ABBREVIATIONS

Cabinet	Kentucky Energy and Environment Cabinet
CCTV	Closed Circuit Television
CIP	Capital Improvement Program
CMOM	Capacity, Management, Operations, and Maintenance
COF	Consequence of Failure
CSAP	Continuous Sewer Assessment Program
CSO	Combined Sewer Overflow
ERP	Emergency Response Plan
FOG	Fats, Oils, and Grease
FSE	Food Service Establishments
FY	Fiscal Year
GCE	Grease Control Equipment
GIS	Geographic Information Systems
I/I	Inflow and Infiltration
IMS	Information Management System
IT	Information Technology
LIMS	Laboratory Information Management System
NOV	Notice of Violation
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
ORSANCO	Ohio River Valley Water Sanitation Commission
PM	Preventive Maintenance
SBP	Strategic Business Plan
SCREAM	System Condition and Risk Enhanced Assessment Model
SD1	Sanitation District No. 1
SOP	Standard Operating Procedure
SORP	Sewer Overflow Response Plan
SSES	Sanitary Sewer Evaluation Survey
SSO	Sanitary Sewer Overflow

SECTION 1. INTRODUCTION

1.1 Overview and Report Period

On April 18, 2007, Sanitation District No. 1 (SD1) entered into a Consent Decree with the U.S. Environmental Protection Agency 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. The Consent Decree requires that SD1 continue the implementation of formal Capacity, Management, Operations, and Maintenance (CMOM) programs. SD1's CMOM programs are designed to manage the collection system assets and provide operational guidelines that maximize efficiency and reduce 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) 2015, which began on July 1, 2014 and ended on June 30, 2015.

1.2 CMOM Program Structure

SD1 has been performing CMOM activities for many years. In 2007, these activities were structured into formal CMOM programs during the self-assessment. 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. Section 2 of this Annual Report provides an update on the implementation of some of these programs.

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 Collection System's Major Components

SD1's sanitary service area currently covers approximately 187 square miles, and its storm service area covers approximately 217 square miles. SD1 serves approximately 103,525 sanitary accounts and approximately 94,500 storm water accounts. SD1 manages a collection system that is comprised of:

- 43,500 SD1 owned manholes
- 3,900 SD1 owned catch basins and inlets in the combined sewer system
- 1,619 miles of SD1 owned and operated gravity sewer lines and force mains
- 160 miles of additional Florence owned sewer lines and force mains
- 82 miles of additional privately owned sewer lines

- 443 miles of SD1 owned and operated separate storm water lines
- 135 pump stations (11 of which are owned by the City of Walton and operated by SD1 through a contract; 3 of which are owned by the Airport and operated by SD1 through a contract; 2 of which are associated with treatment plants)
- 78 gate structures
- 16 flood pump stations
- 8 small wastewater treatment plants (4 of which are owned by separate entities and operated under contract by SD1)
- 3 regional water reclamation facilities

During FY 2015, SD1 acquired more than 32,250 feet of privately developed sewer and approximately 175 new manholes.

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 wastewater treatment plant. The service area consists of both combined and separate systems. The combined sewers are located primarily in the river cities. Maps of the sanitary and storm service areas and the major components can be found in Appendix A.

SECTION 2. CMOM PROGRAM HIGHLIGHTS

This section provides an update on the implementation of SD1's CMOM programs. The Consent Decree also requires SD1 to specifically establish a Grease Control Program and Pump Station Operation Plan for Backup Power, which are specific CMOM programs described in Sections 3 and 4, respectively. Section 5 deals with ongoing self-assessments conducted by SD1 that support and advance the implementation of the CMOM programs.

2.1 Budgeting

The purpose of SD1's Budgeting Program is to 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.

2.1.1 Capital and Operations & Maintenance Expenditures

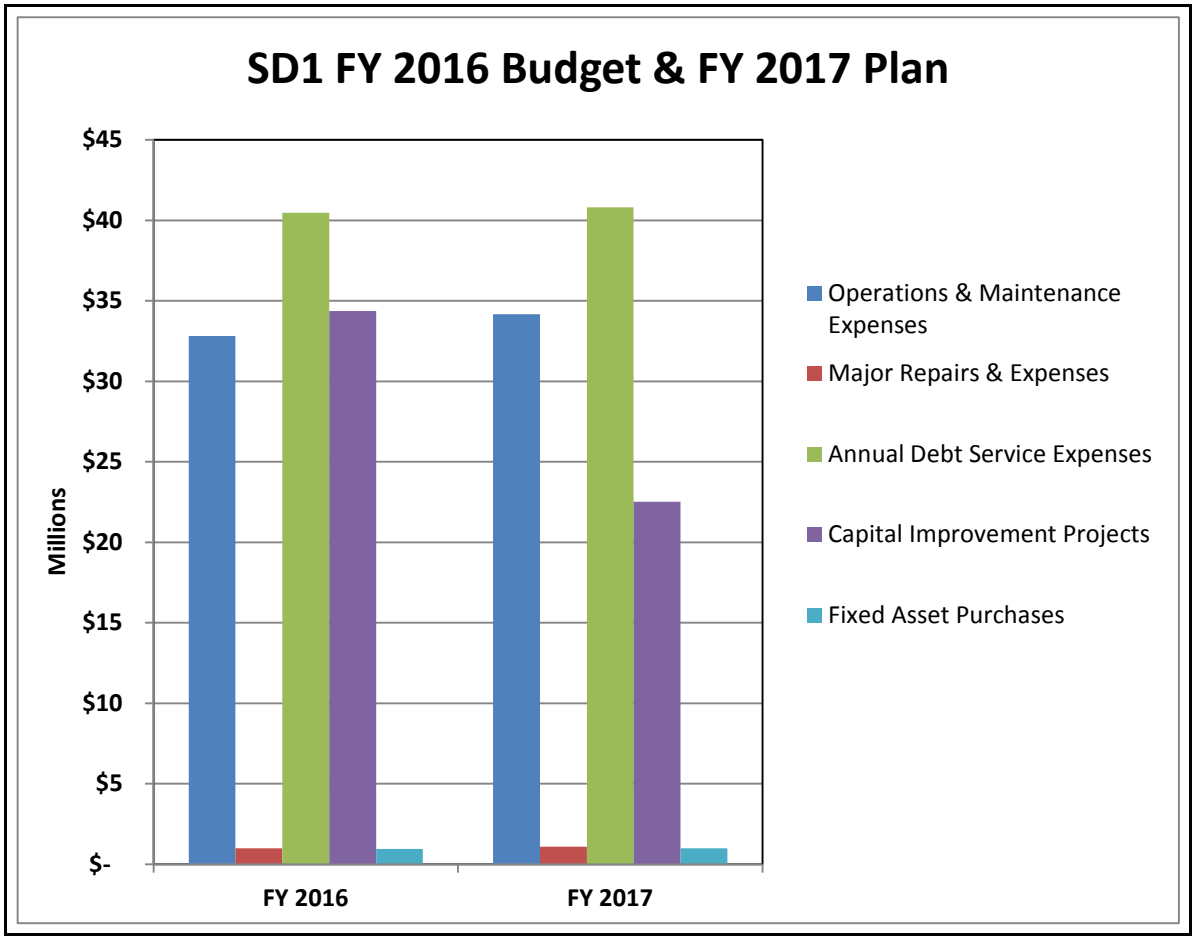
The audited capital expenditures for FY 2015 totaled approximately $12.7 million, and the audited O&M expenditures for FY 2015 totaled approximately $33.4 million. As required in the Consent Decree, SD1 has developed Watershed Plans for improvement projects to be implemented over the next several years, which will impact capital spending. The total capital spending associated with all sanitary projects over the next two years is approximately $56.9 million, as demonstrated in Table 2.1. Figure 2.1 represents SD1's anticipated debt service, O&M, and capital improvement program (CIP) expenses over the next two years.

Table 2.1 Two-Year CIP Budget
(FY 2016 and FY 2017)

Fiscal Year	Projected Capital Spending
2016	$34,374.979
2017	$22,525,500
Total	**$56,900,479**

Figure 2.1 SD1 Estimated Expenses: Annual Debt Service, O&M, and CIP

(FY 2016 and FY 2017)



2.1.2 Funding Sources

Although SD1 receives adequate funding from its operating revenue sources to fund its O&M and debt service commitments, these sources do not provide sufficient funding to also support the CIP. SD1 is therefore required to borrow money from other sources. During FY 2015, user rates, fees, and other revenues made up approximately 97.2% of the total funding sources, while borrowed money accounted for the remaining 2.8% of necessary funding sources to support the fiscal year budget.

2.2 Capacity Assessment & Assurance

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

2.2.1 Overflow Inspections and Hydraulic Modeling

During FY 2015, SD1's wet-weather CSO investigation crew continued to perform routine inspections before and after rain events. SSO investigation and clean-up crews also continued to perform routine inspections after rain events at prioritized recurring and suspected wet-weather SSO locations. The purpose of these routine and reactive inspections is to verify overflow activity, assess the cause of overflow, and initiate the proper procedures for overflow containment and cleanup. This is part of SD1's ongoing effort to characterize, verify, and respond to overflows throughout the collection system, and to ensure that they are appropriately categorized and prioritized for elimination. Proper overflow characterization from field inspections reinforces the accuracy of the hydraulic model, which SD1 uses to improve its understanding of system capacity, and helps identify the most appropriate and effective solutions for eliminating overflows.

SD1 developed a highly calibrated system-wide hydraulic model in 2008 to be used as an accurate planning tool for capital improvements, and to provide information about the current performance of SD1's collection system. To ensure that the hydraulic model continues to provide the most accurate information about the system's performance, SD1's Collections Systems – Operations Asset Maintenance crews perform routine inspections after rain events to verify the model-predicted overflows. The inspection routines, as well as targeted flow monitoring, help maintain an accurate hydraulic model capable of simulating various conditional impacts on an ever-changing system.

SD1 conducted approximately 5,440 CSO diversion inspections in FY 2015. Approximately 3,363 of the CSO inspections were conducted within 48 hours of a wet-weather event that produced at least one half of an inch of rain, or after a high-river event that activated the flood control system. The remaining 2,077 were routine CSO

inspections conducted in dry-weather conditions. Additionally, SD1 conducted approximately 1,192 SSO inspections during FY 2015 at its recurring and inactive wet-weather SSO locations, at its pump stations, and in response to all asset failures that produced an overflow. These overflow inspections are used to verify activity for system characterization and to initiate clean-up procedures when necessary.

2.2.2 Flow Monitoring and Hydraulic Modeling

Flow Monitoring Activity

SD1's flow monitoring crew is involved in a number of data collection efforts in specific areas of the collection system to confirm model predictions, identify and confirm areas that are suspected to have high inflow and infiltration (I/I), and collect pre and post construction monitoring data in project areas.

The map provided in Figure 2.2 highlights the 107 locations that the crew monitored during the reporting period, which includes:

- 78 capacity monitoring sites
- 12 post-construction monitoring sites
- 8 micro-monitoring sites to analyze usage and I/I of new developments
- 4 CSO monitoring sites
- 4 pre-construction monitoring sites for injection wells in the CSS
- 1 pump station bypass monitoring site

These meters are also used to calibrate and expand SD1's hydraulic model. Section 2.2.1 describes how field inspections are being used to continually provide assurances on the model predictions. Flow meters are used to gather more detailed information on system response to varying antecedent moisture conditions and weather patterns. Flow meters also answer specific conveyance questions related to the reservation of capacity, and the construction of capital improvements that alter the system enough to warrant calibration of the model.

Figure 2.3 illustrates where SD1's hydraulic model was calibrated or expanded with the continuous input of the SD1 flow monitoring program.

Figure 2.2 Flow Monitoring Locations in FY 2015

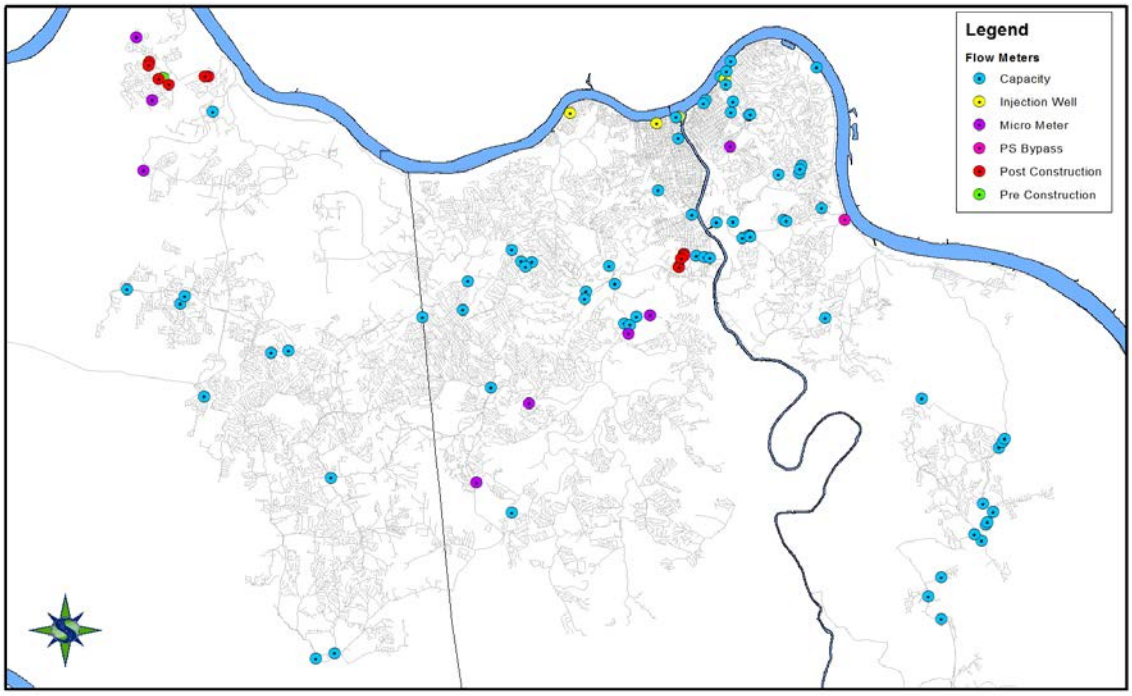
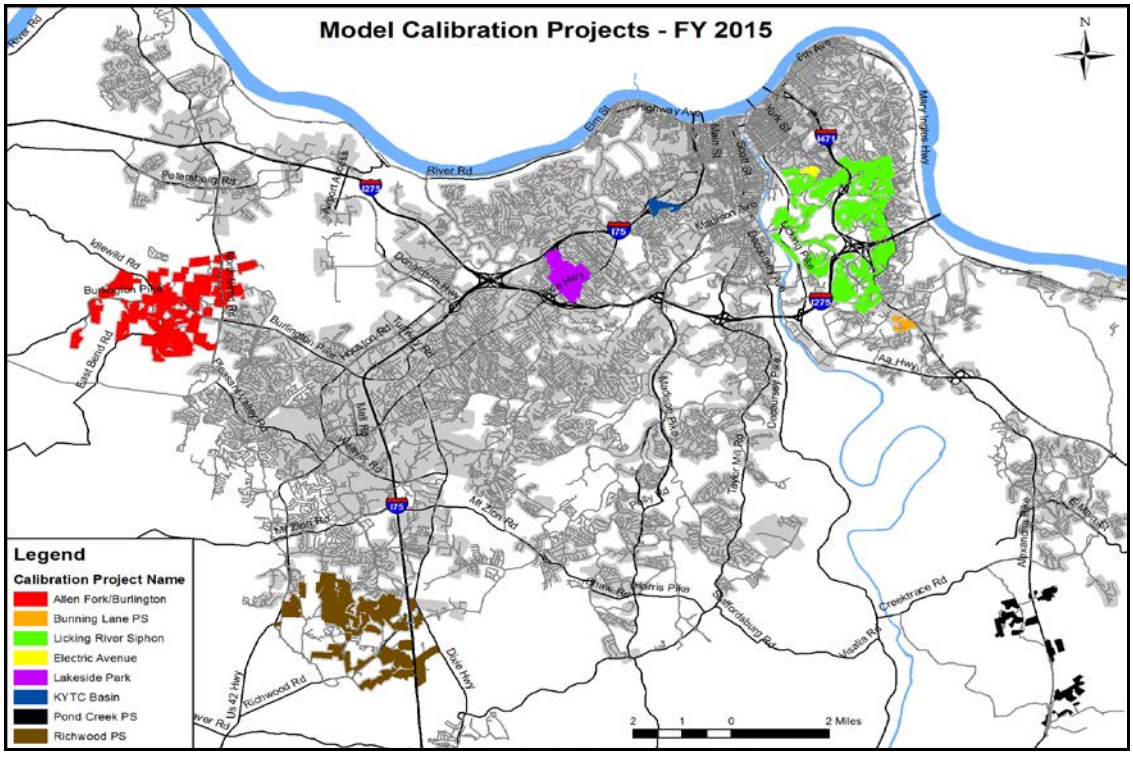


Figure 2.3 SD1 Model Calibrations in FY 2015

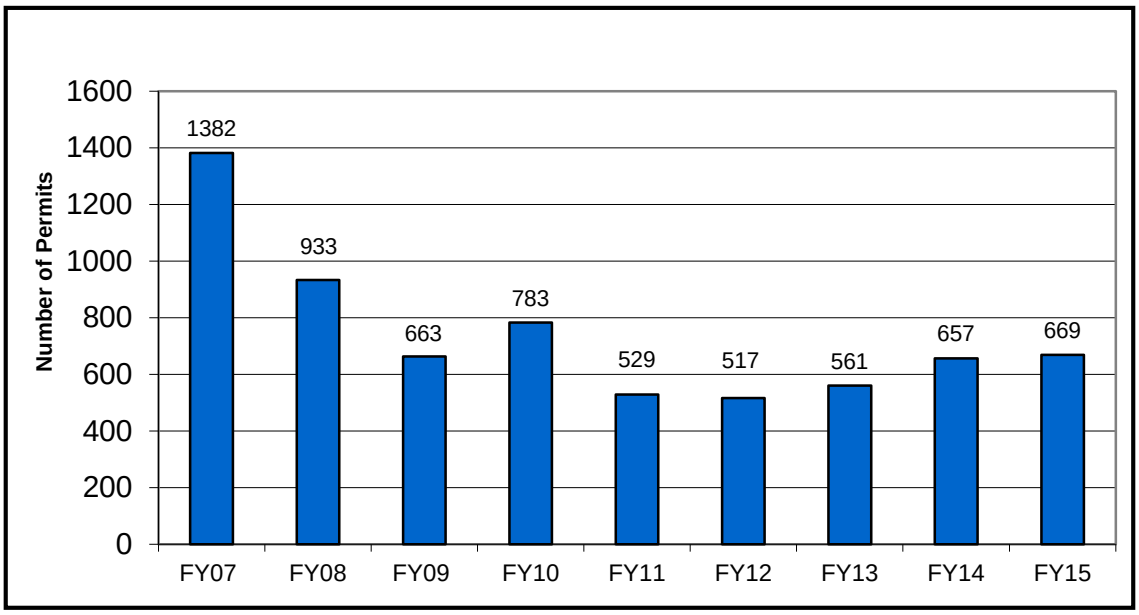


2.2.3 Reservation of Capacity

SD1's Rules and Regulations require developers to submit a written request for the reservation of sanitary sewer capacity, which is reviewed and considered for approval by SD1's Board of Directors or designee.

A building sewer capacity connection permit must be obtained from SD1, prior to connecting to the system. SD1 has issued 669 capacity connection permits in 2015. Figure 2.4 shows that the number of permits issued by SD1 has declined sharply from eight years ago, and averages 664 per year, since the Consent Decree.

Figure 2.4 Capacity Connection Permits Issued



2.3 Call Before You Dig

The purpose of SD1's Call Before You Dig Program is to protect underground assets by marking the ground where SD1 lines and easements exist, prior to construction activities by contractors, homeowners, and other utilities. By marking these assets prior to construction or any other disturbance, SD1 prevents unintended damage that could lead to line failures and SSOs. In compliance with the American Public Works Association Uniform Color Code, SD1 uses green paint to mark all sanitary sewers and storm sewers.

During FY 2015, SD1 received and responded to approximately 1,465 location requests, and marked approximately 2,701 assets. Table 2.2 provides the approximate total of line location requests received and assets marked by SD1 in the past five years.

Table 2.2 Line Locations

Fiscal Year	Number of Work Orders Complete	Number of Assets Marked
FY 2011	688	1,220
FY 2012	1,194	2,722
FY 2013	955	2,520
FY 2014	966	2,226
FY 2015	1,465	2,701

2.4 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 SD1 offers, including:

- Wastewater collection and treatment
- Storm water collection and management
- Flood protection and drainage
- Industrial monitoring
- Water quality monitoring
- Environmental education

SD1 has worked diligently to establish consistent messages and use unique ways of reaching targeted audiences through several internal and external communication initiatives. Highlights of these efforts are included throughout the remainder of this section.

2.4.1 General Public Education Efforts

SD1 engages and informs the general public on issues related its services, through various forms of media.

Articles

During this reporting period, SD1 has been featured in a number of publications, e-newsletters, blogs, and newspapers. Below are a few examples:

- Raintainers help save money and water (7/6/2014) – *Kentucky Enquirer*
- Covington, Sanitation officials host first public meeting on new water run-off improvements (8/5/2014) – *KY Forward*
- Utilities worry water's becoming unaffordable (12/4/2014) – *Governing*
- Seeking sinkhole solution (3/1/2015) – *River City News*
- Who pays to cover sinkholes? (4/27/2015) – *WXIX Fox 19 News*

Educational Material and Publications

As a routine part of SD1's communication efforts, educational information is published in "What's Happening," a county-specific publication that is mailed to every resident in Boone, Campbell and Kenton counties. During FY 2015, SD1 had educational information published in five different issues of "What's Happening."

In addition, SD1 has developed a number of informational and educational pieces during this reporting period, including:

- Use Less, Save More: Conserve Your Water and Lower Your Residential Bill
- Free Household Waste Collection Event (bill insert)
- Spring clean storm drains (bill insert)
- Maintaining Inlets, Outlets & Catch Basins (brochure)
- Maintaining Retention Basins (brochure)
- Maintaining Swales (brochure)
- Maintaining Detention Basins (brochure)

Refer to Appendix B, which highlights a few examples of these educational publications.

2.4.2 Website

SD1's website continues to evolve each year. During the current reporting period, information regarding SD1's Strategic Business Plan was added to the website. Additional topics on the website include current capital projects, SD1's Disconnection, Redirection, Infiltration Program (DRIP), tips for water conservation, FOG, rain event preparations, field trips, policies, and wet weather notifications. In addition, the home

page features a series of flash stories that are updated regularly and highlight key messages. These messages included stories such as:

- SD1 receives national recognition for treatment (http://www.sd1.org/NewsArticle.aspx?id=93)
- Spring clean storm drains (http://www.sd1.org/NewsArticle.aspx?id=98)
- Be responsible: Proper dispose unwanted medications (http://www.sd1.org/NewsArticle.aspx?id=101)

2.4.3 Customer Outreach

As a result of the customer service phone surveys conducted in FY 2015, SD1's Communication Department was able to determine where to continue focusing communication efforts with customers. During FY 2015, SD1 continued mailing bill inserts with tailored messages to customers. SD1 also mailed its welcome brochure to new customers, and directed them to additional information featured on SD1's website. SD1 also began recording and live streaming the monthly board meetings, so customers have the opportunity to view each meeting without attending.

SD1 also participated in a number of local events to better educate its customers on the importance of water quality. In August of 2015, SD1 co-hosted the Kentucky/Tennessee Water Professionals Conference in Covington, Kentucky. A free and open event called "Water For Life," which featured dozens of booths from local water agencies and non-profits, was held on the plaza of Newport on the Levee and attended by approximately 500 people. SD1 actively participated in four different displays and demonstrations at the "Water For Life" event. Additionally, SD1 participated in Save Local Water's rain barrel art event, which was created to promote the use of rain barrels throughout the Ohio River Valley area through a creative and educational medium.

SD1 began improving its crisis communication process to ensure important notices would be circulated to the correct people at the right time, during FY 2015. SD1 also launched a stakeholder engagement effort to assess the strength of stakeholder relationships and identify ways to make improvements. Both of these efforts are ongoing and will be further developed throughout FY 2016.

2.5 Compliance

The purpose of SD1's Compliance Program is to identify and control residential, commercial, and industrial sources of flow that could adversely affect the collection system. This program encompasses both the Industrial Pretreatment Program and Grease Control Program (see Section 3: Grease Control Program). This program meets the Clean Water Act pretreatment regulations and complies with the National Pollution Discharge Elimination System permit.

2.5.1 Permitting

The Compliance Program provides the authoritative measures necessary to permit and monitor discharges from commercial and industrial users that may cause corrosion or blockages in the collection system. SD1 ended FY 2015 with a total of 52 permitted Significant Industrial Users in its collection system.

2.5.2 Monitoring & Enforcement

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 protect SD1's sanitary sewer system, treatment plants, employees, and the receiving waters. All permitted industries are inspected annually and monitored semi-annually, with additional inspection and sampling performed as needed. During FY 2015, a total of 45 inspections were conducted. Of the 45 inspections performed, 42 were routine annual inspections and three were due to foaming events.

SD1 has an Enforcement Response Plan in place to address each violation. Typically, the first Notice of Violation (NOV) issued is verbal. The second NOV is written. Each subsequent NOV includes a fine. Fines can range anywhere from $500 to $1000 depending upon the violation. Most issues are resolved before escalating to fines. If problems persist, an industry is put on a compliance schedule. During FY 2015, SD1 issued 93 NOVs and 10 written notices with fines totaling $6,000. Refer to Appendix C for a summary report describing these violations in more detail.

2.6 Odor Control

SD1's Odor Control Program provides proactive measures to continuously monitor for hydrogen sulfide in the collection system and treatment facilities, which helps prevent the corrosion and failure of infrastructure. Odor control is also an essential customer service that SD1 strives to provide the community and its ratepayers.

2.6.1 Nasal Ranger Field Olfactometer

In alignment with SD1's Strategic Business Plan (described in Section 5: Self-Assessment), new technology was acquired in FY 2015 to detect, locate, and measure odors. The Nasal Ranger Field Olfactometer is a portable odor detecting device that is currently being used by SD1 to identify odors from the treatment plants. When SD1 receives an odor complaint from a customer, plant operators investigate the source with the Nasal Ranger to help initiate corrective actions. The Nasal Ranger removes the subjectivity of smell from the investigation and provides standards for scoring the offensiveness of the odors, which are then recorded and tracked in Lucity. Figure 2.5 is a picture of the Nasal Ranger in use at the Dry Creek Wastewater Treatment Facility.

Figure 2.5 Nasal Ranger

2.7 Continuous Sewer Assessment

The purpose of the Continuous Sewer Assessment program (CSAP) is to provide a proactive and coordinated asset management-based approach to assessing the condition and life cycle of SD1's infrastructure and managing a cost-effective 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 of its assets.

The CSAP is comprised of the following six specific O&M activities that work in conjunction to assess and maintain the collection system:

- Interceptor Program – targets the maintenance and condition assessment of critical main trunk and interceptor sewers
- Large Diameter Sewer Assessment Program – focuses on the maintenance and condition assessment of sewers in the combined sewer system with pipes typically 15-inches and larger in diameter that have a high consequence of failure
- Manhole Inspection Program – assesses manholes throughout the collection system to determine the extent of structural defects, signs of sewer surcharge, and risk of I/I
- Preventive O&M Program – prioritizes the condition assessment, maintenance and repair/rehabilitation of the collection system to proactively prevent system failure that can cause overflows
- SSES Program – identifies and assesses the sources of I/I throughout the collection system
- Trouble Call Program – provides response to calls from customers who suspect problems related to the sanitary sewer service

CSAP classifies pipes by using the Sewer Condition Risk Evaluation Analysis Model™ (SCREAM) to generate structural and maintenance scores for each pipe inspected. The structural and maintenance scores are used to identify appropriate schedules for recommended next actions, such as: reinspection, cleaning, repair, rehabilitation, or replacement.

Together, the activities of each O&M program ensure that SD1 is meeting the overall objectives of the CSAP. The remaining portions of this section highlight the collective progress of the six O&M programs in meeting the performance goals and projected

targets of the overall CSAP. The data provided for previous years has been updated based on improvements in Lucity recordkeeping over the past fiscal year.

2.7.1 Collection System Condition Assessment

Sewer Inspections

Table 2.3 outlines the amount of the system that has been assessed since the onset of the CSAP, through the end of the current reporting period.

Table 2.3 Sewer Inspection Footage

	Initial Inspection Footage	Follow-Up Inspection Footage	Total Cumulative Footage
FY 2008 (Jan-June)	374,068	46,898	420,966
FY 2009	1,340,874	498,113	1,838,987
FY 2010	421,130	589,519	1,010,649
FY 2011	600,306	583,389	1,183,695
FY 2012	501,160	483,494	984,654
FY 2013	622,585	788,311	1,410,896
FY 2014	716,278	629,179	1,345,457
FY 2015	1,070,089	623,860	1,693,949
Total To Date	**5,646,490 (71% of system)**	**4,242,763**	**9,889,253**

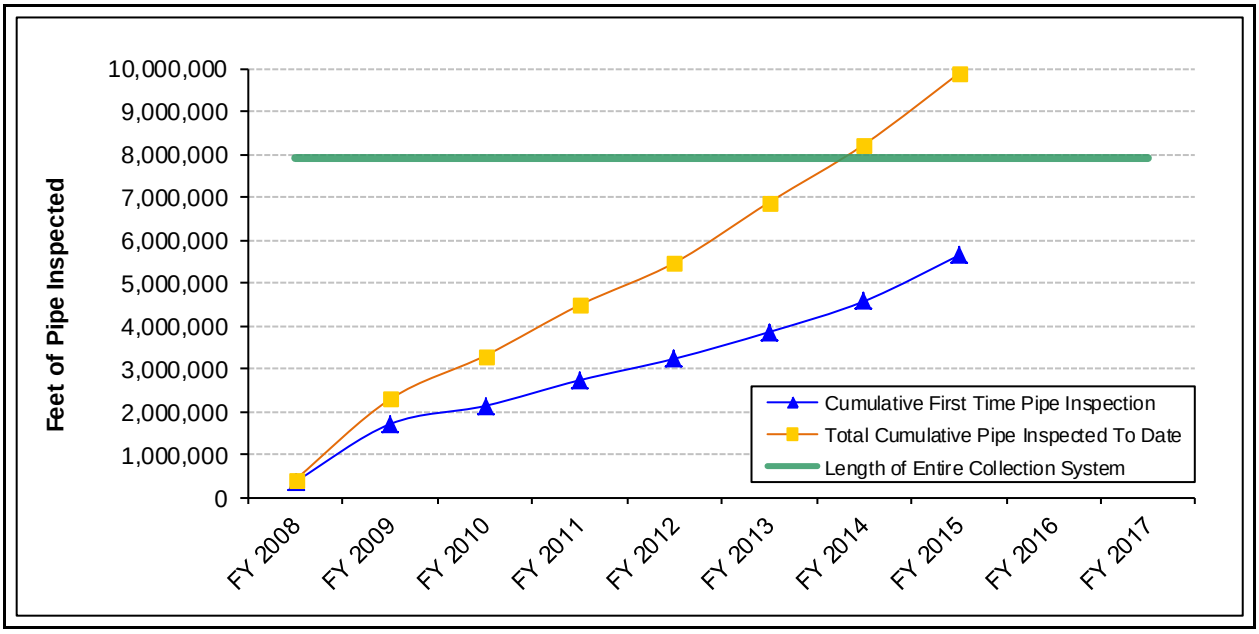
The above table shows the initial and follow-up inspection footages over the first seven years of the CSAP. Initial inspections reflect the amount of the system that has been inspected for the first time based on a prioritization of assets. Follow-up inspections are for pipes that have been initially inspected and leading to reactive maintenance, which in turn require a reinspection for an assessment of the maintenance effectiveness and a new condition score.

SD1's CMOM Self-Assessment, submitted on October 17, 2007, projected a 10-year target for total-system condition assessment of SD1's existing assets at that time. The

projection was largely based on historical inspections and maintenance routines performed prior to the formal development of SD1's CSAP. As stated in the Self-Assessment, this goal requires continuous evaluation that may lead to an adjustment of the initial projection. With approximately 71 percent of the system assessed at the end of FY 2015, SD1 has estimated that it will need to initially assess approximately 1.13 million feet of pipe, per year, for the next two years.

Figure 2.6 displays SD1's progress, as of FY 2015.

Figure 2.6 Sewer Inspection Progress



RedZone Robotics

To meet the ten-year target for complete system assessment, initial inspections will increase significantly in the last two years, over the first seven years. SD1 made strategic investments in FY 2014 in new camera technology to help accomplish this aggressive goal on time. RedZone Robotics' Solo camera is the world's only unmanned condition assessment tool made for sewer inspections. Refer to CMOM FY 2014 Annual Report for a thorough description of the new technology. Currently, SD1 is utilizing four of the new robotic cameras to increase annual inspections.

SD1 used the RedZone Solo cameras to capture approximately 607,000 feet of initial inspections, or 57 percent of all FY 2015 initial inspections.

Catch Basin and Manhole Inspections

SD1 inspects upstream and downstream manholes during all sewer inspections, unless the manholes have had an inspection within the last 12 months. SD1-owned catch basins, inlets, and trapped storm manholes that are in the combined sewer system are inspected at least once per year. Table 2.4 summarizes the number of catch basins and manholes inspected since the onset of CSAP.

Table 2.4 Catch Basin & Manhole Inspections

Fiscal Year	Number of Catch Basin Inspections*	Number of Manhole Inspections
FY 2008 (January – June)	986	2,050
FY 2009	1,774	7,238
FY 2010	4,168	1,933
FY 2011	3,401	1,783
FY 2012	4,019	901
FY 2013	4,247	889
FY 2014	3,745	824
FY 2015	3,569	208
Total Inspections	**25,909**	**15,826**

*Total includes basins owned by SD1, the Commonwealth of Kentucky, municipalities and private entities

2.7.2 Collection System Maintenance

Sewer Cleaning

Cleaning is critical in maintaining the capacity of the sewer system and preventing overflows. SD1's prioritization process ensures that cleaning activities are done in a cost-effective manner and only on pipes in need of cleaning. The cleaning program classifies pipes by using SCREAM™ maintenance scores and identifies appropriate schedules for re-inspections, cleaning, and when the pipe should be reviewed for a permanent solution, in lieu of continued cleaning.

Table 2.5 provides an overview of the length of pipe cleaned, in accordance with the CSAP cleaning program logic.

Table 2.5 Sewer Cleaning Footage

Period	Footage of Pipe Cleaned
FY 2008 (January – June)	113,695
FY 2009	439,191
FY 2010	737,613*
FY 2011	382,352
FY 2012	370,296
FY 2013	632,825
FY 2014	568,551
FY 2015	600,302
Total Feet Cleaned	**3,844,825**

*Higher totals in FY 2010 are due to sewer cleaning support provided by an outside contractor.

Pipes with high recurring maintenance scores undergo further evaluation for potential permanent solutions. Taking into consideration the pipe's structural and maintenance condition, a life-cycle cost analysis is performed to determine if it is more cost-effective to continue to inspect and clean the pipe on a regular preventive maintenance (PM) schedule or to permanently repair or replace the pipe. During FY 2015, SD1 cleaned 27,785 feet of pipe on a PM schedule.

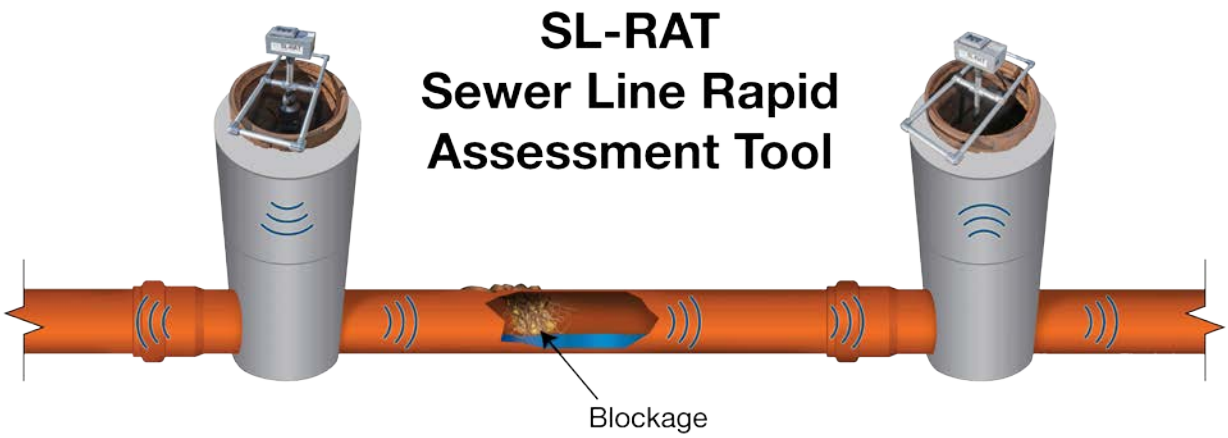
Typically, the cleaning and re-inspection frequencies of pipes vary, depending on the condition of the pipe or the frequency of reoccurring issues, such as grease, roots, basement backups and overflows. SD1's permanent PM cleaning list will continue to evolve as additional inspection data is collected, solutions for the remaining pipes are identified, and other new pipes are identified as needing corrective actions.

