Sanitation District No. 1
December 31, 2014

Capacity, Management, Operations, & Maintenance (CMOM) FY 2014 Annual Report

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SD1
Managing Northern Kentucky's
Wastewater and Storm Water

December 31, 2014

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

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

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

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

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 2014 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

Date 12/30/14

COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 30 day of December, 2014 by David E. Rager, Executive Director of Sanitation District. No. 1.

Angela M. Cook
NOTARY PUBLIC

Kenton County, Kentucky

My commission expires: 7-30-16

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

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CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE FY 2014 ANNUAL REPORT

December 31, 2014

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

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LIST OF ACRONYMS AND ABBREVIATIONS

AWWA	American Water Works Association
BRE	Business Risk Exposure
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
DRIP	Disconnection, Redirection, Infiltration Program
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
KIA	Kentucky Infrastructure Authority
LEAD	Leadership and Development Program
NOV	Notice of Violation
O&M	Operations & Maintenance
OSHA	Occupational Safety and Health Administration
ORSANCO	Ohio River Valley Water Sanitation Commission
PM	Preventive Maintenance
POF	Probability of Failure
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) 2014, which began on July 1, 2013 and ended on June 30, 2014.

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 103,325 sanitary accounts and approximately 94,115 storm water accounts. SD1 manages a collection system that is comprised of:

- 42,625 SD1 owned manholes
- 3,900 SD1 owned catch basins and inlets in the combined sewer system
- 1,600 miles of SD1 owned and operated gravity sewer lines and force mains
- 160 miles of additional Florence owned sewer lines and force mains
- 75 miles of additional privately owned sewer lines

- 440 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)
- 70 gate structures
- 15 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 2014, SD1 acquired more than 34,000 feet of privately developed sewer and nearly 200 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

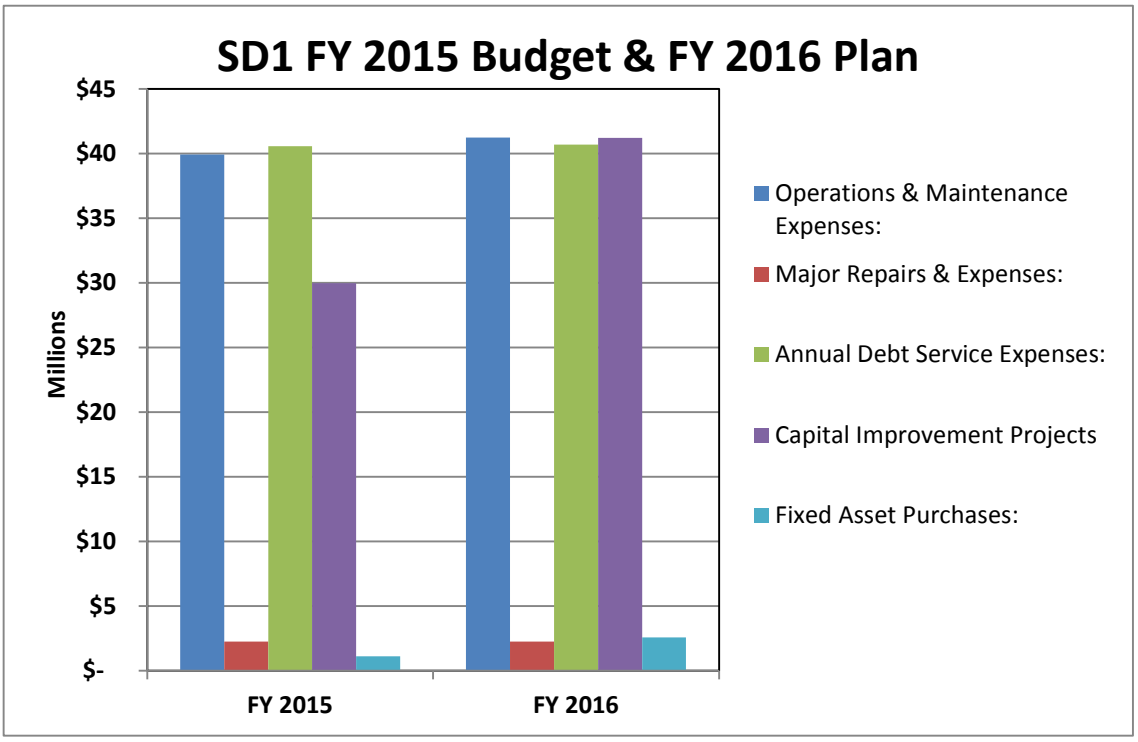
The audited capital expenditures for FY 2014 totaled approximately $13.9 million, and the audited O&M expenditures for FY 2014 totaled approximately $36.3 million. As required in the Consent Decree, SD1 has developed Watershed Plans for improvement projects to be implemented over the next several years, which will impact capital spending. The total capital spending associated with all project work over the next two years is approximately $71.2 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 2015 and FY 2016)

Fiscal Year	Projected Capital Spending
2015	$29,981,942
2016	$41,221,050
Total	**$71,202,992**

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

(FY 2015 and FY 2016)



2.1.2 Alternate Sources of Funding

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 2014, user rates, fees, and other revenues made up approximately 84.9% of the total funding sources, while borrowed money accounted for the remaining 15.1% of necessary funding sources to support the fiscal year budget.

Clean Water State Revolving Loan Fund

The Kentucky Infrastructure Authority (KIA) has provided SD1 more than $171 million out of the Clean Water State Revolving Loan Fund program for capital improvement projects. During FY 2014, there were KIA-funded projects that were in various stages of design, easement acquisition, or construction. Some of the projects include:

- Dry Creek Head Works (complete)

- Ash Street Pump Station and Force Main Projects (design)
- Church St. Combined Sewer Overflow Reduction Project (construction)
- Kentucky Aire Pump Station Elimination (complete)
- Lakeview Pump Station Improvements (complete)
- Lakeside Park Public and Private Source Inflow and Infiltration Removal and Sewer Rehabilitation (Ph.2 complete, Ph.3 design)
- Vernon Lane Public and Private Source Inflow and Infiltration Removal and Sewer Rehabilitation (construction)

Since 2004, the KIA has funded 20 capital improvement projects saving more than $120 million in interest costs, when compared to traditional 30-year revenue bonds.

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 2014, 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.

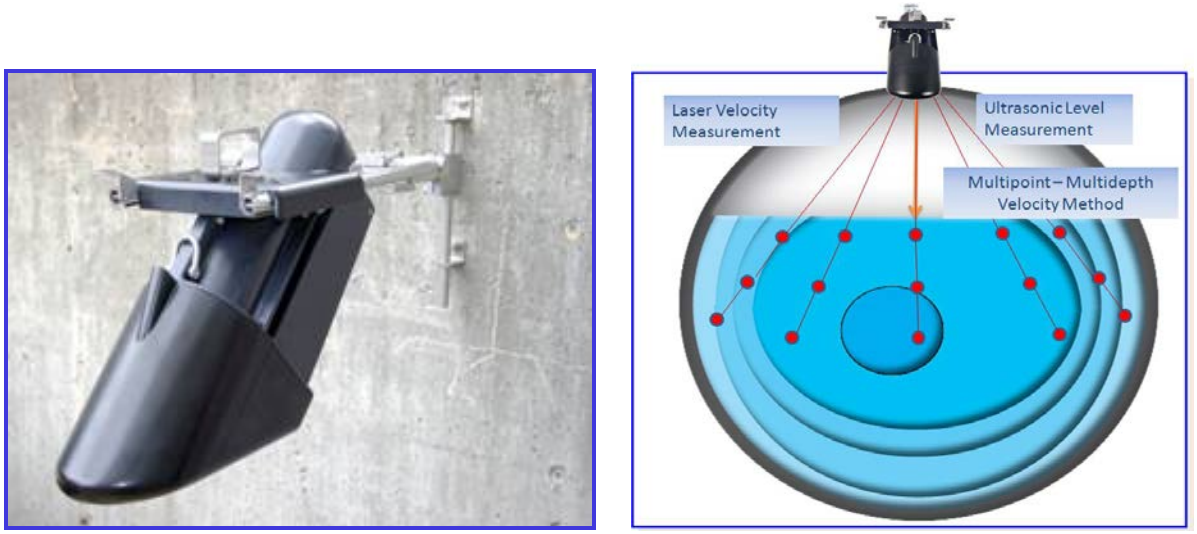
SD1 conducted approximately 6,870 CSO diversion inspections during FY 2014. Approximately 2,150 of the CSO inspections were conducted within 48 hours of a wet-weather event that produced at least one half of an inch of rain, or after a high-river event that activated the flood control system. The remaining 4,720 were routine CSO inspections conducted in dry-weather conditions. Additionally, SD1 conducted approximately 1,705 SSO inspections during FY 2014 at its recurring and suspected wet-weather SSO locations, 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 Meter Inventory Upgrade

SD1 made a significant upgrade to its flow meter inventory in FY 2014 and FY 2015 with the procurement of 15 wireless area/velocity flow meters, 10 wireless rain gauges, and 8 wireless non-contact laser flow meters. This upgrade ensures that SD1's flow monitoring operations continue to produce reliable data as older flow meters are retired, and provides new capabilities that make the operation more efficient and less dangerous. In particular, the new non-contact laser flow meters allow the flow monitoring crew to install meters outside of the flow (hence non-contact), eliminating the need for full entries to the sewer. The new non-contact laser flow meter is also capable of remotely measuring velocity at a single location or up to 15 different locations by Doppler laser, and measuring level with an ultrasonic sensor, as shown in Figure 2.2. Implementing innovative technology such as this makes flow monitoring operations safer for SD1 employees, improves data accuracy, and allows monitoring in locations that were previously unsuitable for conventional flow meters.

Figure 2.2 Non-Contact Laser Flow Meter



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 2.3 highlights the 74 locations that the crew monitored during the reporting period, which includes:

- 56 capacity monitoring sites
- 15 post-construction monitoring sites
- 3 pre-construction monitoring sites

These meters are also used to calibrate and expand SD1's system-wide hydraulic model. Section 2.2.1 describes how field inspections are being used to continually provide assurances on the model predictions. However, in some cases more detailed information regarding flows and system response to varying antecedent conditions is needed to refine the characterization in areas where specific capacity questions need to be answered, where more detail is needed for design purposes, or where capital improvements have altered the system enough to warrant model calibration.

Figure 2.4 illustrates where SD1's hydraulic model was calibrated or expanded with the continuous input of the SD1 flow monitoring program.

Figure 2.3 Flow Monitoring Locations in FY 2014

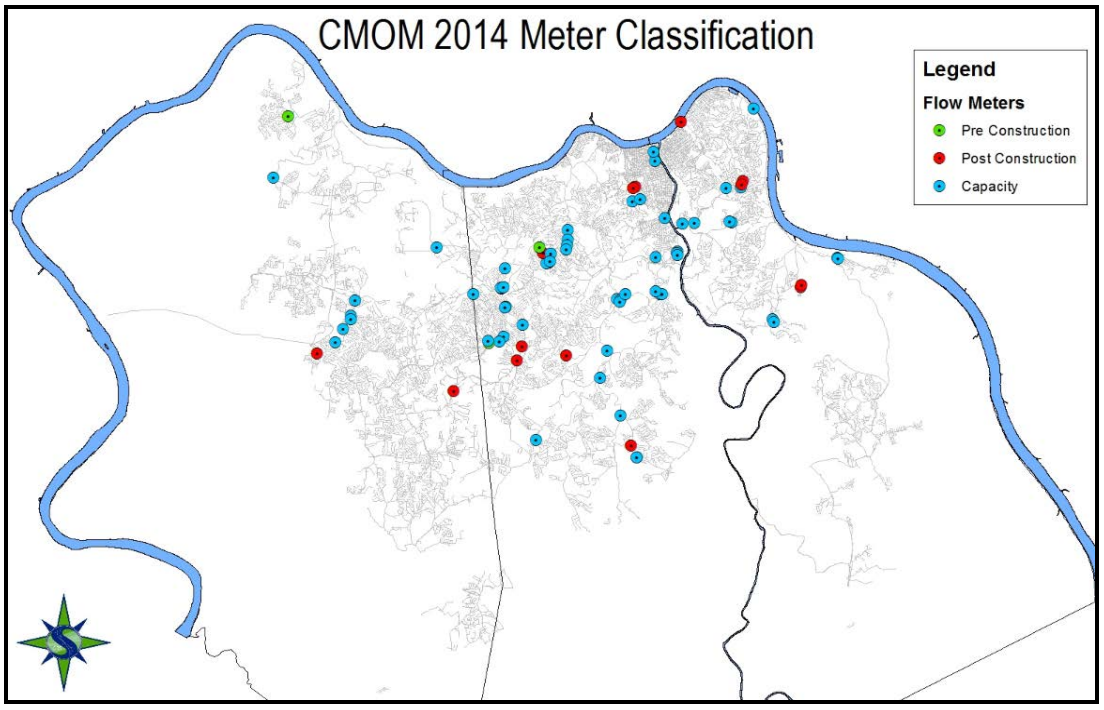
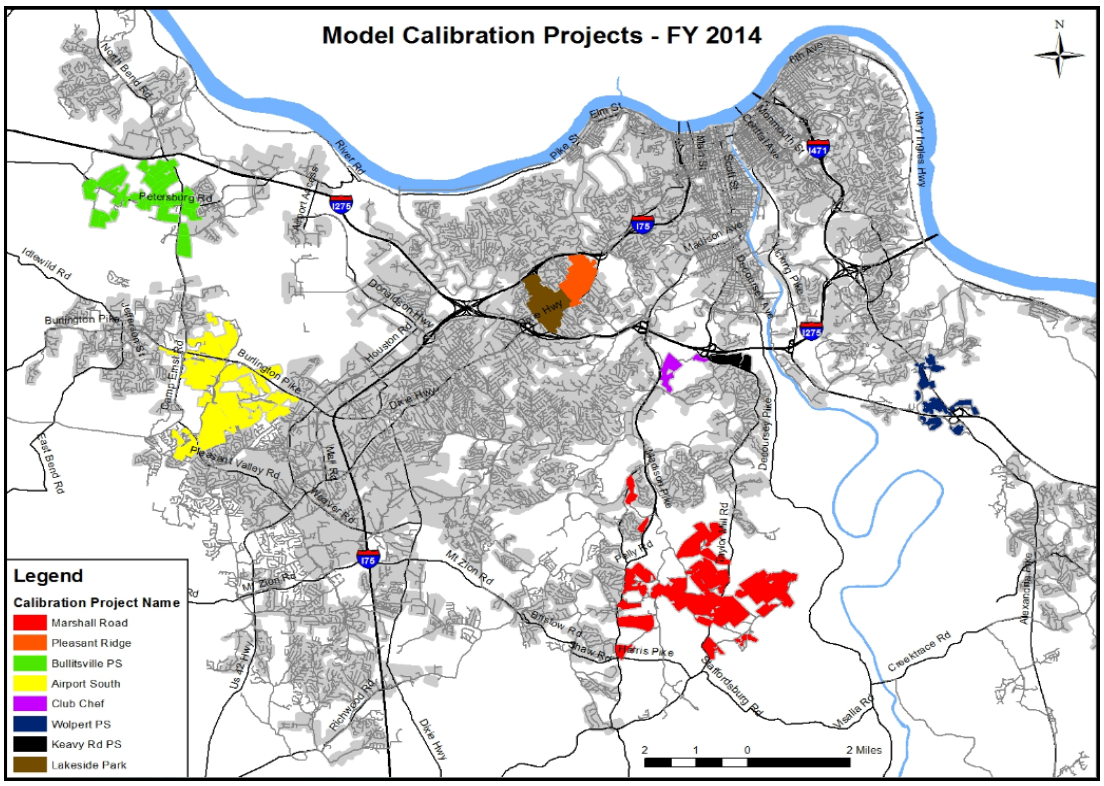


Figure 2.4 SD1 Model Calibrations in FY 2014

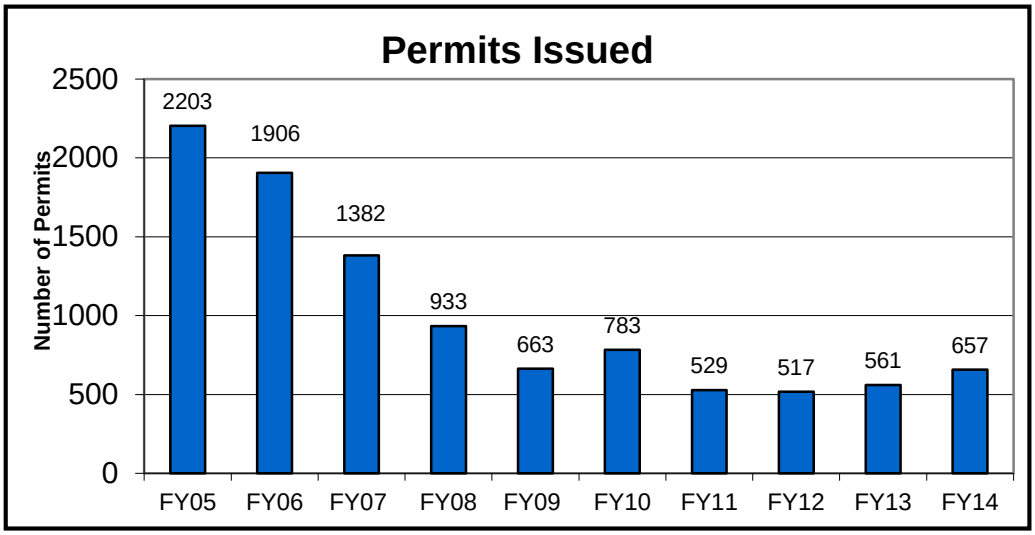


2.2.3 Reservation of Capacity

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. In FY 2014, SD1 issued 657 capacity connection permits, a slight increase over previous years. Figure 2.5 shows that the number of permits issued by SD1 has declined sharply from 10 years ago, and averages 663, annually, since the Consent Decree.

Figure 2.5 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.

SD1 responds to an average of 115 line location requests per month. Some location requests are answered satisfactorily with SD1's GIS mapping resources. However, requests that require an inspector to locate the assets and to mark the ground generate work orders that are to be completed within 48 hours. 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 2014, SD1 received and responded to approximately 1,189 location requests, and marked approximately 2,226 assets. Table 2.2 provides the approximate total of line location requests received and assets marked by SD1 in the past four years.

Table 2.2 Line Locations

Fiscal Year	Number of Location Requests	Number of Work Orders Complete	Number of Assets Marked
FY 2011	1,917	688	1,220
FY 2012	1,386	1,194	2,722
FY 2013	1,091	955	2,520
FY 2014	1,189	966	2,226

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:

- Rain barrels are a way to keep your lawn green (7/8/2013) – *Boone County Recorder*
- Talks could modify sanitation district consent decree (7/22/2013) – *Kentucky Enquirer*
- SD1 hosts Halloween-themed treatment plant tours (10/14/2013) – *Kentucky Enquirer*
- Come and visit if you dare (10/15/2013) – *Treatment Plant Operator Magazine*
- Flow Insert: Helps KY Water Reclamation Facility Divert Flow without Odors (12/10/2013) – *Water World Magazine*
- Sewer Backup Insurance Needed (2/26/2014) – *WXIX Fox 19 News*
- Edgewood, Lyndale roads fix may take three years, $3.75 million (3/3/2014) – *Kentucky Enquirer*

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 2014, 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:

- Welcome to SD1: Your Wastewater and Storm Water Utility (brochure)
- Use Less, Save More: Conserve Your Water and Lower Your Residential Bill (bill insert)
- Be Winter Ready – Tips for Buying and Applying De-Icer (bill insert)

- Average Annual Water Usage Reflected on Your May 2014 Bill (bill insert)
- Public Service Park Mobile Audio Tour (informational signs)
- The flow never stops (bill insert)
- SD1's New Strategic Direction (https://www.youtube.com/watch?v=KkQGAf--J_Y&list=UUvsI7adN6AY0tnKCDRDRpVA) (social media)

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 this reporting period, information regarding SD1's Disconnection, Redirection, Infiltration Program (DRIP) was added to the website, as well as information regarding storm water management and resources for Educators. Additional topics on the website include current capital projects, the benefits of rain barrels, 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 laboratory (http://www.sd1.org/NewsArticle.aspx?id=79)
- Get Involved in Earth Day! (http://www.sd1.org/NewsArticle.aspx?id=87)
- Be responsible: Proper use of fertilizer and pesticides (http://www.sd1.org/NewsArticle.aspx?id=90)

2.4.3 Customer Outreach

As a result of the customer service phone surveys conducted in FY 2013, SD1's Communication Department was able to identify where communication efforts with customers should be focused. During FY 2014, SD1 implemented new customer communication strategies, including bill inserts with tailored messages for customers and a welcome brochure for new customers with additional information featured on SD1's website. SD1 also hosted Halloween-themed tours at Dry Creek Wastewater Treatment Plant and participated in a Boone County Library "How To" event. Additionally, SD1 participated in Greater Cincinnati's Great Outdoor Weekend, a regional initiative that offers children and adults a free sampling of outdoor recreation

and nature awareness programs. Throughout the fiscal year, SD1 spent time researching a number of social media platforms and decided a business Facebook page would be of benefit. The Communication Department anticipates that the SD1 Facebook page will be launched in FY 2015. SD1 will also conduct another phone survey in FY 2015 to identify additional areas of customer service improvement.

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 for an update on SD1's 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 2014 with a total of 54 permitted Significant Industrial Users in its collection system.

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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 2014, a total of 69 inspections were conducted. Of the 69 inspections performed, 64 were routine annual inspections and 5 were foaming inspections.

SD1 has an Enforcement Response Plan in place to address each violation. Typically, the first Notice of Violation issued is verbal (and documented in a computerized program management system). The second violation is written. Each subsequent

violation 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 2014, Notices of Violation were issued 59 times, consisting of 8 verbal notices, 35 written notices with no fine, and 14 written notices with fines totaling $6,000. Two notices were issued to two companies with new compliance schedules to bring their pretreatment operations back into compliance. Refer to Appendix C for a summary report describing these violations in more detail.

2.6 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.

