msd
Safe, clean waterways

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December 30, 2017

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U.S. Department of Justice
Post Office Box 7611
Washington, DC 20044-7611

Subject: Annual Report
July 1, 2016 through June 30, 2017
Civil Action No. 3:08-cv-00608-CRS
DOJ Case No. 90-5-1-1-08254

Attention Director and Chiefs:

Please find attached our Annual Report, prepared in accordance with Paragraph 30 of our Amended Consent Decree. This report is for the period July 1, 2016, through June 30, 2017.

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,

W. Bin Bylam

For Angela Akridge, PE
MSD Chief Engineer

cc: James A. Parrott
Paula Purifoy
File

Louisville and Jefferson County Wet Weather Consent Decree Annual Report

Reporting Period:
July 1, 2016 through June 30, 2017

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:
December 30, 2017

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INTRODUCTION

The Louisville and Jefferson County Metropolitan Sewer District (MSD) has entered into an Amended Consent Decree with the Kentucky Department of Environmental Protection (KDEP) and the United States Environmental Protection Agency (EPA). 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.

This is the twelfth Annual Report submitted in accordance with Paragraph 30 of the Amended Consent Decree. This report covers the time period from July 1, 2016, through June 30, 2017, and references data presented in Quarterly Reports 44 through 47. The structure for this report is outlined as follows:

Section 1: Project WIN Performance Overview – This section provides an accounting of the number of overflow occurrences, including unauthorized discharges from the separate sanitary sewer and combined sewer system, and the estimated volumes of each. A discussion of the probable reductions that are expected as a result of MSD's projects and activities during the reporting period is also contained in this section. These include both unauthorized discharge points and the discharges from MSD's Combined Sewer Overflow (CSO) locations, as identified in the Morris Forman Water Quality Treatment Center (WQTC) Kentucky Pollutant Discharge Elimination System (KPDES) permit.

Section 2: Program Activities for Nine Minimum Controls – This section describes the scope, schedule and status for projects and other activities that were active during the reporting period, as well as the anticipated projects and activities scheduled to be performed during the next reporting period (July 1, 2017, through June 30, 2018) for continued compliance with the Amended Consent Decree.

Section 3: Program Activities for Sewer Overflow Response Protocol – This section describes the scope, schedule and status for activities that were active during the reporting period, and the anticipated activities that are scheduled to be performed during the next reporting period for continued compliance with the Amended Consent Decree.

Section 4: Program Activities for Discharge Abatement Plans – This section describes the scope, schedule and status for projects and other activities that were active during the reporting period, as well as the anticipated projects and activities that are scheduled to be performed during the next reporting period for continued compliance with the Amended Consent Decree.

Section 5: Public Outreach, Education, Notification and Participation – This section describes the activities related to public outreach, education, notification and participation that were active during the reporting period, and the anticipated activities that are scheduled to be performed during the next reporting period for continued compliance with the Amended Consent Decree.

Section 6: Capacity Management Operations and Maintenance Report – The program activities performed during the reporting period, and activities planned for the next reporting period are included in this section for continued compliance with the Amended Consent Decree.

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SECTION 1: PROJECT WIN PERFORMANCE OVERVIEW

This section presents an overview of IOAP progress during the reporting period as well as performance measures related to permit compliance, discharges, and other related data.

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 Combined Sewer Overflow (CSOs) and eliminate Sanitary Sewer Overflows (SSOs).

1.1.1 COMBINED SEWER OVERFLOW REDUCTION AND CONTROL ACTIVITIES

MSD completed two IOAP projects during the reporting period that mitigated permitted CSOs, as detailed in Table 1.1.

Table 1.1. FY17 Combined Sewer Overflow Reduction and Control Activities

PROJECT	CERTIFIED COMPLETION DATE	LEVEL OF CONTROL (TYPICAL YEAR)
Story Ave & Spring Street Green Infrastructure Controls	December 20, 2016	8
Nightingale Pump Station Replacement & Storage	June 29, 2017	0

The Annual Average Overflow Volume (AAOV), derived from the InfoWorks CSO hydraulic model, includes the modeled AAOV for the permitted CSOs and is included as Appendix B. 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, and is included as Appendix C.

Refer to Section 4.3 for comprehensive project certification listing. Refer to Section 4.5 for information regarding system monitoring and performance.

1.1.2 SANITARY SEWER OVERFLOW ELIMINATION ACTIVITIES

MSD completed three IOAP projects during the reporting period that eliminated SSOs, as detailed in Table 1.2.

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

Refer to Section 4.2 for comprehensive project certification listing. Refer to Section 4.5 for information regarding system monitoring and performance. Refer to Appendix D for a listing of discharges.

Table 1.2. FY17 Sanitary Sewer Overflow Elimination Activities

PROJECT	CERTIFIED COMPLETION DATE	ASSOCIATED SSOS
Caven Ave Pump Station Elimination	September 26, 2016	17724, 27116, 61667, 61687, MSD0133-PS
Anchor Estates Pump Station Eliminations 2 – Anchor Estates #1 and #2 Pump Station Eliminations	September 30, 2016	00056-W, MSD0057-LS
Prospect #3 - ORFM System Improvements	December 19, 2016	22436, 40870, 40871, 40872, 42680, 65633, 65635, MSD0123-PS, MSD0183-PS, MSD0192-PS, MSD0193-PS, MSD1063-PS

1.2. PERFORMANCE MEASURES

MSD has developed performance measures to monitor the operation of the collections system and WQTCs, with the goal of reducing sewer overflows and improving surface water quality. The data reported in this document is the best, most up-to-date data available as of the document date. There may be changes to historic data as the data is reviewed for quality and accuracy and updated on a continuous basis by MSD administrative and field staff.

1.2.1 SYSTEMWIDE PERFORMANCE

1.2.1.1. 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. Five new rain gauges have been installed by MSD during the reporting period, bringing the total network to 41 rain gauges, as shown in Figure 1.1. Nine gauges are located within Indiana, four within adjacent Kentucky counties and the remaining 28 are within Jefferson County. MSD plans to continue to expand the rain gauge network as appropriate sites are identified.

Figure 1.1. MSD Rain Gauge Network

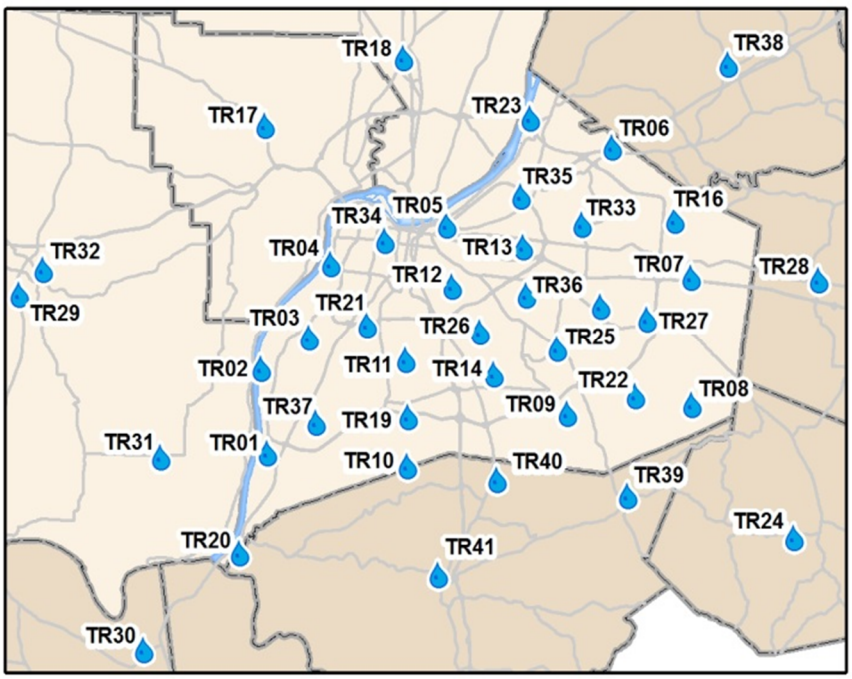


Figure 1.2 shows the Jefferson County average daily rainfall amounts by month for the reporting period, based on the

monthly average of all MSD rain gauges, compared with the average since FY08. Figure 1.3 presents the same data as an average monthly rainfall amount by month and fiscal year. These figures show that while the total rainfall for the year was slightly below the average annual rainfall since FY08, FY17 had significantly higher than average rainfall in August, and slightly higher than average rainfall in July, December, January, and May. The discharge data reflects this occurrence.

Figure 1.2. Daily Average Rainfall by Month

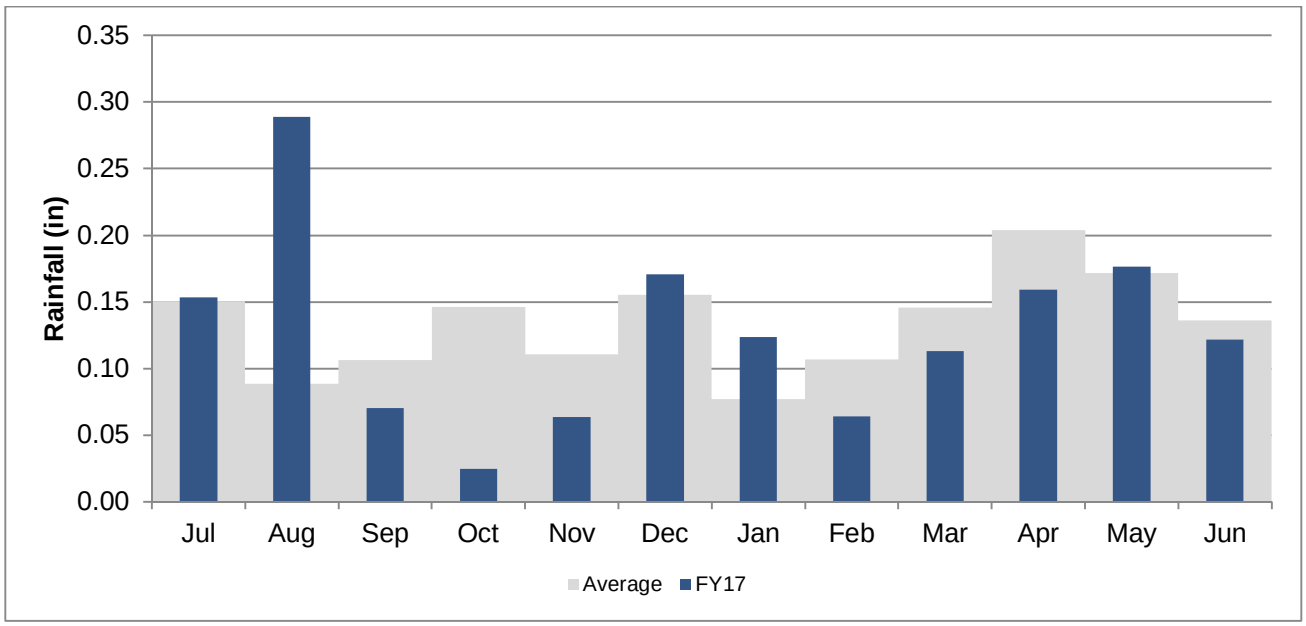
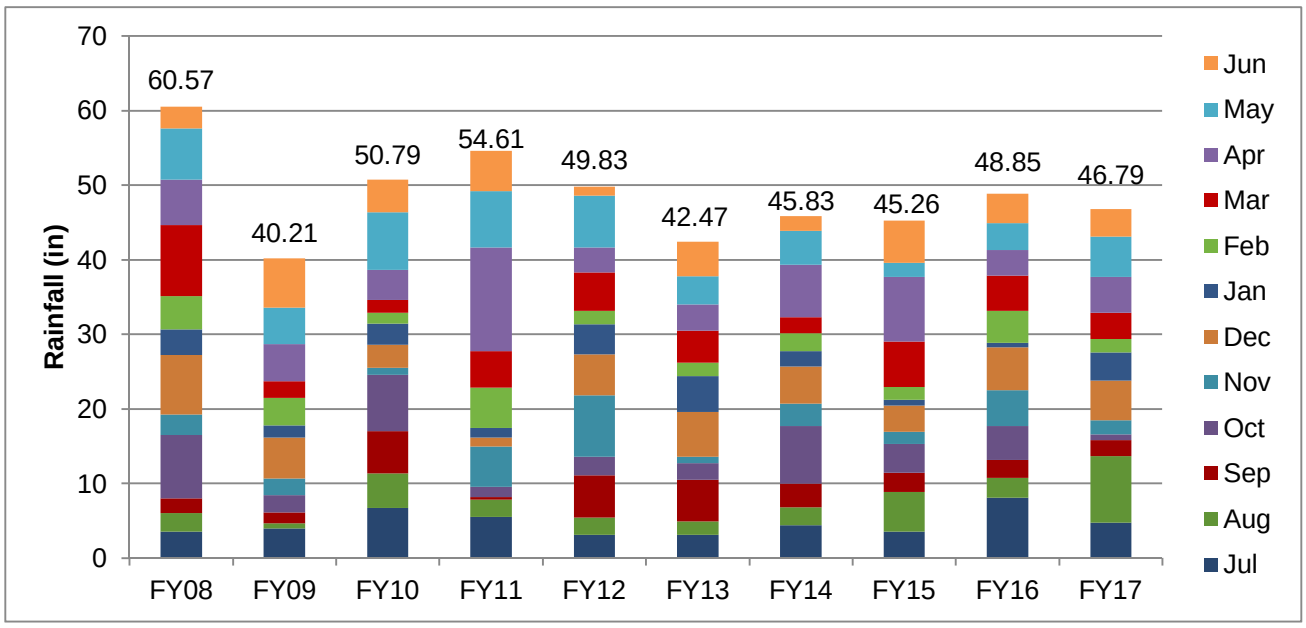


Figure 1.3. Monthly Average Rainfall by Fiscal Year



1.2.1.2. DISCHARGES

MSD enters and maintains information related to discharges and overflows that are observed by MSD staff in the Hansen Information Management System (Hansen) utilizing procedures reviewed and improved through efforts associated with components of the Sewer Overflow Response Protocol (SORP), as required under the Amended Consent Decree. These discharges are categorized using the following categories:

- Asset Type
    - Water Quality Treatment Center (WQTC)
    - Combined Sewer Overflow (CSO)
    - Collections System Assets associated with a Sanitary Sewer Overflow (SSO)
        - Pump Stations –sanitary, flood and viaduct pump stations
        - Access Points – manholes, valves and inlets
        - Mains – sanitary and combined system mains
        - Service Connections – customer service lines
- Weather – Dry or wet
- Result – Waters of the United States (WUS), Exterior (i.e., to the ground), or Interior (i.e., inside a building)
- Problem – The issue that caused the discharge, including the following groups:
    - Bypass / Upset at a WQTC (or Blending at Jeffersontown WQTC, for discharges that occurred prior to WQTC elimination) as defined by permit
    - Capacity – Lack of Capacity or Pumped Overflow during wet weather
    - Maintenance & Operations Issue – Electrical Problem at MSD, Grease Blockage, Mechanical Failure, Obstruction (Not Grease or Roots), Power Outage, Pumped due to USACE Manual Requirements, Roots, Structural Issue, or Utility Damage

Unauthorized discharges to the Waters of the United States (WUS) have been reported to the Kentucky Department of Environment Protection (KDEP) and the Environmental Protection Agency (EPA) per the approved SORP. Overflows to the ground and backups into buildings are reported in the Consent Decree Annual Report. All overflow reporting documentation is stored in MSD's asset management system, Hansen.

Table 1.3 details the observed discharges by weather and result since FY08. Appendix D includes information related to MSD's observed unauthorized discharges and overflows for the reporting period. During the upcoming reporting period, this data will be reviewed to determine if anomalies are present and if additional quality control or process improvements are warranted.

Discharges at permitted CSO locations that are observed by telemetry only are recorded with MSD's flow monitoring data and included in Appendix C.

Table 1.3. Observed Discharges by Weather and Result - All Assets

FY	UNAUTHORIZED DISCHARGE - WATERS OF US		OVERFLOW TO INTERIOR		OVERFLOW TO EXTERIOR (GROUND)	
	DRY WEATHER	WET WEATHER	DRY WEATHER	WET WEATHER	DRY WEATHER	WET WEATHER
FY08	42	552	122	692	42	21
FY09	64	129	154	147	61	9
FY10	47	394	151	706	48	21
FY11	44	789	171	609	62	28
FY12	43	494	141	106	48	20
FY13	27	296	127	38	37	5
FY14	38	416	127	130	26	7
FY15	38	422	763	305	82	24
FY16	32	335	86	83	39	17
FY17	29	76	272	8	69	6

1.2.2 WATER QUALITY TREATMENT CENTER PERFORMANCE

The following sections summarize performance compliance measures and trends at the water quality treatment centers (WQTCs) for the reporting period, including overflows attributed to the WQTC asset, bypasses, and effluent parameter exceedances.

1.2.2.1. OVERFLOWS TO THE EXTERIOR

Table 1.4 and Figure 1.4 detail the observed discharges by weather since FY08 at all WQTCs from manholes "within the fence" at the WQTCs. The decreasing trend in number of discharges can in part be attributed to reduction in number of operational WQTCs, discussed further in Section 1.2.2.5.4. Table 1.5 and Figure 1.5 show discharges by problem.

1.2.2.2. BYPASSES

Project WIN Quarterly Report 18 included a memorandum, included as Appendix K in that report, which described the analysis of 44 bypass events that occurred between July 1, 2008, and December 31, 2009. This analysis delineated bypasses into the four categories, including Capacity, External Power Failures, Equipment Failure (Mechanical, Electrical, or Structural), and Human Error. An assessment of bypasses is performed in each subsequent quarterly report to determine the root cause of each bypass, the failure category, corrective actions to be taken, possible programmatic solutions, and a corrective action completion date. Refer to quarterly reports for the reporting period for detailed analysis of bypasses.

Table 1.6 and Figure 1.6 show the WQTC bypass events by weather since FY08. Table 1.7 and Figure 1.7 show the WQTC bypass events by cause since FY09.

Table 1.4. Observed Overflows to the Exterior by Weather – All WQTCs

FY	OVERFLOW TO EXTERIOR (GROUND)	
	WET WEATHER	DRY WEATHER
FY08	3	12
FY09	0	9
FY10	3	9
FY11	3	17
FY12	5	13
FY13	1	21
FY14	2	10
FY15	2	7
FY16	1	6
FY17	0	5

Figure 1.4. Trend of Observed Overflows to the Exterior by Weather – All WQTCs

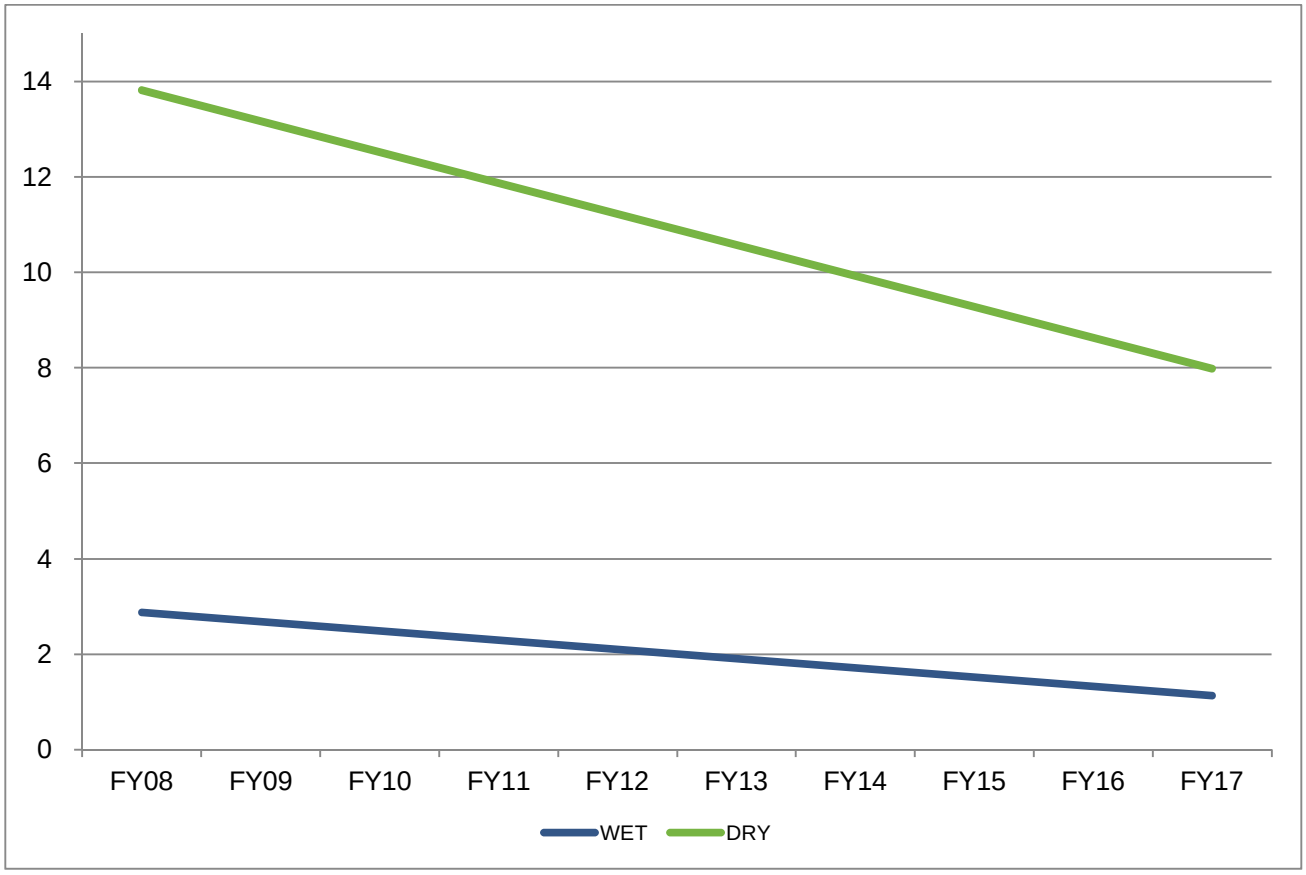


Table 1.5. Observed Overflows to the Exterior by Problem – All WQTCs

FY	ELECTRICAL PROBLEMS AT MSD	LACK OF SYSTEM CAPACITY	MECHANICAL FAILURE	OBSTRUCTION -NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	STRUCTURAL FAILURE
FY08	0	2	11	0	0	2
FY09	0	0	9	0	0	0
FY10	0	1	8	0	1	2
FY11	0	1	11	1	0	7
FY12	2	2	9	1	0	4
FY13	3	1	6	1	0	11
FY14	1	1	5	2	0	3
FY15	1	0	3	0	0	5
FY16	0	0	6	0	0	1
FY17	0	0	2	0	0	3

Figure 1.5. Trend of Observed Overflows to the Exterior by Problem – All WQTCs

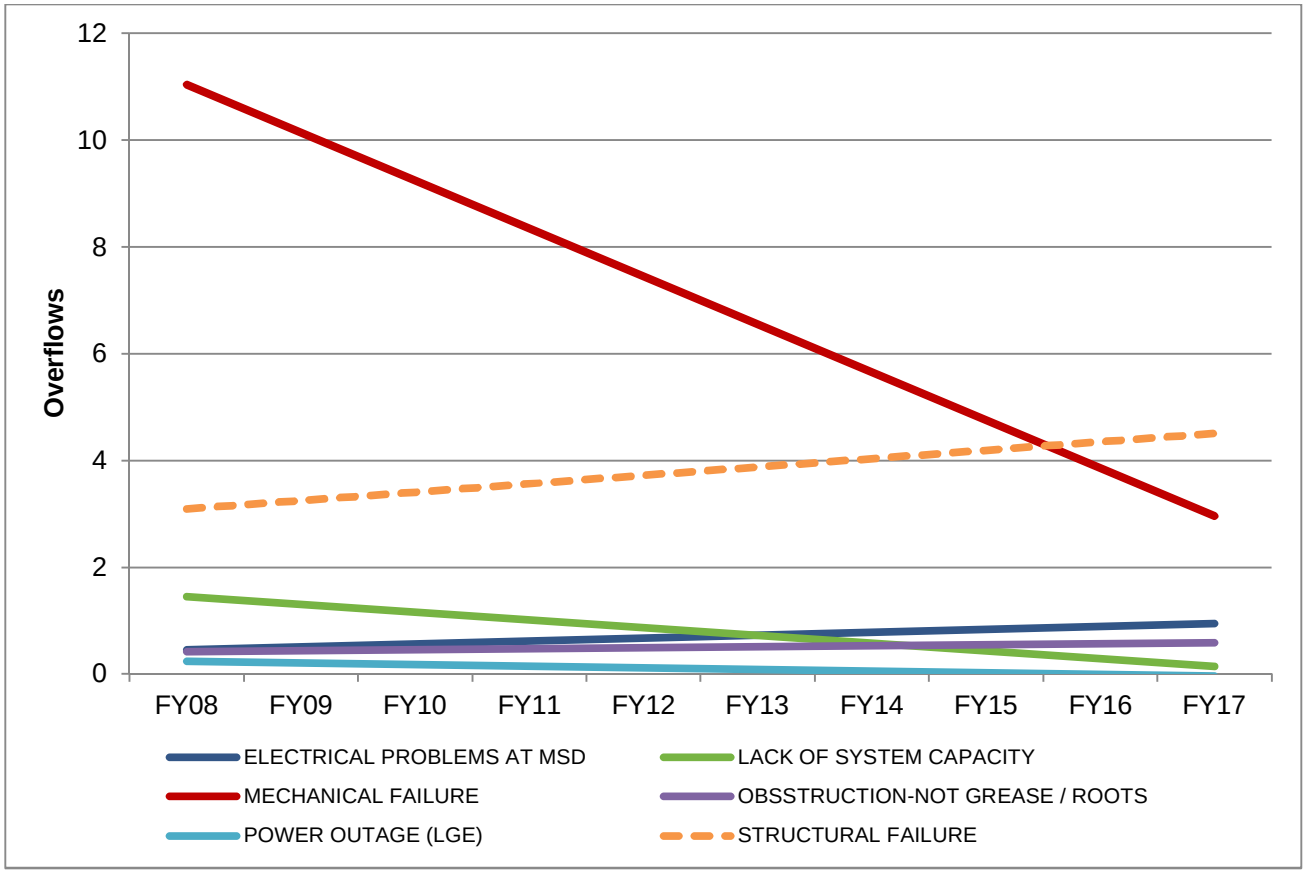


Table 1.6. Bypass Events by Weather – All WQTCs

FY	WET WEATHER	DRY WEATHER
FY08	21	10
FY09	11	21
FY10	20	13
FY11	29	3
FY12	12	8
FY13	17	8
FY14	19	8
FY15	10	0
FY16	8	4
FY17	4	1

Figure 1.6.Trend of Bypass Events by Weather – All WQTCs

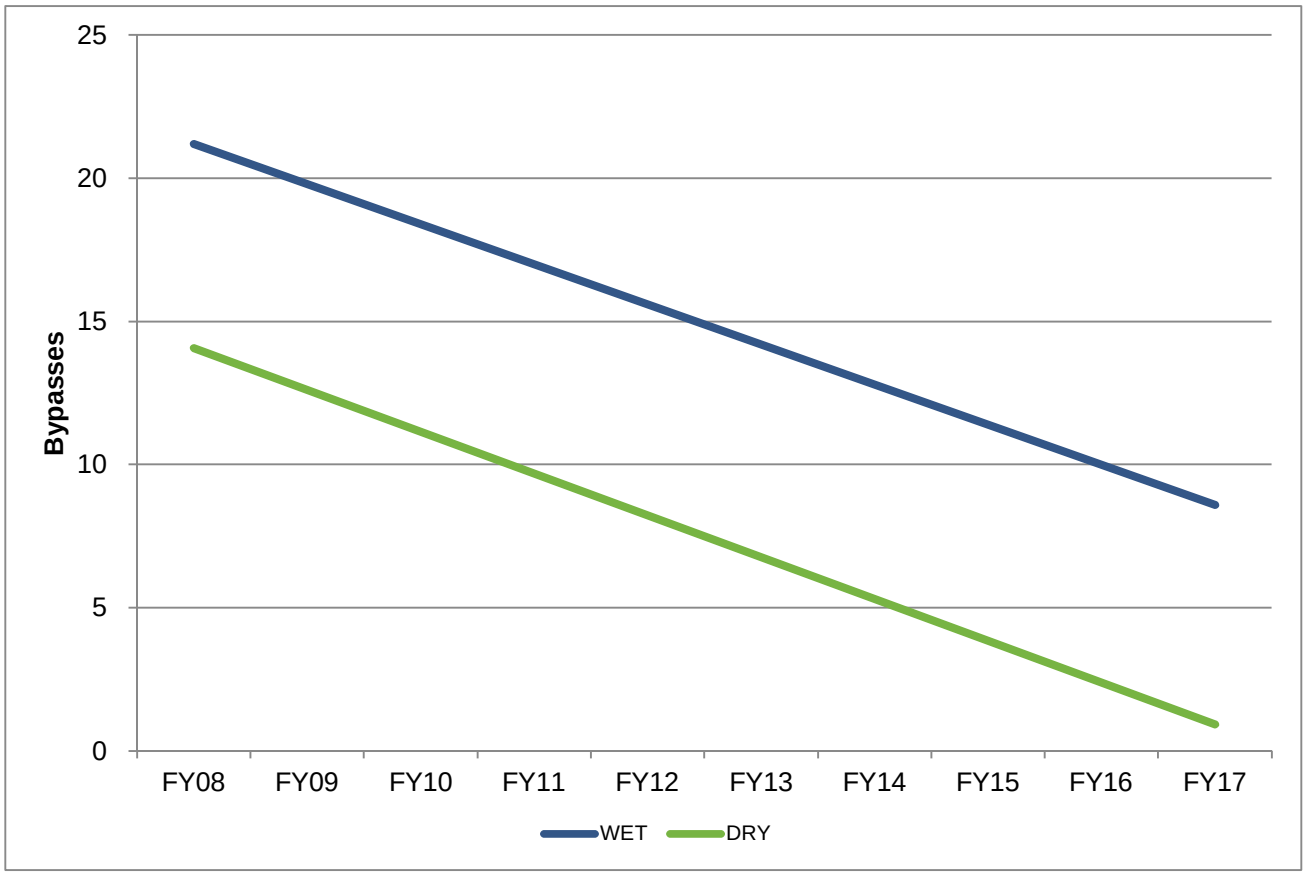
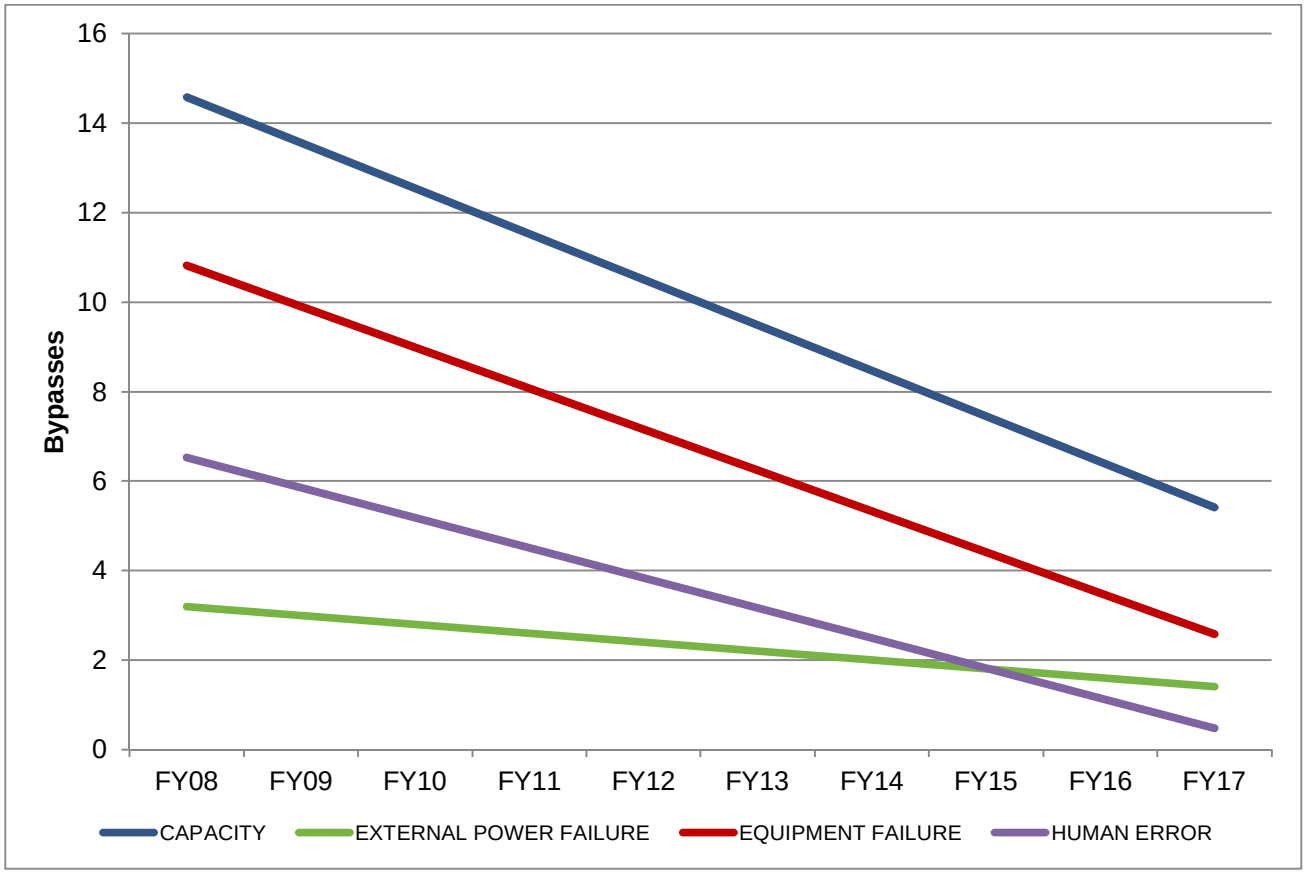


Table 1.7. Bypass Events by Cause – All WQTCs

FY	CAPACITY		EXTERNAL POWER FAILURE		EQUIPMENT FAILURE		HUMAN ERROR	
	NUMBER	%	NUMBER	%	NUMBER	%	NUMBER	%
FY09	4	13%	6	19%	12	38%	10	31%
FY10	13	39%	2	6%	10	30%	8	24%
FY11	18	56%	5	16%	8	25%	1	3%
FY12	8	40%	5	25%	6	30%	1	5%
FY13	11	44%	0	0%	9	36%	5	20%
FY14	15	56%	0	0%	7	26%	5	19%
FY15	7	70%	1	10%	2	20%	0	0%
FY16	7	58%	1	8%	1	8%	3	25%
FY17	0	0%	3	50%	3	50%	0	0%

Figure 1.7.Trend of Bypass Events by Cause – All WQTCs



1.2.2.3. EXCEEDANCES

MSD's policy is to operate WQTCs in full compliance with the permitted effluent water quality standards. However, circumstances sometimes arise that may cause wastewater WQTCs to exceed the permitted effluent limits. This reality is recognized by the National Association of Clean Water Agencies (NACWA), which gives awards at different levels based on the number of effluent parameter exceedances during the calendar year:

- Silver – Five or fewer exceedances per year
- Gold – Zero exceedances per year
- Platinum – Zero exceedances per year for five years

Based on past operating history, MSD has established the target for all treatment centers of receiving at least the NACWA Silver Award. This goal is discussed in further detail under Sections 1.2.2.4.3 and 1.2.2.5.4 related to exceedances at Morris Forman WQTC and the regional WQTCs, respectively.

1.2.2.4. MORRIS FORMAN WATER QUALITY TREATMENT CENTER

Originally constructed in 1958, Morris Forman WQTC is MSD's largest, oldest WQTC. The following sections provide details related to this largest WQTC.

1.2.2.4.1. OVERFLOWS TO THE EXTERIOR

There were no overflows from manholes "within the fence" at the WQTC during the reporting period, as shown in Table 1.8 and Table 1.9.

Table 1.8. Observed Overflows to the Exterior by Weather – Morris Forman WQTC

FY	OVERFLOW TO EXTERIOR (GROUND)	
	WET WEATHER	DRY WEATHER
FY08	0	0
FY09	0	0
FY10	0	2
FY11	0	0
FY12	1	1
FY13	0	0
FY14	0	0
FY15	0	0
FY16	0	0
FY17	0	0

Table 1.9. Observed Overflows to the Exterior by Problem – Morris Forman WQTC

FY	ELECTRICAL PROBLEMS AT MSD	LACK OF SYSTEM CAPACITY	MECHANICAL FAILURE	OBSTRUCTION -NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	STRUCTURAL FAILURE
FY08	0	0	0	0	0	0
FY09	0	0	0	0	0	0
FY10	0	0	2	0	0	0
FY11	0	0	0	0	0	0
FY12	0	0	1	0	0	1
FY13	0	0	0	0	0	0
FY14	0	0	0	0	0	0
FY15	0	0	0	0	0	0
FY16	0	0	0	0	0	0
FY17	0	0	0	0	0	0

1.2.2.4.2. BYPASSES

Four unauthorized wet weather bypasses occurred during the reporting period, as shown in Table 1.10 and Table 1.11. Three of the bypasses were caused by equipment failure (estimated 249,000 gallons total) and one was due to external power failure (estimated 9,100,000 gallons).

Table 1.10. Bypass Events by Weather – Morris Forman WQTC

FY	WET WEATHER	DRY WEATHER
FY08	0	0
FY09	0	0
FY10	0	0
FY11	1	0
FY12	1	2
FY13	0	2
FY14	0	0
FY15	1	0
FY16	0	1
FY17	4	0

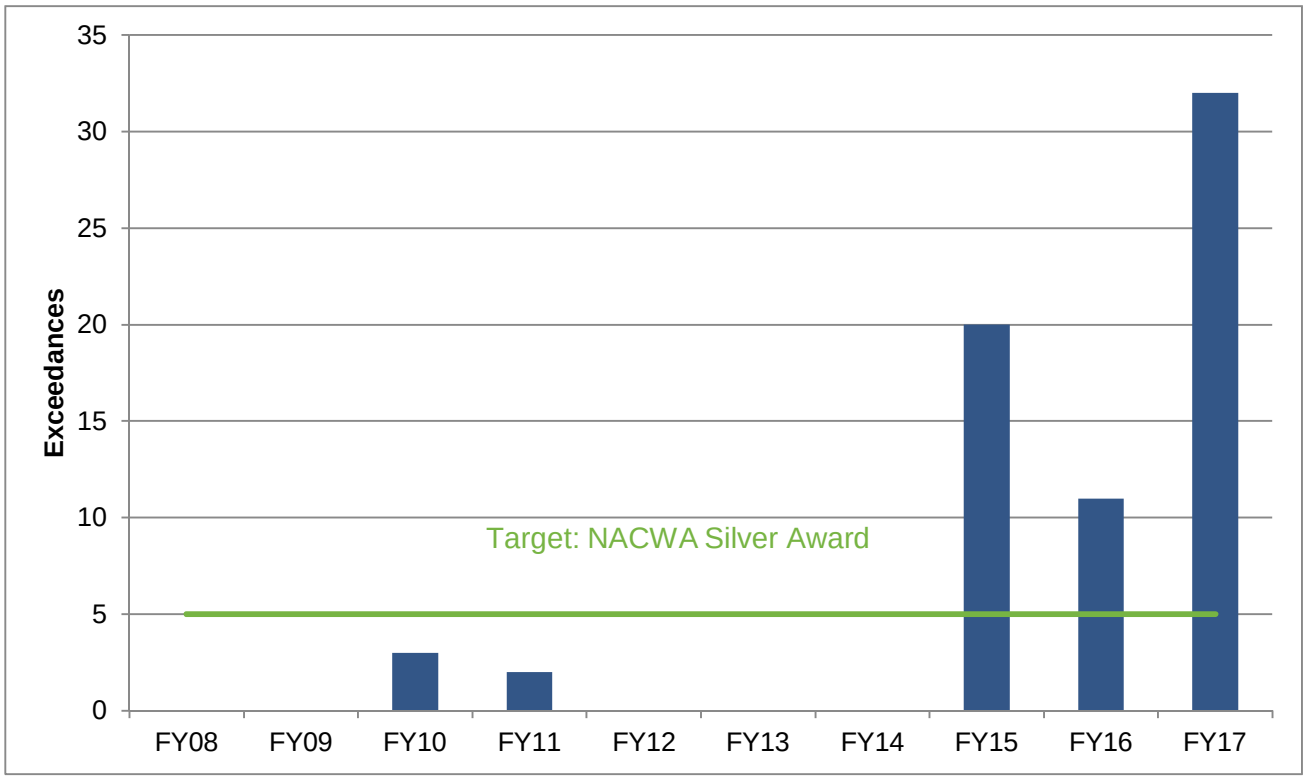
Table 1.11. Bypass Events by Cause – Morris Forman WQTC

FY	CAPACITY	EXTERNAL POWER FAILURE	EQUIPMENT FAILURE	HUMAN ERROR
FY09	0	0	0	0
FY10	0	0	0	0
FY11	0	0	1	0
FY12	2	0	1	0
FY13	0	0	2	0
FY14	0	0	0	0
FY15	0	0	1	0
FY16	0	0	0	1
FY17	0	1	3	0

1.2.2.4.3. EXCEEDANCES

As shown in Figure 1.8, a total of 32 exceedances occurred at Morris Forman WQTC in FY17. Capital construction involving process area shutdowns and compromised solids processing capabilities contributed to the exceedances. Liquid oxygen was purchased to remediate until the new oxygen generation system went online in May 2017, at which point the WQTC showed improved compliance with monitored parameters.

Figure 1.8. Exceedances by Fiscal Year – Morris Forman WQTC



1.2.2.5. REGIONAL WATER QUALITY TREATMENT CENTERS

In December 2015, MSD successfully eliminated Jeffersontown WQTC, bringing the regional WQTC count to four. The following sections provide details related to the regional WQTCs.

1.2.2.5.1. OVERFLOWS TO THE EXTERIOR

Observed overflows from manholes "within the fence" at the WQTC during the reporting period are shown in Table 1.12 and Table 1.13.

Table 1.12. Observed Overflows to the Exterior by Weather – Regional WQTCs

FY	OVERFLOW TO EXTERIOR (GROUND)	
	WET WEATHER	DRY WEATHER
FY08	2	7
FY09	0	7
FY10	2	4
FY11	1	8
FY12	4	9
FY13	1	14
FY14	2	6
FY15	1	3
FY16	1	6
FY17	0	5

Table 1.13. Observed Overflows to the Exterior by Problem – Regional WQTCs

FY	ELECTRICAL PROBLEMS AT MSD	LACK OF SYSTEM CAPACITY	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	STRUCTURAL FAILURE
FY08	0	2	7	0	0
FY09	0	0	7	0	0
FY10	0	1	4	0	1
FY11	0	1	4	0	4
FY12	2	2	7	0	2
FY13	1	1	6	1	6
FY14	1	1	5	1	0
FY15	1	0	3	0	0
FY16	0	0	6	0	1
FY17	0	0	2	0	3

1.2.2.5.2. BYPASSES

Table 1.14 details the results of the current reporting period. Table 1.15 and Figure 1.9 summarize bypass events by weather since FY08, and Table 1.16 and Figure 1.10 summarize bypasses by cause since FY08. Refer to quarterly reports for the reporting period for details of the bypasses which occurred at regional WQTCs.

Table 1.14. FY17 Bypass Events by WQTC – Regional WQTCs

WQTC	KPDES PERMIT NUMBER	DRY WEATHER	WET WEATHER
Hite Creek	KY0022420	1	0

Table 1.15. Bypass Events by Weather – Regional WQTCs

FY	WET WEATHER	DRY WEATHER
FY08	4	6
FY09	10	5
FY10	6	8
FY11	2	7
FY12	4	3
FY13	1	7
FY14	0	2
FY15	0	1
FY16	1	3
FY17	0	1

Figure 1.9 Trend of Bypass Events by Weather – Regional WQTCs

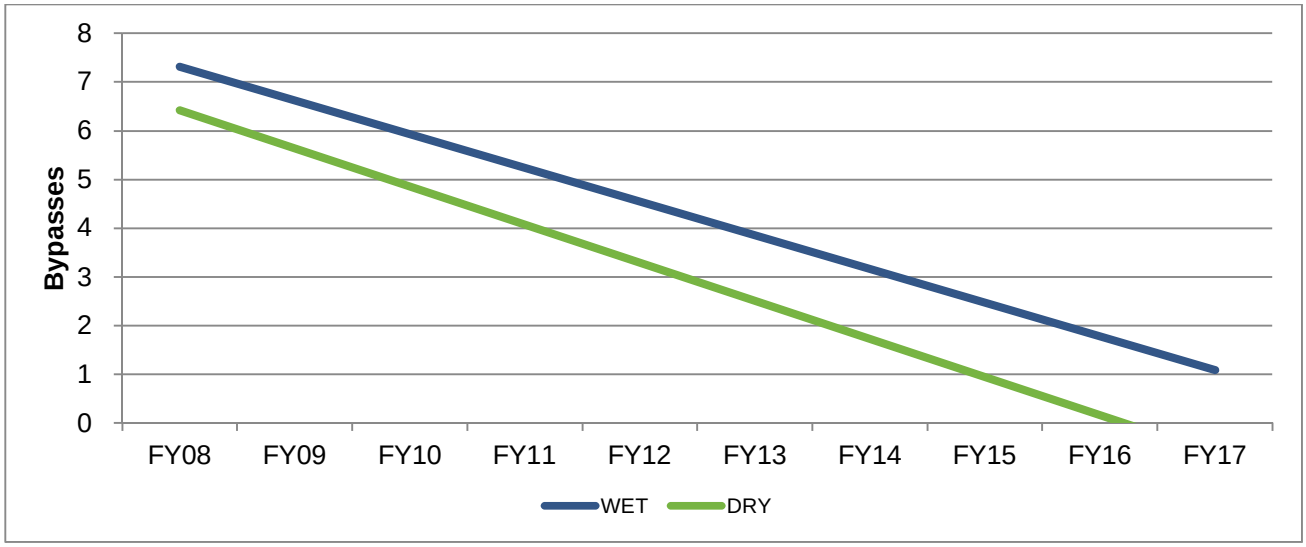
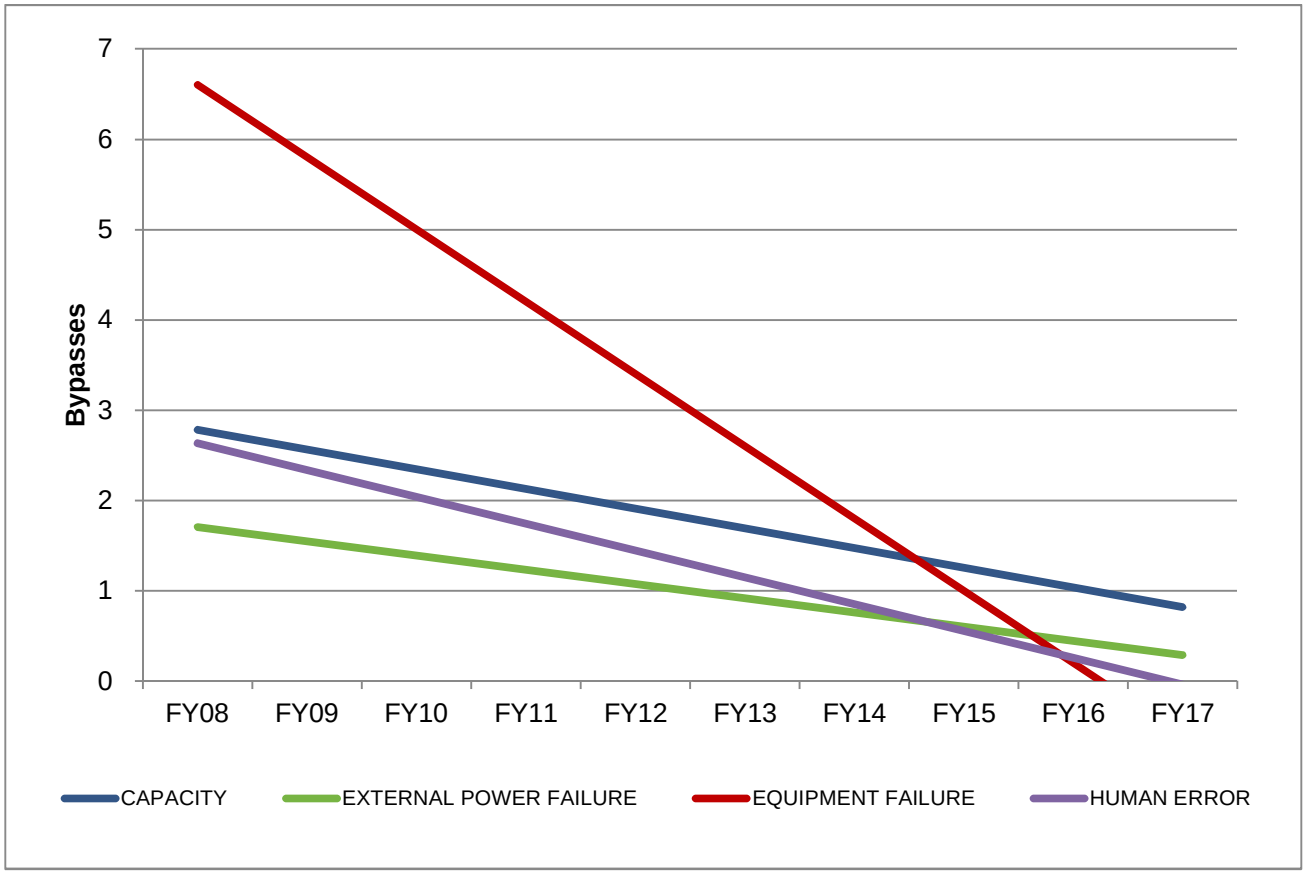


Table 1.16. Bypass Events by Cause – Regional WQTCs

FY	CAPACITY	EXTERNAL POWER FAILURE	EQUIPMENT FAILURE	HUMAN ERROR
FY08	4	0	4	2
FY09	1	2	8	4
FY10	3	2	5	4
FY11	1	3	5	0
FY12	1	2	4	0
FY13	4	0	4	0
FY14	1	0	0	1
FY15	1	0	0	0
FY16	2	0	0	2
FY17	0	1	0	0

Figure 1.10. Trend of Bypass Events by Cause – Regional WQTCs



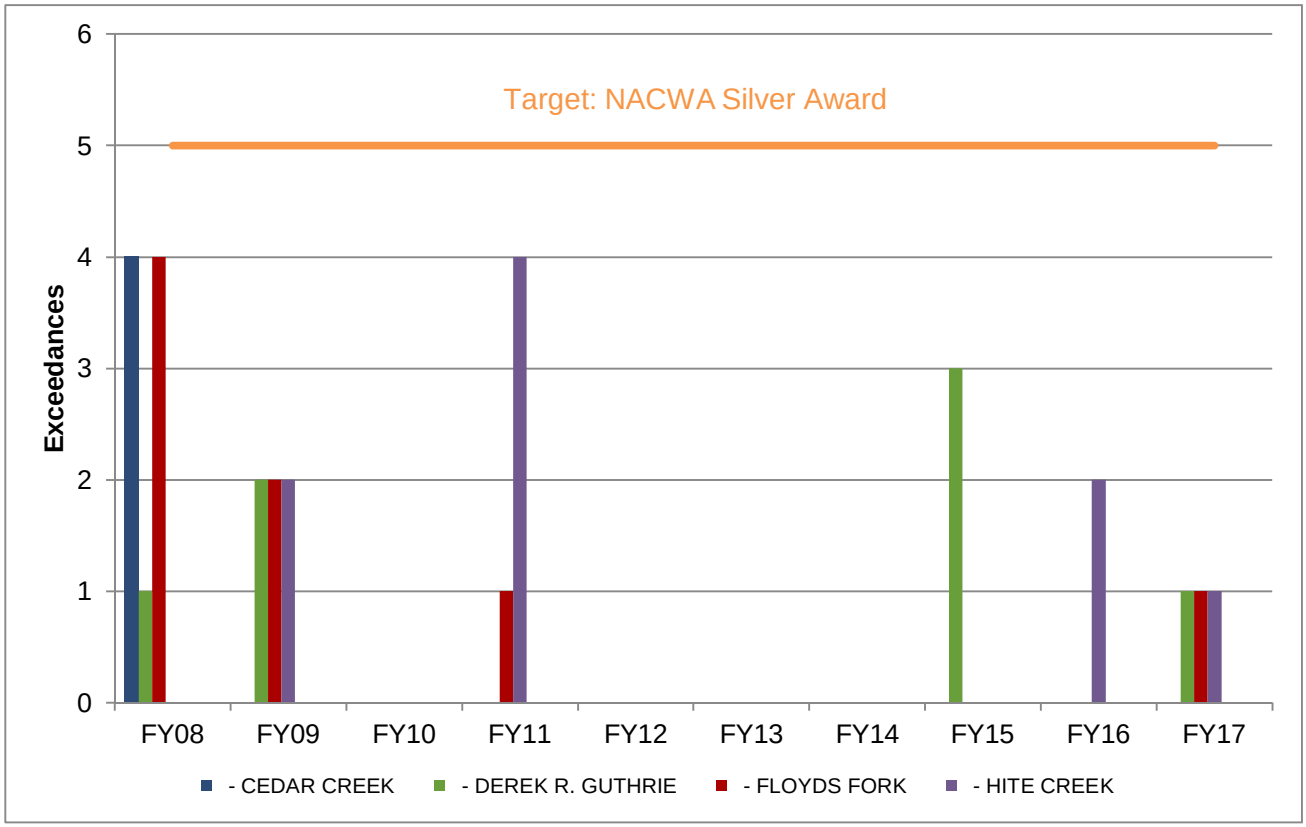
1.2.2.5.3. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER

Jeffersontown WQTC is off-line as of December 2015, as detailed in Section 4.4.1.2. The FY16 Annual Report was the final annual report to include discussion of data at the siphon upstream of the headworks at Jeffersontown WQTC.

1.2.2.5.4. EXCEEDANCES

As shown in Figure 1.11, all four operational regional WQTCs have achieved the NACWA Silver Award goal since FY08. Cedar Creek WQTC meets the qualifications for the NACWA Platinum Award.

Figure 1.11. Exceedances by Fiscal Year – Regional WQTCs



1.2.2.6. NON-REGIONAL WQTCS

Since 1985, MSD has acquired and/or eliminated more than 300 privately owned non-regional WQTCs ("package plants"). The non-regional WQTCs typically had very limited operating flexibility, and were subject to high levels of variability in loads. Most of the non-regional WQTCs had been in operation over 35 years and typically had much poorer records of compliance compared to MSD's regional WQTCs. Therefore, MSD worked aggressively to eliminate the non-regional WQTCs. The last non-regional WQTC within the MSD service area was taken off-line on May 27, 2016. The FY16 Annual Report was the final annual report to include discussion of data associated with non-regional WQTCs. Should MSD acquire and/or eliminate any WQTCs in the future through service area expansion, their performance will be discussed here.

1.2.3 COMBINED SEWER OVERFLOW PERFORMANCE

1.2.3.1. AUTHORIZED DISCHARGES – WET WEATHER CSOs

At the end of the reporting period, MSD maintained 98 CSOs in operation. The modeled AAOV for the permitted CSOs is included as Appendix B. 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, and is included as Appendix C. Refer to Section 4.5 for information regarding system monitoring and performance as CSO reduction projects are completed.

1.2.3.2. UNAUTHORIZED DISCHARGES – DRY WEATHER CSOs

MSD has implemented the Nine Minimum Controls (NMC) programs and provided resources to reduce dry weather CSOs as part of the CSO Long Term Control Plan (LTCP). During the reporting period, there were nine observed dry weather overflows from a permitted CSO location as detailed in Table 1.17. The dry weather CSOs were analyzed by location and problem to identify issues that can be corrected.

CSO151 accounted for four of the nine overflows due to several cubic yards of flowable fill entering the line from an upstream utility repair. The obstruction was first discovered April 11, 2017, during routine inspection of the CSO. Initial efforts through April 18, 2017, focused on removing the material from the bar screen and siphon to allow low flow to pass. MSD contractors have worked through the end of the reporting period to remove the material using non-invasive methods where possible. The work is anticipated to be completed by December 31, 2017.

Mechanical and electrical problems at CSOs 191 and 197 were addressed by repair or replacement of defective parts. MSD crews flushed the downstream line of CSO197 to clear the obstruction.

Table 1.18 and Figure 1.12 demonstrate that dry weather overflows continue to decrease significantly both in number and volume. At this time, the 98 CSOs are functioning properly.

Table 1.17. FY17 Dry Weather CSOs

DATE	CSO	PROBLEM	DESCRIPTION	VOLUME (GAL)
September 14, 2016	CSO191	Electrical Problems at MSD	Electrical malfunction	260,000
April 13, 2017	CSO151	Utility Damaged MSD Asset	Flowable fill found in sewer main upstream and downstream of CSO dam. Source identified as a repair on the LWC main at Eastern Parkway & Quadrant Avenue	124,387
May 9, 2017	CSO151	Utility Damaged MSD Asset	MSD contractor crew working to repair obstruction in CSO151 reported April 13, 2017, identified overflow while removing material from CSO chamber.	25,400
May 15, 2017	CSO151	Utility Damaged MSD Asset	MSD contractor crew working to repair obstruction in CSO151 reported April 13, 2017, identified overflow while removing material from sanitary line	15,975
June 2, 2017	CSO197	Obstruction-Not Grease / Roots	Obstruction downstream of weir	306
June 9, 2017	CSO197	Obstruction-Not Grease / Roots	Obstruction downstream of weir	2,925

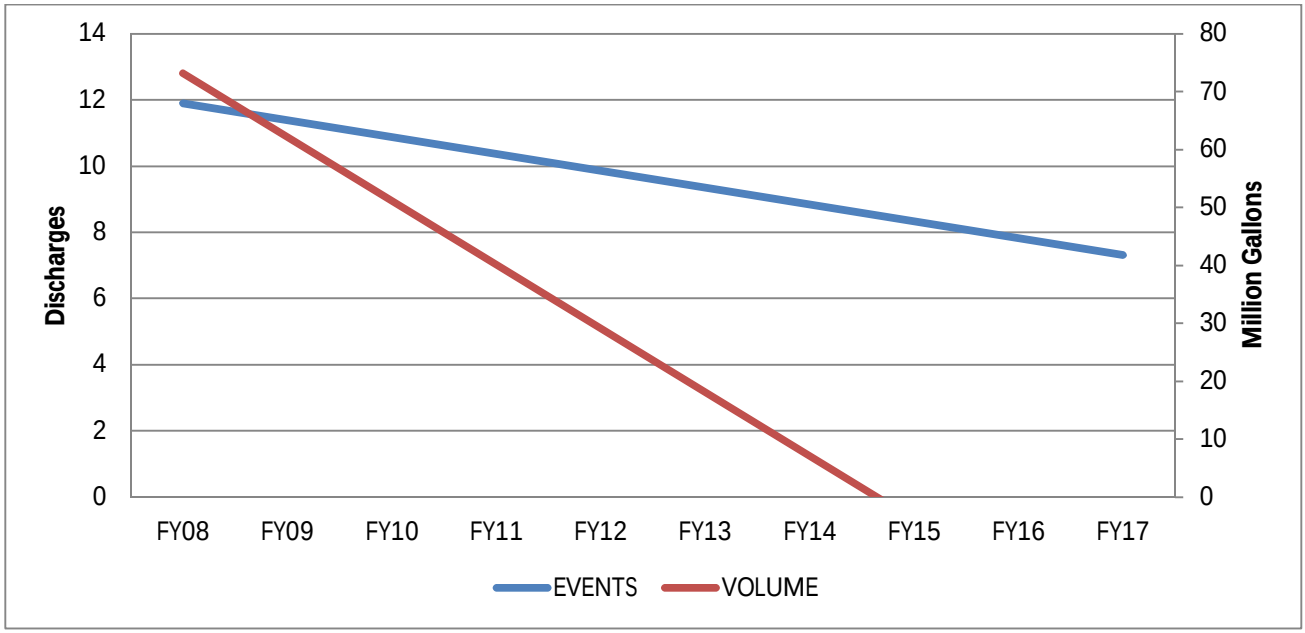
Table 1.17. FY17 Dry Weather CSOs

DATE	CSO	PROBLEM	DESCRIPTION	VOLUME (GAL)
June 28, 2017	CSO151	Utility Damaged MSD Asset	MSD contractor crew working to repair obstruction in CSO151 reported April 13, 2017, identified overflow while removing material from sanitary line	111,260

Table 1.18. Dry Weather CSOs by Fiscal Year

FY	EVENTS	VOLUME (GAL)
FY08	11	197,303,690
FY09	3	488,254
FY10	16	13,321,419
FY11	13	5,225,399
FY12	15	5,108,532
FY13	8	100,162
FY14	13	13,807,294
FY15	5	57,455
FY16	5	265,425
FY17	9	540,253

Figure 1.12. Trend of Dry Weather CSOs by Fiscal Year



1.2.3.3. 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. In some cases, historical volumes could not be recalculated based on the available data. For instance, CSOs influenced by river or creek elevation for which there was no available historic level data could not be recalculated for historical volumes but will be calculated or measured according to the revised SOPs as they are implemented.

To date, SOPs have been drafted and historical volume data corrections (where possible) have been made for all of the 33 initial CSO locations. These changes have also been made for two additional CSO locations included in the review due to interaction with priority CSOs. Multiple SOPs require programming or equipment changes in order to implement the final SOPs. During the upcoming reporting period, MSD will continue working to procure and replace equipment as required and update the programming at the PLC or with monitoring program logic, as summarized in Figure 1.13 to complete implementation of the SOPs.

The remaining 65 active CSO locations will be reviewed during the upcoming fiscal year. MSD has also identified two inactive sites with historic data that will be reviewed. MSD has developed a schedule for review of these sites and begin the analysis. Status for these remaining CSOs is summarized in Figure 1.14.

Until the review is complete, CSO flow monitoring data will continue to be included as an appendix to each quarterly report, will be listed as "Draft", and will include the statement "CSO data monitoring procedures are currently being revised". As changes are made to flow meter locations and or flow meter calculation algorithms, MSD will provide status updates in the quarterly reports on progress to evaluate data accuracy, revise monitoring data records, update monitoring procedures, and implement recommendations. CSO flow monitoring data reported quarterly will include updated volumes based on completion of the review and update of the reporting standards for each CSO. Any revised volumes for previous reporting periods up to and including FY16 for the 33 CSO locations initially reviewed are included in Appendix H, and revised volumes for FY17 are included with FY17 CSO flow monitoring for all CSO locations in Appendix C. Any subsequently developed revised volumes for previous reporting periods up to and including FY18 will be included in the appendices to the FY18 Consent Decree Annual Report.

Figure 1.13. CSO Flow Monitoring Quality Improvement Status – Phase 1

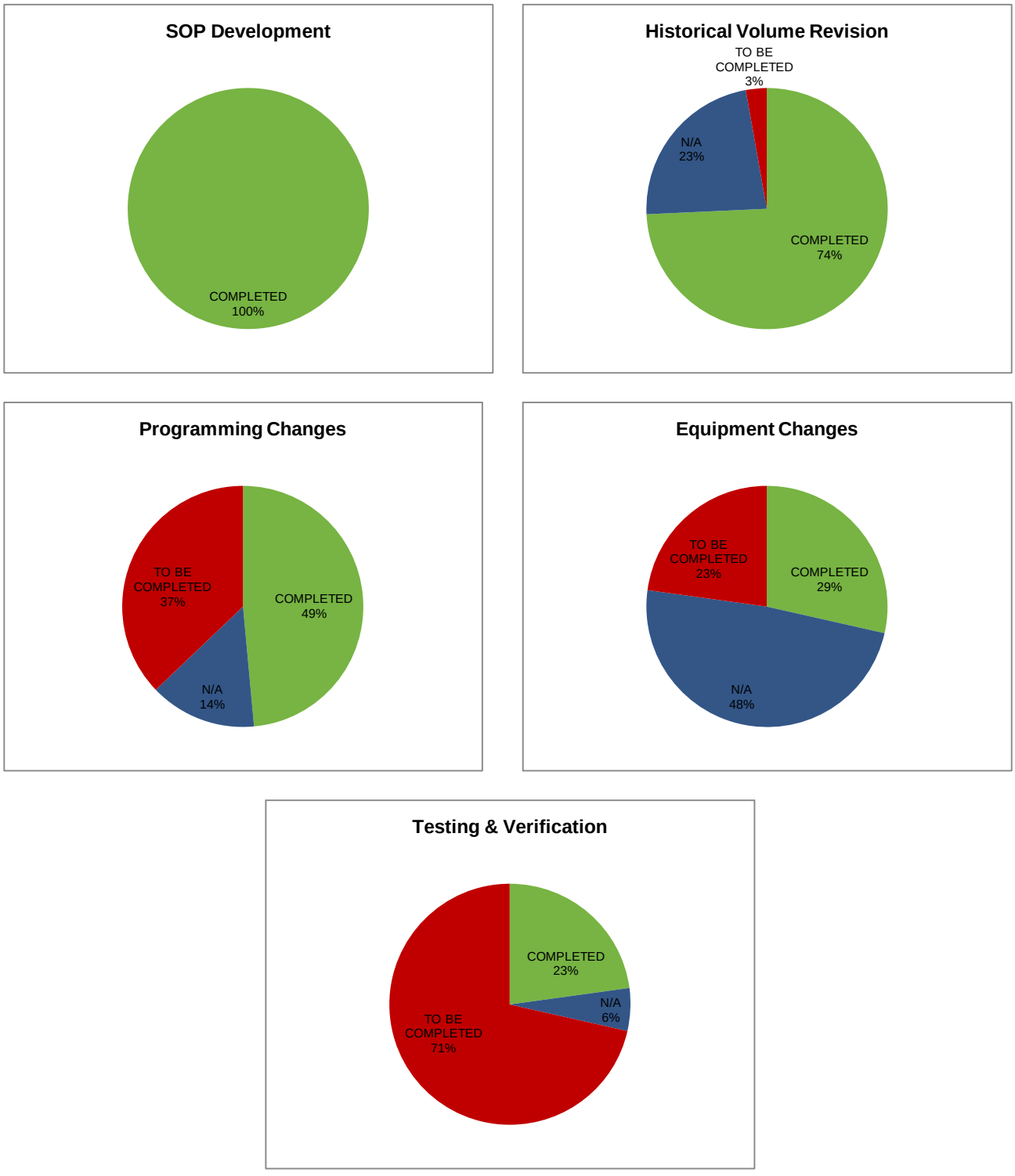
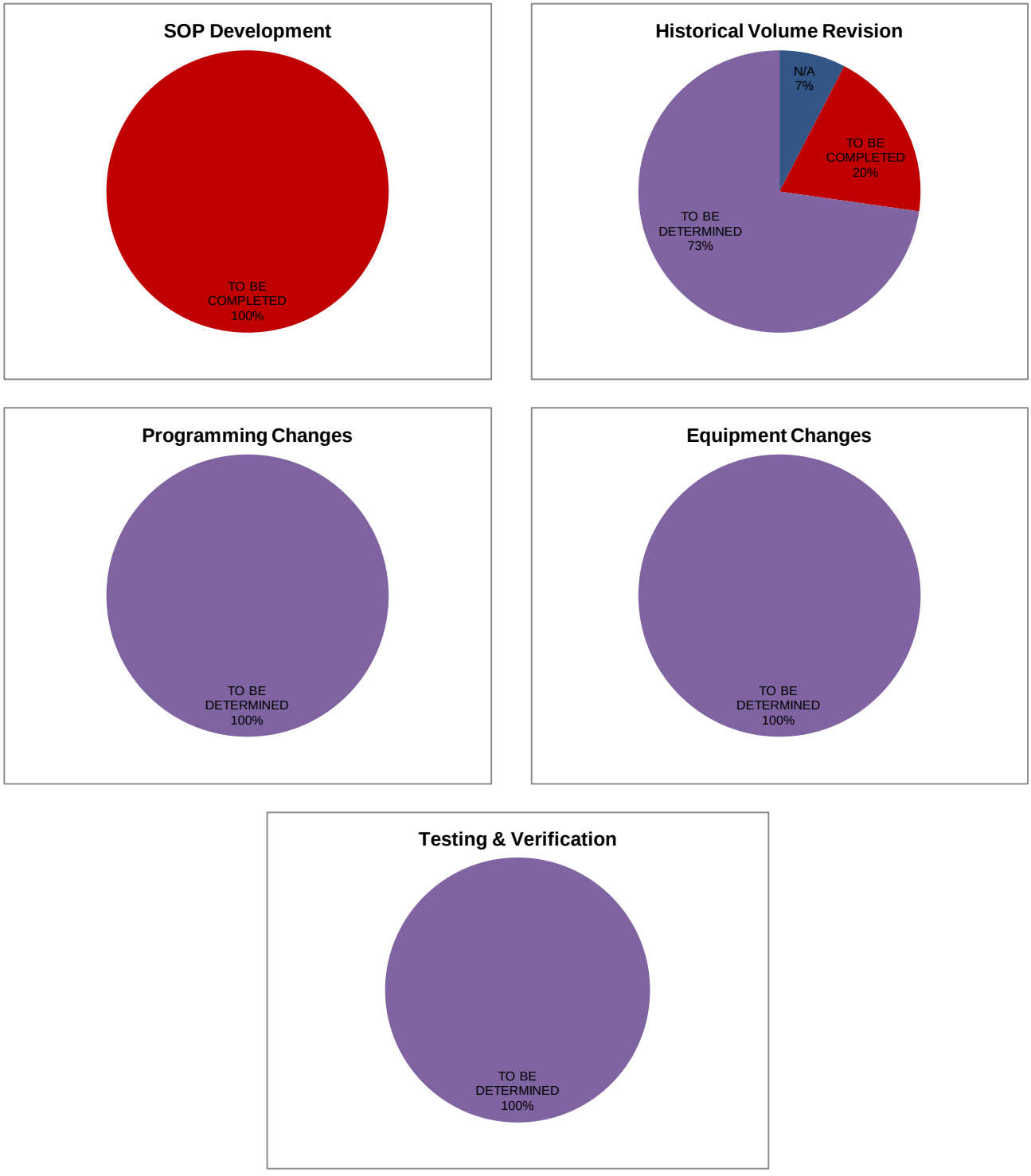


Figure 1.14. CSO Flow Monitoring Quality Improvement Status – Phase 2



1.2.4 COLLECTIONS SYSTEM OVERFLOW PERFORMANCE

At the end of the reporting period, MSD maintained 3,322 miles of sanitary and combined sewer mains in operation, including associated pump stations, manholes and other access points, and service lines.

1.2.4.1. UNAUTHORIZED DISCHARGES TO WATERS OF US – WET WEATHER SSOS

Table 1.19 and Figure 1.15 detail unauthorized discharges to WUS from the collections system by cause.
Table 1.20 and Figure 1.16 detail unauthorized discharges to WUS from the collections system by asset.

Table 1.19. Wet Weather SSOs by Fiscal Year and Cause – Unauthorized Discharges to Waters of US

FY	ELECTRICAL PROBLEMS AT MSD	GREASE BLOCKAGE	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	PUMPED DUE TO COE MANUAL	ROOTS	STRUCTURAL FAILURE	LACK OF SYSTEM CAPACITY	PUMPED OVERFLOW
FY08	2	2	3	0	3	0	3	1	369	136
FY09	4	1	1	0	20	0	1	0	53	26
FY10	4	0	0	0	8	0	0	0	289	55
FY11	3	0	1	2	5	5	2	2	623	99
FY12	2	1	5	0	1	0	0	1	425	30
FY13	1	0	2	0	1	0	3	1	250	5
FY14	0	0	3	5	2	0	1	2	359	10
FY15	3	1	2	1	1	0	3	2	374	7
FY16	1	0	0	0	0	0	0	5	309	3
FY17	2	0	3	0	1	0	0	1	63	0

Figure 1.15. Trend of Non-Capacity Related Wet Weather SSOs by Fiscal Year and Cause – Unauthorized Discharges to Waters of US

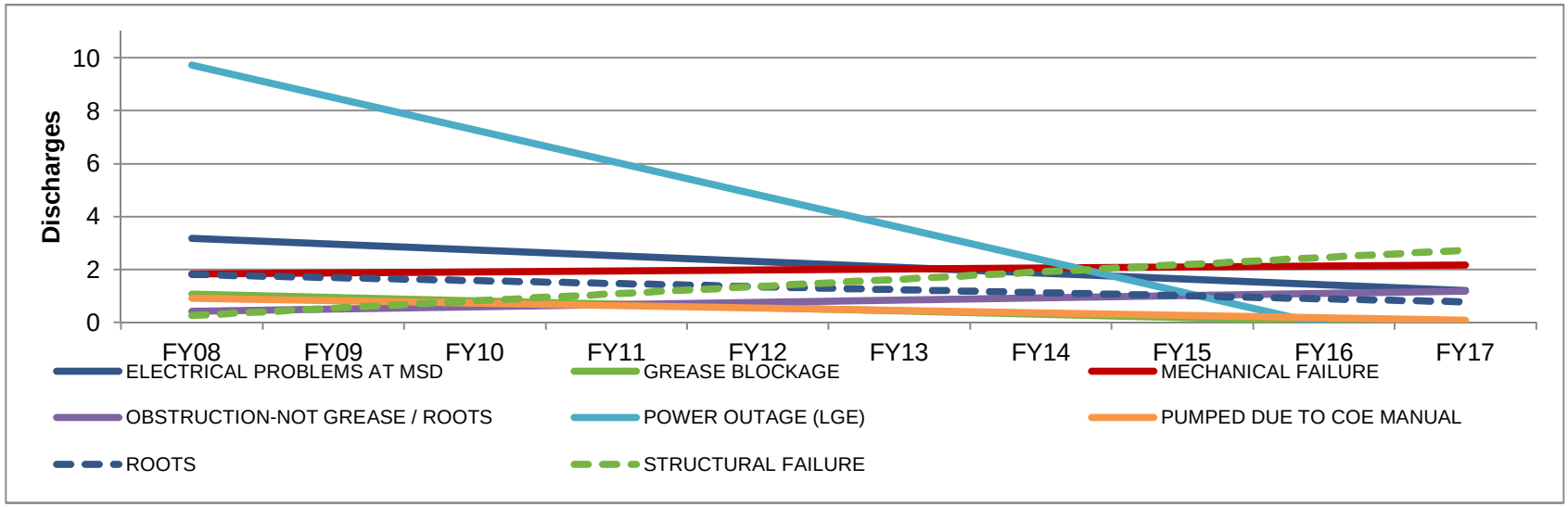
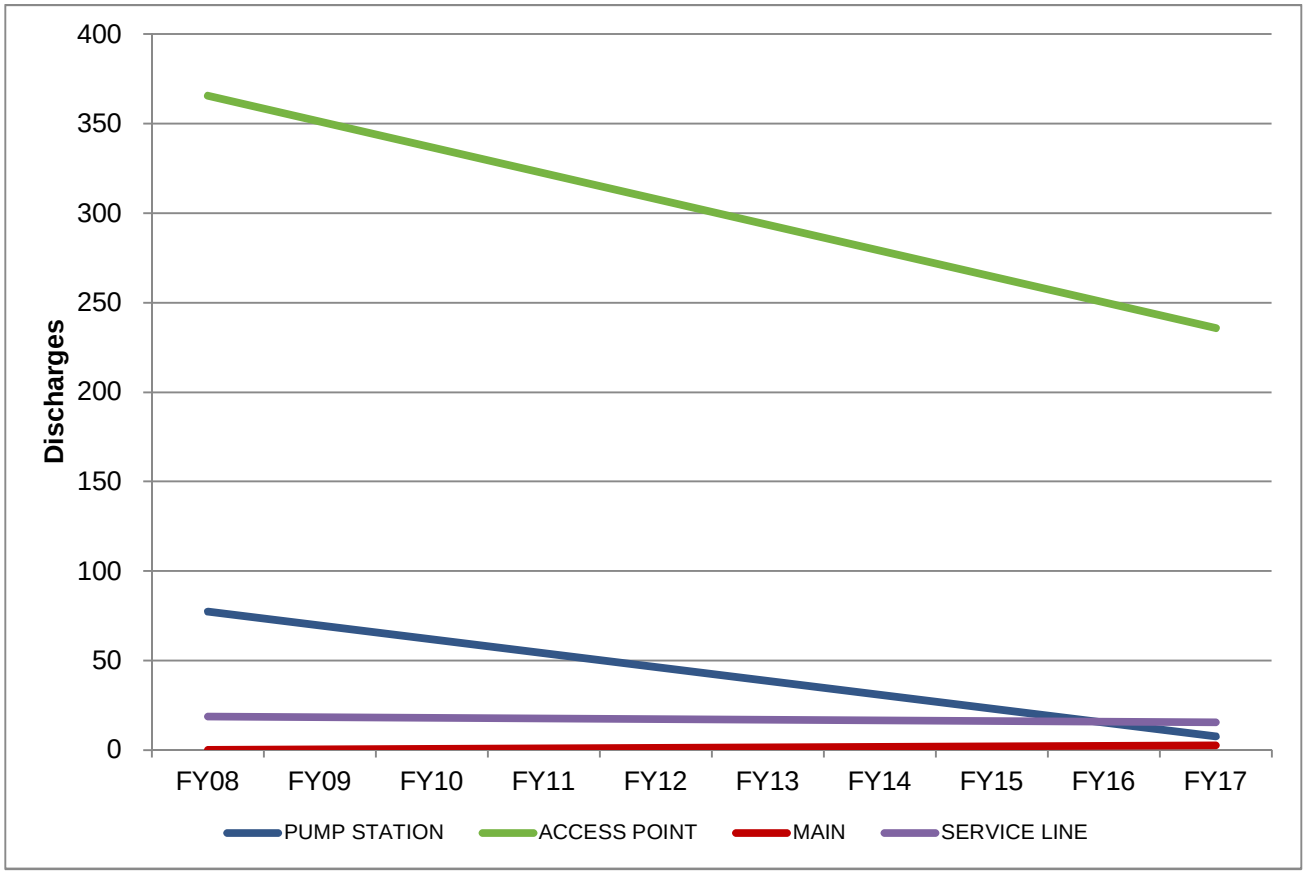


Table 1.20. Wet Weather SSOs by Fiscal Year and Asset – Unauthorized Discharges to Waters of US

FY	PUMP STATION	ACCESS POINT	MAIN	SERVICE CONNECTION
FY08	109	402	1	9
FY09	21	84	0	1
FY10	53	277	0	26
FY11	89	614	2	37
FY12	44	398	1	22
FY13	19	226	1	17
FY14	34	321	1	26
FY15	43	330	2	19
FY16	12	286	5	15
FY17	1	68	1	0

Figure 1.16. Trend of Wet Weather SSOs by Fiscal Year and Asset – Unauthorized Discharges to Waters of US



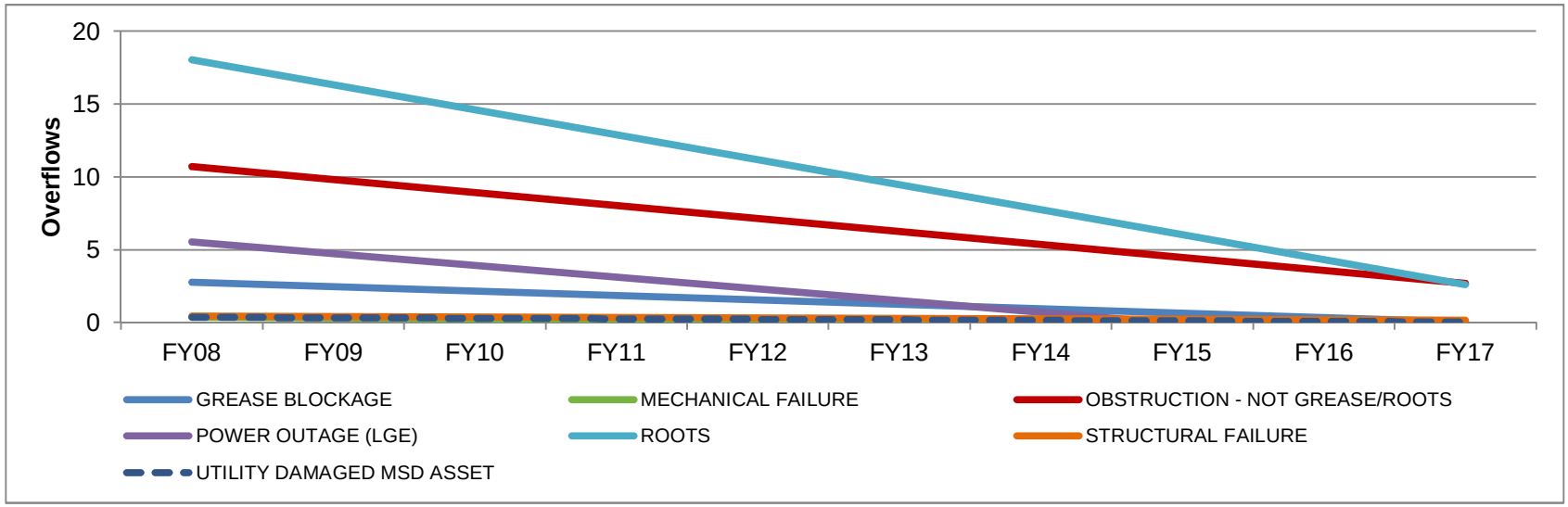
1.2.4.2. WET WEATHER OVERFLOWS TO THE INTERIOR

Table 1.21 and Figure 1.17 detail wet weather overflows to the interior from the collections system by cause.

Table 1.21. Wet Weather Overflows to the Interior by Fiscal Year and Cause

FY	GREASE BLOCKAGE	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	ROOTS	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET	LACK OF SYSTEM CAPACITY
FY08	2	1	5	0	33	0	1	650
FY09	6	0	17	19	10	1	0	94
FY10	1	0	12	0	15	0	0	678
FY11	1	0	7	0	9	0	0	592
FY12	0	0	1	0	2	1	0	102
FY13	1	0	5	0	1	0	0	31
FY14	1	0	3	0	6	1	1	118
FY15	1	0	17	0	16	0	0	271
FY16	0	0	0	0	5	0	0	78
FY17	1	0	0	0	6	0	0	1

Figure 1.17. Trend of Non-Capacity Related Wet Weather Overflows to the Interior by Fiscal Year and Cause



1.2.4.3. WET WEATHER OVERFLOWS TO THE EXTERIOR

Table 1.22 and Figure 1.18 detail wet weather overflows to the exterior from the collections system by cause. Table 1.23 and Figure 1.19 detail wet weather overflows to the exterior from the collections system by asset.

1.2.4.4. WET WEATHER HAULING EVENTS

To reduce the number of overflows in wet weather, MSD hauls sewage from multiple locations. MSD proactively monitors known and suspected locations that have wet weather capacity issues which may cause sewer line surcharging, basement back-ups, and sanitary sewer overflows (SSOs). MSD staff only hauls from these locations as necessary and as resources allow. Hauling efforts are summarized in Table 1.24 and Figure 1.20 by month and in Table 1.25 and Figure 1.21 by asset.

Table 1.22. Wet Weather Overflows to the Exterior by Fiscal Year and Cause

FY	ELECTRICAL PROBLEMS AT MSD	MECHANICAL FAILURE	OBSTRUCTION -NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	PUMPED DUE TO COE MANUAL	ROOTS	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET	LACK OF SYSTEM CAPACITY	PUMPED OVERFLOW
FY08	0	1	0	0	0	4	0	1	12	0
FY09	0	0	3	3	0	1	2	0	0	0
FY10	0	0	2	0	0	2	0	0	13	1
FY11	0	0	1	0	0	0	0	0	24	0
FY12	0	1	2	3	0	0	1	0	8	0
FY13	0	0	1	0	0	0	0	0	3	0
FY14	0	0	0	0	1	1	1	0	2	0
FY15	0	1	1	0	1	0	0	0	17	0
FY16	0	0	0	0	0	2	0	0	13	0
FY17	1	0	0	0	0	0	1	0	3	0

Figure 1.18. Trend of Non-Capacity Related Wet Weather Overflows to the Exterior by Fiscal Year and Cause

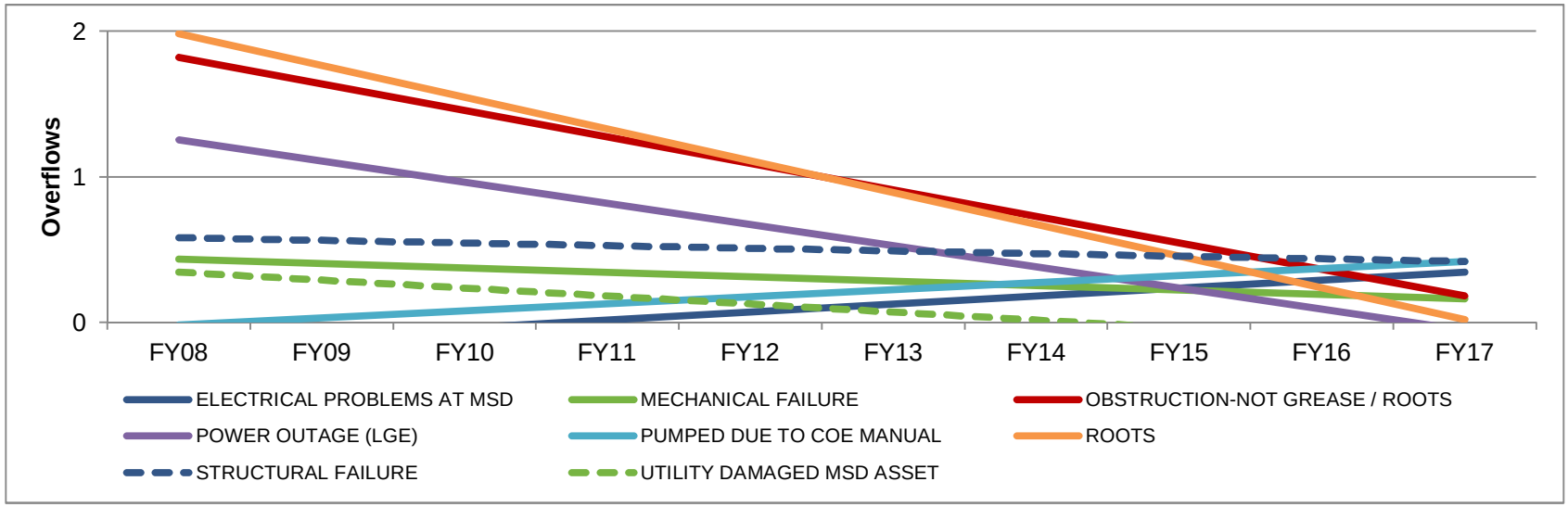


Table 1.23. Wet Weather Overflows to the Exterior by Fiscal Year and Asset

FY	PUMP STATION	ACCESS POINT	MAIN	SERVICE CONNECTION
FY08	2	14	1	1
FY09	3	2	1	3
FY10	1	12	1	4
FY11	0	22	0	2
FY12	1	9	2	3
FY13	0	3	1	0
FY14	0	3	0	2
FY15	1	9	3	9
FY16	1	5	2	7
FY17	3	1	1	0

Figure 1.19. Trend of Wet Weather Overflows to the Exterior by Fiscal Year and Asset

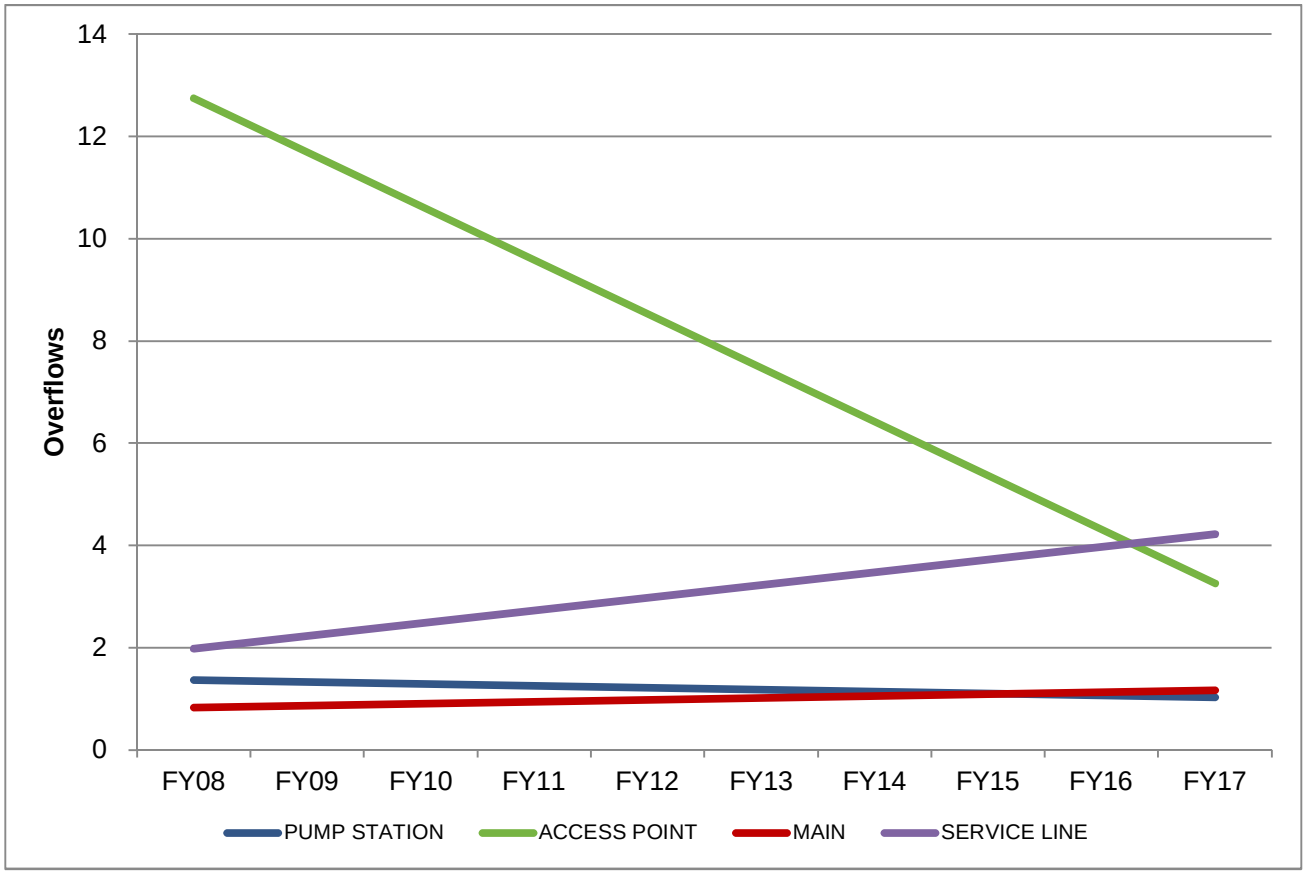


Table 1.24. Hauled Volumes in Gallons by Fiscal Year and Month

MONTH	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
FY08	22,200	0	13,900	1,168,150	41,500	1,470,550	164,300	857,950	4,016,003	1,752,920	1,049,000	19,000
FY09	62,000	24,500	1,834,650	10,000	13,600	550,800	1,330,700	785,280	34,300	634,500	572,400	337,400
FY10	1,367,135	1,794,300	426,300	1,581,950	13,900	452,850	897,800	451,400	100,050	178,650	2,245,750	162,900
FY11	199,500	112,500	571,750	63,622	944,900	76,400	111,500	1,034,200	868,650	2,541,850	1,524,000	660,400
FY12	72,600	146,500	261,800	3,500	938,050	738,700	196,700	12,500	267,100	162,800	604,400	62,700
FY13	33,000	0	77,500	39,300	0	568,700	444,500	0	753,600	58,400	235,500	178,100
FY14	287,600	15,500	320,500	366,100	165,300	167,600	90,400	125,000	22,600	556,710	167,300	0
FY15	41,000	66,500	133,200	58,500	5,000	194,000	0	9,500	509,400	250,300	3,000	58,100
FY16	130,900	3,650	76,000	42,500	95,000	176,100	3,500	115,500	24,700	4,001	0	0
FY17	34,000	0	0	11,500	3,000	123,000	9,200	18,000	10,000	8,000	12,800	6,000

Figure 1.20. Hauled Volumes by Fiscal Year and Month

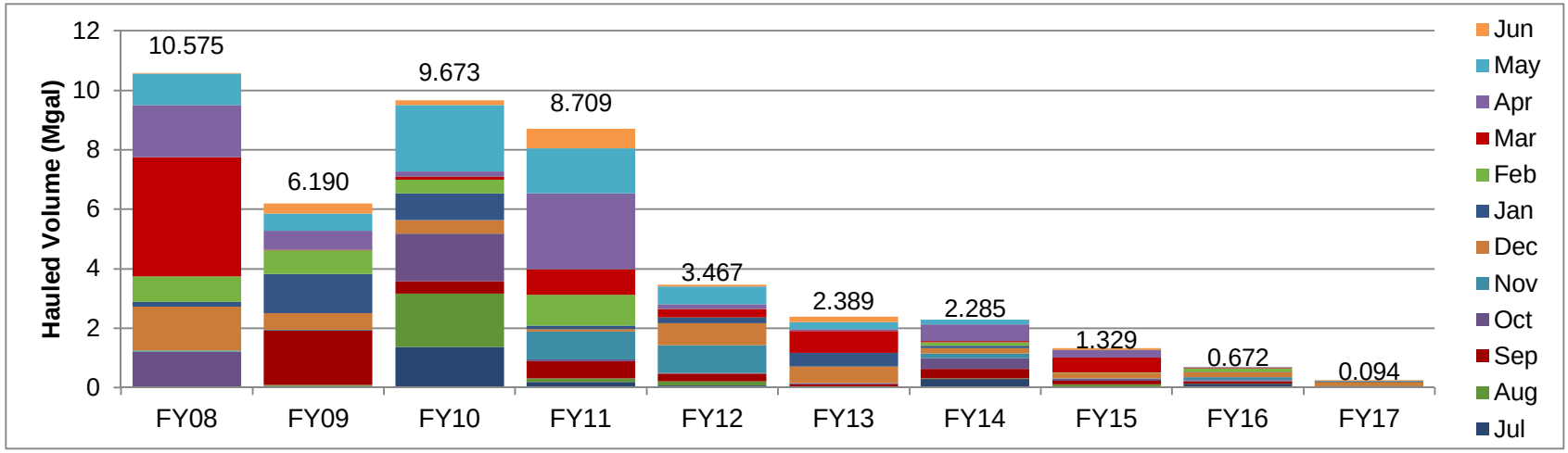
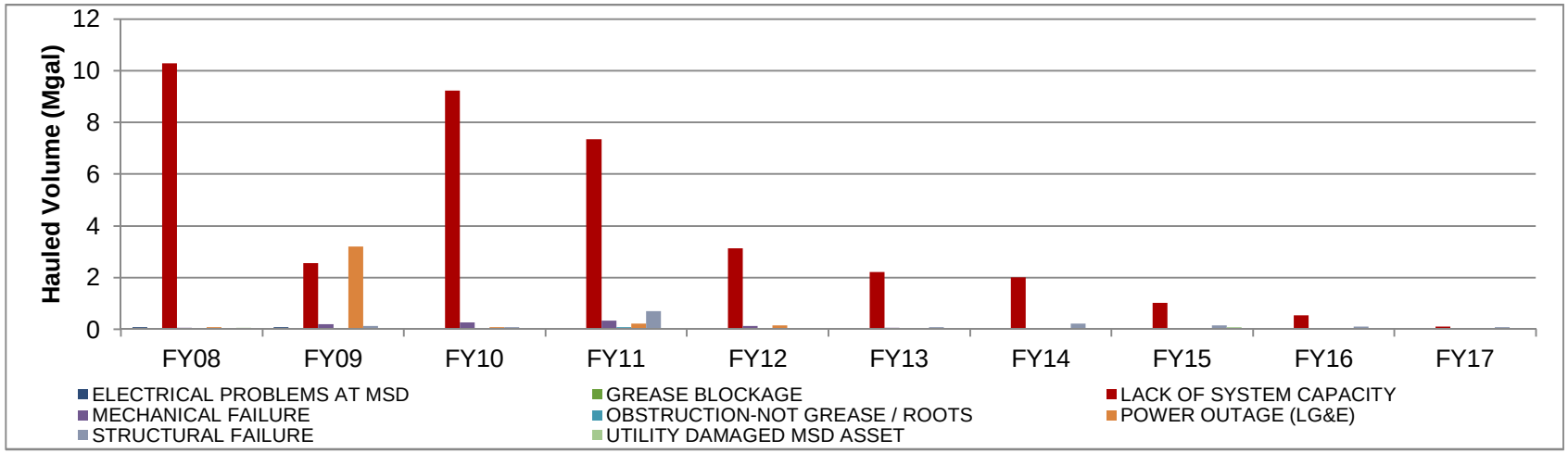


Table 1.25. Hauled Volumes in Gallons by Fiscal Year and Problem

FY	ELECTRICAL PROBLEMS AT MSD	GREASE BLOCKAGE	LACK OF SYSTEM CAPACITY	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET
FY08	86,000	0	10,289,273	50,000	0	71,700	11,500	67,000
FY09	92,100	0	2,569,480	198,200	1,000	3,195,550	133,800	0
FY10	150	0	9,221,250	260,850	8,300	90,135	85,300	7,000
FY11	22,422	8,000	7,339,450	334,800	75,000	227,400	700,950	0
FY12	1,700	0	3,138,250	138,100	7,100	150,000	32,200	0
FY13	0	0	2,225,100	51,900	14,000	7,000	90,600	0
FY14	0	0	2,011,910	12,200	44,000	7,800	208,700	0
FY15	12,500	0	1,019,100	10,000	0	42,800	154,100	90,000
FY16	0	0	534,300	38,000	0	0	99,550	0
FY17	18,500	0	104,800	13,700	0	0	92,500	4,000

Figure 1.21. Hauled Volumes by Fiscal Year and Problem



1.2.4.5. UNAUTHORIZED DISCHARGES TO WATERS OF US – DRY WEATHER SSOS

Table 1.26 and Figure 1.22 detail unauthorized discharges to WUS from the collections system by cause. Table 1.27 and Figure 1.23 detail unauthorized discharges to WUS from the collections system by asset.

1.2.4.6. DRY WEATHER OVERFLOWS TO THE INTERIOR

Table 1.28 and Figure 1.24 detail dry weather overflows to the interior by cause.

1.2.4.7. DRY WEATHER OVERFLOWS TO THE EXTERIOR

Table 1.29 and Figure 1.25 detail dry weather overflows to the exterior by cause. Table 1.30 and Figure 1.26 detail dry weather overflows to the exterior by asset.

