Sanitation District No. 1
December 31, 2016

Capacity, Management, Operations, & Maintenance (CMOM) FY 2016 Annual Report

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SD1
Managing Northern Kentucky's
Wastewater and Storm Water

December 31, 2016

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

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

Ms. Denisse Diaz, Chief
NPDES Permitting and Enforcement Branch
U.S. Environmental Protection Agency, Region 4
Atlanta Federal Center
61 Forsyth Street, S.W.
Atlanta, Georgia 30303

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

To Whom It May Concern:

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

The Consent Decree was entered on April 18, 2007 and required SD1 to submit four separate CMOM documents within the first year – the Grease Control Program, the Sewer Overflow Response Plan (SORP), the CMOM Self-assessment, and the Pump Station Operation Plan for Backup Power. Each of these submittals has received regulatory approval. Updates to these programs are now included in the CMOM Annual Report, as it is not required for the program updates to be submitted as separate documents.

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

To the best of my knowledge and belief, the enclosed report is true, accurate, and complete, and further demonstrates SD1's commitment to the mission of protecting and enhancing the water resources and quality of life in Northern Kentucky.

If you have any questions or concerns, do not hesitate to contact me at 859-578-6762 or by e-mail at mwurschmidt@sd1.org.

Best regards,

Mark W. Wurschmidt
Interim Executive Director

MWW/wck
Enclosures

CERTIFICATION

Capacity, Management, Operations, & Maintenance (CMOM)
FY 2016 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.

Mary W. Wurschmidt — 12/31/16

Mark W. Wurschmidt
Interim Executive Director

Date

COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 31 day of December, 20 16 by Mark W. Wurschmidt, Interim Executive Director of Sanitation District No. 1.

Angela M. Cook

NOTARY PUBLIC

Kenton County, Kentucky

My commission expires: 9-1-20

Angela M. Cook
Notary Public
Kentucky, State at Large
Comm. Exp. 09-01-2020
Notary ID 562735

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CAPACITY, MANAGEMENT, OPERATIONS, AND MAINTENANCE FY 2016 ANNUAL REPORT

December 31, 2016

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

TABLE OF CONTENTS

FIGURES

LIST OF ACRONYMS AND ABBREVIATIONS

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

SECTION 1. INTRODUCTION

1.1 Overview and Report Period

On April 18, 2007, Sanitation District No. 1 (SD1) entered into a Consent Decree with the U.S. Environmental Protection Agency and the Kentucky Energy and Environment Cabinet (Cabinet) to address sanitary sewer overflows (SSOs) and combined sewer overflows (CSOs), in an effort to improve water quality throughout SD1's service area. The Consent Decree requires that SD1 continue the implementation of formal Capacity, Management, Operations, and Maintenance (CMOM) programs. SD1's CMOM programs are designed to manage the collection system assets and provide operational guidelines that maximize efficiency and reduce the potential for overflow occurrences. Proper planning and management of CMOM programs can result in a reduction of the number, frequency, and volume of SSOs and CSOs.

SD1 received regulatory approval of its CMOM programs on May 14, 2008. Pursuant to the Consent Decree, SD1 is required to submit annual reports on its implementation of these CMOM programs. This report describes SD1's ongoing commitment to its CMOM programs, during Fiscal Year (FY) 2016, which began on July 1, 2015 and ended on June 30, 2016.

Section 2 provides updates on the implementation and progress of some of SD1's CMOM programs. Described in Sections 3 through 5 are programs required by the Consent Decree to establish a Sewer Overflow Response Plan (SORP), a Grease Control Program, and a Pump Station Operation Plan for Backup Power, which are all specific CMOM programs that required separate approvals, but no separate reporting schedules. Section 6 deals with ongoing self-assessments and initiatives that support and advance SD1's CMOM programs.

1.2 CMOM Program Structure

SD1 has been performing CMOM activities for many years. In 2007, these activities were structured into formal programs with the CMOM Self-Assessment. During the self-

assessment process, a written purpose, goals, and recommended improvements were established for each program. Most of the recommendations of the initial CMOM self-assessment have already been fully implemented, however, SD1 continues to advance toward the goals of maximized efficiency and overflow reduction by sustaining the CMOM principles of self-assessment and self-improvement.

SD1 has 34 formal CMOM programs, which are identified in Table 1.1. Section 2 and Section 6 of this Annual Report provide updates on the progress of some of these programs and new initiatives. The programs that have not been covered in this Annual Report are italicized in Table 1.1. The programs that are not covered, here, will be in future reports.

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	

Italicized programs in the above table have not been reviewed in this Annual Report

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 104,500 sanitary accounts and approximately 94,650 storm water accounts. SD1 manages a collection system that is comprised of:

- 43,500 SD1 owned manholes
- 3,900 SD1 owned catch basins and inlets in the combined sewer system
- 1,610 miles of SD1 owned and operated gravity sewer lines and force mains
- 160 miles of additional Florence owned sewer lines and force mains
- 83 miles of additional privately owned sewer lines
- 443 miles of SD1 owned and operated separate storm water lines
- 123 pump stations (3 of which are owned by the Airport and operated by SD1 through a contract; 2 of which are associated with treatment plants)
- 78 gate structures
- 15 flood pump stations
- 6 small wastewater treatment plants (2 of which are owned by separate entities and operated by SD1)
- 3 regional water reclamation facilities

SD1 no longer operates 11 pump stations that are owned by the City of Walton. The contract with the city was terminated on June 30, 2016.

During FY 2016, SD1 acquired more than 34,500 feet of privately developed sewer and approximately 195 new manholes. All newly acquired sewers passed inspection, and met the technical and construction standards of SD1.

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 updates on the implementation and progress of many of the CMOM programs provided in Table 1.1.

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

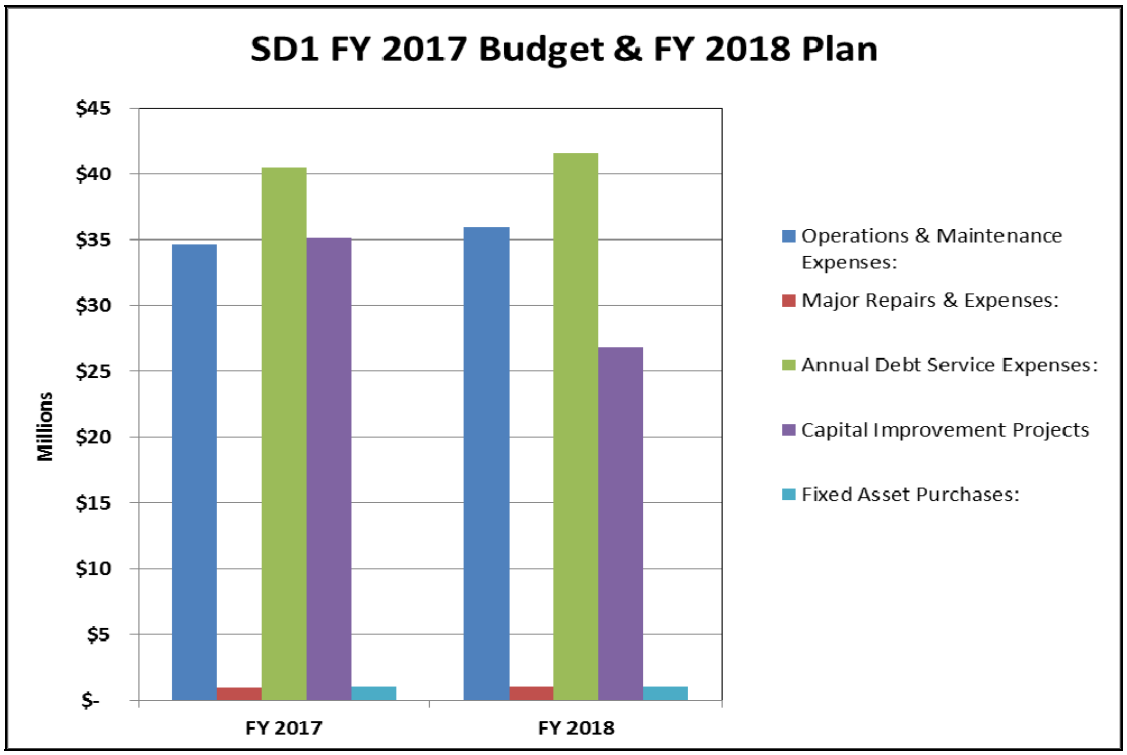
The audited capital expenditures for FY 2016 totaled approximately $11 million, and the audited O&M expenditures for FY 2016 totaled approximately $32.4 million. As required by the Consent Decree, SD1 has developed Watershed Plans for improvement projects to be implemented over the next several years, which will impact capital spending. The total capital spending associated with all sanitary projects over the next two years is approximately $62 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 2017 and FY 2018)

Fiscal Year	Projected Capital Spending
2017	$35,124,163
2018	$26,872,989
Total	**$61,997,152**

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

(FY 2017 and FY 2018)



2.1.2 Funding Sources

Although SD1 receives adequate funding from its operating revenue sources to fund its O&M and debt service commitments, these sources do not provide sufficient funding to also support the CIP. SD1 is therefore required to borrow money from other sources. During FY 2016, user rates, fees, and other revenues made up majority of the total funding sources and over $3.6 million in remaining bond proceeds and over $2 million in State Revolving Loan proceeds was drawn in the fiscal year.

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, and to identify areas that lack adequate capacity, so solutions can be developed to provide sufficient service. This program provides staff with a holistic

understanding of SD1's current capacity, which allows for better management, design, and control of the system.

2.2.1 Overflow Inspections and Hydraulic Modeling

During FY 2016, 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.

SD1 conducted approximately 6,418 CSO diversion inspections in FY 2016. Approximately 4,738 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 1,680 were routine CSO inspections conducted in dry-weather conditions. Additionally, in FY 2016, SD1 conducted approximately 1,357 SSO wet-weather inspections at its recurring and inactive SSO locations. Approximately 166 additional overflow records were created for wet-weather spills at pump stations and asset failures that produced an overflow. These overflow inspections are used to verify activity for collection system modeling and to initiate clean-up procedures when necessary. Further detail on an adjustment to wet-weather inspection routine for SSOs is provided in Section 3.1.2 SORP Annual Review.

2.2.2 Flow Monitoring and Hydraulic Modeling

Flow Monitoring Activity

SD1's flow monitoring crew continuously utilizes approximately 80 remote-sensing devices, such as, flow meters, levels sensors, cameras, and rain gauges to collect various data in targeted areas of the collection system. These data are used to confirm model predictions, improve model certainty, identify and confirm areas that are suspected of having high inflow and infiltration (I/I) rates, inform reservation of capacity decisions, and quantify the benefits of capital projects with pre and post construction monitoring.

The map provided in Figure 2.2 identifies approximately 100 separate locations that the crew monitored flows during the current reporting period. The purpose of monitoring these sites include:

- 75 capacity analysis sites
- 6 post-construction monitoring sites
- 5 micro-monitoring sites to analyze average flows and I/I of new developments
- 4 pre-construction monitoring sites
- 4 separate stormwater sewer monitoring sites
- 2 CSO monitoring sites
- 1 injection well pilot project monitoring site
- 1 pump station bypass monitoring site

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

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

Figure 2.2 Flow Monitoring Locations in FY 2016

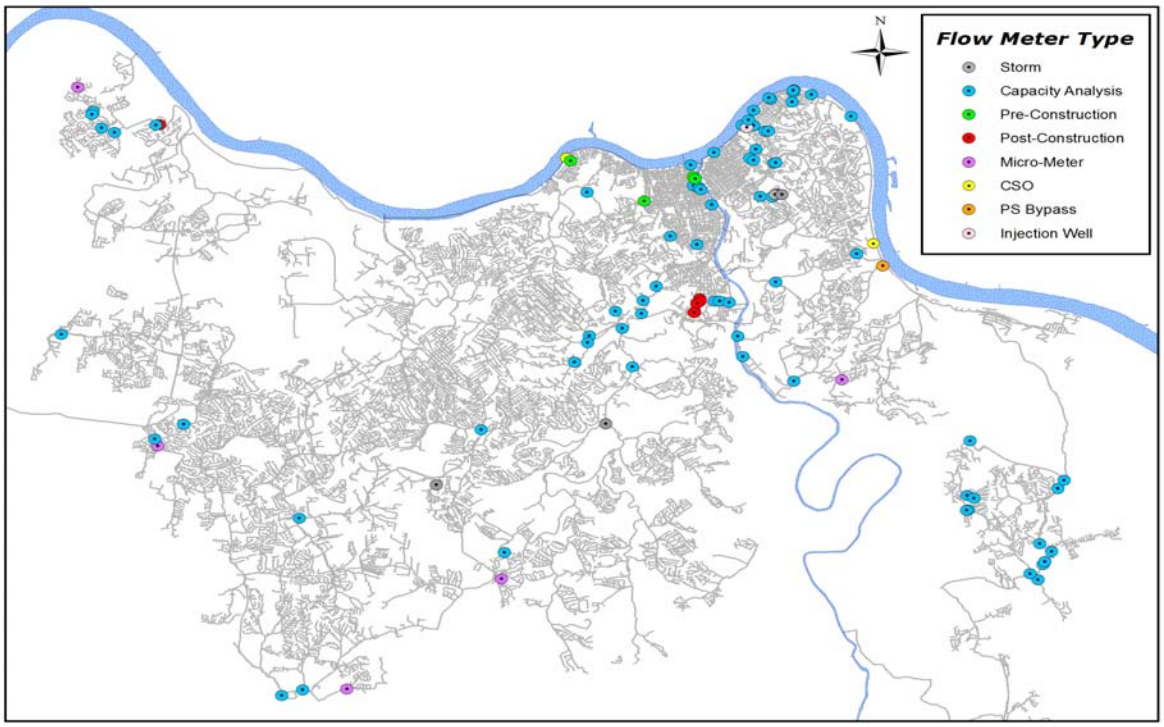
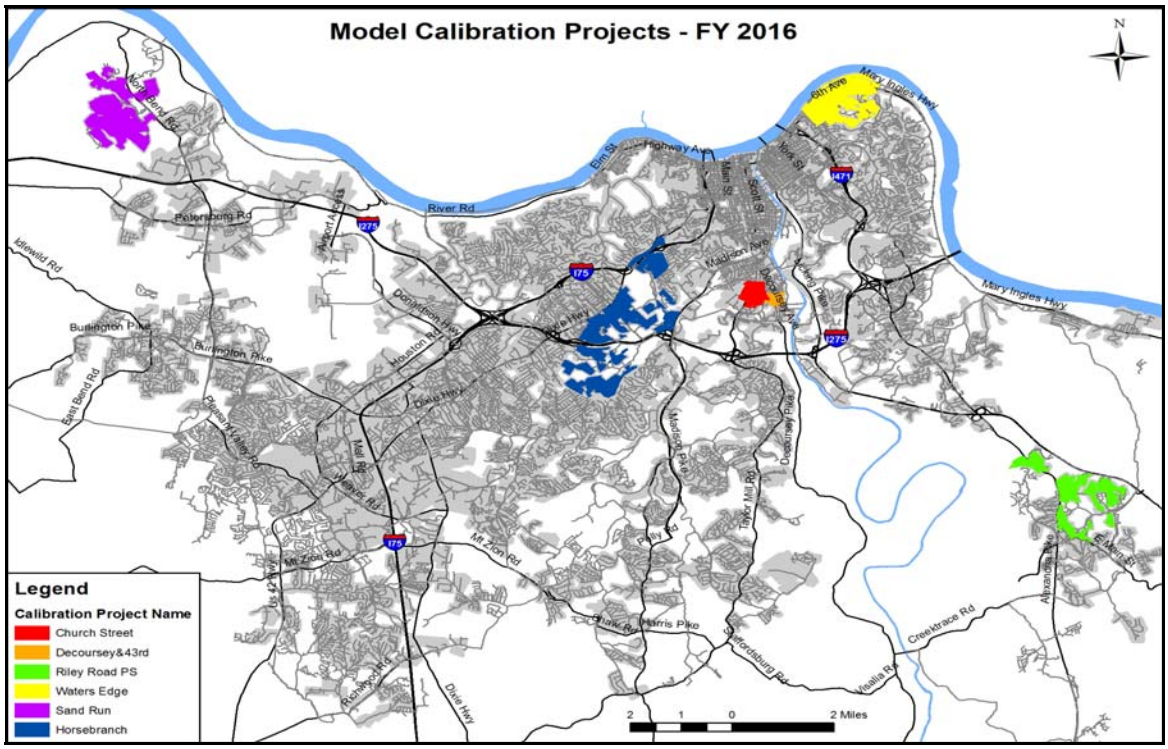


Figure 2.3 SD1 Model Calibrations in FY 2016

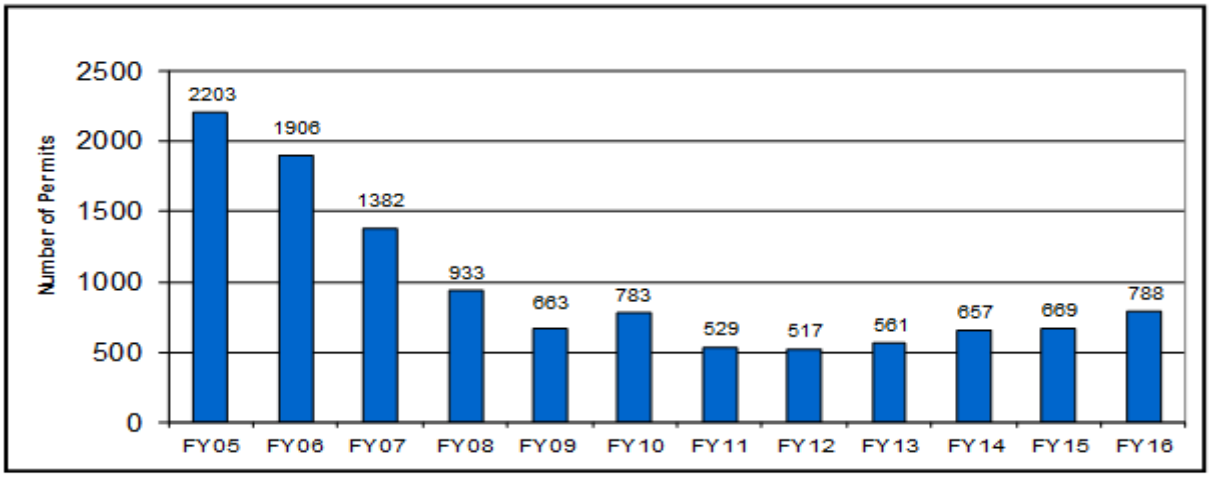


2.2.3 Reservation of Capacity

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 sewer capacity connection permit must be obtained from SD1, prior to connecting to the system. SD1 has issued 788 capacity connection permits in FY 2016. Figure 2.4 shows that permits issued by SD1 have declined sharply from eight years ago, but are steadily on the rise. SD1 has issued on average 748 capacity connection permits per year, since entering the Consent Decree in 2007.

Figure 2.4 Capacity Connection Permits Issued (FY2005 - FY2016)



Due to current capacity limitations, three reservation requests for approximately 217 homes, 120 apartment units, and 2 commercial retail units were put on hold in FY 2016. Additionally, one reservation request for 450 homes was denied in FY 2016.

2.3 Call Before You Dig

The purpose of SD1's Call Before You Dig Program is to protect underground assets by marking the ground where SD1 lines and easements exist, prior to construction activities by contractors, homeowners, and other utilities. By marking these assets prior to construction or any other disturbance, SD1 prevents unintended damage that could

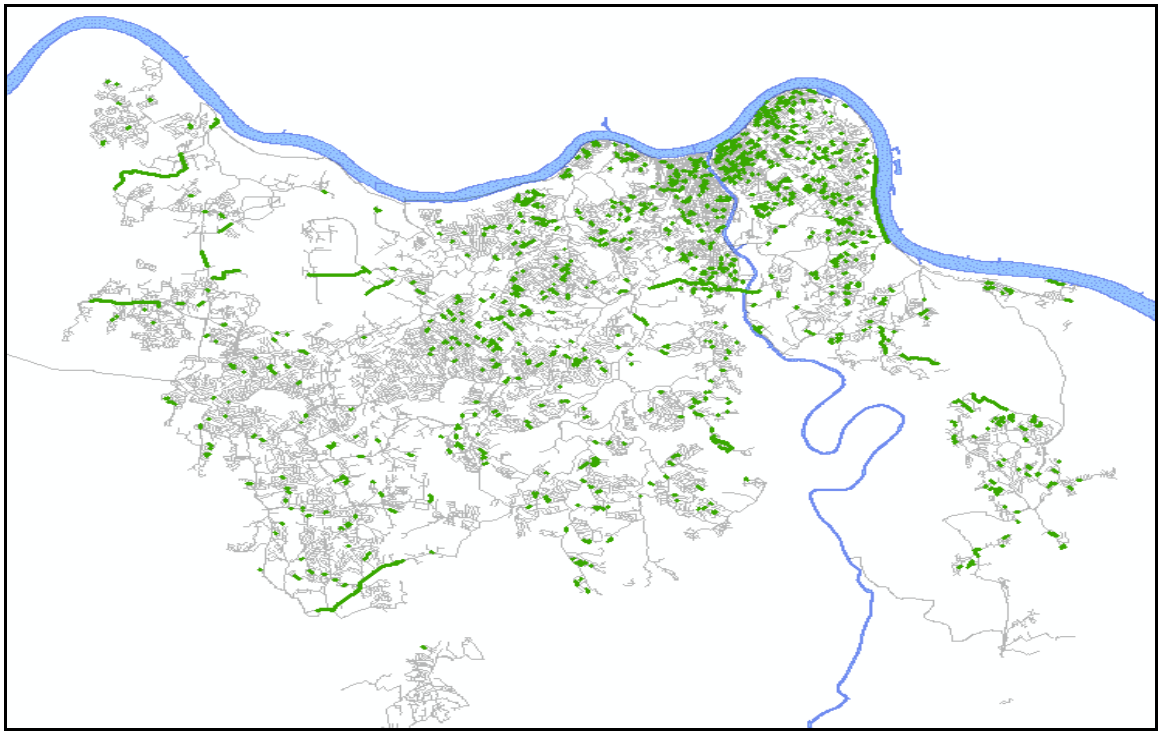
lead to line failures and SSOs. In compliance with the American Public Works Association Uniform Color Code, SD1 uses green paint to mark all sewers.