2.6.1 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

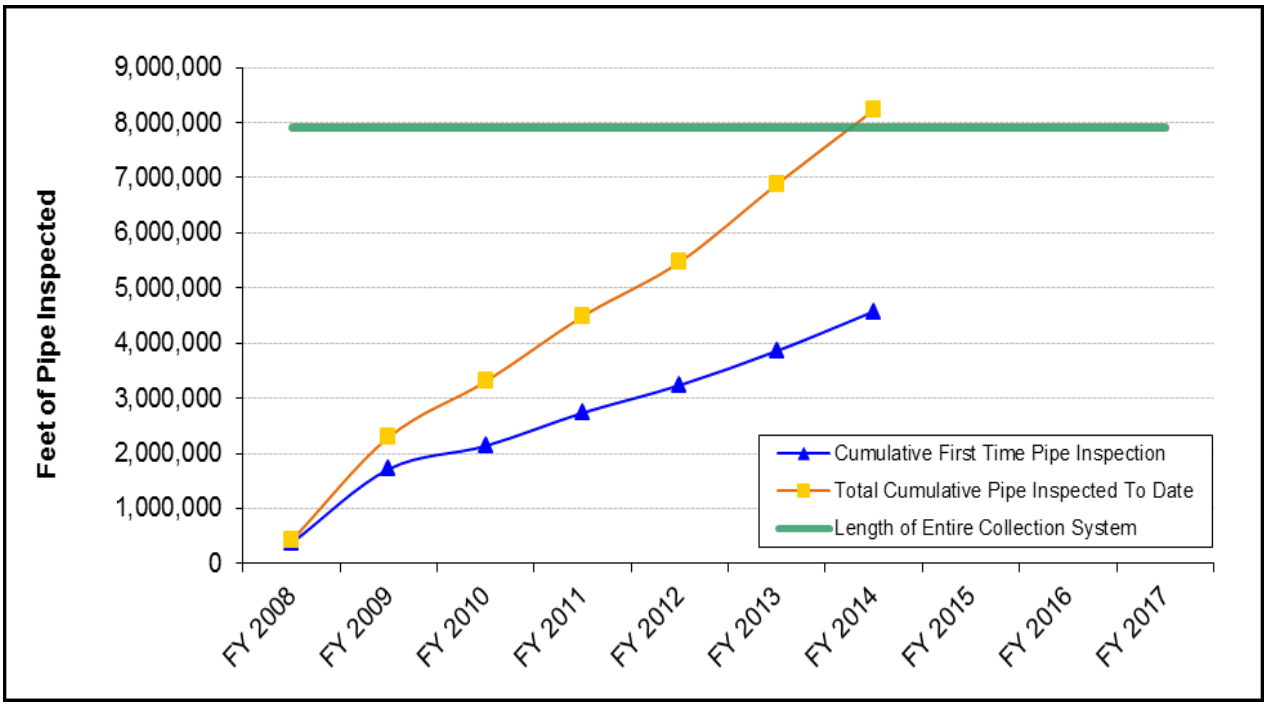
	Initial Inspection Footage	Follow-Up Inspection Footage	Total Cumulative Footage
FY 2008 (Jan-June)	374,068	46,898	420,966
FY 2009	1,340,874	498,113	1,838,987
FY 2010	421,130	589,519	1,010,649
FY 2011	600,306	583,389	1,183,695
FY 2012	501,160	483,494	984,654
FY 2013	622,585	788,311	1,410,896
FY 2014	716,278	629,179	1,345,457
Total To Date	**4,576,401 (58% of system)**	**3,618,903**	**8,195,304**

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. 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, such estimations require regular reassessment that may lead to adjustments of the initial projection. With approximately 55 percent of the system assessed at the end of FY 2014, SD1 has estimated that it will need to televise for initial inspection approximately 1.17 million feet of pipe, per year, for the next three years. SD1 has set a goal of 1.22 million feet of pipe for initial inspection in FY 2015. Figure 2.6 displays SD1's progress, as of FY 2014.

Figure 2.6 Sewer Inspection Progress

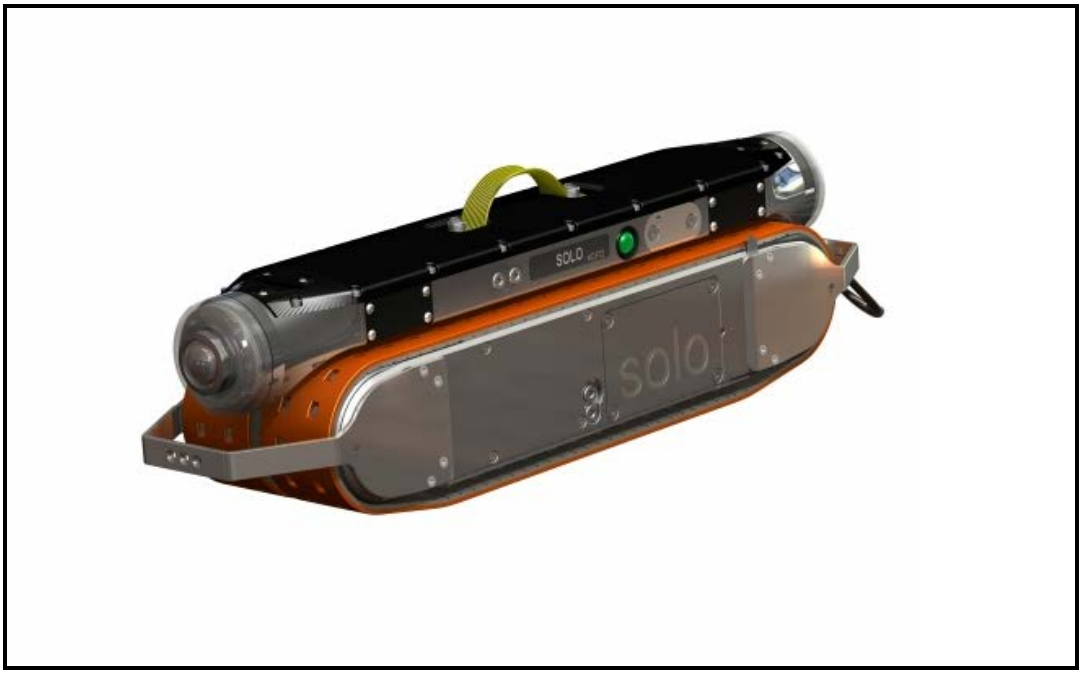


RedZone Robotics

To meet the ten-year target for complete system assessment, initial inspections will increase significantly over the previous seven years. SD1 has made strategic investments during FY 2014 in new camera technology to help accomplish this aggressive goal on time.

Currently, SD1 is utilizing four new robotic cameras to increase annual inspections. RedZone Robotics' Solo camera, pictured in Figure 2.7 below, is the world's only unmanned condition assessment tool made for sewer inspections.

Figure 2.7 RedZone Robotics Solo Camera



SD1 has found that these robotic cameras are most effective in assessing 8-inch and 12-inch sewers. These light weight cameras do not require CCTV trucks, generators, or full camera crews to deploy, which significantly increases the overall productivity and efficiency of SD1's CCTV inspection programs. During FY 2014, SD1 used the Solo cameras to capture approximately 220,000 feet of additional inspections, 97 percent of which were initial inspections. The RedZone Solo cameras will provide approximately 15 percent more inspection footage, annually, than what SD1 has been able to produce with conventional resources in the past.

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
Total Inspections	**22,340**	**15,618**

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

2.6.2 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
Total Feet Cleaned	**3,244,523**

*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 2014, SD1 cleaned 28,829 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.

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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 2014, SD1 removed an estimated 455 cubic yards of debris from catch basins and 355 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	FY 2009 Total (Jan–Jun)	FY 2010 Total	FY 2011 Total	FY 2012 Total	FY 2013 Total	FY 2014 Total	Combined Total
Catch Basin Cleaning	149	433	629	527	367	455	2,560
Grit Pit Cleaning	237	362	330	400	468	355	2,152
Total Cubic Yards Debris Removed	**386**	**795**	**959**	**927**	**835**	**810**	**4,712**

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Rehabilitation and Replacement

Table 2.7 describes 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 2014. These activities do not include capital improvements.

Table 2.7 Rehabilitation & Replacement Activities

Activity	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	Grand Total
Feet of Sewer Lines Repaired or Replaced	11,608	17,944	29,239	19,500	18,508	21,051	6,122	**123,972**
Feet of Sewer Lines Rehabilitated (cured-in-place piping)	1,081	3,204	12,872	64,715	65,757	38,129	43,026	**228,784**
Number of Misc. Sewer Repairs	33	41	5	12	4	0	0	**95**
Number of Manhole Repairs	548	370	317	321	774	299	258	**2,887**
Number of Manhole Replacements	35	63	80	60	89	33	19	**379**
Number of New Manhole Installations	16	53	40	36	57	34	14	**250**
Number of Catch Basin Repairs	68	115	71	209	292	21	56	**832**
Number of Catch Basin Replacements	81	209	203	116	100	54	28	**791**
Number of New Catch Basin Installations	0	4	2	3	3	3	6	**21**

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 these pipes to priority watershed areas. Pipes requiring emergency work are scheduled for immediate repairs upon discovery. Additional considerations that may determine if the schedule should be accelerated are:

- proximity to recurring overflows
- lack of hydraulic capacity
- proximity to other assets in need of repair
- high consequence of failure (as described in more detail in Section 2.8.1)

2.7 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.

2.7.1 SORP Training

SD1 held annual SORP trainings between June and December of 2014. Approximately 115 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 annual training and periodic refreshers throughout the year. Operations-level employees also receive continuous hands-on training from supervisors in the field during actual overflow response events.

2.7.2 SORP Annual Review

Under the Consent Decree, SD1 is required to perform annual reviews of the SORP and make adjustments as necessary. Specifically, Section 36I 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 11, 2014, and determined that there were no material modifications to the SORP for FY 2014. Minor updates include personnel and scheduling changes.

During FY 2014, SORP coordinators developed additional standard operating procedures (SOPs) regarding post-wet weather CSO inspections and responding to building backups. The SOPs developed in FY 2014 will be included in the SORP employee handbook, upon final review and approval by SD1 executive management. The new SOPs will be included in the SORP update to the FY 2015 CMOM Annual Report.

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. 28, submitted on October 30, 2014.

2.8 Information Management Systems (IMS)

The purpose of SD1's Information Management Systems (IMS) program is to provide tools and software that tracks 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.

2.8.1 Consequence of Failure Model Development

SD1 has historically used a probability of failure (POF) score to assess and manage its assets. SD1's POF model, described in Section 2.6, is known as the System Condition and Risk Enhanced Assessment Model™ (SCREAM). It is similar to the more

commonly used Pipeline Assessment and Certification Program (PACP) score. The SCREAM scoring is an integral part of the asset management program, as it provides very detailed structural and maintenance condition assessments that are based on a visual coding of CCTV inspections. The SCREAM scores provide the critical input to the Continuous Sewer Assessment Program (CSAP) automation for next action generation. This POF model informs SD1 of how likely it is that a pipe will fail.

With the CSAP maturing and more than 50 percent of the system assessed, SD1 has determined the program needs to be refined to better account for overall risk. SD1 currently has more than 27,000 pipes with SCREAM scores. Prioritizing rehabilitation schedules has become very time consuming for SD1 staff, especially the process of predicting the impact on the community and the environment from potential failures. To further refine and automate the prioritization of rehabilitation prior to failures, new scoring inputs to the CSAP have been developed.

Utilizing the programing and application development expertise of SD1's GIS staff, SD1's Collections Systems Department has created a business risk exposure (BRE) score for all pipes to produce a comprehensive assessment program that fully accounts for all levels of risk. The BRE score calculates the nature of exposure that SD1 is likely to confront with a potential failure of a specific asset or group of assets. However, to generate a BRE, the POF score needs to be modified with a consequence of failure (COF) score.

As defined by the USEPA, a COF is the real or hypothetical result associated with the failure of an asset. Essentially, the COF model establishes the level of impact each asset will have on the community if it were to fail, and provides a scoring mechanism to qualify the relative impacts of failure. During FY 2014, SD1 developed its own COF based upon the commonly used triple bottom line approach of sustainable management. For SD1's COF, the triple bottom line refers to the weighted risk factors of economic, social, and environmental consequences of failure.

Examples of the criteria used to model the three risk factors include, but are not limited to:

<u>Economic</u>

- Pipe Diameter

- Pipe Depth
- Utility congestion
- Topography
- Proximity to structures
    - Buildings
    - Railroads
    - Flood walls and levees
- History and locations of overflows and backups

Social

- Traffic patterns
- Proximity to community facilities
    - Hospitals
    - Police and Fire stations
    - Schools
    - Parks
- Road size

Environmental

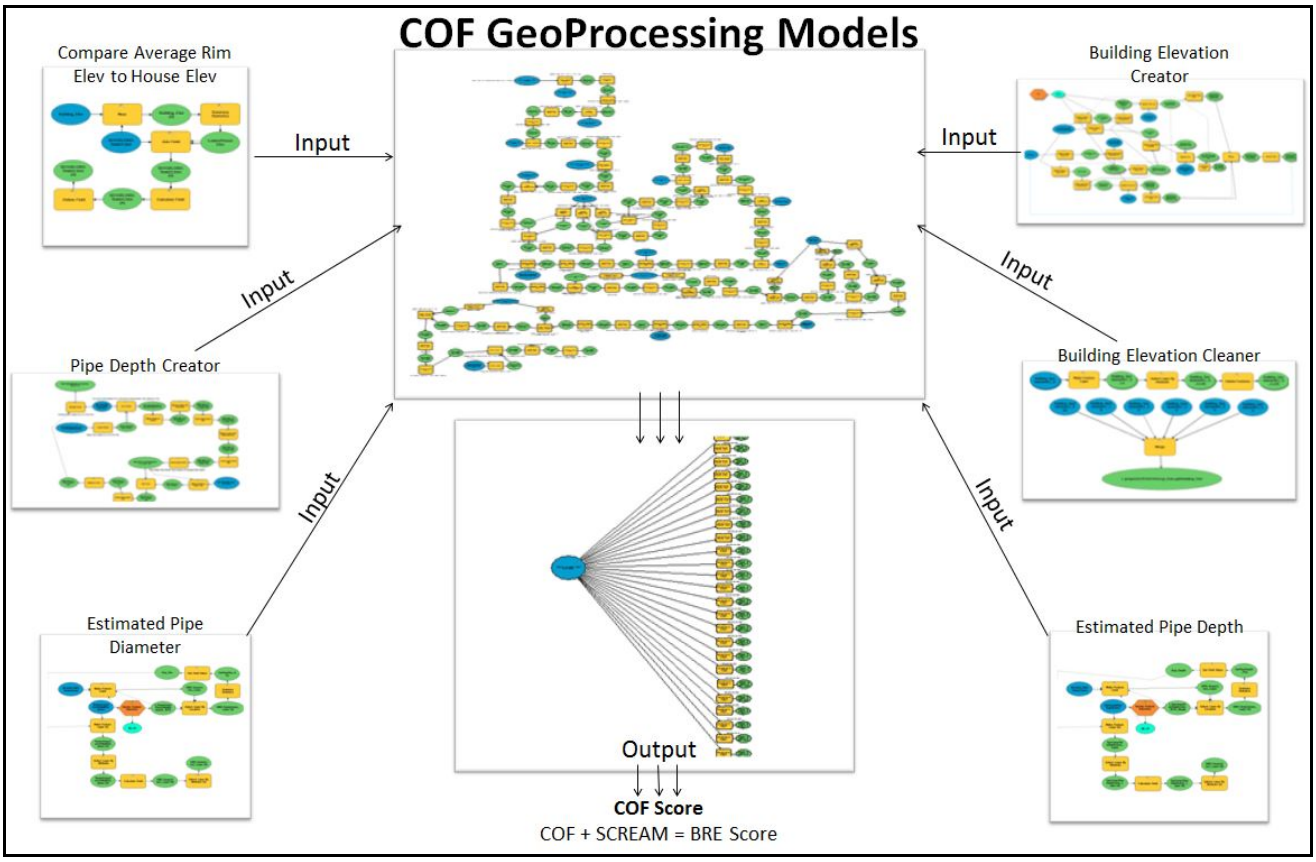
- Proximity to wetlands
- Proximity to streams and creeks
- Landslide history

These spatial characteristics are modeled with GIS software to calculate scores for each category and composite criticality scores for each pipe, which are then imported into SD1's asset management software, Lucity. The imported scores are then combined with the exiting SCREAM scores. The result of this combined POF and COF score is the BRE.

Currently, SD1 is testing the effectiveness of a weighted BRE consisting of 65 percent POF and 35 percent COF. Evaluations of how best to apply the new BRE, as well as considerations of new criteria, will continue throughout FY 2015. The COF and BRE modifications to SD1's CSAP are anticipated to be finalized by FY 2016.

SD1's new BRE requires eight geo-processing models to be continuously updated, as conditions change. Figure 2.8 illustrates the complexity of the spatial models that have been developed for this ongoing initiative.

Figure 2.8 Consequence of Failure Models for Business Risk Exposure

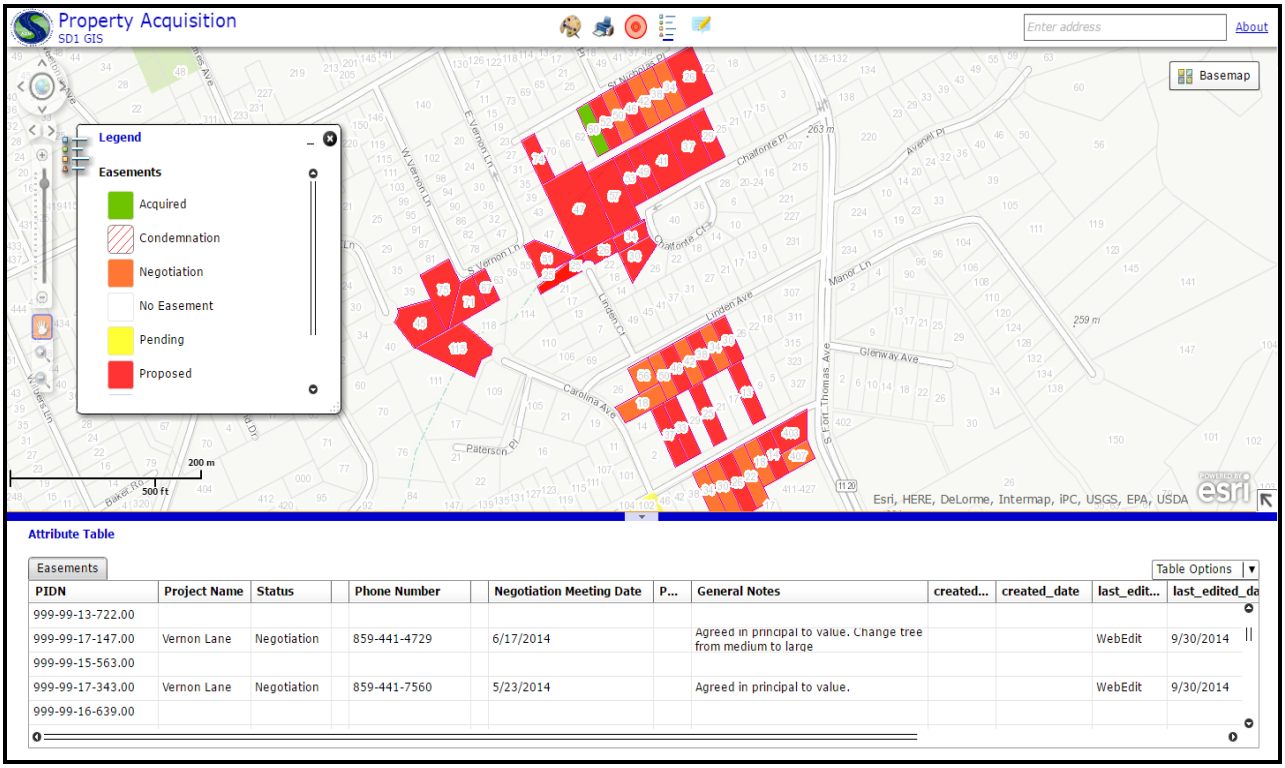


2.8.2 Easement Acquisition Tracking Application

SD1's GIS staff has also developed an application for tracking easement negotiations and acquisitions for the Capital Improvement Program. The map based application provides easy access to parcel records where easements are needed to complete a project. Project managers now have a tool that can select and classify parcels in the map, as well as track contacts and status changes in a related table. This streamlines record keeping for one of the most cumbersome aspects of new construction, and creates efficiencies that advance capital improvements to the collection system.

Figure 2.9 illustrates the web map application and how it's currently being used to track easement negotiations in the Vernon Lane project area.

Figure 2.9 Easement Acquisition Tracking Application



2.9 Legal Authority

The purpose of SD1's Legal Authority Program is to:

- Implement and enforce SD1's Rules and Regulations
- Assist in the development of policies and guidance documents
- Implement SD1's existing policies and guidance
- Ensure compliance with applicable state and federal laws
- Assist with securing necessary permits from state and federal agencies
- Keep informed of relevant legal issues and state and federal policies and guidance
- Reduce legal liability and manage risk
- Provide staff with legal support and advice
- Effectively manage litigation
- Provide legal assistance for timely, effective, and cost-efficient implementation of

the Consent Decree, including coordination with regulators and legal review of all plans submitted pursuant to the Consent Decree

- Continuously review and revise legal authority as needed to further the mission of SD1

2.9.1 Sanitary Rules and Regulations

During FY 2014, SD1 continued revising and finalizing new Rules and Regulations. SD1 strives to provide clarity on the requirements of system users, developers and contractors through its Rules and Regulations.

The only revision to the SD1 Rules and Regulations approved by the Cabinet in FY 2014 was of Article 7. Section 701, 1.G. The revision removes the authority of SD1 to repair private service laterals under public right-of-ways.

SD1 will continue to review proposed revisions to the Rules and Regulations in FY 2015. The following areas have been proposed as new additions:

- New design plan submission requirements
- New flow figures and wet-weather peaking factors to be used when calculating flow for residential, commercial and industrial developments
- New aerial sewer specifications
- New drop manhole requirements
- New section for low pressure force main systems
- New section for incorporating the Small Pump Station Design Guide to be used on SD1 capital projects and by developers
- New reservation of capacity policies
    - Easement requirements
    - Property deeds
    - Valid concept plans

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 164 Certified Tappers representing 101 plumbing companies, two cities, and two utilities. Of these 164 Certified Tappers, three became newly certified during FY 2014.

2.10.2 Violations and Fines

During FY 2014, SD1 issued 23 violations and $15,250 in fines to 14 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**
Total	**72**	**44**	**$41,500**

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 D 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 preventative maintenance (PM) are preformed to ensure that all stations are operating at maximum efficiency.

2.12.1 Pump Station Maintenance

In FY 2014, SD1 completed a total of 14,144 inspections and approximately 1,903 pump station PM inspections. These routine 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

2.12.2 Pump Station Eliminations

During FY 2014, SD1 eliminated two pump stations listed in Exhibit E of the Consent Decree.

Kentucky Aire Pump Station Elimination

Kentucky Aire Pump Station was eliminated in December of 2013. The area previously served by the eliminated pump station is now conveyed to the Western Regional Water Reclamation Facility, instead of the Dry Creek Wastewater Treatment Plan via the Lakeview Pump Station. More than nine miles of pipe that collects approximately 320,000 gallons of dry weather flow per day, and serving more than 1,600 residential units and 30 commercial properties, has been redirected by gravity line with this elimination. For more detail, refer to the Watershed Plans, Section 7.7.2 and the Consent Decree Quarterly Report No. 26.