Table 1.26. Dry Weather SSOs by Fiscal Year and Cause – Unauthorized Discharges to Waters of US

FY	ELECTRICAL PROBLEMS AT MSD	GREASE BLOCKAGE	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	PUMPED DUE TO COE MANUAL	ROOTS	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET
FY08	0	0	4	2	0	3	7	3	2
FY09	2	4	5	4	11	0	3	11	0
FY10	1	1	3	5	1	0	3	2	2
FY11	1	1	5	4	0	1	3	12	0
FY12	1	0	2	8	0	0	2	7	0
FY13	0	1	2	2	0	0	2	2	0
FY14	0	4	1	1	0	0	4	6	1
FY15	0	6	3	5	1	0	3	8	7
FY16	1	2	2	1	0	0	1	16	0
FY17	0	1	2	7	0	0	0	8	3

Figure 1.22. Trend of Dry Weather SSOs by Fiscal Year and Cause – Unauthorized Discharges to Waters of US

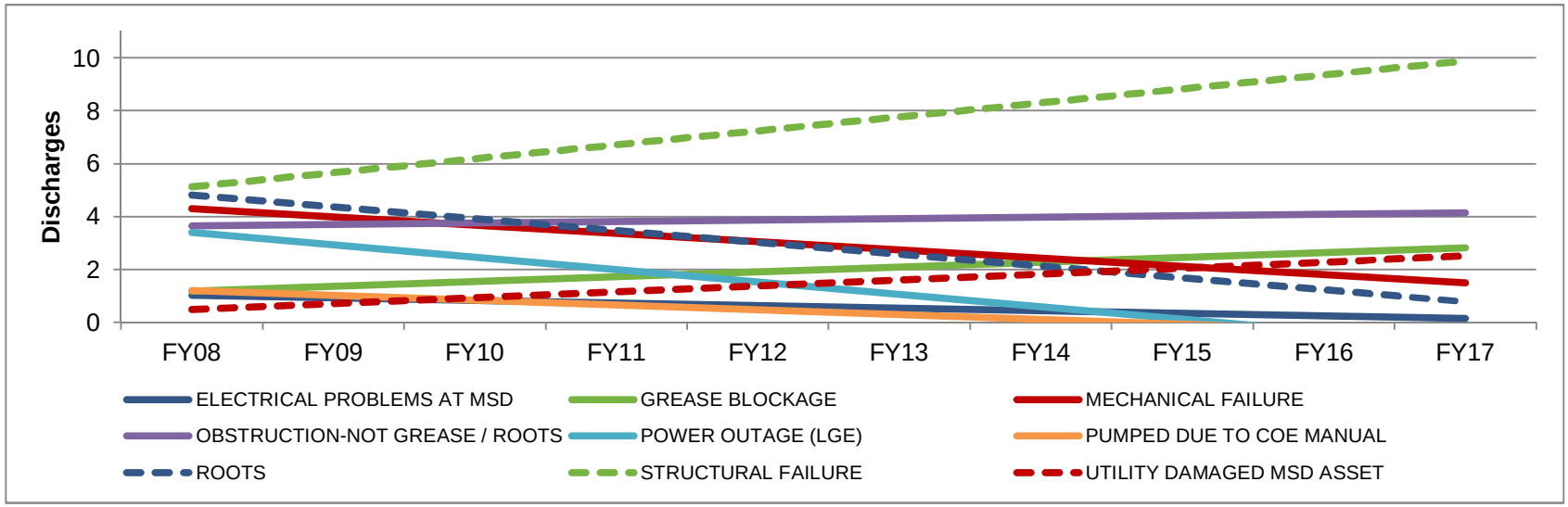


Table 1.27. Dry Weather SSOs by Fiscal Year and Asset – Unauthorized Discharges to Waters of US

FY	PUMP STATION	ACCESS POINT	MAIN	SERVICE CONNECTION
FY08	8	9	5	0
FY09	13	16	9	2
FY10	2	12	2	2
FY11	4	11	12	0
FY12	2	14	3	1
FY13	0	6	3	0
FY14	1	7	7	2
FY15	7	15	9	2
FY16	4	2	16	1
FY17	1	8	12	0

Figure 1.23. Trend of Dry Weather SSOs by Fiscal Year and Asset – Unauthorized Discharges to Waters of US

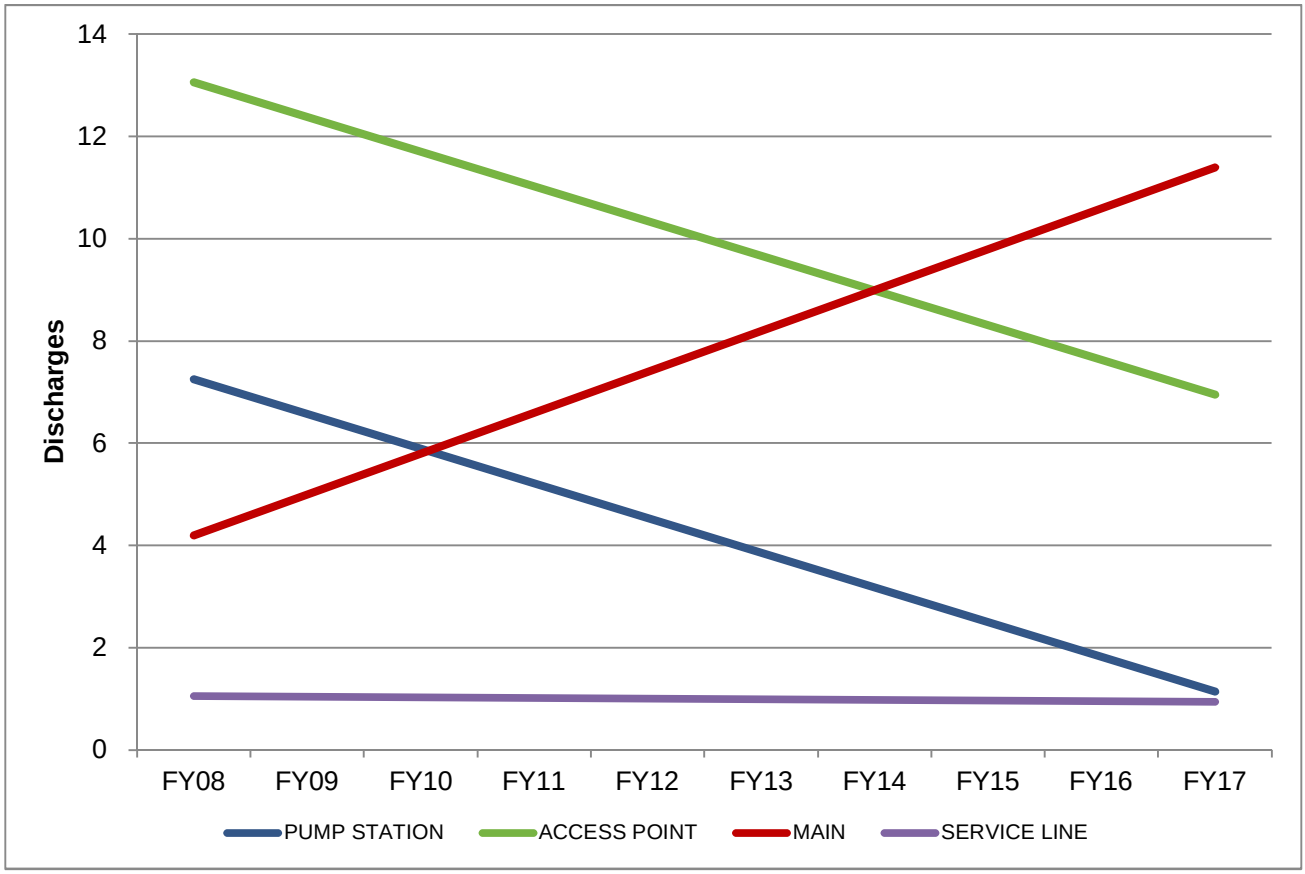


Table 1.28. Dry Weather Overflows to the Interior by Fiscal Year and Cause

FY	GREASE BLOCKAGE	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	ROOTS	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET
FY08	7	1	38	0	71	3	2
FY09	8	0	74	14	55	1	2
FY10	9	1	72	0	61	1	7
FY11	16	0	80	0	70	3	2
FY12	19	0	66	0	48	8	0
FY13	21	0	46	0	55	1	4
FY14	18	0	46	0	49	5	9
FY15	36	1	359	0	361	5	1
FY16	22	1	20	0	43	0	0
FY17	18	0	96	0	153	3	1

Figure 1.24. Trend of Dry Weather Overflows to the Interior by Fiscal Year and Cause

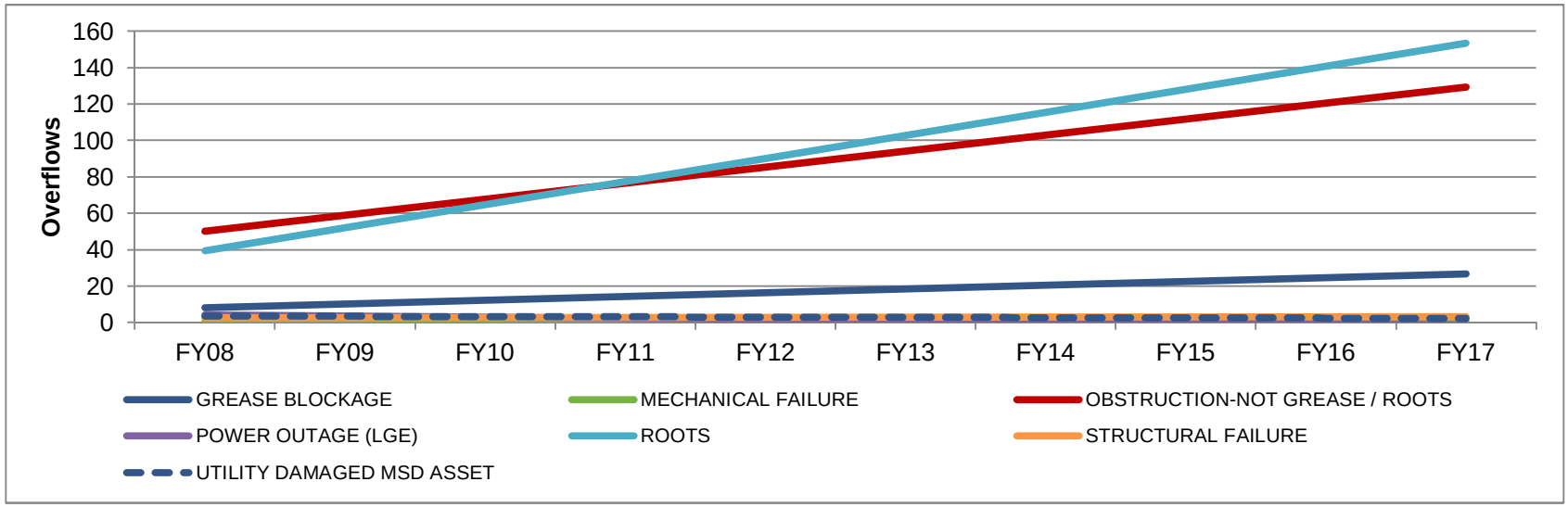


Table 1.29. Dry Weather Overflows to the Exterior by Fiscal Year and Cause

FY	ELECTRICAL PROBLEMS AT MSD	GREASE BLOCKAGE	MECHANICAL FAILURE	OBSTRUCTION-NOT GREASE / ROOTS	POWER OUTAGE (LG&E)	ROOTS	STRUCTURAL FAILURE	UTILITY DAMAGED MSD ASSET
FY08	0	4	8	8	0	6	4	0
FY09	4	4	10	9	16	2	7	0
FY10	2	0	11	14	1	4	4	3
FY11	2	4	8	11	1	9	10	0
FY12	1	7	2	10	0	8	5	2
FY13	0	0	2	5	0	1	8	0
FY14	0	5	1	5	0	0	4	1
FY15	1	4	2	35	0	22	7	3
FY16	0	5	4	11	0	7	4	2
FY17	0	10	3	23	0	22	6	0

Figure 1.25. Trend of Dry Weather Overflows to the Exterior by Fiscal Year and Cause

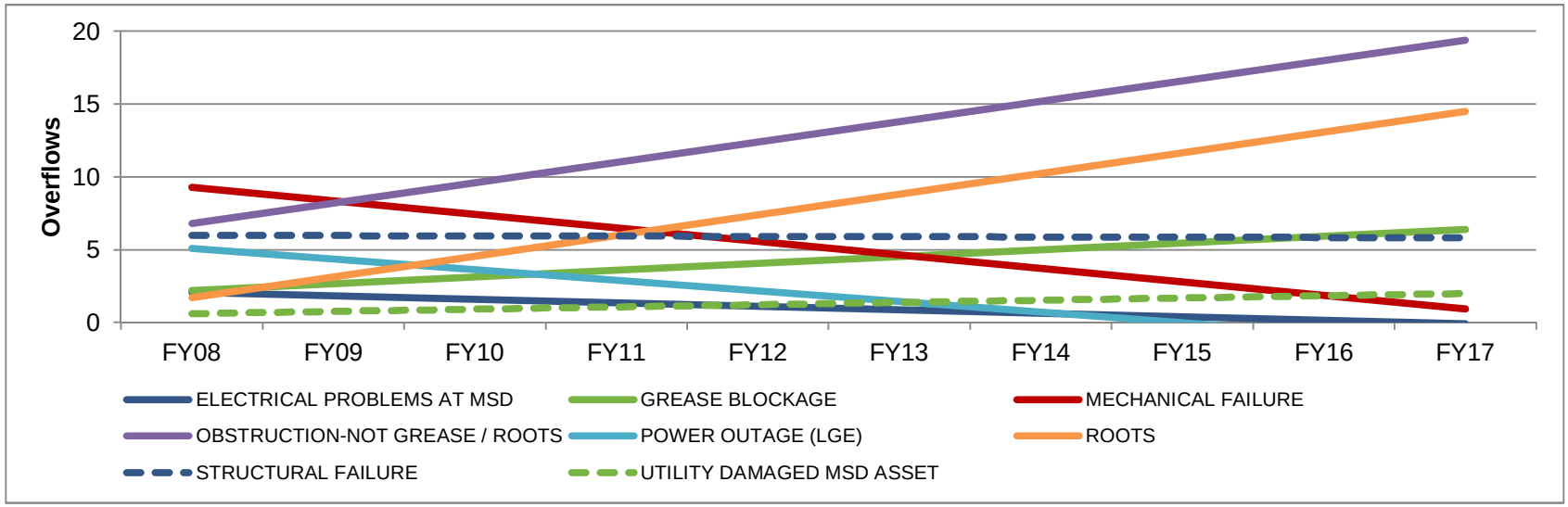
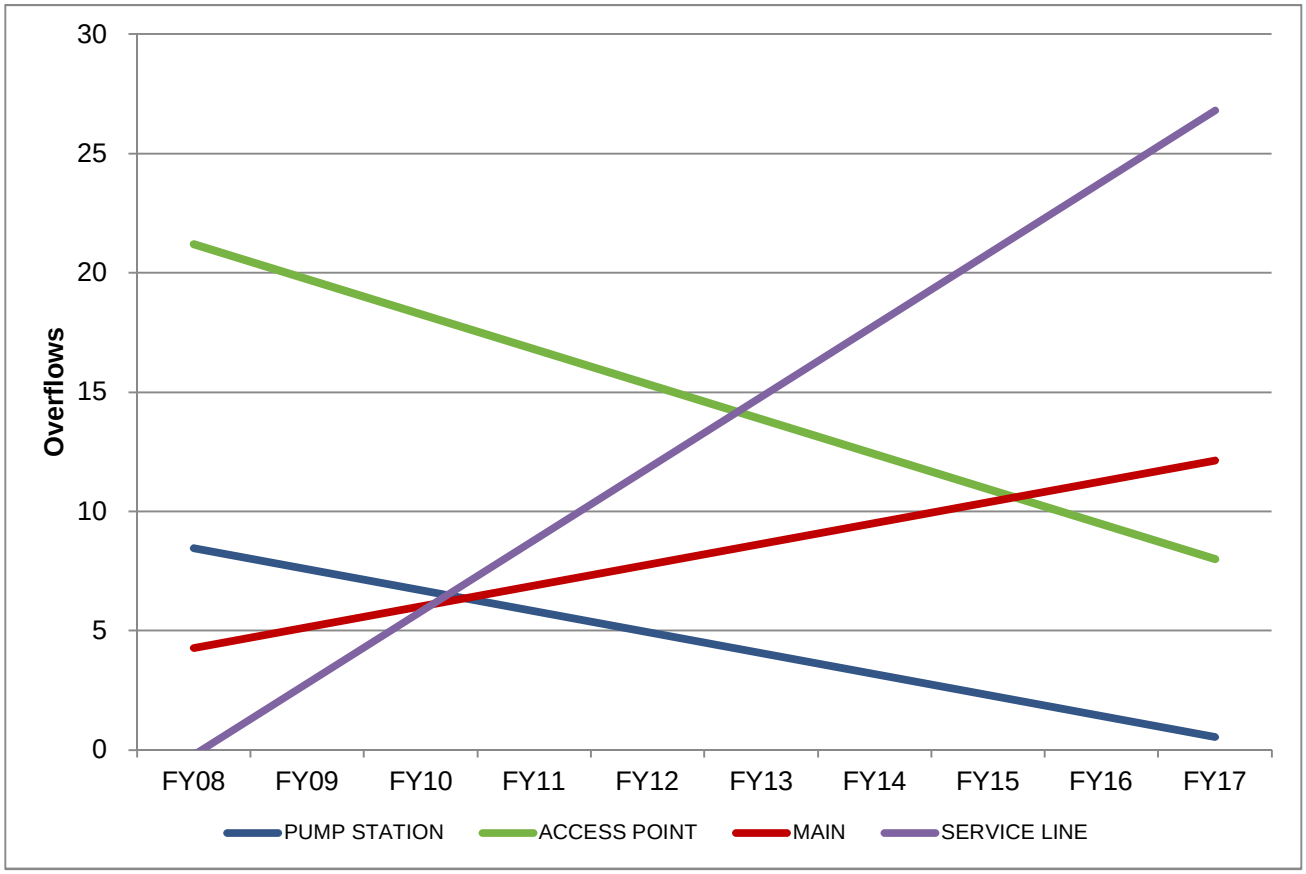


Table 1.30. Dry Weather Overflows to the Exterior by Fiscal Year and Asset

FY	PUMP STATION	ACCESS POINT	MAIN	SERVICE CONNECTION
FY08	3	16	3	8
FY09	18	18	10	6
FY10	5	25	6	3
FY11	8	25	7	5
FY12	2	19	6	8
FY13	0	6	7	3
FY14	0	7	4	5
FY15	5	7	12	50
FY16	1	11	8	13
FY17	3	12	17	32

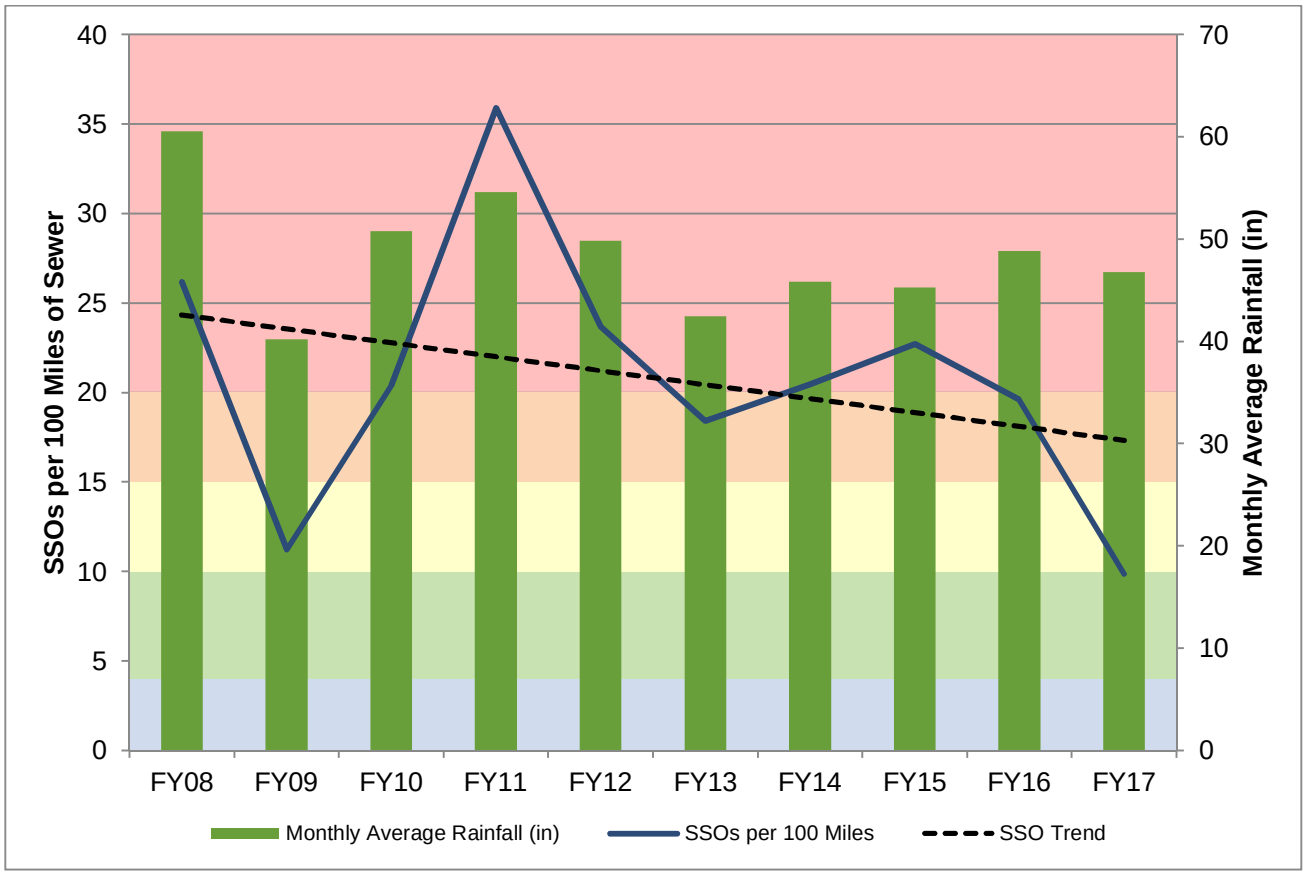
Figure 1.26. Trend of Dry Weather Overflows to the Exterior by Fiscal Year and Asset



1.2.4.8. SSOs PER 100 MILES OF SEWER

Per the request of EPA, and in keeping with benchmarks from other utilities, MSD has prepared the following analysis of SSOs per 100 Miles of sewer by cause for FY17, as well as by year and compared to national benchmarks. The background shading on the following chart represents benchmarking from other utilities and EPA studies of overflows per 100 miles of sewer. Although overflow occurrences are significantly influenced by rainfall, it is shown that MSD is trending favorably against benchmarks, and efforts documented in this Annual Report (CMOM, SORP, CPE, Bypass Reviews, etc.) are proving effective at reducing overflows.

Figure 1.27. SSOs per 100 Miles of Sewer



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SECTION 2: PROGRAM ACTIVITIES FOR NINE MINIMUM CONTROLS

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 the Environmental Protection Agency (EPA) and to Kentucky Department of Environment Protection (KDEP) on February 10, 2006. MSD received an approval letter, dated February 22, 2007, for the NMC Compliance Report. The approved NMC Compliance document can be viewed on the MSD Project WIN website **www.msdlouky.org/projectwin**. Highlights of NMC program implementation are outlined below.

2.2. NMC 1: PROPER OPERATION AND MAINTENANCE PROGRAMS

FY17 Program

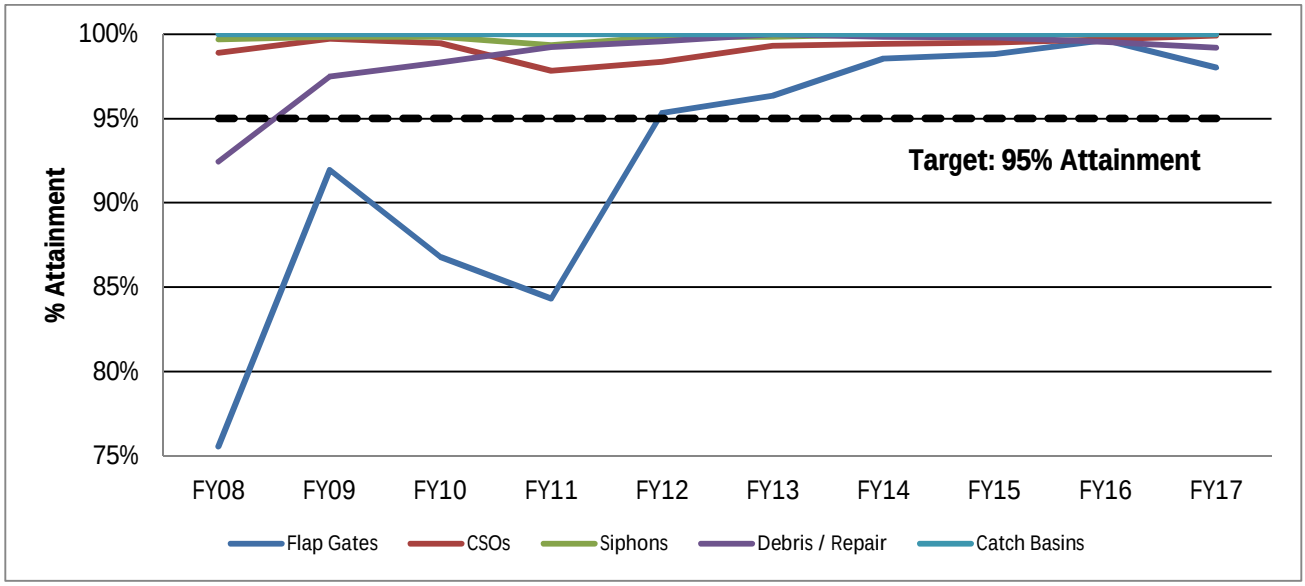
Program Implementation

- Inspected and cleaned 22,467 Catch Basins within the Combined Sewer System (CSS).
- Continued to inspect, maintain and properly operate the CSS pump stations and the Morris Forman Water Quality Treatment Center (WQTC).
- Performed 5,120 weekly inspections on Combined Sewer Overflows (CSOs), 1,029 creek inspections, 592 siphon inspections, and initiated 632 work orders for debris removal and/or repairs as determined to be necessary to allow proper system operation.
- Flushed 985 sewer line segments in the CSS, including 177,064 feet (33.5 miles) of sewer lines ranging in size from 6 inches to 54 inches. Performed formula-based PACP Television (TV) inspection on 900,154 feet (170.5 miles) of sewer lines, as part of the Gravity Line Preventive Maintenance (GLPM) program in the CSS.
- Chemically treated 390,059 feet (73.9 miles) of sanitary sewer for roots.
- Achieved the 95% attainment program goals listed below, as shown in Figure 2.1.
    - 100% of CSOs inspected weekly.
    - 98% of flap gates inspected weekly.
    - 100% of siphons inspected monthly.
    - 99% of Debris or Repair Work Orders on CSO assets created the next work day after the inspection of the asset and open for no more than 5 days.
    - 100% catch basins within the CSS cleaned every 15 months.

Annual Training

- Conducted CSO Field Training classes on March 3, 2017.

Figure 2.1. NMC 1 Programmatic Implementation Attainment



Annual Asset Review and Documentation

- Continued projects to create improved access to selected CSO sites to facilitate cleaning activities.
- Continued to review catch basin areas against the CSS area and explored re-alignment to confirm that regulatory commitments of cleaning on a 15-month cycle in the CSS are being achieved.

FY18 Program

Program Implementation

- Continue cleaning and inspection programs, and reporting on programmatic implementation goals.

Annual Training

- Incorporate the results of the annual field investigation to adjust and enhance the annual CSO Field Training modules.
- Schedule and conduct the annual CSO Field Training with the MSD Operations Division CSO/NMC staff and Morris Forman WQTC personnel.

Asset Review and Documentation

- Continue implementation of field verification efforts to determine operation and maintenance enhancements to be incorporated into annual training.
- Review the CSO inventory schematics and revise as necessary.
- Update the CSO characterization sheets to reflect the updated and calibrated hydraulic model.

2.3. NMC 2: MAXIMIZATION OF STORAGE IN THE COLLECTIONS SYSTEM

FY17 Program

Real Time Control (RTC) Optimization

- Continued operation of Phase 1 and 2 of the Real Time Control (RTC) system. During the reporting period, over 1,092 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 Figure 2.2 for a detailed report.
- Updated standard operating procedures (SOPs) for the Phase 1 and 2 facilities to reflect current operations and to incorporate adjustments for future RTC facilities.
- Continued review of CSOs upstream of Morris Forman WQTC, and noted that flow through the plant is optimized prior to overflows occurring, as shown in quarterly reports for the reporting period.
- Continued utilization of "RTC active storage" to standardize the calculation of the volume of flow stored during wet weather events by RTC facilities.
- Continued Csoft maintenance and service agreement contract with RTC consultant.
- Continued the integration of the InfoWorks Integrated Catchment Model (ICM) hydraulic model, ICM Exchange and Csoft Adjusted and stabilized the ICM RTC model; setup new RTC servers and computers; installed Csoft, ICM, and Gorubi problem solver software; tested runtimes and determined the required time step and control horizon for optimization; finalized Csoft configurations and began testing performance; and updated TAG scripting and began testing of data transfer using iFix software.

  Worked with the RTC consultant under RTC Phase 3 Integration to review, revise and begin implementing the draft wet weather SOP for the system that also includes the Southeast Diversion Structure, Buechel Basin, Northern Ditch Diversion, and the Derek R Guthrie WQTC Wet Weather treatment facility. Full integration in an automated mode will not be achieved until the RTC software (Csoft) is upgraded to the most current version and the hydraulic engine is converted to use MSD's InfoWorks ICM hydraulic model, which is expected to be completed during the next reporting period. While this work is being performed, the SOP is being implemented incrementally, starting with a period of manual operation to validate the control assumptions for each site, 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.
- Worked with the RTC consultant under the RTC Phase 4 Integration to develop updated SOPs for the Nightingale Pump Station (NPS), Southwestern Outfall Relief 1 (SWOR1), and Southwestern Pump Station (SWPS) sites to incorporate modifications to operations stemming from upgrades or the addition of new facilities and to develop preliminary SOPs for the Bells Lane Wet Weather Treatment Facility and the Logan Street and Breckenridge Street CSO Basin. The revised/new SOPs for these sites will be implemented incrementally, starting with a period of manual operation to validate the control assumptions for each site, 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.

- Continued to implement recommendations for improvements designed to optimize the utilization and performance of the existing RTC system. Additional improvements include the development of a module to interpret unknown TAG name alarms as mode 50 (short term communication failure) to reduce instances of RTC unavailability and evaluated an option to convert data transfers to an open platform communications (OPC) protocol to reduce instances of data not found alarms due to synchronization issues and delays in writing data from the local controllers.
- Completed a preliminary design report identifying option to improve operations of the Sneads Branch facility including options to eliminate the Sneads Branch screening and pumping facility by directing stored volumes of water to the Logan CSO basin. Geotechnical and survey work to confirm viability of the elimination options will be performed during the upcoming period.
- Completed design of a gate replacement and backup generator installation at the Ashland RTC facility to improve RTC operations and site reliability.
- Continued monitoring Southwestern Outfall Retention 2 (SWOR2) operations and developed simplified coding to reduce gate movements and improve site performance. A decision to implement the simplified coding will not be made until the upgraded SWPS and Bells Lane facility are integrated into RTC and the SWOR1 and Southwest Sluice Gate (SWSG) gate replacement and upgrades and completed. A design for the installation of a backup generator at the site was completed and the construction notice to proceed was issued in January 2017. Construction is ongoing.
- Integrated new rain gauges deployed by MSD into the RTC system to improve flow prediction and weather forecasting capabilities.

Storage Optimization

- Continued to monitor the performance of the CSO108 Dam Modification, a bending weir installed at CSO108. Modeling showed that additional storm water flow will need to be captured upstream in the CSO 108 sewershed to be directed to green infrastructure or a separate storm sewer system to reduce overflows to the prescribed level of control. Study is underway to identify the most cost-effective solution for implementation.
- Continued to monitor and review the performance of the RTC sites and systems, developing recommendations for improvements, and implementing these recommendations as needed to optimize the utilization and performance of the existing RTC system.
- Constructed a spring-loaded bending weir at CSO023. The proposed bending weir at CSO178 design was completed. CSO190 was evaluated and a dam raise was recommended and designed. Modeling efforts indicated a bending weir was not necessary because of the green infrastructure that has been constructed within the drainage area. Bending weirs and the associated solids and floatables controls were designed for CSOs 178 and 181. CSO 197 dam raise and solids and floatables controls design was completed in FY17. Additional evaluation of upstream conditions was conducted for all CSOs with dam raises to determine if any basements were at risk for flooding based on the revised dam height, and modifications were made as required.

Figure 2.2. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

Louisville/Jefferson County Metropolitan Sewer District

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM AS MANAGED BY THE RTC SYSTEM

Period	
From:	07/01/2016
To:	06/30/2017

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average* TRFD (in)	Max** TRFD (in)	Max** Rain Gauge	SWPS SG Chamber (7.7)*	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.0)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
2016-052	7/3/16 8:10	7/5/16 12:30	52:20:00	1.19	2.02	TR14	10.50	8.20	4.80	10.30	1.00	4.60	0.60	40.00	No	Large back-to-back storm cells heterogeneously distributed over the service area. The storage sites were dewatered between the cells. The Executive Inn site was controlled manually and the Brady Lake site was operated manually at the end of the rainfall event. The SWOR2 site was controlled manually in part. The storage capacity at the SWSG site is restricted due to the damaged Gate 2 and it was controlled manually.
2016-053	7/6/16 12:35	7/7/16 9:15	20:40:00	0.22	0.38	TR04	3.40	2.80	0.60	3.50	0.70	4.10	0.20	15.30	No	Small storm cells heterogeneously distributed over the service area. The Brady Lake, Executive Inn, SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-054	7/7/16 17:15	7/9/16 8:20	39:05:00	0.18	0.52	TR11	2.55	4.45	0.10	0.10	0.80	2.20	0.20	10.40	No	Small storm cells heterogeneously distributed over the service area. The Brady Lake, Executive Inn, SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-055	7/12/16 9:15	7/13/16 0:45	15:30:00	0.56	1.50	TR14	5.45	6.25	2.35	3.50	0.50	4.10	0.90	23.05	No	Large storm cells heterogeneously distributed over the service area. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-058	7/25/25 12:45	7/25/25 22:25	9:40:00	0.15	0.52	TR04	2.10	0.90	0.50	2.65	0.10	3.70	0.00	9.95	No	Small storm cells heterogeneously distributed over the service area. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-059	7/27/16 13:50	7/29/16 1:25	35:35:00	0.96	1.85	TR12	8.15	3.05	3.55	4.00	0.35	4.50	2.15	25.75	No	Large back-to-back storm cells heterogeneously distributed over the service area. The storage sites were dewatered between the cells. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-062/063	7/31/16 17:35	8/3/16 11:40	66:05:00	0.88	1.81	TR12	8.20	5.65	6.15	9.00	0.55	12.75	1.55	43.85	No	Large back-to-back storm cells homogeneously distributed over the service area. The storage sites were dewatered between the cells. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-064	8/4/16 13:25	8/5/16 0:15	10:50:00	0.75	2.77	TR14	2.80	1.70	0.70	0.55	0.15	2.15	0.25	8.30	No	Moderate storm cells homogeneously distributed over the service area. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-065	8/5/16 14:25	8/6/16 5:45	15:20:00	0.21	0.51	TR11	2.15	0.90	0.45	2.40	0.10	4.25	0.40	10.65	No	Moderate storm cells homogeneously distributed over the service area. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-068	8/14/16 12:55	8/18/16 20:45	103:50:00	2.18	2.04	TR14	10.40	10.60	9.70	4.00	0.95	5.65	2.90	44.20	No	Large back-to-back storm cells homogeneously distributed over the service area. The storage sites were dewatered between the cells. The SWSG and SWOR2 sites were controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-069	8/17/16 4:15	8/18/16 20:45	40:30:00	0.95	1.64	TR14	7.10	7.95	2.50	4.40	0.45	4.40	0.65	27.45	No	Large storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The SWOR2 site was back on global control. The inflatable gate at the SWOR2 site was used.
2016-070	8/19/16 19:35	8/22/16 4:25	56:50:00	1.50	1.99	TR04	10.55	14.40	4.70	3.30	0.50	4.20	0.40	38.05	No	Large storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used at the beginning of the rainfall event and deflated during a high inflow peak. The accusonic flowmeter (SWOR2-FL-1 / SWOR2-F1-FLO) recorded incorrect data (near zero) during the high peak flow. At the Snead Branch site, the inflatable dam was not inflated completely during the rainfall event.
2016-071	8/28/16 17:50	8/29/16 6:50	13:00:00	0.18	0.30	TR05	4.25	4.75	0.15	1.15	0.35	3.05	0.00	13.70	No	Small storm cells heterogeneously distributed over the service area. The SWSG was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was not used.
2016-072	8/31/16 10:50	8/31/16 23:20	12:30:00	0.19	1.05	TR13	1.20	1.30	0.10	0.30	0.00	2.30	0.00	5.20	No	Small storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-073	9/10/16 15:40	9/11/16 5:05	13:25:00	0.53	1.59	TR14	3.20	3.50	0.75	2.15	0.10	4.10	0.20	14.00	No	Moderate storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-074	9/17/16 9:45	9/17/16 18:50	9:05:00	0.15	0.24	TR14	1.40	1.30	0.15	0.45	0.00	2.05	0.00	5.35	No	Small storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-075	9/26/16 9:50	9/27/16 1:15	15:25:00	0.37	0.57	TR14	3.15	1.10	0.80	2.15	0.40	4.10	0.10	11.80	No	Small storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-076	9/28/16 9:00	9/29/16 7:10	22:10:00	0.48	0.53	TR14	3.85	1.70	1.85	3.50	0.40	4.40	0.25	15.95	No	Moderate storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used.
2016-077	9/29/16 9:10	10/1/16 0:40	39:30:00	0.65	1.01	TR14	6.70	2.15	1.50	3.50	0.40	4.40	0.45	19.10	No	Moderate storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used. The Sneads Branch site has been in wet weather mode since September 30th.

Figure 2.2. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

Louisville/Jefferson County Metropolitan Sewer District

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM AS MANAGED BY THE RTC SYSTEM

Period	
From:	07/01/2016
To:	06/30/2017

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average* TRFD (in)	Max** TRFD (in)	Max** Rain Gauge	SWPS SG Chamber (7.7)^	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.0)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
2016-078	10/20/16 8:30	10/21/16 12:35	28:05:00	0.73	1.23	TR14	4.10	1.70	2.40	3.50	0.60	4.10	0.00	16.40	No	Large storm cells heterogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The inflatable gate at the SWOR2 site was used. The Sneads Branch site has been in wet weather mode since September 30th.
2016-081	11/23/16 5:40	11/25/16 6:15	48:35:00	0.31	0.37	TR13	4.50	2.05	0.65	1.15	0.35	3.00	0.10	11.80	No	Moderate storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The SWOR2 site was temporaroly controlled manually at the end of the rainfall event.
2016-082	11/28/16 14:25	11/29/16 21:40	31:15:00	0.81	1.35	TR14	4.20	1.80	1.70	3.50	0.40	4.10	0.30	16.00	No	Large storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The SWOR2 site was temporarily controlled manually during the rainfall event.
2016-084	12/6/16 1:35	12/7/16 20:35	43:00:00	1.04	1.51	TR14	5.25	2.30	2.25	3.50	0.45	4.45	0.35	18.55	No	Large storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-085	12/11/16 17:05	12/12/16 16:45	23:40:00	0.43	0.73	TR14	3.20	1.20	1.10	1.50	0.50	3.55	0.10	11.15	No	Moderate storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-086	12/16/16 22:20	12/20/16 17:00	90:40:00	2.88	3.49	TR04	6.65	3.65	8.70	3.50	0.65	4.10	2.70	29.95	No	Very large storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. The SWOR2 site was temporaroly controlled manually during the rainfall event (its dam was deflated during the event).
2016-087	12/23/16 19:25	12/25/16 11:10	39:45:00	0.56	0.72	TR14	6.30	1.80	2.25	3.50	0.70	4.45	0.50	19.50	No	Moderate storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2016-088	12/26/16 15:50	12/27/16 8:25	16:35:00	0.48	0.90	TR14	6.80	2.40	1.40	3.50	0.60	4.50	0.35	19.55	No	Moderate storm cells heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-001	1/2/17 15:50	1/4/17 5:45	37:55:00	0.48	0.58	TR05	3.95	1.10	0.65	1.90	0.45	4.00	0.10	12.15	No	Moderate storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. SWOR2 was partially manually controlled.
2017-002	1/10/17 19:10	1/12/17 16:10	45:00:00	0.60	0.85	TR14	7.20	3.80	2.10	3.50	0.80	4.95	0.35	22.70	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. Brady Lake, Executive Inn and SWOR2 were partially manually controlled.
2017-003	1/12/17 16:10	1/13/17 13:40	21:30:00	0.47	0.54	TR13	4.10	1.90	1.25	2.90	0.50	4.45	0.35	15.45	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. SWOR2 was partially manually controlled.
2017-004	1/13/17 13:40	1/15/17 14:55	49:15:00	0.55	0.65	TR13	3.80	1.40	1.25	5.65	0.30	8.45	0.15	21.00	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-006	1/16/17 17:35	1/19/17 17:25	71:50:00	0.66	0.77	TR14	7.69	2.12	6.06	3.50	0.33	4.10	0.60	24.40	Yes	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. Brady Lake and SWOR2 were partially manually controlled. Executive Inn was partially in downgraded mode during this event.
2017-007	1/19/17 17:25	1/23/17 14:25	93:00:00	1.14	1.18	TR14	12.10	2.45	2.65	3.50	0.00	4.35	1.10	26.15	Yes	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. Brady Lake and SWOR2 were partially manually controlled. Executive Inn was partially in downgraded mode during this event.

Figure 2.2. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

Louisville/Jefferson County Metropolitan Sewer District

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM AS MANAGED BY THE RTC SYSTEM

Period	
From:	07/01/2016
To:	06/30/2017

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average* TRFD (in)	Max** TRFD (in)	Max** Rain Gauge	SWPS SG Chamber (7.7)^	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.0)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
2017-008	2/7/17 6:35	2/8/17 9:50	27:15:00	0.50	0.67	TR14	6.10	2.50	1.15	3.95	0.65	4.50	0.10	18.95	No	Moderate back to back storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. SWOR2 was partially manually controlled.
2017-011	2/24/17 18:30	2/25/17 23:15	28:45:00	0.73	1.13	TR14	5.85	4.75	2.30	3.50	0.50	4.20	2.00	23.10	No	Moderate back to back storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-013	2/28/17 4:40	3/5/17 8:45	124:05:00	1.82	2.42	TR14	13.85	7.90	10.95	6.00	2.00	7.40	2.55	50.65	Yes	Large and long lasting storm cells homogeneously distributed over the service area (characteristic of a 1-year return period). The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. SWOR2 was partially manually controlled.
2017-014	3/6/17 6:30	3/8/17 23:50	65:20:00	0.65	0.71	TR05	8.75	2.55	1.60	3.80	0.80	5.40	0.70	23.60	Yes	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-017	3/25/17 20:10	3/26/17 16:50	20:40:00	0.53	0.66	TR14	1.50	0.65	0.65	3.50	0.40	4.50	0.10	11.30	No	Moderate storm cells heterogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-018	3/27/17 11:45	3/28/17 5:05	17:20:00	0.47	0.86	TR15	3.30	1.70	1.45	3.50	0.65	4.50	0.25	15.35	No	Moderate storm cells heterogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-019	3/30/17 9:35	3/31/17 11:50	26:15:00	0.31	0.58	TR05	1.60	0.90	0.90	3.50	0.50	4.65	0.20	12.25	No	Moderate storm cells heterogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-020	4/3/17 19:45	4/4/17 7:40	11:55:00	0.28	0.68	TR15	1.60	0.65	0.35	1.15	0.15	3.30	0.00	7.20	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-023	4/11/17 6:50	4/11/17 23:10	16:20:00	0.52	0.75	TR15	2.25	0.90	0.90	1.90	0.30	4.10	0.00	10.35	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-024	4/16/17 5:05	4/18/17 4:35	47:30:00	1.49	2.16	TR15	6.95	5.15	6.95	5.70	0.85	6.95	1.80	34.35	No	Large back-to-back storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-028	4/21/17 10:45	4/22/17 21:45	35:00:00	0.66	0.75	TR04	3.30	2.90	1.15	3.50	0.65	5.15	0.25	16.90	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-029	4/27/17 6:55	4/27/17 16:05	9:10:00	0.25	0.34	TR11	3.20	1.95	1.15	3.15	0.35	4.55	0.30	14.65	No	Moderate storm cells homogeneously distributed over the service area . The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-030	4/28/17 23:20	5/2/17 23:35	96:15:00	1.73	1.79	TR13	11.80	5.25	7.50	6.90	0.60	4.50	2.70	39.25	No	Large back-to-back storm cells homogeneously distributed over the service area (characteristic of a 2-year return period). The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-033	5/4/17 3:45	5/7/17 9:30	77:45:00	1.99	3.22	TR14	10.30	5.70	10.95	3.90	1.20	4.15	2.20	38.40	No	Large storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2. SWOR2 was controlled manually in part.
2017-037	5/19/17 18:05	5/22/17 4:15	58:10:00	1.38	1.82	TR04	10.40	5.45	6.95	9.00	1.00	6.00	3.30	42.10	No	Large back-to-back storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-038	5/24/17 10:15	5/27/17 2:10	63:55:00	0.81	1.18	TR15	6.70	3.10	2.50	3.75	0.85	4.00	0.55	21.45	No	Moderate storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.

Figure 2.2. Wet Weather Storage in the Morris Forman Sewer System via the RTC System

Louisville/Jefferson County Metropolitan Sewer District

WET WEATHER STORAGE IN THE MORRIS FORMAN SEWER SYSTEM AS MANAGED BY THE RTC SYSTEM

Period	
From:	07/01/2016
To:	06/30/2017

Event Number	Wet Weather Event			Rainfall			CSO Saved Volume (MG)								High River Levels	Comments
	Start Date	End Date	Duration	Average* TRFD (in)	Max** TRFD (in)	Max** Rain Gauge	SWPS SG Chamber (7.7)+	SWOR2 (7.5)	Brady Lake and Executive Inn Storage (13.4)	Southern Outfall (3.5)	Ashland (1.0)	Ohio River Interceptor (4.1)	Sneads Branch (2.5)	Total (46.5)		
2017-040	6/5/17 1:50	6/6/17 3:45	25:55:00	0.34	0.57	TR04	4.10	2.25	0.95	5.25	0.75	5.00	1.00	19.30	No	Moderate and back-to-back storm cells heterogeneously distributed over the service area. SWOR2 was controlled manually in part. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-041	6/12/17 12:50	6/12/17 21:35	8:45:00	0.14	0.50	TR15	1.70	0.50	0.10	0.70	0.05	2.55	0.00	5.60	No	Small storm cell heterogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-044	6/18/17 7:25	6/19/17 8:00	24:35:00	0.25	0.35	TR11	2.25	0.85	0.20	1.85	0.05	3.00	0.10	8.30	No	Small storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
2017-045	6/22/17 15:55	6/25/17 3:10	59:15:00	1.57	2.14	TR15	9.55	5.15	3.80	5.85	0.75	5.70	2.05	32.85	No	Large storm cells homogeneously distributed over the service area. The SWSG site was controlled manually. The storage capacity at the SWSG site is restricted due to the damaged Gate 2.
TOTAL							291.99	173.07	138.26	185.85	27.48	237.65	38.40	1092.70		

* Average total rainfall depth based on rain gauges TR04, TR05, TR11, TR12, TR13, TR14 and TR15.

** Maximum total rainfall depth measurement and where it was recorded during the wet weather event.

*** The MDS is always controlled manually by the operators.

+ The capacity has been restricted since April 1, 2016 due to the damaged Gate 2 at SWSG. Due to this restriction, capacity has been reduced from 14.5 MG to 7.7 MG. Prior to implementation of RTC, the site could store 5.5 MG.

- The upgraded NPS was placed in service and began operating under manual and local control. The upgraded facility provides an increased pumping capacity and 7.7 MG of below-grade storage.

FY18 Program

RTC Optimization

- Continue to work with the RTC consultant under the RTC Phase 3 Integration to review, revise and implement wet weather SOP changes. On-line and off-line testing of Csoft 4 and integrated InfoWorks hydraulic model will occur. Once testing is successfully complete, full integration in an automated mode under Csoft 4 will begin. The Operations Division will continue to implement operational set point control changes for individual components and then incorporate programming into the overall RTC system.
- Integrate new rain gauges deployed by MSD into the RTC system to improve flow prediction and weather forecasting capabilities.
- Finalize SOPs for the NPS, SWOR1, and SWPS sites to incorporate modifications to operations stemming from upgrades or the addition of new facilities. The revised SOPs for these sites will be implemented incrementally as related construction is completed and the facilities are placed in service, beginning with a period of manual operation to validate the control assumptions for each site, 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.
- Finalize SOPs for the Bells Lane Wet Weather Treatment Facility and the Logan Street and Breckenridge Street CSO Basin. As construction is completed and the facilities are placed in service, the SOPs will be implemented incrementally, starting with a period of manual operation to validate the control assumptions for each site, 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.
- Prepare preliminary SOPs for the Southwestern Parkway and the Clifton Heights CSO Basins. The SOPs for these sites will be implemented incrementally as related construction is completed and the facilities are placed in service, beginning with a period of manual operation to validate the control assumptions for each site, 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.

Storage Optimization

- CSO029, CSO036, CSO193, CSO195, CSO196, CSO198, CSO199, CSO201, CSO202 designs were added to the bid package of CSOs 178, 181 and 197 since MSD crews were shorthanded and unable to implement the dam raises. Construction is anticipated to be bid during the upcoming reporting period.
- Complete SWOR1/SWSG repairs. The gates and actuators for the Southwest Outfall sluice gate chamber have been delivered and the center gate has been installed. Installation of the north and south gates is expected to be completed by January 2018 after which the set point will be gradually increased utilizing a step-wise approach.

- Complete Southern Outfall Retention 1 (SOR1) in-line storage facility construction. Develop RTC programming and the preliminary SOP for the facility. Conduct start-up and begin operating the site under manual/local controls. Commissioning into the RTC system will occur after a period of manual and supervised operation during which operational assumptions will be validated and operational parameters will be tuned for the site. Once performance is deemed satisfactory, the site will be operated under increasing levels of system automation and be commissioned into the overall RTC system. Set points will be increased in a step wise approach to attain the optimal levels supporting the consent decree.

2.4. NMC 3: REVIEW AND MODIFICATION OF PRETREATMENT REQUIREMENTS

FY17 Program

- Completed FY17 NMC 3 Trunk Sewer Water Quality Data Collection in September 2016. Finalized pollutants of concern (POCs) and trunkline sewer data (contributory to CSOs) for FY17 Dry Weather Sampling Result Report. Reviewed and evaluated FY17 trunk sewer data against prior trunk sewer data to determine if changes in pollutants warrant review of contributory Non-Domestic Dischargers (NDDs). Determined POCs and trunkline sewer (contributory to CSOs) dry weather sampling strategy for FY18. Prepared a report to document the findings and recommendations resulting from sampling efforts.
- Continued to send wet weather alerts to NDDs of concern prior to rain events, reminding them of their commitment to implement voluntary controls during wet weather events. During this reporting period, the MSD service area experienced 104 measurable rain events and 18 events with only trace rainfall. MSD sent email notices to NDDs 53 times prior to precipitation events. The email notices contain information regarding expected precipitation expected for a one- to four-day period. There are currently seven NDDs that voluntarily implement controls during wet weather by alternating their cleaning schedule and/or by storing wastewater during a rain event.
- Continued to track performance measures to quantify the effectiveness of voluntary controls during wet weather events. The pollutant loading kept out of the CSS per typical rain event in previous fiscal years has been quantified with the data from the wet weather logs submitted by NDDs and is shown in Table 2.1. The typical results of pollutants kept out of the CSS when all NDDs participate are presented Table 2.2, quantified based on the actual rain events when NDDs detained their flow or otherwise reduced their discharge. One new industry (Diageo, PLC) joined the program when they started production during the reporting period.
- Continued to include specific NMC 3 related language as appropriate, in new and re-issued wastewater discharge permits to facilities located in the CSS, as well as in all Unusual Discharge Requests (UDRs) approved for discharge to the CSS. MSD re-issued 10 wastewater discharge permits to users discharging to or immediately upstream of the CSS. There were 42 UDRs processed for discharges to Morris Forman WQTC in FY17. The UDRs included 34 locations in the CSS and 8 locations in the SSS which ultimately discharge to Morris Forman WQTC. To avoid the risk of an overflow occurring, UDR permits contain standard condition requirements which restrict discharges into the collection system when wet weather conditions are expected.

- Conducted two NMC 3 site inspections at NDD facilities as part of the permit renewal process.
- Conducted twelve NMC 3 site inspections at Industrial User facilities not currently in the formal NMC #3 program as part of the initial permitting or permit renewal process. These facilities were found to have little to no impact during rain events. MSD elected not to request implementation of voluntary controls by these facilities at this time because of the limited benefit to be gained. MSD heightened the understanding of the CSS operation during wet weather for these industries during the inspections.
- Continued to include hold and release requirements in permits for all new industrial users in the combined sewer system and for existing industrial customers that expand production in the combined sewer system. The volume and duration of each hold and release requirement were determined through use of MSD's hydraulic model. MSD applied this requirement to two permits during the reporting period, and documented which permitted industries have 'hold and release' permit requirements.
- Continued to seek out green infrastructure opportunities at NDDs discharging to the CSS, and documented the permitted industries that use green infrastructure to reduce flow contributions during wet weather.
- Documented which NDDs have ceased operation during the reporting period.
- Began a review of improvements made to the combined sewer system infrastructure and their potential impact on the NMC 3 program. Updated CSS flows from the most recent calibrated hydraulic model.
- Conducted staff training on implementation of the NMC 3 program in January 2017.

FY18 Program

- Complete FY18 NMC 3 Trunk Sewer Water Quality Data Collection effort. Compare FY18 trunk sewer data against prior trunk sewer data to determine if changes in pollutants warrant review of contributory NDDs. Determine POCs, NDDs (based on historical data), and trunkline sewer (contributory to CSOs) for FY19. Review NDDs (based on historical data) to identify those that may be removed from the program, as well as any that may need to be added. Prepare a file report to document the findings and recommendations resulting from FY18 NMC 3 trunk sewer collection data.
- Continue to send wet weather alerts to NDDs of concern prior to rain events, reminding them of their commitment to implement voluntary controls during wet weather events.
- Continue to include specific NMC 3 related language as appropriate, in new and re-issued wastewater discharge permits to facilities located in the CSS, as well as in all Unusual Discharge Requests approved for discharge to the CSS.
- Conduct NMC 3 site inspections at Industrial User permitted facilities not currently in the formal NMC 3 program as part of the permit renewal process.
- Discuss NMC 3 program participation at each annual site inspection for Industrial Users who are currently in the NMC 3 program.

- Track performance measures to monitor the effectiveness of the implementation of NMC 3 within the Pretreatment Program.
- Review all new industrial users and existing industrial users with increased discharges in the combined sewer system to determine if hold and release requirements need to be added into their permits. Continue to document which permitted industries have hold and release permit requirements. Continue to document which permitted industries use green infrastructure to trade off for their 'hold and release' program.
- Document which NDDs have ceased operation and quantify the impact/reduction on CSS operation.
- Continue to review improvements made to the combined sewer system infrastructure and their potential impact on the NMC 3 program. Consider updated flows from the most recent calibrated hydraulic model. Some CSS improvements may result in changes to the ongoing NMC 3 program. Document the changes and impacts in a memo to the file.

Table 2.1 Typical Pollutants Kept Out of the CSS per Rain Event [1]

FISCAL YEAR	NUMBER OF NDDS PARTICIPATING[2]	VOLUME (GAL)	BOD (LBS)	TSS (LBS)
FY11	9	139,000	4,310	2,490
FY12	9	110,000	3,910	1,690
FY13	8	170,000	5,430	3,370
FY14	7	170,000	5,500	4,060
FY15	7	235,000	6,830	5,770
FY16	6	239,000	7,190	6,220
FY17	7	255,000	7,950	6,850

[1] When all NDDs participate.
[2] Change due to NDD operational changes: Solae (FY13 - cessation); Kent Feed (FY14 - cessation); Canadian Harvest (FY16 - cessation); Diageo (FY17 - commencement).

Table 2.2 Total Quantity Pollutants Kept Out of the CSS

FISCAL YEAR	NUMBER OF WET WEATHER DAYS	VOLUME (GAL)	BOD (LBS)	TSS (LBS)
FY11	130	7,909,000	265,000	160,000
FY12	68	3,524,000	109,000	51,000
FY13	72	9,143,000	290,000	213,000
FY14	46	5,721,000	181,000	147,000
FY15	58	14,838,000	448,000	385,000
FY16	78	14,747,000	453,000	396,000
FY17	104	21,065,000	659,000	575,000

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

FY17 Program

Determined the proposed Capacity Calculator (developed to reflect results of secondary clarifier stress testing) and the algorithm developed to calculate flow under Sluice Gate 1 (SG-1) at the Main Diversion Structure into the RTC system should be on-hold until after the Morris Forman WQTC Headworks project and the Bells Lane Wet Weather Treatment Facility are in operation. Modifications will likely be made in early FY18, when the flow control system is automated.

Continued development of Effective Utility Management (EUM) performance measures for treatment parameters. Five measures related to treatment effectiveness were identified and tracking has begun on each measure.

The following provides an update on projects underway during the reporting period:

- Bells Lane Wet Weather Treatment Facility – The project has been under construction during this period and is scheduled to be completed during the upcoming reporting period. Since December 2015, MSD has coordinated with EPA and KDOW on the status of this project, including delay causes and strategies for expediting the schedule. A letter was submitted to EPA on September 28, 2016, requesting a minor modification to the project to extend the Consent Decree deadline from December 31, 2016, to September 30, 2017 due to the construction delays caused by weather and permitting issues with CSX Railroad. Approval for the extension was granted on November 3, 2016. MSD and Hall Contracting held biweekly coordination meetings to take necessary steps to have the project substantially operational by September 30, 2017. The project will be completed in the upcoming reporting period.
- Morris Forman WQTC Headworks – The project continued construction in FY17. The bar screens, grit removal equipment and other miscellaneous equipment have been replaced in both the East and West Headworks. MSD is targeting this project for completion before the commissioning of the major off-line storage basins, in anticipation of increased grit and screenings loading to the Morris Forman WQTC when the new storage basins are cleaned following wet weather events.
- Electrical High-Yard Modification – This project replaced the existing electrical High Yard improving electrical distribution for Morris Forman WQTC. The project is substantially complete.
- Final Effluent Pump Station (FEPS) Generator – This project supplies temporary electrical power for one of the FEPS pumps during a power failure. The project began construction in FY16. The new generator has been installed and tested.
- Oxygen Generation – This project was completed during this reporting period.
- Wet Cake Pump – This project provides a backup to the dewatered biosolids cake screw conveyor. The project is complete.
- Condenser Upgrades – This project upgrades the condenser units in the sludge drying process. This project is complete.

- Centrifuge Backdrive Controls – This project helps to improve reliability of the centrifuges. The project is 80% complete.

FY18 Program

- Track performance on each of the five EUM measures.
- The following describes plans for work on Projects in FY18:
  - Bells Lane Wet Weather Treatment Facility – The project is scheduled to be substantially operational during the upcoming reporting period with final completion anticipated in the 2nd quarter.
  - Morris Forman WQTC Headworks – The project is substantially operational during this period with final completion anticipated in the 2nd quarter.
  - Electrical High-Yard Modification – The project was completed 1st quarter.
  - FEPS Generator – The project is scheduled to be completed in the 2nd quarter.

2.5.1 MORRIS FORMAN WATER QUALITY TREATMENT CENTER

FY17 Program

Flows

Continued to maximize flow to the Morris Forman WQTC. Charts that compare plant flow at the Morris Forman WQTC during the reporting period with the occurrence of CSOs at the Main Diversion Structure and the Southwestern Pump Station have been previously included in Consent Decree quarterly reports. Refer to Figure 2.3 for location of the CSOs relative to the WQTC.

Figure 2.3. Morris Forman WQTC and CSO Locations

Outages

- To facilitate return activated sludge (RAS) line replacement, 40% of the secondary capacity (one high purity oxygen reactor) was removed from service in two stages. During rain events in September, Morris Forman WQTC was limited to wet weather flows of 100 MGD through the secondary treatment process. Total plant capacity was 160 MGD due to the Headworks construction work described previously.
- The Morris Forman Headworks Replacement Project continued. The West Headworks Channels were taken out of service in the first quarter to replace the bar screens and grit channel aeration and grit removal equipment.

The West Headworks was returned to service in November 2016. Contractors continued work on channels 3 and 4 in the East Headworks. Channels 3 and 4 in the East Headworks were put back into service with Channels 1 and 2 being taken out of service near the end of the reporting period for construction.

- FEPS was in service 52 days of the third quarter and 28 days of the fourth quarter of the reporting period. Plant capacity was 185 MGD while FEPS was in service.

Violations

- In September 2016, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) Limits.
- In October 2016, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) Limits and percent removal for TSS.
- In November 2016, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) and Biochemical Oxygen Demand (BOD) Limits.
- In December 2016, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) limits, the Seven and 30 Day Secondary Effluent Biochemical Oxygen Demand (BOD) limits, and percent removal for TSS.
- In January 2017, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) limits and the Seven and 30 Day Secondary Effluent Biochemical Oxygen Demand (BOD) limits.
- In February 2017, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) limits, the Seven and 30 Day Secondary Effluent Biochemical Oxygen Demand (BOD) limits, and percent removal for TSS.
- In March 2017, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent Total Suspended Solids (TSS) limits and the Seven and 30 Day Secondary Effluent Biochemical Oxygen Demand (BOD) limits.
- In April 2017, Morris Forman WQTC did not meet the Seven and 30 Day Secondary Effluent TSS limits.
- In May and June, 2017, all effluent parameters were met.

FY18 Program

The FY18 program for the Morris Forman WQTC is as described previously under Section 2.5.

2.5.2 WET WEATHER CAPTURE

Over the past several years, the long term trend continues to show that MSD has increased the amount of wet weather flow treated at the Morris Forman WQTC. The wet weather capture is the difference between the annual average flow treated and the base wastewater flow (defined in state regulations as the lowest monthly average day flow during the calendar year). CY17 (through June 30) shows a slight increase in base flow compared to CY16, as seen in Figure 2.4. Overall, the long term base flow trend is dropping slightly, reflective

of a trend toward lower per capita water use as identified by the Louisville Water Company records, and also some loss of customers in the industrial/commercial and residential customer base in the Morris Forman WQTC service area. The long-term trend shown in Figure 2.4 confirms that while individual year data is highly variable due to weather impacts, the long-term trend in wet weather capture continues to increase. The increasing trend in wet weather capture is largely attributed to a combination of capital improvements at the Morris Forman WQTC, development of wet weather operational procedures, and implementation of RTC facilities in the CSS.

The long term trend in the peak daily flow treated at the Morris Forman WQTC also shows improvement, as shown in Figure 2.5. Each data point represents the maximum daily flow treated during the year. Although the instantaneous peak hydraulic capacity of the Morris Forman WQTC is 350 MGD, the sustained flow that can be treated on a daily basis is governed by a number of other factors, including the performance of the biological treatment processes. While individual years are highly variable due to weather impacts, the long-term trend continues to be up. Factors contributing to this long-term positive trend are implementation of the new wet weather SOP and better wet weather process control at the Morris Forman WQTC. However, CY16 and CY17 show decreases in peak daily flow, as recent repair work has reduced the ability of the plant to operate at high flow for extended periods. MSD is currently evaluating whether additional work needs to be performed in order to treat elevated flows for a longer period of time without jeopardizing permit compliance.

Figure 2.4. Morris Forman WQTC Wet Weather Capture Trend

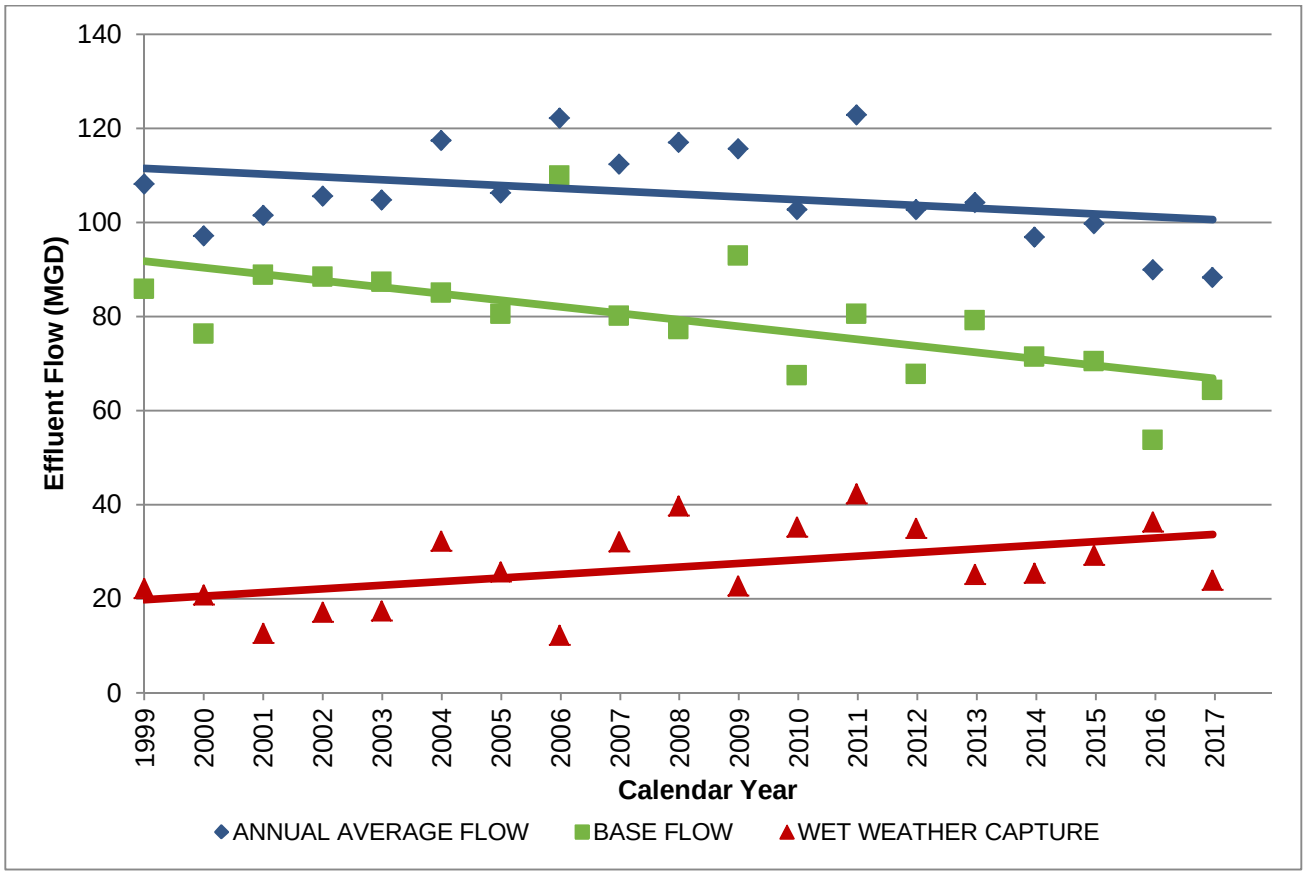
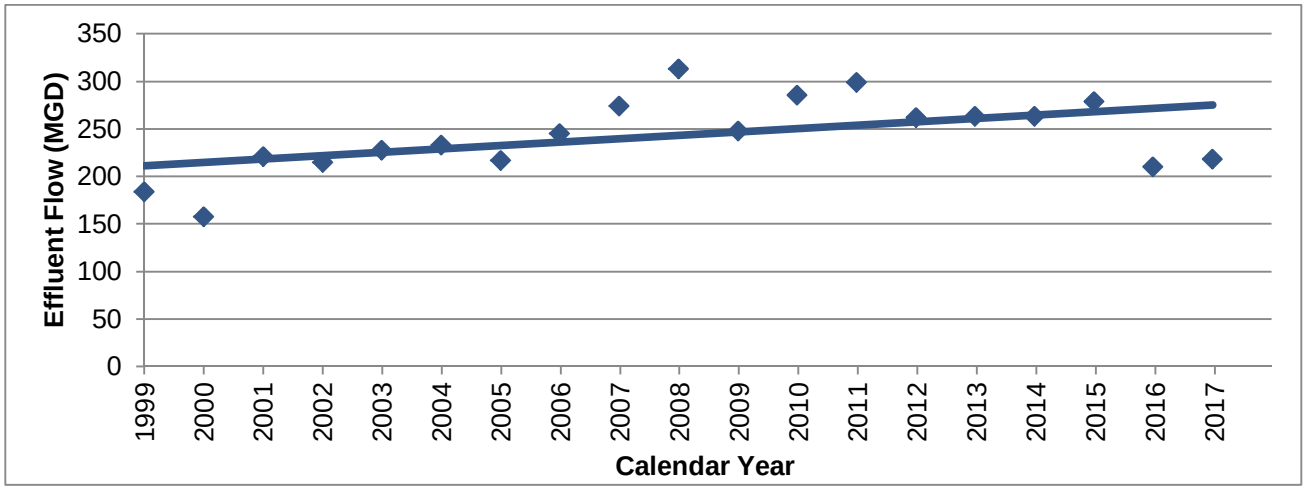


Figure 2.5. Morris Forman WQTC Peak Daily Flow



2.6. NMC 5: ELIMINATION OF COMBINED SEWER OVERFLOWS DURING DRY WEATHER

FY17 Program

Flood Pump Stations

- Continued updates of the U.S. Army Corps of Engineers (USACE) Flood Operations and Maintenance Manual to reflect changes in operations that have occurred with the IOAP projects and operational SOP improvements. This will be an ongoing task until all the projects in the IOAP are completed and an ongoing task as NMC programmatic activities are completed.
- Monitored Flood Pump Stations (FPSs) for opportunities to pump trapped flow back into the combined sanitary sewer system to avoid dry weather overflows as a result of operation of the flood protection system from the 34th Street, Starkey and 4th Street FPSs.

Asset Analysis

- Performed the quarterly evaluation of dry weather unauthorized discharges to the WUS, with emphasis on the CSS, to determine causes and to determine if there is a need for corrective activities. The recommendation delivered from the inspection included continued interaction with the Louisville Water Company on response to water main breaks.
- Initiated design of source control at all upstream catch basins to address clogging of the siphon downstream of CSO153.
- Performed inspection and cleaning of Fats, Oils and Grease (FOG) hotspots within the CSS, in accordance with CMOM commitments.

FY18 Program

Flood Pump Stations

- Continue to implement additional operational modifications at FPSs within the CSS to prevent dry weather overflows. Discussions with the USACE to continue regarding proposed modifications to these pumping stations that will minimize dry weather CSOs due to high river levels. This will be an ongoing activity until all the IOAP projects are completed and as staff implements programmatic NMC activities.
- Continue to review SOPs for the FPSs to reflect ongoing operational changes that occur as capital projects and NMC programmatic activities are completed.

Asset Analysis

- Perform a quarterly evaluation of dry weather overflows to the WUS, with emphasis on the CSS, to determine causes and to determine if there is a need for corrective activities.
- Perform inspection and cleaning of FOG hotspots within the CSS, in accordance with CMOM commitments.
- Complete design of source control at all upstream catch basins to address clogging of the siphon downstream of CSO153.

2.7. NMC 6: CONTROL OF SOLIDS AND FLOATABLE MATERIALS IN COMBINED SEWER OVERFLOWS

FY17 Program

- Continued to monitor and document performance of the CSO108 Solids & Floatables (S&F) Control Continuous Deflection Separator (CDS) operation in accordance with the Memorandum of Understanding (MOU) with the Kentucky Nature Preserve. Copies of the semi-annual CSO108 efficacy report are provided in quarterly reports for the reporting period (January and July).
- Continued to review new S&F technologies for potential incorporation into the program.
- Continued inspection and maintenance procedures for the S&F structures as part of the weekly CSO inspections and PM cleaning routines, outlined under NMC #1. During the reporting period, 613 work orders were issued for debris removal at the S&F structures.
- Constructed a spring-loaded bending weir at CSO023.
- CSO190 was evaluated and a dam raise was recommended and designed.
- Bending weirs and the associated S&F controls were designed for CSOs 178 and 181, to be bid as a part of the Central Relief Drain CSO In-Line Storage, Green Infrastructure, and Distributed Storage project. Designs for CSOs 029, 036, 193, 195, 196, 198, 199, 201, and 202 modifications were added to the bid package.
- CSO197 dam raise and S&F controls designs were completed in FY17.

- Continued working with staff to determine the quantity of debris and floatables captured by street sweeping, catch basin cleaning, at the Headworks of the Morris Forman WQTC, and at the end of line S&F controls. Reports have been developed to capture the amount of material removed through catch basin cleaning and at the end of the line S&F controls. Results for the reporting period are shown in Table 2.3 and Figure 2.6. At this time, S&F capture at the headworks of Morris Forman WQTC is not as high as in previous years, likely due to a combination of variables, including the Morris Forman WQTC Headworks project and ongoing recovery efforts related to failure of the high yard on April 8, 2015, as well as unusually dry periods of weather.

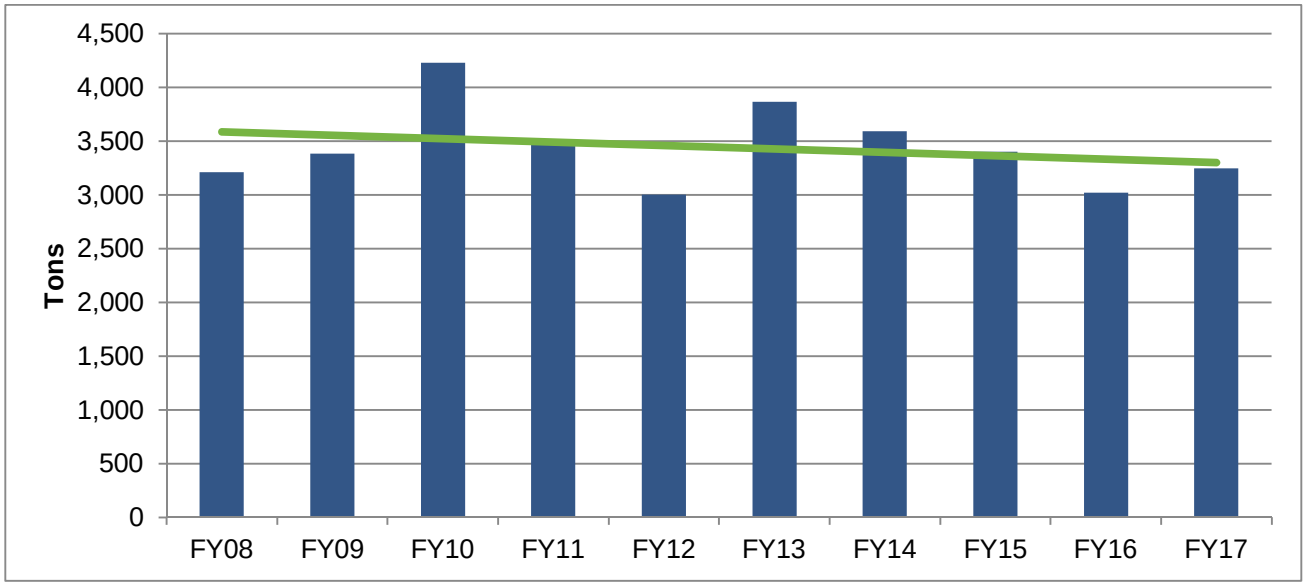
FY18 Program

- Review and refine S&F control operations and maintenance training and administer to appropriate staff.
- Evaluate S&F control configuration at CSO016.
- Complete construction of CSO190 modifications.
- Advertise and bid Central Relief Drain CSO In-Line Storage, Green Infrastructure, and Distributed Storage project, including CSO modifications. Perform additional evaluation of upstream conditions on all dam raises to determine if any basements are at risk for flooding on all CSOs with dam raises.
- Continue to monitor and document performance of the CSO108 S&F structure operation in accordance with the MOU with the Kentucky Nature Preserve by MSD Crews. Reports will be submitted on December 31, 2017, and June 30, 2018.
- Track the volume of S&F materials removed from the CSS.

Table 2.3. Debris Removed from System

ACTIVITY / LOCATION	APPROXIMATE AMOUNT OF DEBRIS REMOVED
Catch Basin and Sewer Cleaning	2,270 CY
Street Sweeping	1,309 tons
Morris Forman WQTC Headworks	3,202 tons

Figure 2.6. Solids and Floatables Capture at Morris Forman WQTC



2.8. NMC 7: POLLUTION PREVENTION PROGRAMS TO REDUCE CONTAMINANTS IN COMBINED SEWER OVERFLOWS

FY17 Program

- Continued coordination of activities performed by Louisville Metro, such as street sweeping, Operation Brightside (trash and litter clean-up), and other Metro pollution prevention programs.
- Continued administration of the Hazardous Materials Ordinance, which requires users with hazardous materials on site to submit a spill prevention and control plan. Continued response to spills of hazardous materials and incidents involving discharges to the sewer system and provided spill mitigation kits to the Louisville Metro Fire Department to use to absorb vehicle fluids rather than flushing to the sewer.
- Continued administration of the Erosion Prevention and Sediment Control Ordinance (EPSC). Continued use of a tracking system for EPSC Notices of Violation (NOVs) and Field Correction Notices (FCNs) within the CSS.
- Continued issuance of Wastewater Discharge Permits under the Industrial Pretreatment Program.
- Participated in the Mayor's Give-A-Day week of service on April 17, 2017, and April 19, 2017, to perform cleanup along Beargrass Creek, in close proximity to several CSOs.
- Participated in the Annual Ohio River Sweep on June 17, 2017.
- Promoted Green Infrastructure initiatives within Jefferson County, such as guidance on downspout disconnection and rain garden installation.
- Led an informational session on residential rain garden construction at the Louisville Free Public Library's How-To Festival on May 13, 2017.

- Led a rain garden workshop at Maupin Elementary School on April 19, 2017.
- Continued to prepare and distribute informational pieces, targeted to inform customers and residents on activities that can be practiced within their homes to assist in the reduction of overflows within the collections system.
- Continued to enhance and train on Stormwater Pollution Prevention Plans (SWPPPs) for the WQTCs, major pump stations, and the Central Maintenance Facility.
- Distributed literature to Significant Industrial Users on best management practices for prevention of pollution.
- Continued enhancement of the framework for the IOAP green infrastructure program tracking in Hansen.
- Utilized and distributed the rain garden handbook to Louisville Metro agencies and to the public in order to encourage green infrastructure.

FY18 Program

- Utilize and distribute the rain garden handbook to Louisville Metro agencies and to the public in order to encourage green infrastructure.
- Continue to track green infrastructure projects and initiatives in Hansen and SharePoint.
- Continue to track EPSC NOVs and FCNs within the CSS.
- Continue to prepare and distribute informational pieces, targeted to inform customers and residents on activities that can be practiced within their homes to assist in the reduction of overflows within the collection system.

2.9. NMC 8: PUBLIC NOTIFICATION

Refer to Section 5: Public Outreach, Education, Notification and Participation for information regarding public notification.

2.10. NMC 9: MONITORING TO CHARACTERIZE COMBINED SEWER OVERFLOW IMPACTS AND THE EFFICACY OF COMBINED SEWER OVERFLOW CONTROLS

Refer to Section 4.5 for information regarding system monitoring.

2.11. 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 2.7.

Figure 2.7. NMC Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
	MSD NMC Annual Commitments Schedule (FY2017-2018)	54%	11/12/2014	7/1/2022
D15017	MFWQTC Centrifuge Elec Controls	95%	11/12/2014	12/31/2018
D15017	CONSTRUCTION	95%	10/1/2015	12/29/2017
D15017	CLOSEOUT	0%	8/1/2017	12/28/2018
F13017	MFWQTC MEB AC REPAIR	100%	12/1/2014	10/2/2017
F13017	DESIGN	100%	4/20/2015	10/14/2016
F13017	CLOSEOUT	100%	10/28/2016	10/2/2017
F14179	MFWQTC Wet Cake Pump	100%	4/21/2015	8/30/2017
F14179	CONSTRUCTION	100%	4/21/2015	4/21/2015
F14179	CLOSEOUT	100%	4/21/2015	5/3/2017
D15016	MFWQTC Biotower Repairs	20%	6/1/2015	2/27/2020
D15016	INITIATION & PROCUREMENT	100%	6/1/2015	9/1/2017
D15016	CLOSEOUT	0%	6/1/2015	2/27/2020
F14183	MFWQTC FEPS Generator	92%	6/5/2015	1/31/2019
F14183	CONSTRUCTION	94%	6/5/2015	12/20/2017
F14183	CLOSEOUT	0%	10/2/2017	1/31/2019
F13016	MF High Yard Modification	94%	7/2/2015	7/17/2018
F13016	CONSTRUCTION	94%	7/2/2015	7/31/2017
F13016	CLOSEOUT	0%	8/1/2017	7/17/2018
F09510	MF OGA Plants 1 and 2 Replacement	80%	9/14/2015	12/24/2018
F09510	CONSTRUCTION	87%	12/1/2015	12/18/2017
F09510	CLOSEOUT	0%	11/20/2017	12/24/2018
F13041	Vactor Pit	80%	11/1/2015	12/18/2018
F13041	DESIGN	100%	11/1/2015	9/27/2016
F13041	CONSTRUCTION	68%	9/29/2016	12/29/2017
F13041	CLOSEOUT	0%	1/1/2018	12/18/2018
D16311	MFWQTC Access Platforms	100%	1/1/2016	3/8/2018

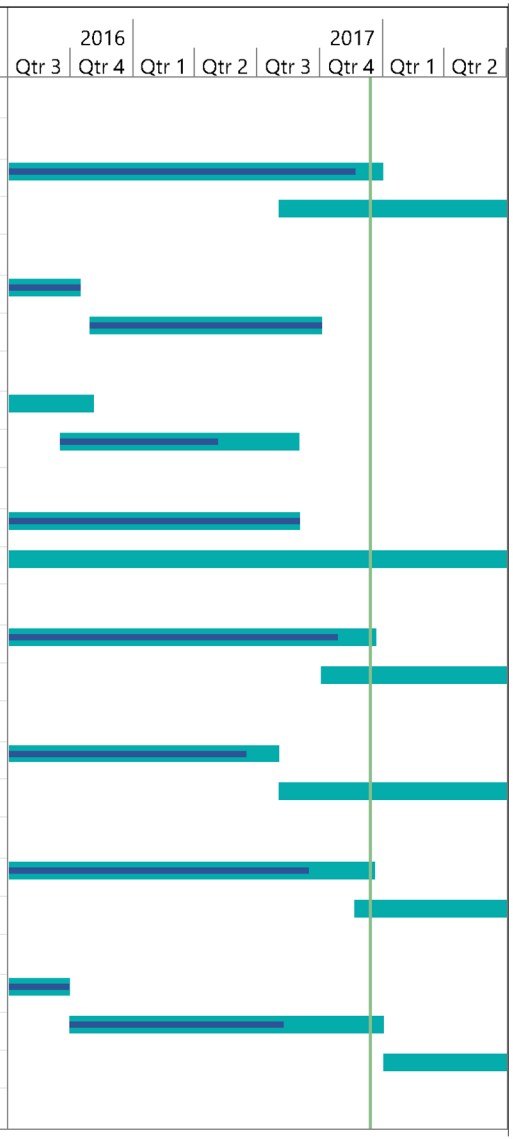


Figure 2.7. NMC Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
D16311	CONSTRUCTION	100%	1/1/2016	2/26/2017
D16311	CLOSEOUT	100%	2/26/2017	3/8/2018
H16076	Sneads Branch Pump Replacement	52%	4/1/2016	11/10/2017
H16076	DESIGN	47%	4/25/2016	11/6/2017
H16076	CLOSEOUT	0%	11/6/2017	11/10/2017
F13015	FY17 ASP Upgrades	95%	7/1/2016	6/29/2018
F13015	INITIATION & PROCUREMENT	100%	7/1/2016	7/1/2016
F13015	CLOSEOUT	95%	6/29/2018	6/29/2018
H14064	FY17 NMC	2%	7/1/2016	6/30/2017
H14064	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
H14064	CLOSEOUT	0%	7/1/2016	6/30/2017
H17005	RTC Support	25%	7/1/2016	7/1/2022
H17005	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
H17005	CLOSEOUT	25%	7/1/2016	7/1/2022
F17148	FY17 Controls Technical Support	2%	8/1/2016	6/30/2017
F17148	INITIATION & PROCUREMENT	20%	8/1/2016	9/2/2016
F17148	CLOSEOUT	0%	9/5/2016	6/30/2017
A17086	FY17 Priv Prop Initiatives and CSO IOAP DES	100%	9/30/2016	9/7/2017
A17086	CLOSEOUT	100%	9/30/2016	8/31/2017
A17086	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H14084	FY17 System Monitoring Sewer Flow and Rain	68%	7/1/2017	1/1/2018
H14084	INITIATION & PROCUREMENT	100%	7/1/2017	7/6/2017
H14084	CLOSEOUT	68%	7/1/2017	1/1/2018
H14084	CONSTRUCTION	0%	1/1/2018	1/1/2018
H18177	FY18 Controls Support	1%	9/1/2017	6/30/2018
H18177	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H18177	CLOSEOUT	0%	9/1/2017	6/30/2018

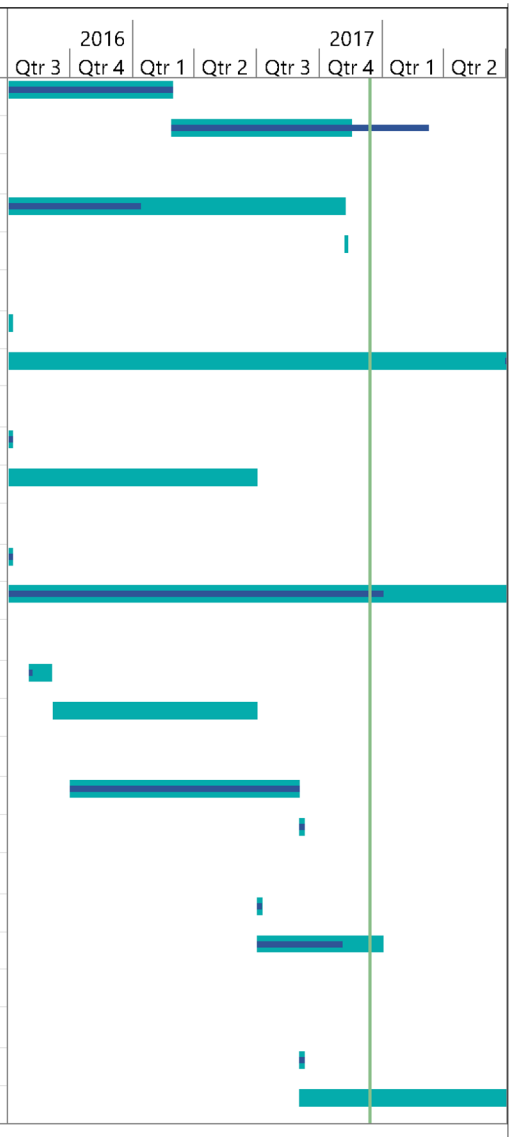
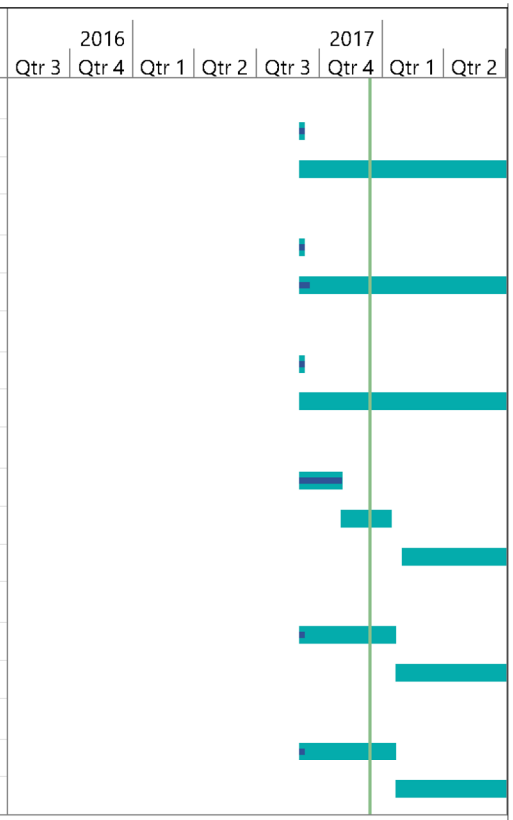


Figure 2.7. NMC Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
H18215	FY18 Local Limits for CCWQTC	2%	9/1/2017	6/30/2018
H18215	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H18215	CLOSEOUT	0%	9/1/2017	6/30/2018
H14065	FY18 NMC	84%	9/1/2017	6/30/2018
H14065	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H14065	CLOSEOUT	5%	9/1/2017	6/30/2018
H18214	FY18 NMC No 3 Support	1%	9/1/2017	6/30/2018
H18214	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H18214	CLOSEOUT	0%	9/1/2017	6/30/2018
D17047	MF Brady Lake and Executive Inn Gate Study	0%	9/1/2017	10/18/2019
D17047	INITIATION & PROCUREMENT	99%	9/1/2017	11/1/2017
D17047	DESIGN	0%	11/1/2017	1/12/2018
D17047	CONSTRUCTION	0%	1/29/2018	10/19/2018
D17044	MF Nightingale CSO 018 Gate Study	0%	9/1/2017	8/25/2021
D17044	INITIATION & PROCUREMENT	5%	9/1/2017	1/19/2018
D17044	DESIGN	0%	1/22/2018	7/12/2019
D18116	MFWQTC Biosolids Replacement Alternatives	0%	9/1/2017	9/1/2021
D18116	INITIATION & PROCUREMENT	5%	9/1/2017	1/19/2018
D18116	DESIGN	0%	1/19/2018	7/12/2019



SECTION 3: PROGRAM ACTIVITIES FOR SEWER OVERFLOW RESPONSE PROTOCOL

3.1. SEWER OVERFLOW RESPONSE PROTOCOL PROGRAM BACKGROUND

Per Paragraph 24.d. of the Amended Consent Decree, MSD initially submitted the Sewer Overflow Response Protocol (SORP) to the Environmental Protection Agency (EPA) and Kentucky Department of Environmental Protection (KDEP) on February 10, 2006, and received comments on March 13, 2006. MSD resubmitted the revised SORP on May 12, 2006, and received an approval letter for the SORP on August 22, 2006. The most recent version is dated February 12, 2012. The approved SORP document can be viewed on the MSD Project WIN website, available at **www.msdlouky.org/projectwin**. The following activities were performed during the reporting period.

3.2. OVERFLOW MANAGEMENT AND FIELD DOCUMENTATION

FY17 Program

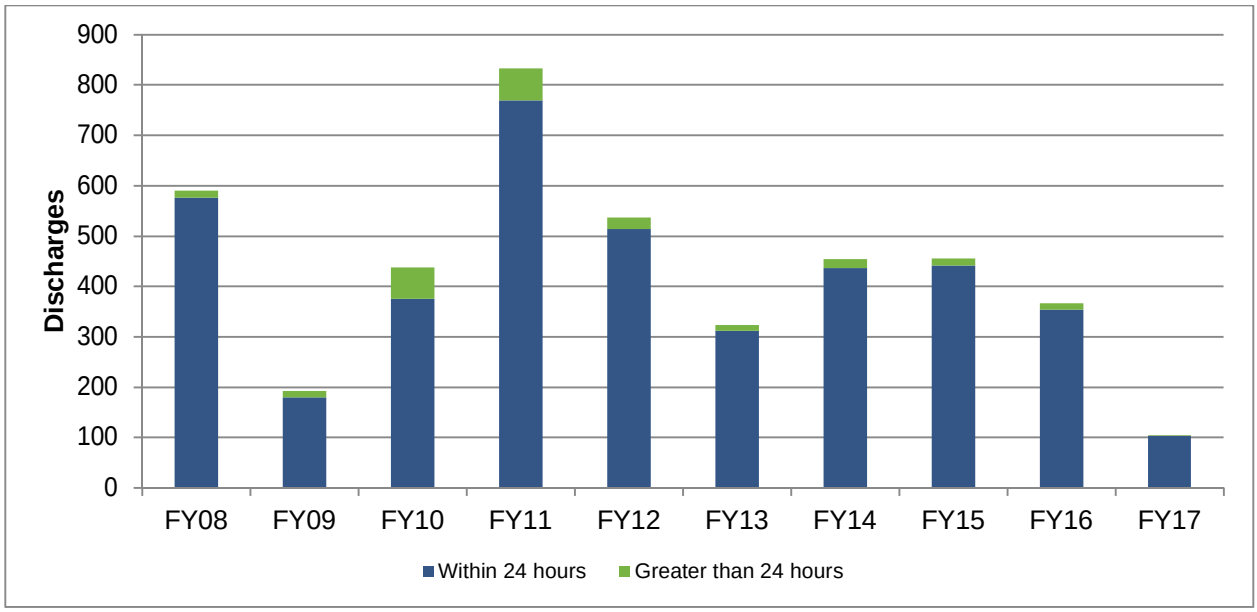
- Documented a total of 105 overflows and unauthorized discharges to waters of the US (WUS) during the reporting period. The charts pertaining to discharges in Section 1.1.2 show these overflows broken down by result, problem, and asset type. Interior overflows are from MSD main line issues only, and do not include those that are the result of a problem on MSD's portion of the lateral. In addition, any interior overflow that is caused by a private property matter is also excluded from reporting.
- Reported 104 of the 105 overflows that reached the WUS (99.0%) within 24 hours as shown in Figure 3.1.
- Reported 5 of the 105 overflows that reached the WUS (4.9%) as a Bypass event that included a required additional 5-day written report.
- Reported 8 of the 29 dry weather overflows (27.6%), each with a volume between 1,000 and 50,000 gallons.
- Reported 5 of the 29 dry weather overflows (17.2%), each with a volume greater than 50,000 gallons.
- Submitted revised SORP Implementation Manual August 22, 2016. Submittal was approved July 21, 2017.
- Continued daily, monthly and quarterly reviews with staff from MSD Operations and MSD Engineering Divisions.
- Continued to monitor SSO sites, which have been grouped into routes based on the range of rainfall rates necessary to cause an SSO. These routes were monitored during rain events depending on the magnitude and location of the storm. If an overflow was observed, a discharge work order was created to document the event. MSD staff executed a total of 2,068 wet weather inspections on a total of 16 days, and documented 60 unauthorized discharges (2.9%) through route reconnaissance.

- Continued to monitor over 300 sites via telemetry. There was one site where sewage was routinely (3 or more times per year) hauled from pump stations to prevent overflows during rain events depending on the magnitude and location of the storm. Due to capacity issues, MSD staff hauled over 104,800 gallons of sewage. It should be noted that this value is greater than previously reported in the quarterly reports, due to late invoicing by the hauling contractor.

FY18 Program

- Continue to monitor data, train staff and update information as needed.
- Continue to monitor over 300 sites via telemetry.
- Continue to haul to prevent overflows and backups during rain events until system improvements are completed.
- Continue to monitor documented collections system SSO sites, which have been grouped into routes based on the range of rainfall rates necessary to cause a SSO.
- Continue the daily, monthly and quarterly data reviews with staff from Engineering and Operations Divisions to ensure accuracy and consistency in reporting.
- Schedule additional field reviews of SORP procedures after rain events to both ensure successful implementation and to assist with the annual SORP overall review.

Figure 3.1. Reporting Timeframe for Unauthorized Discharges to Waters of the US



3.3. REGULATORY REPORTING AND DATA MANAGEMENT

FY17 Program

- Conducted monthly meetings with staff to perform quality control on discharge work orders.
- Conducted a monthly review of the discharge work orders and updated the associated assets in Hansen as needed.
- Performed a detailed review and trend analysis on the discharge data, incorporated the findings into the quarterly SORP training and the quarterly reports.

FY18 Program

- Continue to perform quality control on discharge work orders with appropriate staff.
- Update assets in Hansen when new overflow locations are identified.
- Continue to review the overflow data for trends. These trends are discussed with staff in the Quarterly SORP training and documented in the Quarterly Reports.

3.4. STAFF TRAINING AND COMMUNICATION

FY17 Program

- Facilitated SORP Quarterly and Annual Training as detailed in Table 3.1. Updated the modules for each of the quarterly SORP training prior to each session.

Table 3.1. SORP Training Schedule and Attendance

KEY LEARNING OBJECTIVE	MONTHS	CLASSES	STAFF TRAINED
Clean Up & Public Notification	July - September	13	243
Annual Overview and Overflow Field Documentation	October - December	21	579
Monitoring, Staging, Reconnaissance and Mobilization	January - March	13	250
Control Zones, Mitigation & Volume Estimation	April - June	13	252

FY18 Program

- Launch a new online training delivery system to allow more flexibility for employees to complete training at convenient times during the quarter and to integrate SORP training with new employee and contractor orientation. The existing training program is being reviewed, updated, and repackaged into an enhanced online format. Modules will also be developed to provide continued updates related to progress under the IOAP and projects under the CMOM and NMC programs on a quarterly basis, as well as CSO and SSO abatement and annual trends on an annual basis. Schedule SORP Quarterly and Annual Training as described in Table 3.2.
- Continue to review and update the data associated with overflows.

Table 3.2. Projected SORP Training Schedule

KEY LEARNING OBJECTIVE	MONTHS
Public Notification & Overflow Cleanup	July - September
Reporting & Follow-up	October - December
Annual Overview & Update (CY17)	October - December
Annual Overview & Update (CY18)	January - December
Preparing for Overflows, Monitoring, & Mobilization	January - March
Assessment, Mitigation, & Documentation	April - June

3.5. ANNUAL PROGRAM REVIEW

FY17 Program

- Completed the annual SORP document review in August 2016. Revised SSO routes removed references to Jeffersontown Blending and updated submittal information in the SORP document as part of the review.
- Reviewed and updated routes to include any new SSO locations.

FY18 Program

- Perform the annual SORP document review prior to August 2017. There are no major program updates anticipated at this time. Routes will be reviewed and updated to include any new SSO locations or changes in responsible MSD reporting departments.
- Send new SSO routes to EPA/KDEP by August 22, 2017. New routes will be published once approved by EPA/KDEP.

3.6. PUBLIC NOTIFICATION AND COMMUNICATION

Refer to Section 5: Public Outreach, Education, Notification and Participation for information regarding public notification.

SECTION 4: PROGRAM ACTIVITIES FOR DISCHARGE ABATEMENT PLANS

4.1. INTEGRATED OVERFLOW ABATEMENT PLAN

As a requirement of the Amended Consent Decree, per Paragraph 25, MSD is to prepare and submit, for review and approval, discharge abatement plans. These discharge abatement plans identify the plan for the elimination of unauthorized discharges from the separate sanitary sewer system and the combined sewer system (CSS), the reduction and control of discharges from the Combined Sewer Overflow (CSO) locations identified in the Morris Forman Water Quality Treatment Center (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 an Order signed February 12, 2010, that was entered into public record February 15, 2010.

MSD submitted an IOAP modification request to the Environmental Protection Agency (EPA) and Kentucky Department of Environmental Protection (KDEP) on September 20, 2012, with approval granted via certified letter on June 19, 2014. The modified project package, program descriptions and progress, and updated supporting text are included in the revised IOAP, submitted to EPA and KDEP on June 14, 2013. Minor project modifications have been submitted and approved since the 2014 approval of the 2012 IOAP Modification. A summary of these modifications is included in Table 4.1.

4.2. SANITARY SEWER DISCHARGE PLAN

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 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

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

4.2.3 FINAL SANITARY SEWER DISCHARGE PLAN

MSD submitted for approval a Final Sanitary Sewer Discharge Plan (SSDP) on December 19, 2008, as Volume 3 of the IOAP. The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, and was entered into public record February 15, 2010. A revised SSDP was included in the IOAP revision submitted June 14, 2013. On June 19, 2014, MSD received approval of the 2012 IOAP Modification from EPA / KDEP. Per paragraph 25.a.(3)C., the SSDP shall not extend beyond December 31, 2024. A listing of SSDP projects completed and certified during the reporting period, along with the entire schedule of projects, can be found in Section 4.4.

4.3. COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN

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

4.3.1 INTERIM COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN

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

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 COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN

MSD submitted for approval the Final CSO LTCP on December 19, 2008, as Volume 2 of the Integrated Overflow Abatement Plan (IOAP). The IOAP was accepted by the Federal Court and incorporated by reference into the Amended Consent Decree by an Order signed February 12, 2010, that was entered into public record February 15, 2010. Per paragraph 25.b.(2), completion of the Final CSO LTCP shall not extend beyond December 31, 2020. A listing of Final CSO LTCP projects completed and certified during the reporting period, along with the entire schedule of projects, can be found in Section 4.4.

4.3.3 GREEN DEMONSTRATION PROJECT UPDATE

The Final CSO LTCP (Volume 2 of the IOAP) included 19 green demonstration projects with schedules for completion in 2010 and 2011. The 19 green demonstration projects have been certified as complete.

Table 4.1. IOAP Project Minor Modifications

SUBMITTAL DATE	APPROVAL DATE	NEW PROJECT NAME	ORIGINAL PROJECT NAME	IOAP ID NUMBER	MODIFICATION DESCRIPTION
February 16, 2015	September 11, 2015	CSO190 Green Infrastructure Project	18th and Northwestern Parkway Storage Basin	L_SO_MF_190_S_09B_B_A_8	Green Infrastructure solutions for CSO190 replaced the storage basin at 18th and Northwestern Parkway.
February 16, 2015	September 11, 2015	Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	Chenoweth Hills WQTC Elimination and PS Improvements	S_JT_JT_NB01A_M_03_C	Project modification to construct new sewers and eliminate rather than upgrade Chenoweth Run and Chippewa Pump Stations
February 16, 2015	September 11, 2015	Goose Creek PS Phase 1 - Devondale Wet Weather Storage	Goose Creek PS Phase 1 - Devondale Wet Weather Storage	S_MI_MF_NB04_M_03_B	New sewer construction and a new Pump Station at Bancroft allowed for the elimination of both the Bancroft and Devondale WQTCs along with eliminating the need for wet weather storage
February 16, 2015	September 11, 2015	St. Rene Road Pump Station Elimination	St. Rene Road PS Inline Storage	S_FF_CH_NB01_S_09A_C_A	Elimination of the St. Rene Road Pump Station and diverting flow to the Cedar Creek WQTC replaced the in-line storage solution
February 16, 2015	September 11, 2015	Prospect #3 - ORFM System Improvements	Prospect #3 - ORFM System Improvements	S_OR_MF_NB04_M_03_B_B	Replaced in-line storage upstream of the Muddy Fork Pump Station with an offline covered storage basin
August 7, 2015	September 11, 2015	Southwestern Parkway Storage Basin	Southwestern Parkway Storage Basin	L_OR_MF_105_M_13_B_A_0	Increased basin size from 11.07 MG to 20 MG, with a level of control of 8 overflows per Typical Year and no net increase in AAOV
August 7, 2015	September 11, 2015	Portland Storage Basin	Portland Wharf Storage Basin	L_OR_MF_019_S_13_B_A_8	Increased basin size from 6.37 MG to 6.7 MG
August 7, 2015	September 11, 2015	Lexington Road and Payne Street Storage Basin	Lexington Road and Payne Street Storage Basin	L_OR_MF_083_M_09B_B_A_8	Increased basin size from 8.18 MG to 13.7 MG
August 7, 2015	September 11, 2015	Story Avenue and Main Street Storage Basin	Story Avenue and Main Street Storage Basin	L_OR_MF_020_S_09B_B_A_8	Increased basin size from 5.4 MG to 8.3 MG
August 7, 2015	September 11, 2015	13th Street and Rowan Street Storage Basin	13th Street and Rowan Street Storage Basin	L_OR_MF_155_M_09B_B_B_4	Increased basin size from 4.36 MG to 9.8 MG
December 21, 2015	January 11, 2016	Fairmount Road Pump Station Offline Storage Basin	Fairmount Road Pump Station Offline Storage Basin	S_FF_CC_81316_M_03_C_A	Change completion deadline from December 31, 2015 to March 31, 2016
September 28, 2016	November 3, 2016	Logan Street and Breckenridge Street CSO Basin	Logan Street and Breckenridge Street CSO Basin	L_SO_MF_092_M_09B_B_D_8	Change design from an at-grade basin with a building above to open space above the basin structure
September 28, 2016	November 3, 2016	Bells Lane Wet Weather Treatment Facility	Bells Lane Wet Weather Treatment Facility	L_OR_MF_015_M_13_B_B_8	Change completion deadline from December 31, 2016 to September 30, 2017
September 28, 2016	November 3, 2016	Nightingale Pump Station Replacement and Storage	Nightingale Pump Station Replacement and Storage	L_SO_MF_018_S_03_A_A	Change completion deadline from December 31, 2016 to June 30, 2017
September 28, 2016	November 3, 2016	Morris Forman WQTC Headworks	Southern Outfall Inline Storage (SOR2)	L_OR_MF_211_M_13_B_A_8	Elimination of SOR2 project and replace with flow control improvements at the Main Diversion Structure and rehabilitation of Morris Forman WQTC Headworks in order to increase maximum sustainable treatment capacity to 330 MGD
September 27, 2016, with administrative correction submitted on October 17, 2016	November 3, 2016	Ohio River Tunnel	13th Street and Rowan Street Storage Basin	L_OR_MF_155_M_09B_B_B_4	Revise design to a 31.8 MG tunnel solution that consolidates CSO controls for 13th Street and Rowan Street, Story Avenue and Main Street, and Lexington and Payne Street Storage Basins. Tunnel capacity will allow a level of control of eight overflows per Typical Year for 9 CSOs previously associated with 13th and Rowan. Weir raises at 3 CSOs will remain unchanged.
September 27, 2016, with administrative correction submitted on October 17, 2016	November 3, 2016	Ohio River Tunnel	Story Avenue and Main Street Storage Basin	L_OR_MF_020_S_09B_B_A_8	Revise design to a 31.8 MG tunnel solution that consolidates CSO controls for 13th Street and Rowan Street, Story Avenue and Main Street, and Lexington Road and Payne Street Storage Basins. Tunnel capacity will allow a level of control of eight overflows per Typical Year for the one CSO previously associated with Story and Main.
September 27, 2016, with administrative correction submitted on October 17, 2016	November 3, 2016	Ohio River Tunnel	Lexington Road and Payne Street Storage Basin	L_OR_MF_083_M_09B_B_A_8	Revise design to a 31.8 MG tunnel solution that consolidates CSO controls for 13th Street and Rowan Street, Story Avenue and Main Street, and Lexington Road and Payne Street Storage Basins. Tunnel capacity will allow a level of control of zero overflows per Typical Year for the nine CSOs previously associated with Lexington and Payne.