During FY 2016, SD1 received and responded to approximately 1,698 location requests, and marked approximately 2,065 assets. Table 2.2 provides the approximate total of line location requests received and assets marked by SD1 in the past five years. Figure 2.5 displays all the assets that were marked with green paint in FY 2016.

Table 2.2 Line Locations

Fiscal Year	Work Orders Complete	Assets Marked
FY 2011	688	1,220
FY 2012	1,194	2,722
FY 2013	955	2,520
FY 2014	966	2,226
FY 2015	1,465	2,701
FY 2016	1,698	2,065

Figure 2.5 Lines Located and Marked in FY 2016



2.4 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

2.4.1 Certified Tapper Program

SD1's formal Certified Tapper Program ensures that connections to the sanitary and storm sewer system are approved by SD1 personnel and are performed accurately based upon written specifications and procedures. Plumbers interested in becoming certified are required to attend training and pass a written exam. In addition, Certified Tappers must attend a recertification class offered by SD1 every three years. SD1 currently has 191 Certified Tappers representing 108 plumbing companies, two cities, and one utility. Of these 191 Certified Tappers, 28 became newly certified during FY 2015.

2.4.2 Violations and Fines

During FY 2016, SD1 issued seven violations and $3,500 in fines to seven companies for connecting to SD1's sewer system without obtaining the proper Capacity Permit or Sanitary Sewer Connection Application Permit. Table 2.3 provides the total amount of documented violations and fines issued since FY 2009.

Table 2.3 Capacity Connection Violations and Fines

Fiscal Year	Total Violations	Total Companies	Total in Fines
2009	6	6	$3,000
2010	8	7	$5,250
2011	9	6	$5,500
2012	7	3	$2,000
2013	19	8	$10,500
2014	23	14	$15,250
2015	3	3	$1,500
2016	7	7	$3,500
Total	**82**	**54**	**$46,500**

2.5 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 surcharge and 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 are periodically updated in the CMOM Annual Reports, in order to better reflect recordkeeping that was in progress during the initial production of the reports, but has since been finalized. No revisions to previous years have been made in this CMOM FY 2016 Annual Report.

2.5.1 Collection System Condition Assessment

Sewer Inspections

Table 2.4 outlines the amount of the system that has been assessed since the onset of the CSAP, through the end of the current reporting period. The table provides the initial and follow-up inspection footages over the first nine 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 the assets and criticality. Follow-up inspections are for pipes

that have already been initially inspected and found to need maintenance, requiring reinspection for post-maintenance assessment and a new condition score.

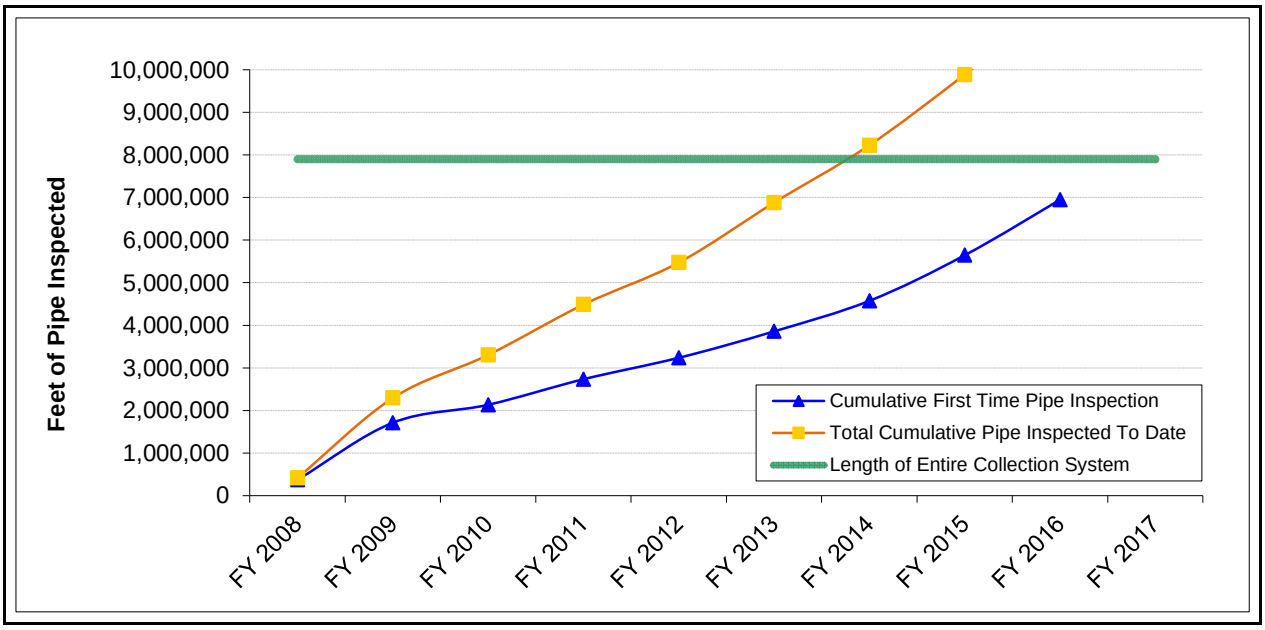
Table 2.4 Sewer Inspection Footage

	Initial Inspection Footage	Follow-Up Inspection Footage	Total Cumulative Footage
FY 2008	374,068	46,898	420,966
FY 2009	1,340,874	498,113	1,838,987
FY 2010	421,130	589,519	1,010,649
FY 2011	600,306	583,389	1,183,695
FY 2012	501,160	483,494	984,654
FY 2013	622,585	788,311	1,410,896
FY 2014	716,278	629,179	1,345,457
FY 2015	1,070,089	623,860	1,693,949
FY 2016	1,304,103	450,934	1,755,037
Total To Date	**6,950,593** (88% of system)	**4,693,697**	**11,644,290**

SD1's CMOM Self-Assessment, submitted on October 17, 2007, projected a 10-year target for condition assessment of SD1's existing assets at that time, approximately 7,900,000 feet of pipe. The projection was largely based on historical inspections and maintenance routines performed prior to the formal development of SD1's CSAP. As stated in the Self-Assessment, this goal requires continuous evaluation that may require an adjustment of the projected schedule. However, with approximately 88 percent of the system assessed at the end of FY 2016, SD1 has estimated that it will need to initially assess less than one million feet of pipe in FY 2017 to meet the initial ten-year target. Currently, SD1's projected initial inspection footage for FY 2017 is 351,000 feet.

Figure 2.6 displays SD1's progress toward meeting the 10-year schedule for condition assessment of the system, as of FY 2016. The green horizontal line on the graph indicates the footage of pipe that was initially set in the CMOM Self-Assessment for condition assessment.

Figure 2.6 Sewer Inspection Progress



RedZone Robotics

To meet the ten-year target for assessment of the system identified in the CMOM Self-Assessment, SD1 made strategic investments in new camera technology to help accomplish this aggressive goal on time. RedZone Robotics' Solo camera is the world's only unmanned condition assessment tool made for sewer inspections. Refer to CMOM FY 2014 Annual Report for a thorough description of the technology that's being utilized to meet this goal. Currently, SD1 is regularly operating four of the robotic cameras to increase annual inspection footage.

SD1 used the RedZone Solo cameras to capture approximately 870,341 feet of initial inspections, or 66 percent of all FY 2016 initial inspection footage.

Catch Basin and Manhole Inspections

SD1 has temporarily suspended its manhole inspection program for FY 2016 and FY 2017, due to budgetary constraints.

SD1 continually reviews its collected inspection data to adjust maintenance strategies. In the past, SD1 has aimed to inspect all public combined sewer system catch basins at least once per year, as recommended in the Nine Minimum Controls Guidance. With the data collected over the past eight years, SD1 is now able to confidently target catch

basins for inspections and cleanings where there are known recurring maintenance issues. Catch basins that are known to not experience recurring maintenance issues are now being inspected on a less frequent schedule. Catch basins are cleaned on an as-needed basis, as determined by the annual inspections. In addition to the as-needed cleanings, crews clean a set of approximately 400 catch basins annually that are assigned to specific preventive maintenance schedules that have proven to be effective. SD1 is currently evaluating how to incorporate its Lucity inspection and assessment records for catch basins into the CSAP for automatic forecasting of maintenance and repair schedules.

Table 2.5 summarizes the number of catch basins and manholes inspected since the onset of CSAP.

Table 2.5 Catch Basin & Manhole Inspections

Fiscal Year	Number of Catch Basin Inspections*	Number of Manhole Inspections
FY 2008 (January – June)	986	2,050
FY 2009	1,774	7,238
FY 2010	4,168	1,933
FY 2011	3,401	1,783
FY 2012	4,019	901
FY 2013	4,247	889
FY 2014	3,745	824
FY 2015	3,569	208
FY 2016	986	0
Total Inspections	**26,895**	**15,826**

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

2.5.2 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 2.6 provides an overview of the total length of pipe cleaned, in accordance with the CSAP cleaning program logic.

Table 2.6 Sewer Cleaning Footage

Period	Footage of Pipe Cleaned
FY 2008 (January – June)	113,695
FY 2009	439,191
FY 2010	737,613*
FY 2011	382,352
FY 2012	370,296
FY 2013	632,825
FY 2014	568,551
FY 2015	600,302
FY 2016	325,798
Total Feet Cleaned	**4,170,623**

**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 2016, SD1 cleaned 14,563 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 known recurring maintenance issues, such as grease, roots, and

debris. SD1's permanent PM cleaning list will continue to evolve as new inspection data are collected and corrective actions are assigned.

Sewer Line Rapid Assessment Tool (SL-RAT)

SD1 made further investments in sewer assessment technology in FY 2015. The Sewer Line Rapid Assessment Tool (SL-RAT) is a portable and very easy to deploy tool, composed of one transmitter and one receiver, which sends, receives, and interprets acoustic signals in a pipe. The SL-RAT is designed to listen for and assess the presence of blockages in pipes that are 12 inches or less in diameter. Typical assessments take less than three minutes to perform. SD1 is currently using the SL-RAT to evaluate if the automated scheduling of maintenance next actions by the CSAP is valid. The SL-RAT provides a much more efficient method of refining the CSAP scheduling logic than the conventional deployment of resource-intensive and time-intensive CCTV crews. In FY 2016, SD1 assessed more than 290,000 feet of pipe that had been identified for next action, using the SL-RAT, and determined that approximately 41,995 needed immediate action. This valuable assessment data allows SD1 to make adjustments to the complicated automation of the CSAP logic and wisely manage vactor-truck deployments. SD1 projects to assess approximately 245,000 feet of next action pipe, per year.

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 2016, SD1 removed an estimated 985 cubic yards of debris from catch basins, more than double the average of the seven previous years. Additionally, an estimated 33 cubic yards of debris were removed from grit pits.

Table 2.7 provides the estimated total cubic yards of debris removed from the collection system since mid-FY 2009.

Table 2.7 Cubic Yards of Debris Removed from Catch Basin & Grit Pit Cleanings

Activity	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Total
Catch Basin Cleanings	149	433	629	527	367	455	486	985	**4,031**
Grit Pit Cleanings	237	362	330	400	468	355	210	33	**2,395**
Total Yards[3] Removed	**386**	**795**	**959**	**927**	**835**	**810**	**696**	**1,018**	**5,408**

Rehabilitation and Replacement

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

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

Table 2.8 provides the rehabilitation and replacement activities performed by SD1's internal construction crews and contractors since the onset of the CSAP through the end of the FY 2016. These activities do not include capital improvements.

Table 2.8 Rehabilitation & Replacement Activities

Activity	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	Grand Total
Feet of Sewer Lines Repaired or Replaced	11,608	17,944	29,239	19,500	18,508	21,051	6,122	6,371	6,893	**137,236**
Feet of Sewer Lines Rehabilitated (CIPP)	1,081	3,204	12,872	64,715	65,757	38,129	43,026	28,237	41,185	**298,206**
Number of Manhole Repairs	548	370	317	321	774	299	258	154	277	**3,318**
Number of Manhole Replacements	35	63	80	60	89	33	19	10	22	**411**
Number of New Manhole Installations	16	53	40	36	57	34	14	9	30	**289**
Number of Catch Basin Repairs	68	115	71	209	292	21	56	63	65	**960**
Number of Catch Basin Replacements	81	209	203	116	100	54	28	23	13	**827**
Number of New Catch Basin Installations	0	4	2	3	3	3	6	0	0	**21**

2.6 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 are preformed to ensure that all stations are operating at maximum efficiency.

2.6.1 Pump Station Maintenance

In FY 2016, SD1 completed a total of 13,780 pump station inspections and approximately 1,250 pump station PM inspections. Additionally, more than 5,100 inspections of generators and stand-by pumps were performed. The routine PM inspections include, but are not limited to:

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

2.6.2 Bromley Pump Station Study

The Bromley Pump Station, pictured in Figure 2.7 on the following page, was constructed circa 1977 as a wet-well/dry-well station. It serves SD1's entire combined sewer area. Portions of the pump station have been upgraded since its original construction, including screen replacement, odor control, and HVAC improvements. Some electrical work was completed in 2000, and in 2003 the present electrical feed platform was constructed. Repairs to motors and replacement of volutes were completed in 2014.

Due to its size and tributary service area, the Bromley Pump Station and force main are considered critical assets to transporting wastewater to the Dry Creek Wastewater Treatment Plant. SD1 began tasks for a master plan for the Bromley Pump Station in 2012, addressing immediate needs. The master plan is divided into three priorities, as listed below, to focus on the most urgent needs initially, while planning for the future.

- Tier 1 – Immediate Needs
- Tier 2 – Operations and Maintenance / Short-Term Improvements
- Tier 3 – Long-Term Improvements

SD1 is mid-way through the initial Tier 2 Tasks related to improved operations and maintenance, as well as short-term improvements to the station and force main. Goals include maximizing flow to the Dry Creek WWTP by first testing station operations and monitoring flow, pressure, voltage, and amp draw. Based on the pump amp draws and test results, the ongoing study will evaluate and recommend various operational

scenarios, including operating two large and one small pump, or operating all four pumps simultaneously.

Figure 2.7 Bromley Pump Station

2.7 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 4: Grease Control Program). This program meets the Clean Water Act pretreatment regulations and complies with the National Pollution Discharge Elimination System permit.

2.7.1 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 2016 with a total of 52 permitted Significant Industrial Users in its collection system.

2.7.2 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 2016, a total of 51 inspections were conducted. Of the 51 inspections performed, 43 were routine annual inspections, four were due to foaming events, three were surprise inspections, and one was an initial inspection.

SD1 has an Enforcement Response Plan in place to address each violation. Typically, the first Notice of Violation (NOV) issued is verbal. The second NOV is written. Each subsequent NOV includes a fine. Fines can range anywhere from $500 to $1000 depending upon the violation. Most issues are resolved before escalating to fines. If problems persist, an industry is put on a compliance schedule. During FY 2016, SD1 issued 43 NOVs and 12 written notices with fines totaling $7,500. Refer to Appendix B for a summary report describing these violations in more detail.

2.8 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 2016, the 17 sites within the East Basin were sampled. These site revisits included biological and habitat assessments, base flow water quality samples, and where appropriate, hydromodification surveys. Additionally, two base flow and one wet-weather event were sampled for the entire Northern Kentucky portion of the Ohio River (river miles 444-518). SD1 continues 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.

2.9 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 C provides the current organization charts for SD1.

2.10 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.

2.10.1 Improved Bill Payment Options for Customers

SD1's customers expect the convenience of interactive technologies to pay their bills. In FY 2016, SD1's Customer Contact Center implemented new bill payment options to improve and enhance its customers' overall experience. New payment choices offer convenient, around-the-clock payment options through the newly implemented billing system called Paymentus. The improvements that Paymentus provide are listed below.

- 24-hour, 7-days-a-week automated phone payments
- Online customer portal to account management
- One-time online payment option, without registering
- Payments through a free mobile application available to iOS/Android users
- Enhanced e-billing and automatic checking account withdraws for payment

With this upgrade of the payment system, SD1 has reduced the call volume for its agents and reduced wait time for its customers. Additionally, the number of delinquent accounts has been reduced, which in turn provides a more reliable and steady revenue stream.

Figure 2.8 demonstrates the decline in customer call volume since the implementation of Paymentus in April of 2016, as indicated by the vertical green line.

Figure 2.8 Customer Call Volume Reduction with New Payment Options

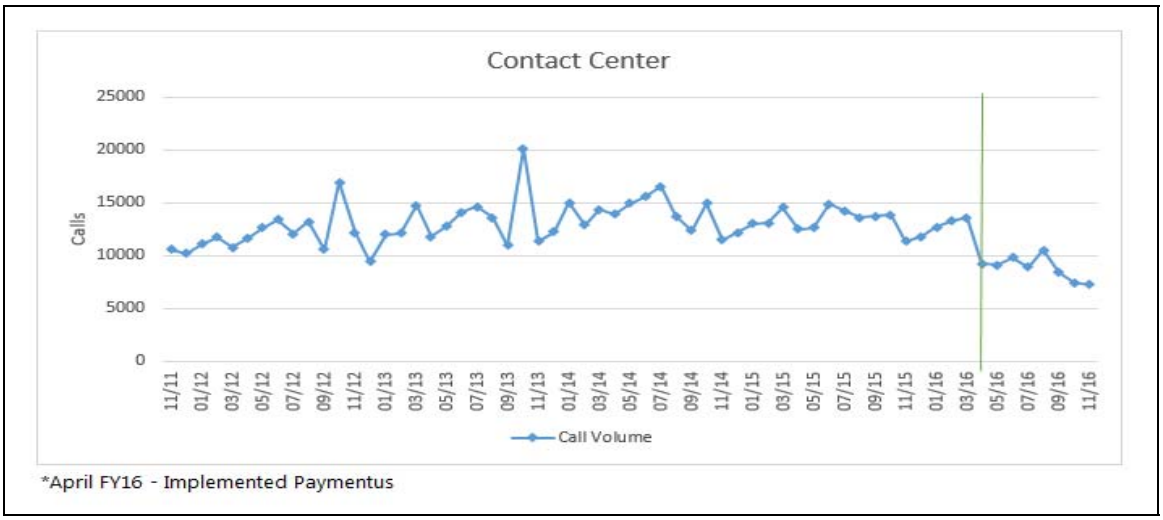
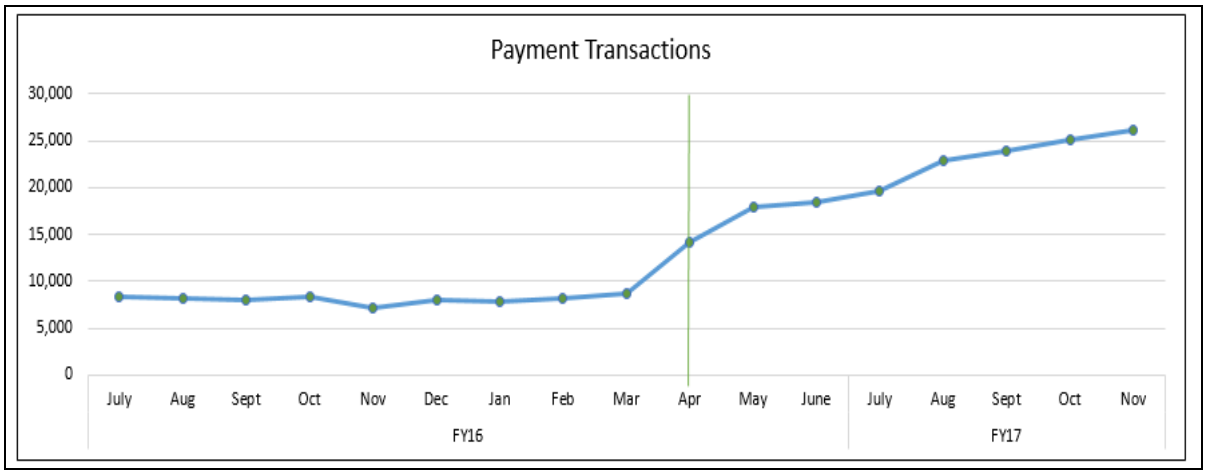


Figure 2.9 demonstrates the increase in automatic transactions since the implementation of Paymentus in April of 2016, as indicated by the vertical green line.

Figure 2.9 Increased Transactions with New Payment Options



2.10.2 General Public Education Efforts

As a routine part of SD1's communication efforts, educational information is published in county-specific publications and distributed in SD1 bill inserts. SD1 developed a number of informational and educational pieces in FY 2016, such as:

- Education material published in seven issued of What's Happening (publication)

- Be Winter Ready: Tips for Buying and Applying De-Icer (bill insert)
- Managing Your SD1 Account Just Got Easier (bill insert)
- Average Annual Water Usage Reflected on Your May Bill (bill insert)
- Properly Draining Your Swimming Pool (fact sheet)
- New Customer Information with updated payment options (brochure)

Refer to Appendix D for examples of these educational materials.

Additional customer outreach efforts in FY 2016 include:

- As a member of the Regional Storm Water Collaborative, SD1 participated in an on-air interview on the 55 WKRC Radio Car Show with Dale Donovan, to discuss ways to reduce pollution through proper car care. There were approximately 20,500 listeners during this show in October 2015. The collaborative also developed a radio ad discouraging homeowners from placing fallen leaves along the curb. The ad instead instructed them to mow over the leaves and use them as mulch and fertilizer. The ad also sent listeners to www.meanmower.com for more lawn care tips.
- In January 2016, SD1 launched the Navigo Scholars Futures Program, a special collaborative mentoring program giving thirteen high school students a unique experience structured around their interest in the environment. This mentoring program was developed to aide students with career exploration by exposing them to a variety of environmental careers and providing hands-on experiences.
- As a result of the new payment options that were launched in April 2016, all content on the SD1 website was edited and updated to be more customer-friendly.