Sewer Line Rapid Assessment Tool (SL-RAT)

SD1 made further investments in sewer assessment technology in FY 2015. The Sewer Line Rapid Assessment Tool (SL-RAT) is a very portable and easy to deploy tool,

composed of one transmitter and one receiver, which sends, receives, and interprets acoustic signals in a pipe. The SL-RAT is designed to listen for and assess the presence of blockages in pipes that are 12 inches or less in diameter. Typical assessments take less than three minutes to perform. Figure 2.7 is a diagram of the SL-RAT sending and receiving acoustic signals through a pipe, from the rim of the manholes.

Figure 2.7 SL-RAT Diagram

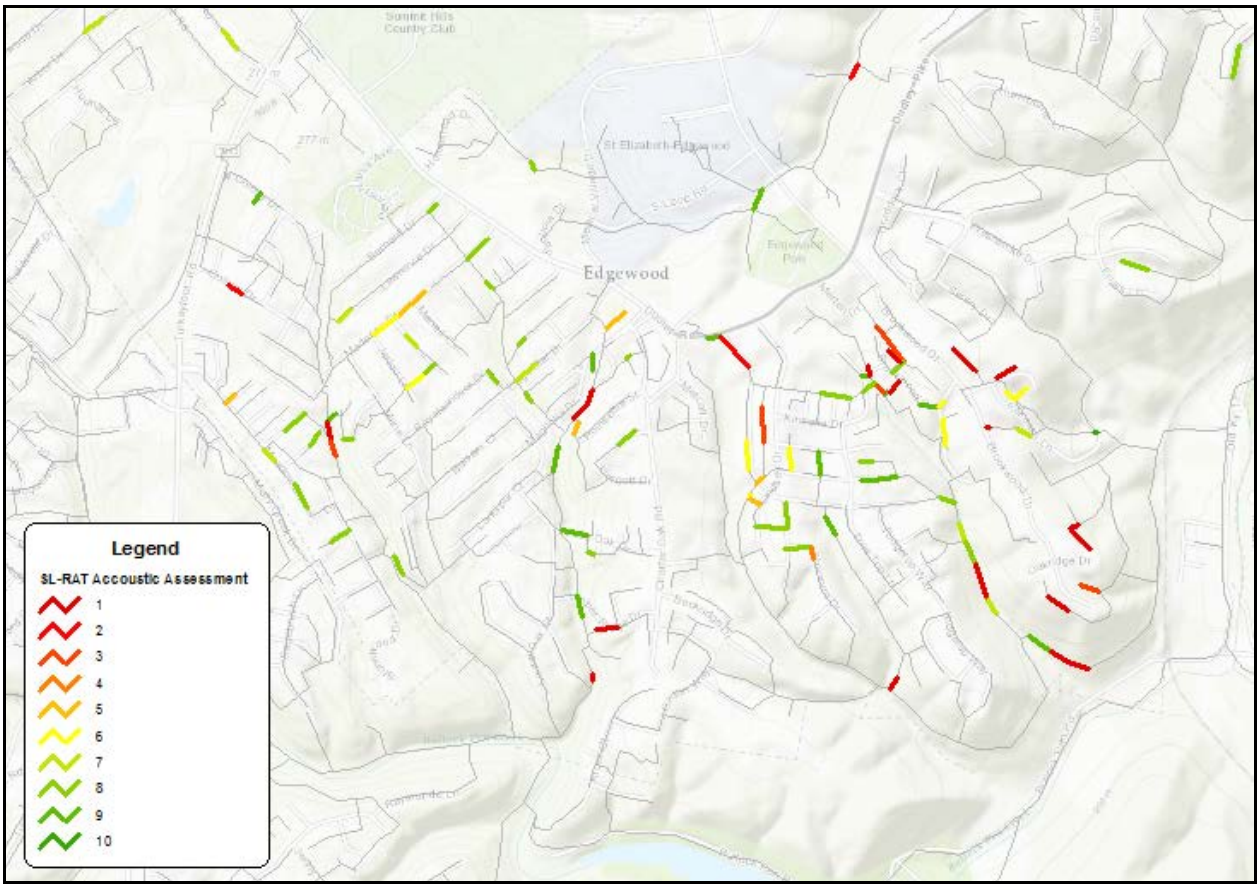


SD1 is currently using the SL-RAT to evaluate if the automated scheduling of maintenance next actions by the CSAP is valid. The SL-RAT provides a much more efficient method of refining the CSAP scheduling logic than the conventional deployment of resource and time intensive CCTV crews. SD1 has only begun to use the new technology in FY 2016, and has acoustically inspected more than 112,000 feet of pipe with a CSAP scheduled next action. Of the 112,000 feet evaluated with the SL-RAT, it has been determined that approximately 24 percent needed no immediate maintenance. This rapid assessment technology allows SD1 to make manual adjustments to its automated maintenance scheduling at a minimal expense, allowing SD1 to dedicate resources to higher priority cleanings.

SD1 has integrated the SL-RAT acoustic scores into its GIS to help maintenance schedulers identify which pipes need immediate attention and which pipes can be rescheduled. SL-RAT scores are on recorded with a scale of 1 to 10, from worst to best conditions. A score of 1 indicates a serious blockage that allowed no acoustic signal to

be received. A score of 10 indicates a completely clear pipe. All pipes scored higher than 5 are rescheduled for SL-RAT reassessment in one year. All pipes scored 5 and lower receive the CSAP scheduled maintenance. Figure 2.8 is an example of the SL-RAT scoring of pipes in SD1's GIS.

Figure 2.8 SL-RAT Assessments Visualized in GIS



SD1 is currently evaluating how to incorporate the SL-RAT into its CSAP logic, in order to automate the rescheduling. The SL-RAT is projected to assess approximately 6,125 feet of next action pipe per day and 245,000 feet per year. SL-RAT inspection totals will be provided in future annual reports.

Catch Basin and Grit Pit Cleaning

In January 2009 SD1 began tracking the amount of debris removed during catch basin and grit pit cleaning. During FY 2015, SD1 removed an estimated 486 cubic yards of debris from catch basins and 210 cubic yards of debris from grit pits.

Table 2.6 provides the estimated total cubic yards of debris removed from the collection system since mid-FY 2009.

Table 2.6 Yards of Debris Removed Through Catch Basin and Grit Pit Cleaning

Activity	FY09 Total	FY10 Total	FY11 Total	FY12 Total	FY13 Total	FY14 Total	FY15 Total	Combined Total
Catch Basin Cleaning	149	433	629	527	367	455	486	3,046
Grit Pit Cleaning	237	362	330	400	468	355	210	2,362
Total Cubic Yards Debris Removed	**386**	**795**	**959**	**927**	**835**	**810**	**696**	**5,408**

Rehabilitation and Replacement

The Asset Renewal group within the SD1 Collection Systems Department manages the internal construction crews and external maintenance contractors that perform repair, replacement, and rehabilitation work. The work schedule is determined by various criticality factors and the proximity of pipes to priority watershed areas. Pipes requiring emergency work are scheduled for immediate repairs upon discovery. Additional considerations that may determine if the rehabilitation schedule should be accelerated are:

- proximity to known building backups
- proximity to recurring overflows
- lack of hydraulic capacity
- proximity to other assets in need of repair
- high consequence of failure

Table 2.7 provides the rehabilitation and replacement activities performed by SD1's internal construction crews and contractors since the onset of the CSAP through the end of the FY 2015. These activities do not include capital improvements.

Table 2.7 Rehabilitation & Replacement Activities

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	Grand Total
Feet of Sewer Lines Repaired or Replaced	11,608	17,944	29,239	19,500	18,508	21,051	6,122	6,371	**130,343**
Feet of Sewer Lines Rehabilitated (CIPP)	1,081	3,204	12,872	64,715	65,757	38,129	43,026	28,237	**257,021**
Number of Manhole Repairs	548	370	317	321	774	299	258	154	**3,041**
Number of Manhole Replacements	35	63	80	60	89	33	19	10	**389**
Number of New Manhole Installations	16	53	40	36	57	34	14	9	**259**
Number of Catch Basin Repairs	68	115	71	209	292	21	56	63	**895**
Number of Catch Basin Replacements	81	209	203	116	100	54	28	23	**814**
Number of New Catch Basin Installations	0	4	2	3	3	3	6	0	**21**

2.8 Emergency Preparedness & Response

SD1's Sewer Overflow Response Plan (SORP) 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. SD1's SORP as amended July 10, 2009 received regulatory approval on November 10, 2009.

2.8.1 SORP Training

SD1 held annual SORP trainings between June and December of 2015. Approximately 109 operations-level employees attended these trainings, and were issued a standard operating procedures handbook, if needed. Personnel in Collection Systems and Plant and Pump Station Operations are required to attend a one-hour training course annually, and periodic refreshers throughout the year. The SORP initially required SD1 operations-level employees to attend a seven-hour course, annually. However, after six years of intensive SORP trainings, it has been determined that an annual one-hour course is sufficient. Operations-level employees also receive continuous hands-on training from supervisors in the field during actual overflow response events.

2.8.2 SORP 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 conducted its annual review meeting on November 09, 2015, and determined that there were no material modifications to the SORP for FY 2015. Minor updates include personnel and scheduling changes.

Standards Operating Procedures

During FY 2014, SORP coordinators developed approximately two standard operating procedures (SOPs) on emergency asset renewal and responding to trouble calls. Coordinators also documented 12 Standard Operating Guidelines for CSO related activities, such as: post-wet weather CSO inspections, outfall cleaning, estimating release volumes, and dry-weather inspections, among others. The SOPs developed in FY 2014 were finalized and approved by executive management in FY 2015, and are included in Appendix D, as well as the documented CSO guidelines.

2.8.3 SSO Reporting

The SORP describes SSO Reporting and Notification. Quarterly, SD1 reports overflows that occurred throughout SD1's service area, which includes a cumulative accounting of all overflow activity from January 2008 through the current reporting period and an annual comparison of the overflow activity. For the most up-to-date information regarding total SSO occurrences and volumes, refer to SD1 Consent Decree Quarterly Report No. 32, submitted on October 30, 2015.

2.9 Information Management Systems (IMS)

The purpose of SD1's Information Management Systems (IMS) program is to provide tools and software that track asset management records, such as, mapping, system performance, costs, work orders, inspections, and other datasets that measure the effectiveness and efficiency of SD1's O&M activities and capital expenditures. IMS programs are intended to maximize the accessibility and integration of a wide range of data that are pertinent to operational awareness and effective decision making.

2.9.1 GE Intelligent Platforms and XLReporter

In FY 2015, SD1 replaced its SCADA Lookout software, which was obsolete and no longer supported. The software was replaced with the redundant Proficy iFIX SCADA telemetry system by GE Intelligent Platforms, which has been implemented at all of SD1's treatment facilities, flood stations, and pump stations. The new system is integrated with the existing iFIX infrastructure at the treatment facilities and existing telemetry system infrastructure for the remote facilities. Information from Lookout was converted into iFIX and Proficy Historian was integrated to log all data of interest, providing greatly expanded capabilities beyond what Lookout afforded. Real-time data

for all monitored facilities are now collected and archived in a central repository, and available for instant access through multiple interfaces.

To facilitate review and analysis of the archived SCADA data, XLReporter software by SyTech was implemented and integrated with Proficy Historian, thereby allowing fast and reliable data access and summation. Several report templates have been created for the monitored facilitates, with emphasis on the pump stations and flood stations. This software allows SD1 staff and consultants to generate reports at will for engineering evaluations, collection system model calibration, operation and maintenance reviews, flow monitoring, compliance reporting, and other uses. These reports will increase productivity, allow faster decisions, and improve responsiveness to operational issues.

2.9.2 Water Information Management Solution (WIMS)

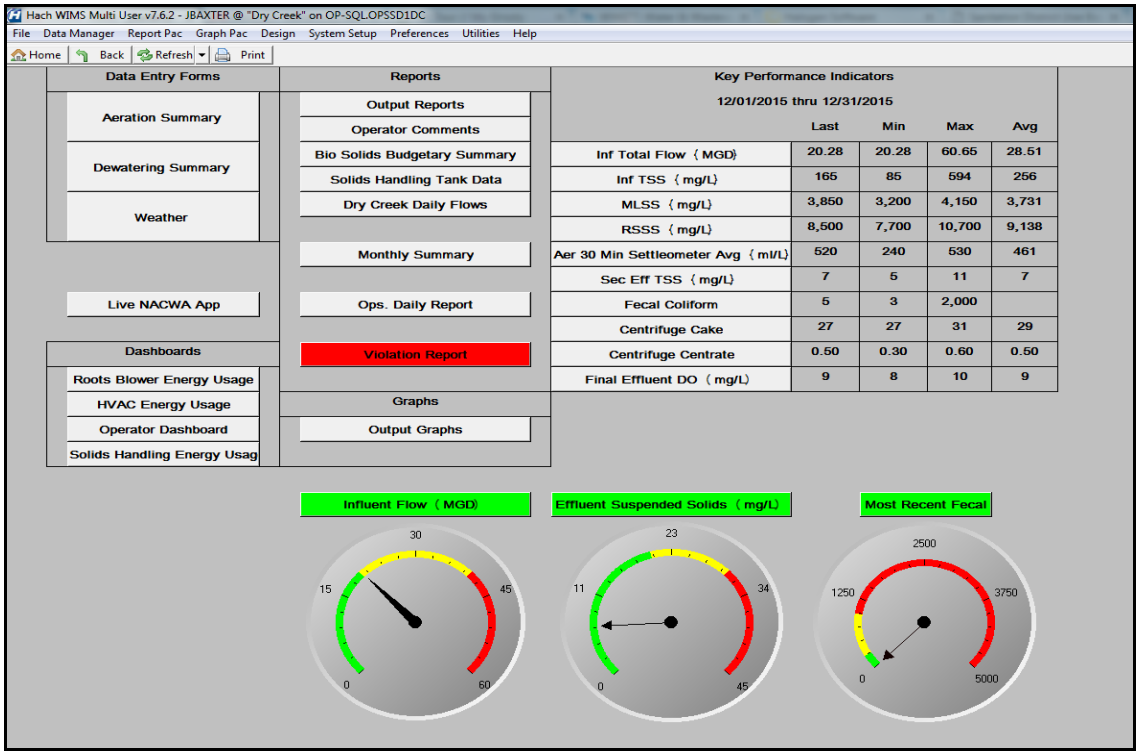
Another important advancement in data management that SD1 has implemented in the past two years is the Water Information Management Solution (WIMS) by Hach Company. WIMS is an interface system that collects and seamlessly reports data from various inputs, such as, the real-time SCADA data stored in Proficy Historian, Laboratory Information Management Systems (LIMS), and doForms (SD1's preferred cloud-based mobile forms for field data collection).

WIMS provides plant managers and operators the ability to centralize multiple datasets and build custom dashboards to continuously monitor critical data in a way the SD1 never had before. With this software, SD1 staff members in Plant Operations now have a data hub where custom reports, charts, and graphs can continuously summarize trends and forecast plant performance. Approximately 40 employees are now using WIMS to make more intelligent process control decisions and evaluate permit compliance.

WIMS has also provided plant managers crucial insights on energy management that have led to FY 2016 investments in new lighting. Monitoring energy usage at the treatment plants with WIMS has identified opportunities for cost savings that were not being realized before the centralized reporting service was available. SD1 will continue to evaluate what other live datasets can be integrated into WIMS in FY 2016.

Figure 2.9 is an example of one of the custom dashboards that monitors plant influent, effluent suspended solids, effluent fecal counts, and other key indicators.

Figure 2.9 WIMS Dashboard



2.10 New Connection Tap-In

The purpose of SD1's New Connection Tap-in Program is to ensure standard policies and procedures are in place to approve and perform connections to the sanitary and storm sewer systems. The objectives of this program are to:

- Accommodate economic development throughout the Northern Kentucky region
- Eliminate the number of illegal and improper taps made throughout the collection system
- Ensure all connection fees are paid and all new connections are put on billing
- Maintain the integrity of the sanitary sewer system by reducing the amount of I/I that can enter the system through bad taps or improper abandonment of service laterals
- Protect the integrity of the sanitary and storm sewer systems by enforcing the use of proper materials

- Provide an avenue for SD1 to keep certified tappers informed about changes to the Rules and Regulations or specifications for tapping the system
- Provide supplemental training on other critical SD1 programs, such as FOG, illicit discharge and confined space entry safety

2.10.1 Certified Tapper Program

SD1's formal Certified Tapper Program ensures that connections to the sanitary and storm sewer system are approved by SD1 personnel and are performed accurately based upon written specifications and procedures. Plumbers interested in becoming certified are required to attend training and pass a written exam. In addition, Certified Tappers must attend a recertification class offered by SD1 every three years. SD1 currently has 191 Certified Tappers representing 108 plumbing companies, two cities, and one utility. Of these 191 Certified Tappers, seven became newly certified during FY 2015.

2.10.2 Violations and Fines

During FY 2015, SD1 issued three violations and $1,500 in fines to three companies for connecting to SD1's sewer system without obtaining the proper Capacity Permit or Sanitary Sewer Connection Application Permit. Table 2.8 provides the total amount of documented violations and fines issued since FY 2009.

Table 2.8 Capacity Connection Violations and Fines

Fiscal Year	Number of Violations	Number of Companies	Total in Fines
2009	6	6	**$3,000**
2010	8	7	**$5,250**
2011	9	6	**$5,500**
2012	7	3	**$2,000**
2013	19	8	**$10,500**
2014	23	14	**$15,250**
2015	3	3	**$1,500**
Total	**75**	**47**	**$43,000**

2.11 Organizational Structure

The purpose of SD1's Organizational Structure Program is to delineate 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.

Appendix E provides the current organization charts for SD1.

2.12 Pump Station Operations

The purpose of SD1's Pump Station Operations program is to ensure reliable operations of the pump stations throughout the service area. Routine inspections and PM are preformed to ensure that all stations are operating at maximum efficiency.

2.12.1 Pump Station Maintenance

In FY 2015, SD1 completed a total of 13,676 pump station inspections and approximately 1,200 pump station PM inspections. Additionally, more than 5,000 inspections of generators and stand-by pumps were performed in FY 2015. The routine PM inspections include, but are not limited to:

- Generator assessments
- Stand-by pumps
- Heating ventilation and air conditioning
- Electrical components
- Air release valves, gate valves, plug valves
- Motors and motor controls
- Wet well evaluations
- Pneumatics and bubblers
- Hydraulics
- Telemetry and SCADA

2.13 Safety

The purpose of SD1's 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.

SD1's Safety Committee assists in providing a safe working environment for all employees. The Committee provides recommendations to improve safety and working conditions at SD1 and communicates with all departments, staff, and employees on matters relating to occupational safety and health. In addition, SD1 has an established an Emergency Response Team that has been trained to plan for and respond to workplace emergencies.

2.13.1 Safety Training

SD1 has continued to produce and distribute a Safety Training Calendar that identifies class offerings, instructors, times, and dates of training throughout the year. A copy of the FY 2015 Safety Training Calendar is included in Appendix F. The calendar is posted to the Intranet site, and monthly email notifications are sent to SD1 employees to notify them of upcoming trainings and mandatory attendance requirements. Attendance at safety training classes is tracked with Halogen performance management software to ensure that each employee meets his or her annual safety training requirements.

2.13.2 Performance Indicators

Table 2.9 outlines the indicators used to measure the success of the Safety Program and SD1's performance in each area during FY 2008 through FY 2015.

Table 2.9 Safety Program Performance

Performance Metric	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015
OSHA Recordables	10	15	19	6	8	8	27	23
Worker Compensation Claims	10	9	10	9	7	5	34	37
Friendly Reminders Issued	18	1	8	6	5	2	10	0
Safety Violations Issued	3	0	4	1	4	1	1	1
First Aids	17	17	21	23	22	5	7	6
Site Safety Audits	104	348	222	235	192	253	874	764

2.14 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 SD1 employees and the community
- 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 SD1 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. Employees may receive professional development through external conferences and courses, or through SD1's formal in-house training program that is managed by Human Resources. SD1 personnel received more than 10,000 hours of training (an average of 40 hours per person), during FY 2015.

(Refer to Section 2.6.1 for a description of SORP training and Section 2.12.1 for a description of safety training that took place during the current reporting period.)

2.14.1 Performance Management Workshops

In FY 2015, SD1 provided mandatory workshops to all of its managers. A series of four workshops on performance management covered topics such as: employee evaluation, goal setting, development plans, and career coaching. These workshops helped SD1 managers gain new insights into communication methods, employee productivity, morale, and standardizing evaluations. This training was identified in SD1's Strategic Business Plan as a necessary strategy to improve workforce dedication. SD1's Strategic Business Plan is covered in Section 5: Self-Assessment.

2.14.2 External Training

Tuition Reimbursement

SD1 encourages its employees to continuously improve upon their skills, which could be in the form of pursing higher education. Requests for financial assistance are approved based on the courses and their relationship to the employees' current or potential future position requirements and expected competencies. During FY 2015, SD1 provided $25,008 in educational assistance to its employees.

Fred Pryor Seminars

SD1 also provided annual memberships to Fred Pryor Seminars for approximately 45 employees during FY 2015. The memberships give the SD1 employees unlimited access to live and on-line courses on topics, such as: conflict resolution, communications, customer service, management, leadership, OSHA and workplace safety, Microsoft Office, project management, IT, and accounting.

2.15 Water Quality Monitoring

The purpose of the Watershed Monitoring Program is to establish a baseline assessment of watershed and stream conditions, via the collection of instream water quality, biological, physical habitat and hydromodification data throughout Northern Kentucky. This program includes dry-weather base flow water quality and biological

monitoring in all watersheds (approximately 75 locations), as well as, event-based wet-weather water quality in major watersheds (approximately 60 locations). Additionally, both wet and dry weather water quality samples are collected on the Ohio River between river miles 444 and 518 (22 locations).

Performance Monitoring

Instream water quality and overflow data collected to help characterize watersheds in Northern Kentucky plays an integral role in prioritizing, designing, and implementing cost-effective solutions that will reduce overflow occurrences and improve water quality in rivers and creeks within SD1's service area. These data were used to create the hydraulic and water quality models that served as essential planning tools in developing SD1's Watershed Plans first submitted on June 30, 2009, as well as the March 14, 2014 final submission. In 2012, SD1 initiated Phase II of its monitoring efforts, which entailed revisiting sites originally sampled at the onset of the program in 2007.

During FY 2015, the 14 sites within the West Basin were sampled. These site revisits included biological and habitat assessments, base flow water quality samples, and where appropriate, hydromodification surveys. Additionally, two base flow and one wet-weather event were sampled for the entire Northern Kentucky portion of the Ohio River (river miles 444-518). SD1 also continued to develop and refine performance metrics, in order to measure its progress in improving water quality in relation to the base-line water quality models.

SECTION 3. GREASE CONTROL PROGRAM

The purpose of SD1's Grease Control Program is to prevent the introduction of fats, oils, and grease (FOG) into the sanitary sewer system thereby reducing sewer overflows, maximizing sewer capacity and decreasing sewer maintenance costs. In addition, this program is intended to increase awareness of operators of local food service establishments (FSE) and home owners about measures they can take to limit or prevent the introduction of FOG into the drains and sanitary sewer system.

SD1 received regulatory approval of its Grease Control Program: Proposed Phased Implementation Plan on January 8, 2008. The revised Grease Control Program includes components such as ordinances, design standards, and permitting

requirements, inspection, and enforcement protocols. The enhancements made in the new Grease Control Program reduce sewer overflows within the collection systems and optimizes system capacity.

Refer to Appendix J for the completed and on-going tasks of the implementation plan. SD1 met the deadline for completion of all tasks by January 8, 2012, and is currently tracking the remaining on-going tasks as part of its regulatory compliance measures.

3.1 Permitting

SD1 determines the need to issue a Food Service Discharge Permit along with any applicable fees. Effective January 1, 2012, all new food service establishments are required to obtain a Food Service Discharge Permit, in accordance with SD1 Rules and Regulations.

3.1.1 Record Keeping

SD1 Food Service Discharge Permit requires that FSE maintain a “FOG Folder” at the FSE facility address that must be available for periodic inspections. Records shall be retained for a minimum of three years. Failure to meet any of the record keeping requirements is a violation of the Food Service Discharge Permit and SD1 Rules and Regulations.

3.1.2 Grease Control Equipment (GCE)

SD1’s permit requires that all discharges containing grease & oil pass through Grease Control Equipment (GCE) before entering the sanitary sewer. GCE refers to any equipment that removes fats, oils, and grease from wastewater such as a grease trap which is installed inside the building usually under a counter/sink or built into the floor of the kitchen area; or a grease interceptor which is usually installed outside in the ground and is much larger in size. GCE must be well-maintained and in proper operating condition at all times.

The design criteria for approved devices are defined in the FOG Management Policy and will be enforced with deadlines for installation through the revisions made to the Sanitary Rules and Regulations.

Effective January 1, 2012, all new FSEs, as well as those undergoing significant renovations, are required to submit plumbing plans to SD1 to ensure that the grease control device specified for installation meets SD1's design criteria. Once installed, the grease control device must be inspected by SD1 to verify that an appropriate grease control device was installed and is operating properly. SD1 will use any and all legal remedies to enforce the use of such devices, including the Administrative and Judicial remedies set forth in SD1's Sanitary Rules and Regulation. Commonly used remedies include: notices of violation, cease and desist orders, and administrative fines.

During FY 2015, approximately 36 plans for GCE installations were reviewed and 50 permits were issued by SD1. Table 3.1 provides an annual plan review and permit summary, since the effective date of the FOG Management Policy.

Table 3.1 GCE Plans Reviewed and Permits Issued

Period	Plans Reviewed	Permits Issued
FY 2012	10	23
FY 2013	53	52
FY 2014	45	58
FY 2015	36	50
Total	**144**	**183**

3.2 Inspections

3.2.1 Permitting Inspections

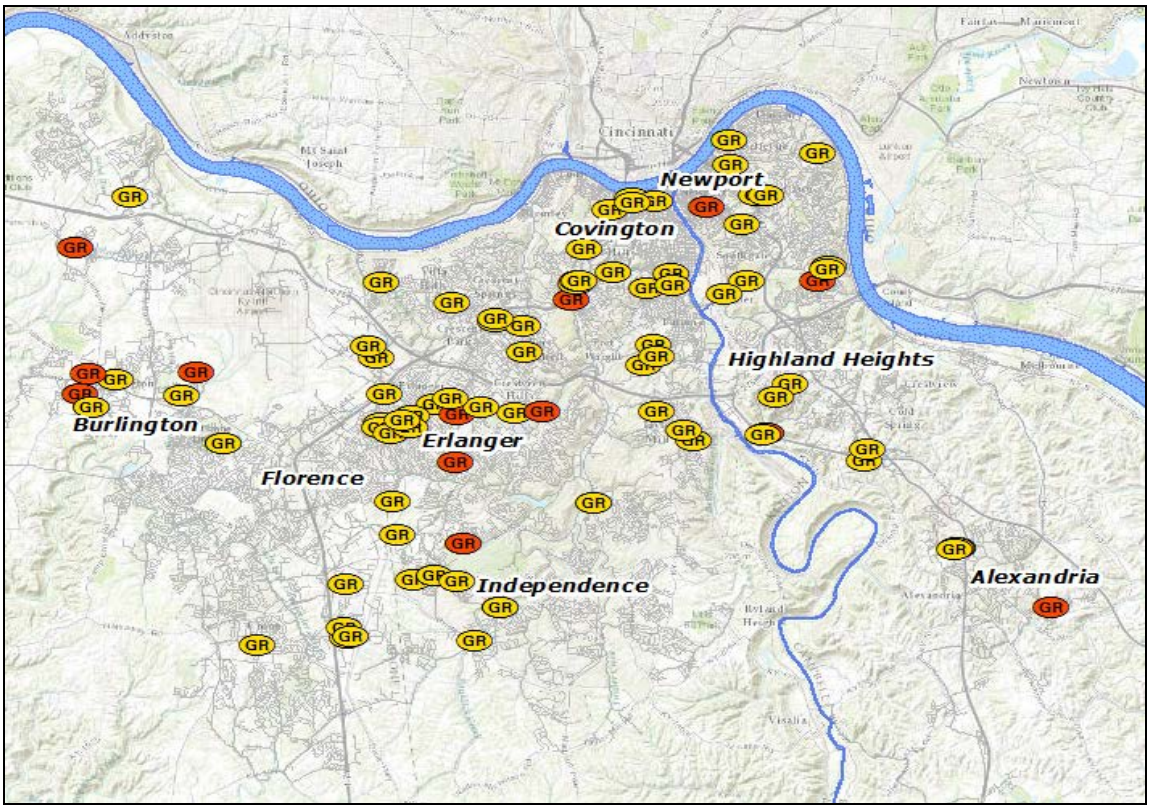
SD1's Industrial Monitoring Department performs inspections of local FSEs that may be contributing to the buildup of FOG in the collection system. Random inspections are conducted to ensure compliance with the permit and with SD1's Rules and Regulations. Additionally, SD1 requires permitted FSEs to report proof of service or cleaning of its GCE. All documentation must be submitted to SD1 by the FSEs within 30 days of the actual cleaning and hauling of grease.

Sewer Inspection Data

SD1 conducts FSE inspections based on current sewer inspection data, which provides specific locations of grease blockages. CCTV inspection data in Lucity indicating a blockage of 30% or greater due to grease is visualized with GIS mapping to represent the FOG problem areas across SD1's service area. Maps are created from the data to display the sewer lines, sewer structures, and buildings connected to the collection system in relation to the grease blockages. The maps are updated daily with new inspection data and are reviewed monthly to determine if new problem areas exist. If new problem areas are discovered, the FSEs in those areas are inspected.

Figure 3.1 illustrates the current CCTV observations across the service area where grease restrictions exist. There are approximately 84 locations that have been observed to have a 30-to-50 percent restriction in the pipe (yellow) and approximately 11 locations that have been observed to have a restriction greater than 50 percent in the pipe (red).

Figure 3.1 Observed Grease Restrictions



3.2.2 Compliance Inspections

SD1 permitted 50 new FSEs throughout the service area, and 19 existing FSEs closed during FY 2015, bringing the total of permitted FSEs to 169. Within one year of a permit's issue date, at least one follow-up inspection is conducted at each permitted FSE. In FY 2015, SD1 issued 33 Notice of Violations (NOV) for non-compliance with the Food Service Discharge Permit to 27 FSEs, and put two FSEs on compliance schedules. A complete FY 2015 violations summary report of permitted FSEs can be found in Appendix G.

3.3 Grease Trap Waste Disposal

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. Mobile waste haulers disposing grease trap waste at the plant are required to submit a Domestic Holding Tank Waste Hauler Manifest, which provides a detailed description of each load on their truck. All FSEs in SD1 jurisdiction shall have an SD1 certified grease waste hauler complete a grease interceptor certification annually.

SD1 monitors the method and location of disposal of grease removed from accepted grease control devices through the grease hauler manifest. The information is stored in LINKO HW FOG software and SD1's Lucity asset management software.

The amount of grease hauled to and disposed of at the Dry Creek Wastewater Treatment plant since FY 2008 is provided in Table 3.2.

(This space intentionally left blank.)

Table 3.2 Grease Disposed at Dry Creek Wastewater Treatment Plant

Fiscal Year	Gallons of Grease
2008	555,833*
2009	43,649
2010	108,300
2011	161,150
2012	234,210
2013	185,575
2014	194,325
2015	163,645
Total	**1,646,687**

*There was a significant reduction in the amount of grease disposed at Dry Creek following FY 2008 because SD1 no longer received grease from Schwan's Global Supply Chain; however, SD1 anticipates that this number will increase as additional FSEs become permitted.

3.4 FOG Education

3.4.1 FSE Compliance Workshop

SD1 has created appropriate training materials to educate FSEs and their employees on best management practices, permit requirements, and applicable rules and regulations. A representative from all permitted FSEs is required to attend a training workshop. SD1's current FSE compliance training workshop is being coordinated through the Northern Kentucky Health Department's monthly Food Service Managers Workshop, which is a required program for all FSEs in Northern Kentucky. This coordination provides a cost-effective and efficient way for SD1 to ensure that all FSEs, even those not currently permitted, are being trained. FSEs must have at least one trained employee on duty, per shift. During FY 2015, approximately 1,200 food service managers attended the workshop and received information on the FOG program.

3.4.2 General Education

SD1 uses various communication pieces throughout the year to inform and educate private residences on the harmful effects of FOG in sewer lines and the proper grease

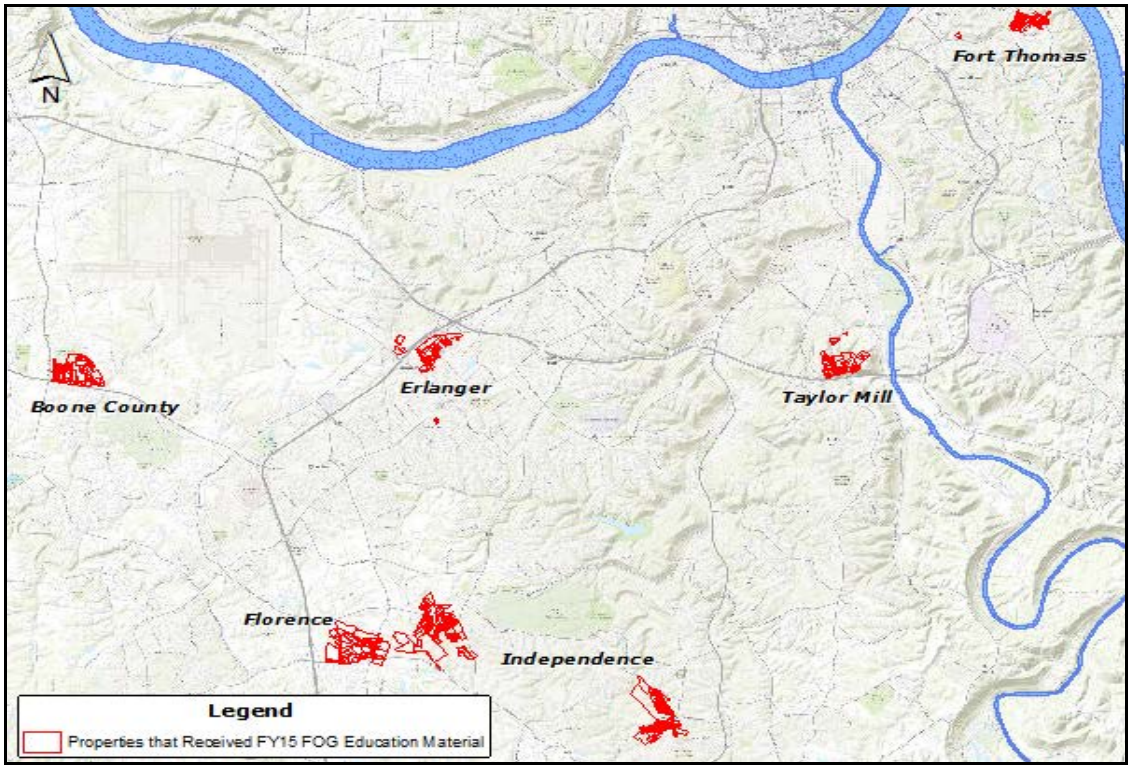
handling techniques that can be used to minimize the release of FOG into the collection system. This information is distributed through various channels such as: direct mailings, bill inserts, SD1's website, promotional product giveaways, and community newsletters and newspapers. With the grease observations obtained from CCTV inspections and overflow responses, SD1 focuses its public education efforts primarily in areas that are showing signs of grease problems and applies the appropriate communication strategy to best fit the situation.