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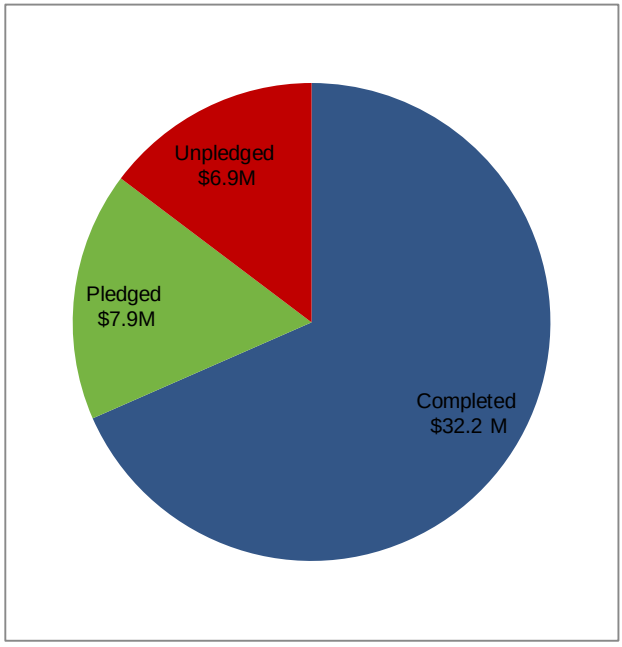
4.3.4 GREEN INFRASTRUCTURE PROGRAMMATIC ACTIVITIES

Figure 4.1 Green Infrastructure Spending

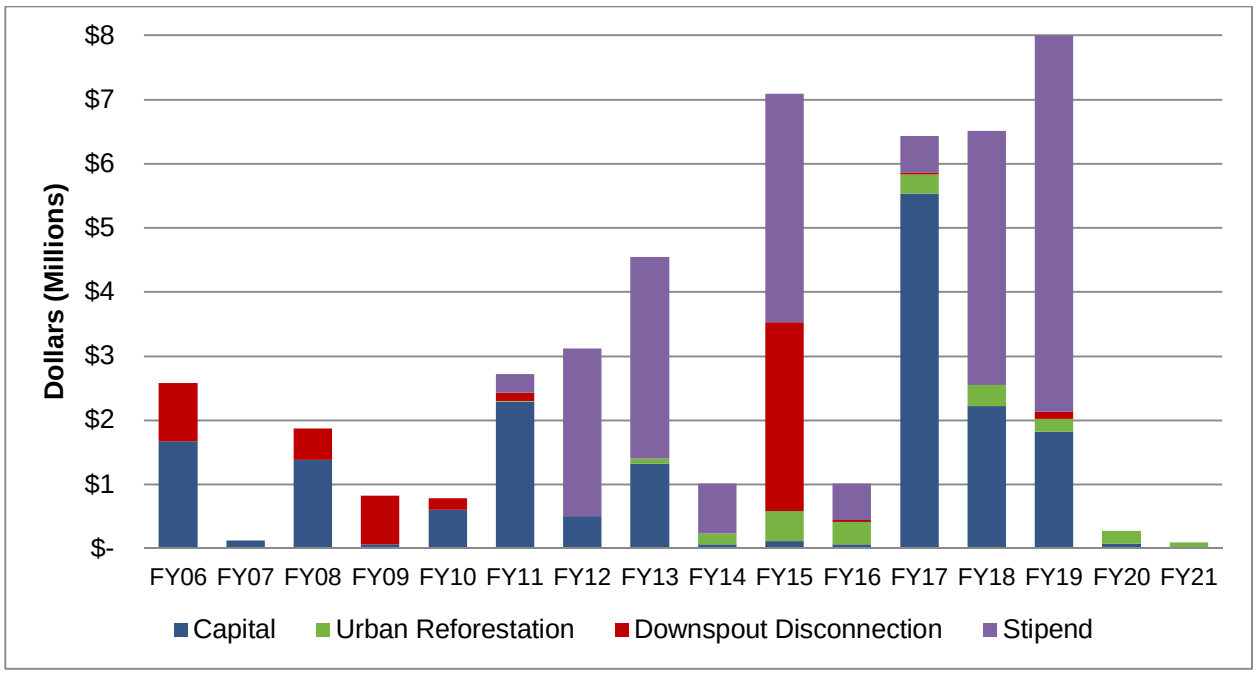


MSD allocated over $47 million for green infrastructure-related projects in the IOAP. As shown in Figure 4.1, MSD has spent $32.3 million, or 67.7%, of this commitment. Additionally, $7.9 million has been pledged to approved projects. The remaining $6.9 million, reported as unpledged, has been allocated for projects, but the final projects have not yet been approved. Figure 4.2 shows the types of projects where green infrastructure funding has been used or will be used prior to December 31, 2020.

FY17 Program

- Published updates to the Green Best Management Practice (BMP) manual.
- Maintained www.msdgreen.org, an MSD Green Infrastructure website intended to offer general information on green infrastructure.

Figure 4.2. Green Infrastructure Expenditures and Commitments



- Utilized a green tracking protocol for green infrastructure projects.
- Participated in Urban Heat Island workgroups under the guidance of Louisville Metro.
- Tracked and calculated the impacts of green infrastructure projects on stormwater capture and estimated overflow reductions.
- Continued the arrangement with EPA Office of Research and Development (ORD) to determine the performance of green infrastructure practices to determine most effective applications, maintenance cycles and areas with high potential for reduction of overflows.
- Supported a joint funding partnership with the Louisville Metro Office of Sustainability to further incentivize the construction of green infrastructure on private property.

FY18 Program

- Continue to participate in the Louisville Metro Sustainability Plan.
- Continue to track green infrastructure projects in Hansen and MSD's Geographic Information System (GIS).

4.4. DISCHARGE ABATEMENT PLAN PROJECT STATUS

4.4.1 PROJECT CERTIFICATION PROGRESS

This section addresses project certification progress for the current reporting period and required activities for the upcoming reporting period.

4.4.1.1. SANITARY SEWER DISCHARGE PLAN

Table 4.2 details SSDP projects completed and certified during the current reporting period, and Table 4.3 details SSDP projects required to be completed and certified during the next reporting period.

Table 4.2. FY17 IOAP Project Completion Dates – SSDP

BUDGET ID	ACD PROJECT NUMBER	PROJECT NAME	ACD DATE	CERTIFIED COMPLETION DATE
H10047	S_PO_WC_PC09_M_09B_C	Caven Avenue PS Elimination	December 31, 2016	September 26, 2016
H10045	S_MI_MF_NB06_M_01_A_A - 1	Anchor Estates- Anchor Estates PS 1 & 2 PS Eliminations	December 31, 2016	September 30, 2016
A12023	S_OR_MF_NB04_M_03_B_B	Prospect #3 - ORFM System Improvements	December 31, 2016	December 19, 2016

Table 4.3. FY18 IOAP Project Required Completion Dates – SSDP

BUDGET ID	ACD PROJECT NUMBER	PROJECT NAME	ACD DATE	CERTIFIED COMPLETION DATE
H09218	S_SF_MF_30917_M_09_A	Camp Taylor #3- Replace Sewer & Rehabilitation	December 31, 2017	Under Construction

4.4.1.2. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER ELIMINATION

Jeffersontown WQTC elimination project was completed and certified December 23, 2015. Subsequent post-construction monitoring activities are reported in Section 4.5.2.

4.4.1.3. COMBINED SEWER OVERFLOW LONG TERM CONTROL PLAN

Table 4.4 details CSO LTCP projects completed and certified during the current reporting period, and Table 4.5 details CSO LTCP projects required to be completed and certified during the next reporting period.

Table 4.4. FY17 IOAP Project Completion Dates – CSO LTCP

BUDGET ID	ACD PROJECT NUMBER	PROJECT NAME	ACD DATE	CERTIFIED COMPLETION DATE
H09140	L_SO_MF_018_S_03_A_A	Nightingale Pump Station Replacement and Storage	June 30, 2017	June 29, 2017
H09145	L_SO_MF_130_S_09B_B_A_8	Story Avenue and Spring Street Green Infrastructure	December 31, 2016	December 20, 2016

Table 4.5. FY18 IOAP Project Required Completion Dates – CSO LTCP

BUDGET ID	ACD PROJECT NUMBER	PROJECT NAME	ACD DATE	CERTIFIED COMPLETION DATE
H09124	L_OR_MF_015_M_13_B_B_8	Bells Lane Wet Weather Treatment Facility	September 30, 2017	September 25, 2017
H09137	L_OR_MF_190_S_09B_B_A_8	CSO 190 Green Infrastructure Solution	December 31, 2017	Under Construction
H09142	L_SO_MF_092_M_09B_B_D_8	Logan Street and Breckenridge St Storage Basin	December 31, 2017	Under Construction

4.4.2 DISCHARGE ABATEMENT ACTIVITY PROGRESS

A Gantt chart showing the 2012 IOAP Modification project schedules and subsequent approved minor modifications for the entire program is provided in Figure 4.3.

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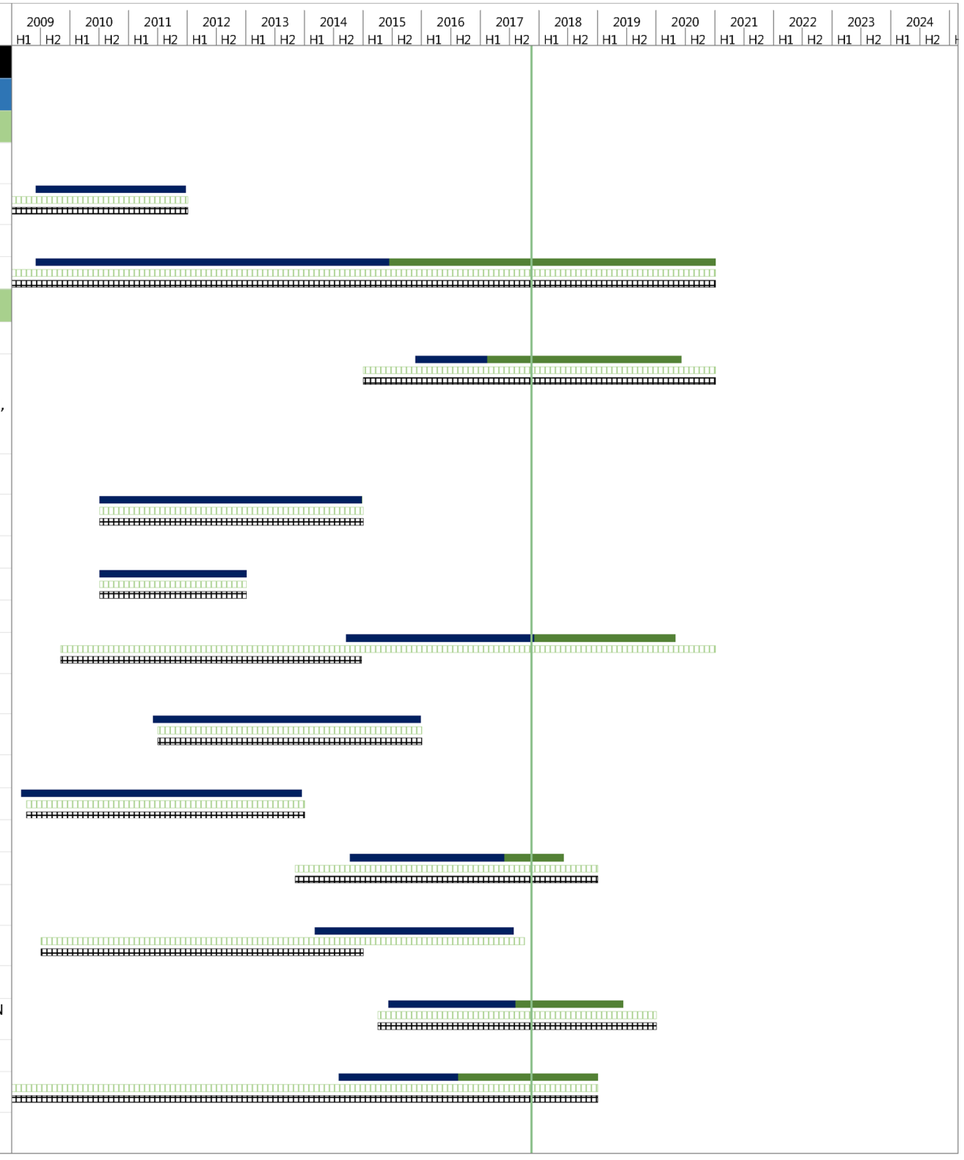
Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name
MSD IOAP ANNUAL SCHEDULE							
LONG TERM CONTROL PLAN	0%	1/1/2021	NA	12/31/2020	12/31/2020		
GREEN DEMONSTRATION PROJECTS	**61%**	**12/31/2020**	**NA**	**12/31/2020**	**12/31/2020**		
Green Infrastructure Demonstration Projects	**100%**	**12/19/2011**	**12/19/2011**	**12/31/2011**	**12/31/2011**		
Green Infrastructure Demonstration Projects	100%	12/19/2011	12/19/2011	12/31/2011	12/31/2011		
Green Infrastructure Program	**52%**	**12/31/2020**	**NA**	**12/31/2020**	**12/31/2020**		
Green Infrastructure Program	52%	12/31/2020	NA	12/31/2020	12/31/2020		
GRAY INFRASTRUCTURE PROJECTS	**68%**	**1/1/2021**	**NA**	**12/31/2020**	**12/31/2020**		
Ohio River Tunnel	**27%**	**6/1/2020**	**NA**	**12/31/2020**	**12/31/2020**		
Ohio River Tunnel	27%	6/1/2020	NA	12/31/2020	12/31/2020	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	13TH STREET AND ROWAN STREET STORAGE BASIN, STORY AVENUE AND MAIN STREET STORAGE BASIN, LEXINGTON ROAD AND PAYNE STREET STORAGE BASIN
CSO058 In-Line Storage and Green Infrastructure	**100%**	**12/23/2014**	**12/18/2014**	**12/31/2014**	**12/31/2014**		
CSO058 In-Line Storage and Green Infrastructure	100%	12/23/2014	12/18/2014	12/31/2014	12/31/2014	L_OR_MF_058_S_08_A_A_0	
CSO123 Downspout Disconnection	**100%**	**12/30/2012**	**12/30/2012**	**12/31/2012**	**12/31/2012**		
CSO123 Downspout Disconnection	100%	12/30/2012	12/30/2012	12/31/2012	12/31/2012	L_MI_MF_123_S_08_A_A_0	
I-64 and Grinstead Drive Storage Basin	**57%**	**4/27/2020**	**NA**	**12/21/2014**	**12/31/2020**		
I-64 and Grinstead Drive Storage Basin	57%	4/27/2020	NA	12/21/2014	12/31/2020	L_MI_MF_127_M_09B_B_A_8	
CSO140 In-Line Storage & Green Infrastructure Controls	**100%**	**12/23/2015**	**12/23/2015**	**12/31/2015**	**12/31/2015**		
CSO140 In-Line Storage & Green Infrastructure Controls	100%	12/23/2015	12/23/2015	12/31/2015	12/31/2015	L_MI_MF_140_S_08_A_A_0	CSO140 SEWER SEPARATION
CSO206 Sewer Separation	**100%**	**12/12/2013**	**12/12/2013**	**12/31/2013**	**12/30/2013**		
CSO206 Sewer Separation	100%	12/12/2013	12/12/2013	12/31/2013	12/30/2013	L_MI_MF_206_S_08_A_A_0	
Clifton Heights Storage Basin	**72%**	**6/1/2018**	**NA**	**12/31/2018**	**12/31/2018**		
Clifton Heights Storage Basin	72%	6/1/2018	NA	12/31/2018	12/31/2018	L_MU_MF_154_M_09B_B_A_8	
Bells Lane Wet Weather Treatment Facility	**100%**	**7/24/2017**	**7/24/2017**	**12/31/2014**	**9/30/2017**		
Bells Lane Wet Weather Treatment Facility	100%	7/24/2017	7/24/2017	12/31/2014	9/30/2017	L_OR_MF_015_M_13_B_B_8	PADDY'S RUN WET WEATHER TREATMENT FACILITY
Portland CSO Basin	**54%**	**6/4/2019**	**NA**	**12/31/2019**	**12/31/2019**		
Portland CSO Basin	54%	6/4/2019	NA	12/31/2019	12/31/2019	L_OR_MF_019_S_13_B_A_8	PORTLAND WHARF STORAGE BASIN
Southwestern Parkway Storage Basin	**46%**	**12/31/2018**	**NA**	**12/31/2018**	**12/31/2018**		
Southwestern Parkway Storage Basin	46%	12/31/2018	NA	12/31/2018	12/31/2018	L_OR_MF_105_M_13_B_A_0	SOUTHWESTERN PARKWAY STORAGE BASIN
Central Relief Drain CSO In-Line Storage, Green Infrastructure & Distributed Storage	**63%**	**5/4/2018**	**NA**	**NA**	**12/31/2018**		



Approved 2009 IOAP | IOAP Modifications | Remaining Work | Completed Work | Composite Schedule | Composite Completed

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Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name
Central Relief Drain CSO In-Line Storage, Green Infrastructure & Distributed Storage	63%	5/4/2018	NA	NA	12/31/2018	L_OR_MF_155_M_09B_B_B_4	
CSO160 In-Line Storage & Green Infrastructure Controls	**100%**	**12/10/2015**	**12/10/2015**	**12/31/2015**	**12/31/2015**		
CSO160 In-Line Storage & Green Infrastructure Controls	100%	12/10/2015	12/10/2015	12/31/2015	12/31/2015	L_OR_MF_160_S_08_A_A_0	CSO160 SEWER SEPARATION
Adams Street Sewer Separation	**100%**	**11/28/2012**	**11/28/2012**	**12/31/2012**	**12/31/2012**		
Adams Street Sewer Separation	100%	11/28/2012	11/28/2012	12/31/2012	12/31/2012	L_OR_MF_172_S_09B_B_A_0	ADAMS STREET STORAGE BASIN
CSO190 Green Infrastructure Solution	**89%**	**12/31/2017**	**NA**	**12/31/2017**	**12/31/2017**		
CSO190 Green Infrastructure Solution	89%	12/31/2017	NA	12/31/2017	12/31/2017	L_OR_MF_190_S_09B_B_A_8	18TH AND NORTHWESTERN PKY. STORAGE BASIN
Southern Outfall Inline Storage at 43rd St (SOR1) & Morris Forman WQTC Headworks	**92%**	**9/1/2017**	**NA**	**12/31/2018**	**12/31/2018**		
Southern Outfall In-Line Storage at 43rd St (SOR 1)	**92%**	**9/1/2017**	**NA**	**12/31/2018**	**12/31/2018**		ALGONQUIN PARKWAY STORAGE BASIN
Southern Outfall In-Line Storage at 43rd St (SOR 1)	92%	9/1/2017	NA	12/31/2018	12/31/2018	L_OR_MF_211_M_13_B_A_8	
Morris Forman WQTC Headworks	**92%**	**8/28/2017**	**NA**	**12/31/2018**	**12/31/2018**		
Morris Forman WQTC Headworks	92%	8/28/2017	NA	12/31/2018	12/31/2018	L_OR_MF_211_M_13_B_A_8	
Nightingale Pump Station Replacement & Storage	**100%**	**6/29/2017**	**6/29/2017**	**12/31/2016**	**6/30/2017**		
Nightingale Pump Station Replacement & Storage	100%	6/29/2017	6/29/2017	12/31/2016	6/30/2017	L_SO_MF_018_S_03_A_A	NIGHTINGALE PUMP STATION REPLACEMENT
Logan and Breckenridge Street Storage Basin	**93%**	**10/18/2017**	**NA**	**12/31/2017**	**12/31/2017**		
Logan and Breckenridge Street Storage Basin	93%	10/18/2017	NA	12/31/2017	12/31/2017	L_SO_MF_092_M_09B_B_D_8	CALVARY CREEKSIDE BASIN
CSO093 Structural Modifications & Green Infrastructure	**100%**	**12/23/2015**	**12/23/2015**	**12/31/2015**	**12/31/2015**		
CSO093 Structural Modifications & Green Infrastructure	100%	12/23/2015	12/23/2015	12/31/2015	12/31/2015	L_SO_MF_093_S_08_A_A_0	CSO093 SEWER SEPARATION
CSO108 Dam Modifications	**100%**	**12/30/2010**	**12/30/2010**	**12/31/2010**	**12/31/2010**		
CSO108 Dam Modifications	100%	12/30/2010	12/30/2010	12/31/2010	12/31/2010	L_SO_MF_108_S_09A_B_A_4	
Story Avenue and Spring Street Green Infrastructure	**100%**	**12/20/2016**	**12/20/2016**	**12/31/2016**	**12/31/2016**		
Story Avenue and Spring Street Green Infrastructure	100%	12/20/2016	12/20/2016	12/31/2016	12/31/2016	L_SO_MF_130_S_09B_B_A_8	STORY AVENUE AND SPRING STREET STORAGE BASIN
FLOOD PUMP STATION PROJECTS	**100%**	**12/31/2014**	**12/18/2014**	**12/31/2014**	**12/31/2014**		
27th Street Flood Pump Station DWO Elimination	**100%**	**6/28/2013**	**6/28/2013**	**6/30/2013**	**6/30/2013**		
27th Street Flood Pump Station DWO Elimination	100%	6/28/2013	6/28/2013	6/30/2013	6/30/2013	L_OR_MF_019_S_03_A_A	
34th Street Flood Pump Station DWO Elimination	**100%**	**6/11/2012**	**6/11/2012**	**12/31/2012**	**12/31/2012**		
34th Street Flood Pump Station DWO Elimination	100%	6/11/2012	6/11/2012	12/31/2012	12/31/2012	L_OR_MF_019_S_03_A_B	
4th Street Flood Pump Station DWO Elimination	**100%**	**6/15/2012**	**6/15/2012**	**12/31/2012**	**12/31/2012**		
4th Street Flood Pump Station DWO Elimination	100%	6/15/2012	6/15/2012	12/31/2012	12/31/2012	L_OR_MF_022_M_03_A_A	

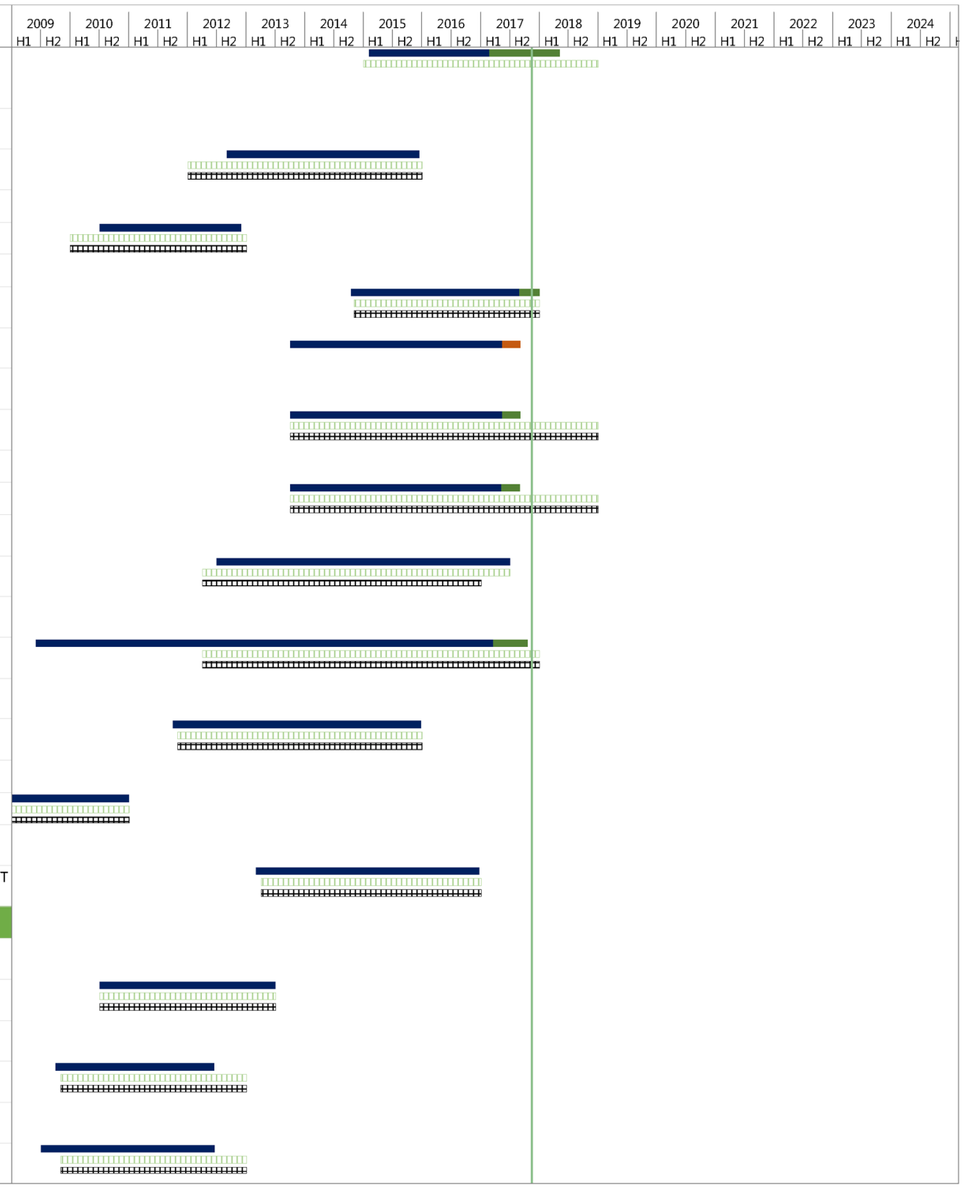

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Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name
Shawnee Flood Pump Station DWO Elimination	**100%**	**6/18/2013**	**6/18/2013**	**6/30/2013**	**6/30/2013**		
Shawnee Flood Pump Station DWO Elimination	100%	6/18/2013	6/18/2013	6/30/2013	6/30/2013	L_OR_MF_189_M_03_A_A	
17th Street Flood Pump Station DWO Elimination	**100%**	**12/18/2014**	**12/18/2014**	**12/31/2014**	**12/31/2014**		
17th Street Flood Pump Station DWO Elimination	100%	12/18/2014	12/18/2014	12/31/2014	12/31/2014	L_OR_MF_190_S_03_A_A	
SANITARY SEWER DISCHARGE PLAN	**0%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
BEARGRASS CREEK MIDDLE FORK AREA	**66%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Goose Creek PS Improvements and Wet Weather Storage	**58%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale PS and Bancroft WQTC Elimination	**100%**	**6/29/2017**	**7/25/2017**	**12/31/2024**	**12/31/2024**		
Goose Creek PS Improvements & Wet Weather Storage 1 - Devondale PS and Bancroft WQTC Elimination	100%	6/29/2017	7/25/2017	12/31/2024	12/31/2024	S_MI_MF_NB04_M_03_B	
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	**0%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Goose Creek PS Improvements & Wet Weather Storage 2 - PS and FM Upgrades	0%	12/31/2024	NA	12/31/2024	12/31/2024	S_MI_MF_NB04_M_03_B	
Anchor Estates Pump Station Elimination	**100%**	**4/15/2016**	**4/15/2016**	**12/31/2016**	**12/31/2016**		
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	**100%**	**4/15/2016**	**4/15/2016**	**12/31/2016**	**12/31/2016**		
Anchor Estates PS Elimination 2 - Anchor Estates #1 and #2 PS Elimination	100%	4/15/2016	4/15/2016	12/31/2016	12/31/2016	S_MI_MF_NB06_M_01_A_A - 1	
Anchor Estates PS Elimination 1 - Vannah PS Elimination	**100%**	**10/15/2011**	**10/15/2011**	**12/31/2013**	**12/31/2013**		
Anchor Estates PS Elimination 1 - Vannah PS Elimination	100%	10/15/2011	10/15/2011	12/31/2013	12/31/2013	S_MI_MF_NB06_M_01_A_A - 2	
Hurstbourne I/I Investigation & Rehabilitation	**100%**	**12/27/2011**	**12/27/2011**	**12/31/2011**	**12/31/2011**		
Hurstbourne I/I Investigation & Rehabilitation	100%	12/27/2011	12/27/2011	12/31/2011	12/31/2011	S_MI_MF_NB07_S_07_C	
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion	**48%**	**12/27/2013**	**NA**	**12/31/2023**	**12/31/2013**		
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1 - Buechel Basin	**100%**	**12/27/2013**	**12/27/2013**	**12/31/2013**	**12/31/2013**		
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 1 - Buechel Basin	100%	12/27/2013	12/27/2013	12/31/2013	12/31/2013	S_MISF_MF_NB01_M_01_C_A1	
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage	**0%**	**12/31/2023**	**NA**	**12/31/2023**	**12/31/2023**		

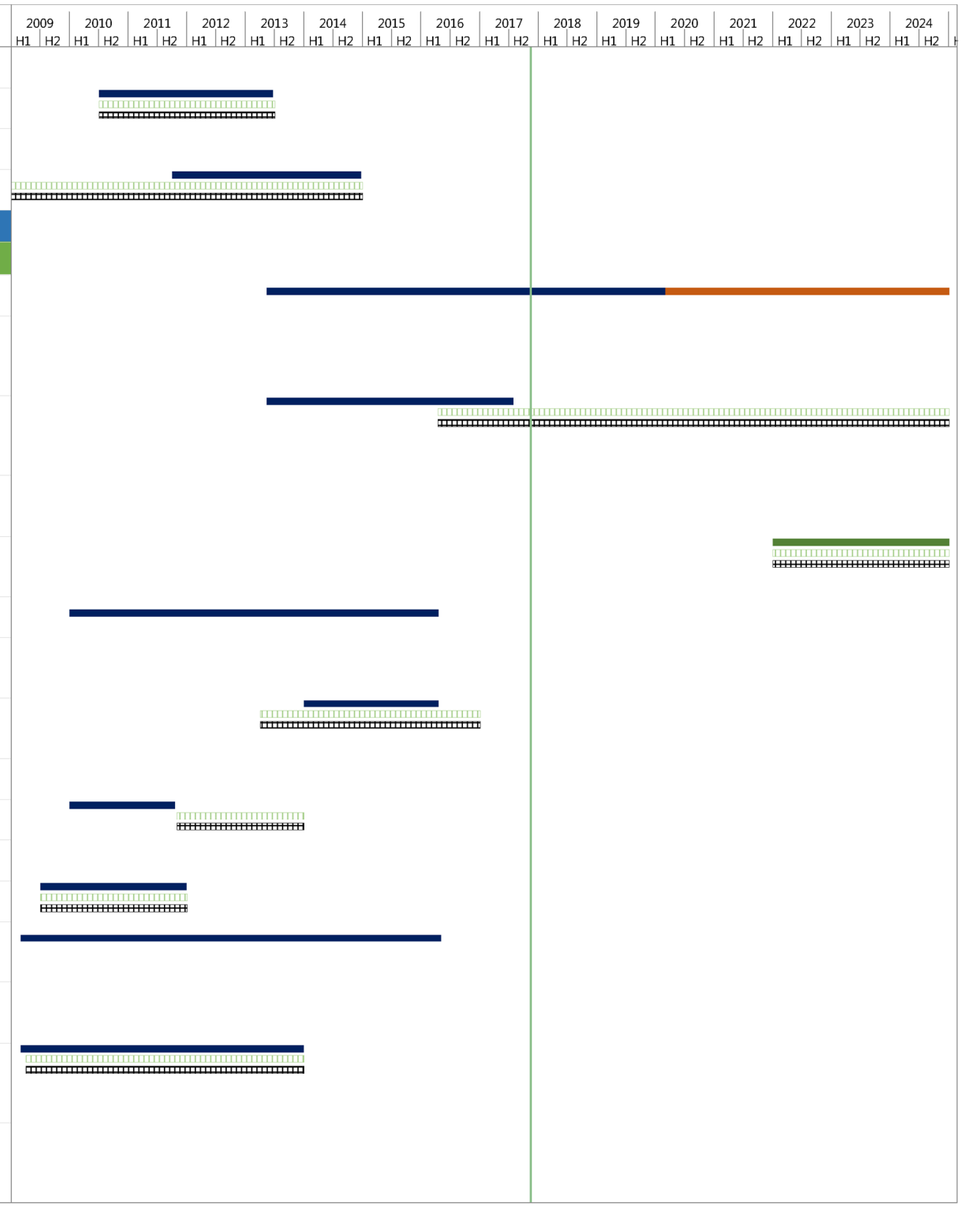

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Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

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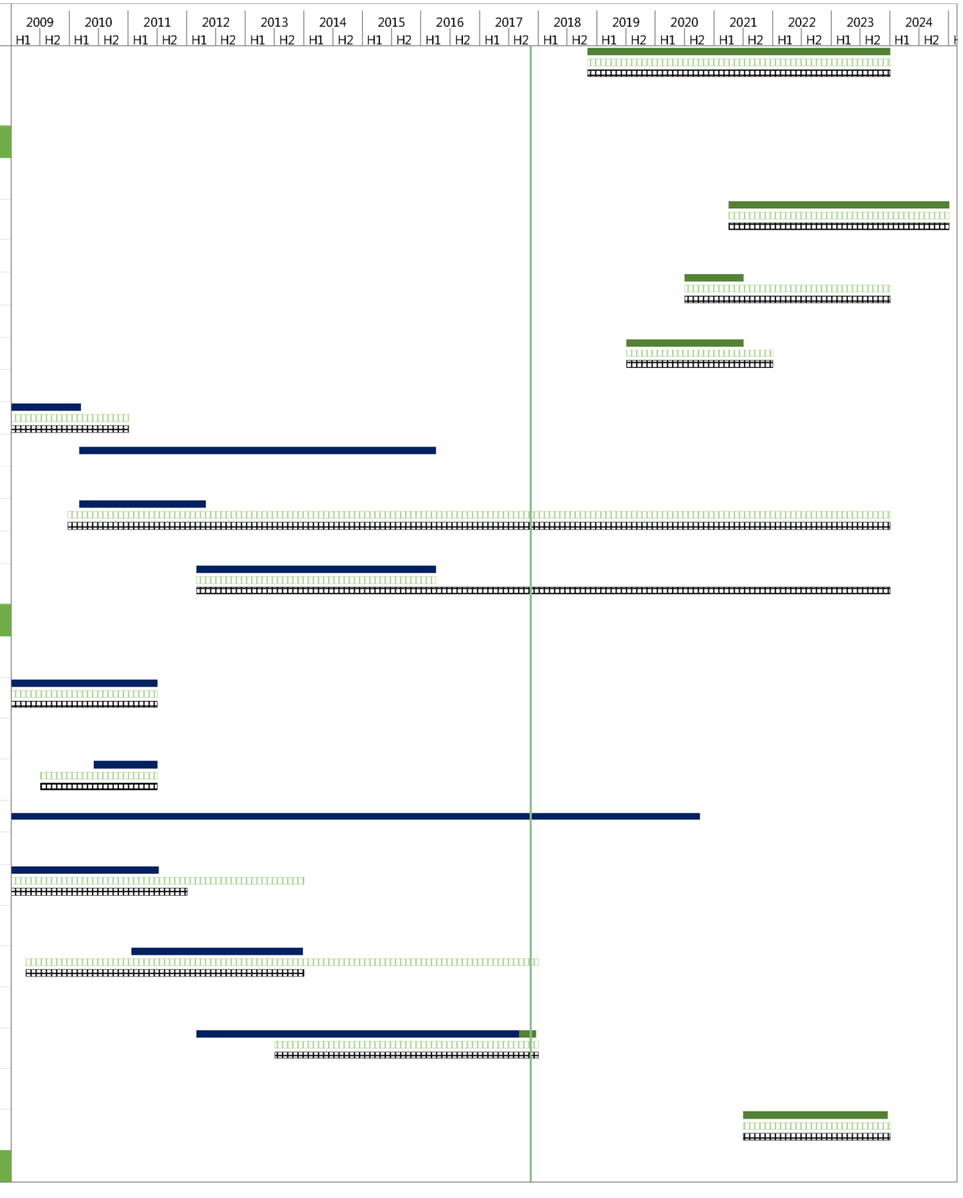
Middle Fork Relief Interceptor, Wet Weather Storage, and UMFLS Diversion 2 - PS Diversion and Storage	0%	12/31/2023	NA	12/31/2023	12/31/2023	S_MISF_MF_NB01_M_01_C_A1	
CEDAR CREEK AREA	**52%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Little Cedar Creek Interceptor Improvements	**0%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Little Cedar Creek Interceptor Improvements	0%	12/31/2024	NA	12/31/2024	12/31/2024	S_CC_CC_67997_M_01_C	
Idlewood Inline Storage	**0%**	**6/30/2021**	**NA**	**12/31/2023**	**12/31/2023**		
Idlewood Inline Storage	0%	6/30/2021	NA	12/31/2023	12/31/2023	S_CC_CC_70158_M_09A_C	
Bardstown Rd. PS Improvements	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Bardstown Rd. PS Improvements	0%	6/30/2021	NA	12/31/2021	12/31/2021	S_CC_CC_MSD1025_S_03_B	
Running Fox PS Elimination	**100%**	**3/10/2010**	**3/10/2010**	**12/31/2010**	**12/31/2010**		
Running Fox PS Elimination	100%	3/10/2010	3/10/2010	12/31/2010	12/31/2010	S_CC_CC_MSD1080_S_01_C	
Fairmount Road Pump Station	**100%**	**3/30/2016**	**3/31/2016**	**12/31/2023**	**12/31/2023**		
Fairmount Rd PS Improvements	**100%**	**4/24/2012**	**4/24/2012**	**12/31/2023**	**12/31/2023**		
Fairmount Rd PS Improvements	100%	4/24/2012	4/24/2012	12/31/2023	12/31/2023	S_FF_CC_81316_M_03_C_A	
Fairmount PS Offline Storage Basin	**100%**	**3/31/2016**	**3/31/2016**	**12/31/2023**	**3/31/2016**		
Fairmount PS Offline Storage Basin	100%	3/31/2016	3/31/2016	12/31/2023	3/31/2016	S_FF_CC_81316_M_03_C_A	
COMBINED SEWER SYSTEM AREA	**70%**	**6/30/2011**	**NA**	**6/30/2011**	**6/30/2011**		
Hazelwood PS I/I Investigation & Rehabilitation	**100%**	**6/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**		
Hazelwood PS I/I Investigation & Rehabilitation	100%	6/30/2011	6/30/2011	6/30/2011	6/30/2011	S_MC_MF_55665_S_07_C	
Sonne Pump Station I/I Investigation & Rehabilitation	**100%**	**6/30/2011**	**6/30/2011**	**6/30/2011**	**6/30/2011**		
Sonne Pump Station I/I Investigation & Rehabilitation	100%	6/30/2011	6/30/2011	6/30/2011	6/30/2011	S_OR_MF_42007_S_07_C	
Camp Taylor	**64%**	**12/31/2017**	**NA**	**12/31/2017**	**12/31/2017**		
Camp Taylor Phase 1 - SSES	**100%**	**7/8/2011**	**7/8/2011**	**12/31/2011**	**12/31/2013**		
Camp Taylor Phase 1 - SSES	100%	7/8/2011	7/8/2011	12/31/2011	12/31/2013	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS PHASE 1 - SSES
Camp Taylor Phase 2 - Sewer Replacement and Rehabilitation	**100%**	**12/20/2013**	**12/20/2013**	**12/31/2013**	**12/31/2017**		
Camp Taylor Phase 2 - Sewer Replacement and Rehabilitation	100%	12/20/2013	12/20/2013	12/31/2013	12/31/2017	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS PHASE 2 - SEWER
Camp Taylor Phase 3 - Sewer Replacement and Rehabilitation	**95%**	**12/31/2017**	**NA**	**12/31/2017**	**12/31/2017**		
Camp Taylor Phase 3 - Sewer Replacement and Rehabilitation	95%	12/15/2017	NA	12/31/2017	12/31/2017	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS 3 - SEWER
Camp Taylor Phase 4 - Storage Basin and Sewer Upsize	**0%**	**12/15/2023**	**NA**	**12/31/2023**	**12/31/2023**		
Camp Taylor Phase 4 - Storage Basin and Sewer Upsize	0%	12/15/2023	NA	12/31/2023	12/31/2023	S_SF_MF_30917_M_09_A	CAMP TAYLOR SYSTEM IMPROVEMENTS 4 - SEWER
FLOYDS FORK AREA	**100%**	**4/1/2010**	**3/4/2010**	**12/31/2021**	**4/1/2010**		



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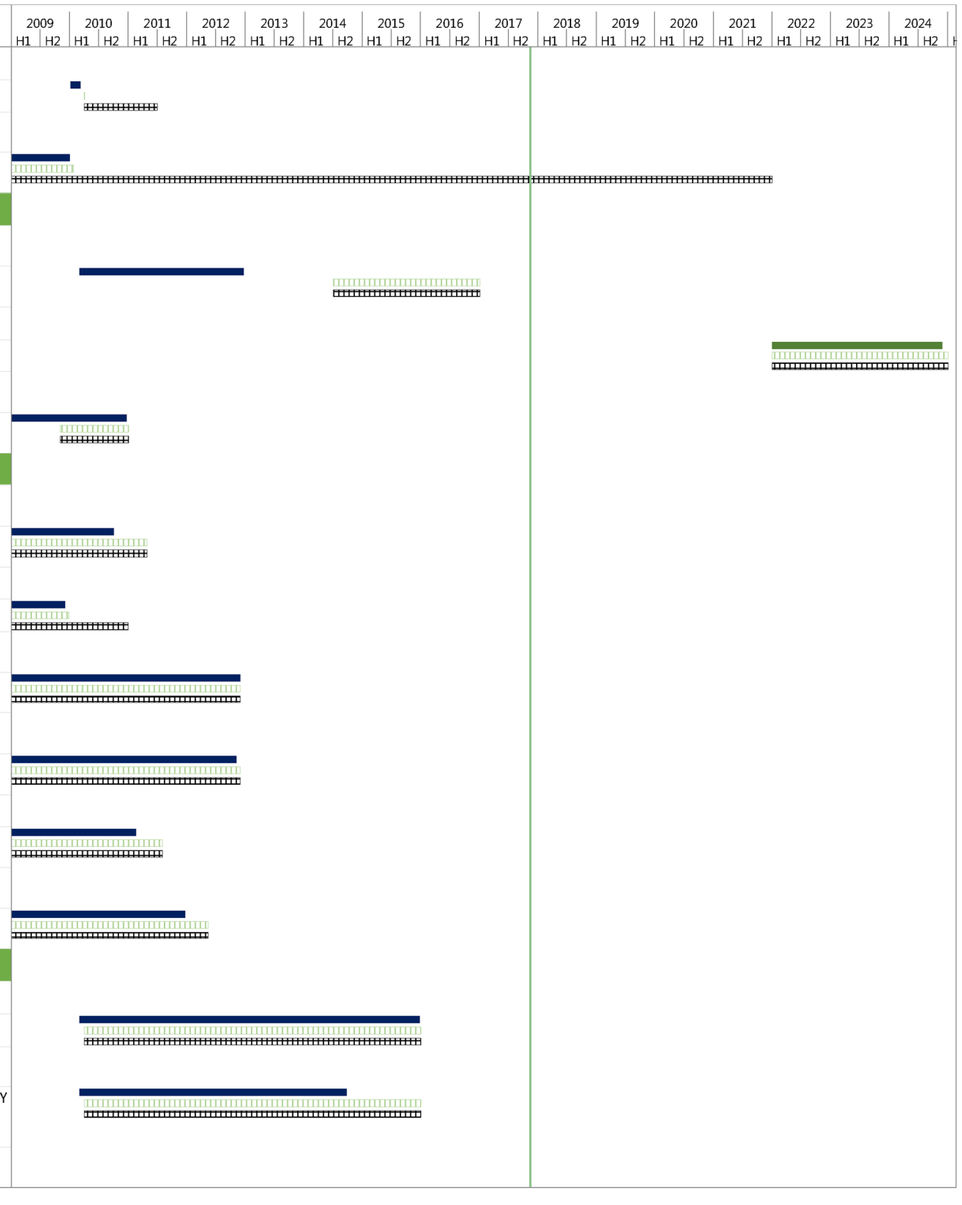
Woodland Hill PS Diversion	**100%**	**3/4/2010**	**3/4/2010**	**6/30/2011**	**4/1/2010**		
Woodland Hill PS Diversion	100%	3/4/2010	3/4/2010	6/30/2011	4/1/2010	S_FF_FF_NB01_S_01_C_A	
Ashburton PS Improvements & Diversion	**100%**	**12/30/2009**	**12/30/2009**	**12/31/2021**	**1/22/2010**		
Ashburton PS Improvements & Diversion	100%	12/30/2009	12/30/2009	12/31/2021	1/22/2010	S_FF_FF_NB03_M_01_C_A	
HITE CREEK AREA	**62%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Meadow Stream Pump Station & Force Main Upgrade	**100%**	**12/18/2012**	**12/18/2012**	**12/31/2016**	**12/31/2016**		
Meadow Stream Pump Station & Force Main Upgrade	100%	12/18/2012	12/18/2012	12/31/2016	12/31/2016	S_HC_HC_MSD1082_S_09A_C	MEADOW STREAM PUMP STATION IN-LINE STORAGE
Kavanaugh Rd. PS Improvements	**0%**	**11/26/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Kavanaugh Rd. PS Improvements	0%	11/26/2024	NA	12/31/2024	12/31/2024	S_HC_HC_MSD1085_S_03_A	
Floydsburg Rd. I/I Investigation & Rehabilitation	**100%**	**12/17/2010**	**12/17/2010**	**12/31/2010**	**12/31/2010**		
Floydsburg Rd. I/I Investigation & Rehabilitation	100%	12/17/2010	12/17/2010	12/31/2010	12/31/2010	S_HC_HC_MSD1086_M_07_C_A	
INTERIM SSP PROJECTS	**100%**	**11/27/2012**	**11/27/2012**	**11/27/2012**	**11/27/2012**		
Beechwood Village Sanitary Sewer Replacement	**100%**	**9/29/2010**	**9/29/2010**	**4/27/2011**	**4/27/2011**		
Beechwood Village Sanitary Sewer Replacement	100%	9/29/2010	9/29/2010	4/27/2011	4/27/2011		
Sinking Fork Relief Sewer	**100%**	**11/30/2009**	**11/30/2009**	**12/30/2010**	**12/23/2009**		
Sinking Fork Relief Sewer	100%	11/30/2009	11/30/2009	12/30/2010	12/23/2009		
Derek R. Guthrie Water Quality Treatment Center	**100%**	**11/27/2012**	**11/27/2012**	**11/27/2012**	**11/27/2012**		
Derek R. Guthrie Water Quality Treatment Center	100%	11/27/2012	11/27/2012	11/27/2012	11/27/2012		
Hikes Lane Interceptor and Highgate Springs PS	**100%**	**11/2/2012**	**11/2/2012**	**11/27/2012**	**11/27/2012**		
Hikes Lane Interceptor and Highgate Springs PS	100%	11/2/2012	11/2/2012	11/27/2012	11/27/2012		
Northern Ditch Diversion Interceptor	**100%**	**2/16/2011**	**2/16/2011**	**7/31/2011**	**7/31/2011**		
Northern Ditch Diversion Interceptor	100%	2/16/2011	2/16/2011	7/31/2011	7/31/2011		
Southeastern Diversion Structure and Interceptor	**100%**	**12/19/2011**	**12/19/2011**	**5/12/2012**	**5/12/2012**		
Southeastern Diversion Structure and Interceptor	100%	12/19/2011	12/19/2011	5/12/2012	5/12/2012		
JEFFERSONTOWN AREA	**54%**	**12/31/2022**	**NA**	**12/31/2022**	**12/31/2022**		
Jeffersontown WQTC Elimination	**100%**	**12/23/2015**	**12/23/2015**	**12/31/2015**	**12/31/2015**		
Jeffersontown WQTC Elimination	100%	12/23/2015	12/23/2015	12/31/2015	12/31/2015	S_JT_JT_NB01_M_01_C_A	
Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	**100%**	**9/22/2014**	**9/22/2014**	**12/31/2015**	**12/31/2015**		
Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	100%	9/22/2014	9/22/2014	12/31/2015	12/31/2015	S_JT_JT_NB01A_M_03_C	CHENOWETH HILLS WATER QUALITY TREATMENT CENTER ELIMINATION AND PS IMPROVEMENTS PROJECT
Dell Rd and Charlane Pkwy Interceptor Improvements	**0%**	**6/30/2021**	**NA**	**12/31/2022**	**12/31/2022**		



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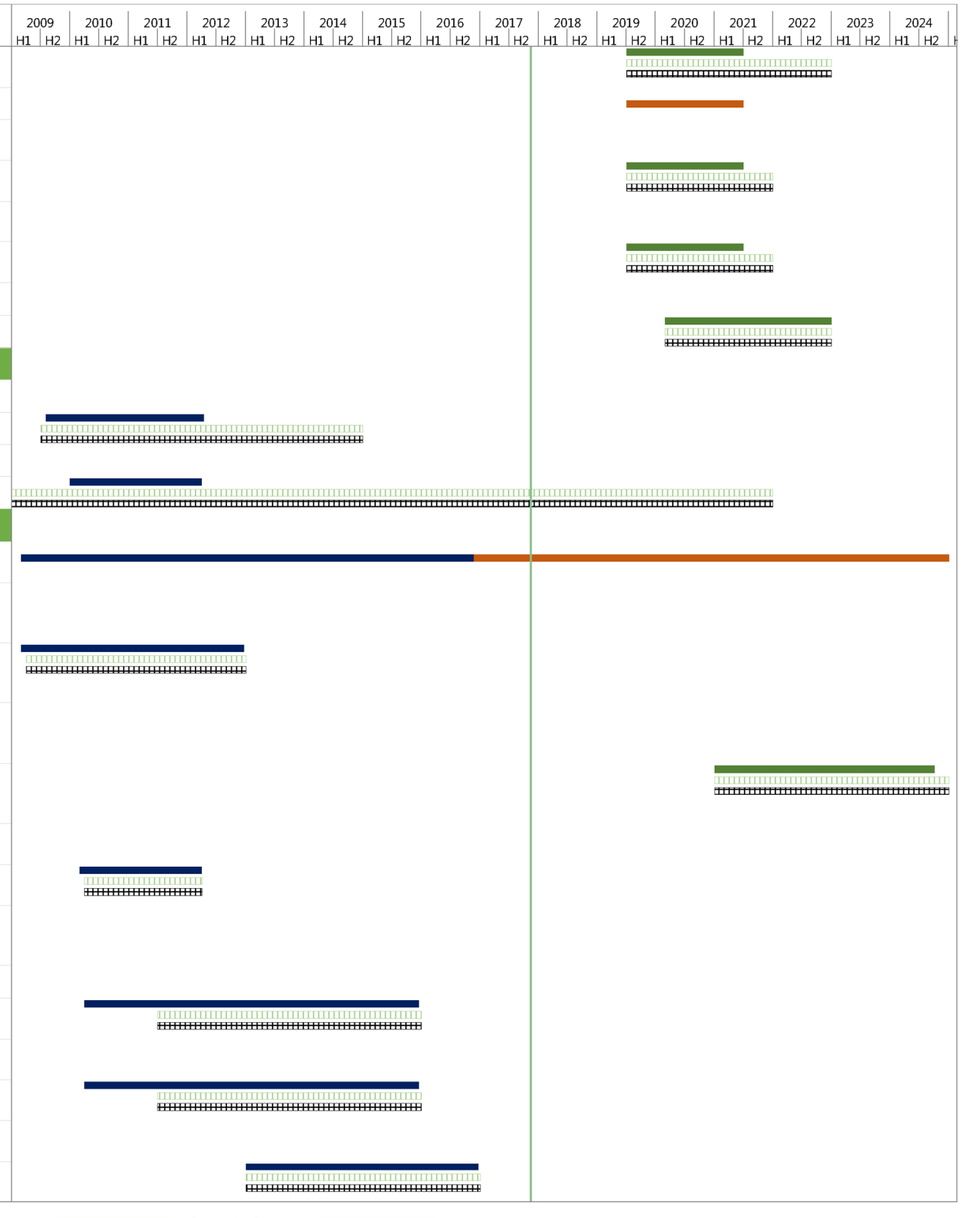
Dell Rd and Charlane Pkwy Interceptor Improvements	0%	6/30/2021	NA	12/31/2022	12/31/2022	S_JT_JT_NB02_M_01_C	
Raintree and Marian Ct 1	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Raintree and Marian Ct 1 - PS Elimination	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Raintree and Marian Ct 1 - PS Elimination	0%	6/30/2021	NA	12/31/2021	12/31/2021	S_JT_JT_NB03_M_01_C	
Raintree and Marian Ct 2 - Pipe Upgrades	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Raintree and Marian Ct 2 - Pipe Upgrades	0%	6/30/2021	NA	12/31/2021	12/31/2021	S_JT_JT_NB03_M_01_C	
Monticello PS Elimination	**0%**	**12/31/2022**	**NA**	**12/31/2022**	**12/31/2022**		
Monticello PS Elimination	0%	12/31/2022	NA	12/31/2022	12/31/2022	S_JT_JT_NB04_M_01_A	
MILL CREEK AREA	**100%**	**12/31/2021**	**4/13/2012**	**12/31/2021**	**12/31/2021**		
Shively Interceptor	**100%**	**4/13/2012**	**4/13/2012**	**12/31/2014**	**12/31/2014**		
Shively Interceptor	100%	4/13/2012	4/13/2012	12/31/2014	12/31/2014	S_MC_WC_NB01_M_01_A	
East Rockford PS Relocation	**100%**	**3/30/2012**	**3/30/2012**	**12/31/2021**	**12/31/2021**		
East Rockford PS Relocation	100%	3/30/2012	3/30/2012	12/31/2021	12/31/2021	S_MC_WC_NB02_S_03_C	
OHIO RIVER FORCE MAIN AREA	**84%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Mellwood System Improvements & PS Elimination	**49%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	**100%**	**12/19/2012**	**12/19/2012**	**12/31/2012**	**12/31/2012**		
Mellwood System Improvements & PS Elimination - Mellwood PS and FM Improvements	100%	12/19/2012	12/19/2012	12/31/2012	12/31/2012	S_OR_MF_NB01_M_01_B	
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	**0%**	**10/3/2024**	**NA**	**12/31/2024**	**12/31/2024**		
Mellwood System Improvements & PS Elimination - Winton and Mockingbird Valley Elimination	0%	10/3/2024	NA	12/31/2024	12/31/2024	S_OR_MF_NB01_M_01_B	
Derington Ct. PS I/I Investigation & Rehabilitation	**100%**	**3/30/2012**	**3/30/2012**	**3/31/2012**	**3/31/2012**		
Derington Ct. PS I/I Investigation & Rehabilitation	100%	3/30/2012	3/30/2012	3/31/2012	3/31/2012	S_OR_MF_NB03_S_07_C	
Prospect WQTC Eliminations, Harrods Creek PS and ORFM System Improvements	**100%**	**12/19/2016**	**12/19/2016**	**12/31/2016**	**12/31/2016**		
Prospect #1 - WQTC Eliminations	**100%**	**12/15/2015**	**12/15/2015**	**12/31/2015**	**12/31/2015**		
Prospect #1 - WQTC Eliminations	100%	12/15/2015	12/15/2015	12/31/2015	12/31/2015	S_OR_MF_NB04_M_03_B_B	
Prospect #2 - Harrods Creek PS and FM	**100%**	**12/15/2015**	**12/15/2015**	**12/31/2015**	**12/31/2015**		
Prospect #2 - Harrods Creek PS and FM	100%	12/15/2015	12/15/2015	12/31/2015	12/31/2015	S_OR_MF_NB04_M_03_B_B	
Prospect #3 - ORFM System Improvements	**100%**	**12/19/2016**	**12/19/2016**	**12/31/2016**	**12/31/2016**		
Prospect #3 - ORFM System Improvements	100%	12/19/2016	12/19/2016	12/31/2016	12/31/2016	S_OR_MF_NB04_M_03_B_B	



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

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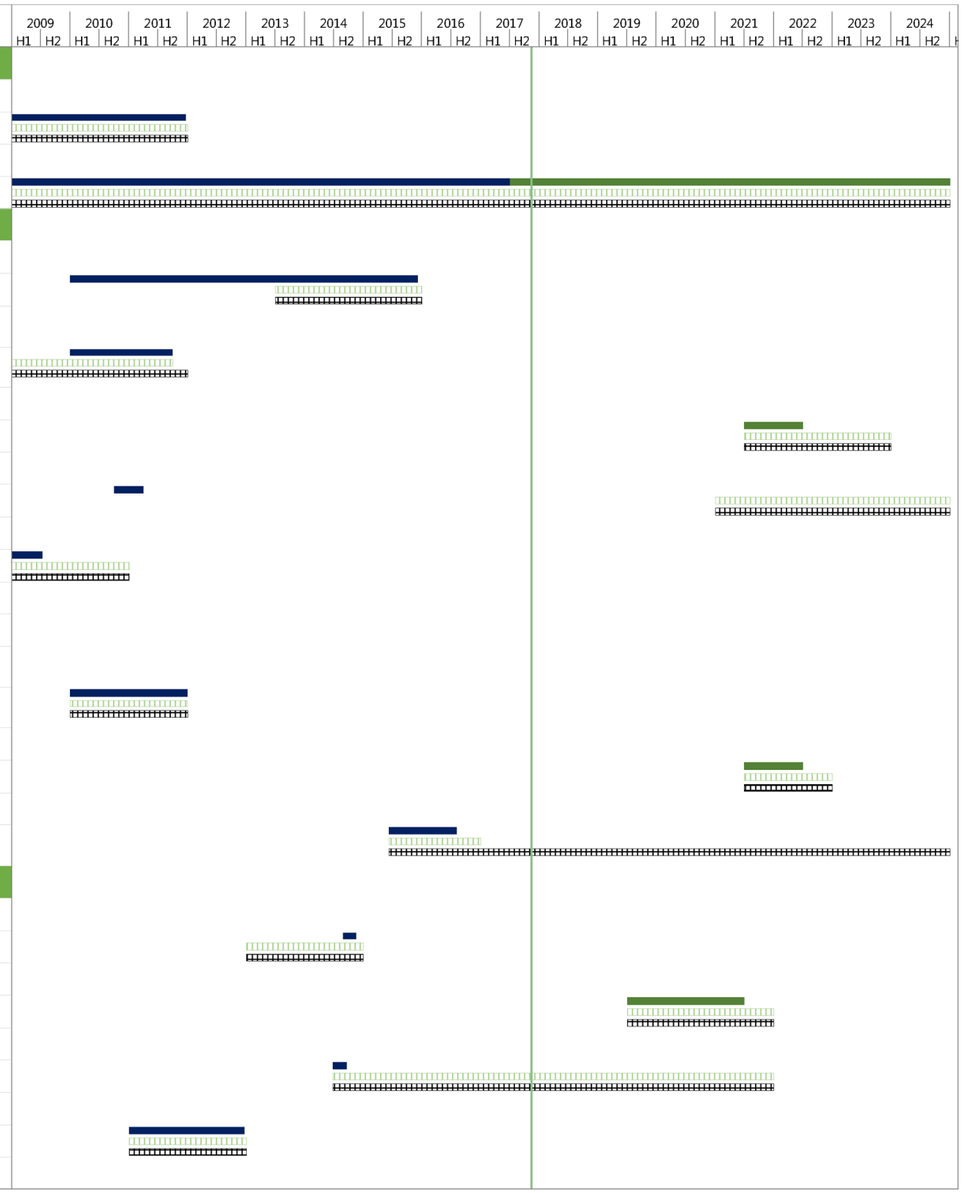
Date: 09/30/17

Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name
OTHER PROJECTS	**60%**	**12/30/2024**	**NA**	**12/31/2024**	**12/30/2024**		
CPE_CCP Modifications To WQTC	**100%**	**12/19/2011**	**12/19/2011**	**12/31/2011**	**12/31/2011**		
CPE_CCP Modifications To WQTC	100%	12/19/2011	12/19/2011	12/31/2011	12/31/2011		
I/I Reduction Program	**53%**	**12/31/2024**	**NA**	**12/31/2024**	**12/31/2024**		
I/I Reduction Program	53%	12/31/2024	NA	12/31/2024	12/31/2024		
POND CREEK AREA	**86%**	**12/31/2023**	**NA**	**12/31/2024**	**12/31/2024**		
Lea Ann Way System Improvements	**100%**	**12/4/2015**	**12/4/2015**	**12/31/2015**	**12/31/2015**		
Lea Ann Way System Improvements	100%	12/4/2015	12/4/2015	12/31/2015	12/31/2015	S_PO_WC_PC08_M_01_C	
Edsel PS I/I Investigation & Rehabilitation	**100%**	**9/27/2011**	**9/27/2011**	**12/31/2011**	**9/30/2011**		
Edsel PS I/I Investigation & Rehabilitation	100%	9/27/2011	9/27/2011	12/31/2011	9/30/2011	S_PO_WC_PC11_M_07_C	
Cinderella PS Elimination	**0%**	**6/30/2022**	**NA**	**12/31/2023**	**12/31/2023**		
Cinderella PS Elimination	0%	6/30/2022	NA	12/31/2023	12/31/2023	S_PO_WC_PC04_M_01_C	
Government Center PS Elimination	**100%**	**4/1/2011**	**4/1/2011**	**12/31/2024**	**12/31/2024**		
Government Center PS Elimination	100%	4/1/2011	4/1/2011	12/31/2024	12/31/2024	S_PO_WC_PC06_M_01_C	
Avanti PS Elimination	**100%**	**7/10/2009**	**7/10/2009**	**12/31/2010**	**12/31/2010**		
Avanti PS Elimination	100%	7/10/2009	7/10/2009	12/31/2010	12/31/2010	S_PO_WC_PC07_M_01_A	
Charleswood Interceptor Extension	**100%**	**8/5/2015**	**8/5/2015**	**12/31/2022**	**12/31/2022**		
Charleswood Interceptor Extension	100%	8/5/2015	8/5/2015	12/31/2022	12/31/2022	S_PO_WC_PC03_M_01_C	
Lantana PS #1 I/I Investigation and Rehabilitation	**100%**	**12/29/2011**	**12/29/2011**	**12/31/2011**	**12/29/2011**		
Lantana PS #1 I/I Investigation and Rehabilitation	100%	12/29/2011	12/29/2011	12/31/2011	12/29/2011	S_PO_WC_PC05_M_07_C	
Leven PS Elimination	**0%**	**6/30/2022**	**NA**	**12/31/2022**	**12/31/2022**		
Leven PS Elimination	0%	6/30/2022	NA	12/31/2022	12/31/2022	S_PO_WC_PC10_M_01_C	
Caven Ave Pump Station Elimination	**100%**	**8/1/2016**	**8/1/2016**	**12/31/2024**	**12/31/2016**		
Caven Ave Pump Station Elimination	100%	8/1/2016	8/1/2016	12/31/2024	12/31/2016	S_PO_WC_PC09_M_09B_C	
SMALL WWTP AREA	**37%**	**12/31/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Riding Ridge PS Improvements	**100%**	**11/15/2014**	**11/15/2014**	**12/31/2014**	**12/31/2014**		
Riding Ridge PS Improvements	100%	11/15/2014	11/15/2014	12/31/2014	12/31/2014	S_HC_HN_NB01_S_03_C_A	
Lucas Lane PS Inline Storage	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Lucas Lane PS Inline Storage	0%	6/30/2021	NA	12/31/2021	12/31/2021	S_FF_BT_NB01_S_09A_C_A	
St. Rene Rd. PS Elimination	**100%**	**9/19/2014**	**9/19/2014**	**12/31/2021**	**12/31/2021**		
St. Rene Rd. PS Elimination	100%	9/19/2014	9/19/2014	12/31/2021	12/31/2021	S_FF_CH_NB01_S_09A_C_A	ST. RENE RD PS INLINE STORAGE
Lake Forest PS SSO Investigation	**100%**	**12/18/2012**	**12/18/2012**	**12/31/2012**	**12/31/2012**		
Lake Forest PS SSO Investigation	100%	12/18/2012	12/18/2012	12/31/2012	12/31/2012	S_FF_LF_NB01_S_13_C_A	
Gunpowder PS Inline Storage	**0%**	**6/30/2021**	**NA**	**12/31/2021**	**12/31/2021**		



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

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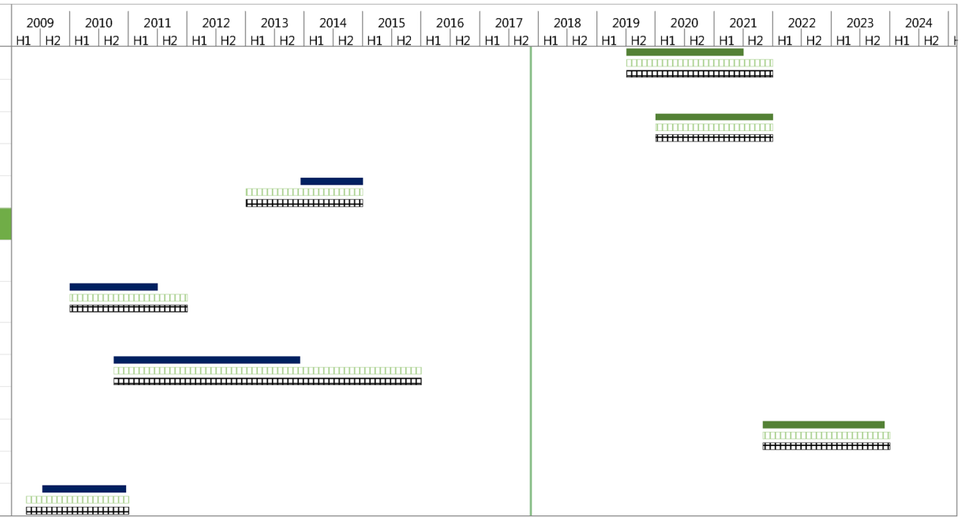
Figure 4.3. MSD Integrated Overflow Abatement Plan Implementation Schedule

Activity Name	% Complete	Anticipated Finish	Actual Finish	2009 IOAP Completion	IOAP Modifications*	IOAP Project ID	Original Project Name
Gunpowder PS Inline Storage	0%	6/30/2021	NA	12/31/2021	12/31/2021	S_HC_HN_NB02_S_09A_C_B	
Fox Harbor Inline Storage	**0%**	**12/31/2021**	**NA**	**12/31/2021**	**12/31/2021**		
Fox Harbor Inline Storage	0%	12/31/2021	NA	12/31/2021	12/31/2021	S_HC_HN_NB03_S_09A_A_A	
Fairway View PS Improvements	**100%**	**12/30/2014**	**12/30/2014**	**12/31/2014**	**12/31/2014**		
Fairway View PS Improvements	100%	12/30/2014	12/30/2014	12/31/2014	12/31/2014	S_HC_HS_NB01_S_03_C_A	
SOUTHEASTERN DIVERSION AREA	**75%**	**12/31/2023**	**NA**	**12/31/2023**	**12/31/2023**		
Parkview Estates I/I Investigation & Rehabilitation	**100%**	**6/28/2011**	**6/28/2011**	**12/31/2011**	**12/31/2011**		
Parkview Estates I/I Investigation & Rehabilitation	100%	6/28/2011	6/28/2011	12/31/2011	12/31/2011	S_SD_MF_NB03_S_07_C	
Klondike Interceptor	**100%**	**12/5/2013**	**12/5/2013**	**12/31/2015**	**12/31/2015**		
Klondike Interceptor	100%	12/5/2013	12/5/2013	12/31/2015	12/31/2015	S_SD_MF_NB04_S_01_B_A	
Sutherland Interceptor	**0%**	**11/27/2023**	**NA**	**12/31/2023**	**12/31/2023**		
Sutherland Interceptor	0%	11/27/2023	NA	12/31/2023	12/31/2023	S_SD_MF_NB05_M_01_A	
Beargrass Interceptor Rehab Ph. 2	**100%**	**12/14/2010**	**12/14/2010**	**12/31/2010**	**12/31/2010**		
Beargrass Interceptor Rehab Ph. 2	100%	12/14/2010	12/14/2010	12/31/2010	12/31/2010	S_SD_MF_NB06_S_13_C	



Approved 2009 IOAP | IOAP Modifications | Remaining Work | Completed Work | Composite Schedule | Composite Completed

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

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4.5. POST CONSTRUCTION COMPLIANCE MONITORING PROGRAM

Within the IOAP, monitoring efforts that support the impact evaluation of both project and plan implementation are discussed in Volume 1, Section 6.5 - Post Construction Compliance Monitoring (PCCM). These efforts are incorporated into MSD's overall environmental data monitoring and management planning and activities, which support various MSD initiatives including operational support, the Municipal Separate Storm Sewer System (MS4) program, hydraulic and water quality modeling, and a range of regulatory reporting and trending requirements. Under the IOAP, the primary compliance assessment objectives will be to certify project completion to the selected overflow control level, both for CSOs and SSOs, as well as to confirm that the predicted levels of overflow control and anticipated water quality benefits have been realized. As such, post-construction compliance monitoring supports impact analysis and the validation of various objectives of IOAP project initiatives, and the overall abatement plan.

4.5.1 MODELING PROGRAM

As implementation of the IOAP continues, the sewer models increasingly support critical planning and design decisions on sizing, location and operation of new facilities (e.g., storage basins, pump stations, gates) as well as providing validation of predicted project level of control.

MSD has contracted with a hydraulic / hydrologic modeling (H/H) consultant to update and maintain a calibrated Infoworks ICM model of the combined and sanitary sewer collection systems. The model is used for the following activities:

- Planning and design of IOAP and other capital projects, including recommendations for changes to the operation of MSD's RTC system based on project impacts.
- Validation of performance of IOAP projects after construction.
- Evaluation of sewer capacity requests and proposed green infrastructure impacts on the combined and separate sanitary sewer systems.

The model is calibrated to both in-system flow monitors as well as flow monitors on CSO outfalls. MSD continues to look for ways to improve the accuracy and precision of the model by performing field surveys and reconnaissance where additional details or other critical details need clarification to refine calibration of the models.

FY17 Program

- Worked with H/H consultant to update ICM model to incorporate IOAP minor modifications.
- Worked with H/H consultant to review IOAP projects under design for validation of proposed performance.
- Worked with H/H consultant to validate performance of 24 IOAP projects under assessment, as discussed in Section 4.5.2.

FY18 Program

- Work with H/H consultant to review CSO flow monitoring data as discussed in Section 1.2.3.3.
- Work with H/H consultant to review IOAP projects under design for validation of proposed performance.
- Work with H/H consultant to validate performance of IOAP projects after construction is completed.

4.5.2 PROJECT PERFORMANCE REPORTING

As described in Volume 1, Section 6.5.2 of the 2012 IOAP Modification, dated May 2014, beginning with the FY14 Annual Report, MSD has agreed to provide annual reports on performance findings for completed projects and to self-identify cases where the performance falls below the committed level of control. In such cases, MSD will define the necessary remedial measures and schedule to improve performance to the appropriate level. It is the intent that performance analyses will be conducted for all constructed IOAP projects as monitoring data becomes available. To complete this effort and independently assess IOAP projects that have been certified to date, MSD has partnered with the University of Louisville Center for Infrastructure Research (UofL) for the majority of the IOAP projects.

Current performance reporting is updated to include additional projects certified through June 30, 2016, with data through the end of the current reporting period.

MSD committed to an analysis of twelve months of final effluent sampling to determine performance of the Derek R. Guthrie WQTC Flow Equalization and Treatment Project, which was completed July 10, 2015. For all other CSO / DWO and SSO projects, the period for monitoring performance and compliance encompasses a three-year window following construction. Green demonstration projects were determined to meet performance commitments based on reported benefit and improvement to MSD's Green Infrastructure Program, as reported in Annual Report 7. Two supplemental environmental projects (SEPs) were assessed for successful restoration.

Detailed performance status of each project is included in Table 4.6. Of the 71 projects analyzed to date, 47 have met the criteria for final committed level of control as discussed and 24 remain under assessment. Projects identified to need additional monitoring or remediation are detailed in Table 4.7. Projects that have been completed through the assessment date but have not been assessed as of the current reporting period and are detailed in Table 4.9.

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Table 4.6. IOAP Project Performance –Performance Status

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	ASSESSMENT RESULT	ASSESSMENT COMPLETION DATE
CSO206 Sewer Separation	L_MI_MF_206_S_08_A_A_0	December 12, 2013	CSO	Pass	Ongoing
Adams Street Sewer Separation	L_OR_MF_172_S_09B_B_A_0	November 28, 2012	CSO	Pass	June 30, 2016
CSO123 Downspout Disconnection	L_MI_MF_123_S_08_A_A_0	December 30, 2012	CSO	Pass	June 30, 2016
CSO093 Structural Modifications & Green Infrastructure	L_SO_MF_093_S_08_A_A_0	December 23, 2015	CSO	Not Yet Assessed	Ongoing
CSO108 Dam Modifications	L_SO_MF_108_S_09A_B_A_4	December 30, 2010	CSO	Not Yet Assessed	Ongoing
CSO140 In-Line Storage And Green Infrastructure Controls	L_MI_MF_140_S_08_A_A_0	December 23, 2015	CSO	Not Yet Assessed	Ongoing
CSO160 In-Line Storage And Green Infrastructure	L_OR_MF_160_S_08_A_A_0	December 23, 2015	CSO	Not Yet Assessed	Ongoing
17th FPS DWO Elimination	L_OR_MF_190_S_03_A_A	December 18, 2014	DWO	Pass	Ongoing
27th Street FPS DWO Elimination	L_OR_MF_019_S_03_A_A	June 28, 2013	DWO	Pass	June 30, 2016
34th Street FPS DWO Elimination	L_OR_MF_019_S_03_A_B	June 11, 2012	DWO	Pass	June 30, 2016
4th Street FPS DWO Elimination	L_OR_MF_022_M_03_A_A	June 15, 2012	DWO	Pass	June 30, 2016
Shawnee FPS DWO Elimination	L_OR_MF_189_M_03_A_A	June 18, 2013	DWO	Pass	June 30, 2016
2300 Block of Congress Street (Formerly Seventh and Market) Permeable Alley	L_OR_MF_053_S_12_A_C	November 11, 2010	Green	Pass	December 30, 2013
3rd Street and Campbell Ventures Green Project (Formerly JFK Montessori Area Dry Well)	L_OR_MF_191_S_12_A_B	December 20, 2011	Green	Pass	December 30, 2013
6th & Martin Luther King (Formerly Sixth and Muhammad Ali) Green Parking Lot	L_OR_MF_022_S_12_A	December 28, 2010	Green	Pass	December 30, 2013
Billy Goat Strut (Formerly Campbell and Main) Permeable Alley	L_SO_MF_121_S_12_A	October 8, 2010	Green	Pass	December 30, 2013
Brandeis Apartments Rain Garden	ADDITIONAL RAIN GARDEN PROJECT	November 15, 2010	Green	Pass	December 30, 2013
Brown-Forman Green Roof Project (Formerly Bardstown Rd Presbyterian Church Green Parking Lot)	ADDITIONAL RAIN GARDEN PROJECT	December 30, 2011	Green	Pass	December 30, 2013

Table 4.6. IOAP Project Performance –Performance Status

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	ASSESSMENT RESULT	ASSESSMENT COMPLETION DATE
Clifton Triangle Area Rain Garden	ADDITIONAL RAIN GARDEN PROJECT	November 11, 2010	Green	Pass	December 30, 2013
East Washington @ Adams Street Green Demonstration Project (Formerly I-264 On-Ramp Dry Well)	L_OR_MF_019_S_12_A	December 19, 2011	Green	Pass	December 30, 2013
German/Paristown Green Street Rain Garden	ADDITIONAL RAIN GARDEN PROJECT	December 20, 2011	Green	Pass	December 30, 2013
Grawemeyer Hall Parking Lot (Formerly I-264 and Gibson Dry Well)	L_OR_MF_191_S_12_A_A	December 20, 2011	Green	Pass	December 30, 2013
Housing Authority Green Roof (Formerly Sixth and Broadway Rain Garden)	L_OR_MF_028_S_12_A	December 30, 2010	Green	Pass	December 30, 2013
MSD Main Office Parking Lot Bioswale	L_OR_MF_053_S_12_A_A	December 3, 2010	Green	Pass	December 30, 2013
Scholar House Green Parking Lot (Formerly Twelfth and Jefferson)	L_OR_MF_208_S_12_A	December 30, 2010	Green	Pass	December 30, 2013
Seventh and Cedar Green Parking Lot	L_OR_MF_053_S_12_A_B	December 30, 2010	Green	Pass	December 30, 2013
Speed Art Museum Infiltration Trench (Formerly I-264 Off-Ramp Dry Well)	L_OR_MF_189_S_12_A	December 20, 2011	Green	Pass	December 30, 2013
Swift Company Green Project (Formerly Second and Broadway Green Parking Lot)	L_OR_MF_181_S_12_A	December 30, 2010	Green	Pass	December 30, 2013
W. Gaulbert & W. Hill (Formerly Seventeenth and W. Hill) Permeable Alley	L_OR_MF_015_S_12_A	October 15, 2010	Green	Pass	December 30, 2013
Wilson Crossings Green Parking Lot (Formerly Russell Lee Drive Dry Well)	L_OR_MF_191_S_12_A_C	December 30, 2011	Green	Pass	December 30, 2013
Cherokee Park Stream Restoration1	SEP PROJECT	December 3, 2010	Other	Pass	May 7, 2014
Pond Creek Trail SEP[3]	SEP PROJECT	February 19, 2011	Other	Pass	December 16, 2014
Charleswood Interceptor Extension	S_PO_WC_PC03_M_01_C	August 5, 2015	SSO	Pass	Ongoing
Elimination of Chenoweth Hills WQTC, Chenoweth Run PS, and Chippewa PS	S_JT_JT_NB01A_M_03_C	September 22, 2014	SSO	Pass	Ongoing

Table 4.6. IOAP Project Performance –Performance Status

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	ASSESSMENT RESULT	ASSESSMENT COMPLETION DATE
Fairmount Rd PS Improvements	S_FF_CC_81316_M_03_C_A	April 24, 2012	SSO	Pass	Ongoing
Fairmount Road Pump Station Offline Storage Basin	S_FF_CC_81316_M_03_C_A	March 30, 2016	SSO	Pass	Ongoing
Fairway View PS Improvements	S_HC_HS_NB01_S_03_C_A	December 30, 2014	SSO	Pass	Ongoing
Goose Creek PS Phase 1 - Devondale Wet Weather Storage	S_MI_MF_NB04_M_03_B	April 15, 2016	SSO	Pass	Ongoing
Jeffersontown WQTC Elimination	S_JT_JT_NB01_M_01_C_A	December 23, 2015	SSO	Pass	Ongoing
Klondike Interceptor	S_SD_MF_NB04_S_01_B_A	July 17, 2014	SSO	Pass	Ongoing
Lea Ann Way System Improvements	S_PO_WC_PC08_M_01_C	December 4, 2015	SSO	Pass	Ongoing
Riding Ridge PS Improvements	S_HC_HN_NB01_S_03_C_A	November 15, 2014	SSO	Pass	Ongoing
St. Rene Road Pump Station Elimination	S_FF_CH_NB01_S_09A_C_A	September 19, 2014	SSO	Pass	Ongoing
Ashburton PS Improvements And Diversion	S_FF_FF_NB03_M_01_C_A	January 22, 2010	SSO	Pass	December 30, 2013
Avanti PS Elimination	S_PO_WC_PC07_M_01_A	July 28, 2009	SSO	Pass	December 30, 2013
Hazelwood PS I&I Investigation & Rehabilitation	S_MC_MF_55665_S_07_C	June 30, 2011	SSO	Pass	December 30, 2013
Northern Ditch Diversion Interceptor	NORTHERN DITCH DIVERSION INTERCEPTOR	February 16, 2011	SSO	Pass	December 30, 2013
Running Fox PS Elimination	S_CC_CC_MSD1080_S_01_C	April 5, 2010	SSO	Pass	December 30, 2013
Anchor Estates- Vannah PS Elimination	S_MI_MF_NB06_M_01_A_A - 2	October 15, 2011	SSO	Pass	December 30, 2014
Beechwood Village Sanitary Sewer Replacement	BEECHWOOD VILLAGE SANITARY SEWER REPLACEMENT	September 29, 2010	SSO	Pass	December 30, 2014
Edsel PSI/I Investigation & Rehabilitation	S_PO_WC_PC11_M_07_C	September 27, 2011	SSO	Pass	December 30, 2014
Government Center PS Elimination	S_PO_WC_PC06_M_01_C	April 1, 2011	SSO	Pass	December 30, 2014
Hurstbourne I&I Investigation & Rehabilitation	S_MI_MF_NB07_S_07_C	December 27, 2011	SSO	Pass	December 30, 2014

Table 4.6. IOAP Project Performance –Performance Status

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	ASSESSMENT RESULT	ASSESSMENT COMPLETION DATE
Parkview Estates I/I Investigation & Rehabilitation	S_SD_MF_NB03_S_07_C	June 28, 2011	SSO	Pass	December 30, 2014
Sinking Fork Relief Sewer	SINKING FORK RELIEF SEWER	December 23, 2009	SSO	Pass	December 30, 2014
Derek R Guthrie WQTC[2]	DEREK R GUTHRIE WATER QUALITY TREATMENT CENTER	November 15, 2012	SSO	Pass	July 10, 2015
Derington Ct PS I/I Investigation & Rehabilitation	S_OR_MF_NB03_S_07_C	March 30, 2012	SSO	Pass	June 30, 2016
East Rockford Lane PS Relocation	S_MC_WC_NB02_S_03_C	March 30, 2012	SSO	Pass	June 30, 2016
Hike Lane Interceptor & Highgate Springs PS	HIKES LANE INTERCEPTOR /HIGHGATE SPRINGS PS	November 2, 2012	SSO	Pass	June 30, 2016
Lake Forest PS SSO Investigation	S_FF_LF_NB01_S_13_C_A	December 18, 2012	SSO	Pass	June 30, 2016
Meadow Stream PS & FM Upgrade	S_HC_HC_MSD1082_S_09A_C	December 18, 2012	SSO	Pass	June 30, 2016
Shively Interceptor	S_MC_WC_NB01_M_01_A	April 13, 2012	SSO	Pass	June 30, 2016
Southeast Diversion Structure & Interceptor	SOUTHEASTERN DIVERSION STRUCTURE & INTERCEPTOR	April 19, 2012	SSO	Additional Monitoring Required	Ongoing
Beargrass Interceptor Rehabilitation Ph 2	S_SD_MF_NB06_S_13_C	December 14, 2010	SSO	Phased Project	Ongoing
Camp Taylor #1- Replace Sewers	S_SF_MF_30917_M_09_A	July 8, 2011	SSO	Phased Project	Ongoing
Camp Taylor #2- Replace Sewers	S_SF_MF_30917_M_09_A	December 20, 2013	SSO	Phased Project	Ongoing
Mellwood Sys 1 - Mellwood Ps & Force Main	S_OR_MF_NB01_M_01_B	December 27, 2012	SSO	Phased Project	Ongoing
Prospect #1 – WQTC Eliminations	S_OR_MF_NB04_M_03_B_B	December 15, 2015	SSO	Phased Project	Ongoing
Prospect #2 – Harrods Creek PS	S_OR_MF_NB04_M_03_B_B	November 13, 2015	SSO	Phased Project	Ongoing
Floydsburg Rd I/I Investigation & Rehabilitation	S_HC_HC_MSD1086_M_07_C_A	December 17, 2010	SSO	Remediation Required	Ongoing
Lantana PS I/I Investigation & Rehabilitation	S_PO_WC_PC05_M_07_C	December 29, 2011	SSO	Remediation Required	Ongoing

Table 4.6. IOAP Project Performance –Performance Status

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	ASSESSMENT RESULT	ASSESSMENT COMPLETION DATE
Sonne Pump Station I&I Investigation & Rehabilitation	S_OR_MF_42007_S_07_C	June 30, 2011	SSO	Remediation Required	Ongoing

[1]Assessment performed by Stantec Consulting Services, Inc.
[2]Assessment performed by HDR Engineers, Inc.
[3]Assessment performed by Redwing Ecological Services, Inc

Table 4.7. IOAP Project Performance – Phased Project Performance Summary

PROJECT NAME	OVERFLOW EVENTS BELOW LEVEL OF CONTROL		PHASED PROJECT	PHASED PROJECT COMPLETION DATE
	COUNT	VOLUME (GALLONS)		
Beargrass Interceptor Rehabilitation Ph 2	53	490,875	Nightingale PS Replacement & Storage (S_SD_MF_NB06_S_13_C)	FY17
Camp Taylor #1- SSES	159	1,714,320	Camp Taylor #3 &#4 (S_SF_MF_30917_M_09_A)	FY18/FY24
Camp Taylor #2- Replace Sewers	86	773,250	Camp Taylor #3 &#4 (S_SF_MF_30917_M_09_A)	FY18/FY24
Mellwood Sys 1 - Mellwood PS & Force Main	11	313,100	Winton & Mockingbird PS (S_OR_MF_NB01_M_01_B)	FY25
UMF #1 - Buechel Basin	101	21,882,578	UMF #2 – PS Diversion & Storage (S_MISF_MF_NB01_M_01_C_A1)	FY24

Table 4.8. IOAP Project Performance – Remediation Project Performance Summary and Action Plan

PROJECT NAME	OVERFLOW EVENTS BELOW LEVEL OF CONTROL		REMEDIAL MEASURES	REMEDIATION COMPLETION DATE
	COUNT	VOLUME (GALLONS)		
Floydsburg Rd I/I Investigation & Rehabilitation	4	560	Additional rehabilitation	FY18
Lantana PS I/I Investigation & Rehabilitation	9	62,105	Sump pump removal at approximately 14 homes Additional rehabilitation with Admiral PS Rehab Project	FY15 FY17
Mellwood Sys 1 - Mellwood PS & Force Main	11	313,100	Phased Project Winton & Mockingbird PS (S_OR_MF_NB01_M_01_B)	FY25
Sonne Pump Station I&I Investigation & Rehabilitation	2	305	Additional rehabilitation	FY18
Southeast Diversion Structure & Interceptor	1[1]	1,000[1]	Additional rehabilitation may be required dependent on monitoring outcomes after construction of Nightingale PS / Basin (S_SD_MF_NB06_S_13_C)	FY18

[1]FY16 Annual Report included a higher count and volume of overflow events due to comparison of rain events to a less frequent storm than the project level of control.

Table 4.9. IOAP Project Performance – Projects Requiring Assessment

PROJECT NAME	ACD PROJECT NUMBER	PROJECT CERTIFICATION DATE	PROJECT TYPE	PERFORMANCE REPORTING DISCUSSION
CSO093 Structural Modifications & Green Infrastructure	L_SO_MF_093_S_08_A_A_0	December 23, 2015	CSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data and to implement modified CSO flow monitoring procedures.
CSO108 Dam Modifications	L_SO_MF_108_S_09A_B_A_4	December 30, 2010	CSO	On review of the data it was determined that additional flow monitoring equipment would be required. This equipment will be installed in FY18 as a part of modified CSO flow monitoring procedures.
CSO140 In-Line Storage And Green Infrastructure Controls	L_MI_MF_140_S_08_A_A_0	December 23, 2015	CSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data and to implement modified CSO flow monitoring procedures.
CSO160 In-Line Storage And Green Infrastructure	L_OR_MF_160_S_08_A_A_0	December 23, 2015	CSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data and to implement modified CSO flow monitoring procedures.
Nightingale Pump Station Replacement And Storage	L_SO_MF_018_S_03_A_A	June 29, 2017	CSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data and to implement modified CSO flow monitoring procedures.
Story Avenue And Spring Street Green Infrastructure	L_SO_MF_130_S_09B_B_A_8	December 20, 2016	CSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data and to implement modified CSO flow monitoring procedures.
Anchor Estates Pump Station Eliminations 2 - Anchor Estates #1 And #2 Pump Station Elimination	S_MI_MF_NB06_M_01_A_A - 1	September 30, 2016	SSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data.
Caven Avenue Pump Station Elimination	S_PO_WC_PC09_M_09B_C	September 26, 2016	SSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data.
Prospect System Improvements 3 - ORFM System Improvements	S_OR_MF_NB04_M_03_B_B	December 19, 2016	SSO	Project will be assessed during the next reporting period to provide at least one full year of monitoring data.

4.5.3 GREEN INFRASTRUCTURE MONITORING

MSD has partnered with the EPA ORD to continue long-term green infrastructure performance monitoring for two CSO areas (CSO130 and CSO190) where green infrastructure solution alternatives have demonstrated more favorable benefit/cost ratios than overflow storage basins. The CSO190 Green Infrastructure Project is nearing completion. A significant amount of monitoring data has been compiled to document the green infrastructure infiltration rates, effectiveness of maintenance practices, and impact on overflow reduction. The monitoring data collected for CSO130 has proven to be valuable in developing an effective regular maintenance program. EPA ORD has continued to be involved in green infrastructure monitoring data in the CSO190 basin, beginning with the installations in November 2015. Both UofL and EPA ORD will be reviewing field monitoring data for these IOAP projects to ascertain overflow reduction performance. PCCM findings for these projects will be included in the annual report subsequent to project certification as updated flow monitoring data is available. Should their findings show that MSD has not achieved the proposed level of control, an action plan will be developed.

4.5.4 WATER QUALITY SYNTHESIS REPORT

Every two years, MSD publishes a synthesis report, called “State of the Streams”, that summarizes water quality trends based on data MSD collects through its Long-Term Monitoring Network. The 2016 report is available at **http://www.louisvillemsd.org/WaterQuality**. MSD continues to synthesize and trend water quality data in a report as required by the MS4 permit.

SECTION 5: PUBLIC OUTREACH, EDUCATION, NOTIFICATION AND PARTICIPATION

5.1. PUBLIC NOTIFICATION PROGRAM

MSD produced and distributed a number of products aimed at notifying the community on the objectives of Project WIN and how to lessen the risks associated with coming into contact with sewage overflows. The following activities occurred during the reporting period or are scheduled to occur in the next reporting period.

5.1.1 OVERFLOW ADVISORY SIGNS

FY17 Program

- Updated sign inventory to ensure all needed signs are in place.
- Completed the annual sign inspection process on March 15, 2017. There were 1,176 signs inspected, 892 signs cleaned, and 111 replaced.

FY18 Program

- Perform an evaluation comparing the documented overflows with existing sign locations to ensure all needed signs are in place.
- Schedule the Annual Sign Inspection process.

5.1.2 ELECTRONIC NOTIFICATIONS

FY17 Program

- Continued to utilize the Louisville Metro e-mail alert system to notify customers who voluntarily signed up to receive email alerts regarding sewer overflows and to broadcast messages to the public.
- Provided notification on thirteen dry weather unauthorized discharges of more than 1,000 gallons.

FY18 Program

- Continue email alerts to customers who signed up to receive the information.

5.1.3 PRINT NOTIFICATIONS

FY17 Program

- Mailed 1,576 Project WIN information packets to customers who called with questions about the Amended Consent Decree – specifically regarding overflows, discharges, plumbing modification and the surcharge fee.
- In April 2017, distributed the annual mailing to residents within 500 feet of Beargrass Creek and the Ohio River, advising the use of caution around streams during and immediately following rain events as they may contain untreated sewage. A copy of the letter to residents is provided in Appendix F.

- Provided annual notification to community at large in the Courier Journal in a newspaper advertisement to use caution around streams during and immediately following rain events as they may contain untreated sewage. A copy of the notification is provided in Appendix F.
- Sent 296 public outreach letters to residents in areas that have Fats, Oil and Grease (FOG) issues. The FOG message, included on the reverse of these letters, is provided in Appendix F.
- Included "Aging Infrastructure" print campaign with February / March 2017 billing, provided in Appendix F.

FY18 Program

- Continue to mail Project WIN information packets to customers who call with questions about the Amended Consent Decree – specifically regarding overflows, discharges, plumbing modification and the surcharge fee.
- Continue to send out FOG residential public outreach letters to areas that have FOG issues.
- Provide annual notification and informational material to the community, providing a general overview and awareness relating to public health impacts associated with sewer overflows and an update of Project WIN initiatives by May 1, 2018.
- Distribute, prior to May 1, 2018, the annual mailing to residents within 500 feet of Beargrass Creek and the Ohio River, advising the use of caution around streams during and immediately following rain events as they may contain untreated sewage.

5.2. PUBLIC EDUCATION PROGRAMS

MSD has developed a public education program aimed at expanding the public's knowledge on MSD's primary business functions of wastewater, stormwater and flood protection, with an emphasis on Project WIN Program elements. The following activities occurred during the reporting period or are scheduled to occur in the coming fiscal year.

FY17 Program

- Continued to identify areas of public knowledge requiring additional effort and attention and target public education efforts to fill the gaps.
- Continued to provide information on MSD's Green Infrastructure incentive programs, Louisville's tree canopy, sewer overflow prevention, pollution prevention and other topics, including the events listed in Table 5.1.
- Included Consent Decree compliance, wastewater facility upgrades, and aging infrastructure as key topics in the Critical Repair & Reinvestment Plan public meetings and posts on MSD's website and social media accounts.
- Released monthly social media ads containing messages related to upcoming IOAP project public meetings. Released posts on topics including environmental awareness, outreach programs, events, health and safety, and public meetings. Public outreach campaigns supported included World Environment Day, World Oceans Day, Pollinator Week, Skills USA, and Ohio River Sweep. Weekly social media campaigns consisted of the following:

- Fun Fact Mondays – shared the benefits of green infrastructure and sewer overflow prevention.
- Do's/Don'ts/Tips Tuesdays – encouraged activities and behaviors that have a positive impact on water quality; discouraged activities and behaviors that have a negative impact on local water quality. This campaign included tweets about the proper way to dispose of pharmaceutical products, pet waste, wipes, dental floss and other household products.
- Value of Water Wednesdays – shared the benefits of fostering good water quality.

FY18 Program

- Continue to re-tool public education efforts to address areas of public knowledge requiring additional effort and attention.
- Continue to provide information through social media platforms.

Table 5.1. Public Education Workshops and Activities

DATE(S)	EVENT	BENEFIT / RELEVANCE / IMPACT
July 18, 2016 – July 29, 2016	Homearama	Provided Rain Barrels, Information on Native Plants and Rain Gardens, as well as Information on MSD Programs and Projects required by the Consent Decree
September 10, 2016	Waterfront Botanical Gardens Generation Fair	MSD Staff discussed water quality topics such as rain gardens and how native plants can improve water quality.
September 29, 2016	Canoemobile at Riverview Park	Raised awareness about local water quality by featuring MSD's participation in water quality testing with local students.
October 10, 2016 – October 13, 2016	Adventures in Water	Raised awareness about stormwater quality by featuring MSD's Enviroscape presentations to local students
February 28, 2017	Construction Field Day 2017	Encouraged attendees to attend a rain garden presentation
March 3, 2017 – March 6, 2017	Home, Garden and Remodeling Show 2017	Encouraged attendees to learn about the benefits of rain gardens, rain barrels and trees.
April 17, 2017 – April 21, 2017	Mayor's Give A Day Week of Service	Raised awareness about the benefits of green infrastructure at one tree planting and two days of cleaning along Beargrass Creek.
April 19, 2017	Rain Garden Workshop	Raised awareness about the benefits of rain gardens by featuring a rain garden installation at local school – Maupin Elementary "Farm Day".
April 22, 2017	Floyds Fork Stream Cleanup	Raised awareness about the role the public can play in ensuring good water quality.
June 17, 2017	Family Farm & Forage Day	Encouraged attendees to learn about the benefits of rain gardens, rain barrels and trees.
June 17, 2017	Ohio River Sweep 2017	Raised awareness about the role the public can play in ensuring good water quality.
June 20, 2017	Summer Reading Program - "Understanding Our Watersheds"	Discussed how human actions can impact the quality of our local waterways as well as ways that students can take steps to reduce pollution loading to receiving water bodies.
June 29, 2017	Summer Reading Program - "Understanding Our Watersheds"	Discussed how human actions can impact the quality of our local waterways as well as ways that students can take steps to reduce pollution loading to receiving water bodies.
Ongoing	IOAP Project & Program Meetings	Encouraged Twitter users to attend our public meetings concerning MSD's IOAP projects and program

5.2.1 RADIO AND TV ACTIVITIES

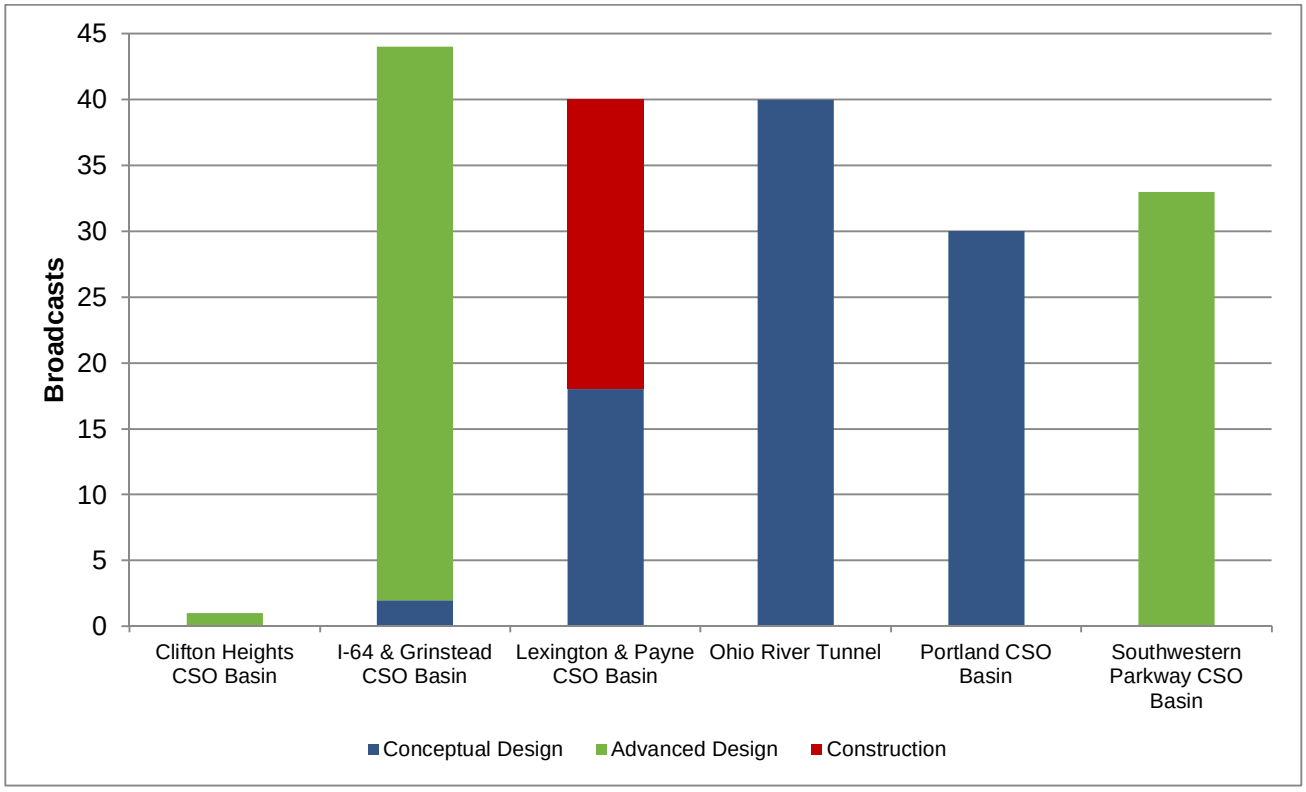
FY17 Program

- Coordinated with Metro TV (Channel 25) to air 188 broadcasts of public input meetings as shown in
- Figure 5.1.

FY18 Program

- Continue to utilize various media outlets, including TV, radio and the newspaper, to serve as a conduit for disseminating information to the public.
- Continue coordination with Metro TV to show IOAP project public input meetings and special interest material.

Figure 5.1. Metro TV Broadcasts



5.2.2 PRINTED MEDIA ACTIVITIES

FY17 Program

- Purchased public service advertising messages in Business First and Louisville Magazine, provided in Appendix F.
- Provided printed copies of the StreamLine to 700 customers and staff each month. Posted the Streamline to Twitter and Facebook accounts. Project WIN related articles are contained in each issue of this newsletter. These publications are available on the MSD Website. Online versions of the StreamLine newsletter can be viewed at http://www.msdlouky.org/aboutmsd/updatenews.htm.

FY18 Program

- Continue to utilize various media outlets, including TV, radio and the newspaper, to serve as a conduit for disseminating information to the public.
- Continue to send the MSD Streamline to customers and staff each month.

5.2.3 PROJECT WIN AND GREEN WEBSITES

FY17 Program

- Continued to post Project WIN information on the website. On MSD's homepage, the Overflow Advisory Level indicator provides important information on the condition of area streams and shows a warning if overflows are likely to be happening or have happened in the past 48 hours. The Overflow Advisory Indicator includes a link to the Project WIN website, which includes a repository of public documents related to Project WIN, tips for customers to help control overflows through their personal actions, information about the history and background of Project WIN and a place to sign up for overflow advisory emails warning when significant precipitation has caused overflows in MSD's system. The Project WIN website can also be accessed by navigating through the Consent Decree link on MSD's homepage. This website can be found at **www.msdprojectwin.org**.
- Continued communication with customers via posts on MSD's social media platforms.

FY18 Program

- Continue to post Project WIN information on the website.
- Continue to post communication with customers via MSD's social media platforms.

5.3. PUBLIC OUTREACH PROGRAMS

MSD has developed a public outreach program aimed at involving the public on MSD's primary business functions with emphasis on wastewater, stormwater and flood protection. The following activities occurred within the current reporting period or are scheduled to occur in the coming fiscal year.

5.3.1 GREEN INFRASTRUCTURE WORKSHOPS AND ACTIVITIES

FY17 Program

Presented, attended, and/or facilitated meetings in Table 5.2 related to green infrastructure.

FY18 Program

- Schedule rain garden workshops at various times throughout the year.
- Continue planning for additional signage for green demonstration sites and green partnership locations.
- Continue planning of internal and external workshops explaining the Green Infrastructure Program, including the next Construction Field Day and classes on green infrastructure design, construction and inspection.

Table 5.2. Green Infrastructure Workshops and Activities

DATE(S)	EVENT	BENEFIT / RELEVANCE / IMPACT
October 4, 2016	Water Wonders	Gave a hands-on demonstration with the Enviroscape watershed model, which provides participants with the understanding of how human activities can impact water quality. Discussed the impacts rainfall can have on stream health, such as sewer overflows and urban runoff, and then provide information on how to mitigate those impacts through behavior change.
November 9, 2016	Urban Design Studio Class	Presented on stormwater quality and green infrastructure.
December 10, 2016	Riparian Restoration and Tree Planting	Coordinated and staffed an event where volunteers planted bare root saplings on a vacant, flood prone property along Cedar Creek.
February 4, 2017	Metro Parks Landowner Workshop - Historic Locust Grove	Presented on how residential property owners can better manage stormwater on their own properties, including information on rain gardens, native plants, and rain barrels.
February 28, 2017	MSD Field Day	Planned and staffed the annual Field Day event where industry stakeholders are given an opportunity to interact directly with staff and ask questions about key projects and initiatives, such as major consent decree work and current MS4 issues.
March 3, 2017 – March 5, 2017	Home & Garden Show	Staffed a booth at the Home & Garden Show and communicated directly with the public on current issues facing MSD, discussed how the work MSD is doing impacts their lives, and how their dollars are being put to use to construct projects that improve the local environment.
March 21, 2017	Environmental Stormwater Presentation at Fairdale Public Library	Gave a hands-on demonstration with the Enviroscape watershed model, which provides participants with the understanding of how human activities can impact receiving water quality.
April 21, 2017	Riparian Restoration and Tree Planting	Coordinated and staffed an event where volunteers planted bare root saplings on a vacant, flood prone property along Cedar Creek.
April 21, 2017	Joe Creason Park Tree Planting Event	Planted several trees in Joe Creason Park in the Beargrass Creek watershed in partnership with Louisville Metro.
May 13, 2017	How-To Festival	Provided attendees information on how to construct a residential rain garden.
June 17, 2017	Family Farm & Forage Day	Gave a hands-on demonstration with the Enviroscape watershed model, which provides participants with the understanding of how human activities can impact receiving water quality.

5.3.2 CLEAN STREAMS WORKSHOPS AND ACTIVITIES

FY17 Program

Activities related to the current reporting period are detailed in Table 5.3.

FY18 Program

- Continue to facilitate stream cleanup events and workshops.
- Continue work with Beargrass Creek Alliance to mark catch basins in critical areas.

Table 5.3. Clean Streams Workshops & Activities

DATE(S)	EVENT	BENEFIT / RELEVANCE / IMPACT
April 17, 2017	Give A Day - Beargrass Creek Stream Clean Up	Coordinated and staffed an event to promote environmental stewardship and awareness where volunteers walked along the banks of Beargrass Creek along the Beargrass Greenway to remove trash near the stream.
April 19, 2017	Give A Day - Beargrass Creek Stream Clean Up	Coordinated and staffed an event to promote environmental stewardship and awareness where volunteers walked along the banks of Beargrass Creek along the Beargrass Greenway to remove trash near the stream.
April 20, 2017	KSPE Convention - MS4 Presentation	Gave a presentation to a statewide audience of engineers and water professionals on the MS4 stormwater quality program.
April 22, 2017	Floyds Fork Stream Cleanup	Coordinated and staffed an event to promote environmental stewardship and awareness where volunteers walked along the banks of Floyd's Fork in Beckley Creek Park to remove trash near the stream.
June 17, 2017	Ohio River Sweep	Facilitated the Ohio River Sweep at the Louisville riverfront.
Throughout the Year	Beargrass Creek (BGC) Alliance	Assisted in marking catch basins in critical areas.

5.3.3 OUTREACH ACTIVITIES FOR STUDENTS

FY17 Program

Attended or presented at the student-centered events detailed in Table 5.4.

FY18 Program

- Continue to coordinate with Parklands of Floyds Fork on educational partnerships at the Floyds Fork WQTC, including field trips with The Parklands and Louisville Water Company at Floyds Fork WQTC.
- Continue to work with UofL to identify educational opportunities for college students.

