



700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

October 30, 2015

Chief, NPDES Permitting & Enforcement Branch
Municipal & Industrial Enforcement Section
US EPA Region 4
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
Post Office Box 7611
Washington DC 20044-7611

Jeff Cummins, Director
Division of Enforcement
Department of Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

Subject: Quarterly Report 40
Civil Action No. 3:08-cv-00608-CRS

Attention Chief:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 29 of our Amended Consent Decree. This report is for the period July 1, 2015 – September 30, 2015, pertaining to Consent Decree compliance activities. Included are sections on Project WIN activities related to: NMC, SORP, Discharge Abatement Plans, Public Outreach, Education, Notification and Participation, CMOM and Performance Overview.

I certify under penalty of law that this document and all attachments were prepared under our 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.

If you have questions or need additional information, please contact me at (502) 540-6136.

Sincerely,

Angela Akridge, PE.
Chief Engineer and MSD Engineering Director

cc: Greg Heitzman, PE

Paula Purifoy



Beneficial Use of Louisville's Biosolids
www.louisvillegreen.com

Louisville and Jefferson County Wet Weather Consent Decree Quarterly Report #40



Reporting Period:

July 1, 2015 through September 30, 2015

Submitted To:

Kentucky Department of Environmental Protection
United States Environmental Protection Agency
United States Department of Justice

Submitted By:

Louisville and Jefferson County Metropolitan Sewer District
700 W. Liberty Street
Louisville, Kentucky 40203-1911

Submittal Date:

October 31, 2015



700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

October 30, 2015

Chief, NPDES Permitting & Enforcement Branch
Municipal & Industrial Enforcement Section
US EPA Region 4
Atlanta Federal Center
61 Forsyth Street SW
Atlanta, GA 30303

Chief, Environmental Enforcement Section
Environmental and Natural Resources Division
U.S. Department of Justice
Post Office Box 7611
Washington DC 20044-7611

Jeff Cummins, Director
Division of Enforcement
Department of Environmental Protection
300 Fair Oaks Lane
Frankfort, KY 40601

Subject: Quarterly Report 40
Civil Action No. 3:08-cv-00608-CRS

Attention Chief:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 29 of our Amended Consent Decree. This report is for the period July 1, 2015 – September 30, 2015, pertaining to Consent Decree compliance activities. Included are sections on Project WIN activities related to: NMC, SORP, Discharge Abatement Plans, Public Outreach, Education, Notification and Participation, CMOM and Performance Overview.

I certify under penalty of law that this document and all attachments were prepared under our 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.

If you have questions or need additional information, please contact me at (502) 540-6136.

Sincerely,

Angela Akridge, PE.
Chief Engineer and MSD Engineering Director

cc: Greg Heitzman, PE

Paula Purifoy



Beneficial Use of Louisville's Biosolids
www.louisvillegreen.com

TABLE OF CONTENTS

INTRODUCTION..... 4

SECTION 1: Program Activities for Nine Minimum Controls..... 6

 1.1 Nine Minimum Controls Program Background..... 6

 1.2 NMC 2: Maximization of Storage in the Collection System..... 6

 1.3 NMC 4: Maximization of Flow at the Morris Forman Water Quality Treatment Center (WQTC) 6

SECTION 2: Program Activities for Sewer Overflow Response Protocol..... 16

 2.1 SORP Program Background 16

 2.2 Overflow Management and Field Documentation 16

 2.3 Staff Training and Communication..... 17

SECTION 3: Program Activities for Discharge Abatement Plans..... 17

 3.1 Integrated Overflow Abatement Plan (IOAP) 18

 3.2 Sanitary Sewer Discharge Plan (SSDP) 18

 3.2.1 Updated Sanitary Sewer Overflow Plan Implementation..... 18

 3.2.2 Interim Sanitary Sewer Discharge Plan 18

 3.2.3 Final Sanitary Sewer Discharge Plan 19

 3.3 CSO Long Term Control Plan 20

 3.3.1 Interim CSO Long Term Control Plan..... 20

 3.3.2 Final CSO Long Term Control Plan..... 20

 3.3.3 Green Program Update 20

 3.4 Activity Progress Chart 21

SECTION 4: Program Activities for Public Outreach, Education, Notification and Participation..... 27

 4.1 Public Notification Program 27

 4.2 Public Education Programs 27

 4.3 Public Outreach Programs..... 27

 4.3.1 IOAP Project and Program Meetings 27

SECTION 5: Capacity Management Operations and Maintenance Report 29

 5.1 Management Programs 29

 5.2 Operations Programs 30

5.3	Comprehensive Performance Evaluations and Composite Correction Plans (CPE/CCP)	30
5.3.1	Hite Creek Water Quality Treatment Center.....	30
5.3.2	Floyds Fork Water Quality Treatment Center.....	30
5.3.3	Derek R. Guthrie Water Quality Treatment Center.....	30
5.3.4	Cedar Creek Water Quality Treatment Center.....	31
5.3.5	Prospect Area Water Quality Treatment Center Updates.....	31
5.3.5.1	Timberlake Water Quality Treatment Center.....	32
5.3.5.2	Hunting Creek North Water Quality Treatment Center.....	32
5.3.5.3	Hunting Creek South Water Quality Treatment Center.....	32
5.3.5.4	Ken Carla Water Quality Treatment Center.....	32
5.3.5.5	Shadow Wood Water Quality Treatment Center.....	32
5.3.6	Jeffersontown Water Quality Treatment Center.....	32
5.3.7	Starview Water Quality Treatment Center.....	32
5.3.8	Berrytown Water Quality Treatment Center.....	33
5.3.9	Other Water Quality Treatment Centers.....	33
5.4	CMOM Activity Schedule	34
SECTION 6: Project WIN Performance Overview		37
6.1	Rainfall	37
6.2	Collection System Unauthorized Discharges	37
6.2.1	Collection System Overflows to Waters of the United States (WUS)	37
6.2.2	Overflows to Ground (EXT)	38
6.2.3	Overflows to Interior (INT).....	38
6.2.4	Dry Weather CSOs.....	38
6.3	CSO Reductions	39
6.4	SSO Reductions	39
6.5	Gravity Line Preventive Maintenance	40
6.6	Water Quality Treatment Center Bypasses	41
6.6.1	Bypass Events.....	41
6.6.2	Bypass Corrective Actions.....	41
6.6.3	Jeffersontown Water Quality Treatment Center	43
6.7	Phosphorus Monitoring at the Prospect WQTCs	46

ATTACHMENTS

APPENDIX A-1 DISCHARGE WORK ORDERS-DRY WEATHER CSOS

APPENDIX A-2 DISCHARGE WORK ORDERS-BYPASS

APPENDIX A-3 DISCHARGE WORK ORDERS-BLENDING

APPENDIX B - CSO STORM FREQUENCY TABLE

APPENDIX C - ACRONYMS

APPENDIX D - SCAP BALANCE

APPENDIX E - IOAP PROJECT CROSS WALK

INTRODUCTION

The Louisville and Jefferson County Metropolitan Sewer District (MSD) is currently under an Amended Consent Decree with the Kentucky Department of Environmental Protection (KDEP), the United States Environmental Protection Agency (EPA), and the United States Department of Justice. The Amended Consent Decree was signed by United States District Judge Simpson on April 10, 2009, and filed in United States District Court, Western Division of Kentucky, Louisville Division, on April 15, 2009.

Quarterly Reporting Period

This is the fortieth Quarterly Report submitted in accordance with Paragraph 29 of the Amended Consent Decree. This report covers the time period from July 1, 2015, through September 30, 2015. **The structure for this report is outlined as follows:**

Section 1: Program Activities for Nine Minimum Controls (NMC) - This section describes the data collected for NMC 2 – Maximization of Storage in the Collection System, and NMC 4 – Maximization of Flow at the Morris Forman Water Quality Treatment Center (WQTC) that were active during the reporting period (July 1, 2015, through September 30, 2015).

Section 2: Program Activities for Sewer Overflow Response Protocol (SORP) - This section describes the training attendance records, overflow data, and overflow reconnaissance inspection routes related to SORP that were active during the reporting period (July 1, 2015, through September 30, 2015).

Section 3: Program Activities for Discharge Abatement Plans (DAP) - This section describes the schedule and status for projects related to the DAP by means of an updated Gantt chart for active DAP projects during the reporting period, and the anticipated projects and activities that are scheduled for continued compliance with the Amended Consent Decree.

Section 4: Program Activities for Public Outreach, Education, Notification and Participation - This section describes the activities related to public outreach that were active during the reporting period (July 1, 2015, through September 30, 2015).

Section 5: Capacity Management, Operations and Maintenance Report - The CMOM program activities and programmatic activities for WQTCs generating capital projects will be reported in a Gantt chart for the reporting period (July 1, 2015, through September 30, 2015), and include the schedule for activities planned for the next two reporting periods (October 1, 2015, through March 31, 2016), are included in this section for continued compliance with the Amended Consent Decree.

Section 6: Performance Overview - This section provides an accounting of unauthorized discharge occurrences from the separate sanitary sewer and combined sewer system and the estimated volumes of each. A discussion of the probable reductions in both unauthorized discharge points and the discharges from MSD's Combined Sewer Overflow (CSO) locations, identified in the Morris Forman Water Quality Treatment Center (WQTC) Kentucky Pollutant Discharge Elimination System (KPDES) permit, that are expected to result from MSD's projects and activities during the reporting period are also contained in this section.

Performance information on Jeffersontown WQTC blending events, bypasses at WQTCs, DMR information, and phosphorus monitoring at WQTCs is included in this section.

SECTION 1: Program Activities for Nine Minimum Controls

1.1 Nine Minimum Controls Program Background

Per Paragraph 24.a. of the Amended Consent Decree, the Nine Minimum Controls (NMC) Compliance Report was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter, dated February 22, 2007, for the NMC Compliance Report. The approved NMC Compliance document can be viewed on the MSD Project WIN website <http://www.msprojectwin.org>. Highlights of the NMC program implementation over this reporting period are outlined below.

1.2 NMC 2: Maximization of Storage in the Collection System

MSD has continued operation of Phase 1 and Phase 2 of the Real Time Control system. During this reporting period, approximately 422.73 MG were stored in the system during rain events and routed to the Morris Forman Water Quality Treatment Center (WQTC) once the system was able to handle the flow. See the table at the end of this section for a detailed report.

The gates at SWOR2 have been placed in manual control due to what was diagnosed as a failure of the gate level sensors that are integral to the integration of this site in the RTC schema. The sensors were replaced in the last quarter of 2013, but the problem could not be resolved at that time due to the gate-closed proximity switches also being diagnosed as defective. A description of corrective action progress is included in the Section 1.3 activities associated with Morris Forman WQTC performance.

1.3 NMC 4: Maximization of Flow at the Morris Forman Water Quality Treatment Center (WQTC)

The following charts illustrate performance in maximizing flow to the Morris Forman WQTC. The top of the chart shows rainfall inches per day. The middle part of the chart shows Morris Forman WQTC effluent flow and secondary treatment flow. The difference between these is the secondary bypass flow. The bottom of the chart shows days with a CSO activation at the five CSOs in the vicinity of the Morris Forman WQTC (CSOs 015, 016, 191, 210, and 211). Note that the flow meter downstream from CSO 211 is known to be affected by backwater effects of the Ohio River and the ultrasonic signal is sometimes blocked by mist and condensation when air and sewage temperatures are significantly different, so CSO activations at CSO 211 are keyed to water levels upstream and downstream of the inflatable dam in the Main Diversion Structure. The other CSO activations are tied to flow measurement downstream of the respective CSOs. At times, “blips” representing very small volumes of overflow are indicated by flow meters even though an overflow cannot be verified by level measurements or other indicators. These blips are not reported as overflows, but are noted in the CSO monitoring data reported in Appendix B. There are occasions in which a communications failure with telemetry has led to short-term gaps in the data. In addition, indications of rainfall and CSO activations are shown on the day they happened, but are not aligned with the exact time, so the effluent flow graph (which is tied to actual time) may show peaks that are offset from the indicated rain or CSO events by as much as 24 hours.

On April 8, 2015, Morris Forman WQTC experienced a complete power outage. The staff spent the month of April restoring processes until at 12:28 PM, April 30, 2015, all dry weather

flow up to normal flow parameters was receiving secondary treatment at MFWQTC. The impact from this outage continued into the third quarter of 2015 as the process had to withstand further outages for repairs to electrical, mechanical and control systems. Final Effluent Pump #2 continues to be out of service for repairs.

During this reporting period, there were a few outages that affected plant capacity in Primary Treatment. In the month of July, West Headworks Channel 1 and 3 were removed from service for repairs bringing the effective plant capacity to Morris Forman WQTC to 235 MGD. Rain events occurred during July causing overflows at CSO015, CSO016, CSO191, CSO210 and CSO211 after the influent exceeded the effective effluent capacity.

During the month of August, West Headworks Channel 3 was placed back in service while West Headworks Channel 1 remained out of service bringing the effective plant capacity to 300 MGD. There were a few high intensity rain events that occurred which produced high surges of flow at Morris Forman WQTC causing overflows at CSO015, CSO016 and CSO210.

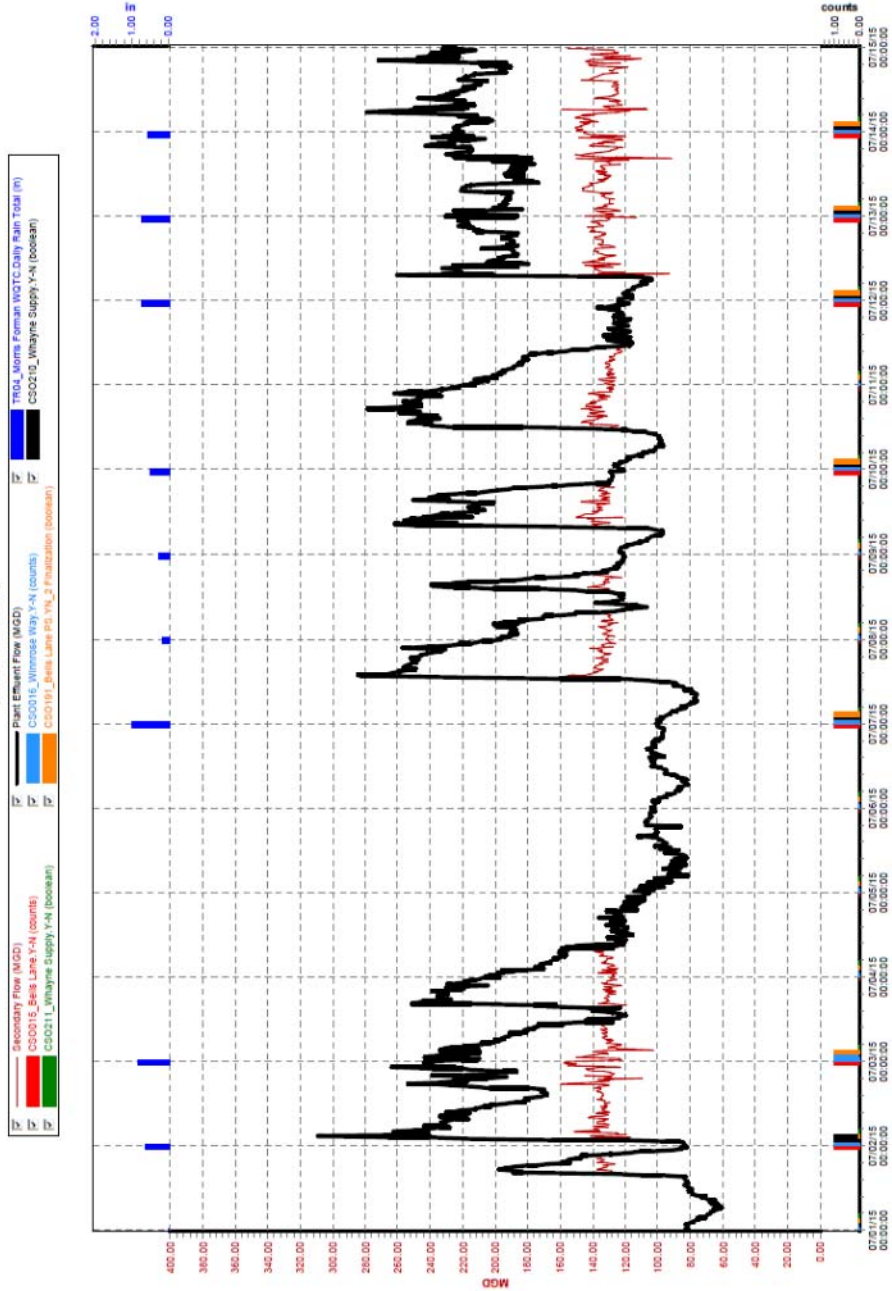
During the month of September, West Headworks Channel 1 remained out of service keeping the effective plant capacity at 300 MGD. The Southwestern Pump Station pumps combined storm flows of the separate system into Morris Forman Water Quality Treatment Center. The Southwestern Pump Station has been experiencing electrical issues with the effluent pumps. On September 30, 2015 the electrical issue disabled two pumps overwhelming the Southwestern Pump Station and caused an overflow to occur at CSO015. MSD staff was able to bring one of the disabled pumps back online shortly after both pumps failed.

There were also outages in Secondary Treatment for this period. Several secondary clarifiers were removed from service, repaired and placed back into service to return them to capacity. During rain events in this quarter, Morris Forman WQTC was able to maintain flows of 120 MGD to 140 MGD and above through the secondary treatment process.

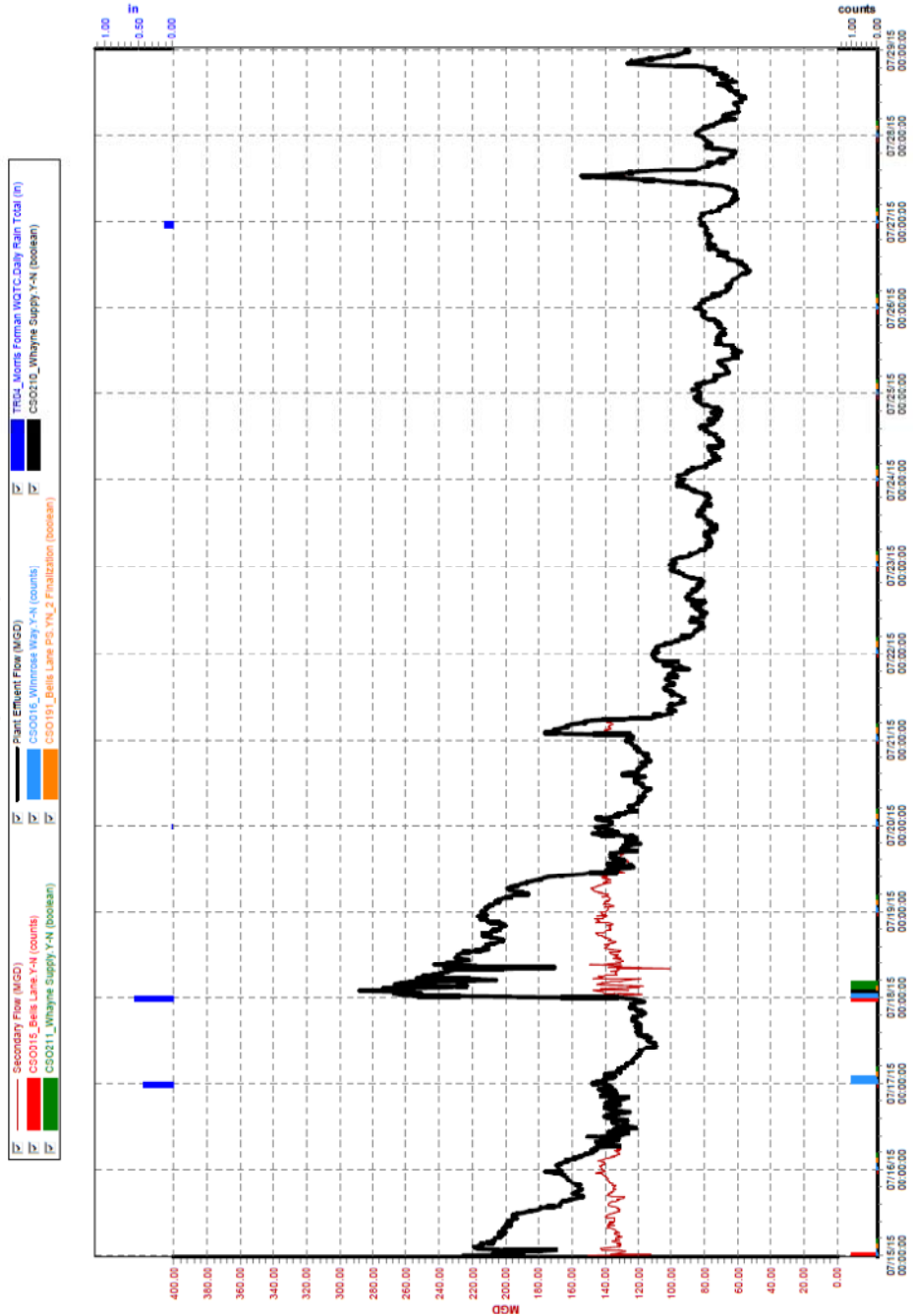
Solids processing was limited at times due to the biosolids dryer condition and capacity, and Morris Forman WQTC compensated by dewatering and landfilling biosolids to meet the solids processing requirements.

The Morris Forman Headworks Replacement Project has been bid and awarded with construction to begin 4th quarter 2015. The contractor has been on site taking final measurements for equipment replacement. The design for replacement of equipment at the Morris Forman WQTC High-Yard Substation is complete. The project was bid and awarded with construction anticipated to begin in the 4th quarter 2015. The Final Effluent Pump Station (FEPS) generator project has been awarded and is now under construction. A dewatering cake pump project and centrifuge backdrive controls project have been bid and are in the award process. Both projects will begin construction in the 4th quarter 2015. The construction of the SWOR 2 Modifications is complete. Project startup and testing occurred July 20, 2015.

Morris Forman WQTC - Bypass vs. Large CSOs
 (07/01/15 to 07/15/15)

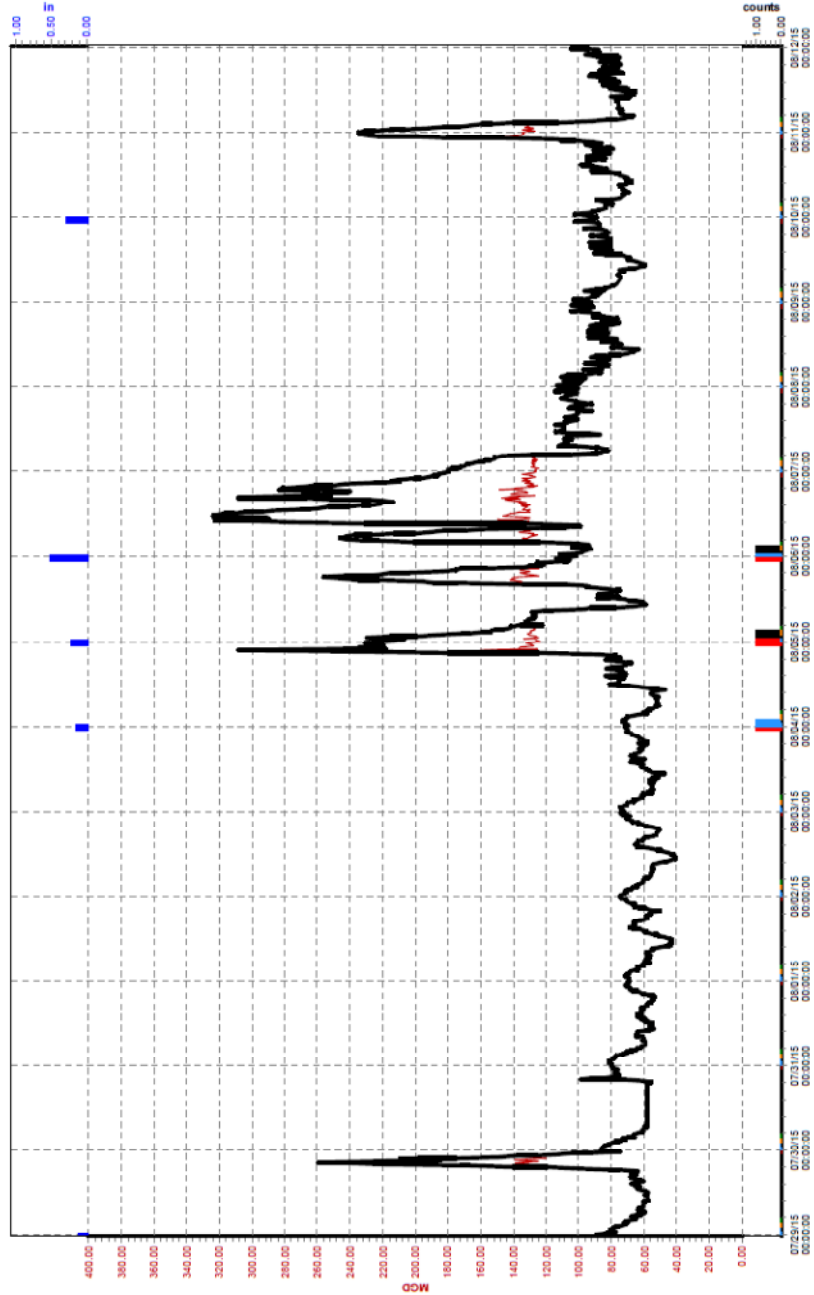


Morris Forman WQTC - Bypass vs. Large CSOs
 (07/15/15 to 07/29/15)



Morris Forman WQTC - Bypass vs. Large CSOs

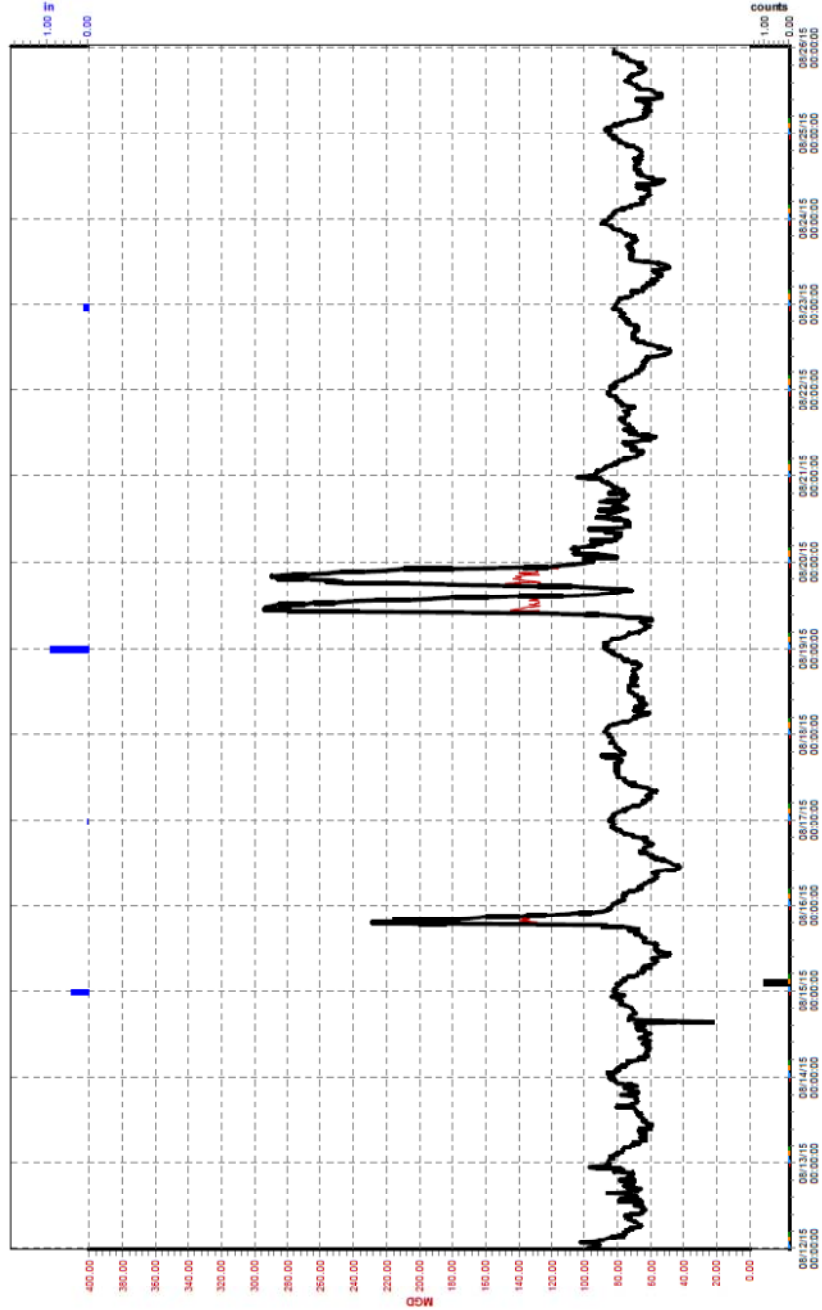
(07/29/15 to 09/12/15)



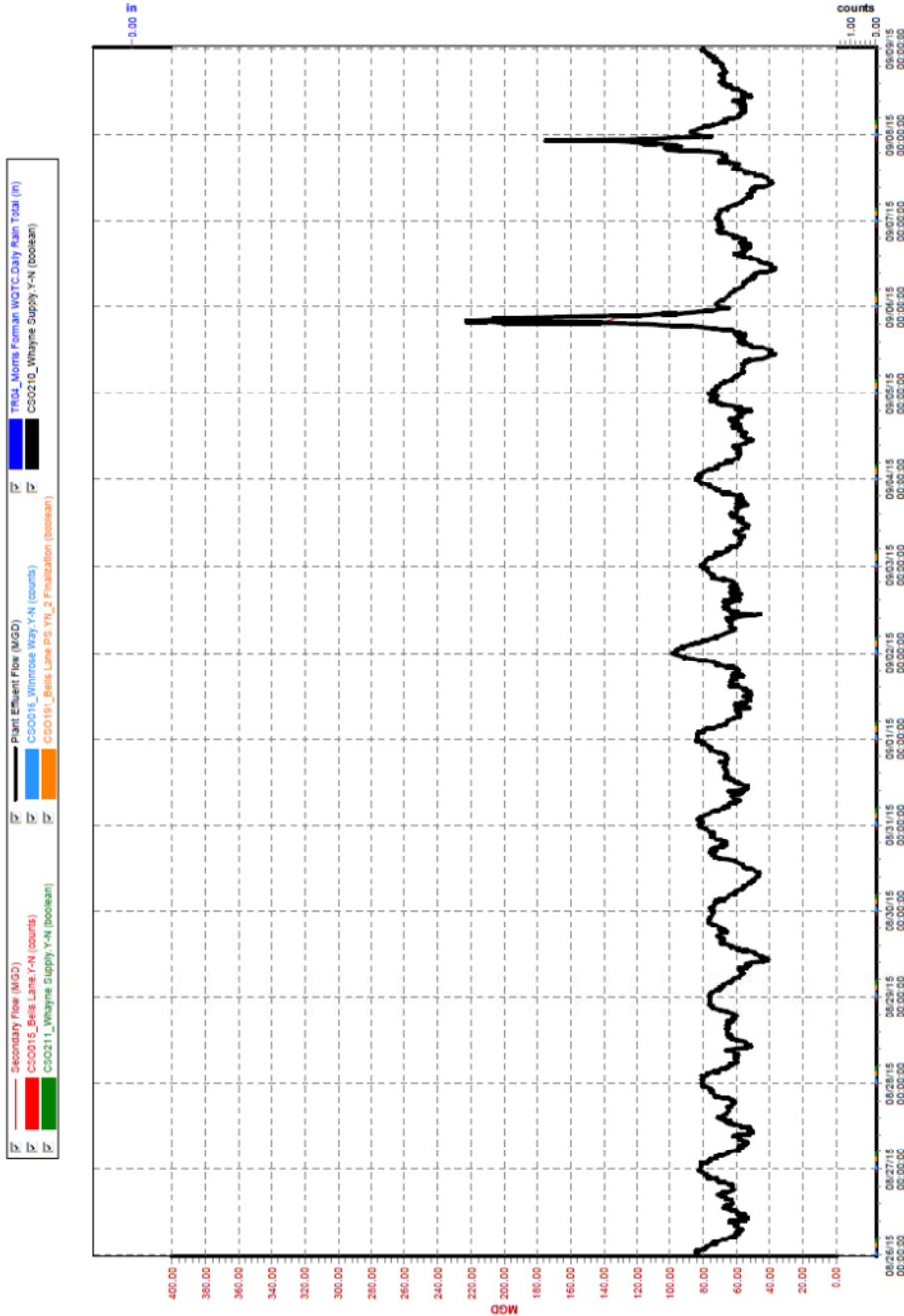
Morris Forman WQTC - Bypass vs. Large CSOs

(08/12/15 to 08/26/15)

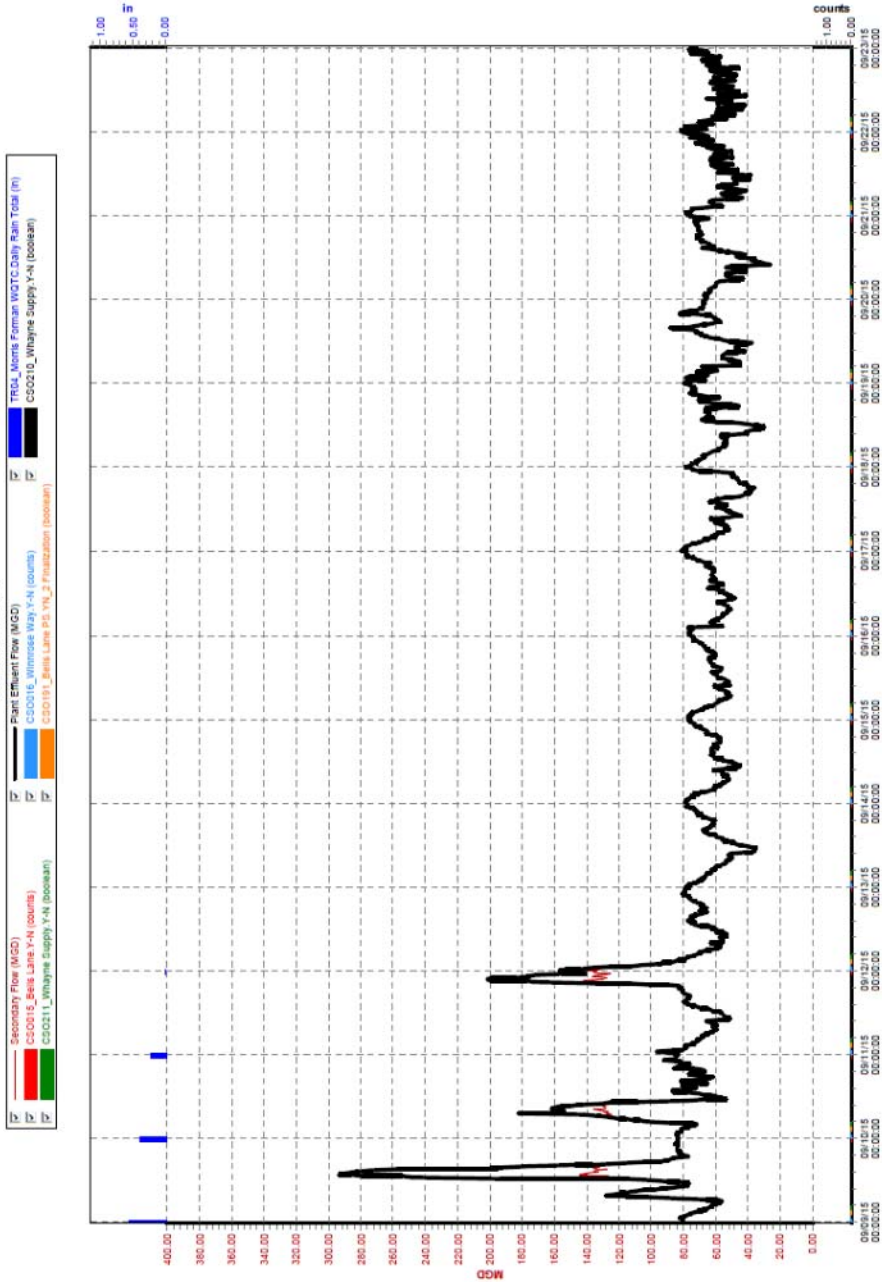
- Secondary Flow (MGD)
- CS0015_Bess Lane Y-N (counts)
- CS0011_Whayne Supply Y-N (boolean)
- Plant Effluent Flow (MGD)
- CS0016_Winnrose Way Y-N (counts)
- CS00191_Bellis Lane PS_YN_2_Frazilation (boolean)
- TRQA_Morris Forman WQTC Daily Rain Total (in)
- CS0010_Whayne Supply Y-N (boolean)



Morris Forman WOTC - Bypass vs. Large CSOs
 (08/26/15 to 09/09/15)



Morris Forman WQTC - Bypass vs. Large CSOs
 (09/09/15 to 09/23/15)



There was only one violation for this reporting period at Morris Forman WQTC. For the month of July a seven (7) day fecal coliform parameter was not met. There were no violations for the month of August and September 2015.

During this reporting period, the following activities were continued and/or completed:

- RTC Integration – Staff is working with the RTC consultant to review, revise and begin implementing the draft wet weather SOP for the system that also includes the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather Treatment Facility. Full integration in an automated mode will not be achieved until the RTC software (CSoft) is upgraded to the most current version and the hydraulic engine is converted to use MSD's InfoWorks ICM hydraulic model. While this work is being done, the SOP is being implemented incrementally, starting with a period of manual operation to validate the control assumptions, followed by increasing levels of system automation as the automated controls for individual components are implemented, validated, and then incorporated into the overall RTC system. During this reporting period, MSD continued troubleshooting and revising the ICM model to achieve suitable run times and stability. Staff continued to review and revise SOPs for the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather Treatment Facilities. During the next reporting period, MSD anticipates completing ICM model revisions to the InfoWorks ICM hydraulic model and begin upgrades to the latest version of Csoft. Staff began developing RTC process layer controls and SOPs for the Bells Lane campus, Logan and Breckenridge storage basin and CSO Interceptor, and upgraded Nightingale PS facilities. It is anticipated that the SOPs for the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather Treatment Facility will be finalized by the end of 2015. Full implementation of the revised SOPs will be completed after the CSoft and InfoWorks ICM hydraulic model integration is complete and as new or upgraded facilities are brought into service. The anticipated completion date for full deployment of the latest version of Csoft utilizing the integrated ICM model is summer 2016.
- RTC Performance Assessment – The main objective of the RTC Performance Assessment is to determine whether the available flow and storage capacities within the system are being utilized to their full potential. MSD staff continued to review and prioritize for implementation strategies for performance improvement. During the next reporting period, MSD staff and the RTC consultant will continue to work to implement the hardware, software and set-point changes as applicable on a site-by-site basis. Work on implementing these improvements will continue through the next reporting period.



Louisville/Jefferson County
Metropolitan Sewer District

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM VIA THE RTC SYSTEM



Period	
From :	07/01/2015
To :	09/30/2015

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average*	Max**		SWPS SG Chamber (14.5)	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.8)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
				TRFD (In)	TRFD (In)	Rain Gauge										
2015-043	7/1/15 14:25	7/4/15 9:25	67:00:00	1.76	2.81	TR14	33.50	14.60	8.80	9.00	2.30	7.20	0.80	76.20	No	Very large, back to back storm cells (1-year return period for 10-minute to 2-hour events) homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-044	7/7/15 11:40	7/8/15 21:15	33:36:00	0.96	1.14	TR04	20.70	3.25	3.80	6.25	1.00	6.80	0.65	41.35	No	Moderate storm cells homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-045	7/9/15 5:45	7/9/15 23:25	17:40:00	0.23	0.36	TR05	8.60	1.80	0.95	2.75	0.90	4.00	0.20	19.20	No	Small storm cells heterogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-046	7/10/15 10:25	7/12/15 1:45	39:20:00	0.62	0.95	TR14	14.50	3.20	3.25	4.15	0.75	4.90	1.20	31.95	No	Moderate storm cells homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-047-048	7/12/15 6:30	7/17/15 5:00	118:30:00	3.12	5.77	TR13	22.70	14.60	13.83	14.50	2.00	6.30	5.10	79.03	Yes	Very large and back to back storm cells (up to 10-year return period for 15-min to 2-hour rainfall events) homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization. SWSG were switched to manual mode during the event.
2015-049	7/17/15 22:50	7/19/15 11:35	36:45:00	1.25	1.75	TR05	20.60	8.45	4.10	6.64	0.55	4.60	2.65	47.59	Yes	Very large storm cells (up to 1-year return period for 2-hour rainfall events) homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization. SWSG was manually operated. The RTC system was unavailable for a long period due to communication breakdown at Ashland and Executive Inn causing an invalid control mode (paris) results in those two sites.
2015-054	8/4/15 19:30	8/5/15 9:10	13:40:00	0.45	0.92	TR14	12.04	4.61	4.30	3.45	0.15	4.46	0.35	29.35	No	Moderate storm cells heterogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-055	8/5/15 15:20	8/7/15 9:35	42:15:00	1.02	1.55	TR11	18.80	6.25	5.55	8.15	0.85	5.90	2.10	47.60	No	Large storm cells homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-056	8/10/15 12:55	8/11/15 6:00	17:05:00	0.16	0.32	TR11	2.40	0.00	0.75	1.75	0.05	2.80	0.25	8.00	No	Small storm cells homogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-059	8/19/15 8:05	8/21/15 20:30	60:25:00	0.51	0.91	TR04	1.05	0.50	1.40	3.00	0.10	4.35	1.10	11.50	No	Small, back to back storm cells heterogeneously distributed over the service area. SWOR2 was manually controlled with its gates in the open position and minimal available storage utilization.
2015-066	9/9/15 4:20	9/11/15 18:45	62:25:00	0.54	1.00	TR14	4.69	2.23	0.54	2.74	0.20	5.16	0.00	15.56	No	Small, back to back storm cells heterogeneously distributed over the service area. SWOR2 was in normal operating mode after completion of repairs and upgrades.
2015-069	9/29/15 4:25	9/30/15 16:00	34:35:00	0.85	1.61	TR11	4.90	1.70	2.15	2.40	0.85	3.30	0.10	16.40	No	Large storm cells homogeneously distributed over the service area with dewatering of storage sites between cells. SWSG was operated manually (One gate of SWSG site failed).
TOTAL							164.48	61.19	49.42	63.78	9.70	59.77	14.40	422.73		

SECTION 2: Program Activities for Sewer Overflow Response Protocol

2.1 SORP Program Background

Per Paragraph 24.d. of the Amended Consent Decree, MSD initially submitted the Sewer Overflow Response Protocol (SORP) to EPA and KDEP on February 10, 2006, and received comments on March 13, 2006.

MSD completely revised the SORP documentation in 2011. The draft of this revised document was submitted for comment on August 22, 2011. Comments from the EPA and KDEP were received and addressed, and the document was resubmitted October 28, 2011. Final approval of the updated SORP document was received February 21, 2012. A hard copy of the approved document has been distributed to each division throughout MSD and a viewable, downloadable electronic version has been posted to the MSD Project WIN website www.msprojectwin.org.

The current approved SORP document is dated February 21, 2012, and can be viewed on the MSD Project WIN website (www.msprojectwin.org). Updates to the SORP document were submitted in August 2012, with confirmation of approvals on October 25, 2012. These updates are posted on the Project WIN website. The following activities were performed during this reporting period.

2.2 Overflow Management and Field Documentation

- Monitored approximately 149 sanitary sewer overflow (SSO) sites, which have been grouped into routes based on the range of rainfall rates necessary to cause a SSO. These routes are monitored during rain events depending on the magnitude and location of the storm. If an overflow is observed, a Discharge Work Order is created to document the event. During this quarter, Engineering staff documented 86 unauthorized discharges through route reconnaissance. Inspection routes were run during rain events as described in the following table:

Route Description	07/03/2015	07/07/2015	07/10/2015	07/12/2015	07/13/2015	07/14/2015	07/18/2015	08/06/2015	08/19/2015
ENGINEERING RAIN EVENT SSO INSPECTION ROUTE		X		X		X			
RS JEFFERSONTOWN RAIN EVENT SSO INSPECTION ROUTE (JTOWN MANHOLES WITHIN 2000 LF OF HEADWORKS)	X		X	X			X	X	X
RS JEFFERSONTOWN/FERN CREEK RAIN EVENT SSO INSPECTION ROUTE	X		X	X			X	X	X
RS MIDDLE/MUDDY FORK RAIN EVENT SSO INSPECTION ROUTE	X		X	X	X	X	X	X	X
RS HIKES POINT RAIN EVENT SSO INSPECTION ROUTE	X		X	X			X	X	X

- Due to capacity-related issues during this reporting period, MSD Operations staff hauled 127,500 gallons of sewage. MSD also hauled due to other issues as indicated in the following table:

MSD Hauled Volumes In Gallons (July 1, 2015 - September 30, 2015)				
Problem	April	May	June	Total
LACK OF SYSTEM CAPACITY	123,900	3,600	-	127,500
ELECTRICAL FAILURE	-	1	-	1
STRUCTURAL FAILURE	7,000	50	40,000	47,050
MECHANICAL FAILURE	-	-	36,000	36,000
Grand Total	130,900	3,651	76,000	210,551

2.3 Staff Training and Communication

- Reviewed and updated the training documentation for the 2015 third quarter SORP training that included Public Notification and Overflow Cleanup.
- Commenced planning for the 2015 fourth quarter SORP training that will focus on Completing the Overflow Reporting Form, Reporting Requirements and Data Entry.
- Conducted the following SORP Quarterly training sessions which were attended by 243 employees.

Staff Training Participation - July 1, 2015 - September 30, 2015				
Date	Dept./Area	Location	Module	Attendees
9/15/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	10
9/16/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	37
9/16/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	13
9/17/2015	RMS/ENG Staff	CMF	Public Notification and Overflow Cleanup	32
9/18/2015	I&FP Staff	CMF	Public Notification and Overflow Cleanup	9
9/22/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	4
9/23/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	16
9/23/2015	Morris Foreman Staff	MFWQTC	Public Notification and Overflow Cleanup	4
9/24/2015	RMS/ENG Staff	CMF	Public Notification and Overflow Cleanup	56
9/25/2015	I&FP Staff	CMF	Public Notification and Overflow Cleanup	10
9/29/2015	West OPS/Collections	DRGWQTC	Public Notification and Overflow Cleanup	6
9/30/2015	Central OPS/Collections	CCWQTC	Public Notification and Overflow Cleanup	33
9/30/2015	East OPS/Collections	FFWQTC	Public Notification and Overflow Cleanup	13
Total				243

SECTION 3: Program Activities for Discharge Abatement Plans

3.1 Integrated Overflow Abatement Plan (IOAP)

As a requirement of the Amended Consent Decree, per Paragraph 25, MSD is to prepare and submit for review and approval discharge abatement plans for the elimination of unauthorized discharges from the separate sanitary sewer system and the combined sewer system, the reduction and control of discharges from the CSO locations identified in the Morris Forman WQTC KPDES permit, and the improvement of water quality in the receiving waters.

The Final Sanitary Sewer Discharge Plan and the Final CSO Long Term Control Plan were submitted concurrently and certified on December 19, 2008, under the title of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010.

MSD submitted an IOAP modification request to EPA/KDEP on September 20, 2012, with partial approval granted via certified letter on October 25, 2012. The modified project package, including program descriptions, progress, and updated supporting text, was submitted to EPA/KDEP for approval on June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP. The project and program modifications proposed within this submittal resulted from additional information gathered from ongoing system monitoring, hydraulic modeling, and best professional judgment. MSD's adaptive management approach to overflow abatement has justified modifications which will result in a higher level of overflow control to be completed faster than originally proposed for approximately the same overall budget.

3.2 Sanitary Sewer Discharge Plan (SSDP)

The Sanitary Sewer Discharge Plan (SSDP) addresses the overflows and unauthorized discharges from the separate sanitary sewer system. Three separate plans have been submitted under this program as described below and outlined in Paragraph 25.a. of the Amended Consent Decree.

3.2.1 Updated Sanitary Sewer Overflow Plan Implementation

MSD prepared and submitted the Updated Sanitary Sewer Overflow Plan (SSOP) on February 10, 2006. This plan included an overview of the MSD sanitary sewer overflow abatement program and specific actions taken to reduce/eliminate overflows from the sanitary sewer system. This document included a list of the proposed improvements to be accomplished by December 31, 2008. Activities required under the Updated SSOP have been completed.

3.2.2 Interim Sanitary Sewer Discharge Plan

MSD submitted an Interim Sanitary Sewer Discharge Plan (ISSDP) for approval on September 30, 2007. Comments were received on January 8, 2008. MSD resubmitted the revised ISSDP on March 7, 2008, and received an approval letter for the ISSDP on July 24, 2008. The approved ISSDP document can be viewed on the MSD Project WIN website (www.msdpwin.org).

All projects required by the ISSDP have been completed and certified, with the exception of the Derek R. Guthrie WQTC expansion. During this reporting period the Derek R. Guthrie WQTC was operational in accordance with information previously submitted. The facilities provided under the project have been brought on-line and operated in a manner that achieves the project's full intent – to eliminate local SSOs caused by plant capacity limitations and to provide secondary treatment to the wastewater received from the expanded wet weather service area resulting from eliminating the SSOs at the Southeast Diversion, the Highgate Springs Pump Station, and the Hikes Point area.

Currently, the entire project is not fully complete in accordance with the construction contract documents due to existing litigation with and performance by the general contractor. However, the full functionality and capacity of the plant upgrades under this project meets the demands of the service area. With this understanding, a revised certification letter will be submitted during the next reporting period.

3.2.3 Final Sanitary Sewer Discharge Plan

MSD submitted for approval a Final Sanitary Sewer Discharge Plan (SSDP) on December 19, 2008, as Volume 3 of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010. A revised SSDP was included in the IOAP revision, submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP.

The following is a summary of activities that support elimination of the Prospect WQTCs.

- Project Status Details:
 - River Road Interceptor – project complete.
 - River Road Interceptor Phase 1A – project complete.
 - Harrods Creek Pump Station – project complete.
 - Harrods Creek Interceptor and Force Main Phase 1 – project complete.
 - Harrods Creek Interceptor and Force Main Phase 2 – project complete.
 - Harrods Creek Force Main Phase 3A – project complete.
 - Harrods Creek Force Main Phase 3B – project complete.
 - Shadow Wood WQTC Elimination – Flow diverted to Hite Creek WQTC 09/01/2015.
 - Hunting Creek North WQTC Elimination – Flow diverted to Hite Creek WQTC 08/31/2015.
 - Timberlake and Hunting Creek South WQTC Elimination – Timberlake flow diverted to Hite Creek WQTC 07/01/2015, Hunting Creek South flow diverted to Hite Creek WQTC 07/16/2015.
 - Ken Carla WQTC Elimination – Flow diverted to Hite Creek WQTC 09/02/2015.
 - Deep Creek PS Elimination – Bid Advertisement.

3.3 CSO Long Term Control Plan

The CSO Long Term Control Plan (LTCP) addresses the overflows and unauthorized discharges from the CSS. Two separate plans have been submitted under this program as described below and outlined in Paragraph 25.b. of the Amended Consent Decree.

3.3.1 Interim CSO Long Term Control Plan

The Interim CSO LTCP was initially submitted to EPA and KDEP on February 10, 2006. MSD received an approval letter dated February 22, 2007, for the Interim LTCP. The approved Interim LTCP can be viewed on the MSD Project WIN website (www.msdpjprojectwin.org).

This plan includes an overview of the MSD program, efforts taken to reduce/eliminate discharges from the CSS and the list of proposed improvements to be accomplished by December 31, 2008. All projects associated with this plan have been completed.

3.3.2 Final CSO Long Term Control Plan

MSD submitted for approval the Final CSO LTCP on December 19, 2008, as Volume 2 of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010. A revised LTCP was included in the IOAP revision, submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP.

3.3.3 Green Program Update

MSD continued program activities to provide incentives to private property owners to reduce the amount of impervious surface that drains to the combined sewer system.

During the reporting period, MSD updated the green infrastructure website (<http://www.msddgreen.org>). Through this website, information on high profile projects, program activities, forms and documents outlining participation in incentive programs (green infrastructure, downspout disconnection, urban reforestation) is provided in an accessible format.

The green program incentives are being applied to reflect the values of green projects in CSO areas or regions based on the latest modeling results. This application ties incentives directly to overflow reductions in various CSO regions to promote green projects in the areas that provide the most value. Project opportunities are optimized to best use available funding and provide additional overflow volume reduction benefits to complement LTCP projects.

On September 22, 2015, MSD held the Construction Field Day. The Construction Field Day educates engineers, designers and developers on green infrastructure technologies, construction methods, design methods and regulatory updates. The 2015 event was held at the Louisville Water Tower, and focused on green infrastructure construction, erosion prevention and sediment control, proposed design requirement changes, and recent regulatory changes. The event included a live rain garden construction demonstration and a meet-and-greet opportunity with MSD's Executive Director.

MSD continues to administer an urban reforestation program to intercept rainwater and reduce stormwater entering the sewer system. Urban reforestation proposals require a Memorandum of Understanding for reporting tree location, condition, and maintenance plan. Partners participating in the program are responsible for ongoing maintenance of the trees.

Continued coordination with the green and MS4 program is on-going to optimize resources and regulations to improve water quality.

3.4 Activity Progress Chart

A Gantt chart showing the previous and Proposed IOAP Modification schedules (Refer to IOAP, Volume 1 – Figure 6.3.1 for the previous) for the entire program is provided below.

MSD Integrated Overflow Abatement Plan Implementation Schedule (01 Jan 2009- 31 Dec 2024)

Activity Name	Scheduled Finish	2009 IOAP Completion	2012 IOAP Modification	2009				2010				2011				2012				2013				2014				2015				2016				2017				2018				2019				2020				2021				2022				2023				2024			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4												
MSD IOAP SCHEDULE	31-Dec-24	31-Dec-24	31-Dec-24																																																																
LONG TERM CONTROL PLAN	01-Jan-21	31-Dec-20	31-Dec-20																																																																
GREEN DEMONSTRATION PROJECTS	31-Dec-20	31-Dec-20	31-Dec-20																																																																
GREEN INFRASTRUCTURE DEMONSTRATION PROJECTS	31-Dec-11 A	31-Dec-11	31-Dec-11																																																																
GREEN INFRASTRUCTURE DEMONSTRATION PROJECTS	31-Dec-11 A	31-Dec-11	31-Dec-11																																																																
GREEN INFRASTRUCTURE PROGRAM	31-Dec-20	31-Dec-20	31-Dec-20																																																																
GREEN INFRASTRUCTURE PROGRAM	31-Dec-20	31-Dec-20	31-Dec-20																																																																
GRAY INFRASTRUCTURE PROJECTS	01-Jan-21	31-Dec-20	31-Dec-20																																																																
CSO 123 DOWNSPOUT DISCONNECTION	31-Dec-12	31-Dec-12	31-Dec-12																																																																
CSO 123 DOWNSPOUT DISCONNECTION	31-Dec-12	31-Dec-12	31-Dec-12																																																																
I-64 AND GRINSTEAD DRIVE STORAGE BASIN	31-Dec-20	21-Dec-14	31-Dec-20																																																																
I-64 AND GRINSTEAD DRIVE STORAGE BASIN	31-Dec-20	21-Dec-14	31-Dec-20																																																																
CSO 140 INCREASE PIPE CONVEYANCE	31-Dec-15	31-Dec-15	31-Dec-15																																																																
CSO 140 INCREASE PIPE CONVEYANCE	31-Dec-15	31-Dec-15	31-Dec-15																																																																
CSO 206 SEWER SEPARATION	30-Dec-13	31-Dec-13	30-Dec-13																																																																
CSO 206 SEWER SEPARATION	30-Dec-13	31-Dec-13	30-Dec-13																																																																
CLIFTON HEIGHTS STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18																																																																
CLIFTON HEIGHTS STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18																																																																
PADDY'S RUN WET WEATHER TREATMENT FACILITY AND OFF LINE I	31-Dec-16	31-Dec-14	31-Dec-16																																																																
PADDY'S RUN WET WEATHER TREATMENT FACILITY	31-Dec-16	31-Dec-14	31-Dec-16																																																																
PORTLAND WHARF STORAGE BASIN	31-Dec-19	31-Dec-19	31-Dec-19																																																																
PORTLAND WHARF STORAGE BASIN	31-Dec-19	31-Dec-19	31-Dec-19																																																																
STORY AVENUE AND MAIN STREET STORAGE BASIN	31-Dec-20	31-Dec-13	31-Dec-20																																																																
STORY AVENUE AND MAIN STREET STORAGE BASIN	31-Dec-20	31-Dec-13	31-Dec-20																																																																
CSO 058 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROL	31-Dec-14	31-Dec-14	31-Dec-14																																																																
CSO 058 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-14	31-Dec-14	31-Dec-14																																																																
SOUTHWESTERN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18																																																																
SOUTHWESTERN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18																																																																
13TH STREET AND ROWAN STREET STORAGE BASIN	01-Jan-21	31-Dec-20	31-Dec-20																																																																
13TH STREET AND ROWAN STREET STORAGE BASIN	31-Dec-20	31-Dec-20	31-Dec-20																																																																
13TH STREET AND ROWAN STREET STORAGE BASIN	31-Dec-20	31-Dec-20	31-Dec-20																																																																
CENTRAL RELIEF DRAIN IN-LINE STORAGE, GREEN INFRASTRUCTURE AND DISTRIBUTED STORAGE	01-Jan-21	31-Dec-18	31-Dec-18																																																																
CENTRAL RELIEF DRAIN IN-LINE STORAGE, GREEN INFRASTRUCTURE AND DISTRIBUTED STORAGE	01-Jan-21	31-Dec-18	31-Dec-18																																																																
CSO 160 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROL	31-Dec-15	31-Dec-15	31-Dec-15																																																																
CSO 160 IN-LINE STORAGE AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-15	31-Dec-15	31-Dec-15																																																																
ADAMS STREET SEWER SEPARATION	31-Dec-12	31-Dec-12	31-Dec-12																																																																
ADAMS STREET SEWER SEPARATION	31-Dec-12	31-Dec-12	31-Dec-12																																																																
18TH AND NORTHWESTERN PKY STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17																																																																
18TH AND NORTHWESTERN PKY STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17																																																																
ALGONQUIN PARKWAY STORAGE BASIN	01-Jan-19	31-Dec-18	31-Dec-18																																																																
ALGONQUIN PARKWAY STORAGE BASIN	31-Dec-18	31-Dec-18	31-Dec-18																																																																
SOUTHERN OUTFALL IN-LINE STORAGE (SOR 1)	31-Dec-18	31-Dec-18	31-Dec-18																																																																
SOUTHERN OUTFALL IN-LINE STORAGE AT 43RD ST.	31-Dec-18	31-Dec-18	31-Dec-18																																																																
SOUTHERN OUTFALL IN-LINE RETENTION (SOR 2)	01-Jan-19	31-Dec-18	31-Dec-18																																																																
SOUTHERN OUTFALL IN-LINE RETENTION AT 13TH AND WILSON AVE. (SOR 2)	01-Jan-19	31-Dec-18	31-Dec-18																																																																
NIGHTINGALE PUMP STATION REPLACEMENT AND STORAGE	31-Dec-15	31-Dec-16	31-Dec-15																																																																
NIGHTINGALE PUMP STATION REPLACEMENT AND STORAGE	31-Dec-15	31-Dec-16	31-Dec-15																																																																
LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN	31-Dec-20	31-Dec-20	31-Dec-20																																																																
LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN	31-Dec-20	31-Dec-20	31-Dec-20																																																																
LOGAN STREET AND BRECKENRIDGE ST STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17																																																																
LOGAN STREET AND BRECKENRIDGE ST STORAGE BASIN	31-Dec-17	31-Dec-17	31-Dec-17																																																																
CSO 085 STRUCTURAL MODIFICATIONS AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-15	31-Dec-15	31-Dec-15																																																																
CSO 093 STRUCTURAL MODIFICATIONS AND GREEN INFRASTRUCTURE CONTROLS	31-Dec-15	31-Dec-15	31-Dec-15																																																																
CSO 108 DAM MODIFICATIONS	31-Dec-10 A	31-Dec-10	31-Dec-10																																																																
CSO 108 DAM MODIFICATIONS	31-Dec-10 A	31-Dec-10	31-Dec-10																																																																
STORY AVENUE AND SPRING STREET GREEN INFRASTRUCTURE CONTROL	31-Dec-16	31-Dec-16	31-Dec-16																																																																
STORY AVENUE AND SPRING STREET GREEN INFRASTRUCTURE CONTROLS	31-Dec-16	31-Dec-16	31-Dec-16																																																																
FLOOD PUMP STATION PROJECTS	31-Dec-14	31-Dec-14	31-Dec-14																																																																
27TH STREET FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13																																																																
27TH STREET FLOOD PUMP STATION	30-Jun-13	30-Jun-13	30-Jun-13																																																																

Approved 2009 IOAP
 Remaining Work
 Completed Work

1 of 5

Date Date: 01-Jul-12

SECTION 4: Program Activities for Public Outreach, Education, Notification and Participation

4.1 Public Notification Program

MSD has developed a program aimed at notifying the community of the objectives of Project WIN and how to lessen the risks associated with coming into contact with sewage overflows.

4.2 Public Education Programs

MSD has developed a public education program aimed at disseminating information to the public on MSD's primary business functions with emphasis on wastewater, stormwater and flood protection. Efforts continued to utilize various media outlets, including television, radio, magazines, and newspapers to serve as a conduit for circulating information to the public.

During the reporting period, MetroTV aired programs detailing the IOAP Public Input Meetings. Additionally, MSD is in the process of creating water quality sampling videos and partnering with educational organizations to assist with watershed videos. These efforts will be underway in FY16 and ultimately available to the public.

4.3 Public Outreach Programs

MSD has developed a public education program aimed at expanding the public's knowledge on MSD's primary business functions of wastewater, stormwater and flood protection, with an emphasis on Project WIN Program elements.

4.3.1 IOAP Project and Program Meetings

MSD facilitates meetings for the Wet Weather Team (WWT), and the public to review regulatory commitments, update progress on projects and initiatives, and to gather public input on efforts.

MSD has developed a partnership with Louisville Metro for providing project information and soliciting feedback from stakeholders using a Structured Public Involvement approach. Structured Public Involvement is meant to facilitate relevant input on the design process as MSD prepares to design and construct CSO basins. Our current IOAP outreach activities and public meetings are using this process to elicit qualitative and quantitative information and enhance our engagement with customers. The Structured Public Involvement approach assures anonymity for each participant using transceivers to compile data which can then be correlated on a customer-specific basis. The plan for Structured Public Involvement includes implementing a four-meeting process that leads stakeholders through the project Design Stages: Orientation, Concept, Advanced, and then a Pardon Our Dust meeting upon construction. Online surveys are also being made available to allow those not in attendance at public meetings to provide similar project-specific input. Creating this secondary online opportunity has been successful and generated responses that otherwise would not have been accounted for at the public meetings. Additional information regarding the Structured

Public Involvement Process and meetings held during this reporting period may be found at the Project WIN Public Input Website (<http://www.msdpwin.org/Public-Input.aspx>).

During the reporting period, MSD facilitated and planned for the following meetings:

- A Pardon Our Dust public meeting was held for the Lea Ann Way West Project on July 9, 2015. MSD staff explained the project plans, offered tips to the public, and provided a construction schedule.
- A Concept Design Stage public input meeting for the Clifton Heights Storage Basin project was held on September 15, 2015, at the American Printing House for the Blind. MSD staff discussed and provided general designs as well as gathered input using the Structured Public Involvement Process.
- The Wet Weather Team Stakeholder Meeting was held on August 11 and September 22, 2015, to provide updates on MSD's IOAP progress and activities to date, planned activities for 2015, and an update of activities for MSD's 20-year Comprehensive Facility Plan, including detailed presentations on the Stormwater and Wastewater Service Areas.

During the next reporting period, the following meetings are planned.

- A planned Conceptual Design input meeting to incorporate Structured Public Involvement for the Southwestern Parkway Storage Basin project is scheduled for November 12, 2015.
- Meet with the Wet Weather Team Stakeholder Meeting in December, 2015.
- Conduct a Pardon Our Dust Preconstruction Meeting on CSO190's Green Infrastructure Project Phase I.
- Conduct a Concept Design stage public meeting for Portland Storage Basin.
- Conduct an Orientation Public Meeting for the Lexington Road & Payne Street Storage Basin Project.

SECTION 5: Capacity Management Operations and Maintenance Report

Per Paragraph 24.c of the Amended Consent Decree, the Capacity Management Operations and Maintenance (CMOM) Self Assessment Report was submitted to EPA and KDEP on February 10, 2006. MSD received a letter of approval on August 22, 2006. The approved CMOM document can be viewed on the MSD Project WIN website (www.msprojectwin.org).

The primary objectives of CMOM are as follows:

Capacity – Ensuring that adequate wet and dry weather capacity is maintained in existing and new infrastructure.

Management – Implementing programs in support of operations and maintenance activities required to ensure KPDES permit compliance and promote public health by remedying design, construction and operational deficiencies; training staff; and performing activities in a safe manner.

Operations – Implementing written standard operating procedures to operate system components as designed to meet permit requirements.

Maintenance – Implementing systematic, comprehensive asset maintenance and rehabilitation programs to prevent overflows, maximize system reliability and ensure system sustainability.

Although the program implementation deadlines from the CMOM Self Assessment Report were previously met, MSD continued to enhance the activities listed below during this reporting period. Highlights of the CMOM program implementation over this reporting period are outlined below.

5.1 Management Programs

M-E-9 Infrastructure Rehabilitation

Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

M-E-10 System Capacity Assurance Program

Included in the goals of the CMOM Self-Assessment Report, The System Capacity Assurance Plan (SCAP) is the basis for applying capacity decision criteria to support watershed community values. It provides a programmatic approach for confirming available capacity within MSD's sanitary sewer system, creating capacity credits through system improvement and rehabilitation, identifying hydraulic constrictions, and proposing capacity improvements that support interim and long-term performance objectives. SCAP revisions, including credit and balance projections and discussion of approach for multi-family residential unit populations were discussed with EPA and KDEP and submitted electronically for review on July 21, 2014. The final SCAP revision was submitted for approval on December 9, 2014 and approval was received February 5, 2015. A copy of the approved SCAP can be found on the Project WIN website (www.msprojectwin.org).

A current copy of the SCAP Credit Balance is included as **Appendix D**.

5.2 Operations Programs

O-A-1 Pump Station Operations Programs (Routine Operating Programs)

Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

O-A-2 Pump Station Operations Programs (Emergency Operating Programs)

Activity details are provided in the CMOM schedule provided as **Section 5.4 – CMOM Activity Schedule**.

5.3 Comprehensive Performance Evaluations and Composite Correction Plans (CPE/CCP)

Per requirements of MSD's 2009 Amended Consent Decree, MSD implemented a Comprehensive Performance Evaluation (CPE) and Composite Correction Plan (CCP) program for the District's water quality treatment centers (WQTCs). Although the IOAP CPE assessments defined specific WQTC improvements to be completed by December 31, 2011, MSD will continue to implement CPE/CCP activities as part of the District's CMOM Program. This section will list such activities per WQTC as they occur each reporting period and will be outlined below.

5.3.1 Hite Creek Water Quality Treatment Center

During this reporting period, the following Hite Creek WQTC activities occurred.

- Construction continued for the Hite Creek WQTC Hydraulic Improvements Project.
- MSD staff continued to work with the consultant to complete an alternative solids and tertiary filter replacement study.

During the next reporting period, the following Hite Creek WQTC activities are planned.

- Construction will continue on the Hite Creek WQTC Hydraulic Improvements Project. It is anticipated that all work will be complete late spring 2016.
- MSD staff will continue to work with the consultant to complete an alternative solids and tertiary filter replacement study.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.2 Floyds Fork Water Quality Treatment Center

During this reporting period there were no activities to report for this facility.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.3 Derek R. Guthrie Water Quality Treatment Center

During this reporting period, the following Derek R. Guthrie WQTC activities occurred.

- Construction began for the Secondary Clarifiers 1, 2 & 3 collection mechanism replacement project.

- Construction began for the removal and upgrade of Return Activated Sludge (RAS) Pumps 1 and 4, including replacement of pumps 1 through 4 variable frequency drives, and was put on hold in anticipation of the results of the DRG Facility Plan document.

During the next reporting period, the following Derek R. Guthrie WQTC activities are planned.

- The draft DRG Facility Plan document will be reviewed by MSD staff and draft KDOW submittal will occur.
- Repairs to the power system of the Wet Weather Pump Station so that the Wet Weather Pumps can be tested for compliance with specifications.
- Construction will continue on the replacement of the Secondary Clarifiers 1, 2, & 3 mechanisms.
- It is anticipated construction will begin for the removal and upgrade of Return Activated Sludge (RAS) Pumps 1 and 4, including replacement of pumps 1 through 4 variable frequency drives. This will be on hold in anticipation of the results of the Facilities Plan document.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.4 Cedar Creek Water Quality Treatment Center

During the 2nd quarter of 2015, MSD staff and Consultant completed a feasibility study of automation alternatives and tertiary filter replacement study. The studies have resulted in recommendations for improvements in phases. During this reporting period, design was completed for the first phase of the project which is for improvements to the ultraviolet (UV) gate. The UV gate will be under construction in the last quarter of 2015. Bids were opened for Cedar Creek Water Quality Treatment Center UV Gate project.

During the next reporting period, MSD expects to award the construction contract for Cedar Creek Water Quality Treatment Center UV Gate project. MSD also plans to advertise and open bids for Cedar Creek Water Quality Treatment Center Influent Pump Station Gate Repair and begin design of Cedar Creek Water Quality Treatment Center Influent Pump Station Variable Frequency Drive (VFD) project.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5 Prospect Area Water Quality Treatment Center Updates

An elimination plan for the five WQTCs serving Prospect (Timberlake, Hunting Creek North, Hunting Creek South, Ken Carla, and Shadow Wood), was submitted to EPA and KDEP on March 31, 2009. Approval of this plan was received on September 24, 2009, and work is proceeding on the projects defined in the IOAP. See **Section 3 – Program Activities for Discharge Abatement Plans** for an update on the design and construction of the projects that make up the elimination plan for the Prospect Area WQTCs.

5.3.5.1 Timberlake Water Quality Treatment Center

On July 7, 2015, the Timberlake WQTC was taken off line and decommissioned.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.2 Hunting Creek North Water Quality Treatment Center

On August 31, 2015, the Hunting Creek North WQTC being taken offline and decommissioned.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.3 Hunting Creek South Water Quality Treatment Center

On July 16, 2015, the Hunting Creek South WQTC was taken offline and decommissioned.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.4 Ken Carla Water Quality Treatment Center

On September 2, 2015, the Ken Carla Water Quality Treatment Center was taken offline and decommissioned.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.5.5 Shadow Wood Water Quality Treatment Center

On September 1, 2015, the Shadow Wood Water Quality Treatment Center was taken offline and decommissioned.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.6 Jeffersontown Water Quality Treatment Center

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.7 Starview Water Quality Treatment Center

During this reporting period, MSD awarded the Middletown Sanitary Recapture Phase II Section C and Chenoweth Run Interceptor Section 1 project. During the next reporting period, construction will begin on the Middletown Sanitary Recapture Phase II Section C and Chenoweth Run Interceptor Section 1 project. The Starview WQTC is scheduled to be off-line prior to March 31, 2016.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.8 Berrytown Water Quality Treatment Center

During this reporting period, construction continued for the Middletown Sanitary Recapture Phase II Section D and Chenoweth Run Interceptor Section 2 project. During the next reporting period, construction should be completed for the Middletown Sanitary Recapture Phase II Section D and Chenoweth Run Interceptor Section 2 project. MSD plans for completion in November 2015. The plant flows will be diverted to the Floyds Fork WQTC. The gravity portion of this project is approximately 25% of the total length of gravity line required to eliminate the Starview WQTC. The Berrytown WQTC is scheduled to be off-line prior to December 31, 2015.

Schedules for CPE/CCP related capital projects are provided in **Section 5.4 – CMOM Activity Schedule**.

5.3.9 Other Water Quality Treatment Centers

CMOM related capital projects will be provided in the schedule provided as **Section 5.4 – CMOM Activity Schedule**.

- McNeely Lake – The McNeely Lake Sanitary Sewer and Force Main project is complete. This gravity portion is approximately 75% of the total length of gravity line required to eliminate the McNeely Lake WQTC. A private developer has extended the remaining gravity sewer through a future residential development to within 600 feet of the McNeely Lake WQTC. The design of the interceptor that will serve to eliminate the McNeely Lake WQTC and the Brookbend Way PS is complete. MSD advertised, bid and awarded a construction contract for the decommissioning of the McNeely Lake WQTC and Brookbend PS. During the next reporting period, construction will continue for the decommissioning of the McNeely Lake WQTC and Brookbend PS. MSD anticipates completing the elimination of the McNeely Lake WQTC by December 31, 2015, but is dependent on the legal processes required to obtain rights of access to the parcel surrounding the McNeely Lake WQTC.
- Bancroft WQTC – The scope of this project has been modified from storage at Devondale PS to eliminating the Devondale PS as part of the IOAP and conveying flow to a 0.33 MGD Pump Station and a 0.25 MG Storage Basin at the Bancroft site. Construction continued as the completion of the excavation of basin is completed along with the gravity sewer and force main required by the project. During the next reporting period, MSD anticipates the installation of the rock anchors for the basin, and the construction of various structures and electrical work to commence. The Bancroft WQTC and Devondale Pump Station are scheduled to be off-line by spring 2016 well ahead of the IOAP December 2021 date.
- Middletown Industrial Park WQTC – MSD's Board approved the acquisition of the Middletown Industrial Park WQTC system on January 26, 2015. The City of Middletown will continue to operate and maintain the sewer system until December 31, 2015. It is anticipated that flow will be diverted and the WQTC will be offline by that date. At that time, MSD will take over full operations and maintenance of the system. MSD initiated a design project to eliminate the plant. A private developer was responsible for the Middletown Sanitary Recapture Phase I Project which constructed a portion of the Chenoweth Run Interceptor to eliminate the Starview and Berrytown plants. This interceptor will also

provide a gravity outlet for the Middletown Industrial Park WQTC. MSD completed the design to construct an approximately 800 linear foot collector line for the elimination. During the next reporting period, MSD expects construction to commence for the elimination of the Middletown Industrial Park WQTC. The Middletown Industrial Park WQTC is scheduled to be off-line by December 31, 2015.

5.4 CMOM Activity Schedule

CMOM capital project milestones for the period of July 1, 2015, through September 30, 2015, as well as a look-ahead for the period of October 1, 2015, through December 30, 2015, are provided in the schedule below.

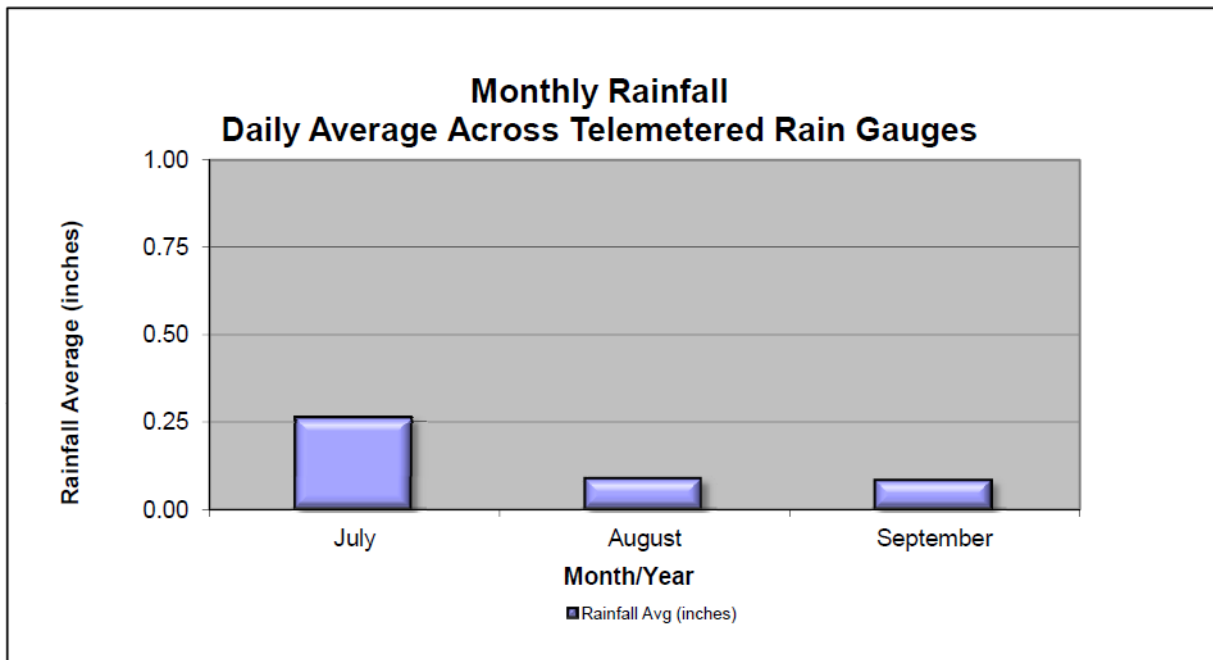
MSD CMOM FY14 Annual Commitments Schedule (01 April 2015 - 31 December 2015)					2015								
Activity ID	Activity Name	Physical % Complete	Start	Finish	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
CMOM FY ANNUAL REPORT COMMITMENTS FINAL													
M-E-9 Infrastructure Rehabilitation													
Annual I/I FY13 Project (H09206)													
A5100	Warranty	100%	30-Mar-14 A	30-Mar-15 A									
Prospect Phase I Sanitary Sewer Rehabilitation Project (H11311)													
A6470	Warranty	50%	23-Jan-13 A	23-Jan-16									
A3240	Construction	100%	20-Sep-13 A	23-Jan-15 A									
Lea Ann Way East - Fegenbush Rehabilitation Project (C08433)													
A4010	Warranty	100%	28-Feb-14 A	28-Feb-15 A									
Middle Fork Beargrass Creek SSR Phase 1 (H11306)													
A5370	Design	0%	01-Aug-15*	01-Aug-15									
Annual I/I FY14 Project (H14184)													
A5730	Construction	100%	28-Jan-14 A	28-Feb-15 A									
A6190	LAW Quad3 Whispering Hills Phase I	100%	28-Jan-14 A	28-Feb-15 A									
Goose Creek PS SSES (H11407)													
A4950	Planning	100%	01-Apr-13 A	31-Jan-15 A									
Nightingale PS SSES (H11313)													
A5110	Planning	100%	15-Jul-13 A	31-May-15 A									
FY15 Annual Sewer Rehabilitation (H09208)													
A5530	Construction	70%	01-Feb-15 A	01-Feb-16									
A5540	LAW Quad 3 - Whispering Hills Phase3 2	85%	15-Feb-15 A	31-Dec-15									
A5650	LAW Quad 4	50%	15-Feb-15 A	31-Dec-15									
Melco Basin Tree Removal (F14171)													
A6250	Design	100%	01-Nov-14 A	09-Apr-15 A									
A6260	Ad	100%	19-May-15 A										
A6270	Bid Open	100%	09-Jun-15 A										
A6280	Award	0%	14-Jul-15*										
A6290	Construction	0%	01-Aug-15*	30-Jun-16									
Pump Station Operations Programs													
Lea Ann Way West Quads 1 & 2 (H15125)													
A6480	Ad	100%	09-Apr-15 A	31-Dec-15									
A6490	Bid	100%	04-May-15 A										
A6500	Award	100%	26-May-15 A										
A6510	Construction	3%	22-Jun-15 A	31-Dec-15									
34th Street Flood Pump Station Gate 71 Replacement (F15008)													
A6520	Ad	100%	17-Jun-15 A										
A6530	Bid	0%	08-Jul-15*										
A6540	Award	0%	14-Jul-15*										
A6550	Construction	0%	01-Aug-15*	01-Nov-15									
O-A-2 Emergency Operation Programs													
Royster Basin Generator Project (H12163)													
A4840	Construction	100%	28-Aug-14 A	18-Jan-15 A									
St. Matthews #4 Pump Station Modification Project (H14211)													
A5840	Warranty	55%	29-Aug-14 A	29-Aug-15									
4th Street FPS Gate and Switch Gear Replacement Project (F12095)													
A5150	Design	95%	04-Jan-13 A	22-Jul-15									
A5160	Ad	0%	01-Aug-15*										
A5170	Bid Open	0%	01-Sep-15*										

MSD CMOM FY14 Annual Commitments Schedule (01 April 2015 - 31 December 2015)						2015							
Activity ID	Activity Name	Physical % Complete	Start	Finish	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
A5180	Award	0%	28-Sep-15*										
A5190	Construction	0%	01-Nov-15*	01-Nov-16									
Melco Basin Crane (F14170)			01-Dec-14 A	01-Jul-16									
A6200	Design	100%	01-Dec-14 A	10-Apr-15 A									
A6210	Ad	100%	24-Apr-15 A										
A6220	Bid Open	100%	19-May-15 A										
A6230	Award	0%	27-Jul-15*										
A6240	Construction	0%	01-Sep-15*	01-Jul-16									
Starkey Flood Pump Station Rooftop A/C (F15006)			15-Dec-14 A	17-Mar-16									
A5660	Construction	100%	15-Dec-14 A	17-Mar-15 A									
A6560	Warranty	30%	18-Mar-15 A	17-Mar-16									
Bridgepointe Pump Station Access Road			24-Mar-15 A	01-Jun-16									
A6310	Ad	100%	24-Mar-15 A										
A6330	Award	100%	17-Apr-15 A										
A6320	Bid Open	100%	17-Apr-15 A										
A6300	Construction	100%	20-Apr-15 A	01-Jun-15 A									
A6570	Warranty	10%	02-Jun-15 A	01-Jun-16									
Fairway View Pump Station Upgrade (H09177)			31-Dec-14 A	06-May-16									
A6350	Warranty	50%	31-Dec-14 A	06-May-16									
Riding Ridge Pump Station Improvements (H09175)			15-Nov-14 A	15-Nov-15									
A6370	Warranty	10%	15-Nov-14 A	15-Nov-15									
Rosa Terrace Pump Station Improvement			03-Nov-14 A	10-Jul-16									
A6450	Construction	95%	03-Nov-14 A	10-Jul-15									
A6460	Warranty	0%	10-Jul-15	10-Jul-16									
CPE/CPE Treatment Plant Activities			20-Jun-14 A	31-Dec-15									
West County Force Main Assessment (H09519)			20-Jun-14 A	28-Feb-15 A									
A5340	Planning	100%	20-Jun-14 A	28-Feb-15 A									
West County Water Quality Treatment Center Gate 145 Electrical Service & Actuator (F14164)			15-Jan-15 A	31-Dec-15									
A6380	Design	100%	15-Jan-15 A	31-May-15 A									
A6580	Ad	100%	16-Jun-15 A										
A6590	Bid Open	0%	22-Jul-15*										
A6600	Award	0%	28-Jul-15*										
A6610	Construction	0%	01-Aug-15*	31-Dec-15									
SWOR 2 Improvements			15-Sep-14 A	22-Jul-15									
A6620	Construction	95%	15-Sep-14 A	22-Jul-15									

SECTION 6: Project WIN Performance Overview

6.1 Rainfall

The number and the volume of wet weather overflows are directly related to the amount of rain that has fallen during the reporting period. The following graph shows the Jefferson County average rainfall amounts for the last quarter. Data was pulled from MSD’s Rain Gauge Network.



A storm frequency analysis for CSOs is included as **Appendix B**.

6.2 Collection System Unauthorized Discharges

6.2.1 Collection System Overflows to Waters of the United States (WUS)

MSD recorded information related to overflows reaching Waters of the United States (WUS) for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. Details of these overflows will be included in the Annual Report for the period of July 1, 2015, through June 30, 2016, and will be posted on the Project WIN website. During this quarter, 152 unauthorized discharges to the Waters of the United States (WUS) have been reported.

Unauthorized Discharges (Waters of the United States) - July 1, 2015 - September 30, 2015			
Problem	Dry Weather	Wet Weather	Total
Blending at Jtown WQTC	0	6	6
Bypass at WQTC	2	6	8
Lack of System Capacity	0	131	131
Structural Failure	4	0	4
Pumped Overflow	0	2	2
Obstruction-Not Grease / Roots	1	0	1
Total	7	145	152

July, August and September Weather Event Summary

According to the National Weather Service “July was a very active month, especially from July 7, 2015, through July 20, 2015 when many rounds of showers and storms crossed the region”. Most of the wet weather activity occurred in the middle of the month. On July 12, rain and thunderstorms caused numerous wet weather related overflows.

By comparison August and September were uneventful. Temperatures were unseasonably cool and the weather was dry with the exception of a thunderstorm and some minor precipitation in August and some precipitation at the end of September. There were no significant rain events and only one wet weather related overflow was recorded in August and one Blending event at J-town WQTC in September.

6.2.2 Overflows to Ground (EXT)

MSD recorded information related to overflows to the ground that did not reach Waters of the United States for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. These overflows will be included in the Annual Report for the period of July 1, 2015, through June 30, 2016.

6.2.3 Overflows to Interior (INT)

MSD recorded information related to overflows to building interiors for the reporting period. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. These overflows, that are the result of an issue in the main line, will be included in the Annual Report for the period of July 1, 2015, through June 30, 2016.

6.2.4 Dry Weather CSOs

MSD recorded information related to dry weather overflows from permitted combined sewer overflow outfalls. This information is entered and maintained in Hansen utilizing procedures reviewed and improved through efforts associated with various components of the Amended Consent Decree. A detailed report of these overflows will be included in the Annual Report for the period of July 1, 2015, through June 30, 2016. The table below summarizes dry weather CSOs that occurred during the quarter. **Appendix A-1** includes details on the dry weather overflows that occurred in the quarter.

There was one dry weather overflow recorded at a CSO.

Dry Weather CSO - July 1, 2015 - September 30, 2015					
CSO	Type of Discharge	Date/Time	Problem	Cause	Volume (GAL)
CSO113	DISDW	9/14/15 8:15 AM	OBSTRUCTION-NOT GREASE / ROOTS	OBSTRUCTION IN MAIN SEWR	450

6.3 CSO Reductions

Included in **Appendix B** is the CSO data for this quarter. A summary of any data anomalies and the CSO data for each monitored overflow has been graphed along with rainfall information from the nearest rain gauge to facilitate review of the overflows that occurred.

- No CSO reduction projects were completed during the reporting period.

6.4 SSO Reductions

Estimation of SSO volume is not available in the same manner as it is for the CSO locations. The SSO volume reductions are estimates based on actual observations or from flow monitoring information.

- No SSO reduction projects were completed during the reporting period.

6.5 Gravity Line Preventive Maintenance

Each quarter, data and statistics relating to the cleaning, inspection, and maintenance of sewer assets performed under the Gravity Line Preventive Maintenance (GLPM) are reported. The following data was compiled for the period of July 1, 2015, through September 30, 2015. The first table includes data and targets. The second table includes unplanned maintenance and other maintenance activities that are performed in response to inspection.

Rolling Quarterly GLPM Performance With Targets							
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Total	Target/ qtr	% of Annual Target
Combined Sewer Area							
Catch Basins Cleaned CSO Area - PM	6,741	6,015	5,943	5,175	23,874	4,460	29%
CSO Inspections	1,790	1,239	1,301	1,235	5,565	1,272	24%
Sanitary Sewer Area							
Catch Basins Cleaned SSO Area - PM	1,397	45	188	2,659	4,289	1,144	58%
County Wide							
Sewer Main Inspections MSD Crews (LF)	184,384	166,228	33,463	13,523	397,598	198,000	2%
Sewer Main Inspections Contractor (LF)	141,872	272,606	186,018	129,759	730,255	198,000	16%
Total Inspections (LF)	326,256	438,834	219,480	143,282	1,127,853	396,000	9%

Rolling quarterly GLPM performance is related to unplanned maintenance; therefore no targets have been developed.

Rolling Quarterly GLPM Performance					
	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Total
Combined Sewer Area					
Catch Basins Cleaned CSO Area - UM	500	194	319	363	1,376
CSO Debris Removal WO	168	78	169	146	561
Chemical Root Treatment CSO Area (LF)	0	0	0	0	0
Root Cutting CSO Area (LF)	740	475	1,804	1,855	4,874
Flushing and Cleaning of Sewer Mains CSO Area (LF)	4,822	5,798	7,112	4,837	22,568
Sanitary Sewer Area					
Catch Basins Cleaned SSO Area - UM	71	42	105	95	313
Chemical Root Treatment SSO Area (LF)	48,803	178,302	49,808	0	276,913
Root Cutting SSO Area (LF)	24,253	15,057	19,004	7,892	66,207
Flushing and Cleaning of Sewer Mains SSO Area (LF)	53,352	23,000	30,170	39,361	145,883

6.6 Water Quality Treatment Center Bypasses

6.6.1 Bypass Events

The table below summarizes the bypasses that occurred during this reporting period.

6.6.2 Bypass Corrective Actions

Each quarter, an assessment of bypasses is conducted to determine the root cause of the bypass, the failure category, corrective actions to be taken, possible programmatic solutions, and corrective action completion date. Refer to the table below for causes of bypasses and respective corrective actions that occurred July 1, 2015 through September 30, 2015.

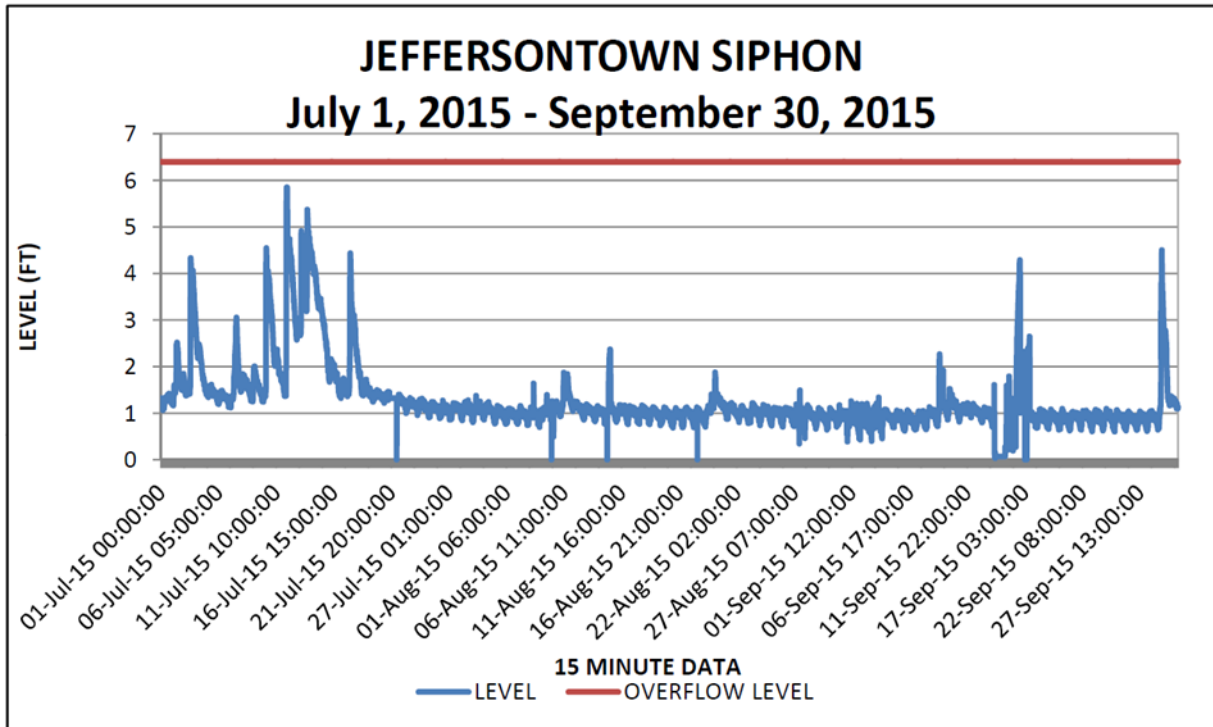
Bypass Summary - July 1, 2015 to September 30, 2015					
DATE	WQTC	WORK ORDER	FAILURE CODE	BYPASS DESCRIPTION	FAILURE RESOLUTION
Capacity (CAP)					
July 12, 2015	HUNTING CREEK NORTH	2387500	CAP	An extremely heavy rain event caused the water quality treatment center to become overwhelmed. All concrete plant process structures were underwater. MSD staff were unable to determine the exact volume bypassed. Prior to the plant flood, the influent flow rate was 782 gpm. The design flow of the plant is 0.358 MG. The gallons of raw wastewater reaching the waters of the U.S. cannot be accurately calculated as the WQTC was completely underwater.	This plant is scheduled to come off line in 2015.
July 12, 2015	HITE CREEK	2387485	CAP	An extremely heavy rain event caused the influent pump station to become overwhelmed with storm water. The bypassed raw wastewater reaching the waters of the U.S. is estimated at 157,500 gallons because it cannot be accurately calculated as the splitter box for the influent pump station was under water. The flow into the plant at the time of occurrence was 15 MGD, which is metered after the influent pumps.	Construction to increase the hydraulic loading for this plant is currently underway.
July 12, 2015	BERRYTOWN	2387497	CAP	On July 12, 2015, Berrytown WQTC bypassed disinfection and dechlorination treatment. Because of elevated levels in the aeration tank, approximately 38,000 gallons was bypassed. As a precaution we turned off plant aeration to minimize the loss of biosolids. The design flow at Berrytown WQTC is 0.075 MG. We are unable to determine the exact flow rate at the time of bypass because the plant flow meter was maxed at a rate of 0.430 MGD.	Plant is to be eliminated December 2015.
July 14, 2015	HITE CREEK	2388696	CAP	An extremely heavy rain event caused the influent pump station to become overwhelmed with storm water. The bypassed raw wastewater reaching the waters of the U.S. is estimated at 49,000 gallons because it cannot be accurately calculated as the splitter box for the influent pump station was under water. The flow into the plant at the time of occurrence was 15 MGD, which is metered after the influent pumps.	Construction to increase the hydraulic loading for this plant is currently underway.
July 14, 2015	BERRYTOWN	2389577	CAP	On July 14, 2015, Berrytown WQTC bypassed disinfection and dechlorination treatment. Because of elevated levels in the aeration tank, approximately 1,425 gallons was bypassed. As a precaution we turned off plant aeration to minimize the loss of biosolids. The design flow at Berrytown WQTC is 0.075 MG. We are unable to determine the exact flow rate at the time of bypass because the plant flow meter was maxed at a rate of 0.430 MGD.	If operational needs for resources allow, in the event of heavy rain, MSD will haul water from the plant. Plant is to be eliminated in 2015. Disinfected and cleaned by MSD staff.
Human Error (OPN)					
July 12, 2015	CEDAR CREEK	2387653	OPN	On July 13, 2015, MSD submitted a bypass letter that stated the cause of the July 12, 2015 Cedar Creek WQTC bypass was caused by algae on the tertiary relief gate level transducer. Following the bypass event, as a result of an investigation, it was determined that the cause of the bypass was due to human error. Bypassed volume received full preliminary and secondary treatment. Peak plant flow rate during time of bypass was 15.853 MGD. Approximately 1,000 gallons was bypassed. The design flow at Cedar Creek WQTC is 7.5 MG. Plant flow rate during the duration of the bypass was 0.109 MGD.	MSD re-trained staff on Standard Operating Procedure September 18 & 19, 2015.
September 26, 2015	HITE CREEK	2434538	OPN	At approximately 10:59 pm on September 26, the breaker for the UV 3000+ system at Hite Creek tripped. The back up UV 3000 system started as programmed. However, the influent gate to the UV 3000+ stayed open due to the tripped breaker, which allowed approximately 49,074 gallons of fully treated, but not disinfected, wastewater to reach the waters of the U.S.	MSD contractor performed a permanent repair and installed new wires and conduit on September 28, 2015. On September 17, 2015, a contractor damaged the electric line feeding the UV 3000+ system. The contractor performed a temporary repair on the electric line. We believe the electric line shorted to ground and caused the breaker to trip and enabled the UV influent gate to stay in the open position.
Facility Failure (Mechanical - MCH, Electrical - ELE, Structural - SRT)					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A
External Power failures (LGE Related-PWR)					
July 18, 2015	MCNEELY LAKE	2391494	PWR	On Saturday, July 18, 2015, this plant experienced a power outage after the main feed line coming to the plant grounded and caught fire. MSD personnel install a portable generator. As a result approximately 8,000 gallons of raw sewage overflowed from the influent wet well and bypassed all treatment processes.	Plant is to be eliminated in 2015. MSD personnel cleaned and sanitized area.
Utility Damage					
N/A	N/A	N/A	N/A	No bypasses of this category occurred during the reporting period.	N/A

6.6.3 Jeffersontown Water Quality Treatment Center

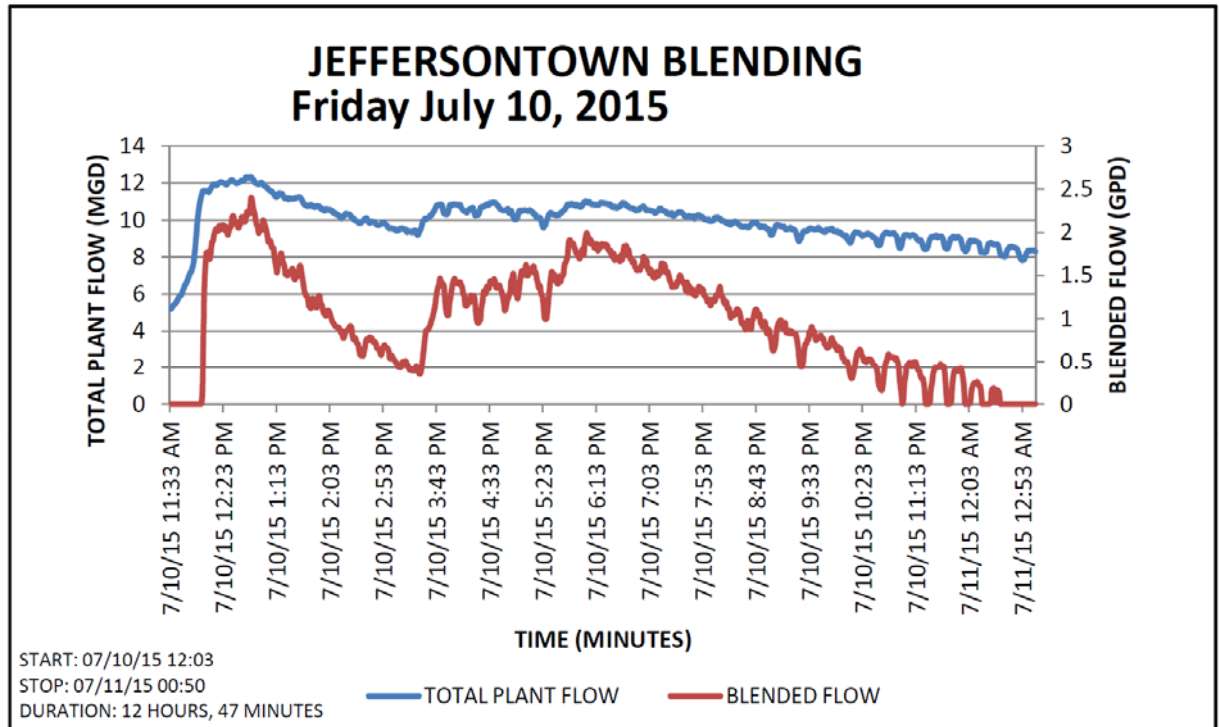
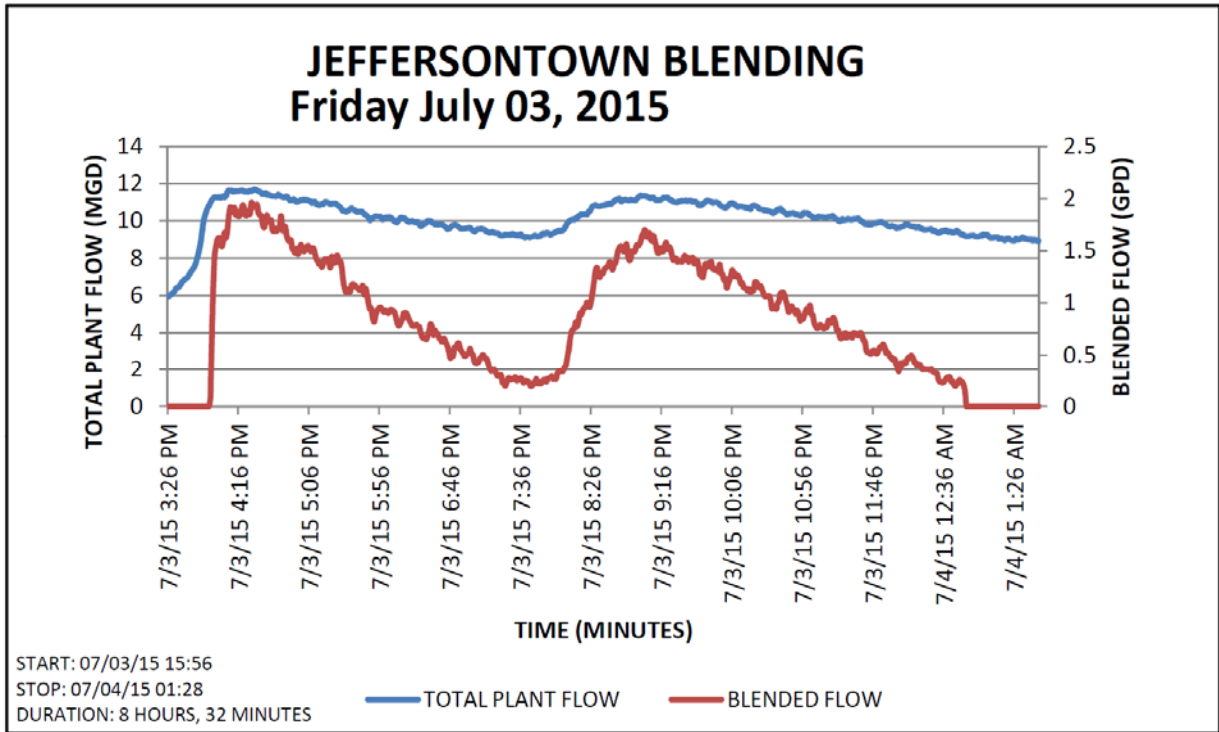
MSD submitted a Jeffersontown WQTC Process Control Plan on October 31, 2008, as required by paragraph 26.a of the Amended Consent Decree. MSD received comments on December 12, 2008, and resubmitted the plan January 16, 2009, and again on February 20, 2009. MSD received conditional approval of this document from EPA on April 1, 2009, pending finalization of the Amended Consent Decree that was under consideration by the Federal Court at the time the Process Control Plan was submitted. The Process Control Plan was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010.

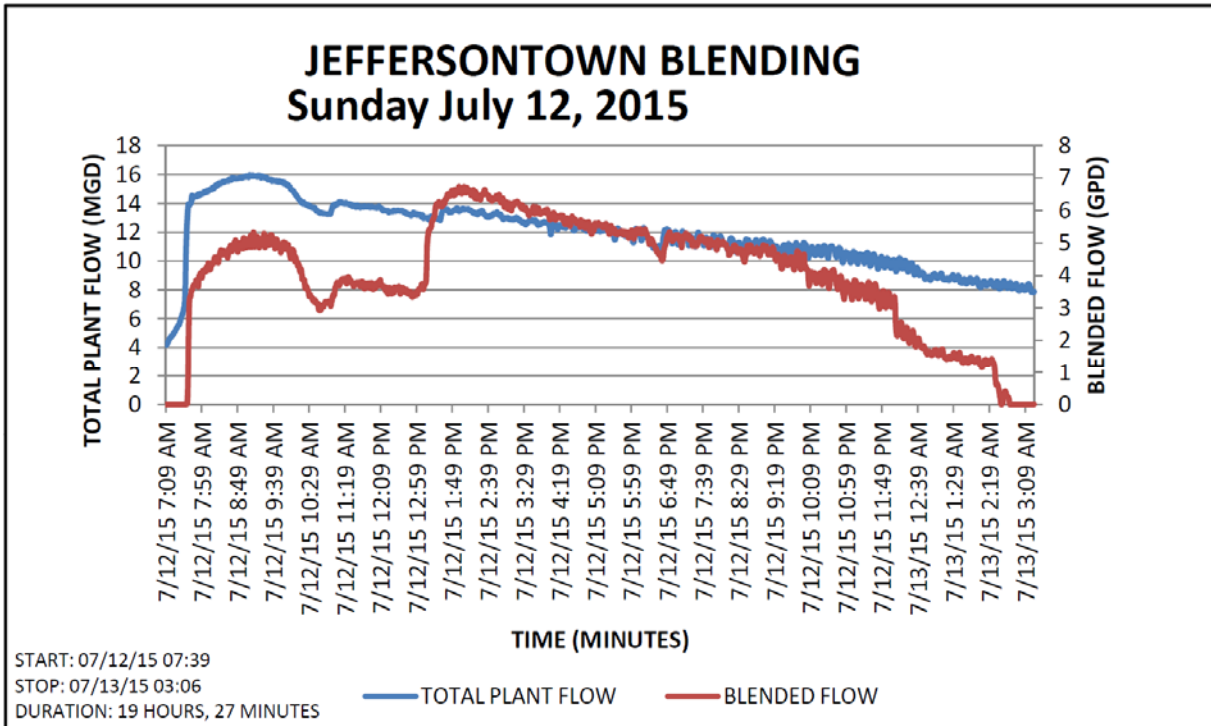
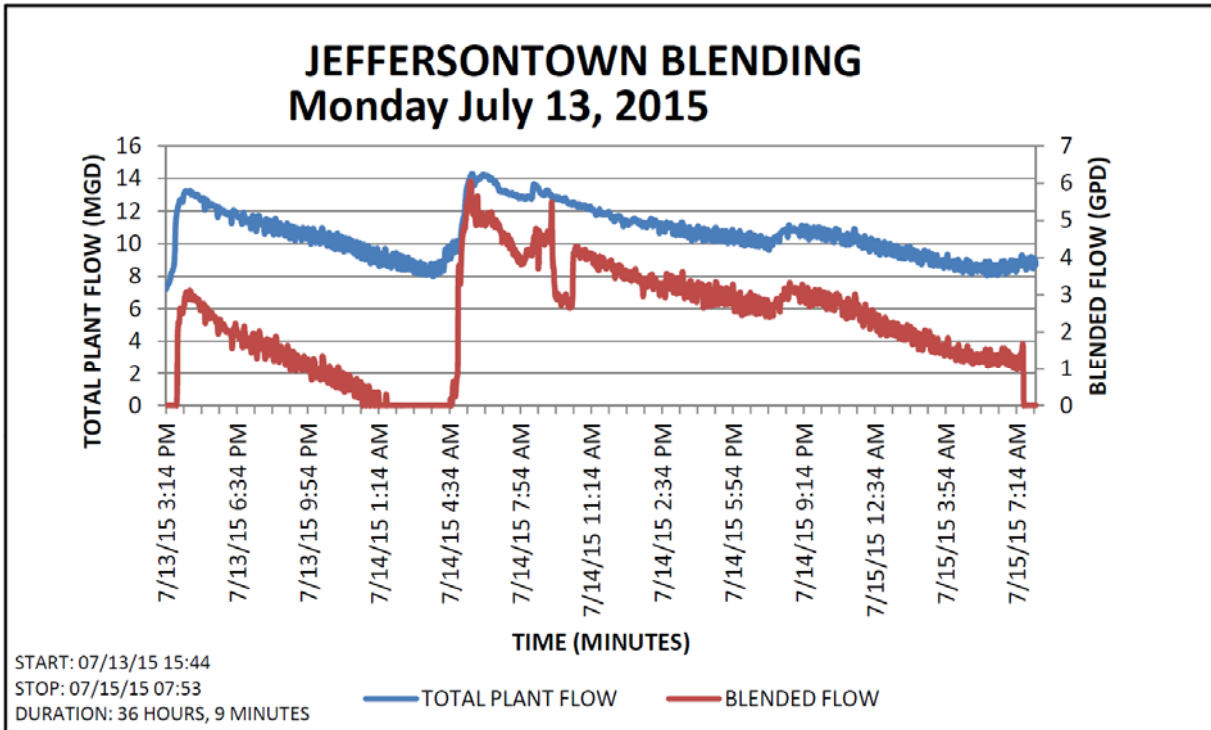
The following activities occurred at the Jeffersontown WQTC during the reporting period:

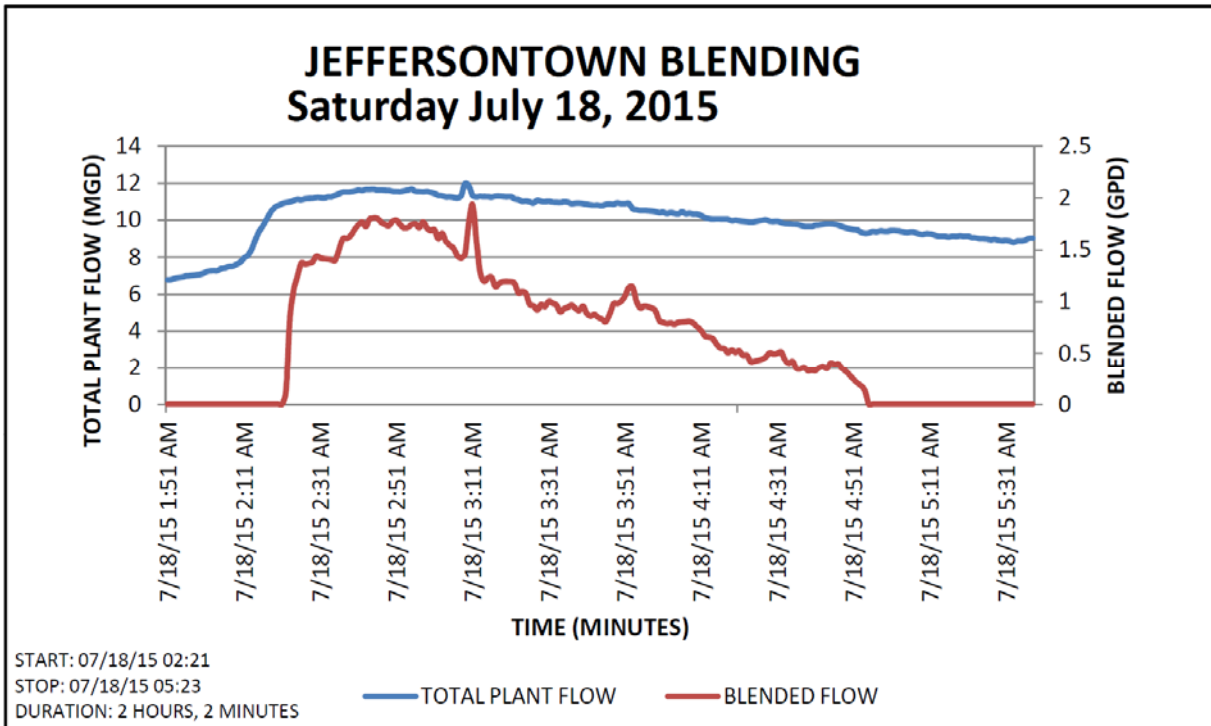
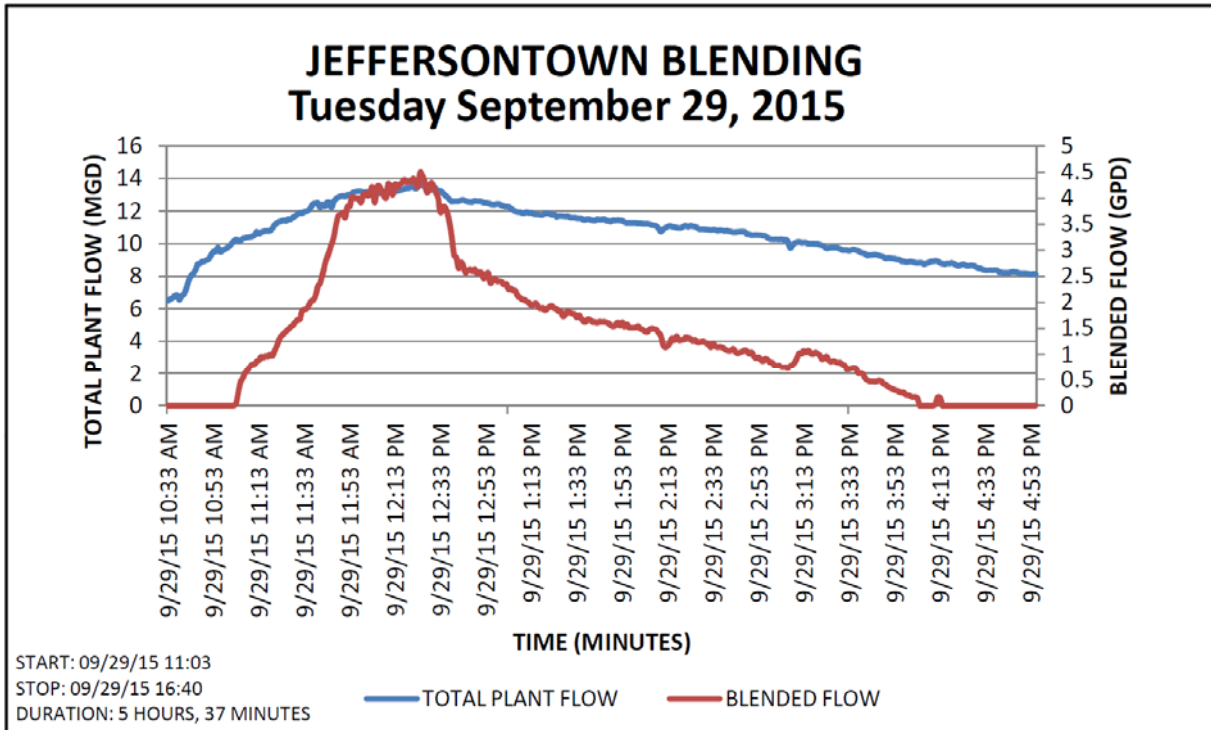
- Inspections were conducted upstream of the Jeffersontown WQTC Headworks six times. Refer to Section 2 for SSO Route information. Overflows were reported up stream of the siphon at manhole 28173 one time, July 12, 2015.



- There were six blending events during the reporting period. Below are charts for each blending event that show total plant flow during the blending event.

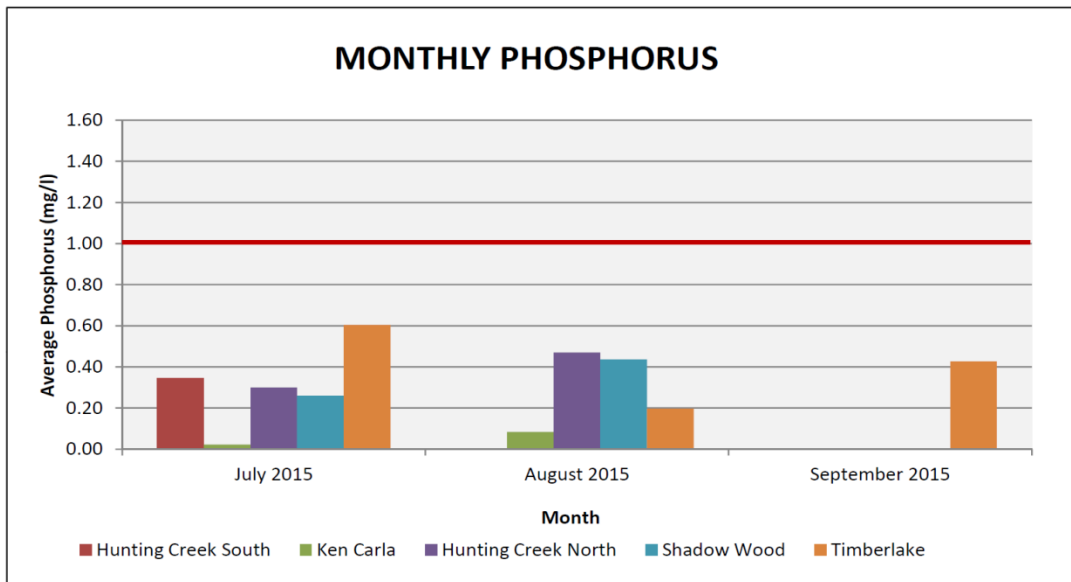






6.7 Phosphorus Monitoring at the Prospect WQTCs

As part of the Amended Consent Decree, MSD has agreed to submit phosphorus monitoring data including the calculations of monthly averages with the quarterly reports. Prospect WQTCs were under the 1mg/l limit during the reporting period, per the Amended Consent Decree requirement. During the quarter, flow was diverted to the Harrods Creek Pump Station for each of the WQTCs. This will be the last Quarterly Report that includes a Phosphorus Monitoring summary per the Amended Consent Decree as these WQTCs were removed from service during this reporting period. The following chart displays monthly average phosphorus results for the Prospect WQTCs.





Appendix A-1 - Discharge Work Orders – Dry Weather CSOs



APPENDIX A-1
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	1215 ELLISON AVE	09/14/15 8:15: AM	09/14/15 08:30 AM	450	SEWER MANHOLE	CSO113	STREAM	SOUTH FORK BEARGRASS CREEK	OBSTRUCTION IN MAIN SEWR	OBSTRUCTION-NOT GREASE / ROOTS	2429237	FLUSHED THE LINE	OPENED BY FLUSHING THE LINE



Appendix A-2 - Discharge Work Orders – Bypass



APPENDIX A-2
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
HITE CREEK	KY0022420	5500 HITT RD	07/12/15 8:00: AM	07/12/15 01:15 PM	157,500	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	RAIN EVENT CAUSED CREEK TO FLOOD WET WELL	BYPASS AT WQTC	2387485	MSD CLEANED & SANITIZED	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	5500 HITT RD	07/14/15 5:42: AM	07/14/15 07:20 AM	49,000	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2388696	MSD CLEANED & SANITIZED AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	5500 HITT RD	09/26/15 10:59: PM	09/27/15 12:45 AM	49,074	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	COMMUNICATION FAILURE OF UV SYSTEM	BYPASS AT WQTC	2434538	NO CLEAN UP REQUIRED MOSTLY TREATED FLOW DISCHARGED AT PLANT EFFLUENT	OPERATOR INSTALLED SLIDE GATE UNTIL ELETRICAL REPAIRS WERE COMPLETED
HITE CREEK	KY0022420	9810 U S HIGHWAY 42	07/12/15 8:00: AM	07/13/15 12:15 AM	1,325,490	SEWER TREATMENT PLANT	MSD0291	STREAM	HARRODS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2387500	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
BERRYTOWN	KY0036501	1203 HEAFER RD	07/12/15 1:00: PM	07/13/15 01:40 AM	38,000	SEWER TREATMENT PLANT	MSD0209	STREAM	FLOYDS FORK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2387497	MSD CLEANED & SANITIZED	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
BERRYTOWN	KY0036501	1203 HEAFER RD	07/14/15 1:30: PM	07/14/15 05:45 PM	1,425	SEWER TREATMENT PLANT	MSD0209	STREAM	FLOYDS FORK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2389577	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS LOCATED IN THE IOAP
MCNEELY LAKE	KY0029416	10300 ROD N REEL RD	07/18/15 12:10: PM	07/18/15 01:30 PM	8,000	SEWER TREATMENT PLANT	MSD0228	STREAM	PENNSYLVANIA RUN	LOST POWER DUE TO POWER LINES BEING ON FIRE.	BYPASS AT WQTC	2391494	MSD CLEANED & SANITIZED THE AREA	INSTALLED GENERATOR TO STOP BYPASS
CEDAR CREEK	KY0098540	8605 CEDAR CREEK RD	07/12/15 8:50: PM	07/12/15 09:00 PM	1,000	SEWER TREATMENT PLANT	MSD0289	GROUND	CEDAR CREEK	FILTER BYPASS GATE FAILED TO OPEN IN AUTO	BYPASS AT WQTC	2387653	NO DEBRIS	OPERATOR OPENED BYPASS GATE MANUALLY



Appendix A-3 - Discharge Work Orders – Blending



APPENDIX A-3
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	07/03/15 3:56 PM	07/04/15 01:28 AM	359,280	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2382474	NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	07/10/15 12:03 PM	07/11/15 12:50 AM	564,375	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2387007	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	07/12/15 7:39: AM	07/13/15 03:06 AM	3,425,126	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2387491	NO CLEANUP- PIPE DISCHARGE SUBMERGED	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	07/13/15 3:44: PM	07/15/15 07:53 AM	3,870,550	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2388137	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	07/18/15 2:21: AM	07/18/15 05:23 AM	107,109	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2391429	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	09/29/15 11:03: AM	09/29/15 04:40 PM	382,797	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2436657	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER



Appendix A-4 - Discharge Work Orders – Waters of the United States



APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
HITE CREEK	KY0022420	5500 HITT RD	7/12/15 8:00 AM	07/13/15 01:00 AM	9,999	SEWER MANHOLE	102447A	GROUND	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387508	REFERENCE #2388159	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	10723 COPPER RIDGE DR	7/14/15 1:15 PM	07/14/15 02:00 PM	9,000	SEWER MANHOLE	108674	GROUND	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389570	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION CAN BE LOCATED IN THE IOAP
HITE CREEK	KY0022420	5500 HITT RD	7/14/15 7:10 AM	07/14/15 05:00 PM	9,999	SEWER MANHOLE	11877	STREAM	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388790	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	3700 CYPRESS SPRINGS PL	9/18/15 4:05 PM	09/18/15 07:30 PM	10,250	SEWER MAIN	45214-AG	GROUND	FLOYDS FORK	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	2431706	MSD CLEANED & SANITIZED THE AREA	CONTRACTOR REPAIRED THE FORCE MAIN
HITE CREEK	KY0022420	5500 HITT RD	7/12/15 8:00 AM	07/12/15 01:15 PM	157,500	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	RAIN EVENT CAUSED CREEK TO FLOOD WET WELL	BYPASS AT WQTC	2387485	MSD CLEANED & SANITIZED	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	5500 HITT RD	7/14/15 5:42 AM	07/14/15 07:20 AM	49,000	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2388696	MSD CLEANED & SANITIZED AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	5500 HITT RD	9/26/15 10:59 PM	09/27/15 12:45 AM	49,074	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	COMMUNICATION FAILURE OF UV SYSTEM	BYPASS AT WQTC	2434538	NO CLEAN UP REQUIRED MOSTLY TREATED FLOW DISCHARGED AT PLANT EFFLUENT	OPERATOR INSTALLED SLIDE GATE UNTIL ELETRICAL REPAIRS WERE COMPLETED
HITE CREEK	KY0022420	9810 U S HIGHWAY 42	7/12/15 8:00 AM	07/13/15 12:15 AM	1,325,490	SEWER TREATMENT PLANT	MSD0291	STREAM	HARRODS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2387500	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	3700 CYPRESS SPRINGS PL	9/18/15 8:40 PM	09/18/15 11:30 PM	700	SEWER LIFT STATION	MSD1018-PS	GROUND	FLOYDS FORK	STRUCTURAL FAILURE - FORCE MAIN BREAK	STRUCTURAL FAILURE	2431709	MSD CLEANED & SANITIZED THE AREA	HAULED SEWAGE UNTIL REPAIRS MADE- CONTRACTOR REPAIRED THE FORCE MAIN
HITE CREEK	KY0022420	6210 DEEP CREEK CT	7/13/15 4:15 PM	07/13/15 06:06 PM	2,750	SEWER LIFT STATION	MSD1063-PS	DITCH	HARRODS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388160	PIPE DISCHARGE SUBMERGED- NO CLEANUP	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
HITE CREEK	KY0022420	8619 WESTOVER DR	7/14/15 7:27 AM	07/14/15 03:15 PM	23,400	SEWER LIFT STATION	MSD1064-PS	DITCH	HARRODS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388841	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS LOCATED IN THE IOAP
HITE CREEK	KY0022420	7520 KAVANAUGH RD	7/14/15 7:15 AM	07/14/15 07:30 AM	150	SEWER LIFT STATION	MSD1085-PS	GROUND	HITE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389008	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
BERRYTOWN	KY0036501	1203 HEAFER RD	7/14/15 5:50 AM	07/15/15 08:00 AM	39,250	SEWER MANHOLE	24012	DITCH	CHENOWETH RUN,UPPER	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388697	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
BERRYTOWN	KY0036501	1203 HEAFER RD	7/12/15 1:00 PM	07/13/15 01:40 AM	38,000	SEWER TREATMENT PLANT	MSD0209	STREAM	FLOYDS FORK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2387497	MSD CLEANED & SANITIZED	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
BERRYTOWN	KY0036501	1203 HEAFER RD	7/14/15 1:30 PM	07/14/15 05:45 PM	1,425	SEWER TREATMENT PLANT	MSD0209	STREAM	FLOYDS FORK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BYPASS AT WQTC	2389577	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS LOCATED IN THE IOAP
MCNEELY LAKE	KY0029416	10300 ROD N REEL RD	7/18/15 12:10 PM	07/18/15 01:30 PM	8,000	SEWER TREATMENT PLANT	MSD0228	STREAM	PENNSYLVANIA RUN	LOST POWER DUE TO POWER LINES BEING ON FIRE.	BYPASS AT WQTC	2391494	MSD CLEANED & SANITIZED THE AREA	INSTALLED GENERATOR TO STOP BYPASS
JEFFERSONTOWN	KY0025194	3620 CHARLANE PKY	7/12/15 8:25 AM	07/14/15 06:30 PM	9,000	SEWER MANHOLE	104289	GROUND	BEATTY BROOK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387472	WO# 2387785	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3258 RUCKRIEGEL PKY	7/12/15 1:21 AM	07/14/15 06:50 PM	18,000	SEWER MANHOLE	28173	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387474	WO# 2387788	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3500 ST EDWARDS DR	7/12/15 8:31 AM	07/12/15 05:45 PM	9,000	SEWER MANHOLE	28249	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387459	WO# 2387778	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3506 CHARLANE PKY	7/12/15 8:35 AM	07/14/15 06:35 PM	9,000	SEWER MANHOLE	28250	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387457	WO# 2387776	LOCATION INCLUDED IN IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
JEFFERSONTOWN	KY0025194	3620 CHARLANE PKY	7/12/15 8:25 AM	07/14/15 06:30 PM	9,000	SEWER MANHOLE	28340	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387467	WO# 2387782	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3406 DELL RD	7/12/15 8:47 AM	07/14/15 09:30 AM	15,000	SEWER MANHOLE	28415	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387447	WO# 2387602	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3501 MARLIN DR	7/12/15 8:40 AM	07/14/15 09:30 AM	15,000	SEWER MANHOLE	28416	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387449	WO# 2387605	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3506 DELL RD	7/12/15 8:45 AM	07/14/15 09:30 AM	15,000	SEWER MANHOLE	28417	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387452	WO# 2387606	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	3406 CHARLANE PKY	7/12/15 8:36 AM	07/14/15 06:30 PM	7,500	SEWER MANHOLE	28451	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387455	WO# 2387774	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	11401 GRAND AVE	7/12/15 8:05 AM	07/13/15 05:30 AM	27,000	SEWER MANHOLE	28551	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387573	WO# 2387695	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	9514 TAYLORSVILLE RD	7/12/15 9:22 AM	07/14/15 06:45 PM	27,000	SEWER MANHOLE	28711	DITCH	BEATTY BROOK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387445	WO# 2387601	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	2711 GRASSLAND DR	7/12/15 9:27 AM	07/15/15 05:25 AM	90,000	SEWER MANHOLE	31733	DITCH	BEATTY BROOK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387444	WO# 2387755	LOCATION INCLUDED IN IOAP
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	7/3/15 3:56 PM	07/04/15 01:28 AM	359,280	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2382474	NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	7/10/15 12:03 PM	07/11/15 12:50 AM	564,375	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2387007	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	7/12/15 7:39 AM	07/13/15 03:06 AM	3,425,126	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2387491	NO CLEANUP- PIPE DISCHARGE SUBMERGED	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER.
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	7/13/15 3:44 PM	07/15/15 07:53 AM	3,870,550	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2388137	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED AT THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	7/18/15 2:21 AM	07/18/15 05:23 AM	107,109	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2391429	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER
JEFFERSONTOWN	KY0025194	10725 OLD TAYLORSVILLE RD	9/29/15 11:03 AM	09/29/15 04:40 PM	382,797	SEWER TREATMENT PLANT	MSD0255	STREAM	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	BLENDING AT JTOWN WQTC	2436657	PIPE DISCHARGE SUBMERGED- NO CLEAN UP	TEMPORARY BLENDING HAS BEEN NEGOTIATED FOR THIS LOCATION WHEN FLOW THROUGH THE PLANT HAS BEEN OPTIMIZED DURING WET WEATHER
DEREK R. GUTHRIE	KY0078956	9114 CINDERELLA LN	7/14/15 7:43 AM	07/14/15 01:20 PM	8,425	SEWER MANHOLE	102339	GROUND	FISHPOOL CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389038	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS LOCATED IN THE IOAP
DEREK R. GUTHRIE	KY0078956	9317 LANTANA DR	7/12/15 9:37 AM	07/12/15 11:40 AM	3,075	SEWER MANHOLE	25484	STREAM	PENNSYLVANIA RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387514	SEE WORK ORDER #23889737	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
DEREK R. GUTHRIE	KY0078956	9317 LANTANA DR	7/14/15 7:28 AM	07/14/15 10:00 AM	3,800	SEWER MANHOLE	25484	STREAM	PENNSYLVANIA RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388937	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS FOUND IN THE IOAP
DEREK R. GUTHRIE	KY0078956	10304 CAVEN AVE	7/7/15 8:00 PM	07/07/15 10:50 PM	3,125	SEWER MANHOLE	27116	STREAM	MUD CREEK	LACK OF SYSTEM CAPACITY DUE TO HEAVY RAINS	LACK OF SYSTEM CAPACITY	2383615	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
DEREK R. GUTHRIE	KY0078956	10304 CAVEN AVE	7/12/15 8:30 AM	07/12/15 02:15 PM	10,125	SEWER MANHOLE	27116	STREAM	MUD CREEK	HEAVY RAIN CAUSED LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387241	MSD TO CLEAN AND SANITIZE AFFECTED AREA	INCLUDED IN IOAP
DEREK R. GUTHRIE	KY0078956	10304 CAVEN AVE	7/14/15 7:00 AM	07/14/15 02:30 PM	10,500	SEWER MANHOLE	27116	STREAM	MUD CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2389054	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
DEREK R. GUTHRIE	KY0078956	6810 SANDSTONE BLVD	7/12/15 10:12 AM	07/12/15 12:25 PM	6,650	SEWER MANHOLE	29948	GROUND	FERN CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387298	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
DEREK R. GUTHRIE	KY0078956	6810 SANDSTONE BLVD	7/14/15 7:00 AM	07/14/15 08:01 AM	500	SEWER MANHOLE	29948	GROUND	FERN CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2389050	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
DEREK R. GUTHRIE	KY0078956	6808 SANDSTONE BLVD	7/12/15 10:15 AM	07/12/15 12:31 PM	6,800	SEWER MANHOLE	31074	DITCH	FERN CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387302	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
DEREK R. GUTHRIE	KY0078956	9114 CINDERELLA LN	7/12/15 9:53 AM	07/12/15 11:50 AM	2,925	SEWER MANHOLE	60679	DITCH	FISHPOOL CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387517	SEE WORK ORDER #2388940	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
DEREK R. GUTHRIE	KY0078956	9114 CINDERELLA LN	7/14/15 7:43 AM	07/14/15 01:20 PM	8,425	SEWER MANHOLE	60679	DITCH	FISHPOOL CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388940	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS FOUND IN THE IOAP
DEREK R. GUTHRIE	KY0078956	5006 LEA ANN WAY	7/12/15 9:30 AM	07/12/15 03:00 PM	1,207,500	SEWER LIFT STATION	MSD1010-PS	STREAM	NORTHERN DITCH	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	PUMPED OVERFLOW	2387525	REFERENCE #2388818	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
DEREK R. GUTHRIE	KY0078956	5006 LEA ANN WAY	7/14/15 6:44 AM	07/14/15 02:05 PM	1,278,900	SEWER LIFT STATION	MSD1010-PS	STREAM	NORTHERN DITCH	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	PUMPED OVERFLOW	2388818	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
DEREK R. GUTHRIE	KY0078956	4005 KIRBY LN	7/23/15 11:30 PM	07/24/15 10:15 AM	50	SEWER MAIN	MSD1203-PS	GROUND	FERN CREEK	FORCE MAIN BREAK	STRUCTURAL FAILURE	2397937	MSD CLEANED & SANITIZED THE AREA	CONTRACTOR TO REPAIR FORCE MAIN
MORRIS FORMAN	KY0022411	804 N ARBOR DR	7/12/15 6:18 PM	07/13/15 02:00 AM	11,550	SEWER MANHOLE	00746	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387533	SEE WO#2389001	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	804 N ARBOR DR	7/14/15 8:56 AM	07/15/15 03:45 AM	89,175	SEWER MANHOLE	00746	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389001	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION CA BE FOUND IN THE IOAP
MORRIS FORMAN	KY0022411	806 PINE WAY	7/13/15 4:35 PM	07/13/15 06:20 PM	525	SEWER MANHOLE	00817	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388619	SEE WO#2388993	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	9 MUIRFIELD PL	7/12/15 11:15 AM	07/13/15 08:21 AM	2,000	SEWER MANHOLE	01793	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387527	WO# 2388642	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	7900 SHELBYVILLE RD	7/12/15 10:28 AM	07/15/15 06:13 AM	2,000	SEWER MANHOLE	02933	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387502	WO# 2388634	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	7900 SHELBYVILLE RD	7/12/15 10:33 AM	07/15/15 06:09 AM	2,000	SEWER MANHOLE	02935	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387499	WO# 2388633	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4315 PRUITT CT	7/12/15 8:41 AM	07/12/15 12:48 PM	500	SEWER MANHOLE	08426	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387549	WO# 2387631	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4313 PRUITT CT	7/12/15 8:40 AM	07/12/15 12:47 PM	500	SEWER MANHOLE	08427	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387546	WO# 2387607	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4339 PRUITT CT	7/12/15 8:43 AM	07/12/15 12:54 PM	300	SEWER MANHOLE	08431	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387550	WO# 2387634	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/10/15 11:45 AM	07/10/15 01:55 PM	1,200	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387050	WO# 2387117	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/12/15 7:24 AM	07/12/15 11:27 AM	12,000	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387556	WO# 2387637	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/14/15 5:51 AM	07/14/15 04:59 PM	300	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389029	WO# 2389801	LOCATION INCLUDED IN IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/18/15 1:36 AM	07/18/15 08:31 AM	1,000	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391502	WO# 2391503	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	7/12/15 7:14 AM	07/12/15 05:42 PM	2,379,438	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387441	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4103 LEE AVE	7/12/15 7:27 AM	07/12/15 11:11 AM	1,100	SEWER MANHOLE	104223	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387571	WO# 2387691	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4103 LEE AVE	7/14/15 5:37 AM	07/14/15 04:49 PM	300	SEWER MANHOLE	104223	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389035	WO# 2389803	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4103 LEE AVE	7/14/15 5:39 AM	07/14/15 04:48 PM	500	SEWER MANHOLE	104224	GROUND	UNNAMED TRIBUTARY	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389100	WO# 2389799	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	7713 WESTPORT RD	7/12/15 8:38 PM	07/14/15 05:02 PM	2,000	SEWER MANHOLE	105936	GROUND	GOOSE CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387578	WO# 2388664	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	208 BRUNSWICK RD	7/12/15 12:25 PM	07/15/15 06:28 AM	2,000	SEWER MANHOLE	115183	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387538	WO# 2388647	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	208 BRUNSWICK RD	7/12/15 12:25 PM	07/14/15 04:36 PM	2,000	SEWER MANHOLE	115184	GROUND	SINKING FORK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387540	WO# 2388649	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	207 BRUNSWICK RD	7/12/15 12:25 PM	07/14/15 04:36 PM	2,000	SEWER MANHOLE	115185	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387541	WO# 2388650	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1600 BELMAR DR	7/12/15 7:25 AM	07/12/15 11:22 AM	2,500	SEWER MANHOLE	13946	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387569	WO# 2387802	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1600 BELMAR DR	7/14/15 5:42 AM	07/14/15 08:41 AM	500	SEWER MANHOLE	13946	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389061	WO# 2389063	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	7/12/15 3:15 PM	07/13/15 07:10 AM	1,000	SEWER MANHOLE	15195	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387575	WO# 2388662	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1913 CHARBDIN PL	7/12/15 9:49 AM	07/12/15 04:34 PM	30,000	SEWER MANHOLE	16455	GROUND	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387589	WO# 2387711	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	7/12/15 8:15 AM	07/12/15 12:15 PM	2,000	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387910	WO# 2387913	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	207 BRUNSWICK RD	7/12/15 12:25 PM	07/14/15 04:36 PM	2,000	SEWER MANHOLE	21089A	DITCH	UPPER MILL CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387539	WO# 2388648	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4609 BLENHEIM RD	7/12/15 12:17 PM	07/14/15 04:32 PM	3,000	SEWER MANHOLE	21171	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387544	WO# 2388657	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3302 TROUT CREEK DR	7/12/15 9:49 AM	07/14/15 09:23 PM	3,000	SEWER MANHOLE	23211	STREAM	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387559	WO# 2388660	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4002 BROOKFIELD AVE	7/12/15 8:54 AM	07/14/15 05:50 PM	2,000	SEWER MANHOLE	24448	GROUND	CHERRYWOOD CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387585	WO# 2387707	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	308 STONEHENGE DR	7/12/15 12:40 PM	07/14/15 04:31 PM	3,000	SEWER MANHOLE	25017	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387543	WO# 2388656	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3317 BROWNSBORO RD	7/12/15 1:00 PM	07/13/15 11:02 AM	2,000	SEWER MANHOLE	26752	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387584	WO# 2388669	LOCATION INCLUDED IN IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	1013 ALTA CIR	7/12/15 8:13 AM	07/15/15 07:39 AM	1,000	SEWER MANHOLE	27007	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387484	WO# 2388175	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	8113 SHELBYVILLE RD	7/12/15 7:24 AM	07/14/15 04:20 PM	2,000	SEWER MANHOLE	30376	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387534	WO# 2388645	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1552 CHEROKEE RD	7/12/15 9:00 AM	07/15/15 07:45 AM	2,000	SEWER MANHOLE	40471	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387595	WO# 2388672	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1552 CHEROKEE RD	7/18/15 2:40 AM	07/19/15 11:18 AM	21,000	SEWER MANHOLE	40471	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391495	WO# 2391582	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	7/12/15 2:00 PM	07/13/15 12:00 AM	30,000	SEWER MANHOLE	40870	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387548	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	300 MOCKINGBIRD VALLEY RD	7/12/15 9:12 AM	07/14/15 05:35 PM	3,000	SEWER MANHOLE	41374	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387582	WO# 2388666	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3343 BROWNSBORO RD	7/12/15 9:12 AM	07/13/15 11:09 AM	2,000	SEWER MANHOLE	41416	GROUND	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387583	WO# 2388667	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4640 BARBOUR LN	7/14/15 9:00 AM	07/15/15 12:57 AM	143,500	SEWER MANHOLE	42680	STREAM	LITTLE GOOSE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389120	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1108 DUPONT CIR	7/12/15 1:21 PM	07/14/15 06:06 PM	2,000	SEWER MANHOLE	43726	GROUND	WEICHER CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387586	WO# 2388670	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	7/12/15 8:13 AM	07/15/15 07:39 AM	1,000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387488	WO# 2388624	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	7/18/15 2:33 AM	07/19/15 11:05 AM	1,000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391490	WO# 2391578	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	7/12/15 8:05 AM	07/15/15 07:28 AM	1,000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387494	WO# 2388628	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	7/18/15 2:26 AM	07/19/15 10:35 AM	18,000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391491	WO# 2391579	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1122 ROSTREVOR CIR	7/12/15 8:07 AM	07/14/15 03:14 PM	2,000	SEWER MANHOLE	45900	DITCH	HAWKINS RILL	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387597	WO# 2388674	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4801 CASSIA CT	7/12/15 9:49 AM	07/16/15 09:30 AM	18,000	SEWER MANHOLE	46623	STREAM	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387590	WO# 2390679	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1910 CHARBDIN PL	7/12/15 9:49 AM	07/15/15 06:00 AM	4,500	SEWER MANHOLE	46627	STREAM	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387593	WO# 2391322	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	232 STONEHENGE DR	7/12/15 12:40 PM	07/14/15 04:28 PM	3,000	SEWER MANHOLE	47034	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387542	WO# 2388650	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	201 BULLITT LN	7/12/15 10:35 AM	07/13/15 07:49 AM	2,000	SEWER MANHOLE	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387496	WO# 2388631	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	201 BULLITT LN	7/18/15 3:23 AM	07/19/15 11:40 AM	19,000	SEWER MANHOLE	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391493	WO# 2391581	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	7/12/15 10:35 AM	07/15/15 06:03 AM	3,000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387495	WO# 2391310	LOCATION INCLUDED IN IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	202 OXMOOR LN	7/18/15 3:23 AM	07/19/15 01:00 PM	24,000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391492	WO# 2391580	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	8021 CHRISTIAN CT	7/13/15 8:30 AM	07/15/15 06:18 AM	2,000	SEWER MANHOLE	47593	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387519	WO# 2388638	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	8016 SHELBYVILLE RD	7/12/15 11:00 AM	07/14/15 04:13 PM	2,000	SEWER MANHOLE	47603	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387522	WO# 2388640	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	8016 SHELBYVILLE RD	7/12/15 11:00 AM	07/13/15 08:09 AM	2,000	SEWER MANHOLE	47604	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387524	WO# 2388641	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	2216 FAIRLAND AVE	7/12/15 8:15 AM	07/12/15 06:02 PM	15,000	SEWER MANHOLE	49445	GROUND	BUECHEL BRANCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387565	WO# 2387662	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	2216 FAIRLAND AVE	7/14/15 7:07 AM	07/14/15 09:12 PM	400	SEWER MANHOLE	49445	GROUND	BUECHEL BRANCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389037	WO# 2389804	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	2219 RICHLAND AVE	7/12/15 8:15 AM	07/12/15 06:03 PM	6,000	SEWER MANHOLE	49446	STREAM	BUECHEL BRANCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387566	WO# 2387667	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	2219 RICHLAND AVE	7/14/15 7:08 AM	07/14/15 09:13 PM	500	SEWER MANHOLE	49446	STREAM	BUECHEL BRANCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389041	WO# 2389805	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3305 INDIAN CREEK CT	7/12/15 9:58 AM	07/15/15 01:27 PM	1,000	SEWER MANHOLE	51160	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387557	WO# 2387948	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	7/10/15 11:40 AM	07/10/15 01:40 PM	1,500	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387043	WO# 2387116	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	7/12/15 7:30 AM	07/12/15 11:35 AM	14,400	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387560	WO# 2387656	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	7/14/15 5:48 AM	07/14/15 09:07 AM	500	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389101	WO# 2389102	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	7/18/15 1:45 AM	07/18/15 08:45 AM	4,500	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391504	WO# 2391505	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	8/19/15 6:10 PM	08/19/15 07:30 PM	1,500	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2418030	DISCLN WO# 2418032	LOCATION INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	332 STONEHENGE DR	7/12/15 12:17 PM	07/14/15 04:32 PM	3,000	SEWER MANHOLE	63357	DITCH	VALLEY CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387577	WO# 2388663	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1910 CHARBDIN PL	7/12/15 9:49 AM	07/15/15 06:03 AM	5,000	SEWER MANHOLE	65606	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387579	WO# 2391316	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1802 ROUND RIDGE RD	7/12/15 9:49 AM	07/15/15 06:00 AM	6,000	SEWER MANHOLE	65610	STREAM	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387594	WO# 2391329	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1804 ROUND RIDGE RD	7/12/15 9:49 AM	07/16/15 09:30 AM	18,000	SEWER MANHOLE	65623	STREAM	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387580	WO# 2390677	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4640 BARBOUR LN	7/14/15 9:00 AM	07/15/15 12:57 AM	95,700	SEWER MANHOLE	65633	STREAM	LITTLE GOOSE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389121	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	4640 BARBOUR LN	7/14/15 9:00 AM	07/15/15 12:57 AM	95,700	SEWER MANHOLE	65635	STREAM	LITTLE GOOSE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2389119	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/12/15 7:23 AM	07/12/15 11:28 AM	2,400	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387555	WO# 2387635	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/14/15 5:50 AM	07/14/15 04:58 PM	500	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389025	WO# 2389800	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	7/18/15 1:35 AM	07/18/15 08:30 AM	3,500	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391498	WO# 2391500	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	9 MUIRFIELD PL	7/12/15 11:15 AM	07/13/15 08:21 AM	2,000	SEWER MANHOLE	67535	GROUND	HURSTBOURNE CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387531	WO# 2388643	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	7/12/15 8:17 AM	07/13/15 07:10 AM	1,000	SEWER MANHOLE	72289	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387477	WO# 2388161	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	7/18/15 2:40 AM	07/19/15 11:12 AM	9,000	SEWER MANHOLE	72289	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391487	WO# 2391574	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1106 BROADFIELDS DR	7/12/15 1:27 PM	07/14/15 05:50 PM	3,000	SEWER MANHOLE	74513	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387588	WO# 2388671	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	7913 SHELBYVILLE RD	7/12/15 10:57 AM	07/15/15 06:23 AM	2,000	SEWER MANHOLE	84155	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387537	WO# 2388646	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	8021 CHRISTIAN CT	7/12/15 10:39 AM	07/15/15 06:15 AM	2,000	SEWER MANHOLE	90700	CATCH BASIN	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387504	WO# 2388636	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3920 DUTCHMANS LN	7/12/15 1:13 PM	07/14/15 06:12 PM	2,000	SEWER MANHOLE	96673	STREAM	WEICHER CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387599	WO# 2388675	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3305 BENT CREEK CT	7/12/15 9:57 AM	07/14/15 09:25 PM	2,000	SEWER SERVICE LINE	BU05074039	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387562	WO# 2388661	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	3303 TROUT CREEK DR	7/12/15 9:51 AM	07/12/15 04:09 PM	9,900	SEWER SERVICE LINE	BU05091039	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387568	WO# 2387686	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	1215 ELLISON AVE	9/14/15 8:15 AM	09/14/15 08:30 AM	450	SEWER MANHOLE	CSO113	STREAM	SOUTH FORK BEARGRASS CREEK	OBSTRUCTION IN MAIN SEWR	OBSTRUCTION-NOT GREASE / ROOTS	2429237	FLUSHED THE LINE	OPENED BY FLUSHING THE LINE
MORRIS FORMAN	KY0022411	4108 LEE AVE	7/12/15 7:36 AM	07/12/15 11:12 AM	100	SEWER SERVICE LINE	KK14815019	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387567	WO# 2387673	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4108 LEE AVE	7/14/15 5:41 AM	07/14/15 08:43 AM	500	SEWER SERVICE LINE	KK14815019	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389053	WO# 2389056	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4107 LEE AVE	7/12/15 7:38 AM	07/12/15 11:15 AM	1,100	SEWER SERVICE LINE	KK14855239	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2387570	WO# 2387681	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4107 LEE AVE	7/14/15 5:39 AM	07/14/15 08:40 AM	500	SEWER SERVICE LINE	KK14855239	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389065	WO# 2389081	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	4107 LEE AVE	7/18/15 1:39 AM	07/18/15 08:35 AM	1,500	SEWER SERVICE LINE	KK14855239	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2391506	WO# 2391507	LOCATION INCLUDED IN IOAP
MORRIS FORMAN	KY0022411	7404 ARROWWOOD RD	7/13/15 9:00 PM	07/15/15 08:05 AM	157,875	SEWER LIFT STATION	MSD0040-PS	DITCH	GOOSE CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2388693	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	806 PINE WAY	7/12/15 6:00 PM	07/13/15 02:05 AM	4,850	SEWER LIFT STATION	MSD0057-LS	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387530	SEE WORK ORDER #2388619	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

APPENDIX A-4
UNAUTHORIZED DISCHARGES
TO WATERS OF UNITED STATES
 JULY 1, 2015 THROUGH SEPTEMBER 30, 2015

Associated Wastewater Treatment Plant Name	Associated Treatment Plant KPDES #	Overflow Location	Overflow Start Date & Time	Overflow Stop Date & Time	Volume of Overflow	Source Asset Type	Source Asset ID	Facility Discharges To	Receiving Stream	Cause of Overflow	Due To	WO #	Cleanup Efforts by MSD	Repair Efforts by MSD
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	7/12/15 2:00 PM	07/13/15 12:00 AM	300,000	SEWER LIFT STATION	MSD0186-PS	DITCH	MUDDY FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	2387520	MSD CLEANED & SANITIZED THE AREA	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3928 DUTCHMANS LN	7/14/15 12:00 PM	07/14/15 06:07 PM	200	SEWER SERVICE LINE	Z18284029			LACK OF SYSTEM CAPACITY-HEAVY RAIN.	LACK OF SYSTEM CAPACITY	2389125	WO# 2389798	LOCATION INCLUDED IN IOAP
CEDAR CREEK	KY0098540	5410 SPRIGWOOD LN	7/12/15 8:15 AM	07/12/15 11:48 AM	9,650	SEWER MANHOLE	28984	GROUND	CEDAR CREEK	HEAVY RAIN CAUSED LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387239	MSD TO CLEAN AND SANITIZE AFFECTED AREA	INCLUDED IN IOAP
CEDAR CREEK	KY0098540	5600 HOFELICH CT	7/12/15 8:15 AM	07/12/15 10:00 AM	6,750	SEWER MANHOLE	28998	GROUND	CEDAR CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387255	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
CEDAR CREEK	KY0098540	9517 PLUMWOOD RD	7/12/15 8:15 AM	07/12/15 10:28 AM	5,850	SEWER MANHOLE	63094	STREAM	CEDAR CREEK	HEAVY RAIN CAUSED LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387215	MSD TO CLEAN AND SANITIZE AFFECTED AREA	INCLUDED IN IOAP
CEDAR CREEK	KY0098540	9300 HAYES AVE	7/12/15 8:15 AM	07/12/15 12:05 PM	11,500	SEWER MANHOLE	63095	STREAM	CEDAR CREEK	HEAVY RAIN CAUSED LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387214	MSD TO CLEAN AND SANITIZE AFFECTED AREA	INCLUDED IN IOAP
CEDAR CREEK	KY0098540	5600 HOFELICH CT	7/12/15 8:15 AM	07/12/15 10:00 AM	6,750	SEWER MANHOLE	70158	GROUND	CEDAR CREEK	HEAVY RAIN CAUSED LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387210	MSD TO CLEAN AND SANITIZE AFFECTED AREA	INCLUDED IN IOAP
CEDAR CREEK	KY0098540	7702 CEDAR CREEK RD	7/12/15 10:30 AM	07/12/15 11:48 AM	5,000	SEWER MANHOLE	83011	GROUND	CEDAR CREEK	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	2387314	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
CEDAR CREEK	KY0098540	8605 CEDAR CREEK RD	7/12/15 8:50 PM	07/12/15 09:00 PM	1,000	SEWER TREATMENT PLANT	MSD0289	GROUND	CEDAR CREEK	FILTER BYPASS GATE FAILED TO OPEN IN AUTO	BYPASS AT WQTC	2387653	NO DEBRIS	OPERATOR OPENED BYPASS GATE MANUALLY
FLOYDS FORK	KY0102784	815 TUCKER STATION RD	7/12/15 9:00 AM	07/12/15 12:30 PM	5,250	SEWER MANHOLE	33003	STREAM	POPE LICK	HEAVY RAIN	LACK OF SYSTEM CAPACITY	2387166	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
FLOYDS FORK	KY0102784	12400 BRIERLY HILL PL	7/12/15 9:00 AM	07/12/15 12:00 AM	5,250	SEWER MANHOLE	65531	STREAM	POPE LICK	HEAVY RAIN	LACK OF SYSTEM CAPACITY	2387170	MSD TO CLEAN AND SANITIZE AFFECTED AREA	AREA INCLUDED IN IOAP
FLOYDS FORK	KY0102784	912 EASTWOOD FISHERVILLE RD	8/25/15 10:20 AM	08/25/15 04:00 PM	5,000	SEWER MAIN	96911A-V	GROUND	LONG RUN	16" FM BREAK.	STRUCTURAL FAILURE	2420006	AFFECTED AREA WAS RAKED.	CHEROKEE CONSTRUCTION - 16" FM WAS REPAIRED.

Appendix B – CSO Flow Monitoring Data

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Status	Volume	Events	Project	Project Date
CSO015	I	134,424,694.38	12.00	Bells Lane Wet Weather Treatment Facility	12/31/2016
CSO016	I	34,936,348.81	12.00	Southern Outfall In-line Storage at 43rd St (SOR1), Southern Outfall In-line Storage at 12th St & Wilson Ave (SOR2)	12/31/2018
CSO018	I	1,997,609.18	5.00	Nightingale Pump Station Replacement & Storage	12/31/2015
CSO019	I	61,785,868.18	21.00	34th Street Flood Pump Station, Portland Wharf Storage Basin, 27th Street Flood Pump Station	12/31/2012, 12/31/2019, 6/30/2013
CSO020	I	174,898,575.93	15.00	Story Avenue and Main Street Storage Basin	12/31/2020
CSO022	I	2,931,736.71	6.00	4th Street Flood Pump Station, 13th Street and Rowan Street Storage Basin	12/31/2012, 12/31/2020
CSO023	I		3.00	4th Street Flood Pump Station, 13th Street and Rowan Street Storage Basin	12/31/2012, 12/31/2020
CSO026	O				
CSO027	I	5,678.89	1.00		
CSO028	I	52,448.45	3.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO029	I	1,272,994.26	13.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO030	O				
CSO031	I	625,039.90	10.00		
CSO032	O				
CSO033	O				
CSO034	I	92,156.66	4.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO035	I		15.00		
CSO036	I	5,143,444.17	8.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO038	I	993,337.15	5.00		
CSO049-SM	O				
CSO050	I	5,272,745.41	23.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO051	I	235,364.65	17.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO052	I		14.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO053	I	2,802,271.25	21.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO054	I	619,664.46	24.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO055	I	546,461.53	10.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO056	I			13th Street and Rowan Street Storage Basin	12/31/2020
CSO057	I	16,659.57	5.00		
CSO058	I	440,019.44	17.00	13th Street and Rowan Street Storage Basin, CSO058 In-Line Storage & Green Infrastructure	12/31/2020, 12/31/2014
CSO062	I				
CSO065	O				
CSO080	O				
CSO081	O				
CSO082	I		8.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO083	I	184,548.49	5.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO084	I	72,548.84	14.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO086	O				
CSO087	O				
CSO088	I	2,069,782.30	15.00	Clifton Heights Storage Basin	12/31/2018
CSO091	I	488,982.42	18.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO092	I	465,001.02	18.00		

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Status	Volume	Events	Project	Project Date
CSO093	I	220,634.94	21.00	CSO093 Structural Modifications & Green Infrastructure	12/31/2015
CSO097	I	3,039,260.88	13.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO104	I	848,516.09	12.00	Southwestern Parkway Storage Basin, Shawnee Flood Pump Station	12/31/2018, 6/30/2013
CSO105	I	58,216,976.59	24.00	Southwestern Parkway Storage Basin, Shawnee Flood Pump Station	12/31/2018, 6/30/2013
CSO106	I	302,005.45	19.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO108	I	5,286,618.56	8.00	CSO108 Dam Modification	12/31/2010
CSO109	I		5.00		
CSO110	I	6,128,838.39	16.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO111	I	30,470.48	5.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO113	I	2,641,289.40	19.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO117	I	12,604,038.58	20.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO118	I	856.28	1.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO119	I	2,466,027.04	18.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO120	I	2,313,065.03	21.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO121	I	1,448,586.19	23.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO123	O			CSO123 Downspout Disconnection	12/31/2012
CSO125	I	2,557,558.83	14.00	I-64 and Grinstead Drive Storage Basin	12/31/2020
CSO126	I	41,479,838.34	7.00	I-64 and Grinstead Drive Storage Basin	12/31/2020
CSO127	I	6,017,118.29	19.00	I-64 and Grinstead Drive Storage Basin	12/31/2020
CSO130	I	227,131.61	6.00	Story Avenue and Spring Street Storage Basin	12/31/2016
CSO131	I	650,726.69	9.00	Clifton Heights Storage Basin	12/31/2018
CSO132	I	9,799,542.55	9.00	Clifton Heights Storage Basin	12/31/2018
CSO137	I	1,075,931.25	16.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO140	I	4,116,307.75	18.00	CSO140 In-Line Storage & Green Infrastructure Controls	12/31/2015
CSO141	I	866,856.62	11.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO142	I	275,404.66	3.00		
CSO143	O				
CSO144	I	22,094.95	8.00		
CSO145	O				
CSO146	I	18,758,102.09	17.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO147	O				
CSO148	I	717,670.67	23.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO149	I	20,561,530.55	18.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO150	I	512,774.94	8.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO151	I	2,517,928.54	21.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO152	I	9,933,920.44	21.00	Logan and Breckinridge Street Storage Basin	12/31/2017
CSO153	I	4,419,670.91	23.00	Lexington Road and Payne Street Storage Basin	12/31/2020
CSO154	I			Clifton Heights Storage Basin	12/31/2018
CSO155	I	343,958.62	14.00	13th Street and Rowan Street Storage Basin	12/31/2020
CSO156	O				
CSO160	I	23,767.54	11.00	CSO160 In-Line Storage & Green Infrastructure Controls	12/31/2015
CSO161	I	147,272.70	12.00		
CSO162	O				
CSO166	I	77,641,748.49	16.00	I-64 and Grinstead Drive Storage Basin	12/31/2020
CSO167	I	5,373,436.60	21.00	Clifton Heights Storage Basin	12/31/2018
CSO172	O			Adams Street Sewer Separation	12/31/2012

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Status	Volume	Events	Project	Project Date
CSO174	I				
CSO178	I		13.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO179	I	54,380.22	1.00		
CSO180	I	508,121.94	3.00		
CSO181	I	1,785,093.69	8.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO182	I		-		
CSO183	I	586.13	2.00		
CSO184	I	220,725.20	3.00		
CSO185	I	442,383.17	4.00		
CSO186	I		-		
CSO187	I		4.00		
CSO188	I	1,795.98	1.00		
CSO189	I	61,484,843.00	17.00	Southwestern Parkway Storage Basin, Shawnee Flood Pump Station	12/31/2018, 6/30/2013
CSO190	I	10,915,856.04	22.00	CSO190 Green Infrastructure Solution, 17th Street Flood Pump Station	12/31/2017, 12/31/2014
CSO191	I	328,279.25	7.00	Bells Lane Wet Weather Treatment Facility	12/31/2016
CSO192	O				
CSO193	I	27,560.51	3.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO194	O				
CSO195	I		15.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO196	I	151,070.83	11.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO197	I			Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO198	I		-		
CSO199	I	181,935.67	7.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO200	I	60,456.79	14.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO201	I		17.00		
CSO202	I	55,532.26	10.00	Central Relief Drain CSO In-line Storage, Green Infrastructure & Distributed Storage	12/31/2018
CSO203	I	96,275.75	12.00		
CSO204	O				
CSO205	I	384.00	1.00		
CSO206	I	12,882,541.85	18.00	CSO206 Sewer Separation	12/30/2013
CSO207	I	102,047.97	7.00		
CSO208	I	397,859.06	14.00		
CSO209	O				
CSO210	I	6,616,032.24	9.00	Southern Outfall In-line Storage at 43rd St (SOR1), Southern Outfall In-line Storage at 12th St & Wilson Ave (SOR2)	12/31/2018
CSO211	I	18,055,106.00	1.00	Southern Outfall In-line Storage at 12th St & Wilson Ave (SOR2)	12/31/2018

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO015	7/2/2015 2:15	7/2/2015 9:00	661,620.77	0.28	0.82	806,854.60	3.11	0.48	3	Atlas	
CSO015	7/2/2015 21:15	7/3/2015 1:30	55,638.14	0.18	0.82	67,851.39	3.14	0.48	3	Atlas	
CSO015	7/3/2015 15:15	7/3/2015 18:15	763,028.40	0.13	1.04	733,681.16	3.26	0.85	1	Atlas	
CSO015	7/7/2015 12:45	7/7/2015 18:15	952,127.96	0.23	0.94	1,012,902.08	2.86	0.50	6	Atlas	
CSO015	7/10/2015 11:00	7/10/2015 19:30	859,876.85	0.35	0.52	1,653,609.33	2.95	0.26	6	Atlas	
CSO015	7/12/2015 6:15	7/12/2015 9:30	1,749,869.90	0.14	0.67	2,611,746.12	2.58	0.47	1	Atlas	
CSO015	7/13/2015 15:15	7/15/2015 2:45	61,581,436.09	1.48	0.54	114,039,696.46	3.58	0.46	1	Atlas	
CSO015	7/18/2015 0:15	7/18/2015 14:30	33,353,982.41	0.59	0.72	46,324,975.56	2.39	0.48	3	Atlas	
CSO015	8/4/2015 20:00	8/5/2015 0:00	8,684,190.55	0.17	0.25	34,736,762.18	0.42	0.21	1	Atlas	
CSO015	8/6/2015 14:45	8/6/2015 18:30	9,002,160.59	0.16	0.8	11,252,700.73	1.05	0.30	1	Atlas	
CSO015	8/19/2015 8:30	8/19/2015 8:30	3,607.59	-	0.75	4,810.13	0.33	0.43	1	Atlas	
CSO015	9/29/2015 16:30	9/30/2015 3:15	16,757,155.14	0.45	0.5	33,514,310.27	0.58	0.19	24	Atlas	
CSO015 Events			12.00								
CSO015 Total Volume (Gal)			134,424,694.38								
CSO016	7/2/2015 1:30	7/2/2015 5:00	2,984,376.23	0.15	0.84	3,552,828.85	2.98	0.47	3	Atlas	
CSO016	7/2/2015 21:30	7/2/2015 23:00	324,696.84	0.06	0.84	386,543.86	3.02	0.47	3	Atlas	
CSO016	7/3/2015 15:00	7/3/2015 17:45	1,835,820.83	0.11	1.48	1,240,419.48	3.7	2.47	1	Atlas	
CSO016	7/7/2015 12:15	7/7/2015 16:45	3,171,900.79	0.19	0.91	3,485,605.26	3.3	0.48	6	Atlas	
CSO016	7/10/2015 16:15	7/10/2015 18:30	1,181,988.82	0.09	0.46	2,569,540.92	1.8	0.24	6	Atlas	
CSO016	7/12/2015 6:15	7/13/2015 6:15	11,993,267.43	1.00	0.73	16,429,133.46	2.5	0.50	1	Atlas	
CSO016	7/13/2015 15:00	7/13/2015 18:00	3,304,363.55	0.13	0.51	6,479,144.21	3.01	0.44	1	Atlas	
CSO016	7/14/2015 4:30	7/14/2015 7:30	2,579,677.51	0.13	0.3	8,598,925.03	3.31	0.23	1	Atlas	
CSO016	7/14/2015 19:45	7/14/2015 20:30	34,149.61	0.03	0.16	213,435.08	2.56	0.14	1	Atlas	
CSO016	7/17/2015 23:30	7/18/2015 7:00	6,925,214.66	0.31	0.83	8,343,632.12	2.53	0.55	3	Atlas	
CSO016	8/4/2015 20:30	8/4/2015 21:45	318,066.69	0.05	0.18	1,767,037.15	0.35	0.15	1	Atlas	
CSO016	8/6/2015 9:00	8/6/2015 10:45	282,825.85	0.07	0.78	362,597.24	0.86	0.30	1	Atlas	
CSO016 Events			12.00								
CSO016 Total Volume (Gal)			34,936,348.81								
CSO018	7/10/2015 10:30	7/10/2015 16:15	32,243.64	0.24	0.7	46,062.34	2.03	0.36	1	Atlas	
CSO018	7/12/2015 6:15	7/12/2015 23:00	547,576.87	0.70	0.87	629,398.70	2.61	0.58	1	Atlas	
CSO018	7/13/2015 14:15	7/14/2015 21:45	948,318.84	1.31	0.56	1,693,426.50	3.8	0.46	1	Atlas	
CSO018	7/17/2015 23:30	7/18/2015 12:00	465,932.46	0.52	1.12	416,011.12	3.18	0.75	3	Atlas	
CSO018	8/6/2015 15:00	8/6/2015 15:15	3,537.38	0.01	1.29	2,742.15	1.51	0.45	24	Atlas	
CSO018 Events			5.00								
CSO018 Total Volume (Gal)			1,997,609.18								
CSO019	7/2/2015 0:15	7/3/2015 23:30	19,670,636.51	1.97	1.22	16,123,472.55	3.54	0.47	24	Atlas	
CSO019	7/7/2015 11:30	7/7/2015 22:45	2,701,886.29	0.47	0.98	2,757,026.83	2.64	0.48	6	Atlas	
CSO019	7/8/2015 12:15	7/8/2015 13:45	57,375.43	0.06	0.98	58,546.36	2.7	0.48	6	Atlas	
CSO019	7/9/2015 7:00	7/9/2015 19:30	1,492,140.96	0.52	0.32	4,662,940.51	2.24	0.15	12	Atlas	
CSO019	7/10/2015 10:15	7/10/2015 22:45	1,396,776.41	0.52	0.43	3,248,317.24	2.2	0.22	6	Atlas	
CSO019	7/12/2015 5:45	7/12/2015 14:45	6,635,027.83	0.38	0.76	8,730,299.77	2.52	0.57	1	Atlas	
CSO019	7/13/2015 14:30	7/13/2015 18:30	1,913,979.67	0.17	0.34	5,629,351.98	2.86	0.29	1	Atlas	
CSO019	7/14/2015 4:15	7/14/2015 21:00	3,500,662.20	0.70	0.55	6,364,840.37	3.44	0.43	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO019	7/17/2015 22:30	7/18/2015 8:30	12,175,516.35	0.42	1.52	8,010,208.12	3.2	1.07	3	Atlas	
CSO019	7/20/2015 8:30	7/20/2015 8:45	4,000.40	0.01	0.01	400,039.58	2.45	0.01	1	Atlas	
CSO019	7/29/2015 17:00	7/29/2015 19:30	668,924.95	0.10	0.28	2,389,017.70	0.3	0.23	1	Atlas	
CSO019	8/4/2015 18:45	8/4/2015 22:15	3,758,277.34	0.15	0.22	17,083,078.80	0.5	0.18	1	Atlas	
CSO019	8/5/2015 14:45	8/5/2015 20:00	1,529,399.55	0.22	0.83	1,842,650.06	0.84	0.32	24	Atlas	
CSO019	8/6/2015 7:30	8/6/2015 15:30	1,778,337.58	0.33	0.83	2,142,575.40	1.04	0.32	24	Atlas	
CSO019	8/10/2015 8:45	8/10/2015 13:15	5,501.68	0.19	0.02	275,083.86	1.07	0.02	1	Atlas	
CSO019	8/10/2015 23:00	8/12/2015 16:30	132,979.79	1.73	0.06	2,216,329.76	1.13	0.05	1	Atlas	
CSO019	8/19/2015 6:45	8/19/2015 22:45	3,665,044.01	0.67	1.21	3,028,961.99	1.2	0.57	1	Atlas	
CSO019	9/5/2015 17:45	9/5/2015 19:00	574,221.15	0.05	0.11	5,220,192.25	0.06	0.06	6	Atlas	
CSO019	9/25/2015 21:30	9/25/2015 23:45	3,643.03	0.09	0.1	36,430.31	0.1	0.05	3	Atlas	
CSO019	9/29/2015 5:30	9/29/2015 21:15	103,627.95	0.66	0.86	120,497.61	0.72	0.28	48	Atlas	
CSO019	9/30/2015 8:15	9/30/2015 9:45	17,909.12	0.06	0.86	20,824.55	0.96	0.28	48	Atlas	
CSO019 Events			21.00								
CSO019 Total Volume (Gal)			61,785,868.18								
CSO020	7/2/2015 1:15	7/2/2015 3:00	607,533.60	0.07	1.75	347,162.06	2.4	0.67	24	Atlas	
CSO020	7/2/2015 19:45	7/2/2015 23:00	5,757,304.40	0.14	1.75	3,289,888.23	3.54	0.67	24	Atlas	
CSO020	7/3/2015 15:30	7/3/2015 20:30	1,056,209.18	0.21	0.37	2,854,619.40	3.43	0.20	6	Atlas	
CSO020	7/7/2015 12:00	7/7/2015 17:30	3,335,022.31	0.23	0.8	4,168,777.89	2.81	0.34	6	Atlas	
CSO020	7/8/2015 12:45	7/8/2015 13:45	578,028.87	0.04	0.8	722,536.09	2.96	0.34	6	Atlas	
CSO020	7/9/2015 7:00	7/9/2015 8:45	753,811.17	0.07	0.33	2,284,276.26	2.3	0.15	12	Atlas	
CSO020	7/10/2015 11:00	7/10/2015 17:45	1,841,538.35	0.28	0.35	5,261,538.13	1.88	0.17	6	Atlas	
CSO020	7/12/2015 5:45	7/13/2015 1:15	47,659,648.78	0.81	1.54	30,947,823.88	3.05	1.13	3	Atlas	
CSO020	7/13/2015 14:30	7/13/2015 17:30	2,327,946.75	0.13	0.56	4,157,047.77	3.61	0.46	1	Atlas	
CSO020	7/14/2015 4:00	7/14/2015 23:30	28,275,347.48	0.81	0.74	38,209,929.03	4.53	0.60	1	Atlas	
CSO020	7/17/2015 22:45	7/18/2015 16:45	81,390,909.32	0.75	1.67	48,737,071.45	4.69	1.57	3	Atlas	
CSO020	8/4/2015 18:45	8/4/2015 18:45	45,032.97	-	0.78	57,734.58	0.78	0.67	1	Atlas	
CSO020	8/5/2015 15:45	8/5/2015 16:15	78,479.00	0.02	0.79	99,340.51	1.15	0.29	24	Atlas	
CSO020	8/6/2015 8:15	8/6/2015 16:30	1,155,338.72	0.34	0.79	1,462,454.08	1.57	0.29	24	Atlas	
CSO020	8/19/2015 8:45	8/19/2015 9:00	36,425.03	0.01	0.3	121,416.75	0.28	0.12	24	Atlas	
CSO020 Events			15.00								
CSO020 Total Volume (Gal)			174,898,575.93								
CSO022	7/2/2015 20:15	7/2/2015 21:00	1,053,576.63	0.03	2.45	430,031.28	4.41	0.94	24	Atlas	
CSO022	7/7/2015 11:45	7/7/2015 12:45	145,766.93	0.04	0.94	155,071.20	3.46	0.42	6	Atlas	
CSO022	7/12/2015 5:45	7/12/2015 6:00	767,837.37	0.01	1.2	639,864.47	2.62	0.80	3	Atlas	
CSO022	7/18/2015 0:45	7/18/2015 1:00	300,598.51	0.01	1.62	185,554.64	4.23	1.37	3	Atlas	
CSO022	8/15/2015 16:30	8/15/2015 16:45	355,470.98	0.01	0.01	35,547,098.25	0.15	0.01	1	Atlas	
CSO022	9/9/2015 11:15	9/9/2015 11:30	308,486.29	0.01	0.32	964,019.67	0.48	0.28	1	Atlas	
CSO022 Events			6.00								
CSO022 Total Volume (Gal)			2,931,736.71								
CSO027	7/12/2015 6:15	7/12/2015 6:15	5,678.89	-	1.06	5,357.44	2.68	0.73	1	Atlas	
CSO027 Events			1.00								
CSO027 Total Volume (Gal)			5,678.89								

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO028	7/2/2015 20:30	7/2/2015 20:30	579.52	-	1.14	508.35	2.85	0.49	3	Atlas	
CSO028	7/12/2015 6:15	7/12/2015 6:15	51,122.01	-	1.06	48,228.31	2.68	0.73	1	Atlas	
CSO028	7/18/2015 0:30	7/18/2015 0:30	746.92	-	1.06	704.64	3.11	0.71	3	Atlas	
CSO028 Events			3.00								
CSO028 Total Volume (Gal)			52,448.45								
CSO029	7/2/2015 15:15	7/2/2015 20:45	413,598.34	0.23	1.14	362,805.56	2.86	0.49	3	Atlas	
CSO029	7/3/2015 14:45	7/3/2015 14:45	7,524.51	-	0.4	18,811.28	2.66	0.31	1	Atlas	
CSO029	7/7/2015 12:00	7/7/2015 12:45	7,803.13	0.03	0.83	9,401.36	2.24	0.43	6	Atlas	
CSO029	7/9/2015 6:15	7/9/2015 6:15	3,780.75	-	0.34	11,119.85	1.89	0.19	3	Atlas	
CSO029	7/10/2015 16:00	7/10/2015 16:00	5,324.99	-	0.48	11,093.73	1.87	0.23	6	Atlas	
CSO029	7/12/2015 5:45	7/12/2015 6:15	378,997.79	0.02	1.06	357,545.09	2.68	0.73	1	Atlas	
CSO029	7/13/2015 15:00	7/13/2015 15:00	25,251.75	-	0.31	81,457.26	3.22	0.27	1	Atlas	
CSO029	7/14/2015 4:15	7/14/2015 4:30	33,471.70	0.01	0.69	48,509.71	3.87	0.54	1	Atlas	
CSO029	7/17/2015 22:30	7/18/2015 0:45	319,860.26	0.09	1.06	301,754.96	3.17	0.71	3	Atlas	
CSO029	8/4/2015 19:00	8/4/2015 19:00	3,212.61	-	0.31	10,363.27	0.34	0.25	1	Atlas	
CSO029	8/6/2015 2:15	8/6/2015 8:00	11,659.12	0.24	0.5	23,318.23	0.82	0.21	1	Atlas	
CSO029	9/9/2015 11:15	9/9/2015 11:30	36,978.21	0.01	0.28	132,065.03	0.38	0.22	1	Atlas	
CSO029	9/29/2015 18:45	9/29/2015 18:45	25,531.12	-	0.79	32,317.87	0.75	0.26	48	Atlas	
CSO029 Events			13.00								
CSO029 Total Volume (Gal)			1,272,994.26								
CSO031	7/2/2015 0:30	7/2/2015 2:30	25,756.78	0.08	1.14	22,593.67	2.51	0.49	3	Atlas	
CSO031	7/2/2015 15:45	7/2/2015 22:45	96,135.39	0.29	1.14	84,329.29	2.86	0.49	3	Atlas	
CSO031	7/3/2015 15:00	7/3/2015 15:15	7,792.81	0.01	0.4	19,482.03	2.7	0.31	1	Atlas	
CSO031	7/7/2015 12:00	7/7/2015 13:00	5,611.34	0.04	0.83	6,760.66	2.25	0.43	6	Atlas	
CSO031	7/10/2015 10:45	7/10/2015 11:00	4,897.95	0.01	0.48	10,204.06	1.96	0.23	6	Atlas	
CSO031	7/12/2015 6:00	7/12/2015 9:15	159,929.88	0.14	1.06	150,877.24	2.9	0.73	1	Atlas	
CSO031	7/13/2015 14:30	7/13/2015 14:30	2,216.28	-	0.31	7,149.29	3.09	0.27	1	Atlas	
CSO031	7/14/2015 1:45	7/14/2015 4:45	34,015.15	0.13	0.69	49,297.32	3.88	0.54	1	Atlas	
CSO031	7/17/2015 21:45	7/18/2015 2:15	167,346.09	0.19	1.06	157,873.67	3.17	0.71	3	Atlas	
CSO031	8/6/2015 2:15	8/6/2015 16:00	121,338.23	0.57	0.5	242,676.46	0.98	0.21	1	Atlas	
CSO031 Events			10.00								
CSO031 Total Volume (Gal)			625,039.90								
CSO034	7/2/2015 20:15	7/2/2015 20:30	8,631.45	0.01	1.14	7,571.45	2.85	0.49	3	Atlas	
CSO034	7/12/2015 5:45	7/12/2015 6:15	70,455.85	0.02	1.06	66,467.78	2.68	0.73	1	Atlas	
CSO034	7/18/2015 0:15	7/18/2015 0:30	8,954.63	0.01	1.06	8,447.77	3.11	0.71	3	Atlas	
CSO034	9/9/2015 11:15	9/9/2015 11:15	4,114.73	-	0.28	14,695.46	0.38	0.22	1	Atlas	
CSO034 Events			4.00								
CSO034 Total Volume (Gal)			92,156.66								
CSO036	7/2/2015 20:30	7/2/2015 21:00	66,879.87	0.02	1.19	56,201.57	2.76	0.46	24	Atlas	
CSO036	7/10/2015 22:45	7/11/2015 9:00	15,163.98	0.43	0.55	27,570.87	1.75	0.28	6	Atlas	
CSO036	7/12/2015 6:00	7/12/2015 14:30	372,269.47	0.35	1.16	320,921.96	2.91	0.79	1	Atlas	
CSO036	7/14/2015 4:15	7/18/2015 1:30	4,625,919.55	3.89	0.71	6,515,379.64	5.11	0.57	1	Atlas	
CSO036	8/4/2015 20:15	8/5/2015 15:15	16,683.65	0.79	0.21	79,445.93	0.36	0.16	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO036	8/6/2015 2:15	8/7/2015 2:45	40,984.74	1.02	0.49	83,642.32	0.82	0.20	1	Atlas	
CSO036	8/19/2015 17:00	8/19/2015 17:00	3,135.15	-	0.38	8,250.38	0.57	0.17	1	Atlas	
CSO036	9/9/2015 11:30	9/9/2015 11:30	2,407.77	-	0.21	11,465.58	0.28	0.16	1	Atlas	
CSO036 Events			8.00								
CSO036 Total Volume (Gal)			5,143,444.17								
CSO038	7/2/2015 20:30	7/2/2015 20:45	23,312.43	0.01	1.14	20,449.50	2.86	0.49	3	Atlas	
CSO038	7/12/2015 6:15	7/12/2015 14:15	667,061.20	0.33	1.06	629,303.02	2.9	0.73	1	Atlas	
CSO038	7/14/2015 4:00	7/14/2015 4:45	32,093.23	0.03	0.69	46,511.93	3.88	0.54	1	Atlas	
CSO038	7/18/2015 0:15	7/18/2015 0:45	58,157.35	0.02	1.06	54,865.42	3.17	0.71	3	Atlas	
CSO038	8/6/2015 2:15	8/6/2015 15:15	212,712.94	0.54	0.5	425,425.88	0.98	0.21	1	Atlas	
CSO038 Events			5.00								
CSO038 Total Volume (Gal)			993,337.15								
CSO050	7/2/2015 0:00	7/2/2015 21:45	982,277.88	0.91	2.42	405,899.95	4.38	0.94	1	Atlas	
CSO050	7/3/2015 14:45	7/3/2015 18:45	191,324.18	0.17	0.57	335,656.46	4.33	0.47	1	Atlas	
CSO050	7/7/2015 11:15	7/7/2015 16:30	145,324.44	0.22	1.07	135,817.24	3.99	0.51	3	Atlas	
CSO050	7/8/2015 12:00	7/8/2015 12:30	21,197.80	0.02	1.07	19,811.03	4.13	0.51	3	Atlas	
CSO050	7/9/2015 6:00	7/9/2015 13:30	83,234.88	0.31	0.34	244,808.46	3.49	0.16	12	Atlas	
CSO050	7/10/2015 10:15	7/10/2015 17:30	89,989.15	0.30	0.5	179,978.30	2.5	0.26	6	Atlas	
CSO050	7/12/2015 6:00	7/12/2015 9:45	722,238.16	0.16	1.07	674,988.93	3	0.82	1	Atlas	
CSO050	7/13/2015 14:15	7/13/2015 16:45	173,238.61	0.10	0.46	376,605.68	3.47	0.40	1	Atlas	
CSO050	7/14/2015 3:30	7/14/2015 6:30	513,181.24	0.13	0.84	610,930.05	4.31	0.66	1	Atlas	
CSO050	7/14/2015 18:30	7/14/2015 18:45	1,189.91	0.01	0.03	39,663.54	3.43	0.03	1	Atlas	
CSO050	7/17/2015 22:30	7/18/2015 3:45	1,661,631.14	0.22	1.58	1,051,665.28	3.99	1.27	3	Atlas	
CSO050	7/29/2015 17:30	7/29/2015 17:30	13,660.01	-	0.12	113,833.41	0.17	0.10	1	Atlas	
CSO050	8/4/2015 18:45	8/4/2015 19:15	190,879.13	0.02	0.52	367,075.25	0.63	0.44	1	Atlas	
CSO050	8/5/2015 14:45	8/5/2015 15:30	101,363.37	0.03	1.13	89,702.09	1.29	0.57	1	Atlas	
CSO050	8/6/2015 2:15	8/6/2015 15:00	69,333.53	0.53	1.13	61,357.11	1.65	0.57	1	Atlas	
CSO050	8/10/2015 20:45	8/10/2015 20:45	7,029.09	-	0.06	117,151.56	1.72	0.05	1	Atlas	
CSO050	8/15/2015 16:45	8/15/2015 17:00	52,517.66	0.01	0.02	2,625,882.76	0.09	0.02	1	Atlas	
CSO050	8/19/2015 7:45	8/19/2015 17:15	43,395.72	0.40	0.76	57,099.63	0.75	0.33	12	Atlas	
CSO050	9/5/2015 17:45	9/5/2015 18:45	48,598.95	0.04	0.31	156,770.80	0.28	0.24	1	Atlas	
CSO050	9/9/2015 4:30	9/9/2015 11:45	133,761.73	0.30	0.04	3,344,043.26	0.65	0.03	1	Atlas	
CSO050	9/11/2015 19:15	9/11/2015 21:15	13,355.49	0.08	0.27	49,464.78	1.03	0.15	6	Atlas	
CSO050	9/29/2015 9:15	9/29/2015 10:00	9,535.85	0.03	0.78	12,225.45	0.46	0.25	48	Atlas	
CSO050	9/29/2015 18:45	9/29/2015 19:15	4,487.49	0.02	0.78	5,753.19	0.64	0.25	48	Atlas	
CSO050 Events			23.00								
CSO050 Total Volume (Gal)			5,272,745.41								
CSO051	7/2/2015 7:00	7/2/2015 20:30	46,219.62	0.56	2.42	19,099.02	4.37	0.94	1	Atlas	
CSO051	7/3/2015 15:00	7/3/2015 18:45	5,284.00	0.16	0.57	9,270.18	4.33	0.47	1	Atlas	
CSO051	7/7/2015 11:45	7/7/2015 12:30	3,400.71	0.03	1.07	3,178.23	3.81	0.51	3	Atlas	
CSO051	7/9/2015 13:15	7/9/2015 13:15	1,642.75	-	0.34	4,831.62	3.31	0.16	12	Atlas	
CSO051	7/10/2015 16:00	7/10/2015 16:00	1,019.82	-	0.5	2,039.65	1.95	0.26	6	Atlas	
CSO051	7/12/2015 5:45	7/12/2015 7:15	22,996.38	0.06	1.07	21,491.95	3	0.82	1	Atlas	

There are now issues with the flow monitoring data's quality.
 MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO051	7/13/2015 14:45	7/13/2015 15:00	1,083.46	0.01	0.46	2,355.34	3.47	0.40	1	Atlas	
CSO051	7/14/2015 4:15	7/14/2015 4:15	4,990.09	-	0.84	5,940.59	4.26	0.66	1	Atlas	
CSO051	7/17/2015 22:15	7/18/2015 1:30	103,219.58	0.14	1.58	65,328.85	3.99	1.27	3	Atlas	
CSO051	7/29/2015 17:15	7/29/2015 17:15	3,617.28	-	0.12	30,144.01	0.16	0.10	1	Atlas	
CSO051	8/4/2015 18:45	8/4/2015 19:00	10,867.81	0.01	0.52	20,899.64	0.62	0.44	1	Atlas	
CSO051	8/5/2015 14:45	8/5/2015 15:00	14,004.27	0.01	1.13	12,393.16	1.26	0.57	1	Atlas	
CSO051	8/6/2015 2:15	8/6/2015 8:00	4,119.55	0.24	1.13	3,645.62	1.46	0.57	1	Atlas	
CSO051	8/10/2015 20:30	8/10/2015 20:30	2,555.92	-	0.06	42,598.61	1.72	0.05	1	Atlas	
CSO051	8/15/2015 16:30	8/15/2015 16:45	2,308.87	0.01	0.02	115,443.73	0.09	0.02	1	Atlas	
CSO051	9/5/2015 17:30	9/5/2015 17:45	6,424.12	0.01	0.31	20,722.98	0.28	0.24	1	Atlas	
CSO051	9/9/2015 11:15	9/9/2015 11:15	1,610.40	-	0.34	4,736.46	0.65	0.30	1	Atlas	
CSO051 Events			17.00								
CSO051 Total Volume (Gal)			235,364.65								
CSO053	7/2/2015 0:15	7/2/2015 21:00	443,993.85	0.86	2.57	172,760.25	4.45	0.98	1	Atlas	
CSO053	7/3/2015 14:45	7/3/2015 18:45	57,333.82	0.17	0.44	130,304.14	4.32	0.35	1	Atlas	
CSO053	7/7/2015 11:30	7/7/2015 12:45	127,179.63	0.05	1.04	122,288.11	3.73	0.48	3	Atlas	
CSO053	7/8/2015 12:00	7/8/2015 21:00	29,287.09	0.38	1.04	28,160.67	4.05	0.48	3	Atlas	
CSO053	7/9/2015 6:15	7/9/2015 13:30	40,807.45	0.30	0.42	97,160.60	3.44	0.19	12	Atlas	
CSO053	7/10/2015 10:15	7/10/2015 16:00	40,907.11	0.24	0.43	95,132.82	2.35	0.22	6	Atlas	
CSO053	7/12/2015 5:45	7/12/2015 7:15	477,868.56	0.06	1.1	434,425.96	3	0.79	1	Atlas	
CSO053	7/13/2015 14:45	7/13/2015 15:00	52,148.80	0.01	0.47	110,954.89	3.49	0.39	1	Atlas	
CSO053	7/14/2015 4:00	7/14/2015 4:30	152,346.24	0.02	0.99	153,885.09	4.45	0.81	1	Atlas	
CSO053	7/17/2015 22:15	7/18/2015 1:00	837,161.10	0.11	1.66	504,313.91	4.28	1.53	3	Atlas	
CSO053	7/29/2015 17:15	7/29/2015 17:15	35,834.56	-	0.17	210,791.54	0.19	0.15	1	Atlas	
CSO053	8/4/2015 18:45	8/4/2015 19:00	107,029.75	0.01	0.55	194,599.55	0.68	0.46	1	Atlas	
CSO053	8/5/2015 14:45	8/5/2015 15:15	114,481.43	0.02	0.31	369,294.92	1.02	0.27	1	Atlas	
CSO053	8/6/2015 2:15	8/6/2015 15:00	85,089.09	0.53	0.44	193,384.31	1.3	0.27	1	Atlas	
CSO053	8/10/2015 20:30	8/10/2015 20:30	4,644.21	-	0.06	77,403.47	1.37	0.05	1	Atlas	
CSO053	8/15/2015 16:30	8/15/2015 16:45	82,793.44	0.01	0.02	4,139,672.16	0.09	0.02	1	Atlas	
CSO053	8/19/2015 8:30	8/19/2015 8:30	139.15	-	0.41	339.38	0.2	0.17	3	Atlas	
CSO053	9/5/2015 17:30	9/5/2015 17:45	59,875.39	0.01	0.1	598,753.92	0.06	0.05	6	Atlas	
CSO053	9/9/2015 4:30	9/9/2015 11:30	49,957.24	0.29	0.04	1,248,931.04	0.44	0.03	1	Atlas	
CSO053	9/11/2015 19:15	9/11/2015 19:15	2,380.73	-	0.24	9,919.71	0.77	0.13	3	Atlas	
CSO053	9/29/2015 19:00	9/29/2015 19:00	1,012.59	-	0.67	1,511.33	0.59	0.22	48	Atlas	
CSO053 Events			21.00								
CSO053 Total Volume (Gal)			2,802,271.25								
CSO054	7/1/2015 23:45	7/2/2015 20:45	101,272.68	0.88	2.57	39,405.71	4.45	0.98	1	Atlas	
CSO054	7/3/2015 14:45	7/3/2015 18:45	18,334.80	0.17	0.44	41,670.01	4.32	0.35	1	Atlas	
CSO054	7/7/2015 10:45	7/8/2015 0:15	8,495.70	0.56	1.04	8,168.94	3.93	0.48	3	Atlas	
CSO054	7/8/2015 10:00	7/8/2015 12:45	945.88	0.11	1.04	909.50	4.05	0.48	3	Atlas	
CSO054	7/9/2015 5:00	7/9/2015 13:45	5,516.12	0.36	0.42	13,133.61	3.44	0.19	12	Atlas	
CSO054	7/10/2015 10:15	7/10/2015 16:15	3,420.43	0.25	0.43	7,954.48	2.35	0.22	6	Atlas	
CSO054	7/12/2015 6:00	7/12/2015 7:30	113,662.07	0.06	1.1	103,329.15	3.01	0.79	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO054	7/13/2015 14:15	7/13/2015 15:30	9,674.86	0.05	0.47	20,584.82	3.49	0.39	1	Atlas	
CSO054	7/14/2015 3:30	7/14/2015 5:00	59,441.38	0.06	0.99	60,041.79	4.46	0.81	1	Atlas	
CSO054	7/17/2015 22:15	7/18/2015 2:15	200,646.07	0.17	1.66	120,871.13	4.28	1.53	3	Atlas	
CSO054	7/29/2015 17:30	7/29/2015 17:45	320.07	0.01	0.17	1,882.78	0.21	0.15	1	Atlas	
CSO054	8/4/2015 18:45	8/4/2015 20:00	35,237.53	0.05	0.55	64,068.24	0.72	0.46	1	Atlas	
CSO054	8/5/2015 14:45	8/5/2015 16:15	9,227.36	0.06	0.31	29,765.69	1.03	0.27	1	Atlas	
CSO054	8/6/2015 2:15	8/6/2015 15:00	6,164.57	0.53	0.44	14,010.39	1.3	0.27	1	Atlas	
CSO054	8/10/2015 20:30	8/10/2015 20:45	2,579.19	0.01	0.06	42,986.46	1.37	0.05	1	Atlas	
CSO054	8/15/2015 16:30	8/15/2015 17:30	19,892.77	0.04	0.02	994,638.56	0.09	0.02	1	Atlas	
CSO054	8/19/2015 7:30	8/19/2015 17:00	2,833.60	0.40	0.41	6,911.23	0.4	0.17	3	Atlas	
CSO054	9/5/2015 17:30	9/5/2015 18:15	6,057.24	0.03	0.1	60,572.40	0.06	0.05	6	Atlas	
CSO054	9/9/2015 4:30	9/9/2015 12:15	12,135.92	0.32	0.04	303,397.92	0.44	0.03	1	Atlas	
CSO054	9/11/2015 18:30	9/11/2015 21:30	1,255.75	0.13	0.24	5,232.29	0.77	0.13	3	Atlas	
CSO054	9/25/2015 20:30	9/25/2015 20:45	1,344.15	0.01	0.11	12,219.50	0.08	0.05	6	Atlas	
CSO054	9/29/2015 9:15	9/29/2015 10:15	555.61	0.04	0.67	829.28	0.44	0.22	48	Atlas	
CSO054	9/29/2015 18:45	9/29/2015 19:45	366.46	0.04	0.67	546.95	0.6	0.22	48	Atlas	
CSO054	9/30/2015 8:15	9/30/2015 8:30	284.26	0.01	0.67	424.27	0.78	0.22	48	Atlas	
CSO054 Events			24.00								
CSO054 Total Volume (Gal)			619,664.46								
CSO055	7/2/2015 20:15	7/2/2015 20:45	66,865.67	0.02	2.57	26,017.77	4.45	0.98	1	Atlas	
CSO055	7/12/2015 6:00	7/12/2015 7:15	41,786.31	0.05	1.1	37,987.55	3	0.79	1	Atlas	
CSO055	7/14/2015 4:15	7/14/2015 4:30	3,141.92	0.01	0.99	3,173.65	4.45	0.81	1	Atlas	
CSO055	7/17/2015 22:15	7/18/2015 1:00	73,241.56	0.11	1.66	44,121.42	4.28	1.53	3	Atlas	
CSO055	8/4/2015 18:45	8/4/2015 19:00	130,900.69	0.01	0.55	238,001.25	0.68	0.46	1	Atlas	
CSO055	8/5/2015 14:45	8/5/2015 15:15	113,969.72	0.02	0.31	367,644.27	1.02	0.27	1	Atlas	
CSO055	8/6/2015 2:15	8/6/2015 8:00	65,979.39	0.24	0.44	149,953.16	1.17	0.27	1	Atlas	
CSO055	8/15/2015 16:30	8/15/2015 16:45	22,935.64	0.01	0.02	1,146,781.75	0.09	0.02	1	Atlas	
CSO055	9/5/2015 17:30	9/5/2015 17:45	11,908.79	0.01	0.1	119,087.92	0.06	0.05	6	Atlas	
CSO055	9/9/2015 11:15	9/9/2015 11:30	15,731.84	0.01	0.32	49,162.01	0.44	0.28	1	Atlas	
CSO055 Events			10.00								
CSO055 Total Volume (Gal)			546,461.53								
CSO057	7/2/2015 15:00	7/2/2015 15:00	350.85	-	2.02	173.69	2.83	0.78	24	Atlas	
CSO057	7/18/2015 0:00	7/18/2015 0:45	11,723.59	0.03	1.31	8,949.31	3.79	0.87	3	Atlas	
CSO057	8/4/2015 18:45	8/4/2015 18:45	282.09	-	0.43	656.03	0.44	0.37	1	Atlas	
CSO057	8/5/2015 14:45	8/5/2015 14:45	4,215.68	-	0.7	6,022.40	0.69	0.25	24	Atlas	
CSO057	9/9/2015 11:15	9/9/2015 11:15	87.35	-	0.28	311.98	0.42	0.24	1	Atlas	
CSO057 Events			5.00								
CSO057 Total Volume (Gal)			16,659.57								
CSO058	7/2/2015 0:15	7/2/2015 20:45	8,585.63	0.85	1.93	4,448.51	3.66	0.74	24	Atlas	
CSO058	7/3/2015 18:45	7/3/2015 18:45	288.09	-	0.4	720.23	2.97	0.29	1	Atlas	
CSO058	7/7/2015 11:30	7/7/2015 11:45	1,086.34	0.01	0.87	1,248.67	2.87	0.45	6	Atlas	
CSO058	7/8/2015 12:00	7/8/2015 12:00	429.65	-	0.13	3,304.97	3.36	0.10	1	Atlas	
CSO058	7/9/2015 6:15	7/9/2015 13:15	389.50	0.29	0.35	1,112.86	2.83	0.17	3	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO058	7/10/2015 16:00	7/10/2015 16:00	152.46	-	0.42	363.00	1.86	0.21	6	Atlas	
CSO058	7/12/2015 5:45	7/12/2015 7:30	194,441.02	0.07	1.3	149,570.01	3.09	0.87	3	Atlas	
CSO058	7/13/2015 14:45	7/13/2015 15:00	883.79	0.01	0.54	1,636.65	3.64	0.45	1	Atlas	
CSO058	7/14/2015 4:00	7/14/2015 4:45	4,468.74	0.03	0.67	6,669.76	4.28	0.52	1	Atlas	
CSO058	7/17/2015 22:15	7/18/2015 1:15	225,136.37	0.13	1.45	155,266.47	4.03	0.96	3	Atlas	
CSO058	8/4/2015 18:45	8/4/2015 19:00	2,123.83	0.01	0.46	4,617.03	0.49	0.39	1	Atlas	
CSO058	8/5/2015 15:00	8/5/2015 15:00	196.02	-	0.71	276.09	0.77	0.25	24	Atlas	
CSO058	8/6/2015 2:15	8/6/2015 2:15	53.98	-	0.71	76.03	0.84	0.25	24	Atlas	
CSO058	8/15/2015 16:30	8/15/2015 16:30	366.88	-	0.04	9,171.88	0.14	0.03	1	Atlas	
CSO058	8/19/2015 8:15	8/19/2015 8:15	208.95	-	0.29	720.51	0.21	0.11	24	Atlas	
CSO058	8/19/2015 17:00	8/19/2015 17:00	315.81	-	0.29	1,089.01	0.34	0.11	24	Atlas	
CSO058	9/9/2015 5:00	9/9/2015 11:15	892.37	0.26	0.04	22,309.37	0.53	0.03	1	Atlas	
CSO058 Events			17.00								
CSO058 Total Volume (Gal)			440,019.44								
CSO083	7/2/2015 20:45	7/2/2015 20:45	2,394.64	-	1.3	1,842.03	2.96	0.50	24	Atlas	
CSO083	7/7/2015 11:45	7/7/2015 11:45	7,181.88	-	0.8	8,977.34	2.1	0.42	6	Atlas	
CSO083	7/12/2015 6:00	7/12/2015 7:15	102,859.00	0.05	1.06	97,036.79	2.59	0.78	1	Atlas	
CSO083	7/14/2015 4:30	7/14/2015 4:30	16,539.94	-	0.51	32,431.25	3.53	0.39	1	Atlas	
CSO083	7/17/2015 23:15	7/18/2015 1:00	55,573.04	0.07	1.18	47,095.80	3.16	0.79	3	Atlas	
CSO083 Events			5.00								
CSO083 Total Volume (Gal)			184,548.49								
CSO084	7/2/2015 0:45	7/2/2015 2:00	6,024.47	0.05	1.3	4,634.21	2.24	0.50	24	Atlas	
CSO084	7/2/2015 19:15	7/2/2015 21:15	7,027.23	0.08	1.3	5,405.56	2.96	0.50	24	Atlas	
CSO084	7/3/2015 15:00	7/3/2015 19:00	5,288.06	0.17	0.33	16,024.43	2.79	0.18	1	Atlas	
CSO084	7/7/2015 11:30	7/7/2015 13:00	5,750.47	0.06	0.8	7,188.09	2.27	0.42	6	Atlas	
CSO084	7/8/2015 12:30	7/8/2015 12:45	1,187.35	0.01	0.07	16,962.20	2.54	0.05	1	Atlas	
CSO084	7/9/2015 6:15	7/9/2015 7:30	1,847.77	0.05	0.28	6,599.18	2.08	0.15	3	Atlas	
CSO084	7/10/2015 16:15	7/10/2015 16:15	1,175.26	-	0.43	2,733.16	1.72	0.21	6	Atlas	
CSO084	7/12/2015 7:30	7/12/2015 12:45	5,941.60	0.22	1.06	5,605.29	2.65	0.78	1	Atlas	
CSO084	7/13/2015 15:00	7/13/2015 15:15	1,508.27	0.01	0.4	3,770.68	3.06	0.34	1	Atlas	
CSO084	7/14/2015 4:00	7/14/2015 4:45	5,315.92	0.03	0.51	10,423.37	3.54	0.39	1	Atlas	
CSO084	7/17/2015 22:30	7/18/2015 1:30	25,287.72	0.13	1.18	21,430.27	3.16	0.79	3	Atlas	
CSO084	8/5/2015 15:00	8/5/2015 15:15	2,274.01	0.01	0.87	2,613.81	0.41	0.31	24	Atlas	
CSO084	8/6/2015 2:15	8/6/2015 8:15	2,129.77	0.25	0.87	2,448.01	0.91	0.31	24	Atlas	
CSO084	9/9/2015 11:15	9/9/2015 11:15	1,790.94	-	0.23	7,786.68	0.55	0.18	1	Atlas	
CSO084 Events			14.00								
CSO084 Total Volume (Gal)			72,548.84								
CSO088	7/2/2015 2:00	7/2/2015 2:00	900.45	-	1.67	539.19	2.19	0.63	24	Atlas	
CSO088	7/2/2015 15:30	7/2/2015 21:15	169,629.72	0.24	1.67	101,574.68	3.24	0.63	24	Atlas	
CSO088	7/7/2015 12:15	7/7/2015 13:00	4,409.32	0.03	0.78	5,652.97	2.43	0.32	6	Atlas	
CSO088	7/8/2015 0:30	7/8/2015 0:30	402.39	-	0.78	515.89	2.59	0.32	6	Atlas	
CSO088	7/9/2015 13:45	7/9/2015 13:45	1,390.26	-	0.34	4,088.99	2.26	0.16	12	Atlas	
CSO088	7/10/2015 16:30	7/10/2015 16:30	9,284.42	-	0.41	22,644.94	1.69	0.20	6	Atlas	

There are know issues with the flow monitoring data's quality.

MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO088	7/12/2015 6:15	7/12/2015 8:30	528,577.93	0.09	1.75	302,044.53	3.3	2.28	1	Atlas	
CSO088	7/13/2015 14:30	7/13/2015 15:15	24,163.84	0.03	0.67	36,065.44	3.97	0.58	1	Atlas	
CSO088	7/14/2015 4:30	7/14/2015 19:15	260,770.27	0.61	0.68	383,485.70	4.83	0.55	1	Atlas	
CSO088	7/18/2015 1:00	7/18/2015 20:30	953,422.22	1.94	1.54	619,105.33	5.25	1.10	3	Atlas	
CSO088	8/4/2015 19:15	8/4/2015 19:30	65,919.25	0.01	0.52	126,767.79	0.58	0.44	1	Atlas	
CSO088	8/5/2015 15:15	8/5/2015 15:30	13,678.73	0.01	0.29	47,168.04	0.88	0.24	1	Atlas	
CSO088	8/6/2015 8:15	8/6/2015 15:30	23,954.06	0.30	0.53	45,196.33	1.34	0.22	12	Atlas	
CSO088	8/19/2015 8:45	8/19/2015 8:45	12,353.31	-	0.34	36,333.25	0.26	0.13	12	Atlas	
CSO088	8/19/2015 17:15	8/19/2015 17:30	926.14	0.01	0.34	2,723.93	0.46	0.13	12	Atlas	
CSO088 Events			15.00								
CSO088 Total Volume (Gal)			2,069,782.30								
CSO091	7/2/2015 0:15	7/2/2015 1:45	1,594.40	0.06	0.87	1,832.64	2.25	0.40	3	Atlas	
CSO091	7/2/2015 14:15	7/2/2015 21:00	35,539.63	0.28	0.87	40,850.14	2.55	0.40	3	Atlas	
CSO091	7/3/2015 14:45	7/3/2015 19:00	29,878.63	0.18	0.35	85,367.52	2.27	0.21	1	Atlas	
CSO091	7/7/2015 11:30	7/7/2015 16:30	21,510.15	0.21	0.75	28,680.21	2.01	0.38	6	Atlas	
CSO091	7/9/2015 5:15	7/9/2015 7:30	1,571.41	0.09	0.28	5,612.17	1.64	0.17	3	Atlas	
CSO091	7/10/2015 16:15	7/10/2015 16:15	1,286.78	-	0.39	3,299.44	1.59	0.19	6	Atlas	
CSO091	7/12/2015 6:00	7/12/2015 7:45	129,677.89	0.07	0.84	154,378.45	2.33	0.55	3	Atlas	
CSO091	7/13/2015 15:00	7/13/2015 15:00	15,009.82	-	0.32	46,905.70	2.66	0.27	1	Atlas	
CSO091	7/14/2015 4:15	7/14/2015 4:45	63,711.02	0.02	0.56	113,769.69	3.19	0.37	3	Atlas	
CSO091	7/17/2015 22:30	7/18/2015 1:15	106,574.01	0.11	0.87	122,498.86	2.61	0.58	3	Atlas	
CSO091	7/29/2015 17:30	7/29/2015 17:30	1,876.36	-	0.08	23,454.56	0.14	0.07	1	Atlas	
CSO091	8/4/2015 19:00	8/4/2015 19:00	2,202.50	-	0.11	20,022.73	0.16	0.09	1	Atlas	
CSO091	8/5/2015 15:00	8/5/2015 15:15	1,860.37	0.01	0.91	2,044.37	0.29	0.33	24	Atlas	
CSO091	8/6/2015 2:15	8/6/2015 15:15	20,802.36	0.54	0.91	22,859.74	1.02	0.33	24	Atlas	
CSO091	8/19/2015 7:45	8/19/2015 8:30	41,933.70	0.03	0.57	73,567.89	0.38	0.24	1	Atlas	
CSO091	8/19/2015 17:00	8/19/2015 17:00	6,247.68	-	0.57	10,960.84	0.61	0.24	1	Atlas	
CSO091	9/9/2015 11:30	9/9/2015 11:30	6,899.57	-	0.21	32,855.11	0.38	0.16	1	Atlas	
CSO091	9/11/2015 18:30	9/11/2015 18:30	806.11	-	0.2	4,030.57	0.69	0.14	1	Atlas	
CSO091 Events			18.00								
CSO091 Total Volume (Gal)			488,982.42								
CSO092	7/2/2015 0:00	7/2/2015 1:45	929.50	0.07	0.87	1,068.39	2.25	0.40	3	Atlas	
CSO092	7/2/2015 14:00	7/2/2015 21:00	42,093.79	0.29	0.87	48,383.66	2.55	0.40	3	Atlas	
CSO092	7/3/2015 14:30	7/3/2015 18:45	58,242.79	0.18	0.35	166,407.97	2.27	0.21	1	Atlas	
CSO092	7/7/2015 11:00	7/8/2015 0:00	28,273.26	0.54	0.75	37,697.68	2.04	0.38	6	Atlas	
CSO092	7/9/2015 6:00	7/9/2015 7:15	2,472.81	0.05	0.28	8,831.47	1.63	0.17	3	Atlas	
CSO092	7/10/2015 10:00	7/10/2015 16:00	4,097.56	0.25	0.39	10,506.57	1.85	0.19	6	Atlas	
CSO092	7/12/2015 5:45	7/12/2015 7:45	131,915.85	0.08	0.84	157,042.68	2.33	0.55	3	Atlas	
CSO092	7/13/2015 14:15	7/13/2015 15:00	1,084.84	0.03	0.32	3,390.14	2.66	0.27	1	Atlas	
CSO092	7/14/2015 4:00	7/14/2015 4:30	73,853.31	0.02	0.56	131,880.91	3.18	0.37	3	Atlas	
CSO092	7/17/2015 22:15	7/18/2015 1:00	78,051.01	0.11	0.87	89,713.81	2.61	0.58	3	Atlas	
CSO092	7/29/2015 17:15	7/29/2015 17:15	3,838.79	-	0.08	47,984.90	0.13	0.07	1	Atlas	
CSO092	8/5/2015 14:45	8/5/2015 14:45	747.06	-	0.91	820.95	0.25	0.33	24	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO106	7/2/2015 0:30	7/2/2015 1:45	2,258.31	0.05	0.74	3,051.77	2.12	0.37	3	Atlas	
CSO106	7/2/2015 10:15	7/2/2015 21:00	15,009.76	0.45	0.74	20,283.46	2.33	0.37	3	Atlas	
CSO106	7/3/2015 14:45	7/3/2015 20:00	9,016.97	0.22	0.3	30,056.56	1.99	0.17	1	Atlas	
CSO106	7/7/2015 11:45	7/7/2015 16:15	2,285.54	0.19	0.68	3,361.09	1.76	0.35	6	Atlas	
CSO106	7/9/2015 6:00	7/9/2015 6:15	2,681.20	0.01	0.21	12,767.61	1.28	0.13	3	Atlas	
CSO106	7/10/2015 9:45	7/10/2015 18:00	43,645.56	0.34	0.67	65,142.62	1.95	0.33	6	Atlas	
CSO106	7/12/2015 5:45	7/12/2015 8:15	58,646.90	0.10	0.9	65,163.22	2.55	0.63	1	Atlas	
CSO106	7/13/2015 14:15	7/13/2015 16:00	5,126.92	0.07	0.4	12,817.29	2.96	0.33	1	Atlas	
CSO106	7/14/2015 4:00	7/14/2015 5:30	22,637.84	0.06	0.5	45,275.69	3.45	0.37	1	Atlas	
CSO106	7/17/2015 22:30	7/18/2015 0:45	44,867.58	0.09	0.87	51,571.93	2.71	0.58	3	Atlas	
CSO106	7/29/2015 17:15	7/29/2015 17:15	1,332.00	-	0.06	22,200.00	0.14	0.05	1	Atlas	
CSO106	8/4/2015 19:00	8/4/2015 19:00	391.32	-	0.18	2,174.02	0.19	0.14	1	Atlas	
CSO106	8/5/2015 14:45	8/5/2015 14:45	106.00	-	1.08	98.15	0.29	0.40	24	Atlas	
CSO106	8/6/2015 7:30	8/6/2015 15:30	36,814.60	0.33	1.08	34,087.59	1.26	0.40	24	Atlas	
CSO106	8/19/2015 7:30	8/19/2015 8:15	5,684.25	0.03	0.65	8,745.00	0.31	0.27	1	Atlas	
CSO106	8/19/2015 16:45	8/19/2015 16:45	8,814.22	-	0.65	13,560.34	0.66	0.27	1	Atlas	
CSO106	9/7/2015 17:45	9/7/2015 18:30	41,954.02	0.03	1.05	39,956.21	1.15	0.91	1	Atlas	
CSO106	9/9/2015 11:15	9/9/2015 11:15	333.16	-	0.1	3,331.56	1.25	0.08	1	Atlas	
CSO106	9/29/2015 18:45	9/29/2015 18:45	399.31	-	1.02	391.48	0.94	0.33	48	Atlas	
CSO106 Events			19.00								
CSO106 Total Volume (Gal)			302,005.45								
CSO108	7/10/2015 10:30	7/10/2015 14:45	86,745.09	0.18	0.81	107,092.71	1.94	0.41	1	Atlas	
CSO108	7/12/2015 6:15	7/12/2015 18:15	3,210,956.26	0.50	1.02	3,147,996.33	2.76	0.69	1	Atlas	
CSO108	7/13/2015 14:30	7/13/2015 15:30	71,647.57	0.04	0.57	125,697.49	3.33	0.47	1	Atlas	
CSO108	7/14/2015 4:30	7/14/2015 13:00	987,620.12	0.35	0.62	1,592,935.68	3.95	0.43	1	Atlas	
CSO108	7/17/2015 23:45	7/18/2015 4:30	596,316.57	0.20	1.25	477,053.26	3.5	0.83	3	Atlas	
CSO108	8/6/2015 15:00	8/6/2015 15:15	61,824.67	0.01	1.32	46,836.87	1.63	0.46	24	Atlas	
CSO108	8/19/2015 17:15	8/19/2015 17:15	27,888.02	-	0.55	50,705.49	0.54	0.25	1	Atlas	
CSO108	9/7/2015 18:15	9/7/2015 18:45	243,620.26	0.02	1.37	177,825.00	1.41	1.96	1	Atlas	
CSO108 Events			8.00								
CSO108 Total Volume (Gal)			5,286,618.56								
CSO110	7/2/2015 1:00	7/2/2015 3:30	326,882.68	0.10	0.77	424,522.95	2.15	0.41	3	Atlas	
CSO110	7/2/2015 21:15	7/2/2015 22:15	131,932.45	0.04	0.77	171,340.85	2.27	0.41	3	Atlas	
CSO110	7/3/2015 15:15	7/3/2015 20:15	151,050.80	0.21	0.28	539,467.14	2.02	0.17	1	Atlas	
CSO110	7/7/2015 12:00	7/7/2015 17:30	328,421.65	0.23	0.72	456,141.18	1.8	0.37	6	Atlas	
CSO110	7/9/2015 6:45	7/9/2015 8:30	77,962.10	0.07	0.22	354,373.19	1.39	0.13	3	Atlas	
CSO110	7/10/2015 10:30	7/10/2015 17:30	553,759.22	0.29	0.56	988,855.76	1.88	0.26	6	Atlas	
CSO110	7/12/2015 6:15	7/12/2015 9:00	903,553.36	0.11	0.94	961,226.97	2.53	0.63	1	Atlas	
CSO110	7/13/2015 14:45	7/14/2015 5:45	1,054,698.07	0.63	0.36	2,929,716.85	3.24	0.30	1	Atlas	
CSO110	7/14/2015 19:00	7/14/2015 20:15	183,406.75	0.05	0.07	2,620,096.50	2.61	0.06	1	Atlas	
CSO110	7/17/2015 23:00	7/18/2015 6:45	1,283,171.52	0.32	0.86	1,492,059.90	2.57	0.57	3	Atlas	
CSO110	7/29/2015 17:45	7/29/2015 17:45	3,484.92	-	0.05	69,698.50	0.14	0.04	1	Atlas	
CSO110	8/4/2015 19:45	8/4/2015 20:00	33,748.75	0.01	0.18	187,493.08	0.23	0.15	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO117	7/14/2015 4:15	7/14/2015 11:00	900,888.17	0.28	0.64	1,407,637.76	3.86	0.50	1	Atlas	
CSO117	7/14/2015 19:15	7/14/2015 19:30	47,474.49	0.01	0.02	2,373,724.40	3.16	0.02	1	Atlas	
CSO117	7/17/2015 22:45	7/18/2015 2:30	2,414,062.32	0.16	1.13	2,136,338.34	3.3	0.75	3	Atlas	
CSO117	8/4/2015 19:30	8/4/2015 20:00	40,181.35	0.02	0.18	223,229.74	0.22	0.14	1	Atlas	
CSO117	8/5/2015 15:15	8/5/2015 16:00	129,716.62	0.03	0.14	926,547.26	0.36	0.12	1	Atlas	
CSO117	8/6/2015 2:30	8/6/2015 16:00	1,087,763.74	0.56	0.54	2,014,377.29	0.86	0.21	1	Atlas	
CSO117	8/15/2015 16:45	8/15/2015 17:15	97,749.23	0.02	0.14	698,208.81	0.25	0.12	1	Atlas	
CSO117	8/19/2015 8:15	8/19/2015 17:45	673,515.71	0.40	0.36	1,870,876.98	0.52	0.14	3	Atlas	
CSO117	9/9/2015 11:30	9/9/2015 12:15	343,870.19	0.03	0.23	1,495,087.77	0.31	0.17	1	Atlas	
CSO117	9/11/2015 18:30	9/11/2015 19:00	51,803.39	0.02	0.15	345,355.94	0.56	0.10	1	Atlas	
CSO117	9/29/2015 19:30	9/29/2015 19:45	11,513.41	0.01	0.77	14,952.48	0.75	0.25	48	Atlas	
CSO117 Events			20.00								
CSO117 Total Volume (Gal)			12,604,038.58								
CSO118	7/12/2015 6:30	7/12/2015 6:30	856.28	-	1.06	807.81	2.51	0.78	1	Atlas	
CSO118 Events			1.00								
CSO118 Total Volume (Gal)			856.28								
CSO119	7/2/2015 0:30	7/2/2015 2:00	86,414.58	0.06	1.3	66,472.76	2.24	0.50	24	Atlas	
CSO119	7/2/2015 19:00	7/2/2015 21:00	178,808.05	0.08	1.3	137,544.65	2.96	0.50	24	Atlas	
CSO119	7/3/2015 14:30	7/3/2015 18:45	74,856.39	0.18	0.33	226,837.54	2.79	0.18	1	Atlas	
CSO119	7/7/2015 11:30	7/7/2015 13:00	145,695.76	0.06	0.8	182,119.70	2.27	0.42	6	Atlas	
CSO119	7/8/2015 12:15	7/8/2015 12:30	31,497.58	0.01	0.07	449,965.36	2.54	0.05	1	Atlas	
CSO119	7/9/2015 6:00	7/9/2015 7:15	46,664.54	0.05	0.28	166,659.06	2.08	0.15	3	Atlas	
CSO119	7/10/2015 10:30	7/10/2015 16:15	55,815.97	0.24	0.43	129,804.57	1.93	0.21	6	Atlas	
CSO119	7/12/2015 5:30	7/12/2015 16:00	891,102.10	0.44	1.06	840,662.36	2.66	0.78	1	Atlas	
CSO119	7/13/2015 14:45	7/13/2015 15:00	26,337.23	0.01	0.4	65,843.08	3.06	0.34	1	Atlas	
CSO119	7/14/2015 3:45	7/14/2015 4:45	99,124.62	0.04	0.51	194,361.99	3.54	0.39	1	Atlas	
CSO119	7/17/2015 22:15	7/18/2015 1:45	436,606.80	0.15	1.18	370,005.76	3.16	0.79	3	Atlas	
CSO119	8/4/2015 18:45	8/4/2015 19:00	17,666.88	0.01	0.14	126,191.97	0.19	0.10	1	Atlas	
CSO119	8/5/2015 14:45	8/5/2015 15:15	52,812.44	0.02	0.87	60,703.96	0.41	0.31	24	Atlas	
CSO119	8/6/2015 2:00	8/6/2015 15:00	160,717.89	0.54	0.87	184,733.20	1.01	0.31	24	Atlas	
CSO119	8/19/2015 8:00	8/19/2015 8:30	84,615.42	0.02	0.35	241,758.34	0.27	0.13	24	Atlas	
CSO119	8/19/2015 16:45	8/19/2015 17:00	25,331.75	0.01	0.35	72,376.42	0.42	0.13	24	Atlas	
CSO119	9/9/2015 11:15	9/9/2015 11:30	50,886.75	0.01	0.23	221,246.74	0.55	0.18	1	Atlas	
CSO119	9/11/2015 18:15	9/11/2015 18:15	1,072.32	-	0.14	7,659.45	0.73	0.10	1	Atlas	
CSO119 Events			18.00								
CSO119 Total Volume (Gal)			2,466,027.04								
CSO120	7/2/2015 0:30	7/2/2015 1:30	60,864.06	0.04	1.66	36,665.09	2.4	0.64	24	Atlas	
CSO120	7/2/2015 19:15	7/2/2015 20:45	295,367.47	0.06	1.66	177,932.21	3.44	0.64	24	Atlas	
CSO120	7/3/2015 14:45	7/3/2015 18:45	46,877.32	0.17	0.35	133,935.21	3.3	0.19	1	Atlas	
CSO120	7/7/2015 11:30	7/7/2015 12:45	163,340.36	0.05	0.87	187,747.54	2.64	0.41	6	Atlas	
CSO120	7/8/2015 12:15	7/8/2015 12:45	28,472.40	0.02	0.87	32,726.89	2.91	0.41	6	Atlas	
CSO120	7/9/2015 6:15	7/9/2015 6:30	24,772.53	0.01	0.31	79,911.39	2.21	0.15	3	Atlas	
CSO120	7/10/2015 14:00	7/10/2015 16:15	29,295.41	0.09	0.43	68,128.87	1.98	0.21	6	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO120	7/12/2015 6:00	7/12/2015 7:45	345,374.52	0.07	1.35	255,832.98	2.98	0.91	1	Atlas	
CSO120	7/13/2015 14:15	7/13/2015 15:00	81,417.71	0.03	0.5	162,835.41	3.48	0.41	1	Atlas	
CSO120	7/14/2015 4:00	7/14/2015 12:45	189,660.70	0.36	0.73	259,809.18	4.21	0.57	1	Atlas	
CSO120	7/17/2015 22:30	7/18/2015 1:30	353,638.84	0.13	1.6	221,024.27	4.32	1.33	3	Atlas	
CSO120	7/29/2015 17:30	7/29/2015 17:30	32,741.69	-	0.08	409,271.09	0.1	0.07	1	Atlas	
CSO120	8/4/2015 19:00	8/4/2015 19:15	108,036.20	0.01	0.44	245,536.82	0.5	0.37	1	Atlas	
CSO120	8/5/2015 15:00	8/5/2015 15:00	37,800.61	-	0.77	49,091.71	0.77	0.28	24	Atlas	
CSO120	8/6/2015 2:00	8/6/2015 15:15	183,200.69	0.55	0.77	237,922.97	1.21	0.28	24	Atlas	
CSO120	8/19/2015 8:30	8/19/2015 8:30	72,571.50	-	0.28	259,183.93	0.27	0.11	24	Atlas	
CSO120	8/19/2015 17:00	8/19/2015 17:00	103,110.01	-	0.28	368,250.03	0.41	0.11	24	Atlas	
CSO120	9/5/2015 17:15	9/5/2015 17:30	29,131.43	0.01	0.12	242,761.95	0.08	0.07	1	Atlas	
CSO120	9/7/2015 17:15	9/7/2015 17:15	6,581.97	-	0.6	10,969.95	0.72	0.52	1	Atlas	
CSO120	9/9/2015 11:30	9/9/2015 11:30	80,351.78	-	0.27	297,599.19	0.99	0.23	1	Atlas	
CSO120	9/11/2015 18:30	9/11/2015 18:30	40,457.83	-	0.19	212,935.96	1.14	0.12	1	Atlas	
CSO120 Events			21.00								
CSO120 Total Volume (Gal)			2,313,065.03								
CSO121	7/2/2015 0:45	7/2/2015 1:30	5,797.61	0.03	1.66	3,492.54	2.4	0.64	24	Atlas	
CSO121	7/2/2015 15:00	7/2/2015 21:00	516,143.68	0.25	1.66	310,929.92	3.44	0.64	24	Atlas	
CSO121	7/3/2015 18:45	7/3/2015 18:45	6,504.60	-	0.35	18,584.58	2.67	0.19	1	Atlas	
CSO121	7/7/2015 12:45	7/7/2015 12:45	6,845.93	-	0.87	7,868.88	2.64	0.41	6	Atlas	
CSO121	7/8/2015 0:15	7/8/2015 0:15	1,674.50	-	0.87	1,924.71	2.84	0.41	6	Atlas	
CSO121	7/8/2015 12:15	7/8/2015 12:30	20,611.28	0.01	0.87	23,691.13	2.91	0.41	6	Atlas	
CSO121	7/9/2015 6:15	7/9/2015 13:30	17,360.50	0.30	0.31	56,001.61	2.38	0.15	3	Atlas	
CSO121	7/10/2015 14:00	7/10/2015 16:15	24,046.84	0.09	0.43	55,922.87	1.98	0.21	6	Atlas	
CSO121	7/12/2015 6:15	7/12/2015 15:30	307,322.20	0.39	1.35	227,646.07	2.98	0.91	1	Atlas	
CSO121	7/13/2015 14:15	7/13/2015 14:15	4,831.99	-	0.5	9,663.98	3.23	0.41	1	Atlas	
CSO121	7/14/2015 4:15	7/14/2015 4:45	33,714.78	0.02	0.73	46,184.63	4.17	0.57	1	Atlas	
CSO121	7/17/2015 22:30	7/18/2015 2:00	179,335.21	0.15	1.6	112,084.51	4.32	1.33	3	Atlas	
CSO121	7/29/2015 17:30	7/29/2015 17:30	2,605.24	-	0.08	32,565.49	0.1	0.07	1	Atlas	
CSO121	8/4/2015 19:15	8/4/2015 19:15	8,659.38	-	0.44	19,680.42	0.5	0.37	1	Atlas	
CSO121	8/5/2015 14:45	8/5/2015 15:00	88,062.80	0.01	0.77	114,367.28	0.77	0.28	24	Atlas	
CSO121	8/6/2015 2:00	8/6/2015 15:15	103,807.92	0.55	0.77	134,815.47	1.21	0.28	24	Atlas	
CSO121	8/19/2015 8:15	8/19/2015 8:30	11,970.45	0.01	0.28	42,751.60	0.27	0.11	24	Atlas	
CSO121	8/19/2015 16:45	8/19/2015 17:00	27,002.90	0.01	0.28	96,438.94	0.41	0.11	24	Atlas	
CSO121	9/5/2015 17:15	9/5/2015 17:15	6,071.56	-	0.12	50,596.35	0.08	0.07	1	Atlas	
CSO121	9/7/2015 17:15	9/7/2015 17:15	13,256.60	-	0.6	22,094.34	0.72	0.52	1	Atlas	
CSO121	9/9/2015 11:15	9/9/2015 11:30	17,999.65	0.01	0.27	66,665.37	0.99	0.23	1	Atlas	
CSO121	9/11/2015 18:15	9/11/2015 18:30	38,342.04	0.01	0.19	201,800.23	1.14	0.12	1	Atlas	
CSO121	9/29/2015 19:00	9/29/2015 19:00	6,618.52	-	0.83	7,974.12	0.78	0.27	48	Atlas	
CSO121 Events			23.00								
CSO121 Total Volume (Gal)			1,448,586.19								
CSO125	7/2/2015 1:00	7/2/2015 2:00	20,814.78	0.04	1.64	12,691.94	1.84	0.63	24	Atlas	
CSO125	7/2/2015 19:15	7/2/2015 21:45	665,034.68	0.10	1.64	405,508.95	2.94	0.63	24	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO125	7/3/2015 15:30	7/3/2015 19:00	41,734.16	0.15	0.35	119,240.45	2.9	0.19	1	Atlas	
CSO125	7/7/2015 11:45	7/7/2015 13:15	277,532.84	0.06	0.77	360,432.27	2.5	0.33	6	Atlas	
CSO125	7/8/2015 12:45	7/8/2015 12:45	47,926.54	-	0.77	62,242.26	2.79	0.33	6	Atlas	
CSO125	7/9/2015 6:30	7/9/2015 7:45	15,315.32	0.05	0.3	51,051.08	2.36	0.14	12	Atlas	
CSO125	7/10/2015 10:30	7/10/2015 16:30	78,457.26	0.25	0.42	186,803.00	1.86	0.21	6	Atlas	
CSO125	7/12/2015 6:00	7/12/2015 6:45	718,242.29	0.03	1.8	399,023.50	2.84	2.00	3	Atlas	
CSO125	8/5/2015 15:15	8/5/2015 15:15	3,606.04	-	1.03	3,501.01	0.63	0.35	24	Atlas	
CSO125	8/6/2015 8:00	8/6/2015 15:15	23,658.30	0.30	1.03	22,969.23	1.36	0.35	24	Atlas	
CSO125	8/19/2015 8:30	8/19/2015 17:15	326,452.12	0.36	0.62	526,535.68	0.69	0.27	1	Atlas	
CSO125	9/1/2015 18:45	9/1/2015 19:00	7,239.82	0.01	Discharge		0	#N/A	#N/A	#N/A	
CSO125	9/10/2015 4:45	9/10/2015 5:00	112,910.22	0.01	0.34	332,088.88	1.11	0.23	1	Atlas	
CSO125	9/29/2015 9:30	9/29/2015 10:00	218,634.44	0.02	1.04	210,225.42	0.69	0.34	48	Atlas	
CSO125 Events			14.00								
CSO125 Total Volume (Gal)			2,557,558.83								
CSO126	7/2/2015 4:15	7/2/2015 14:15	36,481.00	0.42	1.64	22,244.51	2.04	0.63	24	Atlas	
CSO126	7/7/2015 11:45	7/8/2015 21:45	419,889.17	1.42	0.77	545,310.62	2.8	0.33	6	Atlas	
CSO126	7/12/2015 6:15	7/13/2015 16:00	34,788,419.32	1.41	1.8	19,326,899.62	3.93	2.00	3	Atlas	
CSO126	7/14/2015 4:15	7/14/2015 23:30	3,675,697.06	0.80	0.6	6,126,161.77	4.65	0.44	1	Atlas	
CSO126	7/17/2015 23:15	7/19/2015 0:30	2,525,108.10	1.05	1.46	1,729,526.10	4.6	0.97	3	Atlas	
CSO126	8/4/2015 19:00	8/4/2015 19:00	22,328.04	-	0.34	65,670.71	0.38	0.29	1	Atlas	
CSO126	8/19/2015 8:15	8/19/2015 8:15	11,915.65	-	0.62	19,218.78	0.45	0.27	1	Atlas	
CSO126 Events			7.00								
CSO126 Total Volume (Gal)			41,479,838.34								
CSO127	7/2/2015 0:30	7/2/2015 2:45	308,796.25	0.09	1.68	183,807.29	2.13	0.63	24	Atlas	
CSO127	7/2/2015 20:30	7/2/2015 21:45	698,281.35	0.05	1.68	415,643.66	3.12	0.63	24	Atlas	
CSO127	7/3/2015 15:00	7/3/2015 19:30	212,411.46	0.19	0.63	337,161.05	3.27	0.44	1	Atlas	
CSO127	7/7/2015 11:30	7/8/2015 0:30	296,464.42	0.54	0.73	406,115.64	2.96	0.33	6	Atlas	
CSO127	7/8/2015 12:15	7/8/2015 13:00	106,349.57	0.03	0.73	145,684.35	3.04	0.33	6	Atlas	
CSO127	7/9/2015 6:15	7/9/2015 8:00	251,867.90	0.07	0.3	839,559.66	2.57	0.17	3	Atlas	
CSO127	7/10/2015 10:15	7/10/2015 16:45	216,702.44	0.27	0.5	433,404.89	2.18	0.25	6	Atlas	
CSO127	7/12/2015 6:00	7/12/2015 6:15	2,972,847.50	0.01	2.04	1,457,278.19	2.78	3.71	3	Atlas	
CSO127	7/29/2015 17:30	7/29/2015 18:15	43,601.74	0.03	0.07	622,882.01	0.09	0.06	1	Atlas	
CSO127	8/4/2015 19:00	8/4/2015 21:15	128,288.63	0.09	0.23	557,776.66	0.3	0.18	1	Atlas	
CSO127	8/5/2015 15:00	8/5/2015 18:15	117,901.89	0.14	1.14	103,422.71	0.52	0.40	24	Atlas	
CSO127	8/6/2015 2:30	8/7/2015 19:00	458,815.45	1.69	1.14	402,469.69	1.37	0.40	24	Atlas	
CSO127	8/19/2015 7:45	8/19/2015 8:45	70,611.55	0.04	0.62	113,889.59	0.48	0.30	1	Atlas	
CSO127	8/19/2015 17:00	8/19/2015 17:30	17,534.41	0.02	0.62	28,281.30	0.66	0.30	1	Atlas	
CSO127	9/5/2015 17:30	9/5/2015 17:30	3,127.38	-	0.25	12,509.50	0.21	0.18	1	Atlas	
CSO127	9/7/2015 18:00	9/7/2015 18:45	61,250.59	0.03	0.64	95,704.05	0.89	0.53	1	Atlas	
CSO127	9/9/2015 11:30	9/9/2015 11:45	3,217.93	0.01	0.17	18,928.98	0.98	0.08	1	Atlas	
CSO127	9/10/2015 5:15	9/10/2015 5:15	2,134.59	-	0.17	12,556.43	1.06	0.08	1	Atlas	

There are now issues with the flow monitoring data's quality.
 MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO137	8/6/2015 14:30	8/6/2015 15:00	80,375.38	0.02	1.08	74,421.65	1.26	0.40	24	Atlas	
CSO137	8/19/2015 7:45	8/19/2015 8:30	3,198.73	0.03	0.65	4,921.12	0.31	0.27	1	Atlas	
CSO137	8/19/2015 17:00	8/19/2015 17:00	34,259.20	-	0.65	52,706.46	0.68	0.27	1	Atlas	
CSO137	9/7/2015 18:00	9/7/2015 18:15	63,463.87	0.01	1.05	60,441.78	1.11	0.91	1	Atlas	
CSO137	9/9/2015 11:30	9/9/2015 11:30	2,171.76	-	0.1	21,717.60	1.25	0.08	1	Atlas	
CSO137	9/29/2015 9:30	9/29/2015 9:30	360.29	-	1.02	353.23	0.63	0.33	48	Atlas	
CSO137 Events			16.00								
CSO137 Total Volume (Gal)			1,075,931.25								
CSO140	7/2/2015 0:45	7/2/2015 0:45	412.64	-	1.53	269.70	2.12	0.59	24	Atlas	
CSO140	7/2/2015 19:30	7/2/2015 21:00	414,013.02	0.06	1.53	270,596.75	3.25	0.59	24	Atlas	
CSO140	7/7/2015 11:45	7/7/2015 12:45	16,132.73	0.04	0.72	22,406.57	2.46	0.37	6	Atlas	
CSO140	7/8/2015 12:30	7/8/2015 12:30	11,607.45	-	0.1	116,074.48	2.74	0.07	1	Atlas	
CSO140	7/9/2015 6:15	7/9/2015 13:15	16,569.87	0.29	0.29	57,137.47	2.31	0.13	12	Atlas	
CSO140	7/10/2015 14:00	7/10/2015 21:15	19,351.79	0.30	0.45	43,003.98	1.94	0.21	6	Atlas	
CSO140	7/12/2015 6:00	7/12/2015 9:00	1,271,408.94	0.13	1.36	934,859.51	2.93	1.04	1	Atlas	
CSO140	7/13/2015 14:15	7/14/2015 9:15	791,259.39	0.79	0.49	1,614,815.08	4.08	0.41	1	Atlas	
CSO140	7/14/2015 18:45	7/14/2015 20:00	236,648.65	0.05	0.18	1,314,714.72	3.56	0.16	1	Atlas	
CSO140	7/17/2015 22:30	7/18/2015 2:00	839,027.99	0.15	1.4	599,305.71	4.08	0.93	3	Atlas	
CSO140	8/4/2015 18:45	8/4/2015 19:00	214,563.96	0.01	0.35	613,039.88	0.4	0.30	1	Atlas	
CSO140	8/5/2015 14:45	8/5/2015 15:15	19,880.75	0.02	0.9	22,089.72	0.66	0.32	24	Atlas	
CSO140	8/6/2015 2:15	8/6/2015 15:15	87,043.97	0.54	0.9	96,715.52	1.24	0.32	24	Atlas	
CSO140	8/19/2015 8:15	8/19/2015 8:30	87,730.50	0.01	0.38	230,869.75	0.36	0.15	12	Atlas	
CSO140	8/19/2015 17:00	8/19/2015 17:00	13,074.88	-	0.38	34,407.57	0.54	0.15	12	Atlas	
CSO140	9/5/2015 17:00	9/5/2015 17:15	30,113.12	0.01	0.28	107,546.86	0.23	0.20	1	Atlas	
CSO140	9/9/2015 11:30	9/9/2015 11:30	47,375.61	-	0.26	182,213.87	1.26	0.23	1	Atlas	
CSO140	9/11/2015 18:30	9/11/2015 18:30	92.51	-	0.19	486.90	1.42	0.13	3	Atlas	
CSO140 Events			18.00								
CSO140 Total Volume (Gal)			4,116,307.75								
CSO141	7/2/2015 20:15	7/2/2015 23:00	136,912.39	0.11	1.66	82,477.35	3.45	0.64	24	Atlas	
CSO141	7/7/2015 10:30	7/7/2015 17:15	119,873.15	0.28	0.87	137,785.22	2.84	0.41	6	Atlas	
CSO141	7/12/2015 5:45	7/12/2015 8:00	185,063.08	0.09	1.35	137,083.76	2.98	0.91	1	Atlas	
CSO141	7/14/2015 4:00	7/14/2015 6:15	50,322.93	0.09	0.73	68,935.52	4.21	0.57	1	Atlas	
CSO141	7/17/2015 22:45	7/18/2015 3:30	178,198.91	0.20	1.6	111,374.32	4.32	1.33	3	Atlas	
CSO141	8/4/2015 18:45	8/4/2015 22:15	30,490.23	0.15	0.44	69,295.97	0.52	0.37	1	Atlas	
CSO141	8/5/2015 14:15	8/6/2015 14:45	124,321.08	1.02	0.77	161,455.95	1.28	0.28	24	Atlas	
CSO141	8/19/2015 7:45	8/19/2015 17:30	13,349.70	0.41	0.28	47,677.49	0.41	0.11	24	Atlas	
CSO141	9/5/2015 17:15	9/5/2015 17:45	885.95	0.02	0.12	7,382.90	0.08	0.07	1	Atlas	
CSO141	9/9/2015 11:30	9/9/2015 11:45	26,043.56	0.01	0.27	96,457.64	0.99	0.23	1	Atlas	
CSO141	9/11/2015 18:30	9/11/2015 18:30	1,395.66	-	0.19	7,345.56	1.14	0.12	1	Atlas	
CSO141 Events			11.00								
CSO141 Total Volume (Gal)			866,856.62								
CSO142	7/2/2015 20:15	7/2/2015 20:45	34,172.76	0.02	0.93	36,744.91	2.66	0.45	3	Atlas	*R
CSO142	7/3/2015 14:30	7/3/2015 18:45	39,376.35	0.18	0.33	119,322.28	2.39	0.23	1	Atlas	*R

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO142	7/7/2015 11:30	7/7/2015 11:30	11,445.31	-	0.72	15,896.27	1.64	0.37	6	Atlas	*R
CSO142	7/12/2015 5:45	7/12/2015 6:15	118,762.76	0.02	0.84	141,384.24	2.35	0.60	1	Atlas	*
CSO142	7/13/2015 14:45	7/13/2015 14:45	17,476.56	-	0.25	69,906.25	2.75	0.21	1	Atlas	*R
CSO142	7/14/2015 4:00	7/14/2015 4:15	108,450.77	0.01	0.53	204,624.10	3.22	0.39	1	Atlas	*
CSO142	7/17/2015 22:15	7/18/2015 0:30	48,191.12	0.09	0.94	51,267.15	2.55	0.62	3	Atlas	*
CSO142	8/6/2015 2:15	8/6/2015 15:00	11,470.74	0.53	0.71	16,155.97	0.9	0.27	24	Atlas	*R
CSO142	8/19/2015 8:30	8/19/2015 8:30	1,837.72	-	0.54	3,403.18	0.43	0.23	1	Atlas	*R
CSO142	8/19/2015 17:00	8/19/2015 17:00	918.86	-	0.54	1,701.60	0.65	0.23	1	Atlas	*R
CSO142	9/9/2015 11:30	9/9/2015 11:30	1,171.09	-	0.21	5,576.64	0.28	0.14	1	Atlas	*R
CSO142 Events			11.00								
CSO142 Total Volume (Gal)			393,274.06								
CSO144	7/2/2015 20:15	7/2/2015 20:30	1,929.20	0.01	1.55	1,244.64	3	0.60	24	Atlas	
CSO144	7/12/2015 5:45	7/12/2015 7:15	6,878.90	0.06	1.47	4,679.52	2.97	1.17	1	Atlas	
CSO144	7/14/2015 4:00	7/14/2015 4:15	1,434.57	0.01	0.57	2,516.80	4.13	0.45	1	Atlas	
CSO144	7/14/2015 18:30	7/14/2015 18:30	827.12	-	0.18	4,595.14	3.69	0.16	1	Atlas	
CSO144	7/18/2015 0:00	7/18/2015 1:00	5,374.67	0.04	1.45	3,706.67	4.26	0.97	3	Atlas	
CSO144	8/4/2015 18:45	8/4/2015 19:00	2,311.79	0.01	0.34	6,799.39	0.37	0.29	1	Atlas	
CSO144	8/5/2015 14:45	8/5/2015 14:45	1,392.44	-	0.96	1,450.46	0.55	0.33	24	Atlas	
CSO144	8/19/2015 8:15	8/19/2015 8:15	1,946.26	-	0.53	3,672.19	0.44	0.23	1	Atlas	
CSO144 Events			8.00								
CSO144 Total Volume (Gal)			22,094.95								
CSO146	7/1/2015 14:30	7/1/2015 14:45	84,814.06	0.01	0.05	1,696,281.19	1.73	0.04	1	Atlas	
CSO146	7/2/2015 0:30	7/2/2015 3:00	1,186,246.99	0.10	0.93	1,275,534.39	2.46	0.45	3	Atlas	
CSO146	7/2/2015 20:30	7/2/2015 21:30	552,564.89	0.04	0.93	594,155.80	2.66	0.45	3	Atlas	
CSO146	7/3/2015 14:45	7/3/2015 19:30	658,357.38	0.20	0.33	1,995,022.36	2.39	0.23	1	Atlas	
CSO146	7/7/2015 11:30	7/7/2015 17:00	1,280,635.27	0.23	0.72	1,778,660.10	2.03	0.37	6	Atlas	
CSO146	7/9/2015 6:30	7/9/2015 8:00	378,712.66	0.06	0.37	1,023,547.74	1.67	0.23	3	Atlas	
CSO146	7/10/2015 10:15	7/10/2015 17:00	1,125,149.59	0.28	0.46	2,445,977.37	1.99	0.23	6	Atlas	
CSO146	7/12/2015 6:00	7/12/2015 8:45	3,193,905.98	0.11	0.84	3,802,269.02	2.5	0.60	1	Atlas	
CSO146	7/13/2015 14:45	7/13/2015 16:00	817,916.26	0.05	0.25	3,271,665.04	2.76	0.21	1	Atlas	
CSO146	7/14/2015 3:30	7/14/2015 5:45	1,785,314.77	0.09	0.53	3,368,518.43	3.28	0.39	1	Atlas	
CSO146	7/14/2015 18:45	7/14/2015 19:30	349,922.54	0.03	0.03	11,664,084.67	2.61	0.03	1	Atlas	
CSO146	7/17/2015 22:30	7/18/2015 2:30	4,342,162.81	0.17	0.94	4,619,322.13	2.6	0.62	3	Atlas	
CSO146	8/6/2015 2:30	8/6/2015 15:45	1,456,365.54	0.55	0.71	2,051,219.07	0.9	0.27	24	Atlas	
CSO146	8/10/2015 21:00	8/10/2015 22:30	52,838.04	0.06	0.06	880,634.01	1.11	0.05	1	Atlas	
CSO146	8/19/2015 8:00	8/19/2015 9:00	1,331,799.57	0.04	0.54	2,466,295.50	0.46	0.23	1	Atlas	
CSO146	8/19/2015 17:15	8/19/2015 17:45	110,694.40	0.02	0.54	204,989.63	0.65	0.23	1	Atlas	
CSO146	9/29/2015 12:45	9/29/2015 19:45	50,701.35	0.29	0.81	62,594.26	0.78	0.26	48	Atlas	
CSO146 Events			17.00								
CSO146 Total Volume (Gal)			18,758,102.09								
CSO148	7/1/2015 14:15	7/1/2015 14:15	176.00	-	0.06	2,933.33	1.58	0.05	1	Atlas	
CSO148	7/2/2015 0:15	7/2/2015 2:15	38,562.95	0.08	0.74	52,112.10	2.16	0.37	3	Atlas	
CSO148	7/2/2015 20:45	7/2/2015 21:15	23,805.79	0.02	0.74	32,169.99	2.33	0.37	3	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO148	7/3/2015 14:45	7/3/2015 19:00	21,493.36	0.18	0.3	71,644.53	1.99	0.17	1	Atlas	
CSO148	7/7/2015 11:30	7/7/2015 16:30	52,134.07	0.21	0.68	76,667.75	1.77	0.35	6	Atlas	
CSO148	7/9/2015 6:15	7/9/2015 7:30	11,481.50	0.05	0.21	54,673.80	1.38	0.13	3	Atlas	
CSO148	7/10/2015 10:00	7/10/2015 16:15	40,171.99	0.26	0.67	59,958.20	1.95	0.33	6	Atlas	
CSO148	7/12/2015 6:00	7/12/2015 7:45	183,370.98	0.07	0.9	203,745.53	2.55	0.63	1	Atlas	
CSO148	7/13/2015 14:15	7/13/2015 15:15	15,092.17	0.04	0.4	37,730.42	2.96	0.33	1	Atlas	
CSO148	7/14/2015 3:15	7/14/2015 7:45	75,642.86	0.19	0.5	151,285.72	3.46	0.37	1	Atlas	
CSO148	7/17/2015 22:30	7/18/2015 1:00	119,601.13	0.10	0.87	137,472.56	2.72	0.58	3	Atlas	
CSO148	7/23/2015 9:30	7/23/2015 16:45	3,725.46	0.30	Discharge		0.97				
CSO148	7/28/2015 17:30	7/28/2015 17:30	237.91	-	0.03	7,930.21	0.09	0.03	1	Atlas	
CSO148	7/29/2015 17:30	7/29/2015 17:30	1,953.91	-	0.06	32,565.10	0.15	0.05	1	Atlas	
CSO148	8/4/2015 19:00	8/4/2015 19:30	4,008.66	0.02	0.18	22,270.31	0.21	0.14	1	Atlas	
CSO148	8/5/2015 15:15	8/5/2015 15:15	823.71	-	1.08	762.69	0.33	0.40	24	Atlas	
CSO148	8/6/2015 2:15	8/6/2015 15:15	73,975.67	0.54	1.08	68,495.99	1.26	0.40	24	Atlas	
CSO148	8/10/2015 20:45	8/10/2015 20:45	1,937.02	-	0.09	21,522.45	1.36	0.08	1	Atlas	
CSO148	8/19/2015 7:45	8/19/2015 8:30	18,656.14	0.03	0.65	28,701.75	0.31	0.27	1	Atlas	
CSO148	8/19/2015 17:00	8/19/2015 17:00	8,532.10	-	0.65	13,126.31	0.68	0.27	1	Atlas	
CSO148	9/7/2015 18:00	9/7/2015 18:30	19,360.97	0.02	1.05	18,439.02	1.15	0.91	1	Atlas	
CSO148	9/9/2015 11:15	9/9/2015 11:15	1,933.36	-	0.1	19,333.65	1.25	0.08	1	Atlas	
CSO148	9/29/2015 12:00	9/29/2015 19:00	992.97	0.29	1.02	973.50	0.95	0.33	48	Atlas	
CSO148 Events			23.00								
CSO148 Total Volume (Gal)			717,670.67								
CSO149	7/2/2015 0:30	7/2/2015 2:45	1,098,259.35	0.09	0.93	1,180,924.03	2.46	0.45	3	Atlas	
CSO149	7/2/2015 14:30	7/2/2015 21:30	1,026,926.86	0.29	0.93	1,104,222.43	2.66	0.45	3	Atlas	
CSO149	7/3/2015 15:00	7/3/2015 19:30	762,854.35	0.19	0.33	2,311,679.86	2.39	0.23	1	Atlas	
CSO149	7/7/2015 11:30	7/7/2015 17:00	1,624,754.94	0.23	0.72	2,256,604.09	2.03	0.37	6	Atlas	
CSO149	7/8/2015 12:30	7/8/2015 13:00	32,048.50	0.02	0.09	356,094.45	2.12	0.06	1	Atlas	
CSO149	7/9/2015 6:15	7/9/2015 8:00	198,663.19	0.07	0.37	536,927.53	1.67	0.23	3	Atlas	
CSO149	7/10/2015 10:30	7/10/2015 16:45	416,301.96	0.26	0.46	905,004.26	1.99	0.23	6	Atlas	
CSO149	7/12/2015 6:00	7/12/2015 20:00	4,440,884.49	0.58	0.84	5,286,767.25	2.51	0.60	1	Atlas	
CSO149	7/13/2015 15:00	7/13/2015 18:45	801,671.92	0.16	0.25	3,206,687.70	2.76	0.21	1	Atlas	
CSO149	7/14/2015 4:15	7/14/2015 19:30	1,773,194.44	0.64	0.53	3,345,649.89	3.32	0.39	1	Atlas	
CSO149	7/17/2015 22:30	7/18/2015 7:15	4,380,781.22	0.36	0.94	4,660,405.56	2.6	0.62	3	Atlas	
CSO149	8/4/2015 19:15	8/4/2015 19:45	27,588.67	0.02	0.1	275,886.68	0.15	0.07	1	Atlas	
CSO149	8/5/2015 15:00	8/5/2015 15:45	51,928.24	0.03	0.09	576,980.49	0.25	0.08	1	Atlas	
CSO149	8/6/2015 2:15	8/6/2015 15:45	2,314,996.17	0.56	0.71	3,260,557.99	0.9	0.27	24	Atlas	
CSO149	8/10/2015 21:00	8/10/2015 21:15	28,060.77	0.01	0.06	467,679.50	1.11	0.05	1	Atlas	
CSO149	8/15/2015 16:45	8/15/2015 17:15	48,169.59	0.02	0.13	370,535.34	0.34	0.11	1	Atlas	
CSO149	8/19/2015 8:15	8/19/2015 17:30	1,530,863.70	0.39	0.54	2,834,932.79	0.65	0.23	1	Atlas	
CSO149	9/29/2015 19:15	9/29/2015 19:15	3,582.17	-	0.81	4,422.43	0.78	0.26	48	Atlas	
CSO149 Events			18.00								
CSO149 Total Volume (Gal)			20,561,530.55								
CSO150	7/2/2015 20:15	7/2/2015 21:45	47,336.17	0.06	2.57	18,418.74	4.45	0.98	1	Atlas	

There are know issues with the flow monitoring data's quality.

MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO150	7/10/2015 16:45	7/10/2015 17:30	8,827.70	0.03	0.43	20,529.53	1.94	0.22	6	Atlas	
CSO150	7/12/2015 6:00	7/12/2015 9:15	133,998.91	0.14	1.1	121,817.19	3.01	0.79	1	Atlas	
CSO150	7/13/2015 15:15	7/13/2015 16:15	25,648.46	0.04	0.47	54,571.19	3.49	0.39	1	Atlas	
CSO150	7/14/2015 4:15	7/14/2015 6:15	70,883.24	0.08	0.99	71,599.23	4.48	0.81	1	Atlas	
CSO150	7/17/2015 22:15	7/18/2015 3:15	218,156.27	0.21	1.66	131,419.44	4.28	1.53	3	Atlas	
CSO150	8/4/2015 18:45	8/4/2015 19:00	7,529.78	0.01	0.55	13,690.51	0.68	0.46	1	Atlas	
CSO150	8/5/2015 14:45	8/5/2015 14:45	394.41	-	0.31	1,272.28	0.95	0.27	1	Atlas	
CSO150 Events			8.00								
CSO150 Total Volume (Gal)			512,774.94								
CSO151	7/1/2015 14:45	7/1/2015 14:45	1,337.63	-	0.04	33,440.73	1.61	0.03	1	Atlas	
CSO151	7/2/2015 20:45	7/2/2015 23:00	171,769.54	0.09	0.92	186,706.02	2.53	0.37	3	Atlas	
CSO151	7/3/2015 15:00	7/3/2015 22:30	194,827.82	0.31	0.27	721,584.53	2.25	0.17	1	Atlas	
CSO151	7/7/2015 11:30	7/8/2015 0:45	92,715.37	0.55	0.78	118,865.86	2.02	0.40	6	Atlas	
CSO151	7/8/2015 12:30	7/8/2015 13:45	36,773.35	0.05	0.08	459,666.91	2.09	0.06	1	Atlas	
CSO151	7/9/2015 6:30	7/9/2015 9:30	140,929.40	0.13	0.22	640,588.17	1.63	0.12	3	Atlas	
CSO151	7/10/2015 10:15	7/10/2015 20:00	312,039.35	0.41	0.56	557,213.13	1.93	0.27	6	Atlas	
CSO151	7/12/2015 6:15	7/12/2015 6:45	317,322.13	0.02	1.12	283,323.33	2.52	0.74	3	Atlas	
CSO151	7/14/2015 3:30	7/14/2015 4:15	30,501.82	0.03	0.56	54,467.54	3.58	0.41	1	Atlas	
CSO151	7/17/2015 22:45	7/18/2015 16:30	418,880.92	0.74	0.87	481,472.32	2.95	0.58	3	Atlas	
CSO151	7/29/2015 17:45	7/29/2015 18:15	3,208.68	0.02	0.09	35,651.97	0.15	0.08	1	Atlas	
CSO151	8/4/2015 19:30	8/4/2015 20:45	59,638.74	0.05	0.16	372,742.15	0.25	0.12	1	Atlas	
CSO151	8/5/2015 15:15	8/5/2015 16:15	63,706.70	0.04	0.97	65,677.01	0.38	0.34	24	Atlas	
CSO151	8/6/2015 2:30	8/6/2015 17:30	266,437.27	0.63	0.97	274,677.60	1.13	0.34	24	Atlas	
CSO151	8/10/2015 21:15	8/10/2015 21:30	1,693.78	0.01	0.06	28,229.65	1.19	0.05	1	Atlas	
CSO151	8/19/2015 8:00	8/19/2015 18:30	174,508.79	0.44	0.62	281,465.80	0.66	0.26	12	Atlas	
CSO151	9/5/2015 17:45	9/5/2015 17:45	129.00	-	0.13	992.31	0.09	0.08	1	Atlas	
CSO151	9/7/2015 18:30	9/7/2015 20:00	132,165.06	0.06	0.31	426,338.91	0.44	0.27	1	Atlas	
CSO151	9/9/2015 11:45	9/9/2015 12:15	30,334.11	0.02	0.15	202,227.42	0.59	0.13	1	Atlas	
CSO151	9/10/2015 5:30	9/10/2015 5:45	12,701.98	0.01	0.14	90,728.44	0.73	0.06	12	Atlas	
CSO151	9/29/2015 9:45	9/29/2015 13:15	56,307.10	0.15	1	56,307.10	0.81	0.32	48	Atlas	
CSO151 Events			21.00								
CSO151 Total Volume (Gal)			2,517,928.54								
CSO152	7/2/2015 0:30	7/2/2015 3:15	371,645.88	0.11	0.87	427,179.17	2.31	0.40	3	Atlas	
CSO152	7/2/2015 14:45	7/2/2015 22:00	160,749.82	0.30	0.87	184,769.91	2.55	0.40	3	Atlas	
CSO152	7/3/2015 15:00	7/3/2015 19:45	257,822.73	0.20	0.35	736,636.38	2.27	0.21	1	Atlas	
CSO152	7/7/2015 11:30	7/8/2015 0:45	709,167.19	0.55	0.75	945,556.25	2.04	0.38	6	Atlas	
CSO152	7/8/2015 12:30	7/8/2015 13:15	64,513.19	0.03	0.06	1,075,219.76	2.09	0.04	1	Atlas	
CSO152	7/9/2015 6:30	7/9/2015 8:15	275,609.15	0.07	0.28	984,318.40	1.64	0.17	3	Atlas	
CSO152	7/10/2015 10:30	7/10/2015 17:00	425,537.80	0.27	0.39	1,091,122.57	1.85	0.19	6	Atlas	
CSO152	7/12/2015 6:15	7/12/2015 8:45	1,745,138.63	0.10	0.84	2,077,545.99	2.33	0.55	3	Atlas	
CSO152	7/13/2015 14:30	7/13/2015 16:00	648,684.62	0.06	0.32	2,027,139.44	2.66	0.27	1	Atlas	
CSO152	7/14/2015 4:00	7/14/2015 6:00	1,456,068.55	0.08	0.56	2,600,122.42	3.21	0.37	3	Atlas	
CSO152	7/14/2015 19:15	7/14/2015 19:30	19,476.49	0.01	0.02	973,824.67	2.51	0.02	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO152	7/17/2015 22:45	7/18/2015 2:45	2,410,209.89	0.17	0.87	2,770,356.20	2.61	0.58	3	Atlas	
CSO152	7/29/2015 17:45	7/29/2015 18:00	64,396.56	0.01	0.08	804,957.05	0.14	0.07	1	Atlas	
CSO152	8/4/2015 19:15	8/4/2015 20:00	115,925.16	0.03	0.11	1,053,865.07	0.19	0.09	1	Atlas	
CSO152	8/5/2015 15:30	8/5/2015 16:00	116,021.40	0.02	0.91	127,496.04	0.3	0.33	24	Atlas	
CSO152	8/6/2015 2:30	8/6/2015 16:00	582,667.91	0.56	0.91	640,294.40	1.02	0.33	24	Atlas	
CSO152	8/19/2015 8:00	8/19/2015 17:45	348,338.98	0.41	0.57	611,121.02	0.61	0.24	1	Atlas	
CSO152	9/5/2015 17:45	9/5/2015 17:45	14,155.18	-	0.08	176,939.70	0.04	0.04	6	Atlas	
CSO152	9/7/2015 18:45	9/7/2015 19:00	55,839.96	0.01	0.09	620,443.99	0.17	0.08	1	Atlas	
CSO152	9/9/2015 11:45	9/9/2015 12:15	32,436.17	0.02	0.21	154,457.96	0.38	0.16	1	Atlas	
CSO152	9/29/2015 9:45	9/29/2015 20:00	59,515.17	0.43	0.89	66,870.98	0.88	0.29	48	Atlas	
CSO152 Events			21.00								
CSO152 Total Volume (Gal)			9,933,920.44								
CSO153	7/2/2015 0:15	7/2/2015 2:15	81,636.39	0.08	1.66	49,178.55	2.46	0.64	24	Atlas	
CSO153	7/2/2015 15:15	7/2/2015 21:30	472,181.59	0.26	1.66	284,446.74	3.45	0.64	24	Atlas	
CSO153	7/3/2015 15:00	7/3/2015 19:00	30,274.65	0.17	0.35	86,498.99	3.3	0.19	1	Atlas	
CSO153	7/7/2015 11:30	7/8/2015 0:15	192,404.97	0.53	0.87	221,155.14	2.86	0.41	6	Atlas	
CSO153	7/8/2015 12:00	7/8/2015 12:45	56,400.67	0.03	0.87	64,828.35	2.91	0.41	6	Atlas	
CSO153	7/9/2015 6:15	7/9/2015 13:30	41,108.39	0.30	0.31	132,607.72	2.38	0.15	3	Atlas	
CSO153	7/10/2015 10:15	7/10/2015 16:15	78,509.83	0.25	0.43	182,580.99	1.98	0.21	6	Atlas	
CSO153	7/12/2015 6:00	7/12/2015 7:15	1,175,137.58	0.05	1.35	870,472.28	2.93	0.91	1	Atlas	
CSO153	7/13/2015 14:15	7/13/2015 15:15	163,939.19	0.04	0.5	327,878.37	3.48	0.41	1	Atlas	
CSO153	7/14/2015 4:00	7/14/2015 4:30	252,517.28	0.02	0.73	345,914.09	4.16	0.57	1	Atlas	
CSO153	7/14/2015 18:45	7/14/2015 18:45	8,720.70	-	0.14	62,290.70	3.58	0.12	1	Atlas	
CSO153	7/17/2015 22:30	7/18/2015 1:00	1,155,596.09	0.10	1.6	722,247.56	4.32	1.33	3	Atlas	
CSO153	7/29/2015 17:30	7/29/2015 17:30	6,326.02	-	0.08	79,075.26	0.1	0.07	1	Atlas	
CSO153	8/4/2015 19:00	8/4/2015 19:15	94,115.04	0.01	0.44	213,897.82	0.5	0.37	1	Atlas	
CSO153	8/5/2015 15:00	8/5/2015 15:15	39,909.35	0.01	0.77	51,830.32	0.79	0.28	24	Atlas	
CSO153	8/6/2015 2:15	8/6/2015 15:15	207,842.09	0.54	0.77	269,924.79	1.21	0.28	24	Atlas	
CSO153	8/19/2015 8:15	8/19/2015 8:30	139,642.48	0.01	0.28	498,723.13	0.27	0.11	24	Atlas	
CSO153	8/19/2015 17:00	8/19/2015 17:15	47,283.22	0.01	0.28	168,868.64	0.41	0.11	24	Atlas	
CSO153	9/5/2015 17:15	9/5/2015 17:15	48,822.59	-	0.12	406,854.92	0.08	0.07	1	Atlas	
CSO153	9/9/2015 11:30	9/9/2015 11:45	92,508.86	0.01	0.27	342,625.40	0.99	0.23	1	Atlas	
CSO153	9/11/2015 18:30	9/11/2015 18:30	12,469.80	-	0.19	65,630.54	1.14	0.12	1	Atlas	
CSO153	9/29/2015 9:30	9/29/2015 9:30	9,450.55	-	0.83	11,386.21	0.54	0.27	48	Atlas	
CSO153	9/29/2015 19:00	9/29/2015 19:00	12,873.59	-	0.83	15,510.35	0.78	0.27	48	Atlas	
CSO153 Events			23.00								
CSO153 Total Volume (Gal)			4,419,670.91								
CSO155	7/2/2015 7:00	7/2/2015 20:45	80,647.69	0.57	2.42	33,325.49	4.38	0.94	1	Atlas	
CSO155	7/3/2015 14:45	7/3/2015 15:00	10,669.10	0.01	0.57	18,717.72	4.32	0.47	1	Atlas	
CSO155	7/7/2015 11:45	7/7/2015 12:30	6,743.85	0.03	1.07	6,302.67	3.81	0.51	3	Atlas	
CSO155	7/9/2015 6:15	7/9/2015 13:15	2,187.64	0.29	0.34	6,434.22	3.49	0.16	12	Atlas	
CSO155	7/12/2015 6:00	7/12/2015 6:15	30,748.34	0.01	1.07	28,736.77	2.87	0.82	1	Atlas	
CSO155	7/13/2015 14:45	7/13/2015 15:00	1,171.54	0.01	0.46	2,546.83	3.47	0.40	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO155	7/14/2015 4:15	7/14/2015 4:30	15,619.80	0.01	0.84	18,595.00	4.27	0.66	1	Atlas	
CSO155	7/17/2015 22:15	7/18/2015 1:00	123,561.39	0.11	1.58	78,203.41	3.99	1.27	3	Atlas	
CSO155	7/29/2015 17:15	7/29/2015 17:15	5,062.78	-	0.12	42,189.84	0.16	0.10	1	Atlas	
CSO155	8/4/2015 18:45	8/4/2015 19:00	22,750.17	0.01	0.52	43,750.33	0.62	0.44	1	Atlas	
CSO155	8/5/2015 14:45	8/5/2015 15:00	16,513.42	0.01	1.13	14,613.64	1.26	0.57	1	Atlas	
CSO155	8/6/2015 7:45	8/6/2015 8:15	717.93	0.02	1.13	635.33	1.57	0.57	1	Atlas	
CSO155	9/5/2015 17:30	9/5/2015 17:30	23,897.73	-	0.31	77,089.45	0.26	0.24	1	Atlas	
CSO155	9/9/2015 4:15	9/9/2015 11:15	3,667.23	0.29	0.04	91,680.74	0.65	0.03	1	Atlas	
CSO155 Events			14.00								
CSO155 Total Volume (Gal)			343,958.62								
CSO160	7/2/2015 0:30	7/2/2015 20:45	1,086.96	0.84	2.02	538.10	3.69	0.78	24	Atlas	
CSO160	7/3/2015 19:00	7/3/2015 19:00	210.03	-	0.41	512.27	3.04	0.32	1	Atlas	
CSO160	7/7/2015 11:45	7/7/2015 14:45	2,236.50	0.13	1.04	2,150.48	3.25	0.45	6	Atlas	
CSO160	7/9/2015 5:30	7/9/2015 13:30	3,670.74	0.33	0.36	10,196.50	2.96	0.17	3	Atlas	
CSO160	7/10/2015 10:30	7/10/2015 16:15	2,742.59	0.24	0.44	6,233.16	2.27	0.22	6	Atlas	
CSO160	7/12/2015 6:15	7/12/2015 7:15	7,274.35	0.04	1.27	5,727.83	3.1	0.85	3	Atlas	
CSO160	7/13/2015 15:00	7/13/2015 15:00	162.75	-	0.53	307.08	3.67	0.45	1	Atlas	
CSO160	7/14/2015 4:15	7/14/2015 4:45	2,142.05	0.02	0.62	3,454.92	4.27	0.49	1	Atlas	
CSO160	7/17/2015 23:15	7/18/2015 1:00	1,828.86	0.07	1.31	1,396.08	3.79	0.87	3	Atlas	
CSO160	8/4/2015 19:15	8/4/2015 20:15	619.97	0.04	0.43	1,441.78	0.48	0.37	1	Atlas	
CSO160	8/6/2015 2:30	8/6/2015 8:45	1,792.74	0.26	0.7	2,561.06	1.07	0.25	24	Atlas	
CSO160 Events			11.00								
CSO160 Total Volume (Gal)			23,767.54								
CSO161	7/2/2015 0:15	7/2/2015 7:00	1,193.34	0.28	2.02	590.76	2.58	0.78	24	Atlas	
CSO161	7/2/2015 20:15	7/2/2015 20:30	24,755.49	0.01	2.02	12,255.19	3.67	0.78	24	Atlas	
CSO161	7/3/2015 18:45	7/3/2015 18:45	1,747.27	-	0.41	4,261.64	3.04	0.32	1	Atlas	
CSO161	7/7/2015 11:45	7/7/2015 11:45	2,172.00	-	1.04	2,088.46	2.97	0.45	6	Atlas	
CSO161	7/12/2015 6:00	7/12/2015 7:15	37,485.87	0.05	1.27	29,516.43	3.1	0.85	3	Atlas	
CSO161	7/13/2015 14:45	7/13/2015 15:00	3,209.93	0.01	0.53	6,056.47	3.67	0.45	1	Atlas	
CSO161	7/14/2015 4:00	7/14/2015 4:30	8,814.78	0.02	0.62	14,217.39	4.26	0.49	1	Atlas	
CSO161	7/17/2015 22:15	7/18/2015 1:00	61,352.22	0.11	1.31	46,833.75	3.79	0.87	3	Atlas	
CSO161	7/29/2015 17:30	7/29/2015 17:30	548.61	-	0.05	10,972.29	0.12	0.04	1	Atlas	
CSO161	8/4/2015 19:00	8/4/2015 19:00	579.67	-	0.43	1,348.06	0.45	0.37	1	Atlas	
CSO161	8/15/2015 16:30	8/15/2015 16:30	4,123.89	-	0.04	103,097.13	0.17	0.03	1	Atlas	
CSO161	9/9/2015 11:15	9/9/2015 11:15	1,289.64	-	0.28	4,605.84	0.42	0.24	1	Atlas	
CSO161 Events			12.00								
CSO161 Total Volume (Gal)			147,272.70								
CSO166	7/2/2015 1:15	7/2/2015 2:30	262,220.33	0.05	1.68	156,083.53	2.13	0.63	24	Atlas	
CSO166	7/2/2015 19:45	7/2/2015 22:30	2,406,109.30	0.11	1.68	1,432,207.92	3.12	0.63	24	Atlas	
CSO166	7/3/2015 15:30	7/3/2015 20:00	1,004,869.68	0.19	0.63	1,595,031.24	3.27	0.44	1	Atlas	
CSO166	7/7/2015 12:00	7/7/2015 17:15	945,510.52	0.22	0.73	1,295,219.88	2.93	0.33	6	Atlas	
CSO166	7/8/2015 13:00	7/8/2015 13:30	213,656.08	0.02	0.73	292,679.56	3.04	0.33	6	Atlas	
CSO166	7/9/2015 6:45	7/9/2015 8:15	234,895.06	0.06	0.3	782,983.53	2.57	0.17	3	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO180	7/13/2015 15:00	7/13/2015 15:00	13,893.77	-	0.25	55,575.08	2.76	0.21	1	Atlas	*R
CSO180	7/14/2015 4:15	7/14/2015 4:30	43,279.89	0.01	0.53	81,660.16	3.25	0.39	1	Atlas	*
CSO180	7/17/2015 23:00	7/18/2015 0:45	121,050.16	0.07	0.94	128,776.77	2.57	0.62	3	Atlas	*
CSO180	8/6/2015 7:45	8/6/2015 15:00	50,274.06	0.30	0.71	70,808.53	0.9	0.27	24	Atlas	*R
CSO180	8/19/2015 7:30	8/19/2015 8:15	69,632.97	0.03	0.54	128,949.94	0.43	0.23	1	Atlas	*R
CSO180	9/9/2015 11:15	9/9/2015 11:15	10,665.01	-	0.21	50,785.77	0.28	0.14	1	Atlas	*R
CSO180 Events			11.00								
CSO180 Total Volume (Gal)			762,876.79								
CSO181	7/2/2015 20:30	7/2/2015 21:00	138,727.23	0.02	1.19	116,577.50	2.76	0.46	24	Atlas	
CSO181	7/12/2015 6:15	7/12/2015 19:30	604,126.60	0.55	1.16	520,798.79	2.92	0.79	1	Atlas	
CSO181	7/13/2015 14:30	7/14/2015 5:00	713,941.94	0.60	0.33	2,163,460.42	3.94	0.29	1	Atlas	
CSO181	7/14/2015 19:00	7/15/2015 4:00	28,155.39	0.38	0.02	1,407,769.45	3.3	0.02	1	Atlas	
CSO181	7/17/2015 22:45	7/18/2015 1:15	244,140.92	0.10	1.13	216,053.92	3.36	0.75	3	Atlas	
CSO181	8/6/2015 2:30	8/6/2015 2:30	8,016.75	-	0.49	16,360.72	0.46	0.20	1	Atlas	
CSO181	8/15/2015 16:45	8/15/2015 17:00	19,510.22	0.01	0.17	114,766.00	0.3	0.15	1	Atlas	
CSO181	9/9/2015 11:30	9/9/2015 11:45	28,474.63	0.01	0.21	135,593.49	0.28	0.16	1	Atlas	
CSO181 Events			8.00								
CSO181 Total Volume (Gal)			1,785,093.69								
CSO182	7/27/2015 10:00	7/27/2015 10:00	5,869.42	-	0.1	58,694.17	0.17	0.09	1	Atlas	*R
CSO182	7/29/2015 17:45	7/29/2015 18:00	96,198.47	0.01	0.08	1,202,480.84	0.21	0.07	1	Atlas	*R
CSO182	8/4/2015 19:15	8/4/2015 20:00	7,649.60	0.03	0.14	54,640.03	0.22	0.11	1	Atlas	*R
CSO182	8/6/2015 2:45	8/6/2015 15:45	19,590.73	0.54	0.92	21,294.27	1.05	0.35	24	Atlas	*R
CSO182	8/10/2015 20:45	8/10/2015 21:15	17,349.97	0.02	0.1	173,499.69	1.21	0.09	1	Atlas	*R
CSO182	8/15/2015 17:15	8/15/2015 17:15	2,387.29	-	0.07	34,104.16	0.21	0.06	1	Atlas	*R
CSO182	8/19/2015 7:45	8/19/2015 17:30	39,562.78	0.41	0.75	52,750.38	0.79	0.37	1	Atlas	*R
CSO182	9/29/2015 12:15	9/29/2015 19:45	31,974.58	0.31	0.88	36,334.76	0.87	0.29	48	Atlas	*R
CSO182 Events			8.00								
CSO182 Total Volume (Gal)			220,582.84								
CSO183	7/12/2015 6:00	7/12/2015 6:00	333.33	-	0.95	350.88	2.49	0.63	3	Atlas	*
CSO183	7/14/2015 4:15	7/14/2015 4:15	252.79	-	0.39	648.18	3.43	0.29	1	Atlas	*
CSO183 Events			2.00								
CSO183 Total Volume (Gal)			586.13								
CSO184	7/10/2015 10:30	7/10/2015 16:15	21,109.69	0.24	0.78	27,063.71	2.03	0.36	12	Atlas	*R
CSO184	7/12/2015 6:00	7/12/2015 6:15	151,062.16	0.01	0.95	159,012.80	2.5	0.63	3	Atlas	*
CSO184	7/13/2015 15:15	7/13/2015 15:15	2,712.80	-	0.34	7,978.83	3.08	0.30	1	Atlas	*R
CSO184	7/14/2015 4:30	7/14/2015 4:30	13,310.20	-	0.39	34,128.71	3.43	0.29	1	Atlas	*
CSO184	7/14/2015 19:00	7/14/2015 19:00	4,388.40	-	0.09	48,759.95	2.99	0.07	1	Atlas	*R
CSO184	7/17/2015 23:15	7/18/2015 0:45	56,352.83	0.06	0.9	62,614.26	2.66	0.60	3	Atlas	*
CSO184	8/4/2015 19:30	8/4/2015 19:30	1,392.07	-	0.24	5,800.30	0.29	0.19	1	Atlas	*R
CSO184	8/6/2015 14:30	8/6/2015 15:00	14,650.94	0.02	1.01	14,505.88	1.24	0.38	24	Atlas	*R
CSO184	8/19/2015 8:30	8/19/2015 8:30	2,191.60	-	0.53	4,135.10	0.35	0.23	1	Atlas	*R
CSO184 Events			9.00								
CSO184 Total Volume (Gal)			267,170.70								

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO185	7/2/2015 9:45	7/2/2015 11:00	3,086.86	0.05	0.75	4,115.82	2.27	0.43	3	Atlas	*R
CSO185	7/9/2015 8:30	7/9/2015 12:00	5,323.39	0.15	0.3	17,744.62	1.26	0.19	1	Atlas	*R
CSO185	7/10/2015 10:15	7/10/2015 16:15	55,903.69	0.25	0.78	71,671.40	2.03	0.36	12	Atlas	*R
CSO185	7/12/2015 6:00	7/12/2015 6:30	270,331.93	0.02	0.95	284,559.93	2.5	0.63	3	Atlas	*
CSO185	7/13/2015 15:15	7/13/2015 15:15	17,473.86	-	0.34	51,393.72	3.08	0.30	1	Atlas	*R
CSO185	7/14/2015 3:30	7/14/2015 4:45	50,859.37	0.05	0.39	130,408.63	3.44	0.29	1	Atlas	*
CSO185	7/14/2015 19:00	7/14/2015 19:00	17,012.89	-	0.09	189,032.16	2.99	0.07	1	Atlas	*
CSO185	7/17/2015 23:15	7/18/2015 1:00	104,178.97	0.07	0.9	115,754.41	2.68	0.60	3	Atlas	*
CSO185	7/29/2015 18:00	7/29/2015 19:45	2,497.60	0.07	0.08	31,220.05	0.43	0.07	1	Atlas	*R
CSO185	8/4/2015 19:30	8/4/2015 19:30	8,788.89	-	0.24	36,620.36	0.29	0.19	1	Atlas	*R
CSO185	8/6/2015 14:30	8/6/2015 15:00	23,711.03	0.02	1.01	23,476.27	1.24	0.38	24	Atlas	*R
CSO185	8/10/2015 21:00	8/10/2015 21:00	4,032.36	-	0.12	33,603.04	1.4	0.10	1	Atlas	*R
CSO185	8/19/2015 8:30	8/19/2015 8:30	6,866.68	-	0.53	12,955.99	0.35	0.23	1	Atlas	*R
CSO185 Events			13.00								
CSO185 Total Volume (Gal)			570,067.53								
CSO188	7/12/2015 6:00	7/12/2015 6:00	1,795.98	-	0.84	2,138.07	2.33	0.60	1	Atlas	*
CSO188 Events			1.00								
CSO188 Total Volume (Gal)			1,795.98								
CSO189	7/2/2015 1:00	7/2/2015 3:00	1,047,459.95	0.08	0.99	1,058,040.35	2.91	0.50	3	Atlas	
CSO189	7/2/2015 15:00	7/2/2015 22:15	6,989,490.39	0.30	0.99	7,060,091.31	3.08	0.50	3	Atlas	
CSO189	7/3/2015 14:45	7/3/2015 16:45	7,009,032.66	0.08	1.51	4,641,743.49	3.71	2.75	1	Atlas	
CSO189	7/7/2015 11:45	7/7/2015 14:00	2,546,897.61	0.09	1.07	2,380,278.14	3.48	0.58	3	Atlas	
CSO189	7/9/2015 13:30	7/9/2015 14:00	404,585.79	0.02	0.28	1,444,949.26	2.94	0.14	1	Atlas	
CSO189	7/10/2015 16:00	7/10/2015 17:00	650,637.02	0.04	0.46	1,414,428.31	1.89	0.23	6	Atlas	
CSO189	7/12/2015 5:45	7/12/2015 9:00	6,456,265.56	0.14	0.7	9,223,236.51	2.55	0.47	3	Atlas	
CSO189	7/13/2015 14:45	7/13/2015 16:15	1,860,199.12	0.06	0.38	4,895,260.83	2.93	0.33	1	Atlas	
CSO189	7/14/2015 4:30	7/14/2015 6:00	2,422,909.96	0.06	0.27	8,973,740.61	3.19	0.18	1	Atlas	
CSO189	7/14/2015 18:45	7/14/2015 19:45	1,263,895.07	0.04	0.14	9,027,821.91	2.35	0.11	1	Atlas	
CSO189	7/17/2015 22:45	7/18/2015 3:30	17,983,522.56	0.20	1.16	15,503,036.69	2.65	0.77	3	Atlas	
CSO189	7/29/2015 17:15	7/29/2015 18:15	878,409.65	0.04	0.33	2,661,847.43	0.38	0.28	1	Atlas	
CSO189	8/4/2015 19:00	8/4/2015 20:00	1,791,231.75	0.04	0.28	6,397,256.24	0.6	0.23	1	Atlas	
CSO189	8/5/2015 15:00	8/5/2015 16:15	1,804,404.02	0.05	1.24	1,455,164.53	1.33	0.63	1	Atlas	
CSO189	8/6/2015 8:30	8/6/2015 9:45	1,017,245.33	0.05	1.24	820,359.14	1.42	0.63	1	Atlas	
CSO189	8/19/2015 16:15	8/19/2015 18:00	4,092,366.39	0.07	0.8	5,115,457.99	0.79	0.50	1	Atlas	
CSO189	9/9/2015 11:15	9/9/2015 12:30	3,266,290.17	0.05	0.85	3,842,694.31	0.91	0.74	1	Atlas	
CSO189 Events			17.00								
CSO189 Total Volume (Gal)			61,484,843.00								
CSO190	7/2/2015 0:00	7/2/2015 21:15	2,507,610.75	0.89	2.42	1,036,202.79	4.38	0.94	1	Atlas	
CSO190	7/3/2015 14:45	7/3/2015 18:30	265,082.35	0.16	0.57	465,056.75	4.33	0.47	1	Atlas	
CSO190	7/7/2015 11:30	7/7/2015 13:00	418,202.76	0.06	1.07	390,843.70	3.85	0.51	3	Atlas	
CSO190	7/8/2015 12:00	7/8/2015 12:30	12,315.10	0.02	1.07	11,509.44	4.13	0.51	3	Atlas	
CSO190	7/9/2015 6:00	7/9/2015 13:30	160,701.95	0.31	0.34	472,652.79	3.49	0.16	12	Atlas	
CSO190	7/10/2015 10:00	7/10/2015 16:15	67,661.84	0.26	0.5	135,323.67	2.5	0.26	6	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO190	7/12/2015 5:45	7/12/2015 7:30	1,389,405.71	0.07	1.07	1,298,510.01	3	0.82	1	Atlas	
CSO190	7/13/2015 14:30	7/13/2015 15:15	285,161.35	0.03	0.46	619,915.98	3.47	0.40	1	Atlas	
CSO190	7/17/2015 22:00	7/18/2015 1:30	3,576,877.62	0.15	1.58	2,263,846.60	3.99	1.27	3	Atlas	
CSO190	7/29/2015 17:15	7/29/2015 17:30	78,259.67	0.01	0.12	652,163.89	0.17	0.10	1	Atlas	
CSO190	8/4/2015 18:45	8/4/2015 19:15	745,657.70	0.02	0.52	1,433,957.11	0.63	0.44	1	Atlas	
CSO190	8/5/2015 14:45	8/5/2015 15:30	408,336.42	0.03	1.13	361,359.67	1.29	0.57	1	Atlas	
CSO190	8/6/2015 2:15	8/6/2015 8:45	148,598.17	0.27	1.13	131,502.81	1.6	0.57	1	Atlas	
CSO190	8/10/2015 20:30	8/10/2015 20:30	814.69	-	0.06	13,578.12	1.72	0.05	1	Atlas	
CSO190	8/15/2015 16:30	8/15/2015 16:45	23,787.29	0.01	0.02	1,189,364.27	0.09	0.02	1	Atlas	
CSO190	8/19/2015 7:15	8/19/2015 17:15	118,460.46	0.42	0.76	155,869.03	0.75	0.33	12	Atlas	
CSO190	9/5/2015 17:30	9/5/2015 18:00	376,752.67	0.02	0.31	1,215,331.19	0.28	0.24	1	Atlas	
CSO190	9/9/2015 4:15	9/9/2015 11:45	328,914.08	0.31	0.02	16,445,703.92	0.65	0.02	1	Atlas	
CSO190	9/11/2015 18:00	9/11/2015 19:15	3,169.58	0.05	0.27	11,739.20	1.03	0.15	6	Atlas	
CSO190	9/29/2015 9:00	9/29/2015 9:00	49.94	-	0.78	64.02	0.39	0.25	48	Atlas	
CSO190	9/29/2015 18:45	9/29/2015 18:45	9.90	-	0.78	12.69	0.63	0.25	48	Atlas	
CSO190	9/30/2015 6:15	9/30/2015 6:15	26.05	-	0.78	33.40	0.76	0.25	48	Atlas	
CSO190 Events			22.00								
CSO190 Total Volume (Gal)			10,915,856.04								
CSO191	7/3/2015 15:15	7/3/2015 15:15	970.27	-	1.04	932.95	3.25	0.85	1	Atlas	
CSO191	7/7/2015 12:45	7/7/2015 12:45	22,389.46	-	0.94	23,818.57	2.66	0.50	6	Atlas	
CSO191	7/10/2015 16:00	7/10/2015 16:00	25,225.21	-	0.52	48,510.01	1.94	0.26	6	Atlas	
CSO191	7/12/2015 6:15	7/12/2015 7:45	93,402.30	0.06	0.67	139,406.42	2.58	0.47	1	Atlas	
CSO191	7/13/2015 15:15	7/13/2015 15:15	90,271.80	-	0.54	167,169.99	3.11	0.46	1	Atlas	
CSO191	7/14/2015 4:15	7/14/2015 4:15	40,366.93	-	0.19	212,457.52	3.29	0.15	1	Atlas	
CSO191	7/14/2015 18:45	7/14/2015 19:00	55,653.28	0.01	0.27	206,123.27	2.64	0.23	1	Atlas	
CSO191 Events			7.00								
CSO191 Total Volume (Gal)			328,279.25								
CSO193	7/2/2015 20:30	7/2/2015 20:30	23,564.05	-	1.14	20,670.22	2.85	0.49	3	Atlas	
CSO193	7/7/2015 11:45	7/7/2015 11:45	1,196.49	-	0.83	1,441.55	2.05	0.43	6	Atlas	
CSO193	9/9/2015 11:15	9/9/2015 11:15	2,799.97	-	0.28	9,999.89	0.38	0.22	1	Atlas	
CSO193 Events			3.00								
CSO193 Total Volume (Gal)			27,560.51								
CSO196	7/2/2015 20:45	7/2/2015 21:00	6,284.70	0.01	0.99	6,348.18	2.73	0.52	3	Atlas	
CSO196	7/3/2015 14:45	7/3/2015 15:00	6,078.91	0.01	0.35	17,368.30	2.53	0.27	1	Atlas	
CSO196	7/7/2015 11:30	7/7/2015 12:00	18,178.10	0.02	0.85	21,386.00	1.85	0.44	6	Atlas	
CSO196	7/12/2015 6:00	7/12/2015 6:30	30,806.30	0.02	0.9	34,229.22	2.74	0.62	1	Atlas	
CSO196	7/13/2015 15:00	7/13/2015 15:00	10,157.98	-	0.23	44,165.13	3.17	0.19	1	Atlas	
CSO196	7/14/2015 4:15	7/14/2015 4:30	20,258.07	0.01	0.38	53,310.72	3.52	0.28	1	Atlas	
CSO196	7/17/2015 23:00	7/18/2015 0:45	37,441.94	0.07	0.98	38,206.06	2.53	0.65	3	Atlas	
CSO196	8/6/2015 2:15	8/6/2015 15:00	8,813.06	0.53	0.66	13,353.13	0.82	0.25	24	Atlas	
CSO196	8/19/2015 8:15	8/19/2015 8:30	1,293.27	0.01	0.37	3,495.33	0.23	0.14	24	Atlas	
CSO196	8/19/2015 17:00	8/19/2015 17:00	6,304.48	-	0.37	17,039.13	0.4	0.14	24	Atlas	
CSO196	9/9/2015 11:30	9/9/2015 11:30	5,454.03	-	0.33	16,527.37	0.38	0.17	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO196 Events			11.00								
CSO196 Total Volume (Gal)			151,070.83								
CSO199	7/3/2015 14:45	7/3/2015 14:45	277.72	-	0.35	793.48	2.5	0.27	1	Atlas	
CSO199	7/7/2015 11:30	7/7/2015 11:45	2,765.10	0.01	0.85	3,253.06	1.82	0.44	6	Atlas	
CSO199	7/8/2015 9:30	7/8/2015 12:45	11,799.98	0.14	0.1	117,999.79	2.29	0.08	1	Atlas	
CSO199	7/10/2015 16:00	7/11/2015 17:15	146,816.97	1.05	0.57	257,573.64	2.05	0.28	6	Atlas	
CSO199	7/17/2015 21:45	7/18/2015 1:00	17,812.28	0.14	0.98		2.55	0.65	3	Atlas	
CSO199	8/6/2015 2:15	8/6/2015 2:15	1,980.32	-	0.66	3,000.49	0.4	0.25	24	Atlas	
CSO199	8/6/2015 15:00	8/6/2015 15:00	483.29	-	0.66	732.26	0.82	0.25	24	Atlas	
CSO199 Events			7.00								
CSO199 Total Volume (Gal)			181,935.67								
CSO200	7/1/2015 14:00	7/1/2015 14:00	250.21	-	0.99	252.74	1.76	0.52	3	Atlas	
CSO200	7/3/2015 14:45	7/3/2015 18:45	434.63	0.17	0.35	1,241.79	2.54	0.27	1	Atlas	
CSO200	7/7/2015 11:30	7/7/2015 11:45	1,956.57	0.01	0.85	2,301.85	1.82	0.44	6	Atlas	
CSO200	7/10/2015 16:00	7/10/2015 16:00	124.19	-	0.57	217.87	2.05	0.28	6	Atlas	
CSO200	7/12/2015 5:45	7/12/2015 6:15	38,712.68	0.02	0.9	43,014.09	2.74	0.62	1	Atlas	
CSO200	7/13/2015 15:00	7/13/2015 15:00	197.38	-	0.23	858.15	3.17	0.19	1	Atlas	
CSO200	7/14/2015 4:15	7/14/2015 4:30	1,746.19	0.01	0.38	4,595.23	3.52	0.28	1	Atlas	
CSO200	7/14/2015 18:45	7/14/2015 18:45	40.32	-	0.05	806.46	2.77	0.04	1	Atlas	
CSO200	7/17/2015 23:00	7/18/2015 0:45	12,098.79	0.07	0.98	12,345.71	2.53	0.65	3	Atlas	
CSO200	8/6/2015 2:00	8/6/2015 2:00	989.55	-	0.66	1,499.32	0.39	0.25	24	Atlas	
CSO200	8/6/2015 14:45	8/6/2015 14:45	1,168.25	-	0.66	1,770.08	0.82	0.25	24	Atlas	
CSO200	8/19/2015 8:15	8/19/2015 8:15	776.76	-	0.37	2,099.35	0.23	0.14	24	Atlas	
CSO200	8/19/2015 16:45	8/19/2015 16:45	291.74	-	0.37	788.49	0.39	0.14	24	Atlas	
CSO200	9/9/2015 11:15	9/9/2015 11:15	1,669.54	-	0.33	5,059.22	0.38	0.17	1	Atlas	
CSO200 Events			14.00								
CSO200 Total Volume (Gal)			60,456.79								
CSO202	7/3/2015 14:45	7/3/2015 18:45	5,784.23	0.17	0.35	16,526.37	2.54	0.27	1	Atlas	
CSO202	7/7/2015 11:30	7/7/2015 11:45	1,539.30	0.01	0.85	1,810.94	1.82	0.44	6	Atlas	
CSO202	7/10/2015 16:00	7/10/2015 16:00	4,554.89	-	0.57	7,991.03	2.05	0.28	6	Atlas	
CSO202	7/12/2015 5:45	7/12/2015 6:00	17,577.00	0.01	0.9	19,530.00	2.74	0.62	1	Atlas	
CSO202	7/13/2015 15:00	7/13/2015 15:00	3,034.04	-	0.23	13,191.48	3.17	0.19	1	Atlas	
CSO202	7/14/2015 4:15	7/14/2015 4:30	3,117.54	0.01	0.38	8,204.06	3.52	0.28	1	Atlas	
CSO202	7/17/2015 23:15	7/18/2015 0:30	11,435.38	0.05	0.98	11,668.75	2.52	0.65	3	Atlas	
CSO202	8/6/2015 14:45	8/6/2015 14:45	1,164.21	-	0.66	1,763.95	0.82	0.25	24	Atlas	
CSO202	8/19/2015 8:15	8/19/2015 8:15	3,381.81	-	0.37	9,140.03	0.23	0.14	24	Atlas	
CSO202	9/9/2015 11:15	9/9/2015 11:15	3,943.86	-	0.33	11,951.10	0.38	0.17	1	Atlas	
CSO202 Events			10.00								
CSO202 Total Volume (Gal)			55,532.26								
CSO203	7/1/2015 15:15	7/1/2015 15:15	186.35	-	0.99	188.24	1.77	0.52	3	Atlas	
CSO203	7/2/2015 20:45	7/2/2015 20:45	357.34	-	0.99	360.95	2.73	0.52	3	Atlas	
CSO203	7/7/2015 11:30	7/7/2015 15:00	3,907.30	0.15	0.85	4,596.83	2.08	0.44	6	Atlas	
CSO203	7/8/2015 12:15	7/8/2015 12:45	1,251.09	0.02	0.1	12,510.94	2.29	0.08	1	Atlas	

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO203	7/9/2015 6:30	7/9/2015 7:30	834.65	0.04	0.49	1,703.36	1.86	0.30	3	Atlas	
CSO203	7/12/2015 6:00	7/12/2015 8:45	51,627.92	0.11	0.9	57,364.36	2.93	0.62	1	Atlas	
CSO203	7/14/2015 4:15	7/14/2015 4:15	5,560.26	-	0.38	14,632.26	3.5	0.28	1	Atlas	
CSO203	7/18/2015 0:30	7/18/2015 1:00	24,444.28	0.02	0.98	24,943.14	2.55	0.65	3	Atlas	
CSO203	7/29/2015 17:45	7/29/2015 18:00	1,435.44	0.01	0.05	28,708.76	0.18	0.04	1	Atlas	
CSO203	8/6/2015 2:15	8/6/2015 8:45	2,110.23	0.27	0.66	3,197.32	0.67	0.25	24	Atlas	
CSO203	8/19/2015 8:15	8/19/2015 8:30	2,064.53	0.01	0.37	5,579.81	0.23	0.14	24	Atlas	
CSO203	9/9/2015 6:30	9/9/2015 11:45	2,496.35	0.22	0.33	7,564.71	0.38	0.17	1	Atlas	
CSO203 Events			12.00								
CSO203 Total Volume (Gal)			96,275.75								
CSO205	7/12/2015 6:00	7/12/2015 6:15	384.00	0.01	0.77	498.70	2.01	0.51	3	Atlas	*
CSO205	8/21/2015 6:30	8/21/2015 7:45	1,299.18	0.05	Discharge		0.84	#N/A	#N/A	#N/A	*R
CSO205 Events			2.00								
CSO205 Total Volume (Gal)			1,683.18								
CSO206	7/2/2015 0:15	7/2/2015 0:15	5,688.39	-	1.26	4,514.59	1.99	0.48	24	Atlas	
CSO206	7/2/2015 21:15	7/2/2015 21:30	11,395.74	0.01	1.26	9,044.24	3.04	0.48	24	Atlas	
CSO206	7/3/2015 14:45	7/3/2015 18:45	32,082.82	0.17	0.43	74,611.21	2.87	0.24	1	Atlas	
CSO206	7/7/2015 11:30	7/7/2015 11:30	2,869.67	-	0.73	3,931.05	1.99	0.37	6	Atlas	
CSO206	7/8/2015 12:15	7/8/2015 13:00	21,331.02	0.03	0.08	266,637.76	2.55	0.05	1	Atlas	
CSO206	7/9/2015 6:15	7/9/2015 7:45	38,536.74	0.06	0.24	160,569.75	2.09	0.14	3	Atlas	
CSO206	7/10/2015 10:00	7/10/2015 16:30	1,134,739.96	0.27	0.56	2,026,321.37	2.06	0.28	6	Atlas	
CSO206	7/12/2015 6:00	7/12/2015 11:30	9,646,112.66	0.23	1.39	6,939,649.40	3	0.91	3	Atlas	
CSO206	7/13/2015 14:15	7/13/2015 15:15	886,593.77	0.04	0.49	1,809,375.04	3.51	0.41	1	Atlas	
CSO206	7/14/2015 4:00	7/14/2015 5:00	53,310.27	0.04	0.52	102,519.75	4.01	0.37	1	Atlas	
CSO206	7/17/2015 22:30	7/18/2015 1:30	129,277.82	0.13	1.2	107,731.52	3.67	0.80	3	Atlas	
CSO206	7/29/2015 17:30	7/29/2015 17:45	4,515.48	0.01	0.09	50,171.99	0.12	0.08	1	Atlas	
CSO206	8/4/2015 19:00	8/4/2015 19:45	37,486.65	0.03	0.18	208,259.15	0.25	0.13	1	Atlas	
CSO206	8/6/2015 2:30	8/6/2015 14:45	266,324.80	0.51	1.19	223,802.35	1.3	0.40	24	Atlas	
CSO206	8/19/2015 7:45	8/19/2015 8:00	14,302.07	0.01	0.68	21,032.46	0.34	0.28	12	Atlas	
CSO206	9/7/2015 18:00	9/7/2015 18:45	555,003.68	0.03	1.62	342,594.87	1.77	4.25	1	Atlas	
CSO206	9/10/2015 5:00	9/10/2015 5:15	13,533.92	0.01	0.26	52,053.53	2.03	0.10	24	Atlas	
CSO206	9/29/2015 9:15	9/29/2015 12:45	29,436.40	0.15	1.15	25,596.87	0.88	0.37	48	Atlas	
CSO206 Events			18.00								
CSO206 Total Volume (Gal)			12,882,541.85								
CSO207	7/2/2015 20:15	7/2/2015 20:30	31,698.04	0.01	2.02	15,692.10	3.67	0.78	24	Atlas	
CSO207	7/7/2015 12:00	7/7/2015 12:00	4,229.17	-	1.04	4,066.51	3.01	0.45	6	Atlas	
CSO207	7/12/2015 6:15	7/12/2015 6:45	31,424.18	0.02	1.27	24,743.45	2.6	0.85	3	Atlas	
CSO207	7/14/2015 4:30	7/14/2015 6:30	4,447.92	0.08	0.62	7,174.06	4.29	0.49	1	Atlas	
CSO207	7/18/2015 0:15	7/18/2015 0:30	20,589.81	0.01	1.31	15,717.41	3.73	0.87	3	Atlas	
CSO207	8/15/2015 16:30	8/15/2015 16:30	5,669.28	-	0.04	141,732.04	0.17	0.03	1	Atlas	
CSO207	9/9/2015 11:30	9/9/2015 12:30	3,989.58	0.04	0.28	14,248.51	0.42	0.24	1	Atlas	
CSO207 Events			7.00								
CSO207 Total Volume (Gal)			102,047.97								

There are know issues with the flow monitoring data's quality.
MSD is currently working on resolving these issues

CSO	Start Date-Time	End Date-Time	Total Volume (Gal)	Duration (days)	Rain Total (Inch)	Volume per Inch	Antecedent Rain	Freq (yrs)	Period	Standard	SBRet
CSO208	7/2/2015 0:00	7/2/2015 20:45	76,162.16	0.86	2.05	37,152.27	4.11	0.79	24	Atlas	
CSO208	7/3/2015 14:45	7/3/2015 18:30	12,980.22	0.16	0.55	23,600.40	4.02	0.46	1	Atlas	
CSO208	7/7/2015 11:15	7/7/2015 12:30	7,998.77	0.05	1.08	7,406.27	3.41	0.51	3	Atlas	
CSO208	7/8/2015 12:00	7/8/2015 12:30	531.40	0.02	1.08	492.03	3.74	0.51	3	Atlas	
CSO208	7/9/2015 6:00	7/9/2015 13:15	1,747.70	0.30	0.27	6,472.96	3.06	0.13	3	Atlas	
CSO208	7/10/2015 10:00	7/10/2015 16:00	1,034.88	0.25	0.54	1,916.44	2.47	0.28	6	Atlas	
CSO208	7/12/2015 5:45	7/12/2015 7:00	74,627.14	0.05	0.9	82,919.05	2.73	0.63	1	Atlas	
CSO208	7/13/2015 14:15	7/13/2015 14:45	15,431.47	0.02	0.36	42,865.21	3.18	0.30	1	Atlas	
CSO208	7/14/2015 4:00	7/14/2015 4:30	42,816.03	0.02	0.62	69,058.11	3.76	0.46	1	Atlas	
CSO208	7/14/2015 18:30	7/14/2015 18:30	155.01	-	0.02	7,750.52	2.89	0.02	1	Atlas	
CSO208	7/17/2015 22:15	7/18/2015 1:00	163,724.45	0.11	1.37	119,506.90	3.27	0.91	3	Atlas	
CSO208	7/28/2015 17:30	7/28/2015 17:30	266.78	-	0.01	26,678.13	0.1	0.01	1	Atlas	
CSO208	7/29/2015 17:15	7/29/2015 17:15	352.80	-	0.08	4,410.03	0.16	0.07	1	Atlas	
CSO208	8/10/2015 20:30	8/10/2015 20:30	30.26	-	0.13	232.77	1.29	0.11	1	Atlas	
CSO208 Events			14.00								
CSO208 Total Volume (Gal)			397,859.06								
CSO210	7/2/2015 1:15	7/2/2015 5:15	542,738.29	0.17	0.84	646,117.01	2.98	0.47	3	Atlas	
CSO210	7/7/2015 11:45	7/7/2015 17:30	1,150,734.42	0.24	0.91	1,264,543.32	3.3	0.48	6	Atlas	
CSO210	7/10/2015 15:00	7/10/2015 18:45	331,667.49	0.16	0.46	721,016.29	1.8	0.24	6	Atlas	
CSO210	7/12/2015 5:45	7/13/2015 18:15	3,293,157.57	1.52	0.73	4,511,174.75	3.01	0.50	1	Atlas	
CSO210	7/14/2015 4:30	7/14/2015 8:00	214,672.98	0.15	0.3	715,576.61	3.31	0.23	1	Atlas	
CSO210	7/17/2015 23:30	7/18/2015 7:45	606,353.05	0.34	0.83	730,545.84	2.53	0.55	3	Atlas	
CSO210	8/5/2015 14:45	8/5/2015 14:45	152,682.28	-	0.78	195,746.51	0.55	0.30	1	Atlas	
CSO210	8/6/2015 8:45	8/6/2015 11:15	158,240.14	0.10	0.78	202,871.97	0.86	0.30	1	Atlas	
CSO210	8/15/2015 17:00	8/15/2015 17:00	165,786.02	-	0.21	789,457.22	0.41	0.18	1	Atlas	
CSO210 Events			9.00								
CSO210 Total Volume (Gal)			6,616,032.24								
CSO211	7/18/2015 0:30	7/18/2015 1:15	18,055,106.00	0.03	0.83	21,753,139.76	2.53	0.55	3	Atlas	
CSO211 Events			1.00								
CSO211 Total Volume (Gal)			18,055,106.00								

Note:
*R denotes events that were retained by the Sneads Branch Inflatable Dam and therefore did not reach the Waters of the US.
* denotes CSOs that are a part of the Sneads Branch Inflatable Dam Sewershed

Appendix C – Acronyms

Appendix C - Acronyms for Project WIN Quarterly Report

AAM	Advanced Asset Management
AAOV	Annual Average Overflow Volume
ADAPS	Automated Data Processing System
BGC	Beargrass Creek
BMP	Best Management Practices
CCP	Composite Correction Plan
CD	Consent Decree
CMF	Central Maintenance Facility
CMMS	Computerized Maintenance Management System
CMOM	Capacity Management Operations and Maintenance
CPE	Comprehensive Performance Evaluations
CSO	Combined Sewer Overflow
CSS	Combined Sewer System
CSSA	Continuing Sewer System Assessment
DAP	Discharge Abatement Plan (DAP)
DMR	Discharge Monitoring Report
eB	Enterprise Bridge (Spescom scanning software for document management)
EMC	Event Mean Concentration
EPA	Environmental Protection Agency
ERP	Enforcement Response Plan
FM	Force Main
FOG	Fats, Oil & Grease
FPS	Flood Pump Station
FSE	Food Service Establishment
FY	Fiscal Year
GCE	Grease Control Equipment
GIS	Geographical Information System
GLPM	Gravity Line Preventive Maintenance
HMI	Human Machine Interface
I&FP	Infrastructure & Flood Protection (MSD Division)
ICA	Interceptor Condition Assessment
ID	Identification
I&I	Inflow and Infiltration
IMS	Information Management System
IOAP	Integrated Overflow Abatement Plan
ISSDP	Interim Sanitary Sewer Discharge Plan
IT	Information Technology
IWD	Industrial Waste Department
JCPS	Jefferson County Public Schools
KDEP	Kentucky Department of Environmental Protection
KPDES	Kentucky Pollutant Discharge Elimination System
KY	Kentucky
LE	Lateral Extension
LID	Low Impact Development
LIMS	Laboratory Information Management System
LTC	Long Term Control
LTCP	Long Term Control Plan
LOJIC	Louisville and Jefferson County Information Consortium
MDS	Main Diversion Structure
MEB	Main Equipment Building

Appendix C - Acronyms for Project WIN Quarterly Report

MFWTP	Morris Forman Wastewater Treatment Plant
MG	Million Gallons
MGD	Million Gallons Per Day
MLK	Martin Luther King
MO	Metro Operations
MOA	Memorandum of Agreement
MOR	Monthly Operating Report
MOU	Memorandum of Understanding
MSD	Metropolitan Sewer District (Louisville and Jefferson County)
NDD	Non-Domestic Dischargers
NMC	Nine Minimum Controls
NPR	National Public Radio
ORSANCO	Ohio River Valley Water Sanitation Commission
PACP	Pipeline Assessment and Certification Program
PCM	Post Construction Monitoring
PI	Plant Information System
PM	Preventive Maintenance
POC	Pollutants of Concern
PP	Pumping Package
PS	Pump Station
PSC	Property Service Connection
RDII	Rainfall-Derived Infiltration and Inflow
RS	Regulatory Services
RTC	Real Time Control
SCADA	Supervisory Control And Data Acquisition
SCAP	System Capacity Assurance Plan
SIU	Significant Industrial User
SOP	Standard Operating Procedure
SORP	Sewer Overflow Response Protocol
SSDP	Sanitary Sewer Discharge Plan
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
SSOP	Sanitary Sewer Overflow Plan
SWOR2	Southwestern Outfall Relief - Phase 2
SWPS	Southwestern Pump Station
TM	Technical Memorandum
TMDL	Total Maximum Daily Load
TV	Television
UIM	Utility Information Management
UK	University of Kentucky
USACE	US Army Corps of Engineers
USF&W	United States Fish and Wildlife
USGS	United States Geological Survey
WDR	Wastewater Discharge Regulators
WIN	Waterway Improvements Now
WQT	Water Quality Tool
WQTC	Water Quality Treatment Center
WW	Wet Weather
WWT	Wet Weather Team

Appendix D – SCAP Balance



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
CCREEK						
235533	CEDAR CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,521	6,521
236380	FAIRMOUNT ROAD MH REHAB	SCAPCREDIT		6/5/09	10,734	17,255
362688	CCRK IFP ACTIVITY NOV08-MAY12	SCAPCREDIT		5/1/12	2,161	19,416
362689	CCRK IFP ACTIVITY JUN12-AUG12	SCAPCREDIT		8/31/12	2,047	21,463
320989	LITTLE CEDAR CREEK I/I REHABIL	SCAPCREDIT		9/27/12	652,907	674,370
263934	ST JAMES CROSSINGS	LAT EXT	9,000	11/30/12	-19,575	654,795
196927	SONIC SPRINGS	LAT EXT	3,600	12/5/12	-7,830	646,965
14SC1000	FY13 IFP ACTIVITY FIRST HALF - CEDAR CREEK	SCAPCREDIT		12/31/13	2,048	649,013
13LE1155	RAISING CANE'S CEDARLOOK DRIVE	LAT EXT	1,175	5/23/14	-2,556	646,457
239030	POPLAR LAKES PH 1	LAT EXT	18,000	1/26/15	-39,150	607,307
13LE1003	Bardstown Woods Sec 6	LAT EXT	5,200	5/26/15	-11,310	595,997
LE916330	Altawood Development	LAT EXT	1,600	9/14/15	-3,480	592,517
FFORK						
235557	FLOYDSFRK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	14,540	14,540
362638	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	1	14,541
362647	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	4	14,545
362651	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	524	15,069
230379	SHAKES RUN SECTION 4	LAT EXT	3,770	1/5/10	-8,200	6,869
362655	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	81	6,950
362661	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	14,155	21,105
362669	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	22,707	43,812
242480	CLAIBOURNE CROSSINGS PHASE 2	LAT EXT	0	10/17/11	0	43,812
359320	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	4,000	47,812



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
362674	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	2	47,814
362678	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	331	48,145
332823	SINGLE FAMILY HOME	LAT EXT	400	7/13/12	-870	47,275
315945	BROOKFIELD SEC 3	LAT EXT	12,800	10/26/12	-27,840	19,435
361689	LAKE FOREST REHAB PH1	SCAPCREDIT		12/18/12	174,769	194,204
362683	FY13 IFP ACTIVITY FIRST HALF - FFORK	SCAPCREDIT		12/31/12	3	194,207
331397	BROOKFIELD SEC 2A	LAT EXT	14,400	5/8/13	-31,320	162,887
13LE1062	SPEEDWAY #9451	LAT EXT	540	2/18/15	-1,175	161,713
HCREEK						
235561	HITE CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,404	6,404
362641	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	2	6,406
362648	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	8	6,414
362652	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	8	6,422
362657	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	329	6,751
295322	FLOYDSBURG RD I/I INVEST/REHAB	SCAPCREDIT		12/17/10	28,437	35,188
320906	FLOYDSBURG ROAD I/I REHABILITA	SCAPCREDIT		12/17/10	28,437	63,625
362662	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	3	63,628
362670	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	5	63,633
246638	CHAPMAN COURT S/S	LAT EXT	800	9/28/11	-1,740	61,893
362675	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	332	62,225
362679	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	5,002	67,227
290181	CAMDEN WOOD APARTMENTS	LAT EXT	12,400	8/31/12	-26,970	40,257
304536	MAGNOLIA SPRINGS EAST PRIV P/S	LAT EXT	9,500	12/1/12	-20,663	19,595
335610	ROCK SPRINGS FARM SEC 4B	LAT EXT	6,400	12/7/12	-13,920	5,675
362684	FY13 IFP ACTIVITY FIRST HALF - HCREEK	SCAPCREDIT		12/31/12	3	5,678



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
JTOWN						
235563	J-TOWN IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	6,203	6,203
359323	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	10,203
254871	LAKESIDE BAPT CHURCH PRIV PS	LAT EXT	2,500	8/10/10	-5,438	4,766
340213	JEFFERSONTOWN ENG REHAB	SCAPCREDIT		8/11/11	997,448	1,002,214
359324	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	4,000	1,006,214
337261	SINGLE FAMILY 2909 PELHAM CT	LAT EXT	400	5/28/13	-870	1,005,344
13LE1010	SWOPE HR & TRAINING BLDG	LAT EXT	400	6/28/13	-870	1,004,474
13LE1092	BALE EQUIPMENT	LAT EXT	450	10/25/13	-979	1,003,495
14SC1002	FY13 IFP ACTIVITY FIRST HALF - JEFFERSONTC	SCAPCREDIT		12/31/13	3,458	1,006,953
13LE1098	UNIPAK	LAT EXT	720	2/27/14	-1,566	1,005,387
LE924043	Bluearass Indoor Cartina	LAT EXT	400	5/1/14	-870	1,004,517
13LE1067	PARK COMMUNITY	LAT EXT	2,220	12/31/14	-4,829	999,688
MCREEK						
359380	CALENDAR 2005 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/05	12,000	12,000
359381	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	24,000	36,000
235568	MILL CK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	51,530	87,530
359382	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	16,000	103,530
362642	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	93	103,623
362649	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	1,507	105,130
236614	DEVEROES	LAT EXT	960	9/9/09	-2,088	103,042
362653	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	25,272	128,314
359383	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	32,000	160,314
253586	KINGSFORD RETAIL CENTER	LAT EXT	480	1/6/10	-1,044	159,270



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
238421	6840 DIXIE HWY OUTLOT	LAT EXT	2,100	4/28/10	-4,568	154,703
362658	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	6,213	160,916
259408	FAMILY DOLLAR 5105 DIXIE	LAT EXT	1,200	7/2/10	-2,610	158,306
264294	SAINT PETER THE APOSTLE CATHOL	LAT EXT	2,000	7/23/10	-4,350	153,956
276215	FAMILY DOLLAR - KRISTIN WAY	LAT EXT	400	10/12/10	-870	153,086
362664	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	22,740	175,826
359384	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	4,000	179,826
359325	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	8,000	187,826
320916	SONNE AVE PS REHABILITATION -	SCAPCREDIT		6/30/11	120,800	308,626
362671	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	11,615	320,241
299399	FAMILY DOLLAR - GREENWOOD RD	LAT EXT	800	10/4/11	-1,740	318,501
309018	PRP PERFORMING ARTS ADDITION	LAT EXT	1,134	11/9/11	-2,466	316,034
359385	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	328,034
362676	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	3,245	331,279
359326	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	12,000	343,279
318096	CRACKER BARREL OLD COUNTRY	LAT EXT	6,000	1/19/12	-13,050	330,229
262545	DIXIE MANOR SHOPPING CENTER	LAT EXT	965	5/21/12	-2,099	328,130
300374	FORT KNOX FEDERAL CREDIT UNION	LAT EXT	400	6/26/12	-870	327,260
362680	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	2,807	330,067
361693	FY12 MILL CREEK REHAB	SCAPCREDIT		6/30/12	81,675	411,742
231800	PIONEER MOBILE HOME PARK	LAT EXT	11,200	7/24/12	-24,360	387,382
237457	WAVERLY HILLS	LAT EXT	400	9/18/12	-870	386,512
341883	NHK SPRING PRECISION	LAT EXT	17,800	10/19/12	-38,715	347,797
334997	BEECHLAND BAPTIST CHURCH	LAT EXT	2,715	12/5/12	-5,905	341,892
359327	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	148,000	489,892
362685	FY13 IFP ACTIVITY FIRST HALF - MCREEK	SCAPCREDIT		12/31/12	3,458	493,350

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
359386	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	497,350
343763	SOUTHEAST CHRISTIAN CHURCH SW	LAT EXT	6,000	1/18/13	-13,050	484,300
224875	ASHBY GREEN APARTMENT HOMES	LAT EXT	36,400	3/20/13	-79,170	405,130
265944	RIVERPORT PHASE 4A - MICHELIN	LAT EXT	400	6/6/13	-870	404,260
314887	DAYTON FREIGHT	LAT EXT	1,200	9/10/13	-2,610	401,650
13LE1014	LOUISVILLE FREE PUBLIC LIBRARY SOUTHWEST	LAT EXT	8,200	9/26/13	-17,835	383,815
357140	FAMILY DOLLAR CANE RUN ROAD	LAT EXT	832	10/3/13	-1,810	382,005
13LE1171	SINGLE FAMILY HOME 3700 ROMANIA DR	LAT EXT	400	1/29/14	-870	381,135
LE937142	ZAXBYS DIXIE HWY	LAT EXT	924	8/10/15	-2,010	379,126

MFORK

359400	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	84,000	84,000
359328	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	20,000	104,000
235566	MID FORK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	43,779	147,779
359329	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	8,000	155,779
236517	ANCHOR ESTATES MH REHAB	SCAPCREDIT		1/16/09	15,552	171,331
217235	SINKING FORK ICA PHASE I REHAB	SCAPCREDIT		3/30/09	437,967	609,298
235376	MIDDLE FORK INT REHAB PH1	SCAPCREDIT		5/15/09	487,744	1,097,042
179246	SHADY GLEN OF LYNDON PERSONAL	LAT EXT	-500	5/26/09	1,088	1,098,130
250572	1316 WITAWANGA AVE	LAT EXT	400	11/4/09	-870	1,097,260
359331	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	24,000	1,121,260
359401	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	4,000	1,125,260
197432	ALMOST HOME KENNELS - ALL PET	LAT EXT	3,700	3/16/10	-8,048	1,117,212
260064	OXMOOR GOLF FRONT 9	LAT EXT	400	4/15/10	-870	1,116,342
260065	OXMOOR GOLF BACK 9	LAT EXT	400	4/15/10	-870	1,115,472
229834	THE BROOK HOS- DUPONT ADDITION	LAT EXT	1,763	4/27/10	-3,835	1,111,637



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
265723	Z-XPRESS CAR WASH	LAT EXT	5,449	7/2/10	-11,852	1,099,786
255793	HERR LANE APARTMENTS - 4 PLEX	LAT EXT	1,200	7/14/10	-2,610	1,097,176
255792	HERR LANE APARTMENTS - 8 PLEX	LAT EXT	2,400	7/14/10	-5,220	1,091,956
274303	FARM CREDIT SERVICES	LAT EXT	525	9/9/10	-1,142	1,090,814
278015	METROPOLITAN UROLOGY	LAT EXT	400	12/15/10	-870	1,089,944
359402	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	8,000	1,097,944
359333	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	1,109,944
285637	SHELBYHURST OFFICE BUILDING 1	LAT EXT	6,600	1/20/11	-14,355	1,095,589
313465	DORSEY POINTE/CODOMINIUMS 8-13	LAT EXT	2,400	1/27/11	-5,220	1,090,369
291263	BROWNS LANE BUILDING	LAT EXT	400	4/14/11	-870	1,089,499
293400	FOUR PLEX APARTMENTS	LAT EXT	1,200	6/14/11	-2,610	1,086,889
330019	FY11 ANCHOR ESTATES REHAB	SCAPCREDIT		8/11/11	1,359	1,088,248
310046	EL NAPEL - MCMAHAN CENTER	LAT EXT	3,100	10/31/11	-6,743	1,081,506
314591	CHOCOLATE MARTINI BAR/REST	LAT EXT	3,275	11/29/11	-7,123	1,074,382
320983	HURSTBOURNE I/I INVESTIGATION	SCAPCREDIT		12/27/11	1,408,279	2,482,661
359335	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	2,498,661
321228	SINGLE FAMILY UNIT	LAT EXT	400	2/15/12	-870	2,497,791
321647	SINGLE FAMILY	LAT EXT	400	3/27/12	-870	2,496,921
328074	SINGLE FAMILY-703 FOUNTAIN AVE	LAT EXT	400	6/22/12	-870	2,496,051
193195	CEDAR LAKE LODGE WASHBURN	LAT EXT	1,900	8/20/12	-4,133	2,491,919
320923	ST MATTHEWS I/I REHABILITATION	SCAPCREDIT		8/23/12	20,841	2,512,760
337796	CHAMPPS	LAT EXT	635	9/5/12	-1,381	2,511,379
347126	ADVANCE PRODUCTION SYSTEMS	LAT EXT	400	12/28/12	-870	2,510,509
359336	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	92,000	2,602,509
339367	BAPTIST RADIATION ONCOLOGY	LAT EXT	1,500	1/4/13	-3,263	2,599,246
340778	PANDA RESTAURANT	LAT EXT	1,725	1/16/13	-3,752	2,595,494

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
349044	BLAIRWOOD POOL ADDITION	LAT EXT	400	1/29/13	-870	2,594,624
328659	SINGLE FAMILY HOME - 6911 AMBR	LAT EXT	400	2/4/13	-870	2,593,754
352805	POOL HOUSE 9213 REIGATE COURT	LAT EXT	200	2/20/13	-435	2,593,319
14LE1001	MIRANDA LAGRANGE RD	LAT EXT	400	3/19/13	-870	2,592,449
350246	SINGLE FAMILY - 218 BLISS AVE	LAT EXT	400	3/20/13	-870	2,591,579
349974	SINGLE FAMILY 205 N WATTERSON	LAT EXT	400	3/26/13	-870	2,590,709
342433	SHELBYHURST 700 OFFICE BLDG	LAT EXT	7,500	4/15/13	-16,313	2,574,397
350340	JARED THE GALLERY OF JEWELRY	LAT EXT	770	4/16/13	-1,675	2,572,722
13LE1009	Single familv 11716 Wetherbv Ave	LAT EXT	400	6/7/13	-870	2,571,852
13SC1000	FY14 STARVIEW REHABILITATION	SCAPCREDIT		6/30/13	14,183	2,586,035
13LE1001	Single Family 835 Fountain Ave	LAT EXT	400	8/28/13	-870	2,585,165
355162	PROPOSED RESTAURANT	LAT EXT	7,540	9/10/13	-16,400	2,568,766
13LE1045	SINGLE FAMILY 8325 WHIPPS MILL RD	LAT EXT	400	9/30/13	-870	2,567,896
319292	WATERMARK ON HURSTBOURNE	LAT EXT	71,600	10/22/13	-155,730	2,412,166
331542	DENTAL/MEDICAL OFFICE BLDG	LAT EXT	400	10/28/13	-870	2,411,296
13LE1128	SINGLE FAMILY HOME 1327 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,410,426
13LE1144	SINGLE FAMILY 1329 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,409,556
13LE1165	SINGLE FAMILY 8504 LORE LANE	LAT EXT	400	11/25/13	-870	2,408,686
13LE1146	CITY OF ST MATTHEWS COMMUNITY CTR PARI	LAT EXT	1,500	11/26/13	-3,263	2,405,423
13LE1099	NICKLIES - ST MATTHEWS	LAT EXT	1,920	12/11/13	-4,176	2,401,247
353963	DORSEY COMMONS TRACTS 1.2.3	LAT EXT	4,335	12/18/13	-9,429	2,391,819
14SC1003	FY13 IFP ACTIVITY FIRST HALF - MIDDLE FORK	SCAPCREDIT		12/31/13	3,230	2,395,049
352026	MCMAHAN PLAZA PHASE II BLDG B	LAT EXT	766	12/31/13	-1,666	2,393,382
13LE1117	THE VININGS	LAT EXT	850	4/10/14	-1,849	2,391,534
14LE1021	KODA KENTUCKY ORGAN DONOR AFFILIATES	LAT EXT	400	6/18/14	-870	2,390,664
14LE1128	WALDORF SCHOOL OF LOUISVILLE	LAT EXT	400	6/30/14	-870	2,389,794



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
NDITCH						
359404	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	28,000	28,000
235569	N.DITCH IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	11,147	39,147
236363	NORTHERN DITCH INT REHAB PH1	SCAPCREDIT		11/25/08	108,760	147,907
359339	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	151,907
234678	THE LIGHTHOUSE PROMISE COMPLEX	LAT EXT	2,825	3/5/10	-6,144	145,763
284728	SUBWAY - NEW CUT RD	LAT EXT	1,314	12/21/10	-2,858	142,905
359340	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	146,905
320908	PARKVIEW ESTATES REHABILITATIO	SCAPCREDIT		6/28/11	36	146,941
312810	WILLOW PLACE APT COMMUNITY CEN	LAT EXT	400	11/11/11	-870	146,071
359341	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	24,000	170,071
359405	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	182,071
315723	JCPS EARLY CHILDHOOD DEVELOP	LAT EXT	6,000	1/26/12	-13,050	169,021
312057	DOLLAR GENERAL - MEDALLION CT	LAT EXT	400	3/21/12	-870	168,151
312659	KROGER L-350 FUEL STATION	LAT EXT	400	8/20/12	-870	167,281
359343	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	191,281
13LE1147	CARLON ROOFING	LAT EXT	992	12/5/13	-2,158	189,123
13LE1126	JENNINGS CROSSING TRACT 3	LAT EXT	2,100	12/12/13	-4,568	184,556
14SC1004	FY13 IFP ACTIVITY FIRST HALF - NORTHERN DI	SCAPCREDIT		12/31/13	329	184,885
LE947316	Heimbrock I	LAT EXT	400	8/14/15	-870	184,015
LE947318	Heimbrock II	LAT EXT	400	8/14/15	-870	183,145
ORFM						
359433	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	56,000	56,000
359344	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	4,000	60,000

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
235572	ORFM IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	19,826	79,826
362643	FY09 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/08	2	79,828
362650	FY09 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/09	3,836	83,664
362654	FY10 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/09	7,322	90,986
263548	SINGLE FAMILY CONNECTION	LAT EXT	400	5/18/10	-870	90,116
213488	NORTHEAST CHRISTIAN CHURCH	LAT EXT	10,000	6/28/10	-21,750	68,366
362660	FY10 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/10	6,630	74,996
362665	FY11 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/10	165	75,161
362672	FY11 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/11	4,124	79,285
280837	SPRINGHURST TOWNE CTR LOT C	LAT EXT	400	9/20/11	-870	78,415
320920	SHADOW WOOD I/I REHABILITATION	SCAPCREDIT		9/30/11	14,279	92,694
311412	SPRINGHURST CHEVROLET	LAT EXT	855	10/14/11	-1,860	90,834
359345	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	106,834
359434	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	16,000	122,834
362677	FY12 IFP ACTIVITY FIRST HALF	SCAPCREDIT		12/31/11	7,258	130,092
320921	DERINGTON COURT I/I REHABILITA	SCAPCREDIT		3/1/12	56,208	186,300
187028	GLENVIEW PARK SUBD SECTION 1	LAT EXT	4,400	3/5/12	-9,570	176,730
213450	GLENVIEW PARK SUB. SEC 2	LAT EXT	5,600	3/5/12	-12,180	164,550
322455	FIRST LADY NAILS	LAT EXT	400	3/12/12	-870	163,680
362681	FY12 IFP ACTIVITY SECOND HALF	SCAPCREDIT		6/30/12	18,220	181,900
292239	SPRINGHURST RESTAURANT/ RETAIL	LAT EXT	3,440	7/5/12	-7,482	174,418
323821	TIRE DISCOUNTERS WESTPORT RD	LAT EXT	400	12/11/12	-870	173,548
363238	FY13 PROSPECT MANHOLE REHAB	SCAPCREDIT		12/18/12	72,703	246,251
341319	RAISING CANES RETAIL CENTER	LAT EXT	1,225	12/18/12	-2,664	243,587
359346	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	267,587
363235	FY13 MUDDY FORK MH REHAB	SCAPCREDIT		12/31/12	41,653	309,240



Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
362686	FY13 IFP ACTIVITY FIRST HALF - ORFM	SCAPCREDIT		12/31/12	1,148	310,388
360262	SINGLE FAMILY 3419 HILLVALE RD	LAT EXT	400	5/13/13	-870	309,518
343729	RETAIL & RESTAURANT	LAT EXT	3,500	6/21/13	-7,613	301,906
334154	GLENVIEW PARK SUBD SEC 4	LAT EXT	3,600	11/7/13	-7,830	294,076
13LE1024	Overlook at Beech Spring Farm Sec 4	LAT EXT	5,600	12/31/13	-12,180	281,896
199896	SPRINGDALE OFFICE BUILDING	LAT EXT	4,210	3/11/14	-9,157	272,739
225863	SPRING FARM LAKES SEC 1	LAT EXT	4,800	5/16/14	-10,440	262,299
177756	SUMMIT GARDENS PHASE 1	LAT EXT	32,000	9/22/14	-69,600	192,699
14LE1121	Riverside Sewer Extension	LAT EXT	1,200	11/10/14	-2,610	190,089
13LE1071	SPRING FARM LAKE SEC 2	LAT EXT	6,000	1/16/15	-13,050	177,039
352634	BAUER PROPERTY	LAT EXT	2,920	2/12/15	-6,351	170,688
PCREEK						
235574	POND CRK IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	71,782	71,782
359347	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	75,782
359438	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	4,000	79,782
359439	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	12,000	91,782
359348	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	95,782
192513	BANNON CROSSINGS SECTION 3A-1	LAT EXT	800	2/17/10	-1,740	94,042
261115	EMERGENCY RESTORATION	LAT EXT	400	4/27/10	-870	93,172
276977	DADISMAN BUILDERS-POPLAR TREE	LAT EXT	400	10/13/10	-870	92,302
266833	THORNTONS @ PRESTON HWY	LAT EXT	400	12/1/10	-870	91,432
280751	NOTTINGTON HILLS SEC 1	LAT EXT	4,400	12/29/10	-9,570	81,862
359350	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	93,862
187739	GLENGARRY INDUSTRIAL PARK	LAT EXT	4,300	1/13/11	-9,353	84,510
277777	TIRE DISCOUNTERS - BOERSTE WAY	LAT EXT	2,960	3/21/11	-6,438	78,072

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
304408	UPS SUPPLY CHAIN SOLUTIONS #7	LAT EXT	2,250	9/14/11	-4,894	73,178
320918	EDSEL I/I REHABILITATION - FY1	SCAPCREDIT		9/27/11	106,700	179,878
313444	PLANET FITNESS - JEFF BLVD	LAT EXT	1,600	11/4/11	-3,480	176,398
312391	LONGHORN STEAKHOUSE RESTAURANT	LAT EXT	4,840	11/29/11	-10,527	165,871
320919	LANTANA I/I REHABILITATION - F	SCAPCREDIT		12/29/11	5,000	170,871
359351	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	20,000	190,871
310845	ZAXBY'S RESTAURANT	LAT EXT	3,750	2/28/12	-8,156	182,715
255044	ISA-RECYCLING CENTER	LAT EXT	400	3/13/12	-870	181,845
312814	MILLER TRANSPORTATION	LAT EXT	1,800	3/19/12	-3,915	177,930
324554	NORTONS TEMPORARY OFFICE	LAT EXT	900	4/16/12	-1,958	175,972
234102	ETHOS AT VALLEY FARM SR LIVING	LAT EXT	7,050	6/19/12	-15,334	160,638
322367	SHEPHERDS CARE MEMORY HOME	LAT EXT	2,000	6/21/12	-4,350	156,288
307332	LOUISVILLE INDUSTRIAL BLDG B	LAT EXT	2,520	8/6/12	-5,481	150,807
279860	BANNON CROSSINGS SEC 3B-2	LAT EXT	9,600	8/10/12	-20,880	129,927
312053	DOLLAR GENERAL - CLEARWATER FA	LAT EXT	400	8/13/12	-870	129,057
343455	SINGLE FAMILY 1812 GREYLING DR	LAT EXT	400	10/12/12	-870	128,187
243109	OVERBROOK APARTMENTS	LAT EXT	41,200	11/9/12	-89,610	38,577
359354	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	56,000	94,577
329624	COPART	LAT EXT	400	2/20/13	-870	93,707
346082	ZAXBYS	LAT EXT	2,065	5/2/13	-4,491	89,216
320924	LEA ANN WAY INTERCEPTOR I&I RE	SCAPCREDIT		6/30/13	1,017,423	1,106,639
335385	HARRISON LOW PRESSURE S/S	LAT EXT	1,600	7/2/13	-3,480	1,103,159
320940	4 RESIDENCE SFU 7821 MANSCLICK	LAT EXT	400	8/16/13	-870	1,102,289
361336	RENAISSANCE SOUTH BUSINESS	LAT EXT	540	9/6/13	-1,175	1,101,114
324886	PNC BANK	LAT EXT	400	9/6/13	-870	1,100,244
13LE1083	SINGLE FAMILY HOME 5402 (H) E MANSCLICK RE	LAT EXT	400	9/26/13	-870	1,099,374

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
353125	PEGASUS TRANSPORTATION	LAT EXT	250	12/9/13	-544	1,098,831
341439	PRESTON GARDENS APTS	LAT EXT	22,200	12/10/13	-48,285	1,050,546
308206	APPLEGATE FARMS	LAT EXT	57,200	12/10/13	-124,410	926,136
14SC1005	FY13 IFP ACTIVITY FIRST HALF - POND CREEK	SCAPCREDIT		12/31/13	21,344	947,480
13LE1179	TIMBERBEND SUBDIVISION SEC 5B	LAT EXT	6,400	2/14/14	-13,920	933,560
13LE1035	RENAISSANCE SOUTH BUSINESS PARK TRACT	LAT EXT	5,415	4/10/14	-11,778	921,782
13LE1115	VERIZON-OUTER LOOP	LAT EXT	400	4/22/14	-870	920,912
348014	ASHTON PARK TOWN HOMES	LAT EXT	9,000	4/24/14	-19,575	901,337
280180	LOUISVILLE INDUSTRIAL CTR F	LAT EXT	2,480	5/16/14	-5,394	895,943
14LE1085	Williams Properties - Self Storage Facility	LAT EXT	400	5/28/14	-870	895,073
13LE1034	6300 GEIL LANE WAREHOUSE	LAT EXT	720	6/9/14	-1,566	893,507
284215	HURSTBOURNE POINTE APTS	LAT EXT	9,600	7/7/14	-20,880	872,627
344230	AUSTIN PARK APARTMENTS PH6	LAT EXT	27,600	8/25/14	-60,030	812,597
13LE1105	JEFFERSON COMMONS	LAT EXT	17,075	11/13/14	-37,138	775,459
13LE1017	APEX ON PRESTON APT HOMES/Formally CITY	LAT EXT	84,400	1/13/15	-183,570	591,889
354207	COOPER FARMS SEC 11B	LAT EXT	12,400	4/29/15	-26,970	564,919
354209	COOPER FARMS SEC 11A	LAT EXT	13,200	4/29/15	-28,710	536,209
LE948692	Jim's Exoress Wash	LAT EXT	10,500	7/28/15	-22,838	513,371
LE951121	Allaeier Site	LAT EXT	400	8/7/15	-870	512,501
13LE1086	WOODS OF PENN RUN OFFSITE SS	LAT EXT	1,000	8/25/15	-2,175	510,326
13LE1140	JEFFERSON POST APARTMENTS	LAT EXT	28,800	10/2/15	-62,640	447,686
SC939830	Lea Ann Way West Quad 1 & 2 Rehabilitation Proje	SCAPCREDIT		12/31/15	445,911	893,597
SEDIV						
359355	CALENDAR 2007 SUMP PUMP CREDIT	SCAPCREDIT		12/31/07	8,000	8,000
359440	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	128,000	136,000

Capacity Credit Balance Sheet per Credit Basin

<u>APNO</u>	<u>APNAME</u>	<u>APTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
235575	SE DIV IFP WORK AUG05-NOV08	SCAPCREDIT		11/1/08	71,472	207,472
236214	GOLDSMITH BUECHB ICA PHI REHAB	SCAPCREDIT		12/22/08	314,808	522,280
236296	BEARGRASS INT REHAB PH1 SEDIV	SCAPCREDIT		12/22/08	122,688	644,968
359441	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	16,000	660,968
359356	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	4,000	664,968
229854	TINY HANDS DAYCARE	LAT EXT	1,225	10/20/09	-2,664	662,304
359357	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	12,000	674,304
359443	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	8,000	682,304
235291	SULLIVAN COLLEGE OF TECHNOLOGY	LAT EXT	900	2/11/10	-1,958	680,346
238328	LOUISVILLE COLLEGIATE SPORTS	LAT EXT	400	3/1/10	-870	679,476
241759	FRISCHS BIG BOY RESTAURANT	LAT EXT	2,400	3/5/10	-5,220	674,256
257275	LOUISVILLE JUNIOR ACADEMY	LAT EXT	520	4/16/10	-1,131	673,125
320993	BEARGRASS CREEK PHASE II - FY1	SCAPCREDIT		12/14/10	10,368	683,493
359358	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	687,493
359444	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	24,000	711,493
286513	GARDINER POINT RESIDENCE HALL	LAT EXT	10,800	2/16/11	-23,490	688,003
276378	TIRE DISCOUNTERS - BARDSTOWN	LAT EXT	1,500	5/6/11	-3,263	684,741
287888	BEVERAGE WAREHOUSE	LAT EXT	1,180	5/30/11	-2,567	682,174
296295	KEN TOWERY -3800 S HURSTBOURNE	LAT EXT	400	7/1/11	-870	681,304
359445	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	8,000	689,304
359359	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	64,000	753,304
307018	HOOK PROPERTY FAMILY DOLLAR	LAT EXT	400	8/10/12	-870	752,434
359361	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	68,000	820,434
359446	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	824,434
187741	BROOKSTONE SENIOR APARTMENTS	LAT EXT	16,800	3/11/13	-36,540	787,894
232601	RAINTREE/MARIAN CT P/S ELIM	LAT EXT	105,800	6/14/13	-230,115	557,779

<u>APNO</u>	<u>APNAME</u>	<u>APTTYPE</u>	<u>FLOW</u>	<u>Release Date</u>	<u>Approved Credit Required/ Flow Reduction</u>	<u>Running Total</u>
330437	COLLEGIATE ATHLETIC FIELD	LAT EXT	800	11/26/13	-1,740	556,039
14SC1006	FY13 IFP ACTIVITY FIRST HALF - SE DIVERSION	SCAPCREDIT		12/31/13	20,623	576,662

Appendix E – IOAP Project Crosswalk

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Avanti PS Elimination	IOAP	21229-W	S_PO_WC_PC07_M_01_A
Sinking Fork Relief Sewer	ISSDP	21103	SFRS
Sinking Fork Relief Sewer	ISSDP	63319	SFRS
Sinking Fork Relief Sewer	ISSDP	25012	SFRS
Beargrass Interceptor Rehab Ph. 2	IOAP	51594	S_SD_MF_NB06_S_13_C
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108958	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108956	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	MSD1086-PS	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	90776	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108957	S_HC_HC_MSD1086_M_07_C_A
Floydsburg Rd. I/I Investigation & Rehabilitation	IOAP	108953	S_HC_HC_MSD1086_M_07_C_A
Running Fox PS Elimination	IOAP	MSD1080-LS	S_CC_CC_MSD1080_S_01_C
Beechwood Village Sanitary Sewer Replacement	ISSDP	21153	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21101	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21156	BVSSR
Beechwood Village Sanitary Sewer Replacement	ISSDP	21061	BVSSR
Hazelwood PS I/I Investigation & Rehabilitation	IOAP	55667	S_MC_MF_55665_S_07_C
Hazelwood PS I/I Investigation & Rehabilitation	IOAP	55665	S_MC_MF_55665_S_07_C
Parkview Estates I/I Investigation & Rehabilitation	IOAP	47250	S_SD_MF_NB03_S_07_C
Sonne PS I/I Investigation & Rehabilitation	IOAP	MSD0042-PS	S_OR_MF_42007_S_07_C
Woodland Hills PS Diversion	IOAP	33003	S_FF_FF_NB01_S_01_C_A
Anchor Estates- Anchor Ests PS 1 & 2 PS Eliminations	IOAP	0057-W	S_MI_MF_NB06_M_01_A_A - 1
Northern Ditch Diversion Interceptor	ISSDP	MSD0271	NDDI
Edsel PS I/I Investigation & Rehabilitation	IOAP	MSD1048-PS	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	94009	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	92098	S_PO_WC_PC11_M_07_C
Edsel PS I/I Investigation & Rehabilitation	IOAP	92099	S_PO_WC_PC11_M_07_C
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	44397	S_SF_MF_30917_M_09_A

Appendix E IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements 3 - Sewer Replacement & Sewer Rehabilitation	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 1 - SSES	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	8717	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	104231	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 2 - Sewer Replacement and Rehabilitation	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	44397	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	51301	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	99259	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13943	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	8717	S_SF_MF_30917_M_09_A

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13946	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	13931	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	44396	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	104223	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	36763	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	66349	S_SF_MF_30917_M_09_A
Camp Taylor System Improvements Phase 4 - Storage Basin and Sewer Upsize	IOAP	104231	S_SF_MF_30917_M_09_A
Hurstbourne I/I Investigation & Rehabilitation	IOAP	67535	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	47650	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	47656	S_MI_MF_NB07_S_07_C
Hurstbourne I/I Investigation & Rehabilitation	IOAP	1793	S_MI_MF_NB07_S_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	25484	S_PO_WC_PC05_M_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	MSD0101-PS	S_PO_WC_PC05_M_07_C
Lantana PS #1 I/I Investigation and Rehabilitation	IOAP	93719	S_PO_WC_PC05_M_07_C
Derington Ct. PS I/I Investigation & Rehabilitation	IOAP	MSD0095-PS	S_OR_MF_NB03_S_07_C
Derington Ct. PS I/I Investigation & Rehabilitation	IOAP	20155	S_OR_MF_NB03_S_07_C
Southeastern Diversion Structure and Interceptor	ISSDP	72571-X	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30704	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30702	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	63779	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8426	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8427	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8431	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	49647	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	8430	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	18654	SDSI
Southeastern Diversion Structure and Interceptor	ISSDP	30701	SDSI
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	MSD0277	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	32688	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	59169	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22307	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22385	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	22370	DRGWQTC
Derek R. Guthrie WQTC Wet Weather Facility	ISSDP	32682	DRGWQTC

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Hikes Lane Interceptor and Highgate Springs	ISSDP	18370	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18434	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	30681	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	MSD0012-PS	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49673	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49236	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18483	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49224	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18134	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18471	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18318-W	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18505	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18595	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	73111	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	49672	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	17571	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18302	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18297	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	18299	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	30680	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48886	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48888	HLIHSPS
Hikes Lane Interceptor and Highgate Springs	ISSDP	48885	HLIHSPS
Lake Forest PS SSO Investigation	IOAP	MSD1169-LS	S_FF_LF_NB01_S_13_C_A
Meadow Stream Pump Station & Force Main Upgrade	IOAP	MSD1082-PS	S_HC_HC_MSD1082_S_09A_C
Meadow Stream Pump Station & Force Main Upgrade	IOAP	91087	S_HC_HC_MSD1082_S_09A_C
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	41374	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0007-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0024-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	26752	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0023-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0010-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	24472	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	MSD0006-PS	S_OR_MF_NB01_M_01_B

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	IOAP	24152-W	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0007-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	24472	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	41374	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	26752	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0023-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0024-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	24152-W	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0010-PS	S_OR_MF_NB01_M_01_B
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	IOAP	MSD0006-PS	S_OR_MF_NB01_M_01_B
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	MSD0057-LS	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	00056-W	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	817	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	0057-W	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	746	S_MI_MF_NB06_M_01_A_A - 2
Anchor Estates PS Elimination 1 - Vannah PS Elimination	IOAP	1106	S_MI_MF_NB06_M_01_A_A - 2
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47583	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47604	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47603	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	2933	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	2935	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	8537	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	72289	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	30376	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	45796	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	115183	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	84155	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	23211	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	40559	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	51160	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	51180	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47582	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	47034	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1- Buechel Basin	IOAP	72288	S_MISF_MF_NB01_M_01_C_A1

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	8537	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	90700	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	2932	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47034	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	72288	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	47593	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	30376	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	84155	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	115183	S_MISF_MF_NB01_M_01_C_A1
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and	IOAP	45835	S_MISF_MF_NB01_M_01_C_A1
Fairway View PS Improvements	IOAP	MSD1065-PS	S_HC_HS_NB01_S_03_C_A
Riding Ridge PS Improvements	IOAP	MSD1060-LS	S_HC_HN_NB01_S_03_C_A
Shively Interceptor	IOAP	MSD0047-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	4498	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0049-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	4542	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	81814-W	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0016-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0044-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0048-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0050-PS	S_MC_WC_NB01_M_01_A
Shively Interceptor	IOAP	MSD0043-PS	S_MC_WC_NB01_M_01_A
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	92061	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	86052	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0263	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD1043-PS	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0196-PS	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	64096	S_JT_JT_NB01A_M_03_C
Chenoweth Hills WQTC Elimination & PS Improvements	IOAP	MSD0263A-PS	S_JT_JT_NB01A_M_03_C
Fairmount Road Pump Station Off-Line Storage	IOAP	81316	S_FF_CC_81316_M_03_C_A
Fairmount Road Pump Station Off-Line Storage	IOAP	97362	S_FF_CC_81316_M_03_C_A
Jeffersontown WQTC Elimination	IOAP	28391	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	64505	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28392	S_JT_JT_NB01_M_01_C_A

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Jeffersontown WQTC Elimination	IOAP	28395	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	ISO28-SI	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	31733	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28551	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	MSD0255	S_JT_JT_NB01_M_01_C_A
Jeffersontown WQTC Elimination	IOAP	28173	S_JT_JT_NB01_M_01_C_A
Klondike Interceptor	IOAP	26651	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	26650	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	20644	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	66232	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	49513	S_SD_MF_NB04_S_01_B_A
Klondike Interceptor	IOAP	25676	S_SD_MF_NB04_S_01_B_A
Lea Ann Way System Improvements	IOAP	MSD1200-PS	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	29933	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	31074	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	31073	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	57874	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	29948	S_PO_WC_PC08_M_01_C
Lea Ann Way System Improvements	IOAP	MSD1010-PS	S_PO_WC_PC08_M_01_C
Prospect #1 - WQTC Eliminations	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40879	S_OR_MF_NB04_M_03_B_B

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Prospect #1 - WQTC Eliminations	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #1 - WQTC Eliminations	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40879	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #2 - Harrods Creek PS and FM	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	40871	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	65635	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	22436	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	89646	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	40879	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	40880	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemtns	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	42675	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40872	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	65633	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	40870	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	65623	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	42680	S_OR_MF_NB04_M_03_B_B
Prospect #3 - ORFM System Improvemetns	IOAP	89791	S_OR_MF_NB04_M_03_B_B
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	1106	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	MSD0057-LS	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	817	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	00056-W	S_MI_MF_NB06_M_01_A_A - 1
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	IOAP	746	S_MI_MF_NB06_M_01_A_A - 1
Caven Ave Pump Station Elimination	IOAP	70212	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	61667	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	MSD0133-PS	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	17724	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	61687	S_PO_WC_PC09_M_09B_C
Caven Ave Pump Station Elimination	IOAP	27116	S_PO_WC_PC09_M_09B_C
Ashburton PS Improvements & Diversion	IOAP	MSD0165-PS	S_FF_FF_NB03_M_01_C_A
Bardstown Rd. PS Improvements	IOAP	88545	S_CC_CC_MSD1025_S_03_B
East Rockford PS Relocation	IOAP	04699-W	S_MC_WC_NB02_S_03_C
Fox Harbor Inline Storage	IOAP	62769	S_HC_HN_NB03_S_09A_A_A
Gunpowder PS Inline Storage	IOAP	MSD1055-LS	S_HC_HN_NB02_S_09A_C_B
Lucas Lane PS Inline Storage	IOAP	MSD0199-LS	S_FF_BT_NB01_S_09A_C_A
Raintree and Marian Ct 1 - PS Elimination	IOAP	28395A	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	28719	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	28729-W	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 1 - PS Elimination	IOAP	MSD0149-PS	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	MSD0149-PS	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28395A	S_JT_JT_NB03_M_01_C

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28719	S_JT_JT_NB03_M_01_C
Raintree and Marian Ct 2 - Pipe Upgrades	IOAP	28729-W	S_JT_JT_NB03_M_01_C
St. Rene Rd. PS Inline Storage	IOAP	94187	S_FF_CH_NB01_S_09A_C_A
Charleswood Interceptor Extension	IOAP	25480	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	25479	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	25477	S_PO_WC_PC03_M_01_C
Charleswood Interceptor Extension	IOAP	MSD0130-PS	S_PO_WC_PC03_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28415	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	98564	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28250	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	99649	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28416	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28340	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	104289	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28414	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28417	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28413	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28249	S_JT_JT_NB02_M_01_C
Dell Rd and Charlane Pkwy Interceptor Improvements	IOAP	28336	S_JT_JT_NB02_M_01_C
Leven PS Elimination	IOAP	36419	S_PO_WC_PC10_M_01_C
Monticello PS Elimination	IOAP	27969	S_JT_JT_NB04_M_01_A
Monticello PS Elimination	IOAP	MSD0151-PS	S_JT_JT_NB04_M_01_A
Cinderella PS Elimination	IOAP	MSD1013-PS	S_PO_WC_PC04_M_01_C
Cinderella PS Elimination	IOAP	60679	S_PO_WC_PC04_M_01_C
Cinderella PS Elimination	IOAP	35309	S_PO_WC_PC04_M_01_C
Idlewood Inline Storage	IOAP	63094	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	63095	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	70158	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	28984	S_CC_CC_70158_M_09A_C
Idlewood Inline Storage	IOAP	28998	S_CC_CC_70158_M_09A_C
Sutherland Interceptor	IOAP	16649	S_SD_MF_NB05_M_01_A
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	43472	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	MSD1024-PS	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	105936	S_MI_MF_NB04_M_03_B

Appendix E
IOAP Project Crosswalk

Project Name	PROGRAM	ASSET ID	PROJECT ID
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	62418	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	62420	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	21628-W	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	91630	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	46891	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale Wet Weather Storage	IOAP	91629	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	62420	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	91629	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	46891	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	MSD1024-PS	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	62418	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	43472	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	91630	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	105936	S_MI_MF_NB04_M_03_B
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	IOAP	21628-W	S_MI_MF_NB04_M_03_B
Government Center PS Elimination	IOAP	94541	S_PO_WC_PC06_M_01_C
Government Center PS Elimination	IOAP	MSD0180-PS	S_PO_WC_PC06_M_01_C
Government Center PS Elimination	IOAP	94542	S_PO_WC_PC06_M_01_C
Kavanaugh Rd. PS Improvements	IOAP	MSD1085-PS	S_HC_HC_MSD1085_S_03_A
Little Cedar Creek Interceptor Improvements	IOAP	67997	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89197	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89196	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	86423	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	89195	S_CC_CC_67997_M_01_C
Little Cedar Creek Interceptor Improvements	IOAP	86424	S_CC_CC_67997_M_01_C
Eden Care PS SSO Investigation	IOAP	MSD1105-PS	S_FF_FF_NB02_S_13_C
Leland Road SSO Investigation	IOAP	96020	S_OR_MF_NB02_S_13_C