Residential Communication

During FY 2015, SD1 mailed approximately 1,831 letters to residents in areas that have experienced an overflow or building backup caused by a build-up of grease. The standard letter alerts residents that an overflow or building backup occurred, educates the residents about the effects of fats, oils, and grease on the collection system, and clarifies proper disposal methods. The standard letter is provided in Appendix H.

Figure 3.2 illustrates, in red, the properties that SD1 mailed FOG education material to, following a downstream SSO or backup related to grease.

Figure 3.2 Properties that Received FOG Education Material in FY 2015



3.5 Performance Indicators

Table 3.2 provides a summary of the performance indicators that SD1 is tracking in relation to its implementation of a formal Grease Control Program. Specifically, SD1 is determining if there is any correlation between the amount of pipe on a PM cleaning list for grease and the increase in the number of SSOs and building backups. In FY 2015, SD1 nearly doubled the amount of pipe assigned to a grease PM schedule, due to an increase in SSO activity associated with grease.

Table 3.2 Grease Control Program Performance Indicators

Performance Indicator	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15
Feet of Line on Current PM Cleaning List due to Grease	82,000*	4,326	4,326	4,892	4,945	5,465	7,656	13,721
Number of SSOs due to Grease	4	17	10	7	5	4	6	12
Number of Building Backups due to Grease (Trouble Calls)	2	5	7	7	7	6	4	8

*Between FYs 2008 and 2009, the lines listed on the permanent PM list were inspected and assessed according to the CSAP, using SCREAM scores to help identify the lines requiring PM.

SECTION 4. 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.

During FY 2015 ad the first half of FY 2016, SD1 completed the final backup power projects at the following eleven pump stations:

- Blackstone Pump Station
- Bunning Lane Pump Station

- Crestview Pump Station
- Eighth Street Pump Station
- Hampton Ridge Pump Station
- Jonathan Pump Station
- Overlook Pump Station
- Riverview Farms Pump Station
- Silver Grove Pump Station
- Stillwater Pump Station
- Wedgewood Drive Pump Station

SD1 has completed all 110 backup power projects required by the Pump Station Backup Power Plan, before the December 31, 2015 Consent Decree deadline. For a detailed summary of the completed schedule, refer to Appendix I. With the completion of the Pump Station Backup Power Plan, the program will no longer be reviewed in future CMOM Annual Reports.

SECTION 5. SELF-ASSESSMENT

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 the process, SD1 employees identified nearly 100 improvements to collection system activities that would help achieve regulatory compliance and reduce SSO and CSO occurrences throughout the service area. SD1 has completed or found better alternatives to all of the original recommendations of the 2007 CMOM Self-Assessment.

Since the original CMOM Self-Assessment, SD1 has continued to perform self-assessments to improve its performance in meeting the needs of its customers and the obligations of its Consent Decree. In January of 2013, SD1 began developing a new five-year Strategic Business Plan (SBP) for the organization. The SBP heavily relied upon employee input, similar to the CMOM Self-Assessment. The process has produced a framework for identifying and prioritizing the goals, strategies, and metrics of SD1's essential services to the community. The following is an overview of the ongoing development of the SBP.

5.1 Strategic Business Plan

The SBP is a result of a collaborative planning process that was inclusive of customers, community stakeholders, and the employees of SD1. To develop a comprehensive community-focused and customer-centered plan, SD1 sought and assessed input and opinions from hundreds of individuals and organizations through surveys, interviews, and focus group sessions.

With the knowledge gathered from the assessment process, SD1 has:

- Updated its mission statement to reflect its purpose within the community
- Developed a new vision statement to communicate its plan to better serve the community moving forward
- Outlined company values to express the principles by which SD1 does business
- Identified seven goals to focus on the essential areas of improvement that are integral to the success of the organization and the Northern Kentucky community
- Devised key strategies to help SD1 achieve its seven goals

For further information on the development of the SBP, and a summary of the employee and stakeholder assessments, refer to Section 5.1 of the CMOM FY 2014 Annual Report. SD1's Strategic Business Plan summary document can be found in Appendix J.

5.1.1 SBP Initiatives

During FY 2015, SD1 made progress on several initiatives that align with the goals of the SBP. The following are brief summaries of a few of the initiatives currently underway.

Catch Basin Functionality Program

SD1 and municipalities often work together to solve storm water problems. In order to reduce the risk of flooding, erosion, and pollution in the community, SD1 has sought to strengthen its partnerships with municipalities. SD1 has developed a catch basin functionality assessment program that builds on its regular below-the-grate inspection routines, to inform municipalities of potential problems with street grade or debris issues that may be above the grate, which are the responsibility of the municipalities. SD1

anticipates that this program will provide a reduction in the amount of trouble calls received during heavy rain events. As a cost-saving measure, SD1 now compiles the findings into individualized reports for the communities it serves, so they can better prioritize and improve the performance of their catch basins. For a detailed summary of this program and example findings, refer to Section 2.1.2 and Appendix B of the Nine Minimum Controls 2015 Annual Compliance Report, submitted on September 4, 2015.

Customer Bill Payment Options

Customers expect the convenience of interactive technologies to pay their bills. To meet this need, SD1's Customer Contact Center is working to increase its bill payment options and enhance customers' overall experience. New payment choices in FY 2015 will offer convenient, around-the-clock options, including web and mobile payments. SD1 anticipates that these options will reduce the call volume for its agents, reduce wait time for its customers, and lead to an increase in prompt payments, as well as a decrease in delinquent accounts.

Enterprise Capital Management Plan

SD1's capital projects ensure that adequate and reliable facilities and infrastructure that are needed to convey, manage, and clean wastewater and storm water are provided for the community and to protect the environment. Because considerable resources are committed to capital projects each year, The Capital and Infrastructure Planning Department is developing an Enterprise Capital Program Management Plan. This plan will act as a map that outlines strong processes and appropriate controls critical to ensure the most effective use of the available resources. The plan will also outline technology improvements, testing procedures, and training requirements needed to manage the complex and dynamic capital improvement projects. The plan will align an organized set of process controls that allow SD1 employees and stakeholders to make informed choices throughout each phase of a capital project. This will result in projects being completed one time, within budget, and with desired performance results that have a positive impact to on the community and the environment.

Infrastructure Risk Assessment Program

Important decisions are made every day that has a direct impact on how SD1 operates as a utility, especially regarding aging infrastructure. In making these decisions on critical infrastructure, SD1 employees must continuously evaluate and prioritize the organization's infrastructure needs. In FY 2015, SD1 began developing an Infrastructure

Risk Assessment Program to better assess business risks and benefits when prioritizing infrastructure rehabilitation needs. This program will help provide effective distribution of limited resources to critical projects.

In order to continue providing reliable wastewater and storm water services at an affordable rate to its customers, while meeting the obligations of the Consent Decree and protecting the environment, SD1 will implement its priority SBP projects that address issues of strategic importance to the entire region. Commitment to this plan ensures that all members of SD1's staff work toward the protection of public health, property, and the environment, while supporting the economic vitality of the community.

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APPENDIX A:

Maps of Sanitary and Storm Service Areas

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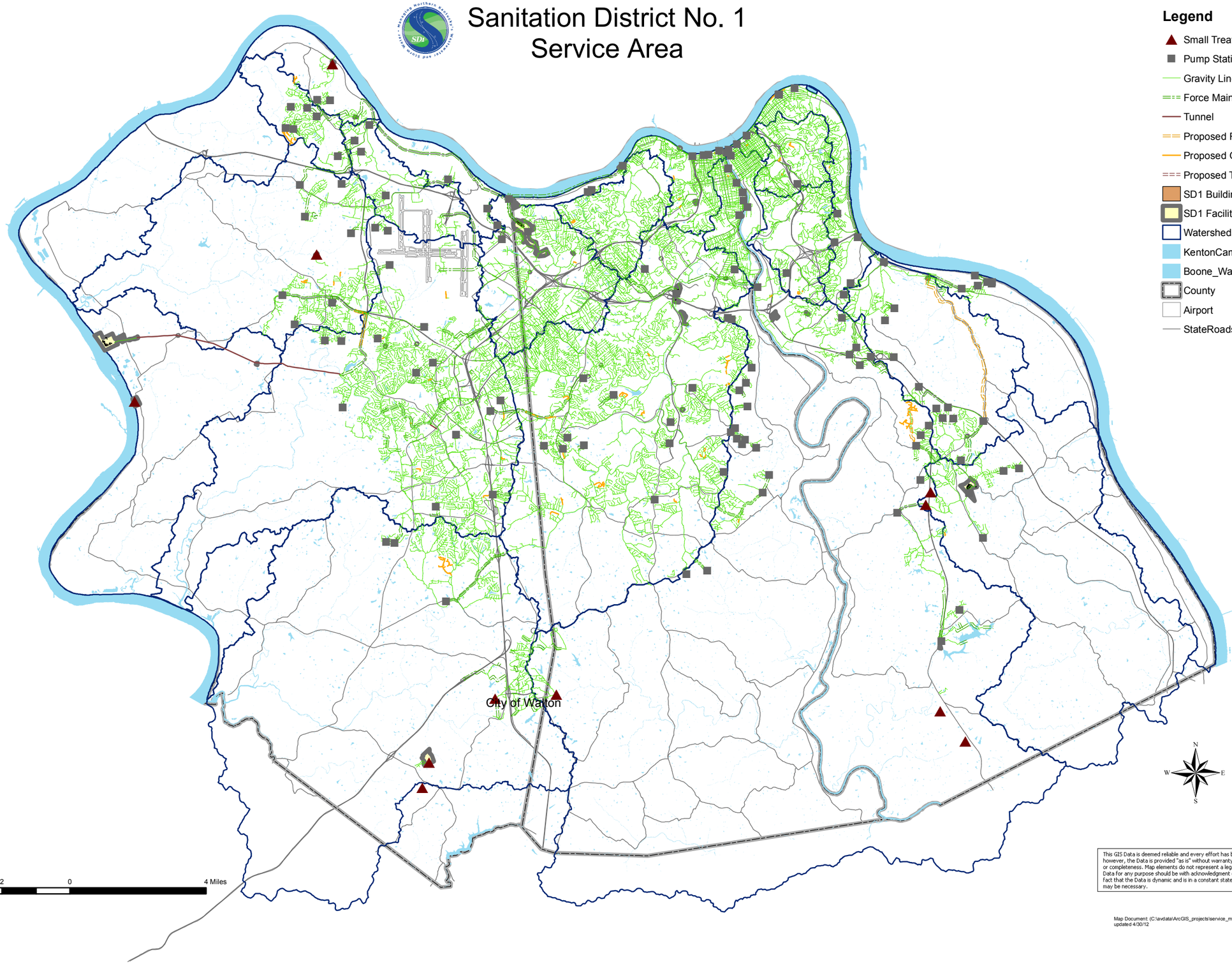
Sanitation District No. 1
Service Area



Legend

- Small Treatment Plant
- Pump Station
- Gravity Line
- Force Main
- Tunnel
- Proposed Force Main
- Proposed Gravity Line
- Proposed Tunnel
- SD1 Buildings
- SD1 Facility Sites
- Watersheds
- KentonCampbell_Waterbodies
- Boone_Waterbodies
- County
- Airport
- StateRoads

N
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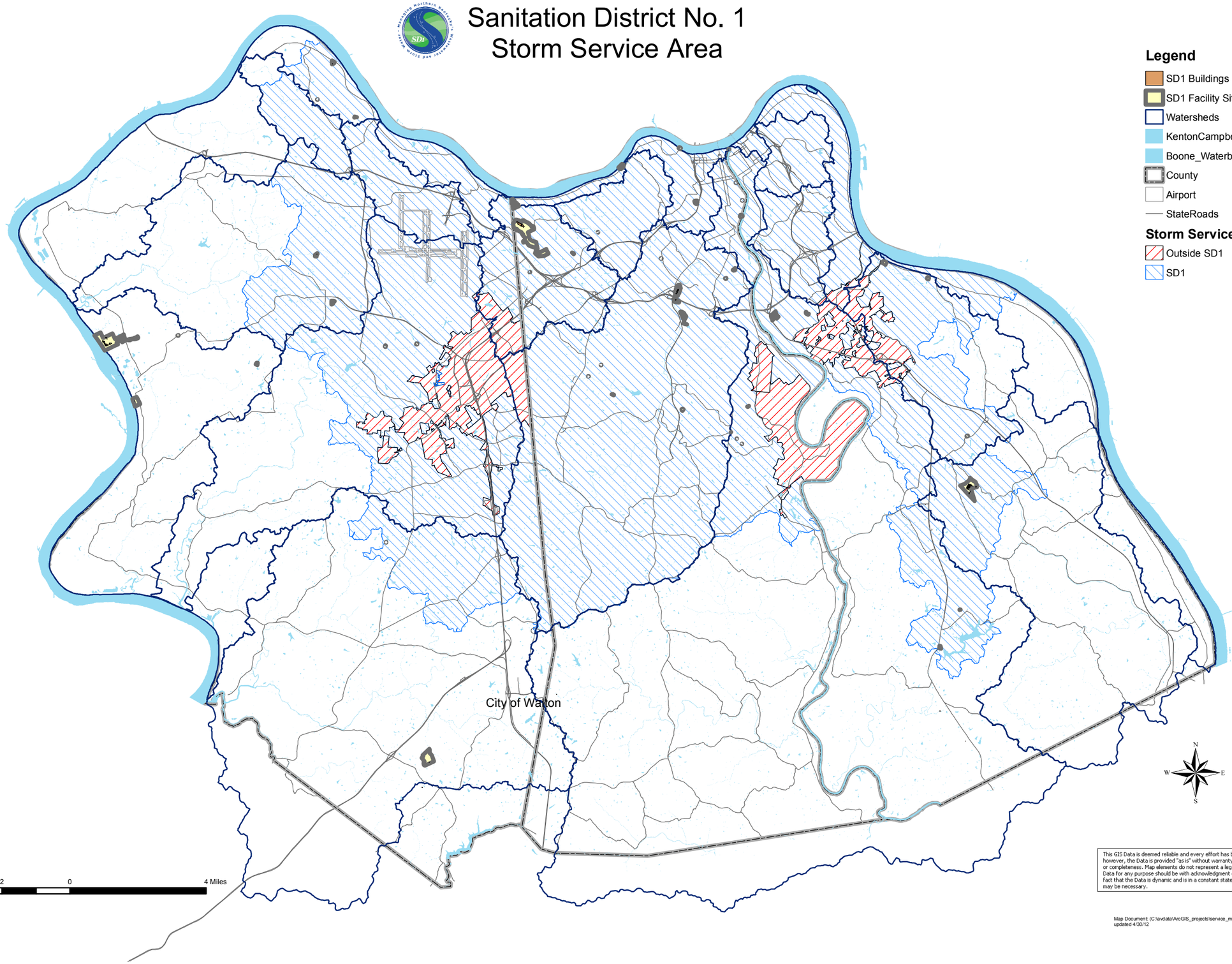
4 2 0 4 Miles

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 4/30/12

Sanitation District No. 1
Storm Service Area



Legend

- SD1 Buildings
- SD1 Facility Sites
- Watersheds
- KentonCampbell_Waterbodies
- Boone_Waterbodies
- County
- Airport
- StateRoads

Storm Service Boundary

- Outside SD1
- SD1

Map Document: (C:\avdata\ArcGIS_projects\service_map_updates10_07.mxd)
updated 4/30/12

APPENDIX B:

FY 2015 Examples of Educational Publications

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SD1

Managing Northern Kentucky's Wastewater and Storm Water

Rule of thumb

The best maintenance is usually preventative, and most problems with storm water control structures can be avoided with one simple step: Clear trash, leaves and other debris away from storm water structures. Debris leads to clogging, which makes control structures less effective at limiting flooding and erosion.

INLET, OUTLET AND CATCH BASIN MAINTENANCE

- ☐ Regularly inspect inlets, outlets, catch basins and the surrounding area for erosion and clogging.
- ☐ Clear brush, grass clippings and other debris that can block drainage.
- ☐ Mow surrounding grass frequently and maintain other nearby vegetation as needed.
- ☐ Call a professional to clean out underground or enclosed structures.
- ☐ Do not dump oil, paint or other pollutants near an inlet or other storm water control. These structures send water directly to nearby waterways, where pollutants can harm water quality and destroy wildlife habitats.

Important notice

While catch basins, inlets and outlets are important tools for managing storm water, they can be dangerous during a heavy rainstorm. Never allow children to play near these storm water structures, as there is a risk of injury or drowning.

Learn more

Visit SD1.org for more information about what SD1 is doing to manage storm water, improve water quality and protect your community from storm water damage.

Get help

If significant erosion, sediment accumulation or other damage is evident near storm water structures, contact SD1 at 859-578-7450 or info@sd1.org to have them inspected. SD1 staff may be able to help determine the cause of the problem and the individual or entity responsible for the maintenance.

For more information about properly maintaining storm water control structures on private property, call a local engineer or landscape architect.

Maintaining Inlets, Outlets & Catch Basins

Storm water, SD1 & you

As our communities grow, our neighborhoods include an increasing number of buildings, roads and parking lots. This growth is important for our local economy, but the additional hard, impervious surfaces prohibit rain and snow melt from soaking into the ground. This creates storm water runoff, which can lead to erosion and flooding that may damage homes and landscaping, make travel difficult and affect recreation and wildlife habitats.

To control storm water runoff, Sanitation District No. 1 (SD1) maintains an expansive system of storm sewer pipes and other structures, but it is only one piece of the storm water puzzle – cities, counties and individual property owners also play an important role.

Your role

When new homes, businesses and neighborhoods are built, developers often install control structures at individual project sites to manage runoff. These storm water control structures sometimes interconnect with neighboring property or with infrastructure under SD1's control, but responsibility for structures on private property often lies with property owners, homeowner associations or property management companies.

It is essential that private property owners properly maintain storm water control structures on their property to ensure the entire system runs smoothly.

Private property owners also should be careful when adding new structures, like a shed, or making major landscaping changes to their property. If a change reroutes storm water and has a negative impact on properties downstream, the matter could become a legal issue among neighbors.

Good neighbors

While individual property owners are required to maintain some storm water control structures, they also can take voluntary steps to help the whole community. Even if a structure is publicly owned, citizens can protect their community from flooding and other problems by simply clearing away nearby debris as they see it. It's one small, preventative step that can do a lot of good.

Infrastructure 101

The most common storm water structures private property owners may interact with are drainage inlets and outlets, catch basins, detention and retention basins and swales. In addition to limiting flooding and erosion by slowing down water movement, many of these structures also help filter the water before it reaches streams and lakes.

Inlets, outlets & catch basins

Inlets, outlets and catch basins are common storm water control structures, sometimes covered by heavy grates or screens, which allow water into or out of another storm water structure. In addition to limiting flooding and erosion by slowing down water movement, inlets help filter litter and debris from water before it reaches streams and lakes.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Rule of thumb

The best maintenance is usually preventative, and most problems with storm water control structures can be avoided with one simple step: Clear trash, leaves and other debris away from storm water structures. Debris leads to clogging, which makes control structures less effective at limiting flooding and erosion.

DETENTION BASIN MAINTENANCE

- ☐ Regularly inspect the detention basin for trash and debris accumulation, erosion, standing water, clogged pipes or other damage.
- ☐ Remove and properly dispose of any trash or debris that accumulates in the basin.
- ☐ Allow native vegetation to grow in and around the basin to prevent erosion. Typically, mowing one to three times per year should be sufficient.
- ☐ Do not plant trees along the edge of the basin, as their roots can damage the basin's banks.
- ☐ Pick up after pets to prevent the waste from being washed into the basin.
- ☐ Use pesticides and fertilizers sparingly on your yard and landscaping. Rain may wash excess chemicals into the storm water system and pollute rivers and streams.
- ☐ Call a professional to clean out underground or enclosed structures.

Important notice

While detention basins are effective tools for managing storm water, they can be dangerous during a heavy rainstorm. Never allow children to play in a detention basin, as there is a risk of injury or drowning.

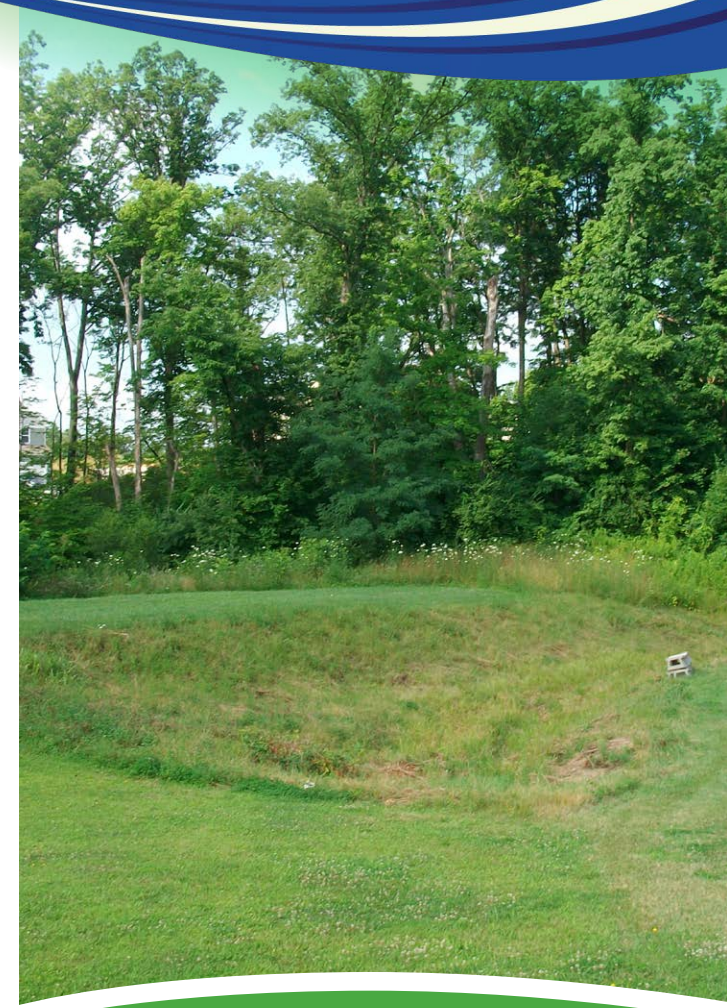
Learn more

Visit SD1.org for more information about what SD1 is doing to manage storm water, improve water quality and protect your community from storm water damage.

Get help

If significant erosion, sediment accumulation or other damage is evident near a storm water structure, contact SD1 at 859-578-7450 or info@sd1.org to have it inspected. SD1 staff may be able to help determine the cause of the problem and the individual or entity responsible for the maintenance.

For more information about properly maintaining storm water control structures on private property, call a local engineer or landscape architect.



Maintaining Detention Basins

Storm water, SD1 & you

As our communities grow, our neighborhoods include an increasing number of buildings, roads and parking lots. This growth is important for our local economy, but the additional hard, impervious surfaces prohibit rain and snow melt from soaking into the ground. This creates storm water runoff, which can lead to erosion and flooding that may damage homes and landscaping, make travel difficult and affect recreation and wildlife habitats.

To control storm water runoff, Sanitation District No. 1 (SD1) maintains an expansive system of storm sewer pipes and other structures, but it is only one piece of the storm water puzzle – cities, counties and individual property owners also play an important role.

Your role

When new homes, businesses and neighborhoods are built, developers often install control structures at individual project sites to manage runoff. These storm water control structures sometimes interconnect with neighboring property or with infrastructure under SD1's control, but responsibility for structures on private property often lies with property owners, homeowner associations or property management companies.

It is essential that private property owners properly maintain storm water control structures on their property to ensure the entire system runs smoothly.

Private property owners also should be careful when adding new structures, like a shed, or making major landscaping changes to their property. If a change reroutes storm water and has a negative impact on properties downstream, the matter could become a legal issue among neighbors.

Good neighbors

While individual property owners are required to maintain some storm water control structures, they also can take voluntary steps to help the whole community. Even if a structure is publicly owned, citizens can protect their community from flooding and other problems by simply clearing away nearby debris as they see it. It's one small, preventative step that can do a lot of good.

Infrastructure 101

The most common storm water structures private property owners may interact with are drainage inlets and outlets, catch basins, detention and retention basins and swales. In addition to limiting flooding and erosion by slowing down water movement, many of these structures also help filter the water before it reaches streams and lakes.

Detention basins

Detention basins are vegetated depressions designed to collect and hold storm water runoff from impervious surfaces. Also known as "dry ponds," detention basins typically do not contain water during dry weather conditions. When it rains, storm water flows into the basin from the surrounding land or other storm systems (e.g., inlets, pipes and swales). Typically, the water is then slowly released through another pipe into a nearby stream within 24 to 36 hours after the rain event.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Rule of thumb

The best maintenance is usually preventative, and most problems with storm water control structures can be avoided with one simple step: Clear trash, leaves and other debris away from storm water structures. Debris leads to clogging, which makes control structures less effective at limiting flooding and erosion.

RETENTION BASIN MAINTENANCE

- [ ] Regularly inspect retention basins for trash and debris, bank erosion, clogged pipes or other damage.
- [ ] Remove and properly dispose of any trash or debris that accumulates in the basin.
- [ ] Use pesticides and fertilizers sparingly on your yard and landscaping. Excess chemicals can harm aquatic life and cause unhealthy overgrowth of algae.
- [ ] Allow native vegetation to grow up around the edge of the basin to help slow the flow of storm water and prevent erosion.
- [ ] Do not plant trees along the edge of the pond, as their roots can damage the pond's banks.
- [ ] Pick up after pets to prevent the waste from being washed into the pond.
- [ ] Call a professional to clean out underground or enclosed structures.

Important notice

While retention basins are important tools for managing storm water, they can be dangerous during a heavy rainstorm. Never allow children to play near these storm water structures, as there is a risk of injury or drowning.

Also, watch out for toxic blue-green algae, or cyanobacteria, a rare type of algae bloom that can harm pets and aquatic life and cause serious illness in humans. Be on the alert for the following:

- Algae that looks like green paint floating on the surface of the water
- Large numbers of dead fish or other aquatic creatures in and around the pond
- Signs of poisoning in pets that have been in or near the water

Learn more

Visit SD1.org for more information about what SD1 is doing to manage storm water, improve water quality and protect your community from storm water damage.

Get help

If significant erosion, sediment accumulation, algae overgrowth or other damage is evident in the pond, contact SD1 at 859-578-7450 or info@sd1.org to have the pond inspected. SD1 staff may be able to help determine the cause of the problem and the individual or entity responsible for the maintenance.

For more information about properly maintaining storm water control structures on private property, call a local engineer or landscape architect.

Maintaining Retention Basins

Storm water, SD1 & you

As our communities grow, our neighborhoods include an increasing number of buildings, roads and parking lots. This growth is important for our local economy, but the additional hard, impervious surfaces prohibit rain and snow melt from soaking into the ground. This creates storm water runoff, which can lead to erosion and flooding that may damage homes and landscaping, make travel difficult and affect recreation and wildlife habitats.

To control storm water runoff, Sanitation District No. 1 (SD1) maintains an expansive system of storm sewer pipes and other structures, but it is only one piece of the storm water puzzle – cities, counties and individual property owners also play an important role.

Your role

When new homes, businesses and neighborhoods are built, developers often install control structures at individual project sites to manage runoff. These storm water control structures sometimes interconnect with neighboring property or with infrastructure under SD1's control, but responsibility for structures on private property often lies with property owners, homeowner associations or property management companies.

It is essential that private property owners properly maintain storm water control structures on their property to ensure the entire system runs smoothly.

Private property owners also should be careful when adding new structures, like a shed, or making major landscaping changes to their property. If a change reroutes storm water and has a negative impact on properties downstream, the matter could become a legal issue among neighbors.

Good neighbors

While individual property owners are required to maintain some storm water control structures, they also can take voluntary steps to help the whole community. Even if a structure is publicly owned, citizens can protect their community from flooding and other problems by simply clearing away nearby debris as they see it. It's one small, preventative step that can do a lot of good.

Infrastructure 101

The most common storm water structures private property owners may interact with are drainage inlets and outlets, catch basins, detention and retention basins and swales. In addition to limiting flooding and erosion by slowing down water movement, many of these structures also help filter the water before it reaches streams and lakes.

Retention basins

Retention basins are man-made ponds designed to collect, hold and filter storm water runoff from impervious surfaces. Also known as "wet ponds," they hold a permanent pool of water that can provide habitat appropriate for fish and other aquatic life. When it rains, runoff from the surrounding land and other storm water structures (e.g., pipes, inlets and swales) drains into the pond. As the water level rises, excess water is slowly released through a pipe or overflow structure.

Rule of thumb

The best maintenance is usually preventative, and most problems with storm water control structures can be avoided with one simple step: Clear trash, leaves and other debris away from storm water structures. Debris leads to clogging, which makes control structures less effective at limiting flooding and erosion.

SWALE MAINTENANCE

- ☐ Perform regular inspections and clear brush, grass clippings and other debris that can block drainage.
- ☐ Remove built up sediment during dry weather with a rake or shovel. Reseed and mulch as necessary.
- ☐ Mow grass and maintain other nearby vegetation as needed. Newly installed plants will require watering.
- ☐ Use pesticides and fertilizers sparingly on vegetation in or near a swale. Rain may wash excess chemicals into the storm water system and pollute rivers and streams.
- ☐ Do not park cars in a swale. The weight will compact the soil and hinder water absorption.
- ☐ Plant vegetation with deep, strong roots in the sides of a swale. Plant the bottom with grassy plants.
- ☐ Slow the flow and lessen the erosion power of water with large rock known as riprap.
- ☐ Call a professional to clean out underground or enclosed structures.

Important notice

While swales are effective tools for managing storm water, they can be dangerous during a heavy rainstorm. Never allow children to play in a swale, as there is a risk of injury or drowning.

Learn more

Visit SD1.org for more information about what SD1 is doing to manage storm water, improve water quality and protect your community from storm water damage.

Get help

If significant erosion, sediment accumulation or other damage is evident in the swale, contact SD1 at 859-578-7450 or info@sd1.org to have it inspected. SD1 staff may be able to help determine the cause of the problem and the individual or entity responsible for the maintenance.

For more information about properly maintaining storm water control structures on private property, call a local engineer or landscape architect.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Maintaining Swales

Storm water, SD1 & you

As our communities grow, our neighborhoods include an increasing number of buildings, roads and parking lots. This growth is important for our local economy, but the additional hard, impervious surfaces prohibit rain and snow melt from soaking into the ground. This creates storm water runoff, which can lead to erosion and flooding that may damage homes and landscaping, make travel difficult and affect recreation and wildlife habitats.

To control storm water runoff, Sanitation District No. 1 (SD1) maintains an expansive system of storm sewer pipes and other structures, but it is only one piece of the storm water puzzle – cities, counties and individual property owners also play an important role.

Your role

When new homes, businesses and neighborhoods are built, developers often install control structures at individual project sites to manage runoff. These storm water control structures sometimes interconnect with neighboring property or with infrastructure under SD1's control, but responsibility for structures on private property often lies with property owners, homeowner associations or property management companies.

It is essential that private property owners properly maintain storm water control structures on their property to ensure the entire system runs smoothly.

Private property owners also should be careful when adding new structures, like a shed, or making major landscaping changes to their property. If a change reroutes storm water and has a negative impact on properties downstream, the matter could become a legal issue among neighbors.

Good neighbors

While individual property owners are required to maintain some storm water control structures, they also can take voluntary steps to help the whole community. Even if a structure is publicly owned, citizens can protect their community from flooding and other problems by simply clearing away nearby debris as they see it. It's one small, preventative step that can do a lot of good.

Infrastructure 101

The most common storm water structures private property owners may interact with are drainage inlets and outlets, catch basins, detention and retention basins and swales. In addition to limiting flooding and erosion by slowing down water movement, many of these structures also help filter the water before it reaches streams and lakes.

Swales

Swales are ditches specially designed and lined with grass and other vegetation to slow the movement of storm water and filter out pollutants. Swales also help by holding back and storing storm water so the soil can absorb it over the next 24 hours or less. Some swales are designed by nature and exist on a property prior to development. In this case, a developer may choose to strategically build around them in lieu of installing underground pipes.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Spring clean storm drains

The catch basins, or storm drains, on the side of the road funnel rainwater to Northern Kentucky's creeks and rivers. With spring showers on the horizon, it is important to remember that pollutants and debris washed into these basins when it rains are not usually carried to one of SD1's treatment plants for cleaning, but instead are conveyed to a nearby waterway. Once in our creeks and rivers, chemicals, yard debris, litter and dirt can degrade the quality of the water we rely on for drinking water and recreation. Basins and drains clogged by debris also can lead to storm water flooding that creates safety hazards and costly property damage.

You can help protect public health, property and the environment by following the tips on the back of this insert.

Remember these tips to help protect public health, property and the environment:

- Sweep grass clippings, leaves and other debris off the street and away from storm drains. Dispose of all waste properly in trash receptacles or recycling bins.
- Use fertilizers and pesticides sparingly on your yard and landscaping.
- Never dump, pour or wash oil, chemicals, paint, yard debris, trash or other substances down a storm drain.
- Rake leaves and other debris from your yard and place them in plastic bags or trash bins for disposal.
- During the winter months or in the event of a late snowfall, try to shovel ice and snow away from storm drains to maintain a clear opening.

For more helpful tips and information about how to prepare for heavy precipitation, visit **www.sd1.org/CustomerService/RainEventPreparations.**

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Free Household Waste Collection Event

The Northern Kentucky Solid Waste Management Area and the Northern Kentucky Household Hazardous Waste Action Coalition are joining forces to help you properly dispose of unwanted items.

Please note: *Only certain items will be collected, and some restrictions apply. Please see the back of this insert for a list of acceptable waste items.*

Saturday, Nov. 1, 2014 from 9 a.m. to 2 p.m.
UC Health Stadium
7950 Freedom Way in Florence, KY

The following items will be accepted at the event:

- Aerosol cans
- Antifreeze
- Batteries (all types)
- Corrosives/flammables (fuel, kerosene, etc.)
- E-scraps (computers, monitors, keyboards, printers, cell phones, etc.)
- Ink cartridges/toner
- Light bulbs
- Oil
- Paint (10 can limit per vehicle)
- Paper (documents will be shredded)
- Pesticides (2 gallon/2 lb limit per vehicle)
- Propane tanks (20 lb tanks only)
- Television sets

Appliances, fertilizer, mercury-containing devices, medications and tires will not be accepted at the event. Other items may also be rejected. If you are unsure about an item or have specific questions, contact your county's solid waste coordinator prior to the event:

Boone County	859-334-3151
Campbell County	859-547-1802
Kenton County	859-392-1920

Visit **www.nkyhhw.org** or **www.sd1.org** for more information and to print and complete a required registration form with the items you plan to drop off.

APPENDIX C:

FY 2015 Violations Report for Industrial Pretreatment Program

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Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 All Permits AND

Permit: **IND-00011** **Mazak Corporation**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Late Reporting - 2nd Half 2014 Self Monitoring Report submitted late.	NC-R	01/20/15	V	02/03/15	Verbal Notice of Violation (NOV)	

Permit: **IND-00019** **Blue Grass Quality Meats**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH > 11.0 for 2 hours, 53 minutes	NC-P	09/16/14	W	10/07/14	Written Notice of Violation (NOV)	$0.00
pH < 5.0 for 40 minutes	NC-P	09/17/14	W	10/07/14	Written Notice of Violation (NOV)	$0.00
pH < 6.0 for 3 hours, 18 minutes, < 5.0 for 54 minutes	NC-P	09/19/14	W	10/07/14	Written Notice of Violation (NOV)	$0.00
pH > 11 for 20 minutes	NC-P	01/07/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	$750.00
pH > 10/11	NC-P	01/14/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 All Permits AND

Permit: **IND-00019** **Blue Grass Quality Meats**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH > 11	NC-P	01/15/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11/12	NC-P	01/19/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH > 10/11	NC-P	01/20/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11	NC-P	01/21/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH < 6	NC-P	01/22/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11	NC-P	01/23/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11/12	NC-P	01/26/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10	NC-P	01/27/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH > 10/11/12	NC-P	02/02/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	

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Permit: **IND-00019** **Blue Grass Quality Meats**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Late Reporting of Self Monitoring pH data for January.	NC-R	02/14/15	W	03/04/15	Written Notice of Violation (NOV)	$0.00
pH < 6/5	NC-P	02/15/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11/12	NC-P	02/17/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11	NC-P	02/18/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH >10/11/12	NC-P	02/19/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	
pH > 10/11/12	NC-P	02/23/15	WF	03/04/15	Written Notice of Violation (NOV) and fine.	