Table 5.4. Outreach Activities for Students

DATE(S)	EVENT	BENEFIT / RELEVANCE / IMPACT
September 29, 2016	Canoemobile	Discussed water quality topics with students, what impacts the CSS can have on receiving waterways, and how they can improve water quality through behavior change.
October 4, 2016	Floyds Fork Educational Tour – Shelby County High School	Planned, coordinated, and staffed a tour for local high school environmental students to learn about how a treatment plant works to clean sewage before it is discharged to a stream. Staff also discussed stormwater topics at this event.
November 17, 2016	Floyds Fork Educational Tour – Holy Cross High School	Planned, coordinated, and staffed a tour for local high school environmental students to learn about how a treatment plant works to clean sewage before it is discharged to a stream. Staff also discussed stormwater topics at this event.
November 21, 2016	Environmental Monitoring and Water Quality - Noe Middle School	Taught an environmental science class, covering environmental data and indicators for stream health.
February 15, 2017	Floyds Fork Educational Tour – Central High School	Planned, coordinated, and staffed a tour for local high school environmental students to learn about how a treatment plant works to clean sewage before it is discharged to a stream. Staff also discussed stormwater topics at this event.
March 21, 2017	Floyds Fork Educational Tour – Bellarmine University	Planned, coordinated, and staffed a tour for local high school environmental students to learn about how a treatment plant works to clean sewage before it is discharged to a stream. Staff also discussed stormwater topics at this event.
March 22, 2017	Community Engagement Calendar - UofL Engineering - Sustainability Graduate Class	Presented on current issues facing MSD and the need to obtain new funding in order to maintain the public health and safety benefits provided by MSD's major systems, such as: the flood protection system, the water quality treatment centers, and the collection and stormwater systems.
April 12, 2017	Floyds Fork Educational Tour – Shawnee High School	Planned, coordinated, and staffed a tour for local high school environmental students to learn about how a treatment plant works to clean sewage before it is discharged to a stream. Staff also discussed stormwater topics at this event.
April 19, 2017	Rain Garden Workshop at "Farm Day" - Maupin Elementary	Gave a presentation to elementary school students that included hands-on activities intended to promote awareness of native plants and the ways that they can positively impact the environment and water quality.

5.3.4 IOAP PROJECT AND PROGRAM MEETINGS

MSD has developed a partnership with Louisville Metro for providing project information and soliciting feedback from stakeholders using a Structured Public Involvement approach. Structured Public Involvement is meant to facilitate relevant input on the design process as MSD prepares to design and construct CSO basins. Our current IOAP outreach activities and public meetings are using this process to elicit qualitative and quantitative information and enhance our engagement with customers. The Structured Public Involvement approach assures anonymity for each participant using transceivers to compile data which can then be correlated on a customer-specific basis. The plan for Structured Public Involvement includes implementing a four-meeting process that leads stakeholders through the project design stages as illustrated in Figure 5.2. Online surveys are also being made available to allow those not in attendance at public meetings to provide similar project-specific input. Creating this secondary online opportunity has been successful and generated responses that otherwise would not have been accounted for at the public meetings. Additional information regarding the Structured Public Involvement Process and meetings held during this reporting period may be found at the Project WIN Public Input Website (**www.msdprojectwin.org/Public-Input.aspx**).

FY17 Program

Facilitated the events detailed in Table 5.5.

FY18 Program

- Continue to facilitate and document IOAP Project Public Input Meetings.
- Continue to inform the Wet Weather Team on the progress of the IOAP implementation by hosting two Wet Weather Team meetings per year.
- Continue to provide information from the Wet Weather Team Stakeholders Group and IOAP Public Input meetings on the Project WIN website, at **www.msdlouky.org/projectwin**.

Figure 5.2. MSD's Structured Public involvement Meeting Process

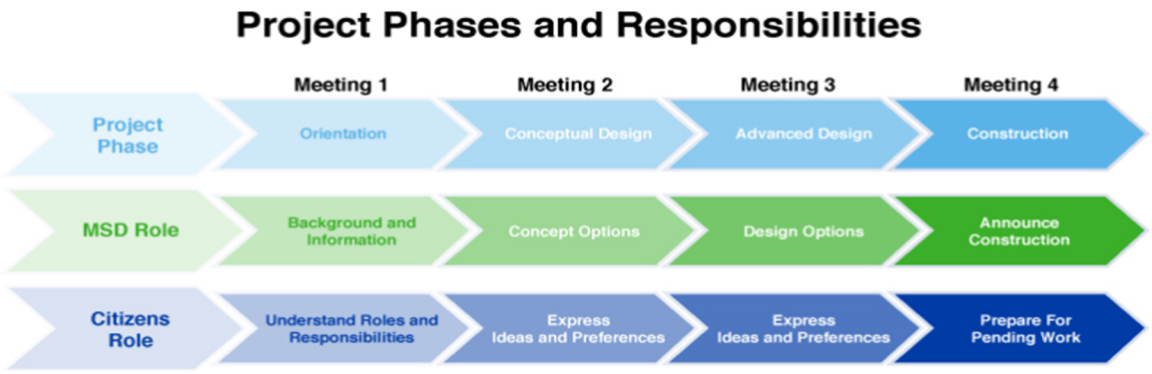


Table 5.5. IOAP Project & Program Meetings

DATE(S)	EVENT
August 30, 2016	Southwestern Parkway CSO Storage Basin Advanced Design
September 29, 2016	Portland CSO Storage Basin Construction
September 29, 2016	Wet Weather Team
October 11, 2016	Ohio River Tunnel Conceptual Design
October 11, 2016	Ohio River Tunnel Conceptual Design
October 18, 2016	Lexington & Payne CSO Storage Basin Construction
November 1, 2016	Southwestern Parkway CSO Storage Basin Advanced Design
November 15, 2016	I-64 & Grinstead Drive CSO Storage Basin Advanced Design
December 13, 2016	Wet Weather Team
January 3, 2017	Clifton Heights CSO Basin Construction
January 10, 2017	Southwestern Parkway CSO Storage Basin Advanced Design
February 10, 2017	Ohio River Tunnel Conceptual Design
March 1, 2017	Ohio River Tunnel Conceptual Design
March 14, 2017	Ohio River Tunnel Conceptual Design
April 18, 2017	Wet Weather Team
April 18, 2017	Southwestern Parkway CSO Storage Basin Construction
April 27, 2017	Ohio River Tunnel Advanced Design
May 30, 2017	Clifton Heights CSO Basin Construction
June 1, 2017	Camp Taylor Sanitary Sewer Replacement Project Construction
June 27, 2017	Portland CSO Storage Basin Construction

SECTION 6: CAPACITY MANAGEMENT OPERATIONS AND MAINTENANCE REPORT

6.1. CAPACITY MANAGEMENT OPERATIONS AND MAINTENANCE PROGRAM ACTIVITIES

Per Paragraph 24.c of the Amended Consent Decree, the Capacity Management Operations and Maintenance (CMOM) Self-Assessment Report was submitted to the Environmental Protection Agency (EPA) and Kentucky Department of Environmental Protection (KDEP) on February 10, 2006. MSD received a letter of approval on August 22, 2006. The approved CMOM document can be viewed on the Project WIN website www.msdlouky.org/projectwin. Highlights of the CMOM program implementation during the reporting period are outlined below.

6.1.1 MANAGEMENT PROGRAMS

6.1.1.1. TABLE OF ORGANIZATION

This section describes MSD's Table of Organization. The goal of this section is to ensure each department works efficiently and cooperatively by clearly defining each department's role in the organization in terms of authority, function, position, duties, and relation to other departments. This section also identifies positions currently budgeted and filled.

M-A-1 Organizational Chart

The Louisville MSD Organizational Chart is updated every quarter. See Appendix G for the latest version.

M-A-2 Relationship to Other Departments

FY17 Program

- Carried 681 approved positions at the beginning of the reporting period and 685.5 approved positions at the end of the reporting period. This is an increase of 4.5 positions.
- Carried 75 vacant positions at the beginning of the reporting period and 56.5 vacant positions at the end of the reporting period.

FY18 Program

- Continue to hire staff to fill vacant positions
- Procure services of executive recruiter to find qualified candidates to fill specialty and senior/mid/upper management positions critical to the success of the Amended Consent Decree (ACD).

6.1.1.2. TRAINING PROGRAMS

This section describes MSD's Training Programs. The goal of this section is to ensure employee growth and workplace safety through mandatory training (both initial and ongoing), conference and seminar attendance, certification, accurate record keeping of employee training, and incentives such as pay, promotions and ability to work. All training programs promote MSD's fundamental mission, goals, and policies.

M-B-1 Technical Training
M-B-2 Skills Training
M-B-3 Safety Training

FY17 Program

- Training for the reporting period is detailed in Figure 6.1 and Figure 6.2.
    - Conducted Administrative Training sessions including such topics as New Employee Orientation, Project Management, Leadership, Records Retention, Crew Management, Supplier Diversity Procurement Procedures, and Ethics.
    - Conducted Collections System training sessions including such topics as Sewer Overflow Response Protocol, Erosion Prevention & Sedimentation Control, Stormwater Pollution Prevention Plans (SWPPP) Training, Combined Sewer Overflow (CSO) & Siphon Preventative Maintenance, Sewer Cleaning, and Construction Blueprints.
    - Conducted Reporting training sessions including such topics as Crystal Reports, Telog, Budget Software and eB basics.
    - Conducted Equipment training primarily including heavy equipment that enables employees to maintain and operate the collections system, pump stations and treatment plants. Examples include training on mini-excavators, sewer cleaners, cranes, forklifts and backhoes.
    - Conducted Wastewater Operations training focusing on knowledge and skills related to wastewater treatment process and control, including sampling, Louisville Green Management System training, and Wastewater Lab Certification Preparation.
    - Conducted safety training in such areas as Traffic Control, Hearing Protection, Confined Space Entry, Blood borne Pathogens, Hazmat, Lock Out/Tag Out, and Competent Person training for trenching and excavation.

FY18 Program

- Continue to develop competent and capable employees through technical and skills training related to job duties.
- Continue to implement employee performance-based goals as part of annual appraisal process and utilize performance results to identify additional training needs.
- Develop processes to better link organizational goals to individual employee goals.
- Continue to train employees of MSD Standard Safety Procedures.

Figure 6.1. Training Programs - Sessions

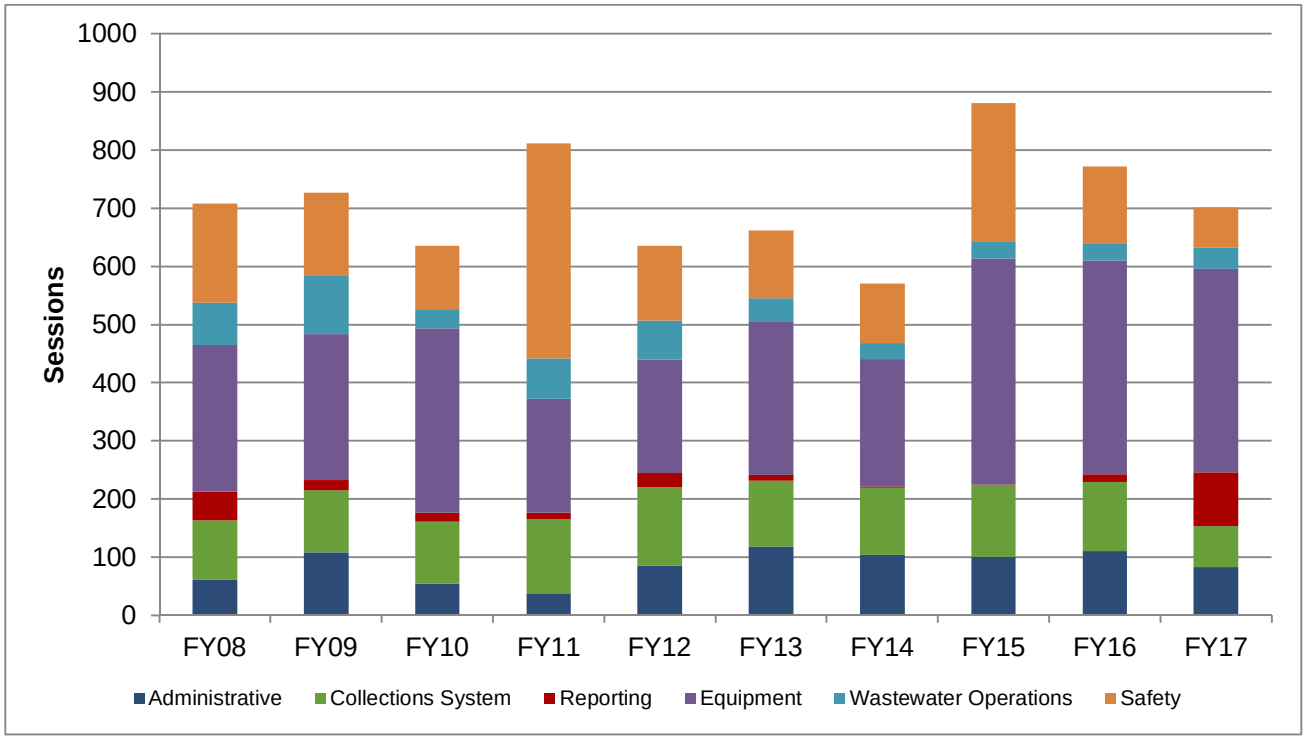
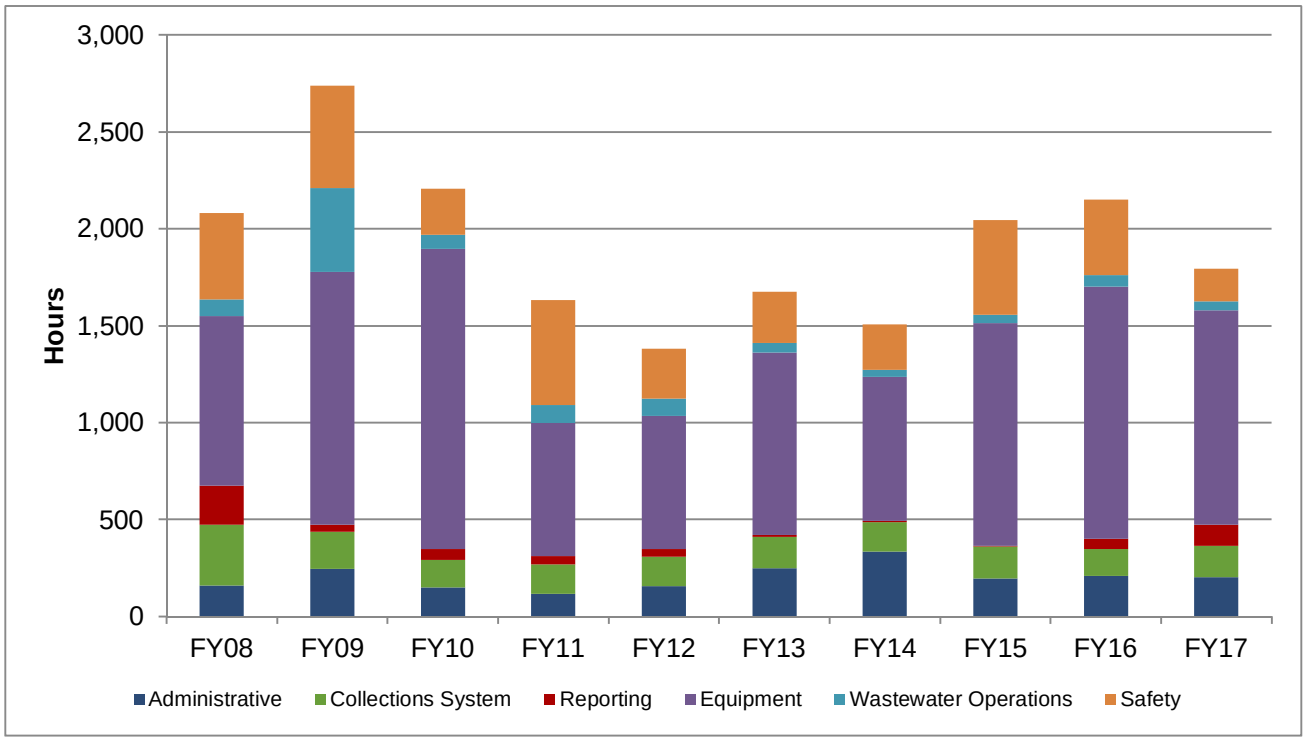


Figure 6.2. Training Programs - Hours



6.1.1.3. SAFETY PROGRAMS

This section describes MSD's Safety Programs. The goal of this section is to eliminate on-the-job injuries. MSD's Safety Programs include safety committees, confined space entry procedures, district wide safety policies, traffic management, lock out/tag out procedures, and proper use of safety equipment.

M-C-1 Safety Committee

FY17 Program

- Conducted quarterly meetings with the Safety Committee. This Committee includes representatives from across the Operations Division, including Treatment, Collections System, and Drainage and Flood Protection representatives.
- Performed random job site inspections on Drainage/Sanitary crews, inspections at Morris Forman WQTC, and quarterly inspections with Operations of WQTCs and flood & viaduct pump stations.

FY18 Program

- Continue Safety Committee meetings to perform inspections and review policy and incidents. Address safety concerns presented by safety committee members.
- Continue to improve safety culture with monthly meetings of the CMF Safety Committee, Treatment Safety Committee, and Collections Safety Committee. Adapt to changes presented during continued reorganization and maintain a focus on safety culture that includes all personnel.

M-C-2 Confined Space Entry

FY17 Program

- Conducted confined space entry training in accordance with the OSHA Confined Space Entry standard 29 CFR 1910.146 for new employees, and on an "as needed" basis for existing employees who have job descriptions requiring confined space entry.
- Maintained entry equipment and personal protective equipment to provide for safe entry conditions and to maintain compliance with 29 CFR 1910.146.
- Contracted with vendor to conduct annual inspections on confined space entry equipment such as tripods, wenches and harnesses.

FY18 Program

- Continue to administer training and monitor procedures on confined space entry in order to maintain compliance with 29 CFR 1910.146. Health and Safety personnel will spot-check confined space entries to determine compliance with company procedure.
- Continue to ensure that all "Climb Down Lift Stations" in Metro Operations are correctly labeled as "Confined Spaces" and not "Permit Required Confined Spaces" and that all new stations are properly labeled when installed.
- Continue to advise personnel on the purchase of multi-gas monitors to replace older models that will no longer be maintained or manufactured.

- Continue to assess confined space monitor calibration status and purchase calibration gas for the six calibration stations.
- Revise the calibration station software to remove chlorine and sulfur dioxide from the monthly calibration program, due to their removal from the operational processes at the treatment plants.
- Purchase new monitors and docking stations in Treatment and Collections to meet expected needs of future personnel and operational changes.

M-C-3 General Safety Procedures

FY17 Program

- Established various general safety procedures based on both 1910 & 1926 OSHA regulations, input from internal personnel, and on the specific needs of the district in order to maintain regulatory compliance and provide safe working procedures for employees.
- Conducted Emergency Response Team (ERT) fire drills and tornado drills at the Main Office, Central Maintenance Facility and Morris Forman Water Quality Treatment Center.
- Conducted 8-hour refresher training on Hazardous Materials for the Emergency Response Teams.
- Conducted fire extinguisher training district-wide.
- Conducted annual audiograms district-wide.

FY18 Program

- Continue to conduct training with employees on the new OSHA Hazardous Communications Standard to include Globally Harmonized Systems for material safety data sheets and container labeling.
- Continue to assess the need to update existing procedures and/or create new procedures as conditions and regulatory requirements dictate.
- Continue to conduct 8-hour refresher training on Hazardous Materials for the Emergency Response Teams.
- Continue to conduct fire extinguisher training district-wide.
- Continue to conduct fire and tornado drills.
- Continue to conduct annual audiograms district-wide.
- Schedule 40-hour HAZ-MAT Technician Level training for newly hired employees as needed based on hiring demands.
- Enhance compliance objectives based on NFPA 70E (Arc Flash) by conducting an initial arc flash study at one of the flood pump stations in service and hire a senior electrical engineer.
- Replace current Material Safety Data Sheets in the MSDS Pro database with updated safety data sheets compliant with the Globally Harmonized System (GHS) standard.

- Continue required safety orientations with contractors to ensure compliance with MSD & KYOSHA regulations and promote a strong safety culture.

M-C-4 Traffic Management

FY17 Program

- Purchased and maintained traffic control equipment to reduce hazardous operational exposure.
- Provided training on traffic control during licensing and equipment operating training, conducted as employees are hired or as employee job duties require.

FY18 Program

- Continue traffic control training for employees to ensure continued compliance with MSD standards.
- Inspect and replace traffic control equipment regularly to ensure compliance with safety standards.

M-C-5 Lock Out/Tag Out

FY17 Program

- Enhanced lock out/tag out procedures as required by the OSHA Control of Hazardous Energy standard. Procedures are maintained and communicated to employees.
- Developed lock out/tag out procedures as equipment was added or replaced, or as processes were changed.

FY18 Program

- Implement lock out/tag out procedures as equipment is added or replaced, or as processes are changed.
- Work with staff at Morris Forman WQTC to enhance existing program by reviewing and documenting existing procedures. These SOPs will then be converted to an electronic database for improved accessibility.

M-C-6 Safety Equipment

FY17 Program

- Continued to review and provide required personal protective equipment to employees.
- Conducted NFPA 1852 required annual testing and maintenance for self-contained breathing apparatus respirators.

FY18 Program

- Maintain safety related equipment or replace the equipment per governing policies or as the need arises.
- Assist MSD Operations Division with the purchase of additional confined space escape bottles.

- Explore options for more comfortable safety equipment to maintain employee adherence to safety policies and procedures.

M-C-7 Performance Measures

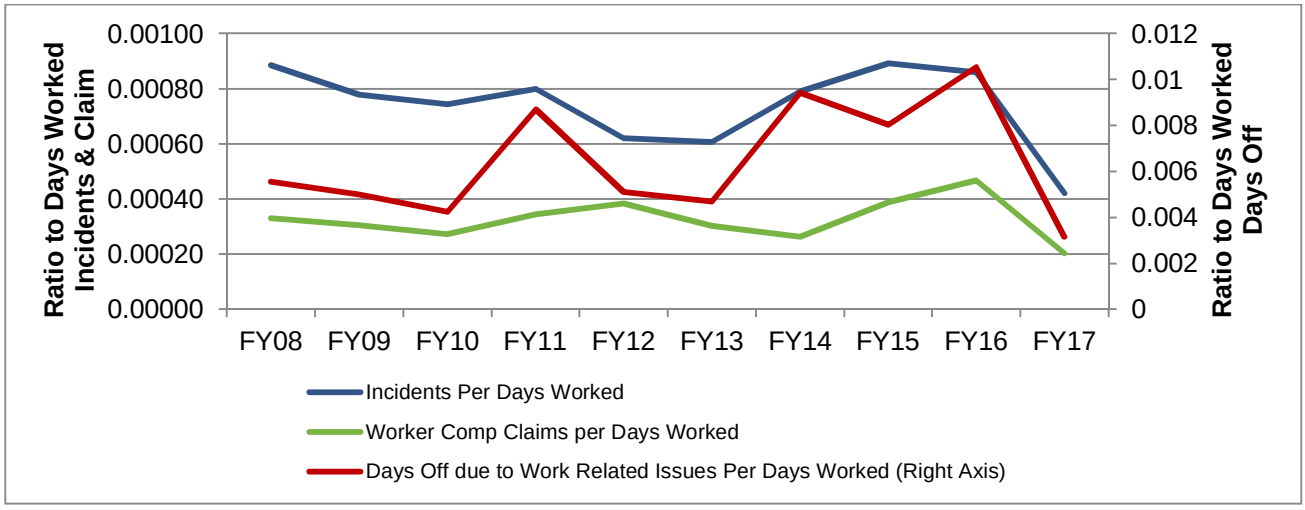
FY17 Program

- Maintained compliance with OSHA standards.
- Ensured that appropriate staff attended mandatory training on trench excavation safety, confined space, first aid, hazmat response and fire extinguisher usage.
- Safety / worker compensation metrics for MSD employees are detailed in Table 6.1 and Figure 6.3.

Table 6.1. Safety Incidents and Worker Compensation Claims

FY	DAYS WORKED (8 HOURS)	SAFETY INCIDENTS	WORKER COMP CLAIMS	DAYS OFF DUE TO WORK RELATED ISSUES
FY08	142,242	126	47	789
FY09	141,564	110	43	707
FY10	146,499	109	40	623
FY11	151,272	121	52	1317
FY12	151,605	94	58	773
FY13	145,302	88	44	681
FY14	144,178	114	38	1,357
FY15	141,353	126	55	1,134
FY16	143,113	123	67	1,507
FY17	152,175	64	31	482

Figure 6.3. Safety Performance Rate Trends



FY18 Program

Mitigate the adverse trends shown through the reporting period by completing the following activities:

- Maintain field inspections as discussed under M-C-1 Safety Committee to reduce the number of incidents.
- Continue to improve compliance with NFPA 70E and the GHS standard as discussed under M-C-3 General Safety Procedures.
- Continue to foster a strong culture of workplace safety.

6.1.1.4. UTILITY INFORMATION MANAGEMENT SYSTEMS

This section describes MSD's Utility Information Management System. The goal of this section is to produce quality information regarding sewer system performance. MSD's Utility Information Management System supports the following programs: management, operations, maintenance, complaint management, and performance indicators.

M-D 1 Management Information Management Systems
M-D-2 Operations Information Management Systems
M-D-3 Maintenance Information Management Systems
M-D-4 Complaint Management and Tracking Information Management Systems
M-D-5 Performance Indicators

FY17 Program

- Completed Security and Active Directory upgrades recommended by 2016 External IT Audit.
- Completed Phase I implementation of Cedar Creek Data Backup and Disaster Recovery implementation.
- Installed new VMWare Virtual server hardware in the Disaster Recovery site.
- Completed maintenance and update of the local geodetic survey control network to support FEMA CRS, MSD projects and local development.
- Continued migration to tracking capital project performance measures and milestones through SharePoint.
- Upgraded the LOJIC GIS Floodplain Determination application to report permits, Local Regulatory Floodplain and Continuing Sewer System Assessment (CSSA) information.
- Utilized a wide variety of software to operate the day to day business activities associated with wastewater collections, conveyance and treatments. The major Utility Information Management (UIM) applications are shown in Table 6.2.
- Continued enhancement of the Project WIN website with updated information related to the Amended Consent Decree: General site statistics are included in Table 6.3.
- Strived to provide network availability 24 hours per day, 7 days per week, 365 days per year.

- Maintained a helpdesk system to track and respond to requests from users.

FY18 Program

- Upgrade the Hansen Oracle Database to Oracle version 11g.
- Migrate 20 MSD custom written operations applications to a new Oracle 11g Oracle Database.
- Complete the replacement of all Windows 2003 Servers.
- Upgrade GIS databases, HARP and all MSD web-based GIS applications to ArcGIS 10.5.
- Deploy redundant GIS database in Oracle to support 24/7 web applications.
- Continue migration to tracking capital project performance measures and project milestones through SharePoint.
- Revise and document procedures for dry weather overflow notifications out of Telog monitoring system.
- Complete Phase II of Cedar Creek Data Backup and Disaster Recovery implementation.
- Complete Datacenter Co-Locate Project with Peak 10.

Table 6.2. Utility Information Management (UIM) Applications

UTILITY INFORMATION MANAGEMENT (UIM) APPLICATIONS			
eB	OneRain	GIS (HARP)	Performance Measures
Crystal Reports	SAP	EGIS	SCADA
Hansen	Telog	GPS	LIMS
FASTER	SharePoint		

Table 6.3. Project WIN Site Statistics

METRIC	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Number of Visits:	139,919	89,753	93,326	109,689	149,677	155,790	156,546
Average Number of Visits Per Day:	383	380	256	301	408	428	427
Average Visit Duration (minutes):	31	20	6	10	15	8	8
Unique Visitors:	38,371	31,387	12,714	31,155	38,649	40,029	47,172
One-time Visitors:	28,822	23,115	7,224	16,855	25,416	25,960	33,741
Repeat Visitors:	9,549	8,272	7,749	14,270	13,233	14,069	13,431
Average Visits per Visitor:	3.65	2.85	2.52	3.52	3.93	3.71	3.38

- Complete SAP Hosting Project with V3IT.
- Continue to work on the migration to tracking capital project performance measures and milestones through SharePoint.

6.1.1.5. ENGINEERING PROGRAMS

This section describes MSD's Engineering Capacity Management Operations and Maintenance (CMOM) activities. The goal of this section is to maintain accurate plans of current sewer system infrastructure, oversee construction quality of new infrastructure, and conduct assessments to maximize the efficiency of current WQTCs. MSD's engineering programs include the following: collections and transmission system plans, system inventory, mapping, sewer system design, sewer construction, construction inspection, acquisition considerations, continuing sewer system assessment (CSSA), infrastructure rehabilitation, and a system capacity assurance plan (SCAP).

M-E-1 Collection and Transmission System Plans

M-E-2 System Inventory

M-E-3 Mapping

MSD has an extensive collection of record drawings of the sewer facilities dating back to 1874. In addition to the original record drawing, a scanned image is stored in eB, MSD's records management system. Plans are scanned twice during a project life cycle – once when the project is approved for construction and a second time when the plans are made "as-built" after construction completion. After a set of plans has been constructed, the facilities are created in GIS and the attributes of the facilities are stored in a corresponding asset record in the Hansen database. Map corrections are also obtained during asset inspection activities described in Appendix E.

FY17 Program

- Captured assets in the GIS and asset management software. Added 1,290 property service connection records and 105,123 feet of sewer records.
- Corrected 60 sewer errata.
- Scanned 258 construction plan sets into the eB Imaging System.
- Launched the upgraded version of HARP, called Upstream. Conducted training sessions to bring employees up to speed on the enhancements in Upstream.

FY18 Program

- Continue to scan plans and to add and update data in the GIS and asset management software based on new construction drawings and feedback from MSD field personnel.
- Update the GIS sewershed layer as projects are completed to support SCAP implementation.

M-E-4 Sewer System Design

FY17 Program

- Published the final version of the Green Infrastructure Chapter of the Design Manual (Chapter 18) in January 2017, incorporating MSD's most recent lessons learned on Green Infrastructure implementation in Louisville.
- Continued to hold the Qualified Post-Construction Inspector (QPCI) training course, which includes a 4-hour training course and qualifying exam that participants must pass to become a certified QPCI. All green infrastructure projects are required to submit an annual inspection by a QPCI to verify continued on-site stormwater management.
- Continued use of new AutoCAD templates available on the MSD public webpage, including new AutoCAD 3D templates, for use by private firms as well as in-house design.

FY18 Program

- Continue to review and update the MSD Design Manual.
- Continue to administer training on the green infrastructure review and inspection process.

M-E-5 Sewer Construction
M-E-6 Construction Inspection

FY17 Program

- Maintained the practice on significant capital projects to utilize the design engineer as the engineer of record or resident project representative (RPR).
- Continued reviews and revisions of the Construction Inspector Field Handbook.
- Expanded the Construction Inspection division to include one manager, two supervisors, and 16 construction inspectors at the end of the reporting period. This growth enabled MSD to bring more inspection services in-house and minimize the need for contracted inspection services. Utilized contract inspectors to supplement in-house inspection services as needed.

FY18 Program

- Continue construction inspection activities in-house and continue to supplement with contract inspection as needed.
- Continue acquisition of RPR services for significant capital projects.
- Continue review and updates of the Construction Inspector Field Handbook.
- Fill additional vacant construction inspection position to better provide in-house inspection services.

M-E-7 Acquisition Considerations

FY17 Program

- Financed capital expenditures of $185,966,874.

- Committed professional services funds of $10,726,967.
- Committed construction funds of $141,930,789.
- Awarded construction contracts valued at $ 145,072,923.
- Processed total change orders equaling $10,173,124.

FY18 Program

- Budget for capital expenditures up to $195,000,000.
- Monitor expenditures related to professional services and construction.

M-E-8 Continuing Sewer System Assessment

Refer to Appendix E for details on the CSSA activities for the reporting period.

M-E-9 Infrastructure Rehabilitation

Refer to Section 4: Program Activities for Discharge Abatement Plans for more details on infrastructure rehabilitation projects identified in the IOAP. Refer to Appendix E for an update on all rehabilitation projects completed during the reporting period and planned for the next reporting period in accordance with CSSA.

M-E-10 System Capacity Assurance Program

FY17 Program

- Continued to collect formula-based defect inspection of significant footage of sewer lines in various sewer-sheds across the county. This information is being used to prioritize cleaning and rehabilitation efforts that will remove inflow and infiltration from the system and create capacity credits. Refer to Appendix E for a progress update.
- Tracked pump station capacities, reviewed drawdown testing results and identified action items pertaining to deficiencies. Critical results of this effort are being documented on each asset within the Hansen system.
- In accordance with the System Capacity Assurance Program (SCAP), reviewed wastewater capacity requests from private development as shown in Table 6.4.
- Continued to work on the procedures for documentation of rehabilitation and the calculation of SCAP results.
- Submitted credit catchment ledgers to the Kentucky Division of Water (KDOW) and EPA as part of quarterly reports.

FY18 Program

- Continue to perform formula-based inspection of sewer lines in various sewer-sheds across the county. Refer to Appendix E for an update on the areas selected for inspection.
- Continue tracking pump station capacities through testing, investigation and capacity evaluations.
- Update WQTC capacities and track new development flows.

- Generate inflow and infiltration reduction projects and calculate related capacity credits.
- Continue to enhance credit calculation protocols and tracking in Hansen.
- Continue to enhance the procedures for documentation of rehabilitation and the calculation of SCAP credits.
- Update SCAP areas based on pump station elimination projects that have been completed.

6.1.1.6. SANITARY SEWER OVERFLOW REPORTING AND NOTIFICATION PROGRAM

This section describes MSD's Sanitary Sewer Overflow (SSO) Reporting and Notification Program. The goal of this section is to maintain accurate, up to date records of SSOs and to ensure proper, timely notification of the agencies and organizations through un-permitted discharge reporting, SSO notification and tracking.

M-F-1 Unauthorized Discharge Reporting

Refer to Section 1: Project WIN Performance Overview for detailed information.

Table 6.4. SCAP Wastewater Capacity Request Review

FY	APPROVED		CONDITIONALLY APPROVED		DENIED	
	REVIEWS	FLOW	REVIEWS	FLOW	REVIEWS	FLOW
FY08	164	2,904,288	123	2,469,192	22	539,824
FY09	46	455,903	132	1,988,973	4	103,000
FY10	77	503,051	135	1,245,410	5	23,214
FY11	113	138,253	115	1,633,364	5	67,600
FY12	98	961,203	141	2,075,781	12	72,822
FY13	100	523,963	182	1,940,150	8	185,100
FY14	139	1,508,296	251	2,521,877	11	80,700
FY15	105	503,940	192	2,002,460	7	47,020
FY16	125	709,164	209	3,237,484	3	13,450
FY17	93	388,626	231	3,741,958	0	0

M-F-2 Sanitary Sewer Overflow Notification

M-F-3 Tracking Sanitary Sewer Overflows

Refer to Section 3: Program Activities for Sewer Overflow Response Protocol for detailed information.

6.1.1.7. FINANCING AND COST ANALYSIS PROGRAM

This section describes MSD's Financing and Cost Analysis Program. The goal of this section is to provide a detailed cost analysis for both the capital and operational costs of MSD for use in future budgeting and decision making. The following cost analysis programs are included in this section: operations, maintenance, capital improvement program funding, management, life cycle, and budget and customer rate setting.

M-G-1 Operations Cost
M-G-2 Maintenance Cost
M-G-3 Capital Improvement Funding
M-G-4 Management Programs Cost
M-G-5 Life Cycle Cost
M-G-6 Budget and Customer Rate Setting

FY17 Program

Details of the FY17 program are included in Table 6.5. Capitalized budget performance is shown in Figure 6.4. Reported amounts for the FY17 program are unaudited financial results.

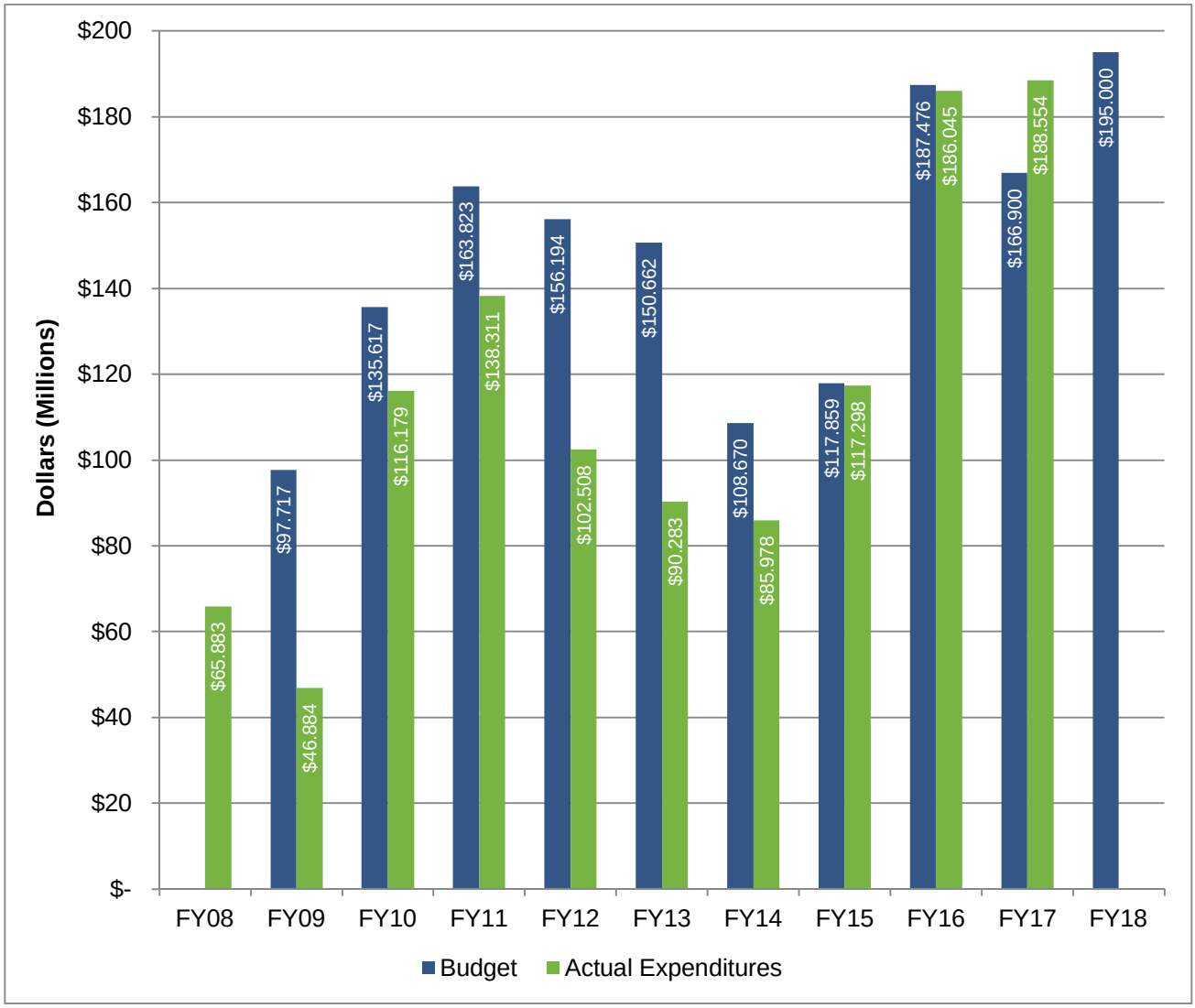
FY18 Program

- Set the operating budget at $125,600,000 and the capital budget at $195,000,000.
- Issue $175 million of revenue bonds in FY18 to fund the capital program.

Table 6.5. FY17 Financing and Cost Analysis Program Details

METRIC	BUDGET	ACTUAL
Operating Revenue Growth	-	6.7%
Operating Revenue	$257,064,000	$259,634,628
Wastewater / Stormwater Revenue	$253,064,000	$253,943,156
Investment Income	$17,508,000	$14,236,455
Debt Service Coverage Ratio	-	181%
Total Operating Expenses	$166,201,511	$169,390,472
Total Capital Expenses	$166,900,000	$188,553,843

Figure 6.4. MSD Capitalized Budget Performance



6.1.1.8. EQUIPMENT AND TOOLS MANAGEMENT AND MAINTENANCE PROGRAM

This section describes MSD's Equipment and Tools Management Programs. The goal of this section is to facilitate efficient repair and support of MSD's sewer systems through an accurate spare parts inventory, a timely equipment maintenance schedule, vehicle repair, and needed tools and supplies.

M-H-1 Spare Parts Inventory Management

M-H-4 Supplies Management

FY17 Program

- Upgraded security at all storeroom locations.

- Developed team goals for concentration of inventory management improvements with spare parts.
- Continued weekly meetings with departments for improved customer service, inventory management of critical spare parts, reorganization of new storeroom locations, and PPE/safety upgrades.
- Provided Excel refresher course training to storeroom team members for improvements with cycle counting and report design.
- Acquired spare parts for Morris Forman WQTC storeroom from ongoing equipment replacement projects.
- Continued asset management process to replace identified spare parts from Morris Forman WQTC flood event.
- Reviewed current SOPs to verify compatibility with current organizational direction. Updated SOPs for quality improvements and determined best practices to improve operations through continuous training of Storeroom applications.
- Completed Phase 1 of bar-code scanning initiatives for inventory control.
- Updated inventory descriptions and relocated like parts in some areas.
- Reviewed contract management of vendor-managed inventory.
- Continued improvements with recycling program.
- Improved cross training of all storeroom team and establish goals to learn new inventory management processes.

FY18 Program

- Resubmit selected Material Master Forms for reprocessing to reconcile vendor's Unit of Measure with storeroom's Unit of Issue, in order to improve inventory and ordering processes.
- Upgrade security of Cedar Creek Storeroom with camera surveillance.
- Revamp Material Master Form to ensure customer comprehension and accuracy.
- Improve receiving process by recording tracking control numbers (TCNs) instead of PO numbers to eliminate ambiguity on materials and shipments.
- Implement plan to reorganize CMF North Warehouse.
- Continue to update SOPs for quality improvements and determine best practices to improve operations, utilizing "Back to Basics" guidelines.
- Complete Bar-Code Scanning initiatives for inventory control.
- Update inventory descriptions and relocate like parts.
- Continue cycle counts after each morning rush and before system processing.
- Implement storeroom follow-up program to ensure accountability of vendors and visibility of incoming assets.

- Continue "Back to Basics" training for goal setting and incorporate focus commodities for team members.

M-H-2 Equipment and Tools Repair Management

FY17 Program

- Completed redesign and remodeling of CMF Tool Shop for added security and availability to crews.
- Attended regular safety inspections and meetings, and supported safety standards as part of participation in CMF and Morris Forman Safety Committees.
- Finalized policy on Arc Flash PPE, in collaboration with Engineering, and began regular inspections of PPE and equipment.
- Trained all employees in advanced safety of material handling and storeroom functionality.
- Continued annual audit of SOPs for tooling inspections and implement improved security measures for cost savings initiatives and asset management.
- Collaborated with Safety to review and update safety equipment and inspection controls (Arc Flash Personal Protective Equipment [PPE], safety harness inspections, eyewash stations, ladders, safety PPE, and fire extinguishers).
- Prepared and executed tooling inspection and equipment repair training for all Treatment and Collections operators, mechanics, electricians and controls technicians.
- Audited tool and equipment repair process and form through MSD Tool Shop for continuous improvement of systems.
- Continued updating standard tooling lists for all Treatment and Collections operators, electricians, mechanics, control specialists, and field supervisors.
- Implemented cost savings initiatives of recycling out-of-service tools and utilizing in-house contracts for equipment and tool repair where applicable.

FY18 Program

- Complete upload of employee tooling lists to eB software for internal management access.
- Continue participation on Central Maintenance Facility and Morris Forman Safety Committees by attending regular safety inspections, safety meetings, and supporting safety standards.
- Designate CMF as ARC Flash and Fall Inspection meeting location.
- Continue training on safety related storeroom processes and inventory for all employees.
- Continue annual audit of SOP for tooling inspections and implement improved security measures for cost savings initiatives and asset management that aligned with departmental goals when necessary.
- Designate supervisors as responsible for managing and responding to employees' inspection needs, including scheduling and filing certificates of inspection if needed.

M-H-3 Vehicle Repair

MSD's vehicle repair maintenance program addresses over 600 pieces of rolling stock, including automobiles, trucks, trailers, construction equipment (backhoes, mobile cranes, etc.) and specialty sewer maintenance equipment. Quarterly and annual summary reports specifically address maintenance issues related to the grouping of Mission Critical Equipment (MCEs) that were identified as being essential to meeting Amended Consent Decree commitments related to NMC and CMOM activities, targeting an overall average availability of 95% or higher for all MCE. Five types of equipment were identified as MCEs in the MSD fleet as shown in Table 6.6 with availability for the current reporting period. It should be noted that the documentation process was changed in FY16 to ensure that out of service times and classifications of repairs are accurate and recorded on a timely basis.

FY17 Program

- Continued monitoring and reporting availability of MCE targeting an overall average availability of 95% or higher for all MCE.
    - Catch Basin Cleaner availability fell below 95% target in FY17 due to the loss of a cleaner to an accident. Prepared specifications for, advertised and awarded contract to purchase one new catch basin cleaner removed from service due to accident damage. Unit has been ordered was delivered in November 2017.
    - High Pressure Sewer Flusher/Jetter Truck availability fell below 95% target in FY16 when the out-of-service time criteria were revised, and equipment was prioritized for replacement in FY17. Prepared specifications for, advertised and awarded contract to purchase one new Single Axle Vacuum Sewer / Catch Basin Cleaner Truck as replacement for two High Pressure Sewer Flusher/Jetter trucks to replace aging equipment and improve availability. Unit has been ordered and was delivered December 2017.
    - Tele-Inspection Vehicle availability fell below 95% target in FY16 when the out-of-service time criteria was revised, and equipment was prioritized for replacement in FY17. Prepared specifications for and advertised two new units to replace aging equipment and improve availability. Contract has been awarded and staff is currently working through configuration issues with manufacturer. Delivery is anticipated within FY18.
- Monitored equipment and work order data using FASTER System reports to analyze and target areas where improvement is needed and to plan future replacements.
- Implemented revised preventive maintenance (PM) schedules to be class-specific and in line with industry standards, specifically addressing the operating environment of all MCE increasing the frequency of PM performed to improve availability to the operating division.
- Analyzed FY18 capital purchasing needs, including the evaluation of MCE for replacement.
- Continued efforts associated with One Water Initiative with LWC to capitalize on fleet services opportunities to realize cost savings while better serving our customers and increasing levels of service to the community. Initiated conversations with both MSD and LWC union leadership regarding shared resources.

Table 6.6. Mission Critical Equipment

EQUIPMENT TYPE	QUANTITY	EVALUATED MISSION CRITICAL AVAILABILITY
Catch Basin Cleaners (mechanical clamshell type)	4	90.0%
High-Pressure Sewer Flusher/Jetter Trucks	6	86.3%
Sound Attenuated Six-Inch Trash Pumps	13	98.8%
Tele-Inspection Vehicles	7	88.5%
Vacuum Sewer / Catch Basin Cleaner Trucks	9	78.9%

FY18 Program

- Continue monitoring and reporting availability of MCE targeting an overall average availability of 95% or higher for all MCE.
  - Catch Basin Cleaner replacement unit was delivered in November 2017 and is anticipated to be put into service in January 2018.
  - High Pressure Sewer Flusher/Jetter Truck replacement unit was delivered December 2017 and will be placed in service in February 2018.
  - Tele-Inspection Vehicle replacement contract has been awarded. Staff is currently working through configuration issues with manufacturer and delivery is anticipated within FY18. Operator and fleet technician training on new units will be conducted after receipt.
  - Vacuum Sewer / Catch Basin Cleaner Truck availability fell below 95% target in FY16 when the out-of-service time criteria were revised, and equipment was prioritized for replacement in FY18. Specifications will be prepare and advertised in FY18 to place in service one new unit to replace aging equipment and improve availability. Operator and fleet technician training on new units will be conducted after receipt.
- Continue monitoring equipment and work order data using FASTER System reports to analyze and target areas where improvement is needed and to plan future replacements.
- Continue to revise PM schedules which are class-specific to address specific needs of MSD based upon the operating environment of equipment to improve overall preventive maintenance program effectiveness.
- Analyze FY19 capital purchasing needs, including the evaluation of all MCE for replacement.
- Continue to explore One Water Initiatives with LWC to capitalize on fleet services opportunities to realize cost savings while better serving our customers and increasing levels of service to the community.

6.1.1.9. CUSTOMER SERVICE PROGRAMS

This section describes MSD's Customer Service Programs. The goal of this section is to strengthen and maintain a healthy relationship between MSD and the public through service programs which include complaint management, public information and public education.

M-I-1 Customer Service
M-I-2 Public Information
M-I-3 Public Education

FY17 Program

- Mailed out 2,076 Project WIN and Plumbing Modification Program packets of information or applications.
- Received 58,653 calls during FY17 as shown in Table 6.7. Figure 6.5 includes calls answered by MSD on behalf of Louisville Metro through FY14.
- Continued effort to reduce the percentage of abandoned calls below target level as shown in Figure 6.6. Annual rate continues to trend upward began taking calls for the Louisville Water Company in July 2016; however this practice ceased in December 2016 and since that time, quarterly abandonment rates have reduced below target level despite challenges in staffing and programmatic changes.

FY18 Program

- Continue efforts to keep the number of abandoned calls below target level.
- Fill vacant Customer Relations positions in order to better serve customer needs.

Figure 6.5. Total Calls Received

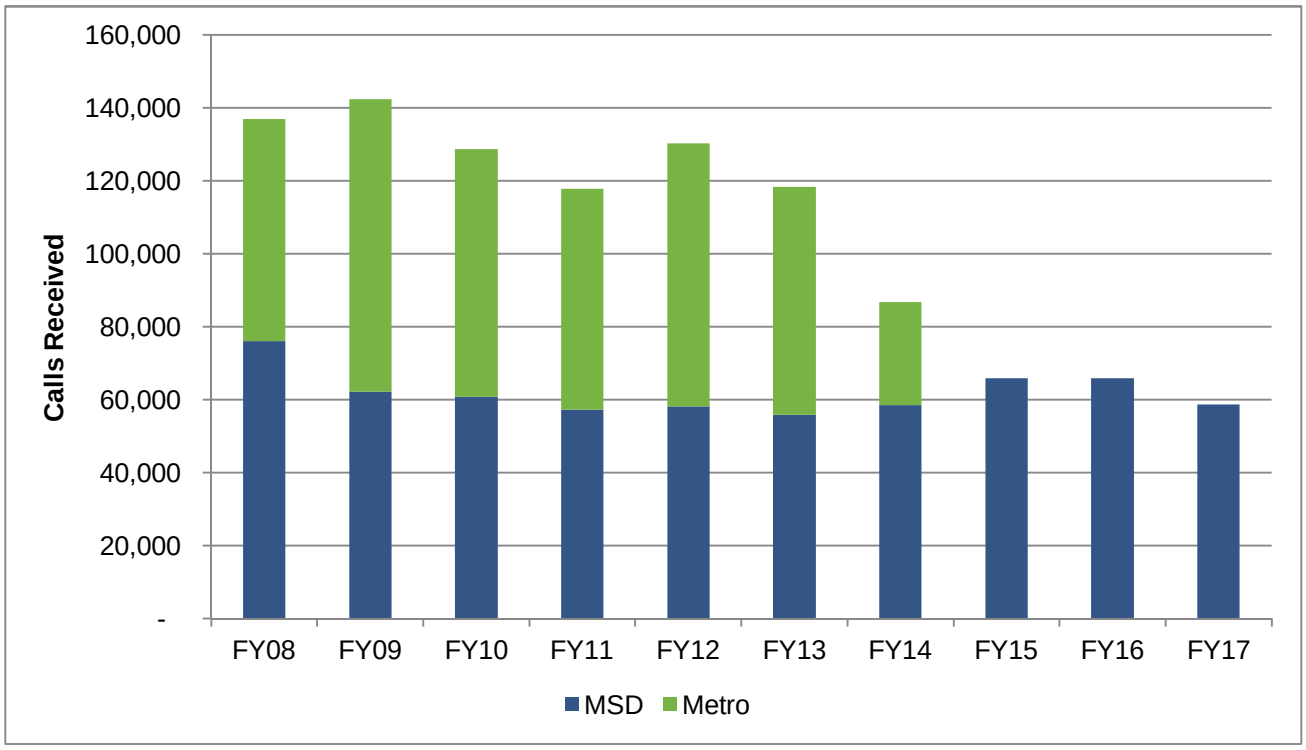
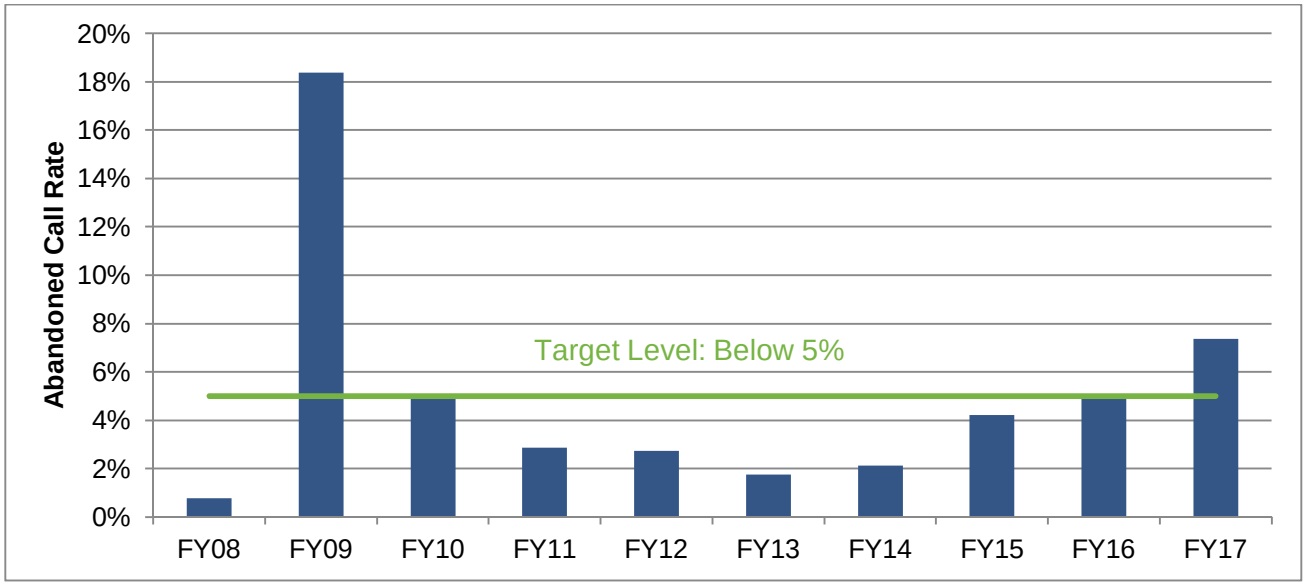


Table 6.7. FY17 Customer Service Call Data

MONTH	MSD CALLS RECEIVED	MSD CALLS ABANDONED	AVG. HOLD TIME (SEC)	CUSTOMER CARE CALLS RECEIVED
July	7,256	651	80	811
August	5,194	219	66	953
September	5,834	310	64	761
October	5,348	211	63	826
November	4,955	156	53	702
December	4,858	289	54	1,189
January	4,073	150	50	718
February	4,779	184	57	557
March	6,838	356	59	866
April	5,471	243	58	937
May	5,545	220	65	769
June	5,830	264	63	867

Figure 6.6. Abandoned Call Rate



6.1.1.10. LEGAL SUPPORT PROGRAMS

The following support programs are included in this section: inter-jurisdictional agreement, ordinances, pretreatment legal support, grease control legal support, service laterals legal support, septic tank haulers legal support, and “Call Before You Dig” legal support.

M-J-1 Inter-Jurisdictional Agreement
M-J-2 Ordinances

FY17 Program

Over the past fiscal year, the MSD legal department has provided a variety of legal services designed to support MSD in its efforts to implement programs to abate sanitary sewer overflows as required by the Amended Consent Decree. The services most directly related to this effort include:

- Participated in and/or provided legal advice and other functions pertaining to the procurement of construction and professional service contractors to provide services and/or perform work in furtherance of IOAP related projects.
- Participated in the acquisition of properties and/or property interests (easements and/or fee simple ownership) critical to the completion of IOAP related sewer construction projects. The department's participation has included assisting in the negotiation and structuring of purchase and sale agreements, drafting acquisition related documents, title research, and performing or providing oversight of the closing of acquisition transactions, as well as initiating legal proceedings to acquire property through eminent domain.
- Provided support, assistance and counsel to regulatory programs and enforcement actions brought under the Wastewater Stormwater Discharge Regulations, Hazardous Materials Ordinance, and Erosion Prevention and Sediment Control Ordinance.
- Pursued cost recovery actions for regulatory violations.

FY18 Program

Continue to provide legal services to support MSD.

M-J-3 Pretreatment

Refer to Sections 2.4 and 6.1.2.2 for details related to pretreatment.

M-J-4 Grease Control

Refer to Section 6.1.2.4 for details related to grease control.

M-J-5 Service Laterals

Refer to Section 6.1.2.5 for details about service connections.

M-J-6 Septic Tank Haulers Legal Support

Refer to Section 6.1.2.7 for details related to septic tanks.

M-J-7 “Call Before You Dig”

Refer to Section 6.1.2.8 for details related to the Call Before You Dig program.

6.1.1.11. WATER QUALITY MONITORING PROGRAMS

This section describes MSD's Water Quality Monitoring Program. The goal of this section is to maintain an accurate, consistent record of water quality in receiving bodies of water. Monitoring results are used to determine the effect of effluent discharge and/or spills through the following monitoring programs: routine water quality, investigative water quality, and water quality monitoring for spill impact. Water Quality monitoring data is also assessed and provided in the Water Quality Synthesis Report.

M-K-1 Routine Water Quality Monitoring Programs

M-K-2 Investigative Water Quality Monitoring

M-K-3 Water Quality Monitoring for Spill Impact

MSD has aggressively pursued a watershed management approach that relies heavily on an established water quality monitoring program. The program has an extensive in-stream monitoring effort for tributary streams and for emergency spill responses, including:

- Ambient monitoring includes a grid of monitoring sites across Jefferson County to monitor multiple physical and biological indicator parameters.
- Recreation contact monitoring is conducted seasonally at each of the ambient monitoring sites for parameters such as fecal coliform.
- The United States Geological Survey (USGS) collects continuous flow data at each of the ambient monitoring sites.
- Sanitary Sewer Overflows (SSOs) / Combined Sewer Overflows (CSOs)/ Significant Industrial Users (SIUs) point sampling monitors the risk of water quality impairment to discharges associated with SIUs and General Discharger Permits, and those that are associated with emergency responses.
- CSO flow monitoring measures flow within the combined sewer system to provide improved data input into water quality models.

Additional information on these programs is provided in Section 4.5.

6.1.1.12. CONTINGENCY PLAN FOR SEWER AND TREATMENT PLANT

This section describes MSD's Contingency Plan for the wastewater collection and treatment system. The goal of this section is to provide a protocol for emergency response and notification. The following elements are included in this section: contingency planning process, response flow diagram, public notification plan, agency notification plan, emergency flow control plan, emergency operations and maintenance plan, preparedness training program, water quality monitoring plan, and Sewer Overflow Response Protocol (SORP). The SORP requires training for all MSD employees.

M-L-1 Contingency Planning Process

M-L-2 Response Flow Diagram

FY17 Program

- Continued collaboration with the National Weather Service, USGS, and Louisville Metro Emergency Management Agency (EMA) to develop a pilot project to install flow and level monitors at a site for

early warning of significant weather events. Significant changes in both meters would trigger a notification at MSD and EMA.

- Continued efforts to improve disaster response protocols. Improved draft matrix for internal training modules to be implemented, including training on first aid, CPR, bloodborne pathogens, and the National Incident Management System's Incident Management System and National Response Framework.
- Practiced annual Floodwall Closure Installations.
- Completed first phase of development of IT Disaster Recovery Plan, which primarily focused on enhancement of disaster recovery infrastructure.
- Revised the Comprehensive Nature Disaster and Business Continuity Plan, including development of several key documents and organizational structure of the comprehensive plan. Identified the critical paths for the development of the key elements for the completion of the plan.
- Completed first phase of new comprehensive ERP, as part of MSD Business Strategy No. 5. This included the initial vulnerability assessment and existing document review.

FY18 Program

- Continue work with the National Weather Service regarding monitors for early warning of significant weather events.
- Continue revision of Comprehensive Nature Disaster and Business Continuity Plan using the critical path. A disaster planning consultant will be utilized to aid in the completion of the plan, which is currently on schedule for June 2018. This revision will include training and emergency exercises.
- Continue to work with other agencies to develop Catastrophic Urban Flood Plan.
- Continue to practice annual Floodwall Closure Installations.
- Continue development of IT Disaster Recovery Plan.
- Begin second phase of development and revision of comprehensive ERP, as a part of MSD Business Strategy No. 5. The ERP is on schedule for completion in May 2018 and will be updated as necessary.

M-L-3 Public Notification Plan

M-L-4 Agency Notification Plan

FY17 Program

Continued quarterly and annual training as outlined in Section 3: Program Activities for Sewer Overflow Response Protocol.

FY18 Program

Continue quarterly and annual training as outlined in Section 3: Program Activities for Sewer Overflow Response Protocol.

M-L-5 Emergency Flow Control Plan
M-L-6 Emergency Operations and Maintenance Plan

FY17 Program

Strategy 5 of MSD's Strategic Business Plan requires that MSD "develop a comprehensive disaster response and business continuity plan for disasters that impact our ability to serve our customers and the community". As part of this effort, a diverse team from across MSD has been working to complete the following initiatives of this plan:

- Assessed level of asset protection through independent consultant evaluation of insurance and risk management plans.
- Completed preliminary vulnerability assessment of MSD operations and infrastructure assets, using industry best practices.
- Selected qualified consultant to assist in completion of Comprehensive Disaster Response and Business Continuity Plan.
- Finalized elements and metrics of EUM related to Operational Resiliency.
- Integrated Engineering's recommendations on systems and improvements necessary to mitigate risks into 20-Year Comprehensive Facility Plan document and capital budget.

FY18 Program

- Continue development of catastrophic urban flood plan in conjunction with the Department of Homeland Security, US Army Corps of Engineers, Kentucky Emergency Management, Louisville Emergency Management Agency and other partners.
- Finalize comprehensive risk and vulnerability assessment of MSD operations and infrastructure assets, using industry best practices.
- Develop and expand each element of EUM related to Operational Resiliency.

M-L-7 Preparedness Training

FY17 Program

Conducted training for Emergency Response procedures as per Section 6.1.1.2.

FY18 Program

Continue to conduct training for Emergency Response procedures as per Section 6.1.1.2.

M-L-8 Water Quality Monitoring Plan

Refer to Sections 4.5 and 6.1.1.11 for more details on the MSD Water Quality Monitoring Plan.

M-L-9 Sewer Overflow Response Protocol

Refer to Section 3: Program Activities for Sewer Overflow Response Protocol for more details on the SORP.

6.1.2 OPERATIONS PROGRAMS

6.1.2.1. PUMP STATION OPERATIONS PROGRAMS

This section describes MSD's Pump Station Operation Programs. The goal of this section is to maintain pump stations for optimal use during routine and emergency operations through well documented operating procedures.

O-A-1 Routine Operating Programs

FY17 Program

- Continued review and updates, as needed, of the U.S. Army Corps of Engineers (USACE) Flood Operations and Maintenance Manual based on USACE and staff review comments. The manual is continuously under review as MSD completes both LTCP and NMC programmatic activities.
- Determined capital project priorities and the budgetary needs related to flood protection system pump stations during regular meetings with MSD Operations and Engineering staff.
- Continued to develop operations and maintenance (O&M) manuals for existing sanitary pump stations that do not have formal O&M manuals. New O&M manuals were created for 30 sanitary pump stations as listed in Table 6.8.
- Continued to develop an application to automate the drawdown testing application at sanitary pump stations and to develop trending standards using Telog. Installed level instrument at 19 sanitary pump stations in order to support automated drawdown efforts as listed in Table 6.8. Completed over 90 manual drawdowns at sanitary pump stations.
- Provided permanent backup power at 86 critical pump stations based upon the previously performed prioritization.

FY18 Program

- Continue regular meetings with MSD Operations and Engineering staff to determine capital project priorities and advise on the budgetary needs on a quarterly basis.
- Complete Operations staff training for Southwestern Pump Station due to operational changes and new equipment related to Bells Lane Wet Weather Treatment Facility construction and planned operation. Complete Operations staff training for pump stations and diversion structures at newly-constructed CSO storage basins.
- Continue the planning to enhance O&M manuals for existing sanitary pump stations that do not have formal O&M manuals. Staff will prioritize pump stations based on operational history. New O&M Manuals will be assigned for 20 sanitary pump stations as detailed in Table 6.9.
- Implement 1-minute level and asset configuration data import to support automatic pump station draw down testing and performance trending. Install an additional 22 level transducers at sanitary pump stations. Continue reviewing pump stations for the installation of level sensors in support of automated drawdown trending.
- Continue to provide backup power at critical pump stations.

Table 6.8. FY17 Pump Station Updates

PUMP STATION ID	PUMP STATION NAME	O&M MANUAL UPDATE	LEVEL INSTRUMENT INSTALLATION
MSD1111-PS	ACADEMY RIDGE	X	X
MSD1051-PS	ADMIRAL		X
MSD1155-PS	BIRCHAM ROAD		X
MSD0069-PS	BLUEGRASS FIELDS	X	
MSD1057-LS	CITY HALL	X	
MSD0027-PS	CROSSGATE	X	
MSD1027-PS	CROSSTIMBERS	X	
MSD1018-PS	CYPRESS SPRINGS		X
MSD1062-LS	DEEP TRAIL	X	
MSD1030-PS	DOVE LAKE		X
MSD1033-PS	FONTAINE ESTATES		X
MSD1008-PS	FRANCELL	X	
MSD0198-PS	GARDEN TRACE		X
MSD0086-PS	GLENVIEW PLACE	X	
MSD1071-PS	HARRODS LANDING	X	
MSD1041-PS	HILLVIEW		X
MSD1003-PS	INDUSTRIAL		X
MSD0195-PS	JEFFERSON HILL		X
MSD1159-PS	KILCOTT		X
MSD1203-PS	KIRBY LANE	X	
MSD0101-PS	LANTANA DRIVE #1	X	X
MSD0188-PS	LOUISVILLE BOAT CLUB	X	
MSD0199-LS	LUCAS LANE	X	
MSD1201-PS	MODESTO ROAD	X	
MSD1020-PS	MUD LANE		X
MSD1086-PS	MUDDY FORK		X
MSD1004-PS	OLD BROWNSBORO PLACE	X	
MSD0135-LS	PARK PLACE		X
MSD0143-PS	PARK RIDGE WOODS	X	
MSD1200-PS	PIROGUE COURT	X	
MSD0126-PS	RIDGE TOP	X	
MSD1060-LS	RIDING RIDGE	X	
MSD1194-PS	RIVER ROAD		X
MSD0062-PS	RIVERSIDE	X	

Table 6.8. FY17 Pump Station Updates

PUMP STATION ID	PUMP STATION NAME	O&M MANUAL UPDATE	LEVEL INSTRUMENT INSTALLATION
MSD1056-LS	ROCK HILL	X	
MSD0049-PS	ROSA TERRACE	X	
MSD0122-PS	ROYSTER		X
MSD0119-PS	SHADY VILLA	X	
MSD1172-PS	ST PATRICK SCHOOL		X
MSD0070-PS	ST. MATTHEWS VILLAGE	X	
MSD0152-PS	TAYLORSVILLE ROAD	X	
MSD0174-PS	TITLEIST ROAD	X	
MSD0125-PS	TRAIL RIDGE	X	
MSD0140-PS	TREE LINE	X	
MSD0038-PS	WOODLAND HILLS	X	X
MSD1170-LS	WORTHING	X	

Table 6.9. FY18 Pump Station Updates

PUMP STATION ID	PUMP STATION NAME	O&M MANUAL UPDATE	LEVEL INSTRUMENT INSTALLATION
MSD1051-PS	ADMIRAL	X	
MSD0166-PS	ASHBURTON		X
MSD1171-PS	BECKLEY STATION ROAD		X
MSD1002-PS	BRITTANY WOODS CIRCLE		X
MSD1091-PS	CARSLAW COURT		X
MSD1092-PS	CEDAR FOREST PLACE		X
MSD1087-PS	CHERRY LANE	X	
MSD1013-PS	CINDERELLA	X	
MSD1095-PS	CLORE LANE		X
MSD1067-PS	COVERED COVE WAY	X	
MSD1001-LS	CREEL LODGE DRIVE		X
MSD1027-PS	CROSSTIMBERS		X
MSD1049-PS	DOMINION WAY		X
MSD0191-PS	GLEN OAKS		X
MSD1068-PS	HARRODS VIEW CIRCLE #1	X	
MSD1069-PS	HARRODS VIEW CIRCLE #2	X	
MSD0112-PS	HASBROOK	X	
MSD1088-LS	HENSLEY CT	X	X

Table 6.9. FY18 Pump Station Updates

PUMP STATION ID	PUMP STATION NAME	O&M MANUAL UPDATE	LEVEL INSTRUMENT INSTALLATION
MSD1106-PS	KAVANAUGH CENTER	X	
MSD1019-PS	LEVEN		X
MSD1101-PS	LOUISVILLE SLUGGER FIELD	X	
MSD1140-PS	MARCIETTA WAY		X
MSD1040-PS	MIDDLETOWN CHRISTIAN VILLAGE		X
MSD1103-PS	MIMICH WAY		X
MSD1147-PS	MOUNT WASHINGTON ROAD		X
MSD0186-PS	MUDDY FORK	X	
MSD1098-PS	NUGENT SAND	X	
MSD1026-LS	OAK POINTE	X	
MSD0135-LS	PARK PLACE	X	
MSD1136-PS	PERIWINKLE WAY		X
MSD1112-PS	POPE LICK	X	
MSD1077-PS	PROVIDENCE COURT	X	X
MSD1089-PS	REALITY TRAIL	X	
MSD1183-PS	RIVERSIDE GARDENS		X
MSD1190-PS	SARATOGA SPRINGS		X
MSD1149-PS	TERRA CROSSING		X
MSD0174-PS	TITLEIST		X
MSD1072-PS	WALNUT RIDGE	X	
MSD0123-PS	WEST GOOSE CREEK	X	
MSD0134-PS	WOODS OF ST. THOMAS	X	

O-A-2 Emergency Operating Programs

FY17 Program

- 4th Street Flood Pump Station Improvements – Replacing three (3) Flood Pumps, three (3) Sanitary Pumps, and Motor Control Centers (MCC); installing a Programmable Logic Control (PLC); and raising the overflow dam approximately 6 inches. Sanitary work will help increase capacity in the collection system and decrease the number of overflows at CSO022, and flood pumping work will increase reliability and performance during flooding events. Project expected to be completed in FY18.
- Green Line Analysis – Continued to evaluate pump stations for inclusion in the Green Line program. Used results of previous Green Line studies to set new elevation set points at 17 pump stations.
- South Pope Lick Pump Station Project (Budget ID H16356) – Bid and award of construction associated with repair of the South Pope Lick Pump Station after a surge event damaged both the

east valve vault and the corresponding piping. The project was advertised July 7, 2016, and a notice-to-proceed was issued October 24, 2016. Construction of this project is scheduled for completion on November 30, 2017.

- Southwestern Gate Chamber Sluice Gate Replacement Project – Initiated emergency project in FY17, expected to be completed in FY18. This project is for the replacement of all three gates and actuator on the Southwestern Outfall, downstream of the Southwestern Pump Station. These gates are responsible for holding back wet weather flow to maximize capacity in the collection system.

FY18 Program

- 34th Street Pump Station Valve Project – Study removal of valves and piping that currently allows for sanitary pumps to pump directly into the Ohio River.
- 4th Street Pump Station Valve Project – Study removal of valves and piping that currently allows for sanitary pumps to pump directly into the Ohio River.
- Beargrass Creek Flood Pump Station Electrical Improvements – Replace and upgrade all electrical & mechanical control equipment, add automated grease systems, and install new PLCs in order to increase the stations reliability and performances during an Ohio River flood event.
- Green Line Analysis - Continue to evaluate pump stations for inclusion in the Green Line program. Green Line pump stations will be prioritized under the program to complete new draw down tests and pump station site assessments. The data from this effort will be collected and will be used to plan future rehabilitation projects. Future rehabilitation work will also correct any pump station operation level settings to prevent line surcharging. An abbreviated Green Line Study for MSD1203-PS Kirby Lane and MSD0038-PS Woodland Hills was initiated in FY15, but was put on hold until more accurate hydraulic models could be put in place. MSD expects the completion of the study in FY18.

6.1.2.2. PRETREATMENT PROGRAM

This section describes MSD's Pretreatment Programs. The goal of this section is to protect MSD's sewer system and treatment plants by requiring industrial users to pretreat their effluent to required levels through industrial user permitting, inspection, sampling and enforcement.

O-B-1 Industrial User Permit

O-B-2 Inspection

O-B-3 Sampling Enforcement

Administered pretreatment limitations at Hite Creek, Floyds Fork, Derek R. Guthrie and Morris Forman WQTCs. Additional information related to the MSD Pretreatment Program for the combined sewer system can be found in Section 2.4. Jeffersontown WQTC was eliminated and flow was redirected to the Morris Forman and Cedar Creek WQTCs in December 2015.

FY17 Program

- Submitted local limits for WQTCs to KDOW for review.
- Reported the status of the Pretreatment Program in annual and semi-annual reports to KDOW.

- Developed a hospital assessment document which identifies reductions in pollutants discharged by hospitals to the publicly-owned treatment works (POTW) as a result of source reduction through process modifications, equipment replacement, products substitution and improved waste management procedures.
- Developed an industrial user email list which is used to regularly email information to industries regarding compliance, regulatory updates and other items of interests to industries.
- Evaluated the Effluent Limitations Guidelines and Standards for Dental Category (Final Rule June 14, 2017) to establish regulatory timelines for implementation of requirements for existing dental offices (July 14, 2020) and to assess the best opportunities to communicate requirements to dental clinics.

FY18 Program

- Establish communication with dental offices and distribute regulatory information regarding the Effluent Limitations and Guidelines and Standards for the Dental Category. Develop a one-time Compliance Report which must be submitted by dental offices.
- Require Environmental Compliance Inspectors to obtain photographs and more detailed information regarding all sampling locations and flow meters.
- Identify sources of molybdenum in Morris Forman's influent and pursue opportunities to reduce molybdenum through product substitution or other controls.
- Establish better data collecting methods and reporting methods to reduce the effort required to submit semi-annual and annual pretreatment reports.
- Work with the KDOW in order to discuss delays in the approval of local limits. MSD will develop a plan to resolve all local limits-related issues and prioritize the development of local limits for Cedar Creek WQTC.

6.1.2.3. CORROSION CONTROLS PROGRAM

This section describes MSD's Corrosion Controls Program. The goal of this section is to extend the life of MSD's sewer system by controlling the corrosive effects of hydrogen sulfide (H_2S) and other corrosive chemicals in the system through inspection, control measures, monitoring, and performance measures.

O-C-1 Inspection

O-C-2 Control Measures

O-C-3 Monitoring

O-C-4 Performance Measures

Hydrogen sulfide is a serious problem for the structural integrity of the collection system, as well as a nuisance to the public due to odor. In some instances, it is possible to respond to odor complaints and treat H_2S without addressing corrosion concerns.

FY17 Program

- Continued to clean MSD facilities to minimize impact of corrosion and odors. Completed 358 cleaning work orders on collection system.
- Continued to enhance asset review and documentation by further defining service request responsibilities related to odor complaints.
- Initiated contracts in order to provide professional engineering services to assist MSD with odor control for the collection system, regional WQTCs, and Ohio River Force Main (ORFM). Work included:
    - Design of Hite Creek Preliminary Treatment Facilities (PTF) Odor Control Improvements Project, which also included Design Services During Construction (DSDC) for the Project.
    - Testing and consultation services for the ORFM Odor and Corrosion Control Project, including pilot testing of a bio-filter to treat H_2S at an air release valve (ARV) along the ORFM at the site of the proposed Waterfront Botanical Gardens site.
    - Other miscellaneous projects as determined by the MSD Collections System Manager and Regional WQTC Program Manager.
- Conducted pilot test of sodium chlorite to treat odors and H_2S with negative results due to impacts on plant processes and cost and safety concerns.
- Continued to monitor and evaluate gravity lines within the collections system through the CSSA/Blockage Abatement Program. Drafted corrosion and FOG indexes for use in internal CSSA Remediation Recommendation Export Tool.

FY18 Program

- Continue to clean MSD facilities to minimize impact of odors and corrosion caused by H_2S on the collection system.
- Create further training and documentation on maintenance activities and work flow for better tracking of work performed and time and materials used.
- Conduct pilot test of an aeration odor control treatment at a pump station wet well. The product is designed for the oxidation and removal of FOG, matting, and odor in pump stations and wet wells.
- Continue to investigate the ORFM to determine recommended plan to reduce odors and corrosion caused by H_2S.
- Monitor and evaluate gravity lines within the collections system through the CSSA/Blockage Abatement Program. Implement corrosion and FOG indexes and assign remediation recommendation in the internal CSSA Remediation Recommendation Export Tool.
- Continue to contract professional engineering services to assist MSD with odor control for the collection system, regional WQTCs, and ORFM.
- Initiate review of underground tank pump station sites, which may be susceptible to corrosion.

6.1.2.4. GREASE TRAP INSPECTION AND ENFORCEMENT PROGRAM

This section describes MSD's Grease Trap Inspection and Enforcement Programs. The goal of this section is to reduce the amount of fats, oils and grease (FOG) that enter MSD's sewer system and treatment plants through permitting, inspection, enforcement, performance measures, and the FOG program.

O-D-1 Permitting

O-D-2 Inspection

O-D-3 Enforcement

O-D-4 Performance Measures

O-D-5 Fats, Oils and Grease Program

FY17 Program

- Conducted 60 inspections at Food Service Establishments (FSEs) within Jefferson County. Inspections resulted in immediate issuance of appropriate enforcement actions to include Field Correction Notices (FCNs). FCNs were issued for violation of MSDs Wastewater/Stormwater Discharge Regulations and FOG Policies.
- Issued 88 enforcement actions to include FCNs, NOVs and NOVs with Fines to FSEs requiring action(s) to prevent and/or eliminate grease blockages in MSDs Collections System. The enforcement actions required FSEs to install and/or modify grease control equipment, with additional requirements to submit documentation of installations and/or modifications.
- Conducted 316 Plan Review inspections to insure proper grease control equipment was installed at new and/or modified FSEs.
- Mailed 362 FOG residential public service notifications. The public service outreach informed residents of a recent sanitary sewer blockage occurrence near their home. Information sent to residents informs the customer of measures that could be taken within a residential dwelling to prevent any further occurrences.
- Conducted two (2) Certified Grease Waste Hauler (CGWH) training classes for haulers servicing grease control equipment within Jefferson County. Class numbers 16 (September 13, 2016) and 17 (April 25, 2017) were provided to haulers during this period. CGWHs as well as master and journeyman plumbers that service or repair grease traps or grease interceptors within Jefferson County are required to participate and receive approval to service grease control equipment. FSEs in Jefferson County must only utilize MSD's CGWHs or plumbers that have obtained the appropriate certification.
- Performed 21 CGWH audits for haulers participating in the CGWH Program. Audits are conducted to assure Certified Grease Waste Haulers comply with hauler agreements between MSD and CGWH. MSD conducts audits with unspecified CGWHs randomly during the fiscal year.
- Continued to track FOG removal by CGWHs. Collectively, 3,310,259 gallons of FOG was removed from grease control equipment maintained by area FSEs during the reporting period. Collectively, CGWHs in Jefferson County serviced approximately 5,970 items of grease control equipment.

- Conducted five (5) FOG reconnaissance tele-inspection projects in conjunction with MSD's internal tele-inspection crews at various locations. The locations inspected were areas where FSEs have not properly maintained grease control equipment or where multiple FOG related incidents had occurred.
- Continued to track FOG Program performance measures.

FY18 Program

- Continue to conduct inspections at FESs and issue enforcement actions as appropriate for violations of the MSD Wastewater/Stormwater Discharge Regulations.
- Continue to send FOG residential public outreach letters to residents in neighborhoods in the MSD service area that had FOG issues.
- Participate in public education and outreach programs to inform the public regarding MSD's FOG Program.
- Continue to host at least two (2) CGWH training classes.
- Continue to conduct CGWH audits.
- Continue to track FOG Program performance measures and develop reporting tools.

6.1.2.5. NEW CONNECTION TAP-IN PROGRAM

This section describes MSD's New Connection Tap-In Program. The goal of this section is to ensure that future connections do not compromise the capacity of the receiving treatment plant. The program is implemented using a new service tap approval process, inspection, enforcement, and performance measures for new connections to existing sewers and increased flow on existing service connection locations. All new service connections are installed by contractors that have a master plumber on staff. New connections made to public sanitary sewers are inspected by MSD personnel.

All new and changes to wastewater discharge volumes are reviewed through MSD's System Capacity Assurance Program (SCAP). Developers are required to submit proposed flows to MSD's system and those flows are traced through MSD's infrastructure to identify lack of system capacity. Where capacity in the system exists, capacity requests are approved for 90 days. Where capacity does not exist, upgrades to infrastructure are undertaken or the capacity request is not approved.

O-E-1 Installation of New Service Taps

O-E-2 Inspection

O-E-3 Enforcement

O-E-4 Performance Measures

O-E-5 Other

FY17 Program

- Approved plans for 297 new development projects to connect to MSD's wastewater system. Treatment capacity is reviewed prior to approval of any plans based on the approved SCAP.
- Inspected installation of 104 new property service connections (PSCs) on existing MSD's sewers.

FY18 Program

- Continue to review projects for capacity available through SCAP program.
- Consolidate and improve internal tracker for new property services connections within the existing infrastructure.
- Work with Customer Relations, Development, and Engineering to develop SOP for new property service connections on existing infrastructure.

6.1.2.6. FLOW MONITORING FIELD OPERATION PROGRAMS

This section describes MSD's Flow Monitoring Field Operation Programs. The goal of this section is to provide accurate flow data for use in evaluating various aspects of MSD's sewer system. Flow is monitored at both permanent and temporary stations.

O-F-1 Permanent Stations
O-F-2 Temporary Stations

Refer to Section 4.5 for details on water quality monitoring efforts.

6.1.2.7. SEPTIC TANK HAULERS PROGRAM

MSD does not accept septic tank waste. This is handled through private contractors in Jefferson County.

6.1.2.8. "CALL BEFORE YOU DIG" PROGRAM

This section describes MSD's "Call Before You Dig" Program. The goal of this section is to prevent the damaging or cutting of sewer lines and other MSD assets and subsequent spills through permitting, inspection, enforcement, and performance measures.

O-H-1 Permitting
O-H-2 Inspection
O-H-4 Performance Measures

FY17 Program

- Contracted with locating company to locate all requests with the MSD service area. Contract is set up to handle Louisville Water Company (LWC) requests as well (invoiced separately). Invoices totaled $967,407.37 to process 114,235 locate requests to identify MSD facilities during the reporting period.
- Contracted with the KY 811 (BUD Center) for underground utility information call center services. Invoices totaled $186,732.80 to participate in this program for the reporting period.
- Requested 2,700 (859 via web and 1,841 via phone) to the BUD Center for the marking of other utilities during this time period.

FY18 Program

- Continue to contract for utility locating service.

O-H-3 Enforcement

Enforcement is handled by the Commonwealth of Kentucky.

6.1.3 MAINTENANCE PROGRAMS

6.1.3.1. PUMP STATION PREVENTIVE MAINTENANCE

This section describes MSD's Pump Station Preventive Maintenance program. The goal of this section is to prevent unanticipated repairs and subsequent down-time by providing scheduling, staff, and records to perform routine, preventive pump station maintenance. Electrical, mechanical, and physical maintenance are included in this section.

S-A-1 Electrical Maintenance

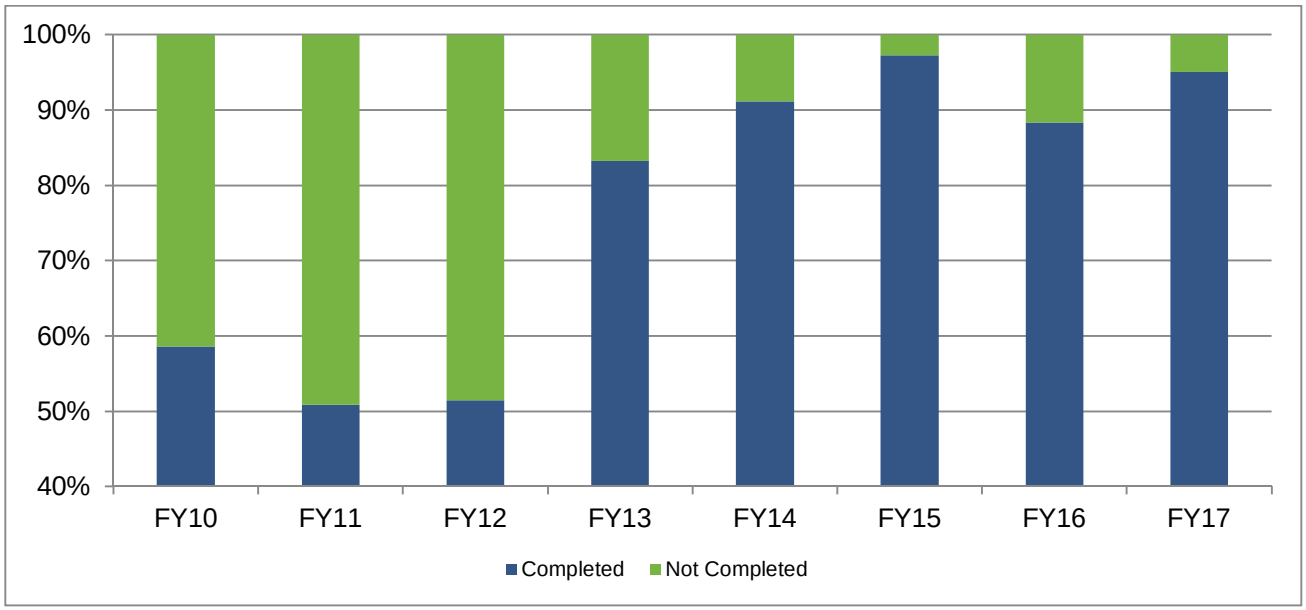
S-A-2 Mechanical Maintenance

S-A-3 Physical Maintenance

FY17 Program

- Continued preventive maintenance inspections for sanitary and flood pump stations as shown in Figure 6.7.
- Continued to annually train staff to use the Hansen asset management system to track pump station work orders as well as associated pump station assets.
- Worked with Engineering on the design and construction of pump stations at CSO storage basins and diversion structures.

Figure 6.7. Sanitary Pump Station Preventive Maintenance



FY18 Program

- Continue preventive maintenance inspections for sanitary and flood pump stations. Continue to annually train staff to use the Hansen asset management system to track pump station work orders as well as associated pump station assets.
- Continue collaboration between Operations and Engineering staff, designers and contractors to incorporate changes to the system with the elimination of the non-regional WQTCs and the addition of storage basins and associated pump stations as required by the IOAP.
- Continue to develop and improve SOPs training, and reporting related to subsequent repairs.

6.1.3.2. FORCE MAIN PREVENTIVE MAINTENANCE

This section describes MSD's Force Main Preventive Maintenance program. The goal of this section is to prevent unanticipated repairs and subsequent down-time by providing scheduling, staff, and records to perform routine, preventive force main maintenance. The maintenance programs include walking the force main alignment to find cave-ins and air relief valve inspections.

S-B-1 Air Release Valves

S-B-2 Valve Exercise Program

FY17 Program

- Conducted the Annual Force Main Program evaluation and completed inspections on force mains listed in Table 6.10, covering 198,237 LF. Each inspection consisted of inspecting wet wells, valve vaults, air release valves, and discharge manholes; pumping out access vaults to lube, grease and exercise cross-connections; and observing the ground above the lines for evidence of pipe failure below ground.
- Determined that 13 air release valves required repairs or replacement as a result of inspections. Continued to initiate corrective work orders for defects found on other assets during inspections.

Table 6.10. FY17 Force Main Inspections

FORCE MAIN	FORCE MAIN	FORCE MAIN	FORCE MAIN
BARDSTOWN BLUFF – 6,597'	GARDEN TRACE – 637'	NEW MARKET – 2,986'	RUBBERTOWN – 9,609'
BOLLING BROOK – 1,246'	GRAND AVE. – 28,832'	OHIO RIVER – 95,009'	SAUREL – 1,306'
CAMPBELL STREET – 1,298'	HURSTBOURNE – 3,735'	PARK PLACE – 1,543'	SHELBYVILLE ROAD – 3,721'
CEDAR BROOK – 764'	JOHNSON ROAD – 4,004'	PHOENIX HILL – 435'	SLUGGER FIELD – 324'
CLORE LANE – 800'	KAVANAUGH CENTER – 1,136'	POPLAR HILL – 851'	ST MATTHEWS #7 – 283'
CLYDE MOORE – 685'	KAVANAUGH ROAD – 2,461'	POPLAR HILL COURT – 950'	TITLEIST – 779'
CYPRESS SPRINGS – 6,723'	KILCOTT – 466'	PREAKNESS – 368'	WEST COUNTY SLUDGE MAIN – 74,693'
FLOYDSBURG ROAD – 1,183'	MARCEITTA WAY – 810'	RIDGELEIGH – 616'	
FONTAINE ESTATES – 264'	MIDDLETOWN CHRISTIAN VILLAGE – 901'	RIVER ROAD – 425'	

FY18 Program

- Complete the annual force main evaluation by December 31, 2017. Adjustments to the inspection schedule will be made based on conditions observed during the inspection cycle.
- Review 5-year trends in activities and performance metrics, comparing to targets established in 2006.
- Schedule FY18 force mains for inspection.

6.1.3.3. GRAVITY LINE PREVENTIVE MAINTENANCE

This section describes MSD's Gravity Line Preventive Maintenance program. The goal of this section is to reduce infiltration and increase efficiency of the gravity line system through routine cleaning, root control, and manhole preventive maintenance.

S-C-1 Routine Hydraulic Cleaning

S-C-2 Routine Mechanical Cleaning

S-C-3 Root Control Program

S-C-4 Manhole Preventive Maintenance

Refer to Appendix E for more details on the Gravity Line Preventative Maintenance Program.

6.1.3.4. EQUIPMENT AND COLLECTIONS SYSTEM MAINTENANCE

S-D-1 Equipment Maintenance

Equipment and vehicle maintenance is discussed in detail in Section 6.1.1.8.

6.2. COMPREHENSIVE PERFORMANCE EVALUATIONS AND COMPOSITE CORRECTION PLANS

Per requirements of MSD's 2009 Amended Consent Decree, MSD implemented a Comprehensive Performance Evaluation (CPE) and Composite Correction Plan (CCP) program for MSD's Water Quality Treatment Centers (WQTCs). This program defined specific WQTC improvements to be completed by December 31, 2011. These improvements under this program are discussed under Section 6.2.1. Although the IOAP CPE/CCP improvements were completed by December 31, 2011, MSD will continue to implement CPE/CCP activities as part of the MSD's CMOM Program. Section 6.2.2 will list such activities per WQTC as they occur each reporting period and a comprehensive project schedule for CPE/CCP related capital projects is provided in Section 6.3.

6.2.1 AMENDED CONSENT DECREE CPE/CCP PROGRAM

All activities under this program were completed by December 31, 2011, as required per the IOAP.

6.2.2 CMOM CPE/CCP PROGRAM

This section describes CMOM CPE/CCP activities active during the reporting period and being planned for the next fiscal year. Schedules for CPE/CCP related capital projects are provided in Section 6.3.

6.2.2.1. CEDAR CREEK WATER QUALITY TREATMENT CENTER

FY17 Program

- Completed design of the Influent Pump Station Motor Controls Upgrade project.
- Initiated and completed construction of the Influent Pump Station Gate Repair and UV Gate Replacement project, part of the recommendations of a study performed in 2014.

FY18 Program

- Advertise and award construction contract for the Influent Pump Station Motor Controls Upgrade project in FY18.

6.2.2.2. HITE CREEK WATER QUALITY TREATMENT CENTER

FY17 Program

- Completed construction of the Hydraulic Improvements project, increasing plant capacity from 4 to 6 MGD.
- Continued design of the expansion project to increase the average daily treatment capacity from 6 MGD to 9 MGD.

FY18 Program

- Advertise and award the construction contract for the expansion project in early 2018.

6.2.2.3. FLOYDS FORK WATER QUALITY TREATMENT CENTER

No major capital projects planned for the Floyds Fork WQTC in FY17 or FY18.

6.2.2.4. DEREK R. GUTHRIE WATER QUALITY TREATMENT CENTER

FY17 Program

- Discussed and developed a plan with KDOW to rerate the facility from 30 MGD to 60 MGD to account for the increase in service area during wet weather conditions. The plan includes coordinated submittals of the Derek R. Guthrie WQTC Facility Plan, an updated KPDES permit application for the WQTC, and Return Activated Sludge (RAS) project construction drawings in order to provide the necessary rationale for increasing flows at the WQTC. Submitted the draft Facility Plan for review and received comments to address.
- Reached final completion on the Secondary Clarifiers 1, 2 and 3 Collection Mechanisms Replacement project.
- Conducted Instrumentation and Controls (I&C) testing of the Wet Weather Pumps.

FY18 Program

- Begin construction for the removal and upgrade of RAS Pumps 1 and 4, including the replacement of variable frequency drives on pumps 1 through 4.

- Send the facility plan to the state multi-agency clearing house and KDOW for final review.
- Conduct additional I&C testing and also Vibration testing of the Wet Weather Pumps.

6.2.2.5. JEFFERSONTOWN WATER QUALITY TREATMENT CENTER

MSD has completed the elimination Jeffersontown WQTC. Refer to Section 1.2.2.6 for details.

6.2.2.6. Non-Regional Water Quality Treatment Center Updates

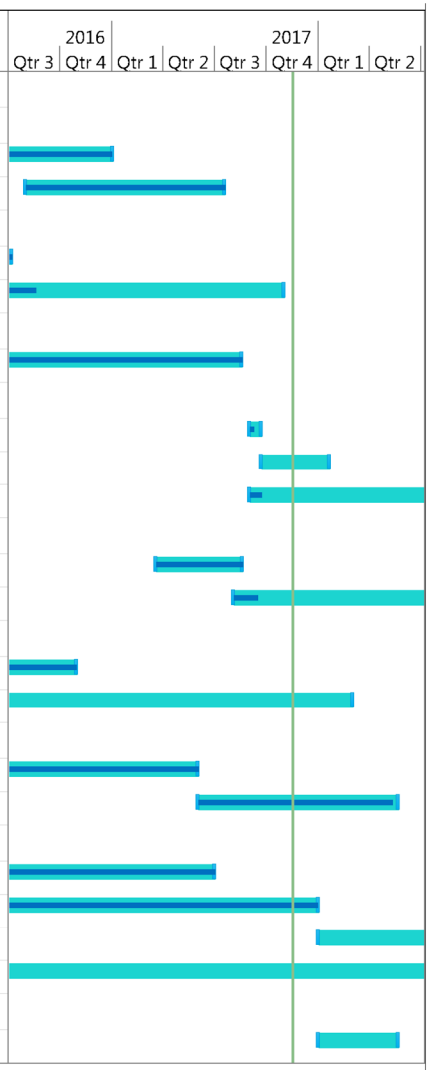
MSD has completed the elimination of all existing non-regional WQTCs at this time. Refer to Section 1.2.2.6 for details.

6.3. 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 6.8.

