

Louisville and Jefferson County Wet Weather Consent Decree Quarterly Report #56



Reporting Period:

July 1, 2019 through September 30, 2019

Submitted To:

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

Submitted By:

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TABLE OF CONTENTS

INTRODUCTION	1
SECTION 1: PROGRAM ACTIVITIES FOR NINE MINIMUM CONTROLS (NMC).....	3
1.1.Nine Minimum Controls Program Background	3
1.2.NMC 2: Maximization of Storage in the Collection System	3
1.3.NMC 4: Maximization of Flow at the Morris Forman Water Quality Treatment Center	5
1.4.NMC Activity Schedule.....	7
SECTION 2: PROGRAM ACTIVITIES FOR SEWER OVERFLOW RESPONSE PROTOCOL (SORP)	17
2.1.Program Background	17
2.2.Overflow Management and Field Documentation.....	17
2.3.Staff Training and Communication.....	17
SECTION 3: PROGRAM ACTIVITIES FOR DISCHARGE ABATEMENT PLANS (DAP)	19
3.1.Integrated Overflow Abatement Plan (IOAP).....	19
3.2.Sanitary Sewer Discharge Plan (SSDP).....	19
3.2.1. Updated Sanitary Sewer Overflow Plan (SSOP) Implementation	19
3.2.2. Interim Sanitary Sewer Discharge Plan (ISSDP).....	20
3.2.3. Final Sanitary Sewer Discharge Plan (SSDP)	20
3.3.CSO Long Term Control Plan (LTCP)	20
3.3.1. Interim CSO Long Term Control Plan (LTCP)	20
3.3.2. Final CSO Long Term Control Plan (LTCP).....	20
3.3.3. Green Infrastructure Program Update	21
3.4.Discharge Abatement Plan Project Status.....	21
3.4.1. Sanitary Sewer Discharge Plan (SSDP).....	21
3.4.2. Combined Sewer Overflow Long Term Control Plan (LTCP)	22
3.4.3. Activity Progress Chart.....	22
SECTION 4: PROGRAM ACTIVITIES FOR PUBLIC OUTREACH, EDUCATION, NOTIFICATION AND PARTICIPATION	33
4.1.Public Notification Program.....	33
4.2.Public Education Programs.....	33
4.3.Public Outreach Programs.....	34
4.3.1. IOAP Project and Program Meetings.....	34
SECTION 5: CAPACITY MANAGEMENT OPERATIONS AND MAINTENANCE (CMOM) REPORT	35
5.1.Management Programs.....	35

TABLE OF CONTENTS

5.2. Operations Programs	36
5.3. Comprehensive Performance Evaluations and Composite Correction Plans (CPE/CCP)	36
5.3.1. Hite Creek Water Quality Treatment Center	36
5.3.2. Floyds Fork Water Quality Treatment Center	36
5.3.3. Derek R. Guthrie Water Quality Treatment Center	36
5.3.4. Cedar Creek Water Quality Treatment Center	36
5.3.5. Prospect Area Water Quality Treatment Center Updates	37
5.3.6. Jeffersontown Water Quality Treatment Center	37
5.3.7. Other Water Quality Treatment Centers	37
5.4. CMOM Activity Schedule	37
SECTION 6: PROJECT WATERWAY IMPROVEMENTS NOW (WIN) PERFORMANCE OVERVIEW.....	43
6.1. Combined Sewer Overflow Reduction and Sanitary Sewer Overflow Abatement Activities	43
6.1.1. Sanitary Sewer Overflow Elimination Activities	43
6.1.2. Combined Sewer Overflow Reduction and Control Activities	43
6.2. Systemwide Performance	43
6.2.1. Rainfall	43
6.3. Water Quality Treatment Center Performance	44
6.3.1. Bypasses	44
6.3.2. Jeffersontown Water Quality Treatment Center	44
6.3.3. Phosphorus Monitoring at the Prospect WQTCs	44
6.4. Combined Sewer Overflow Performance	44
6.4.1. Authorized Discharges – Wet Weather CSOs	44
6.4.2. Unauthorized Discharges – Dry Weather CSOs	44
6.4.3. CSO Flow Monitoring Quality Improvement	44
6.5. Collection System Overflow Performance	48
6.5.1. Unauthorized Discharges to Waters of US	48
6.5.2. Overflows to the Exterior	48
6.5.3. Overflows to Interior	48
6.6. Gravity Line Preventive Maintenance (GLPM)	48
APPENDICES	50

TABLES

Table 1.1. Morris Forman WQTC Permit Compliance	6
Table 2.1. Hauled Volumes in Gallons.....	17
Table 3.1. Green Program Projects – Current Reporting Period	21
Table 3.2. IOAP Project Completion Dates – CSO LTCP – Current Reporting Period	22
Table 4.1. Metro TV Broadcasts	33
Table 6.1. Dry and Wet Weather SSOs by Cause – Unauthorized Discharges to Waters of US	48
Table 6.2. Rolling Quarterly GLPM Performance with Targets.....	49

FIGURES

Figure 1.1. Morris Forman WQTC – Plant Flows and Associated CSO Activations – July	11
Figure 1.2. Morris Forman WQTC – Plant Flows and Associated CSO Activations – August	12
Figure 1.3. Morris Forman WQTC – Plant Flows and Associated CSO Activations – September.....	13
Figure 1.4. NMC Quarterly Commitments Schedule.....	14
Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule.....	23
Figure 5.1. CMOM Quarterly Commitments Schedule	38
Figure 6.1. Daily Average Rainfall by Month.....	43
Figure 6.2. CSO Flow Monitoring Quality Improvement Status – Phase 1.....	46
Figure 6.3. CSO Flow Monitoring Quality Improvement Status – Phase 2.....	47

APPENDICES

APPENDIX A DISCHARGE WORK ORDERS

Appendix A-1 Discharge Work Orders – Dry Weather CSOs

Appendix A-2 Discharge Work Orders – Bypass

Appendix A-3 Discharge Work Orders – Unauthorized Discharges

APPENDIX B CSO FLOW MONITORING DATA

APPENDIX C ACRONYMS

APPENDIX D SCAP BALANCE

APPENDIX E IOAP PROJECT CROSSWALK

APPENDIX F CSO FLOW MONITORING QUALITY IMPROVEMENT

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 fifty-sixth Quarterly Report submitted in accordance with Paragraph 29 of the Amended Consent Decree. This report covers the time period from July 1, 2019, through September 30, 2019. 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.

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.

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. This section also includes 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.

Section 5: Capacity Management Operations and Maintenance (CMOM) Report – The CMOM program activities and programmatic activities for WQTCs generating capital projects are reported in a Gantt chart for the reporting period. This section also includes the schedule for activities planned for the next reporting period for continued compliance with the Amended Consent Decree.

Section 6: Project Waterway Improvements Now (WIN) Performance Overview – This section provides an accounting of unauthorized discharges from the separate sanitary and combined sewer systems, and the estimated volumes along with performance information on bypasses at WQTCs. 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 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.

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SECTION 1: PROGRAM ACTIVITIES FOR NINE MINIMUM CONTROLS (NMC)

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 approval of the report on February 22, 2007. The approved NMC compliance document can be viewed on the MSD Project Waterway Improvements Now (WIN) website, available at 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 the Real Time Control (RTC) system. During this reporting period, approximately 166 MG were stored in the system during rain events and routed to the Morris Forman WQTC once the system was able to handle the flow. See Table 1.2 at the end of this section for a detailed report.

The following identifies on-going activities; those completed during the current period; and those anticipated to be completed during the next period:

RTC Integration

- MSD and the RTC consultant continue to implement the wet weather standard operating procedures (SOPs) 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 and the RTC consultant continue to monitor and evaluate the performance of the RTC system against operational objectives and issue updates to configurations and site tuning as necessary to improve performance of the recently integrated facilities and Csoft 4.
- MSD and the RTC consultant began planning for integration of the Southwestern Parkway (Shawnee) CSO Storage Basin, the Bells Lane Wet Weather Treatment Facility, Splitter Structure #1 at the Southwestern Pump Station (SWPS) and improvements to RTC operations at the SWPS and Southwestern Sluice Gates (SWSG/SWOR1) facilities.
- MSD completed review of the draft Portland CSO Basin RTC SOP, continued development of a filling and dewatering strategy chapter for inclusion in the master RTC SOP manual, and began updating the entire master RTC SOP manual. The RTC consultant updated the site-by-site quick reference guide of expected site behaviors under the various RTC operating modes for use by operations personnel monitoring the system by incorporating recently integrated sites including the Clifton CSO Basin, Logan CSO Basin and the Nightingale Pump Station (NGPS).
- MSD has completed programming for local automatic operation of the Southwestern Parkway CSO Basin and the Portland CSO Basin.

- MSD began operating the SWSG and Splitter Structure #1 at the SWPS in automatic mode in advance of incorporating these facilities into the RTC system.
- During the next reporting period, MSD will continue implementing RTC SOPs and validating operations of the SWPS, SWSG/SWOR1, and the Bells Lane Wet Weather Treatment Facility in preparation for commissioning these sites into RTC. These site as well as the Southwestern Parkway CSO Basin will undergo local RTC startup and data transfer testing during October 2019. Once the sites have been validated through manual operation and gradual implementation of local automatic control, they will be fully commissioned into the RTC system. MSD will continue updating and developing the master RTC SOP Manual including the Portland CSO Basin SOP and the filling and dewatering chapter of the SOP manual. MSD will continue developing a master programming guide for RTC facilities to document existing programming and parameters at each facility as a reference to ensure long-term continuity of the RTC system. The RTC ICM hydraulic model will be updated to include new RTC facilities and the Csoft configurations will be programmed to allow commissioning into RTC and transfer of set points to the Southwestern Parkway (Shawnee) and the Portland CSO storage basins.

RTC Performance Assessment and Improvements

- The main objective of the RTC performance assessment is to determine whether the available flow and storage capacities within the system are utilized to their optimal potential. MSD staff continues to review and prioritize strategies for performance improvement. During the next reporting period, MSD staff and the RTC consultant will continue to implement hardware, software, and set-point changes as applicable on a site-by-site basis.
- MSD and the RTC consultant incorporated a wet weather rule at the Southern Outfall Retention #1 Facility (SOR1) to keep the RTC system in wet mode until the site was fully dewatered.
- The Ashland RTC Facility Upgrade project was accepted and is now complete and fully operational in RTC.
- MSD and the RTC consultant continued incorporating newly integrated facilities into the Hydroweb RTC dashboard and developing real time dashboard interfaces.
- MSD and the RTC consultant developed a means to transfer RTC storage volumes calculated within Hydroweb on an event-by-event basis to PI historian.
- MSD and the RTC consultant continued exploring options to incorporate Telog data into the Hydroweb dashboard.
- MSD has bid a project to install a flow meter between the Main Diversion Structure (MDS) and the Morris Forman Water Quality Treatment Center to improve monitoring of flow from the MDS.
- MSD will continue to monitor the RTC system to ensure proper operation and further refine operations of the RTC system as performance issues are observed. MSD and the RTC consultant will continue to refine the local site tuning of RTC facilities as needed based on performance during varying rain events. MSD will continue to improve and automate operations of the SWPS, SWSG/SWOR1, the Bells Lane Wet Weather Treatment Facility, Southwestern Parkway CSO Basin, and the Portland CSO Basin. MSD and the RTC consultant will continue evaluating use of the Hydroweb dashboard to interact with the Telog data.

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1.3. NMC 4: MAXIMIZATION OF FLOW AT THE MORRIS FORMAN WATER QUALITY TREATMENT CENTER

Plant Outages

The East and West Headworks were in service during the reporting period. Channels were taken out of service due to low flow as appropriate. Channel Two and Three of the West Headworks were taken out of service the majority of the reporting period for contractor work. The Final Effluent Pump Station (FEPS) was in service 15 days of the reporting period, limiting plant flow to 205 MGD. Flows at Morris Forman WQTC were sustained between 70 and 150 MGD, with some exceptions discussed below, before allowing flow to bypass secondary treatment during the reporting period. Flows are shown in Figures 1.1 through 1.3.

Morris Forman WQTC Projects

- Morris Forman WQTC High Yard Modifications – The project is in the Warranty phase, with a final walkthrough scheduled for November 1, 2019.
- Morris Forman WQTC Headworks Replacement – This project modified the existing preliminary treatment processes. This project reached final completion during the last reporting period.
- Morris Forman WQTC Oxygen Generation Plants 1 and 2 Replacement – The project is in the Warranty phase, with a final walkthrough scheduled for November 1, 2019.
- Morris Forman WQTC Truck Unloading Station – Design is complete and construction is planned for the second quarter of FY20.
- Morris Forman WQTC Primary Sludge Line Replacement Project – This project will replace two old sludge lines between the primary sludge pump station building and the digesters. The project was advertised for bid and awarded during this reporting period. Construction is expected to be complete by the next reporting period.
- Morris Forman WQTC FEPS VFD Replacement – The project scope changed from VFDs to soft starts. The project is scheduled to start in November 2019, and completion within FY20.
- Morris Forman WQTC Cake Pump, Phase II – This project will add a larger cake pump to the existing screw and pump conveyance systems for additional cake solids conveyance to the cake truck load out for offsite disposal. The project will also provide modifications to the East Cake Truck Bay to allow this second truck bay to be available for cake solids load out for offsite disposal. The project will add a third means for cake solids transfer to the load out bay and allow two trucks to be loaded from the West and East truck bay areas. The project was awarded on August 26, 2019 and the Commencement of Performance is to begin on November 1, 2019.
- Morris Forman WQTC Sedimentation Basin Rehabilitation – Consultant procurement to be completed in the second quarter of FY20.
- Morris Forman WQTC Groundwater Study – Consultant procurement to be completed in the second quarter of FY20. The Study will be initiated in the second quarter of FY20 as well.
- Morris Forman WQTC Chiller Replacement - The Consultant was issued a Notice-to-Proceed on August 29, 2019. The project is currently in the design phase.

- Morris Forman WQTC Hypochlorite Line Replacement - The Consultant was issued a Notice-to-Proceed on September 10, 2019. The project is currently in the design phase.
- Morris Forman OGA and PTO Demolition - The Consultant was issued a Notice-to-Proceed on September 11, 2019. The project currently consists of an evaluation of salvageable equipment and potential buyers. This effort is scheduled to be completed in the second quarter of FY20.
- Morris Forman WQTC Groundwater Well No. 10 – The project was bid on October 3, 2019. Construction is scheduled to start in the second quarter of FY20.
- MCC Replacement for Batteries A & B Clarifiers – Preliminary engineering report was completed in the third quarter of FY19. Design is currently on hold.

Morris Forman WQTC Performance

Figures 1.1 through 1.3 located at the end of this section illustrate performance in maximizing flow during wet weather to Morris Forman WQTC. The top of the chart shows rainfall in inches per day. The middle part of the chart shows Morris Forman WQTC effluent flow and secondary treatment flow. The difference between these flows 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 CSO211 is known to be affected by Ohio River backwater effects and the ultrasonic signal is sometimes blocked by mist and condensation when air and sewage temperatures are significantly different. Therefore, CSO activations at CSO211 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 CSO. 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. 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 August 7, secondary effluent flow fell slightly below 120 MGD when C-Battery was out of service. That resulted in a reduction of flow through secondary treatment. MSD is investigating options for more reliable plant telemetry to reduce these occurrences.

Morris Forman effluent compliance for the previous three months is summarized in Table 1.1, where a “✓” indicates compliance and an “X” indicates noncompliance. MSD continues to employ additional solids processing methods, including dewatered cake and an outside vendor to assist with solids handling in addition to purchasing additional liquid oxygen in an effort to meet permit requirements.

Table 1.1. Morris Forman WQTC Permit Compliance

PARAMETER	JULY	AUGUST	SEPTEMBER
Ammonia Nitrogen, 30 Day Secondary Effluent	✓	✓	✓
Ammonia Nitrogen, 7 Day Secondary Effluent	✓	✓	✓
BOD, 30 Day Secondary Effluent	X	X	X
BOD, 7 Day Secondary Effluent	X	X	X

Table 1.1. Morris Forman WQTC Permit Compliance

PARAMETER	JULY	AUGUST	SEPTEMBER
BOD, Percent Removal	✓	X	X
Chlorine, Residual	✓	✓	✓
Dissolved Oxygen	X	X	✓
Fecal Coliform, 30 Day Geomean	✓	✓	✓
Fecal Coliform, 7 Day Geomean	✓	✓	✓
pH	✓	✓	✓
TSS, 30 Day Secondary Effluent	X	X	X
TSS, 7 Day Effluent	X	X	X
TSS, Percent Removal	X	X	X

1.4. NMC ACTIVITY SCHEDULE

NMC capital project milestones for the current reporting period as well as a look-ahead for the upcoming reporting period are provided in Figure 1.4.

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Table 1.2. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)										High River Levels	Comments	
	Start Date	End Date	Duration	Average*	Max**		SWPS SG Chamber (14.25)	SWOR2 (4.1)	Brady Lake and Executive Inn Storage (21.5)	Ashland (1.0)	SOR1 (14.05)	Ohio River Interceptor (1.8)	Sneads Branch (2.5)	Logan (17)	NGPS (8.0)	Clifton Heights (6.9)			Total (91.1)
				TRFD (in)	TRFD (in)	Rain Gauge													
2019-048	6/30/19 18:00	7/1/19 6:20	12:20:00	0.22	0.45	TR11	2.20	0.60	0.40	0.25	0.65	0.75	0.00	0.05	0.10	0.00	5.00	0	Small storm cells heterogeneously distributed over the service area.
2019-049	7/1/19 17:25	7/2/19 2:30	9:05:00	0.11	0.25	TR04	0.30	0.20	0.25	0.15	1.10	1.30	0.00	0.10	0.05	0.00	3.45	0	The SWSG site was controlled manually.
2019-051	7/3/19 14:20	7/4/19 0:30	10:10:00	0.35	0.99	TR13	0.55	0.40	0.65	0.00	2.10	0.85	0.00	1.20	0.05	0.40	6.20	0	Small storm cells heterogeneously distributed over the service area.
2019-055	7/16/19 12:05	7/18/19 18:00	53:55:00	0.46	0.90	TR12	5.15	0.70	1.45	0.05	11.05	1.40	1.15	12.20	0.35	0.90	34.40	0	The SWSG site was controlled manually.
2019-056	7/21/19 15:05	7/22/19 23:25	32:20:00	0.27	0.35	TR15	0.55	0.25	0.40	0.30	0.00	2.00	0.10	0.10	0.05	0.00	3.75	0	Moderate back-to-back storm cells homogeneously distributed over the service area.
2019-057	7/29/19 19:05	7/31/19 4:15	33:10:00	0.47	0.91	TR04	3.65	1.10	2.70	0.60	11.70	1.50	1.45	7.25	0.45	1.10	31.50	0	The SWSG site was controlled manually.
2019-059	8/7/19 5:10	8/9/19 20:40	63:30:00	0.07	0.48	TR12	0.00	0.05	0.40	0.00	6.85	1.35	0.00	3.55	0.10	0.00	12.30	0	Moderate storm cells heterogeneously distributed over the service area.
2019-060	8/13/19 3:55	8/16/19 17:40	85:45:00	0.35	0.68	TR11	3.05	1.55	2.10	0.55	0.00	1.40	1.10	0.15	0.10	0.00	10.00	0	The SWSG site was controlled manually.
2019-062	8/19/19 1:45	8/19/19 10:50	9:05:00	0.06	0.26	TR04	0.00	0.00	0.05	0.05	0.00	0.55	0.00	0.00	0.05	0.00	0.70	0	Small back-to-back storm cells heterogeneously distributed over the service area.
2019-064	8/22/19 3:35	8/22/19 19:25	15:50:00	0.37	0.72	TR13	2.45	0.60	1.55	0.15	0.00	1.00	0.10	0.40	0.25	0.45	6.95	0	Moderate back-to-back storm cells heterogeneously distributed over the service area.
2019-065	8/23/19 9:20	8/24/19 2:00	16:40:00	0.02	0.05	TR14	0.00	0.40	0.80	0.00	0.00	0.30	0.00	0.00	0.10	0.00	1.60	0	Small storm cells heterogeneously distributed over the service area.
2019-066	8/25/19 21:05	8/28/19 9:30	60:25:00	1.15	2.10	TR13	3.75	2.80	5.40	0.70	14.40	1.85	1.75	15.30	0.20	4.15	50.30	0	Moderate back-to-back storm cells homogeneously distributed over the service area.
TOTAL							21.65	8.65	16.15	2.80	47.85	14.25	5.65	40.30	1.85	7.00	166.15		

* Average total rainfall depth based on rain gauges TR04, TR05, TR11, TR12, TR13, TR14 and TR15.
 ** Maximum total rainfall depth measurement and measurement location during the wet weather event.
 *** MDS is always controlled manually by operators.

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Figure 1.1. Morris Forman WQTC – Plant Flows and Associated CSO Activations – July

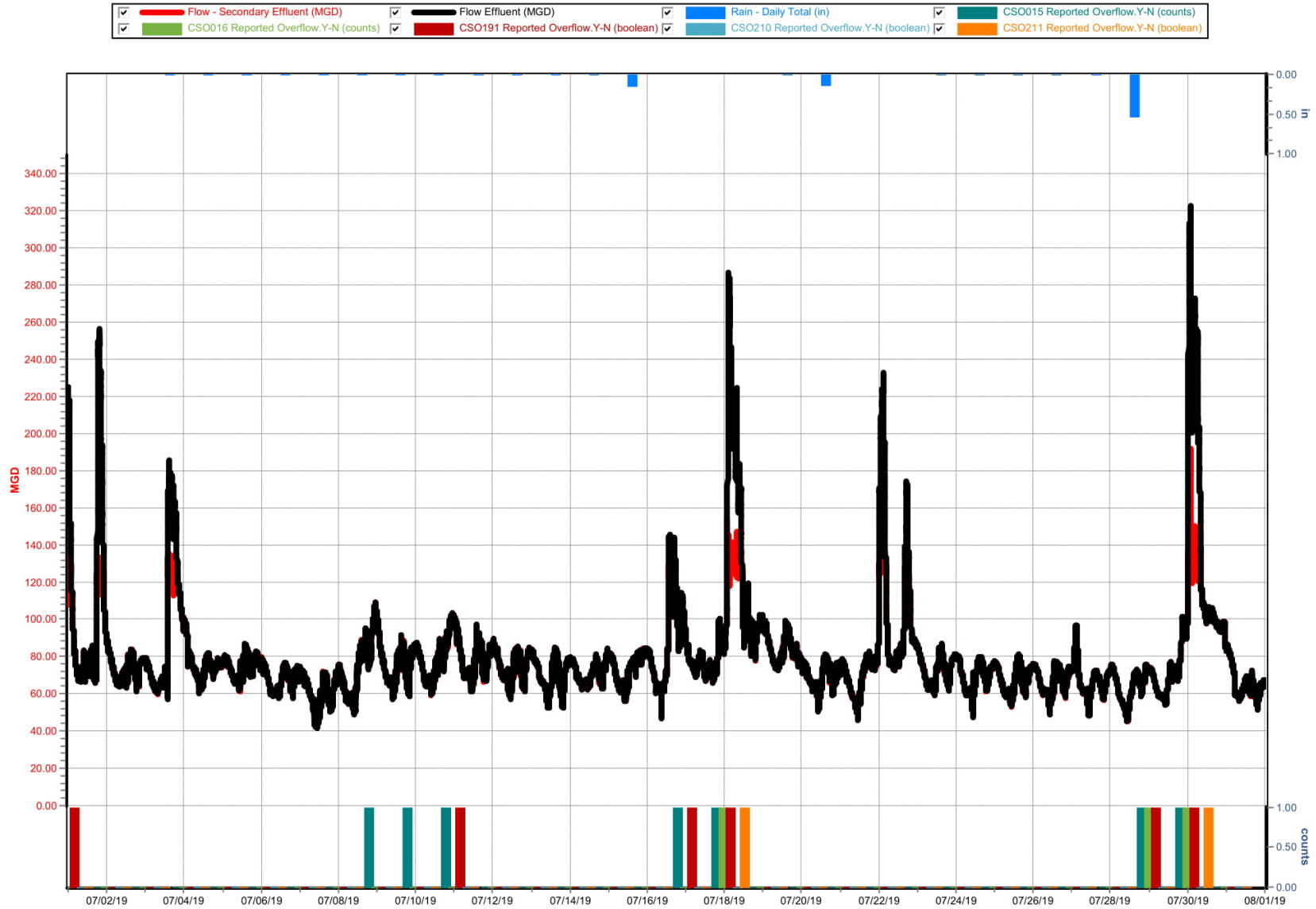


Figure 1.2. Morris Forman WQTC – Plant Flows and Associated CSO Activations – August

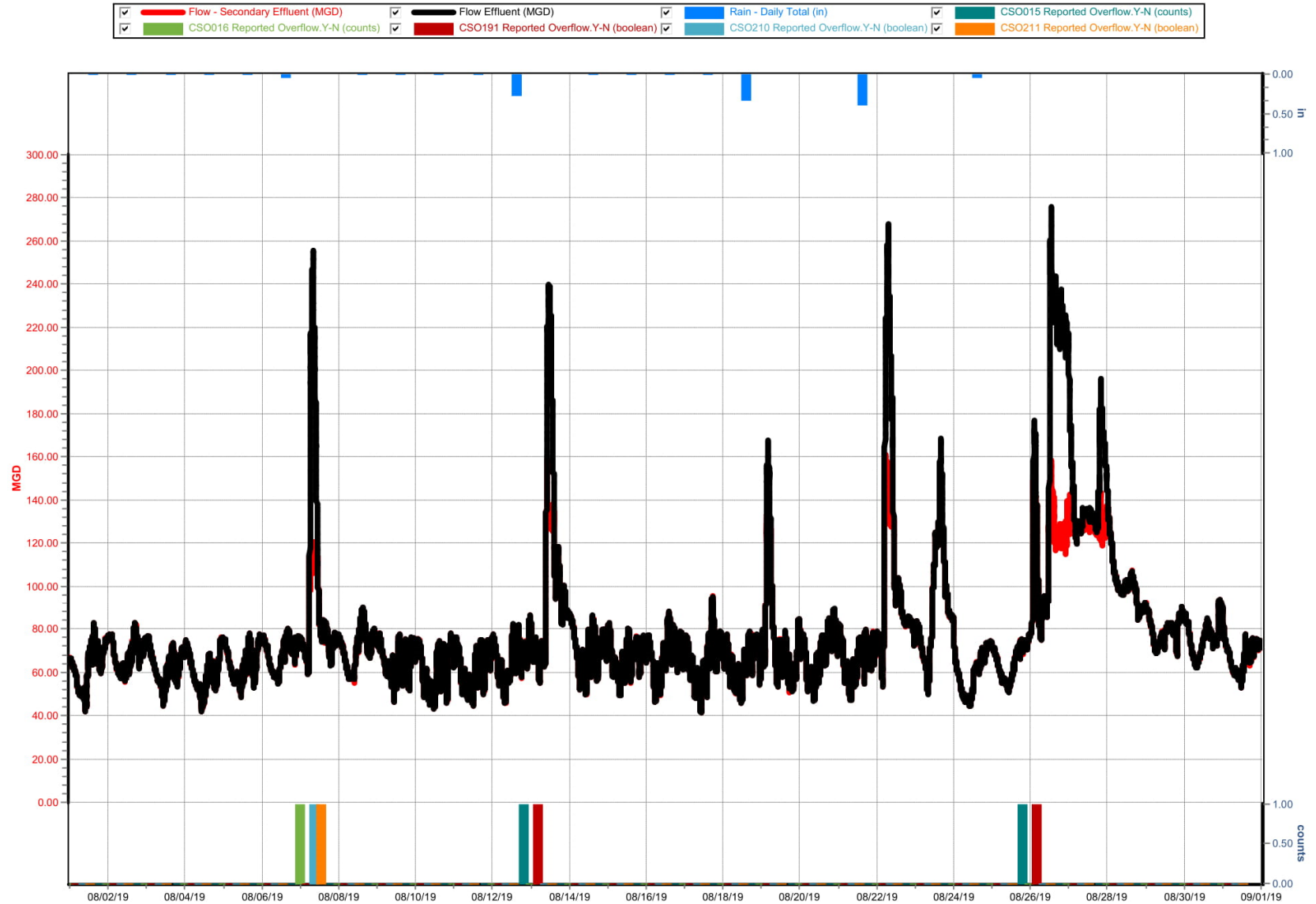


Figure 1.3. Morris Forman WQTC – Plant Flows and Associated CSO Activations – September

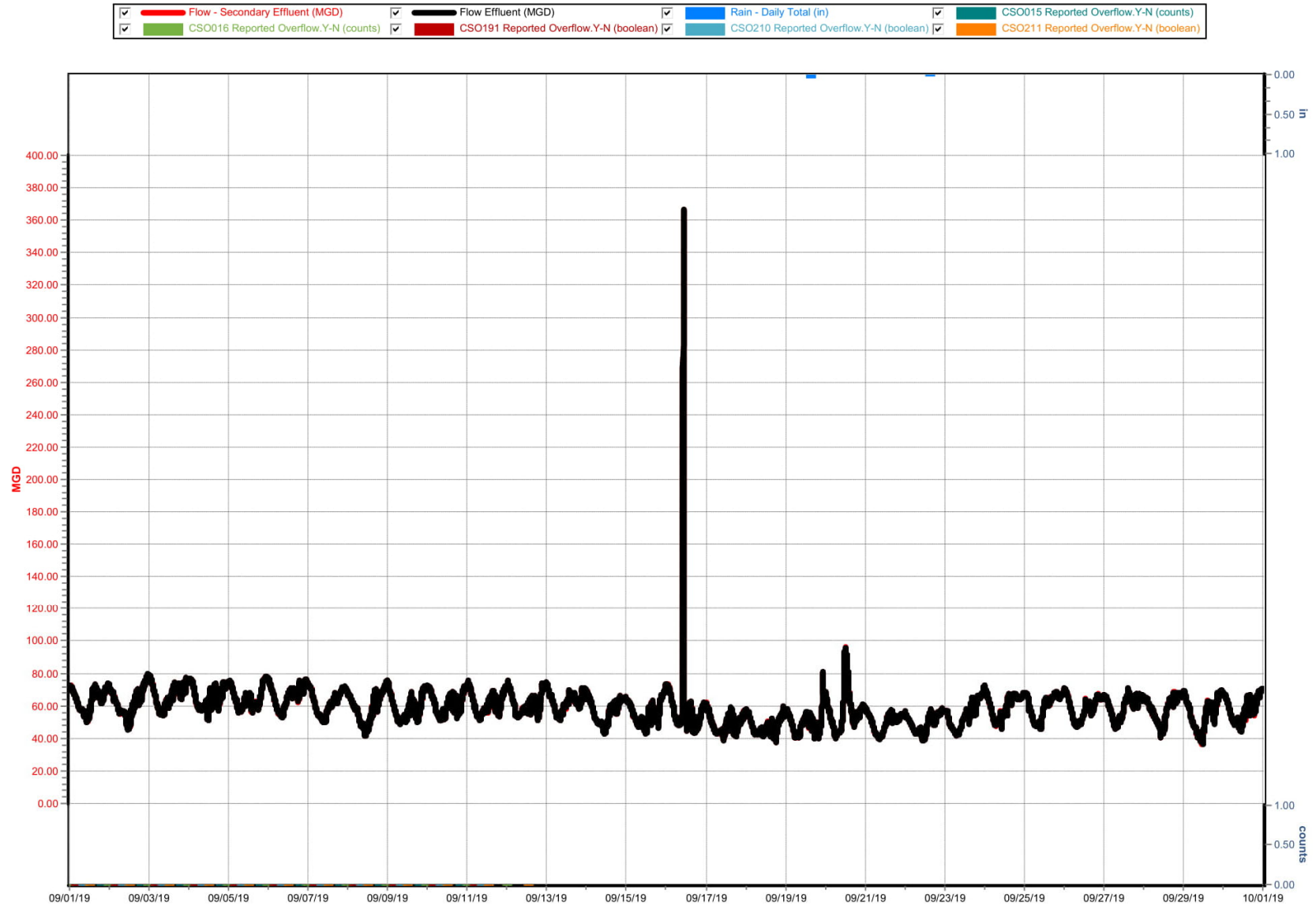


Figure 1.4. NMC Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec
MSD NMC Quarterly Commitments Schedule		66%	Fri 8/15/14	Sun 5/12/24						
A20244	Large Diameter Sewer Rehabilitation	0%	Mon 9/16/19	Fri 12/31/21						
A20244	DESIGN	0%	Mon 10/21/19	Thu 5/21/20						
D15020	MFWQTC Cake Pump Phase II	54%	Mon 3/12/18	Tue 8/3/21						
D15020	CONSTRUCTION	0%	Fri 11/1/19	Thu 10/1/20						
D17042	MFWQTC Sedimentation Basin RR	0%	Tue 5/21/19	Sun 5/12/24						
D17042	DESIGN	0%	Tue 10/15/19	Fri 10/8/21						
D17131	MFWQTC Biosolids Processing Engineering Services	86%	Mon 1/2/17	Fri 3/13/20						
D17131	Engineering Services	86%	Mon 4/24/17	Fri 3/13/20						
D18118	MFWQTC Truck Unloading Station Pavement Repair	20%	Fri 4/27/18	Fri 4/23/21						
D18118	DESIGN	82%	Sun 6/30/19	Thu 10/10/19						
D18118	CONSTRUCTION	0%	Mon 12/2/19	Sun 3/1/20						
D18127	DRGWQTC Hypo Containment	92%	Sat 12/1/18	Thu 8/13/20						
D18127	CONSTRUCTION	87%	Mon 6/3/19	Fri 10/18/19						
D18127	CLOSEOUT	0%	Tue 12/17/19	Thu 8/13/20						
D19028	FY20 MFWQTC Upgrade PLCs	18%	Mon 7/1/19	Tue 6/30/20						
D19028	CLOSEOUT	18%	Thu 8/1/19	Tue 6/30/20						
D19043	MFWQTC OGA and PTO Demolition	20%	Tue 6/4/19	Mon 1/13/20						
D19043	ASSESSMENT	18%	Sun 9/15/19	Sun 12/8/19						
D19045	MFWQTC Sodium Hypochlorite Storage Relocation	5%	Tue 6/4/19	Fri 1/1/21						
D19045	DESIGN	10%	Tue 9/10/19	Thu 4/2/20						
D19046	MFWQTC Ground Water Well 10 Replacement	24%	Mon 7/2/18	Mon 11/30/20						
D19046	CONSTRUCTION	0%	Tue 11/5/19	Mon 2/3/20						
D19048	MFWQTC Radio Repeater Project	2%	Mon 7/2/18	Tue 6/30/20						
D19048	INITIATION & PROCUREMENT	99%	Mon 7/2/18	Wed 1/15/20						
D19223	DRGWQTC WWPS Finite Element Analysis Phase 2	81%	Mon 7/2/18	Tue 12/31/19						
D19223	CLOSEOUT	81%	Wed 9/12/18	Tue 12/31/19						
D19275	MDS Downstream Flow Meter	36%	Tue 1/1/19	Sun 11/15/20						
D19275	CONSTRUCTION	0%	Tue 10/22/19	Mon 1/20/20						
D19307	MFWQTC FEPS VFD Replacement	20%	Mon 4/1/19	Tue 6/30/20						
D19307	INITIATION & PROCUREMENT	99%	Mon 4/1/19	Tue 10/15/19						

Data Date: 09/30/19 NMC Project █ Project Progress █

Percent complete is calculated based on phase duration. Page 1

Figure 1.4. NMC Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec
D19307	CLOSEOUT	19%	Thu 6/20/19	Tue 6/30/20						
D20216	FY20 Strand CCWQTC Engineering Support	10%	Tue 8/27/19	Tue 6/30/20						
D20216	DESIGN	10%	Sun 9/1/19	Tue 6/30/20						
D20216	CLOSEOUT	0%	Sun 9/1/19	Tue 6/30/20						
D20217	FY20 Hazen DRGWQTC Engineering Support	10%	Tue 8/27/19	Tue 6/30/20						
D20217	DESIGN	10%	Sun 9/1/19	Tue 6/30/20						
D20218	FY20 Jacobs MFWQTC Engineering Support	10%	Tue 8/27/19	Tue 6/30/20						
D20218	DESIGN	10%	Sun 9/1/19	Tue 6/30/20						
D20218	CLOSEOUT	0%	Sun 9/1/19	Tue 6/30/20						
D20219	FY20 HDR MFWQTC Engineering Support	10%	Tue 8/27/19	Tue 6/30/20						
D20219	DESIGN	10%	Sun 9/1/19	Tue 6/30/20						
D20219	CLOSEOUT	0%	Sun 9/1/19	Tue 6/30/20						
D20226	Bells Lane and MF HW Bar Screen Grit Study	0%	Tue 7/23/19	Fri 4/3/20						
D20226	STUDY	0%	Tue 10/8/19	Sun 3/8/20						
D20228	MFWQTC Centrifuge Replacement	4%	Tue 7/23/19	Wed 6/30/21						
D20228	EQUIPMENT REPLACEMENT	8%	Sun 9/1/19	Mon 8/31/20						
D20229	MFWQTC Clarifier B5 Floor Repair	0%	Tue 7/23/19	Mon 10/18/21						
D20229	STUDY	0%	Tue 10/1/19	Fri 8/14/20						
D20230	MFWQTC BOC_SHOC Fan Replacement	5%	Mon 7/1/19	Wed 6/30/21						
D20230	PROCUREMENT & INSTALLATION	10%	Sun 9/1/19	Tue 6/30/20						
D20231	FY20 MFWQTC FEPS Pump and Motor Repair	1%	Mon 7/1/19	Tue 6/30/20						
D20231	INITIATION & PROCUREMENT	99%	Mon 7/1/19	Mon 12/30/19						
D20231	CLOSEOUT	0%	Mon 12/30/19	Tue 6/30/20						
F09510	MF OGA Plants 1 and 2 Replacement	97%	Mon 9/14/15	Mon 11/11/19						
F09510	CLOSEOUT	88%	Tue 12/11/18	Mon 11/11/19						
F14182	MFWQTC FEPS Pump Repair and Motor	99%	Wed 1/31/18	Mon 9/30/19						
F14182	EQUIPMENT AND SERVICES PROCUREMENT	99%	Tue 3/6/18	Mon 9/30/19						
F14182	CLOSEOUT	0%	Mon 9/30/19	Mon 9/30/19						
F16003	Ashland RTC Facility Upgrades	76%	Fri 4/1/16	Tue 4/21/20						
F16003	CLOSEOUT	32%	Tue 6/25/19	Tue 4/21/20						
G17033	Louisville Green Major Maintenance	18%	Mon 7/1/19	Tue 6/30/20						



Data Date: 09/30/19

NMC Project  Project Progress 

Percent complete is calculated based on phase duration.

Figure 1.4. NMC Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter			
					Jul	Aug	Sep	Oct	Nov	Dec	
G17033	INITIATION & PROCUREMENT	99%	Mon 7/1/19	Wed 7/31/19							
G17033	CLOSEOUT	18%	Thu 8/1/19	Tue 6/30/20							
H16056	FY20 NMC	25%	Mon 7/1/19	Tue 6/30/20							
H16056	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20							
H16076	Sneads Branch Pump Replacement* FY22	15%	Thu 1/11/18	Thu 5/25/23							
H18442	FY20 RTC Support	25%	Mon 7/1/19	Tue 6/30/20							
H18442	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20							

Data Date: 09/30/19	NMC Project 	Project Progress 
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Percent complete is calculated based on phase duration. Page 3

SECTION 2: PROGRAM ACTIVITIES FOR SEWER OVERFLOW RESPONSE PROTOCOL (SORP)

2.1. 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, received comments on March 13, 2006, , and received an approval letter for the SORP on August 22, 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 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. Modifications were made to the document in 2016 to reflect the elimination of the Jeffersontown WQTC, and were approved on July 21, 2017. 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, available at www.msprojectwin.org. The following activities were performed during this reporting period.

2.2. OVERFLOW MANAGEMENT AND FIELD DOCUMENTATION

MSD monitored approximately 143 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, 0 unauthorized discharges were identified through route reconnaissance. Due to mostly dry conditions, inspection routes were not run during this period.

The West County route is monitored via telemetry. During this reporting period, MSD determined that the inspection work orders should no longer be created to document this monitoring. However, discharge work orders will be created as required based on telemetry observations.

MSD Operations staff hauled 3,500 gallons due to capacity-related issues during this reporting period. Hauling was also initiated due to other issues as indicated in Table 2.1.

Table 2.1. Hauled Volumes in Gallons

PROBLEM	JUL	AUG	SEPT
LACK OF SYSTEM CAPACITY	3,500	0	0
STRUCTURAL FAILURE	6,000	112,000	68,000
MECHANICAL FAILURE	8,000	3,000	0

2.3. STAFF TRAINING AND COMMUNICATION

MSD continued training through the online training delivery system, which allows more flexibility for employees to complete training at convenient times during the quarter and to integrate SORP training with new employee and contractor orientation.

Four modules were delivered under Public Notification and Overflow Cleanup:

- Event Based Notification
- Programmatic Based Notification
- Overflow Cleanup
- Q55 Updates (updates related to progress under the IOAP and projects under the CMOM and NMC programs)

The content was delivered to 265 staff in Operations and Engineering.

Fourth quarter training also utilizes the online format, and includes four modules under Reporting & Follow-up:

- Reporting Basics
- Hansen Reporting
- Paper-Based & Contingency Reporting
- Regulatory Reporting & Data Quality
- Q56 Updates (updates related to progress under the IOAP and projects under the CMOM and NMC programs)

These modules will be reviewed and updated as needed for delivery during the next reporting period. An update module provides continued updates related to progress under the IOAP and projects under the CMOM and NMC programs and will also be updated for delivery.

SECTION 3: PROGRAM ACTIVITIES FOR DISCHARGE ABATEMENT PLANS (DAP)

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 and the combined sewer systems, 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 (SSDP) and the Final CSO Long Term Control Plan (LTCP) 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 a Federal Order signed February 12, 2010, and was entered into public record on 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 provide a higher level of overflow control. These modifications will be completed faster than originally proposed for approximately the same overall budget.

Since the June 19, 2014, approval of the 2012 IOAP Modification, minor project modification requests have been submitted and approved on an individual project basis.

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 (SSOP) 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 (ISSDP)

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 document can be viewed on the MSD Project WIN website, available at www.msprojectwin.org.

All projects required by the ISSDP have been completed and certified. The Derek R. Guthrie WQTC Project's completion was delayed in accordance with the construction contract documents due to existing litigation and performance by the general contractor. However, the full functionality and capacity of the plant upgrades under this project met the demands of the service area. With this understanding, a revised certification letter dated October 19, 2015, was submitted certifying that the Derek R. Guthrie WQTC Project is performing in accordance with its stated intent and purpose, and is in compliance with the Consent Decree requirements.

3.2.3. FINAL SANITARY SEWER DISCHARGE PLAN (SSDP)

MSD submitted for approval a Final SSDP on December 19, 2008, as Volume 3 of the IOAP. The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by a Federal Order signed February 12, 2010, and was entered into public record on February 15, 2010. A revised SSDP was included in the 2012 IOAP Modification, submitted on June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP. The approved document can be viewed on the MSD Project WIN website, available at www.msprojectwin.org.

3.3. CSO LONG TERM CONTROL PLAN (LTCP)

The CSO Long Term Control Plan (LTCP) addresses the overflows and unauthorized discharges from the Combined Sewer System (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 (LTCP)

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

MSD submitted for approval the Final CSO LTCP on December 19, 2008, as Volume 2 of the Integrated Overflow Abatement Plan. The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, and was entered into public record on February 15, 2010. A revised LTCP was included in the 2012 IOAP Modification, submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA/KDEP. The approved document can be viewed on the MSD Project WIN website, available at www.msprojectwin.org.

3.3.3. GREEN INFRASTRUCTURE PROGRAM UPDATE

The intent of the Green Infrastructure Program is to provide additional overflow volume reduction benefits to complement LTCP projects. Projects are selected for incentive by providing high value for residual average annual overflow volume (AAOV) reduction based on the latest modeling results.

Green Infrastructure Program projects approved by the MSD Board are included in Table 3.1, including status during the current reporting period. While all projects listed in the table have been approved for construction, projects may not be completed due to individual project circumstances.

Table 3.1. Green Program Projects – Current Reporting Period

PROJECT NAME	SEWERSHED	EST. AAOV REDUCTION (GAL)	INCENTIVE VALUE	STATUS
1301 W. Main St.	CSO050	135,000	\$60,375	Design
Advance Distribution	CSO015	8,940,405	\$100,000	Completed
Brown Forman Distillery	CSO015	11,923,259	\$770,000	Design
Brown Forman Cooperage	CSO015	9,104,289	\$26,376	Design
Brown Forman Shipping Lot #3	CSO015	261,000	\$117,475	Design
CMF Parking Lot	CSO015	4,546,886	\$230,650	Design
JCTC Advanced Manufacturing Facility	CSO211	1,555,920	\$27,425	Construction
Paristown Pointe	CSO084	160,000	\$433,368	Construction
Passport Healthcare Campus	CSO105	8,680,818	\$351,780	Construction
Spalding Athletic Fields	CSO178	750,321	\$254,826	Construction
UofL Belknap Building	CSO211	5,102,293	\$242,120	Completed
UofL Brook St. Phase II	CSO211	338,000	\$150,465	Construction
Urban Government Center Separation	CSO084	20,496,489	\$245,853	Design
Churchill Downs Eastside Improvements	CSO211 CSO015	14,773,938	\$1,200,000	Construction
Churchill Downs Phase II	CSO015	35,361,232	\$2,542,703	Completed
West Market Phase II	CSO189 CSO019	395,000	\$185,030	Construction
Urban League Track and Field Facility	CSO189	20,978,598.00	\$994,694.00	Construction
Louisville City Soccer Stadium	CSO062	NA	\$250,000	Construction

3.4. DISCHARGE ABATEMENT PLAN PROJECT STATUS

3.4.1. SANITARY SEWER DISCHARGE PLAN (SSDP)

Per the current approved schedule, no SSDP projects were completed during the reporting period. Per the current approved schedule, no SSDP projects are anticipated to be completed or certified during the next reporting period.

3.4.2. COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN (LTCP)

Per the current approved schedule, one CSO LTCP project was completed during the current reporting period, as shown in Table 3.2. Per the current approved schedule, no CSO LTCP projects are anticipated to be completed or certified during the next reporting period.

Table 3.2. IOAP Project Completion Dates – CSO LTCP – Current Reporting Period

BUDGET ID	ACD PROJECT NUMBER	PROJECT NAME	ASSOCIATED CSOs	LEVEL OF CONTROL (TYPICAL YEAR)	ACD DATE	CERTIFIED COMPLETION DATE
H09125	L_OR_MF_019 _S_13_B_A_8	Portland CSO Basin	CSO019	8	December 31, 2019	August 30, 2019

3.4.3. ACTIVITY PROGRESS CHART

A Gantt chart showing the 2012 IOAP Modification project schedules and subsequent approved minor modifications for the entire program is provided in Figure 3.1. Refer to IOAP, Volume 1 – Figure 6.3.1 for the previous chart. A crosswalk of projects and associated overflows is provided in Appendix E.

Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
MSD IOAP ANNUAL SCHEDULE																							
LONG TERM CONTROL PLAN	100%	Fri 1/1/21	Wed 7/1/09	Thu 12/31/20	Thu 12/31/20																		
GREEN DEMONSTRATION PROJECTS	92%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20																		
Green Infrastructure Demonstration Projects	100%	Mon 12/19/11	Mon 12/19/11	Sat 12/31/11	Sat 12/31/11																		
Green Infrastructure Demonstration Projects	100%	Mon 12/19/11	Mon 12/19/11	Sat 12/31/11	Sat 12/31/11																		
Green Infrastructure Program	90%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20																		
Green Infrastructure Program	90%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20																		
GRAY INFRASTRUCTURE PROJECTS	83%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20																		
Waterway Protection Tunnel	84%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20																		
Waterway Protection Tunnel	84%	Thu 12/31/20	NA	Thu 12/31/20	Thu 12/31/20	L_OR_MF_155_M_09B_B_B_4 L_OR_MF_020_S_09B_B_A_8 L_OR_MF_083_M_09B_B_A_8 L_MI_MF_127_M_09B_B_A_8	13TH STREET AND ROWAN STREET STORAGE BASIN, STORY AVENUE AND MAIN STREET STORAGE BASIN, LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN, I-64 AND GRINSTEAD CSO BASIN																
CSO058 In-Line Storage and Green Infrastructure	100%	Tue 12/23/14	Thu 12/18/14	Wed 12/31/14	Wed 12/31/14																		
CSO058 In-Line Storage and Green Infrastructure	100%	Tue 12/23/14	Thu 12/18/14	Wed 12/31/14	Wed 12/31/14	L_OR_MF_058_S_08_A_A_0																	
CSO123 Downspout Disconnection	100%	Sun 12/30/12	Sun 12/30/12	Mon 12/31/12	Mon 12/31/12																		
CSO123 Downspout Disconnection	100%	Sun 12/30/12	Sun 12/30/12	Mon 12/31/12	Mon 12/31/12	L_MI_MF_123_S_08_A_A_0																	
CSO140 In-Line Storage & Green Infrastructure Controls	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15																		
CSO140 In-Line Storage & Green Infrastructure Controls	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15	L_MI_MF_140_S_08_A_A_0	CSO140 SEWER SEPARATION																
CSO206 Sewer Separation	100%	Thu 12/12/13	Thu 12/12/13	Tue 12/31/13	Mon 12/30/13																		
CSO206 Sewer Separation	100%	Thu 12/12/13	Thu 12/12/13	Tue 12/31/13	Mon 12/30/13	L_MI_MF_206_S_08_A_A_0																	
Clifton Heights Storage Basin	100%	Sat 12/1/18	Sat 12/1/18	Mon 12/31/18	Mon 12/31/18																		
Clifton Heights Storage Basin	100%	Sat 12/1/18	Sat 12/1/18	Mon 12/31/18	Mon 12/31/18	L_MU_MF_154_M_09B_B_A_8																	
Bells Lane Wet Weather Treatment Facility	100%	Mon 7/24/17	Mon 7/24/17	Wed 12/31/14	Sat 9/30/17																		
Bells Lane Wet Weather Treatment Facility	100%	Mon 7/24/17	Mon 7/24/17	Wed 12/31/14	Sat 9/30/17	L_OR_MF_015_M_13_B_B_8	PADDY'S RUN WET WEATHER TREATMENT FACILITY																
Portland CSO Basin	100%	Sun 8/18/19	Fri 8/9/19	Tue 12/31/19	Tue 12/31/19																		
Portland CSO Basin	100%	Sun 8/18/19	Fri 8/9/19	Tue 12/31/19	Tue 12/31/19	L_OR_MF_019_S_13_B_A_8	PORTLAND WHARF STORAGE BASIN																
Southwestern Parkway Storage Basin	100%	Fri 3/29/19	Fri 3/29/19	Mon 12/31/18	Sun 6/30/19																		
Southwestern Parkway Storage Basin	100%	Fri 3/29/19	Fri 3/29/19	Mon 12/31/18	Sun 6/30/19	L_OR_MF_105_M_13_B_A_0	SOUTHWESTERN PARKWAY STORAGE BASIN																

Approved 2009 IOAP ██████████ IOAP Modifications ██████████ Remaining Work ██████████ Completed Work ██████████

Includes 2014 approval of 2012 IOAP Modification as well as all minor mod letter approvals to date.

Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Central Relief Drain CSO In-Line Storage, Green Infrastructure & Distributed Storage	100%	Fri 11/30/18	Fri 11/30/18	NA	Mon 12/31/18																		
Central Relief Drain CSO In-Line Storage, Green Infrastructure & Distributed Storage	100%	Fri 11/30/18	Fri 11/30/18	NA	Mon 12/31/18	L_OR_MF_155_M_09B_B_B_4																	
CSO160 In-Line Storage & Green Infrastructure Controls	100%	Thu 12/10/15	Thu 12/10/15	Thu 12/31/15	Thu 12/31/15																		
CSO160 In-Line Storage & Green Infrastructure Controls	100%	Thu 12/10/15	Thu 12/10/15	Thu 12/31/15	Thu 12/31/15	L_OR_MF_160_S_08_A_A_0	CSO160 SEWER SEPARATION																
Adams Street Sewer Separation	100%	Wed 11/28/12	Wed 11/28/12	Mon 12/31/12	Mon 12/31/12																		
Adams Street Sewer Separation	100%	Wed 11/28/12	Wed 11/28/12	Mon 12/31/12	Mon 12/31/12	L_OR_MF_172_S_09B_B_A_0	ADAMS STREET STORAGE BASIN																
CSO190 Green Infrastructure Solution	100%	Sun 12/31/17	Fri 12/29/17	Sun 12/31/17	Sun 12/31/17																		
CSO190 Green Infrastructure Solution	100%	Sun 12/31/17	Fri 12/29/17	Sun 12/31/17	Sun 12/31/17	L_OR_MF_190_S_09B_B_A_8	18TH AND NORTHWESTERN PKY. STORAGE BASIN																
Southern Outfall In-Line Storage at 43rd St (SOR1) & Morris Forman WQTC Headworks	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18																		
Southern Outfall In-Line Storage at 43rd St (SOR 1)	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18	L_OR_MF_211_M_13_B_A_8																	
Southern Outfall In-Line Storage at 43rd St (SOR 1)	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18	L_OR_MF_211_M_13_B_A_8																	
Morris Forman WQTC Headworks	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18																		
Morris Forman WQTC Headworks	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18																		
Morris Forman WQTC Headworks	100%	Fri 11/30/18	Fri 11/30/18	Mon 12/31/18	Mon 12/31/18																		
MF Main Diversion Structure	100%	Wed 11/28/18	Wed 11/28/18	Mon 12/31/18	Mon 12/31/18																		
MF Main Diversion Structure	100%	Wed 11/28/18	Wed 11/28/18	Mon 12/31/18	Mon 12/31/18																		
MF Main Diversion Structure	100%	Wed 11/28/18	Wed 11/28/18	Mon 12/31/18	Mon 12/31/18																		
Nightingale Pump Station Replacement & Storage	100%	Thu 6/29/17	Thu 6/29/17	Sat 12/31/16	Fri 6/30/17																		
Nightingale Pump Station Replacement & Storage	100%	Thu 6/29/17	Thu 6/29/17	Sat 12/31/16	Fri 6/30/17	L_SO_MF_018_S_03_A_A	NIGHTINGALE PUMP STATION REPLACEMENT																
Nightingale Pump Station Replacement & Storage	100%	Thu 6/29/17	Thu 6/29/17	Sat 12/31/16	Fri 6/30/17	L_SO_MF_018_S_03_A_A	NIGHTINGALE PUMP STATION REPLACEMENT																
Logan and Breckenridge Street Storage Basin	100%	Wed 10/18/17	Wed 12/20/17	Sun 12/31/17	Sun 12/31/17																		
Logan and Breckenridge Street Storage Basin	100%	Wed 10/18/17	Wed 12/20/17	Sun 12/31/17	Sun 12/31/17	L_SO_MF_092_M_09B_B_D_8	CALVARY CREEKSIDE BASIN																
Logan and Breckenridge Street Storage Basin	100%	Wed 10/18/17	Wed 12/20/17	Sun 12/31/17	Sun 12/31/17	L_SO_MF_092_M_09B_B_D_8	CALVARY CREEKSIDE BASIN																
CSO093 Structural Modifications & Green Infrastructure	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15																		
CSO093 Structural Modifications & Green Infrastructure	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15	L_SO_MF_093_S_08_A_A_0	CSO093 SEWER SEPARATION																
CSO093 Structural Modifications & Green Infrastructure	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15	L_SO_MF_093_S_08_A_A_0	CSO093 SEWER SEPARATION																
CSO108 Dam Modifications	100%	Thu 12/30/10	Thu 12/30/10	Fri 12/31/10	Fri 12/31/10																		
CSO108 Dam Modifications	100%	Thu 12/30/10	Thu 12/30/10	Fri 12/31/10	Fri 12/31/10	L_SO_MF_108_S_09A_B_A_4																	
CSO108 Dam Modifications	100%	Thu 12/30/10	Thu 12/30/10	Fri 12/31/10	Fri 12/31/10	L_SO_MF_108_S_09A_B_A_4																	
Story Avenue and Spring Street Green Infrastructure	100%	Tue 12/20/16	Tue 12/20/16	Sat 12/31/16	Sat 12/31/16																		
Story Avenue and Spring Street Green Infrastructure	100%	Tue 12/20/16	Tue 12/20/16	Sat 12/31/16	Sat 12/31/16	L_SO_MF_130_S_09B_B_A_8	STORY AVENUE AND SPRING STREET STORAGE BASIN																
Story Avenue and Spring Street Green Infrastructure	100%	Tue 12/20/16	Tue 12/20/16	Sat 12/31/16	Sat 12/31/16	L_SO_MF_130_S_09B_B_A_8	STORY AVENUE AND SPRING STREET STORAGE BASIN																
FLOOD PUMP STATION PROJECTS	100%	Wed 12/31/14	Thu 12/18/14	Wed 12/31/14	Wed 12/31/14																		

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Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
27th Street Flood Pump Station DWO Elimination	100%	Fri 6/28/13	Fri 6/28/13	Sun 6/30/13	Sun 6/30/13																		
27th Street Flood Pump Station DWO Elimination	100%	Fri 6/28/13	Fri 6/28/13	Sun 6/30/13	Sun 6/30/13	L_OR_MF_019_S_03_A_A																	
34th Street Flood Pump Station DWO Elimination	100%	Mon 6/11/12	Mon 6/11/12	Mon 12/31/12	Mon 12/31/12																		
34th Street Flood Pump Station DWO Elimination	100%	Mon 6/11/12	Mon 6/11/12	Mon 12/31/12	Mon 12/31/12	L_OR_MF_019_S_03_A_B																	
4th Street Flood Pump Station DWO Elimination	100%	Fri 6/15/12	Fri 6/15/12	Mon 12/31/12	Mon 12/31/12																		
4th Street Flood Pump Station DWO Elimination	100%	Fri 6/15/12	Fri 6/15/12	Mon 12/31/12	Mon 12/31/12	L_OR_MF_022_M_03_A_A																	
Shawnee Flood Pump Station DWO Elimination	100%	Tue 6/18/13	Tue 6/18/13	Sun 6/30/13	Sun 6/30/13																		
Shawnee Flood Pump Station DWO Elimination	100%	Tue 6/18/13	Tue 6/18/13	Sun 6/30/13	Sun 6/30/13	L_OR_MF_189_M_03_A_A																	
17th Street Flood Pump Station DWO Elimination	100%	Thu 12/18/14	Thu 12/18/14	Wed 12/31/14	Wed 12/31/14																		
17th Street Flood Pump Station DWO Elimination	100%	Thu 12/18/14	Thu 12/18/14	Wed 12/31/14	Wed 12/31/14	L_OR_MF_190_S_03_A_A																	
SANITARY SEWER DISCHARGE PLAN	62%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
BEARGRASS CREEK MIDDLE FORK AREA	65%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
Goose Creek PS Improvements and Wet Weather Storage	58%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale PS and	100%	Thu 6/29/17	Tue 7/25/17	Tue 12/31/24	Tue 12/31/24																		
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale PS and	100%	Thu 6/29/17	Tue 7/25/17	Tue 12/31/24	Tue 12/31/24	S_MI_MF_NB04_M_03_B																	
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	0%	Sat 4/29/23	NA	Tue 12/31/24	Tue 12/31/24																		
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	0%	Sat 4/29/23	NA	Tue 12/31/24	Tue 12/31/24	S_MI_MF_NB04_M_03_B																	
Anchor Estates Pump Station Elimination	100%	Fri 4/15/16	Fri 4/15/16	Sat 12/31/16	Sat 12/31/16																		
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	100%	Fri 4/15/16	Fri 4/15/16	Sat 12/31/16	Sat 12/31/16																		
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	100%	Fri 4/15/16	Fri 4/15/16	Sat 12/31/16	Sat 12/31/16	S_MI_MF_NB06_M_01_A_A - 1																	
Anchor Estates PS Elimination 1 - Vannah PS Elimination	100%	Sat 10/15/11	Sat 10/15/11	Tue 12/31/13	Tue 12/31/13																		
Anchor Estates PS Elimination 1 - Vannah PS Elimination	100%	Sat 10/15/11	Sat 10/15/11	Tue 12/31/13	Tue 12/31/13	S_MI_MF_NB06_M_01_A_A - 2																	
Hurstbourne I/I Investigation & Rehabilitation	100%	Tue 12/27/11	Tue 12/27/11	Sat 12/31/11	Sat 12/31/11																		

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Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Hurstbourne I/I Investigation & Rehabilitation	100%	Tue 12/27/11	Tue 12/27/11	Sat 12/31/11	Sat 12/31/11	S_MI_MF_NB07_S_07_C		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion	48%	Sun 12/31/23	NA	Sun 12/31/23	Tue 12/31/13																		
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1 - Buechel Basin	100%	Fri 12/27/13	Fri 12/27/13	Tue 12/31/13	Tue 12/31/13			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1 - Buechel Basin	100%	Fri 12/27/13	Fri 12/27/13	Tue 12/31/13	Tue 12/31/13	S_MISF_MF_NB01_M_01_C_A1		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage	0%	Sun 12/31/23	NA	Sun 12/31/23	Sun 12/31/23																		
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage	0%	Sun 12/31/23	NA	Sun 12/31/23	Sun 12/31/23	S_MISF_MF_NB01_M_01_C_A1													■	■	■	■	■
CEDAR CREEK AREA	52%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
Little Cedar Creek Interceptor Improvements	0%	Mon 6/26/23	NA	Tue 12/31/24	Tue 12/31/24																		
Little Cedar Creek Interceptor Improvements	0%	Mon 6/26/23	NA	Tue 12/31/24	Tue 12/31/24	S_CC_CC_67997_M_01_C														■	■	■	■
Idlewood Inline Storage	0%	Wed 8/21/24	NA	Sun 12/31/23	Sun 12/31/23																		
Idlewood Inline Storage	0%	Wed 8/21/24	NA	Sun 12/31/23	Sun 12/31/23	S_CC_CC_70158_M_09A_C														■	■	■	■
Bardstown Rd. PS Improvements	0%	Sun 6/6/21	NA	Fri 12/31/21	Fri 12/31/21																		
Bardstown Rd. PS Improvements	0%	Sun 6/6/21	NA	Fri 12/31/21	Fri 12/31/21	S_CC_CC_MSD1025_S_03_B														■	■	■	■
Running Fox PS Elimination	100%	Wed 3/10/10	Wed 3/10/10	Fri 12/31/10	Fri 12/31/10			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Running Fox PS Elimination	100%	Wed 3/10/10	Wed 3/10/10	Fri 12/31/10	Fri 12/31/10	S_CC_CC_MSD1080_S_01_C		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fairmount Road Pump Station	100%	Wed 3/30/16	Thu 3/31/16	Sun 12/31/23	Sun 12/31/23			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fairmount Rd PS Improvements	100%	Tue 4/24/12	Tue 4/24/12	Sun 12/31/23	Sun 12/31/23			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fairmount Rd PS Improvements	100%	Tue 4/24/12	Tue 4/24/12	Sun 12/31/23	Sun 12/31/23	S_FF_CC_81316_M_03_C_A		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fairmount PS Offline Storage Basin	100%	Thu 3/31/16	Thu 3/31/16	Sun 12/31/23	Thu 3/31/16			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Fairmount PS Offline Storage Basin	100%	Thu 3/31/16	Thu 3/31/16	Sun 12/31/23	Thu 3/31/16	S_FF_CC_81316_M_03_C_A		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
COMBINED SEWER SYSTEM AREA	100%	Fri 12/15/23	Fri 12/15/17	Thu 6/30/11	Thu 6/30/11			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

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Hazelwood PS I/I Investigation & Rehabilitation	100%	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11																		
Hazelwood PS I/I Investigation & Rehabilitation	100%	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	S_MC_MF_55665_S_07_C																	
Sonne Pump Station I/I Investigation & Rehabilitation	100%	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11																		
Sonne Pump Station I/I Investigation & Rehabilitation	100%	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	Thu 6/30/11	S_OR_MF_42007_S_07_C																	
Camp Taylor	100%	Fri 12/15/23	Fri 12/15/17	Sun 12/31/17	Sun 12/31/17																		
Camp Taylor Phase 1 - SSES	100%	Fri 7/8/11	Fri 7/8/11	Sat 12/31/11	Tue 12/31/13																		
Camp Taylor Phase 1 - SSES	100%	Fri 7/8/11	Fri 7/8/11	Sat 12/31/11	Tue 12/31/13	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS PHASE 1 - SSES																
Camp Taylor Phase 2 - Sewer Replacement and Rehabilitation	100%	Fri 12/20/13	Fri 12/20/13	Tue 12/31/13	Sun 12/31/17																		
Camp Taylor Phase 2 - Sewer Replacement and Rehabilitation	100%	Fri 12/20/13	Fri 12/20/13	Tue 12/31/13	Sun 12/31/17	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS PHASE 2 - SEWER REPLACEMENT AND REHABILITATION																
Camp Taylor Phase 3 - Sewer Replacement and Rehabilitation	100%	Sun 12/31/17	Fri 12/15/17	Sun 12/31/17	Sun 12/31/17																		
Camp Taylor Phase 3 - Sewer Replacement and Rehabilitation	100%	Fri 12/15/17	Fri 12/15/17	Sun 12/31/17	Sun 12/31/17	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS 3 - SEWER REPLACEMENT & SEWER REHABILITATION																
FLOYDS FORK AREA	100%	Thu 3/4/10	Thu 3/4/10	Fri 12/31/21	Thu 4/1/10																		
Woodland Hill PS Diversion	100%	Thu 3/4/10	Thu 3/4/10	Thu 6/30/11	Thu 4/1/10																		
Woodland Hill PS Diversion	100%	Thu 3/4/10	Thu 3/4/10	Thu 6/30/11	Thu 4/1/10	S_FF_FF_NB01_S_01_C_A																	
Ashburton PS Improvements & Diversion	100%	Wed 12/30/09	Wed 12/30/09	Fri 12/31/21	Fri 1/22/10																		
Ashburton PS Improvements & Diversion	100%	Wed 12/30/09	Wed 12/30/09	Fri 12/31/21	Fri 1/22/10	S_FF_FF_NB03_M_01_C_A																	
HITE CREEK AREA	62%	Tue 11/26/24	NA	Tue 12/31/24	Tue 12/31/24																		
Meadow Stream Pump Station & Force Main Upgrade	100%	Tue 12/18/12	Tue 12/18/12	Sat 12/31/16	Sat 12/31/16																		
Meadow Stream Pump Station & Force Main Upgrade	100%	Tue 12/18/12	Tue 12/18/12	Sat 12/31/16	Sat 12/31/16	S_HC_HC_MSD1082_S_09A_C	MEADOW STREAM PUMP STATION IN-LINE STORAGE																
Kavanaugh Rd. PS Improvements	0%	Sat 3/2/24	NA	Tue 12/31/24	Tue 12/31/24																		
Kavanaugh Rd. PS Improvements	0%	Sat 3/2/24	NA	Tue 12/31/24	Tue 12/31/24	S_HC_HC_MSD1085_S_03_A																	
Floydsburg Rd. I/I Investigation & Rehabilitation	100%	Fri 12/17/10	Fri 12/17/10	Fri 12/31/10	Fri 12/31/10																		
Floydsburg Rd. I/I Investigation & Rehabilitation	100%	Fri 12/17/10	Fri 12/17/10	Fri 12/31/10	Fri 12/31/10	S_HC_HC_MSD1086_M_07_C_A																	
INTERIM SSP PROJECTS	100%	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12																		

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Beechwood Village Sanitary Sewer Replacement	100%	Wed 9/29/10	Wed 9/29/10	Wed 4/27/11	Wed 4/27/11																		
Beechwood Village Sanitary Sewer Replacement	100%	Wed 9/29/10	Wed 9/29/10	Wed 4/27/11	Wed 4/27/11																		
Sinking Fork Relief Sewer	100%	Mon 11/30/09	Mon 11/30/09	Thu 12/30/10	Wed 12/23/09																		
Sinking Fork Relief Sewer	100%	Mon 11/30/09	Mon 11/30/09	Thu 12/30/10	Wed 12/23/09																		
Derek R. Guthrie Water Quality Treatment Center	100%	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12																		
Derek R. Guthrie Water Quality Treatment Center	100%	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12	Tue 11/27/12																		
Hikes Lane Interceptor and Highgate Springs PS	100%	Fri 11/2/12	Fri 11/2/12	Tue 11/27/12	Tue 11/27/12																		
Hikes Lane Interceptor and Highgate Springs PS	100%	Fri 11/2/12	Fri 11/2/12	Tue 11/27/12	Tue 11/27/12																		
Northern Ditch Diversion Interceptor	100%	Wed 2/16/11	Wed 2/16/11	Sun 7/31/11	Sun 7/31/11																		
Northern Ditch Diversion Interceptor	100%	Wed 2/16/11	Wed 2/16/11	Sun 7/31/11	Sun 7/31/11																		
Southeastern Diversion Structure and Interceptor	100%	Mon 12/19/11	Mon 12/19/11	Sat 5/12/12	Sat 5/12/12																		
Southeastern Diversion Structure and Interceptor	100%	Mon 12/19/11	Mon 12/19/11	Sat 5/12/12	Sat 5/12/12																		
JEFFERSONTOWN AREA	61%	Sat 12/31/22	NA	Sat 12/31/22	Sat 12/31/22																		
Jeffersontown WQTC Elimination	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15																		
Jeffersontown WQTC Elimination	100%	Wed 12/23/15	Wed 12/23/15	Thu 12/31/15	Thu 12/31/15	S_JT_JT_NB01_M_01_C_A																	
Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	100%	Mon 9/22/14	Mon 9/22/14	Thu 12/31/15	Thu 12/31/15																		
Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	100%	Mon 9/22/14	Mon 9/22/14	Thu 12/31/15	Thu 12/31/15	S_JT_JT_NB01A_M_03_C	CHENOWETH HILLS WATER QUALITY TREATMENT CENTER ELIMINATION AND PS IMPROVEMENTS PROJECT																
Dell Rd and Charlane Pkwy Interceptor Improvements	0%	Sun 12/26/21	NA	Sat 12/31/22	Sat 12/31/22																		
Dell Rd and Charlane Pkwy Interceptor Improvements	0%	Sun 12/26/21	NA	Sat 12/31/22	Sat 12/31/22	S_JT_JT_NB02_M_01_C																	
Raintree and Marian Ct 1	33%	Wed 6/30/21	NA	Fri 12/31/21	Fri 12/31/21																		
Raintree and Marian Ct 1 - PS Elimination	65%	Fri 2/12/21	NA	Fri 12/31/21	Fri 12/31/21																		
Raintree and Marian Ct 1 - PS Elimination	65%	Fri 2/12/21	NA	Fri 12/31/21	Fri 12/31/21	S_JT_JT_NB03_M_01_C																	
Raintree and Marian Ct 2 - Pipe Upgrades	0%	Tue 10/5/21	NA	Fri 12/31/21	Fri 12/31/21																		
Raintree and Marian Ct 2 - Pipe Upgrades	0%	Tue 10/5/21	NA	Fri 12/31/21	Fri 12/31/21	S_JT_JT_NB03_M_01_C																	
Monticello PS Elimination	0%	Fri 5/6/22	NA	Sat 12/31/22	Sat 12/31/22																		
Monticello PS Elimination	0%	Fri 5/6/22	NA	Sat 12/31/22	Sat 12/31/22	S_JT_JT_NB04_M_01_A																	

Approved 2009 IOAP ██████████ IOAP Modifications ██████████ Remaining Work ██████████ Completed Work ██████████

Includes 2014 approval of 2012 IOAP Modification as well as all minor mod letter approvals to date.

Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
MILL CREEK AREA	100%	Fri 4/13/12	Fri 4/13/12	Fri 12/31/21	Fri 12/31/21																		
Shively Interceptor	100%	Fri 4/13/12	Fri 4/13/12	Wed 12/31/14	Wed 12/31/14																		
Shively Interceptor	100%	Fri 4/13/12	Fri 4/13/12	Wed 12/31/14	Wed 12/31/14	S_MC_WC_NB01_M_01_A																	
East Rockford PS Relocation	100%	Fri 3/30/12	Fri 3/30/12	Fri 12/31/21	Fri 12/31/21																		
East Rockford PS Relocation	100%	Fri 3/30/12	Fri 3/30/12	Fri 12/31/21	Fri 12/31/21	S_MC_WC_NB02_S_03_C																	
OHIO RIVER FORCE MAIN AREA	84%	Thu 10/3/24	NA	Tue 12/31/24	Tue 12/31/24																		
Mellwood System Improvements & PS Elimination	49%	Wed 12/19/12	NA	Tue 12/31/24	Tue 12/31/24																		
Mellwood System Improvements & PS Elimination - Mellwood PS and FM	100%	Wed 12/19/12	Wed 12/19/12	Mon 12/31/12	Mon 12/31/12																		
Mellwood System Improvements & PS Elimination - Mellwood PS and FM	100%	Wed 12/19/12	Wed 12/19/12	Mon 12/31/12	Mon 12/31/12	S_OR_MF_NB01_M_01_B																	
Mellwood System Improvements & PS Elimination - Winton and Mockingbird	0%	Tue 5/21/24	NA	Tue 12/31/24	Tue 12/31/24																		
Mellwood System Improvements & PS Elimination - Winton and Mockingbird	0%	Tue 5/21/24	NA	Tue 12/31/24	Tue 12/31/24	S_OR_MF_NB01_M_01_B																	
Derington Ct. PS I/I Investigation & Rehabilitation	100%	Fri 3/30/12	Fri 3/30/12	Sat 3/31/12	Sat 3/31/12																		
Derington Ct. PS I/I Investigation & Rehabilitation	100%	Fri 3/30/12	Fri 3/30/12	Sat 3/31/12	Sat 3/31/12	S_OR_MF_NB03_S_07_C																	
Prospect WQTC Eliminations, Harrods Creek PS and ORFM System Improvements	100%	Mon 12/19/16	Mon 12/19/16	Sat 12/31/16	Sat 12/31/16																		
Prospect #1 - WQTC Eliminations	100%	Tue 12/15/15	Tue 12/15/15	Thu 12/31/15	Thu 12/31/15																		
Prospect #1 - WQTC Eliminations	100%	Tue 12/15/15	Tue 12/15/15	Thu 12/31/15	Thu 12/31/15	S_OR_MF_NB04_M_03_B_B																	
Prospect #2 - Harrods Creek PS and FM	100%	Tue 12/15/15	Tue 12/15/15	Thu 12/31/15	Thu 12/31/15																		
Prospect #2 - Harrods Creek PS and FM	100%	Tue 12/15/15	Tue 12/15/15	Thu 12/31/15	Thu 12/31/15	S_OR_MF_NB04_M_03_B_B																	
Prospect #3 - ORFM System Improvements	100%	Mon 12/19/16	Mon 12/19/16	Sat 12/31/16	Sat 12/31/16																		
Prospect #3 - ORFM System Improvements	100%	Mon 12/19/16	Mon 12/19/16	Sat 12/31/16	Sat 12/31/16	S_OR_MF_NB04_M_03_B_B																	
OTHER PROJECTS	92%	Tue 12/31/24	NA	Tue 12/31/24	Mon 12/30/24																		
CPE_CCP Modifications To WQTC	100%	Mon 12/19/11	Mon 12/19/11	Sat 12/31/11	Sat 12/31/11																		
CPE_CCP Modifications To WQTC	100%	Mon 12/19/11	Mon 12/19/11	Sat 12/31/11	Sat 12/31/11																		
I/I Reduction Program	90%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
I/I Reduction Program	90%	Tue 12/31/24	NA	Tue 12/31/24	Tue 12/31/24																		
POND CREEK AREA	93%	Thu 6/30/22	NA	Tue 12/31/24	Tue 12/31/24																		
Lea Ann Way System Improvements	100%	Fri 12/4/15	Fri 12/4/15	Thu 12/31/15	Thu 12/31/15																		
Lea Ann Way System Improvements	100%	Fri 12/4/15	Fri 12/4/15	Thu 12/31/15	Thu 12/31/15	S_PO_WC_PC08_M_01_C																	

Approved 2009 IOAP ██████████ IOAP Modifications ██████████ Remaining Work ██████████ Completed Work ██████████

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Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Edsel PS I/I Investigation & Rehabilitation	100%	Tue 9/27/11	Tue 9/27/11	Sat 12/31/11	Fri 9/30/11																		
Edsel PS I/I Investigation & Rehabilitation	100%	Tue 9/27/11	Tue 9/27/11	Sat 12/31/11	Fri 9/30/11	S_PO_WC_PC11_M_07_C																	
Cinderella PS Elimination	0%	Tue 5/30/23	NA	Sun 12/31/23	Sun 12/31/23																		
Cinderella PS Elimination	0%	Tue 5/30/23	NA	Sun 12/31/23	Sun 12/31/23	S_PO_WC_PC04_M_01_C																	
Government Center PS Elimination	100%	Fri 4/1/11	Fri 4/1/11	Tue 12/31/24	Tue 12/31/24																		
Government Center PS Elimination	100%	Fri 4/1/11	Fri 4/1/11	Tue 12/31/24	Tue 12/31/24	S_PO_WC_PC06_M_01_C																	
Avanti PS Elimination	100%	Fri 7/10/09	Fri 7/10/09	Fri 12/31/10	Fri 12/31/10																		
Avanti PS Elimination	100%	Fri 7/10/09	Fri 7/10/09	Fri 12/31/10	Fri 12/31/10	S_PO_WC_PC07_M_01_A																	
Charleswood Interceptor Extension	100%	Wed 8/5/15	Wed 8/5/15	Sat 12/31/22	Sat 12/31/22																		
Charleswood Interceptor Extension	100%	Wed 8/5/15	Wed 8/5/15	Sat 12/31/22	Sat 12/31/22	S_PO_WC_PC03_M_01_C																	
Lantana PS #1 I/I Investigation and Rehabilitation	100%	Thu 12/29/11	Thu 12/29/11	Sat 12/31/11	Thu 12/29/11																		
Lantana PS #1 I/I Investigation and Rehabilitation	100%	Thu 12/29/11	Thu 12/29/11	Sat 12/31/11	Thu 12/29/11	S_PO_WC_PC05_M_07_C																	
Leven PS Elimination	0%	Wed 6/29/22	NA	Sat 12/31/22	Sat 12/31/22																		
Leven PS Elimination	0%	Wed 6/29/22	NA	Sat 12/31/22	Sat 12/31/22	S_PO_WC_PC10_M_01_C																	
Caven Ave Pump Station Elimination	100%	Mon 8/1/16	Mon 8/1/16	Tue 12/31/24	Sat 12/31/16																		
Caven Ave Pump Station Elimination	100%	Mon 8/1/16	Mon 8/1/16	Tue 12/31/24	Sat 12/31/16	S_PO_WC_PC09_M_09B_C																	
SMALL WWTP AREA	37%	Fri 12/31/21	NA	Fri 12/31/21	Fri 12/31/21																		
Riding Ridge PS Improvements	100%	Sat 11/15/14	Sat 11/15/14	Wed 12/31/14	Wed 12/31/14																		
Riding Ridge PS Improvements	100%	Sat 11/15/14	Sat 11/15/14	Wed 12/31/14	Wed 12/31/14	S_HC_HN_NB01_S_03_C_A																	
Lucas Lane PS Inline Storage	0%	Tue 7/27/21	NA	Fri 12/31/21	Fri 12/31/21																		
Lucas Lane PS Inline Storage	0%	Wed 7/21/21	NA	Fri 12/31/21	Fri 12/31/21	S_FF_BT_NB01_S_09A_C_A																	
St. Rene Rd. PS Elimination	100%	Fri 9/19/14	Fri 9/19/14	Fri 12/31/21	Fri 12/31/21																		
St. Rene Rd. PS Elimination	100%	Fri 9/19/14	Fri 9/19/14	Fri 12/31/21	Fri 12/31/21	S_FF_CH_NB01_S_09A_C_A	ST. RENE RD PS INLINE STORAGE																
Lake Forest PS SSO Investigation	100%	Tue 12/18/12	Tue 12/18/12	Mon 12/31/12	Mon 12/31/12																		
Lake Forest PS SSO Investigation	100%	Tue 12/18/12	Tue 12/18/12	Mon 12/31/12	Mon 12/31/12	S_FF_LF_NB01_S_13_C_A																	
Gunpowder PS Inline Storage	0%	Tue 5/25/21	NA	Fri 12/31/21	Fri 12/31/21																		
Gunpowder PS Inline Storage	0%	Tue 5/25/21	NA	Fri 12/31/21	Fri 12/31/21	S_HC_HN_NB02_S_09A_C_B																	
Fox Harbor Inline Storage	0%	Wed 7/28/21	NA	Fri 12/31/21	Fri 12/31/21																		
Fox Harbor Inline Storage	0%	Wed 7/28/21	NA	Fri 12/31/21	Fri 12/31/21	S_HC_HN_NB03_S_09A_A_A																	
Fairway View PS Improvements	100%	Tue 12/30/14	Tue 12/30/14	Wed 12/31/14	Wed 12/31/14																		
Fairway View PS Improvements	100%	Tue 12/30/14	Tue 12/30/14	Wed 12/31/14	Wed 12/31/14	S_HC_HS_NB01_S_03_C_A																	

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Figure 3.1. MSD Integrated Overflow Abatement Plan Implementation Schedule

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Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
SOUTHEASTERN DIVERSION AREA	75%	Mon 11/27/23	NA	Sun 12/31/23	Sun 12/31/23																		
Parkview Estates I/I Investigation & Rehabilitation	100%	Tue 6/28/11	Tue 6/28/11	Sat 12/31/11	Sat 12/31/11																		
Parkview Estates I/I Investigation & Rehabilitation	100%	Tue 6/28/11	Tue 6/28/11	Sat 12/31/11	Sat 12/31/11	S_SD_MF_NB03_S_07_C																	
Klondike Interceptor	100%	Thu 12/5/13	Thu 12/5/13	Thu 12/31/15	Thu 12/31/15																		
Klondike Interceptor	100%	Thu 12/5/13	Thu 12/5/13	Thu 12/31/15	Thu 12/31/15	S_SD_MF_NB04_S_01_B_A																	
Sutherland Interceptor	0%	Thu 1/5/23	NA	Sun 12/31/23	Sun 12/31/23																		
Sutherland Interceptor	0%	Thu 1/5/23	NA	Sun 12/31/23	Sun 12/31/23	S_SD_MF_NB05_M_01_A																	
Beargrass Interceptor Rehab Ph. 2	100%	Tue 12/14/10	Tue 12/14/10	Fri 12/31/10	Fri 12/31/10																		
Beargrass Interceptor Rehab Ph. 2	100%	Tue 12/14/10	Tue 12/14/10	Fri 12/31/10	Fri 12/31/10	S_SD_MF_NB06_S_13_C																	

Approved 2009 IOAP ██████████ IOAP Modifications ██████████ Remaining Work ██████████ Completed Work ██████████

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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 ways to reduce the risks of coming into contact with sewage overflows.

4.2. PUBLIC EDUCATION PROGRAMS

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 has been developed and implemented. Efforts to utilize various media outlets, including television, radio, magazines and newspapers, bill inserts, social media, and MSD websites, is anticipated to change over the course of the upcoming year to improve reach and impact of messaging. MSD plans to move from a single full-page print ad in the Courier Journal each year, estimated to reach 102,000, to multiple quarter-page print ads and digital news site ads, increasing the reach to an estimated 306,000. MSD also plans to begin year-round digital ads with Project WIN messages, estimated to reach 831,000. The on-line campaign continued to increase awareness of the Tunnel project, sewer overflows and the Bowl Patrol.

MSD included Consent Decree compliance, wastewater facility upgrades, and aging infrastructure as key topics in its Critical Repair & Reinvestment Plan. Public education about this initiative continue to include posts on MSD’s website and social media accounts.

MSD continues its One Water education effort. This partnership with Louisville Water enables MSD to reach a wider audience through use of classroom educators and educational tours. The “River to River” education curriculum continued during the reporting period. This program is being taken into classrooms county-wide to share information on Louisville’s water cycle. School groups have also had opportunities to tour the Floyds Fork WQTC.

During the reporting period, Metro TV aired the programs listed in Table 4.1.

Table 4.1. Metro TV Broadcasts

DATE	PROGRAM TITLE	ORIGINAL MEETING DATE
7/24/2019	Ohio River Tunnel: Advanced Design Meeting	7/19/2017
7/25/2019	Portland CSO Basin: Conceptual Design Meeting	6/14/2016
7/27/2019	Southwestern Parkway CSO Basin: Construction Meeting	4/18/2017
7/28/2019	Portland CSO Basin: Conceptual Design Meeting	6/14/2016
8/2/2019	Southwestern Parkway CSO Basin: Construction Meeting	4/18/2017
8/4/2019	Ohio River Tunnel: Advanced Design Meeting	7/19/2017
8/5/2019	Southwestern Parkway CSO Basin: Construction Meeting	4/18/2017

Table 4.1. Metro TV Broadcasts

DATE	PROGRAM TITLE	ORIGINAL MEETING DATE
8/8/2019	Ohio River Tunnel: Advanced Design Meeting	7/19/2017
8/9/2019	Southwestern Parkway CSO Basin: Construction Meeting	4/18/2017
9/8/2019	Ohio River Tunnel: Advanced Design Meeting	7/19/2017
9/16/2019	Portland CSO Basin: Conceptual Design Meeting	6/14/2016
9/18/2019	Southwestern Parkway CSO Basin: Construction Meeting	4/18/2017
9/26/2019	Ohio River Tunnel: Advanced Design Meeting	7/19/2017

4.3. PUBLIC OUTREACH PROGRAMS

MSD has developed a public education program aimed at expanding the public’s knowledge of 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 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. The current IOAP outreach activities and public meetings are using this process to elicit qualitative and quantitative information and enhance engagement with customers. 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, available at <http://www.msprojectwin.org/Public-Input.aspx>.

MSD held no meetings during the current reporting period. During the upcoming reporting period, MSD has no meetings planned.

SECTION 5: CAPACITY MANAGEMENT OPERATIONS AND MAINTENANCE (CMOM) 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, available at 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 continues to enhance the activities. Highlights of the CMOM program implementation over this reporting period are outlined below.

5.1. MANAGEMENT PROGRAMS

M-E-9 Infrastructure Rehabilitation

Refer to the CMOM activity schedule provided in Section 5.4.

M-E-10 System Capacity Assurance Program

Included in the goals of the CMOM Self-Assessment Report, the Sewer 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, available at 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)

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

Refer to the CMOM activity schedule provided in Section 5.4.

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 WQTCs. Although the IOAP CPE assessments that defined specific WQTC improvements were completed by December 31, 2011, MSD will continue to implement CPE/CCP activities as part of the District's CMOM Program. This section lists activities per WQTC as they occur during the reporting period.

Refer to the CMOM activity schedule provided in Section 5.4 for CPE/CCP-related capital projects.

5.3.1. HITE CREEK WATER QUALITY TREATMENT CENTER

The Hite Creek WQTC Expansion project will expand the capacity of Hite Creek WQTC from 6 MGD to 9 MGD and provide regional dewatering of solids. The project was awarded on July 29, 2019 and the Contractor was issued a Commencement of Performance on September 23, 2019. The project will be in construction during the next several reporting periods.

5.3.2. FLOYDS FORK WATER QUALITY TREATMENT CENTER

During this reporting period, there is no activity to report for Floyds Fork WQTC.

5.3.3. DEREK R. GUTHRIE WATER QUALITY TREATMENT CENTER

The DRG Clarifier Grout Repair and Gate Replacement project will provide new gates and automated actuators for the influent and the Return Activated Sludge (RAS) lines for Clarifiers 1 - 6. In addition, defective grout will be removed or replaced as needed for Clarifiers 7 – 12 and the aeration basin isolation gate will be replaced. The construction contract was awarded this reporting period, and construction is anticipated to begin in the next reporting period.

The DRGWQTC Hypochlorite Containment project will repair leaks in the containment structure of the Sodium Hypochlorite Building and separate the feed system into two isolated systems. The project was awarded and construction began in this reporting period.

The DRGWQTC Admin Building HVAC project entered design phase during this reporting period.

5.3.4. CEDAR CREEK WATER QUALITY TREATMENT CENTER

The CCWQTC Sodium Aluminate Building project and the CCWQTC Effluent Parshall Flume Upgrades are under design.

The CCWQTC MCC Upgrades project is anticipated to be bid in the next reporting period.

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/KDEP on March 31, 2009. Approval of this plan was received on September 24, 2009, and work is now complete. A certification letter dated December 15, 2015, was submitted finalizing the completion of the project.

5.3.6. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER

A certification letter dated December 23, 2015, was submitted finalizing the completion of the Jeffersontown WQTC Elimination Project.

5.3.7. OTHER WATER QUALITY TREATMENT CENTERS

All non-regional WQTCs owned or operated by MSD have been eliminated as of May 27, 2016.

5.4. CMOM ACTIVITY SCHEDULE

CMOM capital project milestones for the current reporting period as well as a look-ahead for the upcoming reporting period are provided in Figure 5.1.

Figure 5.1. CMOM Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec
	MSD CMOM Quarterly Commitments Schedule	57%	Sun 3/29/09	Fri 10/7/22						
A18324	Oreland Mill Pump Station Elimination	75%	Fri 4/6/18	Wed 2/26/20						
A18324	CLOSEOUT	50%	Thu 5/2/19	Wed 2/26/20						
A18353	Ohio River Interceptor Structural Rehabilitation	80%	Tue 3/6/18	Sun 3/1/20						
A18353	CLOSEOUT	65%	Thu 3/21/19	Sun 3/1/20						
A19090	FY20 Construction Inspection	18%	Mon 7/1/19	Tue 6/30/20						
A19090	CLOSEOUT	18%	Thu 8/1/19	Tue 6/30/20						
A19208	Broadway Interceptor Infrastructure Rehabilitation	4%	Thu 8/1/19	Sun 7/18/21						
A19208	DESIGN	17%	Thu 9/5/19	Fri 3/6/20						
D16272	CCWQTC Influent PS MCC Upgrades	18%	Thu 2/4/16	Mon 1/17/22						
D16272	DESIGN	52%	Thu 2/4/16	Fri 3/27/20						
D17032	CCWQTC Tertiary Filtration	0%	Thu 6/27/19	Sat 3/26/22						
D17032	DESIGN	0%	Fri 11/15/19	Wed 10/28/20						
D18285	ORFM Odor and Corrosion Control	61%	Mon 1/1/18	Mon 7/19/21						
D18285	CONSTRUCTION	0%	Sun 9/15/19	Tue 9/22/20						
D18292	DRGWQTC Clarifier Grout Repair and RAS Gate Replacement	45%	Wed 1/31/18	Mon 4/25/22						
D18292	CONSTRUCTION	0%	Sun 12/15/19	Sun 6/27/21						
D18452	FY20 MFWQTC Equipment Renewal & Replacement	10%	Mon 7/1/19	Tue 6/30/20						
D18452	INITIATION & PROCUREMENT	10%	Mon 7/1/19	Tue 6/30/20						
D19039	CCWQTC Effluent Parshall Flume Upgrade	5%	Tue 6/4/19	Wed 7/27/22						
D19039	DESIGN	13%	Sun 9/1/19	Mon 8/31/20						
D19227	MFWQTC Primary Sludge Line Replacement	85%	Sun 7/1/18	Wed 9/30/20						
D19227	CONSTRUCTION	65%	Mon 3/25/19	Thu 12/5/19						
D19285	Bells Lane Phase II	44%	Fri 3/1/19	Tue 6/30/20						
D19285	INITIATION & PROCUREMENT	44%	Fri 3/1/19	Tue 6/30/20						
D19286	SWPS Gas Monitoring	0%	Wed 5/15/19	Sat 4/24/21						
D19286	DESIGN	0%	Tue 10/15/19	Sun 1/19/20						
D20017	CCWQTC Sodium Aluminate Building	0%	Tue 6/4/19	Sun 10/17/21						
D20017	DESIGN	0%	Fri 10/4/19	Wed 4/1/20						
D20030	FY20 CCWQTC Equipment RR	10%	Mon 7/1/19	Tue 6/30/20						
D20030	INITIATION & PROCUREMENT	10%	Mon 7/1/19	Tue 6/30/20						
D20032	FY20 HCWQTC Equipment RR	10%	Mon 7/1/19	Tue 6/30/20						

Data Date: 09/30/19 CMOM Project Project Progress

Percent complete is calculated based on phase duration. Page 1

Figure 5.1. CMOM Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec
D20032	INITIATION & PROCUREMENT	10%	Mon 7/1/19	Tue 6/30/20						
D20034	FY20 FFWQTC Equipment RR	25%	Mon 7/1/19	Tue 6/30/20						
D20034	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20						
D20036	FY20 DRGWQTC Equipment RR	10%	Mon 7/1/19	Tue 6/30/20						
D20036	INITIATION & PROCUREMENT	10%	Mon 7/1/19	Tue 6/30/20						
D20167	MFWQTC East Headworks HVAC	17%	Sat 6/1/19	Sat 6/26/21						
D20167	DESIGN	88%	Sat 6/1/19	Thu 10/17/19						
D20167	CONSTRUCTION	0%	Sun 12/1/19	Sun 8/30/20						
D20222	Bells Lane Grit Classifier Drain Line	9%	Tue 7/23/19	Thu 2/18/21						
D20222	DESIGN	49%	Sun 9/1/19	Sun 12/1/19						
D20224	Bells Lane PAA System	0%	Tue 7/23/19	Sun 11/7/21						
D20224	DESIGN	0%	Tue 10/1/19	Tue 3/17/20						
D20225	Bells Lane EQ Basin Water Pressure Improvements	0%	Tue 7/23/19	Mon 3/14/22						
D20225	DESIGN	0%	Tue 10/1/19	Sat 4/18/20						
D20227	FFWQTC Filter Evaluation	0%	Tue 7/23/19	Thu 2/27/20						
D20227	EVALUATION	0%	Tue 10/1/19	Sat 2/1/20						
E15033	Shively PS Generator Replacement	85%	Fri 4/1/16	Mon 7/27/20						
E15033	CONSTRUCTION	81%	Mon 11/27/17	Mon 9/30/19						
E15033	CLOSEOUT	0%	Fri 11/29/19	Mon 7/27/20						
E18446	FY20 Systems Automation	0%	Mon 7/1/19	Tue 6/30/20						
E18446	INITIATION & PROCUREMENT	0%	Mon 7/1/19	Tue 6/30/20						
E18467	FY20 CMOM Collection System Pump Rehab & Replacement	18%	Mon 7/1/19	Tue 6/30/20						
E18467	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Thu 8/1/19						
E18467	CLOSEOUT	0%	Thu 8/1/19	Tue 6/30/20						
E19211	FY20 Operations Renewal and Replacement	18%	Mon 7/1/19	Tue 6/30/20						
E19211	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20						
F14156	DRGWQTC RAS 1 and 4 Pump Replacement	91%	Fri 1/1/16	Tue 12/31/19						
F14156	CLOSEOUT	59%	Wed 3/6/19	Tue 12/31/19						
G18462	FY20 Land Acquisition	1%	Mon 7/1/19	Tue 6/30/20						
G18462	INITIATION & PROCUREMENT	1%	Mon 7/1/19	Tue 6/30/20						
G20001	FY20 Renewal and Replacement	5%	Mon 7/1/19	Tue 6/30/20						
G20001	INITIATION & PROCUREMENT	5%	Mon 7/1/19	Tue 6/30/20						

Data Date: 09/30/19

CMOM Project  Project Progress 

Percent complete is calculated based on phase duration.

Page 2

Figure 5.1. CMOM Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter		
					Jul	Aug	Sep	Oct	Nov	Dec
G20150	FY20 Contingency Reserve	18%	Mon 7/1/19	Tue 6/30/20						
G20150	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20						
H14126	HCWQTC Expansion	44%	Mon 11/2/15	Fri 10/7/22						
H14126	CONSTRUCTION	13%	Fri 3/8/19	Sun 9/12/21						
H16007	FY20 CMOM WQTC CCP Upgrades	6%	Tue 6/4/19	Tue 6/30/20						
H16007	INITIATION & PROCUREMENT	6%	Tue 6/4/19	Tue 6/30/20						
H16009	FY20 CMOM Program Management Assistance	18%	Mon 7/1/19	Tue 6/30/20						
H16009	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20						
H16013	FY20 CMOM SCAP, AAM and FOG	10%	Mon 7/1/19	Tue 6/30/20						
H16013	INITIATION & PROCUREMENT	10%	Mon 7/1/19	Tue 6/30/20						
H16045	FY20 Plumbing Modification Program	18%	Mon 7/1/19	Tue 6/30/20						
H16045	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20						
H16074	Nightingale Rehab	16%	Mon 7/2/18	Mon 3/28/22						
H16074	DESIGN	93%	Fri 6/28/19	Tue 10/8/19						
H16074	CONSTRUCTION	0%	Sat 12/7/19	Sun 5/30/21						
H18172	FY20 Information Governance	25%	Mon 7/1/19	Tue 6/30/20						
H18172	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20						
H19056	CMOM Telog 3G to 4G Conversion	80%	Sun 7/1/18	Tue 12/31/19						
H19056	CLOSEOUT	0%	Sun 9/30/18	Tue 12/31/19						
H19088	FY20 CMOM Grinder RR	5%	Mon 7/1/19	Tue 6/30/20						
H19088	INITIATION & PROCUREMENT	5%	Mon 7/1/19	Tue 6/30/20						
H19089	FY20 CMOM WQTC Process Improvement	6%	Mon 7/1/19	Tue 6/30/20						
H19089	INITIATION & PROCUREMENT	6%	Mon 7/1/19	Tue 6/30/20						
H19095	FY20 PS RR	18%	Mon 7/1/19	Tue 6/30/20						
H19095	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20						
H19232	Parkwood PS Access Road	78%	Wed 8/1/18	Fri 1/24/20						
H19232	CONSTRUCTION	0%	Mon 10/7/19	Thu 11/21/19						
H20045	FY20 Regulatory Compliance Support	25%	Mon 7/1/19	Tue 6/30/20						
H20045	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20						
H20055	FY20 CMOM I_C Implementation	25%	Mon 7/1/19	Tue 6/30/20						
H20055	INITIATION & PROCUREMENT	25%	Mon 7/1/19	Tue 6/30/20						
H20061	FY20 CMOM Gravity Line Cleaning and Inspection	18%	Mon 7/1/19	Tue 6/30/20						
Data Date: 09/30/19		CMOM Project Project Progress								
Percent complete is calculated based on phase duration.					Page 3					



Figure 5.1. CMOM Quarterly Commitments Schedule

Budget ID	Task Name	% Complete	Start	Finish	3rd Quarter			4th Quarter			
					Jul	Aug	Sep	Oct	Nov	Dec	
H20061	INITIATION & PROCUREMENT	18%	Mon 7/1/19	Tue 6/30/20	[Light blue bar from Jul to Sep]						
H20137	FY20 PMIS	1%	Mon 7/1/19	Tue 6/30/20	[Light blue bar from Jul to Sep]						
H20137	INITIATION & PROCUREMENT	1%	Mon 7/1/19	Tue 6/30/20	[Light blue bar from Jul to Sep]						
H20153	SWPS Flood Repair	18%	Tue 6/4/19	Thu 6/24/21	[Light blue bar from Jul to Sep]						
H20153	DESIGN	62%	Tue 8/6/19	Tue 12/3/19	[Light blue bar from Aug to Sep]			[Light blue bar from Oct to Dec]			
H20215	Camp Taylor 2A SSR - Union St Sewers	0%	Mon 7/1/19	Fri 12/31/21	[Light blue bar from Jul to Sep]						
H20215	DESIGN	0%	Mon 7/1/19	Tue 2/25/20	[Light blue bar from Jul to Sep]						
Data Date: 09/30/19					CMOM Project	[Light blue bar]	Project Progress	[Black bar]			
Percent complete is calculated based on phase duration.					Page 4						

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SECTION 6: PROJECT WATERWAY IMPROVEMENTS NOW (WIN) PERFORMANCE OVERVIEW

6.1. COMBINED SEWER OVERFLOW REDUCTION AND SANITARY SEWER OVERFLOW ABATEMENT ACTIVITIES

The following sections outline the activities performed during the reporting period to reduce or control CSOs and eliminate SSOs.

6.1.1. SANITARY SEWER OVERFLOW ELIMINATION ACTIVITIES

Refer to Section 3.4.1 for Final SSDP project updates.

6.1.2. COMBINED SEWER OVERFLOW REDUCTION AND CONTROL ACTIVITIES

Refer to Section 3.4.2 for CSO LTCP project updates.

6.2. SYSTEMWIDE PERFORMANCE

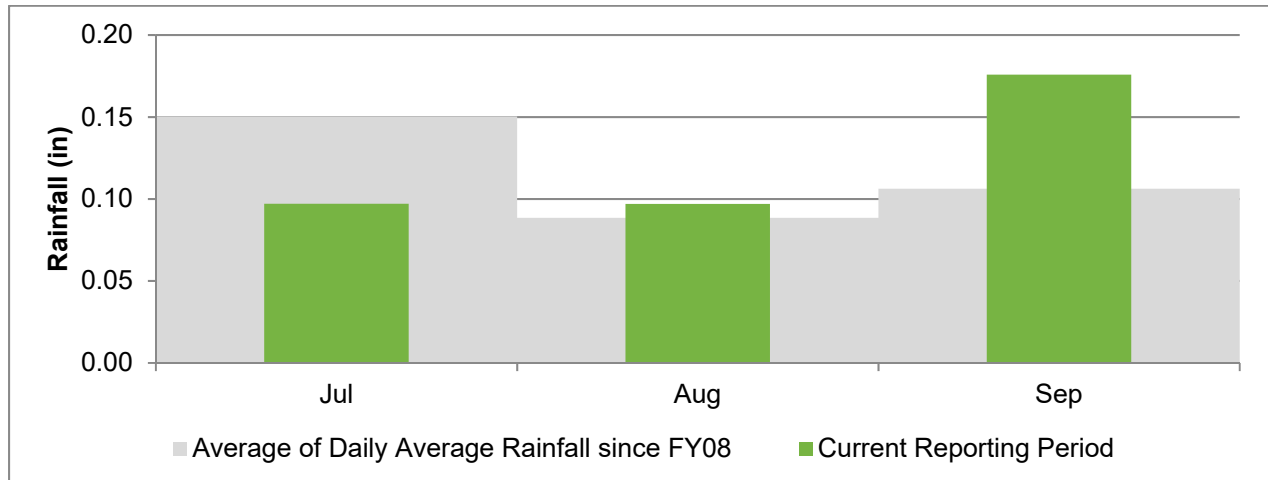
6.2.1. RAINFALL

The number and the volume of wet weather overflows are directly related to the amount of rain that has fallen during the reporting period. Figure 6.1 shows the service area daily average rainfall amounts for each month of the last quarter, compared with the average of the daily average rainfall since FY08. Data was pulled from MSD’s rain gauge network.

Weather Event Summary

Daily average rainfall was below average for July and above average for August and September when compared with the previous fiscal year average for these months.

Figure 6.1. Daily Average Rainfall by Month



6.3. WATER QUALITY TREATMENT CENTER PERFORMANCE

6.3.1. BYPASSES

There were no bypass events that occurred during this reporting period. Any details are included in Appendix A-2. Each quarter when bypasses occur, an assessment of bypasses is conducted to determine root cause of the bypass, the failure category, corrective actions to be taken, possible programmatic solutions, and corrective action completion date.

6.3.2. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER

A letter dated December 23, 2015, certified the elimination of Jeffersontown WQTC. Inspections were conducted upstream of what was previously Jeffersontown WQTC Headworks during the reporting period. There were no overflows reported as a result of these inspections. Refer to Section 2.2 for SSO Route information.

6.3.3. PHOSPHORUS MONITORING AT THE PROSPECT WQTCs

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/KDEP on March 31, 2009. Approval of this plan was received on September 24, 2009, and work is now complete. A certification letter dated December 15, 2015, was submitted finalizing the completion of the project.

6.4. COMBINED SEWER OVERFLOW PERFORMANCE

6.4.1. AUTHORIZED DISCHARGES – WET WEATHER CSOs

The observed CSO data for the reporting period for each monitored overflow has been tabulated, along with rainfall information from the nearest rain gauge to facilitate review of the overflows that occurred. This data is included as Appendix B.

6.4.2. UNAUTHORIZED DISCHARGES – 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 current reporting period. There were no dry weather overflows reported at a CSO during the reporting period.

6.4.3. CSO FLOW MONITORING QUALITY IMPROVEMENT

During the July 2016 – September 2016 reporting period, MSD identified a potential for inaccurate volume reporting at some CSOs. This was identified by comparing measured overflow volumes against modeled overflow volumes for similar storms. It was determined that several CSO flow monitors are affected by backwater levels from the receiving streams causing a discrepancy actual overflow volume, along with other potential variables at some locations. MSD notified EPA and KDEP of data discrepancies on September 29, 2016.

A workgroup was established to review CSO flow monitoring and resolve potential over-reporting of overflow volumes. Initial findings indicated that potentially significant discrepancies between modeling and monitoring data existed at 33 of MSD's 98 CSO locations. This set of 33 CSOs was the highest priority to review, correct data, document SOPs, and implement changes. For these CSO locations, MSD performed site visits including elevation surveys, performed detailed analysis, investigated equipment configurations, and investigated PLC programming or monitoring program logic. This has led to the development of an SOP for each CSO that describes the existing monitoring equipment, configuration, and flow calculation in use as of December 31, 2016, and evaluates the effectiveness of the existing setup. If a more effective arrangement was recommended, MSD added the proposed arrangement to the SOP for implementation and determined if historical data could be updated. In cases where the historical data could be updated, MSD has developed revised volumes for reporting. Locations for which revised volumes have been developed are detailed in Appendix F. In some cases, historical volumes could not be recalculated based on the available data. For instance, CSOs influenced by river or creek elevation for which there was no available historic level data could not be recalculated for historical volumes but will be calculated or measured according to the revised SOPs as they are implemented.

To date, SOPs have been drafted and historical volume data corrections (where possible) have been made for all of the 33 initial CSO locations. These changes have also been made for two additional CSO locations included in the review due to interaction with priority CSOs. Multiple SOPs require programming or equipment changes in order to implement the final SOPs. During the upcoming reporting period, MSD will continue working to procure and replace equipment as required and update the programming at the PLC or with monitoring program logic, as summarized in Figure 6.2 and detailed in Appendix F, to support ongoing implementation of the SOPs.

The remaining 65 active CSO locations are being reviewed during the current fiscal year. MSD has also identified two inactive sites with historic data that will be reviewed. MSD has developed a schedule for review of these sites and has begun site visits, calculation review, and SOP development. Status for these remaining CSOs is summarized in Figure 6.3 and detailed in Appendix F.

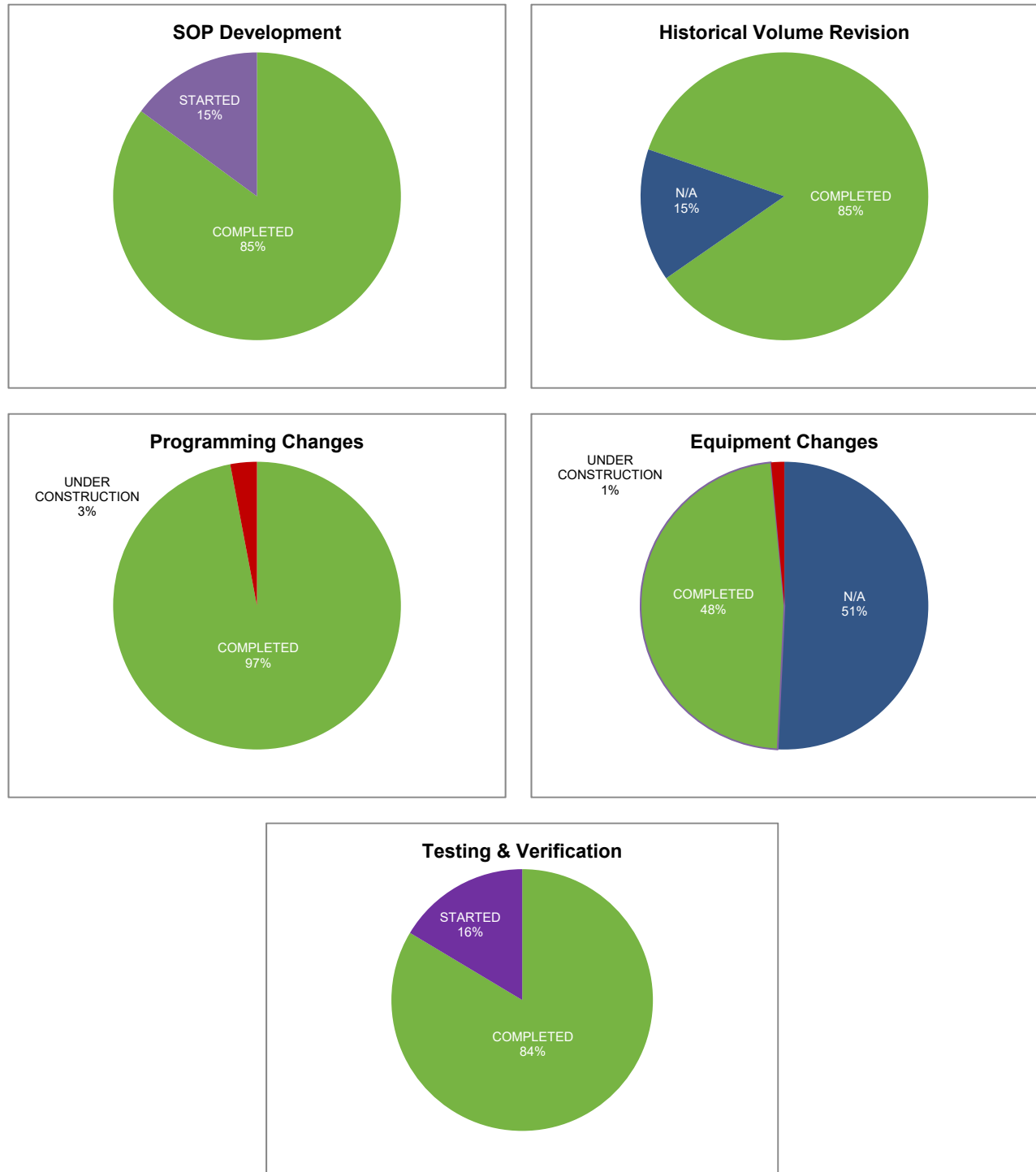
During the course of review, MSD has made determinations about CSO monitoring configurations and SOPs that impact other CSOs that were previously listed as completed. MSD views this process as an ongoing review for continuous improvement, and continues to update status to reflect the latest and most appropriate determination.

Until the review is complete, CSO flow monitoring data will continue to be included as an appendix to each quarterly report, will be listed as "Draft", and will include the statement "CSO data monitoring procedures are currently being revised". As changes are made to flow meter locations and or flow meter calculation algorithms, MSD will provide status updates in the quarterly reports on progress to evaluate data accuracy, revise monitoring data records, update monitoring procedures, and implement recommendations. CSO flow monitoring data reported quarterly will include updated volumes based on completion of the review and update of the reporting standards for each CSO. Revised volumes for previous reporting periods up to and including FY18 for the 33 CSO locations initially reviewed were included as an appendix to the FY18 Consent Decree Annual Report. Any subsequently developed revised volumes for previous reporting periods up to and including FY20 will be included as an appendix to the FY19 or FY20 Consent Decree Annual Report as applicable.

Figure 6.2. CSO Flow Monitoring Quality Improvement Status – Phase 1



Figure 6.3. CSO Flow Monitoring Quality Improvement Status – Phase 2



¹Draft SOPs are completed and under review.

6.5. COLLECTION SYSTEM OVERFLOW PERFORMANCE

6.5.1. UNAUTHORIZED DISCHARGES TO WATERS OF US

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 are included in Appendix A-3 . During this quarter, nine unauthorized discharges to WUS were reported, summarized in Table 6.1.

Table 6.1. Dry and Wet Weather SSOs by Cause – Unauthorized Discharges to Waters of US

PROBLEM	DRY WEATHER	WET WEATHER
LACK OF SYSTEM CAPACITY	0	2
OBSTRUCTION-NOT GREASE/ROOTS	2	0
STRUCTURAL FAILURE	3	1
UTILITY DAMAGED MSD ASSET	0	1

6.5.2. OVERFLOWS TO THE EXTERIOR

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 reporting period.

6.5.3. OVERFLOWS TO INTERIOR

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 reporting period.

6.6. GRAVITY LINE PREVENTIVE MAINTENANCE (GLPM)

Each quarter, data and statistics relating to the cleaning, inspection and maintenance of sewer assets performed under the Gravity Line Preventive Maintenance are reported. Data for the current and previous three reporting periods are shown in Table 6.2.

Targets have been developed for planned maintenance (PM) only, which includes any activities that are routinely scheduled to maintain asset condition and decrease its likelihood of failure. Unscheduled maintenance (UM) activities include those activities performed as a reaction to correct asset deficiencies.

Table 6.2. Rolling Quarterly GLPM Performance with Targets

ACTIVITY	ACTIVITY TYPE	AREA	Oct-Dec	Jan-Mar	Apr-Jun	Jul-Sep	Total	Target/ qtr	% of Annual Target
Catch Basins Cleaned	PM	Combine System	5,961	4,532	4,063	1,622	16,178	4,460	23%
		Separate System	157	0	1,899	34	2,090	1,144	41%
	UM	Combined System	175	239	294	4,550	5,258	-	-
		Separate System	45	94	129	312	580	-	-
CSO Inspections	PM	Combined System	1,285	1,256	1,261	1,290	5,092	1,272	25%
CSO Debris Removal WO	UM		159	166	226	115	666	-	-
Sewer Main Chemical Root Treatment (LF)	UM	Combined System	19,175	0	858	0	20,033	-	-
		Separate System	93,006	27,280	10,875	0	131,161	-	-
Sewer Main Flushing and Cleaning (LF)	UM	Combined System	3,370	3,591	2,587	3,154	12,702	-	-
		Separate System	12,070	40,709	36,222	19,713	108,714	-	-
Sewer Main Inspections MSD Crews (LF)	PM	County Wide	10,427	12,593	16,466	10,349	45,962	198,000	2%
Sewer Main Inspections Contractor (LF)	PM	County Wide	34,004	82,097	186,100	216,949	415,147	198,000	10%
Total Sewer Main Inspections (LF)	PM	County Wide	44,431	0	202,566	227,298	461,110	396,000	6%
Sewer Main Root Cutting (LF)	UM	Combined System	1,741	3,547	307	737	9,572	-	-
		Separate System	13,099	14,167	15,524	16,618	58,051	-	-

APPENDICES

Appendix A	Discharge Work Orders
Appendix A-1	Discharge Work Orders – Dry Weather CSOs
Appendix A-2	Discharge Work Orders – Bypass
Appendix A-3	Discharge Work Orders – Unauthorized Discharges
Appendix B	CSO Flow Monitoring Data
Appendix C	Acronyms
Appendix D	SCAP Balance
Appendix E	IOAP Project Crosswalk
Appendix F	CSO Flow Monitoring Quality Improvement

Appendix A-1 Discharge Work Orders – Dry Weather CSOs

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Appendix A-1 Discharge Work Orders – Dry Weather CSOs

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD

**No Dry Weather CSOs
 Occurred during this
 Reporting Period**

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Appendix A-2 Discharge Work Orders – Bypass

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Appendix A-2 Discharge Work Orders – Bypass

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD

**No Bypasses Occurred
During this Reporting
Period**

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Appendix A-3 Discharge Work Orders – Unauthorized Discharges

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Appendix A-3 Discharge Work Orders – Unauthorized Discharges

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	7/3/2019 15:22	7/30/2019 11:00	800	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY. HEAVY RAIN.	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	3130346	CLEAN UP NOT REQUIRED. DISCHARGE PIPE IS SUBMERGED AND DISCHARGES DIRECTLY INTO THE CREEK.	LOCATION INCLUDED IN IOAP
FLOYDS FORK	KY0102784	611 WOODLAKE DR	7/19/2019 11:57	7/19/2019 12:20	1,150	SEWER MAIN	80581B-AG	STREAM	FLOYDS FORK	THERE WAS A STRUCTURAL FAILURE, FORCEMAIN BREAK.	STRUCTURAL FAILURE	DISW DRY WEATHER DISCHARGE	3136302	IT WAS DISINFECTED AREA WITH LIME.	CHEROKEE CONSTRUCTION REPAIRED FORCE MAIN.
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	7/30/2019 3:14	7/30/2019 3:16	43	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY IN HEAVY RAIN.	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	3137677	NONE, PIPE DISCHARGE DIRECTLY TO CREEK.	LOCATION INCLUDED IN IOAP.
MORRIS FORMAN	KY0022411	309 DORSEY WAY	8/24/2019 16:50	8/24/2019 19:45	8	SEWER SERVICE LINE	29102	GROUND	MIDDLE FORK BEARGRASS CREEK	THERE WAS DEBRIS IN MANHOLE.	OBSTRUCTION-NOT GREASE / ROOTS	DISW DRY WEATHER DISCHARGE	3147082	REFERS TO AREA SUPERVISOR FOR DISCLEAN.	FLUSHED AND REMOVED DEBRIS FROM MANHOLE.
MORRIS FORMAN	KY0022411	5901 U S HIGHWAY 42	8/26/2019 9:00	8/26/2019 12:30	50,000	SEWER VALVE	67746D-V	GROUND	GOOSE CREEK	CONTRACTOR DAMAGED FORCE MAIN.	UTILITY DAMAGED MSD ASSET	DISREV RAIN EVENT DISCHARGE	3147215	CONTRACTOR CLEANED AND SANITIZED THE AERA.	FLYNN COMPANY REPAIRED WITH SOLID REPAIR COUPLINGS.
MORRIS FORMAN	KY0022411	6600 SEMINARY WOODS PL	8/26/2019 11:30	8/26/2019 17:45	187,500	SEWER LIFT STATION	MSD0123-PS	DITCH	GOOSE CREEK	STRUCTURAL FAILURE FORCEMAIN BREAK.	STRUCTURAL FAILURE	DISREV RAIN EVENT DISCHARGE	3147233	AREA DISINFECTED WITH LIME.	WE PLACED STRAW BALES TO CONTAIN THE OVERFLOW.
FLOYDS FORK	KY0102784	14310 LAKE FOREST DR	8/30/2019 11:36	8/30/2019 11:41	25	SEWER MAIN	80351B-AG	GROUND	CHENOWETH RUN	STRUCTURAL FAILURE OF FORCE MAIN.	STRUCTURAL FAILURE	DISW DRY WEATHER DISCHARGE	3148100	WE CLEANED AND SANITIZED THE IMPACTED AREA.	DERBY CITY ENVIROMENTAL HAULED STATION (WO# 3148105) WHILE CHEROKEE CONSTRUCTION REPAIRED FORCE MAIN (WO# 3148102).
CEDAR CREEK	KY0098540	10809 BROOKSIDE DR	9/17/2019 18:00	9/17/2019 20:33	400	SEWER MANHOLE	42268A	STREAM	CHENOWETH RUN	LOCATED BURIEED MH# 42268A BURIED UNDER HEAVY ROCK WITH DETECTOR UNCOVERING AND EXCAVATING MH BY HAND WHEN THIS MANHOLE STARTED TO DISCHARGE.	OBSTRUCTION-NOT GREASE / ROOTS	DISW DRY WEATHER DISCHARGE	3158452	THE DISCHARGE NEAR CREEK TRAVELED INTO CREEK.	MAIN SEWER WAS FLUSHED FROM MH# 16615. OPENED MAIN SEWER.
HITE CREEK	KY0022420	10503 POINTE BAY BLVD	9/28/2019 7:20	9/28/2019 10:00	600	SEWER MAIN	MSD0069-PS	GROUND	LITTLE GOOSE CREEK	THERE WAS A STRUCTURAL FAILURE (FORCEMAIN BREAK).	STRUCTURAL FAILURE	DISW DRY WEATHER DISCHARGE	3160293	WE CLEANED AND SANITIZED THE IMPACTED AREA.	WE REPAIRED THE FORCEMAIN 01083D-AG.

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Appendix B CSO Flow Monitoring Data

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CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO015	7/1/2019 9:15	7/1/2019 20:00	645	Discharge	0	1.53				Data Under Review	23,175	
	7/9/2019 19:15	7/9/2019 23:00	225	Discharge	0	0.01				Data Under Review	667	
	7/10/2019 8:45	7/10/2019 8:45	0	Discharge	0	0.01				Data Under Review	152	
	7/11/2019 9:30	7/11/2019 20:15	645	Discharge	0	0				Data Under Review	18,360	
	7/17/2019 15:15	7/17/2019 21:30	375	Discharge	0	0.16				Data Under Review	13,423	
	7/18/2019 12:30	7/18/2019 21:45	555	Discharge	0	0.57				Data Under Review	35,930	
	7/29/2019 23:45	7/30/2019 0:45	60	0.83	6,361,612	0.83	0.51	3	Atlas		5,280,138	1
	7/30/2019 10:45	7/30/2019 18:45	480	Discharge	0	0.83				Data Under Review	10,871	
	8/13/2019 8:15	8/13/2019 9:00	45	0.47	6,625,957	0.53	0.25	3	Atlas		3,114,200	1
	8/26/2019 11:00	8/26/2019 16:00	300	0.56	46,876,446	1.12	0.23	6	Atlas		26,250,810	1
CSO015											34,747,726	3
Total												
CSO016	7/18/2019 0:45	7/18/2019 6:45	360	0.34	21,112,471	0.47	0.28	1	Atlas		7,178,240	1
	7/29/2019 23:15	7/30/2019 3:45	270	0.92	5,809,176	0.92	0.57	1	Atlas		5,344,442	1
	8/7/2019 5:15	8/7/2019 7:45	150	0.04	34,551,500	0.05	0.03	1	Atlas		1,382,060	1
CSO016											13,904,742	3
Total												
CSO019	7/1/2019 17:30	7/1/2019 18:15	45	0.1	13,282,940	0.26	0.08	1	Atlas		1,328,294	1
	7/15/2019 23:45	7/15/2019 23:45	0	0.02	753,300	0.02	0.01	12	Atlas		15,066	1
	7/17/2019 6:15	7/17/2019 14:15	480	0.03	3,813,200	0.14	0.02	3	Atlas		114,396	1
	7/18/2019 0:00	7/18/2019 2:15	135	0.38	8,257,266	0.52	0.32	1	Atlas		3,137,761	1
	7/21/2019 21:30	7/22/2019 0:45	195	0.83	53,183	1.35	0.58	1	Atlas		44,142	1
	7/29/2019 18:15	7/30/2019 3:45	570	0.69	6,478,491	0.69	0.39	3	Atlas		4,470,159	1
	8/13/2019 7:00	8/13/2019 10:15	195	0.41	397,788	0.45	0.21	6	Atlas		163,093	1
	8/17/2019 14:45	8/17/2019 15:45	60	0.09	132,422	0.5	0.08	1	Atlas		11,918	1
	8/19/2019 1:00	8/19/2019 4:15	195	0.29	3,843,052	0.79	0.25	1	Atlas		1,114,485	1
	8/20/2019 17:00	8/20/2019 17:45	45	0.05	203,960	0.43	0.04	1	Atlas		10,198	1
	8/22/2019 2:45	8/22/2019 7:15	270	0.25	4,065,324	0.66	0.15	3	Atlas		1,016,331	1
	8/23/2019 8:15	8/23/2019 14:45	390	Discharge	0	0.79				Data Under Review	75,174	
	8/26/2019 0:30	8/26/2019 21:00	1230	0.8	9,845,300	1.5	0.31	24	Atlas		7,876,240	1
	9/20/2019 9:45	9/20/2019 10:30	45	0.05	764,760	0.05	0.03	6	Atlas		38,238	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO019											19,415,495	13
Total												
CSO022	7/18/2019 0:30	7/18/2019 0:45	15	0.3	1,436,580	0.34	0.25	1	Atlas		430,974	1
	7/29/2019 23:15	7/29/2019 23:30	15	0.51	308,106	0.51	0.31	3	Atlas		157,134	1
	8/26/2019 11:15	8/26/2019 12:00	45	0.49	308,304	0.79	0.22	6	Atlas		151,069	1
CSO022											739,177	3
Total												
CSO028	7/18/2019 0:30	7/18/2019 0:45	15	0.44	70,852	0.6	0.32	1	Atlas		31,175	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.52	16,250	0.52	0.33	3	Atlas		8,450	1
CSO028											39,625	2
Total												
CSO029	7/18/2019 0:30	7/18/2019 0:45	15	0.44	108,868	0.6	0.32	1	Atlas		47,902	1
CSO029											47,902	1
Total												
CSO031	7/18/2019 0:45	7/18/2019 1:00	15	0.44	5,061	0.6	0.32	1	Atlas		2,227	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.52	408	0.52	0.33	3	Atlas		212	1
CSO031											2,439	2
Total												
CSO034	7/18/2019 0:30	7/18/2019 1:00	30	0.44	325,036	0.6	0.32	1	Atlas		143,016	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.52	63,060	0.52	0.33	3	Atlas		32,791	1
CSO034											175,807	2
Total												
CSO035	7/18/2019 0:30	7/18/2019 0:45	15	0.37	126,492	0.54	0.29	1	Atlas		46,802	1
	7/29/2019 23:15	7/29/2019 23:30	15	0.5	13,964	0.5	0.32	3	Atlas		6,982	1
CSO035											53,784	2
Total												
CSO036	7/18/2019 1:00	7/18/2019 1:15	15	0.37	71,081	0.54	0.29	1	Atlas		26,300	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.5	106,418	0.5	0.32	3	Atlas		53,209	1
	8/26/2019 12:15	8/26/2019 12:15	0	0.42	5,645	0.73	0.17	6	Atlas		2,371	1
CSO036											81,880	3
Total												
CSO038	7/18/2019 0:45	7/18/2019 1:00	15	0.44	10,043	0.6	0.32	1	Atlas		4,419	1
CSO038											4,419	1
Total												
CSO050	7/29/2019 22:30	7/29/2019 23:30	60	0.62	448,761	0.62	0.37	3	Atlas		278,232	1
	8/7/2019 4:30	8/7/2019 5:00	30	0.05	281,920	0.06	0.04	1	Atlas		14,096	1
	8/13/2019 7:30	8/13/2019 9:00	90	0.35	24,617	0.41	0.21	3	Atlas		8,616	1
	8/17/2019 14:45	8/17/2019 14:45	0	0.04	149,450	0.39	0.03	1	Atlas		5,978	1
	8/19/2019 1:15	8/19/2019 2:15	60	0.14	190,314	0.53	0.12	1	Atlas		26,644	1
	8/22/2019 2:45	8/22/2019 4:30	105	0.22	767,318	0.44	0.15	3	Atlas		168,810	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO050	8/25/2019 23:00	8/26/2019 0:30	90	0.61	10,792	0.66	0.26	6	Atlas		6,583	1
	8/26/2019 10:00	8/26/2019 15:15	315	0.61	1,738,715	1.05	0.26	6	Atlas		1,060,616	1
	9/20/2019 9:15	9/20/2019 9:45	30	0.15	63,647	0.15	0.13	1	Atlas		9,547	1
CSO050 Total											1,579,122	9
CSO051	8/22/2019 2:45	8/22/2019 2:45	0	0.22	35,227	0.33	0.15	3	Atlas		7,750	1
	8/26/2019 10:30	8/26/2019 14:15	225	0.61	80,207	1.03	0.26	6	Atlas		48,926	1
CSO051 Total											56,676	2
CSO053	7/16/2019 11:30	7/16/2019 19:00	450	0.1	73,940	0.12	0.06	1	Atlas		7,394	1
	7/18/2019 0:45	7/18/2019 1:15	30	0.3	86,417	0.45	0.21	1	Atlas		25,925	1
	7/29/2019 22:45	7/30/2019 0:00	75	0.61	97,975	0.61	0.37	3	Atlas		59,765	1
	8/7/2019 4:45	8/7/2019 4:45	0	0.05	125,940	0.06	0.04	1	Atlas		6,297	1
	8/13/2019 7:45	8/13/2019 7:45	0	0.34	653	0.29	0.20	3	Atlas		222	1
	8/19/2019 2:00	8/19/2019 2:15	15	0.13	77,038	0.54	0.10	1	Atlas		10,015	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.2	81,490	0.34	0.13	3	Atlas		16,298	1
	8/26/2019 10:15	8/26/2019 14:45	270	0.52	272,715	0.94	0.23	6	Atlas		141,812	1
	9/20/2019 9:30	9/20/2019 10:00	30	0.1	80,090	0.1	0.09	1	Atlas		8,009	1
CSO053 Total											275,737	9
CSO054	8/26/2019 12:00	8/26/2019 14:00	120	0.52	177,931	0.91	0.23	6	Atlas		92,524	1
CSO054 Total											92,524	1
CSO055	7/18/2019 0:45	7/18/2019 1:00	15	0.3	113,617	0.45	0.21	1	Atlas		34,085	1
	7/29/2019 23:30	7/30/2019 0:15	45	0.61	87,375	0.61	0.37	3	Atlas		53,299	1
	8/19/2019 2:00	8/19/2019 2:00	0	0.13	21,000	0.54	0.10	1	Atlas		2,730	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.2	66,610	0.34	0.13	3	Atlas		13,322	1
	8/26/2019 10:45	8/26/2019 15:00	255	0.52	1,302,627	0.94	0.23	6	Atlas		677,366	1
CSO055 Total											780,802	5
CSO056	7/18/2019 0:45	7/18/2019 1:00	15	0.3	176,500	0.45	0.21	1	Atlas		52,950	1
	7/29/2019 23:30	7/29/2019 23:45	15	0.61	88,434	0.61	0.37	3	Atlas		53,945	1
	8/26/2019 11:30	8/26/2019 14:00	150	0.52	47,452	0.91	0.23	6	Atlas		24,675	1
CSO056 Total											131,570	3
CSO057	7/18/2019 0:45	7/18/2019 0:45	0	0.22	11,314	0.39	0.18	1	Atlas		2,489	1
	8/19/2019 2:00	8/19/2019 2:00	0	0.09	3,100	0.43	0.08	1	Atlas		279	1
	8/25/2019 23:00	8/25/2019 23:00	0	0.47	1,611	0.49	0.22	6	Atlas		757	1
	8/26/2019 11:30	8/26/2019 11:30	0	0.47	4,374	0.66	0.22	6	Atlas		2,056	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO057											5,581	4
Total												
CSO062	7/18/2019 1:30	7/18/2019 2:30	60	0.25	334,628	0.45	0.21	1	Atlas		83,657	1
	7/30/2019 0:00	7/30/2019 1:00	60	0.42	558,002	0.42	0.25	3	Atlas		234,361	1
	8/26/2019 11:45	8/26/2019 16:15	270	0.44	5,461,191	0.79	0.21	6	Atlas		2,402,924	1
CSO062											2,720,942	3
Total												
CSO082	8/26/2019 12:00	8/26/2019 14:15	135	0.49	104,910	0.82	0.23	6	Atlas		51,406	1
CSO082											51,406	1
Total												
CSO083	7/18/2019 0:30	7/18/2019 0:30	0	0.26	25,677	0.32	0.17	1	Atlas		6,676	1
CSO083											6,676	1
Total												
CSO084	7/3/2019 13:00	7/3/2019 13:00	0	0.21	2,671	0.33	0.17	1	Atlas		561	1
	7/18/2019 0:45	7/18/2019 2:45	120	0.26	957,019	0.39	0.17	1	Atlas		248,825	1
	7/29/2019 23:45	7/30/2019 0:00	15	0.55	276,736	0.55	0.35	1	Atlas		152,205	1
	8/26/2019 11:15	8/26/2019 13:30	135	0.45	784,729	0.78	0.21	6	Atlas		353,128	1
CSO084											754,719	4
Total												
CSO097	7/18/2019 0:45	7/18/2019 1:45	60	0.57	443,796	0.65	0.37	1	Atlas		252,964	1
	7/29/2019 23:30	7/30/2019 0:15	45	0.46	249,209	0.46	0.31	3	Atlas		114,636	1
	8/7/2019 4:30	8/7/2019 5:00	30	0.28	37,218	0.29	0.24	1	Atlas		10,421	1
	8/26/2019 11:00	8/26/2019 14:45	225	0.45	772,724	0.88	0.22	6	Atlas		347,726	1
CSO097											725,747	4
Total												
CSO104	7/1/2019 17:15	7/1/2019 17:15	0	0.41	9,388	0.8	0.36	1	Atlas		3,849	1
	7/22/2019 14:45	7/23/2019 4:00	795	0.02	712,050	0.74	0.01	3	Atlas		14,241	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.82	396,495	0.82	0.47	3	Atlas		325,126	1
	8/7/2019 4:45	8/7/2019 4:45	0	0.09	8,867	0.1	0.08	1	Atlas		798	1
	8/26/2019 11:30	8/26/2019 14:45	195	0.73	222,360	1.22	0.28	24	Atlas		162,323	1
CSO104											506,337	5
Total												
CSO108	7/30/2019 0:15	7/30/2019 0:15	0	0.6	65,667	0.6	0.40	3	Atlas		39,400	1
CSO108											39,400	1
Total												
CSO109	7/18/2019 1:15	7/18/2019 1:30	15	0.67	194,754	0.72	0.50	1	Atlas		130,485	1
	7/30/2019 0:00	7/30/2019 0:00	0	0.75	212,688	0.75	0.53	1	Atlas		159,516	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.5	105,278	0.48	0.36	1	Atlas		52,639	1
	8/26/2019 11:45	8/26/2019 11:45	0	0.37	1,797	0.98	0.18	6	Atlas		665	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO109											343,305	4
Total												
CSO110	7/18/2019 1:15	7/18/2019 1:45	30	0.56	412,595	0.61	0.33	1	Atlas		231,053	1
	7/30/2019 0:15	7/30/2019 0:30	15	0.37	270,595	0.37	0.24	3	Atlas		100,120	1
	8/7/2019 5:00	8/7/2019 5:00	0	0.25	25,484	0.26	0.22	1	Atlas		6,371	1
	8/26/2019 11:30	8/26/2019 13:30	120	0.39	269,423	0.83	0.19	6	Atlas		105,075	1
CSO110											442,619	4
Total												
CSO111	7/18/2019 1:15	7/18/2019 1:45	30	0.56	98,064	0.61	0.33	1	Atlas		54,916	1
	7/29/2019 23:45	7/30/2019 0:15	30	0.37	78,141	0.37	0.24	3	Atlas		28,912	1
	8/7/2019 4:30	8/7/2019 4:45	15	0.25	56,356	0.26	0.22	1	Atlas		14,089	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.29	10,962	0.21	0.19	3	Atlas		3,179	1
	8/26/2019 11:15	8/26/2019 12:15	60	0.39	43,708	0.78	0.19	6	Atlas		17,046	1
CSO111											118,142	5
Total												
CSO113	7/18/2019 0:30	7/18/2019 1:00	30	0.42	710,343	0.49	0.25	1	Atlas		298,344	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.45	92,733	0.44	0.29	3	Atlas		41,730	1
CSO113											340,074	2
Total												
CSO117	7/18/2019 0:30	7/18/2019 1:00	30	0.33	2,423,106	0.5	0.25	1	Atlas		799,625	1
CSO117											799,625	1
Total												
CSO118	7/3/2019 13:00	7/3/2019 13:15	15	0.21	2,297,152	0.33	0.17	1	Atlas		482,402	1
	7/16/2019 11:45	7/16/2019 14:45	180	0.11	71,845	0.09	0.05	1	Atlas		7,903	1
	7/18/2019 0:45	7/18/2019 2:00	75	0.26	11,869,835	0.39	0.17	1	Atlas		3,086,157	1
	7/26/2019 23:30	7/26/2019 23:45	15	Discharge	0	0.25					18,612	
	7/29/2019 23:45	7/30/2019 0:30	45	0.55	3,484,720	0.55	0.35	1	Atlas		1,916,596	1
	8/7/2019 5:00	8/7/2019 5:30	30	0.05	2,631,820	0.06	0.04	1	Atlas		131,591	1
	8/22/2019 4:45	8/22/2019 5:00	15	0.19	358,042	0.33	0.13	3	Atlas		68,028	1
	8/26/2019 10:30	8/26/2019 15:15	285	0.45	8,315,531	0.82	0.21	6	Atlas		3,741,989	1
CSO118											9,453,278	7
Total												
CSO119	7/3/2019 12:45	7/3/2019 12:45	0	0.21	165,029	0.33	0.17	1	Atlas		34,656	1
	7/18/2019 0:30	7/18/2019 1:30	60	0.26	1,118,650	0.39	0.17	1	Atlas		290,849	1
	7/29/2019 23:30	7/30/2019 0:15	45	0.55	409,075	0.55	0.35	1	Atlas		224,991	1
	8/26/2019 10:45	8/26/2019 14:30	225	0.45	1,114,131	0.82	0.21	6	Atlas		501,359	1
CSO119											1,051,855	4
Total												
CSO121	7/3/2019 13:00	7/3/2019 13:00	0	0.12	2,566,458	0.18	0.07	3	Atlas		307,975	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO121	7/16/2019 11:30	7/16/2019 14:30	180	0.21	56,148	0.2	0.10	1	Atlas		11,791	1
	7/18/2019 0:45	7/18/2019 1:15	30	0.18	200,017	0.45	0.14	1	Atlas		36,003	1
	7/30/2019 0:00	7/30/2019 0:00	0	0.58	2,379	0.58	0.36	3	Atlas		1,380	1
	8/22/2019 3:00	8/22/2019 4:45	105	0.19	44,411	0.35	0.13	3	Atlas		8,438	1
	8/26/2019 10:15	8/26/2019 14:30	255	0.49	114,727	0.83	0.23	6	Atlas		56,216	1
	8/27/2019 17:15	8/27/2019 17:15	0	0.23	500	1.03	0.20	1	Atlas		115	1
CSO121 Total											421,918	7
CSO125	7/3/2019 14:00	7/3/2019 14:30	30	0.2	3,020	0.19	0.13	3	Atlas		604	1
	7/10/2019 15:45	7/10/2019 15:45	0	Discharge	0	0.02					220	
	7/29/2019 23:45	7/29/2019 23:45	0	0.47	2,189	0.47	0.31	3	Atlas		1,029	1
	8/22/2019 3:15	8/22/2019 4:45	90	0.27	4,033	0.37	0.18	3	Atlas		1,089	1
	8/26/2019 11:15	8/26/2019 13:45	150	0.56	166,843	0.96	0.27	6	Atlas		93,432	1
	8/27/2019 17:30	8/27/2019 17:30	0	0.4	4,705	1.36	0.34	1	Atlas		1,882	1
CSO125 Total											98,256	5
CSO126	7/29/2019 23:45	7/29/2019 23:45	0	0.47	59,664	0.47	0.31	3	Atlas		28,042	1
	8/27/2019 17:15	8/27/2019 17:15	0	0.4	2,100	1.37	0.34	1	Atlas		840	1
CSO126 Total											28,882	2
CSO127	7/18/2019 1:00	7/18/2019 2:00	60	0.21	1,086,214	0.32	0.17	1	Atlas		228,105	1
	7/29/2019 23:15	7/30/2019 0:30	75	0.65	122,840	0.65	0.42	1	Atlas		79,846	1
	8/7/2019 4:45	8/7/2019 5:15	30	0.04	497,675	0.06	0.03	1	Atlas		19,907	1
	8/13/2019 8:15	8/13/2019 8:15	0	0.24	20,008	0.22	0.14	3	Atlas		4,802	1
	8/22/2019 3:15	8/22/2019 5:00	105	0.34	94,682	0.42	0.23	3	Atlas		32,192	1
	8/26/2019 11:00	8/26/2019 15:00	240	0.52	230,883	1.01	0.25	6	Atlas		120,059	1
	8/27/2019 17:15	8/27/2019 17:30	15	0.27	12,222	1.26	0.23	1	Atlas		3,300	1
CSO127 Total											488,211	7
CSO131	7/30/2019 0:00	7/30/2019 0:00	0	0.41	64,624	0.41	0.25	3	Atlas		26,496	1
	8/27/2019 17:15	8/27/2019 17:15	0	0.33	109,421	1.1	0.28	1	Atlas		36,109	1
CSO131 Total											62,605	2
CSO132	7/3/2019 14:00	7/3/2019 14:30	30	0.18	910,628	0.21	0.11	3	Atlas		163,913	1
	7/18/2019 1:00	7/18/2019 1:30	30	0.16	2,748,550	0.29	0.14	1	Atlas		439,768	1
	7/29/2019 23:30	7/30/2019 0:15	45	0.44	370,464	0.44	0.27	3	Atlas		163,004	1
CSO132 Total											766,685	3
CSO141	7/29/2019 23:30	7/29/2019 23:30	0	0.58	2,984	0.58	0.36	3	Atlas		1,731	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO141 Total											1,731	1
CSO142	7/17/2019 17:00	7/18/2019 1:15	495	0.44	135,184	0.53	0.30	1	Atlas		59,481	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.51	35,122	0.51	0.33	3	Atlas	Retained by Sneads Branch	17,912	1
	8/7/2019 4:30	8/7/2019 4:30	0	0.2	1,345	0.18	0.17	1	Atlas	Retained by Sneads Branch	269	1
	8/26/2019 11:15	8/26/2019 11:30	15	0.34	7,553	0.63	0.16	6	Atlas	Retained by Sneads Branch	2,568	1
CSO142 Total											80,230	4
CSO146	7/18/2019 1:00	7/18/2019 1:00	0	0.44	132,259	0.53	0.30	1	Atlas		58,194	1
	8/7/2019 5:00	8/7/2019 5:00	0	0.2	22,720	0.21	0.17	1	Atlas		4,544	1
	8/26/2019 11:45	8/26/2019 11:45	0	0.34	8,897	0.67	0.16	6	Atlas		3,025	1
CSO146 Total											65,763	3
CSO148	7/18/2019 0:45	7/18/2019 1:15	30	0.57	226,514	0.65	0.37	1	Atlas		129,113	1
	7/29/2019 23:45	7/30/2019 0:00	15	0.46	143,435	0.46	0.31	3	Atlas		65,980	1
	8/7/2019 4:30	8/7/2019 4:45	15	0.28	57,596	0.29	0.24	1	Atlas		16,127	1
	8/22/2019 3:00	8/22/2019 4:30	90	0.27	84,448	0.34	0.18	3	Atlas		22,801	1
	8/26/2019 11:30	8/26/2019 13:15	105	0.45	63,769	0.85	0.22	6	Atlas		28,696	1
	8/27/2019 17:00	8/27/2019 17:00	0	0.17	46,447	1.03	0.14	1	Atlas		7,896	1
CSO148 Total											270,613	6
CSO149	7/18/2019 1:00	7/18/2019 1:15	15	0.44	182,180	0.53	0.30	1	Atlas		80,159	1
CSO149 Total											80,159	1
CSO150	7/18/2019 0:30	7/18/2019 0:45	15	0.3	65,960	0.43	0.21	1	Atlas		19,788	1
	7/29/2019 23:30	7/30/2019 0:00	30	0.61	36,800	0.61	0.37	3	Atlas		22,448	1
	8/22/2019 2:45	8/22/2019 2:45	0	0.2	825	0.34	0.13	3	Atlas		165	1
	8/26/2019 11:30	8/26/2019 15:00	210	0.52	217,571	0.94	0.23	6	Atlas		113,137	1
CSO150 Total											155,538	4
CSO151	8/7/2019 5:00	8/7/2019 5:00	0	0.14	114,221	0.15	0.12	1	Atlas		15,991	1
	8/22/2019 3:15	8/22/2019 3:30	15	0.21	353,310	0.21	0.14	3	Atlas		74,195	1
	8/26/2019 11:15	8/26/2019 13:45	150	0.46	731,865	0.82	0.22	6	Atlas		336,658	1
CSO151 Total											426,844	3
CSO153	7/3/2019 13:00	7/3/2019 13:00	0	0.12	61,175	0.18	0.07	3	Atlas		7,341	1
	7/18/2019 0:45	7/18/2019 1:30	45	0.18	873,833	0.45	0.14	1	Atlas		157,290	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO153	7/21/2019 23:15	7/21/2019 23:15	0	0.18	2,394	0.59	0.11	3	Atlas		431	1
	7/29/2019 23:30	7/30/2019 0:00	30	0.58	205,833	0.58	0.36	3	Atlas		119,383	1
	8/22/2019 3:00	8/22/2019 4:45	105	0.19	187,884	0.35	0.13	3	Atlas		35,698	1
	8/26/2019 10:15	8/26/2019 14:45	270	0.49	722,502	0.83	0.23	6	Atlas		354,026	1
	8/27/2019 17:00	8/27/2019 17:15	15	0.23	86,004	1.04	0.20	1	Atlas		19,781	1
CSO153 Total											693,950	7
CSO155	7/18/2019 0:30	7/18/2019 0:45	15	0.23	58,691	0.34	0.18	1	Atlas		13,499	1
	7/29/2019 23:15	7/29/2019 23:15	0	0.62	42,476	0.61	0.37	3	Atlas		26,335	1
	8/22/2019 2:45	8/22/2019 2:45	0	0.22	40,495	0.33	0.15	3	Atlas		8,909	1
	8/26/2019 10:30	8/26/2019 12:00	90	0.61	34,182	0.94	0.26	6	Atlas		20,851	1
CSO155 Total										69,594	4	
CSO160	7/18/2019 0:15	7/18/2019 0:15	0	0.22	514	0.24	0.18	1	Atlas		113	1
	7/29/2019 23:15	7/29/2019 23:15	0	0.62	2,635	0.57	0.39	3	Atlas		1,634	1
CSO160 Total											1,747	2
CSO161	7/18/2019 0:30	7/18/2019 0:45	15	0.22	53,450	0.39	0.18	1	Atlas		11,759	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.62	17,310	0.62	0.39	3	Atlas		10,732	1
	8/22/2019 2:45	8/22/2019 2:45	0	0.21	1,800	0.21	0.14	3	Atlas		378	1
CSO161 Total											22,869	3
CSO166	7/1/2019 17:15	7/1/2019 17:45	30	0.04	2,067,500	0.13	0.03	1	Atlas		82,700	1
	7/3/2019 14:30	7/3/2019 15:15	45	0.2	1,468,595	0.32	0.12	3	Atlas		293,719	1
	7/10/2019 15:45	7/10/2019 16:15	30	0.01	8,718,900	0.04	0.01	1	Atlas		87,189	1
	7/18/2019 1:30	7/18/2019 2:00	30	0.21	187,119	0.32	0.17	1	Atlas		39,295	1
	7/30/2019 0:00	7/30/2019 0:45	45	0.65	165,451	0.65	0.42	1	Atlas		107,543	1
	8/22/2019 3:15	8/22/2019 3:45	30	0.34	431,776	0.27	0.23	3	Atlas		146,804	1
	8/26/2019 11:45	8/26/2019 14:30	165	0.52	1,134,438	1.01	0.25	6	Atlas		589,908	1
	8/27/2019 17:00	8/27/2019 18:30	90	0.27	2,126,670	1.27	0.23	1	Atlas		574,201	1
	CSO166 Total											1,921,359
CSO167	7/3/2019 14:00	7/3/2019 14:15	15	0.18	76,872	0.21	0.11	3	Atlas		13,837	1
	7/18/2019 1:00	7/18/2019 1:30	30	0.16	348,213	0.29	0.14	1	Atlas		55,714	1
	7/29/2019 23:30	7/30/2019 0:15	45	0.44	136,757	0.44	0.27	3	Atlas		60,173	1
	8/22/2019 3:15	8/22/2019 4:45	90	0.21	101,181	0.34	0.14	3	Atlas		21,248	1
	8/26/2019 11:15	8/26/2019 14:45	210	0.51	371,947	0.86	0.25	6	Atlas		189,693	1
	8/27/2019 17:00	8/27/2019 17:30	30	0.38	138,450	1.23	0.32	1	Atlas		52,611	1
CSO167 Total											393,276	6

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO174	7/18/2019 0:45	7/18/2019 1:30	45	0.44	3,298,034	0.53	0.30	1	Atlas		1,451,135	1
	7/29/2019 23:45	7/30/2019 0:15	30	0.51	782,480	0.51	0.33	3	Atlas	Retained by Sneads Branch	399,065	1
	8/7/2019 4:45	8/7/2019 5:00	15	0.2	1,562,710	0.21	0.17	1	Atlas	Retained by Sneads Branch	312,542	1
	8/26/2019 11:15	8/26/2019 13:30	135	0.34	1,216,471	0.73	0.16	6	Atlas	Retained by Sneads Branch	413,600	1
	8/27/2019 17:15	8/27/2019 17:15	0	0.25	47,020	0.98	0.21	1	Atlas	Retained by Sneads Branch	11,755	1
CSO174 Total											2,588,097	5
CSO178	7/18/2019 0:30	7/18/2019 0:45	15	0.44	175,318	0.6	0.32	1	Atlas		77,140	1
CSO178 Total											77,140	1
CSO180	7/3/2019 12:30	7/3/2019 12:45	15	0.45	18,840	0.62	0.37	1	Atlas	Retained by Sneads Branch	8,478	1
	7/18/2019 0:45	7/18/2019 1:15	30	0.44	264,343	0.53	0.30	1	Atlas		116,311	1
	7/21/2019 22:00	7/21/2019 22:00	0	0.18	9,939	0.56	0.12	3	Atlas	Retained by Sneads Branch	1,789	1
	7/27/2019 4:00	7/27/2019 4:15	15	Discharge	0	0.26				Retained by Sneads Branch	20,912	
	7/29/2019 23:45	7/30/2019 0:00	15	0.51	137,720	0.51	0.33	3	Atlas	Retained by Sneads Branch	70,237	1
	8/7/2019 4:30	8/7/2019 4:45	15	0.2	261,215	0.21	0.17	1	Atlas	Retained by Sneads Branch	52,243	1
	8/26/2019 11:15	8/26/2019 12:45	90	0.34	133,362	0.72	0.16	6	Atlas	Retained by Sneads Branch	45,343	1
CSO180 Total											315,313	6
CSO183	7/18/2019 0:45	7/18/2019 0:45	0	0.36	278	0.35	0.27	1	Atlas		100	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.38	547	0.38	0.25	3	Atlas	Retained by Sneads Branch	208	1
CSO183 Total											308	2
CSO184	7/18/2019 1:15	7/18/2019 1:15	0	0.36	61,808	0.43	0.27	1	Atlas		22,251	1
	7/29/2019 23:45	7/30/2019 0:00	15	0.38	24,055	0.38	0.25	3	Atlas	Retained by Sneads Branch	9,141	1
	8/7/2019 4:30	8/7/2019 4:30	0	0.16	3,981	0.17	0.14	1	Atlas	Retained by Sneads Branch	637	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO184 Total											32,029	3
CSO185	7/18/2019 1:00	7/18/2019 1:15	15	0.36	447,769	0.43	0.27	1	Atlas		161,197	1
	7/30/2019 0:00	7/30/2019 0:00	0	0.38	208,926	0.38	0.25	3	Atlas	Retained by Sneads Branch	79,392	1
	8/7/2019 4:30	8/7/2019 4:45	15	0.16	74,306	0.17	0.14	1	Atlas	Retained by Sneads Branch	11,889	1
	8/13/2019 8:00	8/13/2019 8:00	0	0.33	3,436	0.41	0.17	3	Atlas	Retained by Sneads Branch	1,134	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.22	6,050	0.17	0.15	3	Atlas	Retained by Sneads Branch	1,331	1
	8/26/2019 11:30	8/26/2019 13:30	120	0.38	46,463	0.72	0.16	6	Atlas	Retained by Sneads Branch	17,656	1
CSO185 Total											272,599	6
CSO187	7/18/2019 0:30	7/18/2019 0:45	15	0.44	141,136	0.53	0.30	1	Atlas		62,100	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.51	3,282	0.51	0.33	3	Atlas	Retained by Sneads Branch	1,674	1
CSO187 Total											63,774	2
CSO189	7/18/2019 1:15	7/18/2019 1:30	15	0.34	55,888	0.58	0.29	1	Atlas		19,002	1
	8/26/2019 13:15	8/26/2019 13:15	0	0.73	9,158	1.18	0.28	24	Atlas		6,685	1
CSO189 Total											25,687	2
CSO190	7/18/2019 0:30	7/18/2019 0:45	15	0.23	605,526	0.34	0.18	1	Atlas		139,271	1
	7/29/2019 23:15	7/29/2019 23:30	15	0.62	183,235	0.62	0.37	3	Atlas		113,606	1
	8/22/2019 2:45	8/22/2019 2:45	0	0.22	4,959	0.33	0.15	3	Atlas		1,091	1
	8/26/2019 10:45	8/26/2019 12:00	75	0.61	28,970	0.94	0.26	6	Atlas		17,672	1
CSO190 Total											271,640	4
CSO191	7/1/2019 9:15	7/1/2019 20:00	645	Discharge	0	1.53				Data Under Review	1,041	
	7/11/2019 9:30	7/11/2019 20:15	645	Discharge	0	0				Data Under Review	825	
	7/17/2019 15:15	7/17/2019 21:30	375	Discharge	0	0.16				Data Under Review	603	
	7/18/2019 12:30	7/18/2019 21:45	555	Discharge	0	0.57				Data Under Review	1,614	
	7/29/2019 23:45	7/30/2019 0:45	60	0.83	285,841	0.83	0.51	3	Atlas		237,248	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO191	7/30/2019 10:45	7/30/2019 18:45	480	Discharge	0	0.83				Data Under Review	488	
	8/13/2019 8:15	8/13/2019 9:00	45	0.47	297,717	0.53	0.25	3	Atlas		139,927	1
	8/26/2019 11:00	8/26/2019 16:00	300	0.56	2,106,255	1.12	0.23	6	Atlas		1,179,503	1
CSO191 Total											1,561,249	3
CSO193	7/3/2019 12:30	7/3/2019 12:30	0	0.08	13,213	0.33	0.05	1	Atlas		1,057	1
	7/18/2019 0:45	7/18/2019 1:00	15	0.44	14,077	0.6	0.32	1	Atlas		6,194	1
	7/29/2019 23:30	7/29/2019 23:45	15	0.52	637	0.52	0.33	3	Atlas		331	1
	8/7/2019 4:30	8/7/2019 4:30	0	0.16	1,750	0.13	0.14	1	Atlas		280	1
CSO193 Total											7,862	4
CSO195	7/18/2019 0:45	7/18/2019 0:45	0	0.55	1,675	0.68	0.41	1	Atlas		921	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.47	2,096	0.47	0.29	3	Atlas		985	1
CSO195 Total											1,906	2
CSO197	7/3/2019 12:15	7/3/2019 12:15	0	0.25	3,324	0.46	0.20	1	Atlas		831	1
	7/18/2019 0:15	7/18/2019 0:45	30	0.55	5,511	0.68	0.41	1	Atlas		3,031	1
	8/7/2019 4:15	8/7/2019 4:15	0	0.22	2,245	0.15	0.19	1	Atlas		494	1
CSO197 Total											4,356	3
CSO198	7/3/2019 12:15	7/3/2019 12:15	0	0.25	30,244	0.46	0.20	1	Atlas		7,561	1
	7/18/2019 0:15	7/18/2019 0:45	30	0.55	40,171	0.68	0.41	1	Atlas		22,094	1
	7/29/2019 23:30	7/29/2019 23:30	0	0.47	696	0.47	0.29	3	Atlas		327	1
	8/7/2019 4:15	8/7/2019 4:15	0	0.22	15,182	0.15	0.19	1	Atlas		3,340	1
CSO198 Total											33,322	4
CSO199	7/3/2019 12:15	7/3/2019 12:30	15	0.25	186,160	0.48	0.20	1	Atlas		46,540	1
	7/18/2019 0:30	7/18/2019 1:00	30	0.55	118,907	0.68	0.41	1	Atlas		65,399	1
	7/29/2019 23:30	7/29/2019 23:45	15	0.47	9,857	0.47	0.29	3	Atlas		4,633	1
	8/7/2019 4:30	8/7/2019 4:30	0	0.22	12,155	0.21	0.19	1	Atlas		2,674	1
CSO199 Total											119,246	4
CSO201	7/3/2019 14:00	7/3/2019 14:00	0	0.08	407,075	0.34	0.05	1	Atlas		32,566	1
	7/18/2019 0:45	7/18/2019 1:00	15	0.44	43,002	0.6	0.32	1	Atlas		18,921	1
CSO201 Total											51,487	2
CSO202	7/3/2019 12:15	7/3/2019 12:30	15	0.25	23,108	0.48	0.20	1	Atlas		5,777	1
	7/16/2019 14:15	7/16/2019 14:15	0	0.13	2,608	0.09	0.06	12	Atlas		339	1
	7/18/2019 0:30	7/18/2019 1:00	30	0.55	79,393	0.68	0.41	1	Atlas		43,666	1

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
CSO202	7/29/2019 23:30	7/29/2019 23:45	15	0.47	7,657	0.47	0.29	3	Atlas		3,599	1
	8/7/2019 4:15	8/7/2019 4:30	15	0.22	17,200	0.21	0.19	1	Atlas		3,784	1
	8/26/2019 11:15	8/26/2019 12:00	45	0.33	1,948	0.64	0.15	6	Atlas		643	1
	8/27/2019 16:45	8/27/2019 16:45	0	0.43	505	1.14	0.35	1	Atlas		217	1
CSO202 Total											58,025	7
CSO203	8/7/2019 4:30	8/7/2019 4:30	0	0.22	3,568	0.21	0.19	1	Atlas		785	1
CSO203 Total											785	1
CSO205	7/18/2019 0:45	7/18/2019 1:15	30	0.51	9,739	0.59	0.37	1	Atlas		4,967	1
	7/29/2019 23:45	7/29/2019 23:45	0	0.4	7,635	0.4	0.26	3	Atlas	Retained by Sneads Branch	3,054	1
	8/7/2019 4:30	8/7/2019 4:30	0	0.25	1,640	0.25	0.22	1	Atlas	Retained by Sneads Branch	410	1
	8/13/2019 8:00	8/13/2019 8:00	0	0.31	977	0.47	0.18	3	Atlas	Retained by Sneads Branch	303	1
	8/22/2019 3:00	8/22/2019 3:00	0	0.26	3,673	0.2	0.17	3	Atlas	Retained by Sneads Branch	955	1
	8/26/2019 10:00	8/26/2019 14:30	270	0.33	26,321	0.75	0.16	6	Atlas	Retained by Sneads Branch	8,686	1
	8/27/2019 17:00	8/27/2019 17:00	0	0.59	1,249	1.32	0.50	1	Atlas	Retained by Sneads Branch	737	1
CSO205 Total											19,112	7
CSO208	7/18/2019 0:15	7/18/2019 0:30	15	0.44	28,786	0.5	0.31	1	Atlas		12,666	1
	7/29/2019 23:15	7/29/2019 23:15	0	0.52	5,156	0.51	0.31	3	Atlas		2,681	1
CSO208 Total											15,347	2
CSO210	8/7/2019 7:15	8/7/2019 7:45	30	0.04	33,250	0.05	0.03	1	Atlas		1,330	1
CSO210 Total											1,330	1
CSO211	7/18/2019 1:30	7/18/2019 6:45	315	0.34	23,680,335	0.47	0.28	1	Atlas		8,051,314	1
	7/30/2019 0:15	7/30/2019 1:45	90	0.92	4,496,843	0.92	0.57	1	Atlas		4,137,096	1
	8/7/2019 6:15	8/7/2019 7:00	45	0.04	10,687,200	0.05	0.03	1	Atlas		427,488	1
CSO211 Total											12,615,898	3

DRAFT

CSO Data Monitoring Procedures are being Revised

Appendix B - CSO Flow Monitoring Data

July 01, 2019 - September 30, 2019

CSO	Start Date	End Date	Duration (Min)	Rain Total (Inch)	Discharge per Rain	Antecedent Rain	Frequency (yr)	Period (hr)	Standard	Comment	Discharge Volume (Gal)	Count of KEY
Grand Total											113,675,875	266

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Appendix C

Acronyms

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Appendix C Acronyms

AAOV	Average Annual Overflow Volume
ACD	Amended Consent Decree
BGI	Beargrass Interceptor
BGIR	Beargrass Interceptor Relief
BOD	Biological Oxygen Demand
CCP	Composite Correction Plan
CCWQTC	Cedar Creek Water Quality Treatment Center
CMF	Central Maintenance Facility
CMOM	Capacity Management Operations and Maintenance
CPE	Comprehensive Performance Evaluations
CSO	Combined Sewer Overflow
CSOFT	Software Name
CSS	Combined Sewer System
DAP	Discharge Abatement Plan
DRGWQTC	Derek R. Guthrie Water Quality Treatment Center
DWO	Dry Weather Overflow
EPA	Environmental Protection Agency
FEPS	Final Effluent Pump Station
FOG	Fat Oil and Grease
FY	Fiscal Year
GLPM	Gravity Line Preventive Maintenance
HCWQTC	Hite Creek Water Quality Treatment Center
HMI	Human Machine Interface
I/I	Inflow and Infiltration
I/O	Input/ Output
ICM	Integrated Catchment Model
ID	Identification
IFIX	Software name
IOAP	Integrated Overflow Abatement Plan
ISSDP	Interim Sanitary Sewer Discharge Plan
KDEP	Kentucky Department of Environmental Protection
KPDES	Kentucky Pollutant Discharge Elimination System
LG&E	Louisville Gas & Electric Company
LTCP	Long Term Control Plan
LWC	Louisville Water Company
MCC	Motor Control Center
MF/MFWQTC	Morris Forman Water Quality Treatment Center
MFI	Middle Fork Interceptor
MG	Million Gallons

Appendix C Acronyms

MGD	Million Gallons per Day
MSD	Metropolitan Sewer District (Louisville and Jefferson County)
NGPS	Nightingale Pump Station
NMC	Nine Minimum Controls
ORFM	Ohio River Force Main
ORI	Ohio River Interceptor
PLC	Programmable Logic Controller
PM	Preventive Maintenance
PS	Pump Station
RAS	Return Activated Sludge
RTC	Real Time Control
SCADA	Supervisory Control And Data Acquisition
SCAP	System Capacity Assurance Plan
SCS	Soil Conservation Service
SED2	South East Diversion 2
SOP	Standard Operating Procedure
SOR1	Southern Outfall Retention Facility 1
SORP	Sewer Overflow Response Protocol
SPS	Starkey Pump Station
SSDP	Sanitary Sewer Discharge Plan
SSES	Sewer System Evaluation Survey
SSO	Sanitary Sewer Overflow
SSOP	Sanitary Sewer Overflow Plan
SWOR1	Southwestern Outfall Retention – Phase 1
SWOR2	Southwestern Outfall Retention – Phase 2
SWPS	Southwestern Pump Station
WSWG	Southwest Sluice Gate
TRFD	Total Rainfall Depth
TSS	Total Suspended Solids
TV	Television
UM	Unplanned Maintenance
UMFPS	Upper Middle Fork Pump Station
US	United States
VFD	Variable Frequency Drive
WIN	Waterway Improvements Now
WQTC	Water Quality Treatment Center
WUS	Waters of the United States
WWTF	Wastewater Treatment Facility

Appendix D SCAP Balance

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<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	MAINTENANCE W ORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	6,521	6,521
362688	MAINTENANCE W ORK FY09A - CEDAR	SCAPCREDIT		12/31/08	5	6,526
236380	FAIRMOUNT ROAD MH REHAB	SCAPCREDIT		6/5/09	10,734	17,260
362689	MAINTENANCE W ORK FY09B - CEDAR	SCAPCREDIT		6/30/09	201	17,461
SC1011254	MAINTENANCE W ORK FY 10A - CEDAR	SCAPCREDIT		12/31/09	347	17,808
SC1011255	MAINTENANCE W ORK FY 10B - CEDAR	SCAPCREDIT		6/30/10	194	18,002
SC1011259	MAINTENANCE W ORK FY 11A - CEDAR	SCAPCREDIT		12/31/10	1,720	19,722
SC1011262	MAINTENANCE W ORK FY 11B - CEDAR	SCAPCREDIT		6/30/11	934	20,656
SC1011264	MAINTENANCE W ORK FY 12A - CEDAR	SCAPCREDIT		12/31/11	269	20,925
SC1011267	MAINTENANCE W ORK FY 12B - CEDAR	SCAPCREDIT		6/30/12	814	21,739
SC1005519	CONTRACTED W ORK FY 12 - CEDAR	SCAPCREDIT		9/10/12	21,321	43,060
320989	LITTLE CEDAR CREEK III REHABIL	SCAPCREDIT		9/27/12	652,907	695,967
263934	ST JAMES CROSSINGS	LAT EXT	9,000	11/30/12	-19,575	676,392
196927	SONIC SPRINGS	LAT EXT	3,600	12/5/12	-7,830	668,562
SC1074160	MAINTENANCE W ORK FY 13 JAN-JUN -	SCAPCREDIT		6/30/13	4,443	673,005
SC1005524	CONTRACTED W ORK FY 13 - CEDAR	SCAPCREDIT		8/19/13	425	673,430
14SC1000	MAINTENANCE W ORK FY 13A - CEDAR	SCAPCREDIT		12/31/13	2,220	675,650
SC1082184	MAINTENANCE W ORK FY 14 JUL-DEC -	SCAPCREDIT		12/31/13	1,482	677,132
13LE1155	RAISING CANE'S CEDARLOOK DRIVE	LAT EXT	1,175	5/23/14	-2,556	674,576
SC1082223	MAINTENANCE W ORK FY 14 JAN-JUN-	SCAPCREDIT		6/30/14	4,729	679,305
SC1082493	MAINTENANCE W ORK FY 15	SCAPCREDIT		12/30/14	4,583	683,888
239030	POPLAR LAKES PH 1	LAT EXT	18,000	1/26/15	-39,150	644,738
13LE1003	Bardstow n W oods Sec 6	LAT EXT	5,200	5/26/15	-11,310	633,428
SC1082496	MAINTENANCE W ORK FY 15	SCAPCREDIT		6/30/15	21	633,449
LE916330	Altawood Development	LAT EXT	1,600	9/14/15	-3,480	629,969



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SC1003694	CONTRACTED WORK FY 16 - CEDAR	SCAPCREDIT		9/25/15	328	630,297
SC1006188	CONTRACTED WORK FY 15 - CEDAR	SCAPCREDIT		9/25/15	1	630,298
SC1082497	MAINTENANCE WORK FY 16	SCAPCREDIT		12/30/15	16	630,314
LE915727	BARDSTOWN WOODS SEC 7	LAT EXT	4,400	5/25/16	-9,570	620,744
SC1082498	MAINTENANCE WORK FY 16	SCAPCREDIT		6/30/16	169	620,913
SC1006171	CONTRACTED WORK FY 14 - CEDAR	SCAPCREDIT		10/26/16	45,900	666,813
SC1082499	MAINTENANCE WORK FY 17	SCAPCREDIT		12/30/16	2,396	669,209
SC1082500	MAINTENANCE WORK FY 17	SCAPCREDIT		6/30/17	3,464	672,673
SC1097042	Cedar Creek I&I Rehab FY 17	SCAPCREDIT		7/13/17	309	672,982
LE983107	Poplar Lakes Phase 3	LAT EXT	12,000	8/14/17	-26,100	646,882
LE971176	Cedar Ridge	LAT EXT	18,800	10/24/17	-40,890	605,992
SC1082501	MAINTENANCE WORK FY 18	SCAPCREDIT		12/30/17	3,067	609,059
LE1027406	Chenoweth Run, LLC	LAT EXT	1,600	3/13/18	-3,480	605,579
LE1005655	Carrier Court	LAT EXT	400	4/2/18	-870	604,709
LE1048252	Landherr Estates Phase II	LAT EXT	17,600	7/23/19	-38,280	566,429
LE1039387	Tuscany Ridge Section 3	LAT EXT	8,000	8/16/19	-17,400	549,029
LE1015579	Glenmary Commons	LAT EXT	8,800	9/12/19	-19,140	529,889
LE1049657	Little Spring Farm, Section 4B	LAT EXT	14,000	9/12/19	-30,450	499,439
FFORK						
235557	MAINTENANCE WORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	14,540	14,540
362638	MAINTENANCE WORK FY09A - FLOYDS	SCAPCREDIT		12/31/08	1	14,541
362647	MAINTENANCE WORK FY09B - FLOYDS	SCAPCREDIT		6/30/09	4	14,545
362651	MAINTENANCE WORK FY 10A - FLOYDS	SCAPCREDIT		12/31/09	524	15,069
230379	SHAKES RUN SECTION 4	LAT EXT	3,770	1/5/10	-8,200	6,869
362655	MAINTENANCE WORK FY 10B - FLOYDS	SCAPCREDIT		6/30/10	82	6,951
362661	MAINTENANCE WORK FY 11A - FLOYDS	SCAPCREDIT		12/31/10	14,163	21,114



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362669	MAINTENANCE W ORK FY 11B - FLOYDS	SCAPCREDIT		6/30/11	22,707	43,821
242480	CLAIBOURNE CROSSINGS PHASE 2	LAT EXT	0	10/17/11	0	43,821
359320	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	4,000	47,821
362674	MAINTENANCE W ORK FY 12A - FLOYDS	SCAPCREDIT		12/31/11	317	48,138
362678	MAINTENANCE W ORK FY 12B - FLOYDS	SCAPCREDIT		6/30/12	338	48,476
332823	SINGLE FAMILY HOME	LAT EXT	400	7/13/12	-870	47,606
315945	BROOKFIELD SEC 3	LAT EXT	12,800	10/26/12	-27,840	19,766
361689	LAKE FOREST REHAB PH1	SCAPCREDIT		12/18/12	174,769	194,535
362683	MAINTENANCE W ORK FY 13A - FLOYDS	SCAPCREDIT		12/31/12	10	194,545
331397	BROOKFIELD SEC 2A	LAT EXT	14,400	5/8/13	-31,320	163,225
13SC1000	FY 14 STARVIEW REHABILITATION	SCAPCREDIT		6/30/13	14,183	177,408
SC1082514	MAINTENANCE W ORK FY 13	SCAPCREDIT		6/30/13	161	177,569
SC1082517	MAINTENANCE W ORK FY 14	SCAPCREDIT		12/30/13	991	178,560
SC1082518	MAINTENANCE W ORK FY 14	SCAPCREDIT		6/30/14	662	179,222
SC1082519	MAINTENANCE W ORK FY 15	SCAPCREDIT		12/30/14	1,318	180,540
13LE1062	SPEEDWAY #9451	LAT EXT	540	2/18/15	-1,175	179,366
SC1003809	BERRYTOWN WQTC I/II REMEDIATION	SCAPCREDIT		6/30/15	116,834	296,200
SC1082520	MAINTENANCE W ORK FY 15	SCAPCREDIT		6/30/15	661	296,861
SC1003723	MIDDLETOWN SSR P2S2 I/II REMEDIATION	SCAPCREDIT		11/6/15	102	296,963
SC1082521	MAINTENANCE W ORK FY 16	SCAPCREDIT		12/30/15	659	297,622
LE941673	Locust Creek Section 8B	LAT EXT	2,000	1/7/16	-4,350	293,272
SC1082523	MAINTENANCE W ORK FY 16	SCAPCREDIT		6/30/16	3,578	296,850
SC1003331	CONTRACTED W ORK FY 16 - FLOYDS	SCAPCREDIT		7/7/16	35	296,885
LE932677	Shakes Run Sec 9	LAT EXT	12,000	9/20/16	-26,100	270,785
SC1082524	MAINTENANCE W ORK FY 17	SCAPCREDIT		12/30/16	1,804	272,589
LE945783	Urton Woods, Section 2B	LAT EXT	17,200	1/4/17	-37,410	235,179
LE971261	Notting Hills Section 4 and Clubhouse	LAT EXT	10,400	2/27/17	-22,620	212,559



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SC1082525	MAINTENANCE WORK FY 17	SCAPCREDIT		6/30/17	1,320	213,879
LE992628	Blankenbaker Centre II	LAT EXT	2,340	10/9/17	-5,090	208,789
SC1082526	MAINTENANCE WORK FY 18	SCAPCREDIT		12/30/17	6,158	214,947
LE1026269	Valencia Villas at Landis Lakes	LAT EXT	2,000	12/27/18	-4,350	210,597
LE1039193	Glen Lakes Section 4 - Phase 3	LAT EXT	16,400	1/7/19	-35,670	174,927
LE1030172	Victory Knoll Apartments - Phase 2	LAT EXT	36,100	6/25/19	-78,518	96,410
HCREEK						
SC1006307	CONTRACTED WORK FY06 - HITE CREEK	SCAPCREDIT		5/15/06	656	656
235561	MAINTENANCE WORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	6,404	7,060
362641	MAINTENANCE WORK FY09A - HITE	SCAPCREDIT		12/31/08	2	7,062
SC1006214	CONTRACTED WORK FY09 - HITE CREEK	SCAPCREDIT		6/1/09	328	7,390
362648	MAINTENANCE WORK FY09B - HITE	SCAPCREDIT		6/30/09	7	7,397
362652	MAINTENANCE WORK FY 10A - HITE	SCAPCREDIT		12/31/09	10	7,407
362657	MAINTENANCE WORK FY 10B - HITE	SCAPCREDIT		6/30/10	332	7,739
320906	FLOYDSBURG ROAD I/ REHABILITA	SCAPCREDIT		12/17/10	28,437	36,176
362662	MAINTENANCE WORK FY 11A - HITE	SCAPCREDIT		12/31/10	9	36,185
362670	MAINTENANCE WORK FY 11B - HITE	SCAPCREDIT		6/30/11	9	36,194
SC1011058	Meadow Stream Pump Station & Force Main	SCAPCREDIT		9/7/11	2,304,000	2,340,194
246638	CHAPMAN COURT S/S	LAT EXT	800	9/28/11	-1,740	2,338,454
362675	MAINTENANCE WORK FY 12A - HITE	SCAPCREDIT		12/31/11	340	2,338,794
362679	MAINTENANCE WORK FY 12B - HITE	SCAPCREDIT		6/30/12	5,007	2,343,801
290181	CAMDEN WOOD APARTMENTS	LAT EXT	12,400	8/31/12	-26,970	2,316,831
304536	MAGNOLIA SPRINGS EAST PRIV P/S	LAT EXT	9,500	12/1/12	-20,663	2,296,169
335610	ROCK SPRINGS FARM SEC 4B	LAT EXT	6,400	12/7/12	-13,920	2,282,249
362684	MAINTENANCE WORK FY 13A - HITE	SCAPCREDIT		12/31/12	7	2,282,256
SC1005530	CONTRACTED WORK FY 13 - HITE CREEK	SCAPCREDIT		4/11/13	1,442	2,283,698



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SC1082527	MAINTENANCE W ORK FY 13 JAN-JUN-HITE	SCAPCREDIT		6/30/13	967	2,284,665
SC1082528	MAINTENANCE W ORK FY 14	SCAPCREDIT		12/30/13	3,211	2,287,876
SC1082529	MAINTENANCE W ORK FY 14	SCAPCREDIT		6/30/14	2,207	2,290,083
SC1082530	MAINTENANCE W ORK FY 15	SCAPCREDIT		12/30/14	360	2,290,443
SC1006178	CONTRACTED W ORK FY 14 - HITE CREEK	SCAPCREDIT		1/27/15	77,660	2,368,103
SC983697	MEADOWSTREAM REHABILITATION -	SCAPCREDIT		3/13/15	448,447	2,816,550
SC1082531	MAINTENANCE W ORK FY 15 JAN-JUN-HITE	SCAPCREDIT		6/30/15	124	2,816,674
SC1082532	MAINTENANCE W ORK FY 16	SCAPCREDIT		12/30/15	1,191	2,817,865
SC1082533	MAINTENANCE W ORK FY 16 JAN-JUN-HITE	SCAPCREDIT		6/30/16	336	2,818,201
LE943178	Rock Springs Farm Section 5A	LAT EXT	6,800	9/13/16	-14,790	2,803,411
SC1006192	CONTRACTED W ORK FY 15 - HITE CREEK	SCAPCREDIT		10/26/16	1	2,803,412
SC1082534	MAINTENANCE W ORK FY 17	SCAPCREDIT		12/30/16	3,599	2,807,011
LE971406	Old Henry Business Park	LAT EXT	930	3/17/17	-2,023	2,804,988
SC1082535	MAINTENANCE W ORK FY 17 JAN-JUN-HITE	SCAPCREDIT		6/30/17	4,109	2,809,097
SC1082536	MAINTENANCE W ORK FY 18	SCAPCREDIT		12/30/17	6,823	2,815,920
LE1031180	Norton Commons North Village Phase 6	LAT EXT	26,800	1/7/19	-58,290	2,757,630
LE1042390	Norton Commons North Village Phase 7	LAT EXT	12,000	1/7/19	-26,100	2,731,530
LE1056431	Norton Commons North Village The Grove	LAT EXT	400	3/15/19	-870	2,730,660
14LE1103	Accomack Mini Warehouses	LAT EXT	400	5/8/19	-870	2,729,790
LE1068686	Ghasem/Factory Lane Project	LAT EXT	685	5/29/19	-1,490	2,728,300
JTOWN						
235563	MAINTENANCE W ORK FY06 AUG-FY09	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



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14SC1002	MAINTENANCE W ORK FY13A -	SCAPCREDIT		12/31/12	3,490	1,009,704
337261	SINGLE FAMILY 2909 PELHAM CT	LAT EXT	400	5/28/13	-870	1,008,834
13LE1010	SWOPE HR & TRAINING BLDG	LAT EXT	400	6/28/13	-870	1,007,964
13LE1092	BALE EQUIPMENT	LAT EXT	450	10/25/13	-979	1,006,985
13LE1098	UNIPAK	LAT EXT	720	2/27/14	-1,566	1,005,419
LE924043	Bluegrass Indoor Carting	LAT EXT	400	5/1/14	-870	1,004,549
13LE1067	PARK COMMUNITY	LAT EXT	2,220	12/31/14	-4,829	999,720
14LE1149	Grand Lakes Section 3	LAT EXT	5,600	2/1/16	-12,180	987,540
LE924049	Blankenbaker Road S/S	LAT EXT	9,010	3/10/16	-19,597	967,944
326360	WATTERSON TRAIL CENTER	LAT EXT	2,745	5/4/16	-5,970	961,973
LE930127	Vantage Point Sec 3B	LAT EXT	7,200	6/21/16	-15,660	946,313
14LE1148	Grand Lakes Section 2	LAT EXT	4,400	11/8/16	-9,570	936,743
LE926081	Monticello Manors Sec 2	LAT EXT	7,600	3/23/17	-16,530	920,213
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	MAINTENANCE W ORK FY06 AUG -FY09	SCAPCREDIT		11/1/08	51,530	87,530
359382	CALENDAR 2008 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/08	16,000	103,530
362642	MAINTENANCE W ORK FY09A - MILL	SCAPCREDIT		12/31/08	93	103,623
362649	MAINTENANCE W ORK FY09B - MILL	SCAPCREDIT		6/30/09	1,507	105,130
236614	DEVEROES	LAT EXT	960	9/9/09	-2,088	103,042
362653	MAINTENANCE W ORK FY10A - MILL	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
238421	6840 DIXIE HWY OUTLOT	LAT EXT	2,100	4/28/10	-4,568	154,703
362658	MAINTENANCE W ORK FY10B - MILL	SCAPCREDIT		6/30/10	6,216	160,919

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259408	FAMILY DOLLAR 5105 DIXIE	LAT EXT	1,200	7/2/10	-2,610	158,309
264294	SAINT PETER THE APOSTLE CATHOL	LAT EXT	2,000	7/23/10	-4,350	153,959
276215	FAMILY DOLLAR - KRISTIN WAY	LAT EXT	400	10/12/10	-870	153,089
362664	MAINTENANCE W ORK FY 11A - MILL	SCAPCREDIT		12/31/10	22,745	175,834
359384	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	4,000	179,834
359325	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	8,000	187,834
320916	SONNE AVE PS REHABILITATION -	SCAPCREDIT		6/30/11	120,800	308,634
362671	MAINTENANCE W ORK FY 11B - MILL	SCAPCREDIT		6/30/11	11,745	320,379
299399	FAMILY DOLLAR - GREENWOOD RD	LAT EXT	800	10/4/11	-1,740	318,639
309018	PRP PERFORMING ARTS ADDITION	LAT EXT	1,134	11/9/11	-2,466	316,172
359385	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	328,172
362676	MAINTENANCE W ORK FY 12A - MILL	SCAPCREDIT		12/31/11	4,800	332,972
359326	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	12,000	344,972
318096	CRACKER BARREL OLD COUNTRY	LAT EXT	6,000	1/19/12	-13,050	331,922
SC1005678	CONTRACTED W ORK FY 12 - MILL CREEK	SCAPCREDIT		3/16/12	22	331,944
262545	DIXIE MANOR SHOPPING CENTER	LAT EXT	965	5/21/12	-2,099	329,845
300374	FORT KNOX FEDERAL CREDIT UNION	LAT EXT	400	6/26/12	-870	328,975
362680	MAINTENANCE W ORK FY 12B - MILL	SCAPCREDIT		6/30/12	4,133	333,108
361693	FY 12 MILL CREEK REHAB	SCAPCREDIT		6/30/12	81,675	414,783
231800	PIONEER MOBILE HOME PARK	LAT EXT	11,200	7/24/12	-24,360	390,423
237457	WAVERLY HILLS	LAT EXT	400	9/18/12	-870	389,553
341883	NHK SPRING PRECISION	LAT EXT	17,800	10/19/12	-38,715	350,838
334997	BEECHLAND BAPTIST CHURCH	LAT EXT	2,715	12/5/12	-5,905	344,933
359327	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	148,000	492,933
362685	MAINTENANCE W ORK FY 13A - MILL	SCAPCREDIT		12/31/12	22,996	515,929
359386	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	519,929
343763	SOUTHEAST CHRISTIAN CHURCH SW	LAT EXT	6,000	1/18/13	-13,050	506,879



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224875	ASHBY GREEN APARTMENT HOMES	LAT EXT	36,400	3/20/13	-79,170	427,709
265944	RIVERPORT PHASE 4A - MICHELIN	LAT EXT	400	6/6/13	-870	426,839
SC1082559	MAINTENANCE WORK FY 13 JAN-JUN-MILL	SCAPCREDIT		6/30/13	32,425	459,264
314887	DAYTON FREIGHT	LAT EXT	1,200	9/10/13	-2,610	456,654
13LE1014	LOUISVILLE FREE PUBLIC LIBRARY	LAT EXT	8,200	9/26/13	-17,835	438,819
357140	FAMILY DOLLAR CANE RUN ROAD	LAT EXT	832	10/3/13	-1,810	437,009
SC1082560	MAINTENANCE WORK FY 14 JUL-DEC-MILL	SCAPCREDIT		12/30/13	11,451	448,460
13LE1171	SINGLE FAMILY HOME 3700 ROMANIA DR	LAT EXT	400	1/29/14	-870	447,590
SC1082562	MAINTENANCE WORK FY 14 JAN-JUN-MILL	SCAPCREDIT		6/30/14	7,753	455,343
SC1082563	MAINTENANCE WORK FY 15 JUL-DEC-MILL	SCAPCREDIT		12/30/14	4,491	459,834
SC1005536	ROSA TERRACE I/I REHABILITATION FY13	SCAPCREDIT		3/10/15	156,635	616,469
SC1082564	MAINTENANCE WORK FY 15 JAN-JUN-MILL	SCAPCREDIT		6/30/15	4,861	621,330
SC1003690	CONTRACTED WORK FY 15 - MILL CREEK	SCAPCREDIT		7/31/15	58	621,388
LE937142	ZAXBYS DIXIE HWY	LAT EXT	924	8/10/15	-2,010	619,379
SC1082565	MAINTENANCE WORK FY 16 JUL-DEC-MILL	SCAPCREDIT		12/30/15	6,692	626,071
SC1082566	MAINTENANCE WORK FY 16 JAN-JUN-MILL	SCAPCREDIT		6/30/16	3,523	629,594
LE944727	Britz Deer Hollow Lane	LAT EXT	800	7/28/16	-1,740	627,854
SC1082567	MAINTENANCE WORK FY 17 JUL-DEC-MILL	SCAPCREDIT		12/30/16	12,857	640,711
SC1082568	MAINTENANCE WORK FY 17 JAN-JUN-MILL	SCAPCREDIT		6/30/17	5,103	645,814
SC1082569	MAINTENANCE WORK FY 18 JUL-DEC-MILL	SCAPCREDIT		12/30/17	27,293	673,107
LE1049057	Advanced ENT	LAT EXT	705	5/15/18	-1,533	671,573
LE995375	1105 Dorsey lane	LAT EXT	10,300	4/10/19	-22,403	649,171
MF ORK						
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	MAINTENANCE WORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	43,779	147,779



APNO	APNAME	APTYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
359329	CALENDAR 2008 SUMP PUMP CREDIT	SCAPCREDIT		12/31/08	8,000	155,779
SC1011287	MAINTENANCE W ORK FY09A - MIDDLE	SCAPCREDIT		12/31/08	13	155,792
236517	ANCHOR ESTATES MH REHAB	SCAPCREDIT		1/16/09	15,552	171,344
217235	SINKING FORK ICA PHASE I REHAB	SCAPCREDIT		3/30/09	437,967	609,311
235376	MIDDLE FORK INT REHAB PH1	SCAPCREDIT		5/15/09	487,744	1,097,055
179246	SHADY GLEN OF LYNDON PERSONAL	LAT EXT	-500	5/26/09	1,088	1,098,143
SC1011288	MAINTENANCE W ORK FY09B - MIDDLE	SCAPCREDIT		6/30/09	4,208	1,102,351
250572	1316 WITAWANGA AVE	LAT EXT	400	11/4/09	-870	1,101,481
359331	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	24,000	1,125,481
359401	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	4,000	1,129,481
SC1011290	MAINTENANCE W ORK FY 10A - MIDDLE	SCAPCREDIT		12/31/09	50	1,129,531
197432	ALMOST HOME KENNELS - ALL PET	LAT EXT	3,700	3/16/10	-8,048	1,121,483
260064	OXMOOR GOLF FRONT 9	LAT EXT	400	4/15/10	-870	1,120,613
260065	OXMOOR GOLF BACK 9	LAT EXT	400	4/15/10	-870	1,119,743
229834	THE BROOK HOS- DUPONT ADDITION	LAT EXT	1,763	4/27/10	-3,835	1,115,908
SC1011292	MAINTENANCE W ORK FY 10B - MIDDLE	SCAPCREDIT		6/30/10	1,113	1,117,021
265723	Z-XPRESS CAR WASH	LAT EXT	5,449	7/2/10	-11,852	1,105,170
255793	HERR LANE APARTMENTS - 4 PLEX	LAT EXT	1,200	7/14/10	-2,610	1,102,560
255792	HERR LANE APARTMENTS - 8 PLEX	LAT EXT	2,400	7/14/10	-5,220	1,097,340
274303	FARM CREDIT SERVICES	LAT EXT	525	9/9/10	-1,142	1,096,198
278015	METROPOLITAN UROLOGY	LAT EXT	400	12/15/10	-870	1,095,328
359402	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	8,000	1,103,328
359333	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	1,115,328
SC1011293	MAINTENANCE W ORK FY 11A - MIDDLE	SCAPCREDIT		12/31/10	1,205	1,116,533
285637	SHELBYHURST OFFICE BUILDING 1	LAT EXT	6,600	1/20/11	-14,355	1,102,178
313465	DORSEY POINTE/CODOMINIUMS 8-13	LAT EXT	2,400	1/27/11	-5,220	1,096,958
291263	BROWNS LANE BUILDING	LAT EXT	400	4/14/11	-870	1,096,088

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293400	FOUR PLEX APARTMENTS	LAT EXT	1,200	6/14/11	-2,610	1,093,478
SC1011294	MAINTENANCE WORK FY 11B - MIDDLE	SCAPCREDIT		6/30/11	7,183	1,100,661
330019	FY 11 ANCHOR ESTATES REHAB	SCAPCREDIT		8/11/11	1,359	1,102,020
310046	EL NAPEL - MCMAHAN CENTER	LAT EXT	3,100	10/31/11	-6,743	1,095,278
314591	CHOCOLATE MARTINI BAR/REST	LAT EXT	3,275	11/29/11	-7,123	1,088,154
320983	HURSTBOURNE I/I INVESTIGATION	SCAPCREDIT		12/27/11	1,408,279	2,496,433
359335	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	2,512,433
SC1011295	MAINTENANCE WORK FY 12A - MIDDLE	SCAPCREDIT		12/31/11	919	2,513,352
321228	SINGLE FAMILY UNIT	LAT EXT	400	2/15/12	-870	2,512,482
SC1005671	CONTRACTED WORK FY 12 - MIDDLE	SCAPCREDIT		3/16/12	7,305	2,519,787
321647	SINGLE FAMILY	LAT EXT	400	3/27/12	-870	2,518,917
328074	SINGLE FAMILY-703 FOUNTAIN AVE	LAT EXT	400	6/22/12	-870	2,518,047
SC1011297	MAINTENANCE WORK FY 12B - MIDDLE	SCAPCREDIT		6/30/12	949	2,518,996
193195	CEDAR LAKE LODGE WASHBURN	LAT EXT	1,900	8/20/12	-4,133	2,514,864
320923	ST MATTHEWS I/I REHABILITATION	SCAPCREDIT		8/23/12	20,841	2,535,705
337796	CHAMPPS	LAT EXT	635	9/5/12	-1,381	2,534,324
347126	ADVANCE PRODUCTION SYSTEMS	LAT EXT	400	12/28/12	-870	2,533,454
359336	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	92,000	2,625,454
14SC1003	MAINTENANCE WORK FY 13A - MIDDLE	SCAPCREDIT		12/31/12	3,309	2,628,763
339367	BAPTIST RADIATION ONCOLOGY	LAT EXT	1,500	1/4/13	-3,263	2,625,500
340778	PANDA RESTAURANT	LAT EXT	1,725	1/16/13	-3,752	2,621,748
349044	BLAIRWOOD POOL ADDITION	LAT EXT	400	1/29/13	-870	2,620,878
328659	SINGLE FAMILY HOME - 6911 AMBR	LAT EXT	400	2/4/13	-870	2,620,008
352805	POOL HOUSE 9213 REIGATE COURT	LAT EXT	200	2/20/13	-435	2,619,573
14LE1001	MIRANDA LAGRANGE RD	LAT EXT	400	3/19/13	-870	2,618,703
350246	SINGLE FAMILY - 218 BLISS AVE	LAT EXT	400	3/20/13	-870	2,617,833
349974	SINGLE FAMILY 205 N WATTERSON	LAT EXT	400	3/26/13	-870	2,616,963

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342433	SHELBYHURST 700 OFFICE BLDG	LAT EXT	7,500	4/15/13	-16,313	2,600,651
350340	JARED THE GALLERY OF JEWELRY	LAT EXT	770	4/16/13	-1,675	2,598,976
SC1005532	CONTRACTED WORK FY 13 - MIDDLE	SCAPCREDIT		5/30/13	6,480	2,605,456
13LE1009	Single family 11716 Wetherby Ave	LAT EXT	400	6/7/13	-870	2,604,586
SC1082545	MAINTENANCE WORK FY 13	SCAPCREDIT		6/30/13	6,989	2,611,575
13LE1001	Single Family 835 Fountain Ave	LAT EXT	400	8/28/13	-870	2,610,705
355162	PROPOSED RESTAURANT	LAT EXT	7,540	9/10/13	-16,400	2,594,306
13LE1045	SINGLE FAMILY 8325 WHIPPS MILL RD	LAT EXT	400	9/30/13	-870	2,593,436
319292	WATERMARK ON HURSTBOURNE	LAT EXT	71,600	10/22/13	-155,730	2,437,706
331542	DENTAL/MEDICAL OFFICE BLDG	LAT EXT	400	10/28/13	-870	2,436,836
13LE1128	SINGLE FAMILY HOME 1327 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,435,966
13LE1144	SINGLE FAMILY 1329 ETAWAH AVE	LAT EXT	400	11/5/13	-870	2,435,096
13LE1165	SINGLE FAMILY 8504 LORE LANE	LAT EXT	400	11/25/13	-870	2,434,226
13LE1146	CITY OF ST MATTHEWS COMMUNITY CTR	LAT EXT	1,500	11/26/13	-3,263	2,430,963
13LE1099	NICKLIES - ST MATTHEWS	LAT EXT	1,920	12/11/13	-4,176	2,426,787
353963	DORSEY COMMONS TRACTS 1,2,3	LAT EXT	4,335	12/18/13	-9,429	2,417,359
SC1082546	MAINTENANCE WORK FY 14	SCAPCREDIT		12/30/13	91,183	2,508,542
352026	MCMAHAN PLAZA PHASE II BLDG B	LAT EXT	766	12/31/13	-1,666	2,506,875
13LE1117	THE VININGS	LAT EXT	850	4/10/14	-1,849	2,505,027
14LE1021	KODA KENTUCKY ORGAN DONOR	LAT EXT	400	6/18/14	-870	2,504,157
SC1082547	MAINTENANCE WORK FY 14	SCAPCREDIT		6/30/14	4,404	2,508,561
14LE1128	WALDORF SCHOOL OF LOUISVILLE	LAT EXT	400	6/30/14	-870	2,507,691
SC1082548	MAINTENANCE WORK FY 15	SCAPCREDIT		12/30/14	3,664	2,511,355
SC1006201	GOOSE CREEK PLANTATION III	SCAPCREDIT		2/10/15	163,919	2,675,274
SC1006179	CONTRACTED WORK FY 14 - MIDDLE	SCAPCREDIT		2/11/15	15,043	2,690,317
SC1082549	MAINTENANCE WORK FY 15	SCAPCREDIT		6/30/15	2,568	2,692,885
SC1082550	MAINTENANCE WORK FY 16	SCAPCREDIT		12/30/15	15,216	2,708,101

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LE939199	Westport Road Apartments	LAT EXT	62,800	6/8/16	-136,590	2,571,511
SC1082552	MAINTENANCE WORK FY 16	SCAPCREDIT		6/30/16	3,573	2,575,084
LE971405	Lyndon Lane Office Condos	LAT EXT	2,652	8/30/16	-5,768	2,569,316
SC1003387	CONTRACTED WORK FY 16 - MIDDLE	SCAPCREDIT		10/18/16	91,264	2,660,580
SC1006194	CONTRACTED WORK FY 15 - MIDDLE	SCAPCREDIT		10/24/16	3	2,660,583
LE938563	The Paddock at Sawyer Park	LAT EXT	99,800	12/20/16	-217,065	2,443,518
SC1082554	MAINTENANCE WORK FY 17	SCAPCREDIT		12/30/16	2,385	2,445,903
SC1082555	MAINTENANCE WORK FY 17	SCAPCREDIT		6/30/17	3,799	2,449,702
SC1082557	MAINTENANCE WORK FY 18	SCAPCREDIT		12/30/17	5,851	2,455,553
LE1042560	202 Oxmoor Lane Residential	LAT EXT	76,700	4/11/18	-166,823	2,288,730
LE1032029	The Enclave at Douglas Hills Section 1	LAT EXT	27,200	4/23/18	-59,160	2,229,570
LE1055615	Bennett & Bloom Medical Office	LAT EXT	585	6/6/18	-1,272	2,228,298
LE1041043	Single Family Unit (Lot 11)	LAT EXT	400	7/24/18	-870	2,227,428
166053	616 & 618 FOUNTAIN AVE S/S	LAT EXT	1,600	9/7/18	-3,480	2,223,948
LE1082291	Taco Bell	LAT EXT	1,100	5/29/19	-2,393	2,221,555
LE1102470	Hurstbourne Town Center - Hyatt House	LAT EXT	15,275	7/1/19	-33,223	2,188,332
LE1051776	Bluegrass Manor - Tract 2	LAT EXT	450	7/23/19	-979	2,187,353
LE1020250	LFPL - Northeast Regional Library	LAT EXT	800	7/26/19	-1,740	2,185,613
LE1024084	Morat Avenue Apartments	LAT EXT	63,200	7/26/19	-137,460	2,048,153
LE1039542	Meadowview - Breckenridge Lane	LAT EXT	15,520	8/28/19	-33,756	2,014,397
NDITCH						
359404	CALENDAR 2007 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/07	28,000	28,000
235569	MAINTENANCE WORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	11,147	39,147
236363	NORTHERN DITCH INT REHAB PH1	SCAPCREDIT		11/25/08	108,760	147,907
SC1011338	MAINTENANCE WORK FY09A -	SCAPCREDIT		12/31/08	11	147,918
SC1011339	MAINTENANCE WORK FY09B -	SCAPCREDIT		6/30/09	1,884	149,802

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359339	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	153,802
SC1011340	MAINTENANCE WORK FY 10A -	SCAPCREDIT		12/31/09	1,177	154,979
234678	THE LIGHTHOUSE PROMISE COMPLEX	LAT EXT	2,825	3/5/10	-6,144	148,835
SC1011343	MAINTENANCE WORK FY 10B -	SCAPCREDIT		6/30/10	2,532	151,367
284728	SUBWAY - NEW CUT RD	LAT EXT	1,314	12/21/10	-2,858	148,509
359340	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	152,509
SC1011344	MAINTENANCE WORK FY 11A -	SCAPCREDIT		12/31/10	2,456	154,965
320908	PARKVIEW ESTATES REHABILITATIO	SCAPCREDIT		6/28/11	36	155,001
SC1011345	MAINTENANCE WORK FY 11B -	SCAPCREDIT		6/30/11	1,989	156,990
312810	WILLOW PLACE APT COMMUNITY CEN	LAT EXT	400	11/11/11	-870	156,120
359341	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	24,000	180,120
359405	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	12,000	192,120
SC1011346	MAINTENANCE WORK FY 12A -	SCAPCREDIT		12/31/11	911	193,031
315723	JCPS EARLY CHILDHOOD DEVELOP	LAT EXT	6,000	1/26/12	-13,050	179,981
312057	DOLLAR GENERAL - MEDALLION CT	LAT EXT	400	3/21/12	-870	179,111
SC1011336	MAINTENANCE WORK FY 12B -	SCAPCREDIT		6/30/12	7,893	187,004
312659	KROGER L-350 FUEL STATION	LAT EXT	400	8/20/12	-870	186,134
359343	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	210,134
14SC1004	MAINTENANCE WORK FY 13A -	SCAPCREDIT		12/31/12	4,239	214,373
SC1082570	MAINTENANCE WORK FY 13	SCAPCREDIT		6/30/13	6,459	220,832
13LE1147	CARLON ROOFING	LAT EXT	992	12/5/13	-2,158	218,674
13LE1126	JENNINGS CROSSING TRACT 3	LAT EXT	2,100	12/12/13	-4,568	214,107
SC1082571	MAINTENANCE WORK FY 14	SCAPCREDIT		12/30/13	2,707	216,814
SC1082572	MAINTENANCE WORK FY 14	SCAPCREDIT		6/30/14	9,044	225,858
SC1006180	CONTRACTED WORK FY 14 - NORTHERN	SCAPCREDIT		10/21/14	5	225,863
SC1082573	MAINTENANCE WORK FY 15	SCAPCREDIT		12/30/14	8,330	234,193
SC1082575	MAINTENANCE WORK FY 15	SCAPCREDIT		6/30/15	5,564	239,757



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LE947316	Heimbrock I	LAT EXT	400	8/14/15	-870	238,887
LE947318	Heimbrock II	LAT EXT	400	8/14/15	-870	238,017
SC1082576	MAINTENANCE W ORK FY 16	SCAPCREDIT		12/30/15	6,074	244,091
SC1082577	MAINTENANCE W ORK FY 16	SCAPCREDIT		6/30/16	5,519	249,610
SC1082578	MAINTENANCE W ORK FY 17	SCAPCREDIT		12/30/16	9,266	258,876
SC1082579	MAINTENANCE W ORK FY 17	SCAPCREDIT		6/30/17	6,441	265,317
SC1082580	MAINTENANCE W ORK FY 18	SCAPCREDIT		12/30/17	7,810	273,127
LE1056400	Thomas Car Wash	LAT EXT	4,670	10/10/18	-10,157	262,969
LE1032761	TRACKSIDE at Churchill Downs	LAT EXT	13,400	10/22/18	-29,145	233,824
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
235572	MAINTENANCE W ORK FY06 AUG-FY09	SCAPCREDIT		11/1/08	19,826	79,826
362643	MAINTENANCE W ORK FY09A - ORFM	SCAPCREDIT		12/31/08	2	79,828
362650	MAINTENANCE W ORK FY09B - ORFM	SCAPCREDIT		6/30/09	3,835	83,663
362654	MAINTENANCE W ORK FY10A - ORFM	SCAPCREDIT		12/31/09	7,330	90,993
263548	SINGLE FAMILY CONNECTION	LAT EXT	400	5/18/10	-870	90,123
213488	NORTHEAST CHRISTIAN CHURCH	LAT EXT	10,000	6/28/10	-21,750	68,373
362660	MAINTENANCE W ORK FY 10B - ORFM	SCAPCREDIT		6/30/10	6,773	75,146
362665	MAINTENANCE W ORK FY 11A - ORFM	SCAPCREDIT		12/31/10	181	75,327
362672	MAINTENANCE W ORK FY 11B - ORFM	SCAPCREDIT		6/30/11	4,139	79,466
280837	SPRINGHURST TOWNE CTR LOT C	LAT EXT	400	9/20/11	-870	78,596
320920	SHADOW WOOD W/ REHABILITATION	SCAPCREDIT		9/30/11	14,279	92,875
311412	SPRINGHURST CHEVROLET	LAT EXT	855	10/14/11	-1,860	91,015
359345	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	16,000	107,015
359434	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	16,000	123,015

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362677	MAINTENANCE WORK FY 12A - ORFM	SCAPCREDIT		12/31/11	7,268	130,283
320921	DERINGTON COURT I/I REHABILITA	SCAPCREDIT		3/1/12	56,208	186,491
187028	GLENVIEW PARK SUBD SECTION 1	LAT EXT	4,400	3/5/12	-9,570	176,921
213450	GLENVIEW PARK SUB, SEC 2	LAT EXT	5,600	3/5/12	-12,180	164,741
322455	FIRST LADY NAILS	LAT EXT	400	3/12/12	-870	163,871
362681	MAINTENANCE WORK FY 12B - ORFM	SCAPCREDIT		6/30/12	19,941	183,812
SC1011315	MAINTENANCE W ORK FY 12B - ORFM	SCAPCREDIT		6/30/12	19,941	203,753
292239	SPRINGHURST RESTAURANT/ RETAIL	LAT EXT	3,440	7/5/12	-7,482	196,271
323821	TIRE DISCOUNTERS WESTPORT RD	LAT EXT	400	12/11/12	-870	195,401
363238	FY 13 PROSPECT MANHOLE REHAB	SCAPCREDIT		12/18/12	72,703	268,104
341319	RAISING CANES RETAIL CENTER	LAT EXT	1,225	12/18/12	-2,664	265,440
359346	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	24,000	289,440
363235	FY 13 MUDDY FORK MH REHAB	SCAPCREDIT		12/31/12	41,653	331,093
362686	MAINTENANCE W ORK FY 13A - ORFM	SCAPCREDIT		12/31/12	1,161	332,254
360262	SINGLE FAMILY 3419 HILLVALE RD	LAT EXT	400	5/13/13	-870	331,384
343729	RETAIL & RESTAURANT	LAT EXT	3,500	6/21/13	-7,613	323,772
SC1082581	MAINTENANCE W ORK FY 13	SCAPCREDIT		6/30/13	279	324,051
334154	GLENVIEW PARK SUBD SEC 4	LAT EXT	3,600	11/7/13	-7,830	316,221
SC1082582	MAINTENANCE W ORK FY 14	SCAPCREDIT		12/30/13	1,302	317,523
13LE1024	Overlook at Beech Spring Farm Sec 4	LAT EXT	5,600	12/31/13	-12,180	305,343
199896	SPRINGDALE OFFICE BUILDING	LAT EXT	4,210	3/11/14	-9,157	296,186
225863	SPRING FARM LAKES SEC 1	LAT EXT	4,800	5/16/14	-10,440	285,746
SC1082583	MAINTENANCE W ORK FY 14	SCAPCREDIT		6/30/14	1,293	287,039
177756	SUMMIT GARDENS PHASE 1	LAT EXT	32,000	9/22/14	-69,600	217,439
14LE1121	Riverside Sewer Extension	LAT EXT	1,200	11/10/14	-2,610	214,829
SC1082584	MAINTENANCE W ORK FY 15	SCAPCREDIT		12/30/14	4,394	219,223
SC1006181	CONTRACTED W ORK FY 14 - ORFM	SCAPCREDIT		12/31/14	1,654	220,877



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13LE1071	SPRING FARM LAKE SEC 2	LAT EXT	6,000	1/16/15	-13,050	207,827
352634	BAUER PROPERTY	LAT EXT	2,920	2/12/15	-6,351	201,476
SC1082585	MAINTENANCE W ORK FY 15	SCAPCREDIT		6/30/15	2,547	204,023
SC983704	PROSPECT I&I REHABILITATION - FY 13	SCAPCREDIT		7/12/15	1,034,758	1,238,781
SC1003730	RIVER ROAD I/I REMEDIATION	SCAPCREDIT		8/5/15	120,418	1,359,199
LE929244	Summit Gardens Phase 2	LAT EXT	18,000	10/21/15	-39,150	1,320,049
SC1006195	CONTRACTED WORK FY 15 - ORFM	SCAPCREDIT		11/19/15	1	1,320,050
LE938166	Spring Farm Lake Section 3	LAT EXT	3,200	12/14/15	-6,960	1,313,090
SC1082586	MAINTENANCE W ORK FY 16	SCAPCREDIT		12/30/15	1,478	1,314,568
SC1082589	MAINTENANCE W ORK FY 17	SCAPCREDIT		6/30/16	3,171	1,317,739
SC1082587	MAINTENANCE W ORK FY 16	SCAPCREDIT		6/30/16	460	1,318,199
SC1003696	CONTRACTED WORK FY 16 - ORFM	SCAPCREDIT		8/10/16	17,566	1,335,765
SC1003728	PROSPECT I&I REHABILITATION - FY 16	SCAPCREDIT		10/6/16	199,036	1,534,801
LE923204	Indian Springs Hotel	LAT EXT	13,000	11/16/16	-28,275	1,506,526
SC1082590	MAINTENANCE W ORK FY 17	SCAPCREDIT		6/30/17	1,630	1,508,156
SC1082592	MAINTENANCE W ORK FY 18	SCAPCREDIT		12/30/17	3,330	1,511,486
PCREEK						
235574	MAINTENANCE W ORK FY06 AUG-FY09	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
SC1011298	MAINTENANCE W ORK FY09A - POND	SCAPCREDIT		12/31/08	1,913	81,695
SC1011299	MAINTENANCE W ORK FY09B - POND	SCAPCREDIT		6/30/09	6,403	88,098
359439	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	12,000	100,098
359348	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	4,000	104,098
SC1011305	MAINTENANCE W ORK FY 10A - POND	SCAPCREDIT		12/31/09	22,337	126,435
192513	BANNON CROSSINGS SECTION 3A-1	LAT EXT	800	2/17/10	-1,740	124,695

<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>
261115	EMERGENCY RESTORATION	LAT EXT	400	4/27/10	-870	123,825
SC1011307	MAINTENANCE W ORK FY 10B - POND	SCAPCREDIT		6/30/10	11,060	134,885
276977	DADISMAN BUILDERS-POPLAR TREE	LAT EXT	400	10/13/10	-870	134,015
266833	THORNTONS @ PRESTON HWY	LAT EXT	400	12/1/10	-870	133,145
280751	NOTTINGTON HILLS SEC 1	LAT EXT	4,400	12/29/10	-9,570	123,575
359350	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	12,000	135,575
SC1011308	MAINTENANCE W ORK FY 11A - POND	SCAPCREDIT		12/31/10	19,773	155,348
187739	GLENGARRY INDUSTRIAL PARK	LAT EXT	4,300	1/13/11	-9,353	145,996
277777	TIRE DISCOUNTERS - BOERSTE WAY	LAT EXT	2,960	3/21/11	-6,438	139,558
SC1011309	MAINTENANCE W ORK FY 11B - POND	SCAPCREDIT		6/30/11	10,562	150,120
304408	UPS SUPPLY CHAIN SOLUTIONS #7	LAT EXT	2,250	9/14/11	-4,894	145,226
320918	EDSEL III REHABILITATION - FY 1	SCAPCREDIT		9/27/11	106,700	251,926
313444	PLANET FITNESS - JEFF BLVD	LAT EXT	1,600	11/4/11	-3,480	248,446
312391	LONGHORN STEAKHOUSE RESTAURANT	LAT EXT	4,840	11/29/11	-10,527	237,919
320919	LANTANA III REHABILITATION - F	SCAPCREDIT		12/29/11	5,000	242,919
359351	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	20,000	262,919
SC1011310	MAINTENANCE W ORK FY 12A - POND	SCAPCREDIT		12/31/11	5,380	268,299
310845	ZAXBY'S RESTAURANT	LAT EXT	3,750	2/28/12	-8,156	260,143
255044	ISA-RECYCLING CENTER	LAT EXT	400	3/13/12	-870	259,273
312814	MILLER TRANSPORTATION	LAT EXT	1,800	3/19/12	-3,915	255,358
324554	NORTONS TEMPORARY OFFICE	LAT EXT	900	4/16/12	-1,958	253,400
234102	ETHOS AT VALLEY FARM SR LIVING	LAT EXT	7,050	6/19/12	-15,334	238,066
322367	SHEPHERDS CARE MEMORY HOME	LAT EXT	2,000	6/21/12	-4,350	233,716
SC1011313	MAINTENANCE W ORK FY 12B - POND	SCAPCREDIT		6/30/12	3,877	237,593
307332	LOUISVILLE INDUSTRIAL BLDG B	LAT EXT	2,520	8/6/12	-5,481	232,112
SC1005684	CONTRACTED W ORK FY 12 - POND	SCAPCREDIT		8/10/12	3,812	235,924
279860	BANNON CROSSINGS SEC 3B-2	LAT EXT	9,600	8/10/12	-20,880	215,044



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312053	DOLLAR GENERAL - CLEARWATER FA	LAT EXT	400	8/13/12	-870	214,174
343455	SINGLE FAMILY 1812 GREYLING DR	LAT EXT	400	10/12/12	-870	213,304
243109	OVERBROOK APARTMENTS	LAT EXT	41,200	11/9/12	-89,610	123,694
359354	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	56,000	179,694
14SC1005	MAINTENANCE WORK FY 13A - POND	SCAPCREDIT		12/31/12	25,984	205,678
329624	COPART	LAT EXT	400	2/20/13	-870	204,808
346082	ZAXBYS	LAT EXT	2,065	5/2/13	-4,491	200,317
320924	LEA ANN WAY INTERCEPTOR I&I RE	SCAPCREDIT		6/30/13	1,017,423	1,217,740
SC1082593	MAINTENANCE WORK FY 13	SCAPCREDIT		6/30/13	41,995	1,259,735
335385	HARRISON LOW PRESSURE S/S	LAT EXT	1,600	7/2/13	-3,480	1,256,255
SC1005534	PICADILLY I/I REHABILITATION FY13	SCAPCREDIT		7/12/13	187,564	1,443,819
320940	4 RESIDENCE SFU 7821 MANSCLICK	LAT EXT	400	8/16/13	-870	1,442,949
SC1005538	CONTRACTED WORK FY 13 - POND	SCAPCREDIT		8/27/13	18,958	1,461,907
361336	RENAISSANCE SOUTH BUSINESS	LAT EXT	540	9/6/13	-1,175	1,460,732
324886	PNC BANK	LAT EXT	400	9/6/13	-870	1,459,862
13LE1083	SINGLE FAMILY HOME 5402 (H) E	LAT EXT	400	9/26/13	-870	1,458,992
SC1005319	FEGENBUSH I/I REHABILITATION FY13	SCAPCREDIT		11/12/13	226,201	1,685,193
353125	PEGASUS TRANSPORTATION	LAT EXT	250	12/9/13	-544	1,684,650
341439	PRESTON GARDENS APTS	LAT EXT	22,200	12/10/13	-48,285	1,636,365
308206	APPLEGATE FARMS	LAT EXT	57,200	12/10/13	-124,410	1,511,955
SC1082594	MAINTENANCE WORK FY 14	SCAPCREDIT		12/30/13	19,491	1,531,446
13LE1179	TIMBERBEND SUBDIVISION SEC 5B	LAT EXT	6,400	2/14/14	-13,920	1,517,526
13LE1035	RENAISSANCE SOUTH BUSINESS PARK	LAT EXT	5,415	4/10/14	-11,778	1,505,748
13LE1115	VERIZON-OUTER LOOP	LAT EXT	400	4/22/14	-870	1,504,878
348014	ASHTON PARK TOWN HOMES	LAT EXT	9,000	4/24/14	-19,575	1,485,303
280180	LOUISVILLE INDUSTRIAL CTR F	LAT EXT	2,480	5/16/14	-5,394	1,479,909
14LE1085	Williams Properties - Self Storage Facility	LAT EXT	400	5/28/14	-870	1,479,039



APNO	APNAME	ATYPE	FLOW	Release Date	Approved Credit Required/ Flow Reduction	Running Total
13LE1034	6300 GEIL LANE WAREHOUSE	LAT EXT	720	6/9/14	-1,566	1,477,473
SC1082595	MAINTENANCE W ORK FY 14	SCAPCREDIT		6/30/14	14,457	1,491,930
284215	HURSTBOURNE POINTE APTS	LAT EXT	9,600	7/7/14	-20,880	1,471,050
344230	AUSTIN PARK APARTMENTS PH6	LAT EXT	27,600	8/25/14	-60,030	1,411,020
13LE1105	JEFFERSON COMMONS	LAT EXT	17,075	11/13/14	-37,138	1,373,882
SC1005323	FERN CREEK III REHABILITATION FY 13	SCAPCREDIT		11/18/14	551,108	1,924,990
SC1082596	MAINTENANCE W ORK FY 15	SCAPCREDIT		12/30/14	26,095	1,951,085
13LE1017	APEX ON PRESTON APT HOMES(Formerly	LAT EXT	84,400	1/13/15	-183,570	1,767,515
SC1005541	STONY BROOK III REHABILITATION FY 13	SCAPCREDIT		3/10/15	345,397	2,112,912
SC995942	CAVEN AVE III REMEDIATION - FY 13	SCAPCREDIT		3/11/15	225,645	2,338,557
354207	COOPER FARMS SEC 11B	LAT EXT	12,400	4/29/15	-26,970	2,311,587
354209	COOPER FARMS SEC 11A	LAT EXT	13,200	4/29/15	-28,710	2,282,877
SC1082597	MAINTENANCE W ORK FY 15	SCAPCREDIT		6/30/15	10,279	2,293,156
LE948692	Jim's Express Wash	LAT EXT	10,500	7/28/15	-22,838	2,270,318
LE951121	Allgeier Site	LAT EXT	400	8/7/15	-870	2,269,448
13LE1086	WOODS OF PENN RUN OFFSITE SS	LAT EXT	1,000	8/25/15	-2,175	2,267,273
13LE1140	JEFFERSON POST APARTMENTS	LAT EXT	28,800	10/2/15	-62,640	2,204,633
SC1082598	MAINTENANCE W ORK FY 16	SCAPCREDIT		12/30/15	13,994	2,218,627
14LE1116	CATALPA SPRINGS	LAT EXT	2,800	12/30/15	-6,090	2,212,537
SC939830	Lea Ann Way West Quad 1 & 2 Rehabilitation	SCAPCREDIT		12/31/15	445,911	2,658,448
358356	WOODS OF PENN RUN Section 1	LAT EXT	18,800	2/12/16	-40,890	2,617,558
SC1003699	CONTRACTED W ORK FY 16 - POND	SCAPCREDIT		5/17/16	36,063	2,653,621
LE936598	Jefferson Commerce Center Tract 1A	LAT EXT	5,250	6/6/16	-11,419	2,642,203
LE918484	AUSTIN PARK SS PHASE 8	LAT EXT	16,800	6/21/16	-36,540	2,605,663
14LE1170	Austin Park Phase 7 & 8	LAT EXT	26,400	6/21/16	-57,420	2,548,243
SC1082599	MAINTENANCE W ORK FY 16	SCAPCREDIT		6/30/16	12,650	2,560,893
SC1003087	HILLRIDGE III REMEDIATION	SCAPCREDIT		8/5/16	308,184	2,869,077

<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>
SC1003292	LEA ANN WAY WEST (LAWW) QUAD 3 I/I	SCAPCREDIT		8/31/16	311,526	3,180,603
SC1006197	CONTRACTED WORK FY 15 - POND	SCAPCREDIT		10/24/16	310	3,180,913
SC1006182	CONTRACTED WORK FY 14 - POND	SCAPCREDIT		10/26/16	8,390	3,189,303
SC1005639	SILVER HEIGHTS SEWER REHAB	SCAPCREDIT		10/31/16	284,936	3,474,239
SC1005631	LEA ANN WAY WEST (LAWW) QUAD 4 I/I	SCAPCREDIT		10/31/16	692,905	4,167,144
SC1082601	MAINTENANCE WORK FY 17	SCAPCREDIT		12/30/16	14,699	4,181,843
LE954229	Jefferson Commerce Center Bldg.2	LAT EXT	3,150	2/2/17	-6,851	4,174,991
SC1082602	MAINTENANCE WORK FY 17	SCAPCREDIT		6/30/17	14,076	4,189,067
SC1082603	MAINTENANCE WORK FY 18	SCAPCREDIT		12/30/17	10,803	4,199,870
LE1053266	Yokomori Manufacturing Facility	LAT EXT	1,750	4/9/18	-3,806	4,196,064
SC1096902	Admiral PS I/I Rehab FY 17 FY18	SCAPCREDIT		6/30/18	977,768	5,173,832
LE1047077	Orell Station 1C	LAT EXT	10,400	6/10/19	-22,620	5,151,212
LE1053368	Ferndale Place Subdivision	LAT EXT	9,600	7/10/19	-20,880	5,130,332
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
235575	MAINTENANCE WORK FY06 AUG-FY09	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
SC1011317	MAINTENANCE WORK FY09A - SE	SCAPCREDIT		12/31/08	1,555	666,523
SC1011318	MAINTENANCE WORK FY09B - SE	SCAPCREDIT		6/30/09	2,929	669,452
229854	TINY HANDS DAYCARE	LAT EXT	1,225	10/20/09	-2,664	666,788
359357	CALENDAR 2009 SUMP PUMP CREDIT	SCAPCREDIT		12/31/09	12,000	678,788
359443	CALENDAR 2009 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/09	8,000	686,788



<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>
SC1011322	MAINTENANCE W ORK FY10A - SE	SCAPCREDIT		12/31/09	16,974	703,762
235291	SULLIVAN COLLEGE OF TECHNOLOGY	LAT EXT	900	2/11/10	-1,958	701,804
238328	LOUISVILLE COLLEGIATE SPORTS	LAT EXT	400	3/1/10	-870	700,934
241759	FRISCHS BIG BOY RESTAURANT	LAT EXT	2,400	3/5/10	-5,220	695,714
257275	LOUISVILLE JUNIOR ACADEMY	LAT EXT	520	4/16/10	-1,131	694,583
SC1011326	MAINTENANCE W ORK FY10B - SE	SCAPCREDIT		6/30/10	10,739	705,322
320993	BEARGRASS CREEK PHASE II - FY1	SCAPCREDIT		12/14/10	10,368	715,690
359358	CALENDAR 2010 SUMP PUMP CREDIT	SCAPCREDIT		12/31/10	4,000	719,690
359444	CALENDAR 2010 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/10	24,000	743,690
SC1011328	MAINTENANCE W ORK FY11A - SE	SCAPCREDIT		12/31/10	11,090	754,780
286513	GARDINER POINT RESIDENCE HALL	LAT EXT	10,800	2/16/11	-23,490	731,290
276378	TIRE DISCOUNTERS - BARDSTOWN	LAT EXT	1,500	5/6/11	-3,263	728,028
287888	BEVERAGE WAREHOUSE	LAT EXT	1,180	5/30/11	-2,567	725,461
SC1011330	MAINTENANCE W ORK FY11B - SE	SCAPCREDIT		6/30/11	3,661	729,122
296295	KEN TOWERY -3800 S HURSTBOURNE	LAT EXT	400	7/1/11	-870	728,252
359445	CALENDAR 2011 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/11	8,000	736,252
359359	CALENDAR 2011 SUMP PUMP CREDIT	SCAPCREDIT		12/31/11	64,000	800,252
SC1011331	MAINTENANCE W ORK FY12A - SE	SCAPCREDIT		12/31/11	5,071	805,323
SC1011316	MAINTENANCE W ORK FY12B - SE	SCAPCREDIT		6/30/12	24,202	829,525
SC1011333	MAINTENANCE W ORK FY12B - SE	SCAPCREDIT		6/30/12	6,141	835,666
307018	HOOK PROPERTY FAMILY DOLLAR	LAT EXT	400	8/10/12	-870	834,796
359361	CALENDAR 2012 SUMP PUMP CREDIT	SCAPCREDIT		12/31/12	68,000	902,796
359446	CALENDAR 2012 DOWNSPOUT CREDIT	SCAPCREDIT		12/31/12	4,000	906,796
14SC1006	MAINTENANCE W ORK FY13A - SE	SCAPCREDIT		12/31/12	24,202	930,998
187741	BROOKSTONE SENIOR APARTMENTS	LAT EXT	16,800	3/11/13	-36,540	894,458
232601	RAINTREE/MARIAN CT P/S ELIM	LAT EXT	105,800	6/14/13	-230,115	664,343
SC1082605	MAINTENANCE W ORK FY13	SCAPCREDIT		6/30/13	21,761	686,104

<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>
SC1005539	CONTRACTED WORK FY 13 - SOUTHEAST	SCAPCREDIT		9/18/13	25,344	711,448
330437	COLLEGIATE ATHLETIC FIELD	LAT EXT	800	11/26/13	-1,740	709,708
SC1082606	MAINTENANCE WORK FY 14	SCAPCREDIT		12/30/13	19,491	729,199
SC1082607	MAINTENANCE WORK FY 14	SCAPCREDIT		6/30/14	9,087	738,286
SC1082608	MAINTENANCE WORK FY 15	SCAPCREDIT		12/30/14	15,321	753,607
SC1006185	CONTRACTED WORK FY 14 - SOUTHEAST	SCAPCREDIT		2/11/15	187,478	941,085
SC1082610	MAINTENANCE WORK FY 15	SCAPCREDIT		6/30/15	10,273	951,358
SC1006199	CONTRACTED WORK FY 15 - SOUTHEAST	SCAPCREDIT		10/20/15	1	951,359
LE919560	Todd's Place Express Car Wash	LAT EXT	4,830	12/22/15	-10,505	940,854
SC1082611	MAINTENANCE WORK FY 16	SCAPCREDIT		12/30/15	7,052	947,906
SC1003718	SOUTHEAST DIVERSION AREA G (SEDG)	SCAPCREDIT		2/16/16	75,998	1,023,904
SC1003704	CONTRACTED WORK FY 16 - SOUTHEAST	SCAPCREDIT		5/24/16	66	1,023,970
SC1082612	MAINTENANCE WORK FY 16	SCAPCREDIT		6/30/16	19,904	1,043,874
LE943171	Costco Wholesale and Fuel Facility	LAT EXT	8,000	7/28/16	-17,400	1,026,474
SC1082613	MAINTENANCE WORK FY 17	SCAPCREDIT		12/30/16	5,812	1,032,286
SC1082614	MAINTENANCE WORK FY 17	SCAPCREDIT		6/30/17	6,961	1,039,247
SC1082615	MAINTENANCE WORK FY 18	SCAPCREDIT		12/30/17	14,909	1,054,156
LE1039341	Silver Creek Place Apartments	LAT EXT	7,200	4/9/18	-15,660	1,038,496
LE1046691	Crown Packaging	LAT EXT	400	4/18/18	-870	1,037,626

Appendix E IOAP Project Crosswalk

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PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
17TH ST FPS DWO ELIMINATION	IOAP	MSD0306-FP	L_OR_MF_190_S_03_A_A
27TH STREET FPS DWO ELIM	IOAP	MSD0307-FP	L_OR_MF_019_S_03_A_A
34TH ST FPS DWO ELIMINATION	IOAP	MSD0308-FP	L_OR_MF_019_S_03_A_B
4TH STREET FPS DWO ELIMINATION	IOAP	MSD0303-FP	L_OR_MF_022_M_03_A_A
ADAMS STREET SEWER SEPARATION (FORMERLY STORAGE BASIN)	IOAP	CS0172	L_OR_MF_172_S_09B_B_A_0
ANCHOR ESTATES PS ELIMINATIONS 1 - VANNAH PUMP STATION ELIMINATION	IOAP	01106	S_MI_MF_NB06_M_01_A_A-2
ANCHOR ESTATES PS ELIMINATIONS 2 - ANCHOR ESTATES #1 AND #2 PUMP STATION ELIMINATION	IOAP	00056-W	S_MI_MF_NB06_M_01_A_A - 1
ANCHOR ESTATES PS ELIMINATIONS 2 - ANCHOR ESTATES #1 AND #2 PUMP STATION ELIMINATION	IOAP	00057-W	S_MI_MF_NB06_M_01_A_A - 1
ANCHOR ESTATES PS ELIMINATIONS 2 - ANCHOR ESTATES #1 AND #2 PUMP STATION ELIMINATION	IOAP	00746	S_MI_MF_NB06_M_01_A_A - 1
ANCHOR ESTATES PS ELIMINATIONS 2 - ANCHOR ESTATES #1 AND #2 PUMP STATION ELIMINATION	IOAP	00817	S_MI_MF_NB06_M_01_A_A - 1
ANCHOR ESTATES PS ELIMINATIONS 2 - ANCHOR ESTATES #1 AND #2 PUMP STATION ELIMINATION	IOAP	MSD0057-LS	S_MI_MF_NB06_M_01_A_A - 1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
ASHBURTON PS IMPROVEMENTS & DIVERSION	IOAP	MSD0165-PS	S_FF_FF_NB03_M_01_C_A
ASHBURTON PS IMPROVEMENTS & DIVERSION	IOAP	MSD0166-PS	S_FF_FF_NB03_M_01_C_A
AVANTI PS ELIMINATION	IOAP	21229	S_PO_WC_PC07_M_01_A
BARDESTOWN RD PS IMPROVEMENTS	IOAP	88545	S_CC_CC_MSD1025_S_03_B
BEARGRASS INTERCEPTOR REHABILITATION PH 2	IOAP	51594	S_SD_MF_NB06_S_13_C
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21061	BEECHWOOD VILLAGE SEWER REPL
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21089	BEECHWOOD VILLAGE SEWER REPL
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21089A	BEECHWOOD VILLAGE SEWER REPL
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21101	BEECHWOOD VILLAGE SEWER REPL
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21153	BEECHWOOD VILLAGE SEWER REPL
BEECHWOOD VILLAGE SEWER REPL	ISSDP	21156	BEECHWOOD VILLAGE SEWER REPL
BELLS LANE (FORMERLY PADDY'S RUN) WET WEATHER TREATMENT FACILITY	IOAP	CSO015	L_OR_MF_015_M_13_B_B_8

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
BELLS LANE (FORMERLY PADDY'S RUN) WET WEATHER TREATMENT FACILITY	IOAP	CSO191	L_OR_MF_015_M_13_B_B_8
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	08717	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	104223	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	104224	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	104231	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	13931	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	13943	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	13946	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	34093542	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	36763	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	44396	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	44397	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	51301	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	66349	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	99259	S_SF_MF_30917_M_09_A
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	KK14815019	S_SF_MF_30917_M_09_A

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
CAMP TAYLOR SYSTEM IMPROVEMENT PHASE 1 - SSES	IOAP	KK14855239	S_SF_MF_30917_M_09_A
CAVEN AVENUE PS ELIMINATION	IOAP	17724	S_PO_WC_PC09_M_09B_C
CAVEN AVENUE PS ELIMINATION	IOAP	27116	S_PO_WC_PC09_M_09B_C
CAVEN AVENUE PS ELIMINATION	IOAP	61667	S_PO_WC_PC09_M_09B_C
CAVEN AVENUE PS ELIMINATION	IOAP	61687	S_PO_WC_PC09_M_09B_C
CAVEN AVENUE PS ELIMINATION	IOAP	70212	S_PO_WC_PC09_M_09B_C
CAVEN AVENUE PS ELIMINATION	IOAP	MSD0133-PS	S_PO_WC_PC09_M_09B_C
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO028	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO029	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO034	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO036	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO178	L_OR_MF_155_M_09B_B_B_4-1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO181	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO193	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO195	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO196	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO197	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO199	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO200	L_OR_MF_155_M_09B_B_B_4-1
CENTRAL RELIEF DRAIN CSO IN-LINE STORAGE, GREEN INFRASTRUCTURE, AND DISTRIBUTED STORAGE	IOAP	CSO202	L_OR_MF_155_M_09B_B_B_4-1
CHARLESWOOD INTERCEPTOR EXTENSION	IOAP	25477	S_PO_WC_PC03_M_01_C
CHARLESWOOD INTERCEPTOR EXTENSION	IOAP	25479	S_PO_WC_PC03_M_01_C
CHARLESWOOD INTERCEPTOR EXTENSION	IOAP	25480	S_PO_WC_PC03_M_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
CHARLESWOOD INTERCEPTOR EXTENSION	IOAP	MSD0130-PS	S_PO_WC_PC03_M_01_C
CINDERELLA PS ELIMINATION	IOAP	102339	S_PO_WC_PC04_M_01_C
CINDERELLA PS ELIMINATION	IOAP	35309	S_PO_WC_PC04_M_01_C
CINDERELLA PS ELIMINATION	IOAP	60679	S_PO_WC_PC04_M_01_C
CINDERELLA PS ELIMINATION	IOAP	MSD1013-PS	S_PO_WC_PC04_M_01_C
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO083	L_MU_MF_154_M_09B_B_A_8
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO088	L_MU_MF_154_M_09B_B_A_8
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO131	L_MU_MF_154_M_09B_B_A_8
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO132	L_MU_MF_154_M_09B_B_A_8
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO154	L_MU_MF_154_M_09B_B_A_8
CLIFTON HEIGHTS STORAGE BASIN	IOAP	CSO167	L_MU_MF_154_M_09B_B_A_8
CSO058 IN-LINE STORAGE & GREEN INFRASTRUCTURE	IOAP	CSO058	L_OR_MF_058_S_08_A_A_0
CSO093 STRUCTURAL MODIFICATIONS & GREEN INFRASTRUCTURE	IOAP	CSO093	L_SO_MF_093_S_08_A_A_0
CSO108 DAM MODIFICATION	IOAP	CSO108	L_SO_MF_108_S_09A_B_A_4
CSO140 IN-LINE STORAGE & GREEN INFRASTRUCTURE	IOAP	CSO140	L_MI_MF_140_S_08_A_A_0

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
CSO160 SEWER SEPARATION	IOAP	CSO160	L_OR_MF_160_S_08_A_A_0
CSO190 GREEN INFRASTRUCTURE (FORMERLY 18TH & NORTHWESTERN PKWY STORAGE BASIN)	IOAP	CSO190	L_OR_MF_190_S_09B_B_A_8
CSO206 SEWER SEPARATION	IOAP	CSO206	L_MI_MF_206_S_08_A_A_0
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	104289	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28249	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28250	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28336	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28340	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28413	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28414	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28415	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28416	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28417	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28451	S_JT_JT_NB02_M_01_C
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28453	S_JT_JT_NB02_M_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS	IOAP	28711	S_JT_JT_NB02_M_01_C
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	22307	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	22370	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	22385	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	32682	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	32688	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	59169	DEREK R GUTHRIE WQTC UPGRADES
DEREK R GUTHRIE WQTC UPGRADES	ISSDP	MSD0277	DEREK R GUTHRIE WQTC UPGRADES
DERINGTON CT PS I&I INVESTIGATION & REHABILITATION	IOAP	20154-W	S_OR_MF_NB03_S_07_C
DERINGTON CT PS I&I INVESTIGATION & REHABILITATION	IOAP	20155	S_OR_MF_NB03_S_07_C
DERINGTON CT PS I&I INVESTIGATION & REHABILITATION	IOAP	MSD0095-PS	S_OR_MF_NB03_S_07_C
EAST ROCKFORD PS RELOCATION	IOAP	04699-W	S_MC_WC_NB02_S_03_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
EDEN CARE PS SSO INVESTIGATION	IOAP	MSD1105-PS	S_FF_FF_NB02_S_13_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
EDSEL PS I&I INVESTIGATION & REHABILITATION	IOAP	94009	S_PO_WC_PC11_M_07_C
EDSEL PS I&I INVESTIGATION & REHABILITATION	IOAP	MSD1048-PS	S_PO_WC_PC11_M_07_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	64096	S_JT_JT_NB01A_M_03_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	86052	S_JT_JT_NB01A_M_03_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	92061	S_JT_JT_NB01A_M_03_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	MSD0196-PS	S_JT_JT_NB01A_M_03_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	MSD0263	S_JT_JT_NB01A_M_03_C
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	MSD0263A-PS	S_JT_JT_NB01A_M_03_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
ELIMINATION OF CHENOWETH HILLS WQTC, CHENOWETH RUN PUMP STATION, AND CHIPPEWA PUMP STATION	IOAP	MSD1043-PS	S_JT_JT_NB01A_M_03_C
FAIRMOUNT RD PS IMPROVEMENTS	IOAP	116106	S_FF_CC_81316_M_03_C_A
FAIRMOUNT RD PS IMPROVEMENTS	IOAP	81316	S_FF_CC_81316_M_03_C_A
FAIRMOUNT RD PS IMPROVEMENTS	IOAP	97362	S_FF_CC_81316_M_03_C_A
FAIRMOUNT RD PS IMPROVEMENTS	IOAP	97363	S_FF_CC_81316_M_03_C_A
FAIRMOUNT RD PS IMPROVEMENTS	IOAP	97365	S_FF_CC_81316_M_03_C_A
FAIRWAY VIEW PS IMPROVEMENTS	IOAP	MSD1065-PS	S_HC_HS_NB01_S_03_C_A
FLOYDSBURG RD I&I INVEST	IOAP	108953	S_HC_HC_MSD1086_M_07_C_A
FLOYDSBURG RD I&I INVEST	IOAP	108956	S_HC_HC_MSD1086_M_07_C_A
FLOYDSBURG RD I&I INVEST	IOAP	108957	S_HC_HC_MSD1086_M_07_C_A
FLOYDSBURG RD I&I INVEST	IOAP	108958	S_HC_HC_MSD1086_M_07_C_A
FLOYDSBURG RD I&I INVEST	IOAP	90776	S_HC_HC_MSD1086_M_07_C_A
FLOYDSBURG RD I&I INVEST	IOAP	MSD1086-PS	S_HC_HC_MSD1086_M_07_C_A
FOX HARBOR IN-LINE STORAGE	IOAP	62769	S_HC_HN_NB03_S_09A_A_A

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	105936	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	117721	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	43472	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	46891	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	62418	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	62420	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	91629	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	91630	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	MSD0040-PS	S_MI_MF_NB04_M_03_B-1
GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE	IOAP	MSD1024-PS	S_MI_MF_NB04_M_03_B-1
GOVERNMENT CENTER PS ELIMINATION	IOAP	94541	S_PO_WC_PC06_M_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
GOVERNMENT CENTER PS ELIMINATION	IOAP	94542	S_PO_WC_PC06_M_01_C
GOVERNMENT CENTER PS ELIMINATION	IOAP	MSD0180-PS	S_PO_WC_PC06_M_01_C
GUNPOWDER PS IN-LINE STORAGE	IOAP	MSD1055-LS	S_HC_HN_NB02_S_09A_C_B
HAZELWOOD PS I&I INVESTIGATION & REHABILITATION	IOAP	55665	S_MC_MF_55665_S_07_C
HAZELWOOD PS I&I INVESTIGATION & REHABILITATION	IOAP	55667	S_MC_MF_55665_S_07_C
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	17571	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18134	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18297	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18298	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18299	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18302	HIKES LN INTER & HIGHGATE SPR

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18318-W	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18370	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18434	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18471	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18483	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18505	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	18595	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	47960A	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	48885	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	48886	HIKES LN INTER & HIGHGATE SPR

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	48888	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	49224	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	49236	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	49672	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	49673	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	73111	HIKES LN INTER & HIGHGATE SPR
HIKES LANE-HIGHGATE SPRINGS PS	ISSDP	MSD0012-PS	HIKES LN INTER & HIGHGATE SPR
HURSTBOURNE I/I INVESTIGATION & REHABILITATION	IOAP	01793	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	67535	S_MI_MF_NB07_S_07_C
IDLEWOOD IN-LINE STORAGE	IOAP	28984	S_CC_CC_70158_M_09A_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
IDLEWOOD IN-LINE STORAGE	IOAP	28985	S_CC_CC_70158_M_09A_C
IDLEWOOD IN-LINE STORAGE	IOAP	28998	S_CC_CC_70158_M_09A_C
IDLEWOOD IN-LINE STORAGE	IOAP	63094	S_CC_CC_70158_M_09A_C
IDLEWOOD IN-LINE STORAGE	IOAP	63095	S_CC_CC_70158_M_09A_C
IDLEWOOD IN-LINE STORAGE	IOAP	70158	S_CC_CC_70158_M_09A_C
JEFFERSONTOWN WQTC ELIMINATION	IOAP	28173	S_JT_JT_NB01_M_01_C_A
JEFFERSONTOWN WQTC ELIMINATION	IOAP	28390	S_JT_JT_NB01_M_01_C_A
JEFFERSONTOWN WQTC ELIMINATION	IOAP	28391	S_JT_JT_NB01_M_01_C_A
JEFFERSONTOWN WQTC ELIMINATION	IOAP	28392	S_JT_JT_NB01_M_01_C_A
JEFFERSONTOWN WQTC ELIMINATION	IOAP	28395	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	31733	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	IS028-SI	S_JT_JT_NB01_M_01_C_A
JEFFERSONTOWN WQTC ELIMINATION	IOAP	MSD0255	S_JT_JT_NB01_M_01_C_A

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
KAVANAUGH RD PS IMPROVEMENTS	IOAP	MSD1085-PS	S_HC_HC_MSD1085_S_03_A
KLONDIKE INTERCEPTOR	IOAP	20644	S_SD_MF_NB04_S_01_B_A
KLONDIKE INTERCEPTOR	IOAP	25676	S_SD_MF_NB04_S_01_B_A
KLONDIKE INTERCEPTOR	IOAP	26650	S_SD_MF_NB04_S_01_B_A
KLONDIKE INTERCEPTOR	IOAP	26651	S_SD_MF_NB04_S_01_B_A
KLONDIKE INTERCEPTOR	IOAP	49513	S_SD_MF_NB04_S_01_B_A
KLONDIKE INTERCEPTOR	IOAP	66232	S_SD_MF_NB04_S_01_B_A
LAKE FOREST PS SSO INVESTIGATION	IOAP	MSD1169-LS	S_FF_LF_NB01_S_13_C_A
LANTANA #1 PS I/I INVESTIGATION & REHABILITATION	IOAP	25484	S_PO_WC_PC05_M_07_C
LANTANA #1 PS I/I INVESTIGATION & REHABILITATION	IOAP	93719	S_PO_WC_PC05_M_07_C
LANTANA #1 PS I/I INVESTIGATION & REHABILITATION	IOAP	MSD0101-PS	S_PO_WC_PC05_M_07_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	19360	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	19369	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	29933	S_PO_WC_PC08_M_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	29943	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	29948	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	29949	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	31073	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	31074	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	31083	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	31084	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	57874	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	61266	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	79076	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	MSD1010-PS	S_PO_WC_PC08_M_01_C
LEA ANN WAY SYSTEM IMPROVEMENT	IOAP	MSD1200-PS	S_PO_WC_PC08_M_01_C
LELAND RD SSO INVESTIGATION	IOAP	96020	S_OR_MF_NB02_S_13_C
LEVEN PS ELIMINATION	IOAP	36419	S_PO_WC_PC10_M_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
LEVEN PS ELIMINATION	IOAP	MSD1019-PS	S_PO_WC_PC10_M_01_C
LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS	IOAP	67997	S_CC_CC_67997_M_01_C
LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS	IOAP	67999	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	86424	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	89197	S_CC_CC_67997_M_01_C
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO091	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO097	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO106	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO110	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO111	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO113	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO137	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO146	L_SO_MF_092_M_09B_B_D_8

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO148	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO149	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO151	L_SO_MF_092_M_09B_B_D_8
LOGAN & BRECKINRIDGE ST STORAGE BASIN	IOAP	CSO152	L_SO_MF_092_M_09B_B_D_8
LUCAS LN PS IN-LINE STORAGE	IOAP	MSD0199-LS	S_FF_BT_NB01_S_09A_C_A
MEADOW STREAM PS & FM UPGRADE	IOAP	91087	S_HC_HC_MSD1082_S_09A_C
MEADOW STREAM PS & FM UPGRADE	IOAP	MSD1082-PS	S_HC_HC_MSD1082_S_09A_C
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	24152-W	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	24472	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	26752	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	41374	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	41416	S_OR_MF_NB01_M_01_B-1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	MSD0006-PS	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	MSD0007-PS	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	MSD0010-PS	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	MSD0023-PS	S_OR_MF_NB01_M_01_B-1
MELLWOOD SYSTEM IMPROVEMENTS AND PS ELIMINATIONS 1 - MELLWOOD PS AND FM IMPROVEMENTS	IOAP	MSD0024-PS	S_OR_MF_NB01_M_01_B-1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	02932	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	02933	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	02935	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	08537	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	08935-SM	S_MISF_MF_NB01_M_01_C_A1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	115183	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	115184	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	115185	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	15194	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	15195	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	17618	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	23211	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	23212	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	24553	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	27005	S_MISF_MF_NB01_M_01_C_A1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	27007	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	30376	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	40471	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	40559	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	43726	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	45796	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	45829	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	45835	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	45900	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47034	S_MISF_MF_NB01_M_01_C_A1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47582	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47583	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47593	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47596	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47603	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	47604	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	48864	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	51160	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	51161	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	51180	S_MISF_MF_NB01_M_01_C_A1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	51221	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	72288	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	72289	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	74513	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	84155	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	90700	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	96672	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	96673	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN	IOAP	IS021A-SI	S_MISF_MF_NB01_M_01_C_A1
MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 2 - PS DIVERSION AND STORAGE	IOAP	27012	S_MISF_MF_NB01_M_01_C_A1-2
MONTICELLO PS ELIMINATION	IOAP	27969	S_JT_JT_NB04_M_01_A

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
MONTICELLO PS ELIMINATION	IOAP	MSD0151-PS	S_JT_JT_NB04_M_01_A
MORRIS FORMAN WQTC HEADWORKS (FORMERLY ALGONQUIN PKWY STORAGE BASIN)	IOAP	CSO211	L_OR_MF_211_M_13_B_A_8_
NIGHTINGALE PS REPLACEMENT & STORAGE	IOAP	CSO018	L_SO_MF_018_S_03_A_A
NORTHERN DITCH DIVERSION INTER	ISSDP	MSD0271	NORTHERN DITCH DIVERSION INTER
PARKVIEW ESTATES I&I INVESTIGATION	IOAP	47250	S_SD_MF_NB03_S_07_C
PORTLAND CSO STORAGE BASIN	IOAP	CSO019	L_OR_MF_019_S_13_B_A_8
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	16455	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	22436	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	40870	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	40871	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	40872	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	40879	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	40880	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	42675	S_OR_MF_NB04_M_03_B_B-1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	42680	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	46621	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	46623	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	46627	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	65606	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	65610	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	65623	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	65633	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	65635	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	89646	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	89791	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0123-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0183-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0186-PS	S_OR_MF_NB04_M_03_B_B-1

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0192-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0193-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0291	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD0292	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD1044-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 1 - WQTC ELIMINATIONS	IOAP	MSD1063-PS	S_OR_MF_NB04_M_03_B_B-1
PROSPECT SYSTEM IMPROVEMENTS 3 - ORFM SYSTEM IMPROVEMENTS	IOAP	89641	S_OR_MF_NB04_M_03_B_B-3
RAINTREE DRIVE AND MARIAN COURT SYSTEM IMPROVEMENTS PHASE 1 - PUMP STATION ELIMINATION	IOAP	28729-W	S_JT_JT_NB03_M_01_C-1
RAINTREE DRIVE AND MARIAN COURT SYSTEM IMPROVEMENTS PHASE 1 - PUMP STATION ELIMINATION	IOAP	MSD0149-PS	S_JT_JT_NB03_M_01_C-1
RIDING RIDGE PS IMPROVEMENTS	IOAP	MSD1060-LS	S_HC_HN_NB01_S_03_C_A
RUNNING FOX PS ELIMINATION	IOAP	MSD1080-LS	S_CC_CC_MSD1080_S_01_C

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
SHAWNEE FPS DWO ELIMINATION	IOAP	MSD0309-FP	L_OR_MF_189_M_03_A_A
SHIVELY INTERCEPTOR	IOAP	04498	S_MC_WC_NB01_M_01_A
SHIVELY INTERCEPTOR	IOAP	04542	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	MSD0043-PS	S_MC_WC_NB01_M_01_A
SHIVELY INTERCEPTOR	IOAP	MSD0044-PS	S_MC_WC_NB01_M_01_A
SHIVELY INTERCEPTOR	IOAP	MSD0047-PS	S_MC_WC_NB01_M_01_A
SHIVELY INTERCEPTOR	IOAP	MSD0049-PS	S_MC_WC_NB01_M_01_A
SHIVELY INTERCEPTOR	IOAP	MSD0050-PS	S_MC_WC_NB01_M_01_A
SINKING FORK INTERCEPTOR	IOAP	21103	SINKING FORK RELIEF SEWER
SINKING FORK INTERCEPTOR	IOAP	25012	SINKING FORK RELIEF SEWER

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
SINKING FORK INTERCEPTOR	IOAP	63319	SINKING FORK RELIEF SEWER
SONNE PS I&I INVESTIGATION & REHABILITATION	IOAP	MSD0042-PS	S_OR_MF_42007_S_07_C
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	08426	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	08427	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	08430	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	08431	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	18654	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	30680	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	30681	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	30701	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	30702	SOUTHEASTERN DIVERSION STRUCT

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	30704	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	49647	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	63779	SOUTHEASTERN DIVERSION STRUCT
SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	IOAP	72571-X	SOUTHEASTERN DIVERSION STRUCT
SOUTHERN OUTFALL IN-LINE STORAGE AT 43RD STREET (SOR1) (FORMERLY ALGONQUIN PKWY STORAGE BASIN)	IOAP	CSO016	L_OR_MF_211_M_13_B_A_8__
SOUTHERN OUTFALL IN-LINE STORAGE AT 43RD STREET (SOR1) (FORMERLY ALGONQUIN PKWY STORAGE BASIN)	IOAP	CSO210	L_OR_MF_211_M_13_B_A_8__
SOUTHWESTERN PKWY CSO BASIN	IOAP	CSO104	L_OR_MF_105_M_13_B_A_0
SOUTHWESTERN PKWY CSO BASIN	IOAP	CSO105	L_OR_MF_105_M_13_B_A_0
SOUTHWESTERN PKWY CSO BASIN	IOAP	CSO189	L_OR_MF_105_M_13_B_A_0
ST RENE RD PS IN-LINE STORAGE	IOAP	94187	S_FF_CH_NB01_S_09A_C_A
SUTHERLAND INTERCEPTOR	IOAP	16649	S_SD_MF_NB05_M_01_A
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO022	L_OR_MF_155_M_09B_B_B_4

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO023	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO050	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO051	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO052	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO053	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO054	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO055	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO056	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO150	L_OR_MF_155_M_09B_B_B_4
WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN)	IOAP	CSO155	L_OR_MF_155_M_09B_B_B_4

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
WATERWAY PROTECTION TUNNEL (FORMERLY I-64 & GRINSTEAD DRIVE CSO BASIN)	IOAP	CSO125	L_MI_MF_127_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY I-64 & GRINSTEAD DRIVE CSO BASIN)	IOAP	CSO126	L_MI_MF_127_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY I-64 & GRINSTEAD DRIVE CSO BASIN)	IOAP	CSO127	L_MI_MF_127_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY I-64 & GRINSTEAD DRIVE CSO BASIN)	IOAP	CSO166	L_MI_MF_127_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO082	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO084	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO118	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO119	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO120	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO121	L_SO_MF_083_M_09B_B_A_8

PROJECT NAME	PROGRAM	ASSET ID	PROJECT ID
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO141	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY LEXINGTON RD & PAYNE ST STORAGE BASIN)	IOAP	CSO153	L_SO_MF_083_M_09B_B_A_8
WATERWAY PROTECTION TUNNEL (FORMERLY STORY & MAIN ST STORAGE BASIN)	IOAP	CSO020	L_OR_MF_020_S_09B_B_A_8
WOODLAND HILLS PS DIVERSION	IOAP	33003	S_FF_FF_NB01_S_01_C_A
WOODLAND HILLS PS DIVERSION	IOAP	65516	S_FF_FF_NB01_S_01_C_A
WOODLAND HILLS PS DIVERSION	IOAP	65531	S_FF_FF_NB01_S_01_C_A

Appendix F CSO Flow Monitoring Quality Improvement

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Table F.1. Phase 1 CSOs

CSO	FINAL SOP COMPLETED	HISTORICAL VOLUME REVISED	PROGRAMMING CHANGES COMPLETED	EQUIPMENT CHANGES COMPLETED	TESTING / VERIFICATION COMPLETED
015	6/30/2017	UNDER CONSTRUCTION	UNDER CONSTRUCTION	UNDER CONSTRUCTION	6/30/2017
016	6/30/2017	7/30/2018	N/A	9/10/2018	6/30/2017
018	6/30/2017	9/13/2017	N/A	3/11/2019	6/30/2017
020	6/30/2017	9/21/2017	N/A	10/10/2017	6/30/2017
036	6/30/2017	8/23/2017	N/A	9/14/2017	6/30/2017
054	6/30/2017	9/8/2017	N/A	9/12/2017	6/30/2017
058	6/30/2017	3/4/2019	N/A	2/16/2019	6/30/2017
088	6/30/2017	8/23/2017	N/A	2/22/2019	6/30/2017
093	6/30/2017	11/19/2018	N/A	1/1/2018	6/30/2017
104	6/30/2017	8/16/2017	N/A	9/12/2017	6/30/2017
105	6/30/2017	8/16/2017	N/A	9/12/2017	6/30/2017
106	6/30/2017	N/A	N/A	N/A	6/30/2017
108	6/30/2017	11/21/2017	10/17/2017	12/1/2018	6/30/2017
109	6/30/2017	11/21/2017	10/13/2017	10/8/2018	6/30/2017
110	6/30/2017	11/19/2018	UNDER CONSTRUCTION	4/5/2019	6/30/2017
118	6/30/2017	N/A	9/1/2017	9/12/2017	6/30/2017
121	6/30/2017	9/12/2017	10/13/2017	12/21/2017	6/30/2017
125	6/30/2017	9/8/2017	8/7/2017	9/8/2017	6/30/2017
126	6/30/2017	9/14/2017	9/1/2017	12/21/2017	6/30/2017
127	6/30/2017	N/A	N/A	N/A	6/30/2017
130	6/30/2017	8/16/2017	N/A	3/11/2019	6/30/2017
132	6/30/2017	9/8/2017	9/1/2017	9/21/2017	6/30/2017
140	6/30/2017	11/21/2017	10/13/2017	3/16/2019	6/30/2017
146	6/30/2017	11/19/2018	UNDER CONSTRUCTION	3/12/2019	6/30/2017
149	6/30/2017	11/19/2018	UNDER CONSTRUCTION	3/12/2019	6/30/2017
154	6/30/2017	12/1/2017	9/1/2017	3/21/2018	6/30/2017
160	6/30/2017	8/23/2017	9/20/2017	12/22/2017	6/30/2017
166	6/30/2017	9/12/2017	10/9/2017	12/21/2017	6/30/2017
167	6/30/2017	9/8/2017	N/A	12/21/2017	6/30/2017
189	6/30/2017	8/16/2017	N/A	9/21/2017	6/30/2017
190	6/30/2017	1/26/2018	N/A	1/26/2018	6/30/2017
191	6/30/2017	UNDER CONSTRUCTION	UNDER CONSTRUCTION	UNDER CONSTRUCTION	6/30/2017
206	6/30/2017	N/A	11/22/2017	12/6/2017	6/30/2017
210	6/30/2017	1/23/2019	N/A	1/23/2019	6/30/2017
211	6/30/2017	8/16/2017	N/A	3/1/2019	6/30/2017

Table F.2. Phase 2 CSOs

CSO	FINAL SOP COMPLETED	HISTORICAL VOLUME REVISED	PROGRAMMING CHANGES COMPLETED	EQUIPMENT CHANGES COMPLETED	TESTING / VERIFICATION COMPLETED
019	COMPLETED	Under Construction	Under Construction	STARTED	COMPLETED
022	COMPLETED	12/17/2018	N/A	COMPLETED	COMPLETED
023	COMPLETED	12/17/2018	N/A	COMPLETED	COMPLETED
027	COMPLETED	1/14/2019	6/6/2019	COMPLETED	COMPLETED
028	COMPLETED	5/3/2019	2/4/2019	COMPLETED	COMPLETED
029	COMPLETED	5/3/2019	3/22/2019	COMPLETED	COMPLETED
031	COMPLETED	3/11/2019	2/24/2019	COMPLETED	COMPLETED
034	COMPLETED	5/3/2019	2/5/2019	COMPLETED	COMPLETED
035	N/A	4/12/2019	4/12/2019	STARTED	N/A
038	COMPLETED	4/22/2019	N/A	COMPLETED	COMPLETED
050	COMPLETED	6/12/2018	N/A	COMPLETED	COMPLETED
051	N/A	6/12/2018	N/A	COMPLETED	N/A
052	COMPLETED	3/25/2019	3/22/2019	COMPLETED	COMPLETED
053	COMPLETED	6/20/2018	N/A	COMPLETED	COMPLETED
055	COMPLETED	6/18/2018	N/A	COMPLETED	COMPLETED
056	N/A	10/24/2017	10/24/2017	COMPLETED	N/A
057	N/A	6/12/2018	N/A	COMPLETED	N/A
062	N/A	4/17/2019	3/16/2019	COMPLETED	N/A
082	COMPLETED	6/26/2018	N/A	COMPLETED	COMPLETED
083	COMPLETED	6/26/2018	N/A	COMPLETED	COMPLETED
084	COMPLETED	6/27/2018	4/9/2019	COMPLETED	COMPLETED
091	COMPLETED	12/21/2018	11/19/2018	STARTED	COMPLETED
092	COMPLETED	6/20/2018	N/A	COMPLETED	COMPLETED
097	COMPLETED	1/7/2019	1/1/2018	STARTED	COMPLETED
111	COMPLETED	3/12/2019	1/1/2018	STARTED	COMPLETED
113	COMPLETED	12/21/2018	11/19/2018	STARTED	COMPLETED
117	COMPLETED	12/21/2018	11/19/2018	STARTED	COMPLETED
119	COMPLETED	6/26/2018	N/A	COMPLETED	COMPLETED
120	COMPLETED	6/26/2018	N/A	COMPLETED	COMPLETED
131	N/A	10/2/2018	10/2/2018	COMPLETED	N/A
137	COMPLETED	12/21/2018	N/A	COMPLETED	COMPLETED
141	N/A	5/30/2018	5/30/2018	COMPLETED	N/A
144	COMPLETED	6/26/2018	8/6/2018	COMPLETED	COMPLETED
148	COMPLETED	3/12/2019	1/1/2018	STARTED	COMPLETED

Table F.2. Phase 2 CSOs

CSO	FINAL SOP COMPLETED	HISTORICAL VOLUME REVISED	PROGRAMMING CHANGES COMPLETED	EQUIPMENT CHANGES COMPLETED	TESTING / VERIFICATION COMPLETED
150	N/A	6/12/2018	N/A	COMPLETED	N/A
151	COMPLETED	3/12/2019	1/1/2018	STARTED	COMPLETED
152	COMPLETED	3/12/2019	1/1/2018	STARTED	COMPLETED
153	COMPLETED	6/26/2018	N/A	COMPLETED	COMPLETED
155	COMPLETED	6/12/2018	N/A	COMPLETED	COMPLETED
161	N/A	6/12/2018	N/A	COMPLETED	N/A
172	N/A	1/1/2018	1/1/2018	COMPLETED	N/A
178	COMPLETED	4/17/2019	3/16/2019	COMPLETED	COMPLETED
179	COMPLETED	Under Construction	1/1/2018	STARTED	COMPLETED
181	COMPLETED	4/17/2019	3/16/2019	COMPLETED	COMPLETED
193	COMPLETED	6/20/2018	N/A	COMPLETED	COMPLETED
195	COMPLETED	6/22/2018	N/A	COMPLETED	COMPLETED
196	COMPLETED	6/22/2018	N/A	COMPLETED	COMPLETED
197	COMPLETED	4/9/2019	8/14/2019	COMPLETED	COMPLETED
198	COMPLETED	6/26/2018	10/4/2018	COMPLETED	COMPLETED
199	COMPLETED	6/18/2018	N/A	COMPLETED	COMPLETED
200	COMPLETED	12/12/2018	12/12/2018	COMPLETED	COMPLETED
201	COMPLETED	6/22/2018	5/31/2019	COMPLETED	COMPLETED
202	COMPLETED	6/15/2018	N/A	COMPLETED	COMPLETED
203	COMPLETED	6/15/2018	N/A	COMPLETED	COMPLETED
207	COMPLETED	6/22/2018	N/A	COMPLETED	COMPLETED
208	COMPLETED	6/25/2018	5/22/2019	COMPLETED	COMPLETED
SBR 142	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED
SBR 174	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED
SBR 180	COMPLETED	6/8/2018	12/7/2018	COMPLETED	COMPLETED
SBR 182	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED
SBR 183	COMPLETED	6/4/2018	N/A	COMPLETED	COMPLETED
SBR 184	COMPLETED	6/4/2018	N/A	COMPLETED	COMPLETED
SBR 185	COMPLETED	6/4/2018	N/A	COMPLETED	COMPLETED
SBR 186	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED
SBR 187	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED
SBR 188	COMPLETED	6/8/2018	12/7/2018	COMPLETED	COMPLETED
SBR 205	COMPLETED	6/8/2018	N/A	COMPLETED	COMPLETED

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