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Permit: **IND-00019** **Blue Grass Quality Meats**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to Maintain pH Pretreatment System - During pH resampling(4-6 to 4-10-15) performed to confirm compliance as a result of previous pH violations(see NOV date 3-4-15), and during self-monitoring, pH excursions were detected at your facility. Conversations with Blue Grass Quality Meats staff have confirmed that these excursions are a result of the failure to maintain the pH pretreatment system probes.	NC-O	04/06/15	W	06/22/15	Written Notice of Violation (NOV)	$0.00
Failure to Maintain pH Pretreatment System - During pH resampling(4-6 to 4-10-15) performed to confirm compliance as a result of previous pH violations(see NOV date 3-4-15), and during self-monitoring, pH excursions were detected at your facility. Conversations with Blue Grass Quality Meats staff have confirmed that these excursions are a result of the failure to maintain the pH pretreatment system probes.	NC-O	04/07/15	W	06/22/15	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00019** **Blue Grass Quality Meats**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to Maintain pH Pretreatment System - During pH resampling(4-6 to 4-10-15) performed to confirm compliance as a result of previous pH violations(see NOV date 3-4-15), and during self-monitoring, pH excursions were detected at your facility. Conversations with Blue Grass Quality Meats staff have confirmed that these excursions are a result of the failure to maintain the pH pretreatment system probes.	NC-O	04/08/15	W	06/22/15	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00033** **Schwan's Global Supply Chain, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
2 minute spike below 5.0 (down to 4.2) on 6/9/15. Gave VNOV.	NC-P	06/09/15	V	06/16/15	Verbal Notice of Violation (NOV) for 2 minute spike below 5.0 (down to 4.2) on 6/9/15.	$0.00

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Permit: **IND-00039** **Duro Hilex Poly, LLC (Walton)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
2nd Half 2014 Self Monitoring Report received late.	NC-R	01/20/15	V	02/05/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00045** **A.O. Smith Corp., Protective Coating Division**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Mercury, Total = 0.0007 mg/L, TRC Non-Compliance.	NC-P	03/17/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00
Nickel, Total = 5.67 mg/L	NC-P	03/17/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00
Mercury, Total = 0.00072 mg/L, TRC Non-Compliance	NC-P	03/18/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00
Mercury, Total = 0.00098 mg/L, TRC Non-Compliance	NC-P	03/19/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
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Permit: **IND-00045** **A.O. Smith Corp., Protective Coating Division**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Mercury, Total = 0.00221 mg/L, TRC Non-Compliance	NC-P	03/20/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00
Nickel, Total = 6.74 mg/L, TRC Non-Compliance	NC-P	03/20/15	W	05/04/15	Written Notice of Violation (NOV)	$0.00
Mercury, Total TRC and Chronic SNC-4 of 5 daily results exceeded the TRC limit for this parameter(0.0006 mg/L) during the SNC determination period of 10/1/14 to 3/31/15.	SNC-P	04/01/15	WF	05/12/15	Written Notice of Violation (NOV) and fine.	$500.00

Permit: **IND-00046** **Kellogg's Snacks, Florence Bakery**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

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Permit: **IND-00046** **Kellogg's Snacks, Florence Bakery**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH testing during the week of 11/3/14 to11/7/14 showed a violation a continuous high ph above the 10.0 SD1 limit stretching between two days: 11/5/14: 2 Hours and 41 Mins, starting at 10:19 PM to Midnight and continues	NC-P	11/05/14	W	12/09/14	Written Notice of Violation for pH testing during the week of 11/3/14 to11/7/14 showed a violation a continuous high ph above the 10.0 SD1 limit stretching between two days: 11/5/14: 2 Hours and 41 Mins, starting at 10:19 PM to Midnight and continues 11/6/14 from 12:01 to 11:00AM (11 Hours, 16 Mins,). A third excursion was 11:02AM to 12:18PM for 1 Hour and 16 Mins. The pH excursion was a total of 15 Hours and 13 Mins above the SD1 pH limit of 10.00.	$0.00
pH < 6 for approximately two hours.	NC-P	01/19/15	V	01/23/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00053** **White Castle Distributing, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH<5.0 multiple times for several hours.	NC-P	09/08/14	W	09/23/14	Written Notice of Violation (NOV)	$0.00
pH<5.0, pH<6.0 for more than an hour.	NC-P	09/10/14	W	09/23/14	Written Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
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Permit: **IND-00053** **White Castle Distributing, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH<6.0 for more than an hour.	NC-P	09/11/14	W	09/23/14	Written Notice of Violation (NOV)	$0.00
pH<6.0 for more than an hour.	NC-P	09/12/14	W	09/23/14	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00054** **Perfetti Van Melle USA**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH was recorded at <5.0 for approximately 40 minutes. Data was recorded by the industry's effluent data recorder.	NC-P	08/15/14	W	09/02/14	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00057** **Mubea Inc. (Industrial Rd)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
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Permit: **IND-00057** **Mubea Inc. (Industrial Rd)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Zinc, total TRC Daily Limit was exceeded. SD1 sampling on the same day (3/17/15) showed Result of 6.65 mg/L and the Mubea's self monitoring on the same day showed a result of 6.77 mg/L, since they are from the same day there 2 results are averaged for that day resulting in 6.71 mg/L. The Daily Limit was 2.61 mg/L.	NC-P	03/17/15	W	05/15/15	Written Notice of Violation for Zinc, total TRC Daily Limit violation. SD1 sampling on the same day (3/17/15) showed Result of 6.65 mg/L and the Mubea's self monitoring on the same day showed a result of 6.77 mg/L, Since they are from the same day there 2 results are averaged for that day resulting in 6.71 mg/L. The Daily Limit was 2.61 mg/L.	$0.00
The monthly average for the month of March 2015 had a concentration of Zinc from SD1 and Mubea self-monitoring of 2.09 mg/L, the monthly limit for Zinc is 1.48 mg/L. This is a violation of the monthly average limit.	NC-P	04/01/15	W	05/15/15	Written Notice of Violation for the monthly average for the month of March 2015 had a concentration of Zinc from SD1 and Mubea self-monitoring of 2.09 mg/L, the monthly limit for Zinc is 1.48 mg/L. This is a violation of the monthly average limit.	$0.00

Permit: **IND-00063** **Ultra Environmental Services, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Lead, Total = 0.660 mg/L, TRC daily limit exceeded	NC-P	06/04/14	W	07/30/14	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00063** **Ultra Environmental Services, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Lead, Total = 0.950 mg/L, TRC daily limit exceeded	NC-P	06/06/14	W	07/30/14	Written Notice of Violation (NOV)	$0.00
Lead, Total, monthly average(June) = 0.304 mg/L, TRC monthly average exceeded	NC-P	07/01/14	W	07/30/14	Written Notice of Violation (NOV)	$0.00
Lead, Total = 0.70 mg/L, TRC daily limit exceeded	NC-P	08/12/14	W	10/31/14	Written Notice of Violation (NOV)	$0.00
Lead, Total, monthly average(August) = 0.175 mg/L	NC-P	09/01/14	W	10/31/14	Written Notice of Violation (NOV)	$0.00
Lead, Total monthly concentration Technical Review Criteria (TRC) SNC - 2 of 3 monthly results exceeded the TRC monthly limit for this parameter(0.192 mg/L) during the SNC determination period of 4-1-14 to 9-30-14.	SNC-P	09/30/14	WF	01/27/15	Written Notice of Violation (NOV) and fine.	$500.00
Lead, Total = 0.589 mg/L Daily Limit was exceeded.	NC-P	12/12/14	W	01/22/15	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00063** **Ultra Environmental Services, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Permit: **IND-00064** **Wild Flavors, Inc.(Pacific ave)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Wild Flavor sent an email to report a quick violation above the 11.0 pH limit, for > 15 minutes. This was due to a maintenance issue that was resolved. Gave verbal NOV.	NC-P	06/02/15	V	06/02/15	Verbal Notice of Violation Given, Wild Flavor sent an email to report a quick violation above the 11.0 pH limit, for > 15 minutes. This was due to a maintenance issue that was resolved.	$0.00

Permit: **IND-00065** **Celanese Engineered Materials**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Verbal NOV for pH of 2.7 on 4/14/15 for 1 minute.	NC-P	04/14/15	V	05/05/15	Verbal Notice of Violation), Verbal NOV for pH of 2.7 on 4/14/15 for 1 minute.	$0.00

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Permit: **IND-00067** **Signode Plastic Recycling Alliance**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Hg, Total = 0.00136 mg/L, TRC Non-Compliance	NC-P	05/12/15	W	06/09/15	Written Notice of Violation (NOV)	$0.00
Hg, Total = 0.00165 mg/L, TRC Non-Compliance	NC-P	05/13/15	W	06/09/15	Written Notice of Violation (NOV)	$0.00
Hg, Total = 0.00121 mg/L, TRC Non-Compliance	NC-P	05/14/15	W	06/09/15	Written Notice of Violation (NOV)	$0.00
Hg, Total = 0.00147 mg/L, TRC Non-Compliance	NC-P	05/15/15	W	06/09/15	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00069** **Skilcraft, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Zinc, Total = 3.58 mg/L, TRC Daily Limit exceeded.	NC-P	08/05/14	W	09/03/14	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00069** **Skilcraft, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Zinc, Total = 2.81 mg/L	NC-P	12/10/14	W	01/20/15	Written Notice of Violation (NOV)	$0.00
Zinc, Total = 12.03 mg/L, TRC Daily Limit exceeded	NC-P	12/16/14	W	01/20/15	Written Notice of Violation (NOV)	$0.00
Zinc, Total, monthly average(December) = 4.74 mg/L TRC Monthly Limit exceeded.	NC-P	12/31/14	W	01/20/15	Written Notice of Violation (NOV)	$0.00
Zinc, Total monthly concentration Technical Review Criteria (TRC) SNC - 1 of 3 monthly results exceeded the TRC monthly limit for this parameter(1.78 mg/L) during the SNC determination period of 7-1-14 to 12-31-14.	SNC-P	12/31/14	WF	03/19/15	Written Notice of Violation (NOV) and fine.	$500.00
Zinc, Total monthly concentration Technical Review Criteria (TRC) SNC - 1 of 2 monthly results exceeded the TRC monthly limit for this parameter(1.78 mg/L) during the SNC determination period of 10-1-14 to 3-31-15.	SNC-P	03/31/15	W	04/01/15	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00069** **Skilcraft, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
On April 7, 2015 a composite sample was collected by SD1 and had a concentration of 14.300 mg/L for total zinc. This is over the daily maximum limit of 2.61 mg/L	NC-P	04/07/15	WF	05/29/15	Written Notice of Violation (NOV) and fine. On April 7, 2015 a composite sample was collected by SD1 and had a concentration of 14.300 mg/L for total zinc. This is over the daily maximum limit of 2.61 mg/L.	$500.00
The monthly average for total zinc was 4.441 mg/L. The monthly average maximum is 1.48 mg/L	NC-P	04/30/15	W	05/28/15	Written Notice of Violation (NOV) The monthly average for total zinc was 4.441 mg/L. The monthly average maximum is 1.48 mg/L	$0.00

Permit: **IND-00073** **Lyons Magnus, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Sampling the pH o 12/4/14 and 12/5/14 showed several violations below 5.0	NC-P	12/04/14	W	01/28/15	Written Notice of Violation (NOV) Sampling the pH on 12/4/14 and 12/5/14 showed several violations below 5.0	$0.00

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Permit: **IND-00076** **Hillshire Brands**

Violation Description		Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Oil & Grease, Total = 135 mg/L Limit exceeded.	Daily	NC-P	04/23/14	W	07/14/14	Written Notice of Violation (NOV)	$0.00
Oil & Grease, Total = 135 mg/L Limit exceeded.	Daily	NC-P	07/22/14	WF	09/02/14	Written Notice of Violation (NOV) and fine.	$500.00
Oil & Grease, Total = 113 mg/L Limit exceeded.	Daily	NC-P	07/24/14	WF	08/28/14	Written Notice of Violation (NOV) and fine.	
Oil & Grease, Total = 159 mg/L Limit exceeded.	Daily	NC-P	09/23/14	W	10/07/14	Written Notice of Violation (NOV)	$0.00
Late Fine Payment, NOV date 9-2-14		NC-R	10/03/14	V	10/31/14	Verbal Notice of Violation (NOV)	$0.00
Oil & Grease, Total = 123 mg/L		NC-P	10/28/14	WF	12/08/14	Written Notice of Violation (NOV) and fine.	$750.00
Selenium, Total = 0.031 mg/L		NC-P	10/28/14	V	01/27/15	Verbal Notice of Violation (NOV)	$0.00

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Permit: **IND-00076** **Hillshire Brands**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
O&G, Total = 303 mg/L	NC-P	10/30/14	WF	12/05/14	Written Notice of Violation (NOV) and fine.	
Late Reporting, Spill Report for 11-11-14 Propylene Glycol Spill.	NC-R	11/17/14	V	11/18/14	Verbal Notice of Violation (NOV)	$0.00
Self-Monitoring on 1/22/15 showed a G&O -Total result of 418 mg/L, the SD1 local limit is 100 mg/L.	NC-P	01/22/15	W	03/04/15	Written Notice of Violation for Self-Monitoring on 1/22/15 showed a G&O -Total result of 418 mg/L, the SD1 local limit is 100 mg/L.	$0.00

Permit: **IND-00077** **Iofina Chemical, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5	NC-P	11/03/14	W	11/17/14	Written Notice of Violation (NOV)	$0.00
pH < 5	NC-P	11/04/14	W	11/17/14	Written Notice of Violation (NOV)	$0.00
pH < 5	NC-P	11/05/14	W	11/17/14	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00077** **Iofina Chemical, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5	NC-P	11/06/14	W	11/17/14	Written Notice of Violation (NOV)	$0.00
pH < 5	NC-P	11/07/14	W	11/17/14	Written Notice of Violation (NOV)	$0.00
Failure to meet NOV response deadline, NOV date 11/17/14. Resampling data was not received by deadline date.	NC-R	12/20/14	W	12/29/14	Written Notice of Violation (NOV)	$0.00
pH < 5 for 1 minute	NC-P	03/09/15	WF	03/19/15	Written Notice of Violation (NOV) and fine.	$500.00
pH < 5 multiple times	NC-P	03/10/15	WF	03/19/15	Written Notice of Violation (NOV) and fine.	
pH < 5 several times	NC-P	03/11/15	WF	03/19/15	Written Notice of Violation (NOV) and fine.	$0.00
pH < 5 for 1 minute	NC-P	05/12/15	W	05/26/15	Written Notice of Violation (NOV)	$0.00
pH < 5 for 1 minute, twice	NC-P	05/14/15	W	05/26/15	Written Notice of Violation (NOV)	$0.00

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Permit: **IND-00077** **Iofina Chemical, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5 for 1 minute	NC-P	05/15/15	W	05/26/15	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00079** **Tressa, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Facility effluent composite sample taken on 8/26/2014 had a total mercury concentration of 0.00284 mg/L The current Dry Creek local limit is 0.0005 mg/L. The current Code of Federal Regulation SNC-TRC mercury limit is 0.0006 mg/L. This violation occurred in the third SNC evaluation period, April 1 to September 30. During this evaluation period 100% of samples collected were above the SNC-TRC mercury limit.	SNC-P	08/26/14	W	12/09/14	Written Notice of Violation (NOV) for SNC-TRC Mercury July to December 2014	$0.00
Composite sample taken on 8/26/2014 had a total mercury concentration of 0.00284 mg/L. The current Dry Creek local limit is 0.0005 mg/L.	NC-P	08/26/14	W	12/09/14	Written Notice of Violation (NOV) Composite sample taken on 8/26/2014 had a total mercury concentration of 0.00284 mg/L. The current Dry Creek local limit is 0.0005	$0.00

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Permit: **IND-00079** **Tressa, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Permit: **IND-00083** **Club Chef LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Sampling for pH during the week of 12/8/14 to 12/12/14 showed numerous violations, see attached pH graph.	NC-P	01/20/15	WF	01/20/15	Written Notice of Violation (NOV) and fine for Violation Description: Sampling for pH during the week of 12/8/14 to 12/12/14 showed numerous violations, see attached pH graph. Enforcement Action(s): Written Notice of Violation (NOV) and Fine Amount: $1000.00	$1,000.0

Permit: **IND-00090** **Augur Metal Products**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to monitor for required pollutants. 1st Half Self Monitoring was not performed.	NC-E	07/01/14	WF	07/29/14	Written Notice of Violation (NOV) and fine.	$500.00

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Permit: **IND-00606** **CR Brands**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Foam persisted in retain sample for approximately 15 seconds. Retain was from discharge occurring on 1-28-15 at 11:00am.	NC-O	01/28/15	V	01/29/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00636** **Boge Rubber & Plastics USA, LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 6 for greater than 1 hr twice, pH <5 for 4 min	NC-P	08/06/14	V	08/12/14	Verbal Notice of Violation (NOV)	$0.00
pH < 5 for 22 minutes	NC-P	08/07/14	V	08/12/14	Verbal Notice of Violation (NOV)	$0.00

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APPENDIX D:

Current Organization Charts

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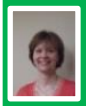
Administration Division

Customer Service Department (3)

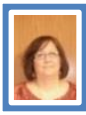
Tom Wiechman
Deputy Executive Director



Faye Cossins
Director of Customer Care

Billing

Bonnie Staton

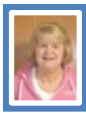


Sherri Martin

Kelli Williams

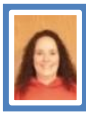
Tracy Stephenson

Customer Service Full Time

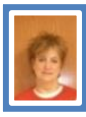


Linda Hamberg

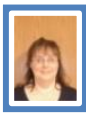
Karen Forsyth



Erica Campbell

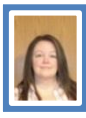


Debbie Yeagle



Karen Derrer

Jason Elfers



Kelli Ashcraft

Customer Service Part Time

Ronda Steffan

Donna Viox

Carolyn Backus

Amy Hamm

Faye Coffman
Temp

Peggy Henn
Temp

Olivia Backus
Temp

Teresa Faselt
Temp

Collections & Delinquency

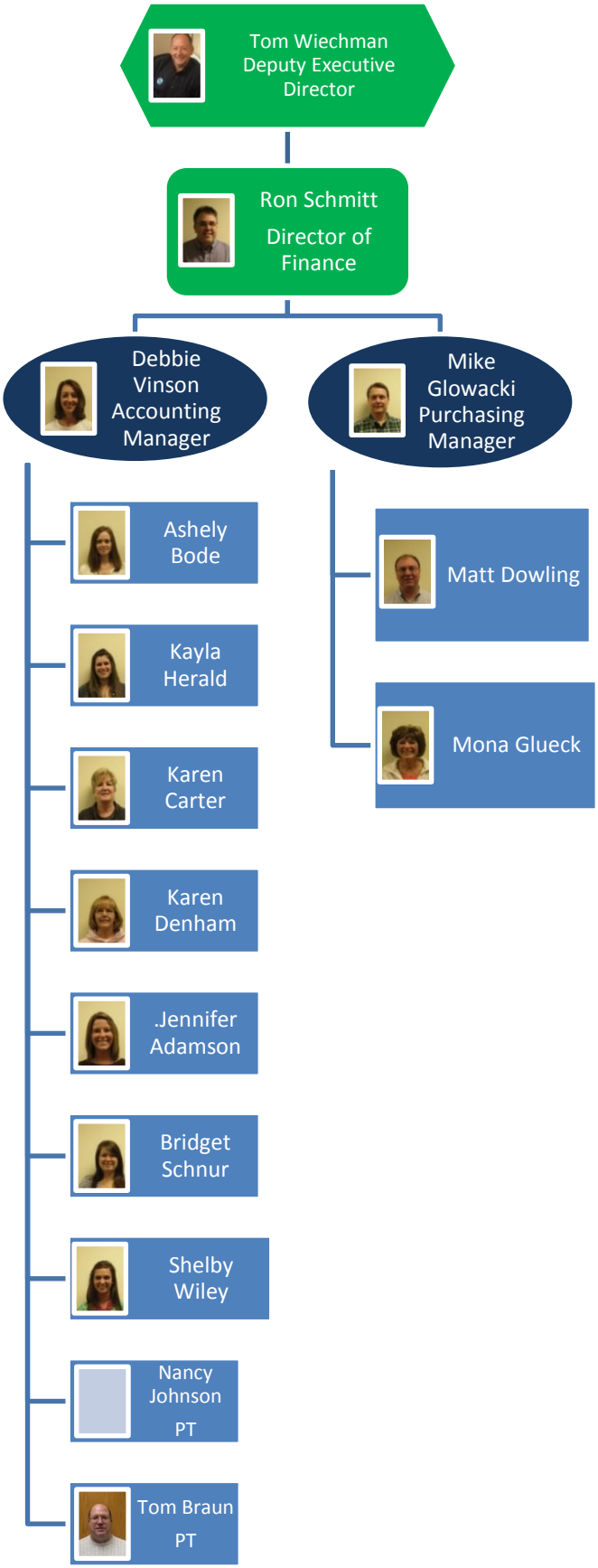
Shirley Guenther

Todd Denham

Heather West
Temp

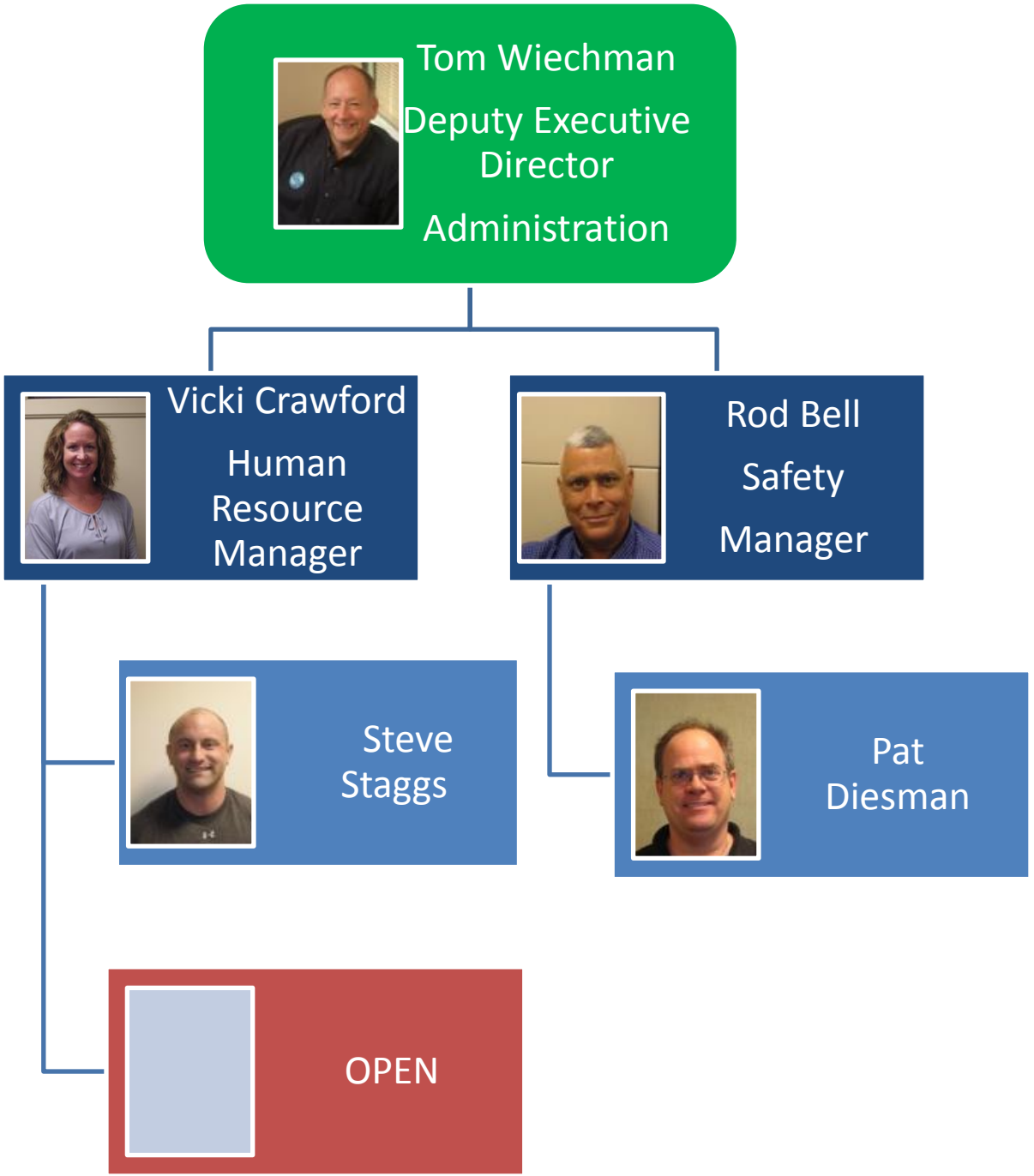
Administration Division

Finance & Purchasing Department (3)



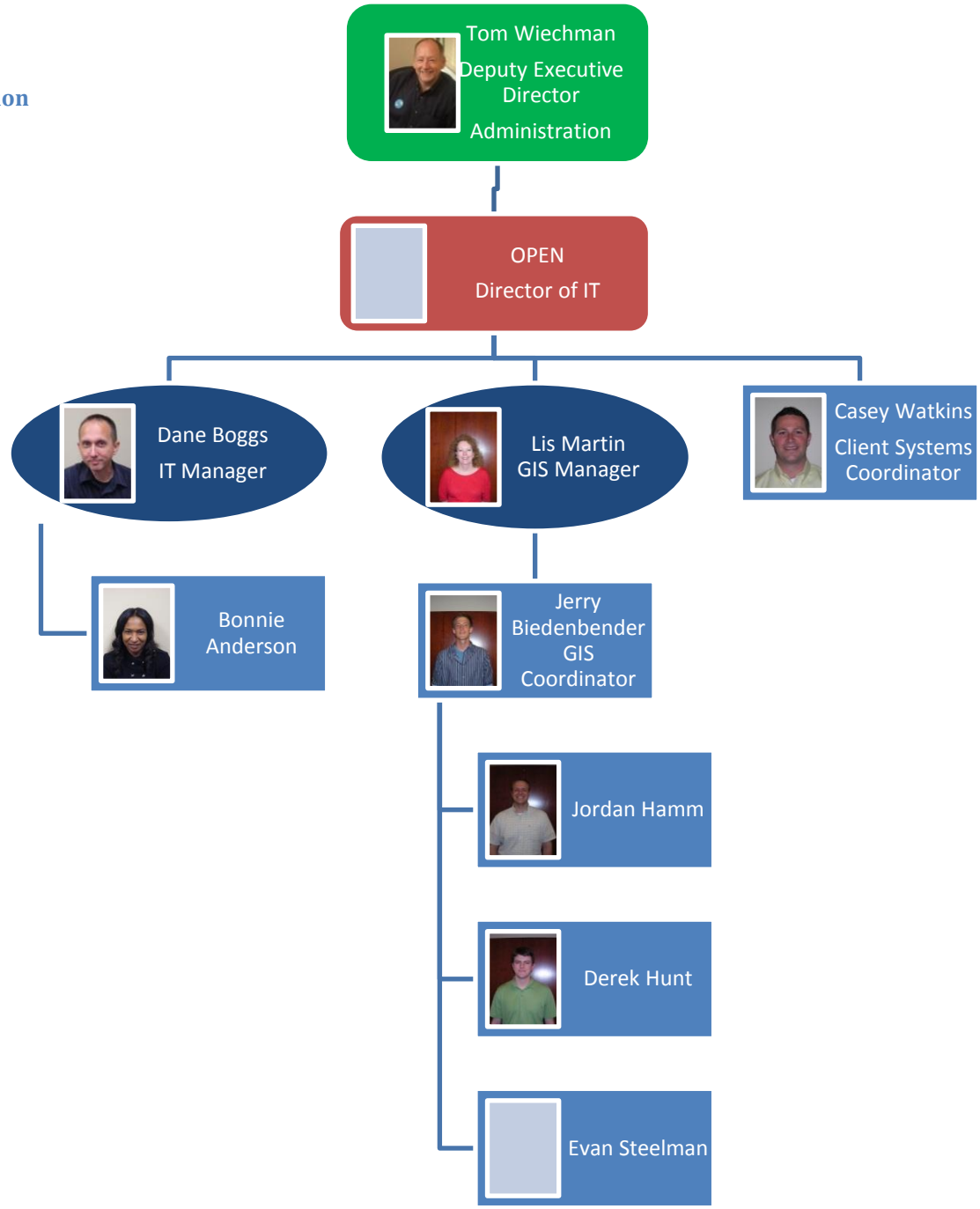
Administration Division

Administration Department (3)



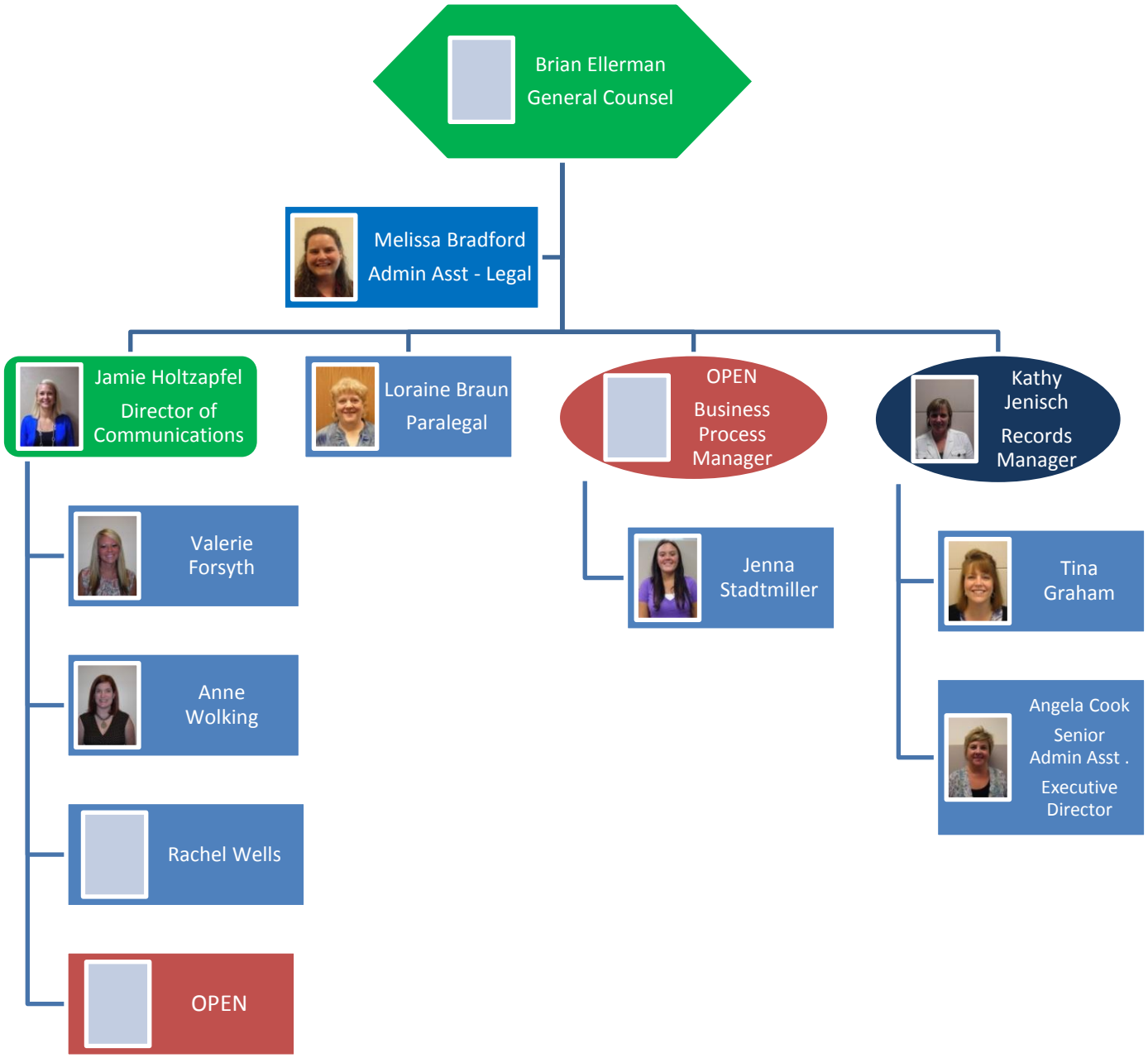
Administration Division

IT - GIS Department (3)



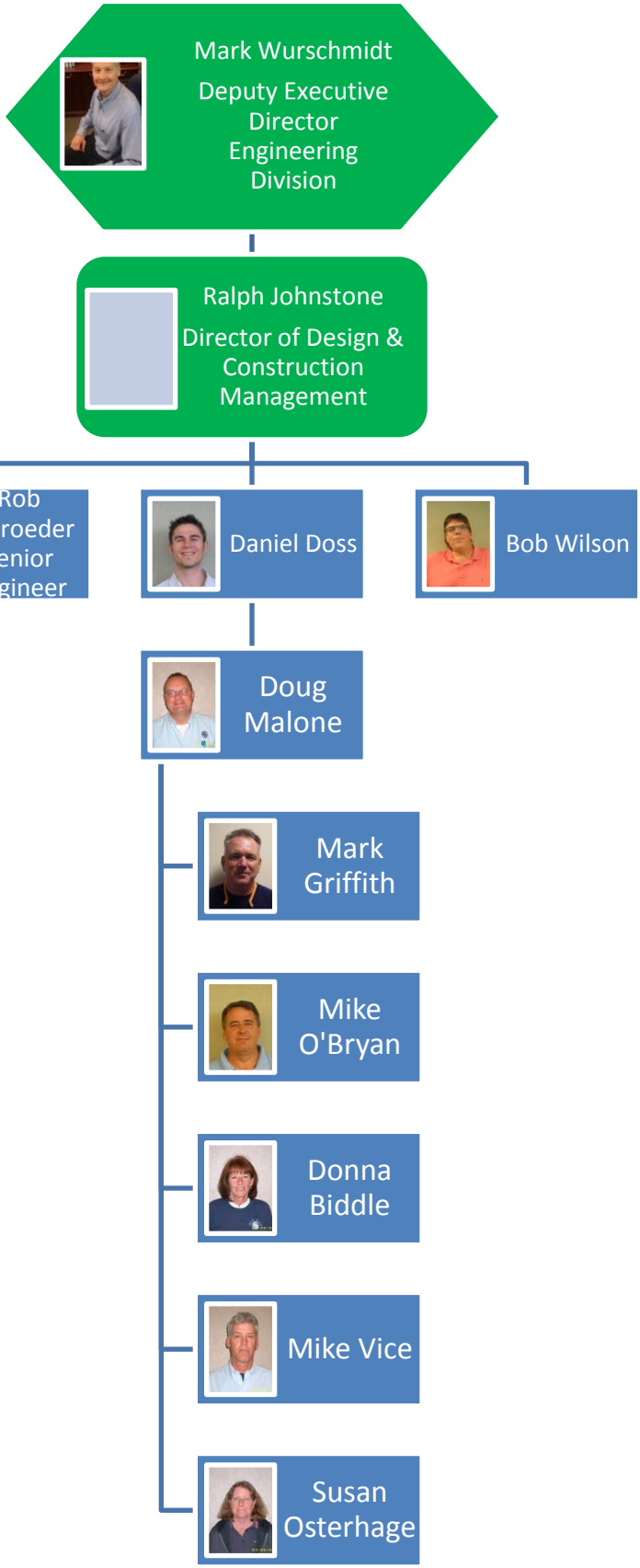
Administration Division

Legal Department (3)



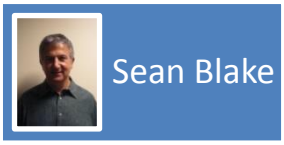
Engineering Division

Infrastructure and Capital Planning (5)