Figure 6.8. CMOM Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
	MSD CMOM Annual Commitments Schedule (FY2017-2018)	45%	3/29/2009	8/2/2023
A14136	Caven Avenue PS Elimination	100%	6/10/2015	7/18/2017
A14136	CONSTRUCTION	100%	6/10/2015	12/30/2016
A14136	CLOSEOUT	100%	8/1/2016	7/18/2017
A14140	FY17 Contract Inspections	10%	7/1/2016	10/31/2017
A14140	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
A14140	CLOSEOUT	10%	7/1/2016	10/31/2017
A15101	Middletown Industrial Park WQTC Elimination	100%	1/1/2015	8/17/2017
A15101	CLOSEOUT	100%	12/30/2015	8/17/2017
A16068	Land Acquisition	2%	9/1/2017	6/30/2020
A16068	INITIATION & PROCUREMENT	33%	9/1/2017	9/21/2017
A16068	EASEMENTS/LAND ACQUISITION	0%	9/22/2017	1/19/2018
A16068	CLOSEOUT	2%	9/1/2017	6/29/2020
A16073	Mud Lane Interceptor	14%	3/20/2017	11/5/2018
A16073	INITIATION & PROCUREMENT	100%	3/20/2017	8/18/2017
A16073	DESIGN	9%	8/4/2017	11/5/2018
D15127	MFWQTC Process Water Line Replacement	27%	1/21/2015	3/1/2018
D15127	CONSTRUCTION	100%	1/21/2015	10/28/2016
D15127	CLOSEOUT	0%	1/21/2015	1/21/2015
D15132	CCWQTC Influent PS Gate Repair and UV Gate Replacement	99%	4/21/2015	5/21/2018
D15132	CONSTRUCTION	100%	4/21/2015	6/2/2017
D15132	CLOSEOUT	97%	6/2/2017	5/21/2018
D16272	CCWQTC Influent Pump Station Motor Control Center Upgrades	1%	2/4/2016	12/31/2019
D16272	INITIATION & PROCUREMENT	100%	2/11/2016	7/1/2017
D16272	DESIGN	99%	2/4/2016	12/29/2017
D16272	CONSTRUCTION	0%	1/1/2018	1/15/2019
D16272	CLOSEOUT	0%	2/4/2016	12/31/2019
D16275	CCWQTC WAS Cycle Automation	0%	1/1/2018	12/10/2021
D16275	INITIATION & PROCUREMENT	0%	1/1/2018	5/21/2018



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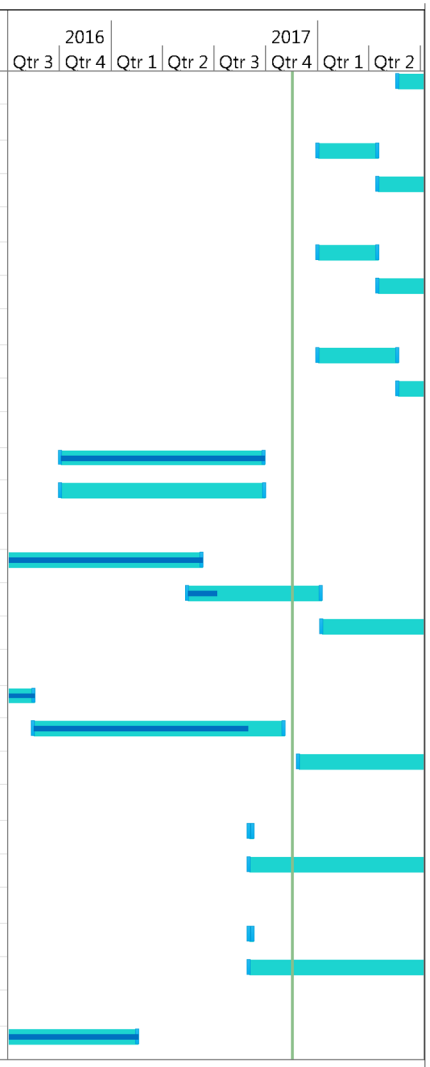
CMOM Project

Project Progress

Figure 6.8. CMOM Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
D16275	DESIGN	0%	5/21/2018	11/15/2019
D16276	CCWQTC Digester Decant Enhancements	0%	1/1/2018	11/5/2021
D16276	INITIATION & PROCUREMENT	0%	1/1/2018	4/16/2018
D16276	DESIGN	0%	4/16/2018	10/11/2019
D16277	CCWQTC Phosphorus Removal Automation	0%	1/1/2018	11/5/2021
D16277	INITIATION & PROCUREMENT	0%	1/1/2018	4/16/2018
D16277	DESIGN	0%	4/16/2018	10/11/2019
D17011	CCWQTC Asset Management Rehab and Replacement	0%	1/1/2018	8/2/2023
D17011	INITIATION & PROCUREMENT	0%	1/1/2018	5/21/2018
D17011	DESIGN	0%	5/21/2018	11/15/2019
D17119	Ohio River FM Odor Study	12%	10/3/2016	9/28/2017
D17119	INITIATION & PROCUREMENT	99%	10/3/2016	9/27/2017
D17119	CLOSEOUT	0%	10/3/2016	9/28/2017
D17153	HCWQTC Bioscrubber Installation	72%	1/1/2016	1/1/2019
D17153	DESIGN	100%	5/23/2016	6/9/2017
D17153	CONSTRUCTION	21%	5/15/2017	1/5/2018
D17153	CLOSEOUT	0%	1/8/2018	1/1/2019
E15033	Shively PS Generator Replacement	51%	4/1/2016	12/11/2019
E15033	INITIATION & PROCUREMENT	100%	4/1/2016	8/16/2016
E15033	DESIGN	85%	8/16/2016	11/1/2017
E15033	CONSTRUCTION	0%	11/27/2017	12/24/2018
E17010	Collection System Spare Pump Inventory	0%	9/1/2017	6/30/2022
E17010	INITIATION & PROCUREMENT	0%	9/1/2017	9/7/2017
E17010	CLOSEOUT	0%	9/1/2017	6/30/2022
E18169	FY18-FY22 Operations Renewal and Replacement	0%	9/1/2017	6/30/2022
E18169	INITIATION & PROCUREMENT	0%	9/1/2017	9/7/2017
E18169	CLOSEOUT	0%	9/1/2017	6/30/2022
F13013	MFWQTC Condenser Upgrades	100%	9/9/2014	11/15/2017
F13013	CONSTRUCTION	100%	9/9/2014	2/15/2017



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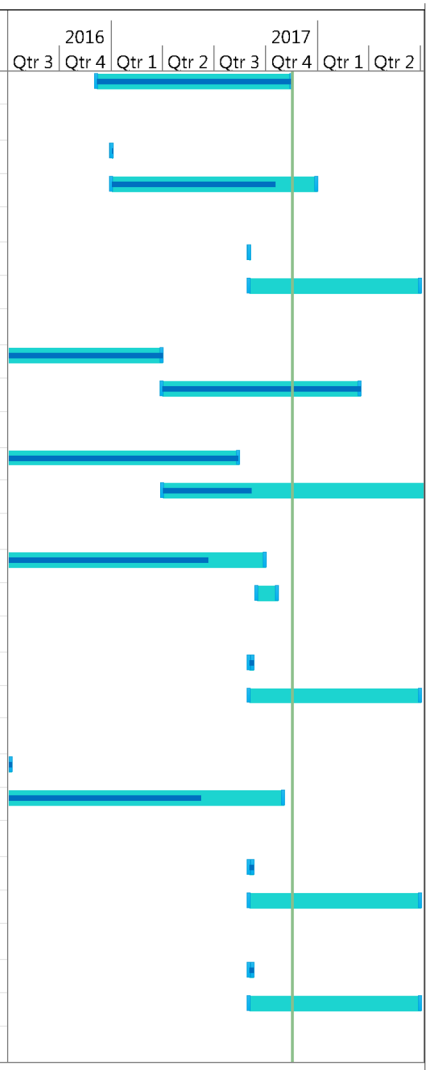
CMOM Project

Project Progress

Figure 6.8. CMOM Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
F13013	CLOSEOUT	100%	12/6/2016	11/15/2017
F14004	FY17 Sewer Cleaning and TV Gline	79%	1/1/2017	12/29/2017
F14004	INITIATION & PROCUREMENT	100%	1/1/2017	1/1/2017
F14004	CLOSEOUT	79%	1/1/2017	12/29/2017
F14005	FY18 Sewer Cleaning and TV Gline	0%	9/1/2017	6/30/2018
F14005	INITIATION & PROCUREMENT	0%	9/1/2017	9/1/2017
F14005	CLOSEOUT	0%	9/1/2017	6/29/2018
F14155	DRGWQTC Clarifier 123	99%	7/9/2013	3/16/2018
F14155	CONSTRUCTION	100%	2/27/2015	3/30/2017
F14155	CLOSEOUT	99%	3/30/2017	3/16/2018
F14156	DRGWQTC RAS Pump No 1 and 4 and VFD Replacement	58%	1/1/2016	12/16/2019
F14156	DESIGN	100%	1/1/2016	8/11/2017
F14156	CONSTRUCTION	26%	4/1/2017	11/20/2018
F14167	District Wide Arc Flash Study	85%	5/25/2015	10/20/2017
F14167	STUDY	88%	5/25/2015	9/29/2017
F14167	CLOSEOUT	0%	9/15/2017	10/20/2017
G16029	FY18 Development Team Support	2%	9/1/2017	6/30/2018
G16029	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
G16029	CLOSEOUT	0%	9/1/2017	6/29/2018
G17001	FY17 Repair and Replacement	70%	7/1/2016	10/31/2017
G17001	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
G17001	CLOSEOUT	70%	7/1/2016	10/31/2017
G18001	FY18 REPAIR & REPLACEMENT	2%	9/1/2017	6/30/2018
G18001	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
G18001	CLOSEOUT	0%	9/1/2017	6/29/2018
H14106	FY18 CMOM SCAP, AAM & FOG	2%	9/1/2017	6/30/2018
H14106	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H14106	CLOSEOUT	0%	9/1/2017	6/29/2018
H14110	FY17 CMOM CPE-CCP	95%	7/1/2016	6/30/2017



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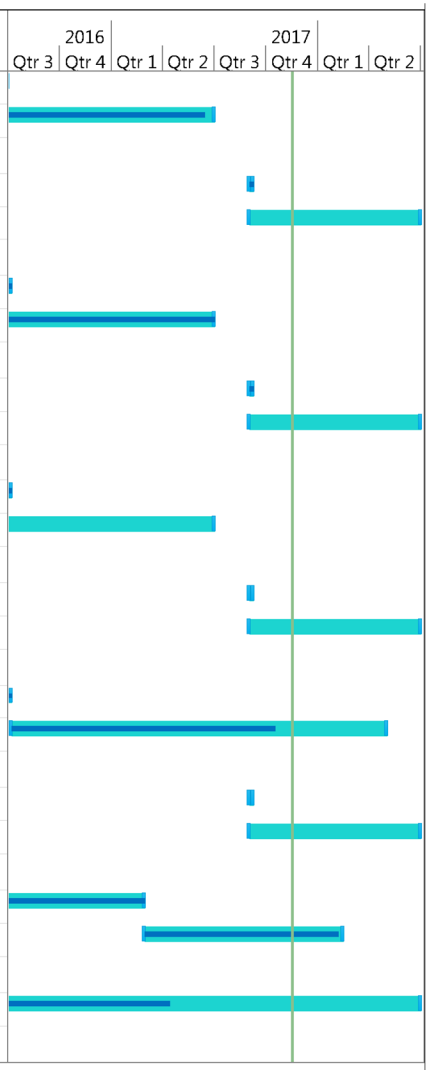
Project Progress

Figure 6.8. CMOM Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
H14110	INITIATION & PROCUREMENT	100%	7/1/2016	7/1/2016
H14110	CLOSEOUT	95%	7/1/2016	6/30/2017
H14111	FY18 CMOM CPE-CCP	2%	9/1/2017	6/30/2018
H14111	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H14111	CLOSEOUT	0%	9/1/2017	6/29/2018
H14113	FY17 CMOM PM Assist	100%	7/1/2016	6/30/2017
H14113	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
H14113	CLOSEOUT	100%	7/1/2016	6/30/2017
H14117	FY18 CMOM PS-Generator Upgrades	2%	9/1/2017	6/30/2018
H14117	INITIATION & PROCUREMENT	100%	9/1/2017	9/7/2017
H14117	CLOSEOUT	0%	9/1/2017	6/29/2018
H14119	FY17 PMP	2%	7/1/2016	6/30/2017
H14119	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
H14119	CLOSEOUT	0%	7/1/2016	6/30/2017
H14120	FY18 PMP	0%	9/1/2017	6/30/2018
H14120	INITIATION & PROCUREMENT	0%	9/1/2017	9/7/2017
H14120	CLOSEOUT	0%	9/1/2017	6/29/2018
H14123	FY17 SSES ICA	70%	7/1/2016	5/1/2018
H14123	INITIATION & PROCUREMENT	100%	7/1/2016	7/7/2016
H14123	CLOSEOUT	70%	7/7/2016	5/1/2018
H14124	FY18 SSES ICA	0%	9/1/2017	6/30/2018
H14124	INITIATION & PROCUREMENT	0%	9/1/2017	9/7/2017
H14124	CLOSEOUT	0%	9/1/2017	6/30/2018
H14125	HCWQTC Improvements	99%	3/16/2015	2/13/2018
H14125	CONSTRUCTION	100%	3/16/2015	2/28/2017
H14125	CLOSEOUT	97%	2/28/2017	2/13/2018
H14126	HCWQTC Expansion	32%	11/2/2015	5/26/2023
H14126	DESIGN	57%	2/8/2016	2/27/2018
H15136	1404 Goddard Sewer Line Relocation	100%	9/18/2015	5/8/2017



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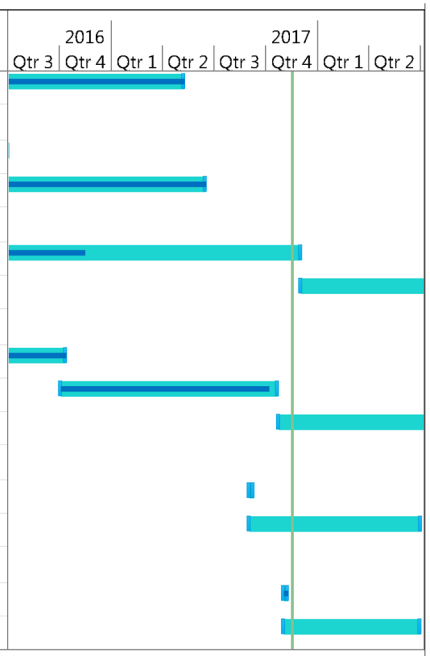
Project Progress

Figure 6.8. CMOM Annual Commitments Schedule

Activity ID	Task Name	% Complete	Start	Finish
H15136	CLOSEOUT	100%	9/18/2015	5/8/2017
H16354	Park Boundary Rd Sanitary Renewal	100%	3/23/2016	6/15/2017
H16354	CONSTRUCTION	100%	5/18/2016	7/1/2016
H16354	CLOSEOUT	100%	6/16/2016	6/15/2017
H16356	South Pope Lick Pump Station Repair	45%	7/27/2015	12/29/2018
H16356	CONSTRUCTION	55%	8/12/2015	11/30/2017
H16356	CLOSEOUT	0%	12/1/2017	12/29/2018
H16357	SWOR2 Generator	89%	4/1/2016	10/9/2018
H16357	DESIGN	100%	4/22/2016	10/11/2016
H16357	CONSTRUCTION	96%	10/3/2016	10/20/2017
H16357	CLOSEOUT	0%	10/23/2017	10/9/2018
H18170	FY18 Information Governance Program	0%	9/1/2017	6/30/2018
H18170	INITIATION & PROCUREMENT	0%	9/1/2017	9/7/2017
H18170	CLOSEOUT	0%	9/1/2017	6/29/2018
H18217	FY18 Consent Decree Operating Program Support	1%	11/1/2017	6/30/2018
H18217	INITIATION & PROCUREMENT	100%	11/1/2017	11/7/2017
H18217	CLOSEOUT	0%	11/1/2017	6/29/2018



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APPENDICES

Appendix A	Acronyms
Appendix B	Annual Average Overflow Volume
Appendix C	CSO Flow Monitoring Data
Appendix D	Discharge Work Orders
Appendix D-1	Discharge Work Orders – Waters of the United States
Appendix D-2	Discharge Work Orders – Ground
Appendix D-3	Discharge Work Orders – Interior
Appendix E	CSSA Annual Report
Appendix F	Public Notification
Appendix G	Organizational Chart
Appendix H	CSO Revised Historical Volume

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Appendix A Acronyms

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Appendix A Acronyms

AAOV	Annual Average Overflow Volume
ACD	Amended Consent Decree
ARV	Air Release Valve
BAP	Blockage Abatement Program
BGC	Beargrass Creek
BMP	Best Management Practices
BOD	Biochemical Oxygen Demand
BUD	Before "U" Dig
CC&B	Customer Care and Billing
CCP	Composite Correction Plan
CDS	Continuous Deflection Separator
CFR	Code of Federal Regulations
CGWH	Certified Grease Waste Hauler
CMOM	Capacity Management Operations and Maintenance
CPE	Comprehensive Performance Evaluations
CRD	Central Relief Drain
CRS	Community Rating System
CSO	Combined Sewer Overflow
CSOFT	Software Name
CSS	Combined Sewer System
CSSA	Continuing Sewer System Assessment
CY	Calendar Year
DMR	Discharge Monitoring Report
DSDC	Design Services During Construction
DWO	Dry Weather Overflow
eB	Enterprise Bridge (Enterprise Informatics scanning software for document management)
EGIS	Emergency Geographic Information System
EMA	Louisville Metro Emergency Management Agency
EPA	Environmental Protection Agency
EPSC	Erosion Prevention and Sediment Control
ERT	Emergency Response Team
EUM	Effective Utility Management
FCN	Field Correction Notice
FEMA	Federal Emergency Management Agency
FEPS	Final Effluent Pump Station
FM	Force Main
FOG	Fats, Oil & Grease
FPS	Flood Pump Station
FSE	Food Service Establishment
FY	Fiscal Year

Appendix A Acronyms

GASB	Governmental Accounting Standards Board
GHS	Globally Harmonized System
GIS	Geographic Information System
GLPM	Gravity Line Preventive Maintenance
GPD	Gallons per Day
GPS	Global Positioning System
H/H	Hydraulic/Hydrologic
H_2S	Hydrogen Sulfide
I&C	Instrumentation and Controls
I&I	Inflow and Infiltration
ICM	Integrated Catchment Model
ID	Identification
IOAP	Integrated Overflow Abatement Plan
ISSDP	Interim Sanitary Sewer Discharge Plan
IT	Information Technology
KDEP	Kentucky Department of Environmental Protection
KDOW	Kentucky Division of Water
KPDES	Kentucky Pollutant Discharge Elimination System
KY	Kentucky
LG&E	Louisville Gas and Electric
LIMS	Laboratory Information Management System
LOJIC	Louisville and Jefferson County Information Consortium
LTCP	Long Term Control Plan
LWC	Louisville Water Company
MCC	Motor Control Center
MCE	Mission Critical Equipment
MG	Million Gallons
MGD	Million Gallons per Day
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
MSD	Metropolitan Sewer District (Louisville and Jefferson County)
MSDS	Material Safety Data Sheet
NACWA	National Association of Clean Water Agencies
NASSCO	National Association of Sewer Services Companies
NDD	Non-Domestic Dischargers
NFPA	National Fire Protection Association
NMC	Nine Minimum Controls
NOV	Notice of Violation
NPDES	National Pollutant Discharge Elimination System
NPS	Nightingale Pump Station
O&M	Operations and Maintenance

Appendix A Acronyms

OPC	Open Platform Communications
ORD	Office of Research and Development
ORFM	Ohio River Force Main
PACP	Pipeline Assessment and Certification Program
PCCM	Post Construction Compliance Monitoring
PLC	Programmable Logic Control
PM	Preventive Maintenance
POC	Pollutant of Concern
POTW	Publicly-Owned Treatment Works
PPE	Personal Protective Equipment
PS	Pump Station
PSC	Property Service Connection
PTF	Preliminary Treatment Facilities
QPCI	Qualified Post-Construction Inspector
RAS	Return Activated Sludge
RFP	Request for Proposal
RFQ	Request for Qualifications
RPR	Resident Project Representative
RTC	Real Time Control
S&F	Solids and Floatables
SAP	Software Name
SCADA	Supervisory Control And Data Acquisition
SCAP	System Capacity Assurance Plan
SEP	Supplemental Environmental Projects
SIU	Significant Industrial User
SOP	Standard Operating Procedure
SORP	Sewer Overflow Response Protocol
SSDP	Sanitary Sewer Discharge Plan
SSES	Sanitary Sewer Evaluation Study
SSO	Sanitary Sewer Overflow
SSOP	Sanitary Sewer Overflow Plan
SWOR1	Southwestern Outfall Relief – Phase 1
SWOR2	Southwestern Outfall Relief – Phase 2
SWPPP	Stormwater Pollution Prevention Plan
SWPS	Southwestern Pump Station
SWSG	Southwest Sluice Gate
TCN	Tracking Control Numbers
TSS	Total Suspended Solids
TV	Television
UDR	Unusual Discharge Request
UIM	Utility Information Management
UMF	Upper Middle Fork

Appendix A Acronyms

UofL	University of Louisville
USACE	United States Army Corps of Engineers
USGS	United States Geological Survey
WIN	Waterway Improvements Now
WQTC	Water Quality Treatment Center
WUS	Waters of the United States

Appendix B Annual Average Overflow Volume

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Appendix B Annual Average Overflow Volume

CSO	CSO Name	Associated Project	Boundary Drainage Area	Existing / Baseline Gauged Link	Initial Conditions		Current Conditions[1]		Baseline Conditions[1]		LTCP[2]	
					Total Volume = 6448 MG		Total Volume = 3658 MG		Total Volume = 3475 MG		Total Volume = 340 MG	
					Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows
015	SOUTHWESTERN PS	Paddy's Run Wet Weather Treatment Facility	7417.3	85205-T.w >> 50946A-Ta.2	2780	76	932	32	795	29	111	7
016	MILES PARK BYPASS	SOR1/SOR2 Inline Storage	3.6	CSO016.w	39	32	159	35	122	33	0.56	8
018	NIGHTINGALE PS	Nightingale PS Replacement		28176A.1	158	28	20	3	35	19	0.00	0
019	34th STREET PS	Portland Wharf Storage Basin	1094.7	CSO019a.3	193	67	167	60	193	66	9.3	8
020	BUCHANAN PS	Story Avenue and Main Street Storage Basin	64.1	CSO020.w	355	74	79	49	294	71	12.4	3
022	FOURTH ST PS	CSO022	63.4	CSO022.w	4.5	16	5.8	16	4.5	16	1.8	7
023	ORI @ 4th ST PS	13th Street and Rowan Street Storage Basin	15.2	12062-T.w	1.8	8	0	1	4.7	9	4.0	6
027	CRD 7th & BROADWAY	CRD	8.5	CSO027.w	0.00	0	0.00	0	0.00	0	0.00	0
028	CRD 6th & YORK	CRD	19.9	028D7A-T..	1.1	20	1.1	20	1.1	20	0.00	0
029	CRD 8th & YORK	CRD	0.0	CSO029.w	4.6	40	4.6	40	4.6	40	0.05	3
031	CRD 6th & BRECKINRIDGE	CRD	9.1	CSO031.1	0.00	0	0.00	0	0.00	0	0.00	0
034	CRD 4th & YORK	CRD	5.2	CSO034.w	3.0	39	3.0	39	3.0	39	0.07	4
035	CRD 2nd & BROADWAY NO 1	CRD	16.0	CSO035.w	0.00	0	0.00	0	0.00	0	0.00	0
036	CRD 3rd & BROADWAY	CRD	29.5	CSO036.w	0.21	7	0.21	7	0.21	7	0.09	4
038	CRD 5th & BROADWAY	CRD	8.9	CSO038.w	0.11	5	0.09	4	0.11	5	0.07	4
050	12th STREET	13th Street and Rowan Street Storage Basin	39.3	CSO050.w	20	55	40	55	22	55	0.0	0
051	11th STREET	13th Street and Rowan Street Storage Basin	5.8	CSO051.w	0.32	8	4.51	23	0.68	10	-	-
052	10th STREET	13th Street and Rowan Street Storage Basin	9.7	CSO052.w	2.5	21	8.8	31	3.2	24	0.00	0
053	8th STREET	13th Street and Rowan Street Storage Basin	34.8	CSO053.w	7.7	50	8.2	50	7.7	50	0.00	0
054	7th STREET	13th Street and Rowan Street Storage Basin	3.8	CSO054.w	1.8	35	5.1	27	2.3	35	0.00	0
055	6th STREET	13th Street and Rowan Street Storage Basin	16.0	CSO055.w	4.9	17	24	33	6.8	21	0.00	0
056	5th STREET	13th Street and Rowan Street Storage Basin	36.4	CSO056.w	4.3	24	12.3	31	4.7	24	0.00	0
057	FIRST STREET OVFL WEIR		76.0	057R1.c	0.00	0	0.00	0	0.00	0	0.00	0
058	PRESTON ST OVFL WEIR	13th Street and Rowan Street Storage Basin	121.3	CSO058.w	51	68	7	9	52	63	0.0	0
062	LOGAN COMPANY		106.6	CSO062.w	100	69	96	49	72	66	0.00	0
082	BGI AT BGC	Lexington Road and Payne Street Storage Basin	12.9	CSO082.1	19	50	26	45	16	46	0.00	0
083	BRENT ST & BROADWAY CONNECT	Lexington Road and Payne Street Storage Basin	30.5	CSO083a.2	0.47	7	0.39	7	0.46	7		
084	BRENT ST @ BGC	Lexington Road and Payne Street Storage Basin	146.3	CSO084.w	19	46	19	44	19	44	0.00	0
086	PAYNE AT SPRING		3.3		0.00	0	0.00	0	0.00	0	0.00	0
088	MELLWOOD AVE INT	Clifton Heights Storage Basin	2.3	CSO088.1	11	45	10	43	11	46	0.00	0
091	SCHILLER AVE OVFL	Logan Street and Breckinridge Street Storage Basin	14.2	CSO091.2	2.7	44	2.7	44	2.7	44	0.00	0
092	ST CATHERINE @ BGC		10.3	CSO092.2	1.3	33	0.0	0	1.3	33	0.00	0
093	SPRING STREET	CSO093 Sewer Seperation	17.5	CSO093.1	0.02	1	0.02	1	0.02	1	0.00	0
097	CANTONMENT SIPHON NO 2	Logan Street and Breckinridge Street Storage Basin		CSO097.1	18	50	7	22	11	45	0.39	7
104	SW PKWY SEWER @ BROADWAY	Southwestern Parkway Storage Basin	68.5	CSO104.w	9.5	20	9.6	21	9.5	20		
105	WESTERN OUTFALL @ BROADWAY	Southwestern Parkway Storage Basin	1087.8	CSO105a.w	260	46	265	48	263	45	37	6
106	ROYAL - NEFF	Logan Street and Breckinridge Street Storage Basin	9.9	CSO106.w	0.28	10	0.28	10	0.28	10		
108	REG N0 1 - NEWBURG	CSO108 Dam Modification	507.5	CSO108.W	52	41	6	5	16	43	0.95	4
109	REG NO 2 - DEER PARK	Logan Street and Breckinridge Street Storage Basin	101.0	CSO109.4	1.2	11	1.2	7	1.3	11	1.5	8
110	REG NO 3 - GOSS AVE	Logan Street and Breckinridge Street Storage Basin	92.9	CSO110.w	20	47	11	32	16	44	0.31	4
111	EMERSON STREET SEWER	Logan Street and Breckinridge Street Storage Basin	87.5	CSO111b.w	5.0	35	4.2	24	4.9	29	0.68	4
113	ELLISON AVENUE SEWER	Logan Street and Breckinridge Street Storage Basin	67.2	CSO113.w	6.2	28	5.5	23	6.0	26	0.00	0
117	REG NO 11 - DRY RUN	Logan Street and Breckinridge Street Storage Basin	73.2	CSO117a.W	86	60	83	58	85	59	32	8
118	REG NO 15 - E BRDWY	Lexington Road and Payne Street Storage Basin	339.1	CSO118.W	118	60	115	58	116	60	0.00	0
119	BRENT STREET SEWER	Lexington Road and Payne Street Storage Basin	4.5	CSO119.2	10	53	11	50	10	51	0.00	0
120	PHOENIX HILL SEWER	Lexington Road and Payne Street Storage Basin	15.4	CSO120.w	7.5	52	8.0	52	7.4	52	0.00	0
121	REG NO 18 - GREEN ST	Lexington Road and Payne Street Storage Basin	101.6	CSO121b.2	5.5	23	6.4	23	5.4	22	0.00	0
125	REG NO 24 - GRINSTEAD DR	I-64 and Grinstead Drive Storage Basin	359.3	CSO125.w	24	43	24	43	24	43	0.00	0

[1] This is a reflection of current design and RTC conditions as constructed by June 1, 2017. These numbers are subject to increases or decreases in overflow volume and number of occurrences.
[2] This is a reflection of currently proposed design and RTC conditions. These numbers are subject to increases or decreases in overflow volume and number of occurrences.

Appendix B Annual Average Overflow Volume

CSO	CSO Name	Associated Project	Boundary Drainage Area	Existing / Baseline Gauged Link	Initial Conditions		Current Conditions[1]		Baseline Conditions[1]		LTCP[2]	
					Total Volume = 6448 MG		Total Volume = 3658 MG		Total Volume = 3475 MG		Total Volume = 340 MG	
					Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows
126	REG NO 26 - RAYMOND AVE	I-64 and Grinstead Drive Storage Basin	37.4	CSO126.W	3.4	20	3.6	20	1.4	11	0.00	0
127	ETLEY AVENUE	I-64 and Grinstead Drive Storage Basin	216.0	CSO127.w	12	39	12	39	11	39	Eliminated	
130	WEBSTER STREET	Story Avenue and Spring Street Storage Basin	16.0	CSO130.w	2.2	26	0.0	0	1.3	18	0.00	0
131	REG NO 33 - MELWD & FRANKFORT	Clifton Heights Storage Basin	30.5	CSO131.2	1.7	16	1.7	16	1.7	16	0.06	3
132	REG NO 35 - BROWNSBORO	Clifton Heights Storage Basin	674.0	CSO132.w	83	61	85	60	79	60	0.0	0
137	CALVARY CEMETARY	Logan Street and Breckinridge Street Storage Basin	72.2	CSO137.w	9.5	54	9.3	54	9.3	54		
140	LOCUST STREET	CSO140 Sewer Seperation	77.9	CSO140.w	2.6	29	2.6	29	2.6	29	0.00	0
141	BAXTER AVE @ BGC	Lexington Road and Payne Street Storage Basin	8.8	CSO141.2	0.66	20	0.00	0	0.66	20	0.00	0
144	VANCE ST REGULATOR		11.6	CSO144.w	0.78	11	0.00	0	0.78	11	0.76	8
146	SNEADS BRANCH DIVERSION	Logan Street and Breckinridge Street Storage Basin	97.5	CSO146.w	38	40	36	39	37	40	0.75	4
148	EASTERN PKWY DIVERSION	Logan Street and Breckinridge Street Storage Basin	26.2	CSO148.w	0.74	17	0.70	17	0.73	17	0.00	0
149	DRY RUN DIVERSION	Logan Street and Breckinridge Street Storage Basin	417.9	CSO149.w	138	47	136	46	138	47	23	8
150	8th ST @ COMMON PLACE	13th Street and Rowan Street Storage Basin	1.7	088308.w	0.80	10	4.9	30	1.2	16	0.00	0
151	REG NO 5 - CASTLEWOOD	Logan Street and Breckinridge Street Storage Basin	245.4	CSO151.4	98	72	66	56	80	69	0.05	2
152	REG NO 7 - SOUTHEASTERN	Logan Street and Breckinridge Street Storage Basin	242.3	CSO152.1	59	62	54	56	58	61	6.2	7
153	COOPER STREET	Lexington Road and Payne Street Storage Basin	41.2	CSO153.2	19	71	19	71	18	71	0.00	0
154	MELLWOOD @ SCHOEFFEL	Clifton Heights Storage Basin	34.7	CSO154.w	23	56	18	48	27	53	0.00	0
155	ROWAN ST @ 12th ST	13th Street and Rowan Street Storage Basin	4.9	CSO155.w	0.59	18	0.59	18	0.59	18	0.00	0
160	SEWER IN ALLEY SAN DIV	CSO160 Sewer Seperation	2.3	CSO160.w	0.05	1	0.60	10	0.05	1	0.00	0
161	MARKET ST SAN DIV		1.5	CSO161.w	0.00	0	0.00	0	0.00	0	0.00	0
166	BEALS BRANCH SAN DIV	I-64 and Grinstead Drive Storage Basin	751.6	CSO166.w	52	46	53	46	48	44	0.00	0
167	BROWNSBORO LAT NO 2	Clifton Heights Storage Basin	21.1	CSO167.w	0.47	11	0.49	11	0.45	10	0.00	0
172	ADAMS STREET	Adams Street Storage Basin	10.3	CSO172.w	0.80	18	0.80	18	0.79	18		
178	CRD 9th & YORK "B"	CRD	39.3	CSO178.w	20	58	20	58	20	58	0.15	4
179	KENTUCKY ST SEWER OVFL		223.3	CSO179.w	0.00	0	0.00	0	0.00	0	0.00	0
181	CRD 2nd & BROADWAY NO 2	CRD	42.5	CSO181.w	3.8	42	3.8	42	3.8	42	0.00	0
189	NORTHWESTERN SAN DIV	Southwestern Parkway Storage Basin	1186.4	CSO189.w	240	52	260	52	254	52	31	6
190	SEVENTEENTH ST SAN DIV	18th and Northwestern Pky Storage Basin	142.4	CSO190.w	30	56	30	56	30	56	0.27	7
191	ALGONQUIN PKWY SAN DIV	Paddy's Run Wet Weather Treatment Facility	334.4	CSO191.w >> 50946A-Ta.2	4.3	16	28	32	24.0	29	14	7
193	CRD S 6th & KENTUCKY	CRD	17.8	CSO193.w	0.09	4	0.09	4	0.09	4	0.08	4
195	CRD S 4th & OAK	CRD	5.7	CSO195.w	2.8	44	2.8	44	2.8	44	0.00	0
196	CRD S 3rd & OAK	CRD	4.0	CSO196.w	0.04	1	0.04	1	0.04	1	0.00	0
197	CRD S 3rd S OF OAK	CRD	3.7	CSO197.w	2.8	43	2.8	43	2.8	43	0.06	4
198	CRD S 3rd & ORMSBY	CRD	3.6	CSO198.w	0.09	4	0.09	4	0.09	4	0.03	2
199	CRD S 3rd N OF MAGNOLIA	CRD	2.0	CSO199.w	0.73	24	0.73	24	0.72	23	0.01	1
200	CRD S 3rd & MAGNOLIA	CRD	7.6	CSO200.w	2.2	45	2.2	45	2.2	45	0.00	0
201	CRD S 5th & KENTUCKY	CRD	10.0	CSO201.w	0.69	11	0.39	7	0.68	11	0.43	7
202	CRD S ORMSBY W OF 3rd	CRD	5.9	CSO202.w	0.15	6	0.15	6	0.15	6	0.01	1
203	CRD S 4th & ORMSBY	CRD	8.5	CSO203.w	0.02	0	0.02	0	0.02	0	0.00	0
206	CHEROKEE PARK @ SPRING DR	CSO206 Sewer Seperation	8.4	CSO206.w	29	70	45	81	29	70		
207	2nd & JEFFERSON		2.1	CSO207.w	0.00	0	0.00	0	0.00	0	0.00	0
208	12th & JEFFERSON		9.9	CSO208.w	0.74	21	0.16	6	0.74	21	0.26	8
210	45th STREET-GREENWOOD	SOR1/SOR2 Inline Storage	181.2	CSO210a.1	19	31	26	35	24	31	3.7	8
211	MAIN DIVERSION STRUCTURE	SOR1/SOR2 Inline Storage	3709.2	CSO211b.W	1090	62	322	26	298	25	41	8
Snead's Branch Overflow Volume to Beargrass Creek				71909B-AGa.w	46	38	7.75	9	8	8	5.5	5

Appendix B Annual Average Overflow Volume

CSO	CSO Name	Associated Project	Boundary Drainage Area	Existing / Baseline Gauged Link	Initial Conditions		Current Conditions[1]		Baseline Conditions[1]		LTCP[2]	
					Total Volume = 6448 MG		Total Volume = 3658 MG		Total Volume = 3475 MG		Total Volume = 340 MG	
					Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows	Overflow Vol. (MG)	# Of Overflows
****The following CSOs are included in the "Snead's Branch Overflow Volume to Beargrass Creek" item.****												
142	SBR LOGAN ST @ ST CATHERINE		4.7	CSO142.w	0.00	0	0.00	0	0.00	0	9.60	37
174	SBR GOSS & BOYLE		160.4	CSO174.w	14	40	14	40	14	40	0.0	1
180	SBR ORMSBY AVE RELIEF		30.9	CSO180.w	0.04	1	0.04	1	0.04	1	26.46	36
182	SBR SHELBY & BURNETT		172.1	CSO182.w	31	38	31	38	31	38	0	0
183	SBR ALEXANDER & KESWICK		4.0	CSO183.3	0.00	0	0.00	0	0.00	0	0.27	7
184	SBR FETTER & ALEXANDER		100.8	CSO184.w	0.31	7	0.31	7	0.31	7	1.60	16
185	SBR SHELBY & KESWICK		163.9	CSO185.w	1.6	16	1.6	16	1.6	16	0.0	0
186	SBR LOGAN & OAK		4.4	CSO186.w	0.00	0	0.00	0	0.00	0	0.00	0
187	SBR SHELBY & CAMP		6.1	CSO187.w	0.00	0	0.00	0	0.00	0	0.00	0
188	SBR SHELBY & CLAY		13.7	CSO188.w	0.00	0	0.00	0	0.00	0	0.00	0
205	SBR MORGAN STREET RELIEF			CSO205.2	0.00	0	0.00	0	0.00	0	0.00	0

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Appendix C CSO Flow Monitoring Data