2.10.3 Environmental Education

In 2003, SD1 partnered with local school districts to develop and implement an "Environmental Unit." The unit currently includes five one-hour lessons, including topics such as point and non-point source pollution, watershed management, wetlands and best management practices. It has been incorporated into nearly every fourth-grade classroom in Northern Kentucky, reaching over 5,000 students every year. SD1 offers to

teach the first of five lessons. In FY 2016, SD1 employees directly taught the first lesson to approximately 1,170 students.

Upon completing the five-lesson unit, schools have the option of visiting SD1's Public Service Park for a hands-on field trip. The park features more than ten Best Management Practices (BMPs) for controlling storm water runoff. In FY 2016, more than 900 students and chaperones toured the facility.

This program provides early learning for lifelong practices. Through this learning experience and hands-on interaction, children and adults learn and get excited about making positive changes that directly impact the quality of the environment and their community.

2.11 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

2.11.1 Private Service Lateral Repair Policy

At the beginning of FY 2016, a formal policy was adopted as an interpretation of Article 7, Section 701, 1.G, of SD1's Rules and Regulations, which states:

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

The newly adopted policy reestablishes SD1's authority to repair failures of private service laterals that are beneath the public roadway. An excerpt of the current lateral repair policy is provided below to summarize recent revisions. The full history and the current language of this frequently-revised policy and can be found in Appendix E. Also provided in Appendix E are a fact sheet and an agreement form.

Excerpt of Lateral Repair Policy

At the July 16, 2013 Board Meeting, the Board of Directors voted, because of insufficient funds, to repeal the SD1 Sewer Lateral Repair Policy and SD1 no longer repaired private laterals under the roadway.

At the June 29, 2015 Judges Executive Meeting, the County Judges Executive allocated funds with approval of the annual budget and reestablished the Sewer Lateral Repair Policy as originally adopted by the Board of Directors at the August 19, 2008 Board Meeting with one exception. The budget Resolution passed by the Judges Executive included a new provision requiring the owners of public roadways to provide all surface restoration services once the lateral repairs have been made including, but not limited to, pavement restoration along with the replacement of any associated curbs, sidewalks and drive aprons.

At the July 21, 2015 Board Meeting, the Board of Directors approved reestablishment of the Sewer Lateral Policy following the policy adopted by the Board on August 19, 2008, but modified to provide that repair of the public roadway is the responsibility of the Public Roadway Owner. The new Sewer Lateral Policy states as follows:

> The owner of the premises, served by a sewer, shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer**.** However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Repair Policy, that the private sewer lateral is not functioning as a result of a problem occurring in a section of the private lateral located beneath the public roadway, and which cannot be corrected through

routine sewer cleaning or similar maintenance activities; then SD1 will repair the problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner. The Public Roadway Owner, where the private lateral was repaired, will be responsible for all surface restoration including, but not limited to, pavement restoration as well as the replacement of any associated curbs, sidewalks and drive aprons.

Result of New Lateral Repair Policy

Pursuant to the newly adopted Sewer Lateral Repair Policy, in FY 2016 SD1 assessed approximately 114 private service lateral failures and repaired approximately 94 that were below the public roadway. The lateral repair program has also been funded for FY 2017.

2.12 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.

2.12.1 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 2016 Safety Training Calendar is included in Appendix F. The calendar is posted to SD1's intranet, and monthly email notifications are sent to SD1 employees to notify them of upcoming trainings and mandatory attendance requirements. Attendance

at safety training classes is tracked with Halogen performance management software to ensure that each employee meets his or her annual safety training requirements.

2.12.2 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 2016.

Table 2.9 Safety Program Performance

Performance Metric	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
OSHA Recordables	10	15	19	6	8	8	27	23	16
Worker Compensation Claims	10	9	10	9	7	5	34	37	16
Friendly Reminders Issued	18	1	8	6	5	2	10	0	14
Safety Violations Issued	3	0	4	1	4	1	1	1	6
First Aids	17	17	21	23	22	5	7	6	16
Site Safety Audits	104	348	222	235	192	253	874	764	282

2.13 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.

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 10,730 hours of training (an average of 42.5 hours per person), during FY 2016.

(Refer to Section 3.1.1 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.)

SECTION 3. SORP

3.1 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.

3.1.1 SORP Training

SD1 held annual SORP trainings between March and November of 2016. Approximately 117 operations-level employees attended these trainings, and were issued a standard operating procedures handbook, if needed. Personnel in Collection Systems and Plant and Pump Station Operations are required to attend a one-hour training course annually, as well as periodic refreshers throughout the year. The SORP initially required SD1 operations-level employees to attend a seven-hour course, annually. However, after seven years of intensive SORP trainings, it has been determined that an annual one-hour course is sufficient. Operations-level employees also receive continuous hands-on training from supervisors in the field, during actual overflow response events.

3.1.2 SORP Annual Review

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

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

SD1 conducted its annual review meeting on November 08, 2016, and determined that there are no material modifications to the SORP for FY 2017. Minor updates include personnel and scheduling changes, and one new standard operating procedure for initiating wet-weather SSO inspections. SD1 conducted its FY 2016 meeting on November 09, 2015 and documented minor revisions in the CMOM FY 2015 Annual Report, submitted on December 31, 2015.

New Standard Operating Procedure for Initiating Wet-Weather SSO Inspections

During FY 2016, SD1's Collections Systems, Infrastructure and Capital Planning, and GIS Departments collaborated to improve the method of initiating wet-weather SSO inspections.

SD1's initial approach to initiating inspections of recurring wet-weather SSOs, as outlined in the approved SORP, relied on average threshold rain events of one inch, two inches, and three inches for each of the three counties of Northern Kentucky. The original method has been replaced with a more refined geographic method that relies on weighted averages across sewersheds and fewer threshold events.

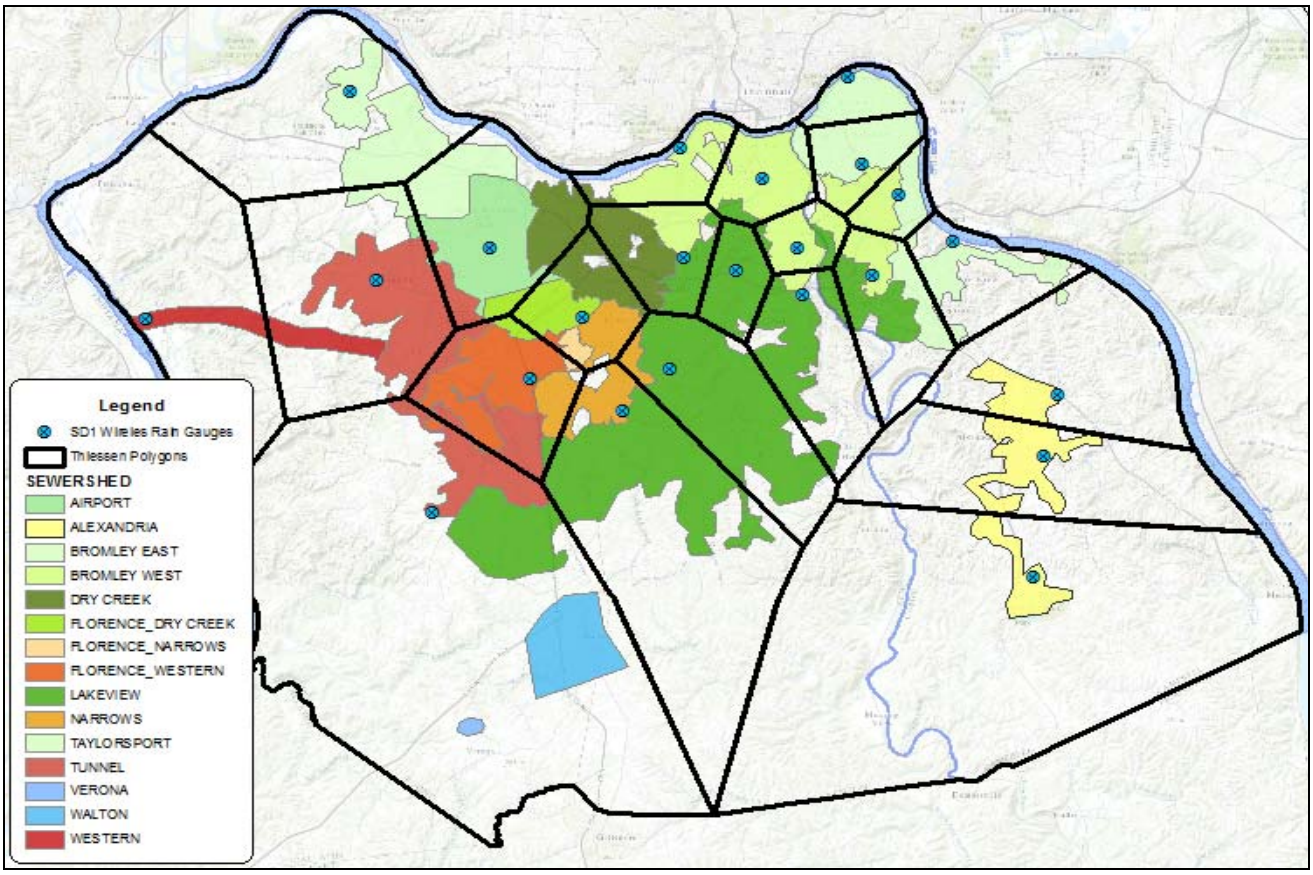
A single-point precipitation measurement is often not representative of the precipitation that has fallen over an entire area. However, a network of point measurements can provide a better representation of the true precipitation over a given area. One technique for converting point precipitation measurements to an areal estimate is the Thiessen polygon method. This is one of the preferred geographical techniques for calculating weighted precipitation averages of the National Oceanic and Atmospheric Administration and the National Weather Service.

Thiessen polygons are polygons whose boundaries define the area that is closest to each point, relative to all other points. They are mathematically defined by the perpendicular bisectors of the lines between all points.

As illustrated in Figure 3.1, SD1 has created Thiessen polygons representing 23 wireless rain gauges that are permanently maintained across the service area. The Thiessen polygons are used to convert the point precipitation measurements collected by the wireless rain gauges to areal rainfall estimates for 15 sewersheds. Recurring wet-weather SSOs inspection routes are now assigned to each sewersheds, using a one-inch or two-inch rain event threshold, per the weighted averages of the overlaid

polygons. Previously, inspection routes were assigned to each of the three counties and initiated by average rainfalls per county. By eliminating the three-inch threshold for initiating inspections, SD1 has ensured that infrequent SSOs in drier years are being evaluated more thoroughly. These revisions of the routes and the initiation method make for a more efficient and effective inspection program that is based upon proven geographic principles, instead of political boundaries and rare rain events.

Figure 3.1 Thiessen Polygons of Rain Gauge Network Used for Areal Estimation of Precipitation to Initiate Wet-Weather SSO Inspections



3.1.3 SSO Reporting

The SORP describes SSO Reporting and Notification. On a quarterly basis, 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. 36, submitted on October 30, 2016.

SECTION 4. 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.

SD1 met the deadline for completion of all required tasks by January 8, 2012, and is currently tracking the remaining on-going tasks as part of its regulatory compliance measures.

4.1 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.

4.1.1 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 demonstrate the record keeping

requirements during an annual or surprise inspection is a violation of the Food Service Discharge Permit and SD1 Rules and Regulations and subject to enforcement actions.

4.1.2 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 are 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 2016, approximately 29 plans for GCE installations were reviewed and 30 permits were issued by SD1.

Table 4.1 provides an annual summary of plans reviewed and permits issued, since the effective date of the FOG Management Policy.

Table 4.1 GCE Plans Reviewed & Permits Issued

Period	Plans Reviewed	Permits Issued
FY 2012	10	23
FY 2013	53	52
FY 2014	45	58
FY 2015	36	50
FY 2016	29	30
Total	**173**	**213**

4.2 Inspections

4.2.1 Permitting Inspections

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

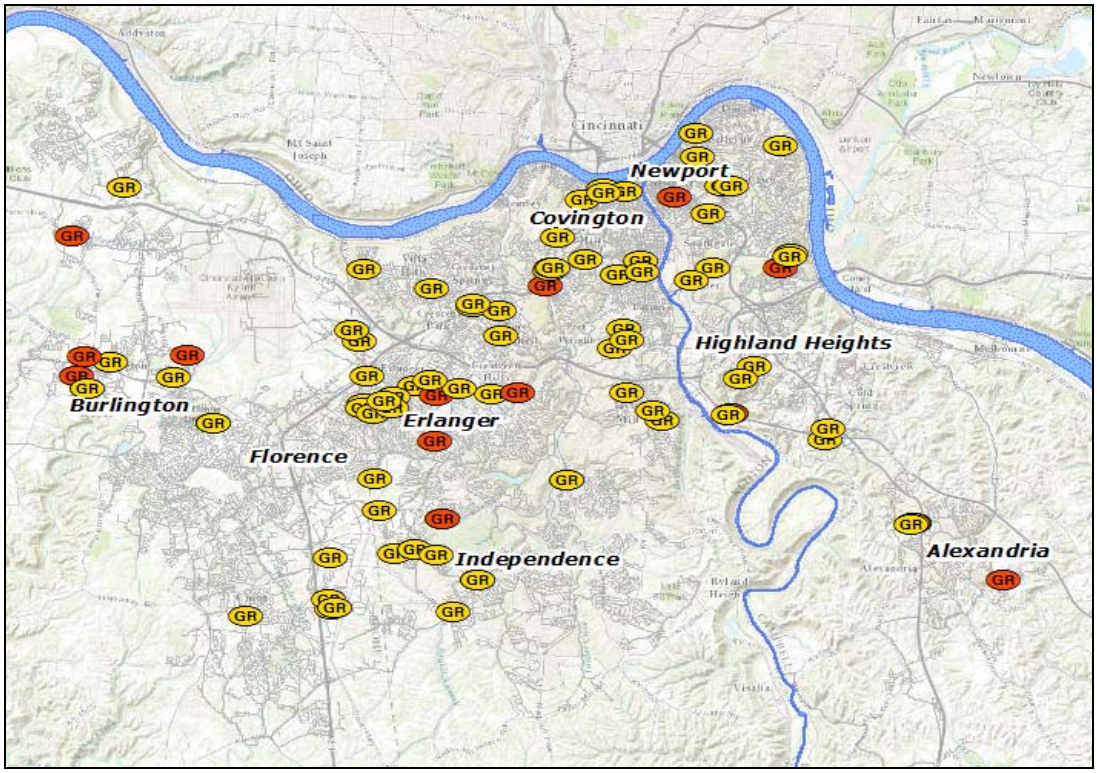
Sewer Inspection Data

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

Figure 4.1 illustrates the current CCTV observations across the SD1 service area where grease restrictions exist. There are approximately 79 locations that have been observed to have a 30-to-50 percent restriction in the pipe (yellow) and approximately 12

locations that have been observed to have a restriction greater than 50 percent in the pipe (red).

Figure 4.1 Observed Grease Restrictions



4.2.2 Compliance Inspections

SD1 permitted 30 new FSEs throughout the service area, and 14 existing FSEs closed during FY 2016, bringing the total of permitted FSEs to 191. Within one year of a permit's issue date, at least one follow-up inspection is conducted at each permitted FSE. In FY 2016, SD1 issued 14 Notice of Violations (NOV) for non-compliance with the Food Service Discharge Permit to 14 FSEs. A complete FY 2016 violations summary report of permitted FSEs can be found in Appendix G.

4.3 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 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 4.2.

Table 4.2 Grease Disposed at Dry Creek Wastewater Treatment Plant

Fiscal Year	Gallons of Grease
2008	555,833*
2009	43,649
2010	108,300
2011	161,150
2012	234,210
2013	185,575
2014	194,325
2015	163,645
2016	203,400
Total	**1,850,087**

*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.

4.4 FOG Education

4.4.1 FSE Compliance Workshop

SD1 has created appropriate training materials to educate FSEs and their employees on best management practices, permit requirements, and applicable rules and regulations. A representative from all permitted FSEs is required to attend a training workshop. SD1's current FSE compliance training workshop is being coordinated through the Northern Kentucky Health Department's monthly Food Service Managers Workshop, which is a required program for all FSEs in Northern Kentucky. This coordination provides a cost-effective and efficient way for SD1 to ensure that all FSEs, even those not currently permitted, are being trained. FSEs must have at least one trained employee on duty, per shift. During FY 2016, approximately 1,200 food service managers attended the workshop and received information on the FOG program.

4.4.2 General Education

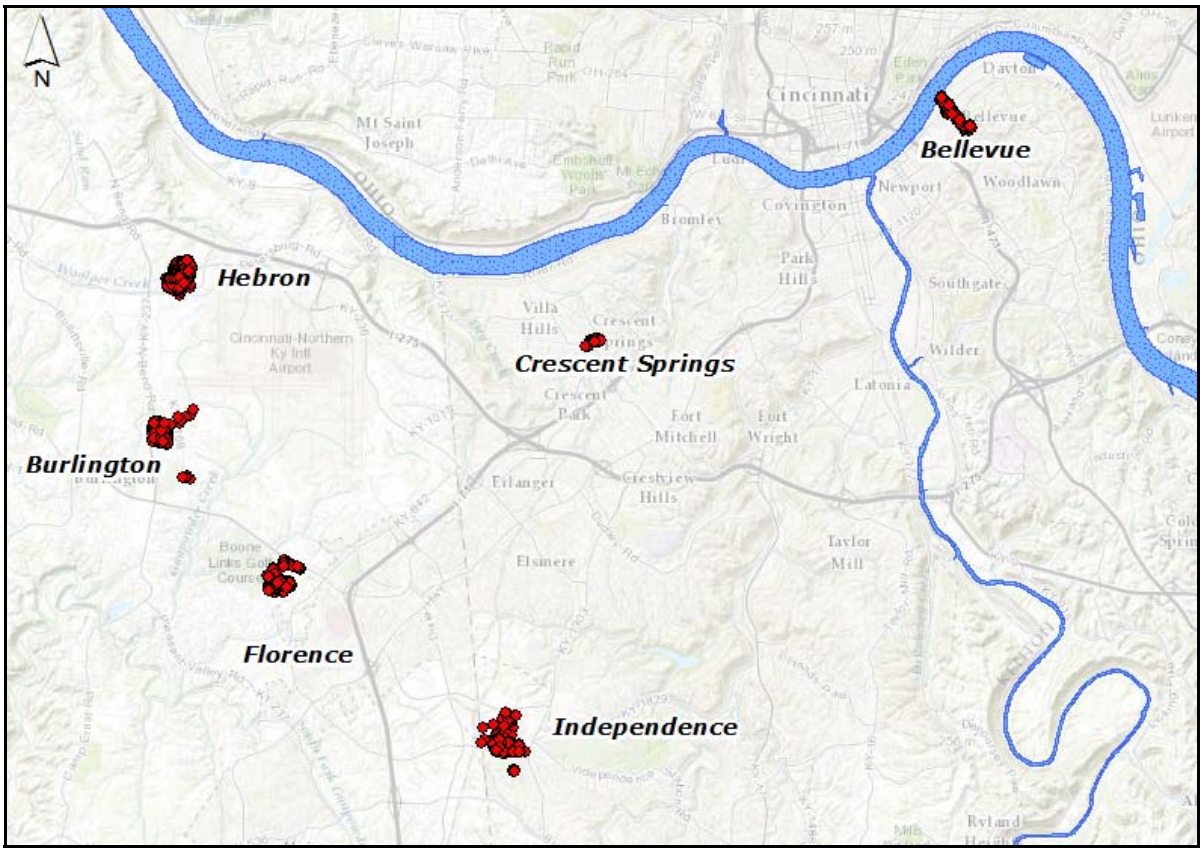
SD1 uses various communication pieces throughout the year to inform and educate private residences on the harmful effects of FOG in sewer lines and the proper grease handling techniques that can be used to minimize the release of FOG into the collection system. This information is distributed through 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 2016, SD1 mailed approximately 808 letters to residents in areas that have experienced overflows that were caused by excessive build-up of grease. The standard letter alerts residents that an overflow occurred, educates the residents about the effects of fats, oils, and grease on the collection system, and clarifies proper disposal methods.

Figure 4.2 illustrates, in red, the properties that SD1 mailed FOG education material to, following downstream SSOs related to grease blockages.

Figure 4.2 Properties that Received FOG Education Material in FY 2016



4.5 Performance Indicators

Table 4.3 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 a correlation between the amount of pipe on a PM cleaning list for grease and the increase in the number of SSOs and building backups. In FY 2015, SD1 recorded double the grease-related SSOs and backups than the previous year, which resulted in an 80 percent increase of the amount of pipe assigned to a grease PM schedule. The apparent result of the more aggressive grease PM cleaning schedule set in FY 2015 is 35 percent less grease-related SSOs and backups in FY 2016 from the previous year. The footage of pipe assigned to a PM for grease in FY 2016 is approximately 7,958.

Table 4.3 Grease Control Program Performance Indicators

Performance Indicator	FY 08	FY 09	FY 10	FY 11	FY 12	FY 13	FY 14	FY 15	FY 16
Linear Footage on a PM Cleaning List, due to Grease	82,000*	4,326	4,326	4,892	4,945	5,465	7,656	13,721	7,958
Number of SSOs due to Grease	4	17	10	7	5	4	6	12	7
Number of Building Backups due to Grease (Trouble Calls)	2	5	7	7	7	6	4	8	6

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

SECTION 5. PUMP STATION BACKUP POWER

SD1 received regulatory approval of the Pump Station Operation Plan for Backup Power on May 14, 2009, and completed the 110 required backup power projects before the December 31, 2015 Consent Decree deadline. For a detailed summary of the completed schedule, refer to Appendix H.

SECTION 6. SELF-ASSESSMENT

SD1 performed an extensive self-assessment of each CMOM program in mid-2007, involving approximately 75 employees in a series of interviews and team planning workshops. During the process, SD1 employees identified nearly 100 improvements to SD1 operations that would help achieve regulatory compliance and reduce SSO and CSO occurrences throughout the service area. SD1 has completed or found better alternatives to all of the original recommendations of the 2007 CMOM Self-Assessment.

Since the original CMOM Self-Assessment, SD1 has continued to perform self-assessments to improve its performance in meeting the needs of its customers and the obligations of its Consent Decree. In January of 2013, SD1 developed a five-year Strategic Business Plan (SBP) for the organization. The SBP relied heavily upon employee input, similar to the original 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 SBP and a few of the active project initiatives in FY 2016.