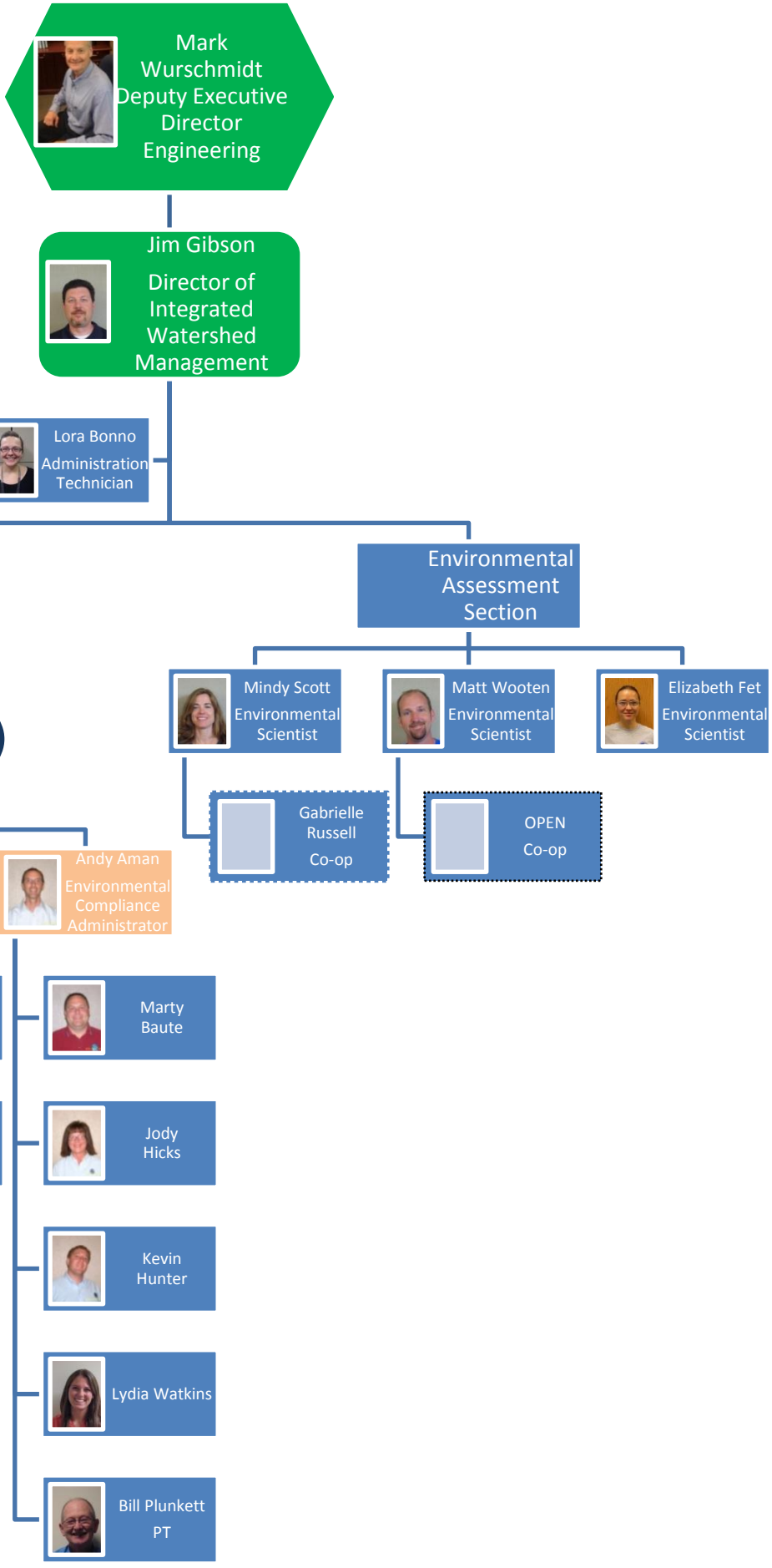
Engineering Division

Infrastructure and Capital Planning (5)



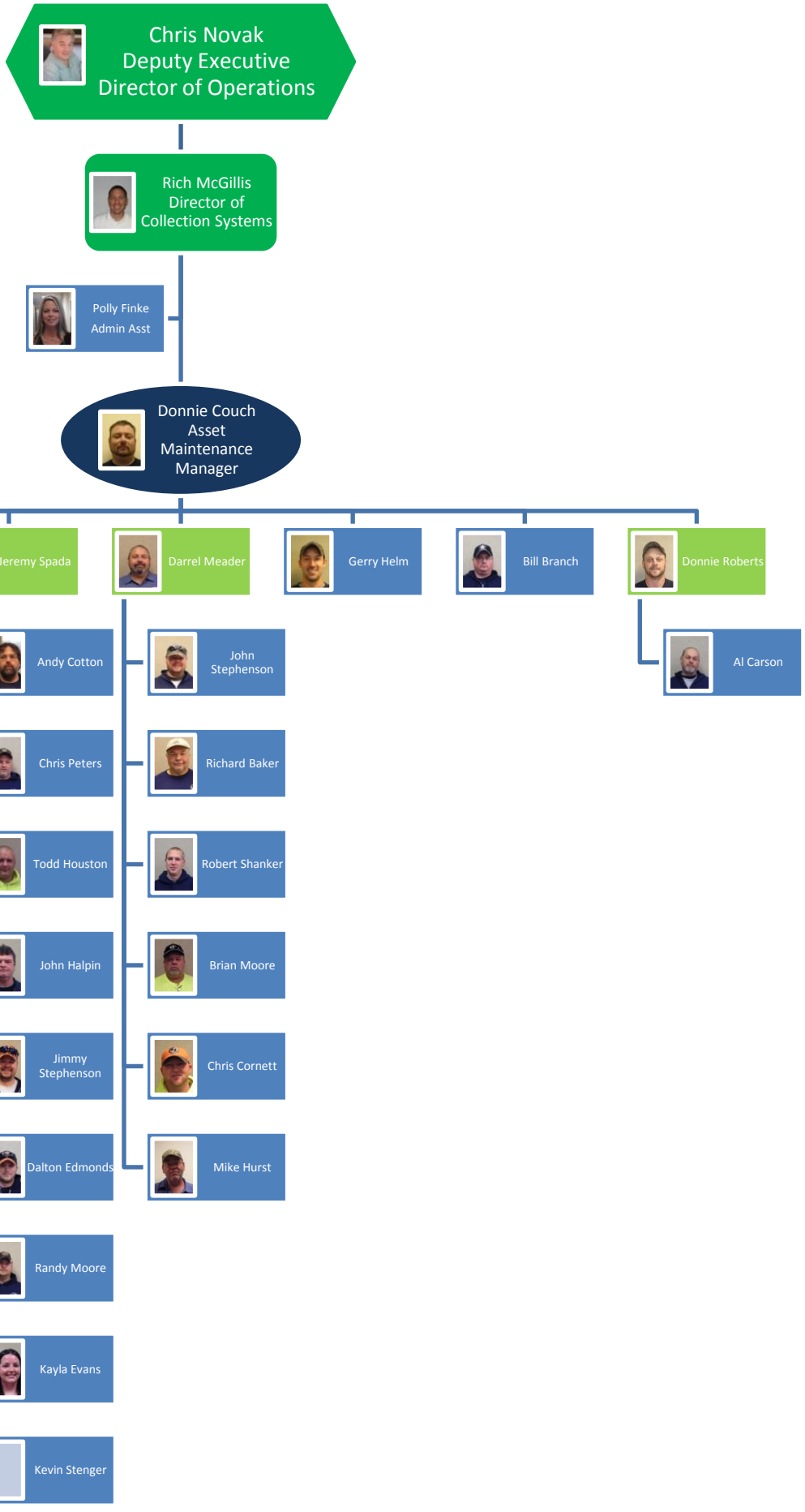
Engineering Division

Integrated Watershed Management Department (6)



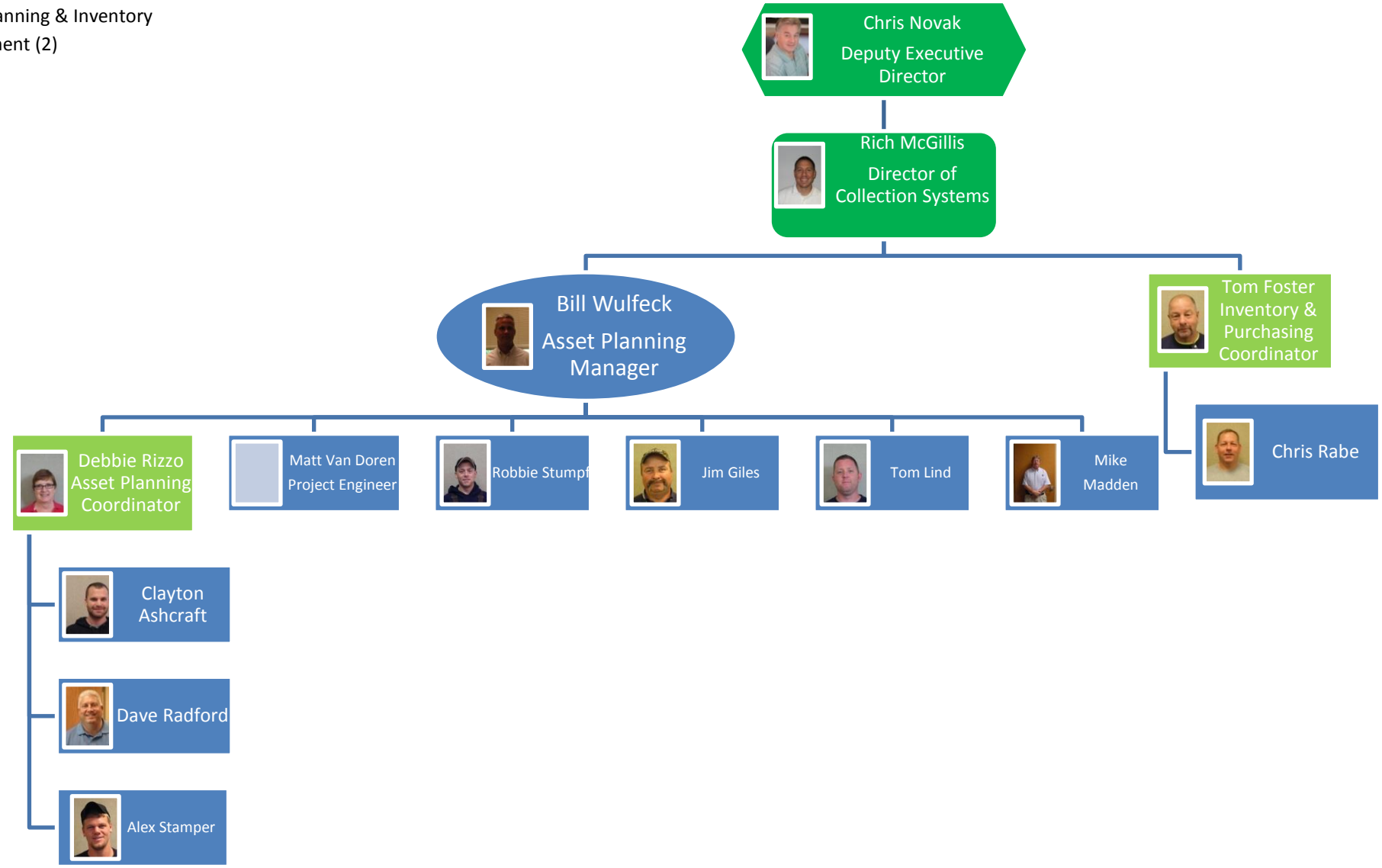
Operations Division

Collection Systems-
Asset Maintenance Department (2)



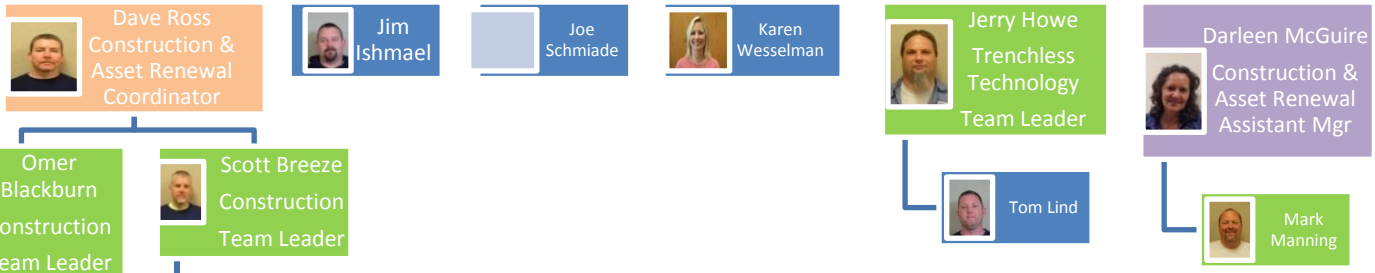
Operations Division

Asset Planning & Inventory Department (2)



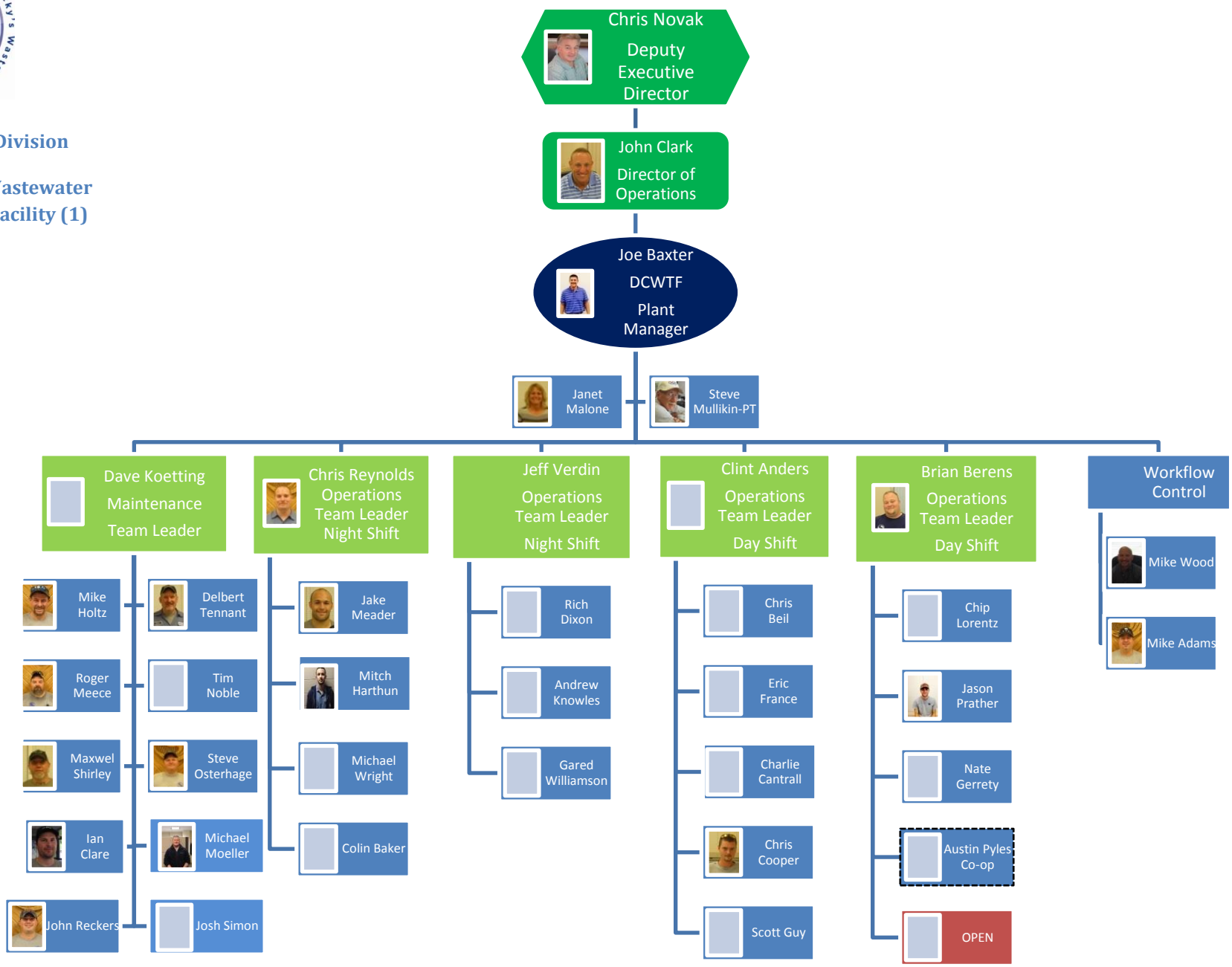
Operations Division

Collection Systems-
Asset Renewal Department



Operations Division

Dry Creek Wastewater Treatment Facility (1)



Operations Division

Eastern Regional & Small Plants Department (8)

Chris Novak
Deputy Executive Director

John Clark
Director of Operations

Mark Pryor
Regional Plant Manger

Chris Reynolds
Eastern Regional Team Leader

Hasten Wright
Small Plants Team Leader

Operations

Maintenance

Tim Bracke

Mitch Mieman

Rick McDannold

Tom Holtkamp-PT

Jason Schmits

Mike Eversole

Mark Watton

Ryan Erickson

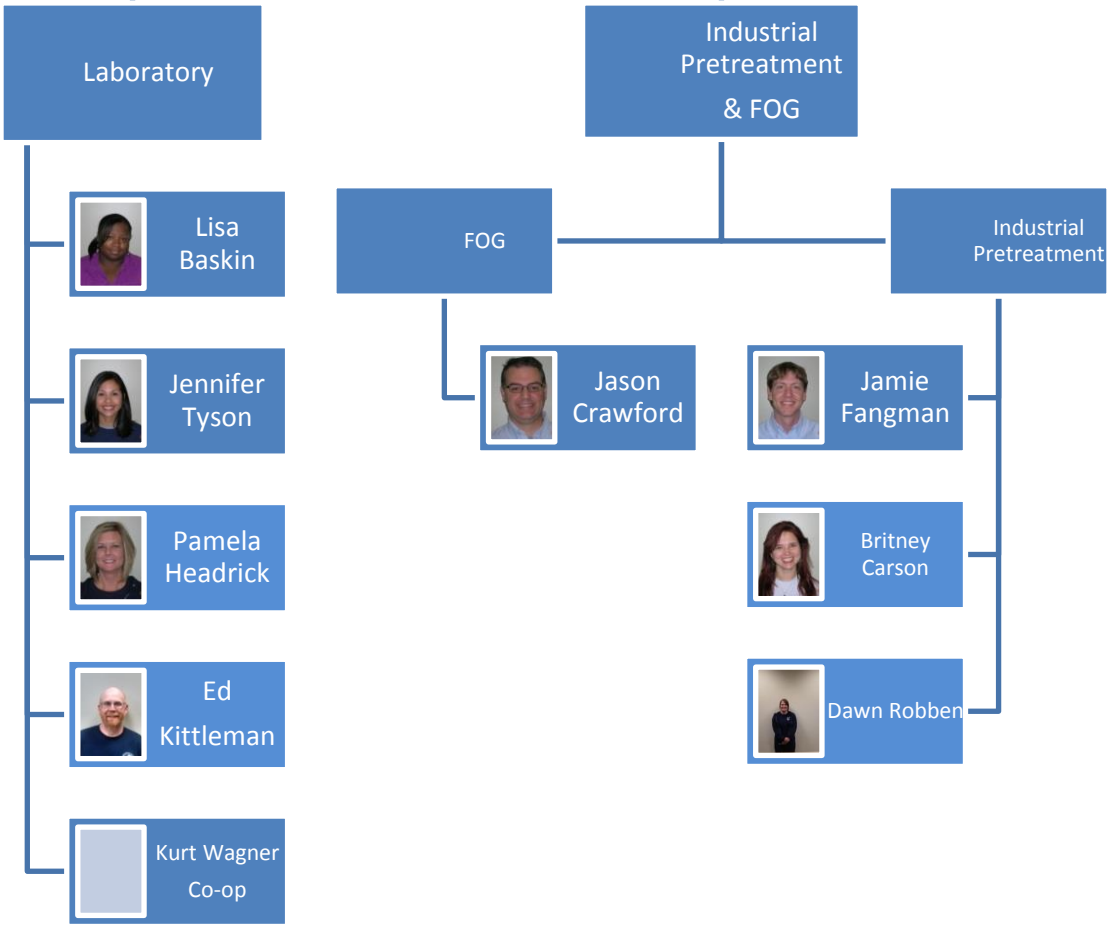
Ed Crout

Operations Division

Fleet & Facilities Department (4)

Operations Division

Laboratory & Industrial Pretreatment/FOG (1)

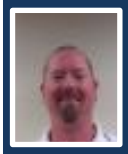


Operations Division

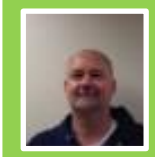
Pump Stations Department (7)

Chris Novak Deputy Executive Director

John Clark
Director of Operations



Chris Foltz
Pump Stations Manager

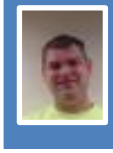


Phil Stanken
Pump Stations Operations Team Leader

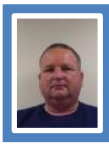
Jim Thurman
Pump Stations Maintenance Team Leader

Chris Crone
Flood Response Coordinator

Larry Westkamp

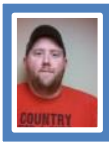


Phillip Sebastain



Joe Buerkley

James Rose



Justin Banta

Randy Morris

Greg Emmons

Zach Martin

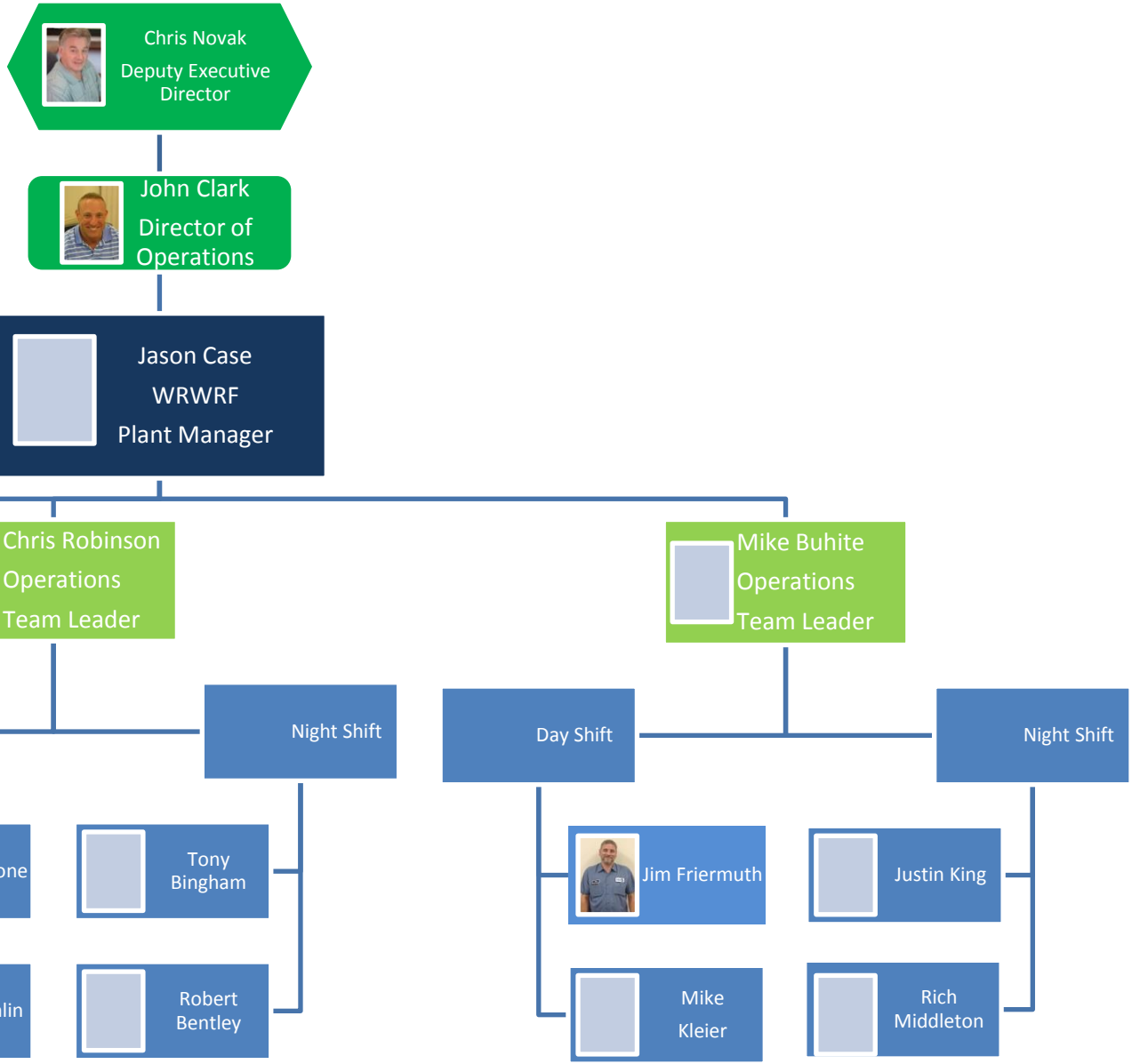
Vern Wiley

Daniel Hamm

Steve Dee
Pump Repair

Operations Division

Western Regional Water Reclamation Facility (9)



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APPENDIX E:

SORP SOPs and Guidelines

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SD1 Managing Northern Kentucky's Wastewater and Storm Water	Collection Systems Department Standard Operating Procedures (SOP) **Emergency Asset Renewal**
	Version: 1 **Effective Date: 11/17/2014** **Owner: Collection Systems** **Revision Date:**

1.0 Purpose

The purpose of this SOP is to document the standard procedures to be used by Collection Systems personnel involved in the initial response, identification, and completion of emergency Asset Renewal projects. The development and use of this SOP is intended to ensure that appropriate actions are taken by SD1 personnel during their response to emergency projects without compromising SD1's safety or construction standards.

2.0 Scope

This SOP covers the procedures to be performed by SD1 personnel from a beginning point of an initial, on-site investigation indicating the potential need for an emergency Asset Renewal project to an ending point where construction has been completed. This SOP is applicable to SD1 asset failures or emergency-related problems associated with SD1 maintenance activities (i.e., stuck CCTV cameras or jet-heads). Emergency Asset Renewal projects should only be initiated under conditions that allow the work to be completed safely. This SOP is not intended to address problems with SD1 Assets that cannot be safely resolved through emergency-scheduled projects (i.e., wet-weather SSO's, flooding, etc.) or problems that are un-related to SD1 assets (i.e., lateral failures).

3.0 SD1 Personnel Roles and Responsibilities

Assistant Construction Manager External Construction - The manager of SD1's external construction group and SD1's primary point of contact with maintenance contractor personnel. The Assistant Construction Manager External Construction is responsible for: performing site visits to potential emergency Asset Renewal project sites, project scoping, making recommendations to the Asset Renewal Manager, assigning projects to external construction crews, making initial contacts with property owners and/or appropriate local officials, maintaining communication with the Asset Renewal Manager as a project is completed, entering data / creating work orders in Lucity, and participating in post-project review meetings.

Asset Renewal Manager - The manager of the Asset Renewal Department that is responsible for oversight of all construction performed within Collection Systems. The Asset Renewal Manager is responsible for: receiving initial reports on potential emergency projects, assigning project site visits, approving the scope of emergency Asset Renewal projects, maintaining regular communication with the Director of Collection Systems on the progress of emergency projects, participating in post-project review meetings, and working with the Collection Systems Director to establish policies that are consistent with this Emergency Asset Renewal SOP.

Asset Renewal Team Leader – A Team Leader in the Asset Renewal Department that is responsible for overall management of assigned construction projects, including emergency-scheduled work. Asset Renewal Team Leader responsibilities include: securing equipment and materials, directing the installation of traffic control / site access control measures, coordinating with property owners and local officials, providing oversight to laborers and equipment operators, maintaining communication with the Construction and Asset Renewal Coordinator, and entering data / creating work orders in Lucity.

Construction and Asset Renewal Coordinator – The coordinator of SD1's internal construction group and direct supervisor of all Asset Renewal Team Leaders. The Construction and Asset Renewal Coordinator is responsible for: performing site visits to potential emergency Asset Renewal project sites, making recommendations to the Asset Renewal Manager, assigning projects to internal construction crews, ensuring that emergency utility locates have been requested, project scoping, making initial property owner contacts, maintaining communication with the Asset Renewal Manager, and participating in post-project review meetings.

Director of Collection Systems – The Director of the Collection Systems Department and direct supervisor of the Asset Renewal Manager and the Asset Maintenance Manager. The Director is responsible for: working with the Asset Maintenance and Asset Renewal Managers to establish policies regarding emergency Asset Renewal projects, participating in post-project review meetings, and communicating with other SD1 Directors / Upper Management and outside parties regarding emergency Asset Renewal project policies and procedures.

First Response Technicians – Technicians working in the Corrective Maintenance group and other Collection Systems personnel that have been trained to respond to Trouble Calls. First Response Technicians are responsible for: assessing reported service problems and identifying the potential need for an emergency-scheduled Asset Renewal project, communicating the results of their assessment to other SD1 personnel involved in the decision to initiate an emergency-scheduled Asset Renewal project, entering work order data into Lucity, and participating in post-emergency review meetings (as necessary).

Corrective Maintenance Team Leader – The direct supervisor of the Technicians working in the Corrective Maintenance group. The Corrective Maintenance Team Leader is responsible for assisting the Corrective Maintenance Coordinator in managing SD1's response to SORP events and assisting in the training of First Response Technicians regarding this *Emergency Asset Renewal* SOP.

4.0 Definitions

Asset Maintenance Department: The Collection Systems Department responsible for performing preventative maintenance activities on sanitary and storm sewer assets. Their work typically involves the use of televised inspection (CCTV and remotely operated) and sewer cleaning equipment (Vactor trucks, etc.).

Asset Renewal Department: The Collection Systems Department responsible for the rehabilitation, repair, and replacement of SD1's sanitary sewer and storm water assets. Asset renewal projects may be completed by construction crews staffed by SD1 personnel or external contractors.

Customer: The owner or tenant of a property that is located within the limits, or would be affected by, the completion of an emergency Asset Renewal project.

Emergency Asset Renewal: An unscheduled Asset Renewal project that is initiated in immediate response to an observed problem with an SD1 asset. Emergency projects typically will not allow time for normal planning-related tasks (cost estimating, property owner notification, etc.) and, therefore, require the approval of the Asset Renewal Manager or his designee (typically the Collection Systems Director). Emergency Asset Renewal projects are generally initiated in cases where the SD1 service problem is serious enough to create a risk of loss of life, property damage, or significant environmental impact. Emergency Asset Renewal projects may involve asset construction or placement of temporary measures (bypass pumping, traffic control, etc.).

External Contact Sheet: A list of contacts from other utilities and Northern Kentucky political jurisdictions that may be need to be contacted during the response and completion of an emergency Asset Renewal project.

Lucity: SD1's work order management system used for storing, analyzing, and managing data related to the operation and maintenance of SD1 assets.

Manager on Call: A manager from the Asset Renewal group that has been designated by the Collection Systems Director to receive calls from First Response Technicians. This role is normally filled by the Asset Renewal Manager but can be re-assigned to other Asset Renewal group managers as necessary.

Property: Used as a general term to refer to a parcel that is occupied by a home, business, or other public entity served or impacted by SD1-owned assets (sanitary or storm water).

SORP (Sewer Overflow Response Program): The component of SD1's Capacity, Management, Operations, and Maintenance (CMOM) program that is focused on emergency response activities to contain, mitigate, and clean residuals resulting from sanitary sewer overflows (SSOs).

Trouble Call: Notification provided to SD1 regarding a service issue or problem that is typically provided through phone calls to SD1's main office number (859-578-7450, followed by appropriate prompts).

5.0 Procedure Overview

5.1 Prior to Site Visit

A. For Emergency Asset Renewal projects that begin with a Trouble Call report, the initial response activities shall be completed in accordance with the *Initial Trouble Call Response* SOP. Prior to visiting a property where a Trouble Call has been reported, these procedures include steps for scheduling the First Response Technicians, Trouble Call information receipt, GIS data review, call prioritization, and travel to the site.

B. Emergency Asset Renewal projects may also be initiated through reports provided from SD1 personnel in various Departments. This could include a report of a collapsed pipe discovered during a CCTV inspection, a CCTV camera that has become lodged in a pipe, or a failing force main discovered by SD1's Pump Stations Operations group.

5.2 Trouble Call Notification

A. For problems that are reported through the normal Trouble Call response process, the First Response Technician shall visit the site and perform a screening level analysis to determine the potential need for an emergency Asset Renewal project. A potential emergency Asset Renewal project shall meet each of the following three (3) conditions:
   i. The source of the problem can clearly be identified during the visit at as a failing or defective SD1 asset. The identification of an SD1 asset as the problem source may require a CCTV inspection. The First Response Technician has the authority to request such an inspection as described in the *Initial Trouble Call Response* SOP.
   ii. The SD1 asset problem appears to have developed recently or is contributing to a rapidly evolving situation.
   iii. The SD1 asset problem is creating a risk for loss of life, property damage, or significant environmental impact.

B. For problems that the First Response Technician has determined meet the three (3) conditions described above, the Technician shall immediately contact the "Manager on Call" by phone.

5.3 All Other Notifications

A. For potential emergency Asset Renewal problems that are reported outside of the normal Trouble Call communication channels, the first recipient of the problem report within the Asset Renewal Group shall immediately contact the Asset Renewal Manager.

B. Depending on the nature of the described problem, the Asset Renewal Manager shall direct either the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction to visit the site, develop a project scope, and provide a recommendation regarding the initiation of an emergency project.

5.4 Project Scoping and Approval

A. A site visit shall be performed by either the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction after being notified by the "Manager on Call" or as requested by the First Response Technician. The purpose of this visit is to assess the need for an emergency-scheduled project, develop an initial project scope, and make a recommendation to the Asset Renewal Manager. In rare cases, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction may decide that a site visit is not necessary to develop a project scope (i.e., missing manhole lid).

B. Due to the risks, potential complications, and general inefficiencies associated with emergency-scheduled work, the project scope developed by the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall emphasize the use of the following measures:
    i. Bypass pumping,
    ii. Temporary traffic / access control measures to reduce public safety risk,
    iii. Sewage hauling and/or temporarily cutting power to pumps at stations served by leaking force mains (this option will require coordination with SD1's Pump Stations Department personnel),
    iv. Containment of sewer overflow and / or pumping of overflow back into the collection system (this option will require coordination with the Corrective Maintenance Team Leader on SORP response activities),
    v. Temporarily relocating residents out of an affected structure into a hotel (any offers for temporary relocation shall only be made to customers after discussing the project scope with the Asset Renewal Manager).

C. The inclusion of excavation or heavy equipment use into an emergency project scope shall generally require the following conditions:
    i. The use of temporary options listed above is not sufficient to address the observed problem,
    ii. The risks associated with excavation are manageable (i.e., the defect location is known, there is adequate clearance between the pipe and adjacent structures, utility conflicts are not anticipated to be complicated, etc.),
    iii. The weather will not create unsafe working conditions for construction workers (i.e., snow or rain),
    iv. The equipment and materials required to complete the project are readily available such that the project can be completed without delay once work is underway. This can be particularly important for projects that are initiated outside of normal working hours.

D. The project scope developed by the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall include the required equipment, materials, and any necessary safety / site access / lighting equipment. Safety is a critical element of the scoping process because of the desire by SD1 workers to complete emergency projects quickly. However, implementing an Asset Renewal project on an emergency-basis shall <u>never</u> be an acceptable justification for disregarding standard safety practices. The materials and methods included in the project scope shall also account for the benefits of labor-saving approaches (i.e., controlled density fill as backfill material, etc.).

E. The project scope developed by the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall typically be focused on a resolution to the immediate problem rather than larger-scale rehabilitation / replacement objectives.

F. After developing a project scope, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall contact the Asset Renewal Manager or designee to review the scope and request approval before mobilizing additional resources (personnel, equipment, materials, etc.).

5.5 Initial Project Implementation / Mobilization

A. After receiving approval from the Asset Renewal Manager, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall contact an appropriate Team Leader or external contractor supervisor to review the project scope and begin mobilizing resources.

B. During the period of time when personnel, equipment, and materials are being mobilized to the project site, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall ensure an emergency locate request to Kentucky811 has been completed ("call-before-you-dig" program). The time of this request shall be documented and provided to the Asset Renewal Team Leader or external contractor supervisor. Because Kentucky Law allows utilities up to 48-hours to respond to an emergency locate request, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction may elect to contact the utilities directly using SD1's external contact sheet as a

guide (attached).