Sunset Pump Station Elimination

In July of 2014, the Sunset Pump Station was eliminated with the completion of the Arcadia Pump Station. The historical SSO at the Sunset Pump Station was eliminated with the replacement of its force main prior to the December 31, 2010 Consent Decree deadline. The force main upgrade was the interim solution to the delayed permanent solution of the new Arcadia Pump Station. The Sunset Pump Station has now been completely removed. A new 10-inch gravity sewer now conveys the existing flows north to the Arcadia Pump Station, which has been designed to provide a firm capacity of 1.3 million gallons per day to permanently eliminate the Sunset overflow and accommodate new development. The new Arcadia Pump Station pumps the flows south the Eastern

Regional Water Reclamation Facility, via the Alex-Licking Pump Station. For more detail, refer to the Watershed Plans, Section 7.4.3.

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 2014 Safety Training Calendar is included in Appendix E. The calendar is posted to the Intranet site, and monthly email notifications are sent to SD1 employees to notify them of upcoming trainings and attendance requirements. Attendance at safety training classes is tracked with Halogen 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 2014.

Table 2.9 Safety Program Performance

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

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

SD1 employees are provided with a wide array of training opportunities throughout the year, including safety training, technical skills training, and soft skills training in areas such as communication and leadership. 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 2014.

(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 Training Needs Assessment

SD1 completed a comprehensive training needs assessment throughout the organization, during FY 2013. In FY 2014, SD1 began implementing changes to the Training Program based on the assessment. The goal of the assessment was to increase the effectiveness, efficiency, and relevance of the internal training program and external trainings, such as conferences and industry workshops. As a result of the assessment, some mandatory training sessions have been modified and are now being offered more than one time per year, and new training coordinators have been established for some departments. Additionally, SD1 has expanded its formal educational assistance program to provide more annual reimbursements for tuition and fees. Other proposed modifications to the Training Program are currently under review.

2.14.2 In-House Training Program

Leadership Development

During FY 2014, SD1 began offering an updated Leadership Education and Development (LEAD) Program. The initial leadership training was offered to 36 employees. Each employee interested in the leadership course had to submit an application and provide a letter of recommendation from a manager or supervisor to participate. Training sessions were three hours long and offered every other week for ten weeks. Training topics included: effective communication, collaboration and team building, customer satisfaction and engagement, live webcasts on leadership, and a review of SD1's policies and procedures. All of the classroom instruction for the courses in the LEAD Program is provided by highly qualified and trained SD1 personnel, as well as guest lecturers. The LEAD Program will continue to be offered throughout FY 2015.

All instructional material is made available through the Training Program’s in-house library, which continues to expand each year. The training calendar and library is updated annually to provide revised or new training information to all employees. During FY 2014, the main expansion of the training library was on leadership material.

2.14.3 External Training

Kentucky WINS Program

SD1 continued its participation in the Kentucky WINS program that provides grant funding for employee training through the Kentucky Community & Technical College System. During FY 2014, SD1 was able to secure grant funds to provide personnel additional specialized job training. SD1 employees that attended Gateway Community and Technical College completed customized courses on electric motor controls and team building.

Fred Pryor Seminars

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

2.14.4 Financial Assistance for Continuing Education

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 2014, SD1 provided $10,597 in educational assistance to its employees.

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 2014, the 19 sites within the North Basin were sampled. These site revisits included biological and habitat assessments, base flow water quality samples, and where appropriate, hydromodification surveys. Additionally, one base flow was 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 2014, approximately 45 plans for GCE installations were reviewed and 58 permits were issued by SD1. Of the 58 new permits issued, 4 of the FSEs went out of business in the same year. 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
Total	**108**	**133**

3.1.3 Reporting Requirements

SD1 requires permitted FSEs to report proof of service or cleaning of its GCE. All documentation must be submitted to SD1 within 30 days of the actual cleaning/service.

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.

FSEs were initially inspected in known FOG problem areas where maintenance and inspection data reveal that the condition of the lines and pump stations are significantly stressed due to the buildup of FOG. Initially, FSEs in all known problem areas, where

sewers were found to overflowing due to blockages of FOG, were thoroughly investigated. By evaluating the collection system in this manner, SD1 was able to prioritize which areas to focus on, and conduct inspections of FSEs that have the greatest potential impact of reducing FOG.

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 integrated into a GIS data layer to visually 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. Over time, the maps will also be reviewed to ensure that pipe conditions are improving and the FOG issues are being resolved.

3.2.2 Compliance Inspections

At the end of FY 2014, SD1 had 58 new permitted FSEs throughout the service area, bringing the total of active FSEs to 138. Within one year of a permit's issue date, at least one follow-up inspection is conducted at each permitted FSE. In FY 2014, SD1 issued eight Notice of Violations (NOV) for non-compliance with the Food Service Discharge Permit to eight FSEs. A complete FY 2014 violations summary report of permitted FSEs can be found in Appendix F.

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.

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
Total	**1,483,042**

*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 grease generators 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 Boone, Campbell and Kenton counties. 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 2014, approximately 1,200 food service managers (including representatives from FSEs that are not currently permitted) attended the workshop and received brochures and pamphlets highlighting 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 2014, SD1 mailed approximately 750 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.

A map illustrating where grease-caused overflows occurred during FY 2014, and the upstream properties that received subsequent letters, is provided in Appendix G.

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 permanent PM cleaning list for grease and the increase in the number of SSOs and building backups.

Table 3.2 Grease Control Program Performance Indicators

Performance Indicator	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14
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
Number of SSOs due to Grease	4	17	10	7	5	4	6
Number of Building Backups due to Grease (Reported through Trouble Calls)	2	5	7	7	7	6	4

*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.

SD1 continues to run an effective Grease Control Program, as indicated in the information in table 3.2. The total number of backups and SSOs due to grease in FY 2014 is approximately 0.63 per 100 miles of sewer, per year. For all blockages leading to SSOs, SD1's performance is in the top quartile of utilities in the South, based on the American Water Works Association's (AWWA) 2007 Benchmarking Study. According to the AWWA study, the top quartile in performance for the South is 3.8 failures due to all blockages, per 100 miles of sewer, per year. SD1's F4 2014 failure rate due to all blockages is approximately 3.6 failures, per 100 miles of sewer, per year. Of the total 58 blockages that led to an SSO or building backup in FY 2014, only 10 (or 17 percent) were due to grease. Additionally, SD1's failure rate for grease blockages has declined for the fifth year in a row. These trends demonstrate the continual improvement and the effectiveness of SD1's operation and maintenance programs, as well as the impact of its FOG awareness programs.

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 2014, SD1 completed backup power projects at the following six pump stations:

- Army Reserve Pump Station
- Brentwood Pump Station
- Darma Court Pump Station
- Eagles Landing Pump Station
- Evergreen Pump Station
- Patton Street Pump Station

To date, SD1 has completed 96 of the 110 projects required by the Pump Station Backup Power Plan. For a detailed update on the current progress of the program, refer to Appendix H.

SECTION 5. SELF-ASSESSMENT PROGRAM

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 aid in more effectively achieving regulatory compliance and reducing 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 five-new 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

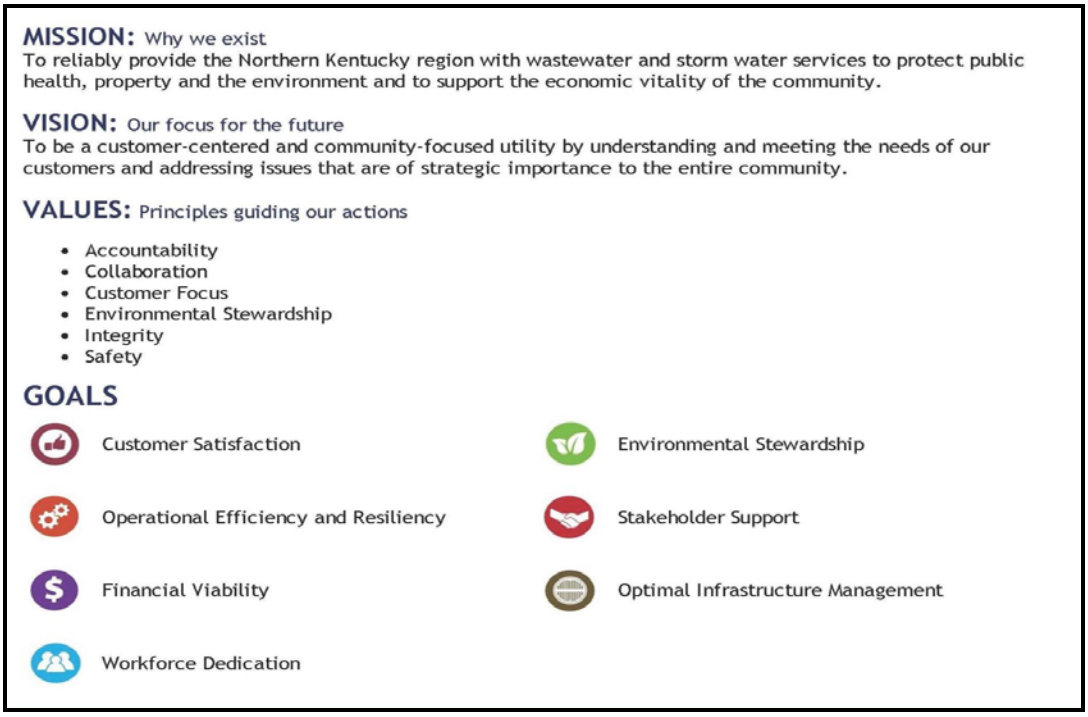
opinions from hundreds of individuals and organizations through surveys, interviews, and focus group sessions.

With the knowledge gathered from this 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

The mission, vision, values and goals are shown below in Figure 5.1 below.

Figure 5.1 SD1 Strategic Business Plan



SBP Participation

The SBP was developed with the input of the following:

- 205 employees participated (approximately 70% of total SD1 workforce) in an initial survey to provide input to the plan

- 38 employees attended a planning kick-off meeting to establish a project charter and learn about the planning process
- Multiple representatives from 34 different local community groups and organizations were interviewed to provide input to the plan
- Telephone survey data from 128 customers across three counties served as input to the plan
- 92 employees participated in focus group sessions to provide input to the plan
- 15 employees participated in a workshop to define the mission, vision, values, and goals
- 61 employees participated on goal teams to help define each goal and its related strategies
- 60 employees participated in a workshop to identify the highest priority goal strategies
- 86 employees participated on teams to develop and present action plans to SD1 executives and senior management for implementing a priority strategy
- 149 employees participated (approximately 54% of total SD1 workforce) in a follow-up survey after the launch of the plan to evaluate awareness, level of understanding, and support for the plan

SD1 staff used the feedback from the community and employees to select the two highest priority strategies within each of the seven goals to develop an action plan. A total of 14 strategies will have action plans developed during FY 2015, which will identify specific projects to complete in order to meet the goals. This prioritization will guide SD1 while it allocates resources to the strategies that have been identified as the most critical for success. Over time action plans will be developed for the remaining strategies. The approach for implementing the new SBP is illustrated in Figure 5.2 on the following page.

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Figure 5.2 SD1 Strategic Business Plan Implementation

SD1's commitment to this plan will ensure all employees are working toward protecting public health, property, and the environment, while supporting the economic vitality of the community.

Through collaboration, innovation, creativity and hard work, SD1 is confident that the SBP will guide the utility into the future. The plan will enable SD1 to better work for its customers and on behalf of the community to protect Northern Kentucky's water resources.

A copy of the SBP summary document and a video about the planning process can be found on SD1's website www.sd1.org as shown in Figure 5.3. The SBP summary document can also be found in Appendix I.

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Figure 5.3 SD1 Strategic Business Plan Online

APPENDIX A:

Maps of Sanitary and Storm Service Areas

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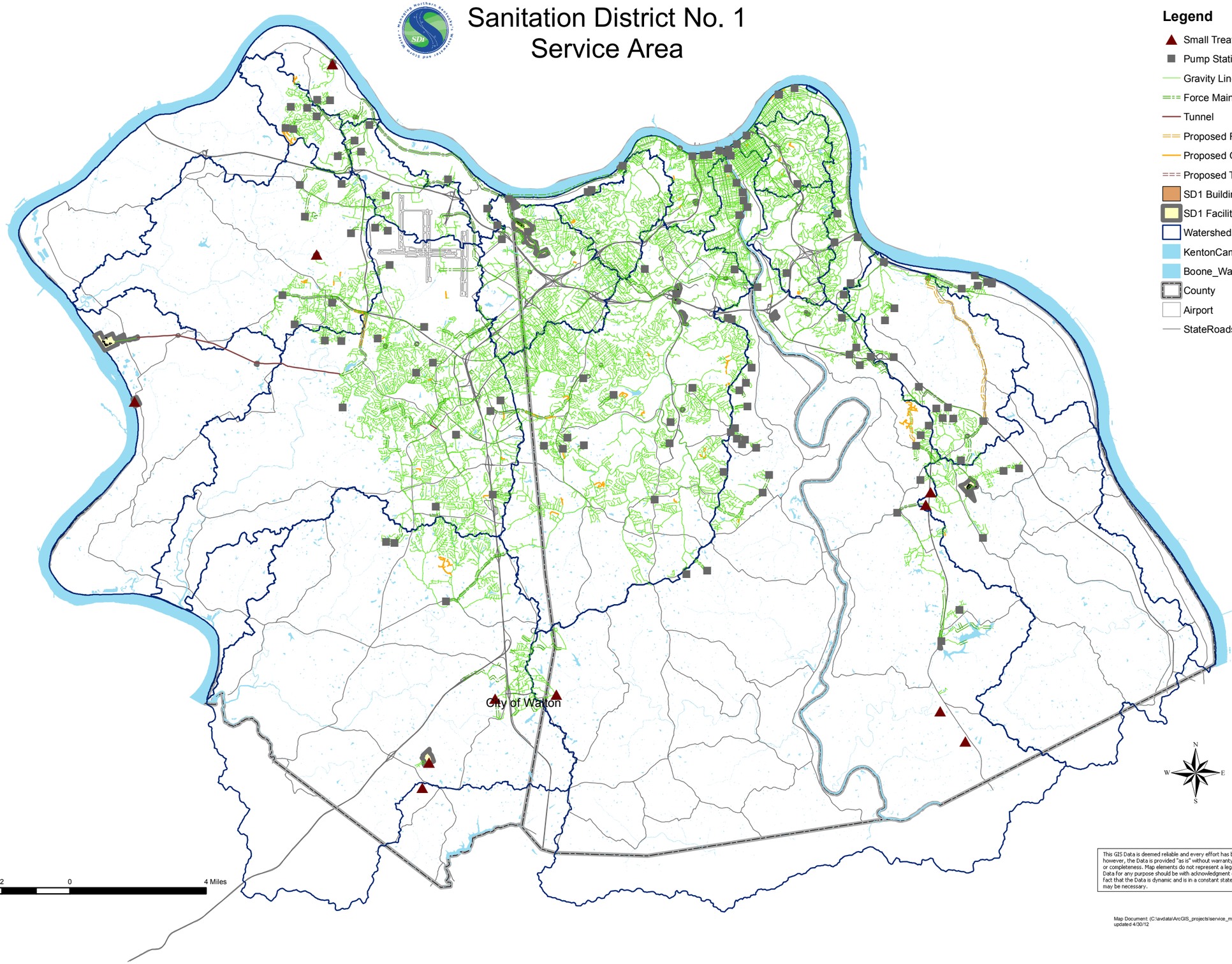
Sanitation District No. 1
Service Area



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
W E
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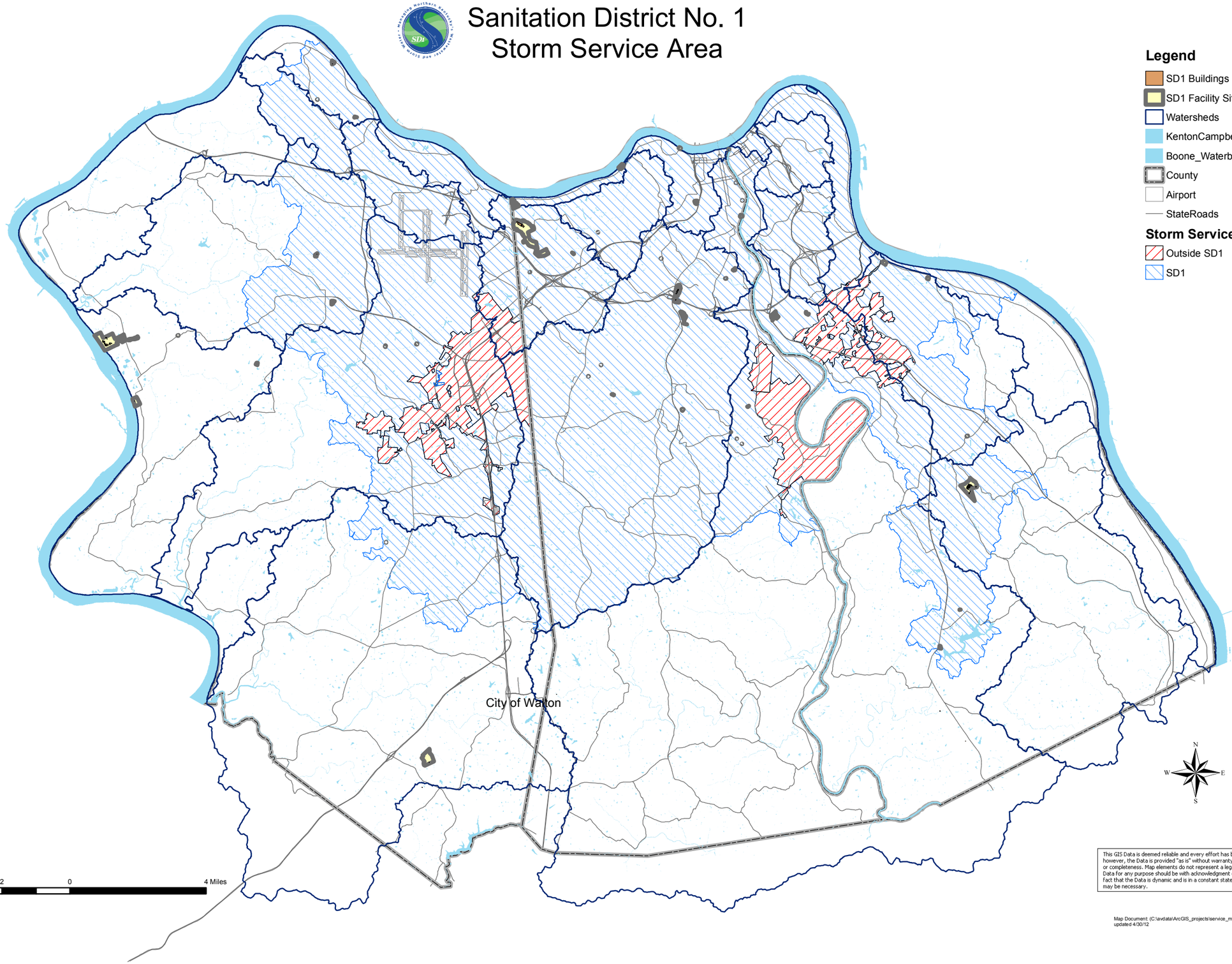
4 2 0 4 Miles

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 2014 Example Educational Publications

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DOWNSPOUT DISCONNECTION

What is downspout disconnection, and why should you do it?

Downspouts are the vertical pipes on your home that collect and channel rainwater and snow melt from your roof and gutters. In many areas, these downspouts are piped into the ground and connected to a sewer system. Excess storm water can overwhelm the sewer system and cause problems like overflows of sewage, flooding, erosion of creek banks and water pollution. Disconnecting your downspout from the sewer system directs that water to your yard or landscaping where it can seep into the ground and help prevent some of the problems caused by excess water entering the sewer system. Downspout disconnection is a simple, quick and relatively inexpensive project involving the removal of the portion of your home's downspout that enters the ground and adding an extension piece that allows you to control where the runoff is discharged on your property.

Will downspout disconnection work on your property?

To avoid undesired flooding when disconnecting your downspout, it is important to ensure your downspout will be directed to an area of your yard that can handle excess water. SD1 highly recommends installing a rain barrel or a rain garden to collect the excess water from your disconnected downspout. However, if you decide to simply direct the flow from your downspout onto your lawn or other vegetated area of your yard, keep the following guidelines in mind:

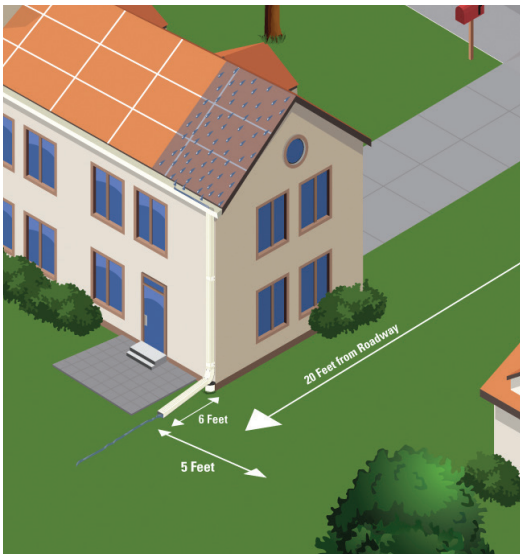
- **The excess water from your downspout must be discharged at least six feet from your home's foundation, five feet from your neighbor's property, five feet from a public sidewalk and 20 feet from a roadway.**

- Make sure the area of yard or landscaping to which you plan to discharge the water from your disconnected downspout is approximately 10 percent of the roof area that drains to the downspout.

  - Determine how many square feet of rooftop you have on your house by multiplying the length of your home by the width.

  - Divide the square feet of rooftop by the number of downspouts on your home to get the area of rooftop that drains to each downspout.

  - Multiply that number by 0.10 to get the area of yard or landscaping you will need.



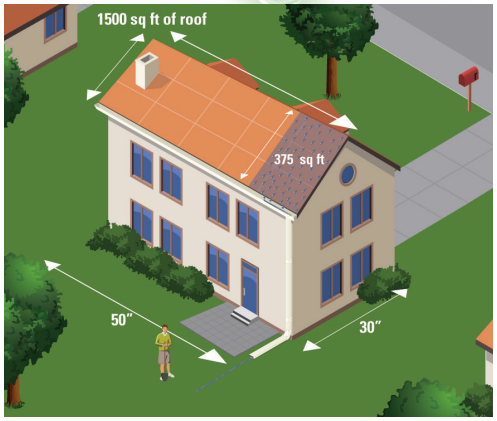
Sample calculation for determining the area of yard or landscaping you need to disconnect your downspout:

50 ft. (length of home) x 30 ft. (width of home) = 1,500 sq. ft. of rooftop
1,500 sq. ft. of rooftop ÷ 4 downspouts = 375 sq. ft. draining to each downspout
375 sq. ft. x .10 = 37.5 sq. ft. of yard or landscaping needed

- Make sure the ground to which you are redirecting the water slopes away from your house. Water must flow away from your foundation to prevent your basement from flooding. However, if the incline is steep, downspout disconnection is not recommended.

- Place a splash block or rocks beneath your downspout to help spread the flow of storm water and prevent yard erosion.