6.1 Strategic Business Plan

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

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

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

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

6.1.1 SBP Initiatives

During FY 2016, SD1 made progress on several initiatives that align with the goals of the SBP. The following are brief summaries of just a few of the initiatives currently underway.

Career Coaching

Multiple SD1 teams and managers created a comprehensive career coaching program that is intended to supplement and enhance annual performance evaluations. The goal of this project is to develop a high performing, collaborative workforce that is engaged,

motivated, and dedicated. Career coaching will help managers and supervisors guide development of their teams through informal sessions that build relationships based on good communication and honest feedback. Employees are expected to share their career goals with their managers and help identify paths to achieving those goals. Managers are expected to give sound career advice and encouragement to their direct reports. In FY 2016, SD1 provided multiple workshops to its managers to train them in effective career coaching techniques and strategies.

Data Breach Response Plan

SD1 uses electronic data systems and web-based applications to store and process information that is critical to the operation of the utility. In order to ensure business continuity and operational reliability during both routine and emergency situations, a Data Breach Response Plan has been developed. The plan provides employees with instructions on how to respond to potential or actual security breaches of SD1's information infrastructure. The plan also identifies data security best management practices to meet Kentucky compliance standards. The defined actions, point of contacts, timelines, and checklists provided in the plan establish essential protocols for responding to a data breach. Additionally, guidance has been developed for third-party vendors to ensure their compliance with the plan. This SBP initiative is a part of a larger Information Technology Master Plan that will continue to be developed and implemented throughout FY 2017. More details on this and other IT improvements will be provided in the Information Management Systems (IMS) section of the CMOM FY 2017 Annual Report, due on December 31, 2017.

Significant Industrial User Liaison

SD1 is committed to providing top-notch service to all of its customers. To better understand and meet large commercial customers' needs, multiple employees from the Customer Care Center have been assigned to engage with and visit the sites of SD1's permitted significant industrial users. This interaction helps SD1's customer service representatives understand the processes and unique facilities of customers that rely on large volumes of water for the operation of their businesses. It also provides the customer with a single point of contact to deal with complicated billing issues.

Stakeholder Support Master Plan

The Stakeholder Support Master Plan project is an SBP initiative to help improve the exchange of information with key community contacts. The ultimate goal of the project is

to improve the support and customer service that SD1 delivers and receives. By providing stakeholders with information about the utility in a format that works for them, SD1 can improve their understanding and retention of these services. Additionally, SD1's stakeholders should start to see the value of their support, and the impact that support can have on the larger community. As of December 2016, a team working on this project has completed an internal stakeholder assessment and narrowed the target stakeholders to three key groups: cities and counties receiving service, associations and commissions, and local environmental groups. The team has also surveyed other utilities across the nation to learn best practices for stakeholder engagement. Next steps may include conducting an external stakeholder assessment in order to develop a management structure for engagement efforts, and refining communication methods and messaging.

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

APPENDIX A:

Maps of Sanitary and Storm Service Areas

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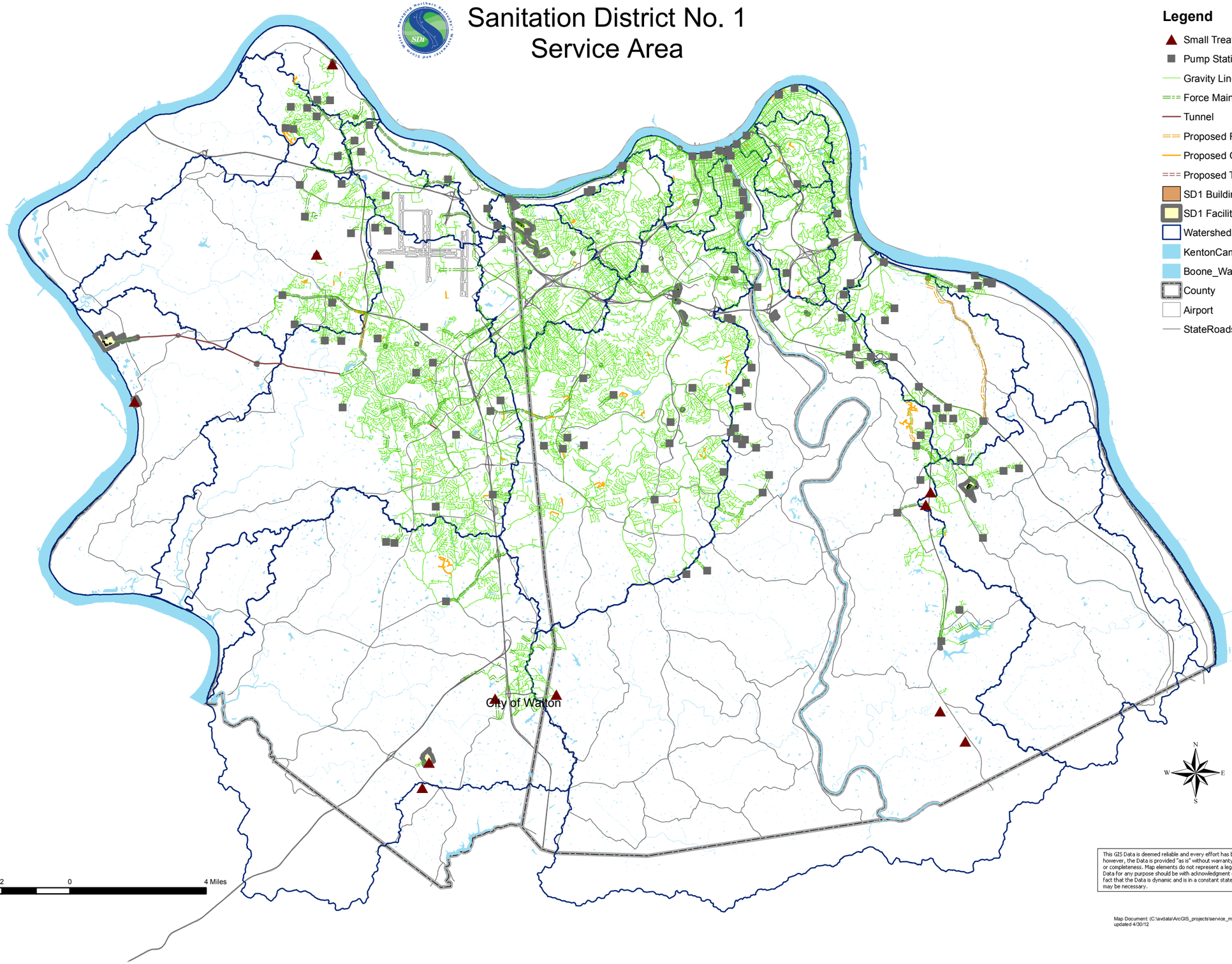
Sanitation District No. 1
Service Area



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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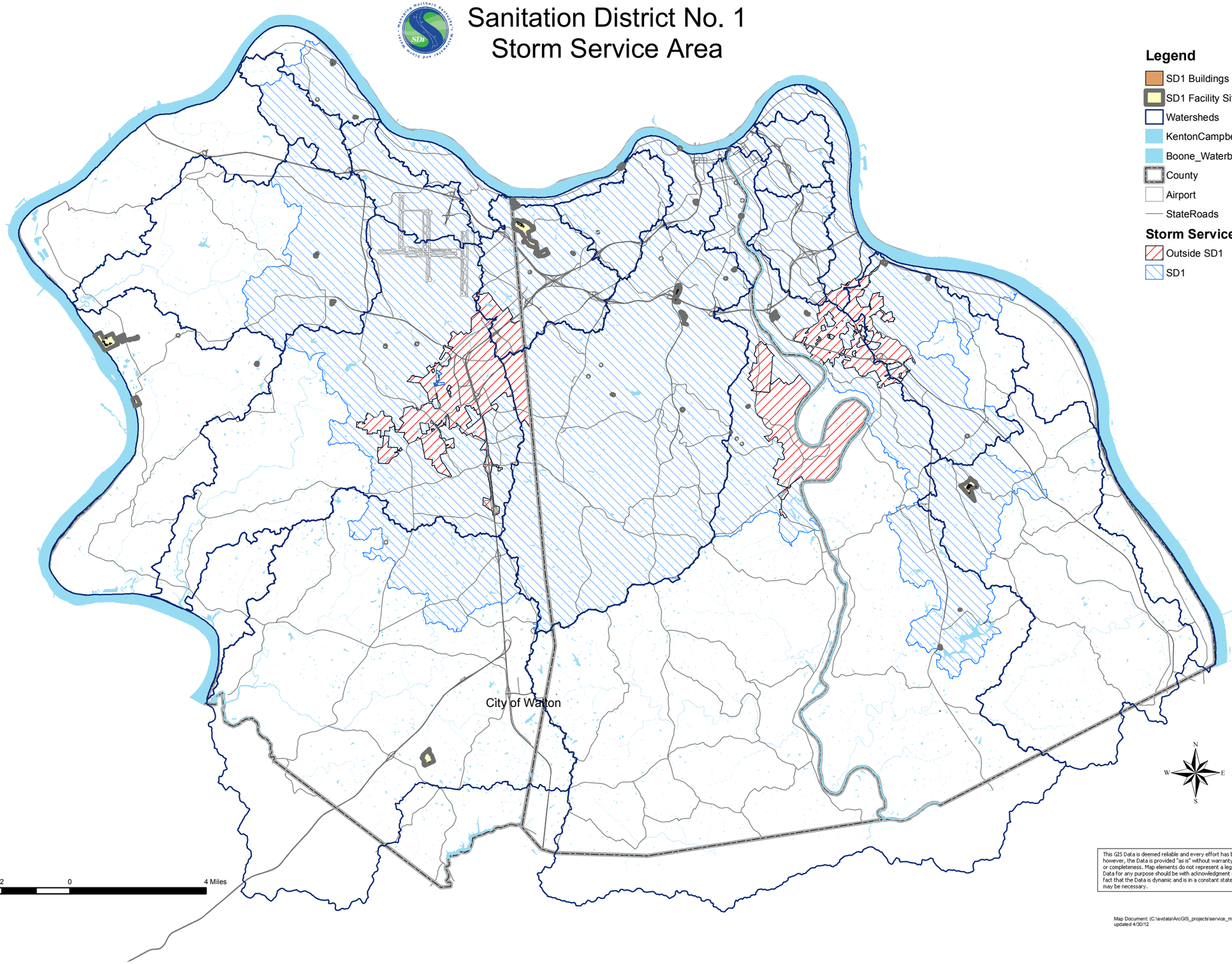
4 2 0 4 Miles

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 2016 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: **IND-00014** **Camco Chemical Co. Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
On October 22, 2015 a grab sample was collected by SD1 and had a concentration of 60.4 mg/L for grease & oil hydrocarbon. This is over the daily maximum limit of 50.0 mg/L	NC-P	12/14/15	W	01/28/16	Written Notice of Violation (NOV)	$0.00
Non-compliance parameter violation - Oil & Grease, Hydrocarbons The Technical Review Criteria (TRC) daily limit was exceeded in a self monitoring sample taken on 1-20-16. The result was 158 mg/L while the daily limit is 50 mg/L.	NC-P	01/20/16	W	03/01/16	Written Notice of Violation (NOV)	$0.00
Non-compliance parameter violation - Oil & Grease, Hydrocarbons The Technical Review Criteria (TRC) daily limit was exceeded in a self monitoring sample taken on 1-21-16. The result was 102 mg/L while the daily limit is 50 mg/L.	NC-P	01/21/16	W	03/01/16	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: **IND-00014** **Camco Chemical Co. Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Oil & Grease, Hydrocarbons Technical Review Criteria (TRC) Non-Compliance. The TRC daily limit was exceeded in sample AC90300 on 3/16/2016. The result was 329 mg/L while the daily limit is 50 mg/L.	NC-P	03/16/16	W	06/16/16	Written Notice of Violation (NOV)	$0.00
Oil & Grease, Hydrocarbons Technical Review Criteria (TRC) Non-Compliance. The TRC daily limit was exceeded in sample AC90359 on 3/18/2016. The result was 225.5 mg/L while the daily limit is 50 mg/L.	NC-P	03/18/16	W	06/16/16	Written Notice of Violation (NOV)	$0.00

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

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

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

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to Maintain pH Pretreatment System on numerous days during the months of July and August. System was not maintained for a period of time at least once on the following days. 7-15 through 7-25-15, 7-27 through 8-1-15 and	NC-O	07/15/15	WF	08/26/15	Written Notice of Violation (NOV) and fine.	
pH < 6 from 1033 to 1156	NC-P	07/23/15	WF	08/26/15	Written Notice of Violation (NOV) and fine.	$1,000.00
pH <6/<5	NC-P	07/24/15	WF	08/26/15	Written Notice of Violation (NOV) and fine.	
pH < 6/<5	NC-P	07/25/15	WF	08/26/15	Written Notice of Violation (NOV) and fine.	
pH <6/<5	NC-P	07/30/15	WF	08/26/15	Written Notice of Violation (NOV) and fine.	
Failure to Maintain pH Pretreatment System	NC-O	08/06/15	WF	10/28/15	Written Notice of Violation (NOV) and fine.	$750.00
Failure to Maintain pH Pretreatment System	NC-O	08/07/15	WF	10/28/15	Written Notice of Violation (NOV) and fine.	

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to Maintain pH Pretreatment System	NC-O	08/08/15	WF	10/28/15	Written Notice of Violation (NOV) and fine.	
pH Self Monitoring Report Late	NC-R	10/11/15	V	10/15/15	Verbal Notice of Violation (NOV)	$0.00
pH > 11 for 27 minutes, pH > 12 for 23 minutes	NC-P	10/12/15	WF	12/22/15	Written Notice of Violation (NOV) and fine.	$1,000.00
pH > 11 for 31 minutes	NC-P	11/23/15	WF	12/22/15	Written Notice of Violation (NOV) and fine.	
pH > 10 for greater than an hour	NC-P	01/13/16	WF	03/14/16	Written Notice of Violation (NOV) and fine.	$1,000.00

Permit: **IND-00026** **Lingo Manufacturing Co., Inc.**

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

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

Permit: **IND-00026** **Lingo Manufacturing Co., Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to notify Control Authority of regulated discharge.	NC-R	12/03/15	W	12/22/15	Written Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
The pH dropped below 5.0 two times on 4/8/16.	NC-P	04/08/16	V	07/15/16	Verbal Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Late 2nd Qtr. 2015 self-monitoring report not received on time. The report was due 7-20-15.	NC-R	07/21/15	V	02/08/16	Verbal 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: **IND-00036** **Ameripride Linen & Apparel Services**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
2nd Qtr. 2015 self-monitoring report not received on time. The report was due 7-20-15. The report was received on 2-8-16 which is over the 45 day limit for Significant Non-Compliance.	SNC-R	09/05/15	W	02/26/16	Written Notice of Violation (NOV)	$0.00
Late 3rd Qtr. 2015 self-monitoring report not received on time. The report was due 10-20-15.	NC-R	10/21/15	V	02/08/16	Verbal Notice of Violation (NOV)	$0.00
3rd Qtr. 2015 self-monitoring report not received on time. The report was due 10-20-15. The report was received on 2-8-16 which is over the 45 day limit for Significant Non-Compliance.	SNC-R	12/05/15	W	02/26/16	Written Notice of Violation (NOV)	$0.00
Late 4th Qtr. 2015 self-monitoring report not received on time. The report was due 1-20-16.	NC-R	01/21/16	V	02/08/16	Verbal 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: **IND-00045** **A.O. Smith Corp., Protective Coating Division**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Total Copper Non-Compliance Daily Limit. The sample result for the sample collected on 6/17/16 was 1.596 mg/L while the Maximum Daily Limit is 1.48 mg/L.	NC-P	06/17/16	W	07/22/16	Written Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5, pH < 6 for 3.5 hrs	NC-P	01/12/16	V	02/22/16	Verbal Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Oil & Grease, Hydrocarbons TRC Daily Limit was exceeded. The concentration result was 131.5 mg/L while the Concentration Daily Limit was 50 mg/L.	NC-P	04/21/16	W	09/06/16	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: **IND-00050** **Highway Transport Chemical, LLC**

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

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease interceptor overflows into sanitary sewer.	NC-O	07/29/15				

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Multiple pH violations during the sampling week of September 23 to October 2, 2015. The pH spiked below 5.0 several times and was above 10.1 for over an hour.	NC-P	09/28/15	V	12/18/15	Verbal Notice of Violation (NOV)Verbal Notice of Violation (NOV)	

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Multiple pH violations occurred on 4/28/16. There were 21 excursions that were recorded below 5.0 and 1 excursion that was recorded below 6.0 and lasted for 88 minutes for a total of 22 violations. See enclosed pH graph.	NC-P	04/28/16	W	06/21/16	Written Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Non-compliance parameter violation - Nickel, total The daily limit was exceeded in a self monitoring sample taken on 11/18/2015. The result was 4.2 mg/L while the daily limit is 3.98 mg/L.	NC-P	11/18/15	W	02/11/16	Written Notice of Violation (NOV)	$0.00
Non-compliance parameter violation - Nickel, total The daily limit was exceeded in a self monitoring sample taken on 2/12/2016. The result was 8.34 mg/L while the daily limit is 3.98 mg/L.	NC-P	02/12/16	W	05/31/16	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: **IND-00057** **Mubea Inc. (Industrial Rd)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Nickel, total monthly average. The monthly average limit was exceeded in the month of February 2016. The monthly average result was 2.52 mg/L while the monthly average limit is 2.38 mg/L.	NC-P	02/29/16	W	05/31/16	Written Notice of Violation (NOV)	$0.00
Zinc, total monthly average. The monthly average limit was exceeded in the month of February 2016. The monthly average result was 1.68 mg/L while the monthly average limit is 1.48 mg/L.	NC-P	02/29/16	W	05/31/16	Written Notice of Violation (NOV)	$0.00
Non-compliance parameter violation - Zinc, total The TRC daily limit was exceeded in a self monitoring sample taken on 3/3/2016. The result was 8.67 mg/L while the daily limit is 2.61 mg/L.	NC-P	03/03/16	W	03/23/16	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: **IND-00057** **Mubea Inc. (Industrial Rd)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Non-compliance parameter violation - Zinc, total - The Technical Review Criteria (TRC) daily limit was exceeded in a Self Monitoring sample taken on 6-6-16. The result was 6.02 mg/L while the daily limit is 2.61 mg/L.	NC-P	06/06/16	W	08/24/16	Written Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
The pH dropped below 5.0 on 4/28/16.	NC-P	04/28/16	V	07/07/16	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00068** **Safran Landing Systems Kentucky LLC (Carbon Division)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5 twice	NC-P	07/20/15	V	07/27/15	Verbal 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: **IND-00068** **Safran Landing Systems Kentucky LLC (Carbon Division)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
pH < 5 for one minute	NC-P	03/07/16	V	04/05/16	Verbal Notice of Violation (NOV)	$0.00
pH < 5 for one minute	NC-P	03/10/16	V	04/05/16	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00070** **Sterling Cut Glass**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
No records for hauling Ferric Chloride off site.	NC-E	11/06/15	V	11/06/15	Verbal Notice of Violation (NOV)	$0.00

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

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

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Based on SD1 sampling in June 2015 during the SNC Determination Period of 1/1/2015 to 6/30/2015, Tressa is in SNC (Significant Non-Compliance) for mercury TRC (Technical Review Criteria) Limit. 75% of the samples taken during this period were in violation of the SNC TRC Limit for mercury, the percentage had to be below 33%. Your facility will be published in the Enquirer Legal Section at a later date. We will let you know when the notice will be published. There is a $500 cost recovery fine associated with this SNC NOV.	SNC-P	07/01/15	WF	10/19/15	Written Notice of Violation (NOV) and fine. Based on SD1 sampling in June 2015 during the SNC Determination Period of 1/1/2015 to 6/30/2015, Tressa was found to be in SNC (Significant Non-Compliance) for the mercury TRC (Technical Review Criteria) Limit by 75%. The samples taken during this period that were in SNC TRC Limit for mercury needed to be below 33%.	$500.00
Oil & Grease, Hydrocarbons TRC Non-Compliance for Daily Limit. The sampling result for the sample collected on 4/26/16 was 650 mg/L while the Daily Maximum Limit is 50 mg/L.	NC-P	04/26/16	W	06/21/16	Written Notice of Violation (NOV)	$0.00
Mercury,Total TRC Non-Compliance for Daily Limit. The sampling result for the sample collected on 4/27/16 was 0.00116 mg/L while the Daily Maximum Limit is 0.0005 mg/L.	NC-P	04/27/16	W	06/21/16	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: **IND-00079** **Tressa, Inc.**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Mercury, Total TRC Non-Compliance for Daily Limit. The sampling result for the sample collected on 4/28/16 was 0.000906 mg/L while the Daily Maximum Limit is 0.0005 mg/L.	NC-P	04/28/16	W	06/21/16	Written Notice of Violation (NOV)	$0.00
Mercury,Total TRC Non-Compliance for Daily Limit. The sampling result for the sample collected on 4/29/16 was 0.000878 mg/L while the Daily Maximum Limit is 0.0005 mg/L.	NC-P	04/29/16	W	06/21/16	Written Notice of Violation (NOV)	$0.00
Non-Compliance Parameter Violation - Oil & Grease, Hydrocarbons Daily Maximum Limit was exceeded. The sampling result for the sample collected on 6/22/16 was 60.8 mg/L while the Daily Maximum Limit is 50 mg/L.	NC-P	06/22/16	W	08/03/16	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: **IND-00083** **Club Chef LLC**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to maintain equipment.	NC-O	08/26/15	WF	08/31/15	Written Notice of Violation (NOV) and fine for not maintaining pH PT equipment	$500.00
Verbal NOV given to Brandon Wells of Club Chef due to failure to comply with previous NOV. The pH Self Monitoring data for August 2015 was not received. Contacted stated that the data was missing and believed to have been destroyed.	NC-O	09/09/15	V	09/09/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **IND-00085** **Mubea Inc. (8224 Dixie HWY)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Non-compliance parameter violation - Zinc, total The daily limit was exceeded in a self monitoring sample taken on 11/19/2015. The result was 2.643 mg/L while the daily limit is 2.61 mg/L.	NC-P	11/19/15	W	02/11/16	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: **IND-00085** **Mubea Inc. (8224 Dixie HWY)**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Nickel, total Monthly Average Non-Compliance. The monthly average limit was exceeded in the month of February 2016. The monthly average result was 2.49 mg/L while the monthly average limit is 2.38 mg/L.	NC-P	02/29/16	W	05/31/16	Written Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Failure to report self monitoring in the 1st Half of 2015	NC-R	07/21/15	WF	08/27/15	Written Notice of Violation (NOV) and fine.	$500.00
			W	08/27/15	Written Notice of Violation (NOV)	$0.00
Failure to submit 2nd Half 2015 Self Monitoring data by the due date.	NC-R	01/21/16	WF	04/21/16	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: **IND-00091** **LPM Manufacturing, Inc**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Mercury, Total = 0.00904 mg/L at the Fresh and Clear monitoring point, TRC Non-Compliance	NC-P	01/08/16	W	02/22/16	Written Notice of Violation (NOV)	$0.00
Mercury, Total SNC-TRC at Fresh & Clear Monitoring Point. 1 of 1 samples exceeded TRC limit for the 10-1-15 to 3-31-16 determination period.	SNC-P	03/31/16	WF	04/07/16	Written Notice of Violation (NOV) and fine.	$500.00
Mercury, Total SNC-Chronic at Fresh & Clear Monitoring Point. 1 of 1 samples exceeded the permit limit for the 10-1-15 to 3-31-16 determination period.	SNC-P	03/31/16	WF	04/07/16	Written Notice of Violation (NOV) and fine.	

