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July 30, 2020

Michael Kroeger, Director Division of Enforcement Department for Environmental Protection 300 Sower Boulevard Frankfort, KY 40601

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

Subject: Quarterly Report 59 Civil Action No. 3:08-cv-00608-CRS EPA – Enforcement and Compliance Assurance Division Attn: Mary Jo Bragan 61 Forsyth Street SW, 9T25 Atlanta, GA 30303

Attention Director and Chiefs:

Please find attached our Quarterly Report, prepared in accordance with Paragraph 29 of our Amended Consent Decree. This report is for the period April 1, 2020 – June 31, 2020, pertaining to Consent Decree compliance activities. Included are sections on Project WIN activities related to: NMC, SORP, Discharge Abatement Plans, Public Outreach, Education, Notification and Participation, CMOM and Performance Overview.

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

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

Sincerely,

Angela Akridge, PE Louisville MSD Chief Strategic Officer

cc: James A. Parrott Jacquelyn Quarles File

Transmittal.docx Rev. 2019-04-26

Louisville and Jefferson County Wet Weather Consent Decree Quarterly Report #59



Reporting Period: April 1, 2020 through June 30, 2020

Submitted To:

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

Submitted By:

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

Submittal Date:

July 30, 2020



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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-nine Quarterly Report submitted in accordance with Paragraph 29 of the Amended Consent Decree. This report covers the time period from April 1, 2020, through June 30, 2020. The structure for this report is outlined as follows:

Section 1: 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.

Section 2: 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 3: 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 4: 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 5: 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 6: 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 1: PROJECT WATERWAY IMPROVEMENTS NOW (WIN) PERFORMANCE OVERVIEW

1.1. 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.

1.1.1. SANITARY SEWER OVERFLOW ELIMINATION ACTIVITIES

Refer to Section 4.4.1 for Final SSDP project updates.

1.1.2. COMBINED SEWER OVERFLOW REDUCTION AND CONTROL ACTIVITIES

Refer to Section 4.4.2 for CSO LTCP project updates.

1.2. Systemwide Performance

1.2.1. 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 1.1 shows the service area daily average rainfall amounts for each month of the last quarter, compared with the average of the daily average rainfall for the previous five years. Data was pulled from MSD's rain gauge network. Daily average rainfall was above average for May and below average for April and June when compared with the previous 5-year average for these months.

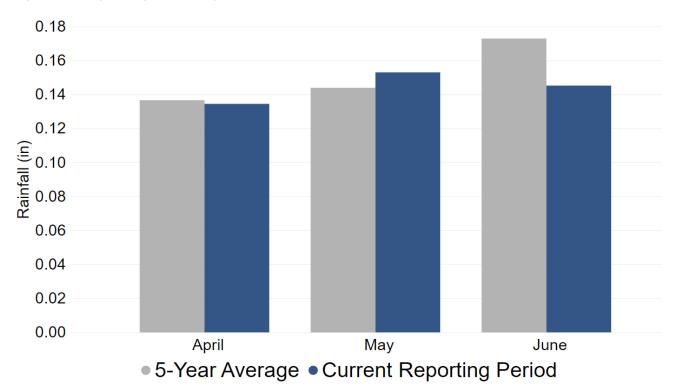


Figure 1.1. Daily Average Rainfall by Month



1.3. WATER QUALITY TREATMENT CENTER PERFORMANCE

1.3.1. BYPASSES

There were two bypass events that occurred during this reporting period. Any details are included in Appendix A-1. 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.

1.3.2. 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 3.2 for SSO Route information.

1.3.3. 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.

1.4. COMBINED SEWER OVERFLOW PERFORMANCE

1.4.1. 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.

1.4.2. UNAUTHORIZED DISCHARGES – DRY WEATHER CSOS

There were no dry weather overflow reported at a CSO during the reporting period. Any details are included in Appendix A-2. MSD records information related to dry weather overflows from permitted combined sewer overflow outfalls. This information is entered and maintained in IPS 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.

1.4.3. 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 98 CSO locations as summarized in Figure 1.2 and Figure 1.3 and detailed in Appendix F. Multiple SOPs required programming or equipment changes in order to implement the final SOPs.

Now that the review is complete, CSO flow monitoring data included as an appendix to each quarterly report, will no longer be listed as "Draft". Regular and ongoing meetings between the Engineering and Operations Divisions will continue to occur. MSD will continue to update and refine changes to meter location and calculation algorithms as needed. These changes will be documented in updated monitoring procedures.

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 FY20 Consent Decree Annual Report.

1.5. COLLECTION SYSTEM OVERFLOW PERFORMANCE

1.5.1. 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 IPS 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, 16 unauthorized discharges to WUS were reported, as summarized in Table 1.1.

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 IPS 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.

1.5.2. Overflows to Interior

MSD recorded information related to overflows to building interiors for the reporting period. This information is entered and maintained in IPS 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.

1.6. 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 program are reported. Data for the current reporting period is shown in Figure 1.4 through Figure 1.6.

Targets, indicated by a blue line on the gauges in Figure 1.4 and Figure 1.5 have been developed for structured work only, which includes any preventive or predictive activities that are routinely scheduled to maintain asset condition and decrease its likelihood of failure. Corrective maintenance activities are shown in Figure 1.6 and include those activities performed as a reaction to correct asset deficiencies, whether identified through structured work or from outside the program, and do not have associated targets.

| PROBLEM | DRY WEATHER | WET WEATHER |
|-------------------------|-------------|-------------|
| LACK OF SYSTEM CAPACITY | 0 | 14 |
| STRUCTURAL FAILURE | 0 | 1 |
| MECHANICAL FAILURE | 1 | 0 |



Figure 1.2. CSO Flow Monitoring Improvement Status - Phase 1

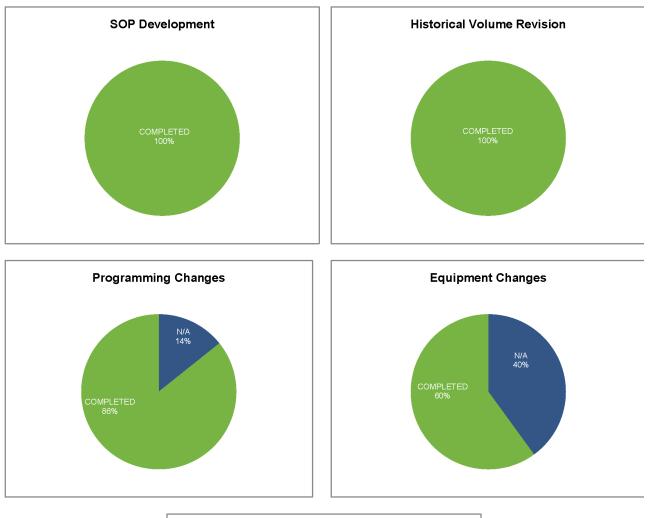
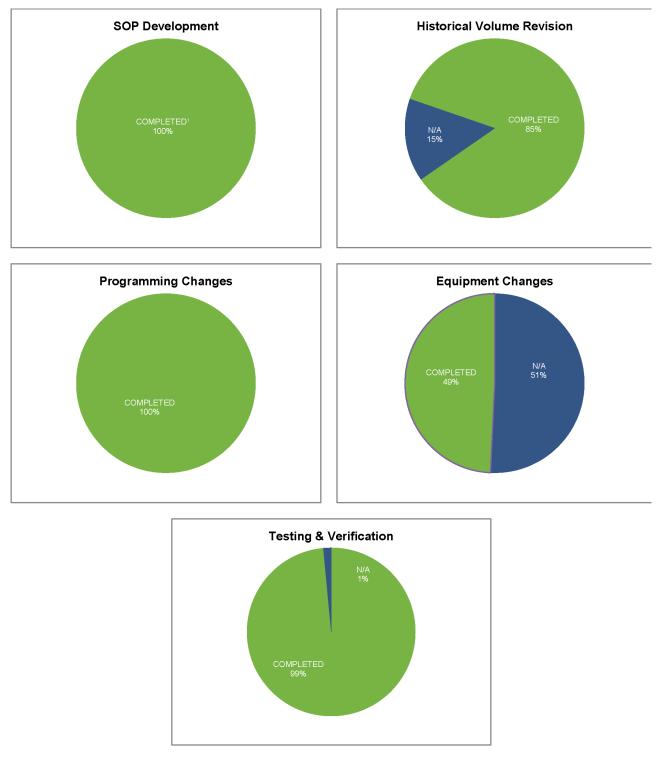






Figure 1.3. CSO Flow Monitoring Improvement Status - Phase 2



¹Draft SOPs are completed and under review.



Figure 1.4. Catch Basin Cleaning

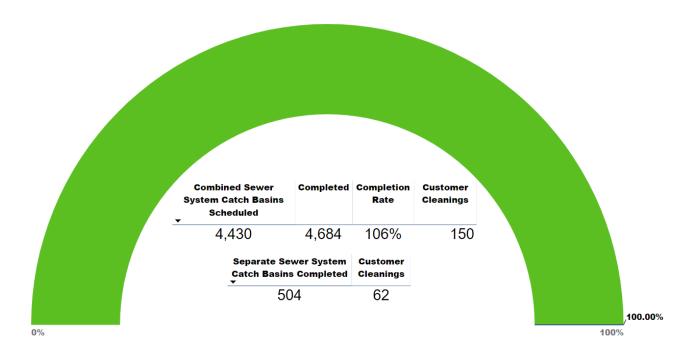
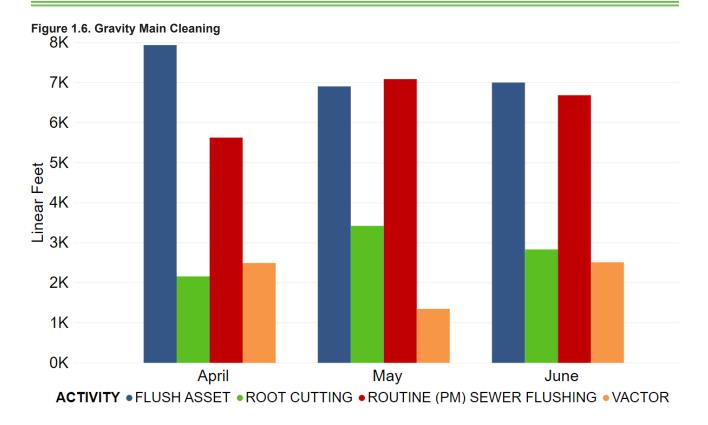


Figure 1.5. CSO Inspections and Cleaning











SECTION 2: PROGRAM ACTIVITIES FOR NINE MINIMUM CONTROLS (NMC)

2.1. 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.msdprojectwin.org. Highlights of the NMC program implementation over this reporting period are outlined below.

2.2. 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 111 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 2.1 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 continued preparing a master programming guide for RTC facilities to document existin programming and parameters at each facility as a reference to ensure long-term continuity of the RTC system.
- MSD continued review of the updated master RTC SOP manual and submittal of comments to the RTC Consultant.
- During the next reporting period, MSD will continue implementing RTC SOPs and validating operations. The RTC Consultant will begin developing Csoft configuration to support integration of the Portland CSO storage basin. Once the site has been validated through manual operation and gradual implementation of local automatic control, the facility will be fully commissioned into the RTC system. MSD and the RTC consultant will begin preparing SOPs for the Rowan St PS and the Logan CSO Interceptor in advance of integration of these facilities into RTC. MSD will complete the review of the updated master RTC 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. MSD will renew the RTC consultant's support contract for FY 21. MSD and the RTC consultant will begin development of an RTC Flood mode for facilities along the Ohio River influenced by high river levels.

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 completed temporary flow monitoring of the Middle Fork Trunk to gather data to improve model calibration during post event recovery to improve dewater of the Clifton Heights and Logan CSO Storage Basin.
- MSD and the RTC consultant deployed the Hydroweb RTC dashboard. The dashboard is fully functional and incorporates all RTC sites currently integrated into the RTC system and provides graphics and interfaces to support weekly and quarterly reporting functions.
- MSD and the RTC consultant continued incorporating Telog data into the Hydroweb dashboard.
- MSD improved level calculations at the Splitter Structure #1 to improve flow estimates from the SWPS to the MFWQTC.
- MSD and The RTC consultant adjusted the SOR1 management strategy to maintain a constant downstream setpoint at the MDS's inflatable dam.
- Gate 3 at the Southwestern Parkway CSO Storage facility was repaired so the facility could be managed under RTC control.
- Construction is in progress 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 facilities integrated into the system. MSD and the RTC consultant will continue development of the Hydroweb dashboard.
- During the next reporting period, the RTC consultant will provide recommendations for improvements to the SWOR1 facility to enable set point increases that will allow a larger volume of in-line storage during rain events.

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

Plant Outage

The East and West Headworks were in service during the reporting period. Channels were taken out of service due to low flow as appropriate. The Final Effluent Pump Station (FEPS) was in service 56 days of the reporting period, limiting plant flow to 205 MGD. Flows at MFWQTC were sustained between 70 and 150 MGD, with some exceptions discussed below, before allowing flow to bypass secondary treatment during wet weather. Flows are shown in Figure 2.1 through Figure 2.3.

Morris Forman WQTC Projects

- MFWQTC Biosolids Management Solutions The WIFIA loan application was submitted during the previous reporting period. Application is under review and is waiting for approval.
- MFWQTC Truck Unloading Station The project was completed during the reporting period.
- MFWQTC Primary Sludge Line Replacement Project The project was completed during the reporting period.
- MFWQTC FEPS VFD Replacement The project scope changed from VFDs to soft starts. The project is scheduled to be completed in the third quarter of 2020.
- MFWQTC 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.

| EVENT | | | ER EVENT | rris Forman S | INFALL | | , | | | | CSO S | SAVED V | OLUME (| (MG) | | | | | | | HIGH | COMMENTS |
|----------|-------------------------------|-------------------------------|----------|---------------|--------------|---------------|--------------------|-------|--|---------|----------------------|---------|-----------------|--------------|--------------|------------------|--------|-----------------|-------|---------|-----------------|---|
| NUMBER | START | END | | AVERAGE* | | AX ** | SWPS SG | SWOR2 | BRADY | ASHLAND | OHIO RIVER | SOR1 | SOBA | SOBA | | CLIFTON | | SNEADS | | | RIVER LEVELS | |
| | DATE | DATE | | TRFD (IN) | TRFD (IN) | RAIN GAUGE | CHAMBER (14.25) | (4.1) | LAKE AND EXECUTIVE INN STORAGE (21.5) | (1.0) | INTERCEPTOR (1.8) | (14.05) | BASIN (20.0) | WO (0.95) | NWI (3.9) | HEIGHTS (6.9) | (17.0) | BRANCH (2.5) | (8.0) | (111.1) | | |
| 2020-025 | 2020- 04-08 10:50 PM | 2020- 04-09 11:15 PM | 24:01 | 0.35 | 0.45 | TR11 | 3.60 | 0.75 | 1.40 | 0.00 | 1.40 | 0.60 | 0.80 | - | 0.35 | 0.40 | 0.90 | 0.10 | 0.10 | 10.40 | No | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells. SOBA-WO data unavailable. |
| 2020-026 | 2020- 04-12 04:30 PM | 2020- 04-15 12:35 AM | 56:01 | 1.60 | 1.80 | TR14 | 22.65 | 4.55 | 20.00 | 1.20 | 1.85 | 14.00 | 15.75 | - | 4.00 | 3.15 | 16.00 | 1.45 | 0.60 | 105.20 | No | Large wet weather event heteregeneously distributed across the collection system with back-to-back storm cells. SOBA-WO data unavailable. |
| 2020-027 | 2020- 04-17 02:55 PM | 2020- 04-18 07:00 AM | 16:01 | 0.38 | 0.80 | TR13 | 0.30 | 0.40 | 0.45 | 0.00 | 0.90 | 0.00 | 0.00 | - | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.05 | No | Moderate wet weather event heteregeneously distributed across the collection system with back-to-back storm cells. SOBA-WO data unavailable. The SWSG site was controlled manually. |
| 2020-028 | 2020- 04-23 06:00 AM | 2020- 04-24 03:35 PM | 33:01 | 0.65 | 1.00 | TR04 | 1.50 | 1.15 | 2.90 | 0.00 | 1.40 | 2.45 | 3.90 | 0.85 | 1.45 | 0.25 | 2.40 | 0.10 | 0.00 | 18.35 | No | Large wet weather event homogeneously distributed across the collection system with back-to-back storm cells |
| 2020-029 | 2020- 04-25 01:00 PM | 2020- 04-28 01:20 AM | 60:01 | 0.73 | 0.96 | TR13 | 0.20 | 0.65 | 1.10 | 0.00 | 2.20 | 0.10 | 0.30 | 0.45 | 3.10 | 0.20 | 0.85 | 0.00 | 0.00 | 9.15 | No | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells |
| 2020-030 | 2020- 04-29 11:20 AM | 2020- 04-30 04:30 PM | 29:01 | 0.19 | 0.32 | TR12 | 0.00 | 0.60 | 1.05 | 0.00 | 0.15 | 0.00 | 1.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.80 | Yes | Small wet weather event homogeneously distributed across the collection system with back-to-back storm cells The SWSG site was controlled manually. |
| 2020-032 | 2020-05-05 04:35 AM | 2020-05- 05 03:55 PM | 11:01 | 0.26 | 0.32 | TR14 | 0.00 | 0.35 | 0.25 | 0.00 | 1.15 | 0.00 | 1.10 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.85 | Yes | Small wet weather event homogeneously distributed across the collection system with back-to-back storm cells The SWSG site was controlled manually. |
| 2020-033 | 2020-05-08 07:35 AM | 2020-05- 09 10:35 AM | 27:01 | 0.75 | 0.96 | TR12 | 12.55 | 1.85 | 9.90 | 0.95 | 1.30 | 5.25 | 1.05 | 0.40 | 0.35 | 0.75 | 5.90 | 0.45 | 0.25 | 40.95 | Yes | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells The SWSG site was controlled manually. |

Table 2.1. Wet Weather Storage in the Morris Forman Sewer System via the RTC System





Table 2.1. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

| EVENT | | | ge in the Mor ER EVENT | | INFALL | | | | | | CSO | SAVED V | OLUME | (MG) | | | | | | | HIGH | COMMENTS |
|----------|------------------------|----------------------------|---------------------------|--------------------------|--------------------|-----------------------|-------------------------------|------|---|------------------|------------------------------------|-----------------|-------|------|------|-----------------------------|------|---------------------------|------|----------------------|-----------------|---|
| NUMBER | START DATE | | DURATION | AVERAGE* TRFD (IN) | M/ TRFD (IN) | AX** RAIN GAUGE | SWPS SG CHAMBER (14.25) | | BRADY LAKE AND EXECUTIVE INN STORAGE (21.5) | ASHLAND (1.0) | OHIO RIVER INTERCEPTOR (1.8) | SOR1 (14.05) | | | NWI | CLIFTON HEIGHTS (6.9) | | SNEADS BRANCH (2.5) | | TOTAL (111.1) | RIVER LEVELS | |
| 2020-034 | 2020-05-13 05:35 AM | 2020-05- 14 05:40 PM | 36:01 | 0.25 | 0.36 | TR11 | 0.00 | 0.65 | 0.85 | 0.00 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.20 | No | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells |
| 2020-035 | 2020-05-15 11:30 AM | 2020-05- 17 08:00 PM | 56:01 | 1.48 | 1.78 | TR11 | 24.05 | 2.50 | 18.80 | 1.00 | 1.20 | 13.40 | 8.70 | 1.30 | 3.95 | 0.30 | 3.25 | 0.80 | 0.40 | 79.65 | No | Large wet weather event homogeneously distributed across the collection system with back-to-back storm cells |
| 2020-036 | 2020-05-17 08:00 PM | 2020-05- 19 10:10 AM | 38:01 | 0.55 | 1.02 | TR04 | 6.60 | 0.30 | 1.00 | 0.25 | 1.45 | 4.05 | 2.55 | 0.65 | 1.95 | 0.00 | 7.45 | 0.30 | 0.00 | 26.55 | No | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells |
| 2020-037 | 2020-05-19 10:10 AM | 2020-05- 20 12:20 PM | 26:01 | 0.02 | 0.05 | TR04 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 2.10 | 7.40 | 0.00 | 0.00 | 9.50 | Yes | Very small wet weather event heterogeneously distributed across the collection system. |
| 2020-039 | 2020-05-23 04:45 PM | 2020-05- 25 04:15 PM | 47:01 | 0.79 | 1.33 | TR15 | 2.00 | 0.70 | 3.85 | 0.30 | 1.20 | 0.00 | 0.00 | 0.00 | 0.00 | 0.80 | 1.80 | 0.10 | 0.45 | 11.20 | Yes | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cell The SWSG site was controlled manually. |
| 020-040 | 2020-05-25 04:15 PM | 2020-05- 26 12:10 PM | 19:01 | 0.22 | 0.86 | TR04 | 7.00 | 1.90 | 0.65 | 0.15 | 1.50 | 1.05 | 1.35 | 0.45 | 2.10 | 1.65 | 0.75 | 0.10 | 0.00 | 18.65 | Yes | Small wet weather event heterogeneously distributed across the collection system. The SWSG site was controlle manually. |
| 020-041 | 2020-05-26 03:15 PM | 2020-05- 30 12:00 AM | 80:01 | 0.42 | 0.74 | TR13 | 2.40 | 1.00 | 0.20 | 0.30 | 1.25 | 0.70 | 0.55 | 0.35 | 0.00 | 0.30 | 0.15 | 0.20 | 0.00 | 7.40 | Yes | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cell The SWSG site was controlled manually. |
| 2020-042 | 2020-06-04 01:55 PM | 2020-06- 06 03:50 PM | 49:01 | 0.72 | 0.86 | TR04 | 14.60 | 2.80 | 12.10 | 0.80 | 1.50 | 3.95 | 0.00 | 0.85 | 3.85 | 3.20 | 3.05 | 0.35 | 0.10 | 47.15 | No | Moderate wet weather event heterogeneously distributed across the collection system. |
| 2020-043 | 2020-06-09 12:20 PM | 2020-06- 14 07:30 AM | 115:01 | 0.12 | 0.33 | TR05 | 0.00 | 0.00 | 0.00 | 0.00 | 0.60 | 0.00 | 0.45 | 0.00 | 0.00 | 0.55 | 0.00 | 0.00 | 0.00 | 1.60 | No | Small wet weather event heterogeneously distributed across the collection system. |
| 2020-046 | 2020-06-21 11:40 AM | 2020-06- 22 10:25 AM | 22:01 | 0.57 | 0.74 | TR04 | 5.05 | 0.50 | 3.70 | 0.00 | 1.45 | 3.85 | 0.05 | 0.20 | 1.70 | 1.25 | 3.50 | 0.35 | 0.30 | 21.90 | No | Moderate wet weather event homogeneously distributed across the collection system with back-to-back storm cells |

PROJECT WIN QUARTERLY REPORT #59 APRIL 1, 2020 - JUNE 30, 2020

| EVENT | WET V | VEATHE | | RA | INFALL | | | | | | CSO S | SAVED V | OLUME (| (MG) | | | | | | | HIGH | COMMENTS |
|------------|------------------------|----------------------------|------------------|----------------|--------------|---------------|--------------------|-------|--|---------|----------------------|---------|-----------------|--------------|--------------|------------------|--------|-----------------|-------|---------|-----------------|---|
| UMBER | START | | DURATION | AVERAGE* | M | AX** | SWPS SG | SWOR2 | BRADY | ASHLAND | OHIO RIVER | | | | | CLIFTON | | | | | RIVER LEVELS | |
| | DATE | DATE | | TRFD (IN) | TRFD (IN) | RAIN GAUGE | CHAMBER (14.25) | (4.1) | LAKE AND EXECUTIVE INN STORAGE (21.5) | (1.0) | INTERCEPTOR (1.8) | (14.05) | BASIN (20.0) | WO (0.95) | NWI (3.9) | HEIGHTS (6.9) | (17.0) | BRANCH (2.5) | (8.0) | (111.1) | | |
| 020-047 | 2020-06-22 | 2020-06- 27 06:40 PM | 118:01 | 1.08 | 1.43 | TR11 | 13.45 | 2.40 | 13.05 | 0.90 | 2.40 | 4.45 | 1.10 | 0.00 | 3.90 | 4.15 | 16.15 | 1.40 | 0.10 | 63.45 | No | Large wet weather event homogeneously distributed across the collection system with back-to-back storm cel |
|)20-048 | 2020-06-27 06:40 PM | 2020-06- 29 03:15 AM | 32:01 | 0.58 | 1.58 | TR11 | 14.15 | 3.70 | 18.00 | 1.20 | 0.50 | 1.35 | 0.00 | 0.00 | 0.00 | 0.00 | 2.30 | 0.40 | 0.05 | 41.65 | No | Moderate wet weathe event homogeneousl distributed across the collection system, wit very intense peak at the beginning. |
| DTAL | | | | | | | 130.10 | 26.75 | 109.25 | 7.05 | 24.10 | 55.20 | 38.65 | 5.50 | 26.70 | 19.05 | 71.85 | 6.10 | 2.35 | 522.65 | | |
| | | | | | | | | | | | | | | | | | | | | | | |
| Average to | tal rainfall d | lepth bas | ed on rain gauge | es TR04, TR05, | TR11, TF | R12, TR13, T | R14 and TR15 | • | | | | | | | | | | | | | | |
| Maximum | total rainfal | l depth m | easurement and | measurement l | ocation d | uring the we | t weather even | t. | | | | | | | | | | | | | | |

Table 2.1. Wet Weather Storage in the Morris Forman Sewer System via the RTC System







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. Construction is estimated to be completed in the fourth quarter of 2020.

- MFWQTC Sedimentation Basin Rehabilitation The Technology Selection Committee selected the Traveling Bridge technology. Design on the project is underway.
- MFWQTC Groundwater Study The study was underway during this period.
- MFWQTC Hypochlorite Building Relocation The project is currently in the design phase.
- MFWQTC OGA, PTO, and Chlorine Rail Car Facility Demolition The project design was nearly completed during this period.
- MFWQTC Dryer Demolition The demolition of all Dryer Trains was completed during the reporting period. Installation of new equipment is expected to begin in the fourth quarter of 2020.
- MFWQTC Chiller Replacement Design of the Chiller Replacement is complete and ready for bidding.
- MFWQTC Headworks and Dumpster Building Structural and Blower Building Stairs The design of project is completed and ready for bidding.
- MFWQTC Sewer and Manhole Condition Assessment Design of the project is nearly completed.

Morris Forman WQTC Performance

Figure 2.1 through Figure 2.3 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.

Morris Forman effluent compliance for the previous three months is summarized in Table 2.2 where a "©" indicates compliance and an "X" indicates noncompliance. MSD continues to employ additional solids processing methods, including dewatered cake, an outside vendor to assist with solids handling in addition to purchasing additional liquid oxygen, and dewatering of regional solids at Derek R. Guthrie WQTC in an effort to meet permit requirements.

2.4. 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 2.4.



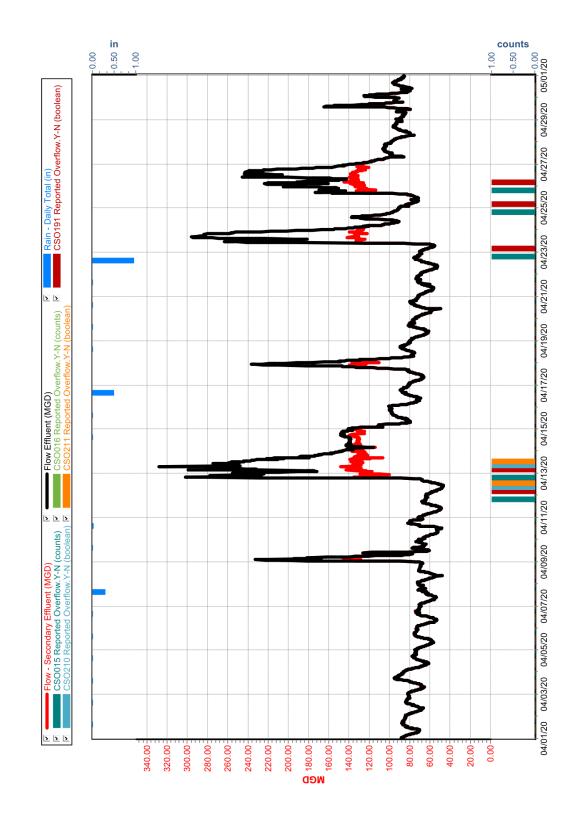
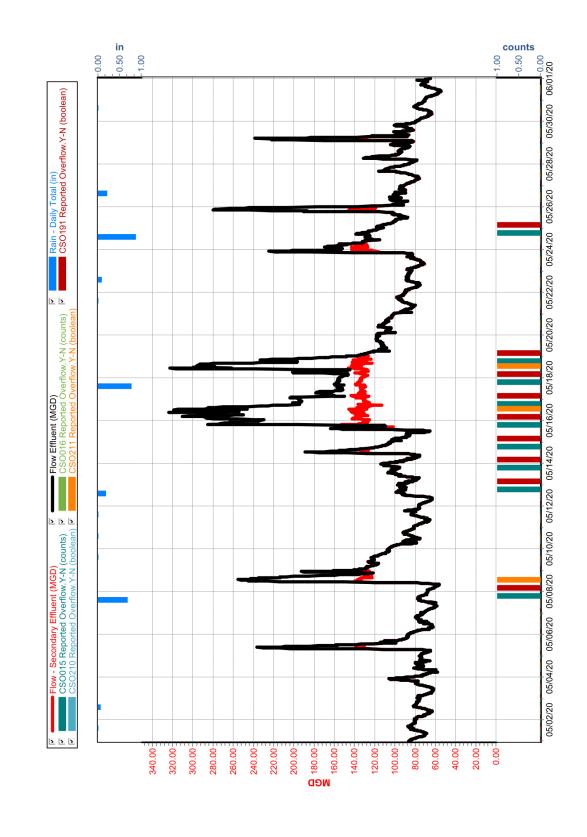


Figure 2.1. Morris Forman WQTC - Plant Flows and Associated CSO Activations - April







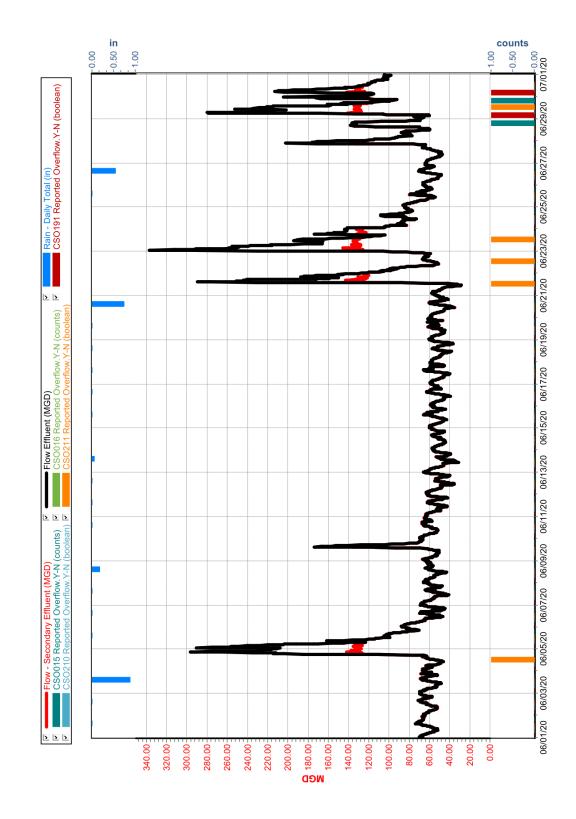




Table 2.2. Morris Forman WQTC Permit Compliance

| PARAMETER | APRIL | MAY | JUNE |
|---|-------|-----|------|
| Ammonia Nitrogen, 30 Day Secondary Effluent | © | © | © |
| Ammonia Nitrogen, 7 Day Secondary Effluent | © | © | © |
| BOD, 30 Day Secondary Effluent | © | Х | Х |
| BOD, 7 Day Secondary Effluent | © | Х | Х |
| BOD, Percent Removal | © | Х | © |
| Chlorine, Residual | © | © | © |
| Dissolved Oxygen | © | © | © |
| Fecal Coliform, 30 Day Geomean | © | © | © |
| Fecal Coliform, 7 Day Geomean | © | © | © |
| рН | © | © | © |
| TSS, 30 Day Secondary Effluent | Х | Х | Х |
| TSS, 7 Day Effluent | Х | Х | Х |
| TSS, Percent Removal | Х | Х | Х |

| MSD NMC Claraterly Commitments Schedule Sisk Fir3/15/14 Mon 9/15/13 Fir3/15/12 Fir3/12/20 Fir3/12/20< | Budget ID | Budget ID Task Name | | % Complete Start | te Start | Finish | 2nd Quarter Anr May Iun | 3rd Quarter | Sen |
|--|-------------|--|-------------------------------|------------------|----------------|--------------|----------------------------|-------------|-----|
| Large Diameter Sewer Rehabilitation0%Mon 9/16/19INITIATION & PROCUREMENT100%Mon 9/16/19INITIATION & PROCUREMENT0%Fri 7/31/20DESIGN0%Fri 7/31/19MFWQTC Cake Pump Phase II8%Fri 11/1/19MFWQTC Sedimentation Basin RR9%Fri 11/1/19MFWQTC Sedimentation Basin RR9%Fri 11/31/20DESIGN0%Wed 7/120MFWQTC Lab Equipment Upgrade8%Fri 11/31/20DESIGN0%Wed 7/120MFWQTC Bosolids Facility Replacement0%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20MFWQTC Bosolids Facility Replacement0%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20MFWQTC Construction0%Wed 7/1/20MFWQTC FIES MCC Replacement0%Wed 7/1/20MFWQTC FIES MCC Replacement0%Med 7/1/20MFWQTC FIES MCC Replacement0%Med 7/1/20MF | | MSD NMC Quarterly | / Commitments Schedule | 65% | Fri 8/15/14 | Mon 9/27/27 | - - | - 5 - | 5 |
| INITIATION & PROCUREMENT 100% Mon 9/16/19 DESIGN 0% Fir 7/31/20 DESIGN 0% Fir 7/31/20 MFWQTC Cake Pump Phase II 87% Mon 3/12/18 CONSTRUCTION 72% Fir 1/31/19 MFWQTC Sedimentation Basin RR 9% Tue 5/21/19 DESIGN 72% Fir 1/31/20 MFWQTC Lab Equipment Upgrade 88% Fir 1/24/20 DESIGN 00% Wed 7/1/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 MFWQTC Fruck Unloading Station 6% Wed 7/1/20 MFWQTC Truck Unloading Station 6% Med 7/1/20 Pavement Repair 0% Wed 7/1/20 CONSTRUCTION NFWQTC UNCLION 0% Med 7/1/20 MFWQTC Truck Unloading Station 6% Med 7/1/20 Pavement Repair 0% Wed 7/1/20 CONSTRUCTION NTMFWQTC UNCLION 0% Med 7/1/20 NINTIATION & PROCUREMENT 0% Wed | A20244 | Large Diameter Se | | %0 | Mon 9/16/19 | Thu 9/28/23 | | | |
| DESIGN0%Fir $7/31/20$ MFWQTC Cake Pump Phase II 87%Mon $3/12/18$ CONSTRUCTION72%Fir $11/1/19$ CONSTRUCTION25%Fir $1/24/20$ MFWQTC Lake Equipment Upgrade 88%Fir $1/24/20$ DESIGN26%Fir $1/24/20$ MFWQTC Lab Equipment Upgrade88%Fir $1/24/20$ MFWQTC Elsositids Facility Replacement0%Wed $7/1/20$ INITIATION & PROCUREMENT0%Wed $7/1/20$ INITIATION & PROCUREMENT0%Mon $7/1/18$ CLOSEOUT0%Mon $7/1/18$ INITIATION & PROCUREMENT0%Mon $7/1/19$ | A20244 | INITIATION & PI | ROCUREMENT | 100% | Mon 9/16/19 | Mon 6/22/20 | | | |
| MFWQTC Cake Pump Phase II 87% Mon $3/12/18$ CONSTRUCTION 72% Fri $11/119$ CONSTRUCTION 26% Fri $1/31/20$ DESIGN 26% Fri $1/31/20$ DESIGN 26% Fri $1/31/20$ MFWQTC Lab Equipment Upgrade 88% Fri $1/24/20$ DESIGN $MFWQTC Lab Equipment Upgrade88\%Fri 1/24/20DESIGNMFWQTC Lab Equipment Upgrade88\%Fri 1/24/20DESIGNMFWQTC Lab Equipment Upgrade88\%Fri 1/24/20DESIGNCONSTRUCTION100\%Wed 7/1/20MFWQTC Truck Unloading Station67\%Fri 4/27/18MFWQTC Truck Unloading Station67\%Fri 1/27/18MFWQTC Truck Unloading Station67\%Fri 1/27/18DESIGUT0\%Med 7/1/200\%MFWQTC FEPS MCC Replacement0\%Med 7/1/20DISGWQT Hypo Containment0\%Med 7/1/20CLOSEOUT0\%0\%Med 7/1/20MFWQTC FEPS MCC Replacement0\%Med 7/1/20DISGWQT Hypo Containment0\%Med 7/1/20MFWQTC FEPS MCC Replacement0\%Med 7/1/20MFWQTC FEPS MCC Replacement0\%Med 7/1/20DISGOUTCOSEOUT0\%Med 7/1/20DISGOUT0\%0\%0\%DISGOUT0\%0\%0\%MFWQTC FEPS MCC Replacement0\%0\%DISGOUT0\%0\%0\%DISGOUT0\%0\%$ | A20244 | DESIGN | | %0 | Fri 7/31/20 | Fri 7/30/21 | | | |
| CONSTRUCTION72%Fri 11/119MFWQTC Sedimentation Basin RR9%Fri 1/31/20DESIGN26%Fri 1/31/20DESIGN26%Fri 1/31/20MFWQTC Lab Equipment Upgrade88%Fri 1/31/20DESIGN00%Wed 4/15/205%CONSTRUCTION100%Sat 2/15/20CONSTRUCTION5%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20MFWQTC Truck Unloading Station67%Fri 4/27/18MFWQTC Truck Unloading Station67%Fri 1/27/18MFWQTC Truck Unloading Station0%Med 7/1/20MFWQTC FEPS MCC Replacement0%Med 7/1/20CLOSEOUT0%Med 7/1/20MFWQTC FEPS MCC Replacement0%Med 7/1/20MFWQTC FEPS MCC Replacement0%Med 7/1/20CLOSEOUT0%Med 7/1/20MFWQTC FEPS MCC Replacement0%Med 7/1/20MFWQTC BOS MCT0%Med 7/1/20MFWQTC BOS MCT0%Med 7/1/20MFWQTC DESCUT0%Med 7/ | D15020 | MFWQTC Cake Pu | | 87% | Mon 3/12/18 | Tue 8/3/21 | | | |
| MFWQTC Sedimentation Basin RR 9% Tue 5/21/19 DESIGN 26% Fi 1/31/20 MFWQTC Lab Equipment Upgrade 88% Fi 1/24/20 DESIGN 26% Ki 1/31/20 MFWQTC Lab Equipment Upgrade 88% Fi 1/24/20 DESIGN 000% Sat 2/15/20 CONSTRUCTION 100% Wed 7/1/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 MFWQTC Truck Unloading Station 0% Wed 7/1/20 MFWQTC Truck Unloading Station< | D15020 | CONSTRUCTION | 7 | 72% | Fri 11/1/19 | Thu 10/1/20 | | | |
| DESIGN26%Fri 1/31/20MFWQTC Lab Equipment Upgrade88%Fri 1/31/20DESIGN100%Sat 2/15/20CONSTRUCTION100%Sat 2/15/20CONSTRUCTION100%Sat 2/15/20CLOSEOUTS%Sun 6/14/20CLOSEOUT0%Wed 7/1/20MFWQTC Biosolids Facility Replacement0%Wed 7/1/20IIITIATION & PROCUREMENT0%Wed 7/1/20MFWQTC Truck Unloading Station67%Fri 12/13/19CONSTRUCTION0%Tue 5/12/20MFWQTC Truck Unloading Station0%Wed 7/1/20MFWQTC Truck Unloading Station0%Wed 7/1/20MFWQTC Truck Unloading Station0%Wed 7/1/20MFWQTC Truck Unloading Station0%Wed 7/1/20MFWQTC FEPS MCC Replacement0%Wed 7/1/20CLOSEOUT0%Med 7/1/20DRGWQTC Hypo Containment0%Wed 7/1/20MFWQTC FEPS MCC Replacement0%Wed 7/1/20IIITIATION & PROCUREMENT0%Wed 7/1/20MFWQTC CGS PUT0%Med 7/1/20MFWQTC CGS PTO and Chlorine Rail Car91%Tue 6/4/19IIITIATION & PROCUREMENT0%Ned 7/1/20MFWQTC OGS PTO and Chlorine Rail Car91%Tue 6/4/19DESIGNDESIGN0%Non 7/1/19DCOSEOUTMFWQTC OGS PTO and Chlorine Rail Car0%Fri 7/2/4/20MFWQTC OGS PTO and Chlorine Rail Car0%Ned 7/1/20DESIGNDSSGNNK ProjectNof 7/1/20DC | D17042 | MFWQTC Sedime | ntation Basin RR | %6 | Tue 5/21/19 | Sun 3/17/24 | | | |
| MFWQTC Lab Equipment Upgrade 88% Fri 1/24/20 DESIGN 100% Sat 2/15/20 CONSTRUCTION 5% Sun 6/14/20 CLOSEOUT 5% Sun 6/14/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 MFWQTC Truck Unloading Station 67% Fri 4/27/18 Pavement Repair 0% Wed 7/1/20 CONSTRUCTION 00% Tue 5/12/20 MFWQTC Hypo Containment 0% Wed 7/1/20 DRGWQTC Hypo Containment 0% Wed 7/1/20 CLOSEOUT 0% Wed 7/1/20 MFMOTC EPS MCC Replacement 0% Wed 7/1/20 MFWQTC EPS MCC Replacement 0% Wed 7/1/20 MFWQTC Upgrade PLCs 100% Mon 7/1/19 INITIATION & PROCUREMENT 0% Wed 7/1/20 MFWQTC Upgrade PLCs 100% Mon 7/1/19 INITIATION & PROCUREMENT 0% Wed 7/1/20 MFWQTC Upgrade PLCs 100% Mon 7/1/19 INITIATION & PROCUREMENT 0% Wed 7/1/20 MFWQTC Upgrade PLCs 100% Mon 7/1/19 INITIATION & PR | D17042 | DESIGN | | 26% | Fri 1/31/20 | Mon 8/30/21 | | | |
| DESIGNDOSat 2/15/20CONSTRUCTION5%Sun 6/14/20CLOSEOUT5%Sun 6/14/20MFWQTC Biosolids Facility Replacement0%Wed $7/1/20$ INTIATION & PROCUREMENT0%Wed $7/1/20$ MFWQTC Truck Unloading Station67%Fri $4/27/18$ Pavement Repair0%Wed $7/1/20$ CONSTRUCTION0%Wed $7/1/20$ MFWQTC Truck Unloading Station0%Wed $7/1/20$ Pavement Repair0%Wed $7/1/20$ CONSTRUCTION0%Tue $5/12/20$ MFWQTC Hypo Containment99%Sat $12/1/18$ CLOSEOUT0%Wed $7/1/20$ NTIATION & PROCUREMENT0%Wed $7/1/20$ MFWQTC FEPS MCC Replacement0%Wed $7/1/20$ INITIATION & PROCUREMENT0%Wed $7/1/20$ MFWQTC COSEOUT0%Wed $7/1/20$ INITIATION & PROCUREMENT0%Wed $7/1/20$ INITIATION & PROCUREMENT0%W | D18114 | MFWQTC Lab Equ | iipment Upgrade | 88% | Fri 1/24/20 | Fri 6/4/21 | | | |
| CONSTRUCTION 100% Wed $4/15/20$ CLOSEOUT 5% Sun $6/14/20$ MFWQTC Biosolids Facility Replacement 0% Wed $7/1/20$ INITIATION & PROCUREMENT 0% Wed $7/1/20$ MFWQTC Biosolids Facility Replacement 0% Wed $7/1/20$ INITIATION & PROCUREMENT 0% Wed $7/1/20$ MFWQTC Truck Unloading Station 67% Fri $4/27/18$ Pavement Repair 0% Wed $7/1/20$ CONSTRUCTION 0% Wed $7/1/20$ MFWQT EPS MCC Replacement 0% Wed $7/1/20$ INITIATION & PROCUREMENT 0% Wed $7/1/20$ MFWQT EPS MCC Replacement 0% Wed $7/1/20$ INITIATION & PROCUREMENT 0% </td <td>D18114</td> <td>DESIGN</td> <td></td> <td>100%</td> <td>Sat 2/15/20</td> <td>Wed 4/15/20</td> <td>I</td> <td></td> <td></td> | D18114 | DESIGN | | 100% | Sat 2/15/20 | Wed 4/15/20 | I | | |
| CLOSEOUT 5% Sun 6/14/20 MFWQTC Biosolids Facility Replacement 0% Wed 7/1/20 NITIATION & PROCUREMENT 0% Wed 7/1/20 MFWQTC Truck Unloading Station 67% Fri 4/27/18 Pavement Repair 0% Wed 7/1/20 CONSTRUCTION 100% Fri 12/13/19 Pavement Repair 0% Wed 7/1/20 CONSTRUCTION 100% Fri 12/13/19 CONSTRUCTION 0% Wed 7/1/20 DRGWQTC Hypo Containment 0% Wed 7/1/20 DRGWQTC FEPS MCC Replacement 0% Wed 7/1/20 InITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCURE | D18114 | CONSTRUCTION | 7 | 100% | Wed 4/15/20 | Thu 6/4/20 | | | |
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| Pavement RepairPavement RepairCONSTRUCTION100%Fri 12/13/19CONSTRUCTION0%Tue 5/12/20CLOSEOUT0%Net 5/12/13/18CLOSEOUT79%Sat 12/1/18DRGWQTC Hypo Contrainment0%Wed 7/1/20DRGUQT CHOP Contrainment0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20CLOSEOUT0%Non 7/1/19INITIATION & PROCUREMENT0%Wed 7/1/20PrZO MFWQTC Upgrade PLCs100%Mon 7/1/19INITIATION & PROCUREMENT0%Wed 7/1/20POSEOUT0%Proper 100%Mon 7/1/19INITIATION & PROCUREMENT0%Mon 7/1/19INITIATION< | D18118 | MFWQTC Truck U | Inloading Station | 67% | Fri 4/27/18 | Tue 5/11/21 | | | |
| CONSTRUCTION100%Fri 12/13/19CLOSEOUT0%Tue 5/12/20CLOSEOUT0%Nut 5/12/13/18CLOSEOUT79%Sat 12/1/18CLOSEOUT79%Ned 7/1/20MFWQTC FEPS MCC Replacement0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Non 7/1/19INITIATION & PROCUREMENT0%Non 7/1/19IN | | Pavement Repair | | | | | | | |
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| MFWQTC FEPS MCC Replacement 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 CLOSEOUT 0% Wed 7/1/20 CLOSEOUT 0% Mon 7/1/19 INITIATION & PROCUREMENT 0% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 0% Mon 7/1/ | D18127 | CLOSEOUT | | 79% | Tue 1/21/20 | Thu 8/13/20 | | | |
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| MFWQTC OGA PTO and Chlorine Rail Car Facility Demolition 91% Tue 6/4/19 Facility Demolition 92% Sun 9/15/19 DESIGN 92% Sun 9/15/19 CLOSEOUT 0% Fri 7/24/20 tte: 6/30/20 NMC Project Project Progress | D19028 | CLOSEOUT | | 100% | Thu 6/25/20 | Tue 6/30/20 | | _ | |
| DESIGN 92% Sun 9/15/19 CLOSEOUT 0% Fri 7/24/20 ate: 6/30/20 NMC Project Project Progress | D19043 | MFWQTC OGA PT Facility Demolitio | CO and Chlorine Rail Car n | 91% | Tue 6/4/19 | Thu 7/30/20 | | | |
| CLOSEOUT 0% Fri 7/24/20 ate: 6/30/20 NMC Project Project Progress omplete is calculated based on phase duration. Page 1 of 3 | D19043 | DESIGN | | 92% | Sun 9/15/19 | Thu 7/23/20 | | | |
| ject Project Progr | D19043 | CLOSEOUT | | %0 | Fri 7/24/20 | Thu 7/30/20 | | | |
| ject Project Progr | | | | | | | | | |
| | Data Dat | e: 6/30/20 | NMC Project | P. | oject Progress | | | | |
| | | a se bosed bosed in the second s | | | | | | | |
| | Percent com | iplete is calculated paseu ori p | hase duration. | | Page 1 o | f 3 | | | |