- Do not discharge the water from your downspout to an area of your yard where a septic system or utility line lies. Call Kentucky811, the "Call Before You Dig Call Center," at 1-800-752-6007 to have a locator mark the location of any underground pipes, lines or cables on your property.

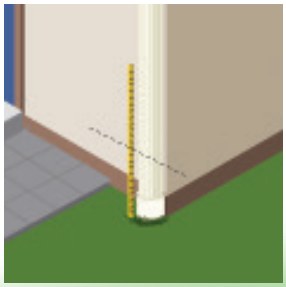


How do I disconnect my downspout?

Tools and Materials Needed:

- Tape measure
- Hacksaw
- Metal file
- Pliers
- Drill
- Screwdriver
- Protective equipment (eye,hand, foot)
- Standpipe expansion plug with a hose clamp OR a cap with a wing nut (measure the diameter of the standpipe to correctly size the plug or cap)
- Downspout elbow or flexible hose
- Downspout extension piece
- Sheet metal screws
- Brackets to secure the downspout to your house (optional)
- Splash block and/or rocks (optional)

Step One – Measure and mark the section of your downspout you plan to remove.



Measure out the length of your elbow or flexible hose, and mark the spot on your downspout. Measure up from the standpipe where the downspout enters the ground to ensure your elbow or flexible hose will fit. Your cut will usually be between eight and nine inches above the ground.

Note: If you plan to install a rain barrel to collect the excess storm water from your downspout, be sure to measure and cut your downspout so that your rain barrel and any connector pieces will fit.

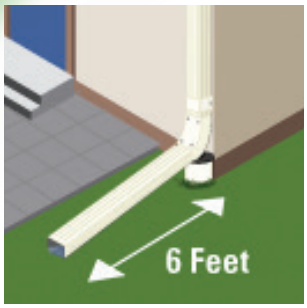
DOWNSPOUT DISCONNECTION

Step Two – Cut the downspout, and remove the cut piece.

With your hacksaw, cut your downspout at the point you have measured and marked, and remove the cut piece. Use a metal file to smooth the rough edges of the downspout.

Step Three – Cap or plug the sewer standpipe.

Use a cap with a hose clamp or a plug with a wing nut to close off the sewer standpipe, which is the open pipe where your downspout entered the ground. Measure the diameter of the standpipe to find the appropriate size plug or cap. Do not cover the pipe with concrete or loosely-fitted objects.

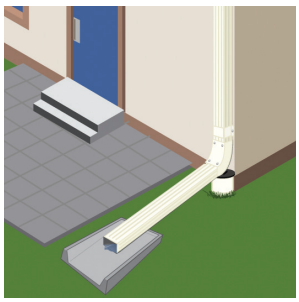


Step Four – Attach the elbow or flexible hose over the downspout.

Cover your cut downspout pipe securely with an elbow or flexible hose. Use pliers to crimp the ends of the downspout so that it slides inside the elbow or flexible hose, and ensure the fit is tight to prevent leaks. Ensure your downspout extension piece is long enough so that water is discharged at least six feet from your home's foundation.

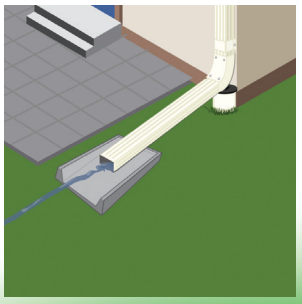
Step Five – Secure the connections.

Drill holes on both sides of the downspout, elbow and extension piece or flexible hose where they connect to each other. Use sheet metal screws to secure them together. You may also need to secure your downspout to your house using brackets to keep it from moving too much.



Step Six – Add a splash block or a rain barrel (optional).

If you are discharging the excess storm water to your yard, place a splash block or rocks beneath your downspout to slow the flow of water and prevent your yard from eroding. Conversely, you can direct the flow of storm water from your downspout into a rain barrel. See the Rain Barrel Installation Guide for information on collecting the water from your downspout in a rain barrel.



Step Seven – Observe your property after a rain event.

Check to see if the area to which you are directing the flow can handle the excess storm water and that the water is not pooling on your property. If the water is not soaking into the ground, try changing the direction of the flow. Remember to ensure the flow is discharging at least six feet from your home's foundation, five feet from your neighbor's property, three feet from a public sidewalk and 20 feet from a roadway.

DOWNSPOUT DISCONNECTION

RAIN GARDEN

What is a rain garden and why should you plant one?

A rain garden is simply a garden that is designed specifically to capture, store and clean storm water runoff from your roof, driveway, patio or other hard surface. You can also direct storm water from your disconnected downspout or the overflow from a rain barrel you have installed on your property to a rain garden. Planting rain gardens is an excellent way to control storm water runoff on your property, as they are both visually-appealing and effective in decreasing flooding and erosion. Rain gardens are created by digging a shallow depression in your yard, filling it loosely with soil and planting small trees, grasses, shrubs and other vegetation that grow naturally in your climate.

Will a rain garden work on your property?

To determine whether a rain garden will be a good fit on your property, it is important to consider the natural landscape of your yard and the way storm water flows on your property. Keep the following in mind:

- A rain garden must be planted at least 10 feet away from your home and any neighbors' homes.
- It is easier to plant a rain garden in a relatively flat area or in a naturally low-lying spot with good drainage.
- Consider how you plan to direct the flow of storm water to your rain garden. If you will be planting your rain garden a good distance away from your downspout, rain barrel or other storm water source, you may need to utilize an extension hose, a grass swale (a shallow trench) or another method to channel storm water runoff to your rain garden.

Note: If you are disconnecting your downspout and redirecting the flow of storm water to a rain garden, make sure the downspout discharges water at least six feet from your home's foundation, five feet from your neighbors' properties, three feet from a public sidewalk and 20 feet from a roadway. See the Downspout Disconnection Guide for more information on disconnecting your downspout.

- Consider how storm water will flow into the rain garden and how excess storm water will flow out of the garden if it fills during a heavy storm. Excess storm water should be routed to existing swales or storm drains.
- Certain areas of your yard or property may not represent a good location for your rain garden. Don't plant your rain garden:
  - Over or near buried utility lines, septic systems or water supply sources
  - Directly under a large tree
  - In the grass strip between a sidewalk and a street
  - On a steep slope
  - In an area where water ponds or where the ground becomes soggy, as this indicates the soil in that area does not drain well.

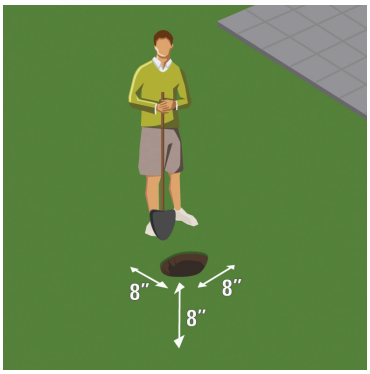
RAIN GARDEN

How do you determine what the size of your rain garden should be?

A rain garden can be relatively easy to plant, but it is important to choose the right location and size of your garden to ensure the plants establish themselves and have a long and useful life. Your rain garden must be large enough to adequately capture the amount of runoff you are directing to it. Follow the steps below to properly size your rain garden:

- Determine how many square feet of rooftop you have on your house by multiplying the length of your home by the width.
- If you are directing storm water from a downspout to your rain garden, divide the square feet of rooftop by the number of downspouts on your home to get the area of rooftop that drains to each downspout.
- If you plan to direct storm water from a patio, driveway or other paved area to your rain garden in addition to the water from your downspout, add the square footage of these surfaces to the area of rooftop that drains to each downspout to get the total amount of impervious surface that will be draining to your garden.
- Test your soil to see how well it drains and to determine how deep the depression for your garden should be.
    - In the area of your yard where you plan to plant your rain garden, dig hole that is at least eight inches deep and eight inches wide.
    - Fill the hole with water. Wait at least one hour while the water saturates the soil.
    - Fill the hole with water again.
    - Wait four hours, and then use a ruler to measure the water level in the hole.
    - Multiply how many inches the water level has dropped by six to determine the soil infiltration rate in a 24 hour period, which will give you your suggested rain garden depth. Your rain garden should drain of all water within a 24 hour period.

      Note: Residential rain gardens should be at least 8 inches deep, but no deeper than 12 inches.
    - If your soil infiltration test results in little change in water level, this is a sign of poorly draining soils. Evaluate the soil, and determine whether it is loose or compact. Sandy soil will drain well, will be crumbly and will break apart easily. Clay soil will drain poorly and will stick together in heavy clods. To improve the drainage of your rain garden, consider amending the soil.



How do you determine what the size of your rain garden should be? *(cont.)*

- Divide the amount of impervious area that will drain to your garden by the depth of your garden.

- Determine the dimensions of your rain garden based on your available space. Generally, your rain garden should be about twice as long as it is wide, and you should direct the flow of storm water to the shorter end to allow the water the length of the garden to soak in.

Sample calculation for determining the dimensions of your rain garden:

50 ft. (length of home) x 30 ft. (width of home) = 1,500 sq. ft. of rooftop

1,500 sq. ft. of rooftop ÷ 4 downspouts = 375 sq. ft. draining to each downspout

75 sq. ft. of patio or driveway + 375 sq. ft. of rooftop = 450 sq. ft. of impervious surface

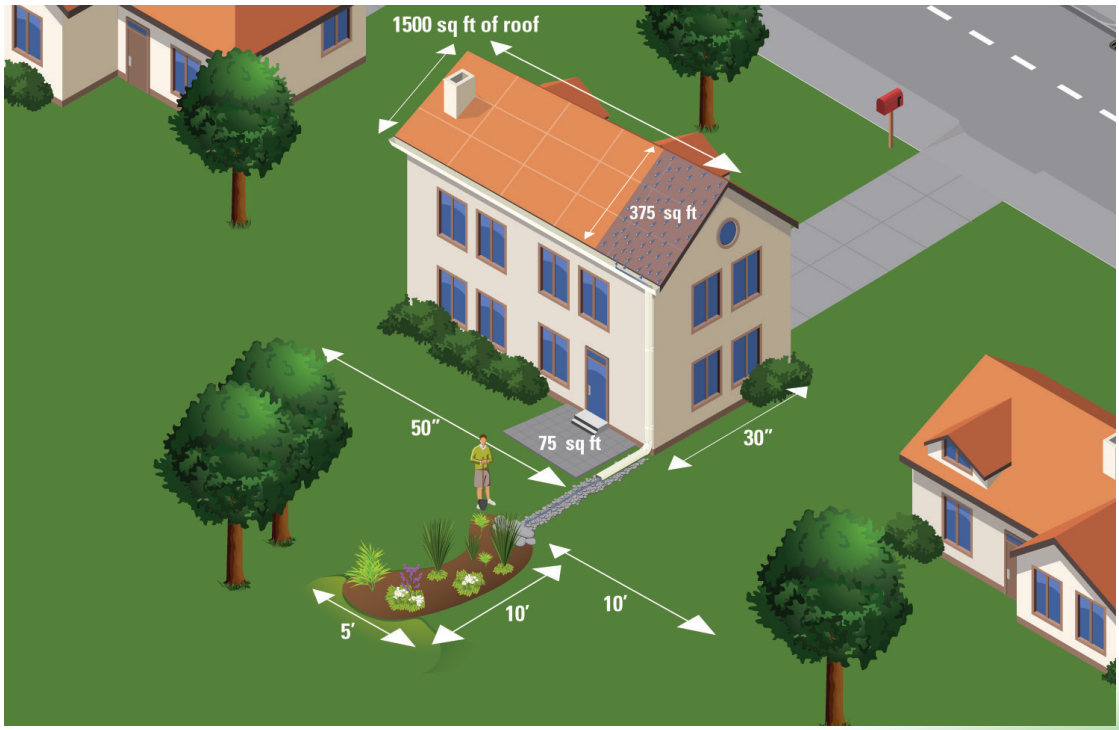
Water level drops 1.5 inches in four hours x 6 = 9 inch rate of infiltration in 24 hours

9 inch rate of infiltration = 9 inch garden depth

450 sq. ft. of impervious area ÷ 9 inch garden depth = 50 sq. ft. of rain garden

50 sq. ft. of rain garden ÷ 10 ft. in length = 5 ft. in width

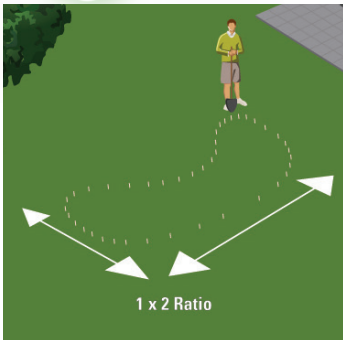
Remember, these are guidelines, not rules. Each property is different, and if your yard or budget cannot accommodate the recommended rain garden size, consider limiting the amount of rooftop or impervious area directed to the garden or planting multiple, smaller gardens.



How do you plant a rain garden?

Tools and Materials Needed:

- Tape measure
- Shovel
- Trowel
- Wheelbarrow
- Carpenter's level
- String
- Rototiller
- Protective equipment
- Topsoil
- Mulch
- Plants



Step One – Prepare the site.

Outline the perimeter of your rain garden in the location you have chosen with stakes, flags or a garden hose based on your calculated dimensions.

Step Two – Dig the depression for your garden.

Dig a depression for your rain garden that is the depth you calculated in your infiltration test. Level the floor of your rain garden so that storm water can infiltrate the garden evenly. However, try not to compress the soil, as this will impact infiltration.

Note: If you are planting your rain garden on a slope, use excavated soil to create a berm, or shelf, to contain the storm water and prevent it from eroding the soil in your garden. However, be sure to build a small spillway into the berm to allow excess water to escape during heavy rainstorms, and make sure that any overflow from the rain garden drains to an area in your yard that can handle additional water. Do not direct overflow from your rain garden toward a house or the street unless there is adequate distance between them.

Step Three – Verify that the soil in your rain garden will drain well.

Add a small amount of water to the depression for your garden, and ensure it drains within 24 hours. If you choose to amend the soil in your rain garden, remove an additional four-to-six inches of soil from the floor of the garden, and replace it with the recommended soil mixture, which includes 50 to 60 percent sand, 30 to 40 percent loamy topsoil and five to 10 percent organic matter. If you plan to leave the existing soil in your rain garden, consider rototilling the area prior to planting your vegetation to promote better infiltration. You can also partially amend the soil by tilling some of the recommended soil mixture into the bottom of your garden.

Step Four – Plant your vegetation.

Fill the depression for your rain garden loosely with the excavated soil, and break apart any large clumps of soil by hand or with a rototiller. To ensure your vegetation is well established, mix in a layer of top soil and organic matter with the existing soil in the garden.

Get creative when choosing the plants and arrangement for your rain garden. It is best to plant grasses, sedges, shrubs and other plants that grow naturally in this climate, as they have long roots that increase water absorption and are more drought-tolerant than non-native counterparts. However, ensure the plants you choose are also suited to wet conditions. Remember also to choose plants that will complement one another aesthetically and that vary in height, color and blooming periods. For visual appeal, place taller plants in the middle or back of your rain garden and medium and short plants in the front or along the sides.

Most plants that are suitable for a rain garden should be placed between 12 and 18 inches apart, as measured from the center of the plant. Based on this recommendation, determine the approximate number of plants you need to fill your rain garden.

For example, a 50 sq. ft. rain garden needs between 33 and 50 plants.

Sample calculation for determining the number of plants needed for your rain garden:

Assuming 12 inches from plant center (one plant for every 1 sq. ft.):

50 sq. ft. ÷ 1 plant per sq. ft. = 50 plants

Assuming 18 inches from plant center (one plant for every 1.5 sq. ft.):

50 sq. ft. ÷ 1.5 plants per sq. ft. = ~33 plants

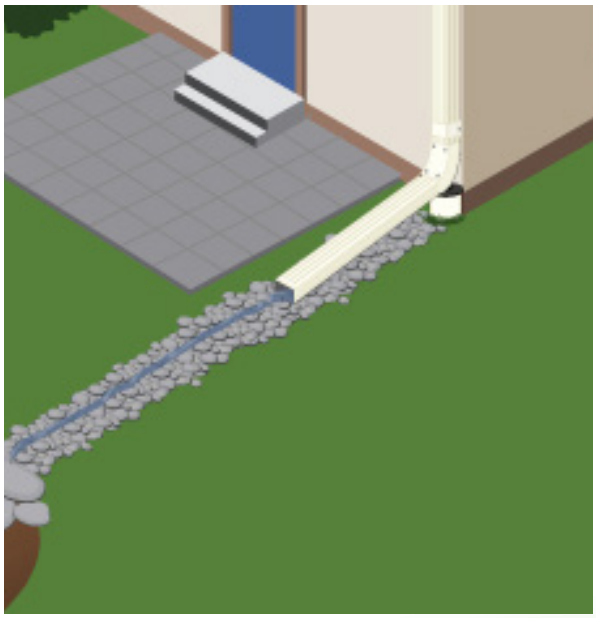
Note that larger plants, like trees and shrubs, will need more space to grow. Depending upon the expected size of the tree or shrub at maturity, these larger plants should be placed anywhere from three to 20 feet away from other plants in your garden.

Step Five – Direct storm water to your rain garden.

You can direct storm water to your rain garden from your roof by angling a downspout extension piece like a flexible hose toward the front of your garden. If you need to disconnect your downspout from the sewer system, see the Downspout Disconnection Guide. You can also build a rock channel or a shallow grass swale or depression to direct the flow of storm water to your garden from the impervious surfaces on your property. To slow the flow of water and distribute it more evenly to your garden, place a large rock at the front of the garden where the storm water enters it.

Step Six – Observe your property after a rain event.

Check to see if your rain garden is working properly and can handle the storm water being directed to it. Monitor the garden for 12 to 24 hours after a rainstorm, and ensure the water is soaking into the soil. If the water is not soaking into the ground, consider changing the direction of the flow or amending the soil in your garden. See Step 3 for information on amending your soil.



RAIN BARREL

What is a rain barrel, and why should you install one?

A rain barrel is a container that connects to a downspout on your home and is used to collect and store rain water that runs off your roof. The collected rain can be used to water your yard or landscaping, which can reduce your water bill. If you disconnect your downspout and add a rain barrel, you can help prevent the sewer system from becoming overwhelmed by excess storm water, which reduces water pollution, flooding, erosion and sewer overflows throughout a community.

How do you install a rain barrel?

Tools and Materials Needed:

- Your rain barrel and any tools or materials needed for assembly as listed in the manufacturer's instructions.
- The tools and materials listed in the Downspout Disconnection Guide for disconnecting your downspout.
- Any extension hoses or connector pieces needed to divert the flow of water from your downspout into the rain barrel and to discharge excess water in your barrel from the overflow output.

Step One – Choose a rain barrel.

Rain barrels come in all shapes and sizes. Choose a rain barrel that is:

- Functional – The barrel you choose should have good quality plastic or brass spigots; an overflow output that is at least the same diameter as your downspout to allow excess water to exit the barrel freely; and a removable lid so that you can easily remove any dirt or debris from your roof that has collected in your barrel.

- Right for your property – Consider where you are going to place your rain barrel when searching for a barrel to purchase. Ensure that the areas where you will be connecting your downspout and attaching hoses will be easily accessible in the position you plan to place your barrel.

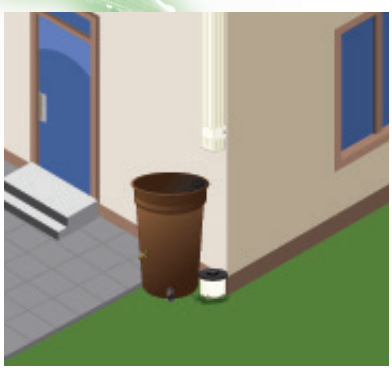
- An accent to your home and landscaping – Your rain barrel will be a more or less permanent fixture on your property, so be sure to choose a design that complements your home and property. Also, some Homeowners' Associations (HOAs) have restrictions on outdoor structures. Check with your HOA to see if there are any restrictions on rain barrels.

Step Two – Disconnect your downspout.

Follow the steps in the Downspout Disconnection Guide to disconnect your downspout. Be sure to measure and cut your downspout so that your rain barrel and any connector pieces will fit.

Step Three – Assemble your rain barrel.

Assemble your rain barrel according to the manufacturer's instructions.



Step Four – Attach your disconnected downspout to your rain barrel.

Divert the flow from your disconnected downspout pipe into the rain barrel. Cover your cut downspout pipe securely with an elbow or flexible hose as instructed in the Downspout Disconnection Guide, and direct the flow of storm water from your downspout into the opening in your rain barrel.

Step Five – Choose how to direct the overflow from your rain barrel.

The overflow from your full rain barrel can be discharged into your yard or landscaping, a rain garden or back into the sewer system from which you disconnected your downspout. If you discharge the overflow into your yard, landscaping or rain garden, remember to ensure the water exits the hose or pipe at least six feet from your home's foundation, five feet from your neighbor's property, three feet from a public sidewalk and 20 feet from a roadway. Place a splash block or rocks beneath the overflow output on your rain barrel to slow the flow of water and prevent your yard from eroding.

Step Six – Ensure your rain barrel is functioning properly after a rain event.

After it rains, inspect your rain barrel to make sure the connection is good and your downspout is emptying water into the rain barrel properly. When your barrel is full, check the overflow output to be sure the excess water is exiting the rain barrel freely. Also, check to see if the area to which you are directing the excess water can handle it and that water is not pooling on your property. If the water is not soaking into the ground, try discharging to a different location.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Other Helpful Resources and Information

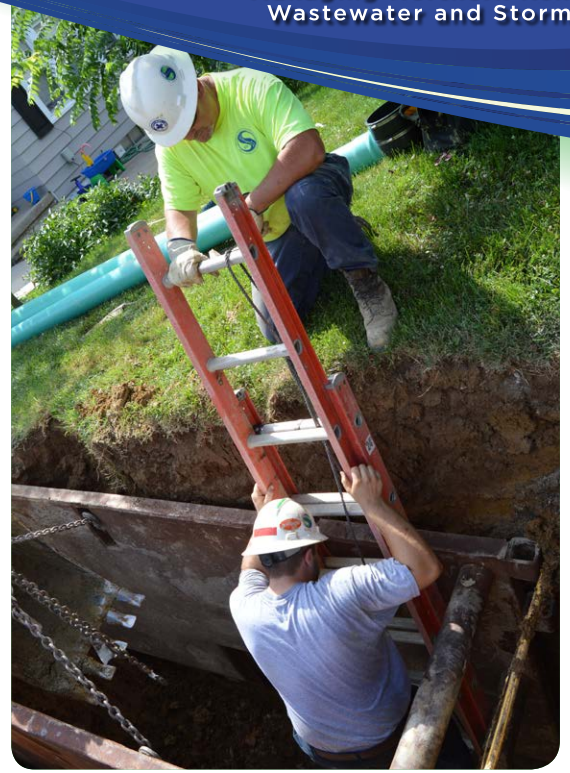
SD1 must partner with our customers and other businesses and utilities in the region in order for us to be successful in our mission to protect public health, property and the environment and to support the economic vitality of the community. The tips and resources below will not only help you, but will also help SD1 fulfill our mission.