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Received 2nd Half 2015 self monitoring report late.	NC-R	02/01/16	V	02/02/16	Verbal 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: **IND-00606** **US Nonwovens**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Non-compliance parameter violation - Zinc, total - The Technical Review Criteria (TRC) daily limit was exceeded in a sample taken on 8-12-15 from Monitoring Point "Bldg 1 PT". The result was 14.8 mg/L while the daily limit is 3.5 mg/L.	NC-P	08/12/15	W	12/29/15	Written Notice of Violation (NOV)	$0.00
Non-compliance parameter violation - Zinc, total - The daily limit was exceeded in a sample taken on 8-12-15 from Monitoring Point "Bldg 1 PT". The result was 4.50 mg/L while the daily limit is 3.5 mg/L.	NC-P	08/14/15	W	12/29/15	Written Notice of Violation (NOV)	$0.00
Failure to respond to NOV Zn/Hg violation and submit resampling. NOV sent on sent dated 7/20/15 and due no later than 8/24/15	NC-R	08/24/15	WF	09/09/15	Written Notice of Violation (NOV) and fine for Failure to respond to NOV Zn/Hg violation and submit resampling. NOV sent on sent dated 7/20/15 and due no later than 8/24/15	$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: **IND-00606** **US Nonwovens**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Zinc, total Concentration Chronic Significant Non-Compliance (66%). 5 of 6 Concentration Daily Results (83.33%) exceeded their allowed limits for report dates 4/1/2015 thru 9/30/2015.	SNC-P	09/30/15	WF	12/28/15	Written Notice of Violation (NOV) and fine.	$500.00
			P	01/14/16	Publish in local newspaper	$0.00
Zinc, total Concentration TRC Significant Non-Compliance (33%). 5 of 6 Concentration Daily Results (83.33%) exceeded their allowed limits for report dates 4/1/2015 thru 9/30/2015.	SNC-P	09/30/15	WF	12/28/15	Written Notice of Violation (NOV) and fine.	$500.00
Written Notice of Violation (NOV) and $750.00 fine for Failure to respond to NOV Zn/Hg violation and submit resampling, and late Response NOV and $500.00 fine. NOV sent on sent dated 9/9/15 and due no later than 10/9/15.	NC-R	10/10/15	WF	10/16/15	Written Notice of Violation (NOV) and fine for Failure to respond to NOV Zn/Hg violation and submit resampling. NOV sent on sent dated 9/9/15 and due no later than 10/9/15.	$750.00
Zinc, total Concentration Chronic Significant Non-Compliance. 2 of 3 Concentration Daily Results (66.67%) exceeded their allowed limits for report dates 7/1/2015 thru 12/31/2015.	SNC-P	12/31/15	W	02/25/16	Written Notice of Violation (NOV)	$0.00
			P	02/25/16	Publish in local newspaper	$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: **IND-00606** **US Nonwovens**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Zinc, total Concentration TRC Significant Non-Compliance. 2 of 3 Concentration Daily Results (66.67%) exceeded their allowed limits for report dates 7/1/2015 thru 12/31/2015.	SNC-P	12/31/15	W	02/25/16	Written Notice of Violation (NOV)	$0.00
			P	02/25/16	Publish in local newspaper	$0.00
Zinc, total TRC Daily Limit was exceeded. The Result was 4.21 mg/L while the Daily Limit was 3.5 mg/L. The Violation occurred for Sample 'Self Monitoring' on the Sample Date of '6/22/2016' and for Monitoring Point 'Bldg 1 PT'.	NC-P	06/22/16				
Zinc, total TRC Daily Limit was exceeded. The Result was 6.37 mg/L while the Daily Limit was 3.5 mg/L. The Violation occurred for Sample 'Self Monitoring' on the Sample Date of '6/29/2016' and for Monitoring Point 'Bldg 1 PT'.	NC-P	06/29/16				

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: **IND-00606** **US Nonwovens**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Mercury, total Daily Limit was exceeded. The Result was <0.0008 mg/L while the Daily Limit was 0.0005 mg/L. The Violation occurred for Sample 'Self Monitoring' on the Sample Date of '6/30/2016' and for Monitoring Point 'Bldg 1 PT'.	NC-P	06/30/16				

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APPENDIX C:

Current Organizational Charts

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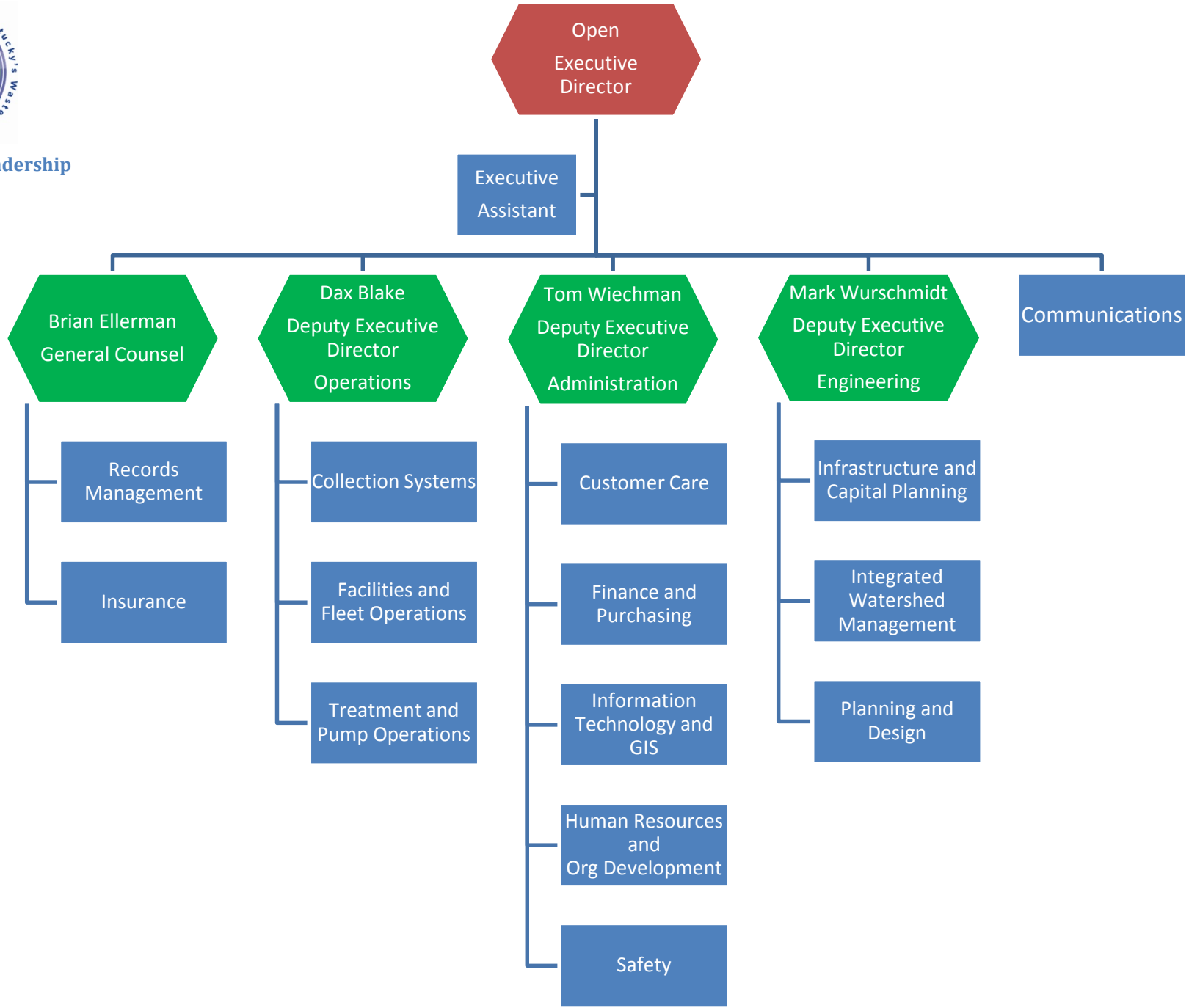
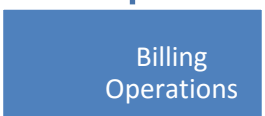
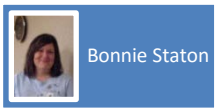
Executive Leadership

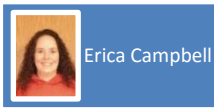


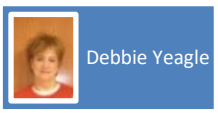
Administration Division

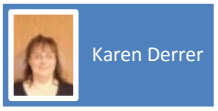
Customer Service Department (3)

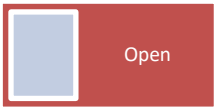


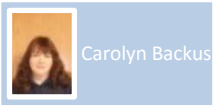






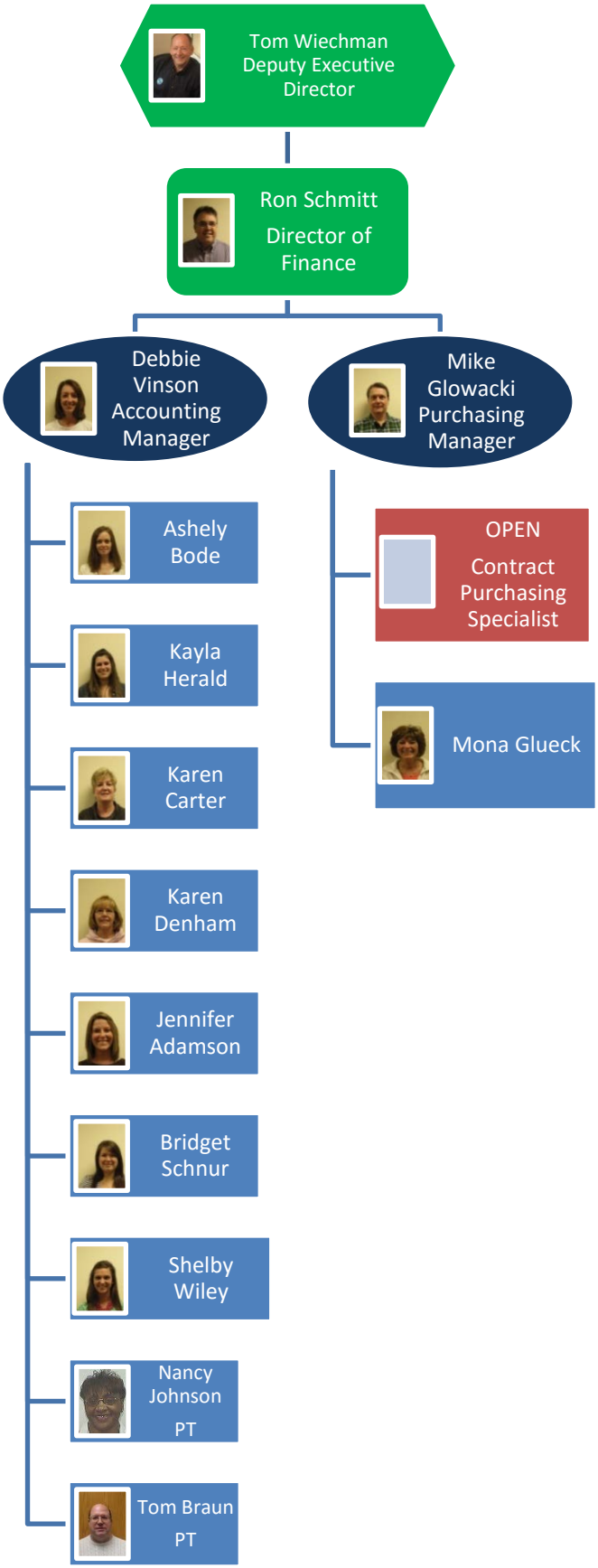






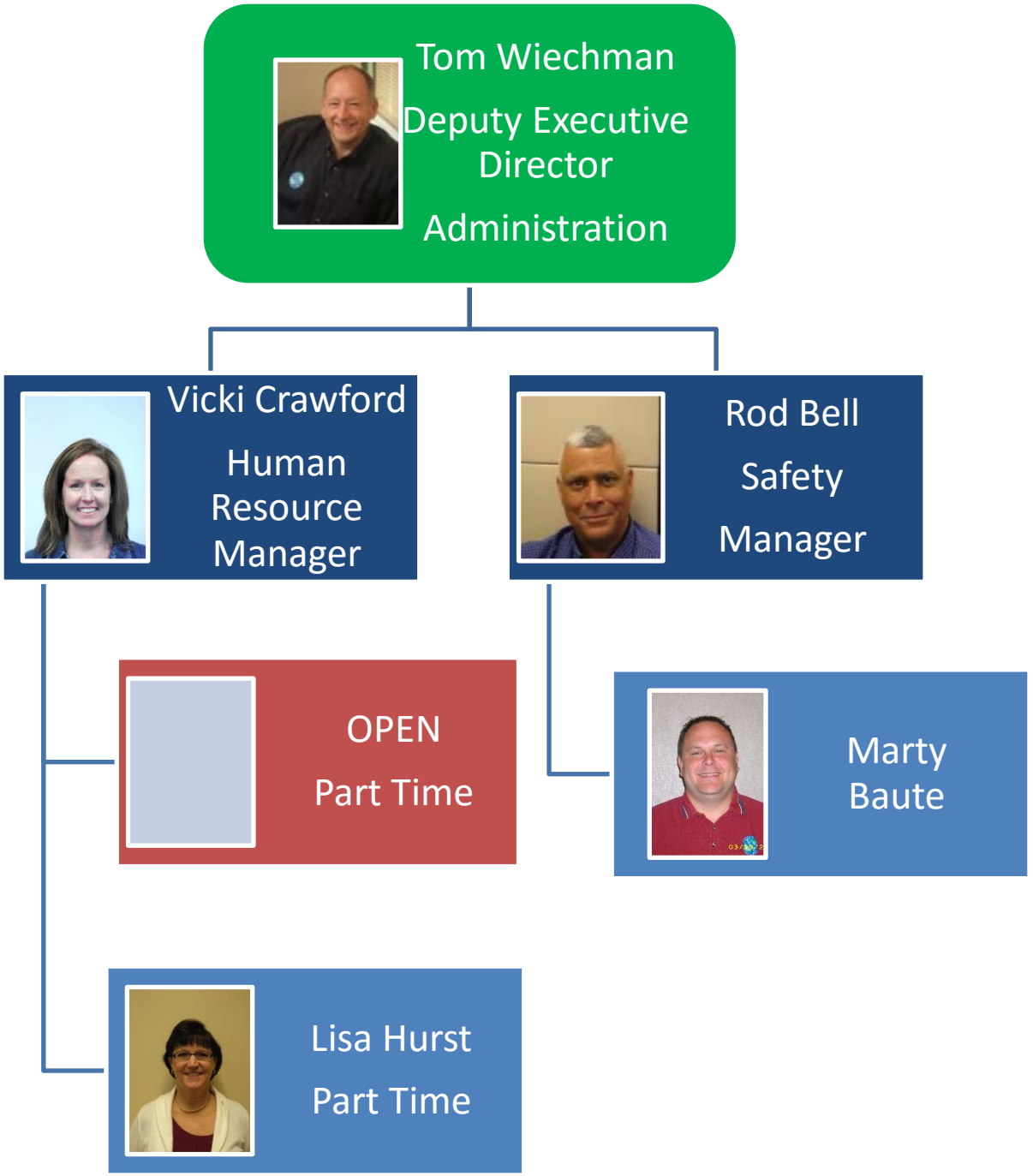
Administration Division

Finance & Purchasing Department (3)



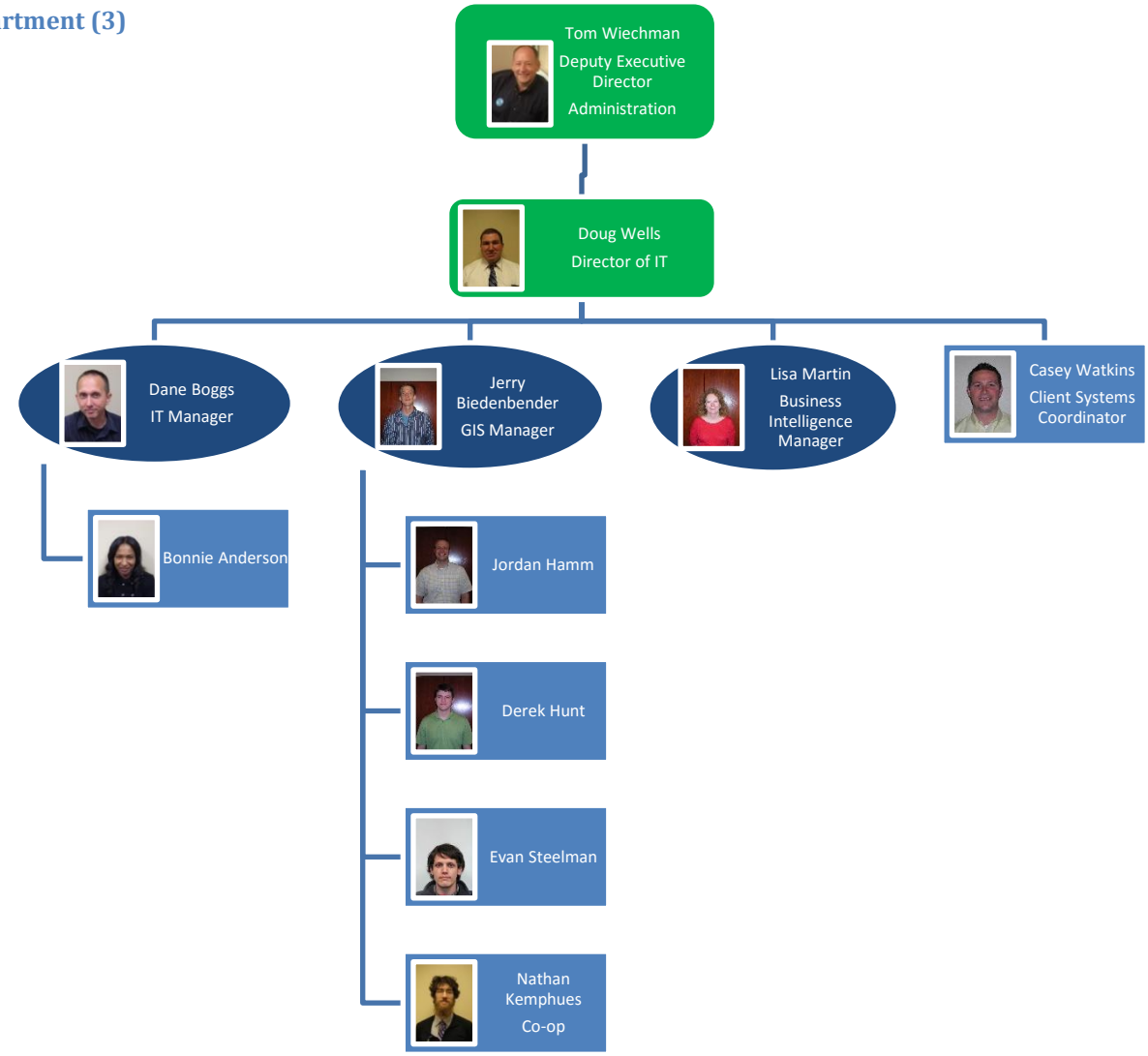
Administration Division

Administration Department (3)