C. During the period of time where personnel, equipment, and materials are being mobilized to the project site, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall attempt to make contact with affected property owners.
    i. For projects involving construction on private property, an attempt shall be made to contact all directly affected property owners / residents regardless of the project initiation time. At any property where contact is not successfully made, a door hanger shall be placed advising them of the need for an emergency-scheduled SD1 project and providing SD1 contact information. All notification attempts shall be documented in Lucity.
    ii. For projects involving construction within public roadways, a door hanger shall be placed which advises property owners of the need for an emergency-scheduled SD1 project and provides SD1 contact information.
    iii. All project notification attempts shall be documented in Lucity.
D. During the period of mobilization to any project involving work in public roadways, the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall contact the local jurisdiction to advise them of the project and any necessary traffic impacts (lane / road closures, parking restrictions, etc.) using SD1's external contact sheet as a guide (attached). Contact emergency dispatch if applicable.
E. The Asset Renewal Coordinator or the Assistant Construction Manager External Construction shall generally remain on-site until the Asset Renewal Team Leader or external contractor supervisor has arrived. For simple projects, the Asset Renewal Coordinator or the Assistant Construction Manager External Construction may leave the site upon the completion of their initial project implementation tasks.

5.6 Project Implementation / Construction

A. Upon arrival at the project site, the Asset Renewal Team Leader or external contractor supervisor shall assume responsibility for completing the project in accordance with the approved scope of work. Any significant adjustments to the project scope should be reviewed with the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction before they are adopted.
B. All construction shall be performed in accordance with standard SD1 practices. As noted previously, the goal of completing an emergency project quickly does not relieve SD1 personnel (or its contractors) from the need to perform work in accordance with applicable safety practices.
C. The Asset Renewal Team Leader or external contractor supervisor shall maintain regular contact with the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction throughout construction. This information shall be relayed to the Asset Renewal Manager on a regular basis.
D. The construction crew shall wait for the utilities to be marked before using heavy equipment for excavation; any excavation performed prior to the marking of utilities shall be performed through hand-digging. The only exceptions to this procedure shall be allowed in the case of an emergency project that is resolving an imminent threat to life or property and shall require the prior approval of the Construction and Asset Renewal Coordinator or the Assistant Construction Manager External Construction.
E. Any issues that arise during construction (property owner coordination, traffic control) shall be managed by the Asset Renewal Team Leader or external contractor supervisor with the support of their SD1 supervisors.
F. The Asset Renewal Team Leader or Assistant Construction Manager External Construction shall be responsible for entering work order data into Lucity for the project.

5.7 Post-Project Meeting

A. At the discretion of the Asset Renewal Coordinator or the Assistant Construction Manager External Construction, a post-project meeting may be scheduled within two (2) weeks of the completion of an emergency project to review and discuss any issues that may impact SD1 policies, procedures, and methods.
B. The post-event meeting shall be attended by the Collection Systems Director, the Asset Renewal Manager, the Asset Renewal Team Leader, and others as necessary.

6.0 Attachments

- External Contact Sheet
- Door Hanger, Asset Renewal No. 1

7.0 References

- Initial Trouble Call Response SOP

8.0 Signatures

See SOP Acknowledgement Sheet

Trouble Call Response Technician — Date

Cap Kiser, Corrective Maintenance Team Leader — Date 6/8/15

Darleen McGuire
Assistant Construction Manager External Construction — Date 5/28/15

Dave Ross, Construction and Asset Renewal Coordinator — Date 6-12-15

Kyle Boyle, Asset Renewal Manager — Date 5/15/15

Rich McGillis, Director of Collection Systems — Date 10/25/15

Chris Novak, Deputy Executive Director – Operations Division — Date 9-15-15

SD1 Managing Northern Kentucky's Wastewater and Storm Water	Collection Systems Department Standard Operating Procedures (SOP) **Initial Trouble Call Response**
	Version: 1 **Effective Date: 11/17/2014** **Owner: Collection Systems** **Revision Date:**

1.0 Purpose

The purpose of this SOP is to document initial Trouble Call response procedures to be performed by SD1 personnel. The development and use of this SOP is intended to promote quality and consistency in responding to Trouble Calls, particularly those involving new employees or those received during high call volume periods.

2.0 Scope

This SOP covers the procedures to be performed by SD1 personnel from the first receipt of the Trouble Call to the point where the First Response Technician has visited the subject property and determined the need for additional response actions or SD1's level of responsibility. This SOP is applicable to typical Trouble Calls that are received via phone or email through the SD1 web-site ("info@"). This SOP is not intended to cover all procedures that may be required to make final determinations regarding SD1 responsibility or specific corrective actions to be taken by SD1 to resolve a service problem.

3.0 SD1 Personnel Roles and Responsibilities

Customer Care Center Service Representative – Personnel from the Customer Care Department that have been trained to receive Trouble Calls during normal working hours. Customer Care Service Representatives are responsible for: obtaining basic Trouble Call information from the customer, entering data into Lucity, and notifying the appropriate First Response Technicians.

Dry Creek WWTP Dispatcher – Personnel from the Dry Creek Wastewater Treatment Facility Department that have been trained to respond to Trouble Calls received outside of normal working hours. Dry Creek WWTP Dispatch personnel are responsible for: obtaining basic Trouble Call information from the customer, entering data into Lucity, and notifying the appropriate First Response Technicians.

Corrective Maintenance First Response Technicians – Technicians working in the Corrective Maintenance group and other Collection Systems personnel that have been trained to respond to Trouble Calls. First Response Technicians are responsible for: responding to Trouble Call notifications from the Customer Care Center or Dry Creek WWTP Dispatch, maintaining communication with the dispatching office, communicating with customers, entering Trouble Call data into Lucity, reviewing GIS data (asset ownership, harassment list, etc.), activating additional staff during high call volume periods, collecting basic service problem data during site visits, establishing likely causes of service problems, requesting additional resources (Asset Maintenance or Asset Renewal) when it is determined that SD1 may have responsibility, and creating work order requests.

Corrective Maintenance Team Leader – The direct supervisor of Technicians working in the Corrective Maintenance group. The Corrective Maintenance Team Leader is primarily responsible for: providing field support to First Response Technicians, assisting in decisions regarding SD1 responsibility, assisting in the training of First Response Technicians, performing QA/QC of Trouble Call data entered into Lucity, and working with First Response Technicians to address job performance issues (response time, quality of service, etc.).

Corrective Maintenance Coordinator – The coordinator of the Corrective Maintenance group and direct supervisor of the Corrective Maintenance Team Leader. The Corrective Maintenance Coordinator is responsible for: working with the Asset Maintenance Manager and Collection Systems Director to establish policies covering Trouble Call work activities, maintaining an on-call list for use by the Customer Care Center / Dry Creek WWTP Dispatch, maintaining the external contact sheet (attached), monitoring weather forecasts for storm events, scheduling additional staff during potentially high call volume periods,

training SD1 personnel involved in Trouble Call response (First Response Technicians, Customer Care Center Service representatives, Dry Creek WWTP Dispatch), monitoring First Response Technician job performance, assisting with decisions regarding SD1 responsibility, and preparing Corrective Maintenance group performance reports for the Asset Maintenance Manager.

Asset Maintenance Manager – The Manager of the Asset Maintenance group and direct supervisor of the Corrective Maintenance Coordinator. The Asset Maintenance Manager is responsible for: working with with the Corrective Maintenance Coordinator and Collection Systems Director to establish policies covering Trouble Call work activities, maintaining a rotation list of off-shift Asset Maintenance personnel, reviewing Corrective Maintenance group performance reports, and generating Asset Maintenance Department performance reports for the Collection Systems Director.

4.0 Definitions

Asset Maintenance Department: The Collection Systems Department responsible for performing preventative and corrective maintenance activities on sanitary and storm sewer assets. Their work typically involves the use of televised inspection (CCTV and remotely operated) and sewer cleaning equipment (Vactor trucks, etc.).

Asset Renewal Department: The Collection Systems Department responsible for the rehabilitation, repair, and replacement of SD1's sanitary sewer and storm water assets. Asset renewal projects may be completed by construction crews staffed by SD1 personnel or external contractors.

Customer: Any individual reporting a Trouble Call to SD1 that is able to provide basic information on the service problem and meet at the problem site with a First Response Technician.

External Contact Sheet: A list of contacts from other utilities and Northern Kentucky political jurisdictions that may be responsible for resolving Trouble Call issues reported to SD1. First Response Technicians and other SD1 personnel may provide external contact information to customers when it can be established that a reported problem is not the responsibility of SD1.

GIS: The Geographic Information System developed by SD1 to geographically store, analyze, manage and map data related to the operation and maintenance of its assets (sanitary and stormwater).

High Call Volume: Those periods of time when a First Response Technician is unable to visit a Trouble Call site within the 2-hr response time goal. Due to the availability of additional staff during regular working hours, high-call volume periods are typically encountered only during after-hours.

Lucity: SD1's work order management system used for storing, analyzing, and managing data related to the operation and maintenance of SD1 assets. Accurate data entry into Lucity is critical in ensuring that Collection Systems service problems are efficiently and appropriately resolved.

On-Call List: A list of First Response Technicians that is updated on a routine basis by the Corrective Maintenance Coordinator and provided to the Customer Care Center and Dry Creek WWTP Dispatch.

Property: Used as a general term to refer to a parcel that is occupied by a home, business, or other public entity served or impacted by SD1-owned assets (sanitary or storm water).

Trouble Call: Notification provided to SD1 regarding a service issue or problem that may be the responsibility of SD1 to resolve. These notifications are typically provided through phone calls to SD1's main office number (859-578-7450, option 3) or email through SD1's website ("info@"). It is important to note that Trouble Calls provided to SD1 via email are not subject to the 2-hr response time goal.

5.0 Procedure Overview

5.1 Planning and Scheduling

A. The Corrective Maintenance Coordinator will be responsible for providing the Customer Care Center and Dry Creek WWTP Dispatch with a current on-call list of First Response Technicians available for Trouble Call response. This list shall be prioritized with the primary Technician listed first and followed by at least two (2) additional, back-up Technicians.

B. Because the heaviest volume of Trouble Calls generally coincides with rainfall events, the Corrective Maintenance Coordinator shall monitor weather forecasts on a daily basis.

C. When heavy rainfall is forecast, the Corrective Maintenance Coordinator will confirm the availability of First Response Technicians from the on-call list and assign additional personnel to the list, as necessary.

5.2 Trouble Call Receipt: Normal Working Hours (8:00 a.m. to 4:30 p.m.)

A. Trouble Calls will be routed to the Customer Care Center. In rare cases where the reported problem is unusually complex or the customer is not willing to accept standard Trouble Call response procedures, the Customer Care Center may direct Trouble Calls to the Corrective Maintenance Team Leader or Coordinator.

B. The Customer Care Center service representative will collect basic information on the nature of the problem, enter Trouble Call information into Lucity, and notify the First Response Technician.

5.3 Trouble Call Receipt: After-Hours (4:30 p.m. to 8:00 a.m.)

A. Trouble Calls will be routed to the Dry Creek WWTP Dispatch.

B. The Dry Creek WWTP Dispatcher will enter basic Trouble Call information into Lucity and then notify the First Response Technician by phone.

C. During periods of high call volume, the First Response Technicians will advise the Corrective Maintenance Team Leader of any issues in meeting the 2-hr response time goal. The Corrective Maintenance Team Leader will work with the Corrective Maintenance Coordinator to activate additional resources to process incoming Trouble Calls in the Dry Creek WWTP Dispatch office or provide field response.

5.4 Site Visit Preparation

A. The First Response Technician will contact the customer by phone and ask additional questions and review the ownership attribute of sanitary or storm water assets in the GIS system to establish whether the problem could be the responsibility of SD1. If a problem can reasonably be determined by the First Response Technician to be clearly outside of the responsibility of SD1, the customer will be provided with contact information of other potentially responsible parties by the Technician. During this step, it is important that the Technician communicate with the customer in a manner that is helpful but not un-necessarily speculative on the actual responsibility for resolving the problem and document all communication with the customer in Lucity.

B. For all other Trouble Calls where information provided indicates that SD1 may be responsible, the First Response Technician will check the harassment list using the GIS. When a Trouble Call is received from a customer on this list, or is located adjacent to a customer on the list, the First Response Technician shall take one the following actions:

   i. Contact the Corrective Maintenance Team Leader and request permission to include an additional Technician to accompany them in the field response for this Trouble Call.

   ii. Contact the Corrective Maintenance Team Leader and request permission to contact the local law enforcement jurisdiction and request an escort to the Trouble Call site. A law enforcement escort is recommended when harassment records indicate previous threats have been made against SD1 personnel.

C. In the event that multiple Trouble Calls have been received within a 2-hour period, the First Response Technician shall prioritize those calls and plan their field response activities accordingly. The prioritization factors shall include protection of human health, public safety, distance between Trouble Call locations, and anticipated travel time.

D. At any time when a First Response Technician cannot safely travel to a Trouble Call site within 2 hours of the initial call receipt (excluding calls received via email), the Technician will temporarily

halt transit and call the customer to provide them with a best estimate of their arrival time.

E. At any point in the work shift of a First Response Technician when it apparent that they will not be able to visit a Trouble Call site within the 2 hour goal (excluding calls received via email), the Technician shall contact the Corrective Maintenance Team Leader and request permission to call in an additional First Response Technician from the on-call list.

F. If / when additional Technicians are activated by the primary First Response Technician, the primary Technician shall advise the Customer Care Center or Dry Creek WWTP Dispatcher that additional First Response Technicians are available.

5.5 Customer Contact

A. First Response Technicians must travel to work sites in SD1 vehicles, wear SD1-issued work clothing, and prominently display their SD1 identification badge during the performance of all Trouble Call response field activities.

B. Upon reaching a subject property, the First Response Technician shall park their SD1 vehicle to avoid traffic impacts or blocking of driveways. If the First Response Technician cannot successfully contact the customer by knocking at the primary entrance door, they shall place a phone call to the provided phone number.

C. If the First Response Technician cannot successfully make contact with the customer, they shall leave a door hanger at the primary entrance door indicating the time of their arrival and include a business card. For any Trouble Call site where direct contact with the customer was not made by the after-hours First Response Technician, that Technician shall notify the Corrective Maintenance Team Leader that follow-up communication will be necessary. The daytime shift First Response Technician shall be responsible for any follow-up communication with the customer.

5.6 Site Investigation / Response

A. Upon successful contact with the customer, the First Response Technician shall identify themself as an SD1 employee and request that the customer direct them towards the service problem.

B. Before taking any photos (inside or outside of a residential structure), the First Response Technician shall request permission from the customer. If a customer does not grant permission, the responder shall request that the customer take photos of the problem using an SD1 camera.

C. During the initial investigation by the First Response Technicians, the critical items of concern shall be verifying the accuracy of the initial report, determining if there is an imminent health / safety issue for the customer or the general public, identifying potential causes of the reported problem, and establishing whether SD1 assets are likely to be involved.

D. During this initial investigation, the First Response Technician shall follow other SD1 SOP's documents that have been developed for specific service problem categories, as appropriate. These SOP's include basement backup response, sinkhole response, and flooding response.

G. If it becomes apparent during the site investigation that resolving a Trouble Call issue is <u>clearly not</u> the responsibility of SD1, the First Response Technician shall explain their reasoning to the customer and provide them with contact information of other potentially responsible parties by the Technician. During this step, it is important that the Technician communicate with the customer in a manner that is helpful but not un-necessarily speculative on the actual responsibility for resolving a problem.

E. If it becomes apparent during the site investigation that the Trouble Call problem <u>may</u> be SD1's responsibility and could benefit from an immediate Asset Maintenance Activity (Vactor truck cleaning or CCTV investigation), the First Response Technican shall contact the Corrective Maintenance Team Leader (during normal working hours) or other Asset Maintenance personnel as provided on the current rotation list prepared by the Asset Maintenance Manager (during off-shift hours). After Asset Maintenance resources have been called, the Technician shall communicate to the customer that the utilization of additional SD1 resources does not automatically imply that SD1 is responsible to resolve the problem. The First Response Technician shall remain on-site with the Asset Maintenance crew until those crew members have been provided with sufficient information on the problem and are able to assume control.

F. If it becomes apparent during the site investigation that the Trouble Call problem represents a safety, operational, or regulatory risk that <u>may</u> be due to the structural failure of an SD1 asset, the

First Response Technician shall contact the appropriate manager from the Asset Renewal Group (rotating schedule between the Construction and Asset Renewal Coordinator and Assistant Construction Manager External Construction). Problems warranting an immediate Asset Renewal response include leaking force mains, collapsed sanitary sewer lines, sinkholes above SD1-owned sanitary or storm sewers that are located in public roadways. A record of the Asset Renewal work order request shall be entered into Lucity by the First Response Technician. After Asset Renewal resources have been called, the Technician shall communicate to the customer that the utilization of additional SD1 resources does not automatically imply that SD1 is responsible to resolve the service problem. The First Response Technician shall remain on-site with the Asset Renewal crew until those crew members have been provided with sufficient information on the problem background and are able to assume control.

H. If it becomes apparent during the site investigation that the Trouble Call problem may be SD1's responsibility but does not warrant immediate action, the Field Response Technician shall explain to the customer that further investigation is necessary and will be programmed into SD1's work schedule. At this time, it is important that the Technician not commit to a work schedule for additional work that is inconsistent with the scope of the problem or the capacity of the SD1 Collection System Department. As soon as possible (during regular working hours), the First Response Technician will work with the Corrective Maintenance Team Leader to establish a schedule for additional response activities. The Corrective Maintenance Team Leader shall be responsible for contacting the customer and providing them with information on this schedule.

G. Before leaving the Trouble Call site, the Field Response Technician shall leave the customer with follow-up contact information. The Technician shall also enter all necessary data into Lucity regarding the site investigation and response activities.

6.0 Attachments

- External Contact Sheet
- Door Hanger, Asset Maintenance No. 1

7.0 Signatures

SEE SOP ACKNOWLEDGEMENT SHEET

Trouble Call Response Technician	Date
Cap Kiser, Corrective Maintenance Team Leader	6/8/15 Date
Craig Massie, Corrective Maintenance Coordinator	5-15-15 Date
Donnie Couch, Asset Maintenance Manager	5/18/15 Date
Rich McGillis, Director of Collection Systems	10/22/15 Date
Chris Novak, Deputy Executive Director – Operations Division	9-15-15 Date

External Contact Sheet

NKY Water	578-9898
NKY Water/Plants	441-0482
NKY Department of HWYS	341-2700
Tank Dispatch	578-6950
KC School Bus	356-5050
BC School Bus	282-5640
CC School Bus	635-2161
Board of Health	341-4151
Cincinnati Bell Office	513-566-5050
Duke Gas	513-651-4466
Duke Electric	800-343-3525
Owen Electric	283-5800
KY 811 Underground	1-800-752-6007
E.P.A	525-4923
Time Warner	431-0300
Silver Grove (TOW)	441-2200
Fleet	431-8600
Repair and Service	513-566-8130
Kenton Co. Garage	392-1930
Flood restoration	513-871-3333
Puro Clean	689-4440

Initial Trouble Call Response

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Door Hanger= Asset Maintenance # 1

We're sorry we missed you!

Please contact SD1 at your earliest convenience using the information on the business card below. Our normal business hours are from 8 a.m. to 4:30 p.m., Monday through Friday.

Sanitation District No. 1
www.sd1.org

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Standard Operating Guideline
(SOG)
Writing W/O In Lucity
For
(4th St. Chamber)

Purpose:
Writing work order for cleaning the chamber is for tracking of time, equipment, personal, weight and what type of debris is being caught on the bar screen. This helps SD1 understand the cost and what's needed to complete the task at hand.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group

Procedures:
- Log into Lucity
- Go to the word **Work**. Click on it. Go to **Work Orders &** then **Standard** & click on it.
- Go to **Add Record** & click on it. You will now be @ **Work Order – No Filter.**

Work Order Tab:
- Go to **Status Date. Auto populated date make sure it correct**
- Go to **Category. Enter 1100 (Structure Main.)**
- Go to **Problem. Enter 1102 (Structure needs to be cleaned)**
- Go to **Main Task. Enter 1105 (Cleaned Structure)**
- Go to **Supervisor. Enter your Supervisor**
- Go to **Lead Worker. Enter Your Employee #**
- Go to **Reason. Enter 411 (Nine Mimi. Controls)**
- Go to **Request Comments For W/O. Enter small comment on what was performed.**
- Go to **Request By. Put in your Supervisor #**
- Go to **Start Date. Auto populated date make sure it correct**
- Go to **End Date. Auto populated date make sure it correct. You're now done w/ this tab.**

Location Tab:
- Go to **Dept. Enter - 2 (Customer Service)**
- Go to **Sub Dept Enter- 2.1 (Collection System)**
- Go to **White Box @ the bottom under work order location- Rt. Click & click on add record**

- Go to **Address Enter address info, General location & City**
- Go to **Save & Save**

ASSETS Tab:

- Rt. Click on the **White Box @ the top & click on Add Record.**
- Go to **System ID & Enter Outfall Structure.**
- Go to **Debris Type. Enter 3 (Floatable & Grit)**
- Go to **Debris Yards. Enter .01**
- Go to **Save & Save**
- **Find Red Folder & Click it & it will close.**

Task/Resources Tab:

- **Look for the word Work Tasks**- Rt. Click in the **White Box & click on Add Record.**
- **Work Order Tasks will be shown.**
- Go to **Task. Enter 1105 (Clean Structure)**
- Go to **Task Start Date. Enter Date.**
- Go to **Task End Date. Enter Date.**
- Go to **Status. Enter 9 (Complete)**
- Go to **Save & Save.**
- **Find Red Folder & Click it & it will close.**
- **Look for the word Resources** - Rt. Click in the **White Box & click on Add Record.**
- **Work Order Resources will be shown.**
- Go to **Resource Type. Enter 1 (Employee)**
- Go to **Emp/Equip/Mat. Enter your employee #**
- Go to **Dept.- Make sure you Dept. # is present. (Ex. # 2 Collection System)**
- Go to **Hrs. & Quanity. Put your time in the Regular Box for Employee. (Example .5 for ½ hr.) If you have more than one employee @ the site. They must be added. You do this by going to the add button next to the Red X & click on it. Follow the step from above.**
- Go to **Add Button & Lt. Click on it. Enter 2 (Vehicle Time) Ex. 1 Reg. Pick up**
- Go to **Hrs. & Quanity- Put your time in the Norm Box for Equipment. (Example .5 for ½ hr.) If you have more than one piece of Equipment @ the site. It must be added. You do this by going to the add button next to the Red X & click on it. Follow the step from above.**
- Go to **Save & Save**

Custom Tab:

- Go to **Drainage Area # Enter the DA**
- Go to **System Type – Choose – Separated or Combined**

Status Tab:

- **Enter 800- (Closed in Field)**

Standard Operating Guideline
(SOG)
Calculating Volume of Release

Purpose:

Calculating Volume for all CSO releases is calculated by the use of modeled dry weather flow. Volumes will be less by using this method than if we used the Manning Pipe Chart. This guideline will help SD1 staff understand and how to perform this duty.

Scope:

Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:

Collection System- Customer Service

- CSO Inspection Group

Procedure:

1) Search structure number in GIS
2) Select Identify feature from Tool bar
3) Highlight the sewer line upstream of the structure
4) In the Identification Box that pops up go to the Identify from drop box and select DWF.
5) Scroll down until you find the Max Flow for this pipe.
6) Flow is listed in MGD and will need to be converted to GPH. (Gallons Per Hr.)
7) To determine the Time of the release you take the start time (when the release was found) until the stop time (when the flow is back in

the dry weather pipe) rounded up to the next hour and add an additional hour.

8) Multiply the Time estimate with the Flow conversion to determine the Flow Volume to be reported.

Standard Operating Guideline
(SOG)
Changing Net Bags

Purpose:

Net bags are in installed on sanitary bypass pipes in the combined and separate systems. Net bags prevent excessive debris like floatable and solids from entering a body of water. This will improve water quality and prevent a public health issue which is a goal at SD1. Net bags make the clean ups quicker and easier on responding personal in event of overflows.

Scope:

Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluation each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:

Collection System – Sorp Crew
Engineering – Flow monitoring crew

Procedures:

Net Bags Installation:
Our guideline for net bags installations at the end of an outfall with easy access to them is as follows;

1) Check to see if the outfall pipe size is between 8" and 24". This will determine the type of netting to use. Use the green net shaped like a tube that can slide over the end of pipes under 12". For pipes between 12" and 24" use the black netting for these pipe sizes. Also check to see if it has a tide flex valve.
2) Determine what the length of the net that is needed. 3' to 4' is enough for most cases, however sometimes you need up to 6' of net. It depends on where the outfall is located and how active it is.
3) For the green netting; slide it over the end of the pipe. Secure the net to the pipe with a metal, adjustable band. Once it is secured roll up the end and wire tie it shut. This allows for the debris to be caught. See picture below.

4) The black net comes in 6’ rolls. Cut it down to size and wrap it around the pipe, secure it to the pipe the same way. Use wire ties to make a “sock”. Secure it down one side and across the end to form a bag around the pipe. See picture below.

Changing Net bag

1) After a release check to see if the bag needs changed. When the net is at least half full change it.
2) Take the metal band off, slide the net off the pipe. Take a picture of it; record what type of debris it caught.
3) Weigh it with the fish scale. Write work order to record the weight. Use the SOG for - Work Order Process for Changing Net Bag for this process. Also record pictures to the work order and the Structure Inventory under the CSO Outfall number.
4) Replace the net.

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Standard Operating Guideline
(SOG)
Writing W/O In Lucity
For
(Changing Net Bag)

Purpose:

Writing work order for changing net bag is for tracking the weight, type of debris and time. Changing net bag prevents excessive debris like floatable and solids from entering a body of water. This will improve water quality and prevents a public health issue which is a goal at SD1. Net bags make the clean ups quicker and easier on responding personal in event of overflows.

Scope:

Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:

Collection System- Customer Service

- CSO Inspection Group
- Sorp Crew

Procedures:

- Log into Lucity by way of Citrix.
- Go to the word **Work**. Click on it. Go to **Work Orders &** then **Standard** & click on it.
- Go to **Add Record** & click on it. You will now be @ **Work Order – No Filter.**

Work Order Tab:

- Go to **Status Date. Auto populated make sure date is correct.**
- Go to **Category. Enter 1100 (Structure Main.)**
- Go to **Problem. Enter 1102 (Structure needs to be cleaned)**
- Go to **Main Task. Enter 1127 (Replaced Net Bag)**
- Go to **Supervisor. Enter your Supervisor**
- Go to **Lead Worker. Enter Your Employee #**

- Go to **Reason. Enter 475 (SSO Inspection) CSO's Enter 411 (Nine Mimi. Controls)**
- Go to **Request Comments For W/O. Enter small comment on what was performed.**
- Go to **Request By. Enter your employee #**
- Go to **Start Date. Auto populated make sure date is correct**
- Go to **End Date. Auto populated make sure date is correct. You are now done w/ this tab.**

Location Tab:

- Go to **Dept. Enter - 2 (Customer Service)**
- Go to **Sub Dept Enter- 2.1 (Collection System)**
- Go to **White Box @ the bottom under work order location- Rt. Click & click on add record**
- Go to **Address Enter address info, General location & City**
- Go to **Save & Save**

ASSETS Tab:

- Rt. Click on the **White Box @ the top & click on Add Record.**
- Go to **System ID & Enter Outfall Structure.**
- Go to **Debris Type. Enter 3 (Floatable & Grit)**
- Go to **Debris Yards. Enter .01**
- Go to **Save & Save**
- **Find Red Folder & Click it & it will close.**

Task/Resources Tab:

- **Look for the word Work Tasks**- Rt. Click in the **White Box & click on Add Record.**
- **Work Order Tasks will be shown.**
- Go to **Task. Enter 1127 (Replace Net Bag)**
- Go to **Task Start Date. Enter Date.**
- Go to **Task End Date. Enter Date.**
- Go to **Status. Enter 9 (Complete)**
- Go to **Save & Save.**
- **Find Red Folder & Click it & it will close.**
- **Look for the word Resources** - Rt. Click in the **White Box & click on Add Record.**
- **Work Order Resources will be shown.**
- Go to **Resource Type. Enter 1 (Employee)**

- Go to **Emp/Equip/Mat. Enter your employee #**
- Go to **Dept.- Make sure you Dept. # is present. (Ex. # 2 Collection System)**
- Go to **Hrs. & Quanity. Put your time in the Regular Box for Employee. (Example .5 for ½ hr.) If you have more than one employee @ the site. They must be added. You do this by going to the add button next to the Red X & click on it. Follow the step from above.**
- Go to **Add Button & Lt. Click on it. Enter 2 (Vehicle Time) Ex. 1 Reg. Pick up**
- Go to **Hrs. & Quanity- Put your time in the Norm Box for Equipment. (Example .5 for ½ hr.) If you have more than one piece of Equipment @ the site. It must be added. You do this by going to the add button next to the Red X & click on it. Follow the step from above.**
- Go to **Save & Save**

Custom Tab:

- Go to **Drainage Area # Enter the DA**
- Go to **System Type – Choose – Separated or Combined**

Status Tab:

- **Enter 800 (Closed in Field)**

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Standard Operating Guideline
(SOG)
Cleaning Creek Inlets/Bar Racks

Purpose:
Bar Screens are installed at various storm/creek inlets throughout the combined system. This is to prevent large debris from entering the system and causing blockages and/or causing the need for excessive cleaning of the downstream lines. This guideline is to assure that the cleaning of the bar racks are completed and documented.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service - Construction
- CSO Inspection Group
- Heavy Equipment Operators

Procedures:
1. Inspection of creek inlets:
   - Pre subsequent rain events
   - Post rain events
   - Document work needed/preformed
   - Create work order

2. Cleaning of creek inlets:
   - Removal of large and small debris from grating

- Removal of debris around headwall that could wash down and block inlet (up to 100ft.)
- Debris that's bagged up and/or removed from the area is deposited in dumpsters at the Lakeview Facility or DCWWTP.
- Cleaning is performed by the use of one or more of the following methods:
    1) Cleaning by hand
    2) Stet Truck
    3) Vactors
    4) Trac Hoe

➢ Work order needs to be completed to track time, procedure, equipment & manpower.

Correct and Maintain:

Rocks are moved back up the creek bed in an effort to curb further erosion of the stream bed. This is also to provide areas for sand, grit and gravel to settle out before it enters the combined system.

Standard Operating Guideline
(SOG)
Cleaning Outfalls & System Values

Purpose:
This guideline is to make sure the proper operation and regular maintenance program for the sewer system and CSO outfalls. This is a requirement of the 9 Minimum Control mandated by the EPA.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:

Collection System- Customer Service - Construction

- CSO Inspection Group
- Heavy Equipment Operators

Procedures:

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Standard Operating Guideline
(SOG)
Solids and Floatables

Purpose:
This guideline is to make sure the proper operation and regular maintenance program for the sewer system for CSO's. This is a requirement of the 9 and 6 Minimum Control mandated by the EPA. The guideline will help prevent excessive debris like floatable and solids from entering a body of water and lying on stream or river beds.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group
- Sorp Crew

Procedures:
Net Bags Installation:
Our procedure for net bags installations at the end of an outfall with easy access to them is as follows;

1) Check to see if the outfall pipe size is between 8" and 24". This will determine the type of netting to use. Use the green net shaped like a tube that can slide over the end of pipes under 12". For pipes between 12" and 24" use the black netting for these pipe sizes. Also check to see if it has a tide flex valve.
2) Determine what the length of the net that is needed. 3' to 4' is enough for most cases, however some times you need up to 6' of net. It depends on where the outfall is located and how active it is.
3) For the green netting; slide it over the end of the pipe. Secure the net to the pipe with a metal, adjustable band. Once it is secured roll up the end and wire tie it shut. This allows for the debris to be caught. See picture below.

4) The black net comes in 6’ rolls. Cut it down to size and wrap it around the pipe, secure it to the pipe the same way. Use wire ties to make a “sock”. Secure it down one side and across the end to form a bag around the pipe. See picture below.

Changing Net bag

1) After a release check to see if the bag needs changed. When the net is at least half full change it.
2) Take the metal band off, slide the net off the pipe. Take a picture of it; record what type of debris it caught.
3) Weigh it with the fish scale. Write work order to record the weight. Use the SOG for - Work Order Process for Changing Net Bag for this process. Also record pictures to the work order and the Structure Inventory under the CSO Outfall number.
4) Replace the net.

4th Street Chamber CSO

This chamber has a 3' weir and a set of bars to keep debris out of the main line. This structure is inspected and cleaned at least once a week.

1) Open the structure and check the bars for debris and build up. If the debris build up is more than half of the bar rack, it needs cleaned.

2) To clean the bars, set up a confine space entry. Make sure you take a 5' rake with you. Use the rake to clean the bars from the bottom to the top. Placing the debris you cleaned on the bench. Repeat this step until the bar rack is cleaned and the flow has returned too normal.

3) Have a 5 gallon bucket lowered to you. Put the debris in the bucket, have it raised out of the chamber and tell the person on top to bag & it weigh it w/ a fish scale and take pictures. See the SOG for- Work Order Process for cleaning 4th St. Chamber. Record any pictures taken to the work order and to the Structure Inventory under the CSO Outfall number.

SECTION 1. GREENUP CSO

The solid and floatable device is a Suntree Nutrient Separating Baffle Box. See pictures below. The design is to capture 80% of total suspended particles from 0.125mm to 2mm at peak velocity. The screens have 1-3/4" x 5/8" diamond shape openings. This chamber is set as part of the outfall. Once the flow exits the diversion it travels to this chamber. There's three baffles in it to let the sediment settle to the bottom of the chamber. The flow enters the chamber and passes through the screens. The screens capture the solids and floatables. The steps for maintenance are as follow:

1) Check the diversion to see if it released. If it has then go to step two.
2) Open the first hatch to see if the screen needs to be cleaned.
3) Open the next two hatches to see if they need to be cleaned and to check the water level in the chamber. Also check for odors.
4) To clean the screens you need to write a work order in Lucity.

1.1 Lucity Work Order Process

1) Log in to Lucity using your name and password.
2) Go to the **work** tab on the top of the screen.
3) Click on the **work order** tab; then the **standard** tab.
4) The **filter screen** will pop up, click on **the add records** tab.
5) **Work orders- unnamed filter** sheet will pop up.
6) Fill in the **category** as **1100** structure maintenance.
7) Make the **problem 1102** structure needs to be cleaned.
8) Make the **main task 1110** vactored structure.
9) Make the **cause 1206** debris.
10) Make the **supervisor 384** Bill Mullins. Work & editing of work order will be finished by the Vactor Crew or Crew leader. Yards removed needs to add to work order.
11) Make the **reason 411**; nine minimum controls.
12) In the **Request comments for work order** box, put what's needed to complete. For instance vactor out the screen, all chambers, and spray it down.
13) In the **requested by box** put your **employee number**.
14) Click on the **location tab**.
15) In the **department** put **2** for collection system.
16) In the **sub dep.** Put **2.1** for customer service.
17) Now **right click** in the **work order location box**, it is on the bottom of the screen. Then click on **add record.**
18) The **Work locations** screen will pop up. Fill out the address box. The closet address is **201 Riverside Dr.** Then fill out the **general location box** as, in the street under the John Roebling Bridge. Also fill out the **Loc city** box as Covington. Now click the **save** button.

19) Now click the **Assets** tab. Then right click inside the empty box, then click on **add record**. When the screen pops up put the manhole number in the **system ID** box. The # is 1440121. After that click the save button.

20) When the screen comes back up click on the **custom** tab. In the **system type** put **1** for combined. Then for **drainage area #** put **144.** Go to the main save button and click on it.

SECTION 2. CHAMBER #1

Chamber 2 and then Chamber 3 are on the next page.


04/03/2008

Garrard St.
Should be checked anytime the string line in the Diversion manhole shows it has been active. The Bar screen can be cleaned by raking it or hosing it and the sump will be sucked out as needed to prevent solids build up and or odor problems. (Follow steps from Greenup for work order)

Main St & Mc Kinney St.
Should be checked anytime the string line shows activation. Solids and Floatables need to be skimmed once (1) a week. This is done by using two aluminum poles and a dip net. Also once (1) a month the sump needs to be checked for grit/solids on or at the sumps floor. If the grit/solids are more than twelve (12) inches a work order needs to be written for cleaning. This is done by using two aluminum poles & measuring from the top of the sump to the top of the grit. Record the footage & subtract that from the overall depth of the sump. (SEE DEPTHS AT THE BOTTOM)
The bar screens can be cleaned by raking or hosing them out and the sump will be pumped down to just below the overflow to the 84 inch Hobas pipe. The sump needs to be on a PM to be cleaned. When sump needs to be cleaned this is done by using a probable pump to clear the liquids. A vactor truck will be used to suck out all the solids. This needs to be done on an annual basis or as needed. This is to prevent solids from building up and/or odor control. (Follow steps from Greenup for work order)

MAIN ST.- 6 FT.
McKINNEY- 9 FT.