| Budget ID | Budget ID Task Name | % Complete Start | te Start | Finish | 2nd Quarter | 3rd Quarter | |
|-------------|---|------------------|------------------|-------------|-------------|-------------|--------|
| D19045 | MFWQTC Sodium Hypochlorite Storage Relocation | 6% | Tue 6/4/19 | Mon 2/6/23 | | | |
| D19045 | DESIGN | 21% | Mon 2/17/20 | Tue 11/2/21 | | | |
| D19048 | MFWQTC Radio Repeater Project | 6% | Mon 7/2/18 | Wed 9/29/21 | | | |
| D19048 | DESIGN | 7% | Thu 6/18/20 | Sun 11/8/20 | 1 | | |
| D19223 | DRGWQTC WWPS Finite Element Analysis Phase 2 | 65% | Mon 7/2/18 | Fri 9/3/21 | | | |
| D19223 | ANALYSIS PERIOD | 64% | Wed 9/12/18 | Wed 6/30/21 | | | |
| D19275 | MDS Downstream Flow Meter | 52% | Tue 1/1/19 | Sat 6/26/21 | | | |
| D19275 | CONSTRUCTION | 75% | Mon 1/6/20 | Sat 8/29/20 | | | |
| D19275 | CLOSEOUT | %0 | Sun 8/30/20 | Sat 6/26/21 | | | |
| D19307 | MFWQTC FEPS VFD Replacement | 78% | Mon 4/1/19 | Tue 7/27/21 | | | |
| D19307 | CONSTRUCTION | 70% | Tue 11/26/19 | Wed 9/30/20 | | | |
| D20012 | SGC RTC Enhancements | 25% | Tue 11/19/19 | Fri 3/17/23 | | | |
| D20012 | DESIGN | 51% | Tue 2/18/20 | Mon 11/2/20 | | | |
| D20226 | Bells Lane and MF HW Bar Screen Grit Study 67% | y 67% | Tue 7/23/19 | Tue 2/9/21 | | | |
| D20226 | STUDY | 68% | Tue 7/23/19 | Fri 12/4/20 | | | |
| D20228 | MFWQTC Centrifuge Replacement | 45% | Tue 7/23/19 | Wed 6/30/21 | | | |
| D20228 | EQUIPMENT REPLACEMENT | 83% | Sun 9/1/19 | Mon 8/31/20 | | | |
| D20228 | CLOSEOUT | %0 | Mon 8/31/20 | Wed 6/30/21 | | | |
| D20230 | MFWQTC BOC_SHOC Fan Replacement | 100% | Mon 7/1/19 | Tue 6/30/20 | | | |
| D20230 | PROCUREMENT & INSTALLATION | 100% | Sun 9/1/19 | Tue 6/30/20 | | | |
| D20230 | CLOSEOUT | 100% | Thu 6/25/20 | Tue 6/30/20 | • | | |
| D20249 | Biosolids Management Strategy | 100% | Tue 10/8/19 | Tue 5/26/20 | | | |
| D20249 | INITIATION & PROCUREMENT | 100% | Tue 10/8/19 | Thu 4/30/20 | | | |
| D20249 | CLOSEOUT | 100% | Fri 5/15/20 | Tue 5/26/20 | I | | |
| D20285 | MFWQTC LG Dryer Replacements | 23% | Mon 12/2/19 | Sat 5/28/22 | | | |
| D20285 | CONSTRUCTION | 34% | Fri 12/6/19 | Sun 8/1/21 | | | |
| D20304 | MFWQTC Headworks and Blower Building Repairs | 31% | Sun 9/1/19 | Fri 1/7/22 | | | |
| D20304 | DESIGN | 79% | Tue 9/24/19 | Mon 9/14/20 | | | |
| | | | | | | | _ I I. |
| Data Datí | Data Date: 6/30/20 NMC Project | L | Project Progress | | | | |
| | | | | | | | - I |
| Percent com | Percent complete is calculated based on phase duration. | | Page 2 of 3 | f 3 | | | |

Figure 2.4. NMC Quarterly Commitments Schedule



| MFWORT Loading Design Criteria 59% Tue 2/11/20 Wed 9/30/20 CLIDERION & PROCURFIMENT 60% Firal 2/11/20 Wed 9/30/20 CLIDERION 00% Firal 2/11/20 Wed 9/30/20 CLIDERION 100% Wed 2/26/20 Lue 6/30/20 ARRENENT 00% Firal 2/11/20 Wed 9/30/20 ARRENENT 100% Wed 7/1/20 Lue 6/30/20 ARRENENT 00% Wed 7/1/20 Lue 7/1/20 INITIATION PROCURFIMENT 0% Wed 7/1/20 Lue 7/1/20 INITIATION PROCURFIMENT 0% Wed 7/1/20 Lue 7/1/20 COSISTRUCTION 0% Wed 7/1/20 Lue 7/1/20 Lue 7/1/20 COSISTRUCTION 0% Wed 7/1/20 Lue 7/1/20 Lue 7/1/20 Ashind Fund 0% Wed 7/1/20 Lue 7/1/20 Lue 7/1/20 Ashind Fund 0% Wed 7/1/20 Lue 7/1/20 Lue 7/1/20 Ashind Fund 0% Wed 7/1/20 Lue 7/1/20 Lue 7/1/20 Ashind Fund 0% | 20306 | | | | | | Anr May lun | Ind Aur Sen |
|---|-----------|----------------------------|------------------------------|-----------------|--------------|---------------|-------------|-------------|
| IATION & PROCUREMENT 60% Tue 2/11/20 IATION & PROCUREMENT 0% Fri 9/25/20 SEOUT 27C Sewer and Manhole Condition 100% Wed 2/26/20 STC Sewer and Manhole Rehab 0% Wed 2/26/20 SEOUT 100% Wed 2/1/20 SEOUT 100% Wed 2/1/20 SEOUT 0% Wed 7/1/20 STRUCTION PROCUREMENT 0% Wed 7/1/20 ONT DIATION & PROCUREMENT 0% Wed 7/1/20 SEOUT 0% PROCUREMENT 0% ATTON & PROCUREMENT 0% Wed 7/1/20 ONTON & PROCUREMENT 0% Wed 7/1/20 IATION & PROCUREMENT 0% <td< td=""><td></td><td>MFWQTC Loading</td><td></td><td>59%</td><td>Tue 2/11/20</td><td>Wed 9/30/20</td><td>-</td><td>2</td></td<> | | MFWQTC Loading | | 59% | Tue 2/11/20 | Wed 9/30/20 | - | 2 |
| CLOSEOUT0%Fri 9/25/20MFWQTC Sewer and Manhole Condition100%Wed 2/26/20Assessment100%Wed 2/26/20Assessment100%Wed 2/26/20CLOSEOUT0%Wed 7/1/20MFWQTC Sewer and Manhole Rehab0%Wed 7/1/20MFMOTC Sewer and Manhole Rehab0%Wed 7/1/20MFMOTC Sewer and Manhole Rehab0%Wed 7/1/20MITIATION & PROCUREMENT0%Wed 7/1/20DESIGNOFSIGN0%Wed 7/1/20MITIATION & PROCUREMENT0%Wed 7/1/20MITIATION & PROCUREMENT0%Wed 7/1/20MITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Med 7/1/20INITIATION & PROCU | 20306 | INITIATION & PF | ROCUREMENT | 60% | Tue 2/11/20 | Wed 9/30/20 | | |
| MFWQTC Sewer and Manhole Condition 100% Wed 2/26/20 Assessment 100% Wed 2/26/20 DESIGN 100% Wed 2/26/20 CLOSEDUT 100% Wed 2/26/20 MFWQTC Sewer and Manhole Rehab 0% Wed 7/1/20 MFWQTC Sewer and Manhole Rehab 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 CONSTRUCTION PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN Ashiand RTC Facility Upgrades 9% Ked 7/1/20 CLOSEDUT 0% Wed 7/1/20 0% Ashiand RTC Facility Upgrades 0% Wed 7/1/20 DESIGN 0% Wed 7/1/20 INITIATION & PROCUREMENT | 0306 | CLOSEOUT | | %0 | Fri 9/25/20 | Wed 9/30/20 | | |
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| CLOSEOUT DOW Tue 6/23/20 MFWOTC Sever and Manhole Rehab 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 CONSTRUCTION CONSTRUCTION 0% Wed 7/1/20 CONSTRUCTION 0% Need 7/1/20 CONSTRUCTION 0% Wed 7/1/20 CONSTRUCTION 0% Wed 7/1/20 CONSTRUCTION 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Need 7/1/20 Ashland RTC Facility Upgrades 99% Fit 4/1/16 CLOSEOUT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% < | 0314 | DESIGN | | 100% | 00/90/0 Pe/M | Tile 6/30/20 | | |
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| INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Wed 7/1/20 BESIGN 0% Wed 7/1/20 Ashland RTC Facility Upgrades 99% Fri 4/1/16 CLOSEOUT 99% Fri 4/1/16 CLOSEOUT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT <td>1074</td> <td>CSO 190 PCCM</td> <td></td> <td>%0</td> <td>Wed 7/1/20</td> <td>Tue 5/10/22</td> <td></td> <td></td> | 1074 | CSO 190 PCCM | | %0 | Wed 7/1/20 | Tue 5/10/22 | | |
| DESIGN 0% Wed 7/1/20 Ashland RTC Facility Upgrades 99% Fit 4/1/16 Ashland RTC Facility Upgrades 99% Fit 4/1/16 CLOSEOUT 99% Wed 7/1/20 Clifton Heights Storage Basin Sump Pump Im 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 37% Fri 12/13/19 CLOSEOUT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 | 1074 | INITIATION & PR | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | | |
| Ashland RTC Facility Upgrades99%Fri 4/1/16CLOSEOUT99%Tue 6/25/19CLOSEOUT0%Wed 7/1/20Clifton Heights Storage Basin Sump Pump Im0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20FY21 Plumbing Modification Program0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20FY21 Plumbing Modification Program0%Wed 7/1/20INITIATION & PROCUREMENT0%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT50%Mon 7/1/19INITIATION & PROCUREMENT50% | 1074 | DESIGN | | %0 | Wed 7/1/20 | Mon 12/28/20 | | |
| CLOSEOUT 99% Tue 6/25/19 CIIfton Heights Storage Basin Sump Pump Im 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 FY21 Plumbing Modification Program 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 31% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% | 6003 | Ashland RTC Facili | ty Upgrades | %66 | Fri 4/1/16 | Fri 4/24/20 | | |
| Clifton Heights Storage Basin Sump Pump Im0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20FY21 Plumbing Modification Program0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Wed 7/1/20INITIATION & PROCUREMENT0%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19CLOSEOUT37%Fri 12/13/19CONSTRUCTION37%Fri 12/13/19Pr20 RTC Support100%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT100%Mon 7/1/19INITIATION & PROCUREMENT50%Mon 7 | 6003 | CLOSEOUT | | %66 | Tue 6/25/19 | Fri 4/24/20 | I | |
| INITIATION & PROCUREMENT 0% Wed 7/1/20 FY21 Plumbing Modification Program 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/19 INITIATION & PROCUREMENT 0% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 37% Fri 12/13/19 CLOSEOUT 37% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 | 1061 | Clifton Heights Sto | | %0 ^L | Wed 7/1/20 | Mon 5/30/22 | | |
| FY21 Plumbing Modification Program 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 FY20 NMC 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Sun 6/14/20 INITIATION & PROCUREMENT 100% Sun 6/14/20 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 31% Mon 7/2/18 Nightingale Rehab 37% Fri 12/13/19 CONSTRUCTION 37% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 | 1061 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Mon 10/12/20 | | |
| INITIATION & PROCUREMENT 0% Wed 7/1/20 FY20 NMC 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Sun 6/14/20 CLOSEOUT 100% Sun 6/14/20 Nightingale Rehab 31% Mon 7/1/19 Nightingale Rehab 31% Mon 7/1/19 CONSTRUCTION 37% Fri 12/13/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 | 8444 | FY21 Plumbing Mc | odification Program | %0 | Wed 7/1/20 | Wed 6/30/21 | | |
| FY20 NMC 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Sun 6/14/20 Nightingale Rehab 31% Mon 7/2/18 CONSTRUCTION 31% Mon 7/2/18 Nightingale Rehab 31% Mon 7/2/18 CONSTRUCTION 31% Mon 7/2/18 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 Initiation & PROCUREMENT 50% Mon 7/1/19 | 8444 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | |
| INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Sun 6/14/20 Nightingale Rehab 31% Mon 7/2/18 CONSTRUCTION 37% Fri 12/13/19 FY20 RTC Support 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 Initiation & PROCUREMENT 50% Mon 7/1/19 | 16056 | FY20 NMC | | 100% | Mon 7/1/19 | Tue 6/30/20 | | |
| CLOSEOUT 100% Sun 6/14/20 Nightingale Rehab 31% Mon 7/2/18 CONSTRUCTION 37% Fri 12/13/19 CONSTRUCTION 37% Mon 7/1/19 FY20 RTC Support 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 Initiation & PROCUREMENT 50% Mon 7/1/19 Initiation & PROCUREMENT 50% Mon 7/1/19 | 16056 | INITIATION & PF | ROCUREMENT | 100% | Mon 7/1/19 | Tue 6/30/20 | | |
| Nightingale Rehab 31% Mon 7/2/18 CONSTRUCTION 37% Fri 12/13/19 CONSTRUCTION 37% Fri 12/13/19 FY20 RTC Support 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 IST 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 | 16056 | CLOSEOUT | | 100% | Sun 6/14/20 | Tue 6/30/20 | I | |
| CONSTRUCTION 37% Fri 12/13/19 FY20 RTC Support 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 Initiation Non 7/1/19 Mon 7/1/19 Initiation Project Project | 16074 | Nightingale Rehab | | 31% | Mon 7/2/18 | Sun 6/5/22 | | |
| FY20 RTC Support 100% Mon 7/1/19 INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Mon 7/1/19 I-64 and Grinstead Infrastructure Rehabilitat 0% Mon 7/1/19 I-64 and Grinstead Infrastructure Rehabilitat 0% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 initiation & PROCUREMENT 50% Mon 7/1/19 | 16074 | CONSTRUCTION | | 37% | Fri 12/13/19 | Sat 6/5/21 | | |
| INITIATION & PROCUREMENT 100% Mon 7/1/19 CLOSEOUT 100% Mon 6/15/20 I-64 and Grinstead Infrastructure Rehabilitat 0% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 initiation 800% Mon 7/1/19 | 8442 | FY20 RTC Support | | 100% | Mon 7/1/19 | Tue 6/30/20 | | |
| CLOSEOUT 100% Mon 6/15/20 I-64 and Grinstead Infrastructure Rehabilitat 0% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 ite: 6/30/20 NMC Project Project Progress | 18442 | INITIATION & PF | ROCUREMENT | 100% | Man 7/1/19 | Tue 6/30/20 | | |
| I-64 and Grinstead Infrastructure Rehabilitat 0% Mon 7/1/19 INITIATION & PROCUREMENT 50% Mon 7/1/19 initiation & Project Project Progress | 18442 | CLOSEOUT | | 100% | Mon 6/15/20 | Tue 6/30/20 | | |
| INITIATION & PROCUREMENT 50% Mon 7/1/19 ate: 6/30/20 NMC Project Project Progress | 18503 | I-64 and Grinstead | l Infrastructure Rehabilitat | :0% | Mon 7/1/19 | Wed 7/24/24 | | |
| NMC Project | 18503 | INITIATION & PF | | 50% | Mon 7/1/19 | Thu 7/1/21 | | |
| NMC Project | | | | | | | | |
| | ata Date: | 6/30/20 | NMC Project | Pro | ect Progress | | | |
| | | | | | | | | |



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SECTION 3: PROGRAM ACTIVITIES FOR SEWER OVERFLOW RESPONSE PROTOCOL (SORP)

3.1. 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, and 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.msdprojectwin.org. The following activities were performed during this reporting period.

3.2. 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, 17 unauthorized discharges were identified through route reconnaissance. During this period, 3 inspection routes were run.

The West County route is monitored via telemetry. 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 37,400 gallons due to capacity-related issues during this reporting period. Hauling was also initiated due to other issues as indicated in Table 3.1.

Table 3.1. Hauled Volumes in Gallons

| PROBLEM | APRIL | MAY | JUN |
|-------------------------|-------|-------|--------|
| LACK OF SYSTEM CAPACITY | - | 4,200 | 23,200 |
| STRUCTURAL FAILURE | - | - | 10,000 |

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.

Second quarter training utilizes the online format, and included four modules under Assessment, Mitigation & Documentation:

- Assessment & Minimum Documentation
- Mitigation
- Updates

The quarterly training was delivered to 269 staff in Operations and Engineering.



Third quarter training utilizes the online format, and includes modules under Public Notification & Overflow Cleanup:

- Public Notification: Event-Based Activities
- Public Notification: Programmatic Activities
- Overflow Cleanup
- Updates

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 4: PROGRAM ACTIVITIES FOR DISCHARGE ABATEMENT PLANS (DAP)

4.1. 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.

4.2. 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.

4.2.1. 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.

4.2.2. 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.msdprojectwin.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.



4.2.3. 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.msdprojectwin.org.

4.3. 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.

4.3.1. 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.msdprojectwin.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.

4.3.2. 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.msdprojectwin.org.

4.3.3. GREEN INFRASTRUCTURE PROGRAM UPDATE

The IOAP describes that "MSD's long-range commitment to this [Green Infrastructure] program will be based on how green performs in comparison to more traditional gray solutions" (Volume 2, Chapter 4, page 12). Through coordination with EPA and with strong support of MSD's Wet Weather Team stakeholder group, MSD's program evolved from solely project-level benefits to maximizing programmatic and community benefits. MSD's green infrastructure program has been successful in downsizing or eliminating gray infrastructure projects, providing a programmatic factor of safety, and providing community enhancements, as described in the FY2019 Annual Report (Section 4.3.4). Beginning with the FY2020 Annual Report, MSD will provide updates on green infrastructure practices constructed during substantial development projects and inspections of existing practices.

4.4. DISCHARGE ABATEMENT PLAN PROJECT STATUS

4.4.1. SANITARY SEWER DISCHARGE PLAN (SSDP)

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

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

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

4.4.3. 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 4.1. 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.

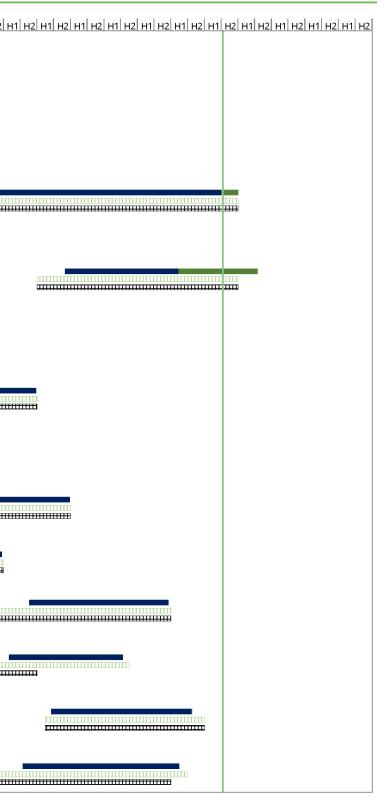
| re 4.1. IOAP Implementation Schedu | Complete | 2 | | | Completion | Modifications* | | H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H |
|---|----------|-------------|--------------|--------------|--------------|----------------|--|------------------------------------|
| | | | | | | | | |
| LONG TERM CONTROL PLAN | | | | | | | | |
| GREEN DEMONSTRATION PROJECTS | | | | | | | | |
| Green Infrastructure Demonstration Projects | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 12/31/11 | Sat 12/31/11 | | |
| Green Infrastructure Demonstration Projects | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 12/31/11 | Sat 12/31/11 | | |
| Green Infrastructure Program | 96% | Thu 1/1/09 | Thu 12/31/20 | NA | Thu 12/31/20 | Thu 12/31/20 | | |
| Green Infrastructure Program | 96% | Thu 1/1/09 | Thu 12/31/20 | NA | Thu 12/31/20 | Thu 12/31/20 | | |
| GRAY INFRASTRUCTURE PROJECTS | | | | | | | | |
| Waterway Protection Tunnel | 75% | Thu 1/1/15 | Sat 7/31/21 | NA | Thu 12/31/20 | Thu 12/31/20 | | |
| Waterway Protection Tunnel | 75% | Thu 1/1/15 | Sat 7/31/21 | 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 | |
| CSO058 In-Line Storage and Green | 100% | Thu 7/1/10 | Tue 12/23/14 | Thu 12/18/14 | Wed 12/31/14 | Wed 12/31/14 | | |
| CSO058 In-Line Storage and Green Infrastructure | 100% | Thu 7/1/10 | 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% | Thu 7/1/10 | Sun 12/30/12 | Sun 12/30/12 | Mon 12/31/12 | Mon 12/31/12 | | |
| CSO123 Downspout Disconnection | 100% | Thu 7/1/10 | 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% | Fri 7/1/11 | Wed 12/23/15 | Wed 12/23/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| CSO140 In-Line Storage & Green Infrastructure Controls | 100% | Fri 7/1/11 | 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 | |
| CSO206 Sewer Separation | 100% | Wed 4/1/09 | Thu 12/12/13 | Thu 12/12/13 | Tue 12/31/13 | Mon 12/30/13 | | |
| CSO206 Sewer Separation | 100% | Wed 4/1/09 | 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% | Fri 11/1/13 | Sat 12/1/18 | Sat 12/1/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| Clifton Heights Storage Basin | 100% | Fri 11/1/13 | 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% | Wed 7/1/09 | Mon 7/24/17 | Mon 7/24/17 | Wed 12/31/14 | Sat 9/30/17 | | |
| Bells Lane Wet Weather Treatment Facility | 100% | Wed 7/1/09 | 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 | |
| Portland CSO Basin | 100% | Wed 4/1/15 | Sun 8/18/19 | Fri 8/9/19 | Tue 12/31/19 | Tue 12/31/19 | | |
| Portland CSO Basin | 100% | Wed 4/1/15 | 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 | |
| Southwestern Parkway Storage Basin | 100% | Thu 1/1/09 | Fri 3/29/19 | Fri 3/29/19 | Mon 12/31/18 | Sun 6/30/19 | | |
| Southwestern Parkway Storage Basin | 100% | Thu 1/1/09 | 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 | |

Approved 2009 IOAP

Completed Work

Includes 2014 approval of 2012 IOAP Modification as well as all minor mod letter approvals to date. MSD has a need to reprioritize its capital program. As 1 of 9 such, MSD is currently discussing the start and end dates for the remaining IOAP projects that have not yet started with USEPA and KDOW. The dates that are shown in Figure 4-1 as "NA" and will be provided in a future report pending the outcome of these discussions. The dates that were previously provided





Data Date: 6/30/20

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| 1 | Complete | 5 | | | Completion | Modifications* | | H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H |
|--|----------|-------------|--------------|--------------|--------------|----------------|-------------------------|------------------------------------|
| Central Relief Drain CSO In-Line Storage, Green Infrastructure & Distributed | 100% | Thu 1/1/15 | 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% | Thu 1/1/15 | Fri 11/30/18 | Fri 11/30/18 | NA | Mon 12/31/18 | L_OR_MF_155_M_09B_B_B_4 | |
| SO160 In-Line Storage & Green nfrastructure Controls | 100% | Sun 1/1/12 | Thu 12/10/15 | Thu 12/10/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| CSO160 In-Line Storage & Green Infrastructure Controls | 100% | Sun 1/1/12 | 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 | |
| Adams Street Sewer Separation | 100% | Fri 1/1/10 | Wed 11/28/12 | Wed 11/28/12 | Mon 12/31/12 | Mon 12/31/12 | | |
| Adams Street Sewer Separation | 100% | Fri 1/1/10 | 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 | |
| SO190 Green Infrastructure Solution | 100% | Sat 11/1/14 | Sun 12/31/17 | Fri 12/29/17 | Sun 12/31/17 | Sun 12/31/17 | | |
| CSO190 Green Infrastructure Solution | 100% | Sat 11/1/14 | 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 | |
| outhern Outfall Inline Storage at 43rd St SOR1) & Morris Forman WQTC | 100% | Tue 10/1/13 | 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% | Tue 10/1/13 | 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% | Tue 10/1/13 | 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% | Tue 10/1/13 | Fri 11/30/18 | Fri 11/30/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| Morris Forman WQTC Headworks | 100% | Tue 10/1/13 | Fri 11/30/18 | Fri 11/30/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| Morris Forman WQTC Headworks | 100% | Tue 10/1/13 | Fri 11/30/18 | Fri 11/30/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| MF Main Diversion Structure | 100% | Tue 10/1/13 | Wed 11/28/18 | Wed 11/28/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| MF Main Diversion Structure | 100% | Tue 10/1/13 | Wed 11/28/18 | Wed 11/28/18 | Mon 12/31/18 | Mon 12/31/18 | | |
| Nightingale Pump Station Replacement & | 100% | Sun 4/1/12 | Thu 6/29/17 | Thu 6/29/17 | Sat 12/31/16 | Fri 6/30/17 | | |
| Nightingale Pump Station Replacement & Storage | 100% | Sun 4/1/12 | Thu 6/29/17 | Thu 6/29/17 | Sat 12/31/16 | Fri 6/30/17 | L_SO_MF_018_S_03_A_A | |
| ogan and Breckenridge Street Storage Basin | 100% | Sun 4/1/12 | Wed 10/18/17 | Wed 12/20/17 | Sun 12/31/17 | Sun 12/31/17 | | |
| Logan and Breckenridge Street Storage Basin | 100% | Sun 4/1/12 | 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 | |
| CSO093 Structural Modifications & Green | 100% | Tue 11/1/11 | Wed 12/23/15 | Wed 12/23/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| CSO093 Structural Modifications & Green Infrastructure | 100% | Tue 11/1/11 | 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 | |
| SO108 Dam Modifications | 100% | Thu 1/1/09 | Thu 12/30/10 | Thu 12/30/10 | Fri 12/31/10 | Fri 12/31/10 | | |
| CSO108 Dam Modifications | 100% | Thu 1/1/09 | 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 | |

Approved 2009 IOAP

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| н1 н2 н1 н2 н1 н2 н1 н2 н1 н2 н1 | H2 H1 H2 H1 H2 H1 H2 H1 H2 |
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| ure 4.1. IOAP Implementation Schedule | e Complete | <u>_</u> | | | Completion | Modifications* | | H1 H2 H1 H |
|--|----------------------|-------------|--------------|--------------|---------------|---------------------------------------|-------------------------|---|
| Story Avenue and Spring Street Green Infrastructure | • | Mon 4/1/13 | Tue 12/20/16 | Tue 12/20/16 | Sat 12/31/16 | Sat 12/31/16 | | |
| Story Avenue and Spring Street Green | 100% | Mon 4/1/13 | 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 | |
| FLOOD PUMP STATION PROJECTS | | | | | | | | |
| 27th Street Flood Pump Station DWO | 100% | Thu 7/1/10 | Fri 6/28/13 | Fri 6/28/13 | Sun 6/30/13 | Sun 6/30/13 | | |
| Elimination | | | | | | | | |
| 27th Street Flood Pump Station DWO Elimination | 100% | Thu 7/1/10 | 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% | Sun 11/1/09 | Mon 6/11/12 | Mon 6/11/12 | Mon 12/31/12 | Mon 12/31/12 | | |
| 34th Street Flood Pump Station DWO | 100% | Sun 11/1/09 | Mon 6/11/12 | Mon 6/11/12 | Mon 12/31/12 | Mon 12/31/12 | L_OR_MF_019_S_03_A_B | |
| Elimination | | | | | | | | |
| 4th Street Flood Pump Station DWO Elimination | 100% | Sun 11/1/09 | Fri 6/15/12 | Fri 6/15/12 | Mon 12/31/12 | Mon 12/31/12 | | |
| 4th Street Flood Pump Station DWO | 100% | Sun 11/1/09 | Fri 6/15/12 | Fri 6/15/12 | Mon 12/31/12 | Mon 12/31/12 | L_OR_MF_022_M_03_A_A | |
| Elimination | | | | | | | | |
| Shawnee Flood Pump Station DWO Elimination | 100% | Thu 7/1/10 | Tue 6/18/13 | Tue 6/18/13 | Sun 6/30/13 | Sun 6/30/13 | | |
| Shawnee Flood Pump Station DWO Elimination | 100% | Thu 7/1/10 | 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 | 100% | Thu 1/1/09 | Thu 12/18/14 | Thu 12/18/14 | Wed 12/31/14 | Wed 12/31/14 | | |
| Elimination | | | | | | | | |
| 17th Street Flood Pump Station DWO Elimination | 100% | Thu 1/1/09 | 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% | NA | Tue 12/31/24 | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| BEARGRASS CREEK MIDDLE FORK AREA | | | | | | | | |
| Goose Creek PS Improvements and Wet Weather Storage | 58% | Fri 4/15/16 | NA | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| Goose Creek PS Improvements & | 100% | Fri 4/15/16 | Thu 6/29/17 | Tue 7/25/17 | Tue 12/31/24 | Tue 12/31/24 | | |
| Wet Weather Storage 1 - Devondale PS and Bancroft WQTC Elimination | | | ,, | | , , , | · · · · · · · · · · · · · · · · · · · | | |
| Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale PS and Bancroft WQTC | 100% | Fri 4/15/16 | Thu 6/29/17 | Tue 7/25/17 | Tue 12/31/24 | Tue 12/31/24 | S_MI_MF_NB04_M_03_B | |
| Elimination | | | | | | | | |
| Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | S_MI_MF_NB04_M_03_B | |
| Anchor Estates Pump Station Elimination | 100% | Tue 11/1/11 | 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% | Mon 4/1/13 | Fri 4/15/16 | Fri 4/15/16 | Sat 12/31/16 | Sat 12/31/16 | | |

Approved 2009 IOAP

Completed Work

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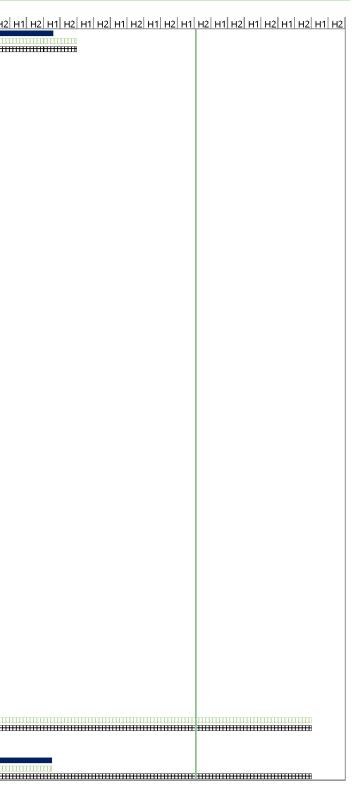


| | Complete | e | | | Completion | Modifications* | | <u>H1 H2 H1 H2 H1 H2 H1 H2 H1 H</u> |
|--|----------|--------------|--------------|--------------|--------------|----------------|---------------------------|-------------------------------------|
| Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination | 100% | Mon 4/1/13 | 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% | Tue 11/1/11 | 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% | Tue 11/1/11 | 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% | Wed 7/1/09 | Tue 12/27/11 | Tue 12/27/11 | Sat 12/31/11 | Sat 12/31/11 | | |
| Hurstbourne I/I Investigation & Rehabilitation | 100% | Wed 7/1/09 | 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% | Wed 4/1/09 | 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% | Wed 4/1/09 | 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% | Wed 4/1/09 | 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% | NA | NA | 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% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | S_MISF_MF_NB01_M_01_C_A1 | |
| EDAR CREEK AREA | | | | | | | | |
| Little Cedar Creek Interceptor Improvements | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| Little Cedar Creek Interceptor Improvements | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | S_CC_CC_67997_M_01_C | |
| Idlewood Inline Storage | 0% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | | |
| Idlewood Inline Storage | 0% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | S_CC_CC_70158_M_09A_C | |
| Bardstown Rd. PS Improvements | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Bardstown Rd. PS Improvements | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | S_CC_CC_MSD1025_S_03_B | _ |
| Running Fox PS Elimination | 100% | Thu 1/1/09 | Wed 3/10/10 | Wed 3/10/10 | Fri 12/31/10 | Fri 12/31/10 | | |
| Running Fox PS Elimination | 100% | Thu 1/1/09 | 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% | Fri 12/18/09 | Wed 3/30/16 | Thu 3/31/16 | Sun 12/31/23 | Sun 12/31/23 | | |
| Fairmount Rd PS Improvements | 100% | Fri 12/18/09 | Tue 4/24/12 | Tue 4/24/12 | Sun 12/31/23 | Sun 12/31/23 | | |
| Fairmount Rd PS Improvements | 100% | Fri 12/18/09 | 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% | Sat 3/3/12 | Thu 3/31/16 | Thu 3/31/16 | Sun 12/31/23 | Thu 3/31/16 | | |
| Fairmount PS Offline Storage Basin | 4000/ | Sat 3/3/12 | Thu 3/31/16 | Thu 3/31/16 | Sun 12/31/23 | Thu 3/31/16 | S_FF_CC_81316_M_03_C_A | |

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| | Complet | e | | | Completion | Modifications* | | H1 H2 | <u>H1 H2 H1 H2 H1 H2 H</u> |
|---|---------|-------------|--------------|--------------|--------------|----------------|--------------------------|---|----------------------------|
| OMBINED SEWER SYSTEM AREA | | | | | | | | | |
| Hazelwood PS I/I Investigation & Rehabilitation | 100% | Thu 1/1/09 | Thu 6/30/11 | Thu 6/30/11 | Thu 6/30/11 | Thu 6/30/11 | | | |
| Hazelwood PS I/I Investigation & Rehabilitation | 100% | Thu 1/1/09 | 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% | Wed 7/1/09 | Thu 6/30/11 | Thu 6/30/11 | Thu 6/30/11 | Thu 6/30/11 | | | |
| Sonne Pump Station I/I Investigation & Rehabilitation | 100% | Wed 7/1/09 | 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 | 66% | Thu 1/1/09 | Fri 12/15/23 | NA | Sun 12/31/17 | Sun 12/31/17 | | | |
| Camp Taylor Phase 1 - SSES | 100% | Thu 1/1/09 | Fri 7/8/11 | Fri 7/8/11 | Sat 12/31/11 | Tue 12/31/13 | | | |
| Camp Taylor Phase 1 - SSES | 100% | Thu 1/1/09 | 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 Phase 2 - Sewer Replacement and Rehabilitation | 100% | Wed 4/1/09 | 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% | Wed 4/1/09 | 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 Phase 3 - Sewer Replacement and Rehabilitation | 100% | Mon 7/1/13 | 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% | Mon 7/1/13 | 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 Phase 4 - Storage Basin and Sewer Upsize | 0% | Wed 7/1/20 | Fri 12/15/23 | NA | Tue 12/31/24 | Tue 12/31/24 | | | |
| Camp Taylor Phsae 4 - Storage Basin and Sewer Upsize | 0% | Wed 7/1/20 | Fri 12/15/23 | NA | Tue 12/31/24 | Tue 12/31/24 | S_SF_MF_30917_M_09_A | | |
| OYDS FORK AREA | | | | | | | | | |
| Woodland Hill PS Diversion | 100% | Thu 4/1/10 | Thu 3/4/10 | Thu 3/4/10 | Thu 6/30/11 | Thu 4/1/10 | | | |
| Woodland Hill PS Diversion | 100% | Thu 4/1/10 | 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% | Thu 1/1/09 | Wed 12/30/09 | Wed 12/30/09 | Fri 12/31/21 | Fri 1/22/10 | | | |
| Ashburton PS Improvements & Diversion | 100% | Thu 1/1/09 | Wed 12/30/09 | Wed 12/30/09 | Fri 12/31/21 | Fri 1/22/10 | S_FF_FF_NB03_M_01_C_A | | |
| TE CREEK AREA | | | | | | | | | |
| Meadow Stream Pump Station & Force Main Upgrade | 100% | Tue 7/1/14 | 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 7/1/14 | Tue 12/18/12 | Tue 12/18/12 | Sat 12/31/16 | Sat 12/31/16 | S_HC_HC_MSD1082_S_09A_C | | |
| Kavanaugh Rd. PS Improvements | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | | | |
| Kavanaugh Rd. PS Improvements | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | S_HC_HC_MSD1085_S_03_A | | |
| Floydsburg Rd. I/I Investigation & Rehabilitation | 100% | Sun 11/1/09 | Fri 12/17/10 | Fri 12/17/10 | Fri 12/31/10 | Fri 12/31/10 | | | |
| Floydsburg Rd. I/I Investigation & Rehabilitation | 100% | Sun 11/1/09 | Fri 12/17/10 | Fri 12/17/10 | Fri 12/31/10 | Fri 12/31/10 | S_HC_HC_MSD1086_M_07_C_A | | |

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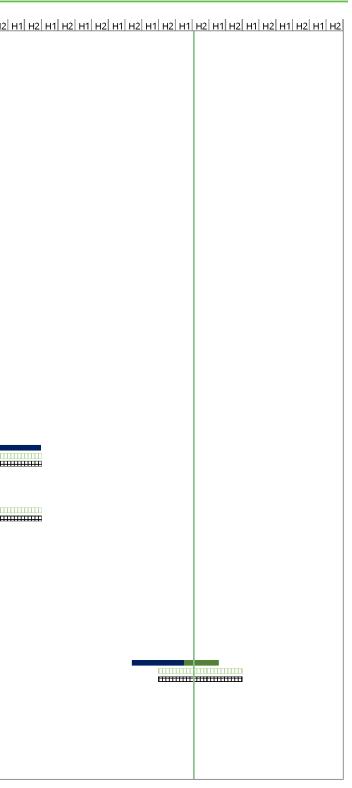
| re 4.1. IOAP Implementation Schedule |) Complete | 2 | | | Completion | Modifications* | | H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H |
|--|---------------|------------|--------------|--------------|--------------|----------------|-----------------------|--|
| INTERIM SSP PROJECTS | ÷ | | | | | | | |
| Beechwood Village Sanitary Sewer Replacement | 100% | Thu 1/1/09 | Wed 9/29/10 | Wed 9/29/10 | Wed 4/27/11 | Wed 4/27/11 | | |
| Beechwood Village Sanitary Sewer Replacement | 100% | Thu 1/1/09 | Wed 9/29/10 | Wed 9/29/10 | Wed 4/27/11 | Wed 4/27/11 | | |
| Sinking Fork Relief Sewer | 100% | Thu 1/1/09 | Mon 11/30/09 | Mon 11/30/09 | Thu 12/30/10 | Wed 12/23/09 | | |
| Sinking Fork Relief Sewer | 100% | Thu 1/1/09 | Mon 11/30/09 | Mon 11/30/09 | Thu 12/30/10 | Wed 12/23/09 | | |
| Derek R. Guthrie Water Quality Treatment Center | 100% | Thu 1/1/09 | Tue 11/27/12 | Tue 11/27/12 | Tue 11/27/12 | Tue 11/27/12 | | |
| Derek R. Guthrie Water Quality Treatment Center | | Thu 1/1/09 | Tue 11/27/12 | Tue 11/27/12 | Tue 11/27/12 | Tue 11/27/12 | | |
| Hikes Lane Interceptor and Highgate Springs PS | | Thu 1/1/09 | Fri 11/2/12 | Fri 11/2/12 | Tue 11/27/12 | Tue 11/27/12 | | |
| Hikes Lane Interceptor and Highgate Springs PS | | Thu 1/1/09 | Fri 11/2/12 | Fri 11/2/12 | Tue 11/27/12 | Tue 11/27/12 | | |
| Northern Ditch Diversion Interceptor | 100% | Thu 1/1/09 | Wed 2/16/11 | Wed 2/16/11 | Sun 7/31/11 | Sun 7/31/11 | | |
| Northern Ditch Diversion Interceptor | 100% | Thu 1/1/09 | Wed 2/16/11 | Wed 2/16/11 | Sun 7/31/11 | Sun 7/31/11 | | |
| Southeastern Diversion Structure and Interceptor | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 5/12/12 | Sat 5/12/12 | | |
| Southeastern Diversion Structure and Interceptor | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 5/12/12 | Sat 5/12/12 | | |
| EFFERSONTOWN AREA | | | | | | | | |
| Jeffersontown WQTC Elimination | 100% | Thu 4/1/10 | Wed 12/23/15 | Wed 12/23/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| Jeffersontown WQTC Elimination | 100% | Thu 4/1/10 | 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% | Thu 4/1/10 | 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% | Thu 4/1/10 | Mon 9/22/14 | Mon 9/22/14 | Thu 12/31/15 | Thu 12/31/15 | S_JT_JT_NB01A_M_03_C | |
| Dell Rd and Charlane Pkwy Interceptor Improvements | 0% | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | | |
| Dell Rd and Charlane Pkwy Interceptor Improvements | 0% | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | S_JT_JT_NB02_M_01_C | |
| Raintree and Marian Ct 1 | 38% | Mon 7/1/19 | Wed 6/30/21 | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Raintree and Marian Ct 1 - PS Elimination | 77% | Mon 7/1/19 | Fri 2/12/21 | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Raintree and Marian Ct 1 - PS Elimination | 77% | Mon 7/1/19 | Fri 4/16/21 | NA | Fri 12/31/21 | Fri 12/31/21 | S_JT_JT_NB03_M_01_C | |
| Raintree and Marian Ct 2 - Pipe Upgrades | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Raintree and Marian Ct 2 - Pipe Upgrades | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | S_JT_JT_NB03_M_01_C | |