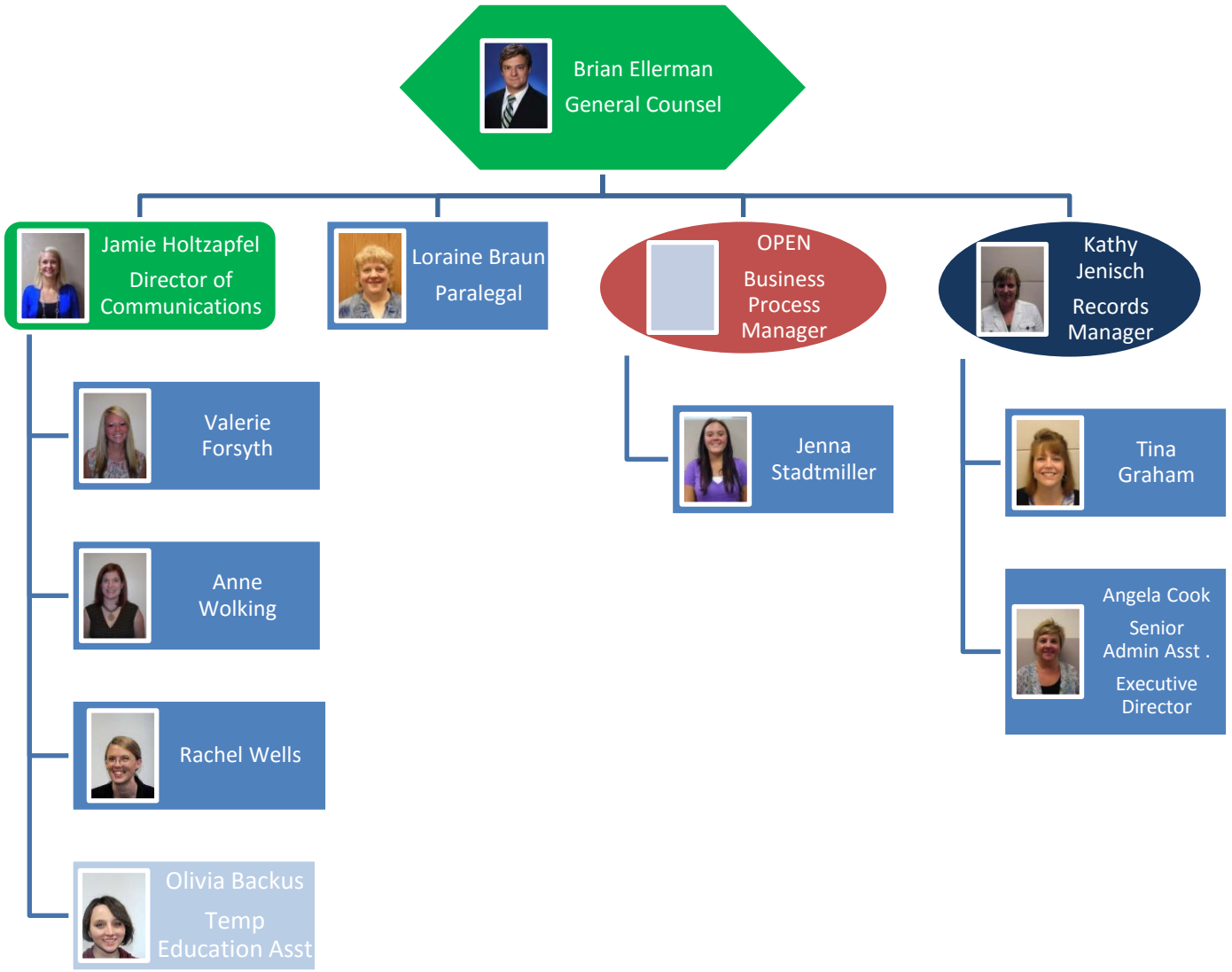
Administration Division

IT - GIS
Department (3)



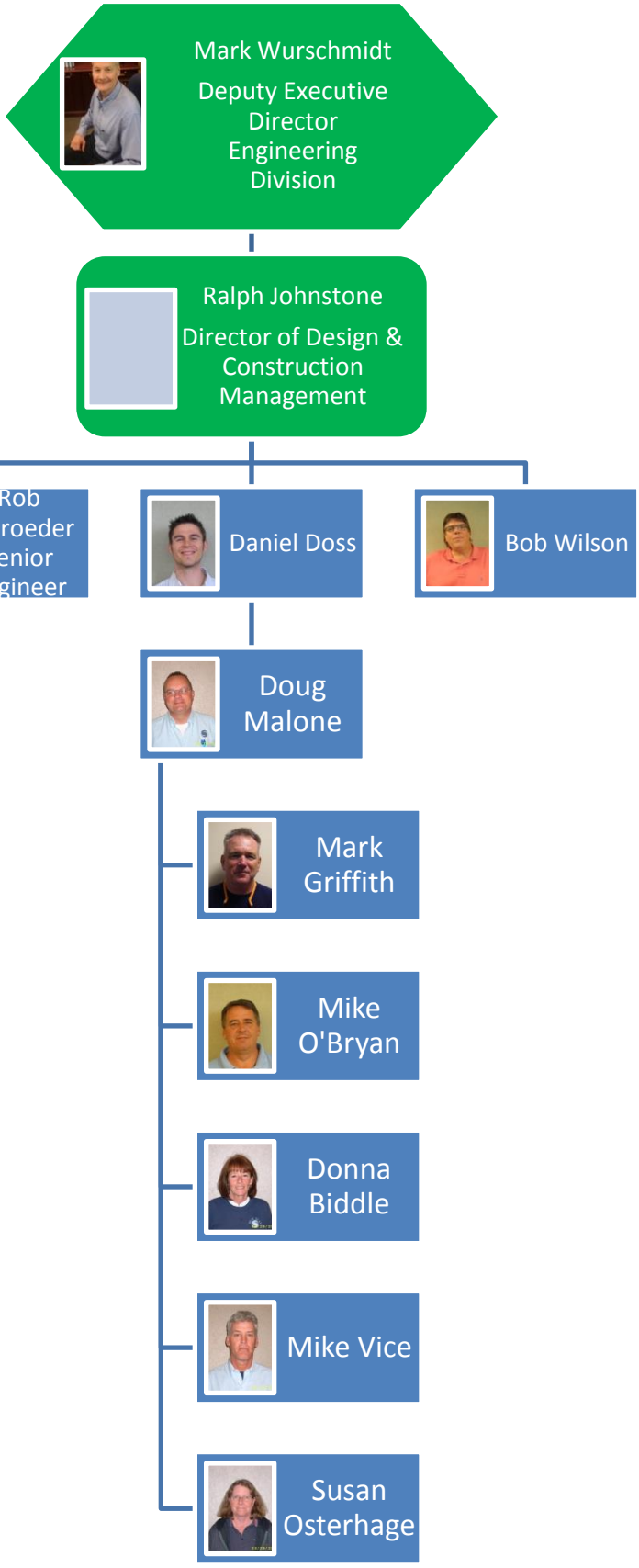
Administration Division

Legal Department (3)



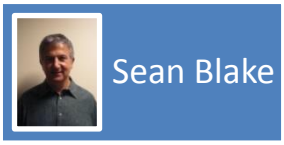
Engineering Division

Infrastructure and Capital Planning (5)



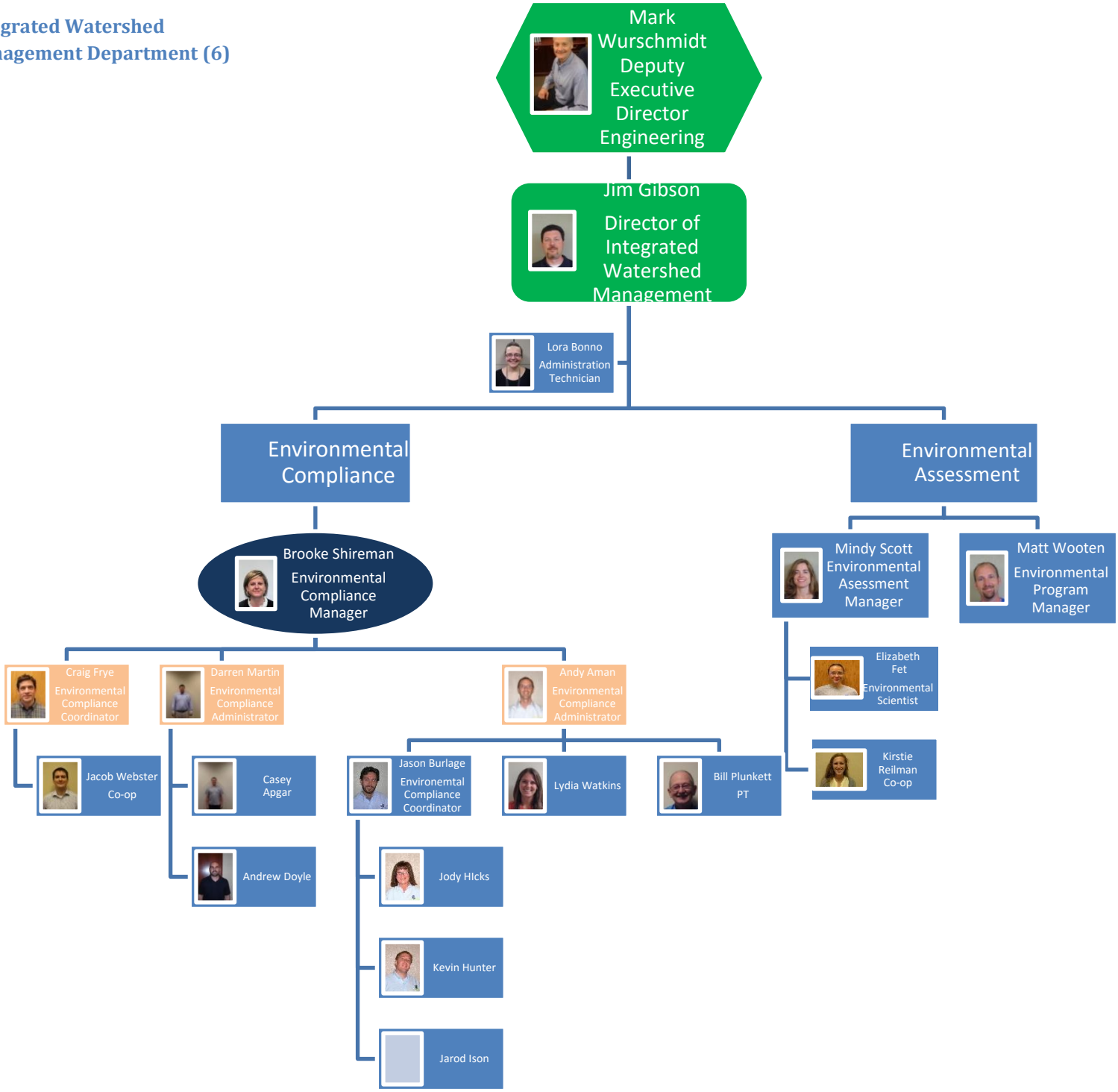
Engineering Division

Infrastructure and Capital Planning (5)



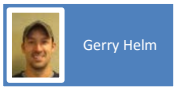
Engineering Division

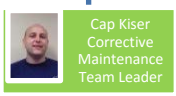
Integrated Watershed Management Department (6)

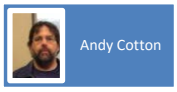


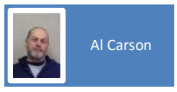
Operations Division

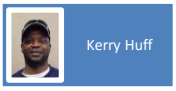
Collection Systems-
Asset Maintenance Department (2)

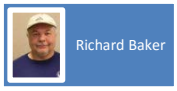


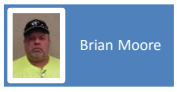






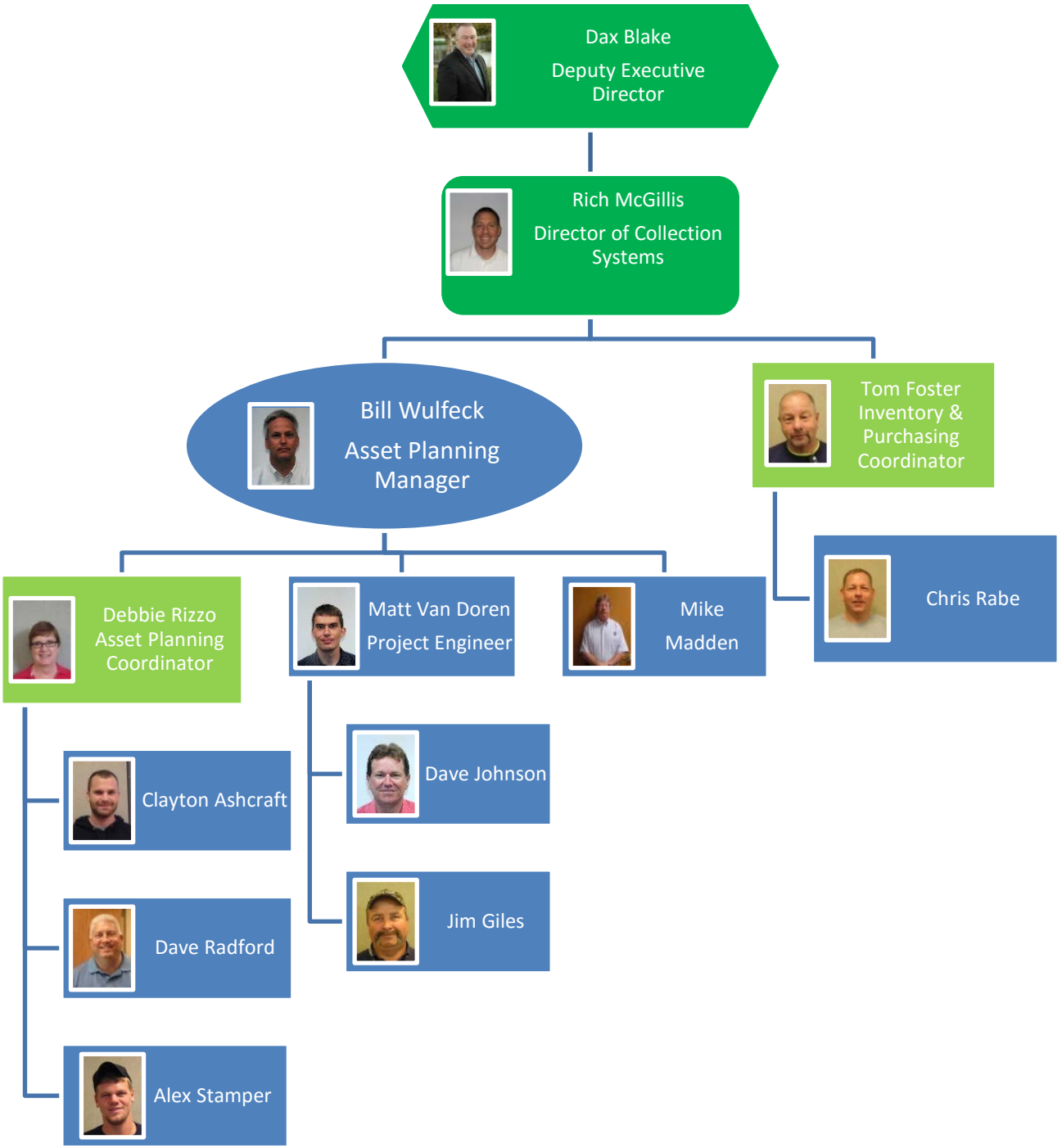






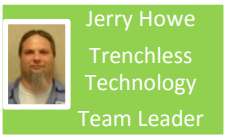
Operations Division

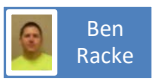
Asset Planning & Inventory Department (2)

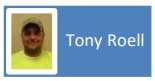


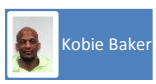
Operations Division

Collection Systems-
Asset Renewal Department (2)



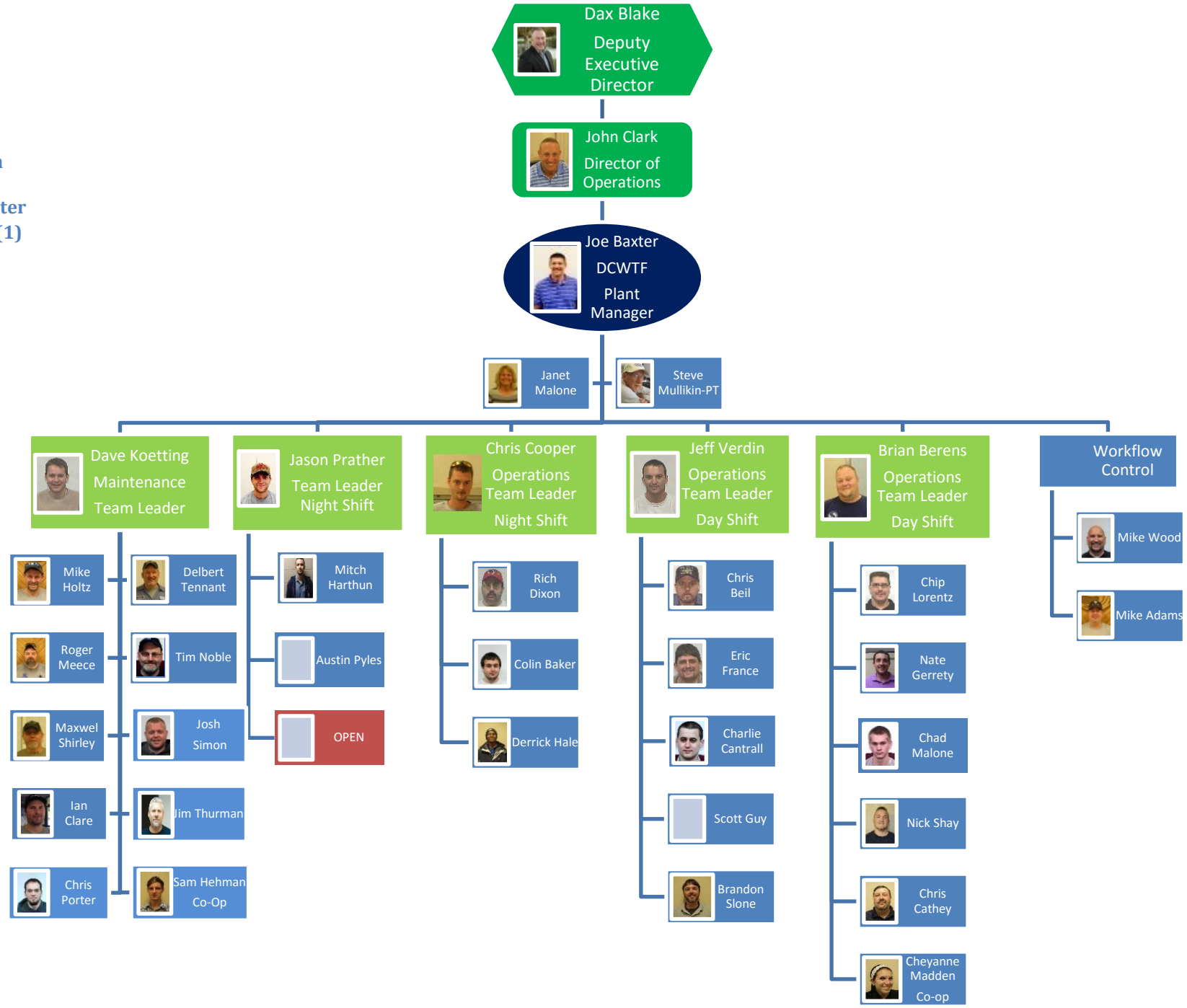






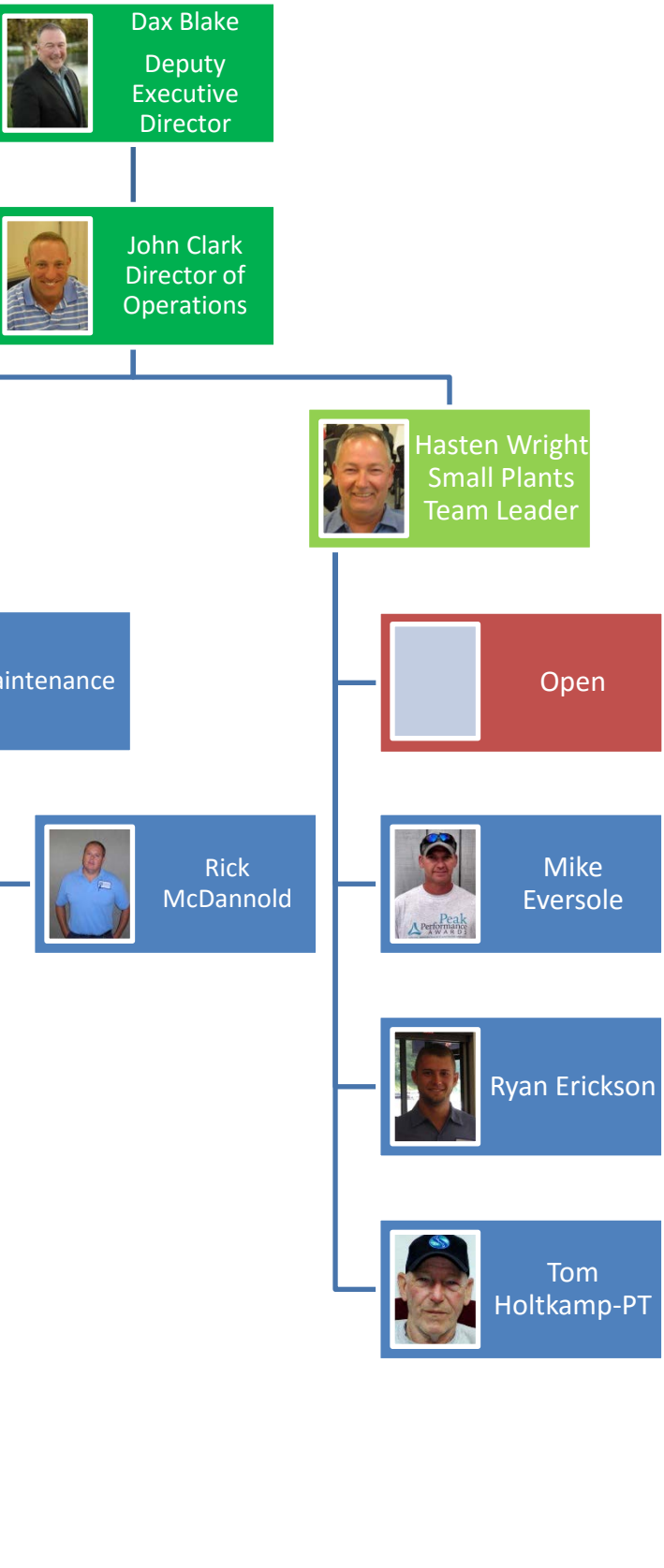
Operations Division

Dry Creek Wastewater Treatment Facility (1)