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CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO015*	**7/3/2016 13:30**	7/4/2016 1:30	**720**	1.2	**19,199,568.53**	0.72	**0.39**	48.00	Atlas	23,039,482	1
	7/4/2016 10:00	7/4/2016 22:45	**765**	1.2	**23,153,296.42**	1.2	**0.39**	48.00	Atlas	27,783,956	1
	7/6/2016 14:30	7/6/2016 16:30	**120**	0.33	**32,588,267.42**	1.53	**0.23**	1.00	Atlas	10,754,128	1
	7/12/2016 11:00	7/12/2016 13:45	**165**	0.21	**100,706,827.43**	0.86	**0.16**	1.00	Atlas	21,148,434	1
	7/25/2016 16:45	7/25/2016 17:00	**15**	0.61	**3,039,224.85**	0.61	**0.44**	1.00	Atlas	1,853,927	1
	7/28/2016 4:30	7/28/2016 6:45	**135**	0.68	**21,810,332.75**	1.2	**0.31**	12.00	Atlas	14,831,026	1
	7/30/2016 15:15	7/30/2016 17:30	**135**	0.56	**46,929,195.09**	1.95	**0.49**	1.00	Atlas	26,280,349	1
	7/31/2016 18:15	7/31/2016 20:30	**135**	0.46	**79,014,478.80**	2.41	**0.39**	1.00	Atlas	36,346,660	1
	8/1/2016 22:15	8/2/2016 0:15	**120**	0.35	**51,168,211.97**	2.15	**0.28**	1.00	Atlas	17,908,874	1
	8/4/2016 16:30	8/5/2016 0:15	**465**	0.13	**56,557,529.08**	1.57	**0.10**	1.00	Atlas	7,352,479	1
	8/5/2016 16:45	8/5/2016 19:45	**180**	0.21	**18,395,201.67**	1.77	**0.14**	3.00	Atlas	3,862,992	1
	8/14/2016 17:30	8/14/2016 19:15	**105**	1.25	**3,800,571.00**	0.28	**0.63**	3.00	Atlas	4,750,714	1
	8/15/2016 4:30	8/15/2016 21:15	**1,005**	1.25	**152,009,728.56**	1.46	**0.63**	3.00	Atlas	190,012,161	1
	8/17/2016 6:45	8/18/2016 0:15	**1,050**	0.81	**62,756,115.52**	2.06	**0.34**	12.00	Atlas	50,832,454	1
	8/20/2016 15:15	8/21/2016 12:30	**1,275**	1.63	**75,627,729.74**	3.69	**0.69**	12.00	Atlas	123,273,199	1
	9/10/2016 17:15	9/10/2016 17:30	**15**	0.32	**2,709,003.41**	0.33	**0.20**	3.00	Atlas	866,881	1
	9/16/2016 19:00	9/16/2016 20:30	**90**	Discharge		0.33				2,574,576	1
	9/26/2016 11:30	9/26/2016 13:15	**105**	0.27	**17,912,777.48**	0.27	**0.18**	3.00	Atlas	4,836,450	1
	9/28/2016 14:00	9/28/2016 19:00	**300**	0.36	**42,435,438.31**	0.63	**0.21**	3.00	Atlas	15,276,758	1
	9/30/2016 3:45	9/30/2016 6:15	**150**	0.65	**23,908,964.85**	1.26	**0.30**	3.00	Atlas	15,540,827	1
	9/30/2016 15:45	9/30/2016 19:00	**195**	0.65	**3,782,496.66**	1.37	**0.30**	3.00	Atlas	2,458,623	1
	12/18/2016	12/19/2016 2:45	**1,605**	3.71	**110,684,577.08**	4.12	**8.46**	12.00	Cloudburst	410,639,781	1
	12/19/2016 11:45	12/19/2016 22:30	**645**	Discharge		3.72				5,023,681	1
	12/20/2016 11:00	12/20/2016 15:00	**240**	Discharge		3.71				11,559,862	1
	12/23/2016 23:15	12/24/2016 8:00	**525**	0.17	**230,501,065.06**	3.84	**0.08**	12.00	Atlas	39,185,181	1
	12/26/2016 21:00	12/27/2016 6:15	**555**	0.37	**68,253,873.73**	0.54	**0.19**	6.00	Atlas	25,253,933	1
	12/27/2016 18:15	12/28/2016 4:30	**615**	Discharge		0.54				13,554,728	1
	1/3/2017 6:15	1/3/2017 6:15	**-**	0.19	**1,240,806.11**	0.29	**0.09**	6.00	Atlas	235,753	1
	1/10/2017 20:30	1/11/2017 2:30	**360**	0.4	**53,818,941.63**	0.61	**0.30**	1.00	Atlas	21,527,577	1
	1/11/2017 13:15	1/12/2017 3:00	**825**	0.24	**54,909,153.50**	0.85	**0.16**	3.00	Atlas	13,178,197	1
	1/12/2017 18:15	1/13/2017 2:30	**495**	0.42	**71,084,467.38**	1.09	**0.21**	6.00	Atlas	29,855,476	1
	1/13/2017 16:15	1/13/2017 21:30	**315**	0.34	**10,223,686.47**	1.41	**0.21**	3.00	Atlas	3,476,053	1
	1/14/2017 11:15	1/15/2017 6:45	**1,170**	0.19	**171,842,633.42**	1.6	**0.08**	12.00	Atlas	32,650,100	1
	1/15/2017 17:15	1/15/2017 18:15	**60**	0.14	**19,287,414.21**	1.72	**0.07**	3.00	Atlas	2,700,238	1
	1/17/2017 0:15	1/18/2017 10:45	**2,070**	0.77	**260,734,943.91**	2.51	**0.35**	12.00	Atlas	200,765,907	1
	1/19/2017 3:30	1/19/2017 5:30	**120**	Discharge		1.87				5,418,406	1
	1/19/2017 20:00	1/21/2017 7:00	**2,100**	1.32	**1,564,216,791.02**	2.92	**0.60**	12.00	Atlas	2,064,766,164	1
	1/21/2017 19:45	1/22/2017 0:45	**300**	Discharge		2.24				6,832,560	1
	2/4/2017 11:15	2/4/2017 13:00	**105**	Discharge		0.02				174,240	1
	2/7/2017 11:15	2/7/2017 14:30	**195**	0.52	**5,629,524.58**	0.52	**0.25**	6.00	Atlas	2,927,353	1
	2/24/2017 19:15	2/25/2017 4:00	**525**	0.54	**135,917,792.09**	0.66	**0.45**	1.00	Atlas	73,395,608	1
	2/28/2017 10:45	2/28/2017 14:15	**210**	0.29	**17,031,016.07**	0.89	**0.13**	12.00	Atlas	4,938,995	1
	2/28/2017 23:30	3/3/2017 5:30	**3,240**	Discharge		2.17				558,490,283	1
	3/7/2017 8:30	3/7/2017 11:45	**195**	0.73	**10,005,809.86**	2.07	**0.24**	48.00	Atlas	7,304,241	1
	6/30/2017 21:15	7/1/2017 0:45	**210**	0.66	**28,682,826.61**	0.83	**0.57**	1.00	Atlas	18,930,666	1
CSO015* Total										**4,154,369,933**	**45**
CSO016*	**7/3/2016 13:15**	7/5/2016 3:45	**2,310**	1.27	**26,014,935.51**	1.33	**0.41**	48.00	Atlas	33,038,968	1
	7/6/2016 15:00	7/6/2016 21:00	**360**	0.18	**28,212,949.67**	1.45	**0.11**	3.00	Atlas	5,078,331	1
	7/12/2016 11:45	7/12/2016 18:30	**405**	0.21	**28,897,005.29**	0.65	**0.17**	1.00	Atlas	6,068,371	1
	7/28/2016 4:30	7/28/2016 12:00	**450**	0.51	**13,901,509.43**	0.86	**0.23**	12.00	Atlas	7,089,770	1
	7/30/2016 15:45	7/30/2016 19:45	**240**	0.23	**15,705,277.48**	1.12	**0.20**	1.00	Atlas	3,612,214	1
	8/1/2016 12:45	8/2/2016 3:30	**885**	0.3	**20,791,371.17**	1.66	**0.24**	1.00	Atlas	6,237,411	1
	8/5/2016 16:00	8/5/2016 18:45	**165**	0.29	**5,352,487.62**	1.23	**0.20**	1.00	Atlas	1,552,221	1
	8/15/2016 4:30	8/15/2016 14:30	**600**	1.16	**10,223,932.26**	1.51	**0.57**	6.00	Atlas	11,859,761	1
	8/17/2016 7:00	8/17/2016 18:15	**675**	0.98	**12,861,608.12**	2.15	**0.47**	3.00	Atlas	12,604,376	1
	8/20/2016 12:30	8/21/2016 5:15	**1,005**	1.89	**9,717,641.47**	4.04	**0.82**	12.00	Atlas	18,366,342	1
	9/10/2016 17:15	9/10/2016 20:00	**165**	0.33	**3,904,482.00**	0.34	**0.21**	3.00	Atlas	1,288,479	1
	9/26/2016 12:30	9/26/2016 15:15	**165**	0.28	**3,738,714.64**	0.28	**0.19**	3.00	Atlas	1,046,840	1
	9/28/2016 14:30	9/28/2016 19:30	**300**	0.38	**12,490,927.26**	0.66	**0.21**	3.00	Atlas	4,746,552	1
	9/30/2016 2:45	9/30/2016 8:45	**360**	0.71	**9,431,907.65**	1.3	**0.31**	3.00	Atlas	6,696,654	1
	10/20/2016 9:45	10/20/2016 21:45	**720**	0.67	**23,350,704.81**	0.57	**0.28**	3.00	Atlas	15,644,972	1
	11/28/2016 18:15	11/29/2016 5:45	**690**	0.86	**10,923,969.06**	1.22	**0.38**	12.00	Atlas	9,394,613	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO016*	**12/6/2016 6:00**	12/6/2016 22:00	**960**	0.94	**19,277,318.63**	1	**0.43**	12.00	Atlas	18,120,680	1
	12/12/2016 0:30	12/12/2016 1:00	**30**	0.39	**21,131.62**	1.37	**0.17**	12.00	Atlas	8,241	1
	12/17/2016 17:15	12/19/2016 16:30	**2,835**	3.56	**12,197,881.68**	3.96	**7.12**	12.00	Cloudburst	43,424,459	1
	12/23/2016 23:45	12/24/2016 11:15	**690**	0.2	**53,538,241.15**	3.72	**0.09**	12.00	Atlas	10,707,648	1
	12/26/2016 21:45	12/27/2016 4:00	**375**	0.33	**16,884,180.91**	0.53	**0.16**	6.00	Atlas	5,571,780	1
	1/3/2017 4:45	1/3/2017 7:45	**180**	0.22	**3,558,408.27**	0.31	**0.10**	6.00	Atlas	782,850	1
	1/10/2017 21:30	1/10/2017 22:00	**30**	0.34	**52,147.00**	0.54	**0.24**	1.00	Atlas	17,730	1
	1/11/2017 14:30	1/11/2017 15:30	**60**	0.23	**109,554.48**	0.77	**0.15**	3.00	Atlas	25,198	1
	1/12/2017 19:15	1/13/2017	**285**	0.37	**4,601,825.14**	0.96	**0.18**	6.00	Atlas	1,702,675	1
	1/13/2017 17:30	1/13/2017 21:30	**240**	0.36	**4,212,913.83**	1.31	**0.23**	3.00	Atlas	1,516,649	1
	1/14/2017 12:30	1/14/2017 17:45	**315**	0.21	**15,111,826.81**	1.52	**0.10**	12.00	Atlas	3,173,484	1
	1/17/2017 0:45	1/17/2017 8:15	**450**	0.85	**9,591,560.42**	2.52	**0.39**	6.00	Atlas	8,152,826	1
	1/19/2017 20:00	1/22/2017 12:30	**3,870**	1.36	**56,864,751.92**	3.06	**0.62**	12.00	Atlas	77,336,063	1
	2/7/2017 11:45	2/7/2017 14:45	**180**	0.44	**1,444,127.84**	0.44	**0.21**	6.00	Atlas	635,416	1
	2/24/2017 19:45	2/24/2017 22:30	**165**	0.29	**7,468,739.48**	0.4	**0.23**	1.00	Atlas	2,165,934	1
	2/28/2017 11:30	2/28/2017 13:45	**135**	0.27	**3,256,102.00**	0.62	**0.12**	12.00	Atlas	879,148	1
	3/1/2017 3:45	3/1/2017 14:45	**660**	1.26	**10,882,761.32**	1.88	**0.63**	6.00	Atlas	13,712,279	1
	3/7/2017 8:30	3/7/2017 22:15	**825**	0.87	**12,556,184.23**	2.29	**0.31**	1.00	Atlas	10,923,880	1
	3/26/2017 3:45	3/26/2017 13:00	**555**	0.42	**22,853,257.50**	0.43	**0.18**	12.00	Atlas	9,598,368	1
	3/27/2017 19:45	3/28/2017 2:00	**375**	0.32	**20,896,572.09**	0.74	**0.17**	1.00	Atlas	6,686,903	1
	3/31/2017 1:15	3/31/2017 6:00	**285**	0.2	**13,469,565.40**	0.93	**0.10**	6.00	Atlas	2,693,913	1
	4/11/2017 14:15	4/11/2017 17:45	**210**	0.32	**438,522.66**	0.47	**0.15**	12.00	Atlas	140,327	1
	4/16/2017 7:15	4/16/2017 9:15	**120**	0.94	**1,105,670.69**	0.52	**0.36**	24.00	Atlas	1,039,330	1
	4/16/2017 18:45	4/17/2017 10:30	**945**	0.94	**16,423,424.71**	1.26	**0.36**	24.00	Atlas	15,438,019	1
	4/22/2017	4/22/2017 4:30	**270**	0.75	**6,073,666.61**	1.55	**0.27**	24.00	Atlas	4,555,250	1
	4/27/2017 8:45	4/27/2017 12:30	**225**	0.23	**10,622,844.74**	1	**0.14**	1.00	Atlas	2,443,254	1
	4/29/2017 1:30	4/29/2017 13:30	**720**	1.6	**8,266,580.72**	2.03	**0.82**	1.00	Atlas	13,226,529	1
	5/1/2017 6:30	5/1/2017 6:45	**15**	0.22	**59,771.95**	2.05	**0.11**	3.00	Atlas	13,150	1
	5/4/2017 21:00	5/7/2017 3:15	**3,255**	2.02	**28,117,800.97**	4.17	**0.68**	24.00	Atlas	56,797,958	1
	5/20/2017 20:30	5/21/2017 12:15	**945**	1.44	**9,663,032.40**	1.69	**0.65**	12.00	Atlas	13,914,767	1
	5/24/2017 20:30	5/25/2017 1:30	**300**	0.68	**6,507,411.47**	2.27	**0.25**	24.00	Atlas	4,425,040	1
	5/25/2017 16:45	5/26/2017 5:00	**735**	0.68	**4,544,955.10**	2.36	**0.25**	24.00	Atlas	3,090,569	1
	5/27/2017 15:45	5/28/2017 1:15	**570**	0.09	**65,925,215.11**	2.21	**0.06**	1.00	Atlas	5,933,269	1
	6/5/2017 20:15	6/6/2017 0:45	**270**	0.35	**13,300,825.49**	0.42	**0.30**	1.00	Atlas	4,655,289	1
	6/15/2017 5:00	6/15/2017 11:00	**360**	0.5	**14,330,663.10**	0.63	**0.32**	3.00	Atlas	7,165,332	1
	6/22/2017 20:45	6/23/2017	**195**	1.18	**2,885,096.69**	0.62	**0.38**	48.00	Atlas	3,404,414	1
	6/23/2017 16:30	6/24/2017 4:00	**690**	1.18	**10,927,539.52**	1.41	**0.38**	48.00	Atlas	12,894,497	1
	6/30/2017 21:15	7/1/2017 2:45	**330**	0.51	**9,076,699.18**	0.66	**0.44**	1.00	Atlas	4,629,117	1
CSO016* Total										**515,928,113**	**54**
CSO018*	**7/27/2016 19:30**	7/27/2016 23:00	**210**	1.61	**23,438.83**	1.37	**0.92**	1.00	Atlas	37,737	1
	8/1/2016 21:30	8/2/2016	**150**	1.08	**85,046.85**	3.36	**0.60**	1.00	Atlas	91,851	1
	8/15/2016 4:15	8/15/2016 4:45	**30**	1.68	**14,743.08**	1.69	**0.76**	3.00	Atlas	24,768	1
	8/20/2016 16:45	8/20/2016 21:45	**300**	0.89	**53,133.08**	3.15	**0.40**	1.00	Atlas	47,288	1
	9/10/2016 16:15	9/10/2016 16:30	**15**	0.41	**82,513.41**	0.39	**0.32**	1.00	Atlas	33,831	1
	12/17/2016 19:30	12/18/2016 9:00	**810**	2.78	**553,279.62**	3.09	**2.52**	6.00	Cloudburst	1,538,117	1
	1/19/2017 23:15	1/20/2017 10:45	**690**	1.26	**371,475.79**	2.58	**0.58**	12.00	Atlas	468,060	1
	2/24/2017 19:30	2/24/2017 19:45	**15**	0.78	**16,293.56**	0.86	**0.66**	1.00	Atlas	12,709	1
	3/1/2017 3:45	3/1/2017 4:00	**15**	1.17	**34,753.26**	1.8	**0.62**	6.00	Atlas	40,661	1
	3/1/2017 12:45	3/1/2017 17:15	**270**	1.17	**154,383.21**	2.55	**0.62**	6.00	Atlas	180,628	1
	6/23/2017 19:00	6/23/2017 20:45	**105**	1.13	**1,382.74**	1.8	**0.62**	3.00	Atlas	1,563	1
CSO018* Total										**2,477,212**	**11**
CSO019	**7/3/2016 10:15**	7/5/2016 6:00	**2,625**	1.6	**1,311,182.43**	1.69	**0.52**	48.00	Atlas	2,097,892	1
	7/8/2016 1:00	7/8/2016 1:00	**-**	0.28	**1,237.82**	1.73	**0.19**	1.00	Atlas	347	1
	7/12/2016 8:45	7/12/2016 13:45	**300**	0.15	**273,138.67**	0.51	**0.08**	6.00	Atlas	40,971	1
	7/20/2016 19:30	7/20/2016 20:45	**75**	0.01	**47,002,949.00**	0.34	**0.01**	1.00	Atlas	470,029	1
	7/25/2016 12:30	7/25/2016 13:45	**75**	0.26	**156,691.85**	0.2	**0.14**	6.00	Atlas	40,740	1
	7/26/2016 17:30	7/26/2016 18:45	**75**	0.26	**37,304.62**	0.54	**0.23**	1.00	Atlas	9,699	1
	7/27/2016 17:45	7/28/2016 4:30	**645**	0.31	**1,095,056.81**	0.81	**0.13**	12.00	Atlas	339,468	1
	7/30/2016 13:45	7/30/2016 14:45	**60**	0.28	**58,195.14**	1.13	**0.23**	1.00	Atlas	16,295	1
	7/31/2016 15:45	7/31/2016 15:45	**-**	0.01	**3,336,469.00**	1.14	**0.01**	1.00	Atlas	33,365	1
	8/1/2016 10:45	8/1/2016 20:30	**585**	0.67	**441,751.61**	1.81	**0.54**	1.00	Atlas	295,974	1
	8/4/2016 12:30	8/4/2016 13:15	**45**	Discharge		0.99				113,450	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO019	**8/5/2016 14:00**	8/5/2016 15:15	**75**	0.21	**46,152.10**	1.21	**0.17**	1.00	Atlas	9,692	1
	8/9/2016 15:30	8/9/2016 17:00	**90**	0.54	**68,124.67**	0.76	**0.46**	1.00	Atlas	36,787	1
	8/15/2016 2:30	8/15/2016 14:00	**690**	1.13	**1,185,551.24**	1.74	**0.61**	3.00	Atlas	1,339,673	1
	8/17/2016 4:00	8/18/2016 0:45	**1,245**	1.41	**2,175,214.89**	2.61	**0.77**	1.00	Atlas	3,067,053	1
	8/19/2016 19:45	8/19/2016 20:30	**45**	0.01	**11,337,391.00**	2.59	**0.01**	1.00	Atlas	113,374	1
	8/20/2016 6:45	8/21/2016 6:00	**1,395**	1.41	**1,787,004.76**	4	**0.61**	12.00	Atlas	2,519,677	1
	8/27/2016 12:45	8/27/2016 14:00	**75**	0.2	**1,575,027.95**	1.08	**0.17**	1.00	Atlas	315,006	1
	8/31/2016 17:30	8/31/2016 18:45	**75**	0.36	**60,697.75**	0.58	**0.30**	1.00	Atlas	21,851	1
	9/8/2016 23:15	9/8/2016 23:15	**-**	0.03	**49,677.67**	0.02	**0.03**	1.00	Atlas	1,490	1
	9/10/2016 14:00	9/10/2016 16:30	**150**	0.21	**308,331.00**	0.22	**0.13**	3.00	Atlas	64,750	1
	9/17/2016 5:00	9/17/2016 11:30	**390**	Discharge		0.37				35,646	1
	9/26/2016 9:00	9/26/2016 12:00	**180**	0.25	**194,208.60**	0.24	**0.16**	3.00	Atlas	48,552	1
	9/28/2016 11:00	9/28/2016 16:00	**300**	0.45	**325,302.02**	0.68	**0.24**	3.00	Atlas	146,386	1
	9/29/2016 9:00	9/29/2016 10:30	**90**	0.58	**45,160.41**	0.84	**0.23**	3.00	Atlas	26,193	1
	9/30/2016	9/30/2016 6:15	**375**	0.58	**912,722.84**	1.23	**0.23**	3.00	Atlas	529,379	1
	10/20/2016 9:00	10/20/2016 18:30	**570**	0.66	**1,247,086.56**	0.56	**0.28**	3.00	Atlas	823,077	1
	11/8/2016 19:45	11/8/2016 20:45	**60**	0.13	**15,691.00**	0.15	**0.06**	12.00	Atlas	2,040	1
	11/10/2016 13:00	11/10/2016 13:00	**-**	Discharge		0.14				62,370	1
	11/19/2016 1:30	11/19/2016 1:45	**15**	0.1	**33,128.40**	0.09	**0.06**	3.00	Atlas	3,313	1
	11/23/2016 17:30	11/23/2016 22:30	**300**	0.32	**54,185.88**	0.42	**0.12**	24.00	Atlas	17,339	1
	11/28/2016 13:00	11/29/2016 5:45	**1,005**	0.76	**569,505.26**	1.08	**0.33**	12.00	Atlas	432,824	1
	12/4/2016 17:30	12/4/2016 20:15	**165**	0.06	**146,154.17**	0.83	**0.03**	12.00	Atlas	8,769	1
	12/6/2016 4:15	12/6/2016 21:15	**1,020**	0.8	**710,783.31**	0.87	**0.37**	12.00	Atlas	568,627	1
	12/11/2016 21:00	12/12/2016 8:45	**705**	0.36	**53,493.81**	1.29	**0.16**	12.00	Atlas	19,258	1
	12/17/2016 0:45	12/18/2016 14:30	**2,265**	2.89	**3,524,640.37**	3.27	**2.68**	12.00	Cloudburst	10,186,211	1
	12/23/2016 21:45	12/24/2016 22:15	**1,470**	0.28	**2,627,395.46**	3.16	**0.13**	6.00	Atlas	735,671	1
	12/26/2016 8:00	12/27/2016 11:30	**1,650**	0.4	**1,132,985.20**	0.68	**0.20**	1.00	Atlas	453,194	1
	12/28/2016 19:00	12/28/2016 22:45	**225**	0.03	**473,136.00**	0.71	**0.02**	3.00	Atlas	14,194	1
	1/2/2017 16:30	1/3/2017 20:30	**1,680**	Discharge		0.58				676,333	1
	1/10/2017 20:45	1/10/2017 23:15	**150**	0.23	**54,348.96**	0.56	**0.17**	1.00	Atlas	12,500	1
	1/11/2017 12:15	1/11/2017 23:45	**690**	0.21	**1,719,549.00**	0.77	**0.15**	1.00	Atlas	361,105	1
	1/12/2017 15:15	1/18/2017 8:30	**8,235**	0.25	**18,087,795.40**	2.58	**0.13**	6.00	Atlas	4,521,949	1
	1/19/2017 18:15	1/21/2017 10:30	**2,415**	1.11	**3,837,051.16**	2.97	**0.51**	12.00	Atlas	4,259,127	1
	2/7/2017 8:30	2/7/2017 15:45	**435**	0.5	**259,511.06**	0.49	**0.23**	6.00	Atlas	129,756	1
	2/18/2017 20:30	2/19/2017	**210**	0.11	**601,670.64**	0.12	**0.06**	6.00	Atlas	66,184	1
	2/24/2017 19:00	2/24/2017 21:15	**135**	0.27	**3,166,776.44**	0.36	**0.22**	1.00	Atlas	855,030	1
	2/28/2017 10:00	2/28/2017 13:30	**210**	0.39	**2,157,845.49**	0.72	**0.20**	6.00	Atlas	841,560	1
	3/1/2017 3:15	3/1/2017 14:00	**645**	1.22	**5,307,470.57**	1.95	**0.64**	6.00	Atlas	6,475,114	1
	3/7/2017 7:00	3/7/2017 16:45	**585**	0.68	**2,225,718.94**	2.15	**0.22**	48.00	Atlas	1,513,489	1
	3/27/2017 18:15	3/27/2017 20:15	**120**	0.26	**4,206,907.46**	0.75	**0.14**	3.00	Atlas	1,093,796	1
	3/31/2017 1:30	3/31/2017 2:15	**45**	0.25	**321,438.88**	0.93	**0.11**	6.00	Atlas	80,360	1
	4/3/2017 19:15	4/3/2017 20:15	**60**	0.2	**17,745.85**	0.39	**0.11**	1.00	Atlas	3,549	1
	4/16/2017 4:15	4/16/2017 23:00	**1,125**	1.23	**3,408,108.04**	1.44	**0.47**	24.00	Atlas	4,191,973	1
	4/21/2017 22:15	4/22/2017 1:15	**180**	0.72	**2,990,362.51**	1.9	**0.27**	6.00	Atlas	2,153,061	1
	4/27/2017 6:30	4/27/2017 8:15	**105**	0.15	**3,048,291.13**	0.96	**0.09**	1.00	Atlas	457,244	1
	4/28/2017 23:15	4/29/2017 2:45	**210**	2.34	**3,585,426.11**	2.54	**1.92**	6.00	Cloudburst	8,389,897	1
	6/30/2017 21:00	6/30/2017 22:15	**75**	0.56	**2,044,273.30**	0.66	**0.49**	1.00	Atlas	1,144,793	1
CSO019 Total										**62,287,442**	**58**
CSO020*	**7/3/2016 12:30**	7/3/2016 21:30	**540**	1.3	**51,192.56**	0.76	**0.42**	48.00	Atlas	66,550	1
	7/4/2016 14:45	7/4/2016 17:00	**135**	1.3	**152,961.67**	1.31	**0.42**	48.00	Atlas	198,850	1
	7/12/2016 10:15	7/12/2016 10:45	**30**	0.25	**278,248.84**	0.46	**0.16**	3.00	Atlas	69,562	1
	7/28/2016 3:15	7/28/2016 4:00	**45**	0.67	**192,322.01**	0.82	**0.31**	1.00	Atlas	128,856	1
	7/30/2016 14:30	7/30/2016 15:00	**30**	0.13	**400,061.23**	1.16	**0.11**	1.00	Atlas	52,008	1
	8/15/2016 3:00	8/15/2016 8:45	**345**	0.75	**3,263,134.11**	1.16	**0.39**	6.00	Atlas	2,447,351	1
	8/17/2016 6:30	8/17/2016 8:15	**105**	0.79	**1,746,508.22**	1.67	**0.35**	3.00	Atlas	1,379,741	1
	8/20/2016 14:15	8/20/2016 22:30	**495**	1.37	**1,668,626.75**	3.05	**0.67**	1.00	Atlas	2,286,019	1
	8/31/2016 17:45	8/31/2016 18:30	**45**	0.43	**239,175.53**	0.5	**0.36**	1.00	Atlas	102,845	1
	9/30/2016 2:00	9/30/2016 2:45	**45**	0.58	**195,335.81**	1.27	**0.31**	3.00	Atlas	113,295	1
	10/20/2016 10:30	10/20/2016 12:00	**90**	0.73	**549,586.78**	0.6	**0.34**	3.00	Atlas	401,198	1
	11/28/2016 18:45	11/28/2016 22:45	**240**	0.68	**1,008,292.32**	0.96	**0.29**	12.00	Atlas	685,639	1
	12/6/2016 9:00	12/6/2016 13:15	**255**	0.82	**1,194,318.95**	0.85	**0.38**	12.00	Atlas	979,342	1
	12/17/2016 18:30	12/18/2016 9:00	**870**	2.74	**5,387,807.72**	3.04	**2.05**	12.00	Cloudburst	14,762,593	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO020*	**1/11/2017 13:45**	1/11/2017 14:15	**30**	0.16	**52,696.63**	0.51	**0.11**	3.00	Atlas	8,431	1
	1/12/2017 18:45	1/12/2017 22:15	**210**	0.46	**522,198.65**	0.81	**0.23**	6.00	Atlas	240,211	1
	1/13/2017 16:00	1/13/2017 16:30	**30**	0.37	**200,380.32**	1.14	**0.23**	3.00	Atlas	74,141	1
	1/14/2017 11:45	1/14/2017 15:45	**240**	0.24	**4,231,170.13**	1.4	**0.11**	6.00	Atlas	1,015,481	1
	2/24/2017 19:30	2/24/2017 20:30	**60**	0.34	**264,805.91**	0.41	**0.29**	1.00	Atlas	90,034	1
	2/28/2017 11:15	2/28/2017 11:15	**-**	0.23	**4,506.26**	0.64	**0.11**	12.00	Atlas	1,036	1
	3/1/2017 3:15	3/1/2017 11:45	**510**	0.99	**4,117,883.64**	1.62	**0.48**	6.00	Atlas	4,076,705	1
	3/7/2017 8:15	3/7/2017 13:30	**315**	0.59	**204,991.88**	1.72	**0.19**	48.00	Atlas	120,945	1
	3/27/2017 18:45	3/27/2017 19:45	**60**	0.29	**670,126.48**	0.71	**0.17**	3.00	Atlas	194,337	1
	4/16/2017 18:00	4/16/2017 22:15	**255**	1.26	**1,046,895.78**	1.55	**0.48**	24.00	Atlas	1,319,089	1
	4/21/2017 23:00	4/22/2017 1:00	**120**	0.67	**538,130.04**	1.8	**0.24**	24.00	Atlas	360,547	1
	4/29/2017 1:45	4/29/2017 6:00	**255**	1.11	**3,337,961.69**	1.36	**0.59**	3.00	Atlas	3,705,137	1
	5/4/2017 20:00	5/5/2017 19:45	**1,425**	1.58	**6,106,060.92**	2.92	**0.53**	24.00	Atlas	9,647,576	1
	5/21/2017 2:45	5/21/2017 6:45	**240**	1.1	**2,661,757.47**	1.14	**0.50**	12.00	Atlas	2,927,933	1
	5/24/2017 18:45	5/24/2017 22:00	**195**	0.52	**1,319,843.77**	1.54	**0.19**	24.00	Atlas	686,319	1
	5/27/2017 14:15	5/27/2017 15:00	**45**	0.3	**146,355.97**	1.91	**0.24**	1.00	Atlas	43,907	1
	6/15/2017 3:15	6/15/2017 4:45	**90**	0.67	**835,163.42**	0.74	**0.43**	3.00	Atlas	559,559	1
	6/23/2017 15:30	6/23/2017 19:00	**210**	0.85	**1,248,361.12**	1.34	**0.41**	6.00	Atlas	1,061,107	1
	6/30/2017 21:30	6/30/2017 21:45	**15**	0.28	**95,412.11**	0.36	**0.20**	1.00	Atlas	26,715	1
CSO020* Total										**49,833,061**	**33**
CSO022	**7/28/2016 4:15**	7/28/2016 4:30	**15**	0.74	**538,084.35**	0.98	**0.37**	1.00	Atlas	398,182	1
	7/30/2016 15:15	7/30/2016 15:15	**-**	0.17	**110,170.47**	1.32	**0.15**	1.00	Atlas	18,729	1
	8/1/2016 12:15	8/1/2016 12:15	**-**	0.58	**12,768.88**	1.86	**0.45**	1.00	Atlas	7,406	1
	8/12/2016 15:00	8/12/2016 15:00	**-**	0.27	**281,381.74**	0.35	**0.20**	1.00	Atlas	75,973	1
	8/15/2016 4:15	8/15/2016 4:15	**-**	0.76	**21,262.38**	0.92	**0.41**	3.00	Atlas	16,159	1
	8/17/2016 7:45	8/17/2016 8:00	**15**	0.96	**358,883.54**	1.92	**0.43**	3.00	Atlas	344,528	1
	12/14/2016 16:15	12/15/2016 15:00	**1,365**	Discharge		0.37				30,145,787	1
	4/16/2017 14:15	4/16/2017 14:15	**-**	1.22	**1,896.89**	0.67	**0.47**	24.00	Atlas	2,314	1
	4/29/2017 2:45	4/29/2017 4:00	**75**	1.25	**751,898.91**	1.5	**0.69**	3.00	Atlas	939,874	1
	5/4/2017 21:30	5/4/2017 21:30	**-**	1.65	**5,391.64**	2.15	**0.55**	24.00	Atlas	8,896	1
	5/21/2017 3:15	5/21/2017 5:15	**120**	1.16	**917,801.09**	1.17	**0.53**	12.00	Atlas	1,064,649	1
	6/5/2017 9:45	6/5/2017 9:45	**-**	0.03	**892,790.00**	0.04	**0.01**	12.00	Atlas	26,784	1
	6/5/2017 19:15	6/5/2017 19:15	**-**	0.15	**2,072,522.93**	0.19	**0.13**	1.00	Atlas	310,878	1
	6/7/2017 10:00	6/7/2017 10:00	**-**	Discharge		0.18				3,975,938	1
CSO022 Total										**37,336,098**	**14**
CSO023	**12/17/2016 19:15**	12/17/2016 19:15	**-**	2.74	**154.94**	1.31	**2.10**	12.00	Cloudburst	425	1
	6/23/2017 17:15	6/23/2017 18:00	**45**	0.85	**35,047.69**	1.4	**0.42**	6.00	Atlas	29,791	1
CSO023 Total										**30,215**	**2**
CSO027	**8/17/2016 6:45**	8/17/2016 7:15	**30**	0.93	**41,760.15**	1.96	**0.43**	3.00	Atlas	38,837	1
	8/20/2016 14:30	8/20/2016 14:30	**-**	1.38	**27,663.32**	2.62	**0.59**	12.00	Atlas	38,175	1
	8/27/2016 13:00	8/27/2016 13:45	**45**	0.01	**8,304,197.00**	1.19	**0.01**	1.00	Atlas	83,042	1
	9/10/2016 15:30	9/10/2016 16:00	**30**	0.19	**186,363.74**	0.17	**0.12**	1.00	Atlas	35,409	1
	10/20/2016 9:15	10/20/2016 10:00	**45**	0.69	**18,592.97**	0.32	**0.26**	24.00	Atlas	12,829	1
	6/30/2017 21:15	6/30/2017 21:15	**-**	0.59	**6,041.15**	0.71	**0.50**	1.00	Atlas	3,564	1
CSO027 Total										**211,857**	**6**
CSO028	**7/3/2016 11:45**	7/3/2016 20:45	**540**	1.35	**21,414.88**	0.76	**0.44**	48.00	Atlas	28,910	1
	7/4/2016 8:00	7/4/2016 16:30	**510**	1.35	**28,802.59**	1.35	**0.44**	48.00	Atlas	38,884	1
	7/20/2016 19:45	7/20/2016 22:15	**150**	0.1	**78,176.90**	0.32	**0.09**	1.00	Atlas	7,818	1
	7/28/2016 3:15	7/28/2016 9:00	**345**	0.7	**39,502.97**	1.02	**0.32**	12.00	Atlas	27,652	1
	8/15/2016 3:15	8/15/2016 8:30	**315**	0.87	**50,963.61**	1.21	**0.43**	6.00	Atlas	44,338	1
	8/17/2016 4:45	8/17/2016 11:00	**375**	0.93	**35,007.94**	2.08	**0.43**	3.00	Atlas	32,557	1
	8/20/2016 14:30	8/21/2016 6:45	**975**	1.38	**82,242.11**	3.22	**0.59**	12.00	Atlas	113,494	1
	9/28/2016 12:30	9/28/2016 15:30	**180**	0.38	**51,709.32**	0.64	**0.21**	6.00	Atlas	19,650	1
	9/30/2016 0:15	9/30/2016 5:00	**285**	0.68	**61,130.46**	1.31	**0.35**	3.00	Atlas	41,569	1
	12/17/2016 18:30	12/21/2016 12:45	**5,415**	2.81	**3,766,533.37**	3.16	**2.53**	12.00	Cloudburst	10,583,959	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.45	**800.73**	0.49	**0.37**	1.00	Atlas	360	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.15	**334.95**	1.04	**0.61**	6.00	Atlas	385	1
	3/1/2017 11:30	3/1/2017 20:45	**555**	1.15	**28,656.25**	1.9	**0.61**	6.00	Atlas	32,955	1
	3/7/2017 17:30	3/8/2017 14:15	**1,245**	0.39	**449,603.03**	1.76	**0.18**	12.00	Atlas	175,345	1
	5/21/2017 3:00	5/21/2017 3:15	**15**	1.09	**2,832.04**	0.79	**0.49**	12.00	Atlas	3,087	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.59	**17,042.68**	0.71	**0.50**	1.00	Atlas	10,055	1
CSO028 Total										**11,161,018**	**16**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO029	**7/3/2016 19:45**	7/3/2016 23:45	**240**	1.35	**132,248.29**	0.85	**0.44**	48.00	Atlas	178,535	1
	7/6/2016 13:00	7/6/2016 13:00	**-**	0.17	**39,065.94**	1.49	**0.11**	1.00	Atlas	6,641	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.16	**49,354.50**	0.42	**0.14**	1.00	Atlas	7,897	1
	7/27/2016 23:30	7/28/2016 3:15	**225**	0.7	**202,960.79**	0.85	**0.32**	12.00	Atlas	142,073	1
	7/30/2016 14:00	7/30/2016 14:00	**-**	0.48	**11,685.85**	1.53	**0.42**	1.00	Atlas	5,609	1
	8/1/2016 11:00	8/1/2016 11:00	**-**	0.34	**9,644.24**	1.88	**0.28**	1.00	Atlas	3,279	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.27	**13,664.44**	0.38	**0.22**	1.00	Atlas	3,689	1
	8/15/2016 3:00	8/15/2016 5:30	**150**	0.87	**19,321.55**	1.12	**0.43**	6.00	Atlas	16,810	1
	8/17/2016 6:45	8/17/2016 7:00	**15**	0.93	**74,084.28**	1.96	**0.43**	3.00	Atlas	68,898	1
	8/20/2016 14:15	8/20/2016 20:00	**345**	1.38	**147,388.36**	3.06	**0.59**	12.00	Atlas	203,396	1
	9/30/2016 1:45	9/30/2016 1:45	**-**	0.68	**6,040.41**	1.16	**0.35**	3.00	Atlas	4,107	1
	10/20/2016 9:00	10/20/2016 9:15	**15**	0.69	**24,310.46**	0.25	**0.26**	24.00	Atlas	16,774	1
	12/17/2016 18:45	12/18/2016 1:15	**390**	2.81	**65,192.80**	3.16	**2.53**	12.00	Cloudburst	183,192	1
	1/19/2017 19:15	1/20/2017 0:45	**330**	0.93	**14,780.49**	2.18	**0.43**	12.00	Atlas	13,746	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.45	**11,890.31**	0.49	**0.37**	1.00	Atlas	5,351	1
	3/1/2017 3:15	3/1/2017 8:45	**330**	1.15	**62,598.49**	1.9	**0.61**	6.00	Atlas	71,988	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.39	**4,675.36**	1.75	**0.18**	12.00	Atlas	1,823	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.1	**26,922.71**	1.35	**0.56**	3.00	Atlas	29,615	1
	5/4/2017 20:00	5/5/2017 4:45	**525**	1.56	**19,416.62**	2.26	**0.53**	24.00	Atlas	30,290	1
	5/21/2017 2:15	5/21/2017 3:00	**45**	1.09	**49,985.45**	0.74	**0.49**	12.00	Atlas	54,484	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.12	**218,242.50**	1.66	**0.09**	1.00	Atlas	26,189	1
	6/15/2017 4:00	6/15/2017 4:00	**-**	0.43	**12,622.12**	0.39	**0.27**	3.00	Atlas	5,428	1
	6/23/2017 15:15	6/23/2017 16:00	**45**	0.77	**21,407.52**	1.07	**0.37**	6.00	Atlas	16,484	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.59	**309,030.19**	0.71	**0.50**	1.00	Atlas	182,328	1
CSO029 Total										**1,278,626**	**24**
CSO031	**7/27/2016 23:45**	7/28/2016 9:45	**600**	0.7	**154,078.60**	1.02	**0.32**	12.00	Atlas	107,855	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.48	**30,451.50**	1.54	**0.42**	1.00	Atlas	14,617	1
	8/1/2016 11:15	8/1/2016 12:00	**45**	0.34	**64,881.38**	1.89	**0.28**	1.00	Atlas	22,060	1
	8/17/2016 6:45	8/17/2016 7:30	**45**	0.93	**43,147.88**	1.96	**0.43**	3.00	Atlas	40,128	1
	8/20/2016 14:30	8/21/2016 22:15	**1,905**	1.38	**292,928.07**	3.22	**0.59**	12.00	Atlas	404,241	1
	8/28/2016 22:00	8/28/2016 22:15	**15**	0.14	**24,626.14**	0.15	**0.12**	1.00	Atlas	3,448	1
	2/7/2017 14:15	2/8/2017 8:15	**1,080**	0.37	**735,033.32**	0.38	**0.18**	6.00	Atlas	271,962	1
	2/8/2017 18:00	2/10/2017 1:45	**1,905**	0.09	**12,062,100.56**	0.47	**0.05**	1.00	Atlas	1,085,589	1
	3/7/2017 21:45	3/8/2017 9:00	**675**	0.39	**329,163.85**	1.76	**0.18**	12.00	Atlas	128,374	1
	5/1/2017 2:30	5/1/2017 4:15	**105**	0.25	**70,998.68**	1.48	**0.13**	3.00	Atlas	17,750	1
	6/18/2017 22:30	6/18/2017 22:30	**-**	0.19	**15,186.42**	0.74	**0.11**	3.00	Atlas	2,885	1
CSO031 Total										**2,098,908**	**11**
CSO034	**7/27/2016 23:45**	7/28/2016 3:30	**225**	0.7	**9,635.57**	0.85	**0.32**	12.00	Atlas	6,745	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**10,364.29**	1.54	**0.42**	1.00	Atlas	4,975	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.93	**4,092.88**	1.96	**0.43**	3.00	Atlas	3,806	1
	8/20/2016 14:30	8/21/2016 20:00	**1,770**	1.38	**6,684,046.56**	3.22	**0.59**	12.00	Atlas	9,223,984	1
	12/17/2016 18:30	12/17/2016 19:15	**45**	2.81	**7,945.42**	1.41	**2.53**	12.00	Cloudburst	22,327	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.45	**16,562.73**	0.49	**0.37**	1.00	Atlas	7,453	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.15	**12,111.90**	1.04	**0.61**	6.00	Atlas	13,929	1
	4/29/2017 1:45	4/29/2017 2:45	**60**	1.1	**7,779.85**	1.34	**0.56**	3.00	Atlas	8,558	1
	5/21/2017 3:00	5/21/2017 3:00	**-**	1.09	**5,627.29**	0.74	**0.49**	12.00	Atlas	6,134	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.12	**32,303.92**	1.66	**0.09**	1.00	Atlas	3,876	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.28	**12,792.14**	0.34	**0.23**	1.00	Atlas	3,582	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.59	**47,105.51**	0.71	**0.50**	1.00	Atlas	27,792	1
CSO034 Total										**9,333,161**	**12**
CSO035	**7/3/2016 20:00**	7/3/2016 20:00	**-**	1.28	**94,374.75**	0.64	**0.42**	48.00	Atlas	120,800	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.17	**99,545.18**	1.43	**0.13**	1.00	Atlas	16,923	1
	7/12/2016 9:45	7/12/2016 9:45	**-**	0.22	**3,560.32**	0.51	**0.14**	3.00	Atlas	783	1
	7/26/2016 18:00	7/26/2016 18:00	**-**	0.09	**76,630.44**	0.25	**0.08**	1.00	Atlas	6,897	1
	7/27/2016 23:45	7/28/2016 3:30	**225**	0.67	**626,001.79**	0.71	**0.31**	12.00	Atlas	419,421	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.45	**530,691.44**	1.38	**0.39**	1.00	Atlas	238,811	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.41	**261,130.76**	1.79	**0.34**	1.00	Atlas	107,064	1
	8/12/2016 14:15	8/12/2016 14:15	**-**	0.2	**239,970.85**	0.3	**0.16**	1.00	Atlas	47,994	1
	8/15/2016 3:15	8/15/2016 5:45	**150**	0.92	**225,849.17**	1.15	**0.45**	6.00	Atlas	207,781	1
	8/17/2016 6:45	8/17/2016 7:00	**15**	0.83	**286,921.40**	1.89	**0.36**	12.00	Atlas	238,145	1
	8/20/2016 14:30	8/20/2016 20:00	**330**	1.1	**658,982.86**	2.77	**0.45**	12.00	Atlas	724,881	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.27	**473,348.67**	0.28	**0.23**	1.00	Atlas	127,804	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO035	**10/20/2016 9:15**	10/20/2016 9:30	**15**	0.6	**248,547.15**	0.16	**0.23**	24.00	Atlas	149,128	1
	12/17/2016 18:30	12/18/2016 0:30	**360**	2.78	**370,200.35**	2.96	**2.39**	12.00	Cloudburst	1,029,157	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.5	**486,206.40**	0.55	**0.43**	1.00	Atlas	243,103	1
	3/1/2017 3:15	3/1/2017 7:15	**240**	1.01	**438,292.21**	1.35	**0.54**	6.00	Atlas	442,675	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.54	**43,191.67**	1.56	**0.18**	48.00	Atlas	23,324	1
	4/16/2017 13:30	4/16/2017 17:45	**255**	1.16	**24,438.78**	0.77	**0.49**	6.00	Atlas	28,349	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	0.9	**970,775.53**	1.17	**0.46**	6.00	Atlas	873,698	1
	5/4/2017 20:00	5/4/2017 20:00	**-**	1.6	**5,438.06**	1.68	**0.54**	24.00	Atlas	8,701	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.6	**4.99**	2.13	**0.54**	24.00	Atlas	8	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	0.98	**972,668.83**	1.01	**0.44**	12.00	Atlas	953,215	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.12	**1,797,758.25**	1.58	**0.09**	1.00	Atlas	215,731	1
	6/5/2017 8:45	6/5/2017 9:00	**15**	0.06	**2,185,754.00**	0.07	**0.03**	12.00	Atlas	131,145	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.27	**754,836.85**	0.33	**0.23**	1.00	Atlas	203,806	1
	6/15/2017 3:15	6/15/2017 4:00	**45**	0.56	**416,216.11**	0.49	**0.35**	3.00	Atlas	233,081	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.74	**196,652.35**	1.02	**0.35**	6.00	Atlas	145,523	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.65	**741,719.83**	0.78	**0.54**	1.00	Atlas	482,118	1
CSO035 Total										**7,420,066**	**28**
CSO036*	**7/3/2016 10:15**	7/3/2016 20:15	**600**	1.28	**46,700.78**	0.66	**0.42**	48.00	Atlas	59,777	1
	7/4/2016 8:30	7/4/2016 14:45	**375**	1.28	**1,616.91**	1.24	**0.42**	48.00	Atlas	2,070	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.17	**152,528.88**	1.43	**0.13**	1.00	Atlas	25,930	1
	7/12/2016 9:00	7/12/2016 9:45	**45**	0.22	**133,201.45**	0.51	**0.14**	3.00	Atlas	29,304	1
	7/20/2016 19:45	7/20/2016 19:45	**-**	0.04	**807.25**	0.26	**0.03**	1.00	Atlas	32	1
	7/26/2016 18:00	7/26/2016 18:00	**-**	0.09	**65,039.44**	0.25	**0.08**	1.00	Atlas	5,854	1
	7/27/2016 23:45	7/28/2016 5:00	**315**	0.67	**398,564.75**	0.8	**0.31**	12.00	Atlas	267,038	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.45	**331,475.20**	1.38	**0.39**	1.00	Atlas	149,164	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.41	**114,016.39**	1.79	**0.34**	1.00	Atlas	46,747	1
	8/5/2016 14:00	8/5/2016 14:00	**-**	0.12	**29,080.42**	1.33	**0.09**	1.00	Atlas	3,490	1
	8/12/2016 14:00	8/12/2016 14:15	**15**	0.2	**223,737.30**	0.31	**0.16**	1.00	Atlas	44,747	1
	8/15/2016 2:45	8/15/2016 7:30	**285**	0.92	**142,857.32**	1.26	**0.45**	6.00	Atlas	131,429	1
	8/17/2016 4:45	8/17/2016 7:15	**150**	0.83	**191,044.17**	1.89	**0.36**	12.00	Atlas	158,567	1
	8/20/2016 10:30	8/20/2016 20:30	**600**	1.1	**176,180.46**	2.85	**0.45**	12.00	Atlas	193,799	1
	8/28/2016 17:30	8/28/2016 17:45	**15**	0.27	**192,921.59**	0.28	**0.23**	1.00	Atlas	52,089	1
	9/10/2016 15:30	9/10/2016 15:30	**-**	0.24	**5.79**	0.22	**0.17**	1.00	Atlas	1	1
	9/28/2016 12:30	9/28/2016 13:00	**30**	0.35	**16,002.17**	0.52	**0.19**	6.00	Atlas	5,601	1
	9/30/2016 1:30	9/30/2016 2:15	**45**	0.67	**23,120.34**	1.19	**0.35**	3.00	Atlas	15,491	1
	10/20/2016 9:15	10/20/2016 10:45	**90**	0.6	**237,133.72**	0.31	**0.23**	24.00	Atlas	142,280	1
	11/23/2016 21:00	11/23/2016 21:00	**-**	0.3	**1,264.03**	0.47	**0.12**	6.00	Atlas	379	1
	12/6/2016 5:30	12/6/2016 9:45	**255**	0.9	**13,025.62**	0.64	**0.41**	12.00	Atlas	11,723	1
	12/17/2016 16:30	12/18/2016 1:30	**540**	2.78	**210,447.62**	3.1	**2.39**	12.00	Cloudburst	585,044	1
	12/24/2016 1:00	12/24/2016 1:00	**-**	0.22	**6,141.41**	2.94	**0.10**	12.00	Atlas	1,351	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.11	**41,756.73**	0.34	**0.08**	1.00	Atlas	4,593	1
	1/11/2017 12:15	1/11/2017 12:15	**-**	0.24	**447.46**	0.51	**0.16**	1.00	Atlas	107	1
	1/12/2017 15:45	1/12/2017 18:30	**165**	0.36	**29,312.92**	0.6	**0.17**	6.00	Atlas	10,553	1
	1/14/2017 11:15	1/14/2017 13:45	**150**	0.25	**9,142.32**	1.26	**0.11**	12.00	Atlas	2,286	1
	1/19/2017 19:15	1/20/2017 1:00	**345**	0.97	**52,868.69**	2.21	**0.44**	12.00	Atlas	51,283	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.5	**349,439.36**	0.55	**0.43**	1.00	Atlas	174,720	1
	2/28/2017 10:15	2/28/2017 10:30	**15**	0.25	**6,659.68**	0.79	**0.11**	6.00	Atlas	1,665	1
	3/1/2017 3:15	3/1/2017 9:00	**345**	1.01	**220,625.68**	1.81	**0.54**	6.00	Atlas	222,832	1
	3/7/2017 7:45	3/7/2017 8:00	**15**	0.54	**79,624.78**	1.58	**0.18**	48.00	Atlas	42,997	1
	3/27/2017 18:15	3/27/2017 19:00	**45**	0.33	**13,324.88**	0.74	**0.21**	3.00	Atlas	4,397	1
	3/30/2017 20:45	3/30/2017 20:45	**-**	0.24	**232.17**	0.82	**0.11**	6.00	Atlas	56	1
	4/3/2017 19:30	4/3/2017 19:30	**-**	0.13	**62,971.54**	0.35	**0.08**	1.00	Atlas	8,186	1
	4/16/2017 5:30	4/16/2017 20:30	**900**	1.16	**52,711.77**	1.37	**0.49**	6.00	Atlas	61,146	1
	4/21/2017 22:45	4/21/2017 22:45	**-**	0.69	**43.75**	1.57	**0.25**	24.00	Atlas	30	1
	4/27/2017 7:00	4/27/2017 7:00	**-**	0.16	**27,060.56**	0.85	**0.11**	1.00	Atlas	4,330	1
	4/28/2017 23:45	4/29/2017 3:15	**210**	0.9	**525,238.39**	1.22	**0.46**	6.00	Atlas	472,715	1
	5/4/2017 19:45	5/5/2017 7:45	**720**	1.6	**42,449.25**	2.44	**0.54**	24.00	Atlas	67,919	1
	5/11/2017 4:00	5/11/2017 4:00	**-**	0.18	**209.67**	1.77	**0.10**	6.00	Atlas	38	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	0.98	**493,947.26**	1.01	**0.44**	12.00	Atlas	484,068	1
	5/24/2017 18:15	5/24/2017 19:00	**45**	0.5	**2,688.08**	1.36	**0.18**	24.00	Atlas	1,344	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.12	**1,058,585.75**	1.58	**0.09**	1.00	Atlas	127,030	1
	6/5/2017 8:45	6/5/2017 9:00	**15**	0.06	**883,686.83**	0.07	**0.03**	12.00	Atlas	53,021	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO036*	**6/5/2017 18:30**	6/5/2017 18:30	**-**	0.27	**382,511.26**	0.33	**0.23**	1.00	Atlas	103,278	1
	6/15/2017 3:15	6/15/2017 4:15	**60**	0.56	**290,211.98**	0.52	**0.35**	3.00	Atlas	162,519	1
	6/22/2017 18:45	6/22/2017 19:15	**30**	0.32	**25,189.41**	0.5	**0.17**	6.00	Atlas	8,061	1
	6/23/2017 8:00	6/23/2017 16:15	**495**	0.74	**118,220.89**	1.04	**0.35**	6.00	Atlas	87,483	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.65	**320,194.68**	0.78	**0.54**	1.00	Atlas	208,127	1
CSO036* Total										**4,296,689**	**50**
CSO038	**7/6/2016 13:30**	7/6/2016 18:30	**300**	0.17	**135,131.35**	1.52	**0.11**	1.00	Atlas	22,972	1
	7/20/2016 20:00	7/21/2016 13:15	**1,035**	0.1	**2,659,187.50**	0.32	**0.09**	1.00	Atlas	265,919	1
	7/25/2016 15:30	7/25/2016 16:15	**45**	0.15	**43,922.73**	0.26	**0.08**	6.00	Atlas	6,588	1
	7/28/2016 3:30	7/28/2016 3:30	**-**	0.7	**16,165.14**	0.85	**0.32**	12.00	Atlas	11,316	1
	8/15/2016 2:45	8/15/2016 8:30	**345**	0.87	**438,289.60**	1.21	**0.43**	6.00	Atlas	381,312	1
	8/17/2016 6:15	8/17/2016 7:15	**60**	0.93	**79,372.19**	1.96	**0.43**	3.00	Atlas	73,816	1
	8/20/2016 14:30	8/23/2016 17:15	**4,485**	1.38	**18,000,900.02**	3.22	**0.59**	12.00	Atlas	24,841,242	1
CSO038 Total										**25,603,165**	**7**
CSO050	**7/3/2016 7:30**	7/4/2016 18:30	**2,100**	1.3	**706,644.32**	1.33	**0.42**	48.00	Atlas	918,638	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.1	**96,691.50**	1.4	**0.07**	1.00	Atlas	9,669	1
	7/12/2016 9:30	7/12/2016 10:00	**30**	0.16	**424,470.19**	0.56	**0.10**	1.00	Atlas	67,915	1
	7/20/2016 19:15	7/20/2016 20:00	**45**	0.1	**3,174,327.30**	0.24	**0.08**	1.00	Atlas	317,433	1
	7/25/2016 12:45	7/25/2016 12:45	**-**	0.3	**48,543.30**	0.2	**0.16**	6.00	Atlas	14,563	1
	7/26/2016 17:45	7/26/2016 18:00	**15**	0.11	**179,500.73**	0.51	**0.10**	1.00	Atlas	19,745	1
	7/27/2016 23:45	7/28/2016 5:30	**345**	0.69	**538,030.38**	1.01	**0.35**	1.00	Atlas	371,241	1
	7/29/2016 14:30	7/29/2016 14:30	**-**	0.05	**171,438.20**	1.11	**0.03**	6.00	Atlas	8,572	1
	7/30/2016 14:00	7/30/2016 14:15	**15**	0.15	**675,187.00**	1.3	**0.13**	1.00	Atlas	101,278	1
	8/1/2016 11:00	8/1/2016 11:30	**30**	0.65	**240,739.00**	1.9	**0.51**	1.00	Atlas	156,480	1
	8/4/2016 11:45	8/4/2016 12:30	**45**	0.35	**536,572.26**	1.03	**0.23**	1.00	Atlas	187,800	1
	8/5/2016 13:45	8/5/2016 14:15	**30**	0.13	**296,747.31**	1.29	**0.09**	3.00	Atlas	38,577	1
	8/12/2016 14:00	8/12/2016 14:15	**15**	0.23	**345,667.35**	0.41	**0.19**	1.00	Atlas	79,503	1
	8/15/2016 2:30	8/15/2016 10:00	**450**	0.74	**1,047,476.03**	1.13	**0.38**	6.00	Atlas	775,132	1
	8/17/2016 4:00	8/17/2016 10:00	**360**	1.32	**488,080.24**	2.23	**0.63**	3.00	Atlas	644,266	1
	8/20/2016 10:15	8/20/2016 22:15	**720**	1.4	**803,705.59**	3.65	**0.61**	12.00	Atlas	1,125,188	1
	8/27/2016 12:45	8/27/2016 13:00	**15**	0.08	**79,692.50**	1.21	**0.07**	1.00	Atlas	6,375	1
	8/31/2016 17:45	8/31/2016 17:45	**-**	0.4	**8,448.33**	0.49	**0.35**	1.00	Atlas	3,379	1
	9/10/2016 15:15	9/10/2016 15:30	**15**	0.22	**153,460.27**	0.2	**0.14**	3.00	Atlas	33,761	1
	9/17/2016 9:15	9/17/2016 9:15	**-**	0.15	**60,946.80**	0.35	**0.11**	1.00	Atlas	9,142	1
	9/26/2016 9:15	9/26/2016 11:00	**105**	0.25	**152,316.84**	0.25	**0.17**	3.00	Atlas	38,079	1
	9/28/2016 12:00	9/28/2016 14:00	**120**	0.62	**219,835.50**	0.85	**0.33**	6.00	Atlas	136,298	1
	9/29/2016 9:00	9/29/2016 9:30	**30**	0.09	**297,379.67**	0.94	**0.05**	3.00	Atlas	26,764	1
	9/30/2016	9/30/2016 4:00	**240**	0.42	**1,023,249.50**	1.33	**0.23**	3.00	Atlas	429,765	1
	10/20/2016 9:15	10/20/2016 16:30	**435**	0.54	**552,857.93**	0.42	**0.23**	3.00	Atlas	298,543	1
	11/8/2016 19:45	11/8/2016 20:00	**15**	0.15	**148,062.67**	0.16	**0.07**	12.00	Atlas	22,209	1
	11/9/2016 10:00	11/9/2016 10:00	**-**	Discharge		0.18				1,803	1
	11/23/2016 20:15	11/23/2016 21:15	**60**	0.31	**47,337.87**	0.43	**0.13**	6.00	Atlas	14,675	1
	11/28/2016 13:45	11/28/2016 23:00	**555**	0.77	**791,766.96**	1.08	**0.33**	12.00	Atlas	609,661	1
	12/6/2016 4:15	12/6/2016 14:00	**585**	0.93	**1,169,239.48**	0.98	**0.43**	12.00	Atlas	1,087,393	1
	12/11/2016 21:30	12/11/2016 22:00	**30**	0.35	**31,030.71**	1.2	**0.15**	12.00	Atlas	10,861	1
	12/17/2016 15:45	12/18/2016 5:15	**810**	3.36	**691,170.00**	3.72	**4.95**	12.00	Cloudburst	2,322,331	1
	12/23/2016 22:15	12/24/2016 2:15	**240**	0.29	**900,365.24**	3.62	**0.13**	12.00	Atlas	261,106	1
	12/26/2016 17:00	12/26/2016 20:45	**225**	0.39	**239,540.64**	0.64	**0.19**	6.00	Atlas	93,421	1
	1/3/2017 1:45	1/3/2017 5:00	**195**	0.2	**1,003,297.80**	0.29	**0.10**	6.00	Atlas	200,660	1
	1/10/2017 19:30	1/10/2017 20:00	**30**	0.15	**339,369.53**	0.35	**0.11**	1.00	Atlas	50,905	1
	1/11/2017 12:00	1/11/2017 13:00	**60**	0.23	**128,667.26**	0.56	**0.17**	1.00	Atlas	29,593	1
	1/12/2017 15:30	1/12/2017 21:15	**345**	0.43	**177,431.79**	0.86	**0.21**	6.00	Atlas	76,296	1
	1/13/2017 14:45	1/13/2017 15:45	**60**	0.41	**62,624.37**	1.21	**0.25**	3.00	Atlas	25,676	1
	1/14/2017 8:45	1/14/2017 14:30	**345**	0.24	**432,980.75**	1.47	**0.11**	12.00	Atlas	103,915	1
	1/15/2017 17:00	1/15/2017 17:00	**-**	0.1	**62,756.40**	1.55	**0.05**	3.00	Atlas	6,276	1
	1/16/2017 23:30	1/17/2017 5:45	**375**	0.69	**1,954,237.52**	2.26	**0.32**	6.00	Atlas	1,348,424	1
	1/19/2017 18:15	1/20/2017 9:00	**885**	0.89	**3,236,498.46**	2.53	**0.41**	12.00	Atlas	2,880,484	1
	2/7/2017 7:00	2/7/2017 13:00	**360**	0.46	**123,087.57**	0.43	**0.23**	6.00	Atlas	56,620	1
	2/8/2017 17:00	2/8/2017 17:15	**15**	0.1	**52,839.80**	0.5	**0.05**	6.00	Atlas	5,284	1
	2/24/2017 18:45	2/24/2017 19:15	**30**	0.23	**803,070.00**	0.28	**0.18**	1.00	Atlas	184,706	1
	2/28/2017 5:30	2/28/2017 11:15	**345**	0.35	**364,908.97**	0.62	**0.17**	6.00	Atlas	127,718	1
	3/1/2017 3:00	3/1/2017 11:45	**525**	1.31	**760,774.25**	1.94	**0.67**	6.00	Atlas	996,614	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO050	**3/7/2017 5:00**	3/7/2017 14:30	**570**	0.48	**406,993.73**	2.36	**0.22**	12.00	Atlas	195,357	1
	3/26/2017 1:00	3/26/2017 8:15	**435**	0.32	**192,492.09**	0.35	**0.14**	12.00	Atlas	61,597	1
	3/27/2017 16:30	3/27/2017 19:00	**150**	0.29	**637,949.93**	0.61	**0.17**	3.00	Atlas	185,005	1
	3/30/2017 21:45	3/31/2017 1:00	**195**	0.32	**170,245.00**	0.86	**0.16**	6.00	Atlas	54,478	1
	4/3/2017 19:15	4/3/2017 19:45	**30**	0.21	**30,548.67**	0.46	**0.11**	1.00	Atlas	6,415	1
	4/11/2017 6:15	4/11/2017 11:15	**300**	0.32	**153,665.00**	0.36	**0.15**	12.00	Atlas	49,173	1
	4/16/2017 4:30	4/16/2017 22:30	**1,080**	1.26	**470,841.68**	1.54	**0.48**	24.00	Atlas	593,261	1
	4/21/2017 19:30	4/22/2017 0:30	**300**	0.74	**304,488.16**	1.87	**0.27**	24.00	Atlas	225,321	1
	4/27/2017 6:30	4/27/2017 7:00	**30**	0.15	**314,809.73**	0.92	**0.08**	6.00	Atlas	47,221	1
	4/28/2017 23:15	4/29/2017 9:45	**630**	1.28	**1,045,238.88**	1.69	**0.64**	6.00	Atlas	1,337,906	1
	5/1/2017 2:15	5/1/2017 4:00	**105**	0.24	**224,348.96**	1.65	**0.12**	6.00	Atlas	53,844	1
	5/4/2017 18:45	5/5/2017 18:15	**1,410**	1.66	**1,151,964.09**	3.17	**0.56**	24.00	Atlas	1,912,260	1
	5/11/2017 3:45	5/11/2017 4:00	**15**	0.18	**22,319.56**	1.85	**0.10**	6.00	Atlas	4,018	1
	5/20/2017 18:30	5/21/2017 7:15	**765**	1.46	**1,038,127.61**	1.51	**0.65**	12.00	Atlas	1,515,666	1
	5/24/2017 18:15	5/25/2017 2:15	**480**	0.55	**94,930.62**	1.99	**0.20**	24.00	Atlas	52,212	1
	5/27/2017 13:45	5/27/2017 14:15	**30**	0.27	**687,502.81**	2.26	**0.22**	1.00	Atlas	185,626	1
	6/5/2017 8:30	6/5/2017 8:30	**-**	0.04	**14,450.50**	0.05	**0.02**	12.00	Atlas	578	1
	6/5/2017 18:15	6/5/2017 18:45	**30**	0.47	**472,999.81**	0.52	**0.41**	1.00	Atlas	222,310	1
	6/13/2017 16:45	6/13/2017 17:00	**15**	0.3	**694,563.50**	0.3	**0.25**	1.00	Atlas	208,369	1
	6/15/2017 3:00	6/15/2017 6:15	**195**	0.48	**924,653.85**	0.79	**0.29**	3.00	Atlas	443,834	1
	6/18/2017 21:30	6/18/2017 22:15	**45**	0.25	**90,371.80**	1.03	**0.15**	3.00	Atlas	22,593	1
	6/22/2017 15:45	6/22/2017 20:30	**285**	1.25	**24,361.02**	0.65	**0.41**	48.00	Atlas	30,451	1
	6/23/2017 7:45	6/23/2017 20:30	**765**	1.25	**471,360.62**	1.52	**0.41**	48.00	Atlas	589,201	1
	6/27/2017 1:30	6/27/2017 2:00	**30**	0.07	**499,865.29**	1.32	**0.06**	1.00	Atlas	34,991	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.7	**120,482.64**	0.77	**0.60**	1.00	Atlas	84,338	1
CSO050 Total										**24,450,764**	**73**
CSO051	**7/3/2016 19:45**	7/3/2016 20:00	**15**	1.3	**7,940.23**	0.59	**0.42**	48.00	Atlas	10,322	1
	7/20/2016 19:15	7/20/2016 19:30	**15**	0.1	**62,998.60**	0.23	**0.08**	1.00	Atlas	6,300	1
	7/25/2016 12:45	7/25/2016 12:45	**-**	0.3	**3,552.03**	0.2	**0.16**	6.00	Atlas	1,066	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.11	**708.00**	0.51	**0.10**	1.00	Atlas	78	1
	7/28/2016 3:00	7/28/2016 3:15	**15**	0.69	**24,746.70**	0.98	**0.35**	1.00	Atlas	17,075	1
	8/1/2016 11:00	8/1/2016 11:00	**-**	0.65	**3,359.57**	1.9	**0.51**	1.00	Atlas	2,184	1
	8/5/2016 13:45	8/5/2016 13:45	**-**	0.13	**3,627.00**	1.25	**0.09**	3.00	Atlas	472	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.23	**33,823.70**	0.41	**0.19**	1.00	Atlas	7,779	1
	8/15/2016 2:30	8/15/2016 5:45	**195**	0.74	**5,134.46**	1.06	**0.38**	6.00	Atlas	3,800	1
	8/17/2016 6:00	8/17/2016 7:00	**60**	1.32	**21,448.90**	2.15	**0.63**	3.00	Atlas	28,313	1
	8/20/2016 14:15	8/20/2016 19:45	**330**	1.4	**22,838.04**	3.52	**0.61**	12.00	Atlas	31,973	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.22	**7,433.91**	0.2	**0.14**	3.00	Atlas	1,635	1
	9/28/2016 12:15	9/28/2016 12:15	**-**	0.62	**177.05**	0.7	**0.33**	6.00	Atlas	110	1
	10/20/2016 9:15	10/20/2016 10:30	**75**	0.54	**5,620.94**	0.27	**0.23**	3.00	Atlas	3,035	1
	12/6/2016 9:15	12/6/2016 9:30	**15**	0.93	**118.15**	0.7	**0.43**	12.00	Atlas	110	1
	12/17/2016 16:45	12/18/2016 1:15	**510**	3.36	**47,380.75**	3.72	**4.95**	12.00	Cloudburst	159,199	1
	1/10/2017 19:30	1/10/2017 19:30	**-**	0.15	**8,934.53**	0.34	**0.11**	1.00	Atlas	1,340	1
	1/12/2017 15:30	1/12/2017 18:15	**165**	0.43	**1,293.33**	0.67	**0.21**	6.00	Atlas	556	1
	1/17/2017 1:00	1/17/2017 1:00	**-**	0.69	**7,384.06**	2.04	**0.32**	6.00	Atlas	5,095	1
	1/19/2017 19:00	1/20/2017 1:00	**360**	0.89	**6,638.07**	2.35	**0.41**	12.00	Atlas	5,908	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.23	**18,864.70**	0.27	**0.18**	1.00	Atlas	4,339	1
	2/28/2017 10:00	2/28/2017 10:00	**-**	0.35	**4,274.20**	0.54	**0.17**	6.00	Atlas	1,496	1
	3/1/2017 3:15	3/1/2017 8:45	**330**	1.31	**8,656.89**	1.94	**0.67**	6.00	Atlas	11,341	1
	3/7/2017 7:00	3/7/2017 7:00	**-**	0.48	**731.71**	1.93	**0.22**	12.00	Atlas	351	1
	4/16/2017 5:30	4/16/2017 17:30	**720**	1.26	**5,568.92**	0.91	**0.48**	24.00	Atlas	7,017	1
	4/28/2017 23:15	4/29/2017 3:45	**270**	1.28	**51,136.46**	1.63	**0.64**	6.00	Atlas	65,455	1
	4/29/2017 17:45	4/29/2017 17:45	**-**	1.28	**280.09**	1.44	**0.64**	6.00	Atlas	359	1
	5/4/2017 20:30	5/4/2017 20:30	**-**	1.66	**2,949.89**	1.99	**0.56**	24.00	Atlas	4,897	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.66	**999.18**	2.33	**0.56**	24.00	Atlas	1,659	1
	5/20/2017 18:45	5/21/2017 4:30	**585**	1.46	**36,391.14**	1.31	**0.65**	12.00	Atlas	53,131	1
	5/27/2017 14:00	5/27/2017 14:00	**-**	0.27	**48,575.70**	2.26	**0.22**	1.00	Atlas	13,115	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.47	**22,880.51**	0.46	**0.41**	1.00	Atlas	10,754	1
	6/13/2017 16:45	6/13/2017 16:45	**-**	0.3	**39,533.17**	0.3	**0.25**	1.00	Atlas	11,860	1
	6/15/2017 3:00	6/15/2017 3:45	**45**	0.48	**83,447.67**	0.54	**0.29**	3.00	Atlas	40,055	1
	6/23/2017 15:15	6/23/2017 17:15	**120**	1.25	**4,078.06**	1.36	**0.41**	48.00	Atlas	5,098	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.7	**6,884.14**	0.76	**0.60**	1.00	Atlas	4,819	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO051 Total										**522,094**	**36**
CSO052	**7/3/2016 9:45**	7/3/2016 23:15	**810**	1.31	**40,423.11**	0.76	**0.43**	48.00	Atlas	52,954	1
	7/4/2016 15:15	7/4/2016 17:30	**135**	1.31	**33,709.93**	1.32	**0.43**	48.00	Atlas	44,160	1
	7/6/2016 13:00	7/6/2016 13:00	**-**	0.12	**9,707.00**	1.43	**0.09**	1.00	Atlas	1,165	1
	7/6/2016 22:45	7/10/2016 11:45	**5,100**	0.12	**2,740,937.50**	1.75	**0.09**	1.00	Atlas	328,913	1
	8/15/2016 16:30	8/15/2016 16:30	**-**	Discharge		1.23				82	1
	8/20/2016 14:00	8/20/2016 21:15	**435**	1.48	**91,880.42**	3.57	**0.64**	12.00	Atlas	135,983	1
	8/27/2016 12:45	8/27/2016 12:45	**-**	0.03	**26,797.00**	1.27	**0.03**	1.00	Atlas	804	1
	9/30/2016 1:30	10/1/2016 3:15	**1,545**	0.52	**234,486.42**	1.36	**0.28**	3.00	Atlas	121,933	1
	1/1/2017 12:00	7/4/2017	**264,240**	Discharge		20.21				417,192,872	1
CSO052 Total										**417,878,866**	**9**
CSO053	**7/3/2016 10:00**	7/3/2016 12:00	**120**	1.31	**25.15**	0.37	**0.43**	48.00	Atlas	33	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.09	**1,778.22**	0.36	**0.08**	1.00	Atlas	160	1
	7/28/2016 3:00	7/28/2016 3:00	**-**	0.85	**545.31**	1.05	**0.43**	1.00	Atlas	464	1
	7/30/2016 14:00	7/30/2016 14:00	**-**	0.18	**1,461.94**	1.44	**0.16**	1.00	Atlas	263	1
	8/1/2016 11:00	8/1/2016 11:00	**-**	0.68	**153.32**	2.01	**0.49**	1.00	Atlas	104	1
	8/5/2016 13:45	8/5/2016 13:45	**-**	0.1	**5,544.70**	1.16	**0.07**	3.00	Atlas	554	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.37	**895.78**	0.46	**0.30**	1.00	Atlas	331	1
	8/15/2016 2:30	8/15/2016 3:00	**30**	0.74	**6,188.27**	0.79	**0.39**	6.00	Atlas	4,579	1
	8/17/2016 6:30	8/17/2016 6:45	**15**	1.11	**2,343.68**	2.11	**0.51**	3.00	Atlas	2,601	1
	8/20/2016 14:15	8/20/2016 19:30	**315**	1.48	**24,692.68**	3.42	**0.64**	12.00	Atlas	36,545	1
	9/28/2016 12:45	9/28/2016 12:45	**-**	0.48	**935.29**	0.66	**0.26**	6.00	Atlas	449	1
	12/17/2016 18:30	12/18/2016 1:15	**405**	3.07	**2,394.80**	3.4	**3.65**	12.00	Cloudburst	7,352	1
	3/1/2017 7:00	3/1/2017 7:00	**-**	1.35	**119.93**	1.73	**0.71**	3.00	Atlas	162	1
	3/27/2017 16:30	3/27/2017 16:30	**-**	0.31	**656.13**	0.41	**0.19**	1.00	Atlas	203	1
	4/16/2017 19:30	4/16/2017 19:30	**-**	1.24	**1,383.69**	1.16	**0.48**	24.00	Atlas	1,716	1
	5/25/2017 14:30	5/25/2017 15:30	**60**	0.47	**2,636.11**	1.86	**0.17**	24.00	Atlas	1,239	1
	6/5/2017 18:15	6/5/2017 18:30	**15**	0.26	**2,652.85**	0.3	**0.22**	1.00	Atlas	690	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.33	**484.33**	0.42	**0.28**	1.00	Atlas	160	1
CSO053 Total										**57,606**	**18**
CSO054*	**7/3/2016 7:30**	7/4/2016 17:30	**2,040**	1.31	**28,931.97**	1.34	**0.43**	48.00	Atlas	37,901	1
	7/6/2016 13:00	7/6/2016 13:30	**30**	0.12	**11,457.00**	1.43	**0.09**	1.00	Atlas	1,375	1
	7/8/2016 0:45	7/8/2016 0:45	**-**	0.1	**648.90**	1.56	**0.07**	1.00	Atlas	65	1
	7/12/2016 8:45	7/12/2016 11:45	**180**	0.22	**27,195.82**	0.61	**0.15**	1.00	Atlas	5,983	1
	7/26/2016 17:30	7/26/2016 17:30	**-**	0.09	**8,751.56**	0.35	**0.08**	1.00	Atlas	788	1
	7/28/2016 3:00	7/28/2016 3:00	**-**	0.85	**34,677.81**	1.05	**0.43**	1.00	Atlas	29,476	1
	7/30/2016 13:45	7/30/2016 13:45	**-**	0.18	**5,351.72**	1.31	**0.16**	1.00	Atlas	963	1
	8/20/2016 14:00	8/20/2016 19:30	**330**	1.48	**30,124.33**	3.42	**0.64**	12.00	Atlas	44,584	1
	12/18/2016 0:45	12/18/2016 0:45	**-**	3.07	**2,042.24**	3.33	**3.65**	12.00	Cloudburst	6,270	1
	3/1/2017 3:00	3/1/2017 3:00	**-**	1.35	**323.17**	1.13	**0.71**	3.00	Atlas	436	1
	4/16/2017 20:00	4/16/2017 20:00	**-**	1.24	**1,009.72**	1.32	**0.48**	24.00	Atlas	1,252	1
	4/29/2017 1:30	4/29/2017 3:30	**120**	1.25	**90,062.61**	1.5	**0.66**	3.00	Atlas	112,578	1
	5/4/2017 20:45	5/5/2017 8:30	**705**	1.66	**8,294.67**	2.81	**0.57**	24.00	Atlas	13,769	1
	5/21/2017 2:30	5/21/2017 5:15	**165**	1.34	**92,480.57**	1.34	**0.60**	12.00	Atlas	123,924	1
	5/27/2017 13:45	5/27/2017 13:45	**-**	0.19	**24,476.74**	1.96	**0.15**	1.00	Atlas	4,651	1
	6/5/2017 18:00	6/5/2017 18:00	**-**	0.26	**72,468.85**	0.18	**0.22**	1.00	Atlas	18,842	1
	6/13/2017 16:30	6/13/2017 16:30	**-**	Discharge		0.01				436	1
	6/15/2017 2:45	6/15/2017 2:45	**-**	0.53	**67,216.98**	0.31	**0.33**	3.00	Atlas	35,625	1
	6/23/2017 17:00	6/23/2017 17:00	**-**	1.22	**1,498.37**	1.24	**0.43**	6.00	Atlas	1,828	1
	6/30/2017 20:45	6/30/2017 20:45	**-**	0.33	**20,235.09**	0.42	**0.28**	1.00	Atlas	6,678	1
CSO054* Total										**447,424**	**20**
CSO055	**7/3/2016 7:30**	7/4/2016 0:45	**1,035**	1.31	**27,711.68**	0.76	**0.43**	48.00	Atlas	36,302	1
	7/4/2016 16:15	7/4/2016 18:45	**150**	1.31	**4,456.84**	1.32	**0.43**	48.00	Atlas	5,838	1
	7/20/2016 19:30	7/20/2016 19:30	**-**	0.03	**61,433.00**	0.2	**0.03**	1.00	Atlas	1,843	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.09	**25,653.33**	0.36	**0.08**	1.00	Atlas	2,309	1
	7/27/2016 23:45	7/28/2016 5:30	**345**	0.85	**97,048.84**	1.09	**0.43**	1.00	Atlas	82,492	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.18	**62,086.33**	1.45	**0.16**	1.00	Atlas	11,176	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.68	**7,283.96**	2.01	**0.49**	1.00	Atlas	4,953	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.37	**28,020.68**	0.46	**0.30**	1.00	Atlas	10,368	1
	8/15/2016 2:45	8/15/2016 8:15	**330**	0.74	**41,513.08**	1.23	**0.39**	6.00	Atlas	30,720	1
	8/17/2016 6:45	8/17/2016 9:45	**180**	1.11	**31,354.11**	2.23	**0.51**	3.00	Atlas	34,803	1
	8/20/2016 14:15	8/20/2016 21:30	**435**	1.48	**69,724.40**	3.57	**0.64**	12.00	Atlas	103,192	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO055	**8/27/2016 13:00**	8/27/2016 13:00	**-**	0.03	**194,348.00**	1.27	**0.03**	1.00	Atlas	5,830	1
	8/28/2016 17:15	8/28/2016 17:15	**-**	0.01	**69,052.00**	0.04	**0.01**	1.00	Atlas	691	1
	9/26/2016 9:15	9/26/2016 9:15	**-**	0.28	**5,580.93**	0.1	**0.19**	3.00	Atlas	1,563	1
	9/30/2016 2:45	9/30/2016 3:30	**45**	0.52	**6,220.25**	1.29	**0.28**	3.00	Atlas	3,235	1
	10/20/2016 9:15	10/20/2016 10:00	**45**	0.67	**23,859.46**	0.34	**0.28**	3.00	Atlas	15,986	1
	11/8/2016 19:45	11/8/2016 19:45	**-**	0.16	**12,081.19**	0.16	**0.07**	12.00	Atlas	1,933	1
	11/28/2016 19:30	11/28/2016 21:45	**135**	0.7	**10,585.09**	1.04	**0.30**	12.00	Atlas	7,410	1
	12/6/2016 7:45	12/6/2016 13:30	**345**	0.95	**23,467.04**	1	**0.44**	12.00	Atlas	22,294	1
	12/17/2016 16:45	12/18/2016 11:15	**1,110**	3.07	**239,828.11**	3.4	**3.65**	12.00	Cloudburst	736,272	1
	12/24/2016 1:15	12/24/2016 2:15	**60**	0.29	**43,226.93**	3.28	**0.13**	12.00	Atlas	12,536	1
	12/26/2016 17:00	12/26/2016 23:45	**405**	0.4	**62,705.73**	0.69	**0.20**	6.00	Atlas	25,082	1
	1/10/2017 19:30	1/10/2017 19:30	**-**	0.16	**18,306.38**	0.37	**0.11**	1.00	Atlas	2,929	1
	1/12/2017 15:30	1/12/2017 15:30	**-**	0.45	**13,365.51**	0.59	**0.22**	6.00	Atlas	6,014	1
	1/16/2017 23:45	1/17/2017 5:30	**345**	0.6	**132,113.55**	2.19	**0.28**	12.00	Atlas	79,268	1
	1/19/2017 19:15	1/20/2017 6:45	**690**	0.95	**97,805.78**	2.46	**0.43**	12.00	Atlas	92,915	1
	2/7/2017 7:00	2/7/2017 7:00	**-**	0.44	**3,420.07**	0.13	**0.22**	6.00	Atlas	1,505	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.44	**89,743.18**	0.48	**0.36**	1.00	Atlas	39,487	1
	2/28/2017 10:15	2/28/2017 10:15	**-**	0.41	**1,339.00**	0.85	**0.20**	6.00	Atlas	549	1
	3/1/2017 3:15	3/1/2017 9:45	**390**	1.35	**69,440.10**	2.24	**0.71**	3.00	Atlas	93,744	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.68	**5,720.69**	1.99	**0.22**	48.00	Atlas	3,890	1
	3/27/2017 16:30	3/27/2017 16:30	**-**	0.31	**40,361.48**	0.41	**0.19**	1.00	Atlas	12,512	1
	3/30/2017 22:45	3/30/2017 22:45	**-**	0.25	**2,481.28**	0.79	**0.12**	6.00	Atlas	620	1
	4/3/2017 19:30	4/4/2017 13:15	**1,065**	0.21	**185,710.43**	0.47	**0.11**	1.00	Atlas	38,999	1
	4/11/2017 6:15	4/11/2017 6:15	**-**	0.39	**1,241.31**	0.19	**0.18**	12.00	Atlas	484	1
	4/16/2017 5:30	4/16/2017 21:30	**960**	1.24	**57,456.00**	1.58	**0.48**	24.00	Atlas	71,245	1
	4/21/2017 22:30	4/21/2017 22:30	**-**	0.73	**567.47**	1.74	**0.27**	24.00	Atlas	414	1
	4/29/2017 1:45	4/29/2017 8:00	**375**	1.25	**117,194.34**	1.52	**0.66**	3.00	Atlas	146,493	1
	5/1/2017 3:45	5/1/2017 3:45	**-**	0.24	**1,931.50**	1.61				464	1
	5/4/2017 20:00	5/5/2017 15:00	**1,140**	1.66	**88,454.31**	3.09	**0.57**	24.00	Atlas	146,834	1
	5/11/2017 3:45	5/11/2017 3:45	**-**	0.2	**20,947.55**	1.88	**0.11**	6.00	Atlas	4,190	1
	5/20/2017 18:45	5/21/2017 6:15	**690**	1.34	**140,752.17**	1.37	**0.60**	12.00	Atlas	188,608	1
	5/27/2017 14:00	5/27/2017 14:15	**15**	0.19	**35,331.58**	1.98	**0.15**	1.00	Atlas	6,713	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.04	**643,747.00**	0.06	**0.02**	12.00	Atlas	25,750	1
	6/13/2017 17:00	6/13/2017 17:15	**15**	0.27	**4,199.56**	0.27	**0.23**	1.00	Atlas	1,134	1
	6/15/2017 3:00	6/15/2017 5:45	**165**	0.53	**8,096.91**	0.78	**0.33**	3.00	Atlas	4,291	1
	6/23/2017 15:15	6/23/2017 20:15	**300**	1.22	**32,380.75**	1.45	**0.43**	6.00	Atlas	39,505	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.33	**165,504.70**	0.42	**0.28**	1.00	Atlas	54,617	1
CSO055 Total										**2,220,001**	**48**
CSO057	**7/30/2016 14:00**	7/30/2016 14:00	**-**	0.25	**114.28**	1.4	**0.22**	1.00	Atlas	29	1
	8/20/2016 14:15	8/20/2016 14:30	**15**	1.48	**1,516.09**	2.57	**0.68**	1.00	Atlas	2,244	1
	9/17/2016 9:15	9/17/2016 10:30	**75**	0.15	**241.20**	0.34	**0.12**	1.00	Atlas	36	1
	9/26/2016 9:00	9/26/2016 9:00	**-**	0.29	**87.14**	0.1	**0.19**	3.00	Atlas	25	1
	9/28/2016 12:00	9/28/2016 12:00	**-**	0.43	**94.23**	0.51	**0.23**	6.00	Atlas	41	1
CSO057 Total										**2,374**	**5**
CSO058*	**7/3/2016 7:30**	7/3/2016 20:15	**765**	1.33	**9,588.28**	0.66	**0.43**	48.00	Atlas	12,752	1
	7/4/2016 9:30	7/5/2016 8:45	**1,395**	1.33	**477,033.14**	1.33	**0.43**	48.00	Atlas	634,454	1
	7/6/2016 15:30	7/7/2016 1:45	**615**	0.1	**544,025.60**	1.44	**0.06**	1.00	Atlas	54,403	1
	7/7/2016 17:30	7/9/2016 7:15	**2,265**	0.04	**2,525,325.75**	1.56	**0.03**	1.00	Atlas	101,013	1
	8/4/2016 13:15	8/4/2016 13:30	**15**	0.22	**18,454.00**	0.87	**0.12**	6.00	Atlas	4,060	1
	8/12/2016 14:00	8/12/2016 14:15	**15**	0.18	**28,962.83**	0.33	**0.15**	1.00	Atlas	5,213	1
	8/15/2016 2:30	8/15/2016 7:15	**285**	0.74	**36,675.65**	1.07	**0.39**	6.00	Atlas	27,140	1
	8/17/2016 4:15	8/17/2016 7:15	**180**	0.79	**22,024.37**	1.64	**0.34**	3.00	Atlas	17,399	1
	8/20/2016 10:15	8/20/2016 20:45	**630**	1.4	**59,260.25**	2.94	**0.60**	12.00	Atlas	82,964	1
	8/27/2016 13:00	8/27/2016 13:00	**-**	0.01	**47,368.00**	1.18	**0.01**	1.00	Atlas	474	1
	8/28/2016 17:15	8/28/2016 17:15	**-**	0.07	**30,838.14**	0.07	**0.06**	1.00	Atlas	2,159	1
	9/10/2016 14:30	9/10/2016 15:30	**60**	0.2	**23,500.50**	0.17	**0.11**	3.00	Atlas	4,700	1
	9/17/2016 9:30	9/17/2016 9:45	**15**	0.14	**7,228.86**	0.35	**0.11**	1.00	Atlas	1,012	1
	9/26/2016 9:15	9/26/2016 11:00	**105**	0.27	**28,699.22**	0.27	**0.18**	3.00	Atlas	7,749	1
	9/28/2016 12:00	9/28/2016 14:30	**150**	0.41	**33,019.07**	0.68	**0.22**	6.00	Atlas	13,538	1
	9/29/2016 9:00	9/29/2016 9:30	**30**	0.07	**40,537.14**	0.74	**0.04**	1.00	Atlas	2,838	1
	9/30/2016	9/30/2016 3:00	**180**	0.62	**21,918.63**	1.29	**0.33**	3.00	Atlas	13,590	1
	10/20/2016 9:15	10/20/2016 11:30	**135**	0.57	**29,765.67**	0.38	**0.23**	3.00	Atlas	16,966	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO058*	**10/28/2016 16:00**	10/28/2016 16:15	**15**	Discharge		0				1,724	1
	11/8/2016 19:30	11/8/2016 20:15	**45**	0.19	**29,131.47**	0.22	**0.09**	12.00	Atlas	5,535	1
	11/19/2016 1:30	11/19/2016 3:30	**120**	0.13	**31,124.08**	0.13	**0.09**	3.00	Atlas	4,046	1
	11/23/2016 14:45	11/24/2016 15:00	**1,455**	0.31	**473,111.58**	0.44	**0.13**	6.00	Atlas	146,665	1
	11/27/2016 13:30	11/29/2016 4:00	**2,310**	Discharge		0.99				262,118	1
	11/29/2016 21:30	11/29/2016 21:45	**15**	Discharge		0.99				1,018	1
	12/4/2016 19:15	12/5/2016 0:30	**315**	0.03	**319,372.33**	0.72	**0.01**	12.00	Atlas	9,581	1
	12/6/2016 4:15	12/6/2016 18:45	**870**	0.9	**83,259.08**	0.94	**0.41**	12.00	Atlas	74,933	1
	12/11/2016 21:00	12/12/2016 2:15	**315**	0.33	**23,809.88**	1.28	**0.15**	12.00	Atlas	7,857	1
	12/17/2016 1:45	12/17/2016 2:00	**15**	2.68	**773.76**	0.42	**1.86**	12.00	Cloudburst	2,074	1
	12/17/2016 15:45	12/19/2016 4:30	**2,205**	2.68	**111,036.52**	3.02	**1.86**	12.00	Cloudburst	297,578	1
	12/23/2016 21:30	12/25/2016 7:45	**2,055**	0.25	**295,068.60**	2.93	**0.11**	6.00	Atlas	73,767	1
	12/26/2016 17:00	12/27/2016 8:00	**900**	0.36	**108,654.81**	0.61	**0.18**	6.00	Atlas	39,116	1
	12/28/2016 19:30	12/29/2016 6:30	**660**	0.04	**452,133.75**	0.65	**0.03**	3.00	Atlas	18,085	1
	1/2/2017 19:30	1/4/2017 7:30	**2,160**	0.22	**143,055.95**	0.46	**0.09**	6.00	Atlas	31,472	1
	1/9/2017 19:15	1/9/2017 20:15	**60**	Discharge		0.44				2,592	1
	1/10/2017 19:30	1/11/2017 18:15	**1,365**	0.13	**445,112.15**	0.57	**0.10**	1.00	Atlas	57,865	1
	1/12/2017 15:15	1/13/2017 21:45	**1,830**	0.34	**358,029.00**	1.08	**0.16**	6.00	Atlas	121,730	1
	1/14/2017 8:45	1/14/2017 15:00	**375**	0.24	**60,570.21**	1.26	**0.11**	12.00	Atlas	14,537	1
	1/16/2017 17:45	1/17/2017 3:15	**570**	0.54	**25,529.52**	1.89	**0.25**	12.00	Atlas	13,786	1
	1/17/2017 20:00	1/18/2017 9:45	**825**	Discharge		1.77				17,097	1
	1/19/2017 18:30	1/20/2017 3:15	**525**	0.96	**32,654.51**	2.34	**0.44**	12.00	Atlas	31,348	1
	1/25/2017 20:45	1/26/2017 0:15	**210**	Discharge		0.97				8,719	1
	1/31/2017 5:45	1/31/2017 10:30	**285**	Discharge		0.02				15,573	1
	2/7/2017 5:15	2/8/2017 13:45	**1,950**	0.36	**467,991.86**	0.36	**0.16**	6.00	Atlas	168,477	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.42	**17,958.40**	0.47	**0.36**	1.00	Atlas	7,543	1
	2/28/2017 5:30	2/28/2017 11:30	**360**	0.29	**36,548.48**	0.76	**0.14**	6.00	Atlas	10,599	1
	3/1/2017 3:15	3/1/2017 9:30	**375**	1.07	**34,435.90**	1.83	**0.57**	6.00	Atlas	36,846	1
	3/7/2017 1:30	3/7/2017 15:15	**825**	0.55	**40,393.25**	1.92	**0.18**	48.00	Atlas	22,216	1
	3/26/2017 1:00	3/26/2017 9:00	**480**	0.4	**57,781.83**	0.41	**0.18**	6.00	Atlas	23,113	1
	3/27/2017 16:30	3/27/2017 19:30	**180**	0.33	**47,375.94**	0.73	**0.20**	3.00	Atlas	15,634	1
	3/28/2017 7:30	3/28/2017 7:30	**-**	Discharge		0.73				474	1
	3/30/2017 9:00	3/31/2017 1:30	**990**	0.02	**1,067,040.00**	0.94	**0.02**	1.00	Atlas	21,341	1
	4/3/2017 19:15	4/3/2017 23:45	**270**	0.16	**38,898.06**	0.41	**0.10**	1.00	Atlas	6,224	1
	4/6/2017 8:00	4/6/2017 8:00	**-**	0.05	**9,473.60**	0.45	**0.02**	12.00	Atlas	474	1
	4/11/2017 6:15	4/11/2017 14:30	**495**	0.33	**63,109.67**	0.41	**0.15**	12.00	Atlas	20,826	1
	4/16/2017 4:30	4/16/2017 21:15	**1,005**	1.13	**30,565.19**	1.42	**0.43**	24.00	Atlas	34,539	1
	4/21/2017 20:45	4/22/2017 0:45	**240**	0.71	**22,855.38**	1.75	**0.25**	24.00	Atlas	16,227	1
	4/26/2017 22:30	4/26/2017 23:00	**30**	Discharge		0.78				3,693	1
	4/28/2017 23:15	4/29/2017 9:00	**585**	1.07	**60,150.65**	1.45	**0.55**	6.00	Atlas	64,361	1
	5/1/2017 2:15	5/1/2017 4:00	**105**	0.23	**30,301.30**	1.41	**0.13**	3.00	Atlas	6,969	1
	5/1/2017 23:00	5/1/2017 23:00	**-**	Discharge		1.43				474	1
	5/4/2017 14:45	5/5/2017 12:30	**1,305**	1.66	**35,851.26**	2.87	**0.56**	24.00	Atlas	59,513	1
	5/6/2017 8:15	5/6/2017 9:15	**60**	0.09	**28,860.78**	2	**0.05**	3.00	Atlas	2,597	1
	5/11/2017 3:45	5/11/2017 5:45	**120**	0.18	**33,512.39**	1.9	**0.10**	6.00	Atlas	6,032	1
	5/20/2017 18:45	5/21/2017 7:15	**750**	1.08	**55,135.66**	1.13	**0.49**	12.00	Atlas	59,547	1
	5/24/2017 15:45	5/25/2017 9:45	**1,080**	0.49	**44,588.90**	1.62	**0.17**	24.00	Atlas	21,849	1
	5/27/2017 13:45	5/27/2017 14:30	**45**	0.35	**53,006.54**	1.9	**0.29**	1.00	Atlas	18,552	1
	6/5/2017 8:45	6/5/2017 9:15	**30**	0.04	**110,726.25**	0.04	**0.02**	12.00	Atlas	4,429	1
	6/5/2017 18:15	6/5/2017 18:30	**15**	0.36	**17,665.06**	0.39	**0.31**	1.00	Atlas	6,359	1
	6/13/2017 17:00	6/13/2017 17:00	**-**	0.17	**6,959.35**	0.19	**0.15**	1.00	Atlas	1,183	1
	6/15/2017 3:00	6/15/2017 10:00	**420**	0.64	**78,505.00**	0.83	**0.39**	3.00	Atlas	50,243	1
	6/18/2017 21:30	6/18/2017 23:30	**120**	0.21	**32,806.76**	1.05	**0.13**	3.00	Atlas	6,889	1
	6/22/2017 15:45	6/22/2017 21:00	**315**	0.32	**53,152.75**	0.54	**0.17**	6.00	Atlas	17,009	1
	6/23/2017 7:45	6/23/2017 20:15	**750**	0.9	**41,600.43**	1.44	**0.44**	6.00	Atlas	37,440	1
	6/27/2017 1:45	6/27/2017 2:15	**30**	0.08	**32,767.63**	1.3	**0.07**	1.00	Atlas	2,621	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.47	**15,016.43**	0.54	**0.38**	1.00	Atlas	7,058	1
CSO058* Total										**3,022,593**	**75**
CSO082	**8/15/2016 3:00**	8/15/2016 7:30	**270**	0.81	**42,893.12**	1.09	**0.43**	6.00	Atlas	34,743	1
	8/17/2016 6:30	8/17/2016 7:15	**45**	0.72	**51,169.88**	1.54	**0.32**	6.00	Atlas	36,842	1
	8/20/2016 14:30	8/20/2016 20:45	**375**	1.1	**40,776.29**	2.66	**0.46**	12.00	Atlas	44,854	1
	12/17/2016 18:30	12/18/2016 4:00	**570**	2.61	**507,711.34**	2.95	**1.70**	12.00	Cloudburst	1,325,127	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO082	**1/17/2017 0:30**	1/17/2017 3:30	**180**	0.5	**512,020.48**	1.91	**0.23**	12.00	Atlas	256,010	1
	1/19/2017 19:30	1/20/2017 4:00	**510**	1.03	**894,742.24**	2.38	**0.47**	12.00	Atlas	921,585	1
	3/1/2017 7:00	3/1/2017 9:15	**135**	1.05	**99,310.49**	1.78	**0.55**	6.00	Atlas	104,276	1
	4/29/2017 1:45	4/29/2017 4:00	**135**	0.9	**305,373.84**	1.14	**0.46**	6.00	Atlas	274,836	1
	5/4/2017 20:15	5/5/2017 10:00	**825**	1.69	**92,268.62**	2.66	**0.57**	24.00	Atlas	155,934	1
	5/21/2017 3:00	5/21/2017 5:45	**165**	1.04	**102,277.21**	1.06	**0.47**	12.00	Atlas	106,368	1
	6/15/2017 4:00	6/15/2017 4:00	**-**	0.71	**371.11**	0.7	**0.44**	3.00	Atlas	263	1
CSO082 Total										**3,260,839**	**11**
CSO083	**7/30/2016 14:15**	7/30/2016 14:15	**-**	0.4	**56,436.20**	1.26	**0.35**	1.00	Atlas	22,574	1
	8/4/2016 13:30	8/4/2016 13:30	**-**	0.22	**15,313.86**	0.93	**0.14**	3.00	Atlas	3,369	1
	8/15/2016 3:15	8/15/2016 7:15	**240**	0.98	**2,789.10**	1.19	**0.49**	6.00	Atlas	2,733	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.7	**2,303.00**	1.62	**0.30**	12.00	Atlas	1,612	1
	8/20/2016 19:45	8/20/2016 20:00	**15**	0.89	**15,385.74**	2.39	**0.39**	1.00	Atlas	13,693	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.53	**2,590.15**	0.09	**0.20**	24.00	Atlas	1,373	1
	12/17/2016 18:30	12/17/2016 19:00	**30**	2.6	**23,263.43**	1.21	**1.77**	12.00	Cloudburst	60,485	1
	3/1/2017 3:15	3/1/2017 7:00	**225**	1.07	**6,731.15**	1.44	**0.57**	6.00	Atlas	7,202	1
	4/29/2017 2:00	4/29/2017 2:30	**30**	0.89	**68,984.10**	1.06	**0.46**	6.00	Atlas	61,396	1
	5/21/2017 3:00	5/21/2017 3:30	**30**	1.04	**32,911.91**	0.81	**0.46**	12.00	Atlas	34,228	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.32	**5,046.63**	0.39	**0.28**	1.00	Atlas	1,615	1
CSO083 Total										**210,281**	**11**
CSO084	**7/3/2016 11:45**	7/3/2016 23:15	**690**	1.08	**8,129.41**	0.67	**0.35**	48.00	Atlas	8,780	1
	7/4/2016 14:30	7/4/2016 14:45	**15**	1.08	**1,162.16**	1.03	**0.35**	48.00	Atlas	1,255	1
	7/6/2016 13:30	7/6/2016 13:30	**-**	0.11	**3,653.55**	1.17	**0.07**	1.00	Atlas	402	1
	7/12/2016 9:00	7/12/2016 10:00	**60**	0.17	**20,065.18**	0.33	**0.11**	3.00	Atlas	3,411	1
	8/1/2016 11:30	8/1/2016 11:30	**-**	0.35	**1,735.77**	1.61	**0.30**	1.00	Atlas	608	1
	8/4/2016 13:45	8/4/2016 13:45	**-**	0.22	**2,750.73**	0.94	**0.14**	3.00	Atlas	605	1
	8/15/2016 3:00	8/15/2016 4:00	**60**	0.98	**6,289.91**	0.98	**0.49**	6.00	Atlas	6,164	1
	8/17/2016 6:00	8/17/2016 7:15	**75**	0.7	**5,831.41**	1.62	**0.30**	12.00	Atlas	4,082	1
	8/20/2016 20:30	8/20/2016 20:30	**-**	0.89	**1,117.25**	2.5	**0.39**	1.00	Atlas	994	1
	8/31/2016 17:00	8/31/2016 18:00	**60**	0.1	**14,689.30**	0.32	**0.08**	1.00	Atlas	1,469	1
	9/10/2016 15:30	9/10/2016 15:30	**-**	0.19	**952.63**	0.17	**0.12**	3.00	Atlas	181	1
	9/28/2016 13:00	9/28/2016 13:00	**-**	0.35	**1,888.14**	0.46	**0.19**	6.00	Atlas	661	1
	9/30/2016 1:30	9/30/2016 2:15	**45**	0.68	**4,925.13**	1.14	**0.35**	3.00	Atlas	3,349	1
	10/20/2016 9:30	10/20/2016 10:15	**45**	0.53	**3,302.34**	0.21	**0.20**	24.00	Atlas	1,750	1
	11/8/2016 19:45	11/8/2016 20:00	**15**	0.2	**13,107.95**	0.23	**0.10**	1.00	Atlas	2,622	1
	12/6/2016 9:15	12/6/2016 9:45	**30**	0.86	**5,677.98**	0.61	**0.39**	12.00	Atlas	4,883	1
	12/17/2016 16:30	12/18/2016 1:15	**525**	2.6	**9,366.62**	2.9	**1.77**	12.00	Cloudburst	24,353	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.11	**2,052.64**	0.35	**0.08**	1.00	Atlas	226	1
	1/12/2017 18:30	1/12/2017 18:30	**-**	0.33	**3,814.27**	0.55	**0.16**	6.00	Atlas	1,259	1
	1/14/2017 11:30	1/14/2017 11:30	**-**	0.22	**5,294.55**	1.12	**0.10**	6.00	Atlas	1,165	1
	1/17/2017 0:15	1/17/2017 3:45	**210**	0.48	**13,098.08**	1.82	**0.22**	12.00	Atlas	6,287	1
	1/19/2017 19:15	1/20/2017 1:00	**345**	1.08	**10,528.97**	2.24	**0.50**	12.00	Atlas	11,371	1
	3/1/2017 3:00	3/1/2017 8:30	**330**	1.07	**4,014.41**	1.84	**0.57**	6.00	Atlas	4,295	1
	3/7/2017 7:30	3/7/2017 8:00	**30**	0.51	**10,908.29**	1.62	**0.17**	48.00	Atlas	5,563	1
	3/27/2017 18:15	3/27/2017 18:45	**30**	0.29	**6,422.79**	0.73	**0.17**	3.00	Atlas	1,863	1
	4/16/2017 13:15	4/16/2017 20:30	**435**	1.2	**2,104.80**	1.41	**0.47**	6.00	Atlas	2,526	1
	4/27/2017 6:45	4/27/2017 7:00	**15**	0.21	**9,847.14**	0.81	**0.16**	1.00	Atlas	2,068	1
	4/29/2017 3:15	4/29/2017 3:15	**-**	0.89	**672.55**	1.21	**0.46**	6.00	Atlas	599	1
	5/4/2017 19:45	5/5/2017 6:45	**660**	1.7	**2,880.09**	2.42	**0.57**	24.00	Atlas	4,896	1
	5/20/2017 18:30	5/21/2017 5:45	**675**	1.04	**5,892.77**	1.05	**0.46**	12.00	Atlas	6,128	1
	5/24/2017 18:30	5/24/2017 19:00	**30**	0.56	**3,726.18**	1.47	**0.20**	24.00	Atlas	2,087	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.22	**6,292.27**	1.8	**0.17**	1.00	Atlas	1,384	1
	6/5/2017 9:15	6/5/2017 9:15	**-**	0.07	**14,346.00**	0.08	**0.03**	1.00	Atlas	1,004	1
	6/15/2017 4:30	6/15/2017 4:30	**-**	0.75	**1,093.37**	0.75	**0.48**	3.00	Atlas	820	1
	6/22/2017 19:00	6/22/2017 19:15	**15**	0.31	**10,689.84**	0.48	**0.17**	6.00	Atlas	3,314	1
	6/23/2017 16:15	6/23/2017 16:15	**-**	0.68	**1,153.93**	0.97	**0.33**	6.00	Atlas	785	1
CSO084 Total										**123,209**	**36**
CSO088*	**12/17/2016 18:45**	12/18/2016 2:45	**480**	2.75	**45,856.49**	3.03	**2.05**	12.00	Cloudburst	126,105	1
	1/17/2017 1:15	1/17/2017 4:00	**165**	0.49	**34,116.29**	1.83	**0.22**	12.00	Atlas	16,717	1
	1/19/2017 20:00	1/20/2017 1:30	**330**	0.99	**70,117.61**	2.13	**0.45**	12.00	Atlas	69,416	1
	2/24/2017 19:30	2/24/2017 19:30	**-**	0.35	**4,647.00**	0.43	**0.30**	1.00	Atlas	1,626	1
	3/1/2017 3:30	3/1/2017 9:15	**345**	0.98	**88,206.16**	1.61	**0.46**	6.00	Atlas	86,442	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO088*	**3/6/2017 10:15**	3/6/2017 10:15	**-**	0.2	**3,052.45**	1.3	**0.08**	24.00	Atlas	610	1
	3/7/2017 8:00	3/7/2017 8:00	**-**	0.4	**6,817.10**	1.62	**0.18**	12.00	Atlas	2,727	1
	4/16/2017 13:45	4/16/2017 20:45	**420**	1.12	**8,877.31**	1.34	**0.43**	24.00	Atlas	9,943	1
	4/29/2017 2:15	4/29/2017 4:00	**105**	1.12	**64,275.40**	1.38	**0.58**	6.00	Atlas	71,988	1
	5/4/2017 20:30	5/5/2017 5:30	**540**	1.69	**32,984.29**	2.5	**0.57**	24.00	Atlas	55,743	1
	5/21/2017 3:30	5/21/2017 6:00	**150**	1.05	**44,902.07**	1.07	**0.47**	12.00	Atlas	47,147	1
	5/27/2017 14:30	5/27/2017 14:45	**15**	0.35	**48,253.26**	1.96	**0.29**	1.00	Atlas	16,889	1
	6/15/2017 3:15	6/15/2017 3:30	**15**	0.7	**67,912.27**	0.55	**0.44**	3.00	Atlas	47,539	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.71	**46,220.92**	0.99	**0.34**	6.00	Atlas	32,817	1
	6/30/2017 21:15	6/30/2017 21:15	**-**	0.23	**41,365.00**	0.34	**0.17**	1.00	Atlas	9,514	1
CSO088* Total										**595,224**	**15**
CSO092	**7/6/2016 13:00**	7/6/2016 13:00	**-**	0.12	**676.92**	1.22	**0.09**	1.00	Atlas	81	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.54	**203.04**	0.6	**0.46**	1.00	Atlas	110	1
	4/29/2017 1:45	4/29/2017 2:30	**45**	0.97	**720.94**	1.1	**0.52**	3.00	Atlas	699	1
	5/20/2017 18:30	5/20/2017 18:30	**-**	1.11	**379.22**	0.33	**0.49**	12.00	Atlas	421	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.06	**9,008.67**	0.06	**0.03**	12.00	Atlas	541	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.32	**1,874.81**	0.37	**0.28**	1.00	Atlas	600	1
	6/15/2017 3:00	6/15/2017 3:00	**-**	0.93	**373.63**	0.64	**0.61**	1.00	Atlas	347	1
	6/23/2017 15:15	6/23/2017 15:45	**30**	0.78	**394.13**	1	**0.38**	6.00	Atlas	307	1
CSO092 Total										**3,106**	**8**
CSO093*	**8/15/2016 3:15**	8/15/2016 3:15	**-**	0.94	**1,683.53**	0.81	**0.50**	6.00	Atlas	1,583	1
	12/17/2016 19:15	12/17/2016 19:15	**-**	2.66	**2,507.16**	1.34	**1.86**	12.00	Cloudburst	6,669	1
	2/7/2017 9:45	2/7/2017 9:45	**-**	0.26	**1,228.62**	0.1	**0.13**	6.00	Atlas	319	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.06	**1,316.88**	1.17	**0.54**	6.00	Atlas	1,396	1
CSO093* Total										**9,967**	**4**
CSO097	**7/3/2016 12:45**	7/4/2016 21:15	**1,950**	0.98	**354,177.27**	0.99	**0.32**	48.00	Atlas	347,094	1
	7/6/2016 14:15	7/6/2016 15:45	**90**	0.11	**244,837.73**	1.09	**0.07**	1.00	Atlas	26,932	1
	7/12/2016 10:30	7/12/2016 13:30	**180**	0.34	**275,538.79**	0.55	**0.24**	1.00	Atlas	93,683	1
	7/27/2016 19:15	7/28/2016 7:30	**735**	0.84	**137,131.37**	0.97	**0.33**	12.00	Atlas	115,190	1
	7/30/2016 15:15	7/30/2016 17:15	**120**	0.33	**173,085.45**	1.41	**0.29**	1.00	Atlas	57,118	1
	8/1/2016 21:15	8/2/2016 17:00	**1,185**	0.52	**377,633.15**	1.97	**0.24**	12.00	Atlas	196,369	1
	8/4/2016 14:30	8/4/2016 15:15	**45**	0.22	**134,367.18**	1.31	**0.14**	3.00	Atlas	29,561	1
	8/5/2016 15:00	8/5/2016 15:15	**15**	0.17	**6,394.71**	1.51	**0.11**	3.00	Atlas	1,087	1
	8/15/2016 3:45	8/15/2016 10:15	**390**	1.64	**105,759.47**	1.83	**0.78**	6.00	Atlas	173,446	1
	8/17/2016 6:00	8/17/2016 16:30	**630**	0.48	**331,620.38**	2.14	**0.20**	12.00	Atlas	159,178	1
	8/20/2016 16:30	8/21/2016 1:30	**540**	0.63	**260,773.44**	2.74	**0.28**	1.00	Atlas	164,287	1
	8/31/2016 18:15	8/31/2016 19:45	**90**	0.04	**709,948.75**	0.11	**0.03**	1.00	Atlas	28,398	1
	9/10/2016 16:15	9/10/2016 17:30	**75**	0.24	**108,571.21**	0.25	**0.17**	1.00	Atlas	26,057	1
	9/26/2016 11:45	9/26/2016 13:15	**90**	0.28	**108,634.11**	0.28	**0.19**	3.00	Atlas	30,418	1
	9/28/2016 13:45	9/28/2016 16:15	**150**	0.42	**173,473.90**	0.7	**0.23**	6.00	Atlas	72,859	1
	9/30/2016 2:30	9/30/2016 4:45	**135**	0.69	**88,523.97**	1.34	**0.35**	3.00	Atlas	61,082	1
	10/20/2016 11:00	10/20/2016 13:15	**135**	0.55	**85,415.18**	0.37	**0.23**	3.00	Atlas	46,978	1
	11/8/2016 20:15	11/8/2016 20:45	**30**	0.18	**12,216.11**	0.23	**0.09**	1.00	Atlas	2,199	1
	11/23/2016 21:00	11/23/2016 22:00	**60**	0.25	**49,316.60**	0.42	**0.10**	6.00	Atlas	12,329	1
	11/28/2016 17:00	11/28/2016 23:30	**390**	0.87	**254,555.92**	1.12	**0.38**	12.00	Atlas	221,464	1
	12/6/2016 5:30	12/6/2016 15:00	**570**	0.98	**316,239.82**	1.01	**0.45**	12.00	Atlas	309,915	1
	12/11/2016 21:45	12/11/2016 23:30	**105**	0.26	**148,759.73**	1.26	**0.12**	12.00	Atlas	38,678	1
	12/17/2016 18:30	12/19/2016 13:00	**2,550**	2.52	**346,862.18**	2.78	**1.56**	12.00	Cloudburst	874,093	1
	12/23/2016 22:45	12/24/2016 2:45	**240**	0.16	**846,032.13**	2.66	**0.07**	12.00	Atlas	135,365	1
	12/26/2016 20:30	12/27/2016 0:45	**255**	0.25	**326,982.76**	0.41	**0.13**	6.00	Atlas	81,746	1
	1/10/2017 19:45	1/10/2017 21:15	**90**	0.18	**71,414.22**	0.46	**0.14**	1.00	Atlas	12,855	1
	1/11/2017 12:45	1/11/2017 16:15	**210**	0.21	**243,980.38**	0.67	**0.13**	3.00	Atlas	51,236	1
	1/12/2017 15:45	1/13/2017 2:00	**615**	0.5	**369,671.70**	0.94	**0.25**	6.00	Atlas	184,836	1
	1/13/2017 14:30	1/13/2017 23:15	**525**	0.26	**230,589.69**	1.16	**0.17**	3.00	Atlas	59,953	1
	1/14/2017 11:00	1/23/2017 0:15	**12,315**	0.2	**13,919,070.20**	3.17	**0.09**	12.00	Atlas	2,783,814	1
	2/7/2017 12:45	2/7/2017 15:15	**150**	0.4	**22,141.23**	0.4	**0.18**	6.00	Atlas	8,856	1
	2/24/2017 19:00	2/24/2017 22:30	**210**	0.8	**86,185.00**	0.89	**0.69**	1.00	Atlas	68,948	1
	2/28/2017 10:15	2/28/2017 12:15	**120**	0.27	**135,816.00**	1.09	**0.12**	12.00	Atlas	36,670	1
	3/1/2017 3:15	3/3/2017 18:00	**3,765**	0.99	**950,853.92**	2.12	**0.52**	6.00	Atlas	941,345	1
	3/7/2017 7:45	3/7/2017 22:45	**900**	0.55	**402,766.53**	1.72	**0.18**	48.00	Atlas	221,522	1
	3/26/2017 3:15	3/26/2017 6:30	**195**	0.49	**53,509.24**	0.43	**0.22**	12.00	Atlas	26,220	1
	3/27/2017 19:15	3/27/2017 22:00	**165**	0.29	**256,495.59**	0.78	**0.17**	3.00	Atlas	74,384	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO097	**3/30/2017 21:45**	3/31/2017 0:15	**150**	0.49	**21,814.73**	1.19	**0.24**	6.00	Atlas	10,689	1
	4/11/2017 12:15	4/11/2017 16:00	**225**	0.38	**94,614.39**	0.46	**0.17**	12.00	Atlas	35,953	1
	4/16/2017 18:30	4/17/2017 8:00	**810**	1.23	**167,460.64**	1.61	**0.58**	3.00	Atlas	205,977	1
	4/27/2017 8:00	4/27/2017 8:30	**30**	0.21	**59,280.52**	0.78	**0.14**	1.00	Atlas	12,449	1
	4/29/2017 2:45	5/1/2017 16:30	**3,705**	0.97	**546,621.54**	1.75	**0.57**	3.00	Atlas	530,223	1
	5/4/2017 20:45	5/8/2017 13:30	**5,325**	1.83	**851,780.49**	3.31	**0.61**	24.00	Atlas	1,558,758	1
	5/20/2017 20:00	5/21/2017 14:45	**1,125**	1.21	**243,878.21**	1.24	**0.52**	12.00	Atlas	295,093	1
	5/24/2017 19:00	5/25/2017 12:30	**1,050**	0.77	**225,031.03**	2.01	**0.28**	24.00	Atlas	173,274	1
	6/5/2017 10:00	6/5/2017 21:15	**675**	0.07	**1,355,222.43**	0.29	**0.03**	12.00	Atlas	94,866	1
	6/15/2017 3:00	6/15/2017 8:30	**330**	0.95	**136,068.18**	1.06	**0.62**	3.00	Atlas	129,265	1
	6/18/2017 23:45	6/19/2017	**15**	0.15	**1,504.00**	1.22	**0.09**	3.00	Atlas	226	1
	6/22/2017 18:15	6/22/2017 21:15	**180**	0.42	**97,773.43**	0.58	**0.23**	6.00	Atlas	41,065	1
	6/23/2017 15:15	6/23/2017 23:00	**465**	0.97	**183,694.12**	1.55	**0.53**	3.00	Atlas	178,183	1
	6/30/2017 21:15	7/1/2017 0:15	**180**	0.41	**170,508.07**	0.49	**0.35**	1.00	Atlas	69,908	1
CSO097 Total										**11,112,092**	**51**
CSO104*	**7/4/2016 9:15**	7/4/2016 9:30	**15**	1.3	**1,307.55**	0.89	**0.42**	48.00	Atlas	1,700	1
	7/8/2016 10:00	7/8/2016 15:00	**300**	0.28	**216,591.39**	1.78	**0.23**	1.00	Atlas	60,646	1
	7/28/2016 3:45	7/28/2016 4:30	**45**	0.3	**46,281.83**	0.72	**0.14**	12.00	Atlas	13,885	1
	8/9/2016 15:45	8/9/2016 16:00	**15**	0.53	**36,284.85**	0.75	**0.43**	1.00	Atlas	19,231	1
	8/15/2016 2:45	8/15/2016 3:15	**30**	1.44	**30,135.01**	1.52	**0.72**	6.00	Atlas	43,394	1
	8/17/2016 6:45	8/17/2016 9:00	**135**	1.13	**126,168.76**	2.69	**0.52**	3.00	Atlas	142,571	1
	8/20/2016 15:00	8/20/2016 19:45	**285**	1.25	**62,899.72**	3.63	**0.55**	12.00	Atlas	78,625	1
	8/28/2016 17:30	8/28/2016 17:45	**15**	0.13	**19,945.23**	0.14	**0.10**	1.00	Atlas	2,593	1
	9/30/2016 0:45	9/30/2016 4:45	**240**	0.64	**21,323.67**	1.61	**0.34**	3.00	Atlas	13,647	1
	11/29/2016 4:30	11/29/2016 11:30	**420**	0.79	**36,650.49**	1.19	**0.35**	12.00	Atlas	28,954	1
	12/6/2016 14:15	12/7/2016 8:45	**1,110**	0.87	**698,348.93**	0.93	**0.40**	12.00	Atlas	607,564	1
	12/17/2016 18:30	12/18/2016 0:30	**360**	3.53	**79,617.05**	3.78	**6.35**	12.00	Cloudburst	281,048	1
	1/6/2017 8:15	1/9/2017 3:30	**4,035**	0.24	**8,961,015.83**	0.5	**0.10**	12.00	Atlas	2,150,644	1
	1/12/2017 19:30	1/16/2017 19:45	**5,775**	0.37	**5,555,424.14**	1.92	**0.19**	6.00	Atlas	2,055,507	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.37	**1,349.04**	1.28	**0.73**	6.00	Atlas	1,848	1
	4/29/2017 2:15	4/29/2017 3:45	**90**	1.64	**544,234.80**	1.85	**0.80**	6.00	Atlas	892,545	1
	5/21/2017 3:00	5/21/2017 5:45	**165**	1.09	**493,908.35**	1.2	**0.48**	12.00	Atlas	538,360	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.65	**13,337.25**	0.8	**0.57**	1.00	Atlas	8,669	1
CSO104* Total										**6,941,430**	**18**
CSO105*	**7/3/2016 12:15**	7/3/2016 23:30	**675**	1.3	**3,333,800.88**	0.79	**0.42**	48.00	Atlas	4,333,941	1
	7/4/2016 9:15	7/4/2016 17:00	**465**	1.3	**1,720,269.98**	1.3	**0.42**	48.00	Atlas	2,236,351	1
	7/8/2016 10:00	7/8/2016 11:15	**75**	0.28	**64,632.75**	1.78	**0.23**	1.00	Atlas	18,097	1
	7/18/2016 8:45	7/18/2016 16:00	**435**	0.11	**165,318.45**	0.42	**0.05**	1.00	Atlas	18,185	1
	7/20/2016 20:00	7/20/2016 21:45	**105**	Discharge		0.22				1,513,559	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.1	**115,788.20**	0.48	**0.09**	1.00	Atlas	11,579	1
	7/27/2016 23:45	7/28/2016 6:15	**390**	0.3	**15,468,568.10**	0.72	**0.14**	12.00	Atlas	4,640,570	1
	7/30/2016 15:15	7/30/2016 16:15	**60**	0.11	**4,708,894.91**	0.93	**0.10**	1.00	Atlas	517,978	1
	8/1/2016 11:45	8/1/2016 13:15	**90**	0.35	**2,192,451.46**	1.29	**0.30**	1.00	Atlas	767,358	1
	8/5/2016 14:30	8/5/2016 16:15	**105**	0.21	**3,496,870.43**	0.77	**0.16**	1.00	Atlas	734,343	1
	8/9/2016 15:45	8/9/2016 16:45	**60**	0.53	**804,643.09**	0.78	**0.43**	1.00	Atlas	426,461	1
	8/15/2016 2:30	8/15/2016 8:15	**345**	1.44	**5,457,760.96**	2.18	**0.72**	6.00	Atlas	7,859,176	1
	8/16/2016 14:30	8/16/2016 14:30	**-**	Discharge		2.2				3,656	1
	8/17/2016 5:15	8/17/2016 10:00	**285**	1.13	**7,463,466.44**	2.7	**0.52**	3.00	Atlas	8,433,717	1
	8/20/2016 10:30	8/20/2016 23:00	**750**	1.25	**14,577,217.66**	3.77	**0.55**	12.00	Atlas	18,221,522	1
	8/27/2016 13:00	8/27/2016 14:45	**105**	0.03	**53,239,483.67**	0.97	**0.02**	1.00	Atlas	1,597,185	1
	8/28/2016 17:45	8/28/2016 17:45	**-**	0.13	**96,293.38**	0.14	**0.10**	1.00	Atlas	12,518	1
	9/10/2016 16:00	9/10/2016 17:00	**60**	0.14	**855,000.57**	0.13	**0.08**	3.00	Atlas	119,700	1
	9/28/2016 13:00	9/28/2016 15:15	**135**	0.5	**1,290,663.14**	0.84	**0.27**	6.00	Atlas	645,332	1
	9/30/2016 0:45	9/30/2016 4:15	**210**	0.64	**2,701,263.09**	1.61	**0.34**	3.00	Atlas	1,728,808	1
	10/20/2016 10:00	10/20/2016 12:45	**165**	0.67	**3,492,822.06**	0.53	**0.33**	3.00	Atlas	2,340,191	1
	11/28/2016 17:30	11/28/2016 23:00	**330**	0.79	**2,557,455.86**	1.19	**0.35**	12.00	Atlas	2,020,390	1
	12/6/2016 6:15	12/6/2016 14:00	**465**	0.87	**3,682,102.16**	0.93	**0.40**	12.00	Atlas	3,203,429	1
	12/17/2016 17:00	12/18/2016 4:30	**690**	3.53	**10,245,477.10**	3.9	**6.35**	12.00	Cloudburst	36,166,534	1
	12/23/2016 23:45	12/24/2016 2:30	**165**	0.24	**2,624,333.04**	3.72	**0.11**	12.00	Atlas	629,840	1
	12/26/2016 21:30	12/26/2016 22:15	**45**	0.34	**5,294.00**	0.57	**0.16**	6.00	Atlas	1,800	1
	1/3/2017 4:15	1/3/2017 6:15	**120**	0.16	**2,310,233.63**	0.29	**0.08**	6.00	Atlas	369,637	1
	1/10/2017 20:15	1/10/2017 21:30	**75**	0.31	**630,924.13**	0.56	**0.21**	1.00	Atlas	195,586	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO105*	**1/12/2017 19:15**	1/12/2017 21:30	**135**	0.37	**549,402.65**	0.9	**0.19**	6.00	Atlas	203,279	1
	1/13/2017 14:15	1/13/2017 16:00	**105**	0.41	**19,389.20**	1.27	**0.25**	3.00	Atlas	7,950	1
	1/14/2017 8:30	1/14/2017 15:45	**435**	0.21	**1,844,003.81**	1.5	**0.10**	12.00	Atlas	387,241	1
	1/15/2017 16:45	1/15/2017 19:30	**165**	0.22	**59,029.55**	1.72	**0.11**	6.00	Atlas	12,987	1
	1/17/2017 0:30	1/17/2017 5:30	**300**	0.83	**4,815,048.22**	2.54	**0.38**	12.00	Atlas	3,996,490	1
	1/19/2017 19:45	1/20/2017 5:15	**570**	1.36	**8,069,668.27**	3.11	**0.62**	12.00	Atlas	10,974,749	1
	2/8/2017 17:00	2/8/2017 21:00	**240**	0.09	**38,109.56**	0.65	**0.05**	6.00	Atlas	3,430	1
	2/24/2017 19:15	2/24/2017 21:15	**120**	0.5	**2,742,701.88**	0.6	**0.42**	1.00	Atlas	1,371,351	1
	2/28/2017 11:00	2/28/2017 12:30	**90**	0.27	**869,038.85**	0.84	**0.12**	12.00	Atlas	234,640	1
	3/1/2017 3:15	3/1/2017 11:30	**495**	1.37	**7,265,315.58**	2.2	**0.73**	6.00	Atlas	9,953,482	1
	3/7/2017 8:00	3/7/2017 10:00	**120**	0.88	**1,335,339.24**	2.27	**0.31**	1.00	Atlas	1,175,099	1
	3/17/2017 3:30	3/17/2017 12:15	**525**	Discharge		0.11				43,868	1
	3/18/2017 5:30	3/18/2017 5:45	**15**	Discharge		0.11				11,165	1
	3/26/2017 0:45	3/26/2017 8:00	**435**	0.42	**353,362.12**	0.43	**0.18**	12.00	Atlas	148,412	1
	3/27/2017 18:30	3/27/2017 20:30	**120**	0.26	**4,296,645.23**	0.68	**0.14**	1.00	Atlas	1,117,128	1
	4/3/2017 19:15	4/3/2017 19:45	**30**	0.22	**30,375.00**	0.32	**0.12**	1.00	Atlas	6,683	1
	4/6/2017 1:30	4/6/2017 3:45	**135**	0.05	**163,699.80**	0.46	**0.03**	3.00	Atlas	8,185	1
	4/10/2017 4:00	4/10/2017 4:15	**15**	Discharge		0.36				2,167	1
	4/11/2017 6:00	4/11/2017 6:15	**15**	0.27	**21,938.48**	0.24	**0.12**	12.00	Atlas	5,923	1
	4/15/2017 16:00	4/16/2017 22:45	**1,845**	Discharge		1.19				4,992,711	1
	4/21/2017 19:30	4/22/2017 13:00	**1,050**	0.74	**2,475,571.07**	1.75	**0.27**	6.00	Atlas	1,831,923	1
	4/27/2017 7:30	4/27/2017 8:30	**60**	0.2	**737,315.55**	0.98	**0.12**	1.00	Atlas	147,463	1
	4/29/2017 0:15	4/29/2017 6:00	**345**	1.64	**9,508,126.52**	1.87	**0.80**	6.00	Atlas	15,593,328	1
	5/1/2017 4:45	5/1/2017 5:00	**15**	0.24	**81,726.04**	2.08	**0.12**	3.00	Atlas	19,614	1
	5/4/2017 20:00	5/5/2017 14:15	**1,095**	2.15	**8,459,592.69**	3.95	**0.72**	24.00	Atlas	18,188,124	1
	5/20/2017 19:15	5/21/2017 8:45	**810**	1.09	**20,503,688.91**	1.23	**0.48**	12.00	Atlas	22,349,021	1
	5/24/2017 19:30	5/24/2017 21:45	**135**	0.65	**845,221.57**	1.75	**0.24**	24.00	Atlas	549,394	1
	5/27/2017 14:30	5/27/2017 16:00	**90**	0.12	**8,556,762.58**	1.84	**0.08**	1.00	Atlas	1,026,812	1
	6/5/2017 18:45	6/5/2017 20:45	**120**	0.42	**3,136,838.55**	0.5	**0.37**	1.00	Atlas	1,317,472	1
	6/14/2017 21:00	6/15/2017 6:30	**570**	Discharge		0.56				2,389,502	1
	6/22/2017 19:45	6/22/2017 21:00	**75**	1.15	**275,058.36**	0.61	**0.37**	48.00	Atlas	316,317	1
	6/23/2017 7:30	6/23/2017 19:30	**720**	1.15	**3,933,257.05**	1.35	**0.37**	48.00	Atlas	4,523,246	1
	6/30/2017 21:00	6/30/2017 23:30	**150**	0.65	**6,207,435.65**	0.81	**0.57**	1.00	Atlas	4,034,833	1
CSO105* Total										**205,711,431**	**61**
CSO108*	**7/27/2016 18:30**	7/27/2016 18:45	**15**	1.22	**402,111.48**	0.81	**0.54**	1.00	Atlas	490,576	1
	8/1/2016 20:15	8/1/2016 21:30	**75**	1.54	**1,413,925.97**	3.34	**0.99**	1.00	Atlas	2,177,446	1
	8/15/2016 3:00	8/15/2016 3:15	**15**	1.6	**79,771.88**	1.41	**0.76**	3.00	Atlas	127,635	1
	8/31/2016 17:00	8/31/2016 17:00	**-**	0.09	**1,521,911.11**	0.06	**0.04**	1.00	Atlas	136,972	1
	12/17/2016 19:15	12/20/2016 10:15	**3,780**	2.71	**13,112,411.44**	3.04	**2.40**	6.00	Cloudburst	35,534,635	1
	3/1/2017 3:45	3/2/2017 10:45	**1,860**	1.22	**1,497,509.84**	2.78	**0.64**	6.00	Atlas	1,826,962	1
	4/16/2017 17:30	4/16/2017 22:00	**270**	1.27	**229,710.24**	1.8	**0.60**	3.00	Atlas	291,732	1
	4/29/2017 2:00	4/29/2017 11:45	**585**	1.5	**934,194.67**	2.15	**0.90**	1.00	Atlas	1,401,292	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.28	**310,757.14**	0.36	**0.23**	1.00	Atlas	87,012	1
	6/30/2017 21:15	6/30/2017 21:15	**-**	0.44	**66,272.73**	0.66	**0.38**	1.00	Atlas	29,160	1
	6/23/2017 16:00	6/24/2017 6:30	**870**	1.2	**29,996.67**	1.9	**0.65**	3.00	Atlas	35,996	1
CSO108* Total										**42,139,418**	**11**
CSO109*	**7/4/2016 14:30**	7/4/2016 14:30	**-**	1.02	**4,677.36**	0.93	**0.33**	48.00	Atlas	4,771	1
	7/27/2016 18:30	7/27/2016 19:00	**30**	1.61	**1,275,071.83**	1.28	**0.92**	1.00	Atlas	2,052,866	1
	7/30/2016 14:30	7/30/2016 14:30	**-**	0.32	**424,708.25**	2.21	**0.28**	1.00	Atlas	135,907	1
	8/1/2016 20:30	8/1/2016 21:45	**75**	1.08	**2,285,937.51**	3.36	**0.60**	1.00	Atlas	2,468,813	1
	8/4/2016 13:45	8/4/2016 14:00	**15**	0.2	**2,028,511.05**	1.8	**0.13**	3.00	Atlas	405,702	1
	8/15/2016 3:00	8/15/2016 3:30	**30**	1.68	**364,793.93**	1.48	**0.76**	3.00	Atlas	612,854	1
	8/17/2016 6:15	8/17/2016 6:15	**-**	0.63	**55,391.78**	2.22	**0.28**	3.00	Atlas	34,897	1
	8/20/2016 15:45	8/20/2016 20:00	**255**	0.89	**153,317.21**	2.94	**0.40**	1.00	Atlas	136,452	1
	8/31/2016 17:15	8/31/2016 18:00	**45**	0.04	**8,908,533.50**	0.06	**0.02**	3.00	Atlas	356,341	1
	12/17/2016 18:45	12/18/2016 5:15	**630**	2.78	**2,709,409.92**	3.09	**2.52**	6.00	Cloudburst	7,532,160	1
	1/17/2017 3:45	1/17/2017 3:45	**-**	0.71	**100,496.72**	2.28	**0.32**	12.00	Atlas	71,353	1
	1/19/2017 23:30	1/19/2017 23:30	**-**	1.26	**13,655.87**	2.24	**0.58**	12.00	Atlas	17,206	1
	2/24/2017 19:15	2/24/2017 19:30	**15**	0.78	**938,193.65**	0.86	**0.66**	1.00	Atlas	731,791	1
	3/1/2017 3:30	3/1/2017 10:45	**435**	1.17	**1,555,441.69**	2.55	**0.62**	6.00	Atlas	1,819,867	1
	4/16/2017 13:30	4/16/2017 19:30	**360**	1.19	**540,979.27**	1.28	**0.55**	6.00	Atlas	643,765	1
	4/27/2017 7:00	4/27/2017 7:00	**-**	0.35	**181,741.54**	0.92	**0.24**	1.00	Atlas	63,610	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO109*	**4/29/2017 2:00**	4/29/2017 3:15	**75**	1.34	**1,206,364.76**	1.8	**0.83**	1.00	Atlas	1,616,529	1
	5/4/2017 20:00	5/4/2017 20:30	**30**	1.75	**184,595.49**	2.46	**0.57**	48.00	Atlas	323,042	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.75	**5,022.81**	2.92	**0.57**	48.00	Atlas	8,790	1
	5/21/2017 4:00	5/21/2017 4:15	**15**	1.19	**38,342.82**	0.85	**0.49**	12.00	Atlas	45,628	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.37	**762,762.59**	0.45	**0.32**	1.00	Atlas	282,222	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.85	**240,447.40**	0.53	**0.55**	3.00	Atlas	204,380	1
	6/23/2017 15:45	6/23/2017 16:15	**30**	1.13	**388,088.99**	1.41	**0.62**	3.00	Atlas	438,541	1
	6/30/2017 21:15	6/30/2017 21:15	**-**	0.55	**541,453.15**	0.73	**0.48**	1.00	Atlas	297,799	1
CSO109* Total										**20,305,285**	**24**
CSO110*	**7/3/2016 11:45**	7/4/2016 0:15	**750**	1.06	**279,847.54**	0.64	**0.34**	48.00	Atlas	296,638	1
	7/4/2016 9:00	7/4/2016 17:30	**510**	1.06	**396,263.59**	1.06	**0.34**	48.00	Atlas	420,039	1
	7/6/2016 13:15	7/6/2016 14:15	**60**	0.13	**752,558.08**	1.17	**0.09**	1.00	Atlas	97,833	1
	7/12/2016 9:45	7/12/2016 12:15	**150**	0.26	**1,114,498.23**	0.51	**0.18**	1.00	Atlas	289,770	1
	7/27/2016 18:30	7/27/2016 19:45	**75**	0.56	**1,495,946.16**	0.36	**0.22**	12.00	Atlas	837,730	1
	7/28/2016 5:15	7/28/2016 5:45	**30**	0.56	**57,060.20**	0.72	**0.22**	12.00	Atlas	31,954	1
	7/30/2016 14:30	7/30/2016 15:30	**60**	0.28	**487,929.71**	1.14	**0.24**	1.00	Atlas	136,620	1
	8/1/2016 20:15	8/1/2016 23:00	**165**	0.41	**3,784,846.80**	1.54	**0.19**	1.00	Atlas	1,551,787	1
	8/4/2016 13:45	8/4/2016 14:15	**30**	0.2	**210,851.90**	1.07	**0.13**	3.00	Atlas	42,170	1
	8/5/2016 14:15	8/5/2016 14:30	**15**	0.16	**131,602.75**	1.31	**0.11**	3.00	Atlas	21,056	1
	8/15/2016 2:45	8/15/2016 8:15	**330**	1.51	**653,221.18**	1.77	**0.71**	6.00	Atlas	986,364	1
	8/17/2016 5:15	8/17/2016 8:00	**165**	0.47	**630,598.36**	1.92	**0.20**	12.00	Atlas	296,381	1
	8/20/2016 15:30	8/20/2016 22:00	**390**	0.65	**813,048.82**	2.58	**0.27**	12.00	Atlas	528,482	1
	8/31/2016 18:00	8/31/2016 18:00	**-**	0.05	**138,066.60**	0.22	**0.03**	1.00	Atlas	6,903	1
	9/10/2016 15:15	9/10/2016 16:00	**45**	0.19	**314,710.68**	0.16	**0.12**	1.00	Atlas	59,795	1
	9/26/2016 11:15	9/26/2016 11:45	**30**	0.37	**98,130.19**	0.37	**0.25**	3.00	Atlas	36,308	1
	9/28/2016 13:00	9/28/2016 14:45	**105**	0.45	**372,589.80**	0.82	**0.25**	6.00	Atlas	167,665	1
	9/30/2016 1:45	9/30/2016 3:15	**90**	0.7	**425,149.21**	1.46	**0.35**	3.00	Atlas	297,604	1
	10/20/2016 10:15	10/20/2016 16:45	**390**	0.51	**331,421.51**	0.39	**0.20**	3.00	Atlas	169,025	1
	11/23/2016 21:15	11/23/2016 21:45	**30**	0.21	**60,905.52**	0.43	**0.11**	6.00	Atlas	12,790	1
	11/28/2016 17:30	11/28/2016 22:45	**315**	0.78	**712,991.47**	1.05	**0.34**	12.00	Atlas	556,133	1
	12/6/2016 5:30	12/6/2016 13:30	**480**	0.96	**771,519.09**	0.99	**0.44**	12.00	Atlas	740,658	1
	12/11/2016 22:00	12/11/2016 23:00	**60**	0.3	**127,999.13**	1.24	**0.14**	12.00	Atlas	38,400	1
	12/17/2016 19:00	12/18/2016 7:15	**735**	2.59	**1,153,037.16**	2.89	**1.78**	6.00	Cloudburst	2,986,366	1
	12/23/2016 23:00	12/24/2016 2:15	**195**	0.16	**1,329,300.44**	2.73	**0.07**	12.00	Atlas	212,688	1
	12/26/2016 20:45	12/26/2016 23:15	**150**	0.25	**457,396.56**	0.4	**0.12**	6.00	Atlas	114,349	1
	1/10/2017 20:00	1/10/2017 20:30	**30**	0.15	**686,784.20**	0.4	**0.11**	1.00	Atlas	103,018	1
	1/11/2017 12:45	1/11/2017 14:30	**105**	0.21	**254,993.33**	0.61	**0.14**	3.00	Atlas	53,549	1
	1/12/2017 16:00	1/12/2017 22:15	**375**	0.49	**615,982.27**	0.88	**0.24**	6.00	Atlas	301,831	1
	1/13/2017 16:00	1/13/2017 16:30	**30**	0.25	**52,516.08**	1.1	**0.15**	3.00	Atlas	13,129	1
	1/14/2017 11:30	1/14/2017 15:15	**225**	0.2	**986,859.55**	1.31	**0.09**	12.00	Atlas	197,372	1
	1/15/2017 17:00	1/15/2017 19:30	**150**	0.11	**103,425.09**	1.42	**0.05**	6.00	Atlas	11,377	1
	1/16/2017 19:00	1/17/2017 5:15	**615**	0.54	**1,203,129.33**	1.96	**0.24**	12.00	Atlas	649,690	1
	1/19/2017 18:45	1/20/2017 9:00	**855**	1.2	**1,167,288.83**	2.47	**0.55**	12.00	Atlas	1,400,747	1
	2/7/2017 13:15	2/7/2017 13:15	**-**	0.43	**7,135.91**	0.42	**0.18**	6.00	Atlas	3,068	1
	2/24/2017 19:15	2/24/2017 20:30	**75**	0.62	**849,123.31**	0.7	**0.53**	1.00	Atlas	526,456	1
	2/28/2017 10:45	2/28/2017 11:15	**30**	0.25	**302,213.52**	0.91	**0.11**	12.00	Atlas	75,553	1
	3/1/2017 3:30	3/1/2017 14:30	**660**	0.95	**1,849,908.13**	1.87	**0.50**	6.00	Atlas	1,757,413	1
	3/7/2017 8:00	3/7/2017 15:45	**465**	0.51	**571,549.53**	1.63	**0.17**	48.00	Atlas	291,490	1
	3/26/2017 2:30	3/26/2017 4:00	**90**	0.46	**87,514.22**	0.36	**0.21**	6.00	Atlas	40,257	1
	3/27/2017 18:30	3/27/2017 20:00	**90**	0.27	**684,760.81**	0.73	**0.15**	3.00	Atlas	184,885	1
	3/30/2017 20:45	3/30/2017 23:15	**150**	0.52	**172,242.98**	1.22	**0.26**	6.00	Atlas	89,566	1
	4/11/2017 11:30	4/11/2017 12:45	**75**	0.37	**66,017.57**	0.37	**0.17**	12.00	Atlas	24,427	1
	4/16/2017 17:45	4/16/2017 22:30	**285**	1.18	**657,753.95**	1.53	**0.56**	6.00	Atlas	776,150	1
	4/22/2017 0:30	4/22/2017 0:45	**15**	0.58	**16,994.41**	1.65	**0.21**	24.00	Atlas	9,857	1
	4/27/2017 7:00	4/27/2017 7:45	**45**	0.16	**543,996.88**	0.77	**0.09**	6.00	Atlas	87,040	1
	4/29/2017 2:00	4/29/2017 7:00	**300**	0.91	**1,818,496.91**	1.2	**0.53**	3.00	Atlas	1,654,832	1
	5/1/2017 4:00	5/1/2017 5:00	**60**	0.3	**551,675.77**	1.37	**0.17**	3.00	Atlas	165,503	1
	5/4/2017 20:15	5/5/2017 21:15	**1,500**	1.85	**831,429.90**	3.06	**0.61**	24.00	Atlas	1,538,145	1
	5/6/2017 9:00	5/6/2017 10:00	**60**	0.1	**286,149.80**	2.24	**0.05**	3.00	Atlas	28,615	1
	5/20/2017 19:00	5/21/2017 8:45	**825**	1.14	**851,150.59**	1.16	**0.50**	12.00	Atlas	970,312	1
	5/24/2017 18:15	5/24/2017 22:15	**240**	0.72	**565,329.46**	1.78	**0.26**	24.00	Atlas	407,037	1
	6/5/2017 9:15	6/5/2017 10:00	**45**	0.06	**2,173,275.00**	0.06	**0.03**	12.00	Atlas	130,397	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO110*	**6/5/2017 18:45**	6/5/2017 19:30	**45**	0.22	**518,925.50**	0.28	**0.19**	1.00	Atlas	114,164	1
	6/15/2017 3:15	6/15/2017 6:45	**210**	0.76	**617,784.03**	0.93	**0.49**	3.00	Atlas	469,516	1
	6/22/2017 19:00	6/22/2017 20:15	**75**	0.37	**438,552.27**	0.53	**0.20**	6.00	Atlas	162,264	1
	6/23/2017 15:30	6/23/2017 19:30	**240**	0.84	**850,341.63**	1.37	**0.45**	6.00	Atlas	714,287	1
	6/30/2017 21:15	6/30/2017 22:15	**60**	0.72	**1,180,274.44**	0.79	**0.63**	1.00	Atlas	849,798	1
CSO110* Total										**24,737,254**	**58**
CSO111	**7/27/2016 18:45**	7/27/2016 18:45	**-**	0.56	**93,448.20**	0.36	**0.22**	12.00	Atlas	52,331	1
	8/1/2016 20:30	8/1/2016 21:15	**45**	0.41	**268,614.85**	1.54	**0.19**	1.00	Atlas	110,132	1
	8/15/2016 3:15	8/15/2016 3:15	**-**	1.51	**1,632.91**	1.2	**0.71**	6.00	Atlas	2,466	1
	12/17/2016 20:30	12/18/2016 1:30	**300**	2.59	**3,846.76**	2.88	**1.78**	6.00	Cloudburst	9,963	1
	2/24/2017 19:15	2/24/2017 19:15	**-**	0.62	**3,214.19**	0.7	**0.53**	1.00	Atlas	1,993	1
	3/1/2017 4:00	3/1/2017 4:00	**-**	0.95	**757.28**	1.27	**0.50**	6.00	Atlas	719	1
	4/16/2017 18:00	4/16/2017 19:30	**90**	1.18	**1,275.01**	1.15	**0.56**	6.00	Atlas	1,505	1
	4/29/2017 2:00	4/29/2017 2:45	**45**	0.91	**24,927.40**	1.14	**0.53**	3.00	Atlas	22,684	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.76	**12,758.67**	0.56	**0.49**	3.00	Atlas	9,697	1
	6/30/2017 21:15	6/30/2017 21:30	**15**	0.72	**55,725.83**	0.79	**0.63**	1.00	Atlas	40,123	1
CSO111 Total										**251,612**	**10**
CSO118*	**7/3/2016 10:15**	7/3/2016 23:15	**780**	1.08	**1,527,659.64**	0.67	**0.35**	48.00	Atlas	1,649,872	1
	7/4/2016 8:15	7/4/2016 16:30	**495**	1.08	**425,894.69**	1.08	**0.35**	48.00	Atlas	459,966	1
	7/6/2016 13:00	7/6/2016 13:30	**30**	0.11	**1,912,933.09**	1.17	**0.07**	1.00	Atlas	210,423	1
	7/12/2016 9:30	7/12/2016 10:15	**45**	0.17	**2,071,536.12**	0.33	**0.11**	3.00	Atlas	352,161	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.04	**35,372.25**	0.24	**0.03**	1.00	Atlas	1,415	1
	7/27/2016 23:30	7/28/2016 5:15	**345**	0.6	**4,513,003.45**	0.75	**0.28**	12.00	Atlas	2,707,802	1
	7/30/2016 14:00	7/30/2016 14:45	**45**	0.4	**2,706,516.63**	1.26	**0.35**	1.00	Atlas	1,082,607	1
	8/1/2016 11:00	8/1/2016 11:30	**30**	0.35	**1,433,195.97**	1.61	**0.30**	1.00	Atlas	501,619	1
	8/5/2016 13:45	8/5/2016 14:15	**30**	0.09	**855,734.44**	1.1	**0.07**	1.00	Atlas	77,016	1
	8/15/2016 2:30	8/15/2016 7:45	**315**	0.98	**3,246,430.39**	1.19	**0.49**	6.00	Atlas	3,181,502	1
	8/17/2016 4:30	8/17/2016 7:30	**180**	0.7	**3,439,486.20**	1.62	**0.30**	12.00	Atlas	2,407,640	1
	8/20/2016 14:15	8/20/2016 21:00	**405**	0.89	**4,106,625.85**	2.52	**0.39**	1.00	Atlas	3,654,897	1
	8/28/2016 17:15	8/28/2016 17:45	**30**	0.21	**1,680,651.38**	0.22	**0.18**	1.00	Atlas	352,937	1
	9/10/2016 15:00	9/10/2016 15:30	**30**	0.19	**932,190.95**	0.17	**0.12**	3.00	Atlas	177,116	1
	9/28/2016 12:30	9/28/2016 14:00	**90**	0.35	**832,429.74**	0.53	**0.19**	6.00	Atlas	291,350	1
	9/30/2016	9/30/2016 2:45	**165**	0.68	**1,313,700.74**	1.16	**0.35**	3.00	Atlas	893,317	1
	10/20/2016 9:15	10/20/2016 11:30	**135**	0.53	**1,850,773.96**	0.3	**0.20**	24.00	Atlas	980,910	1
	11/8/2016 19:45	11/8/2016 20:00	**15**	0.2	**952,131.35**	0.23	**0.10**	1.00	Atlas	190,426	1
	11/23/2016 21:00	11/23/2016 21:00	**-**	0.26	**1,142.00**	0.39	**0.11**	6.00	Atlas	297	1
	11/28/2016 17:00	11/28/2016 22:00	**300**	0.66	**853,398.08**	0.92	**0.29**	12.00	Atlas	563,243	1
	12/6/2016 5:15	12/6/2016 12:30	**435**	0.86	**1,577,763.41**	0.9	**0.39**	12.00	Atlas	1,356,877	1
	12/10/2016 3:00	12/10/2016 3:15	**15**	Discharge		0.93				149,110	1
	12/17/2016 16:30	12/18/2016 1:45	**555**	2.6	**4,877,595.62**	2.9	**1.77**	12.00	Cloudburst	12,681,749	1
	12/23/2016 22:45	12/24/2016 1:00	**135**	0.19	**491,980.11**	2.77	**0.09**	6.00	Atlas	93,476	1
	12/26/2016 20:45	12/26/2016 20:45	**-**	0.28	**823.18**	0.43	**0.14**	6.00	Atlas	230	1
	1/10/2017 19:30	1/10/2017 20:00	**30**	0.11	**1,463,464.82**	0.35	**0.08**	1.00	Atlas	160,981	1
	1/11/2017 12:15	1/11/2017 12:45	**30**	0.22	**259,378.73**	0.53	**0.15**	1.00	Atlas	57,063	1
	1/12/2017 15:30	1/12/2017 18:45	**195**	0.33	**707,258.55**	0.57	**0.16**	6.00	Atlas	233,395	1
	1/14/2017 11:15	1/14/2017 14:00	**165**	0.22	**846,962.05**	1.2	**0.10**	6.00	Atlas	186,332	1
	1/16/2017 23:45	1/17/2017 3:45	**240**	0.48	**2,082,939.71**	1.82	**0.22**	12.00	Atlas	999,811	1
	1/19/2017 18:45	1/20/2017 3:45	**540**	1.08	**3,147,135.38**	2.38	**0.50**	12.00	Atlas	3,398,906	1
	2/24/2017 19:00	2/24/2017 19:30	**30**	0.53	**1,443,898.09**	0.59	**0.45**	1.00	Atlas	765,266	1
	2/28/2017 10:15	2/28/2017 10:30	**15**	0.26	**331,709.19**	0.83	**0.12**	6.00	Atlas	86,244	1
	3/1/2017 3:00	3/1/2017 9:15	**375**	1.07	**3,707,589.98**	1.91	**0.57**	6.00	Atlas	3,967,121	1
	3/7/2017 7:30	3/7/2017 12:45	**315**	0.51	**1,239,873.82**	1.72	**0.17**	48.00	Atlas	632,336	1
	3/26/2017 1:15	3/26/2017 2:30	**75**	0.45	**192,356.76**	0.31	**0.21**	6.00	Atlas	86,561	1
	3/27/2017 18:00	3/27/2017 19:00	**60**	0.29	**1,846,678.03**	0.74	**0.17**	3.00	Atlas	535,537	1
	3/31/2017 1:00	3/31/2017 1:00	**-**	0.36	**730.17**	1.18	**0.17**	6.00	Atlas	263	1
	4/3/2017 19:15	4/3/2017 19:30	**15**	0.11	**435,645.73**	0.59	**0.07**	1.00	Atlas	47,921	1
	4/16/2017 4:30	4/16/2017 21:30	**1,020**	1.2	**1,678,884.44**	1.5	**0.47**	6.00	Atlas	2,014,661	1
	4/21/2017 22:15	4/22/2017 0:30	**135**	0.59	**835,602.56**	1.66	**0.21**	24.00	Atlas	493,006	1
	4/27/2017 6:45	4/27/2017 7:15	**30**	0.21	**1,204,353.67**	0.81	**0.16**	1.00	Atlas	252,914	1
	4/29/2017 1:30	4/29/2017 3:30	**120**	0.89	**6,402,938.09**	1.21	**0.46**	6.00	Atlas	5,698,615	1
	5/1/2017 2:45	5/1/2017 4:00	**75**	0.19	**442,967.37**	1.29	**0.11**	3.00	Atlas	84,164	1
	5/4/2017 19:30	5/5/2017 10:00	**870**	1.7	**2,490,846.59**	2.66	**0.57**	24.00	Atlas	4,234,439	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO118*	**5/20/2017 18:30**	5/21/2017 6:00	**690**	1.04	**6,447,410.28**	1.05	**0.46**	12.00	Atlas	6,705,307	1
	5/24/2017 18:15	5/25/2017 9:30	**915**	0.56	**732,996.30**	1.64	**0.20**	24.00	Atlas	410,478	1
	5/27/2017 14:00	5/27/2017 14:30	**30**	0.22	**3,895,936.64**	1.8	**0.17**	1.00	Atlas	857,106	1
	6/5/2017 8:45	6/5/2017 9:15	**30**	0.07	**26,653,910.71**	0.08	**0.03**	1.00	Atlas	1,865,774	1
	6/5/2017 18:15	6/5/2017 18:45	**30**	0.32	**3,057,045.31**	0.4	**0.28**	1.00	Atlas	978,255	1
	6/15/2017 3:00	6/15/2017 4:30	**90**	0.75	**2,873,113.65**	0.75	**0.48**	3.00	Atlas	2,154,835	1
	6/22/2017 18:30	6/22/2017 19:30	**60**	0.31	**1,025,374.42**	0.48	**0.17**	6.00	Atlas	317,866	1
	6/23/2017 7:45	6/23/2017 18:15	**630**	0.68	**2,689,993.51**	1.15	**0.33**	6.00	Atlas	1,829,196	1
	6/30/2017 21:00	6/30/2017 21:30	**30**	0.31	**5,827,322.55**	0.43	**0.26**	1.00	Atlas	1,806,470	1
CSO118* Total										**74,878,780**	**54**
CSO119	**7/3/2016 11:30**	7/3/2016 23:00	**690**	1.08	**149,766.83**	0.67	**0.35**	48.00	Atlas	161,748	1
	7/4/2016 14:00	7/4/2016 14:45	**45**	1.08	**52,086.85**	1.03	**0.35**	48.00	Atlas	56,254	1
	7/6/2016 13:00	7/6/2016 13:15	**15**	0.11	**343,668.00**	1.17	**0.07**	1.00	Atlas	37,803	1
	7/12/2016 8:45	7/12/2016 10:00	**75**	0.17	**368,640.59**	0.33	**0.11**	3.00	Atlas	62,669	1
	7/28/2016 3:00	7/28/2016 5:00	**120**	0.6	**117,133.22**	0.75	**0.28**	12.00	Atlas	70,280	1
	7/30/2016 14:00	7/30/2016 14:30	**30**	0.4	**172,555.63**	1.26	**0.35**	1.00	Atlas	69,022	1
	8/1/2016 11:00	8/1/2016 11:15	**15**	0.35	**113,014.94**	1.61	**0.30**	1.00	Atlas	39,555	1
	8/4/2016 13:15	8/4/2016 13:45	**30**	0.22	**190,345.64**	0.94	**0.14**	3.00	Atlas	41,876	1
	8/15/2016 2:30	8/15/2016 7:30	**300**	0.98	**245,306.79**	1.19	**0.49**	6.00	Atlas	240,401	1
	8/17/2016 5:30	8/17/2016 7:15	**105**	0.7	**228,410.71**	1.62	**0.30**	12.00	Atlas	159,888	1
	8/20/2016 14:30	8/20/2016 20:45	**375**	0.89	**201,938.93**	2.52	**0.39**	1.00	Atlas	179,726	1
	8/28/2016 17:15	8/28/2016 17:15	**-**	0.21	**23,032.05**	0.19	**0.18**	1.00	Atlas	4,837	1
	8/31/2016 17:30	8/31/2016 17:30	**-**	0.1	**112,751.40**	0.29	**0.08**	1.00	Atlas	11,275	1
	9/10/2016 15:00	9/10/2016 15:15	**15**	0.19	**132,531.84**	0.17	**0.12**	3.00	Atlas	25,181	1
	9/28/2016 12:30	9/28/2016 13:00	**30**	0.35	**97,337.91**	0.46	**0.19**	6.00	Atlas	34,068	1
	9/30/2016 1:15	9/30/2016 2:30	**75**	0.68	**151,775.97**	1.16	**0.35**	3.00	Atlas	103,208	1
	10/20/2016 9:00	10/20/2016 11:00	**120**	0.53	**232,125.26**	0.29	**0.20**	24.00	Atlas	123,026	1
	11/8/2016 19:30	11/8/2016 20:00	**30**	0.2	**122,659.70**	0.23	**0.10**	1.00	Atlas	24,532	1
	11/28/2016 17:30	11/28/2016 21:30	**240**	0.66	**33,782.71**	0.91	**0.29**	12.00	Atlas	22,297	1
	12/6/2016 5:30	12/6/2016 12:00	**390**	0.86	**91,228.16**	0.88	**0.39**	12.00	Atlas	78,456	1
	12/17/2016 16:15	12/18/2016 1:30	**555**	2.6	**378,279.05**	2.9	**1.77**	12.00	Cloudburst	983,526	1
	1/10/2017 19:30	1/10/2017 19:45	**15**	0.11	**130,680.45**	0.35	**0.08**	1.00	Atlas	14,375	1
	1/11/2017 12:30	1/11/2017 12:30	**-**	0.22	**21,309.95**	0.52	**0.15**	1.00	Atlas	4,688	1
	1/12/2017 15:30	1/12/2017 18:30	**180**	0.33	**72,095.48**	0.56	**0.16**	6.00	Atlas	23,792	1
	1/14/2017 11:15	1/14/2017 13:45	**150**	0.22	**134,796.73**	1.19	**0.10**	6.00	Atlas	29,655	1
	1/17/2017	1/17/2017 3:45	**225**	0.48	**344,089.29**	1.82	**0.22**	12.00	Atlas	165,163	1
	1/19/2017 19:00	1/20/2017 3:30	**510**	1.08	**423,296.98**	2.37	**0.50**	12.00	Atlas	457,161	1
	2/24/2017 18:45	2/24/2017 19:15	**30**	0.53	**141,276.08**	0.59	**0.45**	1.00	Atlas	74,876	1
	2/28/2017 10:15	2/28/2017 10:15	**-**	0.26	**38,966.46**	0.82	**0.12**	6.00	Atlas	10,131	1
	3/1/2017 3:00	3/1/2017 9:00	**360**	1.07	**322,973.13**	1.91	**0.57**	6.00	Atlas	345,581	1
	3/7/2017 7:30	3/7/2017 8:00	**30**	0.51	**125,559.82**	1.62	**0.17**	48.00	Atlas	64,036	1
	3/27/2017 18:00	3/27/2017 18:45	**45**	0.29	**274,823.79**	0.73	**0.17**	3.00	Atlas	79,699	1
	3/30/2017 20:30	3/30/2017 21:45	**75**	0.36	**45,403.44**	1.08	**0.17**	6.00	Atlas	16,345	1
	4/16/2017 5:15	4/16/2017 20:30	**915**	1.2	**160,612.02**	1.41	**0.47**	6.00	Atlas	192,734	1
	4/21/2017 23:15	4/22/2017	**45**	0.59	**41,517.83**	1.65	**0.21**	24.00	Atlas	24,496	1
	4/27/2017 6:45	4/27/2017 7:00	**15**	0.21	**132,178.71**	0.81	**0.16**	1.00	Atlas	27,758	1
	4/29/2017 1:30	4/29/2017 3:15	**105**	0.89	**297,049.97**	1.21	**0.46**	6.00	Atlas	264,374	1
	5/1/2017 3:45	5/1/2017 3:45	**-**	0.19	**99,330.37**	1.29	**0.11**	3.00	Atlas	18,873	1
	5/4/2017 19:45	5/5/2017 9:00	**795**	1.7	**189,803.46**	2.62	**0.57**	24.00	Atlas	322,666	1
	5/20/2017 18:30	5/21/2017 5:45	**675**	1.04	**467,578.36**	1.05	**0.46**	12.00	Atlas	486,281	1
	5/24/2017 18:15	5/24/2017 19:00	**45**	0.56	**102,592.46**	1.47	**0.20**	24.00	Atlas	57,452	1
	5/27/2017 14:00	5/27/2017 14:15	**15**	0.22	**182,381.68**	1.8	**0.17**	1.00	Atlas	40,124	1
	6/5/2017 8:30	6/5/2017 9:00	**30**	0.07	**1,257,330.57**	0.08	**0.03**	1.00	Atlas	88,013	1
	6/5/2017 18:00	6/5/2017 18:30	**30**	0.32	**162,710.63**	0.4	**0.28**	1.00	Atlas	52,067	1
	6/15/2017 2:45	6/15/2017 4:15	**90**	0.75	**199,715.09**	0.73	**0.48**	3.00	Atlas	149,786	1
	6/22/2017 18:30	6/22/2017 19:15	**45**	0.31	**178,700.26**	0.48	**0.17**	6.00	Atlas	55,397	1
	6/23/2017 15:00	6/23/2017 16:15	**75**	0.68	**216,916.24**	0.97	**0.33**	6.00	Atlas	147,503	1
	6/30/2017 20:45	6/30/2017 21:15	**30**	0.31	**282,074.19**	0.43	**0.26**	1.00	Atlas	87,443	1
CSO119 Total										**5,830,097**	**48**
CSO120	**7/3/2016 10:15**	7/3/2016 20:15	**600**	1.23	**61,193.64**	0.66	**0.40**	48.00	Atlas	75,268	1
	7/4/2016 14:15	7/4/2016 14:15	**-**	1.23	**4,365.20**	1.11	**0.40**	48.00	Atlas	5,369	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.06	**1,142,633.17**	1.27	**0.04**	3.00	Atlas	68,558	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO120	**7/12/2016 9:00**	7/12/2016 10:00	**60**	0.2	**340,019.75**	0.33	**0.13**	3.00	Atlas	68,004	1
	7/27/2016 23:45	7/28/2016 5:00	**315**	0.65	**226,508.97**	0.85	**0.30**	12.00	Atlas	147,231	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.27	**528,450.15**	1.22	**0.23**	1.00	Atlas	142,682	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.38	**215,143.32**	1.58	**0.31**	1.00	Atlas	81,754	1
	8/4/2016 13:45	8/4/2016 13:45	**-**	0.25	**119,979.88**	0.86	**0.14**	6.00	Atlas	29,995	1
	8/15/2016 2:45	8/15/2016 7:30	**285**	0.81	**273,462.20**	1.09	**0.43**	6.00	Atlas	221,504	1
	8/17/2016 5:45	8/17/2016 7:15	**90**	0.72	**316,002.33**	1.54	**0.32**	6.00	Atlas	227,522	1
	8/20/2016 14:45	8/20/2016 20:30	**345**	1.1	**183,660.86**	2.64	**0.46**	12.00	Atlas	202,027	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.13	**110,806.08**	0.14	**0.11**	1.00	Atlas	14,405	1
	8/31/2016 17:00	8/31/2016 17:45	**45**	0.16	**672,162.44**	0.29	**0.12**	1.00	Atlas	107,546	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.2	**113,042.65**	0.2	**0.12**	1.00	Atlas	22,609	1
	9/28/2016 13:00	9/28/2016 13:00	**-**	0.38	**72.24**	0.53	**0.21**	6.00	Atlas	27	1
	9/30/2016	9/30/2016 2:15	**135**	0.68	**108,707.24**	1.22	**0.37**	3.00	Atlas	73,921	1
	10/20/2016 9:15	10/20/2016 10:00	**45**	0.58	**175,532.21**	0.26	**0.26**	3.00	Atlas	101,809	1
	11/8/2016 19:45	11/8/2016 20:00	**15**	0.16	**213,507.31**	0.18	**0.07**	12.00	Atlas	34,161	1
	12/6/2016 5:30	12/6/2016 9:30	**240**	0.86	**26,530.30**	0.58	**0.39**	12.00	Atlas	22,816	1
	12/17/2016 16:30	12/18/2016 2:00	**570**	2.61	**321,983.62**	2.94	**1.70**	12.00	Cloudburst	840,377	1
	12/24/2016 1:00	12/24/2016 1:00	**-**	0.23	**69,427.74**	2.75	**0.11**	12.00	Atlas	15,968	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.12	**102,819.42**	0.35	**0.09**	1.00	Atlas	12,338	1
	1/12/2017 15:45	1/12/2017 18:30	**165**	0.39	**122,840.95**	0.58	**0.19**	6.00	Atlas	47,908	1
	1/14/2017 11:15	1/14/2017 13:45	**150**	0.24	**91,932.38**	1.29	**0.11**	6.00	Atlas	22,064	1
	1/16/2017 23:45	1/17/2017 3:45	**240**	0.5	**100,354.94**	1.92	**0.23**	12.00	Atlas	50,177	1
	1/19/2017 19:15	1/20/2017 3:30	**495**	1.03	**197,885.91**	2.37	**0.47**	12.00	Atlas	203,822	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.42	**259,255.48**	0.47	**0.36**	1.00	Atlas	108,887	1
	2/28/2017 10:15	2/28/2017 10:30	**15**	0.26	**85,580.92**	0.72	**0.12**	6.00	Atlas	22,251	1
	3/1/2017 3:15	3/1/2017 9:00	**345**	1.05	**369,070.80**	1.78	**0.55**	6.00	Atlas	387,524	1
	3/7/2017 7:45	3/7/2017 8:00	**15**	0.56	**186,594.59**	1.66	**0.18**	48.00	Atlas	104,493	1
	3/26/2017 2:15	3/26/2017 2:15	**-**	0.45	**6,491.44**	0.29	**0.21**	6.00	Atlas	2,921	1
	3/27/2017 18:15	3/27/2017 19:00	**45**	0.31	**140,009.39**	0.76	**0.19**	3.00	Atlas	43,403	1
	3/30/2017 9:00	3/30/2017 9:00	**-**	0.06	**223,050.17**	0.82	**0.05**	1.00	Atlas	13,383	1
	3/30/2017 22:00	3/30/2017 22:00	**-**	0.26	**23,838.50**	0.92	**0.12**	6.00	Atlas	6,198	1
	4/3/2017 19:30	4/3/2017 19:30	**-**	0.15	**58,167.80**	0.43	**0.10**	1.00	Atlas	8,725	1
	4/11/2017 4:45	4/11/2017 4:45	**-**	0.34	**64,064.94**	0.1	**0.16**	12.00	Atlas	21,782	1
	4/16/2017 13:30	4/16/2017 20:30	**420**	1.29	**164,731.72**	1.49	**0.50**	24.00	Atlas	212,504	1
	4/21/2017 23:45	4/21/2017 23:45	**-**	0.67	**8,545.69**	1.79	**0.24**	24.00	Atlas	5,726	1
	4/27/2017 6:45	4/27/2017 7:00	**15**	0.1	**393,804.00**	0.79	**0.05**	6.00	Atlas	39,380	1
	4/29/2017 0:15	4/29/2017 3:15	**180**	0.9	**397,092.79**	1.14	**0.46**	6.00	Atlas	357,384	1
	5/1/2017 4:00	5/1/2017 4:00	**-**	0.24	**125,593.42**	1.22	**0.13**	3.00	Atlas	30,142	1
	5/4/2017 19:45	5/5/2017 9:00	**795**	1.69	**207,329.89**	2.63	**0.57**	24.00	Atlas	350,388	1
	5/11/2017 3:45	5/11/2017 3:45	**-**	0.18	**24,774.00**	1.88	**0.10**	6.00	Atlas	4,459	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	1.04	**506,357.68**	1.06	**0.47**	12.00	Atlas	526,612	1
	5/24/2017 18:30	5/24/2017 19:00	**30**	0.54	**82,858.20**	1.43	**0.19**	24.00	Atlas	44,743	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.29	**450,292.62**	1.85	**0.23**	1.00	Atlas	130,585	1
	6/5/2017 9:00	6/5/2017 9:00	**-**	0.04	**901,369.50**	0.05	**0.02**	12.00	Atlas	36,055	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.19	**30,482.68**	0.24	**0.17**	1.00	Atlas	5,792	1
	6/15/2017 3:15	6/15/2017 4:15	**60**	0.71	**190,454.65**	0.72	**0.44**	3.00	Atlas	135,223	1
	6/22/2017 18:45	6/22/2017 19:15	**30**	0.33	**148,775.91**	0.51	**0.17**	6.00	Atlas	49,096	1
	6/23/2017 15:30	6/23/2017 16:15	**45**	0.78	**251,317.23**	1.1	**0.39**	6.00	Atlas	196,027	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.25	**442,086.76**	0.34	**0.21**	1.00	Atlas	110,522	1
CSO120 Total										**5,794,069**	**52**
CSO121*	**7/3/2016 20:15**	7/3/2016 20:15	**-**	1.23	**29,088.24**	0.66	**0.40**	48.00	Atlas	35,779	1
	7/4/2016 14:30	7/4/2016 14:30	**-**	1.23	**1,524.07**	1.14	**0.40**	48.00	Atlas	1,875	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.06	**126,490.00**	1.27	**0.04**	3.00	Atlas	7,589	1
	7/27/2016 23:45	7/27/2016 23:45	**-**	0.65	**54,526.28**	0.42	**0.30**	12.00	Atlas	35,442	1
	7/30/2016 14:30	7/30/2016 14:30	**-**	0.27	**4,861.96**	1.22	**0.23**	1.00	Atlas	1,313	1
	8/4/2016 13:30	8/4/2016 13:45	**15**	0.25	**279,716.88**	0.86	**0.14**	6.00	Atlas	69,929	1
	8/15/2016 3:00	8/15/2016 7:30	**270**	0.81	**209,296.73**	1.09	**0.43**	6.00	Atlas	169,530	1
	8/17/2016 6:15	8/17/2016 7:00	**45**	0.72	**420,160.64**	1.53	**0.32**	6.00	Atlas	302,516	1
	8/20/2016 14:45	8/20/2016 20:30	**345**	1.1	**84,320.05**	2.64	**0.46**	12.00	Atlas	92,752	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.13	**38,055.15**	0.14	**0.11**	1.00	Atlas	4,947	1
	8/31/2016 17:45	8/31/2016 17:45	**-**	0.16	**98,351.44**	0.29	**0.12**	1.00	Atlas	15,736	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.2	**577,372.50**	0.2	**0.12**	1.00	Atlas	115,475	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO121*	**10/20/2016 9:15**	10/20/2016 10:00	**45**	0.58	**219,666.53**	0.26	**0.26**	3.00	Atlas	127,407	1
	11/8/2016 20:00	11/8/2016 20:00	**-**	0.16	**39,134.25**	0.18	**0.07**	12.00	Atlas	6,261	1
	12/6/2016 9:15	12/6/2016 9:30	**15**	0.86	**33,001.65**	0.58	**0.39**	12.00	Atlas	28,381	1
	12/17/2016 18:30	12/18/2016 1:30	**420**	2.61	**111,889.95**	2.94	**1.70**	12.00	Cloudburst	292,033	1
	3/1/2017 3:15	3/1/2017 8:30	**315**	1.05	**45,432.18**	1.71	**0.55**	6.00	Atlas	47,704	1
	5/21/2017 3:45	5/21/2017 3:45	**-**	1.04	**20,499.38**	0.83	**0.47**	12.00	Atlas	21,319	1
	6/5/2017 8:45	6/5/2017 9:15	**30**	0.04	**5,655,752.25**	0.05	**0.02**	12.00	Atlas	226,230	1
	6/5/2017 18:15	6/5/2017 18:30	**15**	0.19	**129,843.16**	0.24	**0.17**	1.00	Atlas	24,670	1
	6/13/2017 17:15	6/13/2017 17:15	**-**	0.15	**1,061.87**	0.18	**0.13**	1.00	Atlas	159	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.71	**47,836.11**	0.54	**0.44**	3.00	Atlas	33,964	1
	6/18/2017 21:45	6/18/2017 21:45	**-**	0.18	**18,928.72**	1.04	**0.11**	3.00	Atlas	3,407	1
	6/22/2017 18:45	6/22/2017 19:15	**30**	0.33	**134,643.97**	0.51	**0.17**	6.00	Atlas	44,433	1
	6/23/2017 8:00	6/23/2017 16:15	**495**	0.78	**265,645.38**	1.1	**0.39**	6.00	Atlas	207,203	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.25	**441,466.96**	0.34	**0.21**	1.00	Atlas	110,367	1
CSO121* Total										**2,026,421**	**26**
CSO125*	**7/3/2016 12:00**	7/3/2016 20:30	**510**	1.02	**37,932.73**	0.5	**0.33**	48.00	Atlas	38,691	1
	7/4/2016 14:30	7/4/2016 15:15	**45**	1.02	**63,307.77**	0.98	**0.33**	48.00	Atlas	64,574	1
	7/6/2016 12:00	7/6/2016 12:00	**-**	Discharge		1.02				11,403	1
	7/12/2016 10:00	7/12/2016 12:00	**120**	0.32	**112,037.13**	0.48	**0.21**	3.00	Atlas	35,852	1
	7/20/2016 15:00	7/20/2016 15:00	**-**	Discharge		0.18				4,109	1
	7/27/2016 18:30	7/27/2016 19:00	**30**	0.59	**60,106.53**	0.28	**0.24**	12.00	Atlas	35,463	1
	7/28/2016 4:45	7/28/2016 17:30	**765**	0.59	**240,090.25**	0.81	**0.24**	12.00	Atlas	141,653	1
	7/30/2016 14:30	7/30/2016 14:30	**-**	0.32	**8,167.66**	1.16	**0.28**	1.00	Atlas	2,614	1
	8/9/2016 15:30	8/9/2016 15:30	**-**	0.24	**37,026.96**	0.77	**0.16**	1.00	Atlas	8,886	1
	8/15/2016 3:00	8/15/2016 7:45	**285**	1.2	**693,722.36**	1.44	**0.61**	6.00	Atlas	832,467	1
	8/17/2016 6:00	8/17/2016 7:30	**90**	0.68	**1,045,283.74**	1.82	**0.31**	6.00	Atlas	710,793	1
	8/20/2016 15:30	8/20/2016 21:15	**345**	0.8	**864,197.83**	2.68	**0.33**	1.00	Atlas	691,358	1
	8/31/2016 17:00	8/31/2016 18:15	**75**	0.6	**565,829.05**	0.77	**0.45**	1.00	Atlas	339,497	1
	9/10/2016 15:15	9/10/2016 15:30	**15**	0.14	**856,064.36**	0.12	**0.09**	1.00	Atlas	119,849	1
	9/28/2016 13:00	9/28/2016 13:15	**15**	0.37	**270,229.05**	0.51	**0.20**	6.00	Atlas	99,985	1
	9/30/2016 1:30	9/30/2016 2:45	**75**	0.59	**471,616.25**	1.16	**0.31**	3.00	Atlas	278,254	1
	10/20/2016 9:30	10/20/2016 11:30	**120**	0.69	**270,243.06**	0.46	**0.28**	3.00	Atlas	186,468	1
	11/23/2016 20:30	11/23/2016 20:30	**-**	0.24	**33,071.42**	0.41	**0.10**	6.00	Atlas	7,937	1
	11/28/2016 18:00	11/28/2016 22:00	**240**	0.9	**98,787.52**	1.14	**0.40**	12.00	Atlas	88,909	1
	12/6/2016 5:45	12/6/2016 12:30	**405**	0.82	**303,209.87**	0.87	**0.38**	12.00	Atlas	248,632	1
	12/11/2016 5:30	12/11/2016 11:30	**360**	Discharge		0.91				2,267,763	1
	12/17/2016 18:45	12/20/2016 8:45	**3,720**	2.67	**30,907,253.53**	2.94	**1.93**	12.00	Cloudburst	82,522,367	1
	12/24/2016 14:30	12/24/2016 14:30	**-**	Discharge		2.74				7,282	1
	1/2/2017 20:00	1/2/2017 20:15	**15**	0.24	**67,689.08**	0.23	**0.10**	6.00	Atlas	16,245	1
	1/3/2017 4:30	1/3/2017 5:15	**45**	0.24	**246,743.63**	0.29	**0.10**	6.00	Atlas	59,218	1
	1/10/2017 19:45	1/10/2017 20:15	**30**	0.16	**252,881.75**	0.4	**0.12**	1.00	Atlas	40,461	1
	1/11/2017 12:45	1/11/2017 13:00	**15**	0.21	**290,867.33**	0.57	**0.13**	3.00	Atlas	61,082	1
	1/12/2017 15:45	1/12/2017 19:00	**195**	0.32	**261,448.25**	0.62	**0.16**	6.00	Atlas	83,663	1
	1/14/2017 11:30	1/14/2017 14:15	**165**	0.23	**359,469.48**	1.22	**0.11**	6.00	Atlas	82,678	1
	1/17/2017 0:15	1/17/2017 4:15	**240**	0.55	**515,122.98**	1.91	**0.25**	12.00	Atlas	283,318	1
	1/19/2017 19:30	1/20/2017 4:15	**525**	1.12	**526,309.69**	2.43	**0.51**	12.00	Atlas	589,467	1
	2/24/2017 19:15	2/24/2017 19:45	**30**	0.7	**475,708.11**	0.75	**0.59**	1.00	Atlas	332,996	1
	2/28/2017 10:30	2/28/2017 10:45	**15**	0.23	**157,101.39**	0.98	**0.11**	12.00	Atlas	36,133	1
	3/1/2017 3:30	3/1/2017 9:45	**375**	1.07	**899,990.56**	2.06	**0.52**	6.00	Atlas	962,990	1
	3/26/2017 1:45	3/26/2017 1:45	**-**	0.5	**14,636.34**	0.27	**0.22**	12.00	Atlas	7,318	1
	4/11/2017 9:15	4/11/2017 9:15	**-**	0.36	**19,524.78**	0.32	**0.17**	12.00	Atlas	7,029	1
	4/16/2017 5:45	4/16/2017 21:00	**915**	1.1	**645,127.26**	1.39	**0.45**	6.00	Atlas	709,640	1
	4/21/2017 22:15	4/21/2017 22:15	**-**	0.57	**30,810.77**	1.43	**0.21**	24.00	Atlas	17,562	1
	4/27/2017 7:00	4/27/2017 7:30	**30**	0.19	**813,442.26**	0.77	**0.13**	1.00	Atlas	154,554	1
	4/29/2017 0:30	4/29/2017 13:00	**750**	1.43	**1,085,218.87**	1.77	**0.81**	3.00	Atlas	1,551,863	1
	5/1/2017 4:00	5/1/2017 4:15	**15**	0.32	**301,907.59**	1.92	**0.17**	3.00	Atlas	96,610	1
	5/4/2017 19:45	5/5/2017 10:00	**855**	1.95	**925,520.71**	3.59	**0.65**	24.00	Atlas	1,804,765	1
	5/11/2017 4:00	5/11/2017 4:15	**15**	0.14	**487,535.79**	2.11	**0.08**	6.00	Atlas	68,255	1
	5/20/2017 19:15	5/21/2017 6:15	**660**	1.21	**681,606.73**	1.22	**0.54**	12.00	Atlas	824,744	1
	5/24/2017 18:15	5/24/2017 19:45	**90**	0.92	**277,885.98**	1.85	**0.34**	24.00	Atlas	255,655	1
	5/27/2017 14:30	5/27/2017 14:45	**15**	0.38	**310,934.42**	2.49	**0.32**	1.00	Atlas	118,155	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.19	**472,976.47**	0.31	**0.17**	1.00	Atlas	89,866	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO125*	**6/15/2017 3:15**	6/15/2017 4:30	**75**	0.85	**403,689.00**	0.84	**0.53**	3.00	Atlas	343,136	1
	6/22/2017 18:45	6/22/2017 19:30	**45**	0.4	**550,082.55**	0.57	**0.21**	6.00	Atlas	220,033	1
	6/23/2017 15:30	6/23/2017 18:15	**165**	0.88	**755,241.02**	1.46	**0.43**	6.00	Atlas	664,612	1
	6/30/2017 21:15	6/30/2017 21:30	**15**	0.23	**1,163,695.17**	0.3	**0.19**	1.00	Atlas	267,650	1
CSO125* Total										**98,494,506**	**51**
CSO126*	**8/20/2016 20:00**	8/20/2016 21:15	**75**	0.8	**486,157.15**	2.68	**0.33**	1.00	Atlas	388,926	1
	8/31/2016 17:15	8/31/2016 18:00	**45**	0.6	**175,548.20**	0.77	**0.45**	1.00	Atlas	105,329	1
	12/17/2016 18:45	12/18/2016 6:45	**720**	2.67	**1,508,683.84**	2.94	**1.93**	12.00	Cloudburst	4,028,186	1
	1/20/2017 1:15	1/20/2017 4:00	**165**	1.12	**213,473.95**	2.3	**0.51**	12.00	Atlas	239,091	1
	3/1/2017 3:15	3/1/2017 9:45	**390**	1.07	**483,719.78**	2.06	**0.52**	6.00	Atlas	517,580	1
	4/16/2017 20:15	4/16/2017 21:15	**60**	1.1	**72,493.05**	1.41	**0.45**	6.00	Atlas	79,742	1
	4/29/2017 2:00	4/29/2017 5:00	**180**	1.43	**531,617.06**	1.74	**0.81**	3.00	Atlas	760,212	1
	5/4/2017 20:15	5/4/2017 20:45	**30**	1.95	**9,469.46**	2.71	**0.65**	24.00	Atlas	18,465	1
	5/5/2017 5:15	5/5/2017 10:45	**330**	1.95	**286,336.28**	3.59	**0.65**	24.00	Atlas	558,356	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.38	**42,341.89**	2.49	**0.32**	1.00	Atlas	16,090	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.19	**22,640.00**	0.3	**0.17**	1.00	Atlas	4,302	1
	6/23/2017 15:30	6/23/2017 15:30	**-**	0.88	**9,141.56**	1.04	**0.43**	6.00	Atlas	8,045	1
CSO126* Total										**6,724,324**	**12**
CSO127*	**7/3/2016 8:00**	7/3/2016 23:45	**945**	0.99	**342,433.24**	0.57	**0.32**	48.00	Atlas	339,009	1
	7/4/2016 8:30	7/4/2016 17:00	**510**	0.99	**174,715.01**	0.99	**0.32**	48.00	Atlas	172,968	1
	7/6/2016 13:30	7/6/2016 13:45	**15**	0.12	**319,495.25**	1.1	**0.09**	1.00	Atlas	38,339	1
	7/12/2016 9:15	7/12/2016 12:15	**180**	0.39	**294,739.97**	0.59	**0.25**	3.00	Atlas	114,949	1
	7/27/2016 18:15	7/28/2016 5:30	**675**	0.64	**1,293,014.61**	0.8	**0.25**	12.00	Atlas	827,529	1
	7/30/2016 14:15	7/30/2016 15:00	**45**	0.3	**235,979.37**	1.23	**0.26**	1.00	Atlas	70,794	1
	8/1/2016 11:15	8/1/2016 11:45	**30**	0.39	**90,322.77**	1.55	**0.27**	1.00	Atlas	35,226	1
	8/1/2016 20:30	8/1/2016 22:00	**90**	0.39	**275,678.18**	1.41	**0.27**	1.00	Atlas	107,514	1
	8/4/2016 13:45	8/4/2016 14:30	**45**	0.6	**563,041.43**	1.23	**0.40**	3.00	Atlas	337,825	1
	8/5/2016 14:15	8/5/2016 14:30	**15**	0.07	**345,511.00**	1.39	**0.05**	1.00	Atlas	24,186	1
	8/8/2016 9:30	8/8/2016 9:30	**-**	Discharge		1.06				677	1
	8/9/2016 15:30	8/9/2016 23:15	**465**	0.27	**301,947.22**	0.92	**0.16**	1.00	Atlas	81,526	1
	8/15/2016 2:45	8/15/2016 8:00	**315**	1.28	**1,523,657.02**	1.55	**0.64**	3.00	Atlas	1,950,281	1
	8/17/2016 4:15	8/17/2016 7:45	**210**	0.57	**1,097,375.47**	1.78	**0.24**	12.00	Atlas	625,504	1
	8/20/2016 10:30	8/20/2016 21:30	**660**	0.72	**663,330.64**	2.55	**0.33**	1.00	Atlas	477,598	1
	8/31/2016 16:45	8/31/2016 18:30	**105**	0.88	**458,738.23**	0.93	**0.69**	1.00	Atlas	403,690	1
	9/10/2016 15:15	9/10/2016 15:45	**30**	0.17	**443,028.29**	0.16	**0.12**	1.00	Atlas	75,315	1
	9/26/2016 9:45	9/26/2016 11:15	**90**	0.22	**114,542.18**	0.22	**0.15**	3.00	Atlas	25,199	1
	9/28/2016 8:45	9/28/2016 14:30	**345**	0.36	**256,145.75**	0.57	**0.19**	6.00	Atlas	92,212	1
	9/29/2016 9:15	9/29/2016 9:30	**15**	0.07	**76,737.86**	0.64	**0.04**	1.00	Atlas	5,372	1
	9/30/2016 0:30	9/30/2016 3:00	**150**	0.59	**232,739.36**	1.15	**0.31**	3.00	Atlas	137,316	1
	10/20/2016 9:30	10/20/2016 17:00	**450**	0.71	**308,018.82**	0.58	**0.27**	24.00	Atlas	218,693	1
	11/8/2016 20:00	11/8/2016 20:30	**30**	0.17	**61,157.41**	0.2	**0.09**	1.00	Atlas	10,397	1
	11/19/2016 3:00	11/19/2016 3:30	**30**	0.18	**159,284.06**	0.18	**0.11**	3.00	Atlas	28,671	1
	11/23/2016 20:15	11/23/2016 21:30	**75**	0.24	**256,857.92**	0.42	**0.10**	6.00	Atlas	61,646	1
	11/28/2016 16:45	11/28/2016 22:15	**330**	0.93	**287,349.61**	1.16	**0.41**	12.00	Atlas	267,235	1
	12/6/2016 4:30	12/6/2016 12:45	**495**	0.89	**488,579.98**	0.95	**0.41**	12.00	Atlas	434,836	1
	12/11/2016 21:45	12/11/2016 22:15	**30**	0.28	**159,021.46**	1.14	**0.12**	12.00	Atlas	44,526	1
	12/17/2016 16:30	12/18/2016 5:00	**750**	2.88	**528,033.15**	3.15	**2.92**	6.00	Cloudburst	1,520,735	1
	12/23/2016 22:30	12/24/2016 1:30	**180**	0.17	**1,000,715.29**	3.03	**0.08**	6.00	Atlas	170,122	1
	12/26/2016 20:30	12/26/2016 22:45	**135**	0.27	**198,242.78**	0.44	**0.14**	6.00	Atlas	53,526	1
	1/3/2017 2:30	1/3/2017 5:00	**150**	0.21	**133,910.95**	0.29	**0.10**	6.00	Atlas	28,121	1
	1/10/2017 20:00	1/10/2017 20:30	**30**	0.16	**261,959.06**	0.43	**0.12**	1.00	Atlas	41,913	1
	1/11/2017 12:30	1/11/2017 14:15	**105**	0.23	**701,435.91**	0.65	**0.15**	3.00	Atlas	161,330	1
	1/12/2017 15:45	1/12/2017 22:00	**375**	0.43	**637,919.14**	0.87	**0.22**	6.00	Atlas	274,305	1
	1/13/2017 15:15	1/13/2017 16:15	**60**	0.32	**268,358.84**	1.13	**0.19**	3.00	Atlas	85,875	1
	1/14/2017 11:15	1/14/2017 14:30	**195**	0.21	**1,231,424.71**	1.35	**0.10**	6.00	Atlas	258,599	1
	1/16/2017 23:45	1/17/2017 4:30	**285**	0.55	**980,879.04**	2.02	**0.25**	12.00	Atlas	539,483	1
	1/19/2017 18:45	1/20/2017 4:30	**585**	1.19	**1,429,268.78**	2.55	**0.55**	12.00	Atlas	1,700,830	1
	2/7/2017 9:45	2/7/2017 10:45	**60**	0.34	**201,166.59**	0.24	**0.16**	6.00	Atlas	68,397	1
	2/24/2017 19:00	2/24/2017 19:30	**30**	0.83	**1,842,547.63**	0.88	**0.70**	1.00	Atlas	1,529,315	1
	2/28/2017 5:45	2/28/2017 10:30	**285**	0.27	**241,241.70**	1.14	**0.13**	6.00	Atlas	65,135	1
	3/1/2017 4:00	3/1/2017 12:00	**480**	1.02	**187,178.52**	2.18	**0.50**	6.00	Atlas	190,922	1
	3/7/2017 7:45	3/7/2017 15:00	**435**	0.48	**676,282.29**	1.65	**0.16**	48.00	Atlas	324,616	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO127*	**3/26/2017 1:15**	3/26/2017 2:30	**75**	0.54	**344,658.33**	0.35	**0.24**	12.00	Atlas	186,116	1
	3/27/2017 18:00	3/27/2017 19:00	**60**	0.3	**554,229.60**	0.84	**0.17**	3.00	Atlas	166,269	1
	3/30/2017 20:45	3/30/2017 20:45	**-**	0.6	**64,278.70**	1.18	**0.30**	6.00	Atlas	38,567	1
	4/11/2017 9:00	4/11/2017 11:15	**135**	0.38	**98,987.00**	0.39	**0.17**	12.00	Atlas	37,615	1
	4/16/2017 5:30	4/16/2017 21:00	**930**	1.1	**768,389.47**	1.43	**0.49**	3.00	Atlas	845,228	1
	4/21/2017 22:00	4/22/2017 0:30	**150**	0.56	**195,097.50**	1.53	**0.20**	24.00	Atlas	109,255	1
	4/27/2017 6:45	4/27/2017 7:15	**30**	0.24	**202,192.33**	0.8	**0.16**	1.00	Atlas	48,526	1
	4/29/2017 0:30	4/29/2017 4:00	**210**	1.3	**6,125,356.33**	1.66	**0.76**	3.00	Atlas	7,962,963	1