- Protect your plumbing, the public sewer system and the environment: never flush or pour grease, oil, chemicals or personal hygiene products down your toilets or drains.
- When cleaning out your medicine cabinet, protect the wastewater treatment process by properly disposing of expired or unused medications at special drop-off boxes located throughout the region.
- Reduce street flooding, prevent clogs in pipes and avoid backups by ensuring your storm drains are clear of debris.
- When cleaning out your garage or basement, properly dispose of unwanted household hazardous waste like paint and chemicals. Never pour these substances down a drain.
- Identify utility lines and pipes before you begin any outdoor improvement project. Accidently hitting a hidden sewer line can cause unnecessary headaches.

Visit our New Customer webpage at **www.sd1.org/newcustomer** for more information about these tips, including contact information, prescription drug drop-off locations, tips for handling household hazardous waste and the region's "Call Before You Dig" number.

Please note that SD1 does not provide trash collection or recycling services. SD1 also does not supply the clean water that comes through your tap or faucet. Trash collection, recycling and clean water are provided by separate utilities. Visit our New Customer webpage for a listing of your local water districts and trash collection providers.

Sanitation District No. 1
1045 Eaton Drive
Ft. Wright, KY 41017
859-578-7450
www.sd1.org



Welcome to SD1:

Your Wastewater and Storm Water Utility

Proudly Serving Our Customers

SD1 takes pride in providing the Northern Kentucky region with reliable wastewater and storm water services 24 hours a day, seven days a week. We, the employees of SD1, are a part of your community, and we understand that our services are vital in order for our region to be a safe, prosperous and desirable place in which to live, work and play. SD1 not only collects and treats your wastewater, the water that goes down the drains and toilets inside your home, but we also work with community leaders to manage flooding, erosion and water pollution caused by storm water runoff from rain and snow melt throughout the region.

To provide these services, SD1 bills customers for sanitary sewer service and storm water service. When you registered for water service with your local water district, you also activated your SD1 account.

Understanding Your SD1 Bill

Explaining your sanitary sewer service charge:

The flow of wastewater from Northern Kentucky homes and businesses never stops. That's why SD1 works around the clock to ensure the dirty water that goes down the drains inside your home is safely and effectively carried to our treatment plants for cleaning. The sanitary sewer service charge on your bill supports this service.

SD1 has established a billing method that aims to charge customers only for the water they use that enters the sanitary sewer system. This allows us to avoid charging customers for water they may use outdoors during typical spring and summertime activities, like washing a car or watering the lawn. SD1 works with the local water district that serves you to measure your water usage during a 90-day period between the months of October and April, when you are more likely to use water indoors than outdoors. The sanitary sewer charge on your SD1 bill is then set in May for the entire year based on your water usage during this 90-day period.

Explaining your storm water service charge:

SD1 understands that growth and development are essential in order for our community to be a prosperous and desirable place in which to live, but when precipitation falls on hard surfaces like rooftops, streets and parking lots, it is unable to soak into the ground. Trees and other vegetation naturally soak up and slow the flow of storm water, and in their absence, the water "runs off" these hard surfaces, creating problems like flooding and erosion. In addition, as it flows over the land, storm water picks up any trash, debris and pollutants in its path and carries them to the nearest body of water, polluting the water and degrading water quality.

The storm water service charge on your SD1 bill is a flat fee that supports the management of flooding, erosion and water quality issues caused by storm water runoff in SD1's storm water service area, which encompasses 29 cities and three counties in the Northern Kentucky region. Because everyone with a roof, driveway or other impervious surface on their property contributes to these issues, SD1 calculated the average amount of paved or impervious area on residential properties in the region we serve, and we charge property owners a standard monthly fee based on this average.

If you are not the homeowner, or if you are not located within SD1's storm water service area, you should not be billed for storm water service. For more information and to view a map of SD1's storm water service area, please visit **www.sd1.org/newcustomer.*

Need more information about your bill?

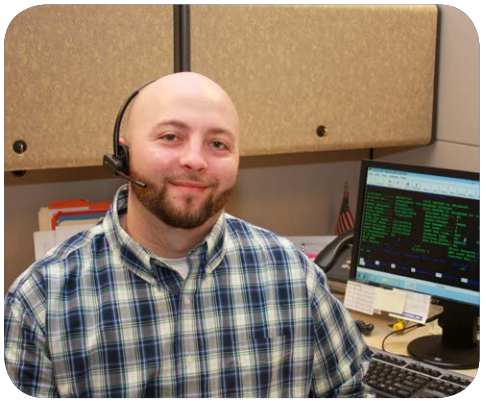
Our Customer Care agents are available during SD1's normal business hours, Monday through Friday, 8 a.m. to 4:30 p.m. They can help you determine the specific 90-day period during which we measure your water usage to calculate the sanitary sewer service charge on your bill, and they can provide more details about your storm water bill. To view SD1's current sanitary and storm water rates used to calculate your bill, visit **www.sd1.org/billing.**

Paying Your SD1 Bill

SD1 receives payments by credit card, debit card, cash or check. Please note that SD1 accepts only Visa, MasterCard and Discover cards.

We currently have several payment options available. You can pay your SD1 bill:

- **In person** at SD1's main office at 1045 Eaton Drive in Ft. Wright during regular business hours, Monday through Friday, 8 a.m. to 4:30 p.m. You can also pay your SD1 bill at any of The Bank of Kentucky branches. **You must have the payment stub from your bill with you in order for the payment to process.*
- **By phone.** Call 859-578-7450 to speak to a Customer Care Agent during regular business hours.
- **Online** by registering with MyCheckFree at **www.mycheckfree.com**. Once you register to view and pay your bill online, you will no longer receive paper statements.



- **By mail** to SD1, P.O. Box 12112, Covington, KY 41012-0112. For your convenience, SD1 includes a self-addressed payment envelope in every paper bill.
- **Through auto-withdrawal** by completing a form to have your monthly charges automatically deducted from a savings or checking account or charged to a credit card. To access the form online, visit **www.sd1.org/paymentoptions.** If you cannot access the form, call our Customer Contact Center during regular business hours to speak to an agent.

The flow never stops.

One of the biggest challenges we face is providing both sanitary sewer and storm water services for the lowest rates in a changing economy and regulatory climate.

SD1
Managing Northern Kentucky's Wastewater and Storm Water

Sanitary Services

Sewage services are essential.

But SD1 recognizes the financial issues our ratepayers face and we're committed to providing sanitary service at an affordable rate.

There will be no increase in sanitary sewer rates for Fiscal Year 2014.

NEW RATES EFFECTIVE JULY 1, 2013

Storm Water Services

Every day, we work to repair storm pipes and storm water infrastructure. We protect public health and enable economic growth by preventing pollution and damage caused by storm water.

The storm water rate will be adjusted by 12 cents, to $4.80 per household. For nonresidential customers, rates will be $4.80 per 2,600 square feet of developed property.

The Best Value for Your Rates

SD1 is required by federal and state law to comply with the regulations of the Clean Water Act. These regulations require large investments in our sanitary and storm water system, which fosters community and economic growth.

However, these improvements are extremely expensive, costing SD1 ratepayers millions of dollars. SD1 seeks from the regulators a balance between compliance with the law and affordability for our ratepayers.

- SD1 has worked with elected officials to ensure that government regulations take affordability into account.
- SD1 seeks out innovative solutions that are more effective and less expensive.

At SD1, we are committed to ensuring we provide the best service for the lowest rates.

For more information, visit our website at www.SD1.org, email info@sd1.org or call us at 859-578-7450.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Use Less, Save More:
Conserve Water and Lower Your Residential Bill

Did you know that by reducing water usage wherever possible from the months of October to January, you can lower your sanitary sewer bill?

The sanitary sewer charge on your SD1 bill is set for the entire year based on the amount of water you use during the months of October to January. Measuring your water usage during this time period allows SD1 to avoid charging you for water that may be used outdoors during typical spring and summertime activities while still reflecting water use that enters the sanitary sewer system year-round. There are many simple ways to conserve water that can have a positive impact on your budget. See the reverse side for some suggested money-saving tips.

Changes to your sanitary sewer charge based on your water usage will be reflected on your May 2014 bill. For details about how your residential bill is calculated or for more water conservation tips, call SD1 at 859-578-7450, email info@sd1.org or visit www.sd1.org.

Tips for Conserving Water:

- **TIP:** Monitor your water bill for unusually high use. Your water bill and meter are tools that can help you discover leaks. You can also regularly check toilets, faucets and shower heads for leaks and promptly fix them.

  FACT: *You use six gallons of water per minute when showering, five gallons of water per toilet flush and two gallons of water each time you wash your hands.*

- **TIP:** Turn the tap off when brushing your teeth.

  FACT: If you leave the water running when you brush your teeth, two gallons of water goes down the drain.

- **TIP:** Use only one glass or reusable water bottle throughout the day to minimize dirty dishes.

  FACT: *You use 20 gallons of water while washing dishes by hand if you leave the water running.*

- **TIP:** Run washing machines and dishwashers only when they are full.

  FACT: *You use 15 gallons of water each time you run the dishwasher and 35 gallons of water each time you do a full load of laundry.*

NOTE: These water usage amounts are based on average usage and may vary by household.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Average Annual Water Usage Reflected on Your May 2014 Bill

Beginning in May, you might see a difference in your SD1 bill based on changes in your water usage. The amount of water you use during the months of October to January sets the sanitary sewer charge on your bill for the entire year. Water usage records for this time period are provided by your local water district.

Measuring your water usage from October to January gives SD1 an average of the amount of water that goes down the toilets and drains inside your home and travels through the sanitary sewer system to SD1's treatment plants for cleaning. This allows SD1 to avoid charging you for water that may be used outdoors during typical spring and summertime activities while still reflecting the water use that enters the sanitary sewer system year-round.

If you used more water than usual during this time period, your bill may increase. For more information about how your bill is calculated, call SD1 at 859-578-7450, email info@sd1.org or visit www.sd1.org/billing.

For tips on how to conserve water from October to January each year and potentially reduce your SD1 bill, see the reverse side of this insert.

Tips for Conserving Water:

- **TIP:** Monitor your water bill for unusually high use. Your water bill and meter are tools that can help you discover leaks. You can also regularly check toilets, faucets and shower heads for leaks and promptly fix them.

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  FACT: *You use 15 gallons of water each time you run the dishwasher and 35 gallons of water each time you do a full load of laundry.*

NOTE: These water usage amounts are based on average usage and may vary by household.

SD1
Managing Northern Kentucky's
Wastewater and Storm Water

Be Winter Ready

Tips for Buying and Applying De-Icer

Snow and ice removal is an annual winter chore. As snow piles up, the first line of defense is simply to shovel paved areas to keep them clean and prevent ice from forming. When ice does form, it is common to use salt and other types of chemical de-icers to clear walkways and driveways.

Salt and other chemical de-icers help make travel conditions less hazardous, but they can have an impact on local waterways, landscaping, pets and wildlife. The suggestions on the back of this insert will help you safely battle the icy cold this winter without harming the environment.

Tips for buying:

Traditional rock salt and some chemical de-icers can injure a pet's paws, damage cars, prematurely age cement and asphalt and pollute streams. There are some alternative de-icers that have less of an impact, but are just as effective at melting ice from paved walkways and driveways.

- Look for alternative de-icers like calcium chloride and calcium magnesium acetate.
- Try using de-icers that contain alternative ingredients, such as beet juice.
- Avoid using de-icers that contain urea.

Tips for applying:

- Before applying de-icer, make sure to manually remove as much snow and ice as possible. De-icer works best when it is applied to thin layers of ice.
- Follow the directions on the de-icer container. Using more than what is recommended will not make the ice melt faster. When snow and ice melt, the runoff picks up the excess de-icer and carries it to our streams.
- When possible, avoid using salt and other de-icers near trees, shrubs and grasses. The salty water can severely harm or kill a home's landscaping.

If you have questions, email info@sd1.org or call the Storm Water Hotline at 859-578-6745

APPENDIX C:

FY 2014 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
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-O	01-Jul-13	Self Monitoring of Stages 1, 3 and 5 (Batch Discharge) - grab samples were not taken immediately before discharge. Samples were taken on 3/11/13 and the tanks were discharged on 2/11/13 and 4/7/13.	24-Jun-13				
				W	01-Jul-13	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00014** **Camco Chemical Co. Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	17-Oct-13	Sample grabbed by SD1 on 10/17/13 had a G&O - Hydrocarbon result of 121 mg/L, the limit is 50 mg/L.	19-Dec-13				
				W	10-Dec-13	Written Notice of Violation . Sample grabbed by SD1 on 10/17/13 had a G&O - Hydrocarbon result of 121 mg/L, the limit is 50 mg/L.. The pretreatment system was discharging at that time.	$0.00
NC-P	30-May-14	Oil & Grease, Hydrocarbon = 185 mg/L.					
				W	30-May-14	Written Notice of Violation (NOV)	$500.00

Permit: **IND-00016** **Imperial Sugar Company**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	21-Nov-13	Mercury, Total = 0.001400 mg/L. TRC Non-Compliance	30-Dec-13				
				W	13-Dec-13	Written Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

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All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	15-Apr-14	pH>11.0 for 49 minutes					
				W	23-Apr-14	Written Notice of Violation (NOV)	$0.00
NC-P	16-Apr-14	pH>10.0 for 106 minutes, >11.0 for 95 minutes and >12.0 for 13 minutes.					
				W	23-Apr-14	Written Notice of Violation (NOV)	$0.00
NC-P	17-Apr-14	pH>10.0 for 80 minutes, >11.0 for 83 minutes					
				W	23-Apr-14	Written Notice of Violation (NOV)	$0.00
NC-P	03-Jun-14	pH<6.0 for more than an hour; pH>10.0 for more than 1 hr(pH >11 for 15min)					
				WF	23-Jun-14	Written Notice of Violation (NOV) and fine.	$500.00
NC-P	04-Jun-14	pH<6.0 for more than one hour					
				WF	23-Jun-14	Written Notice of Violation (NOV) and fine.	
NC-P	05-Jun-14	pH<6.0 for more than 1hr, >10 for 1 hr minutes(>11 for more than 15 minutes), pH<5					
				WF	24-Jun-14	Written Notice of Violation (NOV) and fine.	

Permit: **IND-00034** **L'Oreal USA Products, Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-O	24-Jan-14	Foam in retain samples for dates 1-19-14, 1-21-14 and 1-22-14 did not dissipate immediately.					
				W	24-Jan-14	Written Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

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All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

Permit: **IND-00036** **Ameripride Linen & Apparel Services**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	10-Jul-13	pH < 5.0 for 17 minutes on 7/9/13 and pH < 5.0 twice on 7/10/13.	09-May-14				
				CS	25-Feb-14	Compliance Schedule - industry notified that it will be placed on a CS for pH and O&G, Hydrocarbon. See Letter Event 8/6/13.	$0.00
				WF	07-Aug-13	Written Notice of Violation (NOV) and fine.	$1,000.00
NC-S	13-Dec-13	Compliance Schedule Milestone was not completed by the scheduled due date. Milestone: Installation of sludge press filter cloths(completion date 12/12/13).					
				W	16-Jan-14	Written Notice of Violation (NOV)	$0.00
NC-R	28-Dec-13	Failure to submit Compliance Schedule Milestone report by the required due date.	17-Feb-14				
				WF	08-Jan-14	Written Notice of Violation (NOV) and fine.	$750.00
NC-S	01-Jan-14	Compliance Schedule Milestone was not completed by the scheduled due date. Milestone: Sampling manhole brought to SD1 specifications(completion date 12/31/13).					
				W	16-Jan-14	Written Notice of Violation (NOV)	$0.00
NC-R	13-Feb-14	Late NOV Response, NOV date 1/8/14.	17-Feb-14				
				V	17-Feb-14	Verbal Notice of Violation (NOV)	$0.00
NC-P	17-Mar-14	pH<5 for 3 minutes	09-May-14				
				WF	14-Apr-14	Written Notice of Violation (NOV) and fine.	$750.00

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

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	10-Sep-13	Hg, Total = 0.000743 mg/L, TRC Non-Compliance					
				W	01-Oct-13	Written Notice of Violation (NOV)	$0.00
SNC-P	30-Sep-13	Mercury, Total TRC Significant Non-Compliance (SNC) 1 of 1 concentration daily results exceeded the Technical Review Criteria (TRC) limit of 33% for the SNC determination period from 4/1/13 to 9/30/13.	14-Nov-13				
				W	31-Dec-13	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00050** **Highway Transport Chemical, LLC**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	07-Nov-13	Sampling during the week of 11/4/13 to 11/8/13, they had 2 pH violations. The pretreatment system pH probe started malfunctioning between 11:00PM to 12 midnight on 11/7/13 and 9:30 AM to 10:00AM on 11/8/13. They replaced the probe. Gave verbal NOV since this was the first pH violation in years and probe had died. Once the probe was replaced SD1's data showed back in compliance.	08-Nov-13				

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
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All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

Permit: **IND-00050** **Highway Transport Chemical, LLC**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
				V	15-Nov-13	Verbal Notice of Violation : Sampling during the week of 11/4/13 to 11/8/13, they had 2 pH violations. The pretreatment system pH probe started malfunctioning between 11:00PM to 12 midnight on 11/7/13 and 9:30 AM to 10:00AM on 11/8/13. They replaced the probe. Gave verbal NOV since this was the first pH violation in years and probe had died. Once the probe was replaced SD1's data showed back in compliance.	$0.00
NC-P	24-Mar-14	pH>10.0 for 64 minutes and >11.0 for 43 minutes during compliance monitoring that occurred 3-24 to 3-28-14. SD1's local limits prohibit any discharge of pH >10.0 for more than 60 minutes and >11.0 for more than 15 minutes.	06-May-14				
				W	01-Apr-14	Written Notice of Violation (NOV)	$0.00

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	11-Jun-14	pH<5					
				W	19-Jun-14	Written Notice of Violation (NOV)	$0.00
NC-P	12-Jun-14	pH>10 for more than one hour					
				W	19-Jun-14	Written Notice of Violation (NOV)	$0.00
NC-P	13-Jun-14	pH>10 for more than 1hr					
				W	19-Jun-14	Written Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	04-Jun-14	Lead, Total = 0.660 mg/L, TRC daily limit exceeded	28-Aug-14				
				W	30-Jul-14	Written Notice of Violation (NOV)	$0.00
NC-P	06-Jun-14	Lead, total = 0.950 mg/L, TRC daily limit exceeded	28-Jun-14				
				W	30-Jul-14	Written Notice of Violation (NOV)	$0.00

Permit: **IND-00064** **Wild Flavors, Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	11-Dec-13	pH recorded briefly at 4.35. Excursion was reported by the industry the following morning.	12-Dec-13				
				V	12-Dec-13	Verbal Notice of Violation (NOV)	$0.00
NC-P	25-Jan-14	Wild Flavor reported via email that they had 2 quick pH spike violations.: 1/22/14 and 1/25/14. Gave verbal NOV since still in the process of revamping the whole pH PT system.	25-Jan-14				
				V	27-Jan-14	Verbal Notice of Violation (NOV) for 2 quick pH spikes below 5.0 on 1/22/14 and 1/25/14. Gave verbal NOV since still in the process of revamping the whole pH PT system.	$0.00
NC-P	09-Apr-14	Quick pH spike to 4.4 on 4/9/14 and quick spike to 3.2 on 4/10/14. See 4/11/14 Email.	09-Apr-14				

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

Permit: **IND-00064** **Wild Flavors, Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
				V	30-Apr-14	Verbal Notice of Violation (VNOV) for pH quick spikes : 4/9/14 and 4/11/14 each. Called Jim Philley	

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	10-Dec-13	Mercury, Total = 0.00105 mg/L, TRC Non-Compliance	17-Jan-14				
				W	31-Dec-13	Daily Limit for Mercury, Total was exceeded. Mercury, Total = 0.001050 mg/L. The Daily Maximum Limit is 0.0005 mg/L. Technical Review Criteria(TRC) Non-Compliance.	$0.00

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	11-Jul-13	pH exceeded allowable limits. pH was recorded <5	22-Nov-13				
				WF	17-Jul-13	Written Notice of Violation (NOV) and fine.	$1,000.00
NC-R	23-Aug-13	NOV response, fine payment and pH resample data was not received by the due date, 8/22/13. Notice of Violation date was 7/19/13.	03-Oct-13				
				WF	30-Aug-13	Written Notice of Violation (NOV) and fine.	$500.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	26-Nov-13	Oil & Grease, Total TRC Daily Limit was exceeded. The Result was 191 mg/L while the Daily Limit was 100 mg/L. The Violation occurred for Sample 'Self Monitoring' on the Sample Date of '11/26/2013' and for Monitoring Point '2430206'.	30-Dec-13				
				W	10-Jan-14	Written Notice of Violation for sample taken on 11/26/13 had a G&O -Total of 191 mg/L, the SD1 limit is 100 mg/L.	$0.00
NC-P	23-Apr-14	Oil & Grease, Total = 117 mg/L Daily Limit exceeded.					
				W	29-May-14	Written Notice of Violation (NOV)	$0.00

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	19-May-14	pH<5 for one minute					
				WF	09-Jun-14	Written Notice of Violation (NOV) and fine.Written Notice of Violation (NOV)	$500.00
NC-P	20-May-14	Two pH excursions: pH<5 for one minute, pH<5 for 5 minutes					
				WF	09-Jun-14	Written Notice of Violation (NOV) and fine.	$0.00
NC-P	21-May-14	pH<5 for one minute					
				WF	09-Jun-14	Written Notice of Violation (NOV) and fine.	$0.00
NC-P	22-May-14	pH<5 for one minute					
				WF	09-Jun-14	Written Notice of Violation (NOV) and fine.	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
All Permits AND
All Permits AND
Permit-ted ? DOES Contain ...Yes... AND
Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	23-May-14	Two pH excursions: <5 for 3 minutes and pH<5 for 2 minutes					
				WF	09-Jun-14	Written Notice of Violation (NOV) and fine.	$0.00

Permit: **IND-00078** **Immudyne Inc. (Florence Kentucky Facility)**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	23-Jul-13	Zn, Total = 4.5, TRC Non-Compliance, SNC-TRC (2nd/3rd Quarter)					
				W	02-Oct-13	Written Notice of Violation (NOV)	$0.00
SNC-P	30-Sep-13	Zinc, Total TRC Significant Non-Compliance (SNC) 1 of 1 concentration daily results exceeded the Technical Review Criteria (TRC) limit of 33% for the SNC determination period from 4/1/13 to 9/30/13.					
				W	02-Oct-13	Written Notice of Violation (NOV)	$0.00
NC-R	09-Nov-13	NOV Response(NOV date 10/5/13) received late.	11-Nov-13				
				V	14-Nov-13	Verbal Notice of Violation (NOV)	$0.00
SNC-P	31-Dec-13	Zinc, Total TRC Significant Non-Compliance (SNC)					
				W	07-Jan-14	Written Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
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All Permits AND
All Permits AND
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Permit-ted ? DOES Contain ...Yes...

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-O	19-Dec-13	pH PT System incoming holding tank (pit) leaks into the PT system effluent sewer line, bypassing pH Pretreatment. They have tried several ways to fix the leakage. They are going to study the problem.					
				CS	18-Jun-14	Compliance Schedule to fix the leaking of unpretreated waste water to the sanitary sewer.	$0.00

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

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-R	21-Jan-14	Self Monitoring Report was received after the due date.	29-Jan-14				
				W	31-Jan-14	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00272** **Kiswel Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-R	15-Aug-13	Non-Compliance Reporting Violation - 2nd Quarter Reporting - The quarterly self-monitoring report was due on 7-20-2013 was not received by the reporting date. Since there is no TOMP plan submitted, at this time, a TTO sample is required.	20-Sep-13				
				W	15-Aug-13	Written Notice of Violation (NOV)	$0.00
NC-R	21-Oct-13	Late Reporting - 3rd Quarter Self Monitoring Report submitted late.	26-Dec-14				

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
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All Permits AND
All Permits AND
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Permit-ted ? DOES Contain ...Yes...

Permit: **IND-00272** **Kiswel Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
				W	19-Nov-13	Written Notice of Violation (NOV)	$0.00
NC-P	12-Nov-13	pH <5.0 two times.	15-Aug-14				
				W	19-Nov-13	Written Notice of Violation (NOV)	$0.00
NC-R	01-Mar-14	Failure to Report the installation of a pH recording system.	03-Apr-14				
				W	06-Mar-14	Written Notice of Violation (NOV)	$0.00
NC-R	01-Mar-14	Failure to Report revised water usage information.	03-Apr-14				
				W	06-Mar-14	Written Notice of Violation (NOV)	$0.00
NC-O	15-Mar-14	Failure to Meet Deadline for submitting a SPCC Plan or SPCC/TOMP.	22-Apr-14				
				W	03-Apr-14	Written Notice of Violation (NOV)	$0.00
NC-R	29-Mar-14	Failure to Report the installation of a pH recording system.	22-Apr-14				
				W	03-Apr-14	Written Notice of Violation (NOV)	$0.00
NC-R	20-Apr-14	1st Quarter Self-monitoring report was late.	28-Apr-14				
				V	28-Apr-14	Verbal Notice of Violation for 1st Quarter Self-monitoring report being late.	$0.00
NC-E	20-May-14	Failure to install pH Recording System.	15-Aug-14				
				W	20-May-14	Written Notice of Violation (NOV)	$0.00
NC-E	04-Jun-14	Failure to install pH Recording System	15-Aug-14				
				WF	10-Jun-14	Written Notice of Violation (NOV) and fine.	$500.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
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All Permits AND
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Permit-ted ? DOES Contain ...Yes...

Permit: **IND-00429** **C&B Marine LLC**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-O	31-Dec-13	C&B Marine was unable to get a 4th quarter self-monitoring sample for the 4th quarter report.	31-Dec-13				
				W	15-Jan-14	Written Notice of Violation due to no self-monitoring sample being taken in the 4th quarter reporting period of 10/1/13 to 12/31/13.	$0.00

Permit: **IND-00451** **Angstrom Technologies, Inc.**

Violation Type	Date of NC	Violation Description	Date In Compliance	Enforcement Type	Date of Enforcement	Enforcement	Penalty
NC-P	24-Jul-13	Arsenic, Total = 3.67 mg/L					
				W	24-Jul-13	Written Notice of Violation (NOV)	$0.00
NC-R	17-Aug-13	90 Day Compliance Report late.					
				V	28-Aug-13	Verbal Notice of Violation (NOV)	$0.00

APPENDIX D:

Current Organizational Chart

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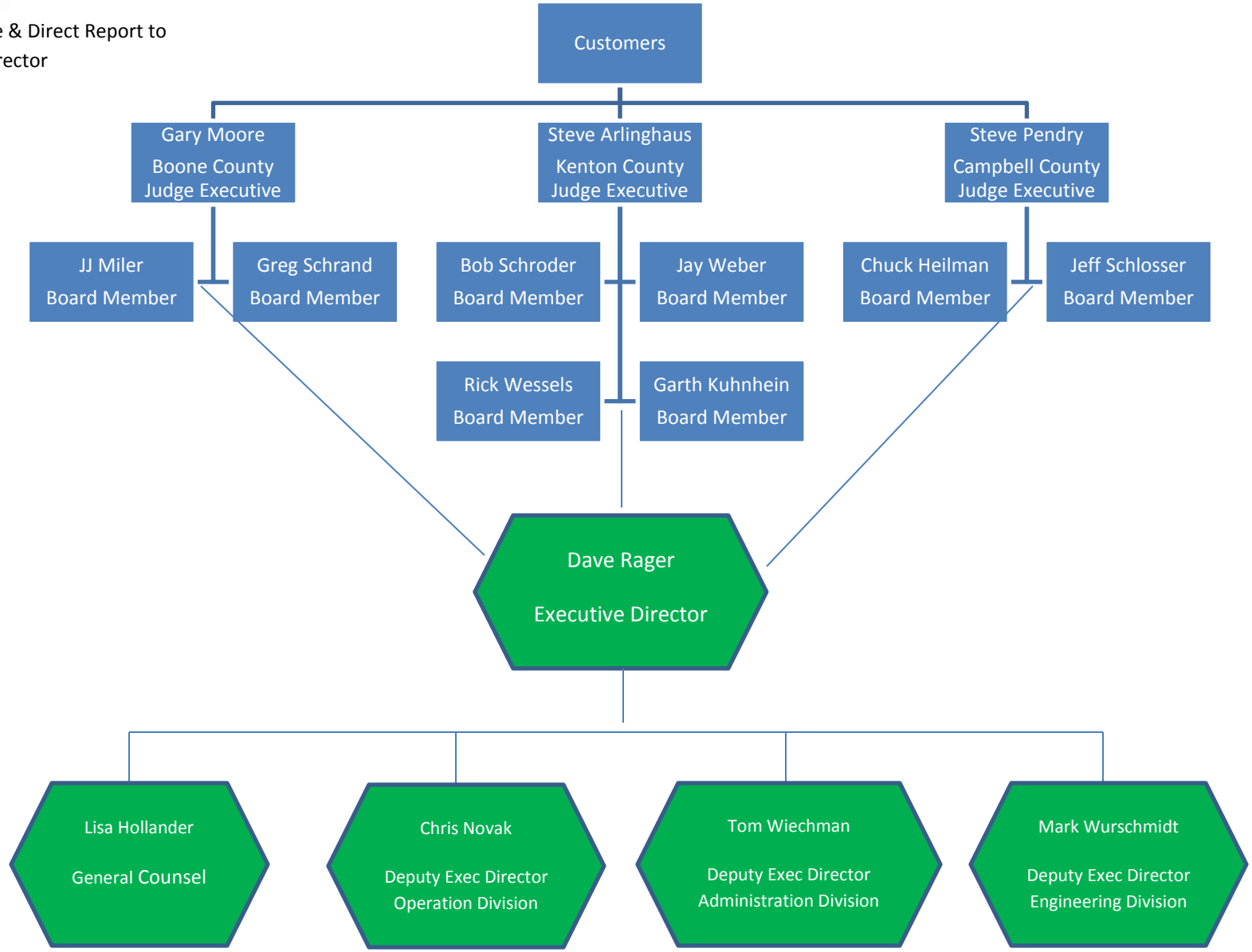
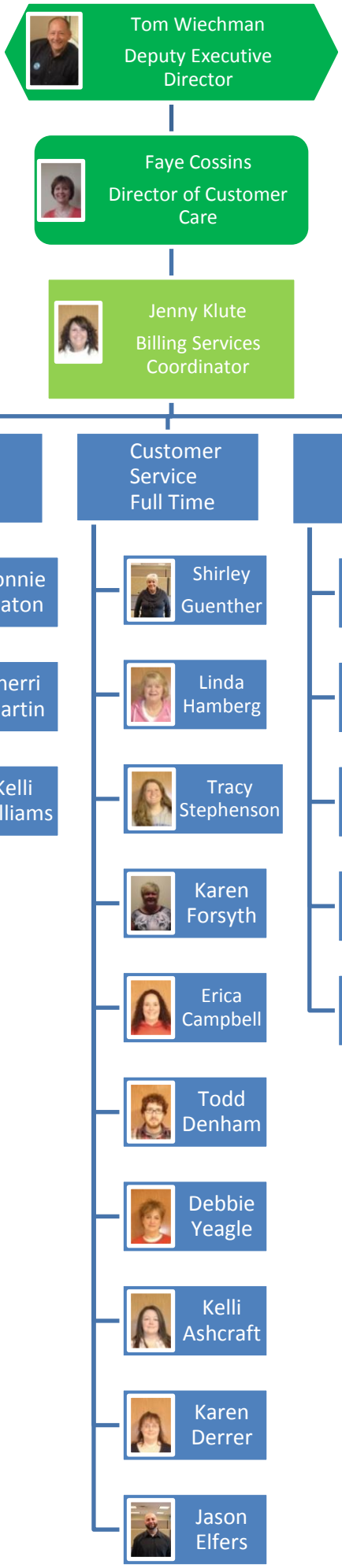
Overall Structure & Direct Report to the Executive Director



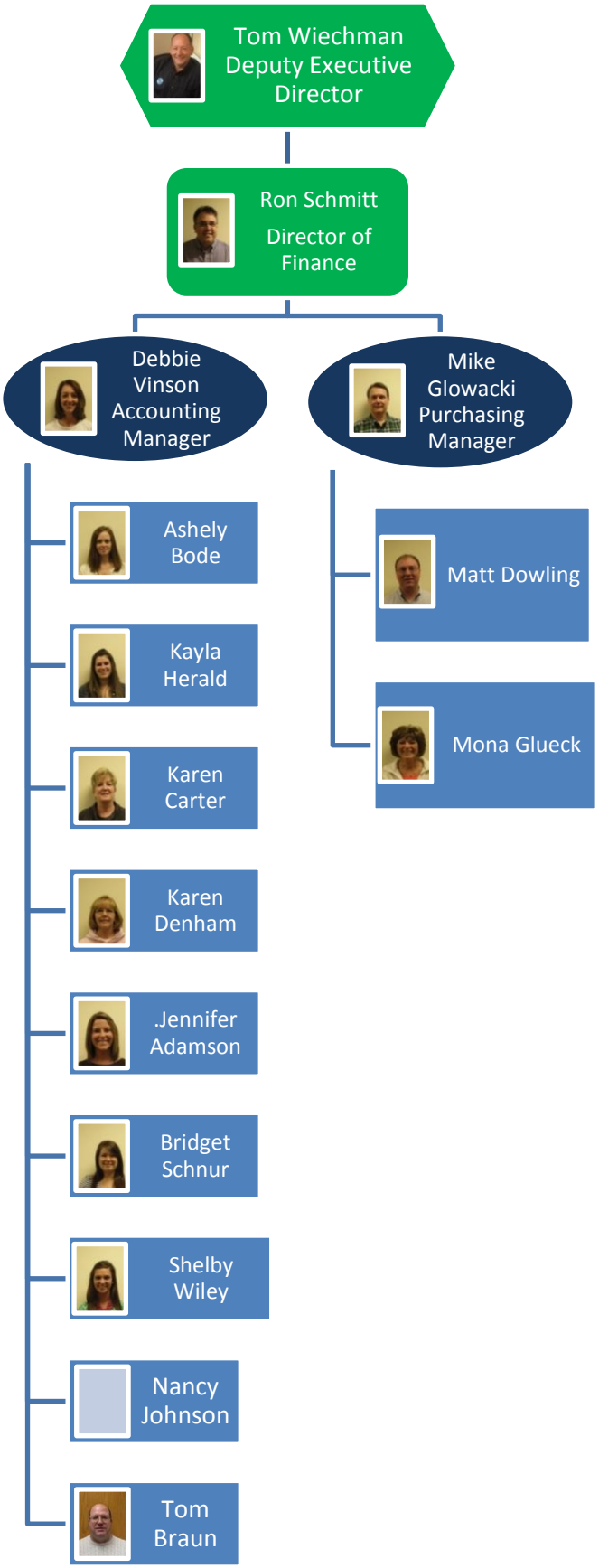
Administration Division

Customer Service Department (3)



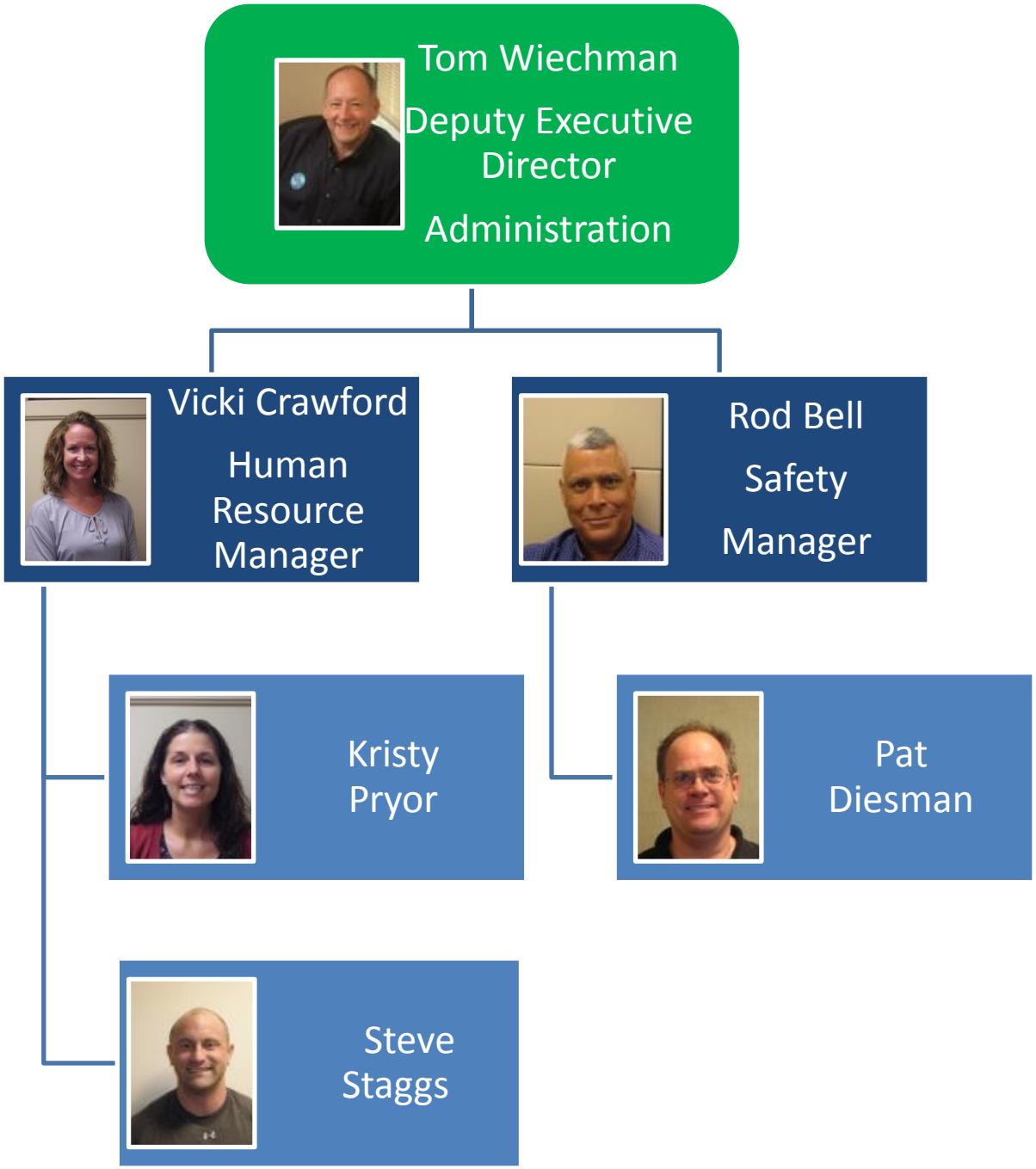
Administration Division

Finance & Purchasing Department (3)



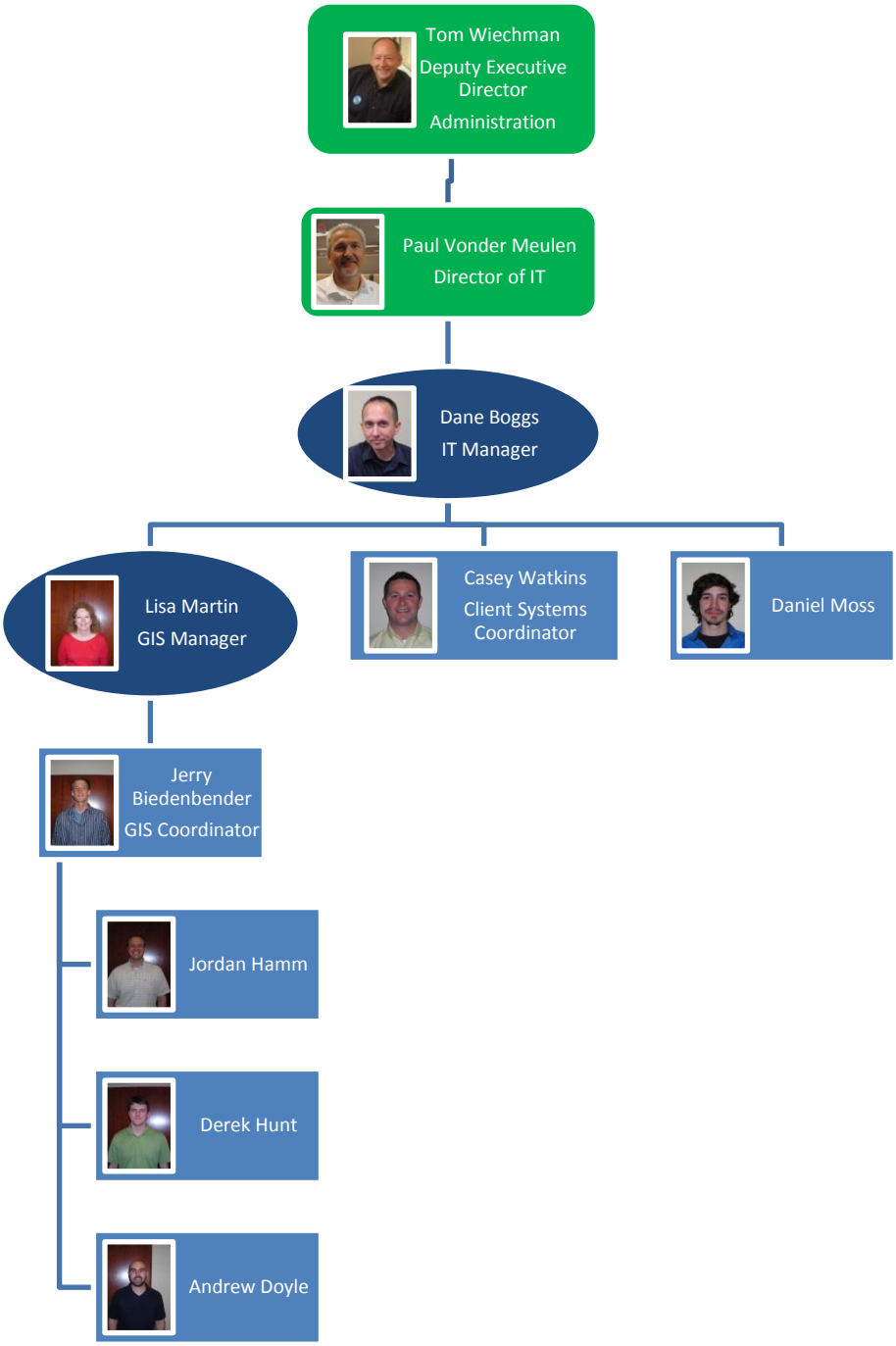
Administration Division

Administration Department (3)



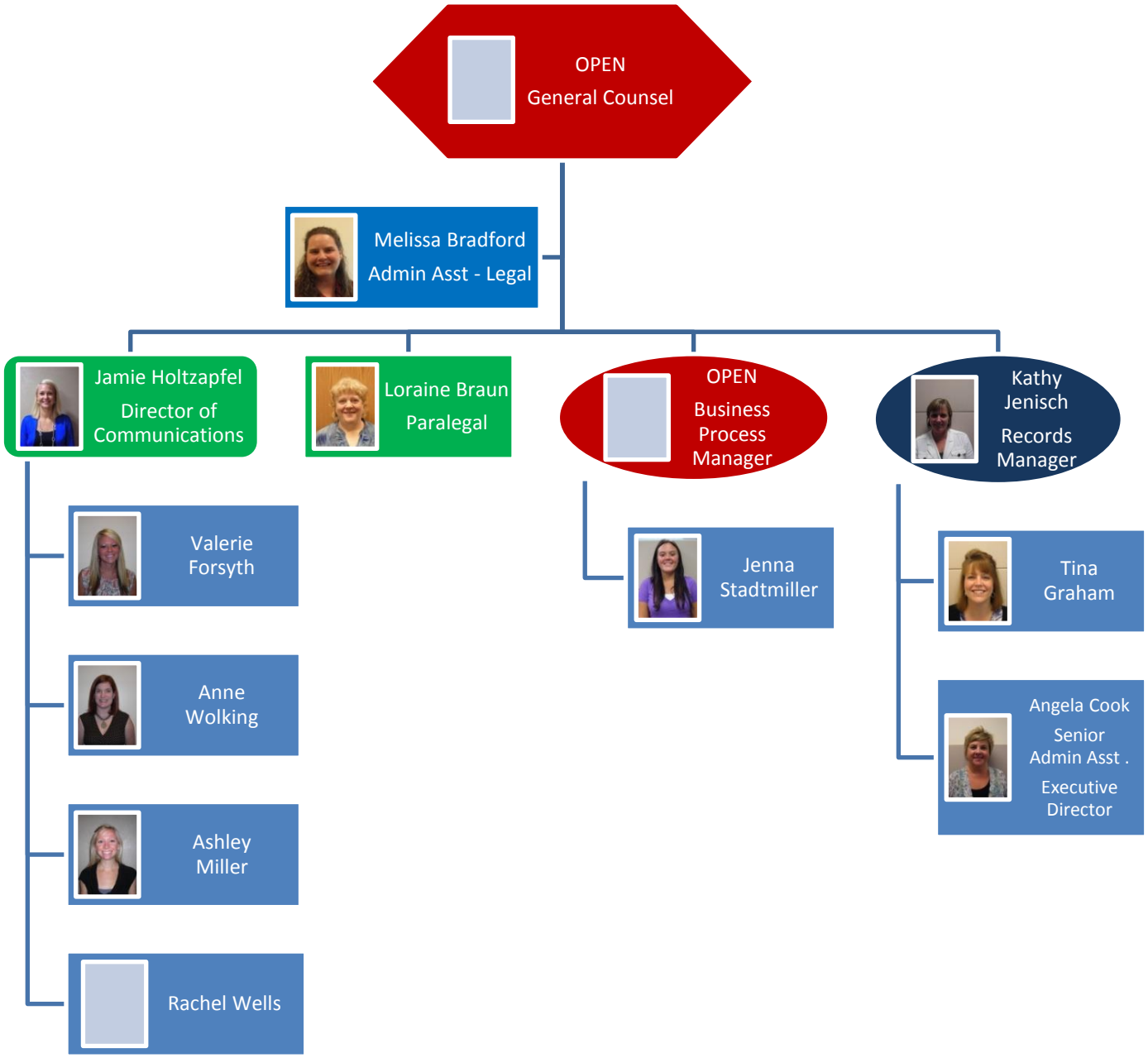
Administration Division

IT - GIS Department (3)