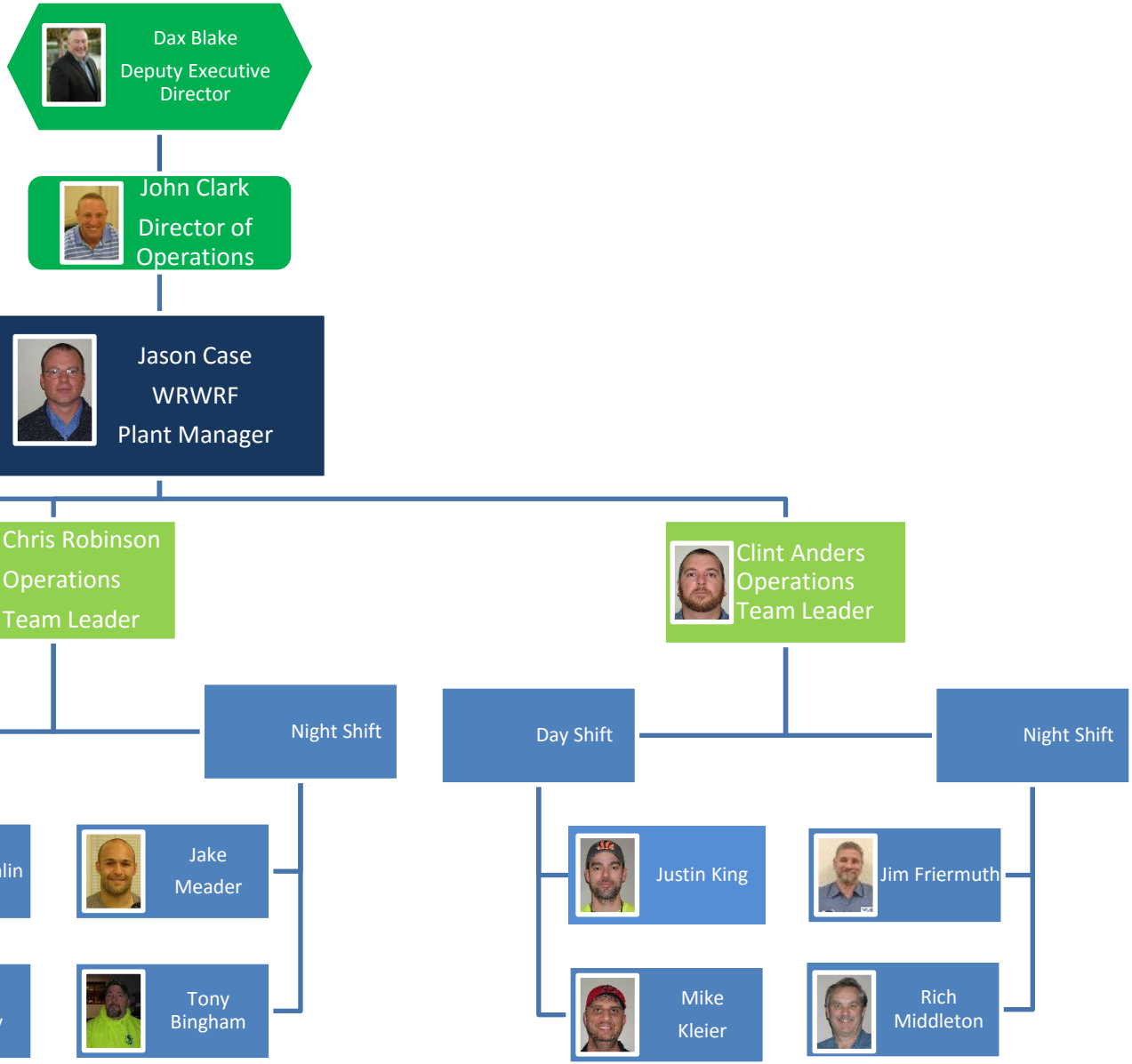
Operations Division

Eastern Regional & Small Plants Department (8)



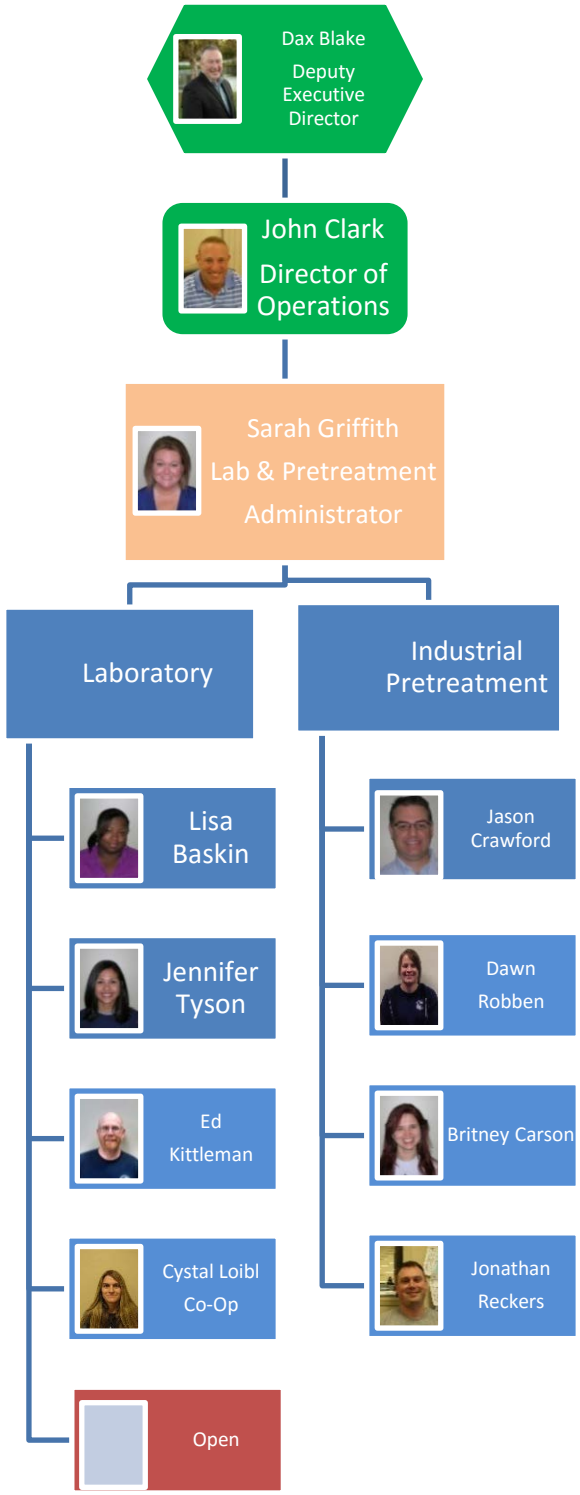
Operations Division

Western Regional Water Reclamation Facility (9)



Operations Division

Laboratory & Industrial Pretreatment/FOG (1)



Operations Division

Pump Stations Department (7)

Dax Blake
Deputy Executive Director

John Clark
Director of Operations

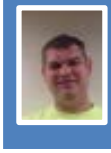
Chris Foltz
Pump Stations Manager

Phil Stanken
Pump Stations Operations Team Leader

Steve Osterhage
Pump Stations Maintenance Team Leader

Chris Crone
Flood Response Coordinator

Larry Westkamp



Phillip Sebastain

Joe Buerkley

James Rose

Randy Morris

Greg Emmons

Zach Martin

Vern Wiley

Daniel Hamm

Steve Dee
Pump Repair

Geoff Ball

Operations Division

Fleet & Facilities Department (4)

Dax Blake

Deputy Executive Director Operations Division

Lisa Hensley

Admin Asst Operations

George Robinson

Facilities Coordinator

Steve Hamberg

Fleet Manager

Jonathan Fletcher

OPEN

Brian Nicely

Temp

APPENDIX D:

FY 2016 Examples of Educational Publications

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SD1

Managing Northern Kentucky's Wastewater and Storm Water

Managing your SD1 account just got easier

We know convenience is important to our customers, so we're pleased to bring you new ways to manage your SD1 account. We've partnered with Paymentus to bring you more choices and 24/7 access. Flip this page over for more details.

- Pay your bill anywhere, anytime
- Register for automatic payments
- Make a quick one-time payment online
- Receive account information in mobile formats

Not interested in new payment options?
You can still pay your bill in person at our main office at 1045 Eaton Drive in Ft. Wright, through the U.S. Postal Service or by taking your payment to one of our existing drop-box locations.

Visit www.sd1.org/paymentoptions to learn more.

New ways to pay your bill

1-844-508-3528

Want to make a payment when you're available? Pay your bill through our automated phone system – anytime, anywhere. This service is available 24/7 by calling 1-844-508-3528.

Automatic withdrawal

Want one less thing to remember? Register online for automatic withdrawal payments or paperless statements. Sign up at www.sd1.org.

Online, one-time

Need to make a quick payment? Make a one-time payment online without registering for e-bills. Visit www.sd1.org to access this option.

Mobile device

Want on-the-go information about your account? Receive alerts via text message, or use your phone or tablet to pay your bill through our new app: SD1 Mobile.

Visit www.sd1.org/paymentoptions to get started.

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Managing Northern Kentucky's Wastewater and Storm Water

Average Annual Water Usage Reflected on Your May 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 November to February 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 November to February 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 November to February each year and potentially reduce your SD1 bill, see the reverse side of this insert.

Tips for Conserving Water

- 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.
- Turn the tap off when brushing your teeth.
- Use only one glass or reusable water bottle throughout the day to minimize dirty dishes.
- Take short showers instead of baths.
- If you do choose to take a bath, stop the drain first and adjust the temperature as the tub fills.
- Run washing machines and dishwashers only when they are full.

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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

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 affect local waterways, landscaping, pets and wildlife. Below is a list of tips to help you buy and safely apply de-icers 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.

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

Helpful tips for homeowners

As you create resolutions for the new year, keep these tips and other resources below in mind to help protect you, your home and our community.

FACT: Antibiotics, steroids and other pharmaceuticals can contaminate our waterways because the wastewater treatment process is not designed to remove these substances.
TIP: Never flush or wash medications down a drain or toilet in your home. Dispose of expired or unused medications in the trash or take them to a pharmaceutical drop-off location near you. A list of locations can be found on our website at www.sd1.org/prescription.

FACT: Common household chemicals like cleaners, auto fluids, paint and lawn care products are toxic to a wastewater treatment plant.
TIP: Wastewater treatment plants are living units designed to treat wastewater, not hazardous chemicals. If flushed or poured down the drain, these chemicals can kill the tiny living organisms that treat the wastewater at SD1's treatment plants. Contact your Boone County Solid Waste Coordinator or visit www.nkyhhw.org to learn how to dispose of chemicals and other hazardous materials.

FACT: FOG (fats, oils and grease) can clog pipes and cause raw sewage to back up in your home or overflow out of SD1's system.
TIP: Household grease from meat fats, lard, baking goods, butter and margarine, cooking oils, food scraps, sauces and dairy products can build up in pipes, preventing your wastewater from making its way through the sewer pipes to SD1's treatment plant. Instead of pouring these substances down the drain, collect fats, oils and grease in a container and throw them in the trash can.

FACT: When flushed down the toilet, diapers, baby wipes and other personal hygiene products can cause blockages in pipes that lead to backups and overflows of sewage.
TIP: Diapers, wipes, cotton balls, dental floss and other personal hygiene products can build up in pipes, bind with any fats, oils or grease that have accumulated in the pipes and cause major blockages. They also can find their way into the environment if the blockages cause SD1's system to overflow. Always dispose of these items in the trash.

If you have questions, email info@sd1.org or visit www.sd1.org for more information.

HHW Collection Event draws record crowd

The 2015 Household Hazardous Waste Collection Event held Oct. 17 served a record-setting 2,190 area residents, ensuring many tons of paint, paper, electronics and other hazardous materials will not end up polluting the environment.

If you missed the event, you can still make sure you properly dispose of household hazardous waste. Visit www.nkyhhw.org to learn more.

SD1

Managing Northern Kentucky's Wastewater and Storm Water

1045 Eaton Drive
Fort Wright, KY 41017
phone: 859/578-7450

Hours of Operation:
Monday-Friday, 8 am - 4:30 pm

Properly draining your swimming pool

SD1
Managing Northern Kentucky's Wastewater and Storm Water

Protect the environment

If not properly handled, swimming pool water can harm our streams. The chemicals used in pool maintenance (chlorine, bromine, copper and silver) are designed to sterilize pools but can wreak havoc in the natural environment, killing fish, insects and plants in our waterways. For this reason, it's important to properly drain your pool water from backwash filters and when you close your pool at the end of summer.

Test your pool water

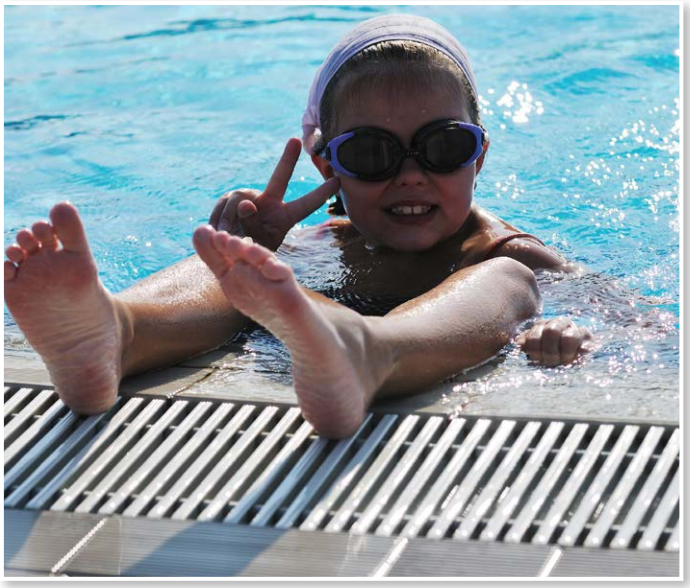
It's important that water discharged from your pool is clear, dechlorinated and of a neutral pH. Do not discharge water containing cleaning chemicals, acid buffering compounds, algae or other substances into the street, storm water system or a stream.

Chlorine levels should be less than 0.1 parts per million before discharging pool water.

- To reduce chlorine levels you can use a chlorine neutralizer, which can be purchased at many pool supply stores.
- A 10-day holding time after the last chemical treatment is adequate to dissipate chlorine prior to discharging the pool water.

pH levels should be within a normal and "neutral" range (6 to 9).

- pH adjustment chemicals, instructions and test kits are available at many pool supply stores.



Remember: Location matters

Whether you're draining your pool onto your lawn or into a public sewer system, it's important to know where the water will go or where a pipe leads to avoid damaging property and the environment.

The sanitary sewer system is the best place to discharge pool water, if available.

- Sanitary sewer pipes lead to a wastewater treatment plant that will clean the water before sending it back into the environment.

Your lawn is a good option, if you're unable to discharge your pool water into the sanitary sewer system.

- The water should not flow off your property.
- Do not allow the water to pond for a prolonged period of time. Stagnant water can create odors and serve as breeding ground for flies and mosquitos.
- Discharge pool water slowly (25 gallons per minute or less) to prevent soil erosion, flooding and damage to adjacent properties.

The storm water system is only an option if the pool water has been dechlorinated and is free of any chemicals and acid buffering compounds.

- Chlorinated water that is discharged into the storm water system is considered an "illicit discharge" because it can harm the environment.

Perform ongoing maintenance

- Make sure backwash filters are directly connected to your property's sanitary sewer. Backwash water from pool filters contains chemicals, debris and dirt, so do not drain it directly into the storm water system.
- Always rinse cartridge filters over soil, covering any residue with dirt. Never clean a filter near a stream, creek or storm drain.
- Before using copper algaecides, try less toxic alternatives. Ask your pool maintenance service or store for help resolving persistent algae problems without using copper algaecides.

Questions?

If you have any questions about proper discharging procedures for swimming pool water, please contact SD1 at 859-578-7450 or info@sd1.org.

SANITATION DISTRICT NO. 1
1045 Eaton Drive, Ft. Wright, KY 41017 | Phone: 859-578-7450 | Fax: 859-331-2436 | www.sd1.org

SD1

Managing Northern Kentucky's Wastewater and Storm Water

Other Helpful Resources and Information

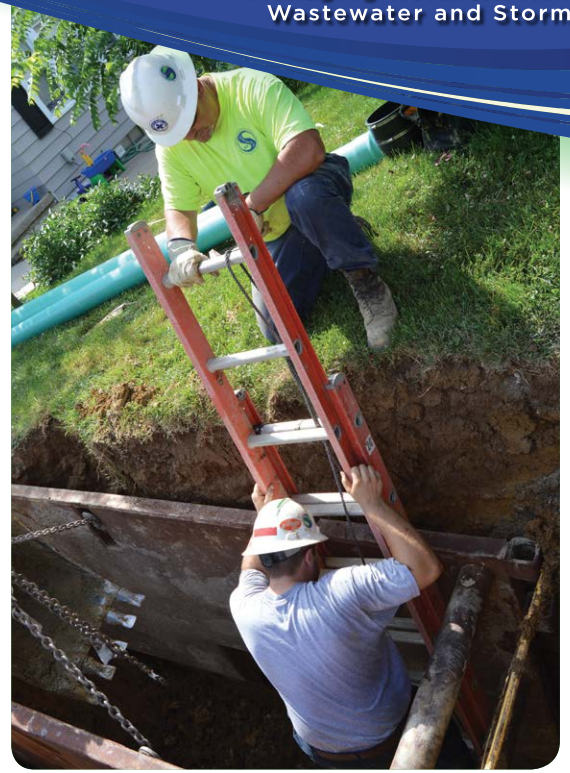
To accomplish our mission, SD1 partners with a variety of stakeholders, including individual customers. By following the tips below, you can protect your home's plumbing while also helping SD1 protect public health, property and the environment and support the community's economic vitality.

- To protect your plumbing, the public sewer system and the environment, never flush or pour grease, oil, chemicals, "flushable" wipes or other personal hygiene products down your toilets or drains.
- When cleaning out your medicine cabinet, properly dispose of expired or unused medications at special drop-off boxes located throughout the region. This will help protect the wastewater treatment process.
- Clean debris from your storm drains to reduce street flooding, prevent clogs in pipes and avoid backups.
- When cleaning out your garage or basement, properly dispose of unwanted household hazardous waste, such as paint and chemicals. Never pour these substances down a drain.
- Identify utility lines and pipes before you begin any outdoor projects. Accidentally hitting an underground sewer line can cause unnecessary headaches.

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 **www.sd1.org/resources** for more information about these tips, contact information, prescription drug drop-off locations and tips for handling household hazardous waste.

SD1
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 Northern Kentucky 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 know our services are vital to make our region 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.

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 water flushed and drained from 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's billing method aims to charge customers only for the water they use that enters the sanitary sewer system. This way we 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 your local water district to measure your water usage during a 90-day period between the months of October and April, when you likely use less 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 to our community, 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 flooding and erosion problems. As it flows over the land, storm water also picks up any trash, debris and pollutants in its path and carries them to the nearest body of water, 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. Every property with a roof, driveway or other impervious surface on it contributes to these issues. As a result, SD1 calculated the average amount of paved or impervious area on residential properties in our service area, and we charge properties a standard monthly fee based on this average.

For more information and to view a map of SD1's storm water service area, please visit **www.sd1.org/stormwater.**

Need more information about your bill?

If you have questions about your SD1 bill, our customer contact agents are available at 859-578-7450 during SD1's business hours, Monday through Friday, 8 a.m. to 4:30 p.m. They also can help you determine the specific 90-day period during which we measure your water usage to calculate your sanitary sewer service charge and provide more details about your storm water bill. To view SD1's current sanitary and storm water rates, visit **www.sd1.org/billing.**

Paying Your SD1 Bill

We know convenience is important to our customers, so SD1, in partnership with Paymentus, offers a variety of ways to pay your bill:

- **By phone** through our automated phone system 24/7 by calling 1-844-508-3528.
- **Online** by registering with Paymentus at www.sd1.org/paymentoptions. Register for automatic withdrawal or to receive an e-bill, or make a one-time payment without registering.
- **By mobile device** by downloading our app, SD1 Mobile. Use the app to set up account alerts, schedule automatic withdrawal or make a one-time payment. The app is available for both iOS and Android users via the App Store and Google Play.
- **In person** at SD1's main office at 1045 Eaton Drive in Ft. Wright during business hours, Monday through Friday, 8 a.m. to 4:30 p.m. You can also pay your SD1 bill at any Northern Kentucky BB&T branch. Please note: You must bring the payment stub from your bill with you to process your payment at a BB&T branch.
- **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.

SD1 accepts payments by credit or debit card, cash, e-check or check at no additional charge. Please note that SD1 accepts only Visa, MasterCard and Discover.

APPENDIX E:

Sanitation District No.1 Sewer Lateral Repair Policy

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SANITATION DISTRICT NO. 1
SEWER LATERAL REPAIR POLICY

BACKGROUND

Since the consolidation of the sanitary sewer system in 1995, the Sanitation District No. 1 (SD1) policy relating to ownership and maintenance of building sewers (also known as sewer laterals) was stated in Article 7, Section 701.1.G, of SD1's Rules and Regulations:

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

This regulation fully complies with Kentucky law. Nevertheless, the result of this regulation was that in certain instances, property owners were being required to perform excavation and repair work beneath public roadways. Accordingly, SD1 has provided some assistance to property owners faced with this difficult and costly situation with subsequent revisions to Article 7, Section 701.1.G, of SD1's Rules and Regulations and Sewer Lateral Policy amendments made between 1995 and 2004. Article 7, Section 701.1.G, of the Rules and Regulations currently states:

> The owner of the premises, served by a sewer, shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer unless the building sewer is located under a public roadway. If the building sewer is damaged under the paved roadway, SD1 will share in the cost repair as determined by the Board of Directors.

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

> The owner of the premises, served by a sewer, shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer. However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Policy, that the private sewer lateral is not functioning as a result of a structural problem occurring at a section of the private lateral located beneath the public roadway, SD1 will repair the structural problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner.

On August 19, 2008, the Board of Directors adopted an interpretive revision to Section 701.1.G, in the following Sewer Lateral Policy:

> The owner of the premises, served by a sewer, shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer. However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Policy, that the private sewer lateral is not functioning as a result of a structural problem occurring at a section of the private lateral located beneath the public roadway that cannot be corrected through routine sewer cleaning or similar maintenance activities, SD1 will repair the structural problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner.

At the July 16, 2013 Board Meeting, the Board of Directors voted, because of insufficient funds, to repeal the SD1 Sewer Lateral Repair Policy and SD1 no longer repaired private laterals under the roadway.

At the June 29, 2015 Judges Executive Meeting, the County Judges Executive allocated funds with approval of the annual budget and reestablished the Sewer Lateral Repair Policy as originally adopted by the Board of Directors at the August 19, 2008 Board Meeting with one exception. The budget Resolution passed by the Judges Executive included a new provision requiring the owners of public roadways to provide all surface restoration services once the lateral repairs have been made including, but not limited to, pavement restoration along with the replacement of any associated curbs, sidewalks and drive aprons.

At the July 21, 2015 Board Meeting, the Board of Directors approved reestablishment of the Sewer Lateral Policy following the policy adopted by the Board on August 19, 2008 but modified to provide that repair of the public roadway is the responsibility of the Public Roadway Owner. The new Sewer Lateral Policy states as follows:

> The owner of the premises, served by a sewer, shall be responsible for all maintenance, operation, cleaning, repair and reconstruction of the building sewer from the building to the point of connection with the public sewer**.** However, if a property owner conclusively demonstrates, in accordance with the guidelines set out in the Sewer Lateral Repair Policy, that the private sewer lateral is not functioning as a result of a problem occurring in a section of the private lateral located beneath the public roadway, and which cannot be corrected through routine sewer cleaning or similar maintenance activities; then SD1 will repair the problem of the private lateral from the public sewer to the edge of the public roadway at no cost to the property owner. The Public Roadway Owner, where the private lateral was repaired, will be responsible for all surface restoration including, but not limited to, pavement restoration as well as the replacement of any associated curbs, sidewalks and drive aprons.

I. Definitions

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

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

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

D. **Public Roadway Owner:** Defined as the city, county or state agency responsible for the operation and maintenance of the public roadway.

II. Lateral Problem Within Public Roadway Identified by Property Owner or Public Roadway Owner

A. Purpose: To provide some assistance to property owners faced with the obligation to perform excavation and repair work on structurally defective private sewer laterals beneath public roadways, which may be contributing to a visible pavement failure, building backup and/or sewer overflow.

B. Applicability: This section of the Policy only applies when SD1 has been notified by a Property Owner or Public Roadway Owner that a sewer lateral is not functioning properly due to a structural defect(s) that is(are) contributing to a visible pavement failure, a building backup and/or a sewer overflow. When the Property Owner and/or Public Roadway Owner conclusively demonstrates to SD1, in accordance with the provisions of this Policy, that the malfunction is the result of a problem with the private sewer lateral at a point beneath the public roadway that cannot be corrected through routine sewer cleaning or similar maintenance activities, SD1 will assist with the repair of the defective lateral that is located under the public roadway. Ownership and maintenance responsibilities shall remain with the individual property owner from the building to the public sewer, including the length of sewer lateral beneath the public roadway. SD1 may, in its sole discretion, approve projects that do not meet the above mentioned criteria.

C. Problem Identification:

a. **Building Backup/Sewer Overflow:** In the case of a building backup or sewer overflow caused by a structurally defective lateral under the public roadway, the Property Owner is responsible for hiring a licensed plumber to identify the location of the lateral line and, specifically, the location of the problem. Locating the problem should be accomplished through the

use of a “locating device.” Measuring distances to the problem is not considered an adequate method to locate the problem. Once the location of the problem has been identified, the plumber should clearly mark the location on the surface of the roadway with spray paint or by other appropriate means. If requested, the plumber will provide SD1 with a videotape of the sewer lateral, which clearly shows the problem causing the sewer lateral malfunction. Once the defective lateral is confirmed to be underneath the roadway, SD1 will repair the sewer lateral in accordance with the provisions of this Policy. When repairs to the lateral are complete, the Public Roadway Owner will be responsible for the surface restoration as outlined in the Policy.

b. **Visible Roadway Damage:** In the case of a sinkhole that has developed in the public roadway surface, it is the Public Roadway Owner’s responsibility to ensure SD1 is notified and provides coordination with Property Owners as needed. Upon notification, SD1 will mobilize during the normal course of business operation hours to verify if the cause of the visible roadway failure is due to a deficiency in the public sewer or if it is being caused by a defective sewer lateral beneath the public roadway. If it has been determined that a private sewer lateral is structurally defective under the roadway and is contributing to the visible pavement failure, SD1 will repair the sewer lateral in accordance with the provisions of this Policy. SD1 will not assume responsibility for public roadway operation and/or safety in the general area of the defective sewer lateral. The Public Roadway Owner maintains responsibility for all safety barricades and/or street plates required to protect public health and safety prior to SD1 undertaking any lateral repairs under the roadway. When SD1 begins the repair of the structurally defective sewer lateral, SD1 will provide the required safety measures throughout the duration of the repair. Once repairs to the lateral are complete, the Public Roadway Owner will be responsible for the surface restoration as outlined in this Policy.

SD1 may, in its sole discretion, waive the problem identification requirements on a case-by-case basis.

Note: *In the case of a building backup, the Property Owner is responsible for 100% of the costs associated with locating the private sewer lateral problem.*

The defective lateral underneath the roadway may be contributing to a building backup and may not always be causing visible surface roadway damage. In these cases, when lateral repairs have been completed, the Public Roadway

Owner will be responsible for the surface roadway restoration costs as outlined in the Policy.

D. SD1 Review: SD1 will review the available information, and determine if the information provided is in accordance with the requirements of this Policy. If the information is sufficient, SD1 will approve the project for repair. If additional information is required, SD1 representatives will notify the Property Owner or Public Roadway Owner of the additional requirements.

E. Performance of Repair Work: SD1 will perform the necessary repair work within the public roadway in accordance with the provisions of this Policy. As part of the repair work SD1 may televise the lateral and perform all necessary smoke and/or dye testing to assess the condition of the lateral and the presence of any illegal connections.

If the work necessary to repair the problem extends beyond the public roadway, SD1 will notify the appropriate Property Owner and/or Public Property Owner to address the repair. The Property Owner must hire a licensed plumber to perform the work outside the roadway at the owner's expense. If SD1 discovers any illegal connections during its assessment of the lateral, SD1 may notify owner that these connections must be removed in accordance with SD1's Sanitary Rules and Regulations.

Note: *In all cases, SD1 reserves the right to require the installation of a vertical cleanout riser near the edge of pavement.*

F. Roadway Restoration Responsibility: Upon completion of the lateral repair work, the required controlled density backfill will be brought up to the existing roadway subgrade and SD1 will coordinate the roadway restoration with the Public Roadway Owner. During the repair of the structurally defective sewer lateral, SD1 will provide the required safety measures throughout the duration of the repair. Per the provisions of this Policy, the owner of the public roadway where the private lateral was repaired will be responsible for all surface restoration including, but not limited to, pavement restoration as well as the replacement of any associated curbs, sidewalks and drive aprons. At the completion of SD1's sewer lateral repair work, the Public Roadway Owner maintains responsibility for all safety barricades and/or street plates required to protect public health and safety.

In instances where the Public Roadway Owners are not able or available to complete the necessary roadway restoration, SD1 will manage the final roadway restoration, per the Public Roadway Owner's applicable restoration specifications and permit requirements, and will invoice the Public Roadway Owner for the total cost incurred for said restoration including SD1's project management and administrative time.

Note: *In cases where the Public Roadway Owner is delinquent in reimbursing SD1 for costs incurred for roadway restoration, SD1 reserves the right to suspend any further defective lateral repairs under the roadway within the jurisdiction of the Public Roadway Owner until full payment has been received for any and all prior street resurfacing expenses that were associated with past sewer lateral repairs.*

In cases where the Public Roadway Owner does not agree with the provisions of the Policy or will not enter into an Interlocal Agreement to facilitate such provisions, SD1 will not undertake repairs of defective laterals under the public roadway within the Public Roadway Owner's jurisdictional boundary until the Public Roadway Owner is in full compliance with all of the provisions of this Policy.

G. Indemnity: By requesting SD1 to provide defective sewer lateral repairs underneath the public roadway, the Property Owner and Public Roadway Owner must agree to indemnify and hold SD1 harmless from any causes of action, claims, liability, judgment or expenses, including attorneys' fees and the costs of investigation and litigation, arising out of the project.

A hold harmless agreement must be signed by the Property Owner, acknowledging receipt of the information and provisions outlined in this Policy, before any lateral repair work can begin. If it has been conclusively demonstrated that a defective sewer lateral exists under the roadway, SD1 will perform repairs to the lateral in accordance with the provisions of the Policy. If the damage to the sewer lateral extends beyond the public roadway, the Property Owner(s) are responsible to locate and repair the section(s) of lateral outside of the public roadway at their sole cost. The Property Owner will be informed by SD1 that failure to make necessary repairs to the damaged sections of lateral outside the roadway may result in sewage blockage on the Owner's property.

In order for SD1 to work together with individual Public Roadway Owners to carry out the provisions of the Policy, the interested parties must provide an adequate, written indemnification to SD1 before any lateral repair work under the roadway can be performed. SD1 cannot undertake any repairs of defective laterals under the public roadway, within the Public Roadway Owner's jurisdictional boundary, until the owner is in full compliance with all provisions as outlined in the Policy. It is the sole responsibility of the Public Roadway Owner to ensure that all obligations associated with this Policy are understood and agreed to in order to participate in the program.

H. Program Funding: Funding for the sewer lateral repair program is included in SD1's fiscal year budget that is approved annually by the SD1 Board of Directors and the County Judges Executive. Funding for the lateral repair program is approved at a not to exceed budget amount. In its sole determination, SD1 reserves the right to prioritize and assign available program funding for sewer

lateral repairs based on criticality and the impact a defective sewer lateral beneath the public roadway has to public health and safety. Once all defective laterals receiving a high priority status have been repaired, and pursuant to available funding, any remaining defective laterals that have been identified will be scheduled for repair based on a consequence of failure rating in combination with the order in which it was received.

I. **Interlocal Agreement:** In order for SD1 to work together with the individual Public Roadway Owners to carry out the provisions of this Policy, it will be necessary to enter into an Interlocal Agreement pursuant to the Interlocal Cooperation Act as set forth in KRS 65.210 to 65.300. The Act permits local governmental units to cooperate with other governmental units and public agencies to make more efficient use of powers and to provide services and facilities in a manner that is in their best interest and the best interest of the local communities they serve.

SD1
Managing Northern Kentucky's Wastewater and Storm Water

Private Lateral Repair Program

What is a private sewer lateral?

A private sewer lateral is an underground pipe that is part of your home's plumbing. It conveys wastewater or storm water from your property to SD1's public sewer system. As a private property owner, you own your lateral from the end of the building's plumbing to the connection with SD1's sewer. You are responsible for maintaining your lateral, just like other pipes in and around your property.

What is the purpose of SD1's private lateral repair program?

When private sewer laterals deteriorate, they can affect community services, public health and safety by causing sinkholes, destabilizing nearby structures and leading to sewer overflows and backups. When these laterals run beneath roadways, repairs can be cost prohibitive to the private property owners responsible for them. To assist property owners in addressing this issue in a timely and affordable way, SD1 has included funding in the fiscal year 2016 budget (July 1, 2015 – June 30, 2016) for a private sewer lateral repair program. The program will allow SD1 to perform work on defective private sewer laterals beneath public roadways that may be contributing to a visible pavement failure, building backup or sewer overflow.

What is the responsibility of private property owners?

Private property owners are responsible for maintaining their private sewer laterals, just as they are responsible for the pipes inside their home. As a result, SD1 is not responsible for investigating or demonstrating the cause of roadway failures, sewer backups or sewer overflows resulting from a damaged or faulty lateral. The private property owner must investigate and demonstrate that such a problem is due to a lateral defect beneath the roadway before SD1 will perform the necessary lateral repair work. Private property owners remain responsible for repairing any lateral damage that does not fall under the public roadway and for any damage to private property caused by a defective lateral, regardless of where the defect is located.

What are the signs of a defective lateral?

If your home is experiencing blockages or sewer backups, or if sewage is overflowing into the environment, your private lateral may be defective. Sinkholes also can be a sign of defective laterals.

What should you do if you suspect your sewer lateral is defective?

If you suspect a defect in your sewer lateral is contributing to a visible pavement failure, a building backup or a sewer overflow, you should call SD1 at 859-578-7450. If SD1 determines the issue is not related to the public sewer line, you will need to call a licensed plumber to investigate your private sewer lateral. If the plumber determines the defect is in the lateral below the public roadway, the following requirements must be met in order for SD1 to perform services through our lateral repair program:

- You must provide SD1 with conclusive evidence, including a plumber's video recording, showing that the problem is below the public roadway and cannot be fixed through

routine maintenance. Routine maintenance issues, including root or grease obstructions or removable blockage, remain the responsibility of the private property owner. Video evidence must clearly show the cause of the sewer lateral malfunction.

- Your plumber must locate the problem using a "locating device" and clearly mark the location on the surface of the roadway with spray paint or another appropriate material. Merely measuring the distance to the problem will not suffice.
- Before SD1 will perform any work, the private property owner must sign an agreement holding SD1 harmless from any litigation resulting from the lateral repair project.

If you are able to demonstrate that the lateral defect is located beneath the public roadway and cannot be corrected through routine maintenance, you should call SD1's Debbie Rizzo at 859-578-6746 to request service through the lateral repair program.

What is SD1's role in the program?

SD1's role in this program is limited to the repair of the private sewer lateral under the public roadway and only when the city, county or state agency that owns the public roadway has formally agreed to participate in the program. Upon completing a repair, SD1 will backfill the excavated area with controlled density fill up to the existing roadway subgrade and coordinate roadway restoration with the owner of the public roadway. If the problem extends beyond the roadway, SD1 will notify you so you can hire a licensed plumber to perform the work outside the roadway at your own expense.

What is the role of participating public roadway owners?

The owner of an affected public roadway – a city, county or the state – is responsible for all road repairs needed as a result of work performed by SD1 on a defective private sewer lateral. The roadway owner also is responsible for traffic control needs and for the restoration of any curbs, sidewalks and drive aprons disturbed through the lateral repair project.

How are private sewer lateral repairs prioritized?

Funding for this program is determined during SD1's regular budgeting process. Once the budgeted funds run out, SD1 will perform no further repairs to private sewer laterals until additional funds are allocated in the next annual budget.

Because funds are limited, SD1 also will prioritize projects based on the impact to public health and safety rather than on a first-come, first-serve basis. Factors SD1 may consider when prioritizing repairs include the presence and severity of building backups, sewer overflows and sinkholes. SD1 may also consider the traffic count of affected roadways.

If you have questions, whom should you contact?

If you have any questions regarding this program, please contact Debbie Rizzo by phone at 859-578-6746 or by email at drizzo@sd1.org during normal business hours, Monday through Friday, 8 a.m. to 4:30 p.m.

Thank you for your cooperation and support as we work to protect public health, property and the environment by providing reliable wastewater and storm water services.

ACKNOWLEDGMENT OF RECEIPT OF INFORMATION AND INDEMNIFICATION

A. _____ is the owner of property located at _____ ("Owner").

B. Owner has been informed by Sanitation District No. 1, a sanitation district organized pursuant to Kentucky Revised Statute Chapter 220, whose mailing address is 1045 Eaton Drive, Ft. Wright, Kenton County, Kentucky 41017 ("SD1"), that SD1 or its contractor(s) will be performing repair work on a damaged sewer lateral within the "public roadway" adjacent to Owner's property. This repair will be performed in accordance with SD1's Private Sewer Lateral Repair Program as amended and reinstated by SD1's Board of Director's at its July 21, 2015 meeting (the "Policy").

C. The "public roadway" is defined as the public road from edge of pavement to edge of pavement. Pursuant to the Policy, SD1 will repair structural problems of private laterals from the public sewer to the edge of the public roadway at no cost to the property owner(s).

D. Necessary work to locate and repair the damaged lateral may extend beyond the "public roadway." Property owner(s) are responsible for 100% of the costs associated with locating and repairing private laterals outside the public roadway and will need to coordinate this work, if necessary, with their independent contractor.

E. In consideration for SD1's work provided in accordance with the Private Sewer Lateral Repair Program, the Property Owner shall defend, indemnify and hold harmless SD1, its directors, officers, agents and employees from and against any and all claims, demands, investigations, suits, actions, damages, and liabilities of every kind or nature which in any way arise from or are related to work performed on the Private Owner's property and the Public Roadway.

F. Owner has been informed by SD1 that failure to make necessary repairs to a damaged lateral may result in sewage backing up into Owner's property.

I hereby acknowledge that I have read and understood the above statements and I understand and accept the risks involved.

_____

_____

Printed Name - "Owner"

Date: _____

Witnessed By: _____

_____

Printed Name – "Witness"

APPENDIX F:

FY 2016 Safety Training Calendar

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Core Courses
Electives

Fiscal Year 2016

Month	Class	Duration	Date of the Month	Class	Duration	Date of the Month
July 2015	Vehicle Mounted Elevating/ Rotating Work Platforms(Bucket Truck)	2hr.	7th-9th	Powered Platform Operation Fall Protection(Ladders ,Scaffolds, Personnel Lift)	2hr.	21st-22nd
August 2015	Combined with Powered Platform and Scaffolding Training	2hr.	11th-13th	Traffic Control	4hr.	25th-27th
September 2015	HAZWPOPER Clean-Up	4hr.	8th-11th	Powered Platform Operation	2hr.	22nd-23rd
October 2015	Fire Extinguisher Training	1hr.	5th-9th	Fire Safety Emergency Action Plan	1hr.	21st & 22nd
November 2015	Work Place Violence/Active Shooter	3hr.	9th-13th	Traffic Control	4hr.	17th-19th
December 2015	**Off**					
January 2016	CPR/AED/First Aid/ BBP	8hr.	11th-15th	Hazard Communications/GHS	4hr.	26th-29th
February 2016	HAZWOPER Response	4hr.	9th-12th	Work Place Violence/Active Shooter	3hr.	22nd-26th
March 2016	CPR/AED/First Aid/ BBP	8hr.	7th-11th	Hazard Communications/GHS	4hr.	22nd-24th
April 2016	CDL Driver Safety	4hr.	19th-22th	Non- CDL Driver Safety	4hr.	25th-29th
May 2016	Confinded Space Entry and rescue	4hr.	**17th-20th**	Fire Safety Emergency Action Plan	1hr.	24th & 25th
June 2016	Confinded Space Entry and rescue	4hr.	7th-9th	**Trench Excavation Operations Rescue**	**4hr.**	**June Class is Canceled**

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APPENDIX G:

FY 2016 Violations Report for Food Service Discharge Permits

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Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-000125** **Taco Bell**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not cleaning the GT out per the permit required cleaning frequency. Not having log up to date.	NC-E	11/10/15	V	11/10/15	Verbal Notice of Violation (NOV)	$0.00

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation The Permit required grease interceptor cleaning frequency has not been followed. The Permit issued to Taco Bell #27637 states the grease interceptor cleaning frequency shall not exceed 90 days. SD1 records show the last cleaning was performed on 10-27-14 by a Hauler that is not on the SD1 Certified Waste Hauler list.	NC-E	10/13/15	WF	10/13/15	Written Notice of Violation (NOV) and fine.	$100.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-000412** **Washington Square Café**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Verbal NOV issued for not having GT cleaning logs or the Permit.	NC-O	10/01/15	V	10/01/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000421** **Wunderbar**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
They are not keeping up with the cleaning log. They say they are doing it every 30 days.	NC-O	08/25/15	V	08/25/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000534** **Popeye's Chicken & Biscuit**

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-000534** **Popeye's Chicken & Biscuit**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Missed July GI cleaning.	NC-E	08/01/15	V	08/31/15	Verbal Notice of Violation (NOV)	$0.00

Verbal NOV for missing the July cleaning. They were sold to another owner in July this is why I am only issuing a Verbal NOV this time.

Permit: **FOG-000638** **Buffalo Bobs Family Restaurant**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not following the 30 day cleaning freq for the GT	NC-E	10/07/15	V	10/07/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000726** **United Dairy Farmers #119**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Have not been following the 90 Day Cleaning Frequency	NC-E	11/03/15	V	11/03/15	Verbal Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-000726** **United Dairy Farmers #119**

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

Permit: **FOG-000863** **Biggby Coffee**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not keeping up with the 90 day cleaning frequency per the Permit.	NC-E	07/22/15	V	07/22/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000889** **White Castle**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not having the GI cleaned every 90 days.	NC-E	08/17/15	V	08/17/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000971** **Pizza Hut #031380**

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-000971** **Pizza Hut #031380**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Went over the 90 day Permit required GT cleaning frequency.	NC-E	07/01/15	V	08/28/15	Verbal Notice of Violation (NOV)	$0.00

Permit: **FOG-000994** **Pizza Hut #031383**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Went over the 90 day Permit required GT cleaning frequency.	NC-E	07/01/15	V	08/28/15	Verbal Notice of Violation (NOV)	$0.00

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

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

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

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

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Grease Interceptor Pumping Frequency Violation The Permit required grease interceptor cleaning frequency has not been followed. The Permit issued to Taco Bell #29693 states the grease interceptor cleaning frequency shall not exceed 90 days. SD1 records shows the last cleaning was performed on 8-29-14 by a Waste Hauler that is not on the SD1 Certified Waste Hauler list.	NC-E	10/13/15	WF	10/13/15	Written Notice of Violation (NOV) and fine.	$300.00

Permit: **FOG-001113** **Tailored Catering**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not cleaning GT per the Permit frequency	NC-E	08/17/15	V	08/17/15	Verbal Notice of Violation (NOV)	$0.00

Sanitation District # 1
Industrial Pretreatment Program
Violations Summary Report

Filter Criteria:
Event Category that Contain Violation
Permit-ted ? DOES Contain ...Yes...
NC Date: Jul 1 2015 - Jun 30 2016

Permit: **FOG-001146** **La Fuente Mexican Restaurant**

Violation Description	Violation Type	Date of NC	Enforcement Type	Date of Enforcement	Enforcement	Penalty
Not following the 90 day cleaning freq for the GI	NC-E	10/07/15	V	10/07/15	Verbal Notice of Violation (NOV)	$0.00

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APPENDIX H:

Pump Station Backup Power Plan Completed Schedule

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Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

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

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APPENDIX 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