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| ure 4.1. IOAP Implementation Schedule |) Complet | to | | | Completion | Modifications* | 1 | H1 H2 H1 |
|---|--------------|------------|--------------|--------------|--------------|----------------|-----------------------|--|
| Monticello PS Elimination | | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | | |
| Monticello PS Elimination | 0% | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | S_JT_JT_NB04_M_01_A | |
| MILL CREEK AREA | | | | | | | | |
| Shively Interceptor | 100% | Wed 7/1/09 | Fri 4/13/12 | Fri 4/13/12 | Wed 12/31/14 | Wed 12/31/14 | | |
| Shively Interceptor | 100% | Wed 7/1/09 | 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% | Thu 1/1/09 | Fri 3/30/12 | Fri 3/30/12 | Fri 12/31/21 | Fri 12/31/21 | | |
| East Rockford PS Relocation | 100% | Thu 1/1/09 | 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 | | | | | | | | |
| Mellwood System Improvements & PS Elimination | 49% | Wed 4/1/09 | Wed 12/19/12 | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements | 100% | Wed 4/1/09 | 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 Improvements | 100% | Wed 4/1/09 | 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 Valley Elimination | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | | |
| Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination | 0% | NA | NA | NA | Tue 12/31/24 | Tue 12/31/24 | S_OR_MF_NB01_M_01_B | |
| Derington Ct. PS I/I Investigation & Rehabilitation | 100% | Thu 4/1/10 | Fri 3/30/12 | Fri 3/30/12 | Sat 3/31/12 | Sat 3/31/12 | | |
| Derington Ct. PS I/I Investigation & Rehabilitation | 100% | Thu 4/1/10 | 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 | 100% | Fri 7/1/11 | Mon 12/19/16 | Mon 12/19/16 | Sat 12/31/16 | Sat 12/31/16 | | |
| Prospect #1 - WQTC Eliminations | 100% | Fri 7/1/11 | Tue 12/15/15 | Tue 12/15/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| Prospect #1 - WQTC Eliminations | 100% | Fri 7/1/11 | 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% | Fri 7/1/11 | Tue 12/15/15 | Tue 12/15/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| Prospect #2 - Harrods Creek PS and FM | 100% | Fri 7/1/11 | 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% | Tue 1/1/13 | Mon 12/19/16 | Mon 12/19/16 | Sat 12/31/16 | Sat 12/31/16 | | |
| Prospect #3 - ORFM System Improvements | 100% | Tue 1/1/13 | 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 | | | | | | | | |
| CPE_CCP Modifications To WQTC | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 12/31/11 | Sat 12/31/11 | | |
| CPE_CCP Modifications To WQTC | 100% | Thu 1/1/09 | Mon 12/19/11 | Mon 12/19/11 | Sat 12/31/11 | Sat 12/31/11 | | |

Approved 2009 IOAP

Completed Work

Includes 2014 approval of 2012 IOAP Modification as well as all minor mod letter approvals to date. MSD has a need to reprioritize its capital program. As such, MSD is currently discussing the start and end dates for the remaining IOAP projects that have not yet started with USEPA and KDOW. The dates that are shown in Figure 4-1 as "NA" and will be provided in a future report pending the outcome of these discussions. The dates that were previously provided



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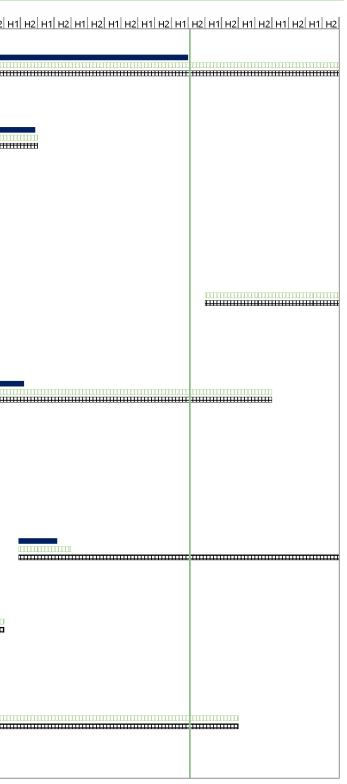


| e 4.1. IOAP Implementation Schedul | ≠ Complete | | | | Completion | Modifications* | | <u> H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 H1 H2 </u> |
|---|---------------|-------------|--------------|--------------|--------------|----------------|------------------------|--|
| I/I Reduction Program | 100% | Thu 1/1/09 | Tue 6/30/20 | Tue 6/30/20 | Tue 12/31/24 | Tue 12/31/24 | | |
| I/I Reduction Program | 100% | Thu 1/1/09 | Tue 6/30/20 | Tue 6/30/20 | Tue 12/31/24 | Tue 12/31/24 | | |
| OND CREEK AREA | | | | | | | | |
| Lea Ann Way System Improvements | 100% | Mon 7/1/13 | Fri 12/4/15 | Fri 12/4/15 | Thu 12/31/15 | Thu 12/31/15 | | |
| Lea Ann Way System Improvements | 100% | Mon 7/1/13 | Fri 12/4/15 | Fri 12/4/15 | Thu 12/31/15 | Thu 12/31/15 | S_PO_WC_PC08_M_01_C | |
| Edsel PS I/I Investigation & Rehabilitation | 100% | Thu 1/1/09 | Tue 9/27/11 | Tue 9/27/11 | Sat 12/31/11 | Fri 9/30/11 | | |
| Edsel PS I/I Investigation & Rehabilitation | 100% | Thu 1/1/09 | 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% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | | |
| Cinderella PS Elimination | 0% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | S_PO_WC_PC04_M_01_C | |
| Government Center PS Elimination | 100% | Fri 1/1/21 | Fri 4/1/11 | Fri 4/1/11 | Tue 12/31/24 | Tue 12/31/24 | | |
| Government Center PS Elimination | 100% | Fri 1/1/21 | 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% | Thu 1/1/09 | Fri 7/10/09 | Fri 7/10/09 | Fri 12/31/10 | Fri 12/31/10 | | |
| Avanti PS Elimination | 100% | Thu 1/1/09 | 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% | Tue 12/1/98 | Wed 8/5/15 | Wed 8/5/15 | Sat 12/31/22 | Sat 12/31/22 | | |
| Charleswood Interceptor Extension | 100% | Tue 12/1/98 | 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% | Fri 1/1/10 | 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% | Fri 1/1/10 | 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% | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | | |
| Leven PS Elimination | 0% | NA | NA | NA | Sat 12/31/22 | Sat 12/31/22 | S_PO_WC_PC10_M_01_C | |
| Caven Ave Pump Station Elimination | 100% | Wed 6/10/15 | Mon 8/1/16 | Mon 8/1/16 | Tue 12/31/24 | Sat 12/31/16 | | |
| Caven Ave Pump Station Elimination | 100% | Wed 6/10/15 | Mon 8/1/16 | Mon 8/1/16 | Tue 12/31/24 | Sat 12/31/16 | S_PO_WC_PC09_M_09B_C | |
| ALL WWTP AREA | | | | | | | | |
| Riding Ridge PS Improvements | 100% | Tue 1/1/13 | Sat 11/15/14 | Sat 11/15/14 | Wed 12/31/14 | Wed 12/31/14 | | |
| Riding Ridge PS Improvements | 100% | Tue 1/1/13 | 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% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Lucas Lane PS Inline Storage | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | S_FF_BT_NB01_S_09A_C_A | |
| St. Rene Rd. PS Elimination | 100% | Tue 6/24/14 | Fri 9/19/14 | Fri 9/19/14 | Fri 12/31/21 | Fri 12/31/21 | | |
| St. Rene Rd. PS Elimination | 100% | Tue 6/24/14 | Fri 9/19/14 | Fri 9/19/14 | Fri 12/31/21 | Fri 12/31/21 | S_FF_CH_NB01_S_09A_C_A | |
| Lake Forest PS SSO Investigation | 100% | Sat 1/1/11 | Tue 12/18/12 | Tue 12/18/12 | Mon 12/31/12 | Mon 12/31/12 | | |
| Lake Forest PS SSO Investigation | 100% | Sat 1/1/11 | Tue 12/18/12 | Tue 12/18/12 | Mon 12/31/12 | Mon 12/31/12 | S_FF_LF_NB01_S_13_C_A | |

Approved 2009 IOAP

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PROJECT WIN QUARTERLY REPORT #59 APRIL 1, 2020 - JUNE 30, 2020



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JULY 30, 2020

| ure 4.1. IOAP Implementation Schedu | Complete | 2 | | | Completion | Modifications* | | H1 H2 H1 |
|--|----------|-------------|--------------|--------------|--------------|----------------|------------------------|--|
| Gunpowder PS Inline Storage | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | | |
| Gunpowder PS Inline Storage | 0% | NA | NA | NA | Fri 12/31/21 | Fri 12/31/21 | S_HC_HN_NB02_S_09A_C_B | |
| Fairway View PS Improvements | 100% | Tue 1/1/13 | Tue 12/30/14 | Tue 12/30/14 | Wed 12/31/14 | Wed 12/31/14 | | |
| Fairway View PS Improvements | 100% | Tue 1/1/13 | Tue 12/30/14 | Tue 12/30/14 | Wed 12/31/14 | Wed 12/31/14 | S_HC_HS_NB01_S_03_C_A | |
| SOUTHEASTERN DIVERSION AREA | | | | | | | | |
| Parkview Estates I/I Investigation & Rehabilitation | 100% | Fri 1/1/10 | Tue 6/28/11 | Tue 6/28/11 | Sat 12/31/11 | Sat 12/31/11 | | |
| Parkview Estates I/I Investigation & Rehabilitation | 100% | Fri 1/1/10 | 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% | Fri 10/1/10 | Thu 12/5/13 | Thu 12/5/13 | Thu 12/31/15 | Thu 12/31/15 | | |
| Klondike Interceptor | 100% | Fri 10/1/10 | 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% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | | |
| Sutherland Interceptor | 0% | NA | NA | NA | Sun 12/31/23 | Sun 12/31/23 | S_SD_MF_NB05_M_01_A | |
| Beargrass Interceptor Rehab Ph. 2 | 100% | Wed 4/1/09 | Tue 12/14/10 | Tue 12/14/10 | Fri 12/31/10 | Fri 12/31/10 | | |
| Beargrass Interceptor Rehab Ph. 2 | 100% | Wed 4/1/09 | Tue 12/14/10 | Tue 12/14/10 | Fri 12/31/10 | Fri 12/31/10 | S_SD_MF_NB06_S_13_C | |

Completed Work

Approved 2009 IOAP

Includes 2014 approval of 2012 IOAP Modification as well as all minor mod letter approvals to date. MSD has a need to reprioritize its capital program. As such, MSD is currently discussing the start and end dates for the remaining IOAP projects that have not yet started with USEPA and KDOW. The dates that are shown in Figure 4-1 as "NA" and will be provided in a future report pending the outcome of these discussions. The dates that were previously provided



Data Date: 6/30/20







SECTION 5: PROGRAM ACTIVITIES FOR PUBLIC OUTREACH, EDUCATION, NOTIFICATION AND PARTICIPATION

5.1. 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.

5.2. PUBLIC EDUCATION PROGRAMS

A public education program about Louisville MSD's primary business functions of wastewater treatment, stormwater management and flood protection has been developed and is in use across multiple platforms. MSD uses earned media through local and regional outlets to educate the public about our vital services, initiatives, consent decree projects and more.

Paid advertising is utilized in our local papers—Business First and the Courier Journal—to inform and educate the public about our consent decree projects and MS4 initiatives. We moved from a single full-page print ad in the Courier Journal to three quarter-page ads, increasing the reach to an estimated 306,000 for the Project WIN messaging. We also added a digital campaign to augment the print ads, reaching more than 831,000. The digital on-line campaign continued to increase awareness of the Waterway Protection Tunnel project, sewer overflows and What Not To Flush.

Direct mail communications through post card, letters and bill inserts are also utilized for external communications.

Social media and our website — LouisvilleMSD.org — are important methods to reach and educate the public. We are on FaceBook, Twitter and Instagram.

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.

During the reporting period, Metro TV aired the programs listed in Table 5.1.

Table 5.1. Metro TV Broadcasts

| DATE | PROGRAM TITLE | ORIGINAL MEETING DATE |
|-----------|--|-----------------------|
| 4/1/2020 | Ohio River Tunnel: Construction Meeting | 1/10/2018 |
| 4/8/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 4/20/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 4/26/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 5/10/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 5/11/2020 | Ohio River Tunnel: Construction Meeting | 1/10/2018 |
| 5/18/2020 | Ohio River Tunnel: Construction Meeting | 1/10/2018 |
| 5/30/2020 | Ohio River Tunnel: Construction Meeting | 1/10/2018 |
| 6/7/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 6/14/2020 | Southwestern Parkway CSO Basin: Construction Meeting | 4/18/2017 |
| 6/21/2020 | Portland CSO Basin: Conceptual Design Meeting | 6/14/2016 |
| 6/23/2020 | Ohio River Tunnel: Construction Meeting | 1/10/2018 |



5.3. 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.

5.3.1. 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.msdprojectwin.org/Public-Input.aspx.

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



SECTION 6: 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.msdprojectwin.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.

6.1. MANAGEMENT PROGRAMS

M-E-9 Infrastructure Rehabilitation

Refer to the CMOM activity schedule provided in Section 6.4.

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.msdprojectwin.org.

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

6.2. 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 6.4.



6.3. 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 6.4. for CPE/CCP-related capital projects.

6.3.1. HITE CREEK WATER QUALITY TREATMENT CENTER

The HCWQTC Expansion project will expand the capacity of HCWQTC from 6 MGD to 9 MGD and provide regional dewatering of solids. The project will be in construction during the next several reporting periods.

6.3.2. FLOYDS FORK WATER QUALITY TREATMENT CENTER

No major project occurred during the reporting period.

6.3.3. DEREK R. GUTHRIE WATER QUALITY TREATMENT CENTER

Construction of the Dewatering Project continued during this reporting period. Solids from all the regional WQTCs (Cedar Creek, Floyds Fork, Hite Creek as well as DRG) are being dewatered at a temporary system referred to as Phase 1. Construction of the Phase 2 building is nearing completion. Construction of the Phase 3 building is underway.

Clarifier Grout Repair and Gate Replacement project continued in construction during this reporting period.

The Admin Building and RAS Building HVAC project is in construction during the reporting period.

The RAS Electrical Modifications project is in construction during the reporting period.

Design of the Paving project was completed and during the reporting period.

6.3.4. CEDAR CREEK WATER QUALITY TREATMENT CENTER

Design of the Sodium Aluminate Building project was completed during the reporting period.

Design of the CCWQTC Effluent Parshall Flume Upgrades project was completed during the reporting period.

The CCWQTC MCC Upgrades project is under construction.

6.3.5. 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.

6.3.6. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER

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

6.3.7. OTHER WATER QUALITY TREATMENT CENTERS

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



6.4. 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 6.1.

| MSD CMOM Quarterly Commitments Schedule Gel man Way Pump Station Gel man M | Budget ID | Budget ID Task Name | % Complete | Start | FINISN | Apr Mav Jun | Jul Aug Sep |
|---|--------------|---|---------------|----------------|--------------|-------------|-------------|
| Gorham Way Purny Station Elimination 0% Fir $7/31/20$ INITIATION & PROCUREMENT 0% Fir $7/31/20$ DESIGN 0% Fir $7/31/20$ INITIATION & PROCUREMENT 0% Wed $7/1/20$ PY21 Construction Inspection 0% Wed $7/1/20$ INITIATION & PROCUREMENT 0% Wed $7/1/20$ Harrods Creek Force Main Repair 2% Mon $11/25/19$ CONSTRUCTION 36% Fir $3/13/20$ Repair 28% Fir $1/24/20$ CONSTRUCTION 15% Mon $5/25/20$ MFWQTC Lab Equipment Upgrades 8% Fir $1/24/20$ CONSTRUCTION 15% Mon $5/25/20$ MFWQTC Lab Equipment Upgrades 8% Fir $1/24/20$ CONSTRUCTION 15% Mon $5/25/20$ MFWQTC Lab Equipment Upgrades 8% Fir $1/24/20$ CONSTRUCTION 15% Mon $5/1/20$ MFWQTC Lab Equipment Upgrade 8% Fir $1/21/18$ Repair CLOSEOUT 7% Fir $1/21/20$ CONSTRUCTION MFWQTC Larfier Grout Repair and RAS 6% Mon $5/13/20$ Repair | | | | | Wed 7/2/25 | | |
| INITIATION & PROCUREMENT0%Fir $7/31/20$ DESIGNDESIGN0%Ned $7/1/20$ NUTIATION & PROCUREMENT0%Ned $7/1/20$ INITIATION & PROCUREMENT0%Ned $7/1/20$ INITIATION & PROCUREMENT0%Ned $7/1/20$ Harrods Creek Force Main Repair28%Mon $11/25/19$ CONSTRUCTION36%Fir $3/13/20$ CONSTRUCTION36%Fir $3/13/20$ CONSTRUCTION36%Fir $3/13/20$ MFWQTC Infuent PS MCC Upgrades8%Fir $1/24/20$ CONSTRUCTION36%Fir $1/21/20$ MFWQTC Truck Unloading Station Pavement5%Fir $1/21/20$ MFWQTC Truck Unloading Station Pavement5%Mon $1/1/18$ CLOSEOUTCLOSEOUT7%Non $5/18/20$ MFWQTC Truck Unloading Station Pavement5%Mon $1/1/18$ CLOSEOUTDRGWQTC Hypo Containment2%Mon $1/1/18$ CLOSEOUTCLOSEOUT2%Mon $1/1/18$ CLOSEOUTDRGWQTC Hypo Containment2%Mon $1/1/18$ CLOSEOUTOKF Moder and Corrosion Control2%Mon $1/2/18$ CLOSEOUTDRGWQTC Hypo Containment2%Mon $1/1/18$ CLOSEOUTCCONSTRUCTION32%Mon $1/1/18$ CLOSEOUTDRGWQTC Clarifier Grout Repair and RAS6%Mon $1/2/18$ CLOSEOUTORF MORE ANALVSIS PRIODDRGWQTC Clarifier Grout Repair2%CLOSEOUTDRGWQTC Clarifier Grout Repair32%Ned $7/1/20$ CLOSEOUTORF MORE ANALVSIS PRIODDRGWQTC Fi | A14129 | Gorham Way Pump Station Elimination | %0 | Fri 7/31/20 | Sat 3/18/23 | | |
| DESIGN0%1me SylopF721 Construction Inspection0%wed 7/1/20INITIATION & PROCUREMENT0%wed 7/1/20INITIATION & PROCUREMENT0%wed 7/1/20Harrods Creek Force Main Repair28%Mon 11/25/19CONSTRUCTION51%Fri 3/13/20Broadfern PS Elimination51%Fri 3/13/20CONSTRUCTION36%Fri 3/13/20Broadfern PS Elimination51%Fri 3/13/20CONSTRUCTION36%Fri 1/24/20CONSTRUCTION15%Mon 5/12/20MFWQTC Induent PS MCC Upgrades88%Fri 1/24/20CONSTRUCTION15%Mon 5/13/18CLOSEOUTCONSTRUCTION88%Fri 1/21/20MFWQTC Truck Unloading Station Pavement7%Fri 4/27/18RepairCLOSEOUT7%Mon 1/1/18CLOSEOUTDRGWQT Hypo Containment7%Mon 1/1/18CLOSEOUTCONSTRUCTION32%Mon 1/1/18CLOSEOUTORF Moder and Corrosion Control6%Mon 1/1/18CLOSEOUTORF Moder and Corrosion Control2%Mon 1/1/18CLOSEOUTORF Moder and Corrosion Control32%Mon 1/1/18CLOSEOUTCONSTRUCTION32%Mon 1/1/18CLOSEOUTORF MODE and Corrosion Control6%Mon 1/1/18CLOSEOUTORF MODE and Corrosion Control10%Mon 1/1/18CLOSEOUTCONSTRUCTION32%Mon 1/1/18CLOSEOUTORF MODE and RAS6%Mon 1/1/18CLOSEOUT <t< td=""><td>A14129</td><td>INITIATION & PROCUREMENT</td><td>%0</td><td>Fri 7/31/20</td><td>Wed 9/2/20</td><td></td><td></td></t<> | A14129 | INITIATION & PROCUREMENT | %0 | Fri 7/31/20 | Wed 9/2/20 | | |
| FY21 Construction Inspection0%wed 7/1/20INITIATION & PROCUREMENT0%wed 7/1/20Harrods Creek Force Main Repair2%Mon 11/25/19CONSTRUCTION46%Mon 11/25/19Broadfern PS Elimination51%Fir 3/13/20CONSTRUCTION36%Tue 6/9/20Broadfern PS Elimination36%True 6/9/20CONSTRUCTION36%Fir 3/13/20CONSTRUCTION36%Fir 3/13/20CONSTRUCTION36%Fir 3/13/20CONSTRUCTION36%Fir 3/13/20CONSTRUCTION5%Fir 3/13/20MFWQTC Lab Equipment Upgrades88%Fir 1/24/20MFWQTC Lab Equipment Upgrade88%Fir 1/24/20CONSTRUCTION7%Fir 4/27/18CONSTRUCTION7%Fir 4/27/18Repair707%Fir 4/27/18CONSTRUCTION7%Fir 4/27/18CONSTRUCTION7%Fir 4/27/18CONSTRUCTION7%Fir 4/27/18CONSTRUCTION7%Mon 1/1/18CONSTRUCTION7%Mon 1/1/18CONSTRUCTION7% <td< td=""><td>A14129</td><td>DESIGN</td><td>%0</td><td>Tue 9/29/20</td><td>Mon 3/1/21</td><td></td><td></td></td<> | A14129 | DESIGN | %0 | Tue 9/29/20 | Mon 3/1/21 | | |
| INITIATION & PROCUREMENT0%Wed 7/1/20Harrods Creek Force Main Repair28%Mon 11/25/19CONSTRUCTION46%Mon 11/25/19Broadfern PS Elimination51%Fri 3/13/20Broadfern PS Elimination36%Thu $2/4/16$ CONSTRUCTION36%Fri 3/13/20CONSTRUCTION36%Fri 1/24/20CONSTRUCTION15%Mon 5/25/20MFWQTC Lab Equipment Upgrade88%Fri 1/24/20CUOSEOUTStation5%Fri 1/24/20MFWQTC Truck Unloading Station Pavement67%Fri 4/27/18Repair0%0%Mon 1/1/18CLOSEOUT0%0%Mon 1/1/18Repair0%0%Mon 1/1/18CLOSEOUT0%0%Mon 1/1/18CONSTRUCTION0%0%Mon 1/1/18CONSTRUCTION0%0%Mon 1/1/18CONSTRUCTION0% <td>A19098</td> <td>FY21 Construction Inspection</td> <td>%0</td> <td>Wed 7/1/20</td> <td>Wed 6/30/21</td> <td></td> <td></td> | A19098 | FY21 Construction Inspection | %0 | Wed 7/1/20 | Wed 6/30/21 | | |
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| CLOSEOUT 5% Sun 6/14/20 MFWQTC Truck Unloading Station Pavement 67% Fri 4/27/18 Repair 0% Tue 5/12/20 CLOSEOUT 0% Tue 5/12/20 DRGWQTC Hypo Containment 99% Sat 12/1/18 CLOSEOUT 79% Tue 1/21/20 DRGWQTC Hypo Containment 79% Tue 1/21/20 CLOSEOUT 79% Mon 1/1/18 CLOSEOUT 79% Mon 1/1/18 CLOSEOUT 79% Mon 5/18/20 ORFM Odor and Corrosion Control 62% Mon 1/1/18 CONSTRUCTION 12% Mon 5/18/20 DRGWQTC Clarifier Grout Repair and RAS 60% Wed 1/31/18 CONSTRUCTION 22% Mon 1/2/18 DRGWQTC Clarifier Grout Repair and RAS 60% Wed 1/31/18 CONSTRUCTION 23% Mon 1/2/18 CONSTRUCTION 22% Mon 1/2/18 IntTATION & PROCUREMENT 0% Wed 7/1/20 IntTATION & PROCUREMENT 0% Mon 7/1/20 IntTATION & PROCUREMENT 0% Mon 7/1/20 IntTATION & PROCUREMENT 0% <td>D18114</td> <td>MFWQTC Lab Equipment Upgrade</td> <td>88%</td> <td>Fri 1/24/20</td> <td>Fri 6/4/21</td> <td></td> <td></td> | D18114 | MFWQTC Lab Equipment Upgrade | 88% | Fri 1/24/20 | Fri 6/4/21 | | |
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| DESIGN 77% Sun 9/1/19 DRGWQTC WWPS Finite Element Analysis Phc 65% Mon 7/2/18 ANALYSIS PERIOD 64% Wed 9/12/18 MFWQTC Primary Sludge Line Replacement 99% Sun 7/1/18 DOSEOUT 0% Thu 7/30/20 ate: 6/30/20 CMOM Project Project Progress | D19039 | CCWQTC Effluent Parshall Flume Upgrade | 28% | Tue 6/4/19 | Sat 8/27/22 | | |
| DRGWQTC WWPS Finite Element Analysis Phc 65% Mon 7/2/18 ANALYSIS PERIOD 64% Wed 9/12/18 MFWQTC Primary Sludge Line Replacement 99% Sun 7/1/18 MFWQTC Primary Sludge Line Replacement 99% Thu 7/30/20 ATALYSIS OUT 0% Thu 7/30/20 | D19039 | DESIGN | 77% | Sun 9/1/19 | Thu 10/1/20 | | |
| ANALYSIS PERIOD 64% Wed 9/12/18 MFWQTC Primary Sludge Line Replacement 99% Sun 7/1/18 CLOSEOUT 0% Thu 7/30/20 ate: 6/30/20 CMOM Project Project Progress | D19223 | DRGWQTC WWPS Finite Element Analysis Pf | 16 5% | Mon 7/2/18 | Fri 9/3/21 | | |
| MFWQTC Primary Sludge Line Replacement 99% Sun 7/1/18 CLOSEOUT 0% Thu 7/30/20 ate: 6/30/20 CMOM Project Project Progress | D19223 | ANALYSIS PERIOD | 64% | Wed 9/12/18 | Wed 6/30/21 | | |
| CLOSEOUT 0% Thu 7/30/20 ate: 6/30/20 CMOM Project Project Progress omplete is calculated based on phase duration. Page 1 or | D19227 | MFWQTC Primary Sludge Line Replacement | %66 | Sun 7/1/18 | Mon 3/29/21 | | |
| roject Progr | D19227 | CLOSEOUT | %0 | Thu 7/30/20 | Mon 3/29/21 | | |
| roject Progr | | | | | | | |
| | Data Dat | | Ри | oject Progress | | | |
| | Percent com | nolete is calculated based on obase duration. | | | 1 J - | | |
| | בו רפו ר רכי | וואובוב וא בפרתומובת המשכת כוו אוומאר מתומויניו. | | rage - | 014 | | |



|) | | | % Complete | Start te | | Apr Mav | 2nd Quarter Jun | Jul Aug | 3rd Quarter |
|--------------------|---------------------------------------|---------------------------------------|---------------|-------------------------|---------------------------|---------|--------------------|---------|-------------|
| D19286 | SWPS Gas Monitoring | ring and SP1 Odor Control | 18% | Wed 5/15/19 | Sun 3/6/22 | | | | |
| D19286 | DESIGN | | 44% | Sun 3/1/20 | Mon 11/30/20 | | I | | |
| D20017 | CCWQTC Sodium Alumi | Aluminate Building | 52% | Tue 6/4/19 | Thu 6/9/22 | | | | |
| D20017 | DESIGN | | 86% | Fri 10/4/19 | Wed 8/12/20 | | | | |
| D20033 | FY21 Regional WQTC Equipment RR | XTC Equipment RR | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | |
| D20033 | INITIATION & PROCUREMENT | ROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | |
| D20167 | MFWQTC East Headworks HVAC | adworks HVAC | 43% | Sat 6/1/19 | Sun 6/20/21 | | | | |
| D20167 | CONSTRUCTION | | 71% | Mon 2/17/20 | Mon 8/24/20 | | Ī | | _ |
| D20167 | CLOSEOUT | | %0 | Mon 8/24/20 | Sun 6/20/21 | | | | |
| D20222 | Bells Lane Grit Classifie | ssifier Drain Line | 41% | Tue 7/23/19 | Thu 3/4/21 | | | | |
| D20222 | CLOSEOUT | | 18% | Fri 5/8/20 | Thu 3/4/21 | I | Ī | | |
| D20223 | Bells Lane WWTF Polym Improvements | Polymer Feed System | 15% | Thu 11/14/19 | Fri 11/25/22 | | | | |
| D20233 | DESIGN | | 37% | Fri 11/22/19 | Sat 7/10/21 | | Ī | | |
| D20224 | Bells Lane PAA System | stem | 15% | Tue 7/23/19 | Sat 3/25/23 | | | | |
| D20224 | DESIGN | | 42% | Tue 10/1/19 | Wed 7/7/21 | | Ī | | |
| D20262 | MF WQTC Groundwate | lwater Wells Study | 36% | Mon 10/28/19 Wed 1/6/21 | Wed 1/6/21 | | | | |
| D20262 | INITIATION & PROCUI | ROCUREMENT | 62% | Mon 10/28/19 | Mon 10/28/19 Mon 11/30/20 | | Ī | | |
| D20262 | DESIGN | | %0 | Fri 7/3/20 | Sun 8/2/20 | | | | |
| D20262 | CONSTRUCTION | | %0 | Tue 9/1/20 | Thu 12/31/20 | | | | |
| D20278 | DRGWQTC RAS Building | uilding Electrical Modificatio 15% | 15% | Tue 12/17/19 | Sun 11/7/21 | | | | |
| D20278 | CONSTRUCTION | _ | %0 | Wed 7/15/20 | Mon 1/11/21 | | | | |
| D20284 | DRGWQTC Dewatering | ering Emergency Contract | 23% | Wed 12/4/19 | Fri 5/27/22 | | | | |
| D20284 | CONSTRUCTION | _ | 35% | Wed 12/4/19 | Sat 7/31/21 | | I | | |
| D20286 | DRGWQTC Substa | DRGWQTC Substation U-13 Modifications | 32% | Tue 1/7/20 | Mon 4/26/21 | | | | |
| D20286 | CLOSEOUT | | %0 | Tue 6/30/20 | Mon 4/26/21 | | | | |
| D20291 | DRGWQTC Dewatering | ering Emergency Phase 1 | %69 | Wed 12/4/19 | Mon 1/4/21 | | | | |
| D20291 | CONSTRUCTION | _ | 70% | Wed 12/4/19 | Wed 9/30/20 | | I | | |
| D20298 | DRGWQTC Artifici | DRGWQTC Artificial Intelligence Pilot | 46% | Wed 1/29/20 | Thu 12/31/20 | | | | |
| D20298 | INITIATION & PROCUREMENT | ROCUREMENT | 46% | Wed 1/29/20 | Thu 12/31/20 | | Ī | | |
| D20304 | MFWQTC Headworks a | orks and Blower Building Rel 31% | 31% | Sun 9/1/19 | Fri 1/7/22 | | | | |
| D20304 | DESIGN | | 79% | Tue 9/24/19 | Mon 9/14/20 | | | | |
| Data Date: 6/30/20 | 6/30/20 | CMOM Project | | Project Progress | | | | | |
| | | | | | | | | | |



| Wed /1/120 Wed (5/30/21 Wed /1/120 Tue 7/1/20 Wed /1/120 Tue 7/1/20 Wed /1/120 Tue 1/1/6/20 Wed /1/120 Tue 1/1/6/20 Wed /1/120 Tue 1/1/6/20 Wed /1/120 Mon 11/1/16/20 Wed /1/120 Mon 11/16/20 Wed /1/120 Mon 11/16/20 Wed /1/120 Mon 11/16/20 Wed /1/120 Mon 11/16/20 Wed /1/120 Mon 5/31/21 Wed /1/120 Wed 6/30/21 Wed /1/120 Fri 10/13/23 | Budget ID Task Name | Task Name | | % Complete | Start | Finish | Apr May Jun | Inf | Aug | 3rd Quarter Sep |
|---|---------------------|---------------------------------|-------------------------|---------------|-----------------|--------------|-------------|-----|-----|--------------------|
| INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 12/4/19 CONSTRUCTION 70% Wed 12/4/19 CONSTRUCTION 70% Wed 7/1/20 INITIATION & PROCUREMENT 8% Fri 4/1/16 CONSTRUCTION 87% Fri 4/1/120 Shwely PS Generator Replacement 8% Fri 4/1/120 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMEN | D21063 | Odor Managemen | t Plan | %0 | | Wed 6/30/21 | | | | |
| DRGWQTC PAA System 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Wed 7/1/20 MFWQTC Sewer and Manhole Rehab 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 D | D21063 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | | | | |
| INITIATION & PROCUREMENT 0% wed 7/1/20 DESIGN 0% wed 7/1/20 MFWQTC Sewer and Manhole Rehab 0% wed 7/1/20 INITIATION & PROCUREMENT 0% wed 7/1/20 | D21077 | DRGWQTC PAA Sy | stem | %0 | Wed 7/1/20 | Tue 5/10/22 | | | | |
| DESIGN 0% Wed 7/1/20 MFWQTC Sewer and Manhole Rehab 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 CONSTRUCTION 0% Wed 12/4/19 CONSTRUCTION 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT | D21077 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | - | | | |
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| CONSTRUCTION0%Sat 8/1/20DRGWQTC Dewatering Emergency Phase 269%Wed 12/4/19CONSTRUCTION70%Wed 12/4/19Shively PS Generator Replacement87%Fri 4/1/16Shively PS Generator Replacement87%Fri 4/1/20NirTiATION & PROCUREMENT0%Wed 7/1/20FY21 CMOM Collection System PS RR0%Wed 7/1/20INTIATION & PROCUREMENT0%Wed 7/1/20NITIATION & PROCUREMENT0%Wed 7/1/20NITIATION & PROCUREMENT0%Wed 7/1/20INTIATION & PRO | D21104 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | - | | | |
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| Shively PS Generator Replacement87%Fit $4/1/16$ CLOSEOUT | D21106 | CONSTRUCTION | | 70% | Wed 12/4/19 | Wed 9/30/20 | | | | |
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| DESIGN 0% Sat 8/1/20 Sanders Lane PS Rehabilitation 0% Wed 7/1/20 Sanders Lane PS Rehabilitation 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Ned 7/1/20 DESIGN 0% Wed 7/1/20 DESIGN 0% Non 3/16/20 DESIGN 0% Mon 5/18/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Ned 7/1/20 INITIATION & PROCUREMENT 0% Ned 7/1/20 Action Science on Provence 0% Ned 7/1/20 Action Science on Prove | E21090 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | | | | |
| Sanders Lane PS Rehabilitation 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Sat 8/1/20 DESIGN 0% Ned 7/1/20 DESIGN 0% Ned 7/1/20 DESIGN 0% Ned 7/1/20 DESIGN 0% Mon 3/16/20 DESIGN 20% Mon 3/16/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Ned 7/1/20 INITIATION 52% Fi | E21090 | DESIGN | | %0 | Sat 8/1/20 | Fri 11/12/21 | | | | |
| INITIATION & PROCUREMENT 0% Wed 7/1/20 DESIGN 0% Sat 8/1/20 Bluegrass Fields Pump Station Renovation 5% Mon 3/16/20 Bluegrass Fields Pump Station Renovation 5% Mon 3/16/20 DESIGN 20% Mon 5/18/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 HCWQTC Expansion 0% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | E21091 | Sanders Lane PS R | ehabilitation | %0 | Wed 7/1/20 | Fri 10/13/23 | | | | |
| DESIGN 0% Sat 8/1/20 Bluegrass Fields Pump Station Renovation 5% Mon 3/16/20 DESIGN 20% Mon 3/16/20 PCSIGN 20% Mon 3/16/20 InITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 HCWQTC Expansion 61% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 | E21091 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Tue 7/7/20 | | | | |
| Bluegrass Fields Pump Station Renovation 5% Mon 3/16/20 DESIGN 20% Mon 5/18/20 FY21 Renewal and Replacement 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | E21091 | DESIGN | | %0 | Sat 8/1/20 | Fri 11/12/21 | | | | |
| DESIGN 20% Mon 5/18/20 FY21 Renewal and Replacement 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 HCWQTC Expansion 61% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | F20321 | Bluegrass Fields Pt | | 5% | Mon 3/16/20 | Sat 6/18/22 | | | | |
| FY21 Renewal and Replacement 0% Wed 7/1/20 INITIATION & PROCUREMENT 0% Wed 7/1/20 HCWQTC Expansion 61% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | F20321 | DESIGN | | 20% | Mon 5/18/20 | Thu 12/17/20 | Ī | | | |
| INITIATION & PROCUREMENT 0% Wed 7/1/20 HCWQTC Expansion 61% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | G21001 | FY21 Renewal and | Replacement | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | |
| HCWQTC Expansion 61% Mon 11/2/15 CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress | G21001 | INITIATION & PF | ROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | |
| CONSTRUCTION 52% Fri 3/8/19 ate: 6/30/20 CMOM Project Project Progress omplete is calculated based on phase duration. Page 3 o | H14126 | HCWQTC Expansic | ų | 61% | Mon 11/2/15 | Mon 10/10/22 | | | | |
| roject Progr | H14126 | CONSTRUCTION | | 52% | Fri 3/8/19 | Wed 9/15/21 | | | | |
| roject Progr | | | | | | | | | | |
| | Data Date | e: 6/30/20 | CMOM Project | ~ | roject Progress | | | | | |
| | Percent comp | olete is calculated based on ph | iase duration. | | Dada 3 | of A | | | | |
| | - | | | | ר מעה ר | 0 4 | | | | |





| Budget ID Task Name | Task Name | % | Start | Finish | 2nd | | - | 3rd | ter |
|---------------------|---|----------------|------------------|--------------|-----------------|---|-----|-------|-----|
| H18096 | FV21 CMOM PM Assistance | Complete 0% | Wed 7/1/20 | Wed 6/30/21 | Apr May Jun | | Aug | g sep | |
| H18096 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | İ | | | |
| H18097 | FY21 CMOM, SCAP, AAM and FOG | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H18097 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | İ | | | |
| H18173 | FY21 Information Governance | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H18173 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | t | | | |
| H20056 | FY21 CMOM I and C Implementation | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H20056 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | Ì | | | |
| H20061 | FY20 CMOM Gravity Line Cleaning and Inspec 78% | spec 78% | Mon 7/1/19 | Wed 9/30/20 | | | | | |
| H20061 | INITIATION & PROCUREMENT | %62 | Mon 7/1/19 | Wed 9/30/20 | | t | | | |
| H20061 | CLOSEOUT | %0 | Fri 9/25/20 | Wed 9/30/20 | | | | | |
| H20062 | FY21 CMOM Gravity Line Cleaning and Inspec 0% | spec 0% | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H20062 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | t | | | |
| H20138 | FY21 PMIS | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H20138 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | t | | | |
| H20153 | SWPS Flood Repair | 52% | Tue 6/4/19 | Wed 1/19/22 | | | | | |
| H20153 | CONSTRUCTION | 45% | Sun 3/1/20 | Thu 11/26/20 | | t | | | |
| H20215 | Camp Taylor 2A SSR - Union St Sewers | %66 | Tue 8/20/19 | Mon 2/15/21 | | | | | |
| H20215 | CLOSEOUT | %0 | Tue 3/17/20 | Mon 2/15/21 | | t | | | |
| H20297 | FY20 Asset Management Assistance | 76% | Wed 1/29/20 | Sun 8/9/20 | | | | | |
| H20297 | INITIATION & PROCUREMENT | 80% | Wed 1/29/20 | Sun 8/9/20 | | Ì | | | |
| H20297 | CLOSEOUT | %0 | Tue 8/4/20 | Sun 8/9/20 | | | | | |
| H21111 | FY21 FOG Program Support | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | | |
| H21111 | INITIATION & PROCUREMENT | %0 | Wed 7/1/20 | Wed 6/30/21 | | | | l | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Data Date: 6/30/20 | e: 6/30/20 CMOM Project | Ρĸ | Project Progress | | | | | | |
| Percent comp | Percent complete is calculated based on phase duration. | | Page 4 of 4 | of 4 | | | | | |
| | | | | | | | | | |







APPENDIX A

DISCHARGE WORK ORDERS





APPENDIX A-1 BYPASSES



| ASSOCIATED WQTC NAME | ASSOCIATED WQTC KPDES# | OVERFLOW Location | OVERFLOW START DATE & TIME | OVERFLOW STOP DATE & TIME | VOLUME OF OVERFLOW (GAL) | SOURCE Asset Type | SOURCE ASSET ID | SOURCE ASSET DISCHARGES TO | RECEIVING Stream | CAUSE OF OVERFLOW | DUE TO | WEATHER | WO # | CLEANUP EFFORTS BY MSD | REPAIR EFFORTS BY MSD |
|-------------------------|---------------------------|------------------------|----------------------------------|------------------------------|--------------------------------|-----------------------------|--------------------|-------------------------------|---------------------|---|----------------|-------------------------|---------|---|--|
| MORRIS FORMAN | KY0022411 | 4522 ALGONQUIN PKY | 5/6/2020 9:00 | 5/6/2020 9:10 | 1000 | Sewer Treatment Plant | MSD0278 | STREAM | OHIO RIVER | MANHOLE OVERWHELMED DUE TO A POSSIBLE BLOCKAGE OR COLLAPSED LINE. | BYPASS AT WQTC | RAIN EVENT DISCHARGE | 3255672 | STAFF HOSED DOWN AREA INTO PLANT DRAIN. VACTOR VENDOR DISPATCHED TO CLEAN AREA. | OBSTRUCTION CLEARED. |
| CEDAR CREEK | KY0098540 | 8405 CEDAR CREEK RD | 5/8/2020 17:08 | 5/8/2020 17:11 | 150 | Sewer Treatment Plant | MSD0289 | GROUND | CEDAR CREEK | LACK OF SYSTEM CAPACITY | BYPASS AT WQTC | RAIN EVENT DISCHARGE | 3256040 | THERE WAS NO DEBRIS PRESENT | WE OPENED THE SAND FILTER BYPASS GATE. |









APPENDIX A-2 DRY WEATHER CSOs



| ASSOCIATED WQTC NAME | OVERFLOW LOCATION | OVERFLOW START DATE & TIME | OVERFLOW STOP DATE & TIME | VOLUME OF OVERFLOW (GAL) | SOURCE Asset Type | SOURCE ASSET DISCHARGES TO | CAUSE OF OVERFLOW | DUE TO | WEATHER | WO # | CLEANUP EFFORTS BY MSD | REPAIR EFFORTS BY MSD |
|-------------------------|----------------------|----------------------------------|------------------------------|--------------------------------|-------------------------|-------------------------------|-------------------|--------|---------|------|---------------------------|--------------------------|
| | | | | | | | | | | | | |