The above procedures also apply when we are Recovering from a River Level of 40. Ft or more.

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Standard Operating Guideline
(SOG)
Dry Weather Inspections

Purpose:
During route inspections, the SD1 staff visually looks for debris and blockages that may trigger a dry weather overflow or would affect the ability of the regulators to maximize the flow entering the interceptor during rainfall. All the regulators are equipped with monitoring blocks to better detect dry weather overflows.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Asset Maintenance – Proactive Maintenance Group
- CSO Inspection Group

Procedures:
Dry Weather Inspections
(No Release)

SD1 personal should inspect the Regulators to ensure that the flow is going to the Dry Weather flow line and check for any debris in the manhole remove as needed.
Check the status of the Overflow Indicator, reset/replace as needed.
Go to location of Outfall; check for placement of sign, also check headwall, river intrusion valve and net bag if present.

Dry Weather Inspections
(Releasing)

If the Regulator was found to have a blockage immediately call Dry Creek to start an Overflow Report.

Try to clear the blockage with a rake, if successful notify Dry Creek of this and provide them with all information for the Overflow report. When reporting to Dry Creek 1 hour will be added to the time given for length of Overflow as well as used in calculating the Volume of the Overflow. The source for the estimate is the Volume Estimate Guide. Use the DWF in GIS. See the SOG on how to Calculate Volume of Release.

If unsuccessful call the LDSAP T/L to arrange to have a Vactor respond to assist with clearing the blockage. Once blockage is cleared report this to Dry Creek as directed above.

After blockage is cleared the Dry weather flow and upstream lines all need to be camera to ensure that debris has been removed as well as to locate where debris came from so repairs can be made. Depending on the type of debris found it is sometimes necessary to inspect all upstream catch basins for deficiencies no bell, wash-out design with an open grating and so on …. Work orders will be written to replace or repair any and all deficiencies.

Standard Operating Guideline
(SOG)
High River Level Inspections

Purpose:
High river level checks are performed at 40.0 feet of River Elevation when Pump Stations are shut down and Flood Stations are put on line, we have to change up our Inspection methods. In some cases Regulators become surcharged and need to be inspected to verify if there's a River Stage Induced Overflow. It's also to identify what Regulators need to be inspected first when the pump station go back on line.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group

Procedure:
High river inspection are performed the same as Dry Weather Inspections and run as a regular route. Some Regulators are subject to River Intrusion at River levels as low as 37.0 ft. This is identified by seeing River water coming in the outfall pipe and entering the sewer system.

Some Regulators are subject to RSIO (River Stage Induced Overflow) this is identified when the Manhole is surcharged to the point that the flow from the incoming line and the outfall pipe are at the same level.

Either of these occurrences should be noted in the Comment Line on the Custom tab in the structure inspection.

Standard Operating Guideline
(SOG)
Post High River Level Inspections

Purpose:
These inspections are performed within a 48 hour window immediately following a Flood Event. Staff concentrates on checking Regulators only to ensure that as the System recovers from the Flood Event there has been no debris deposited in the regulator that would cause a blockage and a subsequent release.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group

Procedure:

These inspections are performed in the same manner and time frame as Post Wet Weather Inspections as we have found that when the P.S. are shut down most of the diversion manholes throughout the system become surcharge and flow thru the dry weather lines become stagnant and tend to deposit and/or leave debris behind when the P.S. are put back in service thereby creating blockages.

For these checks we concentrate on checking Regulators only to ensure that as the System recovers from the Flood Event there has been no debris deposited in the regulator that would cause a blockage and a subsequent release. Any blockages caught and cleared in this time frame will not be reported to Dry Creek as a Dry Weather Release.

Any comments about a release of this type can be put into the comments area of the Structure inspection as well as documenting the status of the Overflow Indicator.

Standard Operating Guideline
(SOG)
Post Wet Weather Inspections

Purpose:
These checks are performed within a 48 hour window immediately following a Rain Event of at least ½ inch of accumulation or more as Modeling has shown this to be the threshold of CSO activity.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group

Procedure:
For these checks we concentrate on checking Regulators only. This is to ensure that as the System recovers from the Rain Event there has been no debris deposited in the regulator that would cause a blockage and a subsequent release.
Any blockages caught and cleared in this time frame will not be reported to Dry Creek as a Dry Weather Release.

Any comments about a release of this type can be put into the comments area of the Structure Inspection as well as documenting the status of the Overflow Indicator.

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Standard Operating Guideline
(SOG)
Rain Gauges used for CSO's

Purpose:
The rain gauge works by collecting rainfall in the collecting funnel and metering the rain into the tipping bucket assembly. When .01 inches of precipitation is collected the tipping bucket assembly tips and activates a switch. The data logger records the switch closure. When the bucket tips the water drains out the screened base of the gauge. Using rain data from USGS rain gauges and SD1 mobile rain gauges will help gauge when the inspections should be performed on the CSO's and the SSO's.

Scope:
Each event is unique and requires SD1 personnel to employ their best professional judgment in evaluating each event to determine the most appropriate actions. The application of the guidelines provides structure and guidance for SD1's staff in the selection and application of appropriate measures to meet the needs of each situation.

Responsibility:
Collection System- Customer Service
- CSO Inspection Group
- Sorp Crews

Procedure:
SD1 will use Primary and Secondary rain gauges. Primary rain gauges are from USGS Web Site. They're listed below as well as the service areas:

- **Pleasant Run- Ludlow, Bromley & Covington**
- **Taylor Creek- Bellevue and Dayton**
- **Three Mile Creek- Eastern Covington , Wilder and Newport**
- **Four Mile Creek- Silver Grove**

Secondary rain gauges are SD1 rain gauges. They will be used in the case of the USGS Web Site isn't functional and/or more data is needed for larger events. They're listed below as well as the service areas:

- **Reilly Rd- Silver Grove**
- **Dayton- Lower Dayton and Lower Ft. Thomas (Rt. 8)**
- **St . Elizabeth East and North- East- Ft. Thomas, North- Covington**

Data collected from the rain gauges will be used with the inspection data collected from each site for the week and/or event.

The Primary collection of the rain data is as follows:

USGS RAIN GAUGES:

- Log onto SD1 Intranet site
- Go to lower right hand corner of the page and find USGS Flow Gauges and click on it.
- You will be on USGS Flow Gauges of Interest. Go to Northern Kentucky continuous monitoring network and click on it.
- You now are on the page w/ current conditions. Scroll down the page and find what site you are looking for and click on it. You must click on the number next to the site location.
- You are now on the page Site Location Selected. Go to the box marked Available Parameters and uncheck all the boxes except for precipitation.
- Go to the box to the right marked Output Format and click on the bubble next to table. Next enter date range needed in the begin date and then enter the end date.
- You will now be on the date range page. Scroll down to the bottom of the page to get the amount of rain for that date you requested. The time is in Military time and it runs from 00:00 to 24:00.

The Secondary collection of the rain data is as follows:

SD1 RAIN GAUGES:

- Log onto Flowlink.SD1.org-flowmon-mainpage.aspx
- You will now be on the main log in page. Go to user name and put in sd1 team. Tab down to password type in sd1team then click OK
- You will now be on Main Graph Page. On the left hand side at the top find Rain Gauge and click on the plus sign
- Go to Campbell County and click on the plus sign
- Go to Reilly Rd and click on the plus sign, then sunset plus sign, Interface module. Click on the box next to rainfall to put in check mark
- Go to time scale at the top and click on it twice to bring up Time Scale Page
- Go to Start and click on down arrow and click on Absolute
- Go to Date Calendar under Absolute and click on it. Click on date needed
- Go to Time Span and click on the down arrow and then click on what is needed
- Go to View Graph
- Go to Export at the top of page and click on it. There will be a pop box at the bottom of the page. Click on open.
- You will now be on an Excel spread sheet. Double click on the line between A and B at the top to spread out the data
- Go to the first date and time and click on it
- Go to buttons on your key board and hit ctrl, shift and your down arrow at the same time. The entire row should be highlighted.
- Go to Auto Sum at top right hand corner and click on it. This will add up the entire rain amount requested.
- Go to the scroll down bar and scroll down to the bottom of the page to get total rain amount and write it down.
- Close out of the page. Box will pop and ask you if you want to save click don't save.

- Repeat steps from Campbell County down for sites in Dayton, Ft. Thomas and Covington

APPENDIX F:

FY 2015 Safety Training Catalog

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SD1

Fiscal Year 2015
Safety Training Schedule and Calendar of Events

Sanitation District Departments	Number of Personnel	Percentage of Total	Description of Designated Employees Job Hazard Analysis
Dry-Creek Wastewater Treatment Plant **DCWWTP: OPS & MTCE & Lab** **Pump Stations: OPS & MTCE** **Eastern Regional Water Reclamation Facility** **ERWRF: OPS & MTCE** **Western Water Reclamation Facility** **WRWRF: OPS & MTCE** **Departments 1-7 -8- 9** Note: Designated employees are those employees where there is a known occupational-illness-disease exposure based upon knowledge of critical safety requirements or procedures requiring safe work practices. They are an essential function of the district based upon their job description and tasks.	**48** **15** **12** **12** **87**	**29%**	**Operations:** wastewater treatment, licensed, affected, authorized, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By. (WPVATNE) Workplace-Violence-Assault-Terrorism-Natural Events; affecting all areas related to this department. **Maintenance-HVAC-Electrical:** authorized, qualified, certified, licensed journeymen, master level designation, operations, technician, incident commander, designated employee training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By. **Lab:** affected-awareness-operations, technician, specifically trained, designated employee trained based on exposure and job description, collateral first-aid responders. (Bio) Biological, (EVR) Environmental, (CW) Contact With, (E) Exposure, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against. **Industrial Monitoring:** affected-awareness-operations, technician, specifically trained, designated employee training, and collateral first-aid responders. (Bio) Biological, (EVR) Environmental, (CW) Contact With, (E) Exposure, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By. **Small Plants:** licensed- affected-awareness- specifically trained based upon exposure designated- employee training, collateral first-aid responders. (Bio) Biological, (EVR) Environmental, (CW) Contact With, (E) Exposure, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By.

Sanitation District Departments	Number of Personnel	Percentage of Total	Description of Designated Employees Job Hazard Analysis
Collection System Department 2 **Asset Maintenance** **Asset Planning & Inventory** **Asset Renewal** **(Customer Services and Construction)** Note: Designated employees are those employees where there is a known occupational-illness-disease exposure based upon knowledge of critical safety requirements or procedures requiring safe work practices. They are an essential function of the district based upon their job description and tasks.	**47** **10** **31** **88**	**30%**	**Customer Services:** collection systems wastewater-storm-water conveyance, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By, (WPVATNE) Workplace-Violence Assault/Terrorism/Natural/Events; affecting all areas related to this department. **Construction:** collection systems repair installation, wastewater conveyance, storm-water conveyance, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By.
Administration Department 3 **Management** **Legal** **Account Services (Customer Care)** **HR and Safety** **Finance and Purchasing** **IT and GIS** **Board Members** Note: Designated employees are those employees where there is a known occupational-illness-disease exposure based upon knowledge of critical safety requirements or procedures requiring safe work practices. They are an essential function of the district based upon their job description and tasks.	**5** **13** **20** **5** **9** **14** **8** **74**	**25%**	**Administration**: Management of operations, legal, compliance, facilities, financial accounts customer services for collection systems wastewater treatment, water resource storm-water compliance and conveyance, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CW) Caught On, (CO) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By. (WPVATNE) Workplace-Violence Assault/Terrorism/Natural Events; affecting all areas related to this department.

Sanitation District Departments	Number of Personnel	Percentage of Total	Description of Designated Employees Job Hazard Analysis
Fleet and Facilities Department 4 Note: Designated employees are those employees where there is a known occupational-illness-disease exposure based upon knowledge of critical safety requirements or procedures requiring safe work practices. They are an essential function of the district based upon their job description and tasks.	**6**	**2%**	**Fleet and Facilities**: Management of operations, legal, compliance, facilities, financial accounts customer services for collection systems wastewater treatment, water resource storm-water compliance and conveyance, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CW) Caught On, (CO) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By. (WPVATNE) Workplace-Violence Assault/Terrorism/Natural Events; affecting all areas related to this department.
Engineering Department 5 **Design and Construction Management** **Infrastructure and Capital Planning** Note: Designated employees are those employees where there is a known occupational-illness-disease exposure based upon knowledge of critical safety requirements or procedures requiring safe work practices. They are an essential function of the district based upon their job description and tasks	**10** **10** **20**	**7%**	**Engineering**: Management of operations, compliance, facilities, financial accounts customer services for collection systems wastewater treatment and conveyance, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By, (WPVATNE) Workplace-Violence Assault/Terrorism/Natural Events; affecting all areas related to this department.
Integrated Watershed Management Department 6 **Environmental Assessment Section** **Environmental Compliance Section**	**20**	**7%**	**Integrated Watershed Management:** Management of storm water permit compliance and watershed management activities, licensed, affected, authorized, qualified, awareness, operations, technician, incident commander, designated employees training based on exposure and job description, collateral first-aid responder: (Bio) Biological, (EVR) Environmental, (CB) Caught Between, (CI) Caught In, (CO) Caught On, (CW) Contact With, (E) Exposure, (FB) Fall Below, (FS) Fall Same Level, (OE) Overexertion, (SA) Struck Against, (SB) Struck By, (WPVATNE) Workplace-Violence Assault/Terrorism/Natural Events; affecting all areas related to this department.

Departments/Groups/Sections Included in this Calendar		**Also Known As:**
Dept. 1 Operations Dry Creek WWTP	1	Dry Creek Operations and Maintenance
Dept. 1 Operations Dry Creek Lab and Pretreatment	1	Dry Creek Lab and Pretreatment
Dept. 2 Operations Asset Maintenance	2	Collection Systems Cust. Service
Dept. 2 Operations Asset Planning and Inventory	2	Collection Systems Asset and Inventory
Dept. 2 Operations Asset Renewal	2	Collection Systems Construction
Dept. 3 Administration Customer Service	3	Account/Customer Service
Dept. 3 Administration Finance and Purchasing	3	Accounting/Purchasing
Dept. 3 Administration HR and Safety	3	Administration HR
Dept. 3 Administration Legal	3	Administration Legal
Dept. 5 Engineering Design and Construction Management	5	Eng. Inspectors and Project Managers
Dept. 4 Operations Fleet and Facilities	4	Facilities and Fleet
Dept. 5 Engineering Infrastructure and Capital Planning	5	Eng. Infrastructure and Capital Planning
Dept. 6 Integrated Watershed Management	6	Environmental Assessment and Environmental Compliance
Dept. 7 Operations Pump Stations	7	Pump Stations Operations and Maintenance
Dept. 8 Operations Eastern Regional WRF and Small Plants	8	Eastern Regional and Small Plants
Dept. 9 Operations Western Regional WRF	9	Western Regional

Introduction

In order to ensure the overall health and safety of each SD1 employee and to satisfy the requirements of SD1, the training described and assigned in this document has been chosen based on job hazard analyses performed as required by OSHA Standards Parts 1910 (General Industry) and 1926 (Construction Industry) as adapted and promulgated by Kentucky Revised Statute Chapter 338

This document is intended to be used as a planning tool as well as a source of information for individual employees to ensure that each are aware of the safety training expectations held by SD1 concerning various positions, job descriptions, and certification requirements.

This calendar includes, but is not limited to:

- Courses offered
- Course elements
- Class Dates
- Class duration and size limits
- Descriptions of job categories that have required safety training
- SD1 Instructors and Subject Matter Experts

SD1 Instructors/Subject Matter Experts

Chris Beil
- Hazard Communication

Rod Bell
- Electrical Safety
- Hazard Communication
- Permit Required Confined Space Entry Rescue
- Traffic
- Forklift
- Office Safety
- Contract Employer Responsibilities
- Fire Safety Emergency Action Planning
- Swift Water Awareness
- Scaffolding and Ladders / Powered Platforms
- Hazardous Waste Operations and Emergency Response: Operations Level
- Excavation / Trenching Safety

Brian Berens
- First Aid
- Hazard Communication
- Swift Water Awareness
- Permit Required Confined Space Entry Rescue

Scott Breeze
- Excavation / Trenching Safety

George Bruns
- Permit Required Confined Space Entry Rescue
- Fire Safety Emergency Action Planning

Josh Campbell
- Fire Safety Emergency Action Planning

Donnie Couch
- First Aid
- Permit Required Confined Space Entry Rescue
- Fire Safety Emergency Action Planning

Jason Crawford
- Hazard Communication

Pat Diesman
- First Aid
- Electrical Safety
- Hazard Communication
- Permit Required Confined Space Entry Rescue
- Traffic
- Forklift
- Office Safety
- Contract Employer Responsibilities
- Fire Safety Emergency Action Planning
- Swift Water Awareness
- Scaffolding and Ladders / Powered Platforms
- Excavation / Trenching Safety

Shelby Fields
- Permit Required Confined Space Entry Rescue
- First Aid / CPR

Chris Foltz
- Electrical Safety

John Halpin
- First Aid
- Traffic

Donald Isaacs
- Permit Required Confined Space Entry Rescue

Dennis Kindoll
- Traffic
- Forklift
- Excavation / Trenching Safety

Dugan Knight
- Forklift

(open)
- Hazard Communication

Brian Moore
- Fire Safety Emergency Action Planning

Steve Osterhage
- Electrical Safety

Donnie Roberts
- Permit Required Confined Space Entry Rescue

Vern Wiley
- Hazard Communication
- Swift Water Awareness
- Permit Required Confined Space Entry Rescue
- Scaffolding and Ladders / Powered Platforms

Notes

- Supervisors will be required to independently complete online NIMS Training Courses 100 and 700;
- The following training/tests are administered at the St. Elizabeth Business Health Center and by other contracted medical services companies and are scheduled on an as-needed and/or when-required basis. These events are for designated employees with occupational exposure:
  - Pulmonary Function Test, Respirator Fit Testing/Training, and Audiometric Testing/Training;
  - Department of Transportation Random Drug and Alcohol Screening;
  - Department of Transportation Physical Certification;
  - Department of Transportation Reasonable Suspicion Drug and Alcohol Screening;
  - Other Medical Screening as required.
- The training schedule for the Sanitation District No.1 Emergency Response Team (SD1ERT) is subject to the schedule(s) of the Northern Kentucky Technical Rescue Team and the Northern Kentucky Hazardous Materials Response Team. Because 2014 training schedules for these organizations have not yet been released, the SD1ERT schedule will be announced on a later date.
- The following classes (and any other additional classes) are not listed. However, as much advance notice as possible will be given:

- WINNs Grant Training – Gateway Community College
- OSHA 10 hour Construction and General Industry Safety Standards for Designated Subject Matter Experts

Calendar Color Legend

Red Text = SD1 General
Blue Text = SD1 General Make-Up
Green Text = ERT and other Specialized Training for Designated Employees based upon Job Hazard Analysis

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Safety Department Mission Statement

The Sanitation District Safety Department believes in an employee based, proactive safety program.
Our belief is that our safety initiative should be based on the following principles: Responsibility, Accountability, Involvement, and Employee Ownership at all levels.

Our goal is to provide the Sanitation District with technical support and services that are related to compliance at all levels: Safety, Health, and our Environmental Responsibilities.

We are responsible and accountable for the well being of our employees, our communities, and the equipment to which we work with. We promote a work environment that is safe and free from all known and recognized hazards.

We based our program on a management philosophy that our employees are our most valuable assets.

Our goal is to provide our employees the necessary leadership for compliance training, education, equipment, and administrative support with service.

All incidents and accidents are preventable

Outline of Scheduled Classes

Month	Class	Duration	Date of the Month	Class	Duration	Date of the Month
Jul-14	Lockout/Tagout	1hr.	22nd-24th	To be Announced		
	Electrical Safety	1.5hr.				
Aug-14	Lab Safety	1hr.	6th & 19th	Swift Water Awareness	8hr.	29th
Sep-14	HAZWOPER Response	4hr.	9th-12th	Workplace Violence/Active Shooter	3hr.	22nd-26th
Oct-14	Fire Extinguisher Training	1hr.	6th-10th	Fire Safety Emergency Action Plan	1hr.	21st-22nd
Nov-14	Lockout/Tagout	1hr.	11th-13th	To be Announced		
	Electrical Safety	1.5hr.				
Dec-14	Off					
Jan-15	CPR/AED/First Aid/BBP	8hr.	12th-16th	Accident Prevention and Hazard Recognition	2hr.	27th-29nd
Feb-15	HAZWOPER Clean-up	4hr.	10th-13th	Workplace Violence/Active Shooter	3hr.	23th-27th
Mar-15	CPR/AED/First Aid/BBP	8hr.	9th-13th	Accident Prevention and Hazard Recognition	2hr.	25th-27th
Apr-15	Cranes, Hoist, and Rigging	3hr.	6th-10th	Lift Truck (Forklift) Safety	4hr.	21st-24th
May-15	Confined Space Entry and Rescue	4hr.	12th-14th	Fire Safety Emergency Action Plan	1hr.	21th-22st
Jun-15	Confined Space Entry and Rescue	4hr.	9th-11th	Excavation and Trench Safety	4hr.	23th-26th

Note: Classes in green are mandatory for employees required to take the classes based on the course description. If any question regarding whether you are required to take class contact Safety department.

July 2014

Lock Out- Tag Out
July 22 - 24

Electrical Safety:
July 22 - 24

Lockout – Tag out

- **Elements**
  - Lockout / Tagout Program
  - Housekeeping
  - Personal Protective Equipment
- **Duration:** 1.0 hr.
- **Required:** annually
- **Employees to attend:**
  - **All Employees Certified in Permit Required Confined Space Entry**
  - **Dry Creek WWTP – Department 1**
    - Operations
    - Maintenance
    - Small Plants
  - **Collection System – Department 2**
    - Customer Service
    - Construction
  - **Engineering Inspectors – Department 5**
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **Pump Stations – Department 7 -** all
  - **Eastern Regional WRF – Department 8 -** all
  - **Western Regional WRF – Department 9 -** all
  -
- **Maximum Class Size: 33**

Electrical Safety

- **Elements**
  - Assured Grounding
  - Arc Flash NFPA 70E (overview)
  - Housekeeping
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Lockout / Tagout (overview)
- **Duration: 1**.5 hrs.
- **Required:** annually
- **Arc Flash Personal Protective Equipment: Attendees to bring arc flash PPE for Demonstration/audit purposes**
- **Employees required to attend:**
  Any employee who is one of the following:

        - Electricians and Maintenance personnel. Also Operations personnel who completed electronics or electrical components training (WINNS grant training at Gateway Community College)
    - **Maximum Class Size: 33**

July

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22 Lockout/ Tag Out Electrical Safety	23 Lockout/ Tag Out Electrical Safety	24 Lockout/ Tag Out Electrical Safety	25	26
27	28	29	30	31		

August 2014

Lab Safety:
August 6 & August 19

Swift Water Awareness:
August 29

Lab Safety

- **Elements**
  - Safe Handling of Hazardous Chemicals
  - Accident prevention
  - Material Safety Data Sheets / Locations
  - Temporary Use Containers
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Housekeeping
  - Storage of Flammable and Combustible Liquids
  - Understanding National Fire Protection Association Hazard Recognition Labels
- **Duration:** 1.0 hr.
- **Required:** annually
- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
    - Lab / Industrial Monitoring
  - **Integrated Watershed Management – Department 6**
    - Environmental Assessment
    - Environmental Compliance
- **Maximum Class Size: 20**

Swift Water Awareness

Elements

- Understanding the Hazards
- Locations Found
- Working Around
- Personal Flotation Devices
- Personal Protective Equipment
- Rescue
- Throw Ropes
- Life Rings

- **Duration: 3**.0 hrs.
- **Required:** annually
- **Employees required to attend:**
  - **Department 3**
    - Safety
  - **Engineering – Department 5**
    - Infrastructure and Capital Planning – Wet Weather Group (designated employees)
  - **Integrated Watershed Management – Department 6**
    - Environmental Assessment
    - Environmental Compliance
  - **SD1 Emergency Response Team**
- **Maximum Class Size: 33**

August

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6 Lab Safety	7	8	9
10	11	12	13	14	15	16
17	18	19 Lab Safety	20	21	22	23
24 31	25	26	27	28	29 Swift Water Awarness	30

September 2014

HAZWOPER Response :
September 9 - 12

Work Place Violence / Active Shooter:
September 22 - 26

Hazardous Waste Operations Response (4 hr. recertification)

- **Elements**
  - Chemical Protective Clothing & Levels of Protection
  - Chemical Profiling (MSDS)
  - Air Monitoring (AMI) Overview
  - Spill Control and Containment (SPCC)
  - Emergency Response Guide (current edition)
  - NIOSH
  - CAMEO
- **Duration:** 4.0 hrs.
- **Required:** annually
- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
    - Maintenance
    - Operations
    - Industrial Pretreatment
    - FOG
    - Certified Pesticide Applicators
  - **Administration – Department 3**
    - Safety
    - Certified Pesticide Applicators
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **Pump Stations – Department 7**
    - Certified Pesticide Applicators
  - **Eastern Regional WRF – Department 8 –** all
  - **Western Regional WRF – Department 9 -** all
  - **Optional:** SD1 Emergency Response Team Members
- **Maximum Class Size: 33**

Work Place Violence / Active Shooter:

- **Elements**
  - Preventing WPV [1]
    - Work environment
    - Security
    - Education

        - Performance/Conduct Indicators
        - Employee Support Services
        - Early Intervention
        - Take Appropriate Action
    - Types of WPV
        - Violence among co-workers
        - Domestic Violence
        - Customers/Clients
        - Bomb Threats
    - Responses to WPV
        - Level 1 (Early Warning Signs)
        - Level 2 (Escalation of the Situation)
        - Level 3 (Further Escalation - (Usually resulting in an Emergency Response)
    - Suspending Access
    - Domestic Violence
    - Suspicious Letter/Package
    - Threat (including bomb threat)
    - Other Threats
    - ACTIVE SHOOTER [2]
        - HOW TO RESPOND WHEN AN ACTIVE SHOOTER IS IN YOUR VICINITY
            - RUN
            - HIDE
            - FIGHT
        - HOW TO RESPOND WHEN LAW ENFORCEMENT ARRIVES
            - HOW OFFICERS WILL BEHAVE
            - HOW TO RESPOND TO OFFICERS
            - INFORMATION TO PROVIDE TO OFFICERS
    - Human Resources' Responsibilities
    - Facility Manager Responsibilities
    - Reactions of Managers During an Active Shooter Situation
    - Assisting Individuals with Special Needs and/or Disabilities
    - Recognizing Potential Workplace Violence
        - Indicators of Potential Violence by an Employee

[1] *7/11/2006 Memo from Michael Chertoff of DHS*
Appendices A,B and C

[2] *ACTIVE SHOOTER - HOW TO RESPOND*
U.S. Department of Homeland Security
http://www.dhs.gov/active-shooter-preparedness

- **Duration:** 3.0 hrs.
- **Required:** semi-annually
- **All Employees required to attend**
- **Maximum Class Size: 33**

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9 HAZWOPER Responce	10 HAZWOPER Responce	11 HAZWOPER Responce	12 HAZWOPER Response	13
14	15	16	17	18	19	20
21	22 Work Place Violence/ Active Shooter	23 Work Place Violence/ Active Shooter	24 Work Place Violence/ Active Shooter	25 Work Place Violence/ Active Shooter	26 Work Place Violence/ Active Shooter	27
28	29	30				

October 2014

Fire Extinguisher Training:
October 6 - 10

Fire Safety Emergency Action Plan:
October 21 & October 22

Fire Extinguisher Training

- **Elements**
  - Types of fire
  - Types of extinguishers
  - SD#1 policies regarding fire extinguishers
  - Proper use of extinguisher
  - Determining if a fire is able to be fought
- **Duration:** 1 hour
- **Required to attend;**
  - Employees assigned equipment/vehicle that has fire extinguisher
  - Floor wardens
  - Emergency rescue Team
  - All other emergency response personnel
- **Maximum Class Size: 33**

Fire Safety and Emergency Action Plan

- **Elements**
  - Portable Fire Extinguishers
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Emergency action plan – Egress - Exit
  - Employee alarm systems
  - Fire detection systems
  - Emergency action and notification plan
  - Workplace Violence
  - Active Shooter
  - National Incident Management System
  - Emergency communication
  - Fire prevention
  - Flammable and combustible storage
- **Duration:** 1.0 hr.
- **Required:** annually
- **Required to attend;**
  - Floor wardens
  - Emergency rescue Team
  - All other emergency response personnel
- **Maximum Class Size: 33**

October

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6 Fire Extinguisher Training	7 Fire Extinguisher Training	8 Fire Extinguisher Training	9 Fire Extinguisher Training	10 Fire Extinguisher Training	11
12	13	14	15	16	17	18
19	20	21 Fire Safety Emergency Action Plan	22 Fire Safety Emergency Action Plan	23	24	25
26	27	28	29	30	31	

November 2014

Lock Out- Tag Out
November 11 - 13

Electrical Safety:
November 11 - 13

Lockout – Tag out

- **Elements**
  - Lockout / Tagout Program
  - Housekeeping
  - Personal Protective Equipment
- **Duration:** 1.0 hr.
- **Required:** annually
- **Employees required to attend:**
  - **All Employees Certified in Permit Required Confined Space Entry**
  - **Dry Creek WWTP – Department 1**
    - Operations
    - Maintenance
    - Small Plants
  - **Collection System – Department 2**
    - Customer Service
    - Construction
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **Pump Stations – Department 7 -** all
  - **Eastern Regional WRF – Department 8 -** all
  - **Western Regional WRF – Department 9 -** all
- **Maximum Class Size: 33**

Electrical Safety

- **Elements**
  - Assured Grounding
  - Arc Flash NFPA 70E (overview)
  - Housekeeping
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Lockout / Tagout (overview)
- **Duration:** 1.5 hrs.
- **Required:** annually
- **Arc Flash Personal Protective Equipment: Attendees to bring arc flash PPE for Demonstration/audit purposes**
- **Employees required to attend:**
  Any employee who is one of the following:
  - Electricians and Maintenance personnel. Also Operations personnel who completed electronics or electrical components training (WINNS grant training at Gateway Community College)
- **Maximum Class Size: 33**

November

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
						1
2	3	4	5	6	7	8
9	10	11 **Lockout/ Tag Out Electrical Safety**	12 **Lockout/ Tag out Electrical Safety**	13 **Lockout/ Tag out Electrical Safety**	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

December 2014

No Training

January 2015

First Aid/CPR/AED/Blood borne Pathogens:
January 12 - 16

Accident Prevention and Hazard Recognition:
January 27 - 29

First Aid/CPR/AED/Bloodborne Pathogens

- **Elements**
  - Adult First Aid and CPR with AED
  - Bloodborne Pathogens
  - Personal Protective Equipment
  - Myclyns Wound Sanitizer
- **Duration**: 8.0 hrs.
- **Required:** annually
- **Employees required to attend:**
  Any employee who job may be classified as one of the following:
  - Confined Space Entry Qualified
  - Electrician or Electrical Technician
  - Emergency Response Team Member
  - Emergency Action Plan (EAP) Designated First Responders (plant and office)
  - Environmental Assessment Team Members

Maximum class size: 20

Accident Prevention

- **Elements**
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Surge Protectors/Power Strips
  - Personal Heaters
  - Ergonomics
  - Cords and Plugs
  - Extension Cords
  - Storage
  - Housekeeping
  - Egress
  - Emergency Exits
  - Emergency Action Planning
  - Accident Prevention: Signs & Tags
  - Hazardous Conditions
- **Duration: 2.0** hrs.
- **Required:**
- **Employees required to attend:**
  - **All employees**
    - **EXCEPTION - those whosefe duties are administrative only**
- **Maximum Class Size: 33**

January

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
				1	2	3
4	5	6	7	8	9	10
11	12 **CPR/AED/ First Aid/ BBP**	13 **CPR/AED/ First Aid/ BBP**	14 **CPR/AED/ First Aid/ BBP**	15 **CPR/AED/ First Aid/ BBP**	16 **CPR/AED/ First Aid/ BBP**	17
18	19	20	21	22	23	24 HAZ/WMD: Raman & FT-IR Administrative Time: 0900
25	26	27 **Accident Prevention and Hazard Recognition**	28 **Accident Prevention and Hazard Recognition**	29 **Accident Prevention and Hazard Recognition**	30	31

February 2015

Work Place Violence, Active Shooter:

February 23 - 27

Work Place Violence / Active Shooter:

- **Elements**
  - Preventing WPV [1]
    - Work environment
    - Security
    - Education
    - Performance/Conduct Indicators
    - Employee Support Services
    - Early Intervention
    - Take Appropriate Action
  - Types of WPV
    - Violence among co-workers
    - Domestic Violence
    - Customers/Clients
    - Bomb Threats
  - Responses to WPV
    - Level 1 (Early Warning Signs)
    - Level 2 (Escalation of the Situation)
    - Level 3 (Further Escalation - (Usually resulting in an Emergency Response)
  - Suspending Access
  - Domestic Violence
  - Suspicious Letter/Package
  - Threat (including bomb threat)
  - Other Threats
  - ACTIVE SHOOTER [2]
    - HOW TO RESPOND WHEN AN ACTIVE SHOOTER IS IN YOUR VICINITY
      - RUN
      - HIDE
      - FIGHT
    - HOW TO RESPOND WHEN LAW ENFORCEMENT ARRIVES
      - HOW OFFICERS WILL BEHAVE
      - HOW TO RESPOND TO OFFICERS
      - INFORMATION TO PROVIDE TO OFFICERS
  - Human Resources' Responsibilities
  - Facility Manager Responsibilities
  - Reactions of Managers During an Active Shooter Situation
  - Assisting Individuals with Special Needs and/or Disabilities
  - Recognizing Potential Workplace Violence
    - Indicators of Potential Violence by an Employee

[1] *7/11/2006 Memo from Michael Chertoff of DHS*
Appendices A,B and C

[2] *ACTIVE SHOOTER - HOW TO RESPOND*
U.S. Department of Homeland Security
http://www.dhs.gov/active-shooter-preparedness

- **Duration:** 3.0 hrs.
- **Required:** semi-annually
- **All Employees required to attend**
- **Maximum Class Size: 33**

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21 HAZ/WMD: Radiological Monitoring & Detection Time: 0900
22	23 **Work Place Violence**	24 **Work Place Violence**	25 **Work Place Violence**	26 **Work Place Violence**	27 **Work Place Violence**	28

March 2015

First Aid/CPR/AED/Bloodborne Pathogens:
March 9 - 13
Hazwoper Clean-up:
March 17 - 19
Accident Prevention and Hazard Recognition:
March 25 - 27

First Aid/CPR/AED/Bloodborne Pathogens

- **Elements**
  - Adult First Aid and CPR with AED
  - Bloodborne Pathogens
  - Personal Protective Equipment
  - Myclyns Wound Sanitizer
- **Duration**: 8.0 hrs.
- **Required:** annually
- **Employees required to attend:**
  Any employee who job may be classified as one of the following:
  - Confined Space Entry Qualified
  - Electrician or Electrical Technician
  - Emergency Response Team Member
  - Emergency Action Plan (EAP) Designated First Responders (plant and office)
  - Environmental Assessment Team Members

Maximum class size: 20

HAZWOPER Clean-up

- **Elements**
  - Hazardous Conditions
  - Pre-work hazard analysis
  - Geographic Information Systems (GIS)
  - Site Assessment
  - SD1 Field Site Assessment and Safety Checklist
  - SD1 Response Flow Charts
  - SD1 Field Safety Reference Booklet
  - Excluded Sites
  - Site Ranking
  - Decontamination
  - Clean up
- **Duration: 4**.0 hrs.
- **Required:** semi-annually
- **This is required training for all affected employees who have potential exposure to working in a brownfield;**
  - **Crew Leaders**
  - **Supervisors**
  - **Construction Planners**
  - **Managers**
  - **Engineering Inspectors**
  - **SD1 ERT Members**

- **Safety Department**
- **Environmental Compliance**

Maximum Class Size: 33

Accident Prevention

- **Elements**
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Surge Protectors/Power Strips
  - Personal Heaters
  - Ergonomics
  - Cords and Plugs
  - Extension Cords
  - Storage
  - Housekeeping
  - Egress
  - Emergency Exits
  - Emergency Action Planning
  - Accident Prevention: Signs & Tags
  - Hazardous Conditions

- **Duration: 2.0** hrs.