	5/1/2017 4:00	5/1/2017 4:00	**-**	0.26	**1,308,456.88**	1.77	**0.14**	3.00	Atlas	340,199	1
	5/4/2017 19:45	5/5/2017 9:45	**840**	1.88	**3,679,715.56**	3.33	**0.61**	48.00	Atlas	6,917,865	1
	5/11/2017 4:00	5/11/2017 4:00	**-**	0.14	**870,009.43**	2.01	**0.07**	3.00	Atlas	121,801	1
	5/21/2017 2:15	5/21/2017 7:15	**300**	1.21	**1,529,690.21**	1.24	**0.53**	12.00	Atlas	1,850,925	1
	5/24/2017 17:15	5/24/2017 20:30	**195**	0.85	**3,198,359.22**	1.86	**0.31**	24.00	Atlas	2,718,605	1
	5/27/2017 14:15	5/27/2017 14:30	**15**	0.22	**1,602,527.09**	2.25	**0.17**	1.00	Atlas	352,556	1
	6/5/2017 9:00	6/5/2017 9:15	**15**	0.18	**5,632,285.33**	0.19	**0.12**	1.00	Atlas	1,013,811	1
	6/5/2017 18:15	6/5/2017 18:45	**30**	0.2	**11,112,577.25**	0.39	**0.17**	1.00	Atlas	2,222,515	1
	6/15/2017 3:00	6/15/2017 4:30	**90**	0.93	**1,565,656.86**	0.89	**0.59**	3.00	Atlas	1,456,061	1
	6/18/2017 21:45	6/18/2017 21:45	**-**	0.17	**366,657.00**	1.2	**0.11**	3.00	Atlas	62,332	1
	6/22/2017 18:30	6/22/2017 19:30	**60**	1.26	**149,542.40**	0.57	**0.45**	6.00	Atlas	188,423	1
	6/23/2017 15:00	6/23/2017 18:30	**210**	1.26	**2,671,135.76**	1.44	**0.45**	6.00	Atlas	3,365,631	1
	6/27/2017 2:15	6/27/2017 2:30	**15**	0.08	**15,005.75**	1.34	**0.07**	1.00	Atlas	1,200	1
	6/30/2017 21:00	6/30/2017 22:00	**60**	0.37	**3,191,693.08**	0.45	**0.32**	1.00	Atlas	1,180,926	1
CSO127* Total										**45,209,649**	**66**
CSO130*	**7/30/2016 14:15**	7/30/2016 14:15	**-**	0.15	**59,997.33**	1.2	**0.13**	1.00	Atlas	9,000	1
	8/1/2016 11:15	8/1/2016 11:30	**15**	0.6	**2,772.55**	1.74	**0.47**	1.00	Atlas	1,664	1
	8/15/2016 3:15	8/15/2016 3:15	**-**	0.88	**244.77**	0.75	**0.45**	6.00	Atlas	215	1
	8/17/2016 4:30	8/17/2016 7:30	**180**	0.72	**26,364.56**	1.58	**0.33**	3.00	Atlas	18,982	1
	8/20/2016 14:30	8/20/2016 14:45	**15**	1.36	**30,379.69**	2.68	**0.66**	1.00	Atlas	41,316	1
	9/28/2016 12:30	9/28/2016 12:30	**-**	0.49	**1,292.18**	0.61	**0.26**	6.00	Atlas	633	1
	9/29/2016 9:15	9/29/2016 9:15	**-**	0.07	**6,089.57**	0.79	**0.04**	1.00	Atlas	426	1
	9/30/2016 1:30	9/30/2016 2:45	**75**	0.64	**12,443.03**	1.36	**0.34**	3.00	Atlas	7,964	1
	12/17/2016 18:30	12/17/2016 19:15	**45**	2.75	**5,495.08**	1.42	**2.05**	12.00	Cloudburst	15,111	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.35	**3,386.63**	0.43	**0.30**	1.00	Atlas	1,185	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	0.98	**16,459.53**	0.98	**0.46**	6.00	Atlas	16,130	1
	4/29/2017 2:15	4/29/2017 2:45	**30**	1.12	**1,388.69**	1.36	**0.58**	6.00	Atlas	1,555	1
	5/4/2017 20:15	5/4/2017 20:15	**-**	1.69	**316.95**	2.02	**0.57**	24.00	Atlas	536	1
	5/21/2017 2:15	5/21/2017 5:45	**210**	1.05	**12,473.01**	1.07	**0.47**	12.00	Atlas	13,097	1
	5/24/2017 18:00	5/24/2017 20:30	**150**	0.59	**54,779.51**	1.47	**0.21**	24.00	Atlas	32,320	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.12	**98,170.92**	0.13	**0.10**	1.00	Atlas	11,781	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.7	**25,577.54**	0.54	**0.44**	3.00	Atlas	17,904	1
CSO130* Total										**189,820**	**17**
CSO131	**7/30/2016 14:00**	7/30/2016 14:00	**-**	0.15	**237,500.00**	1.19	**0.13**	1.00	Atlas	35,625	1
	8/1/2016 11:00	8/1/2016 11:00	**-**	0.6	**21,798.05**	1.73	**0.47**	1.00	Atlas	13,079	1
	8/15/2016 2:45	8/15/2016 3:00	**15**	0.88	**80,965.91**	0.71	**0.45**	6.00	Atlas	71,250	1
	8/17/2016 6:30	8/17/2016 6:45	**15**	0.72	**30,693.61**	1.56	**0.33**	3.00	Atlas	22,099	1
	8/20/2016 14:15	8/20/2016 19:30	**315**	1.36	**38,151.35**	2.88	**0.66**	1.00	Atlas	51,886	1
	8/31/2016 16:30	8/31/2016 17:30	**60**	0.5	**105,883.88**	0.59	**0.40**	1.00	Atlas	52,942	1
	10/20/2016 9:00	10/20/2016 9:00	**-**	0.58	**18,416.95**	0.24	**0.28**	3.00	Atlas	10,682	1
	12/17/2016 18:15	12/17/2016 19:00	**45**	2.75	**44,062.49**	1.38	**2.05**	12.00	Cloudburst	121,172	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.35	**77,782.74**	0.36	**0.30**	1.00	Atlas	27,224	1
	3/1/2017 3:00	3/1/2017 6:45	**225**	0.98	**42,985.11**	1.1	**0.46**	6.00	Atlas	42,125	1
	4/29/2017 1:30	4/29/2017 2:45	**75**	1.12	**96,227.60**	1.36	**0.58**	6.00	Atlas	107,775	1
	5/21/2017 3:15	5/21/2017 3:15	**-**	1.05	**26,311.38**	0.76	**0.47**	12.00	Atlas	27,627	1
	5/27/2017 14:00	5/27/2017 14:00	**-**	0.35	**33,395.89**	1.97	**0.29**	1.00	Atlas	11,689	1
	6/5/2017 18:00	6/5/2017 18:00	**-**	0.12	**75,619.17**	0.11	**0.10**	1.00	Atlas	9,074	1
	6/15/2017 2:45	6/15/2017 3:00	**15**	0.7	**101,785.71**	0.53	**0.44**	3.00	Atlas	71,250	1
	6/30/2017 20:45	6/30/2017 20:45	**-**	0.23	**154,891.30**	0.3	**0.17**	1.00	Atlas	35,625	1
CSO131 Total										**711,124**	**16**
CSO132*	**7/3/2016 10:15**	7/3/2016 11:45	**90**	1.08	**134,503.74**	0.31	**0.35**	48.00	Atlas	145,264	1
	7/3/2016 20:00	7/3/2016 23:30	**210**	1.08	**30,087.11**	0.66	**0.35**	48.00	Atlas	32,494	1
	7/4/2016 8:45	7/4/2016 16:45	**480**	1.08	**33,250.14**	1.07	**0.35**	48.00	Atlas	35,910	1
	7/12/2016 10:00	7/12/2016 12:15	**135**	0.19	**383,682.74**	0.33	**0.12**	3.00	Atlas	72,900	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO132*	**7/28/2016 3:15**	7/28/2016 5:30	**135**	0.67	**512,759.60**	0.8	**0.31**	6.00	Atlas	343,549	1
	7/30/2016 14:15	7/30/2016 15:00	**45**	0.16	**1,856,391.13**	1.06	**0.14**	1.00	Atlas	297,023	1
	8/1/2016 11:00	8/1/2016 11:45	**45**	0.56	**350,662.57**	1.53	**0.41**	1.00	Atlas	196,371	1
	8/9/2016 15:30	8/9/2016 15:45	**15**	0.2	**252,757.60**	0.48	**0.08**	3.00	Atlas	50,552	1
	8/15/2016 2:45	8/15/2016 7:45	**300**	0.91	**354,714.90**	1.18	**0.49**	6.00	Atlas	322,791	1
	8/17/2016 5:45	8/17/2016 7:45	**120**	0.65	**326,217.28**	1.54	**0.29**	3.00	Atlas	212,041	1
	8/20/2016 14:15	8/20/2016 21:15	**420**	1.23	**229,604.98**	2.92	**0.57**	1.00	Atlas	282,414	1
	8/31/2016 17:00	8/31/2016 18:15	**75**	0.48	**783,679.71**	0.7	**0.37**	1.00	Atlas	376,166	1
	9/10/2016 15:15	9/10/2016 15:30	**15**	0.22	**436,940.55**	0.22	**0.15**	1.00	Atlas	96,127	1
	9/28/2016 12:30	9/28/2016 13:15	**45**	0.38	**113,695.63**	0.55	**0.20**	6.00	Atlas	43,204	1
	9/30/2016	9/30/2016 2:45	**165**	0.64	**203,329.06**	1.25	**0.35**	3.00	Atlas	130,131	1
	10/20/2016 9:30	10/20/2016 11:30	**120**	0.52	**306,247.31**	0.37	**0.23**	3.00	Atlas	159,249	1
	11/28/2016 17:30	11/28/2016 22:15	**285**	0.72	**609,268.89**	0.98	**0.32**	12.00	Atlas	438,674	1
	12/6/2016 5:30	12/6/2016 12:45	**435**	0.78	**646,345.65**	0.82	**0.36**	12.00	Atlas	504,150	1
	12/17/2016 16:30	12/18/2016 6:00	**810**	2.71	**138,230.33**	2.97	**1.95**	12.00	Cloudburst	374,604	1
	12/23/2016 23:00	12/24/2016 1:15	**135**	0.21	**526,890.71**	2.86	**0.10**	6.00	Atlas	110,647	1
	12/26/2016 21:00	12/26/2016 21:00	**-**	0.22	**7,546.18**	0.4	**0.11**	6.00	Atlas	1,660	1
	1/2/2017 20:00	1/2/2017 20:00	**-**	0.19	**74,234.32**	0.19	**0.09**	6.00	Atlas	14,105	1
	1/3/2017 4:15	1/3/2017 5:30	**75**	0.19	**937,172.42**	0.27	**0.09**	6.00	Atlas	178,063	1
	1/10/2017 19:45	1/10/2017 20:15	**30**	0.13	**590,370.54**	0.36	**0.10**	1.00	Atlas	76,748	1
	1/11/2017 12:30	1/11/2017 13:00	**30**	0.2	**376,439.85**	0.51	**0.13**	3.00	Atlas	75,288	1
	1/12/2017 15:30	1/12/2017 19:15	**225**	0.32	**497,976.75**	0.6	**0.15**	6.00	Atlas	159,353	1
	1/13/2017 15:45	1/13/2017 16:00	**15**	0.31	**113,429.35**	0.97	**0.19**	3.00	Atlas	35,163	1
	1/14/2017 11:30	1/14/2017 15:00	**210**	0.22	**859,141.00**	1.21	**0.10**	12.00	Atlas	189,011	1
	1/17/2017	1/17/2017 4:30	**270**	0.5	**709,422.34**	1.8	**0.22**	12.00	Atlas	354,711	1
	1/19/2017 19:00	1/20/2017 6:00	**660**	1.05	**652,175.16**	2.29	**0.48**	12.00	Atlas	684,784	1
	2/24/2017 19:00	2/24/2017 19:45	**45**	0.37	**57,429.62**	0.42	**0.31**	1.00	Atlas	21,249	1
	2/28/2017 10:15	2/28/2017 10:45	**30**	0.24	**306,247.00**	0.64	**0.11**	12.00	Atlas	73,499	1
	3/1/2017 3:00	3/1/2017 10:00	**420**	1.03	**1,463,975.09**	1.7	**0.49**	6.00	Atlas	1,507,894	1
	3/7/2017 7:30	3/7/2017 13:00	**330**	0.31	**1,087,145.23**	1.68	**0.14**	12.00	Atlas	337,015	1
	3/26/2017 1:15	3/26/2017 2:45	**90**	0.49	**269,803.94**	0.34	**0.22**	6.00	Atlas	132,204	1
	3/27/2017 18:00	3/27/2017 19:15	**75**	0.25	**970,264.00**	0.74	**0.15**	3.00	Atlas	242,566	1
	3/30/2017 20:30	3/30/2017 20:45	**15**	0.27	**151,259.81**	0.82	**0.13**	6.00	Atlas	40,840	1
	4/3/2017 19:30	4/3/2017 19:45	**15**	0.12	**110,146.92**	0.41	**0.07**	1.00	Atlas	13,218	1
	4/11/2017 4:45	4/11/2017 4:45	**-**	0.31	**7,519.65**	0.09	**0.14**	12.00	Atlas	2,331	1
	4/16/2017 5:30	4/16/2017 21:30	**960**	1.04	**2,584,922.21**	1.31	**0.43**	6.00	Atlas	2,688,319	1
	4/21/2017 22:15	4/22/2017 0:45	**150**	0.56	**1,033,255.96**	1.47	**0.20**	24.00	Atlas	578,623	1
	4/27/2017 6:45	4/27/2017 7:30	**45**	0.18	**2,598,721.83**	0.75	**0.13**	1.00	Atlas	467,770	1
	4/29/2017 0:15	4/29/2017 5:15	**300**	1.28	**3,943,839.24**	1.57	**0.67**	6.00	Atlas	5,048,114	1
	5/1/2017 3:45	5/1/2017 4:15	**30**	0.23	**723,339.87**	1.68	**0.13**	3.00	Atlas	166,368	1
	5/4/2017 19:45	5/5/2017 13:15	**1,050**	1.83	**857,352.96**	3.28	**0.62**	24.00	Atlas	1,568,956	1
	5/11/2017 4:00	5/11/2017 4:15	**15**	0.14	**252,743.36**	1.98	**0.08**	6.00	Atlas	35,384	1
	5/20/2017 19:00	5/21/2017 6:30	**690**	1.1	**951,509.07**	1.13	**0.50**	12.00	Atlas	1,046,660	1
	5/24/2017 17:15	5/25/2017 3:00	**585**	0.72	**539,700.28**	1.8	**0.26**	24.00	Atlas	388,584	1
	5/27/2017 14:00	5/27/2017 14:45	**45**	0.37	**44,802.19**	2.18	**0.30**	1.00	Atlas	16,577	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.04	**180,369.00**	0.05	**0.02**	12.00	Atlas	7,215	1
	6/5/2017 18:00	6/5/2017 18:30	**30**	0.21	**496,128.90**	0.25	**0.18**	1.00	Atlas	104,187	1
	6/22/2017 18:45	6/22/2017 19:30	**45**	0.34	**907,456.50**	0.51	**0.19**	6.00	Atlas	308,535	1
	6/23/2017 15:00	6/23/2017 18:30	**210**	0.77	**1,240,097.17**	1.29	**0.37**	6.00	Atlas	954,875	1
	6/30/2017 21:00	6/30/2017 21:30	**30**	0.18	**1,848,764.67**	0.31	**0.15**	1.00	Atlas	332,778	1
CSO132* Total										**22,076,906**	**54**
CSO140*	**7/3/2016 12:00**	7/3/2016 20:00	**480**	1.13	**8,235.33**	0.58	**0.37**	48.00	Atlas	9,306	1
	7/4/2016 14:15	7/4/2016 14:15	**-**	1.13	**581.85**	1.02	**0.37**	48.00	Atlas	657	1
	7/12/2016 9:45	7/12/2016 9:45	**-**	0.25	**37,362.08**	0.34	**0.16**	3.00	Atlas	9,341	1
	7/28/2016 3:15	7/28/2016 5:00	**105**	0.67	**112,467.97**	0.81	**0.31**	12.00	Atlas	75,354	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.19	**91,426.16**	1.11	**0.17**	1.00	Atlas	17,371	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.39	**9,991.26**	1.47	**0.31**	1.00	Atlas	3,897	1
	8/15/2016 2:45	8/15/2016 4:00	**75**	0.94	**371,789.36**	0.97	**0.50**	6.00	Atlas	349,482	1
	8/17/2016 6:00	8/17/2016 7:00	**60**	0.67	**205,943.64**	1.58	**0.29**	6.00	Atlas	137,982	1
	8/20/2016 14:30	8/20/2016 20:30	**360**	0.85	**331,354.74**	2.47	**0.35**	12.00	Atlas	281,652	1
	8/31/2016 16:45	8/31/2016 17:45	**60**	0.24	**582,075.58**	0.39	**0.17**	1.00	Atlas	139,698	1
	10/20/2016 10:00	10/20/2016 10:00	**-**	0.54	**15,465.35**	0.24	**0.23**	3.00	Atlas	8,351	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO140*	**12/17/2016 18:45**	12/18/2016 0:30	**345**	2.66	**230,701.54**	2.83	**1.86**	12.00	Cloudburst	613,666	1
	3/1/2017 7:00	3/1/2017 7:00	**-**	1.06	**49,570.58**	1.48	**0.54**	6.00	Atlas	52,545	1
	4/29/2017 1:45	4/29/2017 3:15	**90**	0.96	**2,161,695.34**	1.18	**0.50**	6.00	Atlas	2,075,228	1
	5/4/2017 19:45	5/5/2017 8:45	**780**	1.82	**2,001,194.32**	2.85	**0.61**	24.00	Atlas	3,642,174	1
	5/21/2017 2:00	5/21/2017 5:45	**225**	1.02	**2,973,123.84**	1.04	**0.46**	12.00	Atlas	3,032,586	1
	5/24/2017 17:15	5/24/2017 18:45	**90**	0.58	**1,067,988.16**	1.41	**0.21**	24.00	Atlas	619,433	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.3	**830,185.93**	1.88	**0.24**	1.00	Atlas	249,056	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.24	**1,165,930.96**	0.3	**0.21**	1.00	Atlas	279,823	1
	6/15/2017 4:00	6/15/2017 4:00	**-**	0.73	**356,345.40**	0.68	**0.46**	3.00	Atlas	260,132	1
	6/22/2017 18:45	6/22/2017 18:45	**-**	0.32	**712,918.16**	0.46	**0.17**	6.00	Atlas	228,134	1
	6/23/2017 15:15	6/23/2017 16:00	**45**	0.76	**1,410,282.18**	1.03	**0.37**	6.00	Atlas	1,071,814	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.31	**769,556.29**	0.43	**0.26**	1.00	Atlas	238,562	1
CSO140* Total										**13,396,244**	**23**
CSO141	**7/21/2016 13:30**	7/27/2016 13:30	**8,640**	Discharge		0.41				212,885	1
CSO141 Total										**212,885**	**1**
CSO142	**10/20/2016 9:15**	10/20/2016 9:15	**-**	0.54	**28,530.80**	0.07	**0.21**	24.00	Atlas	15,407	1
	12/17/2016 18:45	12/18/2016 0:30	**345**	2.52	**34,419.66**	2.67	**1.58**	12.00	Cloudburst	86,738	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.57	**54,518.49**	0.64	**0.49**	1.00	Atlas	31,076	1
	3/1/2017 3:15	3/1/2017 7:15	**240**	1	**46,873.00**	1.46	**0.52**	6.00	Atlas	46,873	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.54	**20,895.54**	1.56	**0.18**	48.00	Atlas	11,284	1
	4/16/2017 17:30	4/16/2017 17:45	**15**	1.09	**19,704.63**	0.77	**0.48**	6.00	Atlas	21,478	1
	4/29/2017 2:00	4/29/2017 3:00	**60**	1.01	**54,153.48**	1.31	**0.51**	3.00	Atlas	54,695	1
	5/4/2017 20:00	5/4/2017 20:30	**30**	1.73	**1,746.14**	1.83	**0.58**	24.00	Atlas	3,021	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.73	**208.29**	2.33	**0.58**	24.00	Atlas	360	1
	5/20/2017 18:45	5/21/2017 4:15	**570**	1.03	**35,579.57**	0.93	**0.46**	12.00	Atlas	36,647	1
	6/5/2017 8:45	6/5/2017 9:00	**15**	0.07	**327,946.29**	0.08	**0.03**	12.00	Atlas	22,956	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.24	**32,656.29**	0.31	**0.20**	1.00	Atlas	7,838	1
	6/15/2017 3:15	6/15/2017 4:00	**45**	0.7	**35,342.86**	0.66	**0.45**	3.00	Atlas	24,740	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.75	**23,434.53**	1.03	**0.36**	6.00	Atlas	17,576	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.64	**151,630.98**	0.71	**0.53**	1.00	Atlas	97,044	1
CSO142 Total										**477,731**	**15**
CSO144	**7/30/2016 14:15**	7/30/2016 14:15	**-**	0.28	**2,120.64**	1.1	**0.24**	1.00	Atlas	594	1
	8/15/2016 3:00	8/15/2016 3:00	**-**	1.07	**1,896.20**	0.8	**0.57**	6.00	Atlas	2,029	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.69	**81.77**	1.76	**0.32**	3.00	Atlas	56	1
	8/31/2016 16:45	8/31/2016 16:45	**-**	0.46	**4,546.59**	0.45	**0.34**	1.00	Atlas	2,091	1
	12/17/2016 19:15	12/17/2016 19:15	**-**	2.58	**723.71**	1.29	**1.72**	12.00	Cloudburst	1,867	1
	4/29/2017 1:45	4/29/2017 1:45	**-**	1.14	**1,881.74**	0.86	**0.60**	6.00	Atlas	2,145	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.3	**5,912.70**	0.41	**0.26**	1.00	Atlas	1,774	1
CSO144 Total										**10,557**	**7**
CSO148	**7/3/2016 10:15**	7/3/2016 23:00	**765**	0.98	**13,743.36**	0.57	**0.32**	48.00	Atlas	13,468	1
	7/4/2016 14:15	7/4/2016 14:15	**-**	0.98	**9,251.98**	0.87	**0.32**	48.00	Atlas	9,067	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.11	**41,599.36**	1.07	**0.07**	1.00	Atlas	4,576	1
	7/12/2016 9:30	7/12/2016 9:45	**15**	0.34	**36,460.00**	0.48	**0.24**	1.00	Atlas	12,396	1
	7/27/2016 18:15	7/27/2016 18:45	**30**	0.84	**25,947.80**	0.56	**0.33**	12.00	Atlas	21,796	1
	7/28/2016 3:00	7/28/2016 5:00	**120**	0.84	**4,558.51**	0.94	**0.33**	12.00	Atlas	3,829	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.33	**109,135.73**	1.41	**0.29**	1.00	Atlas	36,015	1
	7/31/2016 17:15	7/31/2016 17:15	**-**	0.22	**5,474.95**	1.63	**0.17**	1.00	Atlas	1,204	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.52	**3,685.08**	1.83	**0.24**	12.00	Atlas	1,916	1
	8/1/2016 20:15	8/1/2016 21:15	**60**	0.52	**368,076.92**	1.97	**0.24**	12.00	Atlas	191,400	1
	8/4/2016 13:30	8/4/2016 13:45	**15**	0.22	**90,444.41**	1.2	**0.14**	3.00	Atlas	19,898	1
	8/9/2016 15:30	8/9/2016 15:30	**-**	0.18	**8,415.39**	0.56	**0.11**	3.00	Atlas	1,515	1
	8/15/2016 2:30	8/15/2016 7:15	**285**	1.64	**71,475.99**	1.83	**0.78**	6.00	Atlas	117,221	1
	8/17/2016 6:00	8/17/2016 6:15	**15**	0.48	**5,622.58**	2.04	**0.20**	12.00	Atlas	2,699	1
	8/20/2016 19:45	8/20/2016 20:00	**15**	0.63	**12,251.14**	2.52	**0.28**	1.00	Atlas	7,718	1
	8/31/2016 17:00	8/31/2016 17:00	**-**	0.04	**445,022.00**	0.08	**0.03**	1.00	Atlas	17,801	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.24	**3,843.04**	0.2	**0.17**	1.00	Atlas	922	1
	9/28/2016 12:45	9/28/2016 12:45	**-**	0.42	**10,962.50**	0.61	**0.23**	6.00	Atlas	4,604	1
	9/30/2016 1:30	9/30/2016 2:15	**45**	0.69	**7,246.61**	1.3	**0.35**	3.00	Atlas	5,000	1
	10/20/2016 10:00	10/20/2016 10:00	**-**	0.55	**6,886.25**	0.2	**0.23**	3.00	Atlas	3,787	1
	11/8/2016 20:00	11/8/2016 20:00	**-**	0.18	**1,062.83**	0.23	**0.09**	1.00	Atlas	191	1
	12/6/2016 9:15	12/6/2016 11:30	**135**	0.98	**1,373.74**	0.93	**0.45**	12.00	Atlas	1,346	1
	12/17/2016 18:30	12/18/2016 1:15	**405**	2.52	**78,294.06**	2.76	**1.56**	12.00	Cloudburst	197,301	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO148	**1/10/2017 19:30**	1/10/2017 19:45	**15**	0.18	**10,947.72**	0.46	**0.14**	1.00	Atlas	1,971	1
	1/11/2017 12:30	1/11/2017 12:30	**-**	0.21	**995.24**	0.6	**0.13**	3.00	Atlas	209	1
	1/12/2017 15:30	1/12/2017 18:30	**180**	0.5	**779.56**	0.78	**0.25**	6.00	Atlas	390	1
	1/14/2017 11:30	1/14/2017 13:45	**135**	0.2	**1,200.65**	1.35	**0.09**	12.00	Atlas	240	1
	1/17/2017 0:15	1/17/2017 3:30	**195**	0.52	**32,245.94**	2	**0.23**	12.00	Atlas	16,768	1
	1/19/2017 19:00	1/20/2017 0:45	**345**	1.16	**5,655.93**	2.25	**0.53**	12.00	Atlas	6,561	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.8	**70,353.46**	0.88	**0.69**	1.00	Atlas	56,283	1
	2/28/2017 5:30	2/28/2017 5:30	**-**	0.27	**4,807.81**	0.94	**0.12**	12.00	Atlas	1,298	1
	3/1/2017 3:15	3/1/2017 8:45	**330**	0.99	**89,200.61**	2.12	**0.52**	6.00	Atlas	88,309	1
	3/7/2017 7:45	3/7/2017 8:00	**15**	0.55	**22,433.24**	1.6	**0.18**	48.00	Atlas	12,338	1
	3/27/2017 18:00	3/27/2017 18:15	**15**	0.29	**13,470.00**	0.7	**0.17**	3.00	Atlas	3,906	1
	3/30/2017 20:30	3/30/2017 21:45	**75**	0.49	**49,232.29**	1.11	**0.24**	6.00	Atlas	24,124	1
	4/16/2017 5:30	4/16/2017 5:30	**-**	1.23	**3,331.31**	0.48	**0.58**	3.00	Atlas	4,098	1
	4/16/2017 17:30	4/16/2017 20:15	**165**	1.23	**43,800.14**	1.47	**0.58**	3.00	Atlas	53,874	1
	4/21/2017 22:00	4/21/2017 22:00	**-**	0.56	**2,436.13**	1.51	**0.20**	24.00	Atlas	1,364	1
	4/27/2017 6:45	4/27/2017 7:00	**15**	0.21	**25,826.00**	0.78	**0.14**	1.00	Atlas	5,423	1
	4/29/2017 0:15	4/29/2017 3:15	**180**	0.97	**163,044.00**	1.31	**0.57**	3.00	Atlas	158,153	1
	5/1/2017 3:45	5/1/2017 3:45	**-**	0.4	**14,900.28**	1.56	**0.21**	3.00	Atlas	5,960	1
	5/4/2017 19:45	5/5/2017 6:45	**660**	1.83	**19,688.95**	2.8	**0.61**	24.00	Atlas	36,031	1
	5/11/2017 3:45	5/11/2017 3:45	**-**	0.14	**16,308.36**	2	**0.08**	3.00	Atlas	2,283	1
	5/20/2017 18:45	5/20/2017 18:45	**-**	1.21	**1,539.86**	0.28	**0.52**	12.00	Atlas	1,863	1
	5/21/2017 3:30	5/21/2017 4:30	**60**	1.21	**23,442.51**	1.03	**0.52**	12.00	Atlas	28,365	1
	5/24/2017 18:00	5/24/2017 18:45	**45**	0.77	**3,091.78**	1.74	**0.28**	24.00	Atlas	2,381	1
	6/5/2017 9:00	6/5/2017 9:00	**-**	0.07	**95,397.29**	0.07	**0.03**	12.00	Atlas	6,678	1
	6/5/2017 18:15	6/5/2017 18:30	**15**	0.22	**12,724.73**	0.29	**0.19**	1.00	Atlas	2,799	1
	6/15/2017 3:00	6/15/2017 4:00	**60**	0.95	**28,865.20**	0.87	**0.62**	3.00	Atlas	27,422	1
	6/22/2017 18:45	6/22/2017 18:45	**-**	0.42	**5,348.00**	0.55	**0.23**	6.00	Atlas	2,246	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.97	**22,554.02**	1.21	**0.53**	3.00	Atlas	21,877	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.41	**323,216.29**	0.49	**0.35**	1.00	Atlas	132,519	1
CSO148 Total										**1,381,406**	**52**
CSO149*	**7/3/2016 12:15**	7/3/2016 23:30	**675**	1.16	**211,998.21**	0.7	**0.38**	48.00	Atlas	245,918	1
	7/4/2016 8:45	7/4/2016 16:45	**480**	1.16	**187,806.12**	1.16	**0.38**	48.00	Atlas	217,855	1
	7/6/2016 13:30	7/6/2016 13:30	**-**	0.18	**39,573.06**	1.31	**0.12**	1.00	Atlas	7,123	1
	7/12/2016 10:00	7/12/2016 10:30	**30**	0.24	**85,032.04**	0.5	**0.15**	3.00	Atlas	20,408	1
	7/28/2016 3:30	7/28/2016 5:30	**120**	0.52	**1,400,903.63**	0.61	**0.24**	12.00	Atlas	728,470	1
	7/30/2016 14:15	7/30/2016 15:00	**45**	0.43	**6,427,965.79**	1.14	**0.37**	1.00	Atlas	2,764,025	1
	7/31/2016 17:45	7/31/2016 17:45	**-**	0.08	**153,523.63**	1.22	**0.06**	1.00	Atlas	12,282	1
	8/1/2016 11:15	8/1/2016 11:45	**30**	0.39	**1,819,733.44**	1.56	**0.30**	1.00	Atlas	709,696	1
	8/5/2016 14:00	8/5/2016 14:30	**30**	0.17	**595,286.82**	1.4	**0.11**	3.00	Atlas	101,199	1
	8/11/2016 17:30	8/11/2016 18:15	**45**	Discharge		0.33				14,851	1
	8/12/2016 10:45	8/12/2016 13:45	**180**	Discharge		0.37				107,361	1
	9/30/2016 1:45	9/30/2016 3:00	**75**	0.71	**361,498.69**	1.28	**0.36**	3.00	Atlas	256,664	1
	10/20/2016 9:45	10/20/2016 11:45	**120**	0.54	**206,097.43**	0.3	**0.21**	24.00	Atlas	111,293	1
	11/8/2016 20:00	11/8/2016 20:30	**30**	0.19	**289,917.26**	0.24	**0.09**	12.00	Atlas	55,084	1
	11/28/2016 17:00	11/28/2016 22:15	**315**	0.68	**155,115.69**	0.95	**0.29**	12.00	Atlas	105,479	1
	12/6/2016 5:00	12/6/2016 12:45	**465**	0.86	**475,182.42**	0.89	**0.39**	12.00	Atlas	408,657	1
	12/17/2016 16:30	12/18/2016 2:15	**585**	2.52	**166,825.68**	2.81	**1.58**	12.00	Cloudburst	420,401	1
	12/23/2016 23:00	12/24/2016 1:30	**150**	0.18	**49,004.28**	2.67	**0.08**	12.00	Atlas	8,821	1
	12/26/2016 20:45	12/26/2016 21:00	**15**	0.24	**18,323.54**	0.39	**0.13**	6.00	Atlas	4,398	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.15	**959.27**	0.38	**0.10**	1.00	Atlas	144	1
	1/11/2017 12:45	1/11/2017 13:15	**30**	0.22	**70,570.59**	0.56	**0.14**	3.00	Atlas	15,526	1
	1/12/2017 16:00	1/12/2017 19:00	**180**	0.51	**79,098.08**	0.72	**0.26**	6.00	Atlas	40,340	1
	1/13/2017 16:00	1/13/2017 16:00	**-**	0.29	**6,349.66**	1.16	**0.17**	3.00	Atlas	1,841	1
	1/14/2017 11:30	1/14/2017 14:15	**165**	0.21	**203,491.90**	1.39	**0.10**	12.00	Atlas	42,733	1
	1/17/2017	1/17/2017 4:15	**255**	0.52	**313,413.67**	2.02	**0.24**	12.00	Atlas	162,975	1
	1/19/2017 19:15	1/20/2017 4:00	**525**	1.13	**569,554.60**	2.47	**0.52**	12.00	Atlas	643,597	1
	2/7/2017 10:45	2/7/2017 10:45	**-**	0.37	**701.97**	0.32	**0.19**	6.00	Atlas	260	1
	2/24/2017 19:45	2/24/2017 20:00	**15**	0.57	**80,767.28**	0.64	**0.49**	1.00	Atlas	46,037	1
	2/28/2017 10:30	2/28/2017 11:00	**30**	0.26	**166,950.50**	0.86	**0.12**	12.00	Atlas	43,407	1
	3/1/2017 3:45	3/1/2017 9:45	**360**	1	**784,330.94**	1.87	**0.52**	6.00	Atlas	784,331	1
	3/7/2017 8:45	3/7/2017 13:15	**270**	0.54	**18,601.91**	1.65	**0.18**	48.00	Atlas	10,045	1
	3/26/2017 1:45	3/26/2017 2:45	**60**	0.4	**42,650.33**	0.29	**0.19**	6.00	Atlas	17,060	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO149*	**3/27/2017 18:15**	3/27/2017 19:30	**75**	0.26	**547,652.23**	0.66	**0.15**	3.00	Atlas	142,390	1
	3/30/2017 22:15	3/31/2017 1:15	**180**	0.47	**8,991.77**	1.21	**0.23**	6.00	Atlas	4,226	1
	4/3/2017 19:45	4/3/2017 19:45	**-**	0.13	**23,537.15**	0.71	**0.09**	1.00	Atlas	3,060	1
	4/16/2017 6:15	4/16/2017 21:15	**900**	1.09	**621,962.70**	1.42	**0.48**	6.00	Atlas	677,939	1
	4/22/2017 0:30	4/22/2017 0:45	**15**	0.64	**55,963.70**	1.59	**0.23**	24.00	Atlas	35,817	1
	4/27/2017 7:00	4/27/2017 7:15	**15**	0.21	**415,970.43**	0.86	**0.14**	1.00	Atlas	87,354	1
	4/29/2017 0:30	4/29/2017 4:00	**210**	1.01	**406,346.55**	1.32	**0.51**	3.00	Atlas	410,410	1
	5/5/2017 4:45	5/5/2017 10:30	**345**	1.73	**430,764.14**	2.85	**0.58**	24.00	Atlas	745,222	1
	6/15/2017 3:15	6/15/2017 5:00	**105**	0.7	**1,296,817.96**	0.76	**0.45**	3.00	Atlas	907,773	1
	6/18/2017 22:00	6/18/2017 22:00	**-**	0.15	**11,183.33**	0.95	**0.09**	3.00	Atlas	1,678	1
	6/22/2017 19:00	6/22/2017 19:45	**45**	0.33	**876,590.30**	0.49	**0.18**	6.00	Atlas	289,275	1
	6/23/2017 15:30	6/23/2017 18:30	**180**	0.75	**2,135,181.87**	1.24	**0.36**	6.00	Atlas	1,601,386	1
	6/30/2017 21:15	6/30/2017 22:00	**45**	0.64	**1,922,840.13**	0.72	**0.53**	1.00	Atlas	1,230,618	1
CSO149* Total										**14,245,425**	**45**
CSO150	**7/3/2016 10:00**	7/3/2016 10:00	**-**	1.31	**32.76**	0.23	**0.43**	48.00	Atlas	43	1
	7/3/2016 21:15	7/4/2016 0:30	**195**	1.31	**52,938.53**	0.76	**0.43**	48.00	Atlas	69,349	1
	7/4/2016 15:15	7/4/2016 18:30	**195**	1.31	**62,662.82**	1.32	**0.43**	48.00	Atlas	82,088	1
	7/28/2016 3:15	7/28/2016 5:15	**120**	0.85	**11,546.64**	1.09	**0.43**	1.00	Atlas	9,815	1
	7/30/2016 14:00	7/30/2016 14:00	**-**	0.18	**4,673.67**	1.44	**0.16**	1.00	Atlas	841	1
	8/12/2016 13:45	8/12/2016 13:45	**-**	0.37	**1,202.62**	0.38	**0.30**	1.00	Atlas	445	1
	8/15/2016 2:30	8/15/2016 8:00	**330**	0.74	**223,323.35**	1.23	**0.39**	6.00	Atlas	165,259	1
	8/17/2016 6:45	8/17/2016 9:30	**165**	1.11	**49,093.23**	2.23	**0.51**	3.00	Atlas	54,493	1
	8/20/2016 14:15	8/20/2016 21:15	**420**	1.48	**120,869.61**	3.57	**0.64**	12.00	Atlas	178,887	1
	9/30/2016 2:30	9/30/2016 3:30	**60**	0.52	**95,056.23**	1.29	**0.28**	3.00	Atlas	49,429	1
	10/20/2016 11:30	10/20/2016 11:30	**-**	0.67	**1,570.39**	0.48	**0.28**	3.00	Atlas	1,052	1
	11/28/2016 19:15	11/28/2016 22:00	**165**	0.7	**48,629.20**	1.04	**0.30**	12.00	Atlas	34,040	1
	12/6/2016 7:30	12/6/2016 12:45	**315**	0.95	**205,857.47**	1	**0.44**	12.00	Atlas	195,565	1
	12/17/2016 18:15	12/18/2016 3:45	**570**	3.07	**193,538.79**	3.4	**3.65**	12.00	Cloudburst	594,164	1
	12/24/2016 1:00	12/24/2016 2:00	**60**	0.29	**51,237.76**	3.27	**0.13**	12.00	Atlas	14,859	1
	1/17/2017 2:00	1/17/2017 5:00	**180**	0.6	**108,474.50**	2.19	**0.28**	12.00	Atlas	65,085	1
	1/19/2017 20:30	1/20/2017 4:30	**480**	0.95	**367,851.88**	2.42	**0.43**	12.00	Atlas	349,459	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.44	**8,537.43**	0.47	**0.36**	1.00	Atlas	3,756	1
	3/1/2017 3:00	3/1/2017 10:30	**450**	1.35	**102,611.73**	2.24	**0.71**	3.00	Atlas	138,526	1
	4/11/2017 6:00	4/11/2017 6:00	**-**	0.39	**5,058.33**	0.18	**0.18**	12.00	Atlas	1,973	1
	4/16/2017 13:00	4/16/2017 21:45	**525**	1.24	**68,792.94**	1.58	**0.48**	24.00	Atlas	85,303	1
	4/29/2017 1:45	4/29/2017 9:00	**435**	1.25	**153,965.89**	1.56	**0.66**	3.00	Atlas	192,457	1
	5/4/2017 20:45	5/5/2017 13:30	**1,005**	1.66	**206,147.46**	3.06	**0.57**	24.00	Atlas	342,205	1
	5/21/2017 3:00	5/21/2017 7:30	**270**	1.34	**108,549.57**	1.39	**0.60**	12.00	Atlas	145,456	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.26	**23,797.73**	0.27	**0.22**	1.00	Atlas	6,187	1
	6/15/2017 3:00	6/15/2017 5:15	**135**	0.53	**34,471.72**	0.74	**0.33**	3.00	Atlas	18,270	1
	6/23/2017 16:15	6/23/2017 20:00	**225**	1.22	**126,130.53**	1.45	**0.43**	6.00	Atlas	153,879	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.33	**6,111.88**	0.42	**0.28**	1.00	Atlas	2,017	1
CSO150 Total										**2,954,905**	**28**
CSO151	**7/3/2016 8:00**	7/4/2016 1:15	**1,035**	1.05	**575,003.27**	0.67	**0.34**	48.00	Atlas	603,753	1
	7/4/2016 14:30	7/4/2016 19:00	**270**	1.05	**428,608.41**	1.05	**0.34**	48.00	Atlas	450,039	1
	7/6/2016 13:30	7/6/2016 14:45	**75**	0.12	**1,428,386.92**	1.16	**0.09**	1.00	Atlas	171,406	1
	7/12/2016 9:15	7/12/2016 13:00	**225**	0.23	**1,653,053.83**	0.44	**0.15**	1.00	Atlas	380,202	1
	7/27/2016 18:30	7/28/2016 9:45	**915**	0.49	**2,383,185.31**	0.74	**0.20**	12.00	Atlas	1,167,761	1
	7/30/2016 14:30	7/30/2016 16:15	**105**	0.37	**541,759.03**	1.13	**0.32**	1.00	Atlas	200,451	1
	7/31/2016 17:45	7/31/2016 18:00	**15**	0.06	**128,472.17**	1.19	**0.03**	1.00	Atlas	7,708	1
	8/1/2016 11:30	8/1/2016 12:15	**45**	0.43	**214,824.91**	1.49	**0.26**	1.00	Atlas	92,375	1
	8/1/2016 20:30	8/2/2016	**210**	0.43	**978,134.44**	1.4	**0.26**	1.00	Atlas	420,598	1
	8/4/2016 13:45	8/4/2016 15:00	**75**	0.48	**363,860.50**	1.31	**0.32**	3.00	Atlas	174,653	1
	8/5/2016 14:15	8/5/2016 15:15	**60**	0.12	**511,138.75**	1.5	**0.08**	3.00	Atlas	61,337	1
	8/9/2016 15:45	8/9/2016 23:30	**465**	0.18	**684,990.56**	0.79	**0.13**	1.00	Atlas	123,298	1
	8/14/2016 16:00	8/14/2016 16:15	**15**	1.23	**12,274.06**	0.3	**0.61**	3.00	Atlas	15,097	1
	8/15/2016 3:00	8/15/2016 9:45	**405**	1.23	**565,073.02**	1.44	**0.61**	3.00	Atlas	695,040	1
	8/17/2016 4:15	8/17/2016 14:15	**600**	0.55	**956,726.95**	1.81	**0.23**	12.00	Atlas	526,200	1
	8/31/2016 17:15	8/31/2016 18:45	**90**	0.12	**1,285,831.75**	0.25	**0.08**	1.00	Atlas	154,300	1
	9/10/2016 15:15	9/10/2016 16:30	**75**	0.19	**1,067,772.00**	0.18	**0.12**	1.00	Atlas	202,877	1
	9/26/2016 9:45	9/26/2016 12:00	**135**	0.24	**438,852.33**	0.24	**0.16**	3.00	Atlas	105,325	1
	9/28/2016 8:45	9/28/2016 15:15	**390**	0.33	**1,049,721.00**	0.57	**0.17**	6.00	Atlas	346,408	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO151	**9/29/2016 9:30**	9/29/2016 10:00	**30**	0.08	**156,347.00**	0.64	**0.05**	3.00	Atlas	12,508	1
	9/30/2016 0:30	9/30/2016 4:00	**210**	0.7	**981,940.76**	1.24	**0.37**	3.00	Atlas	687,359	1
	10/20/2016 10:15	10/20/2016 17:30	**435**	0.51	**773,942.76**	0.39	**0.20**	24.00	Atlas	394,711	1
	11/8/2016 20:30	11/8/2016 21:00	**30**	0.22	**120,961.55**	0.25	**0.11**	1.00	Atlas	26,612	1
	11/19/2016 1:45	11/19/2016 3:45	**120**	0.15	**229,786.40**	0.15	**0.10**	3.00	Atlas	34,468	1
	11/23/2016 20:15	11/23/2016 22:15	**120**	0.25	**406,715.20**	0.4	**0.10**	6.00	Atlas	101,679	1
	11/28/2016 14:15	11/28/2016 23:15	**540**	0.79	**701,638.70**	1.04	**0.35**	12.00	Atlas	554,295	1
	12/6/2016 4:30	12/6/2016 14:00	**570**	0.91	**864,530.45**	0.94	**0.42**	12.00	Atlas	786,723	1
	12/11/2016 21:30	12/11/2016 23:45	**135**	0.26	**521,079.96**	1.16	**0.11**	12.00	Atlas	135,481	1
	12/17/2016 16:30	12/18/2016 23:00	**1,830**	2.64	**1,437,286.86**	2.9	**1.91**	12.00	Cloudburst	3,794,437	1
	12/23/2016 22:15	12/24/2016 3:00	**285**	0.16	**2,140,166.00**	2.79	**0.07**	12.00	Atlas	342,427	1
	12/26/2016 20:30	12/27/2016	**210**	0.24	**886,906.92**	0.4	**0.11**	6.00	Atlas	212,858	1
	1/3/2017 2:15	1/3/2017 6:00	**225**	0.2	**961,920.15**	0.27	**0.08**	6.00	Atlas	192,384	1
	1/10/2017 19:45	1/10/2017 21:30	**105**	0.13	**1,432,274.31**	0.39	**0.10**	1.00	Atlas	186,196	1
	1/11/2017 12:30	1/11/2017 16:00	**210**	0.24	**886,793.46**	0.63	**0.16**	3.00	Atlas	212,830	1
	1/12/2017 16:00	1/13/2017 0:30	**510**	0.4	**1,500,925.90**	0.82	**0.20**	6.00	Atlas	600,370	1
	1/13/2017 14:45	1/13/2017 21:15	**390**	0.29	**663,987.28**	1.08	**0.19**	3.00	Atlas	192,556	1
	1/14/2017 10:00	1/14/2017 20:00	**600**	0.21	**2,023,604.90**	1.29	**0.10**	12.00	Atlas	424,957	1
	1/15/2017 13:00	1/15/2017 21:15	**495**	0.13	**1,087,452.46**	1.41	**0.07**	3.00	Atlas	141,369	1
	1/16/2017 18:30	1/17/2017 23:45	**1,755**	0.49	**2,256,289.27**	1.9	**0.22**	12.00	Atlas	1,105,582	1
	1/19/2017 18:45	1/21/2017 0:30	**1,785**	1.18	**1,628,494.07**	2.47	**0.54**	12.00	Atlas	1,921,623	1
	2/7/2017 9:45	2/7/2017 15:30	**345**	0.33	**635,397.94**	0.33	**0.16**	6.00	Atlas	209,681	1
	2/8/2017 17:15	2/8/2017 17:45	**30**	0.08	**961,550.75**	0.36	**0.04**	6.00	Atlas	76,924	1
	2/24/2017 19:15	2/24/2017 22:45	**210**	0.48	**1,607,427.50**	0.57	**0.41**	1.00	Atlas	771,565	1
	2/28/2017 5:45	2/28/2017 12:00	**375**	0.3	**747,915.93**	0.81	**0.14**	12.00	Atlas	224,375	1
	3/1/2017 3:30	3/2/2017 0:15	**1,245**	1.01	**2,321,692.27**	1.84	**0.53**	6.00	Atlas	2,344,909	1
	3/7/2017 8:00	3/7/2017 17:15	**555**	0.54	**1,500,545.48**	1.73	**0.18**	48.00	Atlas	810,295	1
	3/20/2017 12:00	3/20/2017 12:00	**-**	0.02	**29,344.50**	0.09	**0.02**	1.00	Atlas	587	1
	3/26/2017 1:30	3/26/2017 11:00	**570**	0.5	**693,575.76**	0.52	**0.22**	12.00	Atlas	346,788	1
	3/27/2017 17:45	3/27/2017 21:15	**210**	0.29	**1,104,320.10**	0.79	**0.17**	3.00	Atlas	320,253	1
	3/30/2017 21:00	3/31/2017 3:15	**375**	0.63	**355,437.21**	1.6	**0.32**	6.00	Atlas	223,925	1
	4/3/2017 19:45	4/3/2017 20:15	**30**	0.12	**73,832.00**	0.92	**0.07**	1.00	Atlas	8,860	1
	4/5/2017 16:45	4/5/2017 17:15	**30**	0.02	**182,304.00**	0.98	**0.02**	1.00	Atlas	3,646	1
	4/8/2017 10:00	4/8/2017 10:00	**-**	Discharge		0.19				51	1
	4/9/2017 10:00	4/9/2017 20:00	**600**	Discharge		0.19				254	1
	4/11/2017 7:30	4/11/2017 21:45	**855**	0.38	**563,423.11**	0.45	**0.17**	12.00	Atlas	214,101	1
	4/12/2017 7:00	4/12/2017 8:30	**90**	Discharge		0.45				1,300	1
	4/14/2017 8:00	4/14/2017 10:45	**165**	Discharge		0.38				929	1
	4/16/2017 4:45	4/17/2017 21:15	**2,430**	1.14	**1,005,480.68**	1.55	**0.50**	6.00	Atlas	1,146,248	1
	4/18/2017 8:45	4/18/2017 8:45	**-**	Discharge		1.36				10	1
	4/18/2017 21:15	4/18/2017 21:15	**-**	Discharge		1.17				11	1
	4/19/2017 11:00	4/19/2017 11:00	**-**	Discharge		1.17				16	1
	4/19/2017 21:15	4/19/2017 21:15	**-**	Discharge		1.17				10	1
	4/20/2017 8:00	4/20/2017 8:00	**-**	Discharge		1.17				1	1
	4/21/2017 21:15	4/22/2017 14:45	**1,050**	0.55	**73,718.36**	1.73	**0.20**	24.00	Atlas	40,545	1
	4/23/2017 11:15	4/23/2017 11:15	**-**	Discharge		1.56				15	1
	4/27/2017 6:45	4/29/2017 23:15	**3,870**	0.17	**17,986,386.47**	1.76	**0.10**	1.00	Atlas	3,057,686	1
	4/30/2017 8:15	5/1/2017 9:45	**1,530**	Discharge		1.49				247,877	1
	5/4/2017 7:30	5/8/2017 12:30	**6,060**	1.9	**986,415.17**	3.31	**0.63**	24.00	Atlas	1,874,189	1
	5/9/2017 6:45	5/9/2017 7:45	**60**	Discharge		2				1,151	1
	5/9/2017 20:00	5/9/2017 22:00	**120**	Discharge		2				803	1
	5/10/2017 7:00	5/11/2017 7:00	**1,440**	Discharge		2.13				69,943	1
	5/12/2017 11:15	5/12/2017 11:30	**15**	0.04	**30,084.00**	0.38	**0.02**	6.00	Atlas	1,203	1
	5/13/2017 9:00	5/13/2017 9:00	**-**	Discharge		0.22				105	1
	5/15/2017 9:30	5/15/2017 16:15	**405**	Discharge		0.2				360	1
	5/16/2017 8:00	5/16/2017 13:30	**330**	Discharge		0.19				92	1
	5/20/2017 19:00	5/21/2017 12:45	**1,065**	1.31	**994,841.06**	1.34	**0.58**	12.00	Atlas	1,303,242	1
	5/24/2017 17:30	5/25/2017 10:45	**1,035**	0.7	**1,060,145.03**	2.05	**0.26**	6.00	Atlas	742,102	1
	5/27/2017 14:30	5/27/2017 14:45	**15**	0.11	**12,157.73**	2.11	**0.09**	1.00	Atlas	1,337	1
	6/5/2017 9:15	6/5/2017 10:30	**75**	0.1	**3,315,204.90**	0.11	**0.06**	1.00	Atlas	331,520	1
	6/5/2017 18:45	6/5/2017 20:00	**75**	0.41	**658,801.61**	0.52	**0.36**	1.00	Atlas	270,109	1
	6/15/2017 3:30	6/15/2017 8:00	**270**	0.92	**382,449.36**	1.07	**0.59**	3.00	Atlas	351,853	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO151	**6/16/2017 14:45**	6/16/2017 14:45	**-**	Discharge		1.07				152	1
	6/18/2017 22:00	6/19/2017 0:30	**150**	0.13	**777,458.31**	1.21	**0.08**	3.00	Atlas	101,070	1
	6/22/2017 15:45	6/22/2017 21:00	**315**	0.41	**693,182.49**	0.55	**0.22**	6.00	Atlas	284,205	1
	6/23/2017 14:30	6/23/2017 22:00	**450**	0.88	**891,953.01**	1.43	**0.46**	6.00	Atlas	784,919	1
	6/27/2017 2:15	6/27/2017 3:15	**60**	0.08	**437,732.00**	1.37	**0.07**	1.00	Atlas	35,019	1
	6/28/2017 14:45	6/29/2017 13:30	**1,365**	Discharge		1.37				6,722	1
	6/30/2017 21:15	6/30/2017 23:30	**135**	0.32	**2,475,466.97**	0.4	**0.28**	1.00	Atlas	792,149	1
CSO151 Total										**34,963,356**	**88**
CSO152	**7/3/2016 7:45**	7/4/2016	**975**	1.12	**498,452.89**	0.69	**0.36**	48.00	Atlas	558,267	1
	7/4/2016 8:30	7/4/2016 17:15	**525**	1.12	**266,246.57**	1.12	**0.36**	48.00	Atlas	298,196	1
	7/6/2016 13:15	7/6/2016 14:00	**45**	0.12	**779,795.33**	1.23	**0.09**	1.00	Atlas	93,575	1
	7/12/2016 9:15	7/12/2016 12:15	**180**	0.2	**932,752.30**	0.44	**0.13**	3.00	Atlas	186,550	1
	7/27/2016 18:30	7/28/2016 5:45	**675**	0.48	**746,949.88**	0.66	**0.22**	12.00	Atlas	358,536	1
	7/30/2016 14:30	7/30/2016 15:00	**30**	0.34	**565,447.03**	1.08	**0.30**	1.00	Atlas	192,252	1
	8/1/2016 11:15	8/1/2016 11:45	**30**	0.41	**152,339.10**	1.45	**0.27**	1.00	Atlas	62,459	1
	8/1/2016 20:30	8/1/2016 22:00	**90**	0.41	**556,990.68**	1.34	**0.27**	1.00	Atlas	228,366	1
	8/4/2016 14:00	8/4/2016 14:15	**15**	0.34	**185,727.47**	1.09	**0.23**	3.00	Atlas	63,147	1
	8/5/2016 14:15	8/5/2016 14:30	**15**	0.13	**392,426.38**	1.29	**0.09**	3.00	Atlas	51,015	1
	8/9/2016 15:45	8/9/2016 23:00	**435**	0.24	**69,088.71**	0.71	**0.16**	3.00	Atlas	16,581	1
	8/15/2016 2:45	8/15/2016 8:00	**315**	1.04	**332,775.10**	1.34	**0.51**	6.00	Atlas	346,086	1
	8/17/2016 4:15	8/17/2016 13:45	**570**	0.53	**601,715.11**	1.63	**0.22**	12.00	Atlas	318,909	1
	8/20/2016 10:45	8/20/2016 21:30	**645**	0.75	**227,126.43**	2.29	**0.30**	12.00	Atlas	170,345	1
	8/31/2016 17:30	8/31/2016 18:15	**45**	0.07	**732,522.86**	0.32	**0.05**	3.00	Atlas	51,277	1
	9/10/2016 15:15	9/10/2016 16:00	**45**	0.19	**457,901.37**	0.17	**0.12**	1.00	Atlas	87,001	1
	9/26/2016 9:45	9/26/2016 11:30	**105**	0.25	**225,665.60**	0.25	**0.17**	3.00	Atlas	56,416	1
	9/28/2016 12:45	9/28/2016 14:45	**120**	0.36	**429,469.75**	0.61	**0.19**	6.00	Atlas	154,609	1
	9/29/2016 9:45	9/29/2016 9:45	**-**	0.07	**71,029.14**	0.68	**0.05**	1.00	Atlas	4,972	1
	9/30/2016 0:30	9/30/2016 3:15	**165**	0.71	**377,986.14**	1.27	**0.37**	3.00	Atlas	268,370	1
	10/20/2016 9:30	10/20/2016 17:00	**450**	0.55	**175,906.87**	0.44	**0.21**	24.00	Atlas	96,749	1
	11/8/2016 20:00	11/8/2016 20:30	**30**	0.19	**467,040.68**	0.22	**0.09**	12.00	Atlas	88,738	1
	11/19/2016 3:00	11/19/2016 3:30	**30**	0.16	**118,366.31**	0.16	**0.10**	3.00	Atlas	18,939	1
	11/23/2016 20:15	11/23/2016 21:45	**90**	0.25	**243,279.40**	0.41	**0.10**	6.00	Atlas	60,820	1
	11/28/2016 16:45	11/28/2016 22:30	**345**	0.72	**599,794.33**	0.97	**0.32**	12.00	Atlas	431,852	1
	12/6/2016 4:30	12/6/2016 13:00	**510**	0.9	**775,673.96**	0.94	**0.41**	12.00	Atlas	698,107	1
	12/11/2016 21:45	12/11/2016 22:45	**60**	0.28	**137,435.64**	1.14	**0.12**	12.00	Atlas	38,482	1
	12/17/2016 16:30	12/18/2016 2:45	**615**	2.55	**310,260.34**	2.83	**1.70**	12.00	Cloudburst	791,164	1
	12/23/2016 22:45	12/24/2016 1:45	**180**	0.17	**935,715.71**	2.71	**0.08**	12.00	Atlas	159,072	1
	12/26/2016 20:45	12/26/2016 23:00	**135**	0.23	**110,134.48**	0.4	**0.11**	6.00	Atlas	25,331	1
	1/3/2017 2:30	1/3/2017 5:30	**180**	0.16	**153,943.06**	0.27	**0.08**	6.00	Atlas	24,631	1
	1/10/2017 19:45	1/10/2017 20:30	**45**	0.15	**850,835.60**	0.39	**0.10**	1.00	Atlas	127,625	1
	1/11/2017 12:30	1/11/2017 14:30	**120**	0.24	**383,746.96**	0.62	**0.15**	3.00	Atlas	92,099	1
	1/12/2017 15:45	1/12/2017 22:00	**375**	0.53	**298,188.92**	0.95	**0.27**	6.00	Atlas	158,040	1
	1/13/2017 15:15	1/13/2017 16:15	**60**	0.3	**84,696.93**	1.21	**0.18**	3.00	Atlas	25,409	1
	1/14/2017 11:30	1/14/2017 14:45	**195**	0.2	**698,086.80**	1.43	**0.09**	6.00	Atlas	139,617	1
	1/17/2017	1/17/2017 4:30	**270**	0.48	**697,498.65**	2.03	**0.22**	12.00	Atlas	334,799	1
	1/19/2017 19:00	1/20/2017 4:30	**570**	1.2	**794,071.17**	2.48	**0.55**	12.00	Atlas	952,885	1
	2/7/2017 9:45	2/7/2017 13:30	**225**	0.37	**269,480.95**	0.36	**0.16**	6.00	Atlas	99,708	1
	2/24/2017 19:45	2/24/2017 20:00	**15**	0.54	**94,432.06**	0.61	**0.46**	1.00	Atlas	50,993	1
	2/28/2017 6:00	2/28/2017 11:15	**315**	0.27	**265,709.59**	0.85	**0.13**	6.00	Atlas	71,742	1
	3/1/2017 3:45	3/1/2017 9:45	**360**	1.01	**390,623.53**	1.87	**0.53**	6.00	Atlas	394,530	1
	3/7/2017 8:15	3/7/2017 15:15	**420**	0.52	**158,541.98**	1.69	**0.17**	48.00	Atlas	82,442	1
	3/26/2017 1:30	3/26/2017 4:00	**150**	0.44	**511,227.23**	0.35	**0.20**	6.00	Atlas	224,940	1
	3/27/2017 18:15	3/27/2017 19:45	**90**	0.27	**1,389,530.30**	0.71	**0.16**	3.00	Atlas	375,173	1
	3/30/2017 20:45	3/31/2017 1:30	**285**	0.55	**226,329.22**	1.38	**0.27**	6.00	Atlas	124,481	1
	4/11/2017 9:15	4/11/2017 12:45	**210**	0.36	**167,248.89**	0.37	**0.17**	12.00	Atlas	60,210	1
	4/16/2017 5:45	4/16/2017 21:45	**960**	1.12	**519,025.45**	1.44	**0.51**	6.00	Atlas	581,309	1
	4/21/2017 22:15	4/22/2017 1:00	**165**	0.58	**318,777.24**	1.58	**0.21**	24.00	Atlas	184,891	1
	4/27/2017 7:00	4/27/2017 7:45	**45**	0.18	**833,708.50**	0.77	**0.12**	1.00	Atlas	150,068	1
	4/29/2017 0:30	4/29/2017 4:15	**225**	0.97	**353,579.52**	1.25	**0.52**	3.00	Atlas	342,972	1
	5/1/2017 4:00	5/1/2017 4:30	**30**	0.22	**500,527.68**	1.37	**0.11**	3.00	Atlas	110,116	1
	5/4/2017 19:45	5/5/2017 10:15	**870**	1.85	**529,819.19**	2.92	**0.62**	24.00	Atlas	980,166	1
	5/11/2017 4:00	5/11/2017 4:30	**30**	0.16	**294,268.31**	2.02	**0.08**	6.00	Atlas	47,083	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO152	**5/20/2017 19:00**	5/21/2017 7:45	**765**	1.11	**824,743.19**	1.13	**0.49**	12.00	Atlas	915,465	1
	5/24/2017 18:15	5/24/2017 22:00	**225**	0.64	**487,575.17**	1.69	**0.23**	24.00	Atlas	312,048	1
	5/27/2017 14:30	5/27/2017 14:45	**15**	0.12	**458,301.83**	1.84	**0.09**	1.00	Atlas	54,996	1
	6/5/2017 9:00	6/5/2017 9:45	**45**	0.06	**1,611,482.67**	0.06	**0.03**	12.00	Atlas	96,689	1
	6/15/2017 3:15	6/15/2017 6:30	**195**	0.93	**189,102.66**	1.06	**0.61**	1.00	Atlas	175,865	1
	6/18/2017 22:00	6/18/2017 22:45	**45**	0.13	**457,912.23**	1.19	**0.08**	3.00	Atlas	59,529	1
	6/22/2017 18:45	6/22/2017 20:00	**75**	0.35	**539,005.06**	0.49	**0.19**	6.00	Atlas	188,652	1
	6/23/2017 15:00	6/23/2017 19:00	**240**	0.78	**262,144.41**	1.27	**0.38**	6.00	Atlas	204,473	1
	6/27/2017 2:30	6/27/2017 2:30	**-**	0.08	**153,570.75**	1.21	**0.07**	1.00	Atlas	12,286	1
	6/30/2017 21:15	6/30/2017 22:00	**45**	0.49	**782,822.49**	0.57	**0.42**	1.00	Atlas	383,583	1
CSO152 Total										**14,115,698**	**64**
CSO153	**7/3/2016 10:15**	7/3/2016 23:15	**780**	1.23	**184,262.07**	0.77	**0.40**	48.00	Atlas	226,642	1
	7/4/2016 8:00	7/4/2016 16:30	**510**	1.23	**48,410.63**	1.22	**0.40**	48.00	Atlas	59,545	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.06	**128,537.17**	1.27	**0.04**	3.00	Atlas	7,712	1
	7/12/2016 9:00	7/12/2016 10:00	**60**	0.2	**518,022.45**	0.33	**0.13**	3.00	Atlas	103,604	1
	7/25/2016 12:45	7/25/2016 12:45	**-**	0.11	**521,154.36**	0.07	**0.06**	6.00	Atlas	57,327	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.27	**277,506.11**	1.22	**0.23**	1.00	Atlas	74,927	1
	8/1/2016 11:00	8/1/2016 11:15	**15**	0.38	**105,069.95**	1.58	**0.31**	1.00	Atlas	39,927	1
	8/4/2016 13:15	8/4/2016 13:45	**30**	0.25	**307,680.40**	0.86	**0.14**	6.00	Atlas	76,920	1
	8/10/2016 3:30	8/10/2016 3:30	**-**	0.03	**121,608.33**	0.51	**0.03**	1.00	Atlas	3,648	1
	8/15/2016 2:30	8/15/2016 7:30	**300**	0.81	**548,829.23**	1.09	**0.43**	6.00	Atlas	444,552	1
	8/17/2016 4:30	8/17/2016 7:30	**180**	0.72	**355,767.58**	1.54	**0.32**	6.00	Atlas	256,153	1
	8/20/2016 14:30	8/20/2016 20:45	**375**	1.1	**153,335.16**	2.66	**0.46**	12.00	Atlas	168,669	1
	8/28/2016 17:15	8/28/2016 17:30	**15**	0.13	**301,069.62**	0.14	**0.11**	1.00	Atlas	39,139	1
	8/31/2016 17:00	8/31/2016 17:45	**45**	0.16	**200,147.13**	0.29	**0.12**	1.00	Atlas	32,024	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.2	**336,395.20**	0.2	**0.12**	1.00	Atlas	67,279	1
	9/26/2016 9:15	9/26/2016 9:15	**-**	0.2	**39,274.50**	0.06	**0.13**	3.00	Atlas	7,855	1
	9/28/2016 12:30	9/28/2016 14:00	**90**	0.38	**92,994.13**	0.58	**0.21**	6.00	Atlas	35,338	1
	9/30/2016	9/30/2016 2:45	**165**	0.68	**138,864.65**	1.24	**0.37**	3.00	Atlas	94,428	1
	10/20/2016 9:15	10/20/2016 11:15	**120**	0.58	**411,801.02**	0.43	**0.26**	3.00	Atlas	238,845	1
	11/8/2016 19:45	11/8/2016 20:00	**15**	0.16	**179,479.31**	0.18	**0.07**	12.00	Atlas	28,717	1
	11/19/2016 2:45	11/19/2016 2:45	**-**	0.12	**28,855.67**	0.12	**0.08**	3.00	Atlas	3,463	1
	11/23/2016 21:00	11/23/2016 21:00	**-**	0.29	**22,576.31**	0.41	**0.12**	6.00	Atlas	6,547	1
	11/28/2016 16:45	11/28/2016 22:00	**315**	0.7	**106,022.19**	0.98	**0.30**	12.00	Atlas	74,216	1
	12/6/2016 5:30	12/6/2016 12:30	**420**	0.86	**163,135.15**	0.89	**0.39**	12.00	Atlas	140,296	1
	12/17/2016 16:30	12/18/2016 1:15	**525**	2.61	**677,920.54**	2.94	**1.70**	12.00	Cloudburst	1,769,373	1
	12/23/2016 23:00	12/24/2016 1:15	**135**	0.23	**89,497.22**	2.79	**0.11**	12.00	Atlas	20,584	1
	12/26/2016 20:45	12/26/2016 20:45	**-**	0.27	**21,812.74**	0.46	**0.14**	6.00	Atlas	5,889	1
	1/3/2017 3:45	1/3/2017 4:30	**45**	0.17	**110,629.65**	0.23	**0.09**	6.00	Atlas	18,807	1
	1/10/2017 19:45	1/10/2017 20:00	**15**	0.12	**150,470.92**	0.35	**0.09**	1.00	Atlas	18,057	1
	1/11/2017 12:15	1/11/2017 14:00	**105**	0.2	**135,719.85**	0.55	**0.14**	1.00	Atlas	27,144	1
	1/12/2017 15:45	1/12/2017 18:45	**180**	0.39	**111,443.69**	0.59	**0.19**	6.00	Atlas	43,463	1
	1/13/2017 15:30	1/13/2017 15:45	**15**	0.35	**25,716.91**	1.04	**0.21**	3.00	Atlas	9,001	1
	1/14/2017 11:15	1/14/2017 14:00	**165**	0.24	**192,513.46**	1.3	**0.11**	6.00	Atlas	46,203	1
	1/16/2017 23:45	1/17/2017 4:00	**255**	0.5	**396,591.78**	1.92	**0.23**	12.00	Atlas	198,296	1
	1/19/2017 19:00	1/20/2017 3:45	**525**	1.03	**605,720.12**	2.37	**0.47**	12.00	Atlas	623,892	1
	2/7/2017 10:30	2/7/2017 10:30	**-**	0.3	**16,990.60**	0.19	**0.15**	6.00	Atlas	5,097	1
	2/24/2017 19:00	2/24/2017 19:30	**30**	0.42	**314,073.14**	0.47	**0.36**	1.00	Atlas	131,911	1
	2/28/2017 10:15	2/28/2017 10:45	**30**	0.26	**116,727.15**	0.73	**0.12**	6.00	Atlas	30,349	1
	3/1/2017 3:15	3/1/2017 9:00	**345**	1.05	**750,122.07**	1.78	**0.55**	6.00	Atlas	787,628	1
	3/7/2017 7:45	3/7/2017 13:00	**315**	0.56	**251,767.75**	1.76	**0.18**	48.00	Atlas	140,990	1
	3/26/2017 1:15	3/26/2017 2:30	**75**	0.45	**66,078.78**	0.3	**0.21**	6.00	Atlas	29,735	1
	3/27/2017 18:15	3/27/2017 19:00	**45**	0.31	**108,280.19**	0.76	**0.19**	3.00	Atlas	33,567	1
	3/30/2017 8:45	3/30/2017 8:45	**-**	0.06	**162,537.33**	0.82	**0.05**	1.00	Atlas	9,752	1
	3/31/2017 1:00	3/31/2017 1:00	**-**	0.26	**24,908.19**	1.01	**0.12**	6.00	Atlas	6,476	1
	4/3/2017 19:15	4/3/2017 19:15	**-**	0.15	**182,857.40**	0.42	**0.10**	1.00	Atlas	27,429	1
	4/11/2017 4:30	4/11/2017 8:45	**255**	0.34	**62,480.76**	0.26	**0.16**	12.00	Atlas	21,243	1
	4/16/2017 5:15	4/16/2017 20:30	**915**	1.29	**165,892.12**	1.49	**0.50**	24.00	Atlas	214,001	1
	4/21/2017 22:00	4/22/2017 0:15	**135**	0.67	**72,014.19**	1.82	**0.24**	24.00	Atlas	48,250	1
	4/27/2017 6:30	4/27/2017 7:00	**30**	0.1	**236,926.00**	0.79	**0.05**	6.00	Atlas	23,693	1
	4/28/2017 23:15	4/29/2017 3:00	**225**	0.9	**549,534.36**	1.21	**0.46**	6.00	Atlas	494,581	1
	5/1/2017 2:15	5/1/2017 3:45	**90**	0.24	**115,920.67**	1.22	**0.13**	3.00	Atlas	27,821	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO153	**5/4/2017 19:30**	5/5/2017 9:00	**810**	1.69	**321,667.19**	2.63	**0.57**	24.00	Atlas	543,618	1
	5/11/2017 3:45	5/11/2017 3:45	**-**	0.18	**34,288.33**	1.88	**0.10**	6.00	Atlas	6,172	1
	5/20/2017 18:30	5/21/2017 6:00	**690**	1.04	**718,002.60**	1.06	**0.47**	12.00	Atlas	746,723	1
	5/24/2017 18:00	5/24/2017 19:30	**90**	0.54	**95,646.41**	1.45	**0.19**	24.00	Atlas	51,649	1
	5/27/2017 14:00	5/27/2017 14:15	**15**	0.29	**498,425.72**	1.85	**0.23**	1.00	Atlas	144,543	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.04	**1,159,872.25**	0.05	**0.02**	12.00	Atlas	46,395	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.19	**201,532.32**	0.22	**0.17**	1.00	Atlas	38,291	1
	6/15/2017 3:00	6/15/2017 4:30	**90**	0.71	**422,498.59**	0.75	**0.44**	3.00	Atlas	299,974	1
	6/18/2017 21:30	6/18/2017 21:30	**-**	0.18	**43,218.00**	1.02	**0.11**	3.00	Atlas	7,779	1
	6/22/2017 18:30	6/22/2017 19:30	**60**	0.33	**107,844.27**	0.51	**0.17**	6.00	Atlas	35,589	1
	6/23/2017 7:45	6/23/2017 18:00	**615**	0.78	**323,360.21**	1.29	**0.39**	6.00	Atlas	252,221	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.25	**311,939.92**	0.34	**0.21**	1.00	Atlas	77,985	1
CSO153 Total										**9,351,941**	**63**
CSO154*	**7/28/2016 3:30**	7/28/2016 3:30	**-**	0.67	**4,262.25**	0.73	**0.31**	6.00	Atlas	2,856	1
	8/15/2016 3:15	8/15/2016 3:30	**15**	0.91	**195,659.46**	0.82	**0.49**	6.00	Atlas	178,050	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.65	**41,808.20**	1.53	**0.29**	3.00	Atlas	27,175	1
	8/20/2016 14:30	8/20/2016 20:00	**330**	1.23	**30,914.08**	2.82	**0.57**	1.00	Atlas	38,024	1
	8/31/2016 17:00	8/31/2016 17:00	**-**	0.48	**136,660.65**	0.3	**0.37**	1.00	Atlas	65,597	1
	12/17/2016 18:45	12/18/2016 6:30	**705**	2.71	**1,919,051.05**	2.97	**1.95**	12.00	Cloudburst	5,200,628	1
	1/17/2017 0:45	1/17/2017 4:30	**225**	0.5	**3,248,386.36**	1.8	**0.22**	12.00	Atlas	1,624,193	1
	1/19/2017 19:30	1/20/2017 7:30	**720**	1.05	**7,292,792.13**	2.29	**0.48**	12.00	Atlas	7,657,432	1
	3/1/2017 3:30	3/1/2017 10:45	**435**	1.03	**1,111,843.87**	1.7	**0.49**	6.00	Atlas	1,145,199	1
	3/7/2017 8:00	3/7/2017 8:00	**-**	0.31	**7,323.03**	1.58	**0.14**	12.00	Atlas	2,270	1
	4/29/2017 2:00	4/29/2017 6:30	**270**	1.28	**1,217,894.21**	1.57	**0.67**	6.00	Atlas	1,558,905	1
	5/5/2017 9:45	5/5/2017 10:15	**30**	1.83	**4,393.34**	3.23	**0.62**	24.00	Atlas	8,040	1
	5/21/2017 3:45	5/21/2017 4:15	**30**	1.1	**11,092.19**	1	**0.50**	12.00	Atlas	12,201	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.37	**6,392.30**	2.17	**0.30**	1.00	Atlas	2,365	1
CSO154* Total										**17,522,936**	**14**
CSO155	**7/3/2016 10:15**	7/3/2016 20:15	**600**	1.3	**3,993.33**	0.63	**0.42**	48.00	Atlas	5,191	1
	7/20/2016 19:30	7/20/2016 19:45	**15**	0.1	**186,406.70**	0.24	**0.08**	1.00	Atlas	18,641	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.15	**1,863.80**	1.3	**0.13**	1.00	Atlas	280	1
	8/1/2016 11:00	8/1/2016 11:15	**15**	0.65	**6,993.43**	1.9	**0.51**	1.00	Atlas	4,546	1
	8/4/2016 12:00	8/4/2016 12:00	**-**	0.35	**1,799.37**	0.92	**0.23**	1.00	Atlas	630	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.23	**106,857.09**	0.41	**0.19**	1.00	Atlas	24,577	1
	8/15/2016 2:45	8/15/2016 5:45	**180**	0.74	**3,696.51**	1.06	**0.38**	6.00	Atlas	2,735	1
	8/17/2016 6:00	8/17/2016 7:00	**60**	1.32	**2,415.14**	2.15	**0.63**	3.00	Atlas	3,188	1
	8/20/2016 14:15	8/20/2016 20:00	**345**	1.4	**38,229.99**	3.57	**0.61**	12.00	Atlas	53,522	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.22	**8,786.18**	0.2	**0.14**	3.00	Atlas	1,933	1
	9/28/2016 12:15	9/28/2016 12:15	**-**	0.62	**447.02**	0.7	**0.33**	6.00	Atlas	277	1
	9/30/2016 1:30	9/30/2016 2:15	**45**	0.42	**4,244.67**	1.29	**0.23**	3.00	Atlas	1,783	1
	10/20/2016 10:30	10/20/2016 10:30	**-**	0.54	**331.59**	0.27	**0.23**	3.00	Atlas	179	1
	12/17/2016 16:45	12/18/2016 0:15	**450**	3.36	**18,586.97**	3.55	**4.95**	12.00	Cloudburst	62,452	1
	12/26/2016 20:15	12/26/2016 20:15	**-**	0.39	**540.36**	0.62	**0.19**	6.00	Atlas	211	1
	1/10/2017 19:30	1/10/2017 19:30	**-**	0.15	**706.07**	0.34	**0.11**	1.00	Atlas	106	1
	1/17/2017 1:00	1/17/2017 1:00	**-**	0.69	**2,646.23**	2.04	**0.32**	6.00	Atlas	1,826	1
	1/19/2017 19:00	1/20/2017 0:45	**345**	0.89	**10,927.49**	2.33	**0.41**	12.00	Atlas	9,725	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.23	**100,866.22**	0.27	**0.18**	1.00	Atlas	23,199	1
	2/28/2017 10:00	2/28/2017 10:00	**-**	0.35	**219.11**	0.54	**0.17**	6.00	Atlas	77	1
	3/1/2017 3:00	3/1/2017 8:45	**345**	1.31	**5,943.15**	1.94	**0.67**	6.00	Atlas	7,786	1
	3/7/2017 7:30	3/7/2017 7:30	**-**	0.48	**13,603.50**	2	**0.22**	12.00	Atlas	6,530	1
	3/13/2017 16:45	3/13/2017 17:00	**15**	0.06	**382,775.83**	0.61	**0.03**	3.00	Atlas	22,967	1
	3/27/2017 18:00	3/27/2017 18:45	**45**	0.29	**2,238.14**	0.6	**0.17**	3.00	Atlas	649	1
	4/16/2017 5:15	4/16/2017 17:30	**735**	1.26	**20,319.52**	0.91	**0.48**	24.00	Atlas	25,603	1
	4/28/2017 23:15	4/29/2017 8:15	**540**	1.28	**47,231.52**	1.68	**0.64**	6.00	Atlas	60,456	1
	5/4/2017 19:45	5/5/2017 4:45	**540**	1.66	**11,389.04**	2.33	**0.56**	24.00	Atlas	18,906	1
	5/21/2017 2:00	5/21/2017 5:30	**210**	1.46	**65,355.63**	1.47	**0.65**	12.00	Atlas	95,419	1
	5/27/2017 13:45	5/27/2017 14:00	**15**	0.27	**37,092.33**	2.26	**0.22**	1.00	Atlas	10,015	1
	6/5/2017 18:00	6/5/2017 18:15	**15**	0.47	**2,502.36**	0.46	**0.41**	1.00	Atlas	1,176	1
	6/13/2017 16:45	6/13/2017 16:45	**-**	0.3	**18,003.63**	0.3	**0.25**	1.00	Atlas	5,401	1
	6/15/2017 3:00	6/15/2017 4:00	**60**	0.48	**14,838.88**	0.56	**0.29**	3.00	Atlas	7,123	1
	6/23/2017 15:00	6/23/2017 15:15	**15**	1.25	**1,772.54**	1.1	**0.41**	48.00	Atlas	2,216	1
	6/30/2017 20:45	6/30/2017 21:00	**15**	0.7	**3,235.84**	0.76	**0.60**	1.00	Atlas	2,265	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO155 Total										**481,588**	**34**
CSO160*	**8/12/2016 14:00**	8/12/2016 14:00	**-**	0.22	**43,426.45**	0.35	**0.18**	1.00	Atlas	9,554	1
	8/17/2016 6:45	8/17/2016 6:45	**-**	0.81	**13,909.25**	1.68	**0.35**	3.00	Atlas	11,266	1
	8/20/2016 14:30	8/20/2016 14:30	**-**	1.48	**9,807.32**	2.57	**0.68**	1.00	Atlas	14,515	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.54	**15,072.31**	0.17	**0.21**	3.00	Atlas	8,139	1
	12/17/2016 19:15	12/17/2016 21:30	**135**	2.75	**4,739.55**	2.04	**2.00**	12.00	Cloudburst	13,034	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.42	**25,712.55**	0.47	**0.36**	1.00	Atlas	10,799	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.11	**13,978.87**	1.04	**0.59**	6.00	Atlas	15,517	1
	4/16/2017 5:30	4/16/2017 13:15	**465**	1.04	**35,572.68**	0.6	**0.40**	6.00	Atlas	36,996	1
	5/21/2017 3:00	5/21/2017 3:30	**30**	1.07	**15,411.97**	0.82	**0.48**	12.00	Atlas	16,491	1
	5/27/2017 14:00	5/27/2017 14:00	**-**	0.37	**14,000.03**	1.89	**0.30**	1.00	Atlas	5,180	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.04	**374,900.50**	0.05	**0.02**	6.00	Atlas	14,996	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.42	**28,597.38**	0.45	**0.37**	1.00	Atlas	12,011	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.61	**43,890.05**	0.7	**0.52**	1.00	Atlas	26,773	1
CSO160* Total										**195,270**	**13**
CSO161	**7/3/2016 19:45**	7/3/2016 19:45	**-**	1.34	**1,589.73**	0.54	**0.44**	48.00	Atlas	2,130	1
	7/6/2016 13:00	7/6/2016 13:00	**-**	0.11	**6,427.55**	1.43	**0.08**	1.00	Atlas	707	1
	7/12/2016 9:45	7/12/2016 9:45	**-**	0.38	**1,160.37**	0.49	**0.24**	3.00	Atlas	441	1
	7/26/2016 17:45	7/26/2016 17:45	**-**	0.14	**1,299.14**	0.39	**0.12**	1.00	Atlas	182	1
	7/28/2016 3:15	7/28/2016 3:15	**-**	0.75	**8,802.56**	0.95	**0.34**	12.00	Atlas	6,602	1
	7/30/2016 14:00	7/30/2016 14:00	**-**	0.25	**35,687.44**	1.4	**0.22**	1.00	Atlas	8,922	1
	8/1/2016 11:00	8/1/2016 11:00	**-**	0.35	**5,214.31**	1.74	**0.29**	1.00	Atlas	1,825	1
	8/4/2016 13:15	8/4/2016 13:15	**-**	0.21	**6,213.76**	0.81	**0.11**	6.00	Atlas	1,305	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.22	**11,260.23**	0.35	**0.18**	1.00	Atlas	2,477	1
	8/15/2016 2:30	8/15/2016 5:30	**180**	0.76	**11,120.05**	1	**0.38**	6.00	Atlas	8,451	1
	8/17/2016 5:45	8/17/2016 6:45	**60**	0.81	**6,174.60**	1.68	**0.35**	3.00	Atlas	5,001	1
	8/20/2016 10:15	8/20/2016 19:45	**570**	1.48	**17,311.61**	2.89	**0.68**	1.00	Atlas	25,621	1
	9/10/2016 14:45	9/10/2016 14:45	**-**	0.18	**1,361.17**	0.07	**0.11**	3.00	Atlas	245	1
	9/28/2016 12:15	9/28/2016 12:15	**-**	0.43	**2,091.35**	0.57	**0.23**	6.00	Atlas	899	1
	9/30/2016 1:15	9/30/2016 2:00	**45**	0.61	**4,715.57**	1.25	**0.31**	3.00	Atlas	2,877	1
	10/20/2016 9:00	10/20/2016 9:00	**-**	0.54	**6,362.13**	0.15	**0.21**	3.00	Atlas	3,436	1
	11/8/2016 19:30	11/8/2016 19:45	**15**	0.2	**5,897.30**	0.23	**0.09**	12.00	Atlas	1,179	1
	12/6/2016 9:00	12/6/2016 12:00	**180**	0.91	**5,577.07**	0.93	**0.42**	12.00	Atlas	5,075	1
	12/17/2016 18:15	12/17/2016 21:15	**180**	2.75	**5,314.06**	1.9	**2.00**	12.00	Cloudburst	14,614	1
	12/23/2016 22:45	12/24/2016 0:45	**120**	0.25	**4,499.52**	2.97	**0.11**	6.00	Atlas	1,125	1
	12/26/2016 20:15	12/26/2016 20:15	**-**	0.39	**2,204.69**	0.59	**0.19**	6.00	Atlas	860	1
	1/3/2017 2:00	1/3/2017 4:30	**150**	0.18	**32,884.67**	0.26	**0.09**	6.00	Atlas	5,919	1
	1/10/2017 19:15	1/10/2017 19:45	**30**	0.13	**43,745.23**	0.39	**0.10**	1.00	Atlas	5,687	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.42	**16,096.14**	0.43	**0.36**	1.00	Atlas	6,760	1
	3/1/2017 3:00	3/1/2017 3:00	**-**	1.11	**14,860.67**	0.99	**0.59**	6.00	Atlas	16,495	1
	4/16/2017 5:30	4/16/2017 5:30	**-**	1.04	**3,714.44**	0.54	**0.40**	6.00	Atlas	3,863	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.16	**25,492.52**	1.42	**0.60**	6.00	Atlas	29,571	1
	5/21/2017 3:00	5/21/2017 3:30	**30**	1.07	**16,458.83**	0.82	**0.48**	12.00	Atlas	17,611	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.04	**106,302.00**	0.05	**0.02**	6.00	Atlas	4,252	1
	6/13/2017 17:00	6/13/2017 17:00	**-**	0.19	**1,953.42**	0.21	**0.17**	1.00	Atlas	371	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.61	**8,103.54**	0.7	**0.52**	1.00	Atlas	4,943	1
CSO161 Total										**189,448**	**31**
CSO166*	**7/3/2016 11:00**	7/3/2016 13:15	**135**	0.99	**420,654.68**	0.29	**0.32**	48.00	Atlas	416,448	1
	7/4/2016 14:30	7/4/2016 15:45	**75**	0.99	**411,627.22**	0.95	**0.32**	48.00	Atlas	407,511	1
	7/6/2016 12:00	7/6/2016 12:30	**30**	0.12	**2,687,439.00**	1	**0.09**	1.00	Atlas	322,493	1
	7/12/2016 9:45	7/12/2016 12:45	**180**	0.39	**626,162.13**	0.59	**0.25**	3.00	Atlas	244,203	1
	7/27/2016 18:30	7/27/2016 19:30	**60**	0.64	**1,873,758.17**	0.37	**0.25**	12.00	Atlas	1,199,205	1
	7/28/2016 5:45	7/28/2016 6:00	**15**	0.64	**58,209.36**	0.8	**0.25**	12.00	Atlas	37,254	1
	7/30/2016 14:15	7/30/2016 14:45	**30**	0.3	**37,280.00**	1.23	**0.26**	1.00	Atlas	11,184	1
	8/1/2016 11:45	8/1/2016 12:00	**15**	0.39	**409,651.10**	1.56	**0.27**	1.00	Atlas	159,764	1
	8/1/2016 21:00	8/1/2016 22:30	**90**	0.39	**1,341,916.00**	1.41	**0.27**	1.00	Atlas	523,347	1
	8/15/2016 3:00	8/15/2016 8:15	**315**	1.28	**542,926.55**	1.55	**0.64**	3.00	Atlas	694,946	1
	8/16/2016 7:00	8/16/2016 7:00	**-**	0.02	**150,944.00**	1.57	**0.01**	3.00	Atlas	3,019	1
	8/17/2016 6:15	8/17/2016 8:15	**120**	0.57	**713,285.09**	1.78	**0.24**	12.00	Atlas	406,573	1
	8/20/2016 16:00	8/20/2016 21:45	**345**	0.72	**1,024,529.32**	2.55	**0.33**	1.00	Atlas	737,661	1
	8/31/2016 16:45	8/31/2016 19:00	**135**	0.88	**1,153,431.61**	0.93	**0.69**	1.00	Atlas	1,015,020	1
	9/10/2016 15:15	9/10/2016 16:00	**45**	0.17	**673,308.94**	0.16	**0.12**	1.00	Atlas	114,463	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO166*	**9/30/2016 2:00**	9/30/2016 2:15	**15**	0.59	**110,842.90**	1.12	**0.31**	3.00	Atlas	65,397	1
	10/20/2016 10:30	10/20/2016 10:45	**15**	0.71	**51,649.39**	0.39	**0.27**	24.00	Atlas	36,671	1
	1/17/2017 3:45	1/17/2017 5:15	**90**	0.55	**1,337,111.04**	2.02	**0.25**	12.00	Atlas	735,411	1
	1/18/2017 3:45	1/18/2017 11:45	**480**	Discharge		1.85				5,098	1
	1/19/2017 19:00	1/20/2017 5:30	**630**	1.19	**2,434,958.07**	2.56	**0.55**	12.00	Atlas	2,897,600	1
	1/24/2017 10:45	1/24/2017 10:45	**-**	Discharge		1.19				2,580	1
	1/25/2017 12:00	1/25/2017 12:00	**-**	Discharge		1.19				2,517	1
	1/27/2017 23:30	1/27/2017 23:30	**-**	Discharge		0				4,730	1
	1/29/2017 15:30	1/29/2017 15:30	**-**	0.01	**483,591.00**	0.01	**0.01**	1.00	Atlas	4,836	1
	2/17/2017 22:15	2/17/2017 22:15	**-**	Discharge		0.02				5,867	1
	2/19/2017 1:45	2/19/2017 1:45	**-**	0.07	**129,626.43**	0.09	**0.03**	6.00	Atlas	9,074	1
	2/24/2017 19:00	2/24/2017 20:15	**75**	0.83	**795,685.04**	0.88	**0.70**	1.00	Atlas	660,419	1
	2/28/2017 10:45	2/28/2017 11:00	**15**	0.27	**120,118.63**	1.15	**0.13**	6.00	Atlas	32,432	1
	3/1/2017 3:30	3/1/2017 13:45	**615**	1.02	**1,618,394.50**	2.18	**0.50**	6.00	Atlas	1,650,762	1
	3/7/2017 8:00	3/7/2017 8:45	**45**	0.48	**336,893.94**	1.54	**0.16**	48.00	Atlas	161,709	1
	3/27/2017 18:30	3/27/2017 19:30	**60**	0.3	**256,105.17**	0.84	**0.17**	3.00	Atlas	76,832	1
	4/16/2017 6:00	4/16/2017 21:45	**945**	1.1	**1,388,933.71**	1.44	**0.49**	3.00	Atlas	1,527,827	1
	4/27/2017 7:15	4/27/2017 8:00	**45**	0.24	**856,214.71**	0.8	**0.16**	1.00	Atlas	205,492	1
	4/29/2017 1:00	4/29/2017 10:45	**585**	1.3	**3,623,768.52**	1.7	**0.76**	3.00	Atlas	4,710,899	1
	5/1/2017 4:00	5/1/2017 4:45	**45**	0.26	**586,093.92**	1.77	**0.14**	3.00	Atlas	152,384	1
	5/4/2017 19:45	5/5/2017 12:30	**1,005**	1.88	**1,932,231.54**	3.37	**0.61**	48.00	Atlas	3,632,595	1
	5/20/2017 19:15	5/20/2017 19:30	**15**	1.21	**23,074.55**	0.24	**0.53**	12.00	Atlas	27,920	1
	5/21/2017 3:45	5/21/2017 6:30	**165**	1.21	**1,043,267.35**	1.22	**0.53**	12.00	Atlas	1,262,353	1
	5/24/2017 18:45	5/24/2017 20:00	**75**	0.85	**367,394.61**	1.83	**0.31**	24.00	Atlas	312,285	1
	5/27/2017 14:00	5/27/2017 15:15	**75**	0.22	**1,330,919.00**	2.26	**0.17**	1.00	Atlas	292,802	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.18	**227.61**	0.19	**0.12**	1.00	Atlas	41	1
	6/5/2017 18:30	6/5/2017 18:45	**15**	0.2	**124,949.05**	0.39	**0.17**	1.00	Atlas	24,990	1
	6/15/2017 3:00	6/15/2017 3:45	**45**	0.93	**157,364.01**	0.74	**0.59**	3.00	Atlas	146,349	1
	6/22/2017 19:00	6/22/2017 19:15	**15**	1.26	**81,867.96**	0.57	**0.45**	6.00	Atlas	103,154	1
	6/23/2017 15:15	6/23/2017 18:45	**210**	1.26	**505,887.60**	1.44	**0.45**	6.00	Atlas	637,418	1
	6/30/2017 21:15	6/30/2017 22:00	**45**	0.37	**885,581.73**	0.45	**0.32**	1.00	Atlas	327,665	1
CSO166* Total										**26,009,201**	**46**
CSO167*	**7/3/2016 10:30**	7/3/2016 23:30	**780**	1.08	**127,665.02**	0.66	**0.35**	48.00	Atlas	137,878	1
	7/4/2016 14:30	7/4/2016 15:30	**60**	1.08	**60,338.87**	1.03	**0.35**	48.00	Atlas	65,166	1
	7/12/2016 10:00	7/12/2016 12:15	**135**	0.19	**419,145.53**	0.33	**0.12**	3.00	Atlas	79,638	1
	7/28/2016 3:30	7/28/2016 5:30	**120**	0.67	**187,199.09**	0.8	**0.31**	6.00	Atlas	125,423	1
	7/30/2016 14:30	7/30/2016 15:00	**30**	0.16	**582,773.25**	1.06	**0.14**	1.00	Atlas	93,244	1
	8/1/2016 11:15	8/1/2016 11:45	**30**	0.56	**161,188.98**	1.53	**0.41**	1.00	Atlas	90,266	1
	8/9/2016 15:45	8/9/2016 15:45	**-**	0.2	**38,125.10**	0.48	**0.08**	3.00	Atlas	7,625	1
	8/15/2016 2:45	8/15/2016 8:00	**315**	0.91	**501,727.79**	1.18	**0.49**	6.00	Atlas	456,572	1
	8/17/2016 6:00	8/17/2016 7:30	**90**	0.65	**440,425.02**	1.54	**0.29**	3.00	Atlas	286,276	1
	8/20/2016 14:15	8/20/2016 21:00	**405**	1.23	**189,061.43**	2.92	**0.57**	1.00	Atlas	232,546	1
	9/10/2016 15:30	9/10/2016 15:30	**-**	0.22	**52,893.32**	0.22	**0.15**	1.00	Atlas	11,637	1
	9/28/2016 12:30	9/28/2016 13:00	**30**	0.38	**24,330.11**	0.54	**0.20**	6.00	Atlas	9,245	1
	9/29/2016 23:45	9/30/2016 2:30	**165**	0.64	**155,815.88**	1.24	**0.35**	3.00	Atlas	99,722	1
	10/20/2016 9:15	10/20/2016 11:30	**135**	0.52	**290,500.27**	0.37	**0.23**	3.00	Atlas	151,060	1
	11/28/2016 17:45	11/28/2016 22:00	**255**	0.72	**56,384.01**	0.98	**0.32**	12.00	Atlas	40,596	1
	12/6/2016 5:30	12/6/2016 12:30	**420**	0.78	**99,634.04**	0.82	**0.36**	12.00	Atlas	77,715	1
	12/17/2016 16:30	12/18/2016 3:00	**630**	2.71	**575,032.61**	2.97	**1.95**	12.00	Cloudburst	1,558,338	1
	12/23/2016 23:00	12/24/2016 1:00	**120**	0.21	**25,915.90**	2.86	**0.10**	6.00	Atlas	5,442	1
	1/2/2017 20:00	1/2/2017 20:00	**-**	0.19	**14,054.32**	0.19	**0.09**	6.00	Atlas	2,670	1
	1/3/2017 4:15	1/3/2017 5:00	**45**	0.19	**360,365.05**	0.27	**0.09**	6.00	Atlas	68,469	1
	1/10/2017 19:30	1/10/2017 20:00	**30**	0.13	**136,131.23**	0.36	**0.10**	1.00	Atlas	17,697	1
	1/11/2017 12:30	1/11/2017 12:45	**15**	0.2	**77,713.00**	0.5	**0.13**	3.00	Atlas	15,543	1
	1/12/2017 15:30	1/12/2017 18:45	**195**	0.32	**297,605.91**	0.6	**0.15**	6.00	Atlas	95,234	1
	1/13/2017 15:45	1/13/2017 15:45	**-**	0.31	**1,080.45**	0.97	**0.19**	3.00	Atlas	335	1
	1/14/2017 11:30	1/14/2017 14:00	**150**	0.22	**208,599.77**	1.2	**0.10**	12.00	Atlas	45,892	1
	1/17/2017	1/17/2017 4:00	**240**	0.5	**391,190.36**	1.8	**0.22**	12.00	Atlas	195,595	1
	1/19/2017 19:00	1/20/2017 4:15	**555**	1.05	**457,655.17**	2.28	**0.48**	12.00	Atlas	480,538	1
	2/24/2017 19:15	2/24/2017 19:30	**15**	0.37	**270,624.62**	0.42	**0.31**	1.00	Atlas	100,131	1
	2/28/2017 10:15	2/28/2017 10:30	**15**	0.24	**77,198.33**	0.64	**0.11**	12.00	Atlas	18,528	1
	3/1/2017 3:00	3/1/2017 9:30	**390**	1.03	**510,211.14**	1.7	**0.49**	6.00	Atlas	525,517	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO167*	**3/7/2017 7:45**	3/7/2017 8:15	**30**	0.31	**299,125.55**	1.59	**0.14**	12.00	Atlas	92,729	1
	3/26/2017 1:30	3/26/2017 2:45	**75**	0.49	**30,647.35**	0.34	**0.22**	6.00	Atlas	15,017	1
	3/27/2017 18:15	3/27/2017 19:30	**75**	0.25	**306,633.88**	0.74	**0.15**	3.00	Atlas	76,658	1
	3/30/2017 20:30	3/30/2017 20:45	**15**	0.27	**45,402.93**	0.82	**0.13**	6.00	Atlas	12,259	1
	4/3/2017 19:15	4/3/2017 19:30	**15**	0.12	**13,318.92**	0.4	**0.07**	1.00	Atlas	1,598	1
	4/16/2017 5:45	4/16/2017 21:15	**930**	1.04	**297,235.13**	1.3	**0.43**	6.00	Atlas	309,125	1
	4/21/2017 22:30	4/22/2017 0:30	**120**	0.56	**41,254.38**	1.47	**0.20**	24.00	Atlas	23,102	1
	4/27/2017 6:45	4/27/2017 7:15	**30**	0.18	**420,969.50**	0.75	**0.13**	1.00	Atlas	75,775	1
	4/29/2017 0:15	4/29/2017 4:15	**240**	1.28	**529,394.31**	1.57	**0.67**	6.00	Atlas	677,625	1
	5/1/2017 4:00	5/1/2017 4:15	**15**	0.23	**120,449.96**	1.68	**0.13**	3.00	Atlas	27,703	1
	5/4/2017 20:00	5/5/2017 10:15	**855**	1.83	**369,783.50**	3.23	**0.62**	24.00	Atlas	676,704	1
	5/11/2017 4:00	5/11/2017 4:00	**-**	0.14	**27,748.14**	1.97	**0.08**	6.00	Atlas	3,885	1
	5/21/2017 2:00	5/21/2017 6:00	**240**	1.1	**411,449.17**	1.12	**0.50**	12.00	Atlas	452,594	1
	5/24/2017 17:30	5/24/2017 20:45	**195**	0.72	**162,050.76**	1.63	**0.26**	24.00	Atlas	116,677	1
	5/27/2017 14:15	5/27/2017 14:30	**15**	0.37	**178,811.19**	2.17	**0.30**	1.00	Atlas	66,160	1
	6/5/2017 18:00	6/5/2017 18:30	**30**	0.21	**226,457.52**	0.25	**0.18**	1.00	Atlas	47,556	1
	6/15/2017 3:15	6/15/2017 4:30	**75**	0.76	**285,726.66**	0.73	**0.48**	3.00	Atlas	217,152	1
	6/22/2017 18:45	6/22/2017 19:30	**45**	0.34	**150,946.91**	0.51	**0.19**	6.00	Atlas	51,322	1
	6/23/2017 15:00	6/23/2017 18:15	**195**	0.77	**322,844.36**	1.29	**0.37**	6.00	Atlas	248,590	1
	6/30/2017 21:00	6/30/2017 21:30	**30**	0.18	**488,487.56**	0.31	**0.15**	1.00	Atlas	87,928	1
CSO167* Total										**8,374,698**	**50**
CSO174	**10/20/2016 10:15**	10/20/2016 16:45	**390**	0.54	**104,541.63**	0.43	**0.21**	24.00	Atlas	56,452	1
	12/6/2016 9:30	12/6/2016 9:30	**-**	0.86	**12,367.52**	0.6	**0.39**	12.00	Atlas	10,636	1
	12/17/2016 18:45	12/18/2016 1:30	**405**	2.52	**1,109,114.95**	2.81	**1.58**	12.00	Cloudburst	2,794,970	1
	1/10/2017 20:00	1/10/2017 20:00	**-**	0.15	**53,792.53**	0.38	**0.10**	1.00	Atlas	8,069	1
	1/12/2017 15:45	1/12/2017 15:45	**-**	0.51	**19,832.80**	0.53	**0.26**	6.00	Atlas	10,115	1
	1/17/2017 0:15	1/17/2017 3:45	**210**	0.52	**140,537.06**	2.02	**0.24**	12.00	Atlas	73,079	1
	1/19/2017 19:15	1/20/2017 1:00	**345**	1.13	**78,833.26**	2.35	**0.52**	12.00	Atlas	89,082	1
	2/24/2017 19:00	2/24/2017 19:30	**30**	0.57	**1,046,263.51**	0.64	**0.49**	1.00	Atlas	596,370	1
	3/1/2017 3:15	3/1/2017 9:00	**345**	1	**1,183,915.29**	1.87	**0.52**	6.00	Atlas	1,183,915	1
	3/7/2017 7:45	3/7/2017 8:00	**15**	0.54	**220,432.46**	1.57	**0.18**	48.00	Atlas	119,034	1
	3/30/2017 20:45	3/30/2017 20:45	**-**	0.47	**1,714.17**	0.87	**0.23**	6.00	Atlas	806	1
	4/16/2017 17:30	4/16/2017 20:15	**165**	1.09	**483,664.63**	1.31	**0.48**	6.00	Atlas	527,194	1
	4/27/2017 7:00	4/27/2017 7:00	**-**	0.21	**194,597.95**	0.86	**0.14**	1.00	Atlas	40,866	1
	4/29/2017 1:45	4/29/2017 3:30	**105**	1.01	**1,805,634.89**	1.31	**0.51**	3.00	Atlas	1,823,691	1
	5/1/2017 4:00	5/1/2017 4:00	**-**	0.25	**163,977.04**	1.45	**0.13**	3.00	Atlas	40,994	1
	5/4/2017 20:00	5/5/2017 6:45	**645**	1.73	**206,177.04**	2.55	**0.58**	24.00	Atlas	356,686	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	1.03	**1,114,808.64**	1.03	**0.46**	12.00	Atlas	1,148,253	1
	5/24/2017 18:15	5/24/2017 19:00	**45**	0.58	**133,857.88**	1.47	**0.21**	24.00	Atlas	77,638	1
	6/5/2017 8:45	6/5/2017 9:00	**15**	0.07	**1,650,225.43**	0.08	**0.03**	12.00	Atlas	115,516	1
	6/5/2017 18:30	6/5/2017 18:45	**15**	0.24	**685,207.21**	0.31	**0.20**	1.00	Atlas	164,450	1
	6/15/2017 3:00	6/15/2017 4:15	**75**	0.7	**957,225.23**	0.68	**0.45**	3.00	Atlas	670,058	1
	6/22/2017 18:45	6/22/2017 19:15	**30**	0.33	**224,775.70**	0.49	**0.18**	6.00	Atlas	74,176	1
	6/23/2017 15:30	6/23/2017 16:15	**45**	0.75	**673,290.23**	1.05	**0.36**	6.00	Atlas	504,968	1
	6/30/2017 21:00	6/30/2017 21:30	**30**	0.64	**2,379,651.44**	0.72	**0.53**	1.00	Atlas	1,522,977	1
CSO174 Total										**12,009,993**	**24**
CSO178	**7/27/2016 23:45**	7/28/2016 3:30	**225**	0.7	**307,999.94**	0.85	**0.32**	12.00	Atlas	215,600	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**82,636.96**	1.54	**0.42**	1.00	Atlas	39,666	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.93	**76,827.88**	1.96	**0.43**	3.00	Atlas	71,450	1
	8/20/2016 14:30	8/20/2016 20:00	**330**	1.38	**339,400.70**	3.06	**0.59**	12.00	Atlas	468,373	1
	12/17/2016 18:30	12/17/2016 21:00	**150**	2.81	**167,444.59**	1.9	**2.53**	12.00	Cloudburst	470,519	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.45	**167,896.56**	0.49	**0.37**	1.00	Atlas	75,553	1
	3/1/2017 3:15	3/1/2017 3:30	**15**	1.15	**172,448.21**	1.07	**0.61**	6.00	Atlas	198,315	1
	4/29/2017 2:00	4/29/2017 3:00	**60**	1.1	**169,199.49**	1.35	**0.56**	3.00	Atlas	186,119	1
	5/21/2017 3:00	5/21/2017 3:30	**30**	1.09	**269,289.64**	0.87	**0.49**	12.00	Atlas	293,526	1
	5/21/2017 22:15	5/21/2017 22:15	**-**	Discharge		1.15				271,511	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.28	**400,288.50**	0.34	**0.23**	1.00	Atlas	112,081	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.43	**227,712.21**	0.25	**0.27**	3.00	Atlas	97,916	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.59	**236,930.10**	0.71	**0.50**	1.00	Atlas	139,789	1
CSO178 Total										**2,640,418**	**13**
CSO179	**7/30/2016 14:15**	7/30/2016 14:30	**15**	0.43	**40,843.47**	1.14	**0.37**	1.00	Atlas	17,563	1
	8/11/2016 14:30	8/11/2016 18:15	**225**	Discharge		0.41				44,581	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO179	**8/12/2016 7:15**	8/12/2016 13:45	**390**	Discharge		0.37				96,933	1
	8/15/2016 3:15	8/15/2016 3:45	**30**	1.02	**5,394.22**	0.96	**0.49**	6.00	Atlas	5,502	1
	8/17/2016 7:15	8/17/2016 7:15	**-**	0.61	**4,395.89**	1.62	**0.27**	6.00	Atlas	2,681	1
	8/20/2016 20:15	8/20/2016 20:15	**-**	0.76	**4,316.08**	2.3	**0.32**	12.00	Atlas	3,280	1
	8/28/2016 17:45	8/28/2016 18:00	**15**	0.42	**20,686.24**	0.43	**0.37**	1.00	Atlas	8,688	1
	12/17/2016 19:15	12/17/2016 19:30	**15**	2.52	**33,652.88**	1.25	**1.58**	12.00	Cloudburst	84,805	1
	4/22/2017 15:30	4/22/2017 15:30	**-**	0.64	**823.77**	1.76	**0.23**	24.00	Atlas	527	1
	4/29/2017 2:45	4/29/2017 2:45	**-**	1.01	**11,141.07**	1.29	**0.51**	3.00	Atlas	11,252	1
	5/21/2017 3:30	5/21/2017 3:30	**-**	1.03	**6,498.92**	0.79	**0.46**	12.00	Atlas	6,694	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.64	**91,012.11**	0.71	**0.53**	1.00	Atlas	58,248	1
CSO179 Total										**340,755**	**12**
CSO180	**10/20/2016 9:15**	10/20/2016 10:00	**45**	0.54	**21,665.09**	0.2	**0.21**	24.00	Atlas	11,699	1
	11/8/2016 19:45	11/8/2016 19:45	**-**	0.19	**29,646.84**	0.23	**0.09**	12.00	Atlas	5,633	1
	12/17/2016 16:15	12/18/2016 1:15	**540**	2.52	**117,774.75**	2.81	**1.58**	12.00	Cloudburst	296,792	1
	1/10/2017 19:30	1/10/2017 19:30	**-**	0.15	**16,399.33**	0.36	**0.10**	1.00	Atlas	2,460	1
	1/12/2017 15:30	1/12/2017 15:30	**-**	0.51	**9,053.37**	0.54	**0.26**	6.00	Atlas	4,617	1
	1/17/2017 0:15	1/17/2017 3:30	**195**	0.52	**13,208.21**	2.02	**0.24**	12.00	Atlas	6,868	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.57	**42,178.98**	0.64	**0.49**	1.00	Atlas	24,042	1
	3/1/2017 3:15	3/1/2017 8:45	**330**	1	**82,216.49**	1.87	**0.52**	6.00	Atlas	82,216	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.54	**10,547.17**	1.56	**0.18**	48.00	Atlas	5,695	1
	3/30/2017 20:30	3/30/2017 21:45	**75**	0.47	**3,300.21**	1.05	**0.23**	6.00	Atlas	1,551	1
	4/16/2017 5:30	4/16/2017 5:30	**-**	1.09	**8,766.53**	0.48	**0.48**	6.00	Atlas	9,556	1
	4/16/2017 17:30	4/16/2017 19:15	**105**	1.09	**53,554.40**	0.96	**0.48**	6.00	Atlas	58,374	1
	4/27/2017 6:45	4/27/2017 6:45	**-**	0.21	**34,162.62**	0.86	**0.14**	1.00	Atlas	7,174	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.01	**204,354.16**	1.31	**0.51**	3.00	Atlas	206,398	1
	5/1/2017 3:45	5/1/2017 3:45	**-**	0.25	**83,167.32**	1.45	**0.13**	3.00	Atlas	20,792	1
	5/4/2017 19:45	5/4/2017 20:15	**30**	1.73	**13,045.52**	1.81	**0.58**	24.00	Atlas	22,569	1
	5/5/2017 4:30	5/5/2017 4:30	**-**	1.73	**4,530.12**	2.3	**0.58**	24.00	Atlas	7,837	1
	5/20/2017 18:45	5/21/2017 5:30	**645**	1.03	**141,232.74**	1.03	**0.46**	12.00	Atlas	145,470	1
	6/5/2017 8:45	6/5/2017 8:45	**-**	0.07	**744,789.86**	0.07	**0.03**	12.00	Atlas	52,135	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.24	**176,769.88**	0.3	**0.20**	1.00	Atlas	42,425	1
	6/15/2017 3:00	6/15/2017 4:00	**60**	0.7	**211,627.61**	0.66	**0.45**	3.00	Atlas	148,139	1
	6/22/2017 18:45	6/22/2017 19:00	**15**	0.33	**9,782.64**	0.48	**0.18**	6.00	Atlas	3,228	1
	6/23/2017 15:15	6/23/2017 16:00	**45**	0.75	**84,583.11**	1.03	**0.36**	6.00	Atlas	63,437	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.64	**181,901.42**	0.71	**0.53**	1.00	Atlas	116,417	1
CSO180 Total										**1,345,526**	**24**
CSO181	**7/27/2016 23:45**	7/28/2016 3:45	**240**	0.67	**128,634,003.85**	0.71	**0.31**	12.00	Atlas	86,184,783	1
	7/30/2016 14:15	7/30/2016 14:30	**15**	0.45	**69,413,727.42**	1.38	**0.39**	1.00	Atlas	31,236,177	1
	8/15/2016 3:15	8/15/2016 3:15	**-**	0.92	**4,762,275.66**	0.8	**0.45**	6.00	Atlas	4,381,294	1
	8/17/2016 7:00	8/17/2016 7:15	**15**	0.83	**76,819,760.89**	1.89	**0.36**	12.00	Atlas	63,760,402	1
	8/20/2016 14:30	8/20/2016 20:15	**345**	1.1	**250,817,358.25**	2.83	**0.45**	12.00	Atlas	275,899,094	1
	10/20/2016 9:30	10/20/2016 9:30	**-**	0.6	**126,122.77**	0.16	**0.23**	24.00	Atlas	75,674	1
	12/17/2016 18:45	12/17/2016 21:15	**150**	2.78	**30,582,096.35**	1.95	**2.39**	12.00	Cloudburst	85,018,228	1
	2/24/2017 19:15	2/24/2017 19:15	**-**	0.5	**570,333.80**	0.55	**0.43**	1.00	Atlas	285,167	1
	3/1/2017 3:30	3/1/2017 3:30	**-**	1.01	**83,570,745.99**	1.05	**0.54**	6.00	Atlas	84,406,453	1
	4/29/2017 2:00	4/29/2017 3:00	**60**	0.9	**165,582,134.21**	1.17	**0.46**	6.00	Atlas	149,023,921	1
	5/21/2017 3:15	5/21/2017 3:45	**30**	0.98	**119,763,548.94**	0.85	**0.44**	12.00	Atlas	117,368,278	1
	5/27/2017 14:30	5/27/2017 14:30	**-**	0.12	**63,852,479.67**	1.58	**0.09**	1.00	Atlas	7,662,298	1
	6/5/2017 9:00	6/5/2017 9:15	**15**	0.06	**482,579,509.17**	0.07	**0.03**	12.00	Atlas	28,954,771	1
	6/5/2017 18:30	6/5/2017 18:45	**15**	0.27	**109,640,198.33**	0.34	**0.23**	1.00	Atlas	29,602,854	1
	6/15/2017 3:15	6/15/2017 3:30	**15**	0.56	**195,896,376.20**	0.37	**0.35**	3.00	Atlas	109,701,971	1
	6/30/2017 21:15	6/30/2017 21:30	**15**	0.65	**147,688,643.51**	0.78	**0.54**	1.00	Atlas	95,997,618	1
CSO181 Total										**1,169,558,980**	**16**
CSO182	**11/8/2016 20:00**	11/8/2016 20:30	**30**	0.19	**68,425.37**	0.22	**0.09**	12.00	Atlas	13,001	1
	11/19/2016 2:45	11/19/2016 3:15	**30**	0.16	**95,770.44**	0.16	**0.11**	3.00	Atlas	15,323	1
	11/23/2016 20:15	11/23/2016 21:30	**75**	0.28	**68,237.07**	0.44	**0.11**	6.00	Atlas	19,106	1
	11/28/2016 14:15	11/28/2016 22:15	**480**	0.72	**125,734.29**	1	**0.32**	12.00	Atlas	90,529	1
	12/6/2016 4:30	12/6/2016 13:00	**510**	0.9	**239,156.74**	0.94	**0.41**	12.00	Atlas	215,241	1
	12/11/2016 21:30	12/11/2016 22:30	**60**	0.31	**53,397.29**	1.17	**0.14**	12.00	Atlas	16,553	1
	12/17/2016 16:45	12/18/2016 3:30	**645**	2.56	**12,370.31**	2.87	**1.70**	12.00	Cloudburst	31,668	1
	12/23/2016 22:45	12/24/2016 1:45	**180**	0.16	**218,814.63**	2.72	**0.07**	12.00	Atlas	35,010	1
	12/26/2016 20:15	12/26/2016 23:00	**165**	0.26	**62,430.73**	0.42	**0.13**	6.00	Atlas	16,232	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO182	**1/3/2017 2:00**	1/3/2017 5:15	**195**	0.15	**121,841.33**	0.23	**0.08**	6.00	Atlas	18,276	1
	1/10/2017 20:00	1/10/2017 20:30	**30**	0.15	**57,237.13**	0.39	**0.11**	1.00	Atlas	8,586	1
	1/11/2017 12:30	1/11/2017 14:15	**105**	0.22	**101,530.59**	0.61	**0.15**	3.00	Atlas	22,337	1
	1/12/2017 16:00	1/12/2017 22:00	**360**	0.44	**104,387.36**	0.83	**0.21**	6.00	Atlas	45,930	1
	1/13/2017 15:00	1/13/2017 16:15	**75**	0.26	**33,820.77**	1.06	**0.16**	3.00	Atlas	8,793	1
	1/14/2017 11:15	1/14/2017 14:30	**195**	0.18	**113,473.89**	1.26	**0.08**	12.00	Atlas	20,425	1
	1/15/2017 17:00	1/15/2017 17:15	**15**	0.12	**3,311.08**	1.34	**0.06**	12.00	Atlas	397	1
	1/16/2017 19:00	1/17/2017 4:30	**570**	0.62	**110,523.10**	1.99	**0.28**	12.00	Atlas	68,524	1
	1/19/2017 18:45	1/20/2017 5:00	**615**	1.17	**134,050.75**	2.54	**0.54**	12.00	Atlas	156,839	1
	2/7/2017 9:45	2/7/2017 13:15	**210**	0.43	**80,153.28**	0.41	**0.17**	6.00	Atlas	34,466	1
	2/8/2017 17:00	2/8/2017 17:15	**15**	0.08	**36,825.25**	0.45	**0.05**	1.00	Atlas	2,946	1
	2/24/2017 19:30	2/24/2017 19:45	**15**	0.57	**8,403.05**	0.64	**0.49**	1.00	Atlas	4,790	1
	2/28/2017 5:45	2/28/2017 11:15	**330**	0.23	**87,635.39**	0.85	**0.11**	6.00	Atlas	20,156	1
	3/1/2017 3:15	3/1/2017 10:15	**420**	0.95	**255,855.58**	1.8	**0.50**	6.00	Atlas	243,063	1
	3/7/2017 7:45	3/7/2017 15:15	**450**	0.5	**170,136.34**	1.59	**0.16**	48.00	Atlas	85,068	1
	3/26/2017 1:15	3/26/2017 3:00	**105**	0.4	**168,412.15**	0.29	**0.19**	6.00	Atlas	67,365	1
	3/27/2017 17:30	3/27/2017 19:30	**120**	0.29	**287,313.45**	0.69	**0.16**	3.00	Atlas	83,321	1
	3/30/2017 20:45	3/31/2017 1:15	**270**	0.45	**140,618.76**	1.21	**0.22**	6.00	Atlas	63,278	1
	4/3/2017 19:30	4/3/2017 19:45	**15**	0.12	**105,868.25**	0.66	**0.07**	1.00	Atlas	12,704	1
	4/11/2017 9:00	4/11/2017 14:45	**345**	0.35	**96,942.09**	0.41	**0.16**	12.00	Atlas	33,930	1
	4/16/2017 5:45	4/16/2017 6:00	**15**	1.18	**15,705.32**	0.44	**0.56**	6.00	Atlas	18,532	1
	4/16/2017 17:45	4/16/2017 21:15	**210**	1.18	**49,207.20**	1.5	**0.56**	6.00	Atlas	58,065	1
	4/21/2017 22:00	4/22/2017 0:45	**165**	0.59	**110,657.02**	1.65	**0.21**	24.00	Atlas	65,288	1
	4/22/2017 13:00	4/22/2017 13:00	**-**	0.59	**779.34**	1.82	**0.21**	24.00	Atlas	460	1
	4/27/2017 7:15	4/27/2017 7:30	**15**	0.15	**33,203.27**	0.76	**0.09**	1.00	Atlas	4,980	1
	4/29/2017 0:30	4/29/2017 4:30	**240**	0.89	**35,424.78**	1.18	**0.49**	3.00	Atlas	31,528	1
	5/1/2017 2:30	5/1/2017 4:15	**105**	0.21	**133,484.43**	1.24	**0.11**	3.00	Atlas	28,032	1
	5/4/2017 19:45	5/5/2017 18:30	**1,365**	1.81	**113,175.95**	2.91	**0.61**	24.00	Atlas	204,848	1
	5/6/2017 9:00	5/6/2017 9:15	**15**	0.1	**39,911.30**	2.11	**0.05**	3.00	Atlas	3,991	1
	5/11/2017 4:00	5/11/2017 6:00	**120**	0.19	**43,878.53**	2.06	**0.11**	3.00	Atlas	8,337	1
	5/20/2017 19:00	5/21/2017 7:30	**750**	1.03	**61,600.80**	1.04	**0.45**	12.00	Atlas	63,449	1
	5/24/2017 18:00	5/25/2017 3:00	**540**	0.62	**39,537.74**	1.63	**0.22**	24.00	Atlas	24,513	1
	6/5/2017 8:45	6/5/2017 9:30	**45**	0.06	**321,428.83**	0.07	**0.03**	12.00	Atlas	19,286	1
	6/5/2017 19:00	6/5/2017 19:00	**-**	0.18	**14,909.94**	0.25	**0.16**	1.00	Atlas	2,684	1
	6/12/2017 12:15	6/12/2017 12:30	**15**	0.11	**138,065.82**	0.29	**0.10**	1.00	Atlas	15,187	1
	6/15/2017 3:00	6/15/2017 5:00	**120**	0.69	**25,749.33**	0.78	**0.43**	3.00	Atlas	17,767	1
	6/18/2017 21:45	6/18/2017 22:15	**30**	0.16	**33,393.63**	1	**0.10**	3.00	Atlas	5,343	1
	6/22/2017 16:00	6/22/2017 19:30	**210**	0.32	**24,978.91**	0.48	**0.17**	6.00	Atlas	7,993	1
	6/23/2017 14:45	6/23/2017 18:45	**240**	0.8	**65,586.48**	1.28	**0.42**	6.00	Atlas	52,469	1
	6/30/2017 21:30	6/30/2017 21:45	**15**	0.95	**12,506.81**	1	**0.82**	1.00	Atlas	11,881	1
CSO182 Total										**2,098,493**	**49**
CSO183	**6/28/2016**	7/21/2016 0:30	**33,150**	Discharge		3.7				727,382	1
	11/7/2016 9:30	2/20/2017 22:30	**151,980**	Discharge		10.02				5,286,365	1
	2/21/2017 13:45	2/22/2017 13:00	**1,395**	Discharge		0.09				42,533	1
	2/22/2017 22:30	2/27/2017 12:30	**6,600**	Discharge		0.91				1,417,351	1
	2/28/2017 5:30	2/28/2017 17:30	**720**	0.23	**3,912.78**	1.05	**0.11**	12.00	Atlas	900	1
	3/1/2017 3:15	3/3/2017 18:30	**3,795**	1.07	**463,951.90**	2.12	**0.55**	6.00	Atlas	496,429	1
	3/4/2017 8:45	3/4/2017 11:45	**180**	Discharge		1.35				4,331	1
	3/5/2017 6:15	3/6/2017 14:15	**1,920**	Discharge		1.5				51,433	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.52	**4,374.81**	1.58	**0.17**	48.00	Atlas	2,275	1
	3/7/2017 22:30	3/12/2017 16:30	**6,840**	0.52	**504,780.77**	1.59	**0.17**	48.00	Atlas	262,486	1
	3/13/2017 13:15	3/16/2017 19:00	**4,665**	Discharge		0.42				536,612	1
	3/17/2017 12:15	3/17/2017 14:15	**120**	0.05	**72,107.20**	0.09	**0.03**	6.00	Atlas	3,605	1
	3/18/2017 3:45	3/19/2017 18:00	**2,295**	Discharge		0.09				208,468	1
	3/20/2017 11:45	3/23/2017 14:45	**4,500**	Discharge		0.09				184,759	1
	3/24/2017 9:45	3/26/2017 13:15	**3,090**	Discharge		0.43				100,185	1
	3/29/2017 7:00	3/30/2017 11:45	**1,725**	Discharge		0.94				72,709	1
	3/31/2017 5:45	4/12/2017 16:00	**17,895**	0.32	**2,376,778.00**	1.86	**0.15**	6.00	Atlas	760,569	1
	4/13/2017 4:45	4/16/2017 23:00	**5,415**	Discharge		1.57				208,333	1
	4/17/2017 11:00	4/17/2017 14:00	**180**	Discharge		1.54				1,635	1
	4/17/2017 23:00	4/29/2017 13:45	**16,725**	0.02	**34,062,994.50**	3.16	**0.01**	3.00	Atlas	681,260	1
	4/30/2017 1:00	5/11/2017 12:30	**16,530**	Discharge		3.34				604,785	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO183	**5/11/2017 20:45**	5/12/2017 1:45	**300**	0.19	**4,854.95**	1.48	**0.09**	3.00	Atlas	922	1
	5/12/2017 13:30	5/12/2017 16:15	**165**	0.04	**4,796.25**	0.41	**0.02**	6.00	Atlas	192	1
	5/13/2017 2:00	7/4/2017	**74,760**	Discharge		5.58				2,564,887	1
CSO183 Total										**14,220,407**	**24**
CSO185	**7/4/2016 14:15**	7/4/2016 14:15	**-**	0.99	**3,558.64**	0.89	**0.32**	48.00	Atlas	3,523	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.23	**7,176.30**	1.18	**0.17**	1.00	Atlas	1,651	1
	7/12/2016 9:45	7/12/2016 10:00	**15**	0.25	**65,780.56**	0.6	**0.20**	1.00	Atlas	16,445	1
	10/20/2016 10:00	10/20/2016 16:45	**405**	0.54	**8,551.35**	0.4	**0.21**	6.00	Atlas	4,618	1
	12/17/2016 18:45	12/18/2016 1:15	**390**	2.36	**37,949.83**	2.68	**1.16**	12.00	Cloudburst	89,562	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.18	**25,837.00**	0.44	**0.14**	1.00	Atlas	4,651	1
	1/12/2017 15:45	1/12/2017 15:45	**-**	0.45	**7,950.62**	0.56	**0.22**	6.00	Atlas	3,578	1
	1/17/2017 3:45	1/17/2017 3:45	**-**	0.64	**5,514.33**	2.06	**0.29**	12.00	Atlas	3,529	1
	4/16/2017 17:30	4/16/2017 19:30	**120**	1.17	**14,012.69**	1.16	**0.56**	6.00	Atlas	16,395	1
	4/27/2017 7:00	4/27/2017 7:00	**-**	0.17	**15,964.82**	0.74	**0.10**	1.00	Atlas	2,714	1
	4/29/2017 2:00	4/29/2017 3:15	**75**	0.85	**110,980.84**	1.16	**0.49**	3.00	Atlas	94,334	1
	5/1/2017 4:00	5/1/2017 4:00	**-**	0.22	**12,483.00**	1.24	**0.11**	6.00	Atlas	2,746	1
	5/4/2017 20:00	5/4/2017 20:00	**-**	1.82	**702.08**	1.68	**0.60**	24.00	Atlas	1,278	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.82	**1,863.61**	2.21	**0.60**	24.00	Atlas	3,392	1
	5/20/2017 18:45	5/20/2017 18:45	**-**	1.22	**9,853.85**	0.31	**0.53**	12.00	Atlas	12,022	1
	5/21/2017 3:30	5/21/2017 4:30	**60**	1.22	**31,391.52**	1.07	**0.53**	12.00	Atlas	38,298	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.2	**169,292.15**	0.24	**0.17**	1.00	Atlas	33,858	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.64	**332,988.36**	0.7	**0.56**	1.00	Atlas	213,113	1
CSO185 Total										**545,704**	**18**
CSO186	**12/17/2016 19:15**	12/17/2016 19:15	**-**	2.52	**11,560.75**	1.21	**1.58**	12.00	Cloudburst	29,133	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.64	**158,025.39**	0.71	**0.53**	1.00	Atlas	101,136	1
CSO186 Total										**130,269**	**2**
CSO187	**12/17/2016 18:15**	12/17/2016 19:00	**45**	2.52	**5,250.87**	1.19	**1.58**	12.00	Cloudburst	13,232	1
	2/24/2017 18:45	2/24/2017 18:45	**-**	0.57	**2,731.82**	0.32	**0.49**	1.00	Atlas	1,557	1
	4/29/2017 1:30	4/29/2017 2:15	**45**	1.01	**32,375.79**	0.99	**0.51**	3.00	Atlas	32,700	1
	6/5/2017 8:30	6/5/2017 8:30	**-**	0.07	**31,248.00**	0.07	**0.03**	12.00	Atlas	2,187	1
	6/15/2017 2:45	6/15/2017 2:45	**-**	0.7	**7,156.87**	0.13	**0.45**	3.00	Atlas	5,010	1
CSO187 Total										**54,686**	**5**
CSO188	**6/30/2017 21:00**	6/30/2017 21:00	**-**	0.64	**18,913.72**	0.71	**0.53**	1.00	Atlas	12,105	1
CSO188 Total										**12,105**	**1**
CSO189*	**7/3/2016 12:15**	7/3/2016 22:15	**600**	1.3	**1,090,331.02**	0.76	**0.42**	48.00	Atlas	1,417,430	1
	7/4/2016 10:00	7/4/2016 16:00	**360**	1.3	**2,270,233.10**	1.29	**0.42**	48.00	Atlas	2,951,303	1
	7/28/2016 3:45	7/28/2016 4:15	**30**	0.3	**1,285,221.60**	0.72	**0.14**	12.00	Atlas	385,566	1
	8/1/2016 11:15	8/1/2016 12:00	**45**	0.35	**701,914.80**	1.29	**0.30**	1.00	Atlas	245,670	1
	8/9/2016 15:45	8/9/2016 16:30	**45**	0.53	**943,221.89**	0.78	**0.43**	1.00	Atlas	499,908	1
	8/15/2016 2:30	8/15/2016 7:45	**315**	1.44	**4,377,641.69**	2.18	**0.72**	6.00	Atlas	6,303,804	1
	8/17/2016 6:15	8/17/2016 9:00	**165**	1.13	**8,670,083.80**	2.69	**0.52**	3.00	Atlas	9,797,195	1
	8/20/2016 10:15	8/20/2016 22:00	**705**	1.25	**6,123,584.22**	3.76	**0.55**	12.00	Atlas	7,654,480	1
	8/27/2016 13:00	8/27/2016 13:45	**45**	0.03	**14,148,255.67**	0.97	**0.02**	1.00	Atlas	424,448	1
	8/28/2016 18:00	8/28/2016 18:30	**30**	0.13	**845,017.15**	0.15	**0.10**	1.00	Atlas	109,852	1
	9/28/2016 13:15	9/28/2016 14:45	**90**	0.5	**46,541.48**	0.84	**0.27**	6.00	Atlas	23,271	1
	9/30/2016 1:00	9/30/2016 3:45	**165**	0.64	**2,494,910.02**	1.61	**0.34**	3.00	Atlas	1,596,742	1
	10/20/2016 10:30	10/20/2016 12:15	**105**	0.67	**2,068,364.88**	0.53	**0.33**	3.00	Atlas	1,385,804	1
	11/28/2016 18:00	11/28/2016 22:30	**270**	0.79	**1,254,121.46**	1.19	**0.35**	12.00	Atlas	990,756	1
	12/6/2016 7:00	12/6/2016 15:30	**510**	0.87	**2,214,440.71**	0.93	**0.40**	12.00	Atlas	1,926,563	1
	12/17/2016 16:45	12/19/2016 12:15	**2,610**	3.53	**8,205,148.97**	3.9	**6.35**	12.00	Cloudburst	28,964,176	1
	12/24/2016	12/24/2016 2:15	**135**	0.24	**1,364,143.92**	3.71	**0.11**	12.00	Atlas	327,395	1
	1/11/2017 19:00	1/12/2017 7:30	**750**	0.19	**57,575.16**	0.75	**0.13**	1.00	Atlas	10,939	1
	1/14/2017 14:45	1/14/2017 15:00	**15**	0.21	**261,694.95**	1.5	**0.10**	12.00	Atlas	54,956	1
	1/17/2017 0:15	1/17/2017 5:15	**300**	0.83	**3,454,901.46**	2.54	**0.38**	12.00	Atlas	2,867,568	1
	1/19/2017 19:45	1/20/2017 5:15	**570**	1.36	**5,167,894.95**	3.11	**0.62**	12.00	Atlas	7,028,337	1
	2/24/2017 19:30	2/24/2017 20:00	**30**	0.5	**425,176.96**	0.59	**0.42**	1.00	Atlas	212,588	1
	2/28/2017 11:00	2/28/2017 11:00	**-**	0.27	**305,605.41**	0.83	**0.12**	12.00	Atlas	82,513	1
	3/1/2017 3:15	3/1/2017 10:45	**450**	1.37	**5,678,542.19**	2.2	**0.73**	6.00	Atlas	7,779,603	1
	3/7/2017 8:00	3/7/2017 9:00	**60**	0.88	**781,224.20**	2.26	**0.31**	1.00	Atlas	687,477	1
	3/27/2017 18:45	3/27/2017 20:00	**75**	0.26	**1,682,582.73**	0.68	**0.14**	1.00	Atlas	437,472	1
	4/16/2017 5:30	4/16/2017 6:30	**60**	0.95	**737,082.62**	0.4	**0.37**	24.00	Atlas	700,228	1
	4/16/2017 18:15	4/16/2017 22:15	**240**	0.95	**1,852,240.67**	1.19	**0.37**	24.00	Atlas	1,759,629	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO189*	**4/21/2017 22:30**	4/22/2017 1:15	**165**	0.74	**1,737,090.73**	1.58	**0.27**	6.00	Atlas	1,285,447	1
	4/28/2017 23:30	4/29/2017 6:00	**390**	1.64	**10,074,778.21**	1.94	**0.80**	6.00	Atlas	16,522,636	1
	5/4/2017 20:00	5/5/2017 14:45	**1,125**	2.15	**6,551,117.20**	3.96	**0.72**	24.00	Atlas	14,084,902	1
	5/20/2017 19:15	5/21/2017 8:15	**780**	1.09	**10,109,316.27**	1.23	**0.48**	12.00	Atlas	11,019,155	1
	5/24/2017 20:15	5/24/2017 20:45	**30**	0.65	**32,755.17**	1.72	**0.24**	24.00	Atlas	21,291	1
	5/27/2017 14:15	5/27/2017 15:15	**60**	0.12	**3,116,029.67**	1.84	**0.08**	1.00	Atlas	373,924	1
	6/5/2017 18:45	6/5/2017 19:45	**60**	0.42	**1,722,421.21**	0.5	**0.37**	1.00	Atlas	723,417	1
	6/15/2017 3:30	6/15/2017 5:45	**135**	0.5	**1,732,009.22**	0.55	**0.33**	3.00	Atlas	866,005	1
	6/22/2017 20:15	6/22/2017 21:00	**45**	1.15	**34,621.65**	0.61	**0.37**	48.00	Atlas	39,815	1
	6/23/2017 15:15	6/23/2017 19:15	**240**	1.15	**2,247,006.13**	1.35	**0.37**	48.00	Atlas	2,584,057	1
	6/30/2017 21:15	6/30/2017 22:30	**75**	0.65	**1,728,316.45**	0.81	**0.57**	1.00	Atlas	1,123,406	1
CSO189* Total										**135,269,729**	**39**
CSO190*	**7/3/2016 10:15**	7/3/2016 21:00	**645**	1.3	**287,547.90**	0.71	**0.42**	48.00	Atlas	373,812	1
	7/4/2016 10:45	7/4/2016 14:45	**240**	1.3	**34,242.49**	1.27	**0.42**	48.00	Atlas	44,515	1
	7/12/2016 9:30	7/12/2016 10:00	**30**	0.16	**67,278.69**	0.56	**0.10**	1.00	Atlas	10,765	1
	7/20/2016 19:15	7/20/2016 19:45	**30**	0.1	**4,270,601.70**	0.24	**0.08**	1.00	Atlas	427,060	1
	7/25/2016 12:45	7/25/2016 12:45	**-**	0.3	**77,918.97**	0.2	**0.16**	6.00	Atlas	23,376	1
	7/28/2016 1:00	7/28/2016 7:30	**390**	0.69	**1,107,436.03**	1.02	**0.35**	1.00	Atlas	764,131	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.15	**178,824.60**	1.3	**0.13**	1.00	Atlas	26,824	1
	8/1/2016 11:00	8/1/2016 11:15	**15**	0.65	**443,247.71**	1.9	**0.51**	1.00	Atlas	288,111	1
	8/4/2016 12:00	8/4/2016 12:30	**30**	0.35	**1,040,373.63**	1.03	**0.23**	1.00	Atlas	364,131	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.23	**129,546.52**	0.41	**0.19**	1.00	Atlas	29,796	1
	8/15/2016 2:30	8/15/2016 5:45	**195**	0.74	**893,216.53**	1.06	**0.38**	6.00	Atlas	660,980	1
	8/17/2016 4:00	8/17/2016 7:30	**210**	1.32	**765,180.86**	2.18	**0.63**	3.00	Atlas	1,010,039	1
	8/19/2016 19:30	8/19/2016 19:30	**-**	0.19	**264,695.42**	2.29	**0.17**	1.00	Atlas	50,292	1
	8/20/2016 10:15	8/20/2016 20:30	**615**	1.4	**1,210,215.15**	3.63	**0.61**	12.00	Atlas	1,694,301	1
	8/27/2016 12:45	8/27/2016 12:45	**-**	0.08	**2,779.50**	1.21	**0.07**	1.00	Atlas	222	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.22	**517.95**	0.2	**0.14**	3.00	Atlas	114	1
	9/26/2016 10:45	9/26/2016 10:45	**-**	0.25	**382.52**	0.24	**0.17**	3.00	Atlas	96	1
	9/28/2016 12:15	9/28/2016 13:00	**45**	0.62	**91,160.61**	0.78	**0.33**	6.00	Atlas	56,520	1
	9/29/2016 9:15	9/29/2016 9:15	**-**	0.09	**530.89**	0.94	**0.05**	3.00	Atlas	48	1
	9/30/2016 0:15	9/30/2016 2:30	**135**	0.42	**503,222.21**	1.31	**0.23**	3.00	Atlas	211,353	1
	10/20/2016 9:15	10/20/2016 11:15	**120**	0.54	**294,940.11**	0.38	**0.23**	3.00	Atlas	159,268	1
	11/8/2016 19:45	11/8/2016 19:45	**-**	0.15	**196.53**	0.16	**0.07**	12.00	Atlas	29	1
	11/23/2016 20:45	11/23/2016 21:00	**15**	0.31	**3,284.84**	0.43	**0.13**	6.00	Atlas	1,018	1
	11/28/2016 16:30	11/28/2016 18:45	**135**	0.77	**40,732.13**	0.89	**0.33**	12.00	Atlas	31,364	1
	12/6/2016 5:15	12/6/2016 12:15	**420**	0.93	**123,510.99**	0.98	**0.43**	12.00	Atlas	114,865	1
	12/17/2016 16:30	12/18/2016 1:30	**540**	3.36	**1,214,493.64**	3.72	**4.95**	12.00	Cloudburst	4,080,699	1
	12/23/2016 22:45	12/24/2016 1:00	**135**	0.29	**81,407.69**	3.61	**0.13**	12.00	Atlas	23,608	1
	12/26/2016 20:15	12/26/2016 20:30	**15**	0.39	**54,582.54**	0.64	**0.19**	6.00	Atlas	21,287	1
	1/3/2017 3:15	1/3/2017 4:30	**75**	0.2	**619,018.85**	0.27	**0.10**	6.00	Atlas	123,804	1
	1/10/2017 19:30	1/10/2017 19:45	**15**	0.15	**114,090.33**	0.35	**0.11**	1.00	Atlas	17,114	1
	1/12/2017 15:15	1/12/2017 18:30	**195**	0.43	**107,302.51**	0.69	**0.21**	6.00	Atlas	46,140	1
	1/13/2017 15:30	1/13/2017 15:30	**-**	0.41	**48.95**	1.2	**0.25**	3.00	Atlas	20	1
	1/14/2017 11:30	1/14/2017 13:45	**135**	0.24	**86,850.79**	1.45	**0.11**	12.00	Atlas	20,844	1
	1/16/2017 23:30	1/17/2017 3:30	**240**	0.69	**300,556.96**	2.25	**0.32**	6.00	Atlas	207,384	1
	1/19/2017 18:45	1/20/2017 1:45	**420**	0.89	**754,953.00**	2.42	**0.41**	12.00	Atlas	671,908	1
	2/24/2017 18:45	2/24/2017 19:00	**15**	0.23	**919,042.61**	0.28	**0.18**	1.00	Atlas	211,380	1
	2/28/2017 10:00	2/28/2017 11:00	**60**	0.35	**82,587.57**	0.62	**0.17**	6.00	Atlas	28,906	1
	3/1/2017 3:00	3/1/2017 9:00	**360**	1.31	**818,615.29**	1.94	**0.67**	6.00	Atlas	1,072,386	1
	3/7/2017 7:30	3/7/2017 12:30	**300**	0.48	**205,084.90**	2.21	**0.22**	12.00	Atlas	98,441	1
	3/27/2017 18:00	3/27/2017 19:00	**60**	0.29	**212,427.00**	0.61	**0.17**	3.00	Atlas	61,604	1
	4/16/2017 5:15	4/16/2017 20:30	**915**	1.26	**274,213.64**	1.43	**0.48**	24.00	Atlas	345,509	1
	4/21/2017 22:00	4/21/2017 23:00	**60**	0.74	**69,711.78**	1.74	**0.27**	24.00	Atlas	51,587	1
	4/28/2017 23:15	4/29/2017 8:30	**555**	1.28	**1,144,922.63**	1.68	**0.64**	6.00	Atlas	1,465,501	1
	5/1/2017 3:45	5/1/2017 3:45	**-**	0.24	**624.38**	1.64	**0.12**	6.00	Atlas	150	1
	5/4/2017 19:30	5/5/2017 10:00	**870**	1.66	**455,103.25**	2.95	**0.56**	24.00	Atlas	755,471	1
	5/20/2017 18:30	5/21/2017 5:45	**675**	1.46	**1,886,568.98**	1.47	**0.65**	12.00	Atlas	2,754,391	1
	5/24/2017 18:45	5/24/2017 18:45	**-**	0.55	**104.40**	1.79	**0.20**	24.00	Atlas	57	1
	5/27/2017 14:00	5/27/2017 14:15	**15**	0.27	**810,184.41**	2.26	**0.22**	1.00	Atlas	218,750	1
	6/5/2017 18:15	6/5/2017 18:30	**15**	0.47	**551,658.17**	0.5	**0.41**	1.00	Atlas	259,279	1
	6/13/2017 17:00	6/13/2017 17:00	**-**	0.3	**322,028.43**	0.3	**0.25**	1.00	Atlas	96,609	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO190*	**6/15/2017 3:15**	6/15/2017 4:00	**45**	0.48	**601,554.48**	0.56	**0.29**	3.00	Atlas	288,746	1
	6/23/2017 15:00	6/23/2017 16:00	**60**	1.25	**146,302.62**	1.22	**0.41**	48.00	Atlas	182,878	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.7	**512.07**	0.76	**0.60**	1.00	Atlas	358	1
CSO190* Total										**19,447,840**	**53**
CSO191*	**7/3/2016 13:00**	7/3/2016 21:15	**495**	1.2	**138,030.23**	0.65	**0.39**	48.00	Atlas	165,636	1
	7/6/2016 14:00	7/6/2016 14:00	**-**	0.33	**166,327.39**	1.49	**0.23**	1.00	Atlas	54,888	1
	7/25/2016 16:15	7/25/2016 16:15	**-**	0.61	**31,512.03**	0.6	**0.44**	1.00	Atlas	19,222	1
	7/28/2016 4:30	7/28/2016 5:00	**30**	0.68	**159,917.00**	1.2	**0.31**	12.00	Atlas	108,744	1
	7/30/2016 15:00	7/30/2016 15:15	**15**	0.56	**767,363.95**	1.95	**0.49**	1.00	Atlas	429,724	1
	7/31/2016 18:00	7/31/2016 18:30	**30**	0.46	**713,734.09**	2.41	**0.39**	1.00	Atlas	328,318	1
	8/1/2016 12:15	8/1/2016 12:15	**-**	0.35	**128,358.23**	2.73	**0.28**	1.00	Atlas	44,925	1
CSO191* Total										**1,151,457**	**7**
CSO193	**7/27/2016 23:45**	7/28/2016 3:30	**225**	0.7	**26,122.29**	0.85	**0.32**	12.00	Atlas	18,286	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**40,131.73**	1.54	**0.42**	1.00	Atlas	19,263	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.27	**2,714.89**	0.38	**0.22**	1.00	Atlas	733	1
	8/15/2016 3:15	8/15/2016 3:15	**-**	0.87	**1,371.67**	0.77	**0.43**	6.00	Atlas	1,193	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.93	**4,799.91**	1.96	**0.43**	3.00	Atlas	4,464	1
	8/20/2016 14:30	8/20/2016 20:00	**330**	1.38	**20,815.45**	3.06	**0.59**	12.00	Atlas	28,725	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.14	**86,142.36**	0.14	**0.12**	1.00	Atlas	12,060	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.69	**3,749.48**	0.25	**0.26**	24.00	Atlas	2,587	1
	12/8/2016 8:15	12/8/2016 11:00	**165**	Discharge		0.98				13,362	1
	12/17/2016 19:15	12/17/2016 21:00	**105**	2.81	**7,053.86**	1.9	**2.53**	12.00	Cloudburst	19,821	1
	1/17/2017 0:15	1/17/2017 0:15	**-**	0.6	**627.30**	1.71	**0.28**	12.00	Atlas	376	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.45	**5,776.91**	0.49	**0.37**	1.00	Atlas	2,600	1
	3/1/2017 3:15	3/1/2017 7:15	**240**	1.15	**8,659.70**	1.42	**0.61**	6.00	Atlas	9,959	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.39	**1,698.59**	1.75	**0.18**	12.00	Atlas	662	1
	4/16/2017 17:45	4/16/2017 17:45	**-**	1.23	**1,374.87**	0.85	**0.49**	6.00	Atlas	1,691	1
	4/25/2017 2:45	4/25/2017 2:45	**-**	Discharge		0.7				10,153	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.1	**27,788.00**	1.35	**0.56**	3.00	Atlas	30,567	1
	5/20/2017 18:45	5/20/2017 18:45	**-**	1.09	**705.20**	0.23	**0.49**	12.00	Atlas	769	1
	5/21/2017 3:00	5/21/2017 3:45	**45**	1.09	**16,365.38**	0.92	**0.49**	12.00	Atlas	17,838	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.28	**6,837.07**	0.34	**0.23**	1.00	Atlas	1,914	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.59	**40,464.80**	0.71	**0.50**	1.00	Atlas	23,874	1
CSO193 Total										**220,898**	**21**
CSO195	**7/3/2016 12:00**	7/3/2016 12:00	**-**	1.19	**263.75**	0.34	**0.39**	48.00	Atlas	314	1
	7/30/2016 14:30	7/30/2016 14:30	**-**	0.48	**31,293.23**	1.22	**0.42**	1.00	Atlas	15,021	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.4	**94,168.65**	1.69	**0.31**	1.00	Atlas	37,667	1
	8/21/2016 4:15	8/21/2016 4:45	**30**	0.89	**115,443.90**	2.49	**0.38**	12.00	Atlas	102,745	1
	12/17/2016 21:00	12/17/2016 23:30	**150**	2.61	**54,666.16**	2.34	**1.81**	12.00	Cloudburst	142,679	1
	1/12/2017 15:45	1/12/2017 15:45	**-**	0.44	**1,347.18**	0.43	**0.22**	6.00	Atlas	593	1
	1/19/2017 19:15	1/20/2017 0:45	**330**	0.99	**3,622.05**	2.31	**0.45**	12.00	Atlas	3,586	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.41	**170,369.10**	0.47	**0.35**	1.00	Atlas	69,851	1
	3/1/2017 3:15	3/1/2017 8:45	**330**	1.15	**128,995.62**	1.88	**0.58**	6.00	Atlas	148,345	1
	3/7/2017 7:45	3/7/2017 8:00	**15**	0.59	**68,934.44**	1.79	**0.19**	48.00	Atlas	40,671	1
	4/3/2017 19:30	4/3/2017 19:30	**-**	0.16	**632.94**	0.52	**0.10**	1.00	Atlas	101	1
	4/16/2017 5:30	4/16/2017 5:30	**-**	1.16	**7,599.14**	0.54	**0.49**	6.00	Atlas	8,815	1
	4/16/2017 17:30	4/16/2017 20:45	**195**	1.16	**81,038.84**	1.43	**0.49**	6.00	Atlas	94,005	1
	4/27/2017 7:00	4/27/2017 7:00	**-**	0.15	**1,111.27**	0.85	**0.10**	1.00	Atlas	167	1
	4/29/2017 1:45	4/29/2017 3:15	**90**	1.02	**222,964.65**	1.28	**0.52**	6.00	Atlas	227,424	1
	5/4/2017 20:00	5/4/2017 20:30	**30**	1.58	**5,408.76**	1.78	**0.53**	24.00	Atlas	8,546	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.58	**1,981.12**	2.21	**0.53**	24.00	Atlas	3,130	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	1.01	**305,718.88**	1.04	**0.45**	12.00	Atlas	308,776	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.15	**21,096.73**	1.65	**0.10**	1.00	Atlas	3,165	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.17	**384,393.71**	0.22	**0.14**	1.00	Atlas	65,347	1
	6/15/2017 3:15	6/15/2017 4:15	**60**	0.4	**156,185.03**	0.4	**0.25**	3.00	Atlas	62,474	1
	6/23/2017 15:30	6/23/2017 16:15	**45**	0.78	**89,952.78**	1.1	**0.36**	12.00	Atlas	70,163	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.69	**203,758.93**	0.79	**0.59**	1.00	Atlas	140,594	1
CSO195 Total										**1,554,178**	**23**
CSO196	**7/3/2016 12:00**	7/3/2016 20:00	**480**	1.19	**1,603.58**	0.55	**0.39**	48.00	Atlas	1,908	1
	7/6/2016 13:15	7/6/2016 13:15	**-**	0.19	**2,213.89**	1.34	**0.13**	1.00	Atlas	421	1
	8/15/2016 3:15	8/15/2016 3:15	**-**	0.91	**4,106.38**	0.81	**0.44**	6.00	Atlas	3,737	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.67	**8,103.19**	1.69	**0.28**	12.00	Atlas	5,429	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO196	**8/20/2016 20:00**	8/20/2016 20:00	**-**	0.89	**4,081.21**	2.31	**0.38**	12.00	Atlas	3,632	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.23	**47,690.43**	0.23	**0.19**	1.00	Atlas	10,969	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.55	**20,087.22**	0.11	**0.21**	24.00	Atlas	11,048	1
	12/17/2016 18:30	12/18/2016 0:30	**360**	2.61	**22,600.93**	2.77	**1.81**	12.00	Cloudburst	58,988	1
	1/12/2017 18:30	1/12/2017 18:30	**-**	0.44	**2,826.39**	0.58	**0.22**	6.00	Atlas	1,244	1
	5/4/2017 20:00	5/4/2017 20:00	**-**	1.58	**704.36**	1.74	**0.53**	24.00	Atlas	1,113	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.58	**605.11**	2.21	**0.53**	24.00	Atlas	956	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	1.01	**46,120.18**	1.04	**0.45**	12.00	Atlas	46,581	1
	5/23/2017 7:30	5/23/2017 7:45	**15**	Discharge		1.06				1	1
	5/27/2017 14:15	5/27/2017 14:15	**-**	0.15	**256.33**	1.65	**0.10**	1.00	Atlas	38	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.17	**374.41**	0.22	**0.14**	1.00	Atlas	64	1
	6/6/2017 14:15	6/6/2017 14:45	**30**	Discharge		0.23				0	1
	6/14/2017 7:15	6/14/2017 8:15	**60**	Discharge		0.13				0	1
	6/15/2017 3:15	6/15/2017 4:15	**60**	0.4	**8,614.30**	0.4	**0.25**	3.00	Atlas	3,446	1
	6/22/2017 18:45	6/22/2017 18:45	**-**	0.36	**8.61**	0.49	**0.19**	6.00	Atlas	3	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.78	**4,740.51**	1.07	**0.36**	12.00	Atlas	3,698	1
	6/30/2017 21:15	6/30/2017 21:15	**-**	0.69	**2,329.20**	0.79	**0.59**	1.00	Atlas	1,607	1
CSO196 Total										**154,883**	**21**
CSO197	**6/30/2016 8:45**	6/30/2016 8:45	**-**	Discharge		1.92				41	1
	7/3/2016 7:30	7/3/2016 23:00	**930**	1.19	**18,932.50**	0.69	**0.39**	48.00	Atlas	22,530	1
	7/4/2016 8:15	7/4/2016 16:15	**480**	1.19	**7,219.34**	1.19	**0.39**	48.00	Atlas	8,591	1
	7/6/2016 13:00	7/6/2016 13:15	**15**	0.19	**30,269.32**	1.34	**0.13**	1.00	Atlas	5,751	1
	7/12/2016 9:30	7/12/2016 10:00	**30**	0.18	**15,636.50**	0.47	**0.12**	1.00	Atlas	2,815	1
	7/20/2016 19:30	7/20/2016 19:45	**15**	0.15	**8,864.60**	0.45	**0.13**	1.00	Atlas	1,330	1
	7/27/2016 23:30	7/28/2016 3:15	**225**	0.53	**11,702.53**	0.53	**0.24**	12.00	Atlas	6,202	1
	7/30/2016 14:00	7/30/2016 14:15	**15**	0.48	**64,400.21**	1.22	**0.42**	1.00	Atlas	30,912	1
	7/31/2016 17:00	7/31/2016 17:00	**-**	0.11	**374.09**	1.33	**0.09**	1.00	Atlas	41	1
	8/1/2016 11:00	8/1/2016 11:15	**15**	0.4	**16,182.60**	1.69	**0.31**	1.00	Atlas	6,473	1
	8/5/2016 13:45	8/5/2016 13:45	**-**	0.31	**1,297.03**	1.48	**0.21**	1.00	Atlas	402	1
	8/15/2016 2:30	8/15/2016 7:15	**285**	0.91	**11,333.41**	1.21	**0.44**	6.00	Atlas	10,313	1
	8/17/2016 6:00	8/17/2016 7:00	**60**	0.67	**9,441.45**	1.69	**0.28**	12.00	Atlas	6,326	1
	8/20/2016 14:15	8/20/2016 20:15	**360**	0.89	**22,870.42**	2.43	**0.38**	12.00	Atlas	20,355	1
	8/28/2016 17:15	8/28/2016 17:30	**15**	0.23	**72,090.13**	0.23	**0.19**	1.00	Atlas	16,581	1
	12/6/2016 9:00	12/6/2016 9:00	**-**	0.93	**44.25**	0.6	**0.43**	12.00	Atlas	41	1
	12/17/2016 18:30	12/18/2016 1:15	**405**	2.61	**81,276.12**	2.93	**1.81**	12.00	Cloudburst	212,131	1
	1/10/2017 19:30	1/10/2017 19:30	**-**	0.12	**1,846.75**	0.3	**0.09**	1.00	Atlas	222	1
	1/12/2017 15:30	1/12/2017 15:30	**-**	0.44	**503.66**	0.44	**0.22**	6.00	Atlas	222	1
	1/17/2017 1:00	1/17/2017 1:00	**-**	0.61	**67.46**	1.87	**0.28**	12.00	Atlas	41	1
	2/18/2017 20:00	2/18/2017 20:15	**15**	0.07	**7,620.86**	0.08	**0.03**	6.00	Atlas	533	1
	2/21/2017 12:30	2/21/2017 12:30	**-**	Discharge		0.07				222	1
	2/24/2017 10:30	2/24/2017 20:00	**570**	Discharge		0.47				296,006	1
	2/27/2017 11:00	2/27/2017 11:00	**-**	0.05	**18,869.80**	0.46	**0.02**	12.00	Atlas	943	1
	2/28/2017 4:45	2/28/2017 11:30	**405**	0.27	**1,053,338.07**	0.73	**0.13**	6.00	Atlas	284,401	1
	3/1/2017 3:00	3/1/2017 10:45	**465**	1.15	**1,220,161.45**	1.88	**0.58**	6.00	Atlas	1,403,186	1
	3/5/2017 13:45	3/5/2017 20:30	**405**	Discharge		1.47				1,428	1
	3/6/2017 7:15	3/6/2017 19:45	**750**	0.59	**24,365.00**	1.65	**0.19**	48.00	Atlas	14,375	1
	3/7/2017 5:00	3/7/2017 15:15	**615**	0.59	**652,376.59**	1.96	**0.19**	48.00	Atlas	384,902	1
	3/17/2017 6:30	3/17/2017 12:00	**330**	0.04	**7,964,860.50**	0.1	**0.02**	3.00	Atlas	318,594	1
	5/12/2017 10:00	5/12/2017 10:00	**-**	0.04	**1,028.75**	0.47	**0.02**	6.00	Atlas	41	1
	5/13/2017 8:30	5/13/2017 8:30	**-**	Discharge		0.27				131	1
	5/14/2017 9:45	5/14/2017 10:00	**15**	Discharge		0.24				173	1
	5/18/2017 12:15	5/19/2017 7:15	**1,140**	Discharge		0.07				9,770	1
	5/19/2017 17:45	5/19/2017 17:45	**-**	0.03	**4,379.33**	0.04	**0.03**	1.00	Atlas	131	1
	5/20/2017 18:30	5/21/2017 7:30	**780**	1.01	**224,870.26**	1.06	**0.45**	12.00	Atlas	227,119	1
	5/24/2017 9:00	5/25/2017 9:45	**1,485**	0.52	**86,272.13**	1.58	**0.18**	24.00	Atlas	44,862	1
	5/27/2017 14:00	5/27/2017 14:30	**30**	0.15	**86,634.53**	1.65	**0.10**	1.00	Atlas	12,995	1
	6/2/2017 8:00	6/2/2017 9:45	**105**	Discharge		0.15				1,773	1
	6/3/2017 12:45	6/3/2017 19:30	**405**	Discharge		0.15				4,761	1
	6/4/2017 12:30	6/4/2017 19:15	**405**	Discharge		0				3,679	1
	6/5/2017 7:30	6/5/2017 19:45	**735**	0.06	**239,986.67**	0.23	**0.03**	12.00	Atlas	14,399	1
	6/9/2017 7:30	6/9/2017 12:00	**270**	Discharge		0.23				468	1
	6/10/2017 9:30	6/10/2017 9:30	**-**	Discharge		0.23				41	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO197	**6/11/2017 11:45**	6/11/2017 11:45	**-**	Discharge		0.23				41	1
	6/12/2017 12:30	6/12/2017 12:30	**-**	0.04	**1,028.75**	0.21	**0.03**	1.00	Atlas	41	1
	6/13/2017 17:00	6/13/2017 17:00	**-**	0.09	**457.22**	0.13	**0.08**	1.00	Atlas	41	1
	6/15/2017 3:00	6/15/2017 6:15	**195**	0.4	**124,109.95**	0.53	**0.25**	3.00	Atlas	49,644	1
	6/18/2017 11:00	6/18/2017 11:00	**-**	0.01	**4,115.00**	0.54	**0.01**	1.00	Atlas	41	1
	6/18/2017 21:15	6/18/2017 23:30	**135**	0.15	**38,403.60**	0.69	**0.09**	3.00	Atlas	5,761	1
	6/22/2017 15:15	6/22/2017 20:00	**285**	0.36	**77,418.92**	0.52	**0.19**	6.00	Atlas	27,871	1
	6/23/2017 7:45	6/23/2017 19:00	**675**	0.78	**58,734.60**	1.3	**0.36**	12.00	Atlas	45,813	1
	6/27/2017 1:45	6/27/2017 2:15	**30**	0.1	**13,867.10**	1.24	**0.09**	1.00	Atlas	1,387	1
	6/30/2017 20:45	6/30/2017 22:15	**90**	0.69	**161,756.49**	0.79	**0.59**	1.00	Atlas	111,612	1
CSO197 Total										**3,618,505**	**54**
CSO198	**7/3/2016 7:30**	7/3/2016 23:30	**960**	1.19	**75,517.30**	0.7	**0.39**	48.00	Atlas	89,866	1
	7/4/2016 8:00	7/4/2016 16:45	**525**	1.19	**38,995.51**	1.19	**0.39**	48.00	Atlas	46,405	1
	7/6/2016 13:00	7/6/2016 13:45	**45**	0.19	**68,538.21**	1.35	**0.13**	1.00	Atlas	13,022	1
	7/12/2016 9:30	7/12/2016 10:15	**45**	0.18	**94,861.11**	0.47	**0.12**	1.00	Atlas	17,075	1
	7/20/2016 19:30	7/20/2016 20:00	**30**	0.15	**71,552.07**	0.45	**0.13**	1.00	Atlas	10,733	1
	7/25/2016 15:00	7/25/2016 15:00	**-**	0.13	**7,199.54**	0.25	**0.07**	6.00	Atlas	936	1
	7/27/2016 23:30	7/28/2016 5:15	**345**	0.53	**56,957.26**	0.61	**0.24**	12.00	Atlas	30,187	1
	7/30/2016 14:00	7/30/2016 15:00	**60**	0.48	**122,451.69**	1.22	**0.42**	1.00	Atlas	58,777	1
	7/31/2016 17:00	7/31/2016 17:45	**45**	0.11	**150,162.09**	1.33	**0.09**	1.00	Atlas	16,518	1
	8/1/2016 11:00	8/1/2016 11:45	**45**	0.4	**64,529.95**	1.69	**0.31**	1.00	Atlas	25,812	1
	8/1/2016 21:00	8/1/2016 21:30	**30**	0.4	**18,053.70**	1.6	**0.31**	1.00	Atlas	7,221	1
	8/4/2016 13:30	8/4/2016 13:45	**15**	0.24	**16,822.88**	1.23	**0.16**	3.00	Atlas	4,037	1
	8/5/2016 13:45	8/5/2016 15:15	**90**	0.31	**57,177.39**	1.6	**0.21**	1.00	Atlas	17,725	1
	8/12/2016 14:00	8/12/2016 14:00	**-**	0.18	**5,199.67**	0.28	**0.12**	3.00	Atlas	936	1
	8/15/2016 2:30	8/15/2016 8:00	**330**	0.91	**129,949.04**	1.21	**0.44**	6.00	Atlas	118,254	1
	8/17/2016 4:15	8/17/2016 7:30	**195**	0.67	**118,055.99**	1.69	**0.28**	12.00	Atlas	79,098	1
	8/20/2016 10:15	8/20/2016 21:15	**660**	0.89	**100,600.10**	2.48	**0.38**	12.00	Atlas	89,534	1
	8/28/2016 17:15	8/28/2016 18:15	**60**	0.23	**204,260.00**	0.23	**0.19**	1.00	Atlas	46,980	1
	9/10/2016 15:00	9/10/2016 15:45	**45**	0.19	**98,292.89**	0.15	**0.11**	3.00	Atlas	18,676	1
	9/17/2016 9:45	9/17/2016 9:45	**-**	0.15	**825.47**	0.35	**0.12**	1.00	Atlas	124	1
	9/26/2016 9:15	9/26/2016 11:15	**120**	0.28	**69,722.32**	0.28	**0.19**	3.00	Atlas	19,522	1
	9/28/2016 12:15	9/28/2016 14:15	**120**	0.39	**99,369.31**	0.67	**0.21**	3.00	Atlas	38,754	1
	9/29/2016 9:30	9/29/2016 9:45	**15**	0.07	**57,678.57**	0.74	**0.06**	1.00	Atlas	4,038	1
	9/30/2016	9/30/2016 3:00	**180**	0.7	**88,078.67**	1.3	**0.35**	3.00	Atlas	61,655	1
	10/20/2016 9:00	10/20/2016 16:30	**450**	0.55	**104,727.47**	0.42	**0.21**	24.00	Atlas	57,600	1
	11/8/2016 19:45	11/8/2016 20:15	**30**	0.19	**60,287.84**	0.22	**0.09**	12.00	Atlas	11,455	1
	11/23/2016 20:00	11/23/2016 21:15	**75**	0.34	**34,032.59**	0.52	**0.14**	6.00	Atlas	11,571	1
	11/28/2016 13:45	11/28/2016 22:15	**510**	0.66	**111,599.74**	1	**0.29**	12.00	Atlas	73,656	1
	12/6/2016 4:15	12/6/2016 12:45	**510**	0.93	**139,740.13**	0.97	**0.43**	12.00	Atlas	129,958	1
	12/11/2016 21:30	12/11/2016 22:30	**60**	0.32	**26,467.22**	1.17	**0.14**	12.00	Atlas	8,470	1
	12/17/2016 16:15	12/18/2016 2:00	**585**	2.61	**168,219.99**	2.93	**1.81**	12.00	Cloudburst	439,054	1
	12/23/2016 22:15	12/24/2016 1:45	**210**	0.19	**225,616.74**	2.78	**0.09**	6.00	Atlas	42,867	1
	12/26/2016 20:15	12/26/2016 22:15	**120**	0.3	**43,932.27**	0.48	**0.15**	6.00	Atlas	13,180	1
	1/3/2017 1:45	1/3/2017 5:15	**210**	0.15	**176,609.07**	0.25	**0.08**	6.00	Atlas	26,491	1
	1/10/2017 19:30	1/10/2017 20:15	**45**	0.12	**175,181.17**	0.32	**0.09**	1.00	Atlas	21,022	1
	1/11/2017 12:15	1/11/2017 14:15	**120**	0.21	**114,335.90**	0.52	**0.13**	3.00	Atlas	24,011	1
	1/12/2017 15:30	1/12/2017 21:45	**375**	0.44	**97,536.09**	0.81	**0.22**	6.00	Atlas	42,916	1
	1/13/2017 14:45	1/13/2017 16:00	**75**	0.32	**29,392.06**	1.08	**0.19**	3.00	Atlas	9,405	1
	1/14/2017 11:00	1/14/2017 14:30	**210**	0.22	**124,619.95**	1.32	**0.11**	3.00	Atlas	27,416	1
	1/16/2017 23:30	1/17/2017 4:00	**270**	0.61	**108,645.59**	2.04	**0.28**	12.00	Atlas	66,274	1
	1/19/2017 18:30	1/20/2017 4:00	**570**	0.99	**172,816.24**	2.47	**0.45**	12.00	Atlas	171,088	1
	2/7/2017 9:15	2/7/2017 13:15	**240**	0.39	**79,408.03**	0.39	**0.20**	6.00	Atlas	30,969	1
	2/8/2017 17:00	2/8/2017 17:15	**15**	0.08	**3,095.63**	0.42	**0.04**	6.00	Atlas	248	1
	2/24/2017 18:45	2/24/2017 19:45	**60**	0.41	**124,948.56**	0.47	**0.35**	1.00	Atlas	51,229	1
	2/28/2017 5:30	2/28/2017 11:00	**330**	0.27	**89,596.33**	0.73	**0.13**	6.00	Atlas	24,191	1
	3/1/2017 3:00	3/1/2017 9:30	**390**	1.15	**145,003.47**	1.88	**0.58**	6.00	Atlas	166,754	1
	3/7/2017 7:30	3/7/2017 14:45	**435**	0.59	**76,185.29**	1.92	**0.19**	48.00	Atlas	44,949	1
	3/26/2017 1:00	3/26/2017 3:15	**135**	0.38	**71,089.61**	0.31	**0.19**	6.00	Atlas	27,014	1
	3/27/2017 16:45	3/27/2017 19:15	**150**	0.27	**123,875.85**	0.65	**0.15**	3.00	Atlas	33,446	1
	3/30/2017 20:30	3/31/2017 1:15	**285**	0.31	**75,075.55**	1.01	**0.15**	6.00	Atlas	23,273	1
	4/3/2017 19:15	4/3/2017 19:45	**30**	0.16	**63,132.31**	0.52	**0.10**	1.00	Atlas	10,101	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO198	**4/11/2017 4:30**	4/11/2017 12:15	**465**	0.36	**54,236.08**	0.4	**0.17**	12.00	Atlas	19,525	1
	4/16/2017 5:15	4/16/2017 21:15	**960**	1.16	**118,985.46**	1.48	**0.49**	6.00	Atlas	138,023	1
	4/21/2017 20:45	4/22/2017 0:45	**240**	0.68	**60,662.90**	1.72	**0.24**	24.00	Atlas	41,251	1
	4/27/2017 6:30	4/27/2017 7:30	**60**	0.15	**130,194.33**	0.85	**0.10**	1.00	Atlas	19,529	1
	4/29/2017	4/29/2017 3:45	**225**	1.02	**138,037.15**	1.31	**0.52**	6.00	Atlas	140,798	1
	5/1/2017 3:45	5/1/2017 4:15	**30**	0.25	**29,968.72**	1.4	**0.13**	3.00	Atlas	7,492	1
	5/4/2017 19:30	5/5/2017 10:15	**885**	1.58	**125,170.98**	2.69	**0.53**	24.00	Atlas	197,770	1
	5/11/2017 3:45	5/11/2017 4:15	**30**	0.18	**41,623.22**	1.77	**0.10**	6.00	Atlas	7,492	1
	5/20/2017 18:30	5/21/2017 7:00	**750**	1.01	**212,163.97**	1.06	**0.45**	12.00	Atlas	214,286	1
	5/24/2017 17:45	5/25/2017 3:00	**555**	0.52	**80,240.35**	1.54	**0.18**	24.00	Atlas	41,725	1
	5/27/2017 14:00	5/27/2017 14:15	**15**	0.15	**48,520.87**	1.65	**0.10**	1.00	Atlas	7,278	1
	6/5/2017 8:30	6/5/2017 9:15	**45**	0.06	**266,666.67**	0.06	**0.03**	12.00	Atlas	16,000	1
	6/5/2017 18:15	6/5/2017 19:00	**45**	0.17	**185,090.35**	0.23	**0.14**	1.00	Atlas	31,465	1
	6/15/2017 3:00	6/15/2017 6:00	**180**	0.4	**192,426.33**	0.52	**0.25**	3.00	Atlas	76,971	1
	6/18/2017 21:30	6/18/2017 22:15	**45**	0.15	**52,028.60**	0.67	**0.09**	3.00	Atlas	7,804	1
	6/22/2017 15:30	6/22/2017 19:45	**255**	0.36	**79,801.39**	0.52	**0.19**	6.00	Atlas	28,729	1
	6/23/2017 7:45	6/23/2017 18:45	**660**	0.78	**125,421.94**	1.3	**0.36**	12.00	Atlas	97,829	1
	6/27/2017 1:45	6/27/2017 2:15	**30**	0.1	**60,562.50**	1.24	**0.09**	1.00	Atlas	6,056	1
	6/30/2017 20:45	6/30/2017 22:00	**75**	0.69	**534,450.19**	0.79	**0.59**	1.00	Atlas	368,771	1
CSO198 Total										**3,873,286**	**70**
CSO199	**7/3/2016 11:30**	7/3/2016 20:00	**510**	1.19	**5,618.82**	0.55	**0.39**	48.00	Atlas	6,686	1
	7/20/2016 19:30	7/20/2016 19:30	**-**	0.15	**4,639.33**	0.45	**0.13**	1.00	Atlas	696	1
	7/30/2016 14:00	7/30/2016 14:00	**-**	0.48	**1,668.52**	1.21	**0.42**	1.00	Atlas	801	1
	8/5/2016 13:45	8/5/2016 13:45	**-**	0.31	**4,408.94**	1.48	**0.21**	1.00	Atlas	1,367	1
	8/15/2016 3:00	8/15/2016 7:15	**255**	0.91	**6,463.76**	1.21	**0.44**	6.00	Atlas	5,882	1
	8/17/2016 6:45	8/17/2016 7:00	**15**	0.67	**11,242.73**	1.69	**0.28**	12.00	Atlas	7,533	1
	8/20/2016 14:15	8/20/2016 20:00	**345**	0.89	**9,655.58**	2.36	**0.38**	12.00	Atlas	8,593	1
	8/28/2016 17:15	8/28/2016 17:15	**-**	0.23	**10,881.65**	0.19	**0.19**	1.00	Atlas	2,503	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.19	**2,525.84**	0.15	**0.11**	3.00	Atlas	480	1
	9/11/2016 1:15	9/11/2016 1:15	**-**	0.19	**20,598.74**	0.19	**0.11**	3.00	Atlas	3,914	1
	1/12/2017 9:45	1/12/2017 15:30	**345**	Discharge		0.54				2,979	1
	1/19/2017 23:15	1/19/2017 23:15	**-**	0.99	**303.83**	1.91	**0.45**	12.00	Atlas	301	1
	2/24/2017 19:00	2/24/2017 19:15	**15**	0.41	**9,436.66**	0.47	**0.35**	1.00	Atlas	3,869	1
	2/28/2017 8:00	2/28/2017 8:00	**-**	0.27	**43,407.93**	0.55	**0.13**	6.00	Atlas	11,720	1
	2/28/2017 20:00	3/1/2017 13:00	**1,020**	Discharge		1.88				45,151	1
	3/7/2017 7:45	3/7/2017 8:15	**30**	0.59	**10,689.78**	1.79	**0.19**	48.00	Atlas	6,307	1
	4/4/2017 6:45	4/4/2017 6:45	**-**	0.16	**68,654.81**	0.56	**0.10**	1.00	Atlas	10,985	1
	4/16/2017 5:30	4/16/2017 5:45	**15**	1.16	**1,886.48**	0.54	**0.49**	6.00	Atlas	2,188	1
	4/16/2017 17:30	4/16/2017 19:30	**120**	1.16	**14,999.72**	1.09	**0.49**	6.00	Atlas	17,400	1
	4/29/2017 1:45	4/29/2017 3:15	**90**	1.02	**19,052.02**	1.28	**0.52**	6.00	Atlas	19,433	1
	5/4/2017 20:00	5/4/2017 20:30	**30**	1.58	**1,600.00**	1.78	**0.53**	24.00	Atlas	2,528	1
	5/5/2017 4:45	5/5/2017 4:45	**-**	1.58	**499.28**	2.21	**0.53**	24.00	Atlas	789	1
	5/5/2017 18:15	5/5/2017 18:15	**-**	1.58	**6,484.81**	2.83	**0.53**	24.00	Atlas	10,246	1
	5/6/2017 5:00	5/6/2017 5:00	**-**	Discharge		1.88				9,480	1
	5/20/2017 18:45	5/21/2017 5:45	**660**	1.01	**38,266.54**	1.04	**0.45**	12.00	Atlas	38,649	1
	6/5/2017 18:30	6/5/2017 18:45	**15**	0.17	**44,975.41**	0.22	**0.14**	1.00	Atlas	7,646	1
	6/15/2017 3:15	6/15/2017 4:15	**60**	0.4	**19,616.43**	0.4	**0.25**	3.00	Atlas	7,847	1
	6/15/2017 13:30	6/15/2017 16:00	**150**	0.4	**20,869.38**	0.53	**0.25**	3.00	Atlas	8,348	1
	6/23/2017 15:30	6/24/2017 13:00	**1,290**	0.78	**342,082.54**	1.3	**0.36**	12.00	Atlas	266,824	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.69	**64,177.12**	0.79	**0.59**	1.00	Atlas	44,282	1
CSO199 Total										**555,427**	**30**
CSO200	**7/3/2016 12:00**	7/3/2016 19:45	**465**	1.19	**1,509.87**	0.5	**0.39**	48.00	Atlas	1,797	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**50,151.92**	1.22	**0.42**	1.00	Atlas	24,073	1
	7/31/2016 17:15	7/31/2016 17:15	**-**	0.11	**165.27**	1.33	**0.09**	1.00	Atlas	18	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.4	**355.80**	1.69	**0.31**	1.00	Atlas	142	1
	8/15/2016 2:45	8/15/2016 7:15	**270**	0.91	**6,021.47**	1.21	**0.44**	6.00	Atlas	5,480	1
	8/17/2016 6:45	8/17/2016 7:00	**15**	0.67	**1,112.75**	1.69	**0.28**	12.00	Atlas	746	1
	8/20/2016 20:00	8/20/2016 20:00	**-**	0.89	**211.01**	2.31	**0.38**	12.00	Atlas	188	1
	8/28/2016 17:15	8/28/2016 17:30	**15**	0.23	**20,780.04**	0.23	**0.19**	1.00	Atlas	4,779	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.19	**439.68**	0.15	**0.11**	3.00	Atlas	84	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.55	**763.02**	0.11	**0.21**	24.00	Atlas	420	1
	1/12/2017 15:30	1/13/2017	**510**	0.44	**5,211.73**	0.82	**0.22**	6.00	Atlas	2,293	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO200	**1/22/2017 0:30**	1/22/2017 3:45	**195**	Discharge		1.71				0	1
	2/8/2017 21:00	2/9/2017 14:00	**1,020**	0.08	**309,281.25**	0.48	**0.04**	6.00	Atlas	24,743	1
	4/16/2017 17:15	4/16/2017 17:45	**30**	1.16	**14,915.05**	0.82	**0.49**	6.00	Atlas	17,301	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.02	**38,220.13**	1.28	**0.52**	6.00	Atlas	38,985	1
	5/4/2017 19:45	5/4/2017 19:45	**-**	1.58	**109.22**	1.7	**0.53**	24.00	Atlas	173	1
	5/20/2017 18:30	5/20/2017 18:30	**-**	1.01	**529.58**	0.28	**0.45**	12.00	Atlas	535	1
	5/21/2017 2:45	5/21/2017 5:30	**165**	1.01	**20,622.48**	1.04	**0.45**	12.00	Atlas	20,829	1
	6/5/2017 18:15	6/5/2017 18:15	**-**	0.17	**98,997.94**	0.21	**0.14**	1.00	Atlas	16,830	1
	6/15/2017 3:00	6/15/2017 4:00	**60**	0.4	**13,104.33**	0.37	**0.25**	3.00	Atlas	5,242	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.78	**2,757.72**	1.07	**0.36**	12.00	Atlas	2,151	1
	6/30/2017 21:00	6/30/2017 21:15	**15**	0.69	**96,516.81**	0.79	**0.59**	1.00	Atlas	66,597	1
CSO200 Total										**233,403**	**22**
CSO202	**7/3/2016 12:00**	7/3/2016 12:00	**-**	1.19	**1,425.55**	0.34	**0.39**	48.00	Atlas	1,696	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**20,144.10**	1.22	**0.42**	1.00	Atlas	9,669	1
	8/1/2016 11:15	8/1/2016 11:15	**-**	0.4	**2,480.55**	1.69	**0.31**	1.00	Atlas	992	1
	8/15/2016 3:00	8/15/2016 7:15	**255**	0.91	**6,973.95**	1.21	**0.44**	6.00	Atlas	6,346	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.67	**5,417.33**	1.69	**0.28**	12.00	Atlas	3,630	1
	8/20/2016 20:00	8/20/2016 20:00	**-**	0.89	**2,462.11**	2.31	**0.38**	12.00	Atlas	2,191	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.23	**7,244.39**	0.23	**0.19**	1.00	Atlas	1,666	1
	9/10/2016 15:15	9/10/2016 15:15	**-**	0.19	**15,118.21**	0.15	**0.11**	3.00	Atlas	2,872	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.55	**7,585.62**	0.11	**0.21**	24.00	Atlas	4,172	1
	12/17/2016 18:30	12/19/2016 2:15	**1,905**	2.61	**47,795.34**	2.93	**1.81**	12.00	Cloudburst	124,746	1
	1/12/2017 19:45	1/13/2017 20:15	**1,470**	0.44	**632,924.30**	1.11	**0.22**	6.00	Atlas	278,487	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.41	**8,804.63**	0.47	**0.35**	1.00	Atlas	3,610	1
	3/1/2017 3:15	3/1/2017 3:45	**30**	1.15	**6,701.50**	1.07	**0.58**	6.00	Atlas	7,707	1
	3/7/2017 7:45	3/7/2017 7:45	**-**	0.59	**6,092.76**	1.77	**0.19**	48.00	Atlas	3,595	1
	4/16/2017 5:30	4/16/2017 5:30	**-**	1.16	**3,774.22**	0.54	**0.49**	6.00	Atlas	4,378	1
	4/16/2017 17:30	4/16/2017 17:45	**15**	1.16	**9,206.34**	0.82	**0.49**	6.00	Atlas	10,679	1
	4/27/2017 6:45	4/27/2017 6:45	**-**	0.15	**8,970.87**	0.85	**0.10**	1.00	Atlas	1,346	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.02	**23,789.88**	1.28	**0.52**	6.00	Atlas	24,266	1
	5/20/2017 18:45	5/20/2017 18:45	**-**	1.01	**2,089.16**	0.29	**0.45**	12.00	Atlas	2,110	1
	5/21/2017 3:00	5/21/2017 4:15	**75**	1.01	**23,525.62**	0.94	**0.45**	12.00	Atlas	23,761	1
	6/5/2017 18:30	6/5/2017 18:30	**-**	0.17	**28,997.29**	0.22	**0.14**	1.00	Atlas	4,930	1
	6/15/2017 3:15	6/15/2017 4:00	**45**	0.4	**20,219.03**	0.37	**0.25**	3.00	Atlas	8,088	1
	6/23/2017 15:30	6/23/2017 16:00	**30**	0.78	**10,662.46**	1.07	**0.36**	12.00	Atlas	8,317	1
	6/30/2017 21:00	6/30/2017 21:00	**-**	0.69	**8,039.26**	0.79	**0.59**	1.00	Atlas	5,547	1
CSO202 Total										**544,800**	**24**
CSO203	**7/3/2016 20:00**	7/4/2016 0:15	**255**	1.19	**4,575.56**	0.7	**0.39**	48.00	Atlas	5,445	1
	7/4/2016 11:00	7/4/2016 11:00	**-**	1.19	**187.26**	0.94	**0.39**	48.00	Atlas	223	1
	7/6/2016 13:30	7/6/2016 14:30	**60**	0.19	**2,600.00**	1.35	**0.13**	1.00	Atlas	494	1
	7/30/2016 14:15	7/30/2016 14:15	**-**	0.48	**28,154.00**	1.22	**0.42**	1.00	Atlas	13,514	1
	8/17/2016 7:00	8/17/2016 7:00	**-**	0.67	**8,140.22**	1.69	**0.28**	12.00	Atlas	5,454	1
	8/20/2016 20:00	8/20/2016 20:00	**-**	0.89	**5,821.29**	2.31	**0.38**	12.00	Atlas	5,181	1
	8/28/2016 17:30	8/28/2016 17:30	**-**	0.23	**9,762.22**	0.23	**0.19**	1.00	Atlas	2,245	1
	10/20/2016 9:15	10/20/2016 9:15	**-**	0.55	**1,617.56**	0.11	**0.21**	24.00	Atlas	890	1
	12/17/2016 18:30	12/18/2016 12:15	**1,065**	2.61	**31,323.07**	2.93	**1.81**	12.00	Cloudburst	81,753	1
	1/6/2017 9:30	1/6/2017 11:45	**135**	0.19	**6,898.05**	0.45	**0.08**	12.00	Atlas	1,311	1
	1/10/2017 19:45	1/10/2017 19:45	**-**	0.12	**9,352.58**	0.32	**0.09**	1.00	Atlas	1,122	1
	1/12/2017 17:15	1/13/2017 23:45	**1,830**	0.44	**271,436.14**	1.13	**0.22**	6.00	Atlas	119,432	1
	2/9/2017 2:15	2/10/2017 10:15	**1,920**	0.08	**3,172,533.63**	0.48	**0.04**	6.00	Atlas	253,803	1
	2/24/2017 19:00	2/24/2017 19:00	**-**	0.41	**10,950.71**	0.47	**0.35**	1.00	Atlas	4,490	1
	3/1/2017 3:15	3/1/2017 3:15	**-**	1.15	**19,032.90**	1.04	**0.58**	6.00	Atlas	21,888	1
	4/16/2017 17:45	4/16/2017 17:45	**-**	1.16	**3,240.48**	0.82	**0.49**	6.00	Atlas	3,759	1
	4/29/2017 1:45	4/29/2017 3:00	**75**	1.02	**4,787.83**	1.28	**0.52**	6.00	Atlas	4,884	1
	5/21/2017 3:00	5/21/2017 3:45	**45**	1.01	**34,431.37**	0.84	**0.45**	12.00	Atlas	34,776	1
	6/5/2017 18:30	6/6/2017 2:00	**450**	0.17	**216,773.71**	0.23	**0.14**	1.00	Atlas	36,852	1
	6/15/2017 3:15	6/15/2017 3:15	**-**	0.4	**2,775.60**	0.26	**0.25**	3.00	Atlas	1,110	1
	6/23/2017 15:30	6/23/2017 23:30	**480**	0.78	**15,321.18**	1.3	**0.36**	12.00	Atlas	11,951	1
	6/30/2017 21:00	7/1/2017 11:15	**855**	0.69	**175,708.96**	0.79	**0.59**	1.00	Atlas	121,239	1
CSO203 Total										**731,814**	**22**
CSO205	**4/29/2017 2:30**	4/29/2017 2:30	**-**	0.89	**237.45**	1	**0.49**	3.00	Atlas	211	1
CSO205 Total										**211**	**1**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Overflow Volume (Gal)	Events
CSO210*	**10/3/2016 14:15**	10/3/2016 17:00	**165**	Discharge		1.09				2,172	1
	10/4/2016 13:45	10/4/2016 17:15	**210**	Discharge		1.09				2,777	1
	10/6/2016 13:45	10/6/2016 18:15	**270**	Discharge		0.62				4,159	1
	10/7/2016 13:45	10/7/2016 18:45	**300**	Discharge		0.03				5,268	1
	10/9/2016 15:45	10/9/2016 16:30	**45**	Discharge		0				475	1
	10/10/2016 15:30	10/10/2016 17:15	**105**	Discharge		0				890	1
	12/23/2016 23:45	12/24/2016 12:00	**735**	0.2	**59,587,708.25**	3.72	**0.09**	12.00	Atlas	11,917,542	1
	12/26/2016 22:00	12/27/2016 4:30	**390**	0.33	**16,892,907.24**	0.53	**0.16**	6.00	Atlas	5,574,659	1
	1/3/2017 4:45	1/3/2017 8:00	**195**	0.22	**14,766,319.59**	0.31	**0.10**	6.00	Atlas	3,248,590	1
	1/10/2017 21:30	1/10/2017 22:30	**60**	0.34	**3,232,473.85**	0.54	**0.24**	1.00	Atlas	1,099,041	1
	1/11/2017 14:00	1/11/2017 16:00	**120**	0.23	**8,904,218.74**	0.77	**0.15**	3.00	Atlas	2,047,970	1
	1/12/2017 19:30	1/13/2017 0:30	**300**	0.37	**13,554,382.32**	0.96	**0.18**	6.00	Atlas	5,015,121	1
	1/13/2017 18:45	1/13/2017 22:00	**195**	0.36	**8,301,395.06**	1.31	**0.23**	3.00	Atlas	2,988,502	1
	1/14/2017 12:30	1/14/2017 18:15	**345**	0.21	**28,391,792.33**	1.52	**0.10**	12.00	Atlas	5,962,276	1
	1/17/2017 0:30	1/17/2017 8:45	**495**	0.85	**12,482,201.06**	2.52	**0.39**	6.00	Atlas	10,609,871	1
	1/19/2017 20:00	1/22/2017 12:45	**3,885**	1.36	**33,513,307.41**	3.06	**0.62**	12.00	Atlas	45,578,098	1
CSO210* Total										**94,057,414**	**16**
CSO211*	**7/4/2016 16:00**	7/4/2016 22:00	**360**	1.27	**1,373,352.90**	1.27	**0.41**	48.00	Atlas	1,744,158	1
	7/28/2016 5:00	7/28/2016 5:00	**-**	0.51	**4,112,017.71**	0.73	**0.23**	12.00	Atlas	2,097,129	1
	7/30/2016 16:00	7/30/2016 16:00	**-**	0.23	**8,075,713.39**	1.12	**0.20**	1.00	Atlas	1,857,414	1
	8/15/2016 5:30	8/15/2016 6:15	**45**	1.16	**5,184,835.82**	1.46	**0.57**	6.00	Atlas	6,014,410	1
	8/17/2016 7:45	8/17/2016 8:45	**60**	0.98	**6,934,922.63**	2.07	**0.47**	3.00	Atlas	6,796,224	1
	8/20/2016 15:30	8/20/2016 16:45	**75**	1.89	**9,345,690.57**	3.39	**0.82**	12.00	Atlas	17,663,355	1
	11/28/2016 18:15	11/29/2016 2:00	**465**	0.86	**14,252,820.56**	1.22	**0.38**	12.00	Atlas	12,257,426	1
	12/6/2016 6:30	12/6/2016 15:00	**510**	0.94	**32,426,331.48**	1	**0.43**	12.00	Atlas	30,480,752	1
	12/17/2016 18:15	12/18/2016 13:00	**1,125**	3.56	**32,844,632.04**	3.96	**7.12**	12.00	Cloudburst	116,926,890	1
	12/24/2016	12/24/2016 6:00	**360**	0.2	**41,112,841.80**	3.72	**0.09**	12.00	Atlas	8,222,568	1
	12/26/2016 23:00	12/27/2016 1:15	**135**	0.33	**1,180,214.79**	0.53	**0.16**	6.00	Atlas	389,471	1
	1/3/2017 8:15	1/3/2017 8:15	**-**	0.22	**3,257.82**	0.31	**0.10**	6.00	Atlas	717	1
	2/24/2017 19:45	2/24/2017 21:15	**90**	0.29	**4,627,349.66**	0.39	**0.23**	1.00	Atlas	1,341,931	1
	3/1/2017 3:45	3/1/2017 12:15	**510**	1.26	**12,713,781.33**	1.88	**0.63**	6.00	Atlas	16,019,364	1
	3/7/2017 8:45	3/7/2017 18:15	**570**	0.87	**5,244,239.26**	2.29	**0.31**	1.00	Atlas	4,562,488	1
	4/22/2017 1:00	4/22/2017 3:30	**150**	0.75	**1,155,803.21**	1.54	**0.27**	24.00	Atlas	866,852	1
	4/29/2017 3:00	4/29/2017 12:00	**540**	1.6	**36,774,643.77**	2.03	**0.82**	1.00	Atlas	58,839,430	1
	5/4/2017 21:30	5/6/2017 3:30	**1,800**	2.02	**52,785,448.47**	3.84	**0.68**	24.00	Atlas	106,626,606	1
	5/24/2017 20:45	5/24/2017 23:45	**180**	0.68	**1,568,402.00**	2.24	**0.25**	24.00	Atlas	1,066,513	1
CSO211* Total										**447,759,584**	**20**
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Grand Total										**7,965,618,183**	**2,554**