No Dry Weather CSOs Occurred during the Reporting Period







APPENDIX A-3 UNAUTHORIZED DISCHARGES



| ASSOCIATED WQTC NAME | ASSOCIATED WQTC KPDES# | OVERFLOW Location | OVERFLOW START DATE & TIME | OVERFLOW STOP DATE & TIME | VOLUME OF OVERFLOW (GAL) | SOURCE Asset Type | SOURCE ASSET ID | SOURCE ASSET 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 | 4/13/2020 3:50 | 4/13/2020 11:39 | 44123 | Sewer Manhole | 08935-SM | STREAM | MIDDLE FORK BEARGRASS CREEK | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234714 | NO CLEANUP REQUIRED, MANHOLE IS DISCHARGING DIRECTLY INTO CREEK. | LOCATION INCLUDED IN THE IOAP. |
| MORRIS FORMAN | KY0022411 | 1201 OLD CANNONS LN | 4/13/2020 4:30 | 4/13/2020 18:00 | 2100000 | Sewer Manhole | IS021A-SI | STREAM | MIDDLE FORK BEARGRASS CREEK | LACK OF SYSTEM CAPACITY: HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234703 | NO CLEANUP REQUIRED, MANHOLE IS DISCHARGING DIRECTLY INTO CREEK. | LOCATION INCLUDED IN THE IOAP. |
| MORRIS FORMAN | KY0022411 | 3317 DELL RD | 4/13/2020 9:15 | 4/13/2020 11:11 | 3000 | Sewer Manhole | 28413 | GROUND | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234916 | WO#3235008 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 3400 DELL RD | 4/13/2020 9:20 | #□□ | 3000 | Sewer Manhole | 28414 | GROUND | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234918 | WO#3235009 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 3406 DELL RD | 4/13/2020 9:20 | 4/13/2020 11:13 | 3000 | Sewer Manhole | 28415 | GROUND | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234919 | WO#3235010 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 3402 CHARLANE PKY | 4/13/2020 9:30 | 4/13/2020 13:10 | 16500 | Sewer Manhole | 28453 | DITCH | CHENOWETH RUN | LACK OF SYSTEM CAPACITYHEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234925 | WO#3235013 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 3406 CHARLANE PKY | 4/13/2020 9:40 | 4/13/2020 12:00 | 3500 | Sewer Manhole | 28451 | GROUND | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3234924 | WO#3235011 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 1418 CHEROKEE RD | 5/14/2020 13:32 | 5/14/2020 13:35 | 5 | Sewer Service Line | J04964039 | GROUND | MIDDLE FORK BEARGRASS CREEK | LINE DAMAGED BY CONTRACTOR. | STRUCTURAL FAILURE | RAIN EVENT DISCHARGE | 3256719 | MSD WILL CLEAN AREA. | MADE NEEDED REPAIRS TO LINE. |
| MORRIS FORMAN | KY0022411 | 1201 OLD CANNONS LN | 5/16/2020 5:45 | 5/16/2020 18:30 | 700000 | Sewer Manhole | IS021A-SI | STREAM | MIDDLE FORK BEARGRASS CREEK | LACK OF SYSTEM CAPACITYHEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3257030 | NO CLEAN UP NOT PERFORMED NO PUBLIC ACCESS TO THE DISCHARGE SITE. | LOCATION INCLUDED IN IOAP. |
| DEREK R. GUTHRIE | KY0078956 | 9317 LANTANA DR | 5/16/2020 7:33 | 5/16/2020 15:11 | 3750 | Sewer Manhole | 93719 | ЫТСН | PENNSYLVANIA RUN | LACK OF SYSTEM CAPACITY. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3257023 | CLEANED AND SANITIZED THE IMPACTED AREA. | A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE INTEGRATED OVERFLOW ABATEMENT PLAN. |
| DEREK R. GUTHRIE | KY0078956 | 9114 CINDERELLA LN | 5/16/2020 8:03 | 5/16/2020 15:15 | 1800 | Sewer Manhole | 102339 | GROUND | FISHPOOL CREEK | LACK OF SYSTEM CAPACITY. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3257025 | CLEANED AND SANITIZED THE IMPACTED AREA. | A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE INTEGRATED OVERFLOW ABATEMENT PLAN. |
| MORRIS FORMAN | KY0022411 | 3402 CHARLANE PKY | 5/16/2020 10:08 | 5/16/2020 15:00 | 1500 | Sewer Manhole | 28453 | DITCH | CHENOWETH RUN | LACK OF SYSTEM CAPACITYHEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3257061 | WO#3257194 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 334 MOCKINGBIRD VALLEY RD | 6/23/2020 22:20 | 6/23/2020 22:50 | 350 | Sewer Lift Station | MSD0007-PS | DITCH | MUDDY FORK BEARGRASS CREEK | MECHANICAL FAILURE, PUMP FAIL TO START. | MECHANICAL FAILURE | DRY WEATHER DISCHARGE | 3274984 | CLEANED AND SANITIZED THE IMPACTED AREA. | PUMP BATTERY CABLE REPAIRED AND PUMP STARTED. |
| CEDAR CREEK | KY0098540 | 9719 COLLIER LN | 6/30/2020 0:40 | 6/30/2020 9:37 | 92000 | Sewer Manhole | 98022 | STREAM | CEDAR CREEK | LACK OF SYSTEM CAPACITY. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3275944 | NO DEBRIS WAS OBSERVED. | SYSTEM CAPACITY CAUGHT UP WITH FLOW. |
| MORRIS FORMAN | KY0022411 | 3402 CHARLANE PKY | 6/30/2020 7:10 | 6/30/2020 9:00 | 2750 | Sewer Manhole | 28453 | DITCH | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3275985 | WO#3276093 | LOCATION INCLUDED IN IOAP. |
| MORRIS FORMAN | KY0022411 | 3620 CHARLANE PKY | 6/30/2020 7:15 | 6/30/2020 9:15 | 3000 | Sewer Manhole | 28340 | GROUND | CHENOWETH RUN | LACK OF SYSTEM CAPACITY HEAVY RAIN. | LACK OF SYSTEM CAPACITY | RAIN EVENT DISCHARGE | 3275987 | WO#3276094 | LOCATION INCLUDED IN IOAP. |







APPENDIX B

CSO FLOW MONITORING DATA



| | | (MIN) | TOTAL | DISCHARGE | ANTECEDENT RAIN | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume | COUNT |
|-----------------|-----------------|-------|--------|-----------|--------------------|-------------------|----------------|----------|---------|---------------------|-------------|
| | | | (INCH) | | | | | | | (GAL) | |
| 4/12/2020 17:45 | 4/13/2020 9:00 | 915 | e | 3844280 | 4 | 0 | 12 | Atlas | (blank) | 10,687,098 | |
| 4/23/2020 14:15 | 4/23/2020 17:15 | 180 | 0 | 1509 | 2 | 0 | 12 | Atlas | (blank) | 1,434 | ÷ |
| 4/25/2020 12:30 | 4/26/2020 2:15 | 825 | 0 | 1898 | 2 | 0 | 24 | Atlas | (blank) | 1,860 | - |
| 5/8/2020 15:45 | 5/8/2020 19:15 | 210 | 0 | 6740 | 0 | 0 | 9 | Atlas | (blank) | 4,246 | - |
| 5/13/2020 22:30 | 5/14/2020 22:00 | 1410 | 0 | 9185800 | 0 | 0 | - | Atlas | (blank) | 91,858 | - |
| 5/15/2020 16:00 | 5/16/2020 20:15 | 1695 | 2 | 1998209 | 2 | 0 | 24 | Atlas | (blank) | 4,036,383 | ~ |
| 5/18/2020 10:00 | 5/18/2020 13:00 | 180 | 0 | 174086 | e | 0 | 9 | Atlas | (blank) | 147,973 | - |
| 5/25/2020 19:00 | 5/25/2020 20:30 | 06 | 0 | 16176 | 0 | 0 | - | Atlas | (blank) | 11,647 | - |
| 6/29/2020 6:15 | 6/29/2020 21:30 | 915 | 0 | 896084 | e | 0 | e | Atlas | (blank) | 224,021 | - |
| 6/30/2020 11:45 | 7/1/2020 0:00 | 735 | 0 | 880125 | - | 0 | - | Atlas | (blank) | 70,410 | - |
| | | | | | | | | | | 15,276,930 | 10 |
| 4/12/2020 15:45 | 4/13/2020 13:30 | 1305 | 2 | 1850064 | 4 | 0 | 12 | Atlas | (blank) | 4,329,149 | - |
| 4/17/2020 14:15 | 4/18/2020 2:00 | 705 | - | 243641 | 4 | 0 | 12 | Atlas | (blank) | 311,860 | ÷ |
| 4/23/2020 5:30 | 4/23/2020 21:30 | 096 | 0 | 583600 | 2 | 0 | 12 | Atlas | (blank) | 519,404 | - |
| 4/25/2020 13:00 | 4/26/2020 18:15 | 1755 | - | 650253 | 2 | 0 | + | Atlas | (blank) | 903,851 | |
| 4/29/2020 9:30 | 4/29/2020 12:00 | 150 | 0 | 487894 | 2 | 0 | 48 | Atlas | (blank) | 87,821 | ٢ |
| 5/5/2020 4:00 | 5/5/2020 8:00 | 240 | 0 | 406152 | 0 | 0 | 3 | Atlas | (blank) | 101,538 | 1 |
| 5/8/2020 6:45 | 5/8/2020 14:45 | 480 | 0 | 527054 | 0 | 0 | 12 | Atlas | (blank) | 300,421 | 1 |
| 5/13/2020 14:00 | 5/13/2020 20:45 | 405 | 0 | 1191715 | 0 | 0 | 12 | Atlas | (blank) | 154,923 | 1 |
| 5/14/2020 8:45 | 5/14/2020 10:00 | 75 | 0 | 277442 | 0 | 0 | 1 | Atlas | (blank) | 33,293 | 1 |
| 5/15/2020 11:00 | 5/16/2020 15:30 | 1710 | 1 | 749650 | 1 | 0 | 24 | Atlas | (blank) | 832,111 | 1 |
| 5/18/2020 2:45 | 5/18/2020 21:45 | 1140 | 0 | 751663 | 2 | 0 | 1 | Atlas | (blank) | 548,714 | ٢ |
| 5/23/2020 17:15 | 5/23/2020 17:45 | 30 | 0 | 234368 | t | 0 | 1 | Atlas | (blank) | 51,561 | ÷- |
| 5/25/2020 16:30 | 5/25/2020 18:15 | 105 | 0 | 800114 | 0 | 0 | 1 | Atlas | (blank) | 112,016 | - |
| 5/27/2020 11:45 | 5/27/2020 17:15 | 330 | 0 | 206351 | 0 | 0 | 48 | Atlas | (blank) | 76,350 | - |
| 5/28/2020 2:15 | 5/28/2020 4:15 | 120 | 0 | 131892 | 0 | 0 | 48 | Atlas | (blank) | 48,800 | ٢ |
| 5/29/2020 0:30 | 5/29/2020 2:15 | 105 | 0 | 480507 | 0 | 0 | 1 | Atlas | (blank) | 67,271 | 1 |
| 6/4/2020 18:00 | 6/5/2020 2:15 | 495 | 1 | 1701159 | 1 | 0 | 3 | Atlas | (blank) | 1,888,287 | 1 |
| 6/9/2020 11:45 | 6/9/2020 12:45 | 60 | 0 | 261314 | 1 | 0 | 1 | Atlas | (blank) | 36,584 | 1 |
| 6/14/2020 6:45 | 6/14/2020 7:45 | 60 | 0 | 413963 | 0 | 0 | 1 | Atlas | (blank) | 33,117 | 1 |
| 6/21/2020 11:30 | 6/21/2020 18:30 | 420 | 0 | 284256 | 0 | 0 | 1 | Atlas | (blank) | 176,239 | 1 |
| 6/22/2020 20:00 | 6/23/2020 9:00 | 780 | 0 | 1750753 | 2 | 0 | 3 | Atlas | (blank) | 1,540,663 | 1 |
| 6/27/2020 18:30 | 6/27/2020 19:00 | 30 | 0 | 83938 | 2 | 0 | 1 | Atlas | (blank) | 10,912 | 1 |
| 6/29/2020 2:30 | 6/29/2020 10:00 | 450 | 0 | 663226 | 2 | 0 | 1 | Atlas | (blank) | 504,052 | 1 |
| 6/00/000 10-4E | | | | | | | | | | | |





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| DISCHARGE Volume (Gal) | 9,518 | 967,661 | 9,724 | 2,448 | 11,082 | 74,485 | 13,555 | 111,294 | 2,654 | 449 | 88 | | 817 | 817 156 | 817 156 190 | 817 156 190 26 | 817 156 190 26 52 | 817 156 190 26 52 52 2022 | 817 156 190 26 52 52 5,206 | 817 156 156 26 52 2022 5,206 5,206 | 817 156 156 26 52 520 5,206 5,206 5,206 2,524 124 | 817 156 190 26 52 52 5,206 5,206 5,206 7,2 | 817 156 190 26 52 52 5,206 5,206 5,206 5,206 5,206 5,206 5,206 5,206 5,206 5,206 124 124 | 817 156 190 26 52 52 5,206 5,206 5,206 124 124 124 124 16,946 6,875,000 | 817 156 190 26 26 25 202 2,022 2,022 2,023 2,023 2,026 3,026 124 124 124 124 124 12,450 2,638 12,638 12,638 12,638 12,6466 12,6466 12,6466 12,6466 12,6466 12,6466 12,6466 12,6466 12,6466 12,6 | 817 817 156 156 26 26 22 202 2,22 2,022 2,023 2,023 1,24 124 124 124 124 124 12638 12,506 6,875,000 3,937,500 | 817 156 156 26 26 25 202 2,028 5,206 5,206 2,205 2,205 2,206 2,538 124 124 124 12,45 000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,337,5000 30,307,5000 30,307,5000 30,307,5000 30,307,5000 30,3000 30,3000 30,300,5000 30,300,5000 30,300,5000 30,3000 30,3000,5000 30,30000 30,3000,50000000000 | 817 156 156 26 52 26 5,205 5,206 5,206 5,206 5,206 1,24 124 124 124 124 124 124 3,937,500 6,875,000 6,875,000 3,937,500 3,937,500 8,145,231 8,145,231 | 817 156 156 190 26 27 28 29 2022 25 26 27 28 29 2023 2024 2025 2026 2027 2028 2029 20206 20238 1037500 30,937500 8,145,291 8,145,291 8,145,291 8,145,291 3,009,580 3,009,580 | 817 156 156 190 26 27 28 29 2012 2022 2023 2024 2025 2022 2023 2024 2025 2023 2024 124 25,056 2,526 2,526 2,526 2,526 2,526 2,526 2,526 2,526 2,538 16,946 8,145,500 3,091,059 3,091,580 8,145,291 3,093,580 67,035,235 | 817 156 156 26 52 26 5,205 5,206 5,206 5,206 7,023 2,638 16,946 6,875,000 6,875,000 3,981,056 8,750 14,066,80 14,066,80 3,937,50 14,066,80 8,145,291 14,066,80 3,009,580 6,7,035,23 6,7,035,23 6,7,035,23 2,26,372 | 817 156 156 156 26 52 52 52 52 52 52 52 52 5,205 5,206 5,206 5,206 5,206 5,206 5,206 2,524 12,406 12,638 16,946 6,875,000 30,937,500 30,937,500 30,937,500 30,937,500 31,095,890 8,145,291 8,145,291 31,005,890 67,035,233 67,035,233 67,035,233 146,749 146,749 | 817 156 156 190 26 52 52 52 52 52 52 52 52 52 52 52 52 52 52 52 52 52 52 52 53 53 54 16.946 16.946 6.8105 30.937,500 30.937,500 30.937,500 30.937,500 30.937,500 8,145,291 30.09,580 67,035,235 67,035,235 8,43,006 843,006 |
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| DURATION (MIN) | 15 | | 0 | 0 | 0 | 06 | 60 | | 585 | 510 | | 630 | 630 1050 | 630 1050 510 | 630 1050 510 225 | 630 1050 510 225 0 | 630 1050 510 225 0 | 630 1050 510 225 0 0 | 630 1050 510 225 0 0 0 | 630 630 510 225 0 0 0 15 | 630 1050 510 225 0 0 0 15 0 0 | 630 1050 510 225 0 0 0 15 15 90 | 630 1050 510 225 0 0 15 15 90 90 | 630 1050 510 225 0 0 0 15 0 0 0 0 0 0 0 0 0 0 0 | 630 1050 510 525 225 0 0 15 0 90 90 105 | 630 630 510 525 225 0 0 15 15 90 90 105 105 | 630 1050 510 225 0 0 15 15 105 105 105 525 525 | 630 1050 510 225 0 0 0 15 0 0 15 105 105 525 525 660 | 630 1050 510 525 0 0 0 15 0 90 90 90 105 525 525 660 135 | 630 1050 510 225 225 0 0 0 0 15 15 105 105 105 105 105 135 135 | 630 630 225 225 0 0 0 15 0 0 15 15 105 600 660 660 135 45 | 630 630 510 510 225 225 0 15 0 15 105 90 90 90 90 105 105 135 45 120 | 630 1050 510 525 0 0 0 15 0 105 90 90 105 525 525 660 135 135 135 135 135 135 540 |
| END DATE | 6/29/2020 19:15 | | 5/16/2020 7:30 | 5/25/2020 16:45 | 6/21/2020 11:45 | 6/23/2020 0:15 | 6/29/2020 4:30 | | 4/13/2020 2:00 | 117 0000 00.00 | 4/1//2020 22:30 | 4/1//2020 22:30 | 4/1//2020 22:30 4/23/2020 17:30 4/26/2020 5:45 | 4/1//2020 22:30 4/23/2020 17:30 4/26/2020 5:45 5/5/2020 12:30 | 4/17/2020 22:30 4/23/2020 17:30 4/26/2020 5:45 5/5/2020 12:30 5/8/2020 10:45 | 4111/2020 22:30 4/26/2020 5:45 5/5/2020 12:30 5/8/2020 10:45 5/15/2020 11:30 | 4/11/2020 24:30 4/23/2020 17:30 5/5/2020 12:30 5/5/2020 10:45 5/15/2020 11:30 5/18/2020 11:30 | 4117/2020 22:30 4/23/2020 17:30 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 | 4111/2020 22:30 4/23/2020 5:45 5/5/2020 12:30 5/5/2020 12:30 5/15/2020 11:30 5/15/2020 11:30 5/18/2020 2:45 5/25/2020 16:30 5/29/2020 0:15 | 4111/2020 22:30 4/26/2020 5:45 5/5/2020 12:30 5/8/2020 12:30 5/15/2020 11:30 5/15/2020 11:30 5/16/2020 2:45 5/25/2020 16:30 5/29/2020 0:15 6/21/2020 0:15 | 4111/2020 52:30 4/25/2020 5:45 5/6/2020 12:30 5/8/2020 10:45 5/15/2020 11:30 5/18/2020 11:30 5/18/2020 11:30 5/18/2020 16:30 5/29/2020 0:15 6/21/2020 11:45 6/23/2020 8:30 | 4/11/2020 24:30 4/23/2020 17:30 5/5/2020 12:30 5/8/2020 10:45 5/15/2020 11:30 5/18/2020 11:30 5/18/2020 2:45 5/18/2020 16:30 5/25/2020 16:30 5/29/2020 0:15 6/21/2020 11:45 6/29/2020 8:30 6/29/2020 4:15 | 4111/2020 24:30 4/23/2020 17:30 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 5/18/2020 2:45 5/25/2020 11:45 6/21/2020 11:45 6/23/2020 8:30 6/29/2020 4:15 | 4111/2020 22:30 4/23/2020 15:45 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 5/25/2020 11:30 5/25/2020 11:45 6/21/2020 1:145 6/29/2020 8:30 6/29/2020 4:15 5/8/2020 12:45 | 4111/2020 22:30 4/23/2020 17:30 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 5/25/2020 16:30 5/25/2020 11:45 6/23/2020 8:30 6/29/2020 4:15 5/8/2020 12:45 5/8/2020 12:45 | 4/11/2020 5:45 4/23/2020 5:45 5/5/2020 12:30 5/18/2020 10:45 5/18/2020 10:45 5/18/2020 10:45 5/18/2020 11:30 5/18/2020 11:30 5/29/2020 11:45 6/29/2020 4:15 6/29/2020 4:15 5/16/2020 4:15 5/16/2020 12:45 5/16/2020 9:00 | 4/11/2020 5:45 4/25/2020 5:45 5/5/2020 12:30 5/8/2020 10:45 5/15/2020 11:30 5/18/2020 11:30 5/18/2020 2:45 5/18/2020 0:15 6/21/2020 11:45 6/29/2020 0:15 6/29/2020 11:45 5/16/2020 8:30 6/29/2020 12:45 5/16/2020 9:00 5/24/2020 3:30 | 4/11/2020 22:30 4/23/2020 17:30 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 5/18/2020 11:45 6/21/2020 11:45 6/21/2020 11:45 6/22/2020 2:15 5/26/2020 2:00 5/24/2020 3:30 6/23/2020 10:15 5/24/2020 3:30 6/23/2020 10:15 5/24/2020 3:30 | 4111/2020 22:30 4/23/2020 1:30 5/5/2020 1:30 5/15/2020 1:30 5/15/2020 1:30 5/18/2020 2:45 5/25/2020 1:30 5/25/2020 1:30 5/25/2020 1:36 6/21/2020 1:36 6/22/2020 2:30 6/22/2020 1:36 5/6/2020 2:30 6/22/2020 1:35 5/16/2020 2:315 | 4111/2020 22:30 4/23/2020 1:30 5/5/2020 1:30 5/15/2020 1:30 5/15/2020 1:30 5/15/2020 1:30 5/18/2020 2:45 5/25/2020 1:30 5/25/2020 1:30 6/23/2020 1:45 6/23/2020 1:45 5/6/2020 1:45 6/23/2020 1:45 5/16/2020 2:00 6/23/2020 1:15 6/23/2020 2:00 6/23/2020 2:15 6/30/2020 2:15 | 4111/2020 22:30 4/23/2020 1:30 5/5/2020 1:30 5/15/2020 1:30 5/15/2020 1:30 5/18/2020 2:45 5/18/2020 2:45 5/29/2020 1:45 6/29/2020 1:45 6/29/2020 1:45 5/8/2020 1:45 5/8/2020 1:45 5/8/2020 1:45 5/8/2020 1:45 6/29/2020 3:30 6/29/2020 3:15 6/29/2020 3:15 | 4/11/2020 5:45 4/26/2020 5:45 5/5/2020 12:30 5/18/2020 10:45 5/18/2020 11:30 5/18/2020 11:30 5/18/2020 11:45 5/25/2020 11:45 6/21/2020 11:45 6/29/2020 0:15 6/29/2020 11:45 5/16/2020 3:30 6/29/2020 12:45 5/16/2020 3:15 6/30/2020 3:15 6/30/2020 3:15 5/16/2020 12:45 5/16/2020 12:45 5/16/2020 12:45 | 4/11/2020 5:45 4/25/2020 5:45 5/5/2020 12:30 5/15/2020 10:45 5/15/2020 10:45 5/15/2020 11:30 5/18/2020 2:45 5/15/2020 11:45 6/21/2020 11:45 6/21/2020 11:45 6/21/2020 11:45 6/22/2020 11:45 6/22/2020 11:45 6/22/2020 11:45 6/22/2020 11:45 5/16/2020 10:15 6/22/2020 3:30 6/29/2020 3:16 6/29/2020 3:15 5/16/2020 3:15 5/16/2020 3:15 |
| START DATE | 6/29/2020 19:00 | | 5/16/2020 7:30 | 5/25/2020 16:45 | 6/21/2020 11:45 | 6/22/2020 22:45 | 6/29/2020 3:30 | | 4/12/2020 16:15 | 4/17/2020 14:00 | | 4/23/2020 7:00 | 4/23/2020 7:00 4/25/2020 12:15 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 5/8/2020 7:00 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 5/8/2020 7:00 5/15/2020 11:30 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 5/8/2020 7:00 5/15/2020 11:30 5/18/2020 2:45 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 5/8/2020 7:00 5/18/2020 11:30 5/18/2020 2:45 5/18/2020 16:30 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 4:00 5/15/2020 7:00 5/15/2020 11:30 5/18/2020 2:45 5/25/2020 16:30 5/29/2020 0:15 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/15/2020 11:30 5/15/2020 11:30 5/25/2020 02:15 5/22/2020 01:15 5/22/2020 01:130 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 11:30 5/15/2020 11:30 5/18/2020 2:45 5/29/2020 16:30 5/29/2020 16:30 5/29/2020 11:30 6/21/2020 11:30 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 11:30 5/18/2020 11:30 5/18/2020 2:45 5/18/2020 2:45 5/18/2020 11:30 6/21/2020 11:30 6/23/2020 8:30 6/23/2020 2:45 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 11:30 5/18/2020 11:30 5/18/2020 2:45 5/29/2020 11:30 6/23/2020 11:30 6/23/2020 8:30 6/23/2020 2:45 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 12:10 5/15/2020 12:45 5/18/2020 2:45 5/25/2020 11:30 6/29/2020 0:15 6/29/2020 2:45 6/29/2020 2:45 6/29/2020 11:00 5/8/2020 11:00 | 4/23/2020 7:00 5/5/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/15/2020 11:30 5/18/2020 2:45 5/25/2020 11:30 5/25/2020 0:15 6/21/2020 11:30 6/29/2020 2:45 6/29/2020 2:45 5/8/2020 2:45 5/8/2020 11:00 5/16/2020 7:15 | 4/23/2020 7:00 5/5/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/15/2020 12:15 5/15/2020 16:30 5/26/2020 01:15 6/21/2020 11:30 6/29/2020 2:45 6/29/2020 2:45 5/26/2020 2:45 5/26/2020 11:00 5/16/2020 11:00 5/16/2020 11:45 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 11:30 5/15/2020 11:30 5/15/2020 11:30 5/29/2020 16:30 5/29/2020 11:30 6/21/2020 11:30 6/29/2020 2:45 6/29/2020 2:45 5/16/2020 11:00 5/16/2020 11:00 5/16/2020 2:45 5/16/2020 2:45 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/18/2020 7:00 5/18/2020 11:30 5/18/2020 2:45 5/29/2020 0:15 6/21/2020 11:30 6/29/2020 0:15 6/23/2020 11:00 5/16/2020 11:00 5/16/2020 11:00 5/23/2020 18:45 6/22/2020 23:15 6/22/2020 23:15 | 4/23/2020 7:00 5/5/2020 12:15 5/5/2020 12:15 5/18/2020 12:15 5/18/2020 7:00 5/18/2020 2:45 5/25/2020 11:30 5/25/2020 11:30 6/21/2020 11:30 6/29/2020 2:45 5/25/2020 2:45 6/21/2020 11:00 5/16/2020 2:45 5/27/2020 2:45 6/29/2020 2:45 6/29/2020 2:315 6/29/2020 2:315 6/29/2020 2:316 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/18/2020 7:00 5/18/2020 2:45 5/25/2020 11:30 5/25/2020 11:30 6/29/2020 2:45 6/29/2020 2:45 5/23/2020 11:00 5/16/2020 11:00 5/16/2020 2:45 6/29/2020 2:315 6/29/2020 2:315 6/29/2020 2:30 6/29/2020 2:30 | 4/23/2020 7:00 5/5/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/15/2020 12:15 5/15/2020 12:15 5/29/2020 02:15 6/21/2020 11:30 6/29/2020 02:15 6/21/2020 11:30 6/29/2020 2:15 5/8/2020 11:00 5/16/2020 12:15 5/23/2020 12:15 6/22/2020 23:15 6/22/2020 23:15 6/22/2020 23:15 6/22/2020 23:15 6/22/2020 23:15 5/8/2020 10:45 | 4/23/2020 7:00 5/5/2020 12:15 5/5/2020 12:15 5/15/2020 12:15 5/15/2020 11:30 5/15/2020 16:30 5/18/2020 2:45 5/29/2020 0:15 6/21/2020 11:30 6/23/2020 0:15 6/23/2020 11:30 6/29/2020 2:30 5/21/2020 11:00 6/29/2020 2:315 6/23/2020 2:30 6/30/2020 2:30 6/30/2020 2:30 6/30/2020 2:30 | 4/23/2020 7:00 4/25/2020 12:15 5/5/2020 12:15 5/15/2020 11:30 5/15/2020 11:30 5/15/2020 16:30 5/29/2020 16:30 5/29/2020 11:30 6/21/2020 11:30 6/29/2020 2:45 6/29/2020 11:30 6/29/2020 2:45 5/29/2020 11:30 6/29/2020 2:45 5/29/2020 11:45 5/29/2020 2:30 6/30/2020 2:30 6/30/2020 2:30 5/16/2020 10:45 5/16/2020 10:45 5/16/2020 10:45 5/16/2020 10:45 5/16/2020 10:45 5/16/2020 10:45 |
| cso | | CSO055 Total | CS0056 | | | | | CSO056 Total | CS0057 | | | _ | | | | | | | | | | | CSO057 Total | CSO062 CSO062 | CS0062 | CS0062 CS0062 | CSO067 CSO062 CSO062 | CSO062 CSO062 | CS0062 CS0062 | CSO062 CSO067 CSO062 CS | CSO062 CSO082 CS | CSO062 CS | CSO062 CSO067 CSO07 CSO0 |



| cso | START DATE | END DATE | DURATION (MIN) | RAIN TOTAL | DISCHARGE PER RAIN | ANTECEDENT Rain | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume | COUNT |
|-----------------|--------------------|-----------------|-------------------|---------------|-----------------------|--------------------|-------------------|----------------|----------|---------|---------------------|-------|
| | | | | (INCH) | | | | | | | (GAL) | |
| | 6/29/2020 4:00 | 6/29/2020 6:15 | 135 | 0 | 544000 | + | 0 | ю | Atlas | (blank) | 250,240 | - |
| | 6/30/2020 2:15 | 6/30/2020 3:30 | 75 | 0 | 258917 | 1 | 0 | 1 | Atlas | (blank) | 90,621 | - |
| | 7/1/2020 0:00 | 7/1/2020 0:00 | 0 | 0 | 58900 | 0 | 0 | 1 | Atlas | (blank) | 2,945 | 1 |
| CSO082 Total | 32 | | | | | | | | | | 2,035,443 | 7 |
| CSO083 | 33 5/16/2020 2:15 | 5/16/2020 2:15 | 0 | 1 | 1755 | 0 | 0 | 24 | Atlas | (blank) | 2,211 | - |
| | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 46180 | 0 | 0 | 1 | Atlas | (blank) | 20,781 | 1 |
| | 6/22/2020 22:45 | 6/23/2020 0:00 | 75 | 0 | 53234 | 1 | 0 | 9 | Atlas | (blank) | 46,846 | 1 |
| CSO083 Total | 33 | | | | | | | | | | 69,838 | т |
| CS0088 | 38 4/8/2020 22:45 | 4/8/2020 23:45 | 60 | 0 | 21586 | 0 | 0 | e | Atlas | (blank) | 20,291 | - |
| | 4/12/2020 16:45 | 4/13/2020 6:30 | 825 | 2 | 113205 | ъ | 0 | 12 | Atlas | (blank) | 199,240 | - |
| | 4/17/2020 18:30 | 4/17/2020 19:15 | 45 | 0 | 4769 | 2 | 0 | 12 | Atlas | (blank) | 2,814 | - |
| | 4/23/2020 8:00 | 4/23/2020 17:45 | 585 | 0 | 95960 | 1 | 0 | 12 | Atlas | (blank) | 47,980 | - |
| | 4/25/2020 17:15 | 4/26/2020 12:45 | 1170 | 0 | 93622 | 0 | 0 | 24 | Atlas | (blank) | 43,066 | 1 |
| CSO088 Total | 38 | | | | | | | | | | 313,391 | Ð |
| CSO092 | 92 4/8/2020 22:15 | 4/8/2020 22:30 | 15 | + | 470 | 0 | 0 | ო | Atlas | (blank) | 498 | - |
| | 4/12/2020 14:15 | 4/13/2020 3:15 | 780 | 2 | 664 | 3 | 0 | 12 | Atlas | (blank) | 1,182 | 1 |
| | 4/26/2020 6:45 | 4/26/2020 6:45 | 0 | 0 | 98 | 0 | 0 | 24 | Atlas | (blank) | 52 | 1 |
| | 4/29/2020 5:30 | 4/29/2020 7:00 | 06 | 0 | 518 | 1 | 0 | 24 | Atlas | (blank) | 57 | 1 |
| | 5/15/2020 23:45 | 5/16/2020 7:30 | 465 | 1 | 673 | 2 | 0 | 24 | Atlas | (blank) | 936 | 1 |
| | 5/18/2020 7:30 | 5/18/2020 7:30 | 0 | 0 | 406 | 2 | 0 | 12 | Atlas | (blank) | 138 | 1 |
| | 6/21/2020 11:30 | 6/21/2020 11:30 | 0 | 0 | 329 | 0 | 0 | 1 | Atlas | (blank) | 181 | 1 |
| | 6/22/2020 23:15 | 6/22/2020 23:15 | 0 | 0 | 77 | 1 | 0 | 6 | Atlas | (blank) | 58 | 1 |
| | 6/29/2020 3:15 | 6/29/2020 4:00 | 45 | 0 | 1589 | 2 | 0 | 3 | Atlas | (blank) | 1,382 | 1 |
| | 6/30/2020 22:30 | 6/30/2020 22:30 | 0 | 0 | 1500 | 1 | 0 | 1 | Atlas | (blank) | 255 | 1 |
| CSO092 Total | 32 | | | | | | | | | | 4,739 | 10 |
| CSO097 | 97 4/12/2020 16:45 | 4/13/2020 7:15 | 870 | 2 | 75518 | 3 | 0 | 12 | Atlas | (blank) | 166,139 | 1 |
| | 4/26/2020 7:45 | 4/26/2020 8:00 | 15 | 0 | 69 | 1 | 0 | 24 | Atlas | (blank) | 40 | 1 |
| | 5/8/2020 11:30 | 5/8/2020 13:15 | 105 | 0 | 69308 | 0 | 0 | 6 | Atlas | (blank) | 42,278 | 1 |
| | 5/16/2020 0:30 | 5/16/2020 10:45 | 615 | 1 | 184034 | 2 | 0 | 24 | Atlas | (blank) | 250,286 | 1 |
| | 5/18/2020 8:30 | 5/18/2020 8:45 | 15 | 0 | 19074 | 2 | 0 | 12 | Atlas | (blank) | 7,439 | - |
| | 5/23/2020 18:30 | 5/23/2020 19:15 | 45 | 0 | 264029 | 0 | 0 | ы | Atlas | (blank) | 108,252 | - |
| | 6/4/2020 16:30 | 6/4/2020 19:45 | 195 | 0 | 62206 | 0 | 0 | 9 | Atlas | (blank) | 41,678 | - |
| | 6/21/2020 12:45 | 6/21/2020 13:00 | 15 | 0 | 39904 | 0 | 0 | 9 | Atlas | (blank) | 21,947 | - |
| | | | | | | | | | | | | |



PROJECT WIN QUARTERLY REPORT #59 APRIL 1, 2020 - JUNE 30, 2020

| Constant | | START DATE | END DATE | DURATION | RAIN | DISCHARGE | ANTECEDENT | FREQUENCY | PERIOD | STANDARD | COMMENT | DISCHARGE | COUNT |
|--|-----------------|-----------------|-----------------|----------|-----------------|-----------|------------|-----------|--------|----------|---------|-----------------|-------|
| Control 10 Contro 10 Contro 10 Control 1 | cso | | | (NIN) | TOTAL (INCH) | PER RAIN | RAIN | (YR) | (HR) | | | VOLUME (GAL) | |
| 0000000410 1000000 10 100000 10 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 1000000 10000000 10000000 10000000 10000000 10000000 10000000 10000000 10000000 10000000 100000000 100000000 100000000 | | 6/22/2020 23:30 | 6/23/2020 1:45 | 135 | 4 | 223490 | 2 | 0 | 9 | Atlas | (blank) | 281,598 | + |
| Monometric (Monometric) Number (Monometric) Monometric) Mononetric) Monometric) Mo | | 6/29/2020 4:15 | 6/29/2020 6:15 | 120 | ÷- | 283756 | 3 | 0 | e | Atlas | (blank) | 309,294 | ÷- |
| 4 | | 6/30/2020 23:30 | 7/1/2020 0:00 | 30 | 0 | 116867 | 2 | 0 | + | Atlas | (blank) | 50,253 | - |
| 49/2010 (10) 49/2010 (2) 7.0 1 <td>CSO097 Total</td> <td></td> <td>1,279,204</td> <td>1</td> | CSO097 Total | | | | | | | | | | | 1,279,204 | 1 |
| Control Contro Contro Contro C | CSO104 | | 4/9/2020 8:30 | 270 | 1 | 1982 | 1 | 0 | в | Atlas | (blank) | 2,299 | + |
| Construction Gamma Construction Construction | CSO104 Total | | | | | | | | | | | 2,299 | 1 |
| (1) (1) <td>CSO105</td> <td><u> </u></td> <td>6/23/2020 0:00</td> <td>15</td> <td>-</td> <td>698701</td> <td>2</td> <td>0</td> <td>9</td> <td>Atlas</td> <td>(blank)</td> <td>887,350</td> <td>-</td> | CSO105 | <u> </u> | 6/23/2020 0:00 | 15 | - | 698701 | 2 | 0 | 9 | Atlas | (blank) | 887,350 | - |
| 616-05002 51 075100 10 275100 10 275100 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-0500 10 246-05000 246-0500000 24 | CSO105 Total | | | | | | | | | | | 887,350 | - |
| Constant | CSO109 | | 5/16/2020 2:30 | 0 | 2 | 37510 | - | 0 | 24 | Atlas | (blank) | 58,140 | - |
| Current Exploration Current | | 5/23/2020 17:45 | 5/23/2020 18:00 | 15 | 0 | 238041 | - | 0 | - | Atlas | (blank) | 133,303 | - |
| 62.312.00 62.312.00 0 1 5170 5 5707 5 5707 5 5707 5 570 5 | | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 137973 | 0 | 0 | 1 | Atlas | (blank) | 85,543 | - |
| 6202003.03 6202004.30 60 1 11240 4 0 3 4060 3 4060 60m/h 6 47202012.03 100 10 10 1137 100 11 110 | | 6/23/2020 0:00 | 6/23/2020 0:00 | 0 | 2 | 57075 | 2 | 0 | 9 | Atlas | (blank) | 93,033 | 1 |
| 4 | | 6/29/2020 3:30 | 6/29/2020 4:30 | 60 | + | 111249 | 4 | 0 | ю | Atlas | (blank) | 160,198 | - |
| 48/2020230 68/2020230 0 1 1975 0 1 | CSO109 Total | | | | | | | | | | | 530,217 | 5 |
| 4/12202018:00 4/13/2003.30 500 10 403 | CS0111 | | 4/8/2020 22:30 | 0 | + | 1975 | 0 | 0 | з | Atlas | (blank) | 2,014 | - |
| 58/20201045 58/202011:5 30 0 1657 0 1657 0 1657 0 1657 0 1657 0 1657 0 1657 0 1777 0 0 24 0 | | 4/12/2020 18:00 | 4/13/2020 3:30 | 570 | 2 | 40361 | 3 | 0 | 12 | Atlas | (blank) | 76,686 | 1 |
| 61(61/2020 (1) 61(6) 1 1177 0 1 1177 0 1 <td></td> <td>5/8/2020 10:45</td> <td>5/8/2020 11:15</td> <td>30</td> <td>0</td> <td>16537</td> <td>0</td> <td>0</td> <td>9</td> <td>Atlas</td> <td>(blank)</td> <td>9,757</td> <td>+</td> | | 5/8/2020 10:45 | 5/8/2020 11:15 | 30 | 0 | 16537 | 0 | 0 | 9 | Atlas | (blank) | 9,757 | + |
| 618/2007.30 618/20207.30 0 0 5379 0 1 4468 (blank) 1 75/2/202017.45 55/3/202018.30 15 0 89950 0< | | 5/16/2020 0:00 | 5/16/2020 2:45 | 165 | 1 | 11777 | 0 | 0 | 24 | Atlas | (blank) | 14,721 | 1 |
| 55/32020 (17.45) 5/32/2020 (15.0) 15 0 < | | 5/18/2020 7:30 | 5/18/2020 7:30 | 0 | 0 | 5379 | 2 | 0 | 1 | Atlas | (blank) | 2,044 | 1 |
| 6i/i202018:30 6i/i202018:30 0 0 3027 0 3027 0 0 6i Attas (blank) 6i/2102011:45 6i/2102011:45 0 0 33992 0 < | | 5/23/2020 17:45 | 5/23/2020 18:00 | 15 | 0 | 89950 | 0 | 0 | + | Atlas | (blank) | 12,593 | 1 |
| 6/21/2020 11:45 0 0 3392 0 3392 0 | | 6/4/2020 18:30 | 6/4/2020 18:30 | 0 | 0 | 3027 | 0 | 0 | 6 | Atlas | (blank) | 1,786 | 1 |
| 6/29/2020 6:30 6/29/2020 6:30 30 7 <th< td=""><td></td><td>6/21/2020 11:45</td><td>6/21/2020 11:45</td><td>0</td><td>0</td><td>33992</td><td>0</td><td>0</td><td>6</td><td>Atlas</td><td>(blank)</td><td>17,336</td><td>1</td></th<> | | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 33992 | 0 | 0 | 6 | Atlas | (blank) | 17,336 | 1 |
| 5/16/2020 2:30 5/16/2020 7:30 300 1 44684 2 0 24 Atlas (blank) 6/21/2020 11:45 6/21/2020 11:45 0 0 1 44684 2 0 24 Atlas (blank) 6/21/2020 11:45 6/21/2020 11:45 0 0 149565 0 0 1 Atlas (blank) 6/21/2020 12:45 6/20 202 11:45 0 0 1 1 0 1 Atlas (blank) 6/22/2020 22:45 6/20 202 13:0 10 0 16740 22 0 0 16740 1 0 1 < | | 6/29/2020 5:30 | 6/29/2020 6:00 | 30 | 0 | 306470 | 2 | 0 | 3 | Atlas | (blank) | 214,529 | 1 |
| 5/16/2020 2:30 5/16/2020 7:30 300 1 44684 2 0 24 Atias (blank) (blank) 6/21/2020 11:45 6/21/2020 11:45 0 0 149555 0 0 149555 0 149555 0 149555 (blank) (blank) (blank) 1 6/21/2020 11:45 0 0 149555 0 45399 1 0 1 Atias (blank) 1 6/22/2020 23:30 6/22/2020 23:30 6/20 0 1 1670 0 1 Atias (blank) 1 6/29/2020 23:45 6/20/202 23:00 15 0 167400 2 0 0 1 | CSO111 Total | | | | | | | | | | | 351,466 | 6 |
| 6/21/2020 11:45 0 0 149555 0 149555 0 149555 0 149555 0 149555 0 149555 0 149555 0 1495555 1495555 149555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 1495555 14955555 1495555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 14955555 149555555 149555555 14955555 14955555 14955555 149555555 149555555 149555555 149555555 14955555555 149555555555555555555555 149555555555555555555555555 | CSO113 | | 5/16/2020 7:30 | 300 | 1 | 44684 | 2 | 0 | 24 | Atlas | (blank) | 62,111 | 1 |
| 6/22/2020 22:45 0 0 45399 1 0 6 Atlas (blank) (blank) 6/29/2020 3:30 6/29/2020 4:30 60 0 116740 22 0 3 Atlas (blank) 1 6/30/2020 23:45 6/30/2020 23:00 15 0 116740 22 0 3 Atlas (blank) 1 6/30/2020 23:45 6/30/2020 23:00 15 0 524606 1 0 1 Atlas (blank) 1 6/30/2020 23:45 6/30/2020 23:00 15 0 524606 1 0 1 Atlas (blank) 1 6/30/2020 23:45 6/30/202 33:00 15 0 524606 1 0 0 1 Atlas (blank) 1 6/30/2020 33:0 15 2 1432/202 33 15 2 1435 1 1 1 1 1 1 1 1 1 1 1 1 1 | | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 149555 | 0 | 0 | + | Atlas | (blank) | 82,255 | + |
| 6(29/2020 3:30 6(29/2020 4:30 60 0 116740 2 0 3 Atlas (blank) (blank) 6(30/2020 22:45 6(30/2020 23:00 15 0 524606 1 0 1 Atlas (blank) 1 6(30/2020 22:45 6(30/2020 23:00 15 0 524606 1 0 1 Atlas (blank) 1 4(13/2020 23:00 15 2 1495 3 0 12 Atlas (blank) 1 5/16/2020 7:15 5/16/2020 8:30 75 1 805470 2 0 24 Atlas (blank) 1 | | 6/22/2020 22:45 | 6/22/2020 22:45 | 0 | 0 | 45399 | F | 0 | 9 | Atlas | (blank) | 34,049 | ÷- |
| 6/30/2020 22:45 6/30/2020 23:00 15 0 524606 1 0 1 Atlas (blank) (blank) 4/13/2020 5:15 4/13/2020 5:30 15 2 1495 3 0 12 Atlas (blank) 1 5/16/2020 7:15 5/16/2020 8:30 75 1 805470 2 0 24 Atlas (blank) 1 | | 6/29/2020 3:30 | 6/29/2020 4:30 | 60 | 0 | 116740 | 2 | 0 | 3 | Atlas | (blank) | 101,564 | 1 |
| 4/13/2020 5:15 4/13/2020 5:30 15 2 1495 3 0 12 Atlas (blank) 5/16/2020 7:15 6/16/2020 8:30 75 1 805470 2 0 24 Atlas (blank) | | 6/30/2020 22:45 | 6/30/2020 23:00 | 15 | 0 | 524606 | + | 0 | 1 | Atlas | (blank) | 89,183 | 1 |
| 4/13/2020 5:15 4/13/2020 5:30 15 2 1495 3 0 12 Atlas (blank) 5/16/2020 7:15 5/16/2020 8:30 75 1 805470 2 0 24 Atlas (blank) | CSO113 Total | | | | | | | | | | | 369,162 | 5 |
| 5/16/2020 8:30 75 1 805470 2 0 24 Atlas (blank) | CS0117 | | 4/13/2020 5:30 | 15 | 2 | 1495 | 3 | 0 | 12 | Atlas | (blank) | 2,541 | + |
| | | 5/16/2020 7:15 | 5/16/2020 8:30 | 75 | 1 | 805470 | 2 | 0 | 24 | Atlas | (blank) | 1,063,220 | 1 |

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| | | | (NIN) | RAIN TOTAL (INCH) | DISCHARGE PER RAIN | ANTECEDENT Rain | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume (gal) | COUNT |
|-----------------|-----------------|-----------------|-------|-------------------------|-----------------------|--------------------|-------------------|----------------|----------|---------|------------------------------|-------|
| | 6/22/2020 22:30 | 6/22/2020 22:30 | 0 | 0 | 3934 | 0 | 0 | 3 | Atlas | (blank) | 3,541 | - |
| | 6/30/2020 1:30 | 6/30/2020 3:00 | 90 | 0 | 684500 | 0 | 0 | 12 | Atlas | (blank) | 164,280 | 1 |
| | 6/30/2020 22:45 | 6/30/2020 23:45 | 60 | 0 | 5157129 | 0 | 0 | + | Atlas | (blank) | 360,999 | 1 |
| CSO117 Total | | | | | | | | | | | 1,594,581 | 5 |
| CSO118 | 4/8/2020 22:30 | 4/8/2020 22:45 | 15 | - | 167562 | 0 | 0 | е | Atlas | (blank) | 197,723 | - |
| | 4/12/2020 16:30 | 4/13/2020 4:00 | 069 | 2 | 1657995 | 3 | 0 | 12 | Atlas | (blank) | 2,752,272 | - |
| | 4/23/2020 8:30 | 4/23/2020 15:45 | 435 | 0 | 169812 | - | 0 | 12 | Atlas | (blank) | 84,906 | - |
| | 4/26/2020 6:45 | 4/26/2020 7:15 | 30 | 0 | 63833 | 0 | 0 | 24 | Atlas | (blank) | 33,193 | - |
| | 5/5/2020 6:45 | 5/5/2020 6:45 | 0 | 0 | 23491 | 0 | 0 | 9 | Atlas | (blank) | 5,403 | - |
| | 5/8/2020 10:15 | 5/8/2020 13:15 | 180 | 0 | 1053873 | 0 | 0 | 12 | Atlas | (blank) | 632,324 | - |
| | 5/15/2020 17:00 | 5/16/2020 8:45 | 945 | - | 2656227 | 1 | 0 | 24 | Atlas | (blank) | 3,346,846 | - |
| | 5/18/2020 7:30 | 5/18/2020 12:45 | 315 | 0 | 1375147 | 2 | 0 | + | Atlas | (blank) | 412,544 | - |
| | 5/25/2020 16:45 | 5/25/2020 17:15 | 30 | 0 | 2339091 | 0 | 0 | 1 | Atlas | (blank) | 537,991 | 1 |
| | 5/29/2020 0:45 | 5/29/2020 1:00 | 15 | 0 | 463945 | 0 | 0 | 1 | Atlas | (blank) | 102,068 | 1 |
| | 6/4/2020 18:30 | 6/4/2020 21:00 | 150 | 0 | 1339448 | 0 | 0 | 3 | Atlas | (blank) | 669,724 | 1 |
| | 6/21/2020 11:45 | 6/21/2020 12:45 | 60 | 0 | 2328616 | 0 | 0 | 1 | Atlas | (blank) | 1,047,877 | 1 |
| | 6/22/2020 22:45 | 6/23/2020 9:30 | 645 | 0 | 2838135 | - | 0 | 9 | Atlas | (blank) | 2,497,559 | 1 |
| | 6/29/2020 3:15 | 6/29/2020 5:15 | 120 | 0 | 4729727 | 2 | 0 | 3 | Atlas | (blank) | 2,648,647 | - |
| | 6/30/2020 1:45 | 6/30/2020 2:45 | 60 | 0 | 563850 | - | 0 | 12 | Atlas | (blank) | 112,770 | - |
| | 6/30/2020 23:00 | 6/30/2020 23:00 | 0 | 0 | 533457 | 0 | 0 | - | Atlas | (blank) | 37,342 | - |
| CSO118 Total | | | | | | | | | | | 15,119,189 | 16 |
| CSO119 | 4/8/2020 22:15 | 4/8/2020 22:30 | 15 | - | 55964 | 0 | 0 | 3 | Atlas | (blank) | 66,038 | - |
| | 4/12/2020 16:30 | 4/13/2020 3:30 | 660 | 2 | 433086 | 8 | 0 | 12 | Atlas | (blank) | 718,923 | + |
| | 4/23/2020 12:45 | 4/23/2020 13:00 | 15 | 0 | 111146 | 1 | 0 | 12 | Atlas | (blank) | 55,573 | 1 |
| | 5/8/2020 10:30 | 5/8/2020 12:30 | 120 | 0 | 384112 | 0 | 0 | 12 | Atlas | (blank) | 230,467 | 1 |
| | 5/15/2020 16:30 | 5/16/2020 8:00 | 930 | 1 | 558430 | + | 0 | 24 | Atlas | (blank) | 703,622 | 1 |
| | 5/18/2020 7:15 | 5/18/2020 8:00 | 45 | 0 | 447413 | 2 | 0 | 1 | Atlas | (blank) | 134,224 | 1 |
| | 5/25/2020 16:45 | 5/25/2020 16:45 | 0 | 0 | 121439 | 0 | 0 | + | Atlas | (blank) | 27,931 | - |
| | 5/29/2020 0:30 | 5/29/2020 0:30 | 0 | 0 | 150882 | 0 | 0 | - | Atlas | (blank) | 33,194 | - |
| | 6/4/2020 18:15 | 6/4/2020 19:15 | 60 | 0 | 227486 | 0 | 0 | 3 | Atlas | (blank) | 113,743 | - |
| | 6/21/2020 11:30 | 6/21/2020 12:00 | 30 | 0 | 291469 | 0 | 0 | - | Atlas | (blank) | 131,161 | - |
| | 6/22/2020 22:30 | 6/23/2020 0:30 | 120 | 0 | 514581 | - | 0 | 9 | Atlas | (blank) | 452,831 | - |
| | 6/23/2020 8:45 | 6/23/2020 9:00 | 15 | 0 | 64076 | - | 0 | 9 | Atlas | (blank) | 56,387 | - |
| | 6/29/2020 3:00 | 6/29/2020 4:45 | 105 | 0 | 520579 | 2 | 0 | e | Atlas | (blank) | 291,524 | - |
| | 6/30/2020 22:45 | 6/30/2020 23:00 | 15 | 0 | 975386 | 0 | 0 | - | Atlas | (blank) | 68,277 | - |





| <u> </u> | cso | START DATE | END DATE | DURATION (MIN) | RAIN TOTAL | DISCHARGE PER RAIN | ANTECEDENT Rain | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume | COUNT |
|---------------|-----------------|-----------------|-----------------|-------------------|---------------|-----------------------|--------------------|-------------------|----------------|----------|---------|---------------------|-------|
| | | | | | (INCH) | | | | | | | (GAL) | |
| CSO Total | CSO119 Total | | | | | | | | | | | 3,083,895 | 14 |
| CS | CS0121 | 4/8/2020 22:30 | 4/8/2020 22:30 | 0 | - | 8859 | 0 | 0 | ε | Atlas | (blank) | 10,454 | - |
| | | 4/12/2020 18:00 | 4/12/2020 18:00 | 0 | 2 | 2651 | 2 | 0 | 12 | Atlas | (blank) | 4,612 | - |
| | | 5/8/2020 11:00 | 5/8/2020 11:00 | 0 | 0 | 5480 | 0 | 0 | 12 | Atlas | (blank) | 3,288 | 1 |
| | | 5/15/2020 16:45 | 5/16/2020 8:00 | 915 | 1 | 117417 | 1 | 0 | 24 | Atlas | (blank) | 143,249 | 1 |
| | | 5/18/2020 7:30 | 5/18/2020 8:00 | 30 | 0 | 125048 | 2 | 0 | 1 | Atlas | (blank) | 41,266 | 1 |
| | | 5/23/2020 18:00 | 5/23/2020 18:00 | 0 | 0 | 81779 | 0 | 0 | 3 | Atlas | (blank) | 15,538 | + |
| | | 5/29/2020 0:45 | 5/29/2020 0:45 | 0 | 0 | 100647 | 0 | 0 | 1 | Atlas | (blank) | 19,123 | 1 |
| | | 6/4/2020 18:15 | 6/4/2020 19:30 | 75 | 0 | 214086 | 0 | 0 | 3 | Atlas | (blank) | 104,902 | 1 |
| | | 6/21/2020 11:45 | 6/21/2020 12:00 | 15 | 0 | 147514 | 0 | 0 | 1 | Atlas | (blank) | 54,580 | 1 |
| | | 6/22/2020 22:45 | 6/23/2020 0:30 | 105 | 0 | 197636 | 1 | 0 | 9 | Atlas | (blank) | 160,085 | + |
| | | 6/23/2020 8:45 | 6/23/2020 9:00 | 15 | 0 | 60823 | 1 | 0 | 9 | Atlas | (blank) | 49,267 | 1 |
| | | 6/29/2020 3:00 | 6/29/2020 4:45 | 105 | 0 | 378143 | 1 | 0 | 3 | Atlas | (blank) | 173,946 | 1 |
| | | 6/30/2020 1:30 | 6/30/2020 2:30 | 60 | 0 | 127209 | + | 0 | - | Atlas | (blank) | 44,523 | - |
| CSO Total | CSO121 Total | | | | | | | | | | | 824,833 | 13 |
| Ĉ | CS0125 | 4/8/2020 22:30 | 4/9/2020 1:00 | 150 | 1 | 40569 | 1 | 0 | 3 | Atlas | (blank) | 43,003 | 1 |
| | | 4/12/2020 17:00 | 4/13/2020 5:45 | 765 | 2 | 214800 | 3 | 0 | 12 | Atlas | (blank) | 442,489 | 1 |
| | | 4/23/2020 13:00 | 4/23/2020 20:00 | 420 | 0 | 64318 | 1 | 0 | 12 | Atlas | (blank) | 39,877 | 1 |
| | | 4/25/2020 17:30 | 4/25/2020 17:45 | 15 | 0 | 37270 | 0 | 0 | 24 | Atlas | (blank) | 25,716 | - |
| | | 4/29/2020 11:00 | 4/29/2020 11:15 | 15 | 0 | 43500 | 1 | 0 | 3 | Atlas | (blank) | 9,135 | 1 |
| | | 5/5/2020 6:45 | 5/5/2020 6:45 | 0 | 0 | 26735 | 0 | 0 | 3 | Atlas | (blank) | 5,347 | 1 |
| | | 5/8/2020 11:00 | 5/8/2020 12:15 | 75 | 0 | 75544 | 0 | 0 | 12 | Atlas | (blank) | 43,060 | 1 |
| | | 5/15/2020 16:45 | 5/16/2020 8:00 | 915 | 1 | 46828 | 2 | 0 | 24 | Atlas | (blank) | 67,901 | 1 |
| | | 5/18/2020 7:45 | 5/18/2020 8:00 | 15 | 0 | 11327 | 2 | 0 | 1 | Atlas | (blank) | 6,683 | - |
| | | 5/23/2020 17:00 | 5/23/2020 17:00 | 0 | 0 | 24010 | 0 | 0 | 3 | Atlas | (blank) | 7,203 | - |
| | | 5/29/2020 0:45 | 5/29/2020 0:45 | 0 | 0 | 2975 | 0 | 0 | + | Atlas | (blank) | 476 | - |
| | | 6/21/2020 12:45 | 6/21/2020 15:30 | 165 | 0 | 894 | 0 | 0 | 1 | Atlas | (blank) | 563 | 1 |
| CSO. Total | CSO125 Total | | | | | | | | | | | 691,453 | 12 |
| Ċ | CSO126 | 5/16/2020 7:45 | 5/16/2020 8:30 | 45 | 1 | 17534 | 2 | 0 | 24 | Atlas | (blank) | 25,425 | 1 |
| | | 6/4/2020 18:15 | 6/4/2020 18:15 | 0 | 0 | 8113 | 0 | 0 | 3 | Atlas | (blank) | 4,543 | 1 |
| | | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 26594 | 0 | 0 | - | Atlas | (blank) | 16,754 | - |
| | | 6/23/2020 0:15 | 6/23/2020 0:30 | 15 | - | 3599 | 2 | 0 | e | Atlas | (blank) | 3,959 | - |
| | _ | 6/29/2020 2:45 | 6/29/2020 2:45 | 0 | 0 | 100 | 2 | 0 | е | Atlas | (blank) | 91 | - |
| | | 6/30/2020 23:15 | 6/30/2020 23:15 | 0 | 0 | 18375 | - | 0 | 3 | Atlas | (blank) | 3,675 | ~ |
| | | | | | | | | | | | | | |

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JULY 30, 2020





| START DATE | END DATE | DURATION (MIN) | RAIN TOTAL (INCH) | DISCHARGE Per rain | ANTECEDENT Rain | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume (gal) | COUNT |
|-----------------|-----------------|-------------------|-------------------------|-----------------------|--------------------|-------------------|----------------|----------|------------------------------|------------------------------|-------|
| 6/22/2020 23:15 | 6/24/2020 0:00 | 1485 | 0 | 869456 | 1 | 0 | 3 | Atlas | (blank) | 652,092 | - |
| 6/29/2020 3:30 | 6/30/2020 0:00 | 1230 | 0 | 324622 | 2 | 0 | ۲ | Atlas | (blank) | 175,296 | - |
| 6/30/2020 23:45 | 7/1/2020 0:00 | 15 | 0 | 4673 | - | 0 | e | Atlas | (blank) | 514 | - |
| | | | | | | | | | | 1,582,267 | 2 |
| 6/23/2020 0:00 | 6/23/2020 0:00 | 0 | 0 | 28527 | - | 0 | e | Atlas | (blank) | 23,107 | - |
| | | | | | | | | | | 23,107 | ~ |
| 6/22/2020 22:30 | 6/22/2020 22:30 | 0 | 0 | 5932 | 0 | 0 | 9 | Atlas | (blank) | 4,805 | - |
| 6/23/2020 8:45 | 6/23/2020 8:45 | 0 | 0 | 621 | - | 0 | 9 | Atlas | (blank) | 503 | - |
| | | | | | | | | | | 5,308 | N |
| 5/16/2020 2:15 | 5/16/2020 7:30 | 315 | - | 3274 | N | 0 | 24 | Atlas | Retained by Sneads Branch | 4,486 | - |
| 5/18/2020 7:30 | 5/18/2020 7:30 | 0 | 0 | 4763 | 7 | 0 | 12 | Atlas | Retained by Sneads Branch | 1,953 | - |
| 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 49545 | 0 | 0 | - | Atlas | Retained by Sneads Branch | 23,286 | - |
| 6/22/2020 22:30 | 6/23/2020 0:00 | 06 | 0 | 22705 | 1 | 0 | 3 | Atlas | Retained by Sneads Branch | 44,007 | - |
| 6/27/2020 18:15 | 6/27/2020 18:15 | 0 | 0 | 8888 | 1 | 0 | 1 | Atlas | Retained by Sneads Branch | 2,012 | ٢ |
| 6/29/2020 3:30 | 6/29/2020 4:30 | 09 | 0 | 42837 | 2 | 0 | 3 | Atlas | Retained by Sneads Branch | 25,702 | - |
| 6/30/2020 22:45 | 6/30/2020 22:45 | 0 | 0 | 183857 | - | 0 | - | Atlas | Retained by Sneads Branch | 12,870 | - |
| | | | | | | | | | | 114,316 | 7 |
| 6/23/2020 0:00 | 6/23/2020 0:00 | 0 | 0 | 3932 | 1 | 0 | 3 | Atlas | (blank) | 3,303 | - |
| | | | | | | | | | | 3,303 | - |
| 5/16/2020 7:45 | 5/16/2020 7:45 | 0 | - | 7508 | 2 | 0 | 24 | Atlas | (blank) | 10,286 | - |
| 6/22/2020 23:00 | 6/22/2020 23:15 | 15 | 0 | 109281 | 1 | 0 | 3 | Atlas | (blank) | 86,332 | 1 |
| 6/30/2020 22:45 | 6/30/2020 22:45 | 0 | 0 | 96657 | 4 | 0 | - | Atlas | (blank) | 6,766 | - |
| | | | | | | | | | | 103,384 | з |
| 4/8/2020 22:15 | 4/8/2020 22:15 | 0 | 1 | 8582 | 0 | 0 | 3 | Atlas | (blank) | 8,754 | - |
| 4/12/2020 16:30 | 4/13/2020 3:15 | 645 | 2 | 6573 | Э | 0 | 12 | Atlas | (blank) | 14,461 | - |
| 4/23/2020 12:45 | 4/23/2020 12:45 | 0 | 0 | 963 | 4 | 0 | 12 | Atlas | (blank) | 626 | - |
| 5/8/2020 10:30 | 5/8/2020 11:00 | 30 | 0 | 22064 | 0 | 0 | 9 | Atlas | (blank) | 13,459 | - |

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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 |
|-----------------|-----------------|-----------------|-------------------|-------------------------|-----------------------|--------------------|-------------------|----------------|----------|---------|------------------------------|-------|
| | 5/15/2020 23:00 | 5/16/2020 7:30 | 510 | 1 | 26549 | 1 | 0 | 24 | Atlas | (blank) | 36,107 | 1 |
| | 5/18/2020 7:30 | 5/18/2020 7:30 | 0 | 0 | 5577 | 2 | 0 | 12 | Atlas | (blank) | 2,175 | 1 |
| | 5/23/2020 16:45 | 5/23/2020 17:45 | 60 | 0 | 57402 | 0 | 0 | 3 | Atlas | (blank) | 23,535 | 1 |
| | 6/4/2020 15:30 | 6/4/2020 18:30 | 180 | 0 | 24360 | 0 | 0 | 9 | Atlas | (blank) | 16,321 | 1 |
| | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 19687 | 0 | 0 | 9 | Atlas | (blank) | 10,828 | 1 |
| | 6/22/2020 22:30 | 6/23/2020 0:00 | 90 | 1 | 103862 | 2 | 0 | 9 | Atlas | (blank) | 130,866 | 1 |
| | 6/27/2020 18:15 | 6/27/2020 18:15 | 0 | 0 | 24700 | 2 | 0 | 1 | Atlas | (blank) | 12,350 | 1 |
| | 6/29/2020 3:00 | 6/29/2020 4:30 | 06 | + | 66731 | 3 | 0 | 3 | Atlas | (blank) | 72,737 | 1 |
| | 6/30/2020 22:45 | 6/30/2020 23:00 | 15 | 0 | 66647 | 2 | 0 | 1 | Atlas | (blank) | 28,658 | 1 |
| CSO148 Total | | | | | | | | | | | 370,877 | 13 |
| CS0151 | 4/8/2020 22:45 | 4/8/2020 23:00 | 15 | + | 37863 | - | 0 | 3 | Atlas | (blank) | 42,406 | £- |
| | 4/12/2020 17:00 | 4/13/2020 5:45 | 765 | 2 | 273692 | e | 0 | 12 | Atlas | (blank) | 509,068 | ÷- |
| | 4/23/2020 8:00 | 4/23/2020 16:00 | 480 | 0 | 178180 | 1 | 0 | 12 | Atlas | (blank) | 105,126 | 1 |
| | 4/25/2020 17:15 | 4/25/2020 17:15 | 0 | 0 | 9675 | 0 | 0 | 24 | Atlas | (blank) | 5,515 | 1 |
| | 4/26/2020 6:45 | 4/26/2020 10:30 | 225 | 0 | 51807 | 1 | 0 | 24 | Atlas | (blank) | 29,530 | 1 |
| | 4/29/2020 11:15 | 4/29/2020 11:15 | 0 | 0 | 159624 | - | 0 | 24 | Atlas | (blank) | 27,136 | 1 |
| | 4/29/2020 21:45 | 4/29/2020 21:45 | 0 | 0 | 140129 | 1 | 0 | 24 | Atlas | (blank) | 23,822 | 1 |
| | 5/5/2020 6:45 | 5/5/2020 7:15 | 30 | 0 | 466300 | 0 | 0 | 9 | Atlas | (blank) | 102,586 | 1 |
| | 5/8/2020 9:00 | 5/8/2020 13:45 | 285 | 0 | 1360452 | 0 | 0 | 12 | Atlas | (blank) | 816,271 | 1 |
| | 5/15/2020 23:30 | 5/16/2020 8:15 | 525 | 1 | 458246 | 2 | 0 | 24 | Atlas | (blank) | 650,709 | 1 |
| | 5/18/2020 7:45 | 5/18/2020 12:15 | 270 | 0 | 250800 | 2 | 0 | 9 | Atlas | (blank) | 95,304 | 1 |
| | 5/23/2020 17:15 | 5/23/2020 18:45 | 90 | 0 | 1870745 | 0 | 0 | 3 | Atlas | (blank) | 374,149 | 1 |
| | 5/29/2020 1:00 | 5/29/2020 1:00 | 0 | 0 | 45141 | 0 | 0 | 12 | Atlas | (blank) | 9,931 | 1 |
| | 6/4/2020 16:00 | 6/4/2020 21:00 | 300 | 0 | 563778 | 0 | 0 | 9 | Atlas | (blank) | 281,889 | 1 |
| | 6/21/2020 12:15 | 6/21/2020 12:30 | 15 | 0 | 54455 | 0 | 0 | 1 | Atlas | (blank) | 32,673 | 1 |
| | 6/22/2020 22:45 | 6/23/2020 0:45 | 120 | 0 | 285048 | 2 | 0 | 3 | Atlas | (blank) | 270,796 | 1 |
| | 6/23/2020 9:15 | 6/23/2020 9:15 | 0 | 0 | 8788 | 2 | 0 | 3 | Atlas | (blank) | 8,349 | 1 |
| | 6/27/2020 18:30 | 6/27/2020 18:45 | 15 | 0 | 82515 | 2 | 0 | 1 | Atlas | (blank) | 28,055 | 1 |
| | 6/29/2020 3:45 | 6/29/2020 8:00 | 255 | 0 | 187095 | 2 | 0 | 3 | Atlas | (blank) | 145,934 | 1 |
| | 6/30/2020 1:15 | 6/30/2020 1:30 | 15 | 0 | 178617 | 1 | 0 | 1 | Atlas | (blank) | 32,151 | 1 |
| | 6/30/2020 23:00 | 6/30/2020 23:45 | 45 | 0 | 305707 | 2 | 0 | 1 | Atlas | (blank) | 85,598 | 1 |
| CSO151 Total | | | | | | | | | | | 3,676,998 | 21 |
| CSO153 | 4/8/2020 22:15 | 4/8/2020 22:30 | 15 | 1 | 29619 | 0 | 0 | 3 | Atlas | (blank) | 34,951 | 1 |
| | 4/12/2020 16:15 | 4/13/2020 3:30 | 675 | 2 | 155274 | 3 | 0 | 12 | Atlas | (blank) | 270,177 | 1 |
| | 4/23/2020 7:30 | 4/23/2020 13:00 | 330 | 0 | 92740 | - | 0 | 12 | Atlas | (blank) | 44,515 | 1 |





| COUNT | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | + | 1 | + | + | + | 16 | - | 1 | - | 1 | 1 | 1 | - | 1 | 8 | + | 1 | 1 | 1 | 1 | + | 1 | 1 | 1 | 1 | 1 | + |
|------------------------------|----------------|---------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|----------------|-----------------|
| DISCHARGE Volume (GAL) | 10,959 | 13,368 | 205,516 | 475,456 | 63,720 | 54,420 | 23,719 | 75,319 | 75,269 | 582,194 | 239,550 | 7,738 | 23,757 | 2,200,628 | 83 | 602 | 1,217 | 70 | 2,027 | 24,388 | 235 | 1,527 | 30,149 | 28,284 | 1,998,319 | 46,464 | 38,665 | 32,145 | 73,447 | 1,161,683 | 45,858 | 1,023,133 | 17,742 | 319,779 | 193,312 |
| COMMENT | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) |
| STANDARD | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas |
| PERIOD (HR) | 24 | 6 | 12 | 24 | 1 | 3 | 1 | 3 | + | 6 | 3 | + | 1 | | ю | 24 | - | 3 | 1 | 3 | - | 1 | | з | 12 | 12 | 24 | 24 | 12 | 24 | 6 | 3 | 3 | 9 | - |
| FREQUENCY (YR) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| ANTECEDENT RAIN | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | | 0 | 2 | 0 | 0 | 0 | 1 | - | 1 | | 0 | 3 | - | 0 | 1 | 0 | 2 | 2 | 0 | 0 | 0 | 0 |
| DISCHARGE Per rain | 21075 | 60764 | 342527 | 389718 | 193091 | 286421 | 124837 | 153712 | 203430 | 718758 | 520761 | 22109 | 475140 | | 83 | 456 | 2766 | 117 | 5791 | 31267 | 691 | 4491 | | 29463 | 839630 | 71483 | 58583 | 160725 | 131155 | 695619 | 93588 | 3197291 | 118280 | 524228 | 316905 |
| RAIN TOTAL (INCH) | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | ٦ | 1 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| DURATION (MIN) | 375 | 15 | 270 | 915 | 300 | 60 | 0 | 135 | 15 | 069 | 195 | 09 | 15 | | 0 | 0 | 0 | 0 | 0 | 06 | 06 | 0 | | 30 | 795 | 30 | 30 | 15 | 105 | 570 | 300 | 120 | 0 | 60 | 45 |
| END DATE | 4/26/2020 6:30 | 5/5/2020 6:30 | 5/8/2020 13:00 | 5/16/2020 7:45 | 5/18/2020 12:30 | 5/23/2020 17:45 | 5/29/2020 0:30 | 6/4/2020 20:30 | 6/21/2020 12:00 | 6/23/2020 10:00 | 6/29/2020 6:00 | 6/30/2020 2:15 | 6/30/2020 23:00 | | 4/8/2020 22:00 | 5/16/2020 7:15 | 5/25/2020 16:30 | 6/4/2020 18:00 | 6/21/2020 11:45 | 6/23/2020 0:00 | 6/29/2020 4:15 | 6/29/2020 19:15 | | 4/8/2020 23:15 | 4/13/2020 6:30 | 4/23/2020 13:45 | 4/25/2020 18:00 | 4/29/2020 11:30 | 5/8/2020 12:30 | 5/16/2020 9:15 | 5/18/2020 13:00 | 5/23/2020 19:30 | 5/26/2020 15:00 | 6/4/2020 19:15 | 6/21/2020 12:45 |
| START DATE | 4/26/2020 0:15 | 5/5/2020 6:15 | 5/8/2020 8:30 | 5/15/2020 16:30 | 5/18/2020 7:30 | 5/23/2020 16:45 | 5/29/2020 0:30 | 6/4/2020 18:15 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/29/2020 2:45 | 6/30/2020 1:15 | 6/30/2020 22:45 | | 4/8/2020 22:00 | 5/16/2020 7:15 | 5/25/2020 16:30 | 6/4/2020 18:00 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/29/2020 2:45 | 6/29/2020 19:15 | | 4/8/2020 22:45 | 4/12/2020 17:15 | 4/23/2020 13:15 | 4/25/2020 17:30 | 4/29/2020 11:15 | 5/8/2020 10:45 | 5/15/2020 23:45 | 5/18/2020 8:00 | 5/23/2020 17:30 | 5/26/2020 15:00 | 6/4/2020 18:15 | 6/21/2020 12:00 |
| cso | | | | | | | | | | | | | | CSO153 Total | CSO161 | | | | | | | | CSO161 Total | CSO166 | | | | | | | | | | | |



| COUNT | - | 1 | 1 | 1 | 16 | + | 1 | - | + | 1 | 1 | 9 | - | - | - | - | 1 | 1 | 1 | 4 | - | - | 1 | - | 12 |
|------------------------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|
| DISCHARGE Volume (Gal) | 1,800,087 | 641,989 | 310,719 | 1,225,999 | 8,957,625 | 6,294 | 236 | 752 | 4,983 | 10,603 | 2,850 | 25,718 | 3,055 | 117,364 | 64,702 | 158,771 | 4,574 | 24,377 | 19,215 | 210,268 | 783,218 | 86,833 | 559,262 | 283,170 | 2,314,809 |
| COMMENT | (blank) | (blank) | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | |
| STANDARD | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | | Atlas | |
| PERIOD (HR) | 3 | 3 | 1 | 3 | | 24 | 3 | ε | + | 3 | 1 | | 3 | 12 | 12 | 24 | 12 | 9 | 9 | L | ю | ۲ | 3 | Ļ | |
| FREQUENCY (YR) | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANTECEDENT RAIN | 2 | 2 | 2 | 2 | | 1 | 0 | 0 | 0 | 1 | 2 | | 0 | e | 0 | 5 | 2 | 0 | 0 | 0 | - | ۲ | 2 | ۲ | |
| DISCHARGE PER RAIN | 1440070 | 682967 | 597537 | 6452626 | | 5994 | 1073 | 1635 | 13468 | 14137 | 5278 | | 2680 | 64486 | 109664 | 115891 | 11156 | 270856 | 41772 | 447379 | 991415 | 361804 | 932103 | 4045286 | |
| RAIN Total (Inch) | - | 0 | 0 | 0 | | 1 | 0 | 0 | 0 | 0 | 0 | | L | 2 | 0 | L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DURATION (MIN) | 645 | 180 | 30 | 45 | | 1260 | 375 | 300 | 069 | 1485 | 1230 | | 0 | 615 | 45 | 465 | 0 | 0 | 0 | 15 | 105 | 15 | 75 | 30 | |
| END DATE | 6/23/2020 9:30 | 6/29/2020 6:00 | 6/30/2020 1:45 | 7/1/2020 0:00 | | 5/17/2020 0:00 | 5/24/2020 0:00 | 6/5/2020 0:00 | 6/22/2020 0:00 | 6/24/2020 0:00 | 6/30/2020 0:00 | | 4/8/2020 22:30 | 4/13/2020 3:15 | 5/8/2020 11:15 | 5/16/2020 7:30 | 5/18/2020 7:45 | 5/23/2020 18:00 | 6/4/2020 15:45 | 6/21/2020 12:00 | 6/23/2020 0:15 | 6/27/2020 18:30 | 6/29/2020 4:45 | 6/30/2020 23:00 | |
| START DATE | 6/22/2020 22:45 | 6/29/2020 3:00 | 6/30/2020 1:15 | 6/30/2020 23:15 | | 5/16/2020 3:00 | 5/23/2020 17:45 | 6/4/2020 19:00 | 6/21/2020 12:30 | 6/22/2020 23:15 | 6/29/2020 3:30 | | 4/8/2020 22:30 | 4/12/2020 17:00 | 5/8/2020 10:30 | 5/15/2020 23:45 | 5/18/2020 7:45 | 5/23/2020 18:00 | 6/4/2020 15:45 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/27/2020 18:15 | 6/29/2020 3:30 | 6/30/2020 22:30 | |
| cso | | | | | CSO166 Total | CSO167 | | | | | | CSO167 Total | CS0174 | | | | | | | | | | | | CSO174 Total |



| E COUNT | 1 | 1 | 1 | - | - | 1 | 9 | - | ~ | - | ~ | 4 | ~ | - | - | - | ~ | 5 | 1 | - | - |
|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|-----------------|------------------------------|------------------------------|------------------------------|
| DISCHARGE Volume (Gal) | 683 | 104,690 | 5,913 | 112 | 23,152 | 131,354 | 265,904 | 189 | 7,504 | 532 | 2,323 | 10,548 | 9,363 | 1,348 | 24,859 | 7,162 | 1,556 | 44,288 | 853 | 1,355 | 6,909 |
| COMMENT | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch | | Retained by Sneads Branch | Retained by Sneads Branch | Retained by Sneads Branch |
| STANDARD | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas |
| PERIOD (HR) | 12 | 24 | 1 | 9 | 1 | 3 | | - | e | - | e | | 9 | - | 3 | 1 | 3 | | 12 | 9 | 24 |
| FREQUENCY (YR) | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 |
| ANTECEDENT Rain | 0 | 2 | 0 | 0 | 0 | 1 | | 7 | - | N | 7 | | 0 | 0 | 2 | 2 | 2 | | 3 | 0 | - |
| DISCHARGE PER RAIN | 1158 | 76416 | 22742 | 243 | 49260 | 166271 | | 461 | 5600 | 1267 | 5666 | | 17339 | 2643 | 18551 | 17052 | 3795 | | 464 | 2085 | 5617 |
| RAIN TOTAL (INCH) | 0 | 1 | 0 | 0 | 0 | 0 | | 0 | - | 0 | 0 | | 0 | 0 | + | 0 | 0 | | 2 | 0 | - |
| DURATION (MIN) | 0 | 450 | 0 | 0 | 15 | 06 | | 0 | 0 | 0 | 0 | | 0 | 0 | 06 | 0 | 60 | | 435 | 0 | 165 |
| END DATE | 5/8/2020 10:30 | 5/16/2020 7:30 | 5/25/2020 16:30 | 6/4/2020 18:15 | 6/21/2020 11:45 | 6/23/2020 0:00 | | 5/18/2020 14:45 | 6/22/2020 22:30 | 6/27/2020 18:15 | 6/29/2020 3:30 | | 6/4/2020 15:30 | 6/21/2020 11:45 | 6/23/2020 0:00 | 6/27/2020 18:15 | 6/29/2020 4:30 | | 4/13/2020 1:15 | 5/8/2020 10:30 | 5/16/2020 2:45 |
| START DATE | 5/8/2020 10:30 | 5/16/2020 0:00 | 5/25/2020 16:30 | 6/4/2020 18:15 | 6/21/2020 11:30 | 6/22/2020 22:30 | | 5/18/2020 14:45 | 6/22/2020 22:30 | 6/27/2020 18:15 | 6/29/2020 3:30 | | 6/4/2020 15:30 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/27/2020 18:15 | 6/29/2020 3:30 | | 4/12/2020 18:00 | 5/8/2020 10:30 | 5/16/2020 0:00 |
| cso | CSO180 | | | | | | CSO180 Total | CSO183 | | | | CSO183 Total | CSO184 | | | | | CSO184 Total | CSO185 | | |



| DURATION RAIN DISCHARGE ANTECEDENT FREQUENCY (MIN) TOTAL PERRAIN RAIN (YR) (INCH) |
|---|
| 15 0 107525 0 |
| 15 0 51370 0 |
| |
| 6/22/2020 22:15 0 0 19004 0 |
| 0 1000 1 |
| |
| 4/12/2020 17:45 0 2 600 2 |
| 15 2 154 3 |
| 15 0 125 0 |
| 6/21/2020 17:15 345 0 60954 0 |
| 630 1 122599 2 |
| 120 0 32199 2 |
| 450 0 30851 3 |
| |
| 915 3 172732 4 |
| 4/23/2020 17:15 180 0 67 2 |
| 825 0 86 2 |
| 210 0 303 0 |
| 1410 0 4 |
| 5/16/2020 20:15 1695 2 89784 2 |
| 180 0 7822 3 |
| 5/25/2020 20:30 90 0 726 0 |
| 915 0 40264 3 |
| 735 0 39550 1 |
| |
| 0 0 518 2 |
| |
| 0 1 5226 1 |
| 0 |
| 90 0 22062 1 |

JULY 30, 2020



| GE COUNT E | - | 4 | - | 1 | - | ĸ | - | - | 2 | - | - | - | - | 4 | - | - | 1 | - | 4 | - | - | - | 1 | 1 | - | - | - | - | + | 1 | - |
|------------------------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|----------------|-----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|---|
| DISCHARGE Volume (Gal) | 56,368 | 84,056 | 267 | 2,159 | 595 | 3,021 | 5,814 | 9,164 | 14,978 | 7,152 | 803 | 1,913 | 13,858 | 23,726 | 1,006 | 898 | 13,244 | 11,303 | 26,451 | 974 | 1,549 | 110 | 10,374 | 3,971 | 57 | 543 | 096 | 2,072 | 17,189 | 12,083 | _ |
| COMMENT | (blank) | | (blank) | (blank) | (blank) | | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | (blank) | |
| STANDARD | Atlas | | Atlas | Atlas | Atlas | | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | Atlas | |
| PERIOD (HR) | ъ | | 24 | 3 | ε | | 24 | e | | 24 | - | ო | e | | 24 | - | 3 | ε | | e | 12 | 12 | 24 | 1 | . | 9 | - | - | e | 3 | |
| FREQUENCY (YR) | 0 | | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| ANTECEDENT Rain | 2 | | 2 | 0 | 2 | | 2 | 0 | | 2 | 0 | - | 2 | | 2 | 0 | 1 | + | | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | |
| DISCHARGE PER RAIN | 100657 | | 183 | 2482 | 1063 | | 3982 | 10533 | | 4899 | 1746 | 2199 | 24746 | | 745 | 2041 | 13244 | 28258 | | 974 | 890 | 172 | 7105 | 9455 | 335 | 1065 | 9600 | 4504 | 19757 | 21577 | |
| RAIN TOTAL (INCH) | 0 | | 1 | 0 | 0 | | - | 0 | | - | 0 | 0 | 0 | | - | 0 | + | 0 | | - | 2 | 0 | + | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| DURATION (MIN) | 60 | | 0 | 0 | 0 | | 300 | 0 | | 315 | 0 | 90 | 60 | | 0 | 0 | 06 | 0 | | 0 | 450 | 0 | 006 | 0 | 435 | 0 | 0 | 0 | 06 | 75 | |
| END DATE | 6/29/2020 4:30 | | 5/16/2020 7:00 | 6/22/2020 22:15 | 6/29/2020 4:00 | | 5/16/2020 7:00 | 6/22/2020 22:15 | | 5/16/2020 7:15 | 6/21/2020 11:45 | 6/23/2020 0:00 | 6/29/2020 4:30 | | 5/16/2020 7:30 | 6/21/2020 11:45 | 6/23/2020 0:00 | 6/29/2020 3:30 | | 4/8/2020 22:15 | 4/13/2020 1:15 | 5/8/2020 10:30 | 5/16/2020 7:30 | 5/25/2020 16:30 | 5/29/2020 0:30 | 6/4/2020 18:15 | 6/9/2020 11:45 | 6/21/2020 11:45 | 6/23/2020 0:00 | 6/29/2020 4:30 | |
| START DATE | 6/29/2020 3:30 | | 5/16/2020 7:00 | 6/22/2020 22:15 | 6/29/2020 4:00 | | 5/16/2020 2:00 | 6/22/2020 22:15 | | 5/16/2020 2:00 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/29/2020 3:30 | | 5/16/2020 7:30 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/29/2020 3:30 | | 4/8/2020 22:15 | 4/12/2020 17:45 | 5/8/2020 10:30 | 5/15/2020 16:30 | 5/25/2020 16:30 | 5/28/2020 17:15 | 6/4/2020 18:15 | 6/9/2020 11:45 | 6/21/2020 11:45 | 6/22/2020 22:30 | 6/29/2020 3:15 | |
| cso | | CSO196 Total | CSO197 | | | CSO197 Total | CSO198 | | CSO198 Total | CSO199 | | | | CSO199 Total | CSO201 | | | | CSO201 Total | CSO202 | | | | | | | | | | | |

PAGE B-18



| | START DATE | END DATE | DURATION (MIN) | RAIN TOTAL (INCH) | DISCHARGE Per rain | ANTECEDENT Rain | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume (gal) | COUNT |
|-----|-----------------|-----------------|-------------------|-------------------------|-----------------------|--------------------|-------------------|----------------|----------|------------------------------|------------------------------|-------|
| ~ | 6/21/2020 11:45 | 6/21/2020 11:45 | 0 | 0 | 554 | 0 | 0 | ٢ | Atlas | (blank) | 255 | 1 |
| ~ | 6/22/2020 22:30 | 6/22/2020 22:30 | 0 | 0 | 13301 | 1 | 0 | 3 | Atlas | (blank) | 11,572 | 1 |
| | 6/29/2020 3:30 | 6/29/2020 3:30 | 0 | 0 | 6702 | 1 | 0 | 3 | Atlas | (blank) | 3,753 | 1 |
| | | | | | | | | | | | 15,661 | 4 |
| | 4/8/2020 22:15 | 4/8/2020 22:15 | 0 | - | 518 | 0 | 0 | 3 | Atlas | Retained by Sneads Branch | 591 | - |
| | 4/12/2020 16:30 | 4/13/2020 5:15 | 765 | 0 | 3333 | е | 0 | 12 | Atlas | Retained by Sneads Branch | 5,800 | - |
| | 4/23/2020 7:30 | 4/23/2020 13:00 | 330 | 0 | 959 | Ļ | 0 | 12 | Atlas | Retained by Sneads Branch | 518 | 1 |
| | 4/26/2020 6:45 | 4/26/2020 6:45 | 0 | 0 | 50 | 0 | 0 | 24 | Atlas | Retained by Sneads Branch | 26 | 1 |
| | 5/8/2020 9:45 | 5/8/2020 12:45 | 180 | 0 | 5590 | 0 | 0 | 12 | Atlas | Retained by Sneads Branch | 3,298 | 1 |
| | 5/15/2020 19:15 | 5/16/2020 7:30 | 735 | - | 2859 | - | 0 | 24 | Atlas | Retained by Sneads Branch | 3,488 | - |
| | 5/18/2020 7:30 | 5/18/2020 13:00 | 330 | 0 | 646 | 2 | 0 | 1 | Atlas | Retained by Sneads Branch | 265 | 1 |
| | 5/23/2020 17:45 | 5/23/2020 17:45 | 0 | 0 | 614 | 0 | 0 | 1 | Atlas | Retained by Sneads Branch | 43 | 1 |
| | 5/29/2020 0:30 | 5/29/2020 0:30 | 0 | 0 | 1496 | 0 | 0 | 12 | Atlas | Retained by Sneads Branch | 344 | 1 |
| Ľ | 6/27/2020 18:15 | 6/27/2020 18:30 | 15 | 0 | 2769 | 2 | 0 | 1 | Atlas | Retained by Sneads Branch | 886 | 1 |
| | 6/29/2020 3:30 | 6/29/2020 4:45 | 75 | 0 | 7720 | 2 | 0 | 3 | Atlas | Retained by Sneads Branch | 4,169 | 1 |
| | 6/30/2020 22:30 | 6/30/2020 22:45 | 15 | 0 | 15394 | 1 | 0 | 1 | Atlas | Retained by Sneads Branch | 2,463 | 1 |
| | | | | | | | | | | | 21,891 | 12 |
| 7 | 4/12/2020 18:00 | 4/13/2020 9:00 | 006 | 3 | 129632 | 4 | 0 | 12 | Atlas | (blank) | 365,561 | 1 |
| | | | | | | | | | | | 365,561 | 1 |
| 1 | 4/12/2020 17:45 | 4/13/2020 6:00 | 735 | ю | 8120204 | 4 | 0 | 12 | Atlas | (blank) | 22,898,975 | - |
| | 5/8/2020 12:00 | 5/8/2020 14:00 | 120 | 0 | 4794284 | 0 | 0 | 12 | Atlas | (blank) | 2,780,685 | - |
| | 5/16/2020 3:45 | 5/16/2020 12:15 | 510 | - | 11321035 | 2 | 0 | 24 | Atlas | (blank) | 16,641,921 | + |
| - 1 | 5/18/2020 9:15 | 5/18/2020 10:15 | 60 | 0 | 298785 | 3 | 0 | 1 | Atlas | (blank) | 274,882 | + |
| | 6/4/2020 19:45 | 6/4/2020 21:45 | 120 | 0 | 1689048 | - | 0 | 3 | Atlas | (blank) | 1,503,253 | + |
| 9 | 6/21/2020 13:30 | 6/21/2020 14:00 | 30 | 0 | 252124 | 0 | 0 | 1 | Atlas | (blank) | 196,657 | - |



| CSO | START DATE | END DATE | DURATION (MIN) | RAIN TOTAL (INCH) | DISCHARGE Per rain | DISCHARGE ANTECEDENT FREQUENCY PERIOD STANDARD Per Rain Rain (YR) (HR) | FREQUENCY (YR) | PERIOD (HR) | STANDARD | COMMENT | DISCHARGE Volume (Gal) | COUNT |
|-----------------|-----------------|--------------------------------|-------------------|-------------------------|-----------------------|---|-------------------|----------------|----------|---------|------------------------------|-------|
| | 6/22/2020 23:45 | 6/22/2020 23:45 6/23/2020 2:45 | 180 | - | 22442020 | 2 | 0 | 9 | Atlas | (blank) | 28,276,945 | 1 |
| | 6/29/2020 5:15 | 6/29/2020 6:45 | 06 | 0 | 28254019 | 2 | 0 | - | Atlas | (blank) | 4,520,643 | - |
| CSO211 Total | | | | | | | | | | | 77,093,961 | ω |
| Grand Total | | | | | | | | | | | 225,886,210 | 468 |



APPENDIX C

ACRONYMS





| ACRONYM | DEFINITION |
|-----------|---|
| 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 |
| СМОМ | 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 |
| 1/1 | 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 |
| MGD | Million Gallons per Day |



| ACRONYM | DEFINITION |
|---------|---|
| 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 |
| SWSG | 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





| CREDIT BASIN | RELEASE DATE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED CREDIT REQUIRED / FLOW REDUCTION |
|-----------------|-----------------|-------------|---|------------|--------|--|
| Cedar Creek | 11/1/2008 | 235533 | MAINTENANCE WORK FY06 AUG-FY09 NOV - CEDAR CREEK | SCAPCREDIT | | 6,521 |
| | 12/31/2008 | 362688 | MAINTENANCE WORK FY09A - CEDAR CREEK | SCAPCREDIT | | 5 |
| | 6/5/2009 | 236380 | FAIRMOUNT ROAD MH REHAB | SCAPCREDIT | | 10,734 |
| | 6/30/2009 | 362689 | MAINTENANCE WORK FY09B - CEDAR CREEK | SCAPCREDIT | | 201 |
| | 12/31/2009 | SC1011254 | MAINTENANCE WORK FY10A - CEDAR CREEK | SCAPCREDIT | | 347 |
| | 6/30/2010 | SC1011255 | MAINTENANCE WORK FY10B - CEDAR CREEK | SCAPCREDIT | | 194 |
| | 12/31/2010 | SC1011259 | MAINTENANCE WORK FY11A - CEDAR CREEK | SCAPCREDIT | İ | 1,720 |
| | 6/30/2011 | SC1011262 | MAINTENANCE WORK FY11B - CEDAR CREEK | SCAPCREDIT | İ | 934 |
| | 12/31/2011 | SC1011264 | MAINTENANCE WORK FY12A - CEDAR CREEK | SCAPCREDIT | İ | 269 |
| | 6/30/2012 | SC1011267 | MAINTENANCE WORK FY12B - CEDAR CREEK | SCAPCREDIT | İ | 814 |
| | 9/10/2012 | SC1005519 | CONTRACTED WORK FY12 - CEDAR CREEK | SCAPCREDIT | İ | 21,321 |
| | 9/27/2012 | 320989 | LITTLE CEDAR CREEK I/I REHABIL | SCAPCREDIT | | 652,907 |
| | 11/30/2012 | 263934 | ST JAMES CROSSINGS | LAT EXT | 9,000 | -19,575 |
| | 12/5/2012 | 196927 | SONIC SPRINGS | LAT EXT | 3,600 | -7,830 |
| | 1/29/2013 | 350057 | FMC EAST LOUISVILLE #1673-3 | LAT EXT | 3,400 | -7,395 |
| | 6/30/2013 | SC1074160 | MAINTENANCE WORK FY13 JAN-JUN - CEDAR CREEK | SCAPCREDIT | | 4,443 |
| | 8/19/2013 | SC1005524 | CONTRACTED WORK FY13 - CEDAR CREEK | SCAPCREDIT | İ | 425 |
| | 12/31/2013 | 14SC1000 | MAINTENANCE WORK FY13A - CEDAR CREEK | SCAPCREDIT | | 2,220 |
| | | SC1082184 | MAINTENANCE WORK FY14 JUL-DEC - CEDAR CREEK | SCAPCREDIT | | 1,482 |
| | 6/30/2014 | SC1082223 | MAINTENANCE WORK FY14 JAN-JUN- CEDAR CREEK | SCAPCREDIT | | 4,729 |
| | 12/30/2014 | SC1082493 | MAINTENANCE WORK FY15 JUL-DEC-CEDAR CREEK | SCAPCREDIT | | 4,583 |
| | 1/26/2015 | 239030 | POPLAR LAKES PH 1 | LAT EXT | 18,000 | -39,150 |
| | 5/26/2015 | 13LE1003 | Bardstown Woods Sec 6 | LAT EXT | 5,200 | -11,310 |
| | 6/30/2015 | SC1082496 | MAINTENANCE WORK FY15 JAN-JUN-CEDAR CREEK | SCAPCREDIT | | 21 |
| | 9/14/2015 | LE916330 | Altawood Development | LAT EXT | 1,600 | -3,480 |
| | 9/25/2015 | SC1003694 | CONTRACTED WORK FY16 - CEDAR CREEK | SCAPCREDIT | | 328 |
| | | SC1006188 | CONTRACTED WORK FY15 - CEDAR CREEK | SCAPCREDIT | | 1 |
| | 12/30/2015 | SC1082497 | MAINTENANCE WORK FY16 JUL-DEC-CEDAR CREEK | SCAPCREDIT | | 16 |
| | 5/25/2016 | LE915727 | BARDSTOWN WOODS SEC 7 | LAT EXT | 4,400 | -9,570 |
| | 6/30/2016 | SC1082498 | MAINTENANCE WORK FY16 JAN-JUN-CEDAR CREEK | SCAPCREDIT | | 169 |
| | 10/26/2016 | SC1006171 | CONTRACTED WORK FY14 - CEDAR CREEK | SCAPCREDIT | | 45,900 |
| | 12/30/2016 | SC1082499 | MAINTENANCE WORK FY17 JUL-DEC-CEDAR CREEK | SCAPCREDIT | | 2,396 |
| | 6/30/2017 | SC1082500 | MAINTENANCE WORK FY17 JAN-JUN-CEDAR CREEK | SCAPCREDIT | | 3,464 |
| | 7/13/2017 | SC1097042 | Cedar Creek I&I Rehab FY17 | SCAPCREDIT | | 309 |
| | 8/14/2017 | LE983107 | Poplar Lakes Phase 3 | LAT EXT | 12,000 | -26,100 |
| | 10/24/2017 | LE971176 | Cedar Ridge | LAT EXT | 18,800 | -40,890 |
| | 12/30/2017 | SC1082501 | MAINTENANCE WORK FY18 JUL-DEC-CEDAR CREEK | SCAPCREDIT | | 3,067 |
| | 7/23/2019 | LE1048252 | Landherr Estates Phase II | LAT EXT | 17,600 | -38,280 |
| | 9/12/2019 | LE1015579 | Glenmary Commons | LAT EXT | 8,800 | -19,140 |
| | | LE1049657 | Little Spring Farm, Section 4B | LAT EXT | 14,000 | -30,450 |



| CREDIT BASIN | RELEASE DATE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED CREDIT REQUIRED / FLOW REDUCTION |
|----------------------|-----------------|-------------|---|------------|---------|--|
| | 10/2/2019 | LE978334 | Houchens Industries | LAT EXT | 780 | -1,697 |
| | 1/30/2020 | LE1049477 | Hearthstone Meadows | LAT EXT | 14400 | -31,320 |
| | 2/27/2020 | LE1085520 | Jefferson Trace Blvd. Sewer Extension | LAT EXT | 400 | -870 |
| Cedar Creek Total | | | | | | 482,463 |
| Floyds Fork | 11/1/2008 | 235557 | MAINTENANCE WORK FY06 AUG-FY09 NOV - FLOYDS FORK | SCAPCREDIT | | 14,540 |
| | 12/31/2008 | 362638 | MAINTENANCE WORK FY09A - FLOYDS FORK | SCAPCREDIT | | 1 |
| | 6/30/2009 | 362647 | MAINTENANCE WORK FY09B - FLOYDS FORK | SCAPCREDIT | | 4 |
| | 12/31/2009 | 362651 | MAINTENANCE WORK FY10A - FLOYDS FORK | SCAPCREDIT | | 524 |
| | 1/5/2010 | 230379 | SHAKES RUN SECTION 4 | LAT EXT | 3,770 | -8,200 |
| | 6/30/2010 | 362655 | MAINTENANCE WORK FY10B - FLOYDS FORK | SCAPCREDIT | | 82 |
| | 12/31/2010 | 362661 | MAINTENANCE WORK FY11A - FLOYDS FORK | SCAPCREDIT | | 14,163 |
| | 6/30/2011 | 362669 | MAINTENANCE WORK FY11B - FLOYDS FORK | SCAPCREDIT | 1 | 22,707 |
| | 10/12/2011 | 309608 | BLANKENBAKER TRAIL OFFICE LN-B | LAT EXT | 2,880 | -6,264 |
| | 10/17/2011 | 242480 | CLAIBOURNE CROSSINGS PHASE 2 | LAT EXT | 0 | 0 |
| | 12/31/2011 | 359320 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | İ | 4,000 |
| | | 362674 | MAINTENANCE WORK FY12A - FLOYDS FORK | SCAPCREDIT | i – – – | 317 |
| | 3/13/2012 | 319027 | PREMIER SURGERY CENTER | LAT EXT | 5,740 | -12,485 |
| | 6/30/2012 | 362678 | MAINTENANCE WORK FY12B - FLOYDS FORK | SCAPCREDIT | 1 | 338 |
| | 10/26/2012 | 315945 | BROOKFIELD SEC 3 | LAT EXT | 12,800 | -27,840 |
| | 12/18/2012 | 361689 | LAKE FOREST REHAB PH1 | SCAPCREDIT | | 174,769 |
| | 12/31/2012 | 362683 | MAINTENANCE WORK FY13A - FLOYDS FORK | SCAPCREDIT | | 10 |
| | 5/8/2013 | 331397 | BROOKFIELD SEC 2A | LAT EXT | 14,400 | -31,320 |
| | 6/30/2013 | 13SC1000 | FY14 STARVIEW REHABILITATION | SCAPCREDIT | | 14,183 |
| | | SC1082514 | MAINTENANCE WORK FY13 JAN-JUN-FLOYDS FORK | SCAPCREDIT | | 161 |
| | 12/30/2013 | SC1082517 | MAINTENANCE WORK FY14 JUL-DEC-FLOYDS FORK | SCAPCREDIT | | 991 |
| | 6/30/2014 | SC1082518 | MAINTENANCE WORK FY14 JAN-JUN-FLOYDS FORK | SCAPCREDIT | | 662 |
| | 12/30/2014 | SC1082519 | MAINTENANCE WORK FY15 JUL-DEC-FLOYDS FORK | SCAPCREDIT | | 1,318 |
| | 2/18/2015 | 13LE1062 | SPEEDWAY #9451 | LAT EXT | 540 | -1,175 |
| | 6/30/2015 | SC1003809 | BERRYTOWN WQTC I/I REMEDIATION FY14 | SCAPCREDIT | | 116,834 |
| | | SC1082520 | MAINTENANCE WORK FY15 JAN-JUN-FLOYDS FORK | SCAPCREDIT | | 661 |
| | 11/6/2015 | SC1003723 | MIDDLETOWN SSR P2S2 I/I REMEDIATION | SCAPCREDIT | | 102 |
| | 12/30/2015 | SC1082521 | MAINTENANCE WORK FY16 JUL-DEC-FLOYDS FORK | SCAPCREDIT | | 659 |
| | 1/7/2016 | LE941673 | Locust Creek Section 8B | LAT EXT | 2,000 | -4,350 |
| | 6/30/2016 | SC1082523 | MAINTENANCE WORK FY16 JAN-JUN-FLOYDS FORK | SCAPCREDIT | | 3,578 |
| | 7/7/2016 | SC1003331 | CONTRACTED WORK FY16 - FLOYDS FORK | SCAPCREDIT | | 35 |
| | 9/20/2016 | LE932677 | Shakes Run Sec 9 | LAT EXT | 12,000 | -26,100 |
| | 12/30/2016 | SC1082524 | MAINTENANCE WORK FY17 JUL-DEC-FLOYDS FORK | SCAPCREDIT | | 1,804 |
| | 1/4/2017 | LE945783 | Urton Woods, Section 2B | LAT EXT | 17,200 | -37,410 |
| | 1/6/2017 | LE983784 | Catalpa Farms Subdivision | LAT EXT | 16,000 | -34,800 |
| | 2/27/2017 | LE971261 | Notting Hills Section 4 and Clubhouse | LAT EXT | 10,400 | -22,620 |



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|----------------------|------------|-------------|--|------------|--------|-------------------------------------|
| BASIN | DATE | | | | | CREDIT REQUIRED / FLOW REDUCTION |
| | 6/30/2017 | SC1082525 | MAINTENANCE WORK FY17 JAN-JUN-FLOYDS FORK | SCAPCREDIT | | 1,320 |
| | 12/30/2017 | SC1082526 | MAINTENANCE WORK FY18 JUL-DEC-FLOYDS FORK | SCAPCREDIT | | 6,158 |
| | 1/7/2019 | LE1039193 | Glen Lakes Section 4 - Phase 3 | LAT EXT | 16,400 | -35,670 |
| | 10/21/2019 | LE1050932 | Courtyard at Curry Farms Section 1 | LAT EXT | 17,000 | -36,975 |
| Floyds Fork Total | | | | | | 94,712 |
| Hite Creek | 5/15/2006 | SC1006307 | CONTRACTED WORK FY06 - HITE CREEK | SCAPCREDIT | | 656 |
| | 11/1/2008 | 235561 | MAINTENANCE WORK FY06 AUG-FY09 NOV - HITE CREEK | SCAPCREDIT | | 6,404 |
| | 12/31/2008 | 362641 | MAINTENANCE WORK FY09A - HITE CREEK | SCAPCREDIT | | 2 |
| | 6/1/2009 | SC1006214 | CONTRACTED WORK FY09 - HITE CREEK | SCAPCREDIT | | 328 |
| | 6/30/2009 | 362648 | MAINTENANCE WORK FY09B - HITE CREEK | SCAPCREDIT | | 7 |
| | 12/31/2009 | 362652 | MAINTENANCE WORK FY10A - HITE CREEK | SCAPCREDIT | | 10 |
| | 6/30/2010 | 362657 | MAINTENANCE WORK FY10B - HITE CREEK | SCAPCREDIT | | 332 |
| | 12/17/2010 | 320906 | FLOYDSBURG ROAD I/I REHABILITA | SCAPCREDIT | | 28,437 |
| | 12/31/2010 | 362662 | MAINTENANCE WORK FY11A - HITE CREEK | SCAPCREDIT | | 9 |
| | 6/30/2011 | 362670 | MAINTENANCE WORK FY11B - HITE CREEK | SCAPCREDIT | | 9 |
| | 9/7/2011 | SC1011058 | Meadow Stream Pump Station & Force Main Expansion | SCAPCREDIT | | 2,304,000 |
| | 9/28/2011 | 246638 | CHAPMAN COURT S/S | LAT EXT | 800 | -1,740 |
| | 12/31/2011 | 362675 | MAINTENANCE WORK FY12A - HITE CREEK | SCAPCREDIT | | 340 |
| | 6/30/2012 | 362679 | MAINTENANCE WORK FY12B - HITE CREEK | SCAPCREDIT | | 5,007 |
| | 8/31/2012 | 290181 | CAMDEN WOOD APARTMENTS | LAT EXT | 12,400 | -26,970 |
| | 12/1/2012 | 304536 | MAGNOLIA SPRINGS EAST PRIV P/S | LAT EXT | 9,500 | -20,663 |
| | 12/7/2012 | 335610 | ROCK SPRINGS FARM SEC 4B | LAT EXT | 6,400 | -13,920 |
| | 12/31/2012 | 362684 | MAINTENANCE WORK FY13A - HITE CREEK | SCAPCREDIT | | 7 |
| | 4/11/2013 | SC1005530 | CONTRACTED WORK FY13 - HITE CREEK | SCAPCREDIT | | 1,442 |
| | 6/30/2013 | SC1082527 | MAINTENANCE WORK FY13 JAN-JUN-HITE CREEK | SCAPCREDIT | | 967 |
| | 12/30/2013 | SC1082528 | MAINTENANCE WORK FY14 JUL-DEC-HITE CREEK | SCAPCREDIT | | 3,211 |
| | 6/30/2014 | SC1082529 | MAINTENANCE WORK FY14 JAN-JUNE-HITE CREEK | SCAPCREDIT | | 2,207 |
| | 12/30/2014 | SC1082530 | MAINTENANCE WORK FY15 JUL-DEC-HITE CREEK | SCAPCREDIT | | 360 |
| | 1/27/2015 | SC1006178 | CONTRACTED WORK FY14 - HITE CREEK | SCAPCREDIT | | 77,660 |
| | 3/13/2015 | SC983697 | MEADOWSTREAM REHABILITATION - FY13 | SCAPCREDIT | | 448,447 |
| | 6/30/2015 | SC1082531 | MAINTENANCE WORK FY15 JAN-JUN-HITE CREEK | SCAPCREDIT | | 124 |
| | 12/30/2015 | SC1082532 | MAINTENANCE WORK FY16 JUL-DEC-HITE CREEK | SCAPCREDIT | | 1,191 |
| | 6/30/2016 | SC1082533 | MAINTENANCE WORK FY16 JAN-JUN-HITE CREEK | SCAPCREDIT | | 336 |
| | 9/13/2016 | LE943178 | Rock Springs Farm Section 5A | LAT EXT | 6,800 | -14,790 |
| | 10/26/2016 | SC1006192 | CONTRACTED WORK FY15 - HITE CREEK | SCAPCREDIT | | 1 |
| | 12/30/2016 | SC1082534 | MAINTENANCE WORK FY17 JUL-DEC-HITE CREEK | SCAPCREDIT | | 3,599 |
| | 3/17/2017 | LE971406 | Old Henry Business Park | LAT EXT | 930 | -2,023 |
| | 6/30/2017 | SC1082535 | MAINTENANCE WORK FY17 JAN-JUN-HITE CREEK | SCAPCREDIT | | 4,109 |
| | 12/30/2017 | SC1082536 | MAINTENANCE WORK FY18 JUL-DEC-HITE CREEK | SCAPCREDIT | | 6,823 |
| | 6/12/2020 | LE1102431 | Tony's Wrecker Service | LAT EXT | 400 | -870 |
| | 6/3/2020 | LE1104592 | EPOP II | LAT EXT | 510 | -1,109 |
| Hite Creek Total | | | | | | 2,813,940 |



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|----------------------------|------------|---|---|------------|-------|-----------------|
| BASIN | DATE | | | | | CREDIT REQUIRED |
| J'Town | 11/1/2008 | 235563 | MAINTENANCE WORK FY06 AUG-FY09 NOV - JEFFERSONTOWN | SCAPCREDIT | | 6,203 |
| | 12/31/2008 | 359323 | CALENDAR 2008 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | 8/10/2010 | 254871 | LAKESIDE BAPT CHURCH PRIV PS | LAT EXT | 2,500 | -5,438 |
| | 8/11/2011 | 340213 | JEFFERSONTOWN ENG REHAB | SCAPCREDIT | | 997,448 |
| | 12/31/2011 | 359324 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | 12/31/2012 | 14SC1002 | MAINTENANCE WORK FY13A - JEFFERSONTOWN | SCAPCREDIT | | 3,490 |
| | 5/28/2013 | 337261 | SINGLE FAMILY 2909 PELHAM CT | LAT EXT | 400 | -870 |
| | 6/28/2013 | 254871LAKESIDE BAPT CHURCH PRIV PSLAT EXT2,500340213JEFFERSONTOWN ENG REHABSCAPCREDIT359324CALENDAR 2011 SUMP PUMP CREDITSCAPCREDIT14SC1002MAINTENANCE WORK FY13A - JEFFERSONTOWNSCAPCREDIT337261SINGLE FAMILY 2909 PELHAM CTLAT EXT40013LE1010SWOPE HR & TRAINING BLDGLAT EXT40013LE1092BALE EQUIPMENTLAT EXT45013LE1098UNIPAKLAT EXT72013LE1067PARK COMMUNITYLAT EXT2,220 | | | -870 | |
| | 10/25/2013 | 13LE1092 | BALE EQUIPMENT | LAT EXT | 450 | -979 |
| | 2/27/2014 | 13LE1098 | UNIPAK | LAT EXT | 720 | -1,566 |
| | 12/31/2014 | 13LE1067 | PARK COMMUNITY | LAT EXT | 2,220 | -4,829 |
| | 2/1/2016 | 14LE1149 | Grand Lakes Section 3 | LAT EXT | 5,600 | -12,180 |
| | 3/10/2016 | LE924049 | Blankenbaker Road S/S | LAT EXT | 9,010 | -19,597 |
| | 5/4/2016 | 326360 | WATTERSON TRAIL CENTER | LAT EXT | 2,745 | -5,970 |
| | 6/21/2016 | LE930127 | Vantage Point Sec 3B | LAT EXT | 7,200 | -15,660 |
| | 7/28/2016 | 13LE1158 | GOODWILL INDUSTRIES OF KENTUCKY | LAT EXT | 400 | -870 |
| | 11/8/2016 | 14LE1148 | Grand Lakes Section 2 | LAT EXT | 4,400 | -9,570 |
| | 3/23/2017 | LE926081 | Monticello Manors Sec 2 | LAT EXT | 7,600 | -16,530 |
| | 3/31/2017 | LE967619 | Louis F. Zoeller, Jr Minor Plat | LAT EXT | 400 | -870 |
| J'Town Total Mill Creek | | | | | | 919,342 |
| | 12/31/2005 | 359380 | CALENDAR 2005 DOWNSPOUT CREDIT | SCAPCREDIT | | 12,000 |
| | 12/31/2007 | 359381 | CALENDAR 2007 DOWNSPOUT CREDIT | SCAPCREDIT | | 24,000 |
| | 11/1/2008 | 235568 | MAINTENANCE WORK FY06 AUG-FY09 NOV - MILL CREEK | SCAPCREDIT | | 51,530 |
| | 12/31/2008 | 359382 | CALENDAR 2008 DOWNSPOUT CREDIT | SCAPCREDIT | İ | 16,000 |
| | | 362642 | MAINTENANCE WORK FY09A - MILL CREEK | SCAPCREDIT | | 93 |
| | 6/30/2009 | 362649 | MAINTENANCE WORK FY09B - MILL CREEK | SCAPCREDIT | | 1,507 |
| | 9/9/2009 | 236614 | DEVEROES | LAT EXT | 960 | -2,088 |
| | 12/31/2009 | 359383 | CALENDAR 2009 DOWNSPOUT CREDIT | SCAPCREDIT | | 32,000 |
| | | 362653 | MAINTENANCE WORK FY10A - MILL CREEK | SCAPCREDIT | | 25,272 |
| | 1/6/2010 | 253586 | KINGSFORD RETAIL CENTER | LAT EXT | 480 | -1,044 |
| | 4/28/2010 | 238421 | 6840 DIXIE HWY OUTLOT | LAT EXT | 2,100 | -4,568 |
| | 6/30/2010 | 362658 | MAINTENANCE WORK FY10B - MILL CREEK | SCAPCREDIT | | 6,216 |
| | 7/2/2010 | 259408 | FAMILY DOLLAR 5105 DIXIE | LAT EXT | 1,200 | -2,610 |
| | 7/23/2010 | 264294 | SAINT PETER THE APOSTLE CATHOL | LAT EXT | 2,000 | -4,350 |
| | 10/12/2010 | 276215 | FAMILY DOLLAR - KRISTIN WAY | LAT EXT | 400 | -870 |
| | 12/31/2010 | 359325 | CALENDAR 2010 SUMP PUMP CREDIT | SCAPCREDIT | | 8,000 |
| | | 359384 | CALENDAR 2010 DOWNSPOUT CREDIT | SCAPCREDIT | | 4,000 |
| | | 362664 | MAINTENANCE WORK FY11A - MILL CREEK | SCAPCREDIT | | 22,745 |
| | 6/30/2011 | 320916 | SONNE AVE PS REHABILITATION - | SCAPCREDIT | | 120,800 |
| | | 362671 | MAINTENANCE WORK FY11B - MILL CREEK | SCAPCREDIT | | 11,745 |
| | 10/4/2011 | 299399 | FAMILY DOLLAR - GREENWOOD RD | LAT EXT | 800 | -1,740 |
| | 11/9/2011 | 309018 | PRP PERFORMING ARTS ADDITION | LAT EXT | 1,134 | -2,466 |
| | 12/31/2011 | 359326 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | 1,104 | 12,000 |
| | 12/01/2011 | 359385 | CALENDAR 2011 SOMP FOMP CREDIT | SCAPCREDIT | | 12,000 |
| | | + | | | | |
| | | 362676 | MAINTENANCE WORK FY12A - MILL CREEK | SCAPCREDIT | ļ | 4,800 |
| | 1/19/2012 | 318096 | CRACKER BARREL OLD COUNTRY | LAT EXT | 6,000 | -13,050 |



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|---------------------|-----------------|-------------|--|------------|--------|--|
| | 5/21/2012 | 262545 | DIXIE MANOR SHOPPING CENTER | LAT EXT | 965 | -2,099 |
| | 6/26/2012 | 300374 | FORT KNOX FEDERAL CREDIT UNION | LAT EXT | 400 | -870 |
| | 6/30/2012 | 361693 | FY12 MILL CREEK REHAB | SCAPCREDIT | | 81,675 |
| | | 362680 | MAINTENANCE WORK FY12B - MILL CREEK | SCAPCREDIT | | 4,133 |
| | 7/24/2012 | 231800 | PIONEER MOBILE HOME PARK | LAT EXT | 11,200 | -24,360 |
| | 9/18/2012 | 237457 | WAVERLY HILLS | LAT EXT | 400 | -870 |
| | 10/19/2012 | 341883 | NHK SPRING PRECISION | LAT EXT | 17,800 | -38,715 |
| | 12/5/2012 | 334997 | BEECHLAND BAPTIST CHURCH | LAT EXT | 2,715 | -5,905 |
| | 12/31/2012 | 359327 | CALENDAR 2012 SUMP PUMP CREDIT | SCAPCREDIT | | 148,000 |
| | | 359386 | CALENDAR 2012 DOWNSPOUT CREDIT | SCAPCREDIT | | 4,000 |
| | | 362685 | MAINTENANCE WORK FY13A - MILL CREEK | SCAPCREDIT | | 22,996 |
| | 1/18/2013 | 343763 | SOUTHEAST CHRISTIAN CHURCH SW | LAT EXT | 6,000 | -13,050 |
| | 3/20/2013 | 224875 | ASHBY GREEN APARTMENT HOMES | LAT EXT | 36,400 | -79,170 |
| | 6/6/2013 | 265944 | RIVERPORT PHASE 4A - MICHELIN | LAT EXT | 400 | -870 |
| | 6/30/2013 | SC1082559 | MAINTENANCE WORK FY13 JAN-JUN-MILL CREEK | SCAPCREDIT | | 32,425 |
| | 9/10/2013 | 314887 | DAYTON FREIGHT | LAT EXT | 1,200 | -2,610 |
| | 9/26/2013 | 13LE1014 | LOUISVILLE FREE PUBLIC LIBRARY SOUTHWEST | LAT EXT | 8,200 | -17,835 |
| | 10/3/2013 | 357140 | FAMILY DOLLAR CANE RUN ROAD | LAT EXT | 832 | -1,810 |
| | 12/30/2013 | SC1082560 | MAINTENANCE WORK FY14 JUL-DEC-MILL CREEK | SCAPCREDIT | | 11,451 |
| | 1/29/2014 | 13LE1171 | SINGLE FAMILY HOME 3700 ROMANIA DR | LAT EXT | 400 | -870 |
| | 6/30/2014 | SC1082562 | MAINTENANCE WORK FY14 JAN-JUN-MILL CREEK | SCAPCREDIT | | 7,753 |
| | 12/30/2014 | SC1082563 | MAINTENANCE WORK FY15 JUL-DEC-MILL CREEK | SCAPCREDIT | | 4,491 |
| | 3/10/2015 | SC1005536 | ROSA TERRACE I/I REHABILITATION FY13 | SCAPCREDIT | | 156,635 |
| | 6/30/2015 | SC1082564 | MAINTENANCE WORK FY15 JAN-JUN-MILL CREEK | SCAPCREDIT | ĺ | 4,861 |
| | 7/31/2015 | SC1003690 | CONTRACTED WORK FY15 - MILL CREEK | SCAPCREDIT | ĺ | 58 |
| | 12/30/2015 | SC1082565 | MAINTENANCE WORK FY16 JUL-DEC-MILL CREEK | SCAPCREDIT | ĺ | 6,692 |
| | 6/30/2016 | SC1082566 | MAINTENANCE WORK FY16 JAN-JUN-MILL CREEK | SCAPCREDIT | ĺ | 3,523 |
| | 7/28/2016 | LE944727 | Britz Deer Hollow Lane | LAT EXT | 800 | -1,740 |
| | 12/30/2016 | SC1082567 | MAINTENANCE WORK FY17 JUL-DEC-MILL CREEK | SCAPCREDIT | | 12,857 |
| | 6/30/2017 | SC1082568 | MAINTENANCE WORK FY17 JAN-JUN-MILL CREEK | SCAPCREDIT | ĺ | 5,103 |
| | 12/30/2017 | SC1082569 | MAINTENANCE WORK FY18 JUL-DEC-MILL CREEK | SCAPCREDIT | | 27,293 |
| | 4/10/2019 | LE995375 | 1105 Dorsey lane | LAT EXT | 10,300 | -22,403 |
| | 10/31/2019 | LE1039415 | Delcour Multi-Family Apartments | LAT EXT | 60,400 | -131,370 |
| Mill Creek Total | | | | | | 521,343 |
| Middle Fork | 12/31/2007 | 359328 | CALENDAR 2007 SUMP PUMP CREDIT | SCAPCREDIT | | 20,000 |
| | | 359400 | CALENDAR 2007 DOWNSPOUT CREDIT | SCAPCREDIT | | 84,000 |
| | 11/1/2008 | 235566 | MAINTENANCE WORK FY06 AUG-FY09 NOV - MOIDDLE FORK | SCAPCREDIT | | 43,779 |
| | 12/31/2008 | 359329 | CALENDAR 2008 SUMP PUMP CREDIT | SCAPCREDIT | | 8,000 |
| | | SC1011287 | MAINTENANCE WORK FY09A - MIDDLE FORK | SCAPCREDIT | | 13 |
| | 1/16/2009 | 236517 | ANCHOR ESTATES MH REHAB | SCAPCREDIT | | 15,552 |
| | 3/30/2009 | 217235 | SINKING FORK ICA PHASE I REHAB | SCAPCREDIT | | 437,967 |
| | 5/15/2009 | 235376 | MIDDLE FORK INT REHAB PH1 | SCAPCREDIT | | 487,744 |
| | 5/26/2009 | 179246 | SHADY GLEN OF LYNDON PERSONAL | LAT EXT | (500) | 1,088 |
| | 6/30/2009 | SC1011288 | MAINTENANCE WORK FY09B - MIDDLE FORK | SCAPCREDIT | | 4,208 |
| | 11/4/2009 | 250572 | 1316 WITAWANGA AVE | LAT EXT | 400 | -870 |
| | 12/31/2009 | 359331 | CALENDAR 2009 SUMP PUMP CREDIT | SCAPCREDIT | | 24,000 |
| | | 359401 | CALENDAR 2009 DOWNSPOUT CREDIT | SCAPCREDIT | | 4,000 |



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| | | SC1011290 | MAINTENANCE WORK FY10A - MIDDLE FORK | SCAPCREDIT | | 50 |
| | 3/16/2010 | 197432 | ALMOST HOME KENNELS - ALL PET | LAT EXT | 3,700 | -8,048 |
| | 4/15/2010 | 260064 | OXMOOR GOLF FRONT 9 | LAT EXT | 400 | -870 |
| | | 260065 | OXMOOR GOLF BACK 9 | LAT EXT | 400 | -870 |
| | 4/27/2010 | 229834 | THE BROOK HOS- DUPONT ADDITION | LAT EXT | 1,763 | -3,835 |
| | 6/30/2010 | SC1011292 | MAINTENANCE WORK FY10B - MIDDLE FORK | SCAPCREDIT | İ | 1,113 |
| | 7/2/2010 | 265723 | Z-XPRESS CAR WASH | LAT EXT | 5,449 | -11,852 |
| | 7/14/2010 | 255792 | HERR LANE APARTMENTS - 8 PLEX | LAT EXT | 2,400 | -5,220 |
| | | 255793 | HERR LANE APARTMENTS - 4 PLEX | LAT EXT | 1,200 | -2,610 |
| | 9/9/2010 | 274303 | FARM CREDIT SERVICES | LAT EXT | 525 | -1,142 |
| | 12/15/2010 | 278015 | METROPOLITAN UROLOGY | LAT EXT | 400 | -870 |
| | 12/31/2010 | 359333 | CALENDAR 2010 SUMP PUMP CREDIT | SCAPCREDIT | | 12,000 |
| | | 359402 | CALENDAR 2010 DOWNSPOUT CREDIT | SCAPCREDIT | | 8,000 |
| | | SC1011293 | MAINTENANCE WORK FY11A - MIDDLE FORK | SCAPCREDIT | | 1,205 |
| | 1/20/2011 | 285637 | SHELBYHURST OFFICE BUILDING 1 | LAT EXT | 6,600 | -14,355 |
| | 1/27/2011 | 313465 | DORSEY POINTE/CODOMINIUMS 8-13 | LAT EXT | 2,400 | -5,220 |
| | 4/14/2011 | 291263 | BROWNS LANE BUILDING | LAT EXT | 400 | -870 |
| | 6/14/2011 | 293400 | FOUR PLEX APARTMENTS | LAT EXT | 1,200 | -2,610 |
| | 6/30/2011 | SC1011294 | MAINTENANCE WORK FY11B - MIDDLE FORK | SCAPCREDIT | | 7,183 |
| | 8/11/2011 | 330019 | FY11 ANCHOR ESTATES REHAB | SCAPCREDIT | | 1,359 |
| | 10/31/2011 | 310046 | EL NAPEL - MCMAHAN CENTER | LAT EXT | 3,100 | -6,743 |
| | 11/29/2011 | 314591 | CHOCOLATE MARTINI BAR/REST | LAT EXT | 3,275 | -7,123 |
| | 12/27/2011 | 320983 | HURSTBOURNE I/I INVESTIGATION | SCAPCREDIT | | 1,408,279 |
| | 12/31/2011 | 359335 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | | 16,000 |
| | | SC1011295 | MAINTENANCE WORK FY12A - MIDDLE FORK | SCAPCREDIT | | 919 |
| | 2/15/2012 | 321228 | SINGLE FAMILY UNIT | LAT EXT | 400 | -870 |
| | 3/16/2012 | SC1005671 | CONTRACTED WORK FY12 - MIDDLE FORK | SCAPCREDIT | | 7,305 |
| | 3/27/2012 | 321647 | SINGLE FAMILY | LAT EXT | 400 | -870 |
| | 6/22/2012 | 328074 | SINGLE FAMILY-703 FOUNTAIN AVE | LAT EXT | 400 | -870 |
| | 6/30/2012 | SC1011297 | MAINTENANCE WORK FY12B - MIDDLE FORK | SCAPCREDIT | | 949 |
| | 8/20/2012 | 193195 | CEDAR LAKE LODGE WASHBURN | LAT EXT | 1,900 | -4,133 |
| | 8/23/2012 | 320923 | ST MATTHEWS I/I REHABILITATION | SCAPCREDIT | | 20,841 |
| | 9/5/2012 | 337796 | CHAMPPS | LAT EXT | 635 | -1,381 |
| | 12/28/2012 | 347126 | ADVANCE PRODUCTION SYSTEMS | LAT EXT | 400 | -870 |
| | 12/31/2012 | 14SC1003 | MAINTENANCE WORK FY13A - MIDDLE FORK | SCAPCREDIT | | 3,309 |
| | | 359336 | CALENDAR 2012 SUMP PUMP CREDIT | SCAPCREDIT | | 92,000 |
| | 1/4/2013 | 339367 | BAPTIST RADIATION ONCOLOGY | LAT EXT | 1,500 | -3,263 |
| | 1/16/2013 | 340778 | PANDA RESTAURANT | LAT EXT | 1,725 | -3,752 |
| | 2/4/2013 | 328659 | SINGLE FAMILY HOME - 6911 AMBR | LAT EXT | 400 | -870 |
| | 2/20/2013 | 352805 | POOL HOUSE 9213 REIGATE COURT | LAT EXT | 200 | -435 |
| | 3/19/2013 | 14LE1001 | MIRANDA LAGRANGE RD | LAT EXT | 400 | -870 |
| | 3/20/2013 | 350246 | SINGLE FAMILY - 218 BLISS AVE | LAT EXT | 400 | -870 |
| | 3/26/2013 | 349974 | SINGLE FAMILY 205 N WATTERSON | LAT EXT | 400 | -870 |
| | 4/15/2013 | 342433 | SHELBYHURST 700 OFFICE BLDG | LAT EXT | 7,500 | -16,313 |
| | 4/16/2013 | 350340 | JARED THE GALLERY OF JEWELRY | LAT EXT | 770 | -1,675 |
| | 5/30/2013 | SC1005532 | CONTRACTED WORK FY13 - MIDDLE FORK | SCAPCREDIT | | 6,480 |
| | 6/7/2013 | 13LE1009 | Single family 11716 Wetherby Ave | LAT EXT | 400 | -870 |



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| | 6/30/2013 | SC1082545 | MAINTENANCE WORK FY13 JAN-JUN-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 6,989 |
| | 8/28/2013 | 13LE1001 | Single Family 835 Fountain Ave | LAT EXT | 400 | -870 |
| | 9/10/2013 | 355162 | PROPOSED RESTAURANT | LAT EXT | 7,540 | -16,400 |
| | 9/30/2013 | 13LE1045 | SINGLE FAMILY 8325 WHIPPS MILL RD | LAT EXT | 400 | -870 |
| | 10/22/2013 | 319292 | WATERMARK ON HURSTBOURNE | LAT EXT | 71,600 | -155,730 |
| | 10/28/2013 | 331542 | DENTAL/MEDICAL OFFICE BLDG | LAT EXT | 400 | -870 |
| | 11/5/2013 | 13LE1128 | SINGLE FAMILY HOME 1327 ETAWAH AVE | LAT EXT | 400 | -870 |
| | | 13LE1144 | SINGLE FAMILY 1329 ETAWAH AVE | LAT EXT | 400 | -870 |
| | 11/25/2013 | 13LE1165 | SINGLE FAMILY 8504 LORE LANE | LAT EXT | 400 | -870 |
| | 11/26/2013 | 13LE1146 | CITY OF ST MATTHEWS COMMUNITY CTR PARK RESTROOM | LAT EXT | 1,500 | -3,263 |
| | 12/11/2013 | 13LE1099 | NICKLIES - ST MATTHEWS | LAT EXT | 1,920 | -4,176 |
| | 12/18/2013 | 353963 | DORSEY COMMONS TRACTS 1,2,3 | LAT EXT | 4,335 | -9,429 |
| | 12/30/2013 | SC1082546 | MAINTENANCE WORK FY14 JUL-DEC-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 91,183 |
| | 12/31/2013 | 352026 | MCMAHAN PLAZA PHASE II BLDG B | LAT EXT | 766 | -1,666 |
| | 4/10/2014 | 13LE1117 | THE VININGS | LAT EXT | 850 | -1,849 |
| | 6/30/2014 | 14LE1128 | WALDORF SCHOOL OF LOUISVILLE | LAT EXT | 400 | -870 |
| | | SC1082547 | MAINTENANCE WORK FY14 JAN-JUN-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 4,404 |
| | 12/30/2014 | SC1082548 | MAINTENANCE WORK FY15 JUL-DEC-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 3,664 |
| | 2/10/2015 | SC1006201 | GOOSE CREEK PLANTATION I/I REHABILITATION FY14 | SCAPCREDIT | | 163,919 |
| | 2/11/2015 | SC1006179 | CONTRACTED WORK FY14 - MIDDLE FORK | SCAPCREDIT | | 15,043 |
| | 6/30/2015 | SC1082549 | MAINTENANCE WORK FY15 JAN-JUN-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 2,568 |
| | 12/30/2015 | SC1082550 | MAINTENANCE WORK FY16 JUL-DEC-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 15,216 |
| | 6/8/2016 | LE939199 | Westport Road Apartments | LAT EXT | 62,800 | -136,590 |
| | 6/30/2016 | SC1082552 | MAINTENANCE WORK FY16 JAN-JUN-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 3,573 |
| | 8/30/2016 | LE971405 | Lyndon Lane Office Condos | LAT EXT | 2,652 | -5,768 |
| | 10/18/2016 | SC1003387 | CONTRACTED WORK FY16 - MIDDLE FORK | SCAPCREDIT | | 91,264 |
| | 10/24/2016 | SC1006194 | CONTRACTED WORK FY15 - MIDDLE FORK | SCAPCREDIT | | 3 |
| | 12/20/2016 | LE938563 | The Paddock at Sawyer Park | LAT EXT | 99,800 | -217,065 |
| | 12/30/2016 | SC1082554 | MAINTENANCE WORK FY17 JUL-DEC-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 2,385 |
| | 5/9/2017 | LE1005641 | City of Anchorage Sewer Extension | LAT EXT | 800 | -1,740 |
| | 6/30/2017 | SC1082555 | MAINTENANCE WORK FY17 JAN-JUN-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 3,799 |
| | 12/30/2017 | SC1082557 | MAINTENANCE WORK FY18 JUL-DEC-MIDDLE FORK BEARGRAS | SCAPCREDIT | | 5,851 |
| | 2/19/2018 | LE1017531 | 526 & 528 Fountain Ave | LAT EXT | 800 | -1,740 |
| | 9/7/2018 | 166053 | 616 & 618 FOUNTAIN AVE S/S | LAT EXT | 1,600 | -3,480 |
| | 7/26/2019 | LE1020250 | LFPL - Northeast Regional Library | LAT EXT | 800 | -1,740 |
| | | LE1024084 | Morat Avenue Apartments | LAT EXT | 63,200 | -137,460 |
| | 11/4/2019 | LE1083952 | 1700 Cold Spring Rd & 12004 Osage Rd | LAT EXT | 800 | -1,740 |
| | 4/24/2020 | LE1059259 | 904 Browns Lane | LAT EXT | 1600 | -3,480 |
| | 6/5/2020 | LE1082329 | St. Luke's Episcopal Church | LAT EXT | 920 | -2,001 |



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| | 5/5/2020 | LE1102767 | Parks - Herr Lane Office Building | LAT EXT | 560 | -1,218 |
| | 5/14/2020 | LE1104478 | Breckenridge Center | LAT EXT | 4000 | -8,700 |
| Middle Fork Total | | | | | | 2,293,989 |
| Northern Ditch | 12/31/2007 | 359404 | CALENDAR 2007 DOWNSPOUT CREDIT | SCAPCREDIT | | 28,000 |
| | 11/1/2008 | 235569 | MAINTENANCE WORK FY06 AUG-FY09 NOV - NORTHERN DIT | SCAPCREDIT | | 11,147 |
| | 11/25/2008 | 236363 | NORTHERN DITCH INT REHAB PH1 | SCAPCREDIT | | 108,760 |
| | 12/31/2008 | SC1011338 | MAINTENANCE WORK FY09A - NORTHERN DITCH | SCAPCREDIT | | 11 |
| | 6/30/2009 | SC1011339 | MAINTENANCE WORK FY09B - NORTHERN DITCH | SCAPCREDIT | | 1,884 |
| | 12/31/2009 | 359339 | CALENDAR 2009 SUMP PUMP CREDIT | SCAPCREDIT | 1 | 4,000 |
| | | SC1011340 | MAINTENANCE WORK FY10A - NORTHERN DITCH | SCAPCREDIT | İ | 1,177 |
| | 3/5/2010 | 234678 | THE LIGHTHOUSE PROMISE COMPLEX | LAT EXT | 2,825 | -6,144 |
| | 6/30/2010 | SC1011343 | MAINTENANCE WORK FY10B - NORTHERN DITCH | SCAPCREDIT | | 2,532 |
| | 12/21/2010 | 284728 | SUBWAY - NEW CUT RD | LAT EXT | 1,314 | -2,858 |
| | 12/31/2010 | 359340 | CALENDAR 2010 SUMP PUMP CREDIT | SCAPCREDIT | i – – – | 4,000 |
| | | SC1011344 | MAINTENANCE WORK FY11A - NORTHERN DITCH | SCAPCREDIT | 1 | 2,456 |
| | 6/28/2011 | 320908 | PARKVIEW ESTATES REHABILITATIO | SCAPCREDIT | | 36 |
| | 6/30/2011 | SC1011345 | MAINTENANCE WORK FY11B - NORTHERN DITCH | SCAPCREDIT | | 1,989 |
| | 11/11/2011 | 312810 | WILLOW PLACE APT COMMUNITY CEN | LAT EXT | 400 | -870 |
| | 12/31/2011 | 359341 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | 100 | 24,000 |
| | 12/01/2011 | 359405 | CALENDAR 2011 DOWNSPOUT CREDIT | SCAPCREDIT | | 12,000 |
| | | SC1011346 | MAINTENANCE WORK FY12A - NORTHERN DITCH | SCAPCREDIT | | 911 |
| | 1/26/2012 | | | LAT EXT | 6.000 | |
| | 3/21/2012 | 315723 312057 | JCPS EARLY CHILDHOOD DEVELOP DOLLAR GENERAL - MEDALLION CT | | 6,000 400 | -13,050 -870 |
| | | | | | 400 | |
| | 6/30/2012 | SC1011336 | MAINTENANCE WORK FY12B - NORTHERN DITCH | SCAPCREDIT | 400 | 7,893 |
| | 8/20/2012 | 312659 | KROGER L-350 FUEL STATION | LAT EXT | 400 | -870 |
| | 12/31/2012 | 14SC1004 | MAINTENANCE WORK FY13A - NORTHERN DITCH | SCAPCREDIT | | 4,239 |
| | 6/30/2013 | 359343 SC1082570 | CALENDAR 2012 SUMP PUMP CREDIT MAINTENANCE WORK FY13 JAN-JUN-NORTH DITCH | SCAPCREDIT SCAPCREDIT | | 24,000 6,459 |
| | 12/5/2013 | 13LE1147 | CARLON ROOFING | LAT EXT | 992 | -2,158 |
| | 12/3/2013 | 13LE1126 | JENNINGS CROSSING TRACT 3 | LAT EXT | 2,100 | -4,568 |
| | 12/12/2013 | 13121120 | | | 2,100 | -4,506 |
| | 12/30/2013 | SC1082571 | MAINTENANCE WORK FY14 JUL-DEC-NORTH DITCH | SCAPCREDIT | | 2,707 |
| | 6/30/2014 | SC1082572 | MAINTENANCE WORK FY14 JAN-JUN-NORTH DITCH | SCAPCREDIT | | 9,044 |
| | 10/21/2014 | SC1006180 | CONTRACTED WORK FY14 - NORTHERN DITCH | SCAPCREDIT | ļ | 5 |
| | 12/30/2014 | SC1082573 | MAINTENANCE WORK FY15 JUL-DEC-NORTH DITCH | SCAPCREDIT | | 8,330 |
| | 6/30/2015 | SC1082575 | MAINTENANCE WORK FY15 JAN-JUN-NORTH DITCH | SCAPCREDIT | | 5,564 |
| | 12/30/2015 | SC1082576 | MAINTENANCE WORK FY16 JUL-DEC-NORTH DITCH | SCAPCREDIT | | 6,074 |
| | 6/30/2016 | SC1082577 | MAINTENANCE WORK FY16 JAN-JUN-NORTH DITCH | SCAPCREDIT | | 5,519 |
| | 12/30/2016 | SC1082578 | MAINTENANCE WORK FY17 JUL-DEC-NORTH DITCH | SCAPCREDIT | | 9,266 |
| | 6/30/2017 | SC1082579 | MAINTENANCE WORK FY17 JAN-JUN-NORTH DITCH | SCAPCREDIT | | 6,441 |



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| | 12/30/2017 | SC1082580 | MAINTENANCE WORK FY18 JUL-DEC-NORTH DITCH | SCAPCREDIT | | 7,810 |
| Northern Ditch Total | | | | | | 274,866 |
| ORFM | 12/31/2007 | 359344 | CALENDAR 2007 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | | 359433 | CALENDAR 2007 DOWNSPOUT CREDIT | SCAPCREDIT | 1 | 56,000 |
| | 11/1/2008 | 235572 | MAINTENANCE WORK FY06 AUG-FY09 NOV - ORFM | SCAPCREDIT | | 19,826 |
| | 12/31/2008 | 362643 | MAINTENANCE WORK FY09A - ORFM | SCAPCREDIT | Ì | 2 |
| | 6/30/2009 | 362650 | MAINTENANCE WORK FY09B - ORFM | SCAPCREDIT | İ | 3,835 |
| | 12/31/2009 | 362654 | MAINTENANCE WORK FY10A - ORFM | SCAPCREDIT | | 7,330 |
| | 5/18/2010 | 263548 | SINGLE FAMILY CONNECTION | LAT EXT | 400 | -870 |
| | 6/28/2010 | 213488 | NORTHEAST CHRISTIAN CHURCH | LAT EXT | 10,000 | -21,750 |
| | 6/30/2010 | 362660 | MAINTENANCE WORK FY10B - ORFM | SCAPCREDIT | | 6,773 |
| | 8/30/2010 | 254919 | TRILOGY HEALTH SERVICES, LLC | LAT EXT | 8,200 | -17,835 |
| | 12/31/2010 | 362665 | MAINTENANCE WORK FY11A - ORFM | SCAPCREDIT | | 181 |
| | 6/30/2011 | 362672 | MAINTENANCE WORK FY11B - ORFM | SCAPCREDIT | | 4,139 |
| | 9/20/2011 | 280837 | SPRINGHURST TOWNE CTR LOT C | LAT EXT | 400 | -870 |
| | 9/30/2011 | 320920 | SHADOW WOOD I/I REHABILITATION | SCAPCREDIT | | 14,279 |
| | 10/14/2011 | 311412 | SPRINGHURST CHEVROLET | LAT EXT | 855 | -1,860 |
| | 12/31/2011 | 359345 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | | 16,000 |
| | | 359434 | CALENDAR 2011 DOWNSPOUT CREDIT | SCAPCREDIT | | 16,000 |
| | | 362677 | MAINTENANCE WORK FY12A - ORFM | SCAPCREDIT | | 7,268 |
| | 3/1/2012 | 320921 | DERINGTON COURT I/I REHABILITA | SCAPCREDIT | | 56,208 |
| | 3/5/2012 | 187028 | GLENVIEW PARK SUBD SECTION 1 | LAT EXT | 4,400 | -9,570 |
| | | 213450 | GLENVIEW PARK SUB, SEC 2 | | 5,600 | -12,180 |
| | 3/12/2012 | 322455 | FIRST LADY NAILS | LAT EXT | 400 | -870 |
| | 6/30/2012 | 362681 | MAINTENANCE WORK FY12B - ORFM | SCAPCREDIT | 100 | 19,941 |
| | 0,00,2012 | SC1011315 | MAINTENANCE WORK FY12B - ORFM | SCAPCREDIT | | 19,941 |
| | 7/5/2012 | 292239 | SPRINGHURST RESTAURANT/ RETAIL | LAT EXT | 3,440 | -7,482 |
| | 12/11/2012 | 323821 | TIRE DISCOUNTERS WESTPORT RD | LAT EXT | 400 | -870 |
| | 12/18/2012 | 341319 | RAISING CANES RETAIL CENTER | LAT EXT | 1,225 | -2,664 |
| | 12/10/2012 | 363238 | FY13 PROSPECT MANHOLE REHAB | SCAPCREDIT | 1,220 | 72,703 |
| | 12/31/2012 | 359346 | CALENDAR 2012 SUMP PUMP CREDIT | SCAPCREDIT | | 24,000 |
| | 1210112012 | 362686 | MAINTENANCE WORK FY13A - ORFM | SCAPCREDIT | | 1,161 |
| | | 363235 | FY13 MUDDY FORK MH REHAB | SCAPCREDIT | | 41,653 |
| | 3/12/2013 | 303235 | KROGER L-707 STORE EXPANSION | LAT EXT | 400 | -870 |
| | 5/13/2013 | 360262 | SINGLE FAMILY 3419 HILLVALE RD | LAT EXT | 400 | -870 |
| | 6/21/2013 | 343729 | RETAIL & RESTAURANT | LAT EXT | 3,500 | -7,613 |
| | 6/30/2013 | SC1082581 | MAINTENANCE WORK FY13 JAN-JUN-OHIO RIVER | SCAPCREDIT | 3,500 | 279 |
| | 11/7/0040 | 204454 | | | 2.000 | 7 000 |
| | 11/7/2013 | 334154 | | LAT EXT | 3,600 | -7,830 |
| | 12/30/2013 | SC1082582 | MAINTENANCE WORK FY14 JUL-DEC-OHIO RIVER FORCE MAI | SCAPCREDIT | | 1,302 |
| | 12/31/2013 | 13LE1024 | Overlook at Beech Spring Farm Sec 4 | LAT EXT | 5,600 | -12,180 |
| | 3/11/2014 | 199896 | SPRINGDALE OFFICE BUILDING | LAT EXT | 4,210 | -9,157 |
| | 5/16/2014 | 225863 | SPRING FARM LAKES SEC 1 | LAT EXT | 4,800 | -10,440 |
| | 6/30/2014 | SC1082583 | MAINTENANCE WORK FY14 JAN-JUN-OHIO RIVER FORCE MAI | SCAPCREDIT | | 1,293 |
| | 9/22/2014 | 177756 | SUMMIT GARDENS PHASE 1 | LAT EXT | 32,000 | -69,600 |
| | | | | | | |



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| | 11/10/2014 | 14LE1121 | Riverside Sewer Extension | LAT EXT | 1,200 | -2,610 |
| | 12/30/2014 | SC1082584 | MAINTENANCE WORK FY15 JUL-DEC-OHIO RIVER FORCE MAI | SCAPCREDIT | | 4,394 |
| | 12/31/2014 | SC1006181 | CONTRACTED WORK FY14 - ORFM | SCAPCREDIT | | 1,654 |
| | 1/16/2015 | 13LE1071 | SPRING FARM LAKE SEC 2 | LAT EXT | 6,000 | -13,050 |
| | 2/12/2015 | 352634 | BAUER PROPERTY | LAT EXT | 2,920 | -6,351 |
| | 6/30/2015 | SC1082585 | MAINTENANCE WORK FY15 JAN-JUN-OHIO RIVER FORCE MAI | SCAPCREDIT | | 2,547 |
| | 7/12/2015 | SC983704 | PROSPECT I&I REHABILITATION - FY13 PHASE IA | SCAPCREDIT | 1 | 1,034,758 |
| | 8/5/2015 | SC1003730 | RIVER ROAD I/I REMEDIATION | SCAPCREDIT | 1 | 120,418 |
| | 10/21/2015 | LE929244 | Summit Gardens Phase 2 | LAT EXT | 18,000 | -39,150 |
| | 11/19/2015 | SC1006195 | CONTRACTED WORK FY15 - ORFM | SCAPCREDIT | İ | 1 |
| | 12/14/2015 | LE938166 | Spring Farm Lake Section 3 | LAT EXT | 3,200 | -6,960 |
| | 12/30/2015 | SC1082586 | MAINTENANCE WORK FY16 JUL-DEC-OHIO RIVER FORCE MAI | SCAPCREDIT | | 1,478 |
| | 6/30/2016 | SC1082587 | MAINTENANCE WORK FY16 JAN-JUN-OHIO RIVER FORCE MAI | SCAPCREDIT | | 460 |
| | | SC1082589 | MAINTENANCE WORK FY17 JUL-DEC-OHIO RIVER FORCE MAI | SCAPCREDIT | | 3,171 |
| | 8/10/2016 | SC1003696 | CONTRACTED WORK FY16 - ORFM | SCAPCREDIT | | 17,566 |
| | 10/6/2016 | SC1003728 | PROSPECT I&I REHABILITATION - FY16 PHASE IB | SCAPCREDIT | | 199,036 |
| | 11/16/2016 | LE923204 | Indian Springs Hotel | LAT EXT | 13,000 | -28,275 |
| | 6/30/2017 | SC1082590 | MAINTENANCE WORK FY17 JAN-JUN-OHIO RIVER FORCE MAI | SCAPCREDIT | | 1,630 |
| | 12/30/2017 | SC1082592 | MAINTENANCE WORK FY18 JUL-DEC-OHIO RIVER FORCE MAI | SCAPCREDIT | | 3,330 |
| | 12/6/2019 | LE971285 | Cityscape - Simcoe Lane | LAT EXT | 66,700 | -145,073 |
| | 6/16/2020 | LE937450 | Poplar Hill Place | LAT EXT | 4000 | -8,700 |
| ORFM Total | | | | | | 1,339,007 |
| Pond Creek | 11/1/2008 | 235574 | MAINTENANCE WORK FY06 AUG-FY09 NOV - POND CREEK | SCAPCREDIT | | 71,782 |
| | 12/31/2008 | 359347 | CALENDAR 2008 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | | 359438 | CALENDAR 2008 DOWNSPOUT CREDIT | SCAPCREDIT | | 4,000 |
| | | SC1011298 | MAINTENANCE WORK FY09A - POND CREEK | SCAPCREDIT | 1 | 1,913 |
| | 6/30/2009 | SC1011299 | MAINTENANCE WORK FY09B - POND CREEK | SCAPCREDIT | 1 | 6,403 |
| | 12/31/2009 | 359348 | CALENDAR 2009 SUMP PUMP CREDIT | SCAPCREDIT | 1 | 4,000 |
| | | 359439 | CALENDAR 2009 DOWNSPOUT CREDIT | SCAPCREDIT | 1 | 12,000 |
| | | SC1011305 | MAINTENANCE WORK FY10A - POND CREEK | SCAPCREDIT | 1 | 22,337 |
| | 2/17/2010 | 192513 | BANNON CROSSINGS SECTION 3A-1 | LAT EXT | 800 | -1,740 |
| | 3/26/2010 | 219734 | DSL LIFE LONG LEARNING CENTER | LAT EXT | 900 | -1,958 |
| | 4/27/2010 | 261115 | EMERGENCY RESTORATION | LAT EXT | 400 | -870 |
| | 6/30/2010 | SC1011307 | MAINTENANCE WORK FY10B - POND CREEK | SCAPCREDIT | Ì | 11,060 |
| | 10/13/2010 | 276977 | DADISMAN BUILDERS-POPLAR TREE | LAT EXT | 400 | -870 |
| | 12/1/2010 | 266833 | THORNTONS @ PRESTON HWY | LAT EXT | 400 | -870 |
| | 12/29/2010 | 280751 | NOTTINGTON HILLS SEC 1 | LAT EXT | 4,400 | -9,570 |
| | 12/31/2010 | 359350 | CALENDAR 2010 SUMP PUMP CREDIT | SCAPCREDIT | | 12,000 |
| | | SC1011308 | MAINTENANCE WORK FY11A - POND CREEK | SCAPCREDIT | | 19,773 |
| | 1/13/2011 | 187739 | GLENGARRY INDUSTRIAL PARK | LAT EXT | 4,300 | -9,353 |
| | 3/21/2011 | 277777 | TIRE DISCOUNTERS - BOERSTE WAY | LAT EXT | 2,960 | -6,438 |
| | 6/30/2011 | SC1011309 | MAINTENANCE WORK FY11B - POND CREEK | SCAPCREDIT | | 10,562 |



| CREDIT BASIN | RELEASE DATE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED CREDIT REQUIRED / FLOW REDUCTION |
|-----------------|-----------------|-------------|---|-----------------------|--------|--|
| | 9/14/2011 | 304408 | UPS SUPPLY CHAIN SOLUTIONS #7 | LAT EXT | 2,250 | -4,894 |
| | 9/27/2011 | 320918 | EDSEL I/I REHABILITATION - FY1 | SCAPCREDIT | | 106,700 |
| | 11/4/2011 | 313444 | PLANET FITNESS - JEFF BLVD | LAT EXT | 1,600 | -3,480 |
| | 11/29/2011 | 312391 | LONGHORN STEAKHOUSE RESTAURANT | LAT EXT | 4,840 | -10,527 |
| | 12/29/2011 | 320919 | LANTANA I/I REHABILITATION - F | SCAPCREDIT | | 5,000 |
| | 12/31/2011 | 359351 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | | 20,000 |
| | | SC1011310 | MAINTENANCE WORK FY12A - POND CREEK | SCAPCREDIT | | 5,380 |
| | 2/28/2012 | 310845 | ZAXBY'S RESTAURANT | LAT EXT | 3,750 | -8,156 |
| | 3/13/2012 | 255044 | ISA-RECYCLING CENTER | LAT EXT | 400 | -870 |
| | 3/19/2012 | 312814 | MILLER TRANSPORTATION | LAT EXT | 1,800 | -3,915 |
| | 4/16/2012 | 324554 | NORTONS TEMPORARY OFFICE | LAT EXT | 900 | -1,958 |
| | 6/19/2012 | 234102 | ETHOS AT VALLEY FARM SR LIVING | LAT EXT | 7,050 | -15,334 |
| | 6/21/2012 | 322367 | SHEPHERDS CARE MEMORY HOME | LAT EXT | 2,000 | -4,350 |
| | 6/30/2012 | SC1011313 | MAINTENANCE WORK FY12B - POND CREEK | SCAPCREDIT | , | 3,877 |
| | 8/6/2012 | 307332 | LOUISVILLE INDUSTRIAL BLDG B | LAT EXT | 2,520 | -5,481 |
| | 8/10/2012 | 279860 | BANNON CROSSINGS SEC 3B-2 | LAT EXT | 9,600 | -20,880 |
| | 0/10/2012 | SC1005684 | CONTRACTED WORK FY12 - POND CREEK | SCAPCREDIT | 0,000 | 3,812 |
| | 8/13/2012 | 312053 | DOLLAR GENERAL - CLEARWATER FA | LAT EXT | 400 | -870 |
| | 10/12/2012 | 343455 | SINGLE FAMILY 1812 GREYLING DR | LAT EXT | 400 | -870 |
| | 11/9/2012 | 243109 | OVERBROOK APARTMENTS | LAT EXT | 41,200 | -89,610 |
| | 12/31/2012 | 14SC1005 | MAINTENANCE WORK FY13A - POND CREEK | SCAPCREDIT | 41,200 | 25,984 |
| | 12/31/2012 | 359354 | CALENDAR 2012 SUMP PUMP CREDIT | SCAPCREDIT | | 56,000 |
| | 2/20/2013 | 329624 | COPART | LAT EXT | 400 | -870 |
| | 5/2/2013 | 346082 | ZAXBYS | | | |
| | | 346082 | LEA ANN WAY INTERCEPTOR I&I RE | LAT EXT SCAPCREDIT | 2,065 | -4,491 |
| | 6/30/2013 | SC1082593 | MAINTENANCE WORK FY13 JAN-JUN-POND CREEK | SCAPCREDIT | | 1,017,423 41,995 |
| | 7/2/2013 | 335385 | HARRISON LOW PRESSURE S/S | LAT EXT | 1,600 | -3,480 |
| | 7/12/2013 | SC1005534 | PICADILLY I/I REHABILITATION FY13 | SCAPCREDIT | ., | 187,564 |
| | 8/16/2013 | 320940 | 4 RESIDENCE SFU 7821 MANSLICK | LAT EXT | 400 | -870 |
| | 8/27/2013 | SC1005538 | CONTRACTED WORK FY13 - POND CREEK | SCAPCREDIT | | 18,958 |
| | 9/6/2013 | 324886 | PNC BANK | LAT EXT | 400 | -870 |
| | | 361336 | RENAISSANCE SOUTH BUSINESS | LAT EXT | 540 | -1,175 |
| | 9/26/2013 | 13LE1083 | SINGLE FAMILY HOME 5402 (H) E MANSLICK RD | LAT EXT | 400 | -870 |
| | 11/12/2013 | SC1005319 | FEGENBUSH I/I REHABILITATION FY13 | SCAPCREDIT | | 226,201 |
| | 12/9/2013 | 353125 | PEGASUS TRANSPORTATION | LAT EXT | 250 | -544 |
| | 12/10/2013 | 308206 | APPLEGATE FARMS | LAT EXT | 57,200 | -124,410 |
| | 12,10,2010 | 341439 | PRESTON GARDENS APTS | LAT EXT | 22,200 | -48,285 |
| | 12/30/2013 | SC1082594 | MAINTENANCE WORK FY14 JUL-DEC-POND CREEK | SCAPCREDIT | | 19,491 |
| | 2/14/2014 | 13LE1179 | TIMBERBEND SUBDIVISION SEC 5B | LAT EXT | 6,400 | -13,920 |
| | 4/10/2014 | 13LE1035 | RENAISSANCE SOUTH BUSINESS PARK TRACT 4 | LAT EXT | 5,415 | -11,778 |
| | 4/24/2014 | 348014 | ASHTON PARK TOWN HOMES | LAT EXT | 9,000 | -19,575 |
| | 5/16/2014 | 280180 | LOUISVILLE INDUSTRIAL CTR F | LAT EXT | 2,480 | -5,394 |
| | 5/28/2014 | 14LE1085 | Williams Properties - Self Storage Facility | LAT EXT | 400 | -870 |
| | 6/9/2014 | 13LE1034 | 6300 GEIL LANE WAREHOUSE | LAT EXT | 720 | -1,566 |
| | | SC1082595 | MAINTENANCE WORK FY14 JAN-JUN-POND | SCAPCREDIT | | 14,457 |
| | 6/30/2014 | 301002393 | CREEK | | | , |



| CREDIT | RELEASE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED |
|--------|------------|-------------|--|------------|--------|-------------------------------------|
| BASIN | DATE | | | | | CREDIT REQUIRED / FLOW REDUCTION |
| | 8/25/2014 | 344230 | AUSTIN PARK APARTMENTS PH6 | LAT EXT | 27,600 | -60,030 |
| | 11/13/2014 | 13LE1105 | JEFFERSON COMMONS | LAT EXT | 17,075 | -37,138 |
| | 11/18/2014 | SC1005323 | FERN CREEK I/I REHABILITATION FY13 | SCAPCREDIT | | 551,108 |
| | 12/30/2014 | SC1082596 | MAINTENANCE WORK FY15 JUL-DEC-POND CREEK | SCAPCREDIT | | 26,095 |
| | 1/13/2015 | 13LE1017 | APEX ON PRESTON APT HOMES(Formally CITYSCAPE APTS | LAT EXT | 84,400 | -183,570 |
| | 3/10/2015 | SC1005541 | STONY BROOK I/I REHABILITATION FY13 | SCAPCREDIT | | 345,397 |
| | 3/11/2015 | SC995942 | CAVEN AVE I/I REMEDIATION - FY13 | SCAPCREDIT | | 225,645 |
| | 4/29/2015 | 354207 | COOPER FARMS SEC 11B | LAT EXT | 12,400 | -26,970 |
| | | 354209 | COOPER FARMS SEC 11A | LAT EXT | 13,200 | -28,710 |
| | 6/30/2015 | SC1082597 | MAINTENANCE WORK FY15 JAN-JUN-POND CREEK | SCAPCREDIT | | 10,279 |
| | 8/25/2015 | 13LE1086 | WOODS OF PENN RUN OFFSITE SS | LAT EXT | 1,000 | -2,175 |
| | 10/2/2015 | 13LE1140 | JEFFERSON POST APARTMENTS | LAT EXT | 28,800 | -62,640 |
| | 12/30/2015 | 14LE1116 | CATALPA SPRINGS | LAT EXT | 2,800 | -6,090 |
| | | SC1082598 | MAINTENANCE WORK FY16 JUL-DEC-POND CREEK | SCAPCREDIT | | 13,994 |
| | 12/31/2015 | SC939830 | Lea Ann Way West Quad 1 & 2 Rehabilitation Project | SCAPCREDIT | | 445,911 |
| | 2/4/2016 | 13LE1056 | MORNING POINTE AT HURSTBOURNE | LAT EXT | 13,000 | -28,275 |
| | 2/12/2016 | 358356 | WOODS OF PENN RUN Section 1 | LAT EXT | 18,800 | -40,890 |
| | 5/17/2016 | SC1003699 | CONTRACTED WORK FY16 - POND CREEK | SCAPCREDIT | | 36,063 |
| | 6/6/2016 | LE936598 | Jefferson Commerce Center Tract 1A | LAT EXT | 5,250 | -11,419 |
| | 6/21/2016 | 14LE1170 | Austin Park Phase 7 & 8 | LAT EXT | 26,400 | -57,420 |
| | | LE918484 | AUSTIN PARK SS PHASE 8 | LAT EXT | 16,800 | -36,540 |
| | 6/30/2016 | SC1082599 | MAINTENANCE WORK FY16 JAN-JUN-POND CREEK | SCAPCREDIT | | 12,650 |
| | 8/5/2016 | SC1003087 | HILLRIDGE I/I REMEDIATION | SCAPCREDIT | | 308,184 |
| | 8/31/2016 | SC1003292 | LEA ANN WAY WEST (LAWW) QUAD 3 I/I REMEDIATION | SCAPCREDIT | | 311,526 |
| | 10/24/2016 | SC1006197 | CONTRACTED WORK FY15 - POND CREEK | SCAPCREDIT | | 310 |
| | 10/26/2016 | SC1006182 | CONTRACTED WORK FY14 - POND CREEK | SCAPCREDIT | | 8,390 |
| | 10/31/2016 | SC1005631 | LEA ANN WAY WEST (LAWW) QUAD 4 I/I REHABILITATION | SCAPCREDIT | | 692,905 |
| | | SC1005639 | SILVER HEIGHTS SEWER REHAB | SCAPCREDIT | | 284,936 |
| | 12/30/2016 | SC1082601 | MAINTENANCE WORK FY17 JUL-DEC-POND CREEK | SCAPCREDIT | | 14,699 |
| | 1/17/2017 | LE942402 | Preston Crossing Apartments | LAT EXT | 46,400 | -100,920 |
| | 2/2/2017 | LE954229 | Jeffeerson Commerce Center Bldg.2 | LAT EXT | 3,150 | -6,851 |
| | 6/30/2017 | SC1082602 | MAINTENANCE WORK FY17 JAN-JUN-POND CREEK | SCAPCREDIT | | 14,076 |
| | 7/6/2017 | LE967615 | Cooper Farms Section 12 | LAT EXT | 21,200 | -46,110 |
| | 12/30/2017 | SC1082603 | MAINTENANCE WORK FY18 JUL-DEC-POND CREEK | SCAPCREDIT | | 10,803 |
| | 6/30/2018 | SC1096902 | Admiral PS I/I Rehab FY17 FY18 | SCAPCREDIT | | 977,768 |
| | 6/10/2019 | LE1047077 | Orell Station 1C | LAT EXT | 10,400 | -22,620 |
| | 7/10/2019 | LE1053368 | Ferndale Place Subdivision | LAT EXT | 9,600 | -20,880 |
| | 1/13/2020 | LE1092680 | Hidden Forest Section 2 | LAT EXT | 10000 | -21,750 |
| | 5/12/2020 | LE1047091 | New Cut Road Retail Shop | LAT EXT | 1381 | -3,004 |
| | 6/10/2020 | LE1078674 | Frontgate Apartments | LAT EXT | 67600 | -147,030 |



| CREDIT BASIN | RELEASE DATE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED CREDIT REQUIRED / FLOW REDUCTION |
|---------------------|-----------------|-------------|---|------------|---------|--|
| Pond Creek Total | | | | | | 4,809,667 |
| SE Diversion | 12/31/2007 | 359355 | CALENDAR 2007 SUMP PUMP CREDIT | SCAPCREDIT | | 8,000 |
| ĺ | | 359440 | CALENDAR 2007 DOWNSPOUT CREDIT | SCAPCREDIT | İ | 128,000 |
| | 11/1/2008 | 235575 | MAINTENANCE WORK FY06 AUG-FY09 NOV - SE DIVERSION | SCAPCREDIT | | 71,472 |
| | 12/22/2008 | 236214 | GOLDSMITH BUECHB ICA PHI REHAB | SCAPCREDIT | | 314,808 |
| | | 236296 | BEARGRASS INT REHAB PH1 SEDIV | SCAPCREDIT | | 122,688 |
| | 12/31/2008 | 359356 | CALENDAR 2008 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | | 359441 | CALENDAR 2008 DOWNSPOUT CREDIT | SCAPCREDIT | | 16,000 |
| | | SC1011317 | MAINTENANCE WORK FY09A - SE DIVERSION | SCAPCREDIT | | 1,555 |
| | 6/30/2009 | SC1011318 | MAINTENANCE WORK FY09B - SE DIVERSION | SCAPCREDIT | | 2,929 |
| | 10/20/2009 | 229854 | TINY HANDS DAYCARE | LAT EXT | 1,225 | -2,664 |
| | 12/31/2009 | 359357 | CALENDAR 2009 SUMP PUMP CREDIT | SCAPCREDIT | İ | 12,000 |
| | | 359443 | CALENDAR 2009 DOWNSPOUT CREDIT | SCAPCREDIT | İ | 8,000 |
| | | SC1011322 | MAINTENANCE WORK FY10A - SE DIVERSION | SCAPCREDIT | | 16,974 |
| | 2/11/2010 | 235291 | SULLIVAN COLLEGE OF TECHNOLOGY | LAT EXT | 900 | -1,958 |
| | 3/1/2010 | 238328 | LOUISVILLE COLLEGIATE SPORTS | LAT EXT | 400 | -870 |
| | 3/5/2010 | 241759 | FRISCHS BIG BOY RESTAURANT | LAT EXT | 2,400 | -5,220 |
| | 4/16/2010 | 257275 | LOUISVILLE JUNIOR ACADEMY | LAT EXT | 520 | -1,131 |
| | 6/30/2010 | SC1011326 | MAINTENANCE WORK FY10B - SE DIVERSION | SCAPCREDIT | | 10,739 |
| | 12/14/2010 | 320993 | BEARGRASS CREEK PHASE II - FY1 | SCAPCREDIT | | 10,368 |
| | 12/31/2010 | 359358 | CALENDAR 2010 SUMP PUMP CREDIT | SCAPCREDIT | | 4,000 |
| | | 359444 | CALENDAR 2010 DOWNSPOUT CREDIT | SCAPCREDIT | | 24,000 |
| | | SC1011328 | MAINTENANCE WORK FY11A - SE DIVERSION | SCAPCREDIT | | 11,090 |
| | 2/16/2011 | 286513 | GARDINER POINT RESIDENCE HALL | LAT EXT | 10,800 | -23,490 |
| | 5/6/2011 | 276378 | TIRE DISCOUNTERS - BARDSTOWN | LAT EXT | 1,500 | -3,263 |
| | 5/30/2011 | 287888 | BEVERAGE WAREHOUSE | LAT EXT | 1,180 | -2,567 |
| | 6/30/2011 | SC1011330 | MAINTENANCE WORK FY11B - SE DIVERSION | SCAPCREDIT | 1,100 | 3,661 |
| | 7/1/2011 | 296295 | KEN TOWERY -3800 S HURSTBOURNE | LAT EXT | 400 | -870 |
| | 12/31/2011 | 359359 | CALENDAR 2011 SUMP PUMP CREDIT | SCAPCREDIT | 400 | 64,000 |
| | 12/31/2011 | 359445 | CALENDAR 2011 DOWNSPOUT CREDIT | SCAPCREDIT | | 8,000 |
| | | SC1011331 | MAINTENANCE WORK FY12A - SE DIVERSION | SCAPCREDIT | | 5,071 |
| | 6/30/2012 | SC1011316 | MAINTENANCE WORK FY12B - SE DIVERSION | SCAPCREDIT | | 24,202 |
| | 0/30/2012 | SC1011313 | MAINTENANCE WORK FY12B - SE DIVERSION | SCAPCREDIT | | |
| | 8/10/2012 | 307018 | HOOK PROPERTY FAMILY DOLLAR | LAT EXT | 400 | -870 |
| | 12/31/2012 | 14SC1006 | | SCAPCREDIT | 400 | |
| | 1213112012 | 359361 | MAINTENANCE WORK FY13A - SE DIVERSION CALENDAR 2012 SUMP PUMP CREDIT | SCAPCREDIT | | 24,202 68,000 |
| | | + | CALENDAR 2012 SOMP FOMP CREDIT | | | |
| | 2/11/2012 | 359446 | | SCAPCREDIT | 16 800 | 4,000 |
| | 3/11/2013 | 187741 | BROOKSTONE SENIOR APARTMENTS RAINTREE/MARIAN CT P/S ELIM | | 16,800 | -36,540 |
| | 6/14/2013 | 232601 | | LAT EXT | 105,800 | -230,115 |
| | 6/30/2013 | SC1082605 | MAINTENANCE WORK FY13 JAN-JUN-SOUTHEAST DIVERSION | SCAPCREDIT | | 21,761 |
| | 9/18/2013 | SC1005539 | CONTRACTED WORK FY13 - SOUTHEAST DIVERSION | SCAPCREDIT | | 25,344 |
| | 11/26/2013 | 330437 | COLLEGIATE ATHLETIC FIELD | LAT EXT | 800 | -1,740 |
| | 12/30/2013 | SC1082606 | MAINTENANCE WORK FY14 JUL-DEC- SOUTHEAST DIVERSION | SCAPCREDIT | | 19,491 |
| | 6/30/2014 | SC1082607 | MAINTENANCE WORK FY14 JAN-JUN-SOUTHEAST DIVERSION | SCAPCREDIT | | 9,087 |



| CREDIT BASIN | RELEASE DATE | APPLICATION | APPLICATION NAME | ТҮРЕ | FLOW | SUM OF APPROVED CREDIT REQUIRED / FLOW REDUCTION |
|-----------------------|-----------------|-------------|---|------------|-------|--|
| | 12/30/2014 | SC1082608 | MAINTENANCE WORK FY15 JUL-DEC- SOUTHEAST DIVERSION | SCAPCREDIT | | 15,321 |
| | 2/11/2015 | SC1006185 | CONTRACTED WORK FY14 - SOUTHEAST DIVERSION | SCAPCREDIT | | 187,478 |
| | 6/30/2015 | SC1082610 | MAINTENANCE WORK FY15 JAN-JUN-SOUTHEAST DIVERSION | SCAPCREDIT | | 10,273 |
| | 10/20/2015 | SC1006199 | CONTRACTED WORK FY15 - SOUTHEAST DIVERSION | SCAPCREDIT | | 1 |
| | 12/22/2015 | LE919560 | Todd's Place Express Car Wash | LAT EXT | 4,830 | -10,505 |
| | 12/30/2015 | SC1082611 | MAINTENANCE WORK FY16 JUL-DEC- SOUTHEAST DIVERSION | SCAPCREDIT | | 7,052 |
| | 2/16/2016 | SC1003718 | SOUTHEAST DIVERSION AREA G (SEDG) I/I REMEDIATION | SCAPCREDIT | | 75,998 |
| | 5/24/2016 | SC1003704 | CONTRACTED WORK FY16 - SOUTHEAST DIVERSION | SCAPCREDIT | | 66 |
| | 6/30/2016 | SC1082612 | MAINTENANCE WORK FY16 JAN-JUN-SOUTHEAST DIVERSION | SCAPCREDIT | | 19,904 |
| | 7/28/2016 | LE943171 | Costco Wholesale and Fuel Facility | LAT EXT | 8,000 | -17,400 |
| | 12/30/2016 | SC1082613 | MAINTENANCE WORK FY17 JUL-DEC- SOUTHEAST DIVERSION | SCAPCREDIT | | 5,812 |
| | 6/30/2017 | SC1082614 | MAINTENANCE WORK FY17 JAN-JUN-SOUTHEAST DIVERSION | SCAPCREDIT | | 6,961 |
| | 12/30/2017 | SC1082615 | MAINTENANCE WORK FY18 JUL-DEC- SOUTHEAST DIVERSION | SCAPCREDIT | | 14,909 |
| SE Diversion Total | | | | | | 1,054,155 |
| Grand Total | | | | | | 14,603,484 |



APPENDIX E

IOAP PROJECT CROSSWALK





| 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 | 0057-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 |
| 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 |
| BARDSTOWN 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_8_8 |
| 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 |
| 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 |



| PROJECT NAME | PROGRAM | ASSET ID | PROJECT ID |
|--|---------|------------|---------------------------|
| 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 |
| 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 | CSO200X | 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 |
| 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 |
| CS0058 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 |
| CSO160 SEWER SEPARATION | IOAP | CSO160 | L_OR_MF_160_S_08_A_A_0 |
| CSO190 GREEN INFRASTRUCTURE (FORMERLY18TH & 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 |



| PROJECT NAME | PROGRAM | ASSET ID | PROJECT ID |
|---|----------------------|------------------|--|
| 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 | 28452 | S JT JT NB02 M 01 C |
| DELL RD/CHARLANE PKWY INTERCEPTOR IMPROVEMENTS | IOAP | 28453 | S JT JT NB02 M 01 C |
| 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 WOTC UPGRADES | ISSDP | 32682 | DEREK R GUTHRIE WQTC UPGRADES |
| DEREK R GUTHRIE WOTO UPGRADES | ISSDP | 32688 | DEREK R GUTHRIE WQTC UPGRADES |
| DEREK R GUTHRIE WOTO UPGRADES | ISSDP | 59169 | DEREK R GUTHRIE WQTC UPGRADES |
| DEREK R GUTHRIE WOTC UPGRADES | ISSDP | MSD0277 | DEREK R GUTHRIE WQTC UPGRADES |
| DERINGTON CT PS I&I INVESTIGATION & REHABILITATION | IOAP | 20154-W | |
| DERINGTON CT PS I&I INVESTIGATION & REHABILITATION | IOAP | 20154-00 | S_OR_MF_NB03_S_07_C |
| | IOAP | MSD0095-PS | S_OR_MF_NB03_S_07_C |
| DERINGTON CT PS I&I INVESTIGATION & REHABILITATION EAST ROCKFORD PS RELOCATION | IOAP | 04699-W | S_OR_MF_NB03_S_07_C |
| EAST ROCKFORD PS RELOCATION | - | MSD1105-PS | S_MC_WC_NB02_S_03_C |
| | IOAP | | 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 |
| 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 | + | MSD1065-PS | S_HC_HS_NB01_S_03_C_A |
| | IOAP | | |
| FLOYDSBURG RD I&I INVEST | IOAP | 108953 | S_HC_HC_MSD1086_M_07_C_A |
| FLOYDSBURG RD I&I INVEST FLOYDSBURG RD I&I INVEST | + | 108953 108956 | S_HC_HC_MSD1086_M_07_C_A S_HC_HC_MSD1086_M_07_C_A |
| | IOAP | | S_HC_HC_MSD1086_M_07_C_A |
| FLOYDSBURG RD I&I INVEST FLOYDSBURG RD I&I INVEST | IOAP IOAP | 108956 108957 | S_HC_HC_MSD1086_M_07_C_A S_HC_HC_MSD1086_M_07_C_A |
| FLOYDSBURG RD I&I INVEST | IOAP IOAP IOAP | 108956 | S_HC_HC_MSD1086_M_07_C_A |



| PROJECT NAME | PROGRAM | ASSET ID | PROJECT ID |
|--|---------|------------|---|
| FOX HARBOR IN-LINE STORAGE | IOAP | 62769 | |
| GOOSE CREEK PS IMPROVEMENTS AND WET WEATHER STORAGE 1 - DEVONDALE WET WEATHER STORAGE | IOAP | 105936 | S_HC_HN_NB03_S_09A_A_A 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 |
| 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 |
| 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 |
| 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 |



| PROJECT NAME | PROGRAM | ASSET ID | PROJECT ID |
|---|---------|------------|------------------------|
| 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 |
| 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 |
| 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 | SMF_NB04_S_01_B_A |
| KLONDIKE INTERCEPTOR | IOAP | 49513 | SMF_NB04_S_01_B_A |
| KLONDIKE INTERCEPTOR | IOAP | 66232 | SMF_NB04_S_01_B_A |
| AKE FOREST PS SSO INVESTIGATION | IOAP | MSD1169-LS | S_FF_LF_NB01_S_13_C_A |
| LANTANA #1 PS I/I INVESTESTIGATION & REHABILITATION | IOAP | 25484 | S_PO_WC_PC05_M_07_C |
| LANTANA #1 PS I/I INVESTESTIGATION & REHABILITATION | IOAP | 93719 | S_PO_WC_PC05_M_07_C |
| LANTANA #1 PS I/I INVESTESTIGATION & 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 |
| 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 |
| EA ANN WAY SYSTEM IMPROVEMENT | IOAP | MSD1010-PS | S_PO_WC_PC08_M_01_C |
| | 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 |
| LEVEN PS ELIMINATION | IOAP | MSD1019-PS | S_PO_WC_PC10_M_01_C |
| | IOAP | 67997 | S_CC_CC_67997_M_01_C |
| | IOAP | 67999 | S CC CC 67997 M 01 C |
| LITTLE CEDAR CREEK INTERCEPTOR IMPROVEMENTS | IOAP | 86423 | S_CC_CC_67997_M_01_C |



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| 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 | CS0111 | 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 |
| 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 | CSO149 CSO151 | |
| | | CSO151 | L_SO_MF_092_M_09B_B_D_8 |
| LOGAN & BRECKINRIDGE ST STORAGE BASIN | IOAP | | 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 |
| 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 |
| 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 |



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| 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 |
| 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 |
| 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 |
| MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION 1 - BUECHEL BASIN | IOAP | 51221 | S_MISF_MF_NB01_M_01_C_A1 |



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| MIDDLE FORK RELIEF INTERCEPTOR, WET WEATHER STORAGE AND UMFPS DIVERSION | IOAP | 72288 | S MISF MF NB01 M 01 C A1 |
| 1 - BUECHEL BASIN | IUAP | 12200 | 3_WISF_WF_WB01_W_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 |
| 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 |
| 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 |
| 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 |



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| 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 |
| PROSPECT SYSTEM IMPROVEMENTS 3 - ORFM SYSTEM IMPROVEMENTS | IOAP | 89790 | 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 |
| 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 |
| 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 STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 08427 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 08430 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 08431 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 18654 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 30680 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 30681 | SOUTHEASTERN DIVERSION STRUC |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR | IOAP | 30701 | SOUTHEASTERN DIVERSION STRUC |
| | IOAP | 30701 | |
| | - | | SOUTHEASTERN DIVERSION STRUC |
| | IOAP | 30704 | SOUTHEASTERN DIVERSION STRUC |
| | IOAP | 49647 | SOUTHEASTERN DIVERSION STRUC |
| | IOAP | 63779 | |
| SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR SOUTHERN OUTFALL IN-LINE STORAGE AT 43RD STREET (SOR1) (FORMERLY ALGONQUIN PKWY STORAGE BASIN) | IOAP | 72571-X CSO016 | SOUTHEASTERN DIVERSION STRUC 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 | CSO189X | 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 |
| WATERWAY PROTECTION TUNNEL (FORMERLY 13TH STROWAN ST STORAGE BASIN) | IOAP | CS0022 | L OR MF 155 M 09B B B 4 |
| | IOAP | | |
| WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN) | | CSO050 | L_OR_MF_155_M_09B_B_B_4 |
| WATERWAY PROTECTION TUNNEL (FORMERLY 13TH ST/ROWAN ST STORAGE BASIN) | IOAP | CS0051 | 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 |