- **Employees required to attend:**
  - **All employees**
    - **EXCEPTION - those whose duties are administrative only**

- **Maximum Class Size: 33**

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9 **CPR/AED/ First Aid/ BBP**	10 **CPR/AED/ First Aid/ BBP**	11 **CPR/AED/ First Aid/ BBP**	12 **CPR/AED/ First Aid/ BBP**	13 **CPR/AED/ First Aid/ BBP**	14
15	16	17 **HAZWOPER Clean-up**	18 **HAZWOPER Clean-up**	19 **HAZWOPER Clean-up**	20	21 HAZ/WMD: PH, Peroxides & Oxidizers Time: 0900
22	23 TRT: Search Time: 1900	24	25 **Accident Prevention and Hazard Recognition**	26 **Accident Prevention and Hazard Recognition**	27 **Accident Prevention and Hazard Recognition**	28
29	30	31 **HAZWOPER TECHNICIAN REFRESHER**				

April 2015

Cranes, Hoist and Rigging:

April 6 - 10

Lift Truck(Forklift) Safety:

April 21 - 24

Cranes, Hoist and Rigging

- **Elements**
    - Types of Equipment
    - Slings and Other Rigging Hardware
    - Personal Protective Equipment
    - Inspection
    - Lock-Out / Tag out
    - Setting Up and Rigging
    - Operating Controls
    - Accident Prevention: Signs & Tags
    - Hazardous Conditions
    - Guarding
    - Storage
- **Duration 3.0 hrs.**
- **Employees required to attend:**
    - **Dry Creek WWTP**
        - Operations
        - Maintenance
        - Any other Designated Employees from Operations & Maintenance
    - **Collection System**
        - Customer Service (Designated Operators)
        - Construction (Designated Operators)
    - **Pump Stations**
        - Operations
        - Maintenance
- **Maximum Class Size: 20**

Forklift (Powered Industrial Trucks),

- **Elements**
    - Authorized operators
    - Types
    - Capacities
    - Loading
    - Traveling
    - Attachments
    - Pre-use inspection
    - Roll over / Tip over
    - Safety operating areas
    - Removal From Service - Lockout /Tag Out
- **Duration 4.0 hrs.**
- **Required:** semi-annually

- **Employees required to attend:**
  - **Dry Creek WWTP**
    - Operations
    - Maintenance
    - Any other Designated Employees from Operations & Maintenance
  - **Collection System**
    - Customer Service (Designated Operators)
    - Construction (Designated Operators)
  - **Pump Stations**
    - Operations
    - Maintenance

- **Maximum Class Size: 20**

April

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6 Cranes, Hoist, and Rigging	7 Cranes, Hoist, and Rigging	8 Cranes, Hoist, and Rigging	9 Cranes, Hoist, and Rigging	10 Cranes, Hoist, and Rigging	11
12	13	14	15	16	17	18 TRT: Ropes Time: 0900 HAZ/WMD: Chemical PPE & Suit Testing Time: 0900
19	20	21 Fork Lift Training	22 Fork Lift Training	23 Fork Lift Training	24 Fork Lift Training	25
26	27	28	29	30		

May 2015

Confined Space Entry and Rescue:
May 12 - 14

Fire Safety Emergency Action Plan:
May 21 & May 22

Confined Space Entry and Rescue

- **Elements**
  - Confined space – permit required Program
  - Fall protection / fall prevention
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Lock-out / Tag-out
  - Hazard Communication
  - Communication
  - Ventilation
  - Open Surface Tanks
  - Personal Protection
  - Entry/Dispatch
  - Confined Space Entry Permit Form
  - Emergency Rescue Permit Form
  - Hot Work Permit Form
  - Compressed Gasses
  - Housekeeping
  - Traffic Control / Flagger
  - iTX atmospheric monitoring
  - Entry Equipment - Simulator
  - Rescue/SKED
  - Self Contained Breathing Apparatus /Supplied Air Respirator

- **Duration:** 4.0 hrs.

- **Required:** annually

- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
    - Operations
    - Maintenance
    - Lab
    - Industrial Pretreatment/FOG
  - **Collection System – Department 2 -** all
  - **Administration – Department 3**
    - Safety
  - **Engineering – Department 5**
    - Design and Construction Management - Inspectors
    - Infrastructure and Capital Planning – Wet Weather
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **Pump Stations – Department 7 -** all
  - **Eastern Regional WRF – Department 8 -** all
  - **Western Regional WRF – Department 9 -** all

Maximum Class Size: 33

Fire Safety and Emergency Action Plan

- **Elements**
  - Portable Fire Extinguishers
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Emergency action plan – Egress - Exit
  - Employee alarm systems
  - Fire detection systems
  - Emergency action and notification plan
  - Workplace Violence
  - Active Shooter
  - National Incident Management System
  - Emergency communication
  - Fire prevention
  - Flammable and combustible storage

- **Duration: 1.0** hrs.

- **Required:** annually

- **Required to attend;**

  - Floor wardens
  - Emergency rescue Team
  - All other emergency response personnel

- **Maximum Class Size: 33**

May

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1	2
3	4	5	6	7	8	9
10	11	12 Confined Space Entry and Rescue TRT: (same) Time: 0800	13 Confined Space Entry and Rescue TRT: (same) Time: 0800	14 Confined Space Entry and Rescue TRT: (same) Time: 0800	15	16
17	18	19	20	21 **Fire Safety Emergency Action Plan**	22 **Fire Safety Emergency Action Plan**	23 HAZ/WMD: Drivers Training & TVI Set Up Time: 0900
24 / 31	25	26	27	28	29	30

June 2015

Confined Space Entry and Rescue:
June 9 - 11

Trench and Excavation Safety:
June 23 - 26

Confined Space Entry and Rescue

- **Elements**
  - Confined space – permit required Program
  - Fall protection / fall prevention
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Lock-out / Tag-out
  - Hazard Communication
  - Communication
  - Ventilation
  - Open Surface Tanks
  - Personal Protection
  - Entry/Dispatch
  - Confined Space Entry Permit Form
  - Emergency Rescue Permit Form
  - Hot Work Permit Form
  - Compressed Gasses
  - Housekeeping
  - Traffic Control / Flagger
  - iTX atmospheric monitoring
  - Entry Equipment - Simulator
  - Rescue/SKED
  - Self Contained Breathing Apparatus /Supplied Air Respirator

- **Duration:** **4**.0 hrs.

- **Required:** annually

- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
    - Operations
    - Maintenance
    - Lab
    - Industrial Pretreatment/FOG
  - **Collection System – Department 2 -** all
  - **Administration – Department 3**
    - Safety
  - **Engineering – Department 5**
    - Design and Construction Management - Inspectors
    - Infrastructure and Capital Planning – Wet Weather
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **Pump Stations – Department 7 -** all
  - **Eastern Regional WRF – Department 8 -** all

- **Western Regional WRF – Department 9 -** all

- **Maximum Class Size: 33**

Excavation Training

- **Elements**
  - Trench and Shoring
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Call before you dig
  - Underground lines – Color Coding
  - Overhead lines
  - Rescue Notification Awareness
  - Public Safety
  - Housekeeping
  - Slips / Trips / Falls
  - Ladder Safety
  - Contract Employer Responsibilities
  - Some atmospheric monitoring
  - Traffic Control / Excavation Permit
  - Record Keeping
  - Hot Work Permit – Flammable / Spark Producing
  - Atmospheric Sampling – Confined Space
  - Cold Weather Training

- **Duration: 4.0** hrs.

- **Required:** annually

- **Employees required to attend:**
  - **Collection System – Department 2**
    - Construction
  - **Engineering – Department 5**
    - Inspectors
    - Project Managers
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance
  - **SD #1 Emergency Response Team (ERT)**

- **Maximum Class Size: 20**

June

Sun	*Mon*	*Tue*	*Wed*	*Thu*	*Fri*	*Sat*
	1	**2**	**3**	**4**	**5**	**6**
7	**8**	**9** **Confined Space Entry and Rescue**	**10** **Confined Space Entry and Rescue**	**11** **Confined Space Entry and Rescue**	**12**	**13**
14	**15**	**16**	**17**	**18**	**19**	**20** HAZ/WMD: Communications /ICS Mitigation Strategies Time: 0900
21	**22**	**23** Excavation and Trench Safety TRT: (same) Time: 0800	24 Excavation and Trench Safety TRT: (same) Time: 0800	25 Excavation and Trench Safety TRT: (same) Time: 0800	26 Excavation and Trench Safety TRT: (same) Time: 0800	**27**
28	**29**	**30**				

APPENDIX G:

FY 2015 Violations Report for Food Service Discharge Permits

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Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000100** **O'Charley's, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Verbal NOV issued for not cleaning the GI per the permit stated frequency	NC-E	10/02/14	V	10/02/14	Verbal Notice of Violation (NOV)	

Permit: **FOG-000112** **Chan's Asian Wok**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
They did not have the cleaning log on site.	NC-O	08/19/14	V	08/19/14	Verbal Notice of Violation (NOV)	$0.00
A review of our records indicates that the following invoices remain unpaid: Invoice No. FOG00194, in the amount of $331.00, due April 25, 2014; Total Outstanding Amount Due: $000.00 (Copies of the permit fee letters and invoices previously sent to you for the above-referenced unpaid invoices are attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000112** **Chan's Asian Wok**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoices remain unpaid: Invoice No. FOG00056, in the amount of $331.00, due May 22, 2013; Total Outstanding Amount Due: $000.00 (Copies of the permit fee letters and invoices previously sent to you for the above-referenced unpaid invoices are attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000128** **TA Travel Centers / Country Pride Restaurant**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000128** **TA Travel Centers / Country Pride Restaurant**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation	NC-E	10/21/14	W	11/11/14	Written Notice of Violation (NOV)	$0.00

The Permit required grease interceptor cleaning frequency has not been followed. The Permit issued to Travel Centers of America states the grease interceptor cleaning frequency shall not exceed 90 days. SD1 records show Travel Centers of America has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Permit: **FOG-000131** **Crossroads Elementary School**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having the GI cleaned per the permit required frequency.	NC-E	10/03/14	V	10/03/14	Verbal Notice of Violation (NOV)	

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000173** **Taco Bell #15353**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not adhering to the permit stated pumping frequency. FSE did not have GI pumped due to the landscapers covering the GI with rock and dirt. It is now cleared and they are back on schedule.	NC-E	12/11/14	V	12/11/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000334** **Taco Bell #27637**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not cleaning the GI per the permit frequency	NC-E	10/28/14	V	10/28/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000341** **El Ranchero**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000341** **El Ranchero**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation	NC-O	08/20/14	W	08/26/14	Written Notice of Violation (NOV)	$0.00

During a recent annual inspection of El Ranchero it was noticed that the Food Service Discharge Permit (Permit) cleaning frequency for the grease interceptor has not been followed. The Permit requires the grease interceptor cleaning frequency not exceed 90 days between cleanings. SD1 records show El Ranchero has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Permit: **FOG-000440** **Candy & Cones / Spare Time Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000440** **Candy & Cones / Spare Time Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00012, in the amount of $248.26, due September 18, 2012; (Copies of the permit fee letters and invoices previously sent to you for the above-referenced unpaid invoices are attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00100, in the amount of $331.00, due May 22, 2013 (Copies of the permit fee letters and invoices previously sent to you for the above-referenced unpaid invoices are attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000440** **Candy & Cones / Spare Time Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00192, in the amount of $331.00, due April 25, 2014. (Copies of the permit fee letters and invoices previously sent to you for the above-referenced unpaid invoices are attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000470** **Sweet Frog Premier Forzen Yogurt**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000470** **Sweet Frog Premier Forzen Yogurt**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00260, in the amount of $331.00, due April 25, 2014; Total Outstanding Amount Due: $331.00 (A Copy of the permit fee letter and invoice previously sent to you for the above-referenced unpaid invoice is attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000535** **Mad Mikes Burgers**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000535** **Mad Mikes Burgers**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00115, in the amount of $331.00, due May 22, 2013; Total Outstanding Amount Due: $331.00 (A Copy of the permit fee letter and invoice previously sent to you for the above-referenced unpaid invoice is attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000540** **Nick & Tony's Double Deckers**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
No cleaning logs on site.	NC-R	08/18/14	V	08/18/14	Verbal Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000540** **Nick & Tony's Double Deckers**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00269, in the amount of $331.00, due April 25, 2014; Total Outstanding Amount Due: $331.00 (A Copy of the permit fee letter and invoice previously sent to you for the above-referenced unpaid invoice is attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000625** **Pizza Hut #201**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Did not have Permit on site	NC-P	10/03/14	V	10/14/14	Verbal Notice of Violation (NOV)	

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000628** **Pizza Hut #203**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Was not cleaning the GT out per the Permit.	NC-E	09/30/14	V	09/30/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000717** **Subway #55786**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having the GT cleaned out per the permit stated frequency.	NC-E	12/17/14	V	12/17/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000718** **Subway**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
No cleaning log for GT	NC-E	12/18/14	V	12/18/14	Verbal Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000721** **Walt's Hitching Post**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not cleaning the GT out per the permit stated frequency of every 60 days. They are doing it every 90 day.	NC-E	12/05/14	V	12/05/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000871** **Marco's Pizza**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Trap Pumping Frequency Violation	NC-E	11/17/14	W	11/18/14	Written Notice of Violation (NOV)	$0.00

During a recent annual inspection of Marco's Pizza it was noticed that the Food Service Discharge Permit (Permit) cleaning frequency for the grease trap has not been followed. The Permit requires the grease trap cleaning frequency not exceed 90 days between cleanings. SD1 records show Marco's Pizza has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000904** **Pepperoncini's Pizza LLC.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having Permit of log on site during then inspection.	NC-O	08/22/14	V	08/22/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000906** **Nuvo at Greenup**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having GT cleaning out per the permit required frequency. They have new management/owner. Had to go over the permit with them. They said they would get on track.	NC-O	08/20/14	V	08/20/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000973** **Tommy's Asian Wok**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having the GT cleaned out per the frequency stated in the permit.	NC-E	08/18/14	V	08/18/14	Verbal Notice of Violation (NOV)	

Event Category that Contain Violation AND **Filter Criteria:**
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000973** **Tommy's Asian Wok**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Permit: **FOG-000976** **Rancho Grande**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation	NC-E	08/19/14	W	08/26/14	Written Notice of Violation (NOV)	$0.00

During a recent annual inspection of Rancho Grande it was noticed that the cleaning frequencies of the grease trap has not been completed on time. The Food Service Discharge Permit (Permit) requires that the grease trap cleaning frequency not exceed 30 days between cleanings. SD1 records show Rancho Grande has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000996** **Longnecks Sports Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
The grease interceptor is not operating properly due to not being within SD1 specification. There are no "T's" (influent or effluent) in the grease interceptor.	NC-O	08/19/14	CS	08/27/14	Compliance Schedule	$0.00

CS Issued

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Event Category that Contain Violation AND **Filter Criteria:**
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000996** **Longnecks Sports Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
During a recent annual inspection of Longnecks Sports Grill no Food Service Discharge Permit (Permit) required folder could be found. The Permit requires that a "FOG Folder" be kept on site and be available for periodic inspections. Also, during the inspection it was found that the Permit required cleaning frequency for the grease interceptor has not been followed. The Permit requires the grease interceptor cleaning frequency not exceed 90 days between cleanings. SD1 records show Longnecks Sports Grill has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit. During the inspection the Waste Hauler that pumps your grease interceptor was on site and informed me this is the first time they had pumped the interceptor since December 2013. He said there was a large amount of grease and the solids were so bad they had to get another truck with high pressure jets to break up the hardened solids.	NC-E	08/19/14	W	08/26/14	Written Notice of Violation (NOV)	$0.00

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000996** **Longnecks Sports Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00311, in the amount of $331.00, due April 25, 2014; Total Outstanding Amount Due: $331.00 (A Copy of the permit fee letter and invoice previously sent to you for the above-referenced unpaid invoice is attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-000997** **Rima D's**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-000997** **Rima D's**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Trap Pumping Frequency Violation	NC-E	12/11/14	W	12/12/14	Written Notice of Violation (NOV)	$0.00

During a recent annual inspection of Rima D's it was noticed that the Food Service Discharge Permit (Permit) cleaning frequency for the grease trap has not been followed. The Permit requires the grease trap cleaning frequency not exceed 90 days between cleanings. SD1 records show Rima D's has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Permit: **FOG-001000** **Taco Bell #29693**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-001000** **Taco Bell #29693**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation	NC-E	07/23/14	W	07/24/14	Written Notice of Violation (NOV)	$0.00

The Permit required grease interceptor cleaning frequency has not been followed. The Permit issued to Taco Bell states the grease interceptor cleaning frequency shall not exceed 90 days. SD1 records show Taco Bell missed the cleanings that should have occurred in March and June 2014.

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Event Category that Contain Violation AND **Filter Criteria:**
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-001000** **Taco Bell #29693**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Non-Compliance Reporting/Cleaning Violation	NC-R	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

A recent Notice of Violation (attached for your review) sent out on July 24, 2014 stated the grease interceptor need to be cleaned out immediately and record (hauling manifest/invoice) from the SD1 Certified Waste Hauler that pumped/cleaned the grease interceptor needed to be submitted to SD1 by August 27, 2014.

To date SD1 has only received a phone call, from Steve Mizer, which was after the NOV response due date. Mr. Mizer stated that the interceptor had been cleaned out on August 29, 2014; this date is also after the NOV response due date and is also over 30 days after the original NOV was sent out which stated the grease interceptor needed to be cleaned out immediately.

It should also be noted that the cleaning was not done by an SD1 Certified Waste Hauler. A list of SD1 Certified Waste Haulers was given to Steve Mizer, the Area Coach, during a meeting/inspection on July 23, 2014 in order for him to get a SD1 Certified Hauler to pump/clean the interceptor. Another copy is being attached to this NOV for your review.

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-001000** **Taco Bell #29693**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Permit: **FOG-001004** **Firehouse Subs**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not cleaning the GT per the Permit frequency	NC-E	09/30/14	V	09/30/14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-001123** **Katharina's Café - Konditorei**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-001123** **Katharina's Café - Konditorei**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Trap Pumping Frequency Violation	NC-E	12/05/14	W	12/09/14	Written Notice of Violation (NOV)	$0.00

During a recent annual inspection of Katharina's Café - Restaurant it was noticed that the Food Service Discharge Permit (Permit) cleaning frequency for the grease trap has not been followed. The Permit requires the grease trap cleaning frequency not exceed 30 days between cleanings. SD1 records show Katharina's Café - Restaurant has not been adhering to the Permit required cleaning frequency. This is a direct violation of your Permit.

Permit: **FOG-001127** **Longnecks Sports Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation AND
Enforce Date IS Greater than 6/30/2014 AND
Enforce Date IS Less than 7/1/2015 Permit-ted ? DOES Contain ...Yes...

Permit: **FOG-001127** **Longnecks Sports Grill**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
A review of our records indicates that the following invoice remain unpaid: Invoice No. FOG00190, in the amount of $331.00, due April 9, 2014; Total Outstanding Amount Due: $331.00 (A Copy of the permit fee letter and invoice previously sent to you for the above-referenced unpaid invoice is attached for your convenience.)	NC-E	09/19/14	W	09/19/14	Written Notice of Violation (NOV)	$0.00

Permit: **FOG-001194** **The Block Deli**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Did not have the proper GCE installed before opening. Put on a Compliance Schedule to get it installed	NC-E	12/30/14	CS	12/30/14	Compliance Schedule	$0.00

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APPENDIX H:

Standard Letter to Customers Upstream of a Grease Blockage

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SD1
Managing Northern Kentucky's
Wastewater and Storm Water

December 30, 2015

Re: Grease Blockage in Local Sewers

Dear Customer:

Recently, SD1 discovered significant grease accumulations in the sanitary sewer system in your area. SD1 crews cleaned the sewer line to allow your wastewater to continue to flow freely to the local treatment facility and prevent further harm to your home's plumbing, the sewer system and the environment.

When washed or flushed down a drain, certain substances, such as diapers, personal hygiene products and grease from meat fats, lard, baking goods, butter, oil, food scraps, sauces and dairy products, can build up in pipes, preventing your wastewater from making its way through the sewer pipes to SD1's treatment plants. When your wastewater is unable to move through the sewer pipes, raw sewage containing harmful bacteria and pollutants can back up into your home or yard or overflow into local streets and streams.

In addition, household chemicals like cleaners, medications, auto fluids, used motor oil, paint and lawn care products can corrode sewer pipes, release toxic fumes through the sewer system and significantly decrease the effectiveness of the wastewater treatment process.

Help SD1 prevent costly repairs to wastewater pipes and protect the health of the community and local streams by:

- Properly disposing of oil, grease and liquid foods (dairy products, syrups, batters, gravy, etc.) by collecting them in a container and throwing them in your garbage can
- Throwing diapers and personal hygiene products in the garbage can
- Never flushing or pouring hazardous household chemicals down a drain and, instead, contacting your county's Solid Waste Coordinator or visiting www.nkyhhw.org for proper disposal information

SD1 thanks you for your cooperation as we work to eliminate overflows, improve water quality, minimize risks to public health and enhance the quality of life in your neighborhood.

Sincerely,

Sarah Griffith
Environmental Manager

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APPENDIX I:

Pump Station Backup Power Updates

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Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of October 2015
Category 1 Projects (4 total projects)						
Alex Licking	East	Permanent Generator	n/a	2008	2008	Complete
American Sign	West	Permanent Generator	n/a	2008	2008	Complete
Riley Road	East	Permanent Generator	n/a	2009	2009	Complete
Sunset	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2010	2010	Complete
CIP Title	**Basin**	**Original Proposed Solution**	**Updated Proposed Solution**	**Scheduled Completion Date**	**Actual Completion Date**	**Status as of October 2015**
Category 2 Projects (21 total projects)						
Kahns	East	PS Elimination	n/a	2007	2007	Complete
Meadow Hill	Central	PS Elimination Study	PS Elimination	Study - 2008 2012 - 2015	2008 2010	Complete
Riley Road No. 1 Riley Road No. 2	East	PS Elimination	n/a	2009	2009	Complete
Riverwatch PS	North	PS Elimination Study	PS Elimination	Study - 2008 2012 - 2015	2008 2008	Complete Complete
South Park Industrial	North	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008 2012 - 2015	2008 2010	Complete Complete
Wedgewood Dr	Central	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2015	2008 2015	Complete Complete
Willow Bend No. 2	West	PS Elimination Study	PS Elimination	Study - 2008 2013	2008 2013	Complete Complete
Army Reserve	East	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2013-2014	2008 2014	Complete Complete
Eagles Landing	West	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2013-2014	2008 2014	Complete Complete
Evergreen	Central	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2014	2008 2014	Complete Complete
Lamphill	East	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2011	2008 2011	Complete Complete
Mill House Crossing	Central	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008 2012	2008 2012	Complete Complete
Ridgefield	North	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008 2014	2008 2014	Complete Complete
War Admiral	West	PS Elimination Study	PS Elimination	Study - 2008 2012 - 2015	2008 2011	Complete Complete
Blackstone	West	PS Elimination Study	Electrical hook up for portable generator	Study - 2008 2015	2008 2015	Complete Complete
Dublin Green No. 1	West	PS Elimination Study	PS Elimination	Study - 2008 2015	2008 2012	Complete Complete
Fowler Creek	West	PS Elimination	These stations were eliminated after the Western Regional collection system became operational.	2013	2011	Complete
Gammon Calmet	West	PS Elimination		2013	2012	Complete
Gunpowder	West	PS Elimination		2013	2012	Complete
Union	West	PS Elimination		2013	2012	Complete

Updated: October 30, 2015

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of October 2015
Category 3 Projects (24 total projects)						
Airport Exchange Ind Park	North	Permanent Generator	n/a	2009	2009	Complete
Barrs Branch	East	Permanent Generator	Portable Generator	2009	2009	Complete
Cedar Point	East	Permanent Generator	n/a	2009	2009	Complete
Bullitsville	North	Permanent Generator	n/a	2008	2008	Complete
Catalpa	Central	Permanent Generator	n/a	2009	2009	Complete
Centerplex	East	Permanent Generator	n/a	2008	2008	Complete
Hempsteade	West	Permanent Generator	n/a	2009	2009	Complete
Highland Heights	East	Portable Generator	n/a	2009	2009	Complete
Dublin Green No. 2	West	Permanent Generator	n/a	2009	2009	Complete
Brookwood	East	Permanent Generator	n/a	2009	2009	Complete
Ky Aire	West	Permanent Generator	n/a	2008	2007	Complete
Levi	West	Permanent Generator	n/a	2008	2007	Complete
Maple Ave	Central	Permanent Generator	n/a	2009	2009	Complete
Sand Run	North	Permanent Generator	n/a	2008	2008	Complete
Saturn	West	Permanent Generator	n/a	2009	2009	Complete
Second Street	Central	Permanent Generator	n/a	2009	2009	Complete
Skyport	North	Permanent Generator	n/a	2008	2008	Complete
South Hampton	West	Permanent Generator	n/a	2008	2007	Complete
Thornwilde	North	Permanent Generator	n/a	2008	2008	Complete
Bunning Lane	East	PS Elimination Study	Electrical hook up for portable generator	2015	2015	Complete
Kees	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2011	2011	Complete
Overlook	East	Permanent Generator	Electrical hook up for portable generator	2015	2015	Complete
Riverview Farms	North	Permanent Generator	Electrical hook up for portable generator	2015	2015	Complete
Stillwater	East	Permanent Generator	Electrical hook up for portable generator	2015	2015	Complete

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of October 2015
Category 4 Projects (50 total projects)						
Banklick	Central	Permanent Generator	n/a	2009-2014	2009	Complete
Cedar	Central	Permanent Generator	n/a	2009-2014	2009	Complete
Fowler Ridge	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2010	Complete
Lassing Green	West	Permanent Generator	n/a	2009-2014	2009	Complete
Leathers Rd	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2010	Complete
Marshall Rd	Central	Permanent Generator	n/a	2009-2014	2010	Complete
Mineola Pike	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2010	Complete
Newport Steel Mill	East	Permanent Generator	n/a	2009-2014	2009	Complete
Paul Rd	East	Permanent Generator	Portable Generator	2009-2014	2010	Complete
Rosewood Lane	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2010	Complete
Shadow Lake	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2009	Complete
Wolf Rd	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2009	Complete
Air Park West	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2011	Complete
Arbortech	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012	2012	Complete
Arborwood	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
Brandtly Ridge	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012	2012	Complete
Brentwood	North	Permanent Generator	Electrical hook up for portable generator	2015	2014	Complete
Brushup Lane	West	Permanent Generator	PS Elimination	2012	2012	Complete
Carlisle Ave	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
Cinnamon Ridge	West	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012	2012	Complete
Cold Spring Crossing	East	Permanent Generator	Permanent Generator	2014	2014	Complete
Cold Spring Plaza	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012	2012	Complete
Darma Ct	East	Permanent Generator	Electrical hook up for portable generator	2013-2014	2014	Complete
Deer Creek No. 1	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2011	Complete
Deer Creek No. 2	North	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2011	Complete
Eighth Street	Central	Connect to Grid Power	Permanent Generator	2015	2015	Complete
Gerrard Ave	East	Permanent Generator	Portable Generator	2009-2014	2011	Complete
Golf Course	Central	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete
Hampton Ridge	West	Permanent Generator	Electrical hook up for portable generator	2015	2015	Complete
Harrison Harbor	East	Permanent Generator	Portable Generator	2009-2014	2011	Complete

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of October 2015
Category 4 Projects (continued)						
Harvest Hill	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
ICH	Central	Permanent Generator	Electrical hook up for portable generator	2011	2011	Complete
IDI	North	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete
Independence Station Rd	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2009-2014	2011	Complete
Jefferson Ave	East	Permanent Generator	Portable Generator	2009-2014	2011	Complete
Jericho Rd	Central	Permanent Generator	Electrical hook up for portable generator	2011	2011	Complete
Jonathan	West	Permanent Generator	Electrical hook up for portable generator	2015	2015	Complete
Litton	North	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete
Ohio Ave	East	Permanent Generator	Portable Generator	2009-2014	2011	Complete
Orchard Estates	West	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
Parkside No. 2	East	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete
Patton Street	Central	Dual Utility Power Feed	Permanent Generator	2015	2014	Complete
Ria Vista	North	Permanent Generator	Electrical hook up for portable generator	2011	2011	Complete
Silver Grove	East	Permanent Generator	Permanent Generator	2015	2015	Complete
St Annes	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
Sycamore	West	Permanent Generator	PS Elimination	2015	2012	Complete
Taylor Mill Rd	Central	Permanent Generator	Electrical hook up for portable generator	2011	2011	Complete
Wilder	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete
Wyndemere	North	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete
Youell Rd	West	Permanent Generator	Electrical hook up for portable generator	2012	2012	Complete

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of October 2015
Category 5 Projects (6 total projects)						
Keavy	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2010-2015	2010	Complete
Meadow Lane	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2010-2015	2009	Complete
Cardinal Cove	North	Permanent Generator	Permanent Generator	2015	2013	Complete
Crestview	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2015	2015	Complete
Ripple Creek	East	PS Elimination Study	PS Elimination	2010-2015	2010	Complete
Winters Lane No. 2	East	Permanent Generator	Electrical hook up for portable generator	2014	2014	Complete
CIP Title	**Basin**	**Original Proposed Solution**	**Updated Proposed Solution**	**Scheduled Completion Date**	**Actual Completion Date**	**Status as of October 2015**
Category 6 Projects (5 total projects)						
Enzweiller	East	Permanent Generator	n/a	2012-2015	2009	Complete
Mafred	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012-2015	2009	Complete
Ridgeway	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012-2015	2009	Complete
Richwood	West	Permanent Generator	Backup Dry Prime Pump with a Diesel	2012	2012	Complete
Twin Lakes	Central	Permanent Generator	Backup Dry Prime Pump with a Diesel	2014	2014	Complete

Progress Summary	Number
2007 Complete Projects	4
2008 Complete Projects	8
2009 Complete Projects	24
2010 Complete Projects	11
2011 Complete Projects	16
2012 Complete Projects	18
2013 Complete Projects	2
2014 Complete Projects	16
2015 Complete Projects	11
Total Complete	**110**

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APPENDIX J:

Strategic Business Plan Summary Document

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STRATEGIC BUSINESS PLAN

Customer-Centered and Community-Focused

The staff of SD1 has worked with stakeholders throughout the community and across the organization to develop a new strategic business plan. The plan will help SD1 to become a utility that is more customer-centered and community-focused. This summary provides an outline of our long-term goals and the strategies we will implement over time to achieve the expected outcomes.

MISSION: Why we exist

To reliably provide the Northern Kentucky region with wastewater and storm water services to protect public health, property and the environment and to support the economic vitality of the community.

VISION: Our focus for the future

To be a customer-centered and community-focused utility by understanding and meeting the needs of our customers and addressing issues that are of strategic importance to the entire community.

VALUES: Principles guiding our actions

- Accountability
- Collaboration
- Customer Focus
- Environmental Stewardship
- Integrity
- Safety

GOALS

CUSTOMER SATISFACTION

Create a culture of exceptional service by focusing on understanding and meeting the needs of both internal and external customers.

OPERATIONAL EFFICIENCY AND RESILIENCY

Ensure operational efficiency through effective performance improvements while managing and minimizing business risks.

FINANCIAL VIABILITY

Effectively manage and generate the financial resources required to meet current and future operating, debt service and capital needs.

WORKFORCE DEDICATION

Develop a high-performance, collaborative workforce that is engaged, motivated and dedicated.

ENVIRONMENTAL STEWARDSHIP

Ensure adequate and reliable quality of Northern Kentucky's waterways for the benefit of those who live, visit and work in the community.

STAKEHOLDER SUPPORT

Effectively communicate and collaborate with our stakeholders to create a shared understanding of SD1's Mission and Vision.

OPTIMAL INFRASTRUCTURE MANAGEMENT

Optimize asset functionality, condition and operations to ensure we have adequate and reliable facilities and infrastructure needed to convey, manage and clean wastewater and storm water.

STRATEGIES: Actions to achieve our goals

CUSTOMER SATISFACTION

1. Conduct an assessment of existing customer service practices and response standards, and take necessary actions based upon an understanding of the needs of different types of customers.
2. Develop and implement customer service training plans for each department, based on SD1's Mission, Vision and Values.
3. Identify and expand interactive customer technology to improve the customers' experience.

EXPECTED OUTCOMES

- Improved external customer satisfaction of specific and overall service experiences
- Improved employee satisfaction of specific and overall internal service experiences

OPERATIONAL EFFICIENCY AND RESILIENCY

1. Optimize the use of technology and data to support and improve decision-making.
2. Implement resource optimization initiatives and best business practices to reduce operating costs.
3. Ensure business continuity and operational reliability during both routine operations and emergency conditions.
4. Create a culture of continuous improvement and innovation.

EXPECTED OUTCOMES

- Improved efficiency in using resources
- Improved operational performance levels
- Increased operational reliability
- Comprehensive emergency preparedness

FINANCIAL VIABILITY

1. Invest in projects and technology intended to reduce operating costs.
2. Seek project partnership opportunities with municipalities, as well as with state and/or federal agencies, to expand financial resources.
3. Develop and adopt comprehensive financial management policies.
4. Develop a multi-year comprehensive financial plan.
5. Establish financial performance metrics.

EXPECTED OUTCOMES

- Optimized operations costs
- Achievement of capital and fixed asset expenditure plans
- Recovery of costs for providing services through rates and fees
- Maintained bond ratings (AA stable – S&P and Aa2 – Moody's)

WORKFORCE DEDICATION

1. Recognize employee achievements.
2. Regularly communicate with employees about current and relevant topics.
3. Create a learning environment that fosters professional growth and the retention of institutional and technical knowledge.
4. Explore new wellness programs that offer improvement in preventative care.
5. Encourage the use of collaborative teams to address issues of strategic importance and facilitate employee development.
6. Promote employee development by providing effective training and quality educational opportunities.
7. Provide employees with the tools, resources and technology necessary to perform their jobs.

EXPECTED OUTCOMES

- Improved employee satisfaction
- Increased employee awareness and participation in Wellness Program
- Increased number of interdepartmental work teams
- Eighty percent of employees fully meeting their personal development and performance plans

ENVIRONMENTAL STEWARDSHIP

1. Actively participate in matters relating to local, state and national water quality-related regulations.
2. Utilize local data to optimize the use of models, tools and other technologies.
3. Advocate appropriate environmental regulations.
4. Implement cost-effective integrated storm water management practices to control runoff.
5. Explore opportunities to improve stream conditions that are supported by scientific principles and data.

EXPECTED OUTCOMES

- Reduced volume and number of sewer overflows
- Sustained or improved stream conditions
- Compliance with all water quality-related permit conditions and limits
- Influenced environmental policies and regulations

STAKEHOLDER SUPPORT

1. Expand involvement in and collaborations with local community groups.
2. Build and improve relationships with key non-residential accounts.
3. Identify and implement new communication strategies to reach stakeholders.
4. Regularly inform community leaders about SD1 through various strategies.

EXPECTED OUTCOMES

- Improved stakeholder support
- Increased number of stakeholder collaborations

OPTIMAL INFRASTRUCTURE MANAGEMENT

1. Conduct on-going infrastructure risk assessments, and target resources accordingly.
2. Regularly communicate to SD1's Board and the public about infrastructure issues through standardized reporting and data.
3. Evaluate industry trends and utilize emerging technologies to reduce costs and improve the longevity, reliability and performance of infrastructure.
4. Develop and adopt a sustainable asset repair and replacement program.
5. Maximize the use of information technology systems to collect and share the asset-specific knowledge required to optimize the maintenance, refurbishment and replacement of assets at the right times.

EXPECTED OUTCOMES

- Maintained asset renewal rate to optimize system performance
- Achievement of regulatory requirements
- System assessments of pipes conducted on a 10-year cycle
- Optimized asset life-cycle costs
- Achievement of operational performance metrics