Administration Division

Legal Department (3)



Engineering Division

Design & Construction Management Department (5)

Mark Wurschmidt
Deputy Executive Director
Engineering

Ralph Johnstone
Director of Design & Construction Management

Rob Schroeder
Senior Engineer

Daniel Doss

Bob Wilson

Doug Malone

Mark Griffith

Mike O'Bryan

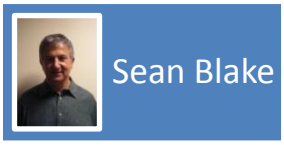
Donna Biddle

Mike Vice

Susan Osterhage

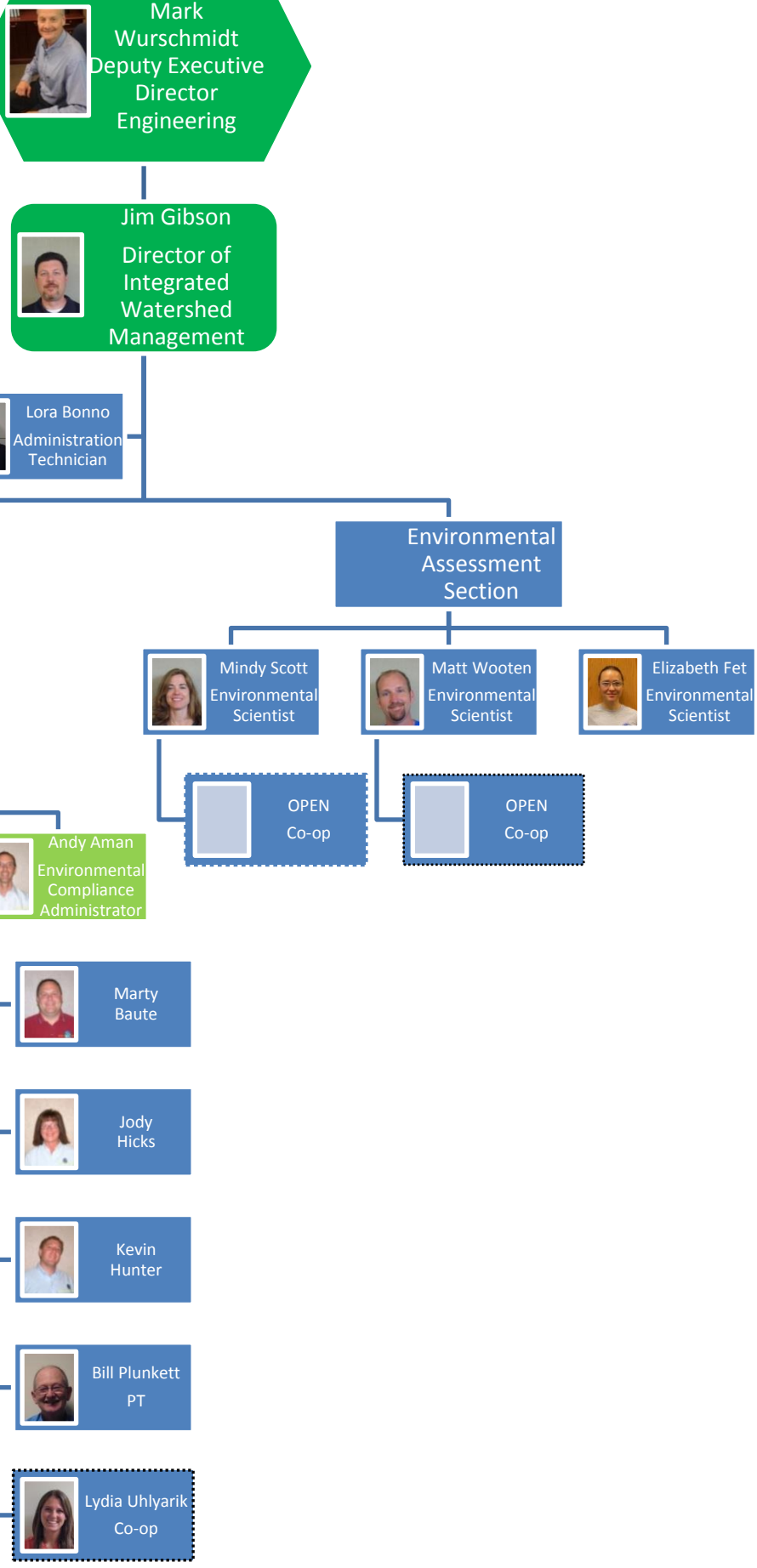
Engineering Division

Infrastructure and Capital Planning (5)



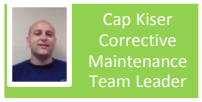
Engineering Division

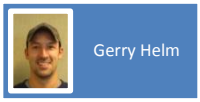
Integrated Watershed Management Department (6)

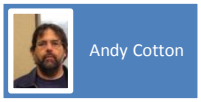


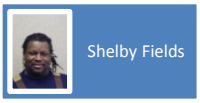
Operations Division

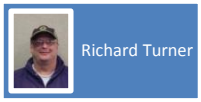
Collection Systems-
Asset Maintenance Department (2)

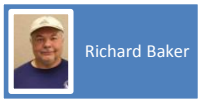






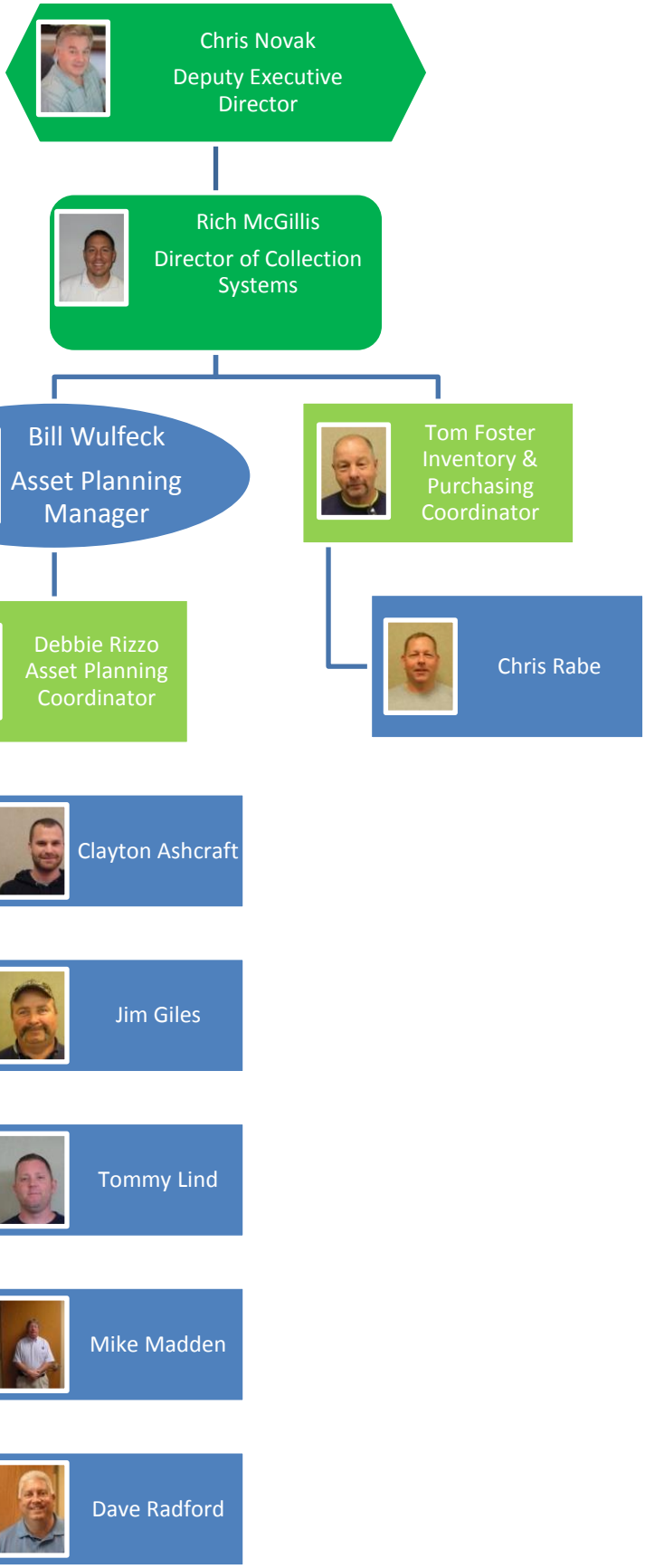






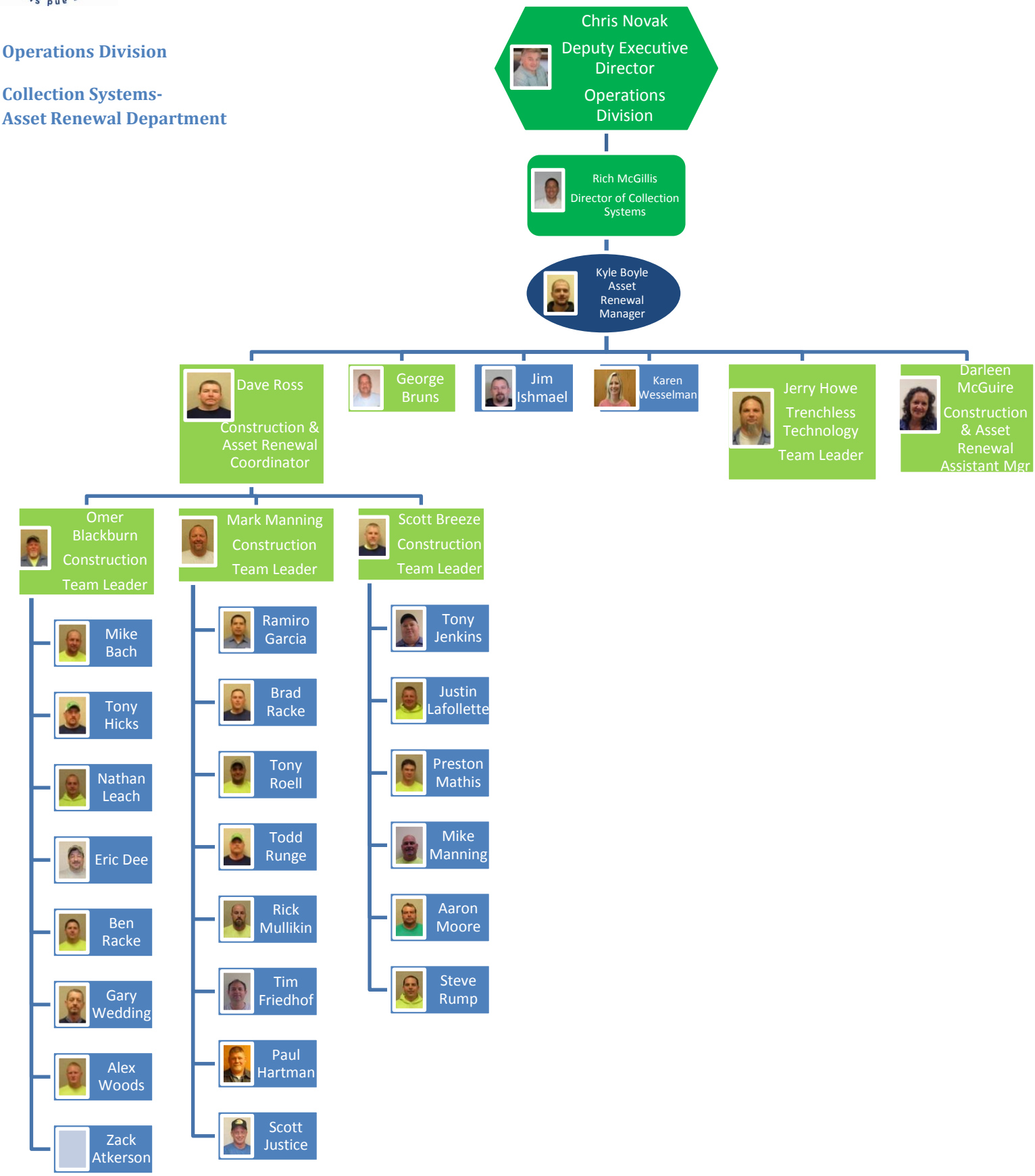
Operations Division

Asset Planning & Inventory Department (2)



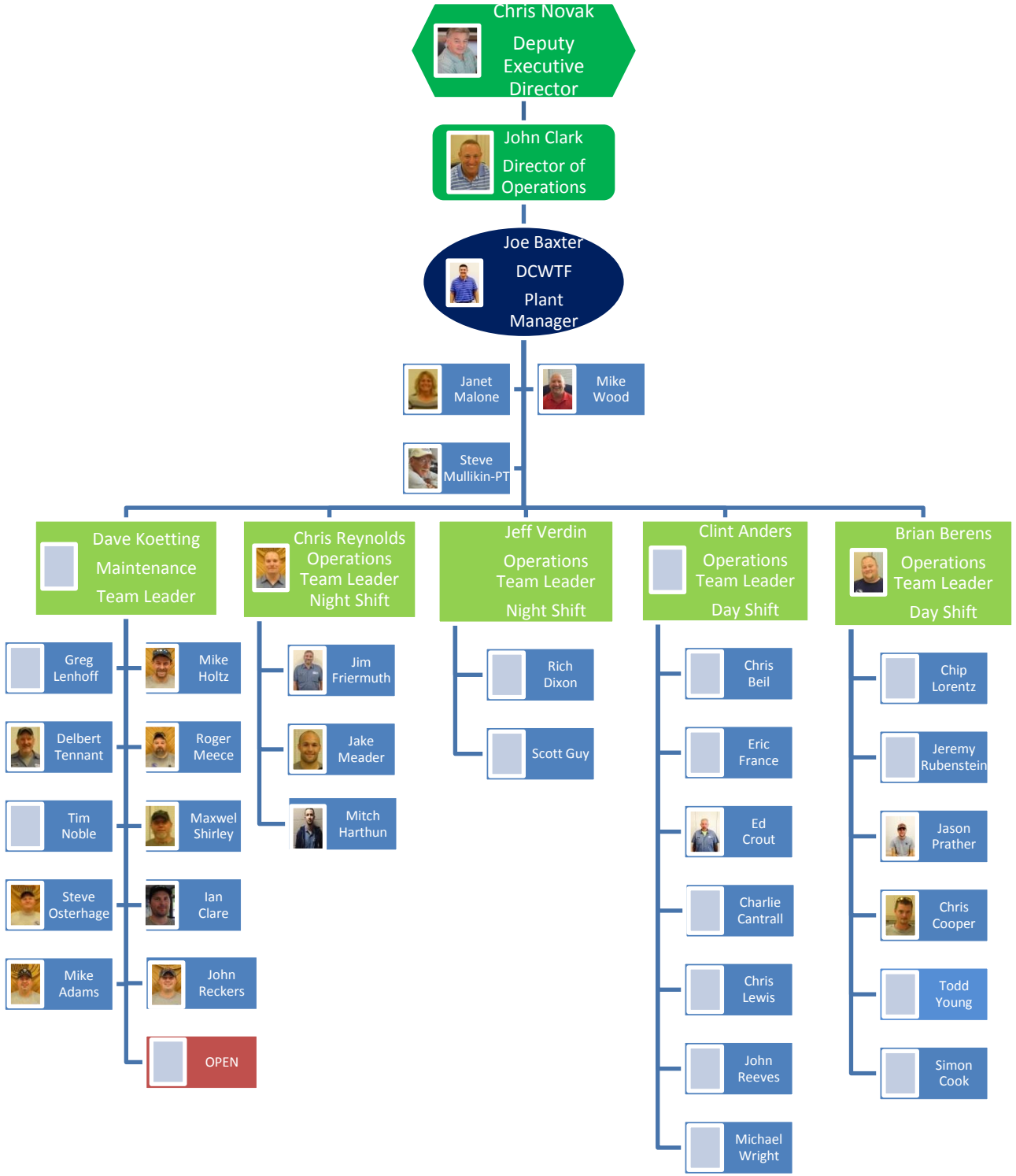
Operations Division

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

Jason Case
Eastern Regional Team Leader

Hasten Wright
Small Plants Team Leader

Operations

Maintenance

Tim Bracke

Gary Ashcraft

Rick McDannold

Tom Holtkamp-PT

Mitch Mieman

Mike Eversole

Jason Schmits

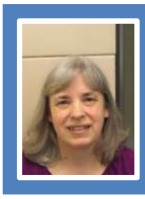
Ryan Erickson

Mark Watton

Operations Division

Fleet & Facilities Department (4)

Chris Novak
Deputy Executive Director
Operations Division



Lisa Hensley
Admin Asst Operations

Steve Hamberg
Fleet Manager

Jay Ashcraft

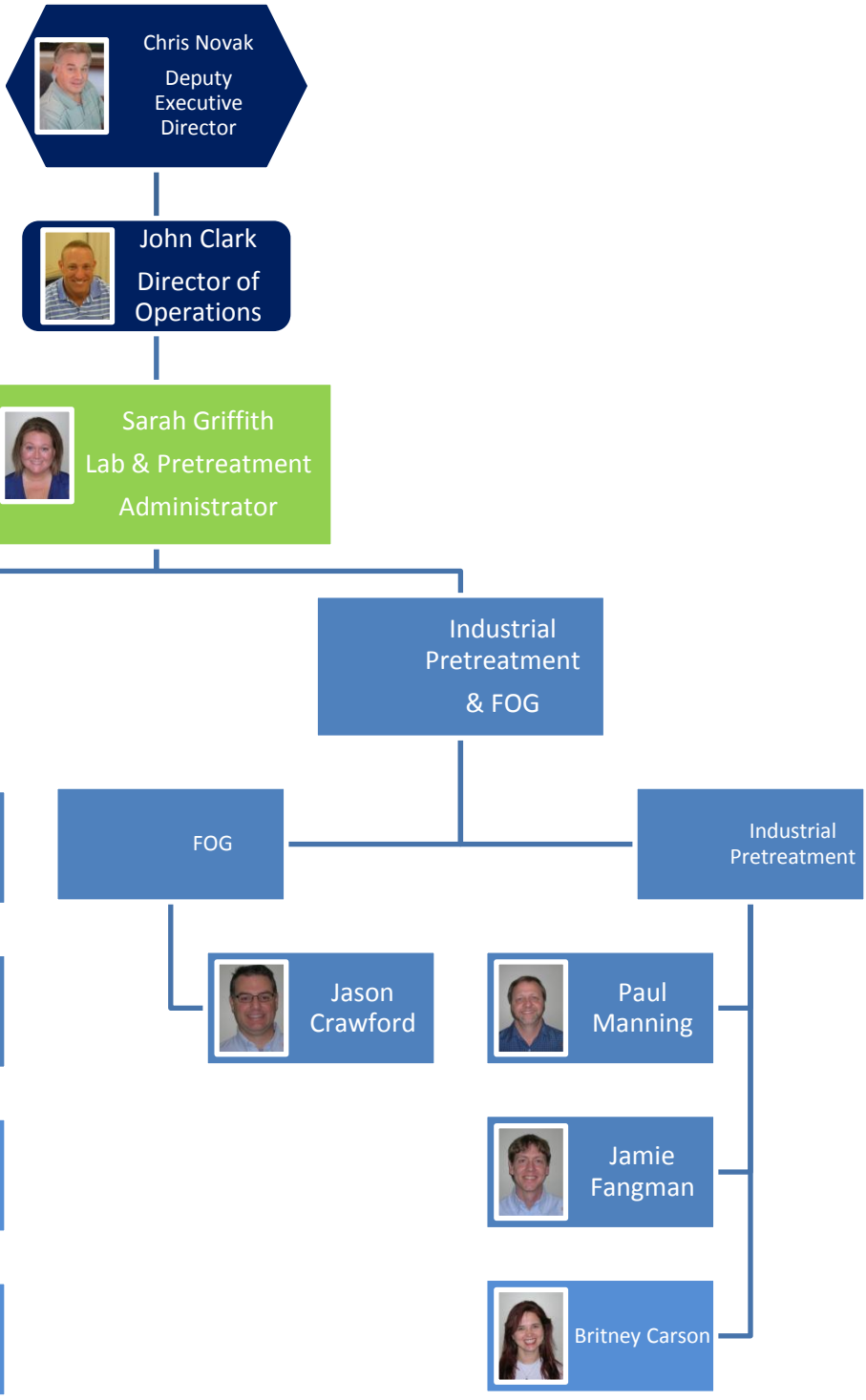
George Robinson

Jonathan Fletcher

Randy Creekmore
Facilities Temp

Operations Division

Laboratory & Industrial Pretreatment/FOG (1)

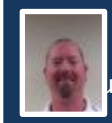


Operations Division

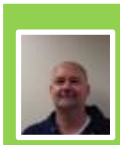
Pump Stations Department (7)

Chris Novak
Deputy Executive Director

John Clark Director of Operations



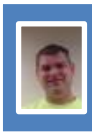
Chris Foltz
Pump Stations Manager



Phil Stanken
Pump Stations Operations Team Leader

Jim Thurman
Pump Stations Maintenance Team Leader

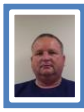
Larry Westkamp



Phillip Sebastain

Chris Crone

Larry Brewer



Joe Buerkley

Greg Emmons

Justin Banta

Vern Wiley

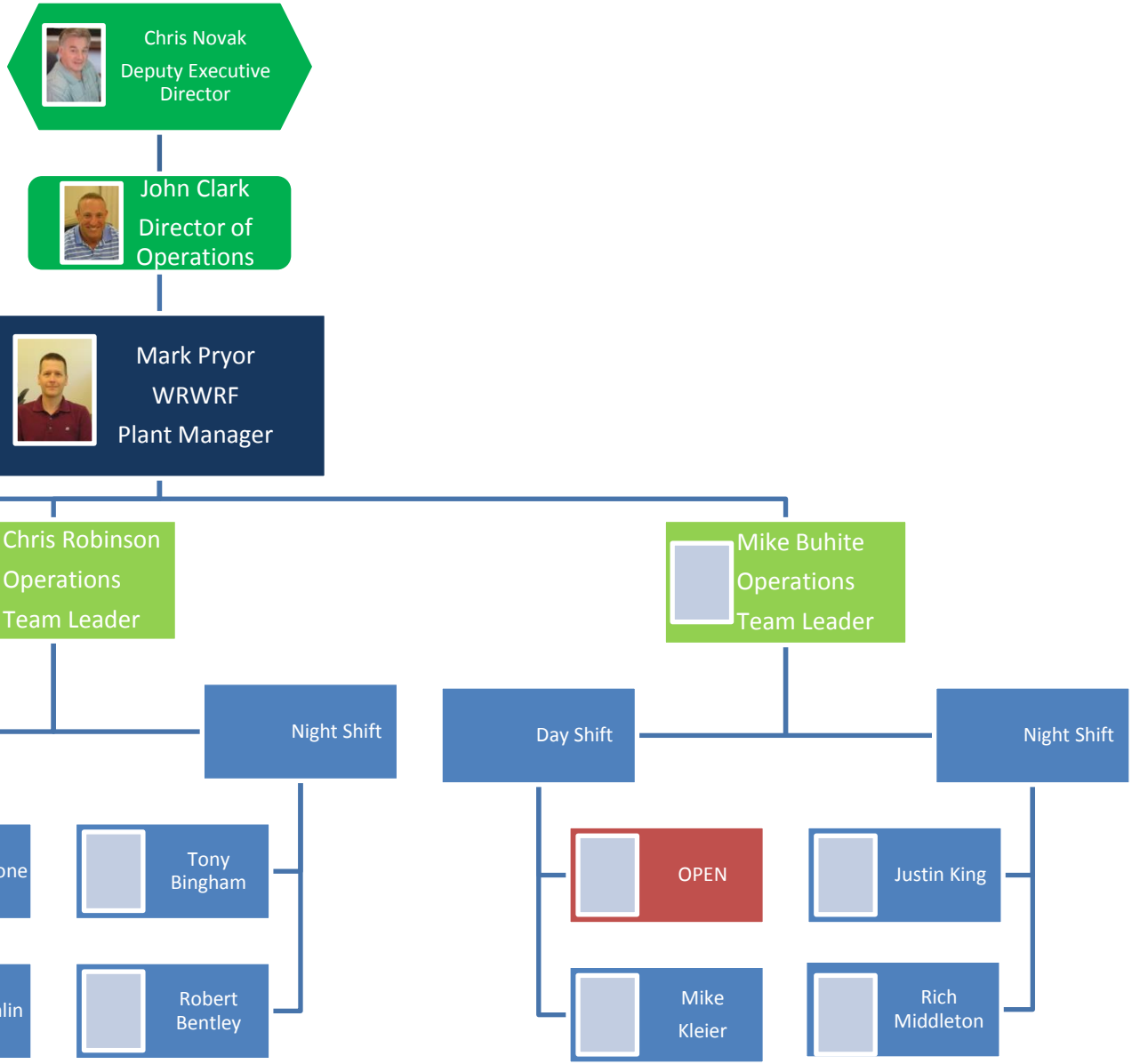
Tom Parman

James Rose

Steve Dee

Operations Division

Western Regional Water Reclamation Facility (9)



APPENDIX E:

FY 2014 Safety Training Catalog

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SD1

Fiscal Year 2014
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** **Field Technical Services: Pump Stations** **FTS: OPS & MTCE** **Eastern Regional Water Reclamation Treatment Plant** **ERWRTP: OPS & MTCE** **Western Water Reclamation Treatment Plant** **WRWRTP: 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.	**79**	**31%**	**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, (CW) 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, (CW) 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 **Customer Services** **Constriction Services** 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.	**80**	**31%**	**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, (CW) 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 Services:** 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, (CW) 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** **Fiancé Safety** **Purchasing** **Facilities** **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.	**49**	**20%**	**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, (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.