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| 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 |
| 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 |
| 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





| CSO | FINAL SOP COMPLETED | HISTORICAL VOLUME REVISED | PROGRAMMING CHANGES COMPLETED | EQUIPMENT CHANGES COMPLETED | TESTING / VERIFICATION COMPLETED |
|-----|---------------------|------------------------------|----------------------------------|--------------------------------|--|
| 015 | 6/30/2017 | 6/30/2017 | 6/30/2020 | 2/1/2020 | 6/30/2020 |
| 016 | 7/1/2019 | 6/30/2017 | 7/30/2018 | N/A | 9/10/2018 |
| 018 | 7/1/2019 | 6/30/2017 | 9/13/2017 | N/A | 3/11/2019 |
| 020 | 7/1/2019 | 6/30/2017 | 9/21/2017 | N/A | 10/10/2017 |
| 036 | 7/1/2019 | 6/30/2017 | 8/23/2017 | N/A | 9/14/2017 |
| 054 | 7/1/2019 | 6/30/2017 | 9/8/2017 | N/A | 9/12/2017 |
| 058 | 7/1/2019 | 6/30/2017 | 3/4/2019 | N/A | 2/16/2019 |
| 088 | 6/30/2017 | 6/30/2017 | 8/23/2017 | 6/20/2019 | 2/22/2019 |
| 093 | 7/1/2019 | 6/30/2017 | 11/19/2018 | N/A | 1/1/2018 |
| 104 | 7/1/2019 | 6/30/2017 | N/A | N/A | N/A |
| 105 | 7/1/2019 | 6/30/2017 | 3/6/2020 | 8/3/2019 | 6/30/2020 |
| 106 | 7/1/2019 | 6/30/2017 | N/A | N/A | N/A |
| 108 | 7/1/2019 | 6/30/2017 | 11/21/2017 | 10/17/2017 | 12/1/2018 |
| 109 | 7/1/2019 | 6/30/2017 | 11/21/2017 | 10/13/2017 | 10/8/2018 |
| 110 | 6/30/2017 | 6/30/2017 | 11/19/2018 | 4/6/2020 | 4/5/2019 |
| 118 | 7/1/2019 | 6/30/2017 | N/A | 9/1/2017 | 9/12/2017 |
| 121 | 7/1/2019 | 6/30/2017 | 9/12/2017 | 10/13/2017 | 12/21/2017 |
| 125 | 7/1/2019 | 6/30/2017 | 9/8/2017 | 8/7/2017 | 9/8/2017 |
| 126 | 7/1/2019 | 6/30/2017 | 9/14/2017 | 9/1/2017 | 12/21/2017 |
| 127 | 7/1/2019 | 6/30/2017 | N/A | N/A | N/A |
| 130 | 7/1/2019 | 6/30/2017 | 8/16/2017 | N/A | 3/11/2019 |
| 132 | 7/1/2019 | 6/30/2017 | 11/19/2019 | 2/6/2020 | 6/30/2020 |
| 140 | 7/1/2019 | 6/30/2017 | 11/21/2017 | 10/13/2017 | 3/16/2019 |
| 146 | 6/30/2017 | 6/30/2017 | 11/19/2018 | 5/14/2020 | 6/30/2020 |
| 149 | 6/30/2017 | 6/30/2017 | 11/19/2018 | 3/27/2019 | 3/12/2019 |
| 154 | 7/1/2019 | 6/30/2017 | 1/3/2019 | 1/3/2019 | 6/30/2020 |
| 160 | 7/1/2019 | 6/30/2017 | 8/23/2017 | 9/20/2017 | 12/22/2017 |
| 166 | 7/1/2019 | 6/30/2017 | 9/12/2017 | 10/9/2017 | 12/21/2017 |
| 167 | 7/1/2019 | 6/30/2017 | 11/19/2019 | 2/6/2020 | 6/30/2020 |
| 189 | 7/1/2019 | 6/30/2017 | 3/6/2020 | 8/3/2019 | 6/30/2020 |
| 190 | 7/1/2019 | 6/30/2017 | 1/26/2018 | N/A | 1/26/2018 |
| 191 | 6/30/2017 | 6/30/2017 | 6/30/2020 | 2/1/2020 | 6/30/2020 |
| 206 | 7/1/2019 | 6/30/2017 | N/A | 11/22/2017 | 12/6/2017 |
| 210 | 7/1/2019 | 6/30/2017 | 1/23/2019 | N/A | 1/23/2019 |
| 211 | 7/1/2019 | 6/30/2017 | 8/16/2017 | N/A | 3/1/2019 |



Table F-2. Phase 2 CSOs

| CSO | FINAL SOP COMPLETED | HISTORICAL VOLUME REVISED | PROGRAMMING CHANGES COMPLETED | EQUIPMENT CHANGES COMPLETED | TESTING / VERIFICATION COMPLETED |
|-----|---------------------|------------------------------|----------------------------------|--------------------------------|--|
| 019 | 6/28/2019 | COMPLETED | 11/1/2019 | 11/1/2019 | COMPLETED |
| 022 | 6/28/2019 | COMPLETED | 12/17/2018 | N/A | COMPLETED |
| 023 | 6/28/2019 | COMPLETED | 12/17/2018 | N/A | COMPLETED |
| 027 | 6/28/2019 | COMPLETED | 1/14/2019 | 6/6/2019 | COMPLETED |
| 028 | 6/28/2019 | COMPLETED | 5/3/2019 | 2/4/2019 | COMPLETED |
| 029 | 6/28/2019 | COMPLETED | 5/3/2019 | 3/22/2019 | COMPLETED |
| 031 | 6/28/2019 | COMPLETED | 3/11/2019 | 2/24/2019 | COMPLETED |
| 034 | 6/28/2019 | COMPLETED | 5/3/2019 | 2/5/2019 | COMPLETED |
| 035 | 6/28/2019 | N/A | 4/12/2019 | 4/12/2019 | COMPLETED |
| 038 | 6/28/2019 | COMPLETED | 4/22/2019 | N/A | COMPLETED |
| 050 | 6/28/2019 | COMPLETED | 6/12/2018 | N/A | COMPLETED |
| 051 | 6/28/2019 | N/A | 6/12/2018 | N/A | COMPLETED |
| 052 | 6/28/2019 | COMPLETED | 3/25/2019 | 3/22/2019 | COMPLETED |
| 053 | 6/28/2019 | COMPLETED | 6/20/2018 | N/A | COMPLETED |
| 055 | 6/28/2019 | COMPLETED | 6/18/2018 | N/A | COMPLETED |
| 056 | 6/28/2019 | N/A | 10/24/2017 | 10/24/2017 | COMPLETED |
| 057 | 6/28/2019 | N/A | 6/12/2018 | N/A | COMPLETED |
| 062 | 6/28/2019 | N/A | 4/17/2019 | 3/16/2019 | COMPLETED |
| 082 | 6/28/2019 | COMPLETED | 6/26/2018 | N/A | COMPLETED |
| 083 | 6/28/2019 | COMPLETED | 6/26/2018 | N/A | COMPLETED |
| 084 | 6/28/2019 | COMPLETED | 6/27/2018 | 4/9/2019 | COMPLETED |
| 091 | 6/30/2020 | COMPLETED | 12/21/2018 | 11/19/2018 | COMPLETED |
| 092 | 6/28/2019 | COMPLETED | 6/20/2018 | N/A | COMPLETED |
| 097 | 6/30/2020 | COMPLETED | 1/7/2019 | 1/1/2018 | COMPLETED |
| 111 | 6/30/2020 | COMPLETED | 3/12/2019 | 1/1/2018 | COMPLETED |
| 113 | 6/30/2020 | COMPLETED | 12/21/2018 | 11/19/2018 | COMPLETED |
| 117 | 6/30/2020 | COMPLETED | 12/21/2018 | 11/19/2018 | COMPLETED |
| 119 | 6/28/2019 | COMPLETED | 6/26/2018 | N/A | COMPLETED |
| 120 | 6/28/2019 | COMPLETED | 6/26/2018 | N/A | COMPLETED |
| 131 | 6/28/2019 | N/A | 10/2/2018 | 10/2/2018 | COMPLETED |
| 137 | 6/30/2020 | COMPLETED | 12/21/2018 | N/A | N/A |
| 141 | 6/28/2019 | N/A | 5/30/2018 | 5/30/2018 | COMPLETED |
| 144 | 6/28/2019 | COMPLETED | 6/26/2018 | 8/6/2018 | COMPLETED |
| 148 | 6/30/2020 | COMPLETED | 3/12/2019 | 1/1/2018 | COMPLETED |
| 150 | 6/28/2019 | N/A | 6/12/2018 | N/A | COMPLETED |
| 151 | 6/30/2020 | COMPLETED | 3/12/2019 | 1/1/2018 | COMPLETED |
| 152 | 6/30/2020 | COMPLETED | 3/12/2019 | 1/1/2018 | COMPLETED |
| 153 | 6/28/2019 | COMPLETED | 6/26/2018 | N/A | COMPLETED |
| 155 | 6/28/2019 | COMPLETED | 6/12/2018 | N/A | COMPLETED |
| 161 | 6/28/2019 | N/A | 6/12/2018 | N/A | COMPLETED |
| 172 | 6/28/2019 | N/A | 1/1/2018 | 1/1/2018 | COMPLETED |
| 178 | 6/28/2019 | COMPLETED | 4/17/2019 | 3/16/2019 | COMPLETED |
| 179 | 6/30/2020 | COMPLETED | 6/30/2020 | 1/1/2018 | COMPLETED |
| 181 | 6/28/2019 | COMPLETED | 4/17/2019 | 3/16/2019 | COMPLETED |
| 193 | 6/28/2019 | COMPLETED | 6/20/2018 | N/A | COMPLETED |
| 195 | 6/28/2019 | COMPLETED | 6/22/2018 | N/A N/A | COMPLETED |
| 196 | 6/28/2019 | COMPLETED | 6/22/2018 | N/A N/A | COMPLETED |



Table F-2. Phase 2 CSOs

| CSO | FINAL SOP COMPLETED | HISTORICAL VOLUME REVISED | PROGRAMMING CHANGES COMPLETED | EQUIPMENT CHANGES COMPLETED | TESTING / VERIFICATION COMPLETED |
|------------|---------------------|------------------------------|----------------------------------|--------------------------------|--|
| 197 | 6/28/2019 | COMPLETED | 4/9/2019 | 8/14/2019 | COMPLETED |
| 198 | 6/28/2019 | COMPLETED | 6/26/2018 | 10/4/2018 | COMPLETED |
| 199 | 6/28/2019 | COMPLETED | 6/18/2018 | N/A | COMPLETED |
| 200 | 6/28/2019 | COMPLETED | 12/12/2018 | 12/12/2018 | COMPLETED |
| 201 | 6/28/2019 | COMPLETED | 6/22/2018 | 5/31/2019 | COMPLETED |
| 202 | 6/28/2019 | COMPLETED | 6/15/2018 | N/A | COMPLETED |
| 203 | 6/28/2019 | COMPLETED | 6/15/2018 | N/A | COMPLETED |
| 207 | 6/28/2019 | COMPLETED | 6/22/2018 | N/A | COMPLETED |
| 208 | 6/28/2019 | COMPLETED | 6/25/2018 | 5/22/2019 | COMPLETED |
| SBR 142 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |
| SBR 174 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |
| SBR 180 | 6/28/2019 | COMPLETED | 6/8/2018 | 12/7/2018 | COMPLETED |
| SBR 182 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |
| SBR 183 | 6/28/2019 | COMPLETED | 6/4/2018 | N/A | COMPLETED |
| SBR 184 | 6/28/2019 | COMPLETED | 6/4/2018 | N/A | COMPLETED |
| SBR 185 | 6/28/2019 | COMPLETED | 6/4/2018 | N/A | COMPLETED |
| SBR 186 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |
| SBR 187 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |
| SBR 188 | 6/28/2019 | COMPLETED | 6/8/2018 | 12/7/2018 | COMPLETED |
| SBR 205 | 6/28/2019 | COMPLETED | 6/8/2018 | N/A | COMPLETED |





APPENDIX G

CSO108 SEMI-ANNUAL REPORT







July 30, 2020

Josh Lillpop Natural Areas Branch Manager Office of Kentucky Nature Preserves Kentucky Energy and Environment Cabinet 300 Sower Boulevard, 4th Floor Frankfort, KY 40601

Subject: CSO108 Semi-Annual Report ##24

Dear Mr. Lillpop,

As required in Paragraph #2 of the document titled "Memorandum of Understanding by and between the Commonwealth of Kentucky, Office of Kentucky Nature Preserves ad the Louisville and Jefferson County Metropolitan Sewer District", MSD submits to you the MOU Semi-Annual Report ##24. This report summarizes activities at the CSO108 CDS Site during the reporting period of January 1, 2020 to June 30, 2020ds.

Should you have any questions or comments, please feel free to contact me via email at heather.dodds@louisvillemsd.org or phone at (502) 540-6961.

Sincerely,

Heather Dods

Heather Dodds, PE Regulatory Compliance & Asset Management Administrator





MOU SEMI-ANNUAL REPORT #24 JANUARY 1, 2020 - JUNE 30, 2020



INTRODUCTION

The Louisville and Jefferson County Metropolitan Sewer District (MSD) has entered into a Memorandum of Understanding (MOU) with the Kentucky State Nature Preserve Commission (Commission). The MOU was signed by MSD on July 31, 2018, and by the Commission on August 10, 2018. This MOU is effective for the period starting August 1, 2018, and ending on August 1, 2028.

This is the 24th Semi-Annual Report submitted in accordance with Paragraph 2 of the MOU. This report covers the time period of January 1, 2020 to June 30, 2020.

This Semi-Annual Report will address only those requirements considered ongoing. The initial Semi-Annual Report, MOU Semi-Annual Report #1, was comprehensive and included a response to each requirement addressed within the MOU. Please refer to the initial Semi-Annual Report for additional information not found within this document.

Work and activities undertaken by MSD and relating to the MOU are outlined in the paragraphs below.

1. PARAGRQAPH #2 OF THE MOU

MSD shall be diligent of this ten-year period in supplying the Commission with timely semi-annual reports on the efficacy of the CDS unit, water quality monitoring data, and any other such pertinent information. Said reports shall be provided to the Commission by January 30 and July 30 of each year.

2. MSD Response

This document is the 24th semi-annual report to the Commission since the completion of the Project. Appendix A shows photos of the area around the CDS unit and South Fork Beargrass Creek during the reporting period.

2.1. CLEANING & INSPECTION ACTIVITIES

The CSO108 CDS unit is inspected weekly and cleaned on an as-needed basis. During the reporting period, MSD cleaned the CDS Unit bar racks 2 times. The information, shown in Table 1, is generated from work orders initiated whenever the CDS Unit is inspected and needs to be cleaned. Cleaning consists of either washing debris off the bar racks or hauling the solids and floatables from the site. Both operations result in removing debris that would otherwise overflow into Beargrass Creek. When cleaning the bar racks, the debris is reintroduced into the sewer system, and as a result, is difficult to accurately estimate the amount removed during the maintenance process. The report often indicates the quantity removed as "unknown".

| ACTIVITY | QUANTITY | COMMENTS | COMPLETED DATE |
|----------|----------|--|----------------|
| DEBRIS | UNKNOWN | CLEANED MEDIUM DEBRIS OFF RACK BARS BUCKNER LAW | 2/4/2020 |
| DEBRIS | UNKNOWN | CLEANED MEDIUM DEBRI OFF RACK BARS NORTHINGTON HOGUE | 2/21/2020 |
| DEBRIS | UNKNOWN | CLEANED RACK BARS MEDIUM DEBRIS NORTHINGTON CORLEY | 2/25/2020 |
| DEBRIS | UNKNOWN | CLEANED RACK BARS MEDIUM DEBRIS NORTHINGTON CORLEY | 3/24/2020 |
| DEBRIS | UNKNOWN | CLEANED MEDIUM DEBRIS OFF RACK BARS NORTHINGTON BRITTLE | 4/14/2020 |
| DEBRIS | UNKNOWN | CLEARED MEDIUM DEBRIS FROM RACK BARS NORTHINGTON KLEIN | 6/16/2020 |
| | | | |

Table 1. CSO108 CDS Unit Debris Removal

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2.2. MAINTENANCE ACTIVITIES

In addition to the weekly inspections, MSD has initiated a preventative maintenance program to insure that the CDS unit and respective pumps are performing optimally. During these quarterly preventative maintenance activities, MSD staff also cleans the CDS unit and rack bars, washing the debris into the interceptor. The CDS Unit's pumps are removed from the facility twice yearly to more closely inspect and to perform any needed maintenance.

2.3. CAPTURED FLOW

The CDS unit was placed along the Trevillian Way Twin Trunk Sewer to capture solids and floatables from a 485-acre drainage area. The unit uses a vortex action created by the hydraulic energy of incoming flow to separate solids and floatable from the flow. The treated flow is then discharged through the outlet pipe to Beargrass Creek and the debris that is captured is pumped to the Morris Forman Water Quality Treatment Center (WQTC).

In an effort to estimate the volume of debris captured by the CDS unit and kept within the sewer system, a study of the efficiency of the unit was performed in the early 2002. The results of the study indicated that the concentration of solids kept within the sewer system was approximately 1ml/l. Using pump run times and knowing the efficiency of the pumps, MSD was able to determine a volume of solids captured by the CDS technology. MSD estimates that the CDS unit captured 45.9 tons of solids during the reporting period. Appendix B lists the pump run times and Appendix C shows the calculations MSD used to determine the amount of debris captured by the CDS Unit and sent to the Morris Forman WQTC for treatment.

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APPENDIX A

Photos of Area Adjacent to CSO108 and the CDS Unit (Dated July 18, 2020)

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Figure 2. Entrance to CDS Unit



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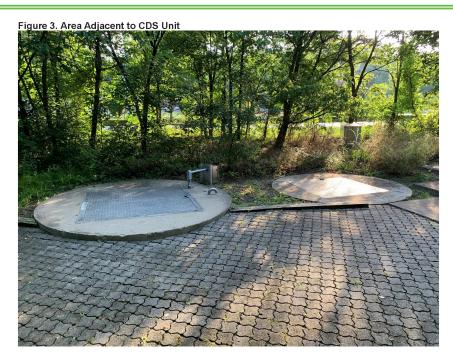


Figure 4. Area Adjacent to CDS Unit



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Figure 5. Area Adjacent to Creek



Figure 6. Area Adjacent to Creek



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APPENDIX B

CDS UNIT PUMP RUN TIMES

JULY 30, 2020

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| DATE | PUMP 1 RUN HOURS | PUMP 2 RUN HOURS | PUMP 3 RUN HOURS |
|------------------|------------------|------------------|------------------|
| January 1, 2020 | 0.00 | 0.00 | 0.35 |
| January 2, 2020 | 0.00 | 0.00 | 0.17 |
| January 3, 2020 | 0.00 | 0.00 | 0.17 |
| January 4, 2020 | 0.00 | 0.00 | 0.13 |
| January 5, 2020 | 0.00 | 0.00 | 0.27 |
| January 6, 2020 | 0.00 | 0.00 | 0.25 |
| January 7, 2020 | 0.00 | 0.00 | 0.18 |
| January 8, 2020 | 0.00 | 0.00 | 0.12 |
| January 9, 2020 | 0.00 | 0.00 | 0.13 |
| January 10, 2020 | 0.00 | 0.00 | 0.08 |
| January 11, 2020 | 0.00 | 0.00 | 0.05 |
| January 12, 2020 | 0.00 | 0.00 | 0.08 |
| January 13, 2020 | 0.00 | 0.00 | 0.35 |
| January 14, 2020 | 0.00 | 0.00 | 0.27 |
| January 15, 2020 | 0.00 | 0.00 | 0.12 |
| January 16, 2020 | 0.00 | 0.00 | 0.18 |
| January 17, 2020 | 0.00 | 0.00 | 0.08 |
| January 18, 2020 | 0.00 | 0.00 | 0.13 |
| January 19, 2020 | 0.00 | 0.00 | 0.03 |
| January 20, 2020 | 0.00 | 0.00 | 0.08 |
| January 21, 2020 | 0.00 | 0.00 | 0.10 |
| January 22, 2020 | 0.00 | 0.00 | 0.08 |
| January 23, 2020 | 0.00 | 0.00 | 0.00 |
| January 24, 2020 | 0.00 | 0.00 | 0.03 |
| January 25, 2020 | 0.00 | 0.00 | 0.05 |
| January 26, 2020 | 0.00 | 0.00 | 0.13 |
| January 27, 2020 | 0.00 | 0.00 | 0.08 |
| January 28, 2020 | 0.00 | 0.00 | 0.08 |
| January 29, 2020 | (1.00) | (1.00) | (1.00) |
| January 30, 2020 | 0.00 | 0.00 | 0.05 |
| January 31, 2020 | 0.00 | 0.00 | 0.03 |
| February 1, 2020 | 0.00 | 0.00 | 0.05 |
| February 2, 2020 | 0.00 | 0.00 | 0.08 |
| February 3, 2020 | 0.00 | 0.00 | 0.05 |
| February 4, 2020 | 0.00 | 0.00 | 0.00 |
| February 5, 2020 | 0.00 | 0.00 | 0.03 |
| February 6, 2020 | 0.00 | 0.00 | 0.08 |
| February 7, 2020 | 0.00 | 0.00 | 0.10 |
| February 8, 2020 | 0.00 | 0.00 | 0.07 |
| February 9, 2020 | 0.00 | 0.00 | 0.07 |

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JULY 30, 2020



Safe, clean waterways

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| DATE | PUMP 1 RUN HOURS | PUMP 2 RUN HOURS | PUMP 3 RUN HOURS |
|-------------------|------------------|------------------|------------------|
| February 10, 2020 | 0.00 | 0.00 | 0.10 |
| February 11, 2020 | 0.00 | 0.00 | 0.03 |
| February 12, 2020 | 0.00 | 0.00 | 0.08 |
| February 13, 2020 | 0.00 | 0.00 | 0.13 |
| February 14, 2020 | 0.02 | 0.13 | 0.70 |
| February 15, 2020 | 0.00 | 0.00 | 0.27 |
| February 16, 2020 | 0.00 | 0.00 | 0.17 |
| February 17, 2020 | 0.00 | 0.00 | 0.13 |
| February 18, 2020 | 0.00 | 0.00 | 0.08 |
| February 19, 2020 | 0.00 | 0.00 | 0.08 |
| February 20, 2020 | 0.00 | 0.00 | 0.08 |
| February 21, 2020 | 0.00 | 0.00 | 0.08 |
| February 22, 2020 | 0.00 | 0.00 | 0.05 |
| February 23, 2020 | 0.00 | 0.00 | 0.03 |
| February 24, 2020 | 0.00 | 0.00 | 0.00 |
| February 25, 2020 | 0.00 | 0.00 | 0.05 |
| February 26, 2020 | 0.00 | 0.00 | 0.05 |
| February 27, 2020 | 0.00 | 0.00 | 0.25 |
| February 28, 2020 | 0.00 | 0.00 | 0.05 |
| February 29, 2020 | 0.00 | 0.00 | 0.08 |
| March 1, 2020 | 0.00 | 0.00 | 0.22 |
| March 2, 2020 | 0.00 | 0.00 | 0.00 |
| March 3, 2020 | 0.00 | 0.00 | 0.00 |
| March 4, 2020 | 0.00 | 0.00 | 0.13 |
| March 5, 2020 | 0.00 | 0.00 | 0.17 |
| March 6, 2020 | 0.00 | 0.00 | 0.08 |
| March 7, 2020 | 0.00 | 0.00 | 0.13 |
| March 8, 2020 | 0.00 | 0.00 | 0.05 |
| March 9, 2020 | 0.00 | 0.00 | 0.08 |
| March 10, 2020 | 0.00 | 0.00 | 0.00 |
| March 11, 2020 | 0.00 | 0.00 | 0.03 |
| March 12, 2020 | 0.00 | 0.00 | 0.08 |
| March 13, 2020 | 0.00 | 0.00 | 0.10 |
| March 14, 2020 | 0.00 | 0.00 | 0.13 |
| March 15, 2020 | 0.00 | 0.00 | 0.22 |
| March 16, 2020 | 0.00 | 0.00 | 0.17 |
| March 17, 2020 | 0.00 | 0.00 | 0.17 |
| March 18, 2020 | 0.00 | 0.00 | 0.18 |
| March 19, 2020 | 0.00 | 0.00 | 0.13 |
| March 20, 2020 | 0.00 | 0.00 | 0.17 |

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| DATE | PUMP 1 RUN HOURS | PUMP 2 RUN HOURS | PUMP 3 RUN HOURS |
|----------------|------------------|------------------|------------------|
| March 21, 2020 | 0.00 | 0.28 | 0.78 |
| March 22, 2020 | 0.00 | 0.00 | 0.22 |
| March 23, 2020 | 0.00 | 0.00 | 0.17 |
| March 24, 2020 | 0.00 | 0.00 | 0.18 |
| March 25, 2020 | 0.00 | 0.00 | 0.12 |
| March 26, 2020 | 0.00 | 0.00 | 0.13 |
| March 27, 2020 | 0.00 | 0.00 | 0.13 |
| March 28, 2020 | 0.00 | 0.00 | 0.13 |
| March 29, 2020 | 0.00 | 0.00 | 0.08 |
| March 30, 2020 | 0.00 | 0.00 | 0.08 |
| March 31, 2020 | 0.00 | 0.00 | 0.13 |
| April 1, 2020 | 0.00 | 0.00 | 0.08 |
| April 2, 2020 | 0.00 | 0.00 | 0.05 |
| April 3, 2020 | 0.00 | 0.00 | 0.03 |
| April 4, 2020 | 0.00 | 0.00 | 0.05 |
| April 5, 2020 | 0.00 | 0.00 | 0.00 |
| April 6, 2020 | 0.00 | 0.00 | 0.03 |
| April 7, 2020 | 0.00 | 0.00 | 0.00 |
| April 8, 2020 | 0.00 | 0.00 | 0.05 |
| April 9, 2020 | 0.00 | 0.00 | 0.00 |
| April 10, 2020 | 0.00 | 0.00 | 0.03 |
| April 11, 2020 | 0.00 | 0.00 | 0.05 |
| April 12, 2020 | 0.00 | 0.00 | 0.00 |
| April 13, 2020 | 0.00 | 0.00 | 0.03 |
| April 14, 2020 | 0.00 | 0.00 | 0.05 |
| April 15, 2020 | 0.00 | 0.00 | 0.40 |
| April 16, 2020 | 0.00 | 0.00 | 0.12 |
| April 17, 2020 | 0.00 | 0.00 | 0.10 |
| April 18, 2020 | 0.00 | 0.00 | 0.18 |
| April 19, 2020 | 0.00 | 0.00 | 0.00 |
| April 20, 2020 | 0.00 | 0.00 | 0.05 |
| April 21, 2020 | 0.00 | 0.00 | 0.03 |
| April 22, 2020 | 0.00 | 0.00 | 0.05 |
| April 23, 2020 | 0.00 | 0.00 | 0.05 |
| April 24, 2020 | 0.00 | 0.00 | 0.00 |
| April 25, 2020 | 0.00 | 0.00 | 0.12 |
| April 26, 2020 | 0.00 | 0.00 | 0.08 |
| April 27, 2020 | 0.00 | 0.00 | 0.10 |
| April 28, 2020 | 0.00 | 0.00 | 0.12 |
| April 29, 2020 | 0.00 | 0.00 | 0.13 |

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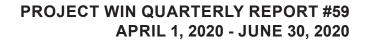
Safe, clean waterways

MOU SEMI-ANNUAL REPORT #24 JANUARY 1, 2020 - JUNE 30, 2020

| DATE | PUMP 1 RUN HOURS | PUMP 2 RUN HOURS | PUMP 3 RUN HOURS |
|----------------|------------------|------------------|------------------|
| April 30, 2020 | 0.00 | 0.00 | 0.08 |
| May 1, 2020 | 0.00 | 0.00 | 0.08 |
| May 2, 2020 | 0.00 | 0.00 | 0.05 |
| May 3, 2020 | 0.00 | 0.00 | 0.05 |
| May 4, 2020 | 0.00 | 0.00 | 0.08 |
| May 5, 2020 | 0.00 | 0.00 | 0.03 |
| May 6, 2020 | 0.00 | 0.00 | 0.05 |
| May 7, 2020 | 0.00 | 0.00 | 0.03 |
| May 8, 2020 | 0.00 | 0.00 | 0.05 |
| May 9, 2020 | 0.00 | 0.00 | 0.05 |
| May 10, 2020 | 0.00 | 0.00 | 0.12 |
| May 11, 2020 | 0.00 | 0.00 | 0.08 |
| May 12, 2020 | 0.00 | 0.00 | 0.05 |
| May 13, 2020 | 0.00 | 0.00 | 0.00 |
| May 14, 2020 | 0.00 | 0.00 | 0.05 |
| May 15, 2020 | 0.00 | 0.00 | 0.03 |
| May 16, 2020 | 0.00 | 0.00 | 0.05 |
| May 17, 2020 | 0.00 | 0.00 | 0.03 |
| May 18, 2020 | 0.00 | 0.28 | 0.83 |
| May 19, 2020 | 0.00 | 0.00 | 0.17 |
| May 20, 2020 | 0.00 | 0.00 | 0.22 |
| May 21, 2020 | 0.00 | 0.00 | 0.13 |
| May 22, 2020 | 0.00 | 0.00 | 0.12 |
| May 23, 2020 | 0.00 | 0.00 | 0.10 |
| May 24, 2020 | 0.00 | 0.00 | 0.08 |
| May 25, 2020 | 0.07 | 0.33 | 0.65 |
| May 26, 2020 | 0.00 | 0.00 | 0.22 |
| May 27, 2020 | 0.00 | 0.00 | 0.10 |
| May 28, 2020 | 0.00 | 0.00 | 0.08 |
| May 29, 2020 | 0.00 | 0.00 | 0.03 |
| May 30, 2020 | 0.00 | 0.00 | 0.05 |
| May 31, 2020 | 0.00 | 0.00 | 0.03 |
| June 1, 2020 | 0.00 | 0.00 | 0.00 |
| June 2, 2020 | 0.00 | 0.00 | 0.05 |
| June 3, 2020 | 0.00 | 0.00 | 0.00 |
| June 4, 2020 | 0.00 | 0.00 | 0.05 |
| June 5, 2020 | 0.00 | 0.00 | 0.00 |
| June 6, 2020 | 0.00 | 0.00 | 0.08 |
| June 7, 2020 | 0.00 | 0.00 | 0.12 |
| June 8, 2020 | 0.00 | 0.00 | 0.05 |

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| DATE | PUMP 1 RUN HOURS | PUMP 2 RUN HOURS | PUMP 3 RUN HOURS |
|---------------|------------------|------------------|-------------------------|
| June 9, 2020 | 0.00 | 0.00 | 0.00 |
| June 10, 2020 | 0.00 | 0.00 | 0.05 |
| June 11, 2020 | 0.00 | 0.00 | 0.00 |
| June 12, 2020 | 0.00 | 0.00 | 0.03 |
| June 13, 2020 | 0.00 | 0.00 | 0.05 |
| June 14, 2020 | 0.00 | 0.00 | 0.00 |
| June 15, 2020 | 0.00 | 0.00 | 0.03 |
| June 16, 2020 | 0.00 | 0.00 | 0.00 |
| June 17, 2020 | 0.00 | 0.00 | 0.05 |
| June 18, 2020 | 0.00 | 0.00 | 0.00 |
| June 19, 2020 | 0.00 | 0.00 | 0.03 |
| June 20, 2020 | 0.00 | 0.00 | 0.00 |
| June 21, 2020 | 0.00 | 0.00 | 0.05 |
| June 22, 2020 | 0.00 | 0.00 | 0.03 |
| June 23, 2020 | 0.00 | 0.20 | 0.40 |
| June 24, 2020 | 0.63 | 0.20 | 0.67 |
| June 25, 2020 | 0.00 | 0.00 | 0.17 |
| June 26, 2020 | 0.00 | 0.00 | 0.00 |
| June 27, 2020 | 0.00 | 0.00 | 0.00 |
| June 28, 2020 | 0.00 | 0.00 | 0.03 |
| June 29, 2020 | 0.00 | 0.00 | 0.05 |
| June 30, 2020 | 0.00 | 0.00 | 0.05 |

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APPENDIX C

CSO108 UNDERFLOW PUMP FLOW METER DATA

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| DATE | DAILY VOLUME (MG) | DAILY VOLUME (CF) | DAILY VOLUME (GAL) |
|------------------|----------------------|-------------------|-----------------------|
| January 1, 2020 | 0.0709 | 9,481.69 | 70,927.95 |
| January 2, 2020 | 0.0549 | 7,341.15 | 54,915.64 |
| January 3, 2020 | 0.0538 | 7,191.31 | 53,794.75 |
| January 4, 2020 | 0.0501 | 6,699.78 | 50,117.82 |
| January 5, 2020 | 0.0623 | 8,322.08 | 62,253.49 |
| January 6, 2020 | 0.0612 | 8,179.85 | 61,189.54 |
| January 7, 2020 | 0.0532 | 7,115.55 | 53,227.98 |
| January 8, 2020 | 0.0493 | 6,587.81 | 49,280.24 |
| January 9, 2020 | 0.0507 | 6,776.26 | 50,689.92 |
| January 10, 2020 | 0.0455 | 6,076.70 | 45,456.89 |
| January 11, 2020 | 0.0417 | 5,580.70 | 41,746.56 |
| January 12, 2020 | 0.0453 | 6,056.64 | 45,306.85 |
| January 13, 2020 | 0.0714 | 9,543.39 | 71,389.53 |
| January 14, 2020 | 0.0623 | 8,334.77 | 62,348.40 |
| January 15, 2020 | 0.0494 | 6,609.13 | 49,439.74 |
| January 16, 2020 | 0.0510 | 6,823.34 | 51,042.09 |
| January 17, 2020 | 0.0444 | 5,934.36 | 44,392.13 |
| January 18, 2020 | 0.0502 | 6,705.67 | 50,161.93 |
| January 19, 2020 | 0.0417 | 5,576.44 | 41,714.65 |
| January 20, 2020 | 0.0452 | 6,042.27 | 45,199.36 |
| January 21, 2020 | 0.0464 | 6,199.82 | 46,377.91 |
| January 22, 2020 | 0.0479 | 6,404.54 | 47,909.27 |
| January 23, 2020 | 0.0387 | 5,178.46 | 38,737.56 |
| January 24, 2020 | 0.0427 | 5,709.70 | 42,711.53 |
| January 25, 2020 | 0.0421 | 5,624.84 | 42,076.71 |
| January 26, 2020 | 0.0493 | 6,594.32 | 49,328.94 |
| January 27, 2020 | 0.0461 | 6,159.43 | 46,075.72 |
| January 28, 2020 | 0.0443 | 5,919.69 | 44,282.38 |
| January 29, 2020 | (1.0000) | 0.00 | 0.00 |
| January 30, 2020 | 0.0410 | 5,483.25 | 41,017.56 |
| January 31, 2020 | 0.0425 | 5,678.79 | 42,480.27 |
| February 1, 2020 | 0.0422 | 5,638.98 | 42,182.49 |
| February 2, 2020 | 0.0454 | 6,069.50 | 45,403.01 |
| February 3, 2020 | 0.0420 | 5,619.27 | 42,035.08 |
| February 4, 2020 | 0.0375 | 5,018.59 | 37,541.67 |
| February 5, 2020 | 0.0415 | 5,544.94 | 41,479.04 |
| February 6, 2020 | 0.0460 | 6,145.14 | 45,968.88 |
| February 7, 2020 | 0.0452 | 6,044.71 | 45,217.59 |
| February 8, 2020 | 0.0436 | 5,832.48 | 43,629.99 |

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| DATE | DAILY VOLUME (MG) | DAILY VOLUME (CF) | DAILY VOLUME (GAL) |
|-------------------|----------------------|-------------------|-----------------------|
| February 9, 2020 | 0.0470 | 6,287.45 | 47,033.39 |
| February 10, 2020 | 0.0467 | 6,247.79 | 46,736.73 |
| February 11, 2020 | 0.0418 | 5,581.26 | 41,750.70 |
| February 12, 2020 | 0.0457 | 6,115.32 | 45,745.76 |
| February 13, 2020 | 0.0500 | 6,681.08 | 49,977.98 |
| February 14, 2020 | 0.1094 | 14,624.00 | 109,395.15 |
| February 15, 2020 | 0.0634 | 8,470.96 | 63,367.17 |
| February 16, 2020 | 0.0539 | 7,211.63 | 53,946.71 |
| February 17, 2020 | 0.0505 | 6,753.93 | 50,522.91 |
| February 18, 2020 | 0.0445 | 5,948.52 | 44,498.00 |
| February 19, 2020 | 0.0463 | 6,185.28 | 46,269.07 |
| February 20, 2020 | 0.0452 | 6,046.23 | 45,228.91 |
| February 21, 2020 | 0.0462 | 6,172.22 | 46,171.43 |
| February 22, 2020 | 0.0417 | 5,573.01 | 41,689.03 |
| February 23, 2020 | 0.0426 | 5,698.12 | 42,624.93 |
| February 24, 2020 | 0.0382 | 5,101.96 | 38,165.32 |
| February 25, 2020 | 0.0422 | 5,644.42 | 42,223.19 |
| February 26, 2020 | 0.0418 | 5,585.45 | 41,782.07 |
| February 27, 2020 | 0.0580 | 7,758.73 | 58,039.34 |
| February 28, 2020 | 0.0398 | 5,324.20 | 39,827.78 |
| February 29, 2020 | 0.0467 | 6,241.64 | 46,690.73 |
| March 1, 2020 | 0.0577 | 7,719.30 | 57,744.40 |
| March 2, 2020 | 0.0381 | 5,098.73 | 38,141.18 |
| March 3, 2020 | 0.0377 | 5,045.42 | 37,742.33 |
| March 4, 2020 | 0.0500 | 6,682.13 | 49,985.77 |
| March 5, 2020 | 0.0539 | 7,207.82 | 53,918.21 |
| March 6, 2020 | 0.0458 | 6,126.53 | 45,829.66 |
| March 7, 2020 | 0.0486 | 6,501.49 | 48,634.52 |
| March 8, 2020 | 0.0411 | 5,499.56 | 41,139.60 |
| March 9, 2020 | 0.0454 | 6,062.71 | 45,352.21 |
| March 10, 2020 | 0.0376 | 5,027.67 | 37,609.58 |
| March 11, 2020 | 0.0415 | 5,543.52 | 41,468.39 |
| March 12, 2020 | 0.0460 | 6,155.71 | 46,047.95 |
| March 13, 2020 | 0.0456 | 6,097.83 | 45,614.95 |
| March 14, 2020 | 0.0500 | 6,689.19 | 50,038.61 |
| March 15, 2020 | 0.0590 | 7,885.27 | 58,985.89 |
| March 16, 2020 | 0.0545 | 7,281.09 | 54,466.34 |
| March 17, 2020 | 0.0543 | 7,258.78 | 54,299.45 |
| March 18, 2020 | 0.0530 | 7,090.36 | 53,039.58 |

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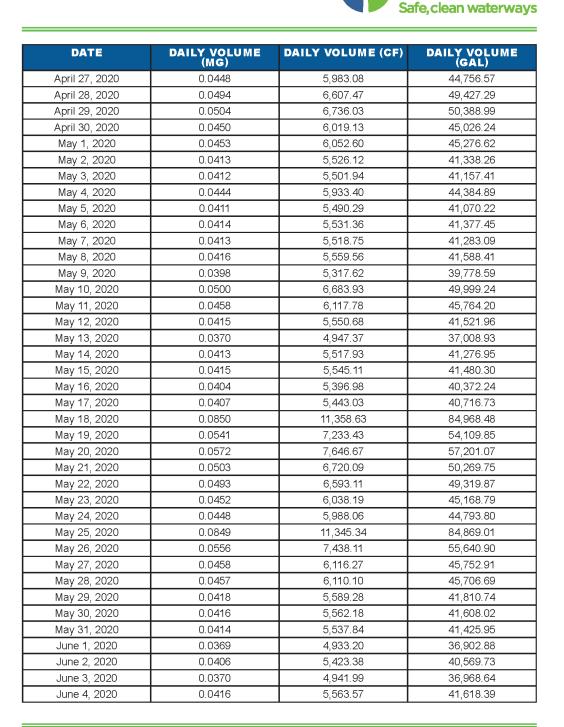
| DATE | DAILY VOLUME (MG) | DAILY VOLUME (CF) | DAILY VOLUME (GAL) |
|----------------|----------------------|-------------------|-----------------------|
| March 19, 2020 | 0.0499 | 6,674.53 | 49,928.98 |
| March 20, 2020 | 0.0527 | 7,044.91 | 52,699.55 |
| March 21, 2020 | 0.0881 | 11,778.91 | 88,112.35 |
| March 22, 2020 | 0.0560 | 7,492.12 | 56,044.95 |
| March 23, 2020 | 0.0545 | 7,286.49 | 54,506.71 |
| March 24, 2020 | 0.0538 | 7,197.94 | 53,844.32 |
| March 25, 2020 | 0.0482 | 6,443.45 | 48,200.38 |
| March 26, 2020 | 0.0522 | 6,975.67 | 52,181.65 |
| March 27, 2020 | 0.0503 | 6,728.83 | 50,335.13 |
| March 28, 2020 | 0.0478 | 6,386.67 | 47,775.65 |
| March 29, 2020 | 0.0443 | 5,915.58 | 44,251.62 |
| March 30, 2020 | 0.0412 | 5,506.36 | 41,190.41 |
| March 31, 2020 | 0.0473 | 6,323.24 | 47,301.12 |
| April 1, 2020 | 0.0454 | 6,066.52 | 45,380.74 |
| April 2, 2020 | 0.0408 | 5,448.45 | 40,757.21 |
| April 3, 2020 | 0.0413 | 5,519.93 | 41,291.93 |
| April 4, 2020 | 0.0416 | 5,560.40 | 41,594.69 |
| April 5, 2020 | 0.0371 | 4,957.53 | 37,084.89 |
| April 6, 2020 | 0.0392 | 5,236.46 | 39,171.42 |
| April 7, 2020 | 0.0370 | 4,951.21 | 37,037.61 |
| April 8, 2020 | 0.0412 | 5,505.19 | 41,181.68 |
| April 9, 2020 | 0.0370 | 4,942.37 | 36,971.46 |
| April 10, 2020 | 0.0407 | 5,439.19 | 40,688.00 |
| April 11, 2020 | 0.0415 | 5,550.90 | 41,523.58 |
| April 12, 2020 | 0.0374 | 4,995.39 | 37,368.12 |
| April 13, 2020 | 0.0417 | 5,575.08 | 41,704.47 |
| April 14, 2020 | 0.0416 | 5,554.93 | 41,553.79 |
| April 15, 2020 | 0.0756 | 10,101.01 | 75,560.82 |
| April 16, 2020 | 0.0501 | 6,693.08 | 50,067.69 |
| April 17, 2020 | 0.0471 | 6,293.10 | 47,075.65 |
| April 18, 2020 | 0.0538 | 7,198.57 | 53,849.05 |
| April 19, 2020 | 0.0371 | 4,965.84 | 37,147.03 |
| April 20, 2020 | 0.0418 | 5,589.55 | 41,812.75 |
| April 21, 2020 | 0.0404 | 5,401.73 | 40,407.72 |
| April 22, 2020 | 0.0400 | 5,350.36 | 40,023.44 |
| April 23, 2020 | 0.0412 | 5,510.89 | 41,224.29 |
| April 24, 2020 | 0.0371 | 4,961.87 | 37,117.33 |
| April 25, 2020 | 0.0501 | 6,695.29 | 50,084.26 |
| April 26, 2020 | 0.0420 | 5,609.69 | 41,963.37 |

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