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Appendix D-1 Discharge Work Orders – Waters of the United States

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Appendix D-1 Discharge Work Orders – Waters of the United States

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
CEDAR CREEK	KY0098540	10801 FAIRMOUNT RD	5/1/2017 13:30	5/1/2017 14:02	3200	SEWER MAIN	78207	STREAM	CEDAR CREEK	STRUCTURAL FAILURE - FORCE MAIN BREAK - FAIRMOUNT ROAD FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2725228	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	PUMPS TURNED OFF AND WASTEWATER STORED DURING REPAIR. MSD CREWS AND CONTRACTOR ONSITE FOR REPAIRS
CEDAR CREEK	KY0098540	11409 VISTA CLUB DR	1/28/2017 7:30	1/28/2017 7:35	50	SEWER LIFT STATION	MSD1163-PS	GROUND	FLOYDS FORK	PUMPS LEFT IN THE OFF POSITION	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2677139	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	TURNED ON THE PUMPS
CEDAR CREEK	KY0098540	4332 WILLOWVIEW BLVD	3/25/2017 19:13	3/25/2017 21:29	200	SEWER MAIN	95330	DITCH	CHENOWETH RUN	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2701654	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE OBSTRUCTION / DEBRIS FROM THE SEWER
CEDAR CREEK	KY0098540	9898 FAIRMOUNT RD	5/5/2017 21:30	5/5/2017 22:34	1600	SEWER MANHOLE	78208	DITCH	CEDAR CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	MECHANICAL FAILURE	DISREV RAIN EVENT DISCHARGE	2727535	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FAIRMOUNT RD PUMPS TURNED OFF TO MINIMIZE FLOW DURING RAIN EVENT
DEREK R. GUTHRIE	KY0078956	3706 NOBEL CT	8/8/2016 12:50	8/8/2016 13:00	250	SEWER MAIN	06940E-AG	GROUND	MILL CREEK	BROKEN FORCE MAIN APPROX. 40' FROM ROSA TERRACE PUMP STATION IN STORM DITCH	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2600078	B&H VACTORING OUT SEWAGE IN DITCH LINE AND LIME APPLIED	CHEROKEE CONSTRUCTION TO DIG AND REPAIR 4" CAST IRON FORCE MAIN PIPE. 8/9/16 SEED + STRAW PUT DOWN
DEREK R. GUTHRIE	KY0078956	3706 NOBEL CT	12/13/2016 8:20	12/13/2016 8:30	1000	SEWER MAIN	06940D-AG	GROUND	MILL CREEK	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2655257	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	SHUT OFF PUMPS, B&H HAULED STATION WHILE CHEROKEE CONSTRUCTION MADE REPAIRS TO FORCE MAIN.
DEREK R. GUTHRIE	KY0078956	3713 DIXIE HWY	2/13/2017 14:50	2/13/2017 16:30	250	SEWER MAIN	06940C-AG	DITCH	MILL CREEK	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2683354	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REFERRED TO METRO OPERATIONS SUPERVISOR TO MAKE NEEDED REPAIRS
DEREK R. GUTHRIE	KY0078956	4005 KIRBY LN	7/27/2016 20:00	7/27/2016 21:30	9000	SEWER LIFT STATION	MSD1203-PS	STREAM	FERN CREEK	POWER OUTAGE	POWER OUTAGE (LG&E)	DISREV RAIN EVENT DISCHARGE	2594002	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	RESTORED POWER
DEREK R. GUTHRIE	KY0078956	5007 LEA ANN WAY	12/18/2016 2:30	12/18/2016 4:45	10000	SEWER MANHOLE	84926	STREAM	NORTHERN DITCH	LACK OF SYSTEM CAPACITY DURING RAIN EVENT, ONE PUMP OUT OF SERVICE FOR LEA ANN WAY SYSTEM IMPROVEMENTS	MECHANICAL FAILURE	DISREV RAIN EVENT DISCHARGE	2657902	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	PUMPED OUT OF MANHOLE WITH ONE 6" DISCHARGE PUMP TO PREVENT BASEMENT FLOODING IN SURROUNDING NEIGHBORHOODS.
DEREK R. GUTHRIE	KY0078956	5206 STONY BROOK DR	4/26/2017 17:15	4/26/2017 19:35	50	SEWER MANHOLE	99049	GROUND	WALNUT HILL BRANCH	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2721551	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM MAIN SEWER
DEREK R. GUTHRIE	KY0078956	8023 DIXIE HWY	2/15/2017 19:05	2/15/2017 20:10	1	SEWER MAIN	99188	GROUND	VALLEY CREEK	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2685492	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE OBSTRUCTION FROM THE SEWER
DEREK R. GUTHRIE	KY0078956	9114 CINDERELLA LN	3/1/2017 12:05	3/1/2017 13:45	500	SEWER MANHOLE	60679	DITCH	FISHPOOL CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2691028	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	N/A STATION RECOVERED ON ITS OWN AS FLOW DROPPED
DEREK R. GUTHRIE	KY0078956	9301 STONESTREET RD	2/24/2017 9:56	2/24/2017 12:56	4500	SEWER MANHOLE	40395	STREAM	PONDER CREEK	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2688434	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED MAIN SEWER ABOUT 200' TO RESTORE FLOW
FLOYDS FORK	KY0102784	14307 WAKEFIELD PL	12/12/2016 20:35	12/12/2016 23:25	2200	SEWER MAIN	80351C-AG	CATCH BASIN	CHENOWETH RUN	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2655123	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	CONTRACTOR REPAIRED THE FORCE MAIN
FLOYDS FORK	KY0102784	14310 LAKE FOREST DR	7/24/2016 11:33	7/24/2016 14:50	5	SEWER MAIN	80351B-AG	GROUND	CHENOWETH RUN	FORCE MAIN BREAK IN REAR OF FENCED IN PROPERTY 14307 WAKEFIELD PLACE. FOUND HOLE IN THE SIDE OF THE PIPE SIZE OF A DIME	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2590359	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	B&H HAULED STATION WHILE MAC CONSTRUCTION MADE REPAIRS. 12' OF 4" FORCE MAIN REPLACED, RESTORATION COMPLETED
FLOYDS FORK	KY0102784	611 WOODLAKE DR	1/30/2017 14:00	1/30/2017 14:35	875	SEWER MAIN	80581A-AG	GROUND	CHENOWETH RUN	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2677439	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	BROKEN FORCE MAIN TAKEN OUT OF SERVICE/REPAIRED BY CONTRACTOR
HITE CREEK	KY0022420	5500 HITT RD	9/25/2016 10:45	9/25/2016 11:10	77620	SEWER TREATMENT PLANT	MSD0202	STREAM	HITE CREEK	LG&E POWER OUTAGE IN AREA	BYPASS AT WQTC	DISDW DRY WEATHER DISCHARGE	2622093	NO CLEANUP REQUIRED, MOSTLY TREATED EFFLUENT	STANDBY GENERATOR PLACED INTO SERVICE MANUALLY. CONTRACTOR TO REPAIR AUTOMATIC TRANSFER SWITCH
HITE CREEK	KY0022420	6331 RIVER RD	5/17/2017 17:43	5/17/2017 19:37	100	SEWER MAIN	41872-V	CATCH BASIN	HARRODS CREEK	UTILITY (OR CONTRACTOR) DAMAGED MSD ASSET	UTILITY DAMAGED MSD ASSET	DISDW DRY WEATