



July 30, 2014

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

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

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

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

To Whom It May Concern:

Pursuant to the above-referenced Consent Decree, Sanitation District No. 1 (SD1) is required to submit quarterly reports that demonstrate SD1's compliance with the Consent Decree:

42. Quarterly Reports. The District shall submit to the Cabinet/EPA a quarterly report that describes the District's progress in complying with this Consent Decree for the previous quarter no later than thirty days after the end of each calendar quarter. The first such report shall be submitted to the Cabinet/EPA no later than thirty days after the second full quarter after entry of this Consent Decree.

Information contained within the enclosed Quarterly Report describes SD1's compliance with Consent Decree Case No. 2:05-cv-00199-WOB for the period of April 1, 2014 through June 30, 2014. The report also contains an outlook for the upcoming calendar quarter period of July 1, 2014 through September 30, 2014.

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July 30, 2014

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 drager@sd1.org.

Best regards,



David E. Rager
Executive Director

DER/wck
Enclosures

Sanitation District No. 1
July 30, 2014

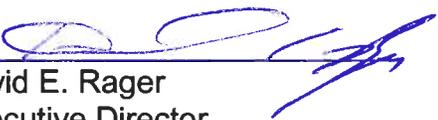
Consent Decree
Quarterly Report No. 27
(April 1, 2014 through June 30, 2014)



CERTIFICATION

Consent Decree Quarterly Report No. 27
Consent Decree Case No. 2:05-cv-00199-WOB

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



David E. Rager
Executive Director

7/30/14

Date

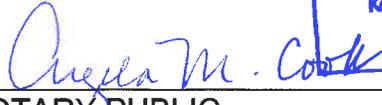
COMMONWEALTH OF KENTUCKY

)ss.

COUNTY OF Kenton

The foregoing instrument was acknowledged before me this 29th day of July, 20 14 by David E. Rager, Executive Director of Sanitation District. No. 1.

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



NOTARY PUBLIC

Kenton County, Kentucky

My commission expires: 7-30-16

CONSENT DECREE QUARTERLY REPORT NO. 27

July 30, 2014



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

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LIST OF ACRONYMS AND ABBREVIATIONS

Cabinet	Kentucky Energy and Environment Cabinet
CSO	Combined Sewer Overflow
CVG	Cincinnati-Northern Kentucky International Airport
EPA	U.S. Environmental Protection Agency
KDOW	Kentucky Division of Water
SD1	Sanitation District No. 1
SSO	Sanitary Sewer Overflow

SECTION 1. INTRODUCTION

1.1 Purpose

This Quarterly Report is submitted to fulfill the requirements of Sanitation District No. 1's (SD1) Consent Decree as entered on April 18, 2007. This Consent Decree is a legal agreement with the U.S. Environmental Protection Agency (EPA) and the Kentucky Energy and Environment Cabinet (Cabinet). The purpose of the Consent Decree is to address sanitary sewer overflows (SSOs) in SD1's sanitary sewer system and combined sewer overflows (CSOs) in the combined sewer system in an effort to improve water quality throughout SD1's service area. Specifically, Section V Reporting Requirements, states that:

42. Quarterly Reports. The District shall submit to the Cabinet/EPA a quarterly report that describes the District's progress in complying with this Consent Decree for the previous quarter no later than thirty days after the end of each calendar quarter.

1.2 Report Period

Information contained within this report describes SD1's compliance with Consent Decree Case No. 2:05-cv-00199-WOB for the period of April 1, 2014 through June 30, 2014. This report also contains an outlook for the upcoming calendar quarter period of July 1, 2014 through September 30, 2014.

1.3 Consent Decree Compliance Schedule

A comprehensive compliance schedule for meeting the requirements of the Consent Decree can be found in Appendix A. Additionally, a more detailed listing of the projects and activities conducted to comply with the requirements of the Consent Decree, including schedules, project updates for the current reporting period, and planned activity for the subsequent quarter can be found in Appendix B. SD1 has also incorporated into Appendix B the status of the projects proposed in the first five years of the final Watershed Plans for Northern Kentucky, submitted on March 31, 2011, approved by a letter from the Cabinet and EPA dated February 14, 2014, and

resubmitted March 14, 2014 with agreed revisions as requested in the February 14, 2014 letter.

Initial Watershed Projects

As shown in Appendix B, SD1 has completed its initial watershed projects. A request to remove Western Regional – Richwood project C-039-00 was included in the revised Watershed Plan submitted on March 31, 2011. Approval of the request was granted in a letter dated May 13, 2013 from the Cabinet and EPA. SD1 submitted its final Initial Watershed Projects Annual Report on June 7, 2013.

SECTION 2. OVERFLOW DATA

This section of the Quarterly Report presents SD1's estimates of overflow activity in the collection systems.

Overflow Categories

For reporting and system performance measurement purposes, SD1 has categorized sewer overflows throughout the service area into five distinct categories:

- *SSOs Due to Wet Weather Capacity Issues* – Recurring and inactive overflows from SD1's sanitary sewer system due to a lack of capacity during wet weather. This category includes wet-weather discharges at pump stations that may or may not have a constructed bypass. Overflows are determined to be "recurring" if they have been observed to overflow twice in a running twelve month period. Overflows are determined to be "inactive" until they occur more than once in a running twelve month period. Inactive overflows are generally under investigation as suspected or predicted hydraulic model overflow points in the collection system.
- *SSOs Due to Operational Issues* – Overflows from SD1's sanitary sewer system, including pump stations that are not a result of wet weather capacity issues. Many of these are one-time, dry-weather occurrences caused by temporary system issues that are investigated and corrected as soon as practicable.
- *Wet Weather CSOs* – Wet-weather discharges from the combined sewer system.

- *Dry Weather CSOs* – Dry-weather discharges from the combined sewer system.
- *Building Backups* – The release of raw sewage from a service lateral into a building in SD1's service area. Building backups can be caused by several factors, such as constrained capacity during wet weather or a blockage or collapse in the private service lateral or public main line. Building backups can be determined to be associated with the public sewer system or can be due to other causes beyond the control of SD1.

Quantitative Estimates

SD1 uses three general methods for developing quantitative overflow estimates:

- Field inspections during or shortly after wet-weather events to identify activations. This inspection program has been in place since 2005 and is expanded as warranted for ongoing reporting and sewer overflow response cleanup. SD1's wet weather crew continues to perform routine inspections before, during and after rain events at prioritized recurring, inactive and suspected SSO locations to understand and verify overflow activity and the need for sewer overflow response cleanup. This is part of SD1's ongoing effort to characterize and verify overflows throughout the collection systems and ensure they are categorized accurately and cleaned up after rain events. Proper characterization of overflows ensures that the hydraulic models that SD1 utilizes are maintained and improved upon, which helps identify the most appropriate and effective solutions.
- Simple hydraulic estimating using Manning's Gravity Flow and Pipe Calculation to report overflows from pump stations with constructed bypasses, and industry standard volume estimations techniques and calculations are used for spills or for any witnessed overflow from a manhole. The only exception to this calculation methodology is at the Lakeview Pump Station, which has a metered bypass pipe. This method has been used historically for reporting purposes, and its results are included in this Quarterly Report.
- SD1's collection systems hydraulic models are used for quarterly activation and volume estimations of wet-weather CSOs and SSOs. SD1 completed a year-long flow monitoring program in 2008, consisting of more than 245 flow meters

and 45 rain gauges installed throughout the combined and separate sewer systems, that was utilized to update the calibration and validation of the system-wide hydraulic models. This calibration was undertaken to provide a model network that could confidently be used as an accurate tool in preparing SD1's Watershed Plans. In addition to the use of the models for planning future capital improvements, the models are also being used to provide information about the current performance of SD1's system. Based on the results of the ongoing verifications, SD1 has developed a highly-calibrated hydraulic model that provides an accurate representation of the sewer system. This tool allows SD1 to have confidence in the results of the overflow volumes from the sewer system and to provide estimates of the overflow locations within the system for quarterly reporting purposes. Additionally, the model is updated on a quarterly and annual basis to incorporate the latest data gathered from ongoing CSO and SSO inspections, targeted flow monitoring, sewer inspections, GPS surveys, discovered infrastructure, and record drawings of completed capital projects and private developments. This process ensures that the model is kept up-to-date and accurately reflects the current state of the collection system. This approach is consistent with SD1's commitment to provide the best available information on overflow activity within these reports.

For this submittal, SD1 has measured rainfall with a series of 20 rain gauges located across the system, and simulated the rainfall that occurred April 1, 2014 through June 30, 2014 within the hydraulic model. The results of the model simulations have been summarized and included as an estimate of the frequency and total volume of the overflow locations within SD1's system for this period. For the modeled locations, these results are not a summary of the observed or confirmed conditions, but are confident estimates of the overflow activations, based upon the calibrated and verified model.

SD1 actively realigns and optimizes field and modeling activities on a continual basis, through regular inspections and flow monitoring, to verify model simulations against actual field conditions. Field verifications improve model predictions by correcting and minimizing discrepancies found with observed conditions. The ongoing refinement of SD1's modeling tools provides accurate estimations of overflow location and activity. The model is also continuously updated with record drawings to reflect capital improvements to SD1's collection system. These updates may also include post-

construction flow monitoring for further calibration. Modeled overflow activity reported in this submittal incorporates current system improvements.

Precipitation Data

Rainfall statistics are an important component of overflow reporting, as rainfall conditions represent an uncontrolled variable impacting SD1's wet weather CSO and SSO activity. Quarterly CSO and SSO activations and volumes will constantly vary over time, with or without system improvements, due to natural variations in rainfall patterns and the associated groundwater and antecedent moisture conditions. Over time, SD1 expects system improvements to show a clear trend in reduced overflow activity. However, reviewing overflow reports for any individual quarter, relative to the previous quarter, also requires careful review of the rainfall associated with each quarter, in order to understand the impact of the weather patterns. For this reason, storm event summaries are included in all overflow reporting submittals. The data in Table 2.1 is from the Cincinnati-Northern Kentucky International Airport (CVG) rain gauge maintained by the National Weather Service.

Table 2.1 Summary of Storm Events
(April 1, 2014 through June 30, 2014)

Month	Approximate # of Storm Events ¹	Rainfall (in)
April	9	6.66
May	7	2.86
June	12	6.22
Total	28	15.74

¹ A storm event is defined as at least 0.01" of rain with a minimum inter-event time of 7 hours.

The remainder of this section reports overflows that occurred throughout SD1's service area during the period of April 1, 2014 through June 30, 2014. Annual comparisons and a cumulative accounting of SD1's overflows from January 2008 through the current reporting period can be found in Appendix C.

2.1 SSOs Due to Wet Weather Capacity Issues

As previously described, this category includes recurring and inactive overflows from SD1's sanitary sewer system due to lack of capacity during wet weather. This includes wet-weather discharges at pump stations that may or may not have a constructed

bypass. Overflows are determined to be “recurring” if they have been observed to overflow more than once in a running twelve month period. Overflows are determined to be “inactive” until they have been observed to overflow more than once in a running twelve month period. Inactive overflows are generally under investigation as suspected or predicted hydraulic model overflow points in the collection system.

Recurring Wet Weather SSOs

Modeled activation and volume statistics for 158 recurring wet-weather SSO locations, for the current reporting period, can be found in Appendix D. Updates to the locations of SD1’s recurring wet-weather SSOs are reported on an annual basis to include any revisions, based upon SD1’s routine field inspections and hydraulic modeling programs. The updates are included in the first quarterly report of every year. Therefore, any revisions to the current recurring wet-weather SSO list will be published in Consent Decree Quarterly Report No. 30, due on April 30, 2015.

SD1 observed and provided initial notification of three wet-weather overflows at known recurring SSO sites, on April 3, 2014. Estimated volumes were provided with the initial notification, but are not included in the wet-weather recurring SSO cumulative totals. Instead of the initial estimates that were reported on April 3, the modeled results for the recurring wet-weather SSOs, provided in Appendix D, account for the overflows at these locations. The following are the three wet-weather SSOs that SD1 provided initial notification on:

- KDOW ID# 35145: Structure ID# 1990018 at the intersection of Lakepark Drive and Madison Pike, in Fort Wright
- KDOW ID# 35146: Structure ID# 1730086 on Bromley-Crescent Springs Road, near Bromley
- KDOW ID# 35147: Structure ID# 2301274 at the intersection of Richardson Road and Madison Pike, in Independence

Recurring Pump Station Overflows

In addition to the 158 recurring wet-weather SSOs, there are also 14 pump stations identified in the Consent Decree that have historically documented recurring wet-weather capacity issues. Table 2.2 lists each of the 14 pump stations identified in

Exhibit E of the Consent Decree and demonstrates their wet-weather SSO occurrences during the current reporting period.

Of the 14 pump stations listed in the Consent Decree, Lakeview Pump Station and Crestview Pump Station each discharged twice, due to lack of capacity in wet weather, during the current reporting period. The four events discharged an estimated combined total volume of 1,241,850 gallons in the first week of April, following approximately 3.8 inches of rain and 1 inch of snow melt.

As previously mentioned, SD1 uses the Manning's Gravity Flow and Pipe Calculation to estimate discharge volumes from pump stations. Typically, the only exception to this calculation methodology is at the Lakeview Pump Station, which has a metered bypass pipe. However, the flow meter at the Lakeview bypass was under repair in April, so the Manning's Calculation was used to estimate this quarter's Lakeview Pump Station discharge volumes.

Table 2.2 Discharges from Consent Decree Pump Stations Due to Lack of Capacity during Wet Weather
(April 1, 2014 through June 30, 2014)

Name of Pump Station	Number of Wet-Weather Related Discharge Occurrences	Total Estimated Volume (gallons)
Crestview	2	4,350
Lakeview	2	1,237,500
Alex-Licking	0	0
Allen Fork	0	0
Harrison Harbor	0	0
Highland Acres	0	0
Kentucky Aire	0	0
Riley Road	0	0
Ripple Creek	0	0
South Hampton	0	0
South Park	0	0
Sunset	0	0
Taylor'sport	0	0
Union	0	0
TOTAL	4	1,241,850

Gray denotes where required improvements have been made to pump stations.

Overflows at Pump Stations Not Listed in Consent Decree due to Lack of Capacity

In addition to tracking the recurring wet-weather SSOs at the pump stations listed in the Consent Decree, SD1 continuously monitors all pump stations throughout the service area for recurring wet-weather capacity issues.

During the current reporting period, three pump stations not listed in the Consent Decree experienced recurring wet-weather capacity issues. The three stations discharged a total of eight times, for a total estimated volume of 383,450 gallons.

Table 2.3 Discharges from Pump Stations Not Listed in the Consent Decree Due to Lack of Capacity during Wet Weather
(April 1, 2014 through June 30, 2014)

Name of Pump Station	Number of Wet-Weather Related Discharge Occurrences	Total Estimated Volume (gallons)
Highland Heights	6	380,620
Mafred	1	2,560
Sand Run	1	270
TOTAL	8	383,450

Inactive Wet Weather SSOs

No inactive wet-weather SSOs were observed during the current reporting period.

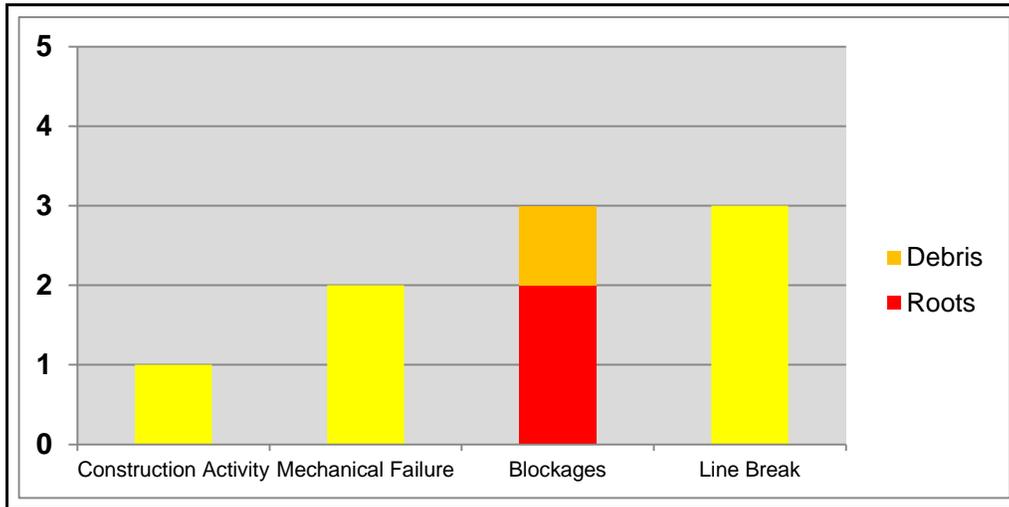
2.2 SSOs Due to Operational Issues

This category of overflows includes discharges from SD1's sanitary sewer system that are not a result of wet-weather capacity issues. Many of these are one-time, dry-weather occurrences caused by temporary system issues that are investigated and corrected as soon as possible.

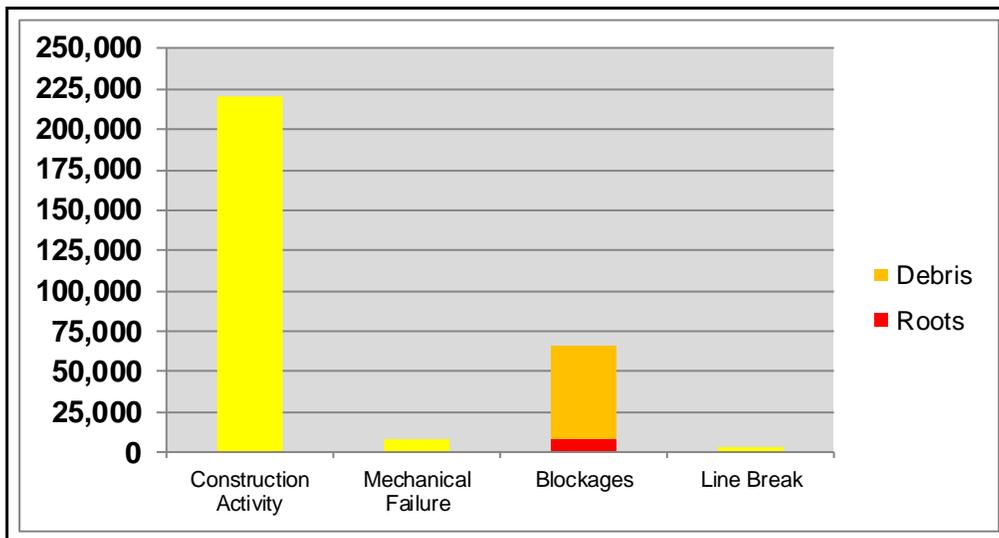
During the current reporting period, there were a total of nine SSOs due to operational issues throughout SD1's service area, with a total estimated overflow volume of 296,800 gallons.

Figure 2.1 demonstrates the primary causes and Figure 2.2 demonstrates the corresponding volumes of the SSOs due to operational issues for the current reporting period.

**Figure 2.1 Occurrences of SSO Due to Operational Issues per Cause
(April 1, 2014 through June 30, 2014)**



**Figure 2.2 Gallons of SSO Due to Operational Issues per Cause
(April 1, 2014 through June 30, 2014)**



These SSOs were immediately acted upon and the problems repaired. The sewers where blockages occurred were put into SD1’s Continuous Sewer Assessment Program (CSAP) to be inspected and cleaned as determined by the CSAP logic, which also provides appropriate next actions to permanently address the cause of the blockages. All overflow events are recorded in Lucity and are periodically reviewed to identify if any trends or localized problem areas (such as past overflows or proximity to recurring SSOs) exist that warrant the need for a larger-scale inspection or rehabilitation project.

2.3 Wet Weather CSOs

Included in Appendix E are the modeled activation and volume statistics for SD1's 95 CSOs. This data was generated from the hydraulic modeling program previously described in Section 2.1.

2.4 Dry Weather CSOs

Two dry-weather CSOs were recorded during the current reporting period, both due to extenuating circumstances related to flood stage river levels. These occurrences were necessary bypasses that were made to repair major system failures, which were caused by events that were beyond the control of SD1. Neither dry-weather CSO was due to a lack of preventative or regular maintenance of the collection system. The estimated combined total discharge of the dry-weather CSO from the two events is 7,307,500 gallons.

Ludlow Landslide

The first event occurred in the evening of the last day of the previous quarter, but was not fully documented until the following day on April 1, 2014. In Quarterly Report No. 26, SD1 documented a line break of a 60-inch interceptor sewer, caused by a landslide along the Ohio River in the City of Ludlow on March 26, 2014. SD1 set up one 12-inch and two 8-inch bypass pumps, as illustrated in Figure 2.3, to make the temporary repair to the interceptor. The combined pumping capacity of the bypass operation was approximately 1.5 million gallons per day.

During the repair, it became apparent that the pumps could not convey all of the interceptor flow, and no physical space remained to insert a fourth bypass pump. To minimize discharges at the point of repair, SD1 closed two flood gates and diverted a small portion of the total flow to the Willow Run Flood Station wet well on March 31, 2014. The diversion lasted approximately two hours, and resulted in an estimated discharge of 607,500 gallons. While this combined system discharge is directly related to a downstream repair during dry weather, the failure of the interceptor is the result of a destabilized river bank from illegal dumping and continuous high river (wet weather) events.

Figure 2.3 Bypass Pumping of 60-Inch Ohio River Interceptor

Barge Accident during High River

This incident immediately followed a high river event that occurred between April 4 and April 9, 2014. A water-tight manhole along the Newport side of the Licking River was hit by a barge, after it had become submerged during the high river event. Following the deactivation of the flood control system, SD1 pump station operators identified the broken manhole when the reactivated Second Street Pump Station in Covington could not fully convey the interceptor flows from Newport. Although the river was no longer at flood stage, river water continued to pour into the broken manhole, which overwhelmed the Second Street Pump Station. The pump station had to be shut back down and was offline for approximately one day, as river water intruded into the system through the damaged manhole and backed up to Newport's Fourth Street and Columbia Street diversions. Once the river receded below the damaged manhole, Second Street Pump Station was reactivated and the repair was made. Figure 2.4 illustrates the affected areas.

SD1's hydraulic model estimates that approximately 6,700,000 gallons were discharged from the two CSO outfalls during the post-high river event. SD1 is evaluating permanent solutions to avoid such an incident from happening in the future, including: burying the manhole, adding flags to a new steel manhole marker pole, and tethering a buoy to the manhole frame. Figure 2.5 is a photograph of the riverbank where the manhole frame was destroyed, and the high-river manhole marker pole was bent over from the collision with the barge.

Figure 2.4 Map of Affected Area after Barge Collision



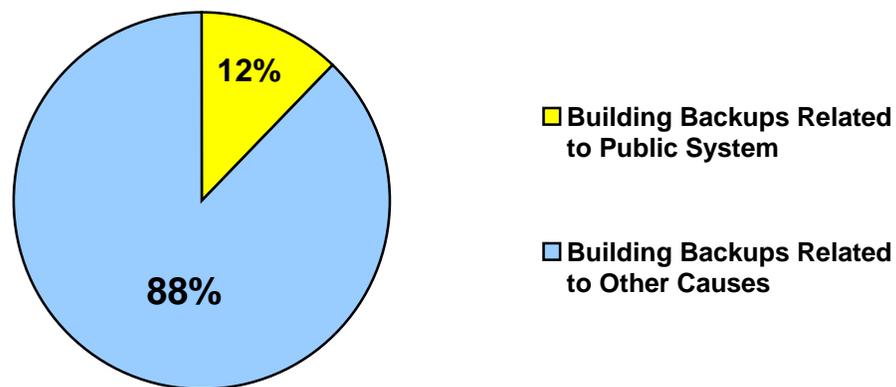
Figure 2.5 Location of Damaged Manhole - Bent Marker Pole from Barge Collision



2.5 Building Backups

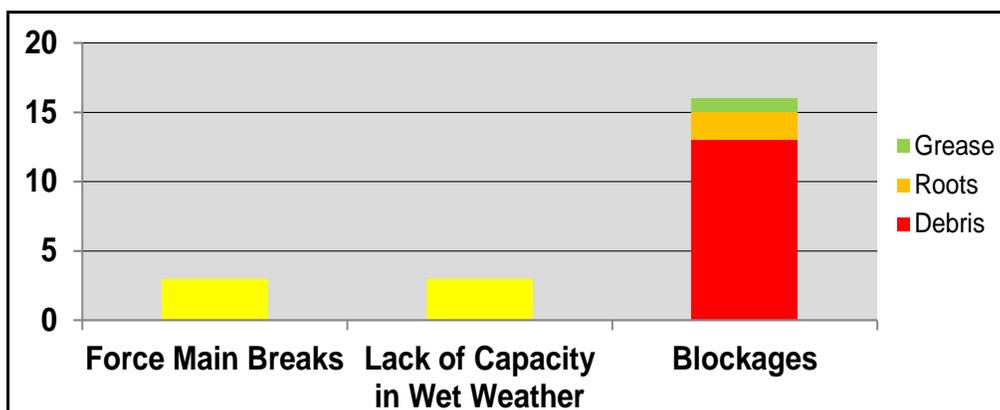
During the second quarter of 2014, there were approximately 178 building backups throughout SD1’s service area. Of these 178 backups, approximately 22 were related to the condition or operation of the public sewers and 156 were caused by other issues, as shown in Figure 2.6. The building backups that were not related to the condition or operation of the public sewers were caused by blockages in private service laterals, internal plumbing issues, or were undetermined.

Figure 2.6 Building Backups: Public System vs. Other Causes
(April 1, 2014 through June 30, 2014)



Causes of the approximate 22 building backups determined to be related to the condition or operation of the public sewer lines are detailed in Figure 2.7 below.

Figure 2.7 Causes of Public System Related Building Backups
(April 1, 2014 through June 30, 2014)



The sewers where these blockages occurred were put into or updated in SD1's CSAP to be inspected and cleaned, as determined by the program logic, which also provides appropriate next actions to permanently address the cause of the blockages.

All building backups are recorded in Lucity and are periodically reviewed to identify if any trends or localized problem areas exist that warrants the need for a larger-scale inspection routine, rehabilitation, or repair project.

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APPENDIX A:
Consent Decree Compliance Schedule

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Consent Decree Compliance Schedule

	CONSENT DECREE ACTIVITY	PERCENT COMPLETE	DUE DATE	DATE OF COMPLETION
ASSESSED STIPULATED PENALTY				
✓	\$14,000 for 9 DWOs, between April 18, 2009 through June 30, 2010	100%	1/9/2011	12/21/2010
CIVIL PENALTY				
✓	Pay Civil Penalties to EPPC and US EPA	100%	06/18/07	06/18/07
CMOM PROGRAM REQUIREMENTS – 2007 through 2014				
✓	Submit CMOM Program Self-Assessment	100%	10/18/07	10/17/07
✓	Submit Grease Control Program	100%	10/18/07	09/17/07
✓	Submit Pump Station Backup Power Plan	100%	04/18/08	12/14/07
✓	Submit Sewer Overflow Response Plan (SORP)	100%	10/18/07	10/09/07
Submit CMOM Annual Report				
✓	CMOM Annual Report 1	100%	12/31/07	12/28/07
✓	CMOM Annual Report 2	100%	12/31/08	12/19/08
✓	CMOM Annual Report 3	100%	12/31/09	12/18/09
✓	CMOM Annual Report 4	100%	12/31/10	12/21/10
✓	CMOM Annual Report 5	100%	12/31/11	12/21/11
✓	CMOM Annual Report 6	100%	12/31/12	12/31/12
✓	CMOM Annual Report 7	100%	12/31/13	12/31/13
	CMOM Annual Report 8	0%	12/31/14	
Phased Grease Control Implementation				
✓	Phase 1 Tasks	100%	01/08/09	01/08/09
✓	Phase 2 Tasks	100%	01/08/10	01/08/10
✓	Phase 3 Tasks	100%	01/08/11	01/08/11
✓	Phase 4 Tasks / Full Implementation	100%	01/08/12	12/31/11
Complete Pump Station Backup Power Projects (110 Total)		81%	12/31/2015	
Complete SORP Annual Review				
✓	SORP Annual Review 1	100%	05/14/09	07/10/09
✓	SORP Annual Review 2	100%	11/10/10	10/01/10
✓	SORP Annual Review 3	100%	11/10/11	11/10/11
✓	SORP Annual Review 4	100%	11/10/12	11/10/12
✓	SORP Annual Review 5	100%	11/10/13	11/08/13
	SORP Annual Review 6	0%	11/10/14	
INITIAL WATERSHED PROJECTS				
✓	Complete Initial Watershed Projects (51 Total)	100%	12/31/14	06/06/12
Submit Initial Watershed Projects Annual Report				
✓	Initial Watershed Projects Annual Report 1	100%	04/18/08	04/08/08
✓	Initial Watershed Projects Annual Report 2	100%	06/07/09	06/05/09
✓	Initial Watershed Projects Annual Report 3	100%	06/07/10	06/04/10
✓	Initial Watershed Projects Annual Report 4	100%	06/07/11	06/07/11
✓	Initial Watershed Projects Annual Report 5	100%	06/07/12	06/07/12
✓	Initial Watershed Projects Annual Report 6	100%	06/07/13	06/06/13
NMC PROGRAM REQUIREMENTS – 2007 through 2014				
✓	Submit NMC Documentation of Compliance	100%	04/18/08	03/12/08
✓	Complete Additional NMC Compliance Activities (51 Total)	100%	04/18/09	4/18/09 ¹
Submit NMC Annual Report				
✓	NMC Annual Compliance Report 1	100%	09/04/09	05/11/09
✓	NMC Annual Compliance Report 2	100%	09/04/10	06/04/10
✓	NMC Annual Compliance Report 3	100%	09/04/11	06/21/11
✓	NMC Annual Compliance Report 4	100%	09/04/12	07/02/12
✓	NMC Annual Compliance Report 5	100%	09/04/13	09/04/13
	NMC Annual Compliance Report 6	10%	09/04/14	

Consent Decree Compliance Schedule

	CONSENT DECREE ACTIVITY	PERCENT COMPLETE	DUE DATE	DATE OF COMPLETION
PUBLIC PARTICIPATION				
✓	Watershed Summit	100%	N/A	08/30/07
✓	Watershed Community Council Meeting 1	100%	N/A	11/27/07
✓	Watershed Community Council Meeting 2	100%	N/A	02/26/08
✓	Watershed Community Council Meeting 3	100%	N/A	05/20/08
✓	Watershed Community Council Meeting 4	100%	N/A	08/19/08
✓	Watershed Community Council Meeting 5	100%	N/A	11/18/08
✓	Watershed Community Council Meeting 6	100%	N/A	02/17/09
✓	Watershed Community Council Meeting 7	100%	N/A	05/20/10
✓	Watershed Community Council Meeting 8	100%	N/A	11/03/10
PUMP STATION OVERFLOW ELIMINATION PLAN (PSOEP) – 2007 through 2014				
✓	Submit PSOEP	100%	10/18/07	09/18/07
Submit PSOEP Annual Report				
✓	PSOEP Annual Report 1	100%	05/14/09	05/11/09
✓	PSOEP Annual Report 2	100%	05/14/10	05/14/10
✓	PSOEP Annual Report 3	100%	05/14/11	05/13/11
✓	PSOEP Annual Report 4	100%	05/14/12	05/14/12
✓	PSOEP Annual Report 5	100%	05/14/13	05/14/13
✓	PSOEP Annual Report 6	100%	05/14/14	05/13/13
REPORTING – 2007 through 2014				
Submit Quarterly Report				
✓	Submit Quarterly Report 1	100%	01/30/08	01/30/08
✓	Submit Quarterly Report 2	100%	04/30/08	04/30/08
✓	Submit Quarterly Report 3	100%	07/30/08	07/30/08
✓	Submit Quarterly Report 4	100%	10/30/08	10/30/08
✓	Submit Quarterly Report 5	100%	01/30/09	01/30/09
✓	Submit Quarterly Report 6	100%	04/30/09	04/30/09
✓	Submit Quarterly Report 7	100%	07/30/09	07/30/09
✓	Submit Quarterly Report 8	100%	10/30/09	10/30/09
✓	Submit Quarterly Report 9	100%	01/30/10	01/29/10
✓	Submit Quarterly Report 10	100%	04/30/10	04/30/10
✓	Submit Quarterly Report 11	100%	07/30/10	07/30/10
✓	Submit Quarterly Report 12	100%	10/30/10	10/29/10
✓	Submit Quarterly Report 13	100%	01/30/11	01/28/11
✓	Submit Quarterly Report 14	100%	04/30/11	04/29/11
✓	Submit Quarterly Report 15	100%	07/30/11	07/29/11
✓	Submit Quarterly Report 16	100%	10/30/11	10/28/11
✓	Submit Quarterly Report 17	100%	01/30/12	01/30/12
✓	Submit Quarterly Report 18	100%	04/30/12	04/30/12
✓	Submit Quarterly Report 19	100%	07/30/12	07/30/12
✓	Submit Quarterly Report 20	100%	10/30/12	10/30/12
✓	Submit Quarterly Report 21	100%	01/30/13	01/30/13
✓	Submit Quarterly Report 22	100%	04/30/13	04/30/13
✓	Submit Quarterly Report 23	100%	07/30/13	07/30/13
✓	Submit Quarterly Report 24	100%	10/30/13	10/30/13
✓	Submit Quarterly Report 25	100%	01/30/14	01/30/14
✓	Submit Quarterly Report 26	100%	04/30/14	04/30/14
✓	Submit Quarterly Report 27	100%	07/30/14	07/30/14
	Submit Quarterly Report 28	0%	10/30/14	

Consent Decree Compliance Schedule

	CONSENT DECREE ACTIVITY	PERCENT COMPLETE	DUE DATE	DATE OF COMPLETION
STATE ENVIRONMENTAL PROJECTS				
✓	Setup 6 Separate Escrow Accounts	100%	10/18/07	10/18/07
✓	Conservancies	100%	04/18/12	04/18/12
✓	<i>Boone County</i>	100%	04/18/12	03/26/12
✓	<i>Campbell County</i>	100%	04/18/12	02/23/12
✓	<i>Kenton County</i>	100%	04/18/12	04/17/12
✓	Licking River Watershed Watch	100%	04/18/12	09/28/11
✓	Split Rock	100%	04/18/12	12/18/08
✓	Education Programs	100%	04/18/12	08/04/11
✓	State Environmental Project Completion Report	100%	06/17/12	06/15/12
SUPPLEMENTAL PROJECTS				
✓	Supplemental Environmental Projects	100%	04/18/12	04/12/12
✓	SEP Completion Reports	100%	06/17/12	06/15/12
WATERSHED PLANS				
Framework for Developing Watershed Plans				
✓	Obtain Public Input on Framework for Watershed Plans	100%	04/09/08	04/09/08
✓	Submit Framework for Watershed Plans	100%	04/18/08	04/17/08
First Round Watershed Plans				
✓	Obtain Public Input on First Round of Watershed Plans	100%	06/27/09	06/08/09
✓	<i>Public Comment Period (5/7/09-6/8/09)</i>	100%	06/08/09	06/08/09
✓	<i>Boone County Public Meeting</i>	100%	N/A	05/14/09
✓	<i>Campbell County Public Meeting</i>	100%	N/A	05/19/09
✓	<i>Kenton County Public Meeting</i>	100%	N/A	05/21/09
✓	Submit First Round of Watershed Plans	100%	06/30/09	06/30/09
✓	Resubmit First Round of Watershed Plans	100%	03/31/11	03/31/11
✓	Resubmit First Round of Watershed Plans - Revision	100%	10/03/13	10/01/13
✓	Final Submission of First Round of Watershed Plans	100%	03/15/14	03/14/14
Second Round Watershed Plans				
	Obtain Public Input on Second Round of Watershed Plans	0%	To Be Determined ²	
	Submit Second Round of Watershed Plans	0%	To Be Determined ²	
Third Round Watershed Plans				
	Obtain Public Input on Third Round of Watershed Plans	0%	To Be Determined ²	
	Submit Third Round of Watershed Plans	0%	To Be Determined ²	
Consent Decree Compliance				
	Complete all Consent Decree Compliance Measures	40%	12/31/25	

¹ Project schedules for three of the 51 projects were extended beyond 4/18/2009, as described in the 2009 NMC Annual Report. The three projects were complete as of December 2009.

² Deadline is dependent on the approval date of each Watershed Plan.

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APPENDIX B:
Watershed Improvement Program

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Initial Watershed Projects

CIP Title	Basin	Scheduled Completion Date	Actual Completion Date	Status
Initial Watershed Projects				
Strawberry PS Elimination	North	2006	2005	Complete
Beechwood Outfall Sewer Replacement	North	2007	2007	Complete
Eastern Regional - Contract 1--Pond Creek Force Main and Gravity Sewer to Eastern Regional WRF	East	2008	2007	Complete
Eastern Regional - Contract 2--Kahn's Gravity Sewer and Gravity Sewer to the Pond Creek PS	East	2008	2007	Complete
US 27 at Summit Assessment	East	2008	2006	Complete
Eastern Regional - Contract 4--Alex-Licking Gravity Sewer & Force Main to Contract 1	East	2009	2008	Complete
Eastern Regional - Contract 6--Pond Creek PS	East	2008	2007	Complete
Eastern Regional - Contract 8A--Alex-Licking PS	East	2009	2009	Complete
Parkside PS Relocation	East	2008	2007	Complete
Eastern Regional Water Reclamation Facility	East	2008	2008	Complete
Highland Heights PS Study	East	2006	2006	Complete
Wilson/Waterworks Road Relief Sewer Study	East	2008	2007	Complete
Pinehill/Skyview Terrace Sewer	East	2006	2005	Complete
Eastern Regional - Contract 7--Riley Road #2 PS	East	2009	2009	Complete
Eastern Regional - Contract 3--Riley Force Main and Gravity Sewer to the ERWRF	East	2009	2010	Complete
Western Regional - KDOT - Turkeyfoot Road Force Main	West	2006	2005	Complete
Western Regional - Union Sewer (North and South)	West	2013	2008	Complete
American Sign PS Rehabilitation	West	2008	2008	Complete
Allen Fork Collection System - Phase I Improvements	West	2009	2007	Complete
Duncan Drive Assessment Project	West	2007	2006	Complete
Western Regional - Sunnybrook Sewer	West	2013	2010	Complete
Western Regional - Gunpowder Interceptor Sewer	West	2013	2010	Complete
Banklick PS Screening Facility	Central	2006	2005	Complete
Stevenson Road Relief Sewer Project Phase II	Central	2006	2006	Complete
Latonia Combined Sewer Separation	Central	2009	2007	Complete
Licking River Sewer Crossing Study	Central	2007	2007	Complete
McMillan PS Removal	Central	2006	2005	Complete
Meyer Road PS Rehabilitation	Central	2008	2008	Complete
Macke PS Rehabilitation	Central	2008	2008	Complete

Initial Watershed Projects

CIP Title	Basin	Scheduled Completion Date	Actual Completion Date	Status
Initial Watershed Projects				
Richwood PS Improvements	Central	2006	2005	Complete
Patton Street Sewer Study	Central	2006	2006	Complete
South Hills Outfall	Central	2008	2007	Complete
Grit Chamber Projects	Multiple	2010	2008	Complete
Fort Wright Illicit Discharge Removal	Multiple	2007	2006	Complete
Fort Wright Sanitary Sewer Rehabilitation Phase 1	Multiple	2007	2006	Complete
Fort Wright Outfall Sewer - Phase II	Multiple	2006	2006	Complete
Dry Creek Treatment Plant - Grit Removal Modifications	Multiple	2006	2005	Complete
Large Diameter Sewer Assessment Program - Phase III	Multiple	2007	2006	Complete
Brookwood Subdivision SSES Study	Multiple	2006	2006	Complete
Southern Kenton Drainage Study	Multiple	2007	2006	Complete
Wilson Road Sewer Assessment Project	Multiple	2006	2005	Complete
Apple Drive Sewer Outfall	Multiple	2006	2006	Complete
Bluegrass Swim Club Sewer Separation	Multiple	2008	2007	Complete
Eastern Regional – Sunset Pump Station and Force Main Improvements	East	2010	2010	Complete
Western Regional Conveyance System to Western Regional WRF	West	2013	2012	Complete
Western Regional Water Reclamation Facility	West	2013	2012	Complete
Western Regional - Narrows Road Diversion PS	West	2013	2012	Complete
Western Regional - Frogtown Interceptor Sewer (from Sunnybrook Dr. to Frogtown Rd.)	West	2014	2012	Complete
Western Regional - South Fork Gunpowder Interceptor Sewer and Rosetta Sewer	West	2013	2012	Complete
Western Regional - Turkeyfoot Industrial Road Force Main	West	2013	2012	Complete
Western Regional - Richwood Sewer and Force Main	West	Removed from Initial Watershed Projects. Approved in letter from Cabinet dated May 13, 2013.		