Sanitation District Departments	Number of Personnel	Percentage of Total	Description of Designated Employees Job Hazard Analysis
Engineering Department 5-6 **Communications** **Flow Monitoring** **Eng Inspectors** **Storm-Water, Compliance** **Water Resources** **Project Management.** 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	**46**	**18%**	**Engineering**: Management of operations, 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, (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	3	Administration HR
Dept. 3 Administration Legal	3	Administration Legal
Dept. 5 Engineering Design and Construction Management	5	Eng. Inspectors and Project Managers
Dept. 5 Engineering Infrastructure and Capital Planning	5	Eng. Infrastructure and Capital Planning
Dept. 5 Operations Fleet and Facilities	5	Eng. Facilities and Fleet
Dept. 6 Engineering Integrated Watershed Management	6	Eng. Environ. Compliance and Assessment
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

July 2013
(FY 2014)

Drivers Safety:

July 22 - July 26

Make-up: August 1 and 2

Drivers Safety: CDL and Non-CDL

- **Elements**
  - Driver Safety
  - Walk Around / Daily and Pre-Trip Inspections
  - Random Inspections
  - Reasonable Suspicion
  - Securing Loads
  - Personal Protective Equipment
  - Minor Repairs
  - Vehicle Housekeeping
  - Accident Prevention: Signs & Tags
  - Removal From Service - Lockout /Tag Out
  - Coaching The Experience Driver
  - Department of Transportation Commercial Drivers License Pre-trip inspection
  - Record Keeping - Commercial Motor Vehicles

- **Duration:** 4.0 hours

- **Employees required to attend:**

  - **All employees having authorization to operate an SD1 Motor Vehicle**

- **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 Drivers Safety	16 Drivers Safety	17 Drivers Safety	18 Drivers Safety	19 Drivers Safety	20
21	22	23	24	25 Drivers Safety MAKE UP	26 Drivers Safety MAKE UP	27
28	29	30	31			

August 2013
(FY 2014)

Swift Water Awareness:
Aug. 30

(No Make-up)

Swift Water Awareness

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

- **Duration: 8**.0 hours

- **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 Compliance Group (designated employees)
    - Environmental Assessment Group (designated employees)
  - **SD1 Emergency Response Team**

- **Maximum Class Size: 33**

August

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	23	24
25	26	27	28	29	30 Swift Water Awareness	31

September 2013
(FY 2014)

Accident Prevention and Hazard Recognition:
Sept. 9 - Sept. 13

Make-up: Sept. 26 and 27

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** hours

- **Required:**

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

- **Maximum Class Size: 33**

September

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9 Accident Prevention and Hazard Recognition	10 Accident Prevention and Hazard Recognition	11 Accident Prevention and Hazard Recognition	12 Accident Prevention and Hazard Recognition	13 Accident Prevention and Hazard Recognition	14
15	16	17	18	19	20	21
22	23	24	25	26 Accident Prevention and Hazard Recognition MAKE UP	27 Accident Prevention and Hazard Recognition MAKE UP	28
29	30					

October 2013
(FY 2014)

Fire Safety and Emergency Action Plan:
Oct. 7 - Oct. 11

Make-up Oct. 24 and 25

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:** 3 hours
- **Required:** annually
- **All SD1 employees required to attend**
- **Maximum Class Size: 40**

October

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

November 2013
(FY 2014)

Excavation and Trench Safety:
Nov. 13 - Nov. 15

Make-up: Nov. 18

Excavation and Trench Safety

- **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
  - Atmospheric monitoring
  - Traffic Control / Excavation Permit
  - Record Keeping
  - Hot Work Permit – Flammable / Spark Producing
  - Atmospheric Sampling – Confined Space
  - Cold Weather Training

- **Duration:** 8 hours

- **Required:** annually

- **Employees required to attend:**
  - **Collection System – Department 2**
    - Asset Renewal Department
    - Asset Planning & Inventory (designated employees)
  - **Engineering – Department 5** Design and Construction Management
    - Inspectors
    - Project Managers
  - **SD #1 Emergency Response Team (ERT)**

- **Maximum Class Size: 20**

November

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

December 2013
(FY 2014)

Hazardous Waste Operations Response:
Dec. 10 and 12

Make-up: Dec. 18

Hazardous Waste Operations Response (24 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 hours
- **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
  - **Pump Stations (Field Technical Services) – 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**

December

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10 Hazardous Waste Operations (HAZWOPER)	11	12 Hazardous Waste Operations (HAZWOPER)	13	14
15	16	17	18 Hazardous Waste Operations (HAZWOPER) MAKE UP	19	20	21
22	23	24	25	26	27	28
29	30	31				

January 2014

First Aid/CPR/AED/Bloodborne Pathogens:
Jan. 13 - 17

Make-up: January 22 through 24

First Aid/CPR/AED/Bloodborne Pathogens

- **Elements**
  - Adult First Aid and CPR with AED
  - Bloodborne Pathogens
  - Personal Protective Equipment
  - Myclyns Wound Sanitizer
- **Duration**: 8 hours
- **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)

Maximum class size: 20

January

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6	7	8	9	10	11
12	13 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr.	14 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr.	15 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr.	16 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr.	17 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr.	18
19	20	21	22 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr. MAKE UP	23 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr. MAKE UP	24 CPR/AED/BBP 6.0 hr. First Aid 2.0 hr. MAKE UP	25
26	27	28	29	30	31	

February 2014

Hazard Communication (HAZCOM) with *Globally Harmonized System*

Feb. 10 - 14

Make-up: Feb. 20 and 21

Lab Safety: Feb. 10, 12 and 13. Make-Up Feb. 20

Hazard Communication (HAZCOM) *or*
Globally Harmonized System of Classification and Labeling of Chemicals (GHS)

- **Elements**
  - Summary of Globally Harmonized System
  - Damming and Dykes
  - Safe Handling of Hazardous Chemicals
  - Accident prevention/housekeeping
  - Material Safety Data Sheets / Locations
  - Temporary Use Containers
  - Personal Protective Equipment
  - Accident Prevention: Signs & Tags
  - Housekeeping
  - Storage of Flammable and Combustible Liquids
  - Spill Prevention Control & Countermeasures & Storm Water Pollution Prevention Plan Kit Locations
  - Understanding National Fire Protection Association Hazard Recognition Labels
- **Duration:** 2.0 hrs.
- **Required:** annually
- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
  - **Collection System – Department 2**
  - **Administration – Department 3**
    - Safety
  - **Engineering – Department 5**
    - Wet Weather Group
    - Other members having exposure and selected by department manager
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance Group (designated employees)
    - Environmental Assessment Group (designated employees)
  - **Pump Stations (Field Technical Services) – Department 7**
  - **Eastern Regional WRF – Department 8**
  - **Western Regional WRF – Department 9**
- **Maximum Class Size: 30**

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 Pretreatment/FOG
  - **Integrated Watershed Management – Department 6** Water Resources (designated employees)

Maximum Class Size: 20

February

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10 Hazard Communication (HAZCOM) Lab Safety	11 Hazard Communication (HAZCOM)	12 Hazard Communication (HAZCOM) Lab Safety	13 Hazard Communication (HAZCOM) Lab Safety	14 Hazard Communication (HAZCOM)	15
16	17	18	19	20 Hazard Communication (HAZCOM) Lab Safety MAKE UP	21 Hazard Communication (HAZCOM) MAKE UP	22
23	24	25	26	27	28 Hazardous Waste Technicial Refresher (HAZWOPER	

March 2014

Hazwoper Brownfield Clean-up
March 10 - 14

Make-up: March 21

Hazwoper Brownfield 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**
  - **Mangers**
  - **Engineering Inspectors**
  - **SD1 ERT Members**
  - **Safety Department**
- **Maximum Class Size: 33**

March

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10 HAZWOPER Brown Field Clean-up	11 HAZWOPER Brown Field Clean-up	12 HAZWOPER Brown Field Clean-up	13 HAZWOPER Brown Field Clean-up	14 HAZWOPER Brown Field Clean-up	15
16	17	18	19	20	21 HAZWOPER Brown Field Clean-up MAKE UP	22
23	24	25	26	27	28	29
30	31					

April 2014

Traffic Control:
April 14 - 18

Make-up: April 24 and 25

Traffic Control :

- **Elements**
  - Traffic control / Excavation Permit
  - Record Keeping
  - Flagging
  - Signaling
  - Hot Weather Training
  - Work Zone Setup
  - Signs
  - Accident Prevention: Signs & Tags
  - Changing Conditions
  - Short-term v/s Long-term
  - Speed Classification
  - Personal Protective Equipment (employees to bring equipment for audit)

- **Duration**
  - 4.0 hrs. for update class

- **Required:** Semi-annually

- **Employees required to attend:**
  - **Dry Creek WWTP – Department 1**
    - (designated employees)
  - **Collection System – Department 2**
    - all
  - **Administration – Department 3**
    - Safety
  - **Engineering – Department 5**
    - Design & Construction Management (Inspectors)
    - Infrastructure and Capital Planning (Wet Weather)
  - **Integrated Watershed Management – Department 6**
    - Environmental Compliance (designated employees)
  - **Pump Stations (Field Technical Services) – Department 7**
    - all

- **ALSO: Emergency Response Team Members**

- **Maximum Class Size: 33**

April

		Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14 Traffic Control	15 Traffic Control	16 Traffic Control	17 Traffic Control	18 Traffic Control	19
20	21	22	23	24 Traffic Control MAKE UP	25 Traffic Control MAKE UP	26
27	28	29	31			

May 2014

Confined Space Entry and Rescue:
May 12 - 16

Make-up: May 22 and 23

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:** 8.0 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**
    - Flow Monitoring
    - Design and Construction Management - Inspectors
    - Infrastructure and Capital Planning – Wet Weather
    - **Pump Stations (Field Technical Services) – Department 7 -** all
    - **Eastern Regional WRF – Department 8 -** all
    - **Western Regional WRF – Department 9 -** all

- **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	13 Confined Space Entry and Rescue	14 Confined Space Entry and Rescue	15 Confined Space Entry and Rescue	16 Confined Space Entry and Rescue	17
18	19	20	21	22 Confined Space Entry and Rescue MAKE UP	23 Confined Space Entry and Rescue MAKE UP	24
25	26	27	28	29	30	31

June 2014

TBD

June

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

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APPENDIX F:

FY 2014 Violations Report for Food Service Discharge Permits

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Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Non Comp Date IS Greater than 6-30-13 AND
Non Comp Date IS Less than 7-1-14
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2013 - Jun 30 2014

Permit: **FOG-000090** **Taco Bell #3302**

Violation Description		Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
GT cleaning frequency not followed. was not cleaned out per the permit required frequency of every 90 days.	GT	NC-E	04/22/14	04/22/14				
					V	22-Apr-14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000416** **Chick-fil-A**

Violation Description	Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
Not cleaning out the GI per the Permit required cleaning frequency of every 90 days.	NC-E	05/30/14	05/30/14				
				V	30-May-14	Verbal Notice of Violation (NOV)	$0.00

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

Violation Description		Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
GT cleaning frequency not followed. was not cleaned out per the permit required frequency of every 90 days.	GT	NC-E	04/22/14	04/22/14				
					V	22-Apr-14	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000879** **Europa Bistro**

Violation Description		Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
No cleaning records were kept. GM was unaware if it has been cleaned at all. No permit was available during inspection.		NC-R	12/09/13	12/09/13				
					V	09-Dec-13	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000894** **Carabello Coffee**

Violation Description		Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
GT cleaning frequency not followed. was not cleaned out per the permit required frequency of every 60 days.	GT	NC-E	05/01/14	05/01/14				
					V	01-May-14	Verbal Notice of Violation (NOV)	$0.00

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

Violation Description		Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
Installation of the proper GCE was not completed before opening. A compliance schedule for installing the proper GCE will be issued.		NC-E	07/01/13	09/25/13				
					CS	01-Jul-13	Compliance Schedule	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Non Comp Date IS Greater than 6-30-13 AND
Non Comp Date IS Less than 7-1-14
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2013 - Jun 30 2014

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

Violation Description	Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
GT not installed	NC-E	09/01/13	01/01/14				
CS issued							
				CS	23-Aug-13	Compliance Schedule	$0.00

Permit: **FOG-001125** **Angelo's Family Restaurant**

Violation Description	Violation Type	Date of NC	Date in Compliance	Enforcement Type	Date of Enforcement		Penalty
GI Not Installed or Not up to SD1 Specifications	NC-E	03/01/14	05/01/14				
CS Issued							
				CS	26-Feb-14	Compliance Schedule	$0.00

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APPENDIX G:

Map of FOG Related SSOs and Customer Correspondence

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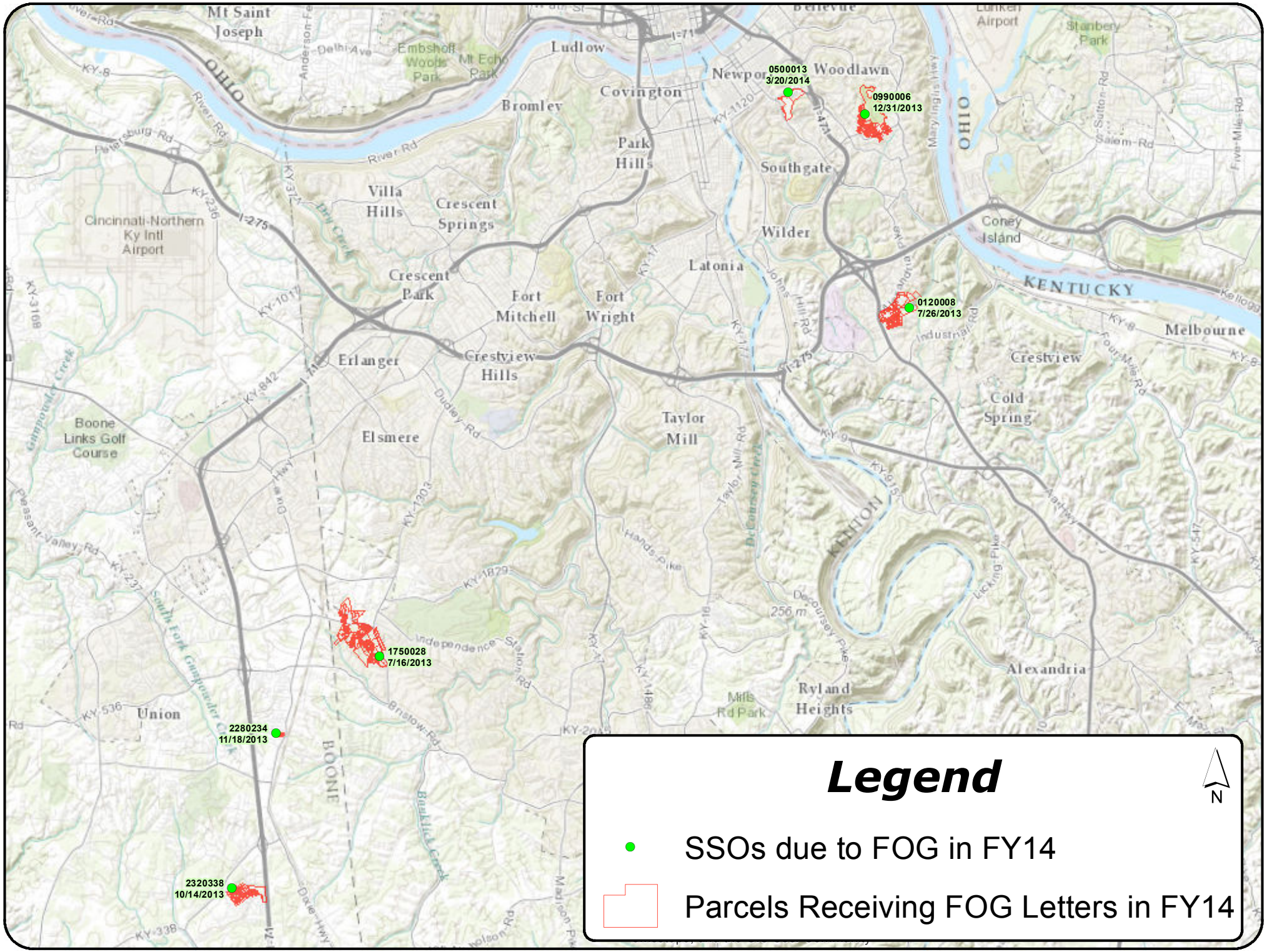
0500013
3/20/2014
0990006
12/31/2013
0120008
7/26/2013
1750028
7/16/2013
2280234
11/18/2013
2320338
10/14/2013
Legend
SSOs due to FOG in FY14
Parcels Receiving FOG Letters in FY14
N
Mt Saint Joseph
Ludlow
Bromley
Covington
Newport
Woodlawn
Park Hills
Southgate
Villa Hills
Crescent Springs
Crescent Park
Fort Mitchell
Fort Wright
Latonia
Wilder
Coney Island
KENTUCKY
Melbourne
Crestview
Cold Spring
Erlanger
Crestview Hills
Elsmere
Taylor Mill
Boone Links Golf Course
Cincinnati-Northern Ky Intl Airport
Union
Alexandria
Ryland Heights
OHIO
BOONE
KENTON

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APPENDIX H:

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 July 2014
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 July 2014**
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	2008	Complete
				2012 - 2015	2010	
Riley Road No. 1	East	PS Elimination	n/a	2009	2009	Complete
Riley Road No. 2						
Riverwatch PS	North	PS Elimination Study	PS Elimination	Study - 2008	2008	Complete
				2012 - 2015	2008	Complete
South Park Industrial	North	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008	2008	Complete
				2012 - 2015	2010	Complete
Wedgewood Dr	Central	PS Elimination Study	Evaluating Solutions	Study - 2008	2008	Complete
				2015	n/a	Evaluating Solutions
Willow Bend No. 2	West	PS Elimination Study	PS Elimination	Study - 2008	2008	Complete
				2013	2013	Complete
Army Reserve	East	PS Elimination Study	Electrical hook up for portable generator	Study - 2008	2008	Complete
				2013-2014	2014	Complete
Eagles Landing	West	PS Elimination Study	Electrical hook up for portable generator	Study - 2008	2008	Complete
				2013-2014	2014	Complete
Evergreen	Central	PS Elimination Study	Electrical hook up for portable generator	Study - 2008	2008	Complete
				2014	2014	Complete
Lamphill	East	PS Elimination Study	Electrical hook up for portable generator	Study - 2008	2008	Complete
				2011	2011	Complete
Mill House Crossing	Central	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008	2008	Complete
				2012	2012	Complete
Ridgefield	North	PS Elimination Study	Backup Dry Prime Pump with a Diesel	Study - 2008	2008	Complete
				2014	2014	Complete
War Admiral	West	PS Elimination Study	PS Elimination	Study - 2008	2008	Complete
				2012 - 2015	2011	Complete
Blackstone	West	PS Elimination Study	Evaluating Solutions	Study - 2008	2008	Complete
				2015	n/a	Evaluating Solutions
Dublin Green No. 1	West	PS Elimination Study	PS Elimination	Study - 2008	2008	Complete
				2015	2012	Complete
Fowler Creek	West	PS Elimination	These stations will be eliminated after the Western Regional collection system is 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, 2014

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of July 2014
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
Kees	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2011	2011	Complete
Overlook	East	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions
Riverview Farms	North	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions
Stillwater	East	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of July 2014
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	n/a	In Progress
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	n/a	In Progress
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
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 July 2014
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
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 July 2014
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	Evaluating Solutions	2015	n/a	Evaluating Solutions
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	n/a	In Progress
CIP Title	**Basin**	**Original Proposed Solution**	**Updated Proposed Solution**	**Scheduled Completion Date**	**Actual Completion Date**	**Status as of July 2014**
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	13
Total Complete	**96**
2014 Active Projects	3
Total Project Activity	**99**

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APPENDIX I:

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