Watershed Plan Projects: Five Year Program

System-wide Programs

CIP Title	Basin	Project Description	Target Project Benefit	Scheduled Completion Date	Actual Completion Date	Past Activity for 4/01/2014 to 6/30/2014	Planned Activity for 7/01/2014 to 9/30/2014
<i>(Schedules listed in this section are subject to change based on the approval of SD1's Watershed Plans.)</i>							
Priority Inflow and Infiltration Source Identification & Removal Program							
Lakeview I/I Source Identification & Removal	Central	SSES activities and I/I removal in areas where found to be cost effective and feasible upstream of the Lakeview Pump Station	Reduce I/I and SSOs in Lakeview PS service area	Beyond 2014	n/a	Initial Design	Initial Design
Licking River Siphon Source Identification and Removal	Central	SSES activities and I/I removal in areas where found to be cost effective and feasible upstream of the Licking River Siphon	Reduce I/I and SSOs in Licking River Siphon area	Beyond 2014	n/a	Initial Design	Initial Design
Taylor Creek Source Identification and Removal	East	SSES activities and I/I removal in areas where found to be cost effective and feasible in the Taylor Creek area	Reduce I/I and SSOs in Taylor Creek area	Beyond 2014	n/a	Initial Design	Initial Design
Green Programs (DRIP & GrIPP)							
Boone Woods YMCA Detention Model	North	Partnership with Northern Kentucky University Center for Applied Ecology to retrofit a detention basin on Boone Woods YMCA property	Improve Water Quality	2010	2010	Complete	
City of Covington: 12th Street Bioswale	North	Partnership with City of Covington to install street planters leading to a bioswale and rain garden along 12th Street	Reduce CSO volume	2011	2011	Complete	
City of Covington: Main Strasse Gateway Biofiltration Swale	North	Partnership with City of Covington and Transit Authority of Northern Kentucky to install biofiltration swales on city property at the Bakewell parking lot	Reduce CSO volume	2012	2013	Complete	
Notre Dame Academy Basin Retrofit	North	Partnership with Notre Dame Academy to retrofit an existing detention basin on school property	Reduce CSO volume	2009	2009	Complete	
City of Ft. Thomas: Rossford Park Rain Garden	East	Partnership with City of Ft. Thomas to install rain gardens at Rossford Park	Improve Water Quality	2012	2012	Complete	
City of Ft. Thomas: Memorial Parkway Bioswale	East	Partnership with City of Ft. Thomas to install a bioswale at the Northern Kentucky Water District property located along Memorial Parkway.	Improve Water Quality	2010	2010	Complete	
Kenton County School District: Turkeyfoot Middle School	Central	Partnership with Kenton County School District to install rain garden at Turkeyfoot Middle School	Improve Water Quality	2010	2010	Complete	
City of Covington: Madison Ave. Rain Garden	North	Partnership with City of Covington to install two rain gardens or street planters within the right-of-way along Madison Avenue	Reduce CSO volume	2013	2013	Complete	
Kenton County Public Library: Mary Ann Morgan Branch	North	Partnership with Kenton County Library to install rain gardens and permeable pavers on site at the Mary Ann Mongan Branch	Reduce CSO volume	2013	2013	Complete	
Demonstration Projects (Pilot Projects & Innovative Technology Testing)							
St. Elizabeth Detention Basin Retrofit	North	Modification of an existing dry detention basin located on property owned by St. Elizabeth Medical Center.	Reduce CSO volume in the Willow Run Sewershed	2009	2009	Post-Construction Monitoring	
Prisoner's Lake Rainwater Harvesting	North	Construction of a small storm water pumping station and force main to capture storm water runoff from Prisoner's Lake that will be re-used in an irrigation pond for a small public golf course.	Manage storm water entering the CSS	2010	2010	Complete	
Terraced Reforestation	North	Construction of a series of vegetated, terraced berms within the I-71/75 right-of-way in the City of Covington.	Manage storm water entering the CSS	2010	2011	Post-Construction Monitoring	
Watershed Controls Pilot Projects - Regional and Decentralized Controls							
Regional Project: Banklick Regional Wetlands	Central	Constructed wetland that treats flow diverted from Banklick Creek to reduce bacteria concentrations.	Improve water quality of Banklick Creek	2011	2011	Post-Construction Monitoring	
Decentralized Control Project	Central	Storm water control measures such as wetlands, biofiltration basins, and enhanced retention serving upstream drainage areas smaller than one square mile, but typically greater than five acres	Improve water quality of local streams	Beyond 2014	n/a	Initial Design	Initial Design

Watershed Plan Projects: Five Year Program

Specific Basin Projects

CIP Title	Basin	Project Description	Target Project Benefit	Scheduled Completion Date	Actual Completion Date	Past Activity for 4/01/2014 to 6/30/2014	Planned Activity for 7/01/2014 to 9/30/2014
<i>(Schedules listed in this section are subject to change based on the approval of SD1's Watershed Plans.)</i>							
Van Deren Sanitary Sewer Improvements	North	Sanitary and storm sewer improvements in a 100 home area to separate common manholes and remove illicit connections and I/I	Reduce SSOs and illicit discharges in Lakeside Park	2011	2011	Complete	
Avon Drive Sanitary Sewer Improvements	North	Replacement of 570 LF of 12-inch sewer with 24-inch pipe and installation of new storm sewer	Reduce SSOs in Lakeside Park	2010	2010	Complete	
Willow Run Direct Entry Point Bar Racks	North	Installed bar racks on 10 direct entry points where open storm channels discharge into sewer system	Reduce debris entry into system, maintain capacity and reduce blockages	2009	2010	Complete	
KYTC Basin - Green Infrastructure Retrofit	North	Conversion of traditional detention basin near I-75 to provide greater detention and infiltration by modifying the outlet structure and other improvements	CSO reduction, informs future green infrastructure design	2012	2011	Post-Construction Monitoring	
Lakeview PS Pump Replacement	Central	Replacement of 8 pumps at the Lakeview pump station along with piping and electrical improvements to provide a reliable peak capacity of 22.5 MGD	Reduce SSOs at Lakeview PS and increase PS reliability	2014	2013	Complete	
Church Street (gray, green, and watershed controls) Phase 1	Central	Disconnection of downspouts from approximately 130 homes, the separation of street load on six streets, new biofiltration basin and installation of approximately 1,300 linear feet of new 72-inch sewer	Reduce CSO frequency and volume into Banklick Creek and improve structural integrity of sewer infrastructure.	2014	n/a	Construction	Construction
Vernon Lane – Public & Private Source I/I Removal	Central	Combination of private I/I removal, sewer rehabilitation, manhole lining, and stormwater BMPs in area	Eliminate Vernon Ln. SSO and improve water quality	Beyond 2014	Ph 1 - 2014 Ph 2 - n/a	Ph 1 Complete Ph 2 Final Design Ph 2 Final Design	
Ash Street PS and Forcemain	East	Construction of a new approximately 7 MGD pump station in Silver Grove and new force main to the Riley Rd. Pump Station in Alexandria. Also includes new force main to redirect flow from the Silver Grove PS to the Ash St. PS	Reduce overflows from Silver Grove CSO and SSO reduction in the Highland Heights PS and Silver Grove PS service areas.	2015	n/a	Final Design	Final Design
Riviera Sewer Replacement	East	Replacement of approximately 4,100 LF of deteriorated 24-inch pipe in the Taylor Creek area	Reduce CSOs into Taylor Creek and address structural issues	Beyond 2014	n/a	None	Initial Design
Lakeside Park – Public Sewer Rehab and Private Source Removal	North	Combination of private I/I removal, sewer rehabilitation/replacement and manhole lining, and stormwater BMPs where feasible in Lakeside Park	Eliminate SSOs in Lakeside Park	Beyond 2014	n/a	In Progress	In Progress
Willow Run Dynamic Control Facility	North	Construction of a dynamic weir facility at the Willow Run overflow diversion to provide in-line storage	CSO reduction using in-line storage	2015	n/a	None	Initial Design

Other Committed Projects

CIP Title	Basin	Project Description	Target Project Benefit	Scheduled Completion Date	Actual Completion Date	Past Activity for 4/01/2014 to 6/30/2014	Planned Activity for 7/01/2014 to 9/30/2014
<i>(Schedules listed in this section are subject to change based on the approval of SD1's Watershed Plans.)</i>							
Donnemeyer Improvements, Newport Pavilion Improvements, Bellevue Relief Sewer, Wilson/Waterworks Road, Covert Run	East	Multiple sewer projects including replacement with larger 18-30 -inch diameter sewers in the Taylor Creek area. Also included private source removal	Reduce CSO and SSO in Taylor Creek area and address basement flooding	2011	2011	Complete	
Dry Creek WWTP Headworks Improvements	North	Construction of a new 110 MGD headworks facility at the Dry Creek WWTP	Increase reliability and wet weather treatment capacity at Dry Creek WWTP	2013	2013	Complete	

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of July 2014
Category 1 Projects (4 total projects)						
Alex Licking	East	Permanent Generator	n/a	2008	2008	Complete
American Sign	West	Permanent Generator	n/a	2008	2008	Complete
Riley Road	East	Permanent Generator	n/a	2009	2009	Complete
Sunset	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2010	2010	Complete
CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of July 2014
Category 2 Projects (21 total projects)						
Kahns	East	PS Elimination	n/a	2007	2007	Complete
Meadow Hill	Central	PS Elimination Study	PS Elimination	Study - 2008 2012 - 2015	2008 2010	Complete
Riley Road No. 1	East	PS Elimination	n/a	2009	2009	Complete
Riley Road No. 2						
Riverwatch PS	North	PS Elimination Study	PS Elimination	Study - 2008 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	Evaluating Solutions	Study - 2008 2015	2008 n/a	Complete Evaluating Solutions
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 n/a	Complete In Progress
War Admiral	West	PS Elimination Study	PS Elimination	Study - 2008 2012 - 2015	2008 2011	Complete Complete
Blackstone	West	PS Elimination Study	Evaluating Solutions	Study - 2008 2015	2008 n/a	Complete Evaluating Solutions
Dublin Green No. 1	West	PS Elimination Study	PS Elimination	Study - 2008 2015	2008 2012	Complete Complete
Fowler Creek	West	PS Elimination	These stations will be eliminated after the Western Regional collection system is operational.	2013	2011	Complete
Gammon Calmet	West	PS Elimination		2013	2012	Complete
Gunpowder	West	PS Elimination		2013	2012	Complete
Union	West	PS Elimination		2013	2012	Complete

Pump Station Backup Power Plan

CIP Title	Basin	Original Proposed Solution	Updated Proposed Solution	Scheduled Completion Date	Actual Completion Date	Status as of July 2014
Category 3 Projects (24 total projects)						
Airport Exchange Ind Park	North	Permanent Generator	n/a	2009	2009	Complete
Barrs Branch	East	Permanent Generator	Portable Generator	2009	2009	Complete
Cedar Point	East	Permanent Generator	n/a	2009	2009	Complete
Bullitsville	North	Permanent Generator	n/a	2008	2008	Complete
Catalpa	Central	Permanent Generator	n/a	2009	2009	Complete
Centerplex	East	Permanent Generator	n/a	2008	2008	Complete
Hempsteade	West	Permanent Generator	n/a	2009	2009	Complete
Highland Heights	East	Portable Generator	n/a	2009	2009	Complete
Dublin Green No. 2	West	Permanent Generator	n/a	2009	2009	Complete
Brookwood	East	Permanent Generator	n/a	2009	2009	Complete
Ky Aire	West	Permanent Generator	n/a	2008	2007	Complete
Levi	West	Permanent Generator	n/a	2008	2007	Complete
Maple Ave	Central	Permanent Generator	n/a	2009	2009	Complete
Sand Run	North	Permanent Generator	n/a	2008	2008	Complete
Saturn	West	Permanent Generator	n/a	2009	2009	Complete
Second Street	Central	Permanent Generator	n/a	2009	2009	Complete
Skyport	North	Permanent Generator	n/a	2008	2008	Complete
South Hampton	West	Permanent Generator	n/a	2008	2007	Complete
Thornwilde	North	Permanent Generator	n/a	2008	2008	Complete
Bunning Lane	East	PS Elimination Study	Evaluating Solutions	2015	n/a	Evaluating Solutions
Kees	East	Permanent Generator	Backup Dry Prime Pump with a Diesel	2011	2011	Complete
Overlook	East	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions
Riverview Farms	North	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions
Stillwater	East	Permanent Generator	Evaluating Solutions	2015	n/a	Evaluating Solutions

Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

Pump Station Backup Power Plan

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

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	5
Total Complete	89
2014 Active Projects	10
Total Project Activity	99

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Pump Station Overflow Elimination Plan

CIP Title	Basin	Scheduled Completion Date	Actual Completion Date	Activity for 1/01/2014 to 3/31/2014	Planned Activity for 4/01/2014 to 6/30/2014
Pump Station Overflow Elimination Projects					
Alex-Licking	East	12/31/2010	2008	Complete	Complete
Allen Fork	North	12/31/2015	2014	Complete	Complete
Harrison Harbor	East	12/31/2010	*See PS Overflow Elimination Annual Report May 11, 2009	Complete	Complete
Highland Acres	West	12/31/2010	2010	Complete	Complete
Kentucky Aire	West	12/31/2013	n/a	Complete	Complete
Riley Road No.1	East	12/31/2010	2009	Complete	Complete
Ripple Creek	Central	12/31/2010	2010	Complete	Complete
South Hampton	West	3/31/2013	2012	Complete	Complete
South Park	North	12/31/2010	2010	Complete	Complete
Sunset	Central	12/31/2010	2010	Complete	Complete
TaylorSPORT	North	12/31/2010	2004	Complete	Complete
Union	West	3/31/2013	2012	Complete	Complete
Crestview	East	12/31/2015	n/a	Phase 1 - Sewer and MH rehab is complete. Private service rehab is under evaluation. Pump station improvement is in Final Design.	
Lakeview	Central	12/31/2023 ¹	n/a	In-Progress	In-Progress

¹ Revised deadline approved in letter from Cabinet dated May 13, 2013.

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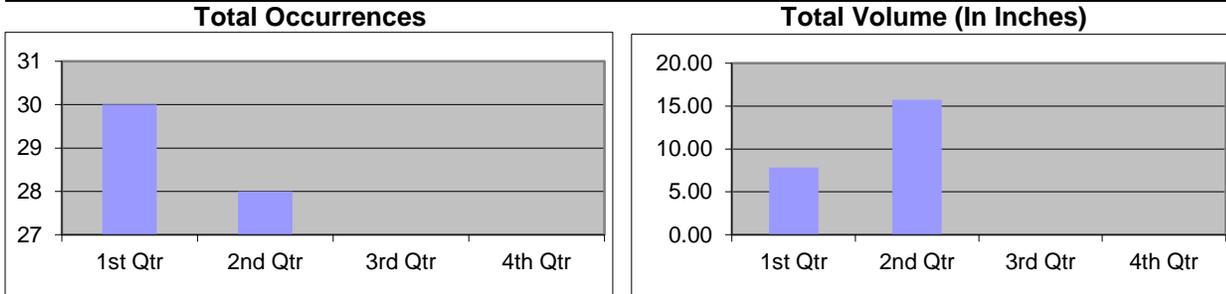
APPENDIX C:

Cumulative and Annual Overflow Data

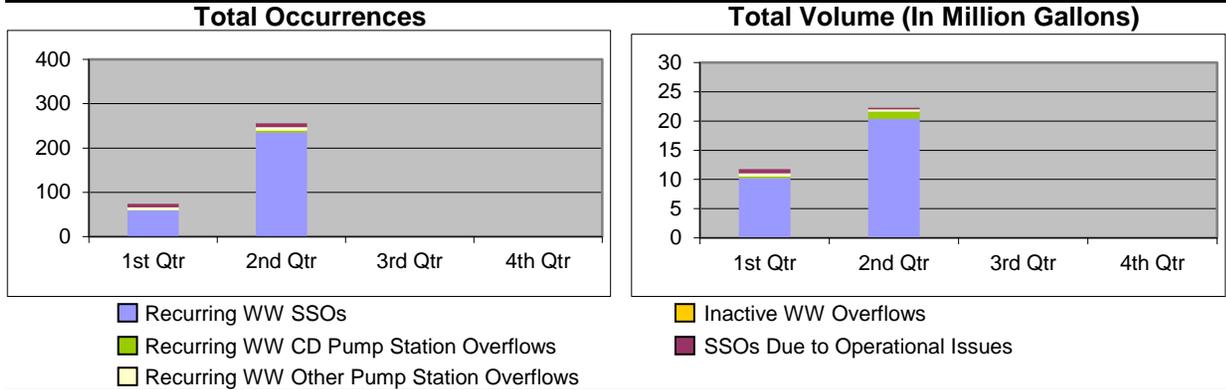
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Cumulative Overflow Data
April 1, 2014 through June 30, 2014

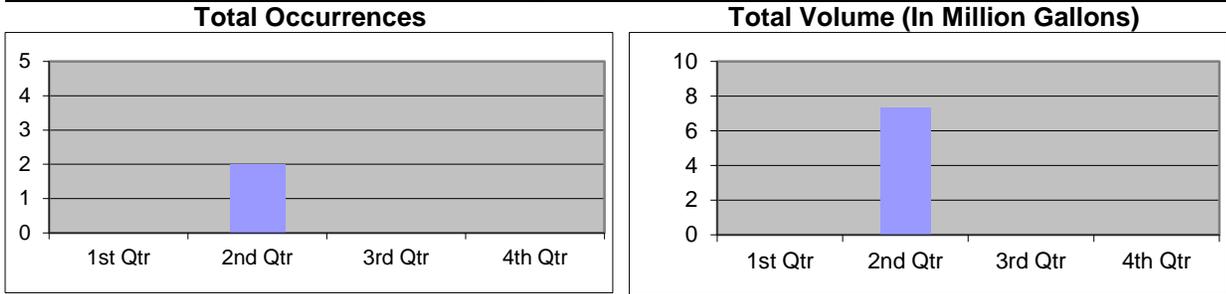
Rainfall



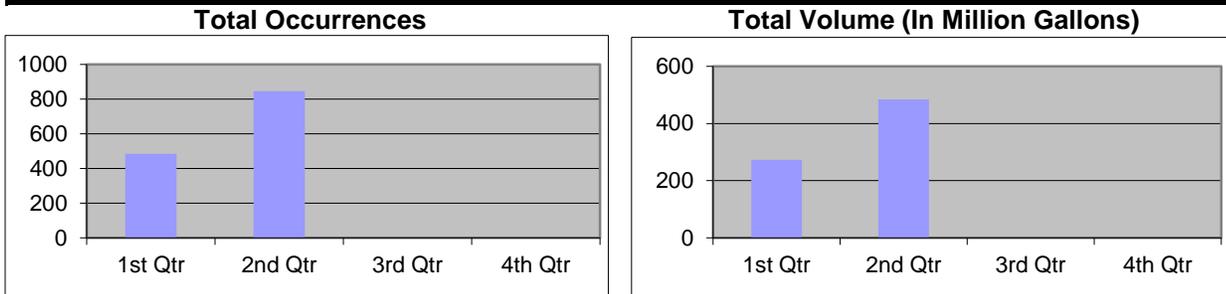
SSOs - Due to Wet Weather (WW) and Operational Issues



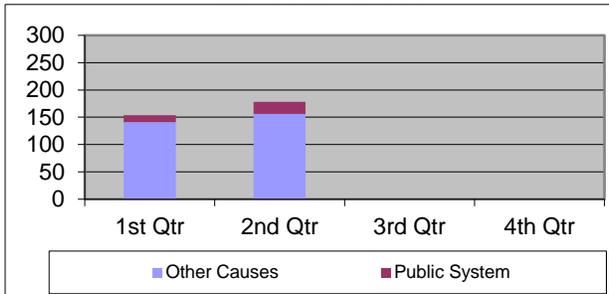
Dry Weather CSOs



Wet Weather CSOs



Building Backups

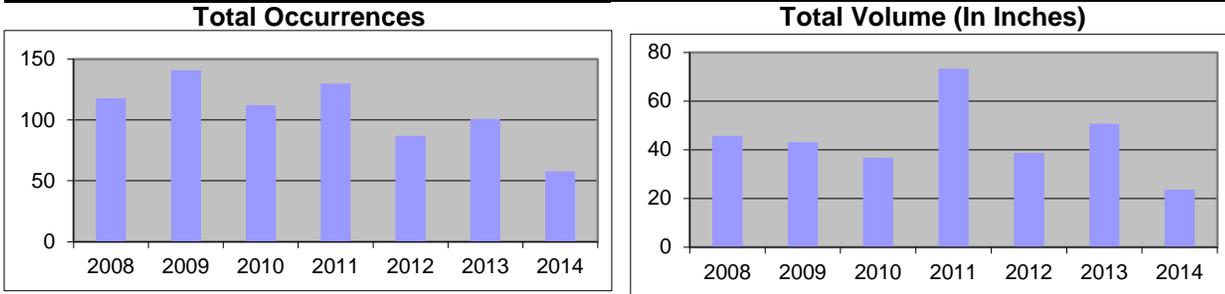


2014 Overflow Summary

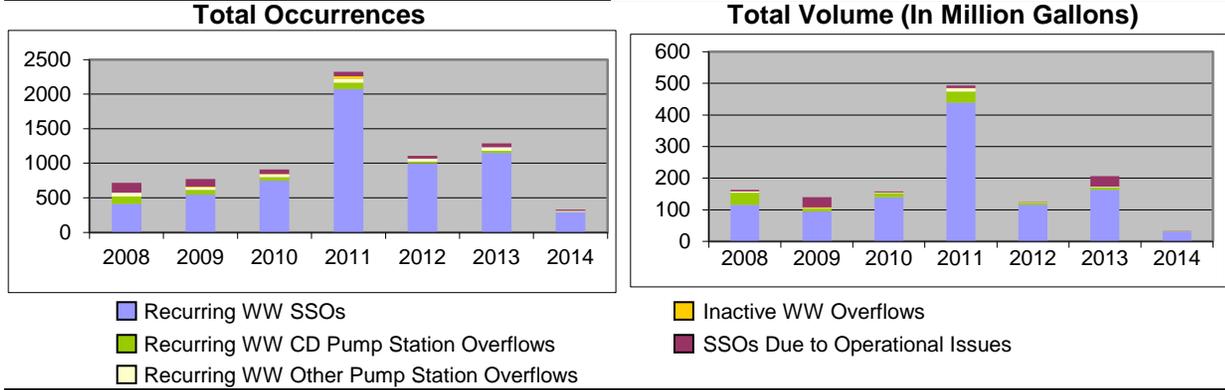
	Occurrences	Volume
Rainfall	58	23.590 inches
Recurring WW SSOs	294	33.034 MG
Inactive WW SSOs	0	0.000 MG
Operational SSOs	17	1.025 MG
Dry Weather CSOs	2	7.308 MG
Wet Weather CSOs	1330	757.530 MG
Building Backups (Other Causes)		
	297	
Building Backups (Public System)		
	35	

Annual Cumulative Overflow Data 2008 through 2014 (Q2)

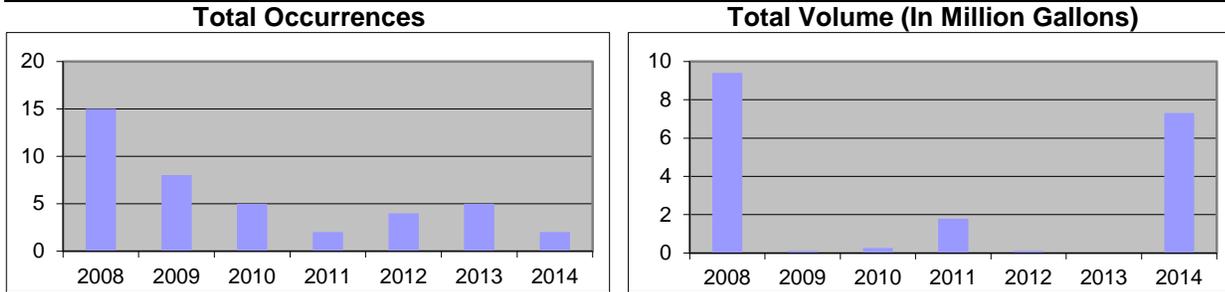
Rainfall



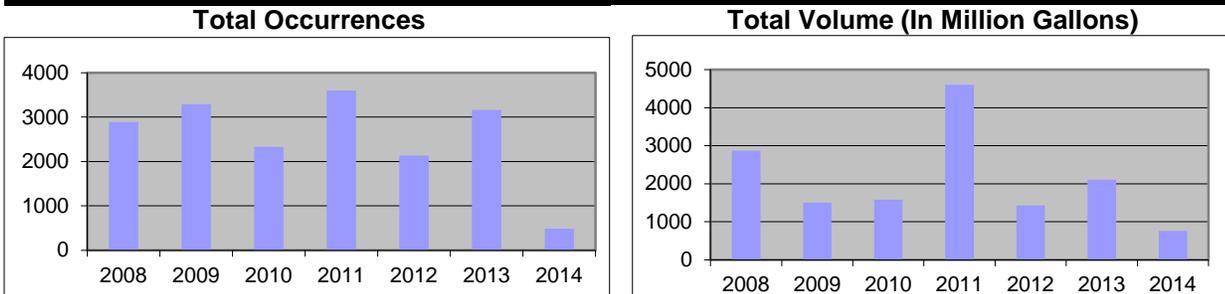
SSOs - Due to Wet Weather (WW) and Operational Issues



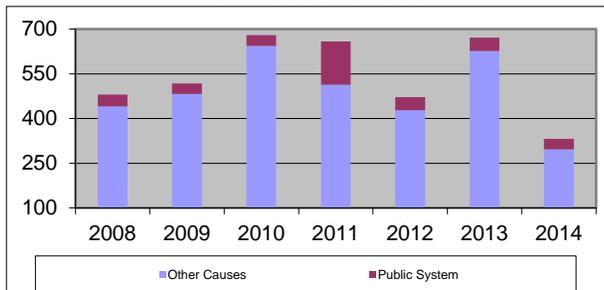
Dry Weather CSOs



Wet Weather CSOs



Building Backups



Change from 2013 to 2014 (Q2)

	Occurrences	Volume
Rainfall	-43	-27.04 inches
Recurring WW SSOs	-920	-140.331 MG
Inactive WW SSOs	0	0.000 MG
Operational SSOs	-38	-32.151 MG
Dry Weather CSOs	-3	7.291 MG
Wet Weather CSOs	-2680	-1348.71 MG
Building Backups (Other Causes)		
		-330
Building Backups (Public System)		
		-9

APPENDIX D:
Recurring Wet Weather SSOs

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Recurring Wet Weather SSOs

No.	MHID	City	County	Model Predicted Overflow Activations	Model Predicted Overflow Volume (MG)
1	0020006	Silver Grove	Campbell	8	1.63
2	0020007	Silver Grove	Campbell	7	0.10
3	0020008	Unicorp Campbell County	Campbell	6	0.07
4	0020032	Unicorp Campbell County	Campbell	1	0.00
5	0040003	Fort Thomas	Campbell	0	0.00
6	0050022	Fort Thomas	Campbell	1	0.01
7	0060001	Unicorp Campbell County	Campbell	3	0.05
8	0060002	Unicorp Campbell County	Campbell	1	0.00
9	0060004	Unicorp Campbell County	Campbell	2	0.02
10	0110002	Fort Thomas	Campbell	0	0.00
11	0110010	Highland Heights	Campbell	4	0.12
12	0120018	Highland Heights	Campbell	0	0.00
13	0150009	Wilder	Campbell	4	0.46
14	0150063	Wilder	Campbell	0	0.00
15	0150064	Wilder	Campbell	0	0.00
16	0150065	Wilder	Campbell	0	0.00
17	0150085	Fort Thomas	Campbell	0	0.00
18	0150086	Fort Thomas	Campbell	3	0.30
19	0150087	Fort Thomas	Campbell	0	0.00
20	0150356	Southgate	Campbell	0	0.00
21	0150399	Wilder	Campbell	4	0.40
22	0200003	Fort Thomas	Campbell	0	0.00
23	0220056	Fort Thomas	Campbell	1	0.00
24	0220058	Fort Thomas	Campbell	0	0.00
25	0220086	Southgate	Campbell	0	0.00
26	0230011	Fort Thomas	Campbell	0	0.00
27	0230016	Fort Thomas	Campbell	0	0.00
28	0260001	Fort Thomas	Campbell	0	0.00
29	0270020	Fort Thomas	Campbell	0	0.00
30	0270026	Fort Thomas	Campbell	2	0.02
31	0270062	Fort Thomas	Campbell	0	0.00
32	0270103	Fort Thomas	Campbell	0	0.00
33	0280001	Fort Thomas	Campbell	1	0.01
34	0280073	Fort Thomas	Campbell	0	0.00
35	0300035	Fort Thomas	Campbell	3	0.03
36	0330005	Fort Thomas	Campbell	0	0.00
37	0360004	Dayton	Campbell	0	0.00
38	0370001	Fort Thomas	Campbell	1	0.00
39	0370009	Fort Thomas	Campbell	0	0.00
40	0380005	Fort Thomas	Campbell	2	0.02
41	0390007	Fort Thomas	Campbell	0	0.00
42	0400002	Fort Thomas	Campbell	5	0.11
43	0400017	Fort Thomas	Campbell	0	0.00
44	0400034	Fort Thomas	Campbell	1	0.01
45	0410010	Fort Thomas	Campbell	4	0.02

Recurring Wet Weather SSOs

No.	MHID	City	County	Model Predicted Overflow Activations	Model Predicted Overflow Volume (MG)
46	0410019	Fort Thomas	Campbell	4	0.02
47	0410036	Fort Thomas	Campbell	0	0.00
48	0430006	Newport	Campbell	4	0.03
49	0440074	Fort Thomas	Campbell	0	0.00
50	0490039	Newport	Campbell	0	0.00
51	0490073	Newport	Campbell	0	0.00
52	0500047	Newport	Campbell	1	0.02
53	0530083	Newport	Campbell	4	0.06
54	0860001	Wilder	Campbell	14	11.67
55	0860003	Wilder	Campbell	0	0.00
56	0860016	Wilder	Campbell	0	0.00
57	1010002	Fort Thomas	Campbell	1	0.00
58	1010027	Fort Thomas	Campbell	0	0.00
59	1090069	Edgewood	Kenton	0	0.00
60	1110025	Erlanger	Kenton	0	0.00
61	1110067	Erlanger	Kenton	6	0.06
62	1110161	Erlanger	Kenton	0	0.00
63	1110164	Erlanger	Kenton	0	0.00
64	1110174	Elsmere	Kenton	0	0.00
65	1110226	Elsmere	Kenton	0	0.00
66	1110275	Elsmere	Kenton	0	0.00
67	1110294	Erlanger	Kenton	2	0.01
68	1190001	Erlanger	Kenton	3	0.01
69	1190012	Erlanger	Kenton	6	0.08
70	1210018	Erlanger	Kenton	0	0.00
71	1220016	Erlanger	Kenton	4	0.02
72	1220054	Erlanger	Kenton	5	0.10
73	1230019	Erlanger	Kenton	0	0.00
74	1230036	Erlanger	Kenton	0	0.00
75	1240008	Erlanger	Kenton	3	0.06
76	1240012	Erlanger	Kenton	0	0.00
77	1330022	Park Hills	Kenton	0	0.00
78	1550036	Fort Mitchell	Kenton	1	0.00
79	1550053	Fort Mitchell	Kenton	0	0.00
80	1560016	Fort Mitchell	Kenton	1	0.01
81	1560019	Fort Mitchell	Kenton	0	0.00
82	1560074	Fort Mitchell	Kenton	0	0.00
83	1560092	Fort Mitchell	Kenton	5	0.10
84	1560121	Fort Mitchell	Kenton	1	0.00
85	1600029	Lakeside Park	Kenton	0	0.00
86	1610053	Fort Mitchell	Kenton	0	0.00
87	1610054	Fort Mitchell	Kenton	0	0.00
88	1690043	Fort Wright	Kenton	1	0.00
89	1690072	Fort Wright	Kenton	0	0.00
90	1700006	Ludlow	Kenton	0	0.00
91	1700025	Park Hills	Kenton	0	0.00
92	1730086	Unicorp Kenton County	Kenton	3	0.35
93	1730100	Crescent Springs	Kenton	2	0.01
94	1730103	Fort Mitchell	Kenton	1	0.01

Recurring Wet Weather SSOs

No.	MHID	City	County	Model Predicted Overflow Activations	Model Predicted Overflow Volume (MG)
95	1760047	Edgewood	Kenton	4	0.13
96	1760048	Edgewood	Kenton	4	0.03
97	1770062	Erlanger	Kenton	0	0.00
98	1790003	Crescent Springs	Kenton	1	0.01
99	1830020	Unicorp Boone County	Boone	0	0.00
100	1830067	Unicorp Boone County	Boone	1	0.00
101	1850140	Covington	Kenton	1	0.02
102	1850141	Covington	Kenton	5	0.11
103	1860108	Taylor Mill	Kenton	1	0.01
104	1870013	Covington	Kenton	0	0.00
105	1870014	Covington	Kenton	0	0.00
106	1920086	Cold Spring	Campbell	0	0.00
107	1920097	Cold Spring	Campbell	1	0.01
108	1940006	Fort Wright	Kenton	2	0.10
109	1950014	Fort Wright	Kenton	4	0.57
110	1950232	Fort Wright	Kenton	0	0.00
111	1960002	Fort Wright	Kenton	3	0.21
112	1990018	Covington	Kenton	1	0.03
113	1990028	Covington	Kenton	0	0.00
114	1990032	Unicorp Kenton County	Kenton	0	0.00
115	2020203	Covington	Kenton	0	0.00
116	2040040	Edgewood	Kenton	0	0.00
117	2070019	Elsmere	Kenton	4	0.09
118	2090008	Elsmere	Kenton	10	0.27
119	2090063	Elsmere	Kenton	1	0.01
120	2100002	Elsmere	Kenton	1	0.00
121	2100007	Elsmere	Kenton	0	0.00
122	2100036	Elsmere	Kenton	1	0.00
123	2100037	Elsmere	Kenton	0	0.00
124	2100057	Elsmere	Kenton	1	0.00
125	2100106	Elsmere	Kenton	5	0.05
126	2100126	Elsmere	Kenton	1	0.01
127	2100128	Elsmere	Kenton	0	0.00
128	2100129	Elsmere	Kenton	6	0.96
129	2110001	Elsmere	Kenton	6	0.12
130	2110002	Elsmere	Kenton	4	0.09
131	2110006	Elsmere	Kenton	1	0.01
132	2120001	Elsmere	Kenton	3	0.03
133	2120041	Elsmere	Kenton	1	0.01
134	2130026	Erlanger	Kenton	0	0.00
135	2130027	Erlanger	Kenton	0	0.00
136	2130028	Erlanger	Kenton	0	0.00
137	2130286	Erlanger	Kenton	0	0.00
138	2150050	Crestview Hills	Kenton	0	0.00
139	2160004	Fort Mitchell	Kenton	2	0.01
140	2160005	Fort Mitchell	Kenton	2	0.01
141	2160006	Fort Mitchell	Kenton	1	0.01
142	2170006	Crestview Hills	Kenton	5	0.04
143	2170008	Crestview Hills	Kenton	1	0.01
144	2170013	Lakeside Park	Kenton	1	0.02

Recurring Wet Weather SSOs

No.	MHID	City	County	Model Predicted Overflow Activations	Model Predicted Overflow Volume (MG)
145	2170097	Crestview Hills	Kenton	2	0.00
146	2280010	Unicorp Kenton County	Kenton	0	0.00
147	2280011	Unicorp Kenton County	Kenton	0	0.00
148	2280016	Independence	Kenton	0	0.00
149	2290001	Crescent Springs	Kenton	0	0.00
150	2300016	Erlanger	Kenton	0	0.00
151	2300019	Erlanger	Kenton	0	0.00
152	2300121	Independence	Kenton	4	0.52
153	2300123	Unicorp Kenton County	Kenton	3	0.06
154	2301219	Erlanger	Kenton	4	0.79
155	2301274	Erlanger	Kenton	0	0.00
156	2370003	Unicorp Boone County	Boone	0	0.00
157	2390002	Unicorp Boone County	Boone	1	0.00
158	2400001	Unicorp Boone County	Boone	0	0.00
			TOTAL	235	20.37

Threshold for model activation is 0.01 MGD and 0.001 MG

APPENDIX E:
Wet Weather CSOs

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Wet Weather CSOs				
No.	CSO ID	KPDES Permit #	Model Predicted Activations	Model Predicted Overflow Volume (MG)
1	0010220	To Be Permitted	6	0.34
2	0030031	KY0021466 - Outfall 10	0	0.00
3	0200069	KY0021466 - Outfall 11	10	0.11
4	0330100	KY0021466 - Outfall 12	0	0.00
5	0340050	KY0021466 - Outfall 14	4	0.09
6	0340051	KY0021466 - Outfall 13	4	0.03
7	0360079	To Be Permitted	4	0.28
8	0540157	To Be Permitted	21	0.34
9	0540156	To Be Permitted	16	0.36
10	0540158	To Be Permitted	3	0.06
11	0550134	To Be Permitted	2	0.00
12	0570089	KY0021466 - Outfall 16	4	2.13
13	0570090	KY0021466 - Outfall 17	1	0.33
14	0600094	KY0021466 - Outfall 18	17	0.57
15	0600096	To Be Permitted	8	0.14
16	0600097	KY0021466 - Outfall 19	15	1.06
17	0600104	To Be Permitted	3	0.04
18	0610071	KY0021466 - Outfall 21	21	8.73
19	0610072	KY0021466 - Outfall 20	6	0.17
20	0620075	KY0021466 - Outfall 23	23	2.91
21	0620077	KY0021466 - Outfall 22	9	0.16
22	0630054	To Be Permitted	0	0.00
23	0630061	KY0021466 - Outfall 83	14	1.11
24	0640090	KY0021466 - Outfall 24	23	74.49
25	0650054	To Be Permitted	2	0.01
26	0650090	KY0021466 - Outfall 26	6	1.54
27	0650098	To Be Permitted	7	3.27
28	0650100	KY0021466 - Outfall 25	7	0.10
29	0660085	To Be Permitted	0	0.00
30	0690059	To Be Permitted	0	0.00
31	0690067	To Be Permitted	0	0.00
32	0730129	To Be Permitted	24	0.56
33	0770096	KY0021466 - Outfall 28	14	0.81
34	0790084	KY0021466 - Outfall 31	29	4.89
35	0790086	KY0021466 - Outfall 29	21	26.18
36	0840111	To Be Permitted	2	0.07
37	0840112	To Be Permitted	19	0.88
38	0840116	KY0021466 - Outfall 27	26	1.70
39	0870078	KY0021466 - Outfall 33	5	0.27
40	0870079	KY0021466 - Outfall 34	26	9.14
41	0880081	KY0021466 - Outfall 36	27	7.55
42	0880082	KY0021466 - Outfall 35	5	0.30
43	0890081	To Be Permitted	0	0.00
44	0910065	KY0021466 - Outfall 38	19	64.50
45	0910066	To Be Permitted	0	0.00
46	0910068	KY0021466 - Outfall 37	10	13.00
47	0910084	To Be Permitted	5	0.18

Wet Weather CSOs				
No.	CSO ID	KPDES Permit #	Model Predicted Activations	Model Predicted Overflow Volume (MG)
48	0930102	KY0021466 - Outfall 43	0	0.00
49	0930103	KY0021466 - Outfall 42	2	0.01
50	0930104	KY0021466 - Outfall 40	1	0.05
51	0930105	KY0021466 - Outfall 41	23	9.98
52	0930106	KY0021466 - Outfall 39	0	0.00
53	0960063	KY0021466 - Outfall 45	6	2.21
54	0960064	KY0021466 - Outfall 44	1	0.01
55	0980073	KY0021466 - Outfall 46	6	0.05
56	0980080	KY0021466 - Outfall 47	2	0.04
57	0980081	KY0021466 - Outfall 48	26	15.39
58	1320112	To Be Permitted	0	0.00
59	1350155	KY0021466 - Outfall 49	1	0.01
60	1380132	To Be Permitted	0	0.00
61	1380146	To Be Permitted	0	0.00
62	1420141	KY0021466 - Outfall 50	15	0.23
63	1420142	KY0021466 - Outfall 51	25	31.85
64	1420144	KY0021466 - Outfall 52	0	0.00
65	1420145	KY0021466 - Outfall 53	0	0.00
66	1420146	KY0021466 - Outfall 54	0	0.00
67	1420147	KY0021466 - Outfall 55	1	0.01
68	1440204	KY0021466 - Outfall 59	3	0.02
69	1440206	KY0021466 - Outfall 61	17	0.94
70	1440207	To Be Permitted	0	0.00
71	1440209	KY0021466 - Outfall 56	30	28.62
72	1440508	KY0021466 - Outfall 60	7	0.22
73	1470089	KY0021466 - Outfall 62	2	0.01
74	1470093	KY0021466 - Outfall 63	17	16.23
75	1480185	To Be Permitted	8	0.30
76	1480187	KY0021466 - Outfall 30	15	114.48
77	1490132	KY0021466 - Outfall 65	5	0.13
78	1490172	KY0021466 - Outfall 64	0	0.00
79	1500131	KY0021466 - Outfall 66	11	2.36
80	1510133	To Be Permitted	0	0.00
81	1710114	KY0021466 - Outfall 69	5	0.15
82	1710116	KY0021466 - Outfall 68	22	5.68
83	1710119	KY0021466 - Outfall 70	9	2.08
84	1710121	KY0021466 - Outfall 71	7	0.97
85	1710124	KY0021466 - Outfall 72	6	1.23
86	1720109	KY0021466 - Outfall 73	10	5.57
87	1730259	KY0021466 - Outfall 75	9	0.94
88	1730262	To Be Permitted	3	0.02
89	1730263	KY0021466 - Outfall 74	10	0.84
90	1840130	To Be Permitted	14	0.64
91	1850158	KY0021466 - Outfall 76	27	12.95
92	1870193	KY0021466 - Outfall 78	14	0.55
93	1870194	KY0021466 - Outfall 79	5	0.07
94	1880090	KY0021466 - Outfall 81	7	1.22

Wet Weather CSOs				
No.	CSO ID	KPDES Permit #	Model Predicted Activations	Model Predicted Overflow Volume (MG)
95	1880091	KY0021466 - Outfall 80	6	0.24
		TOTAL	846	484.70

Threshold for model activation is 0.01 MGD and 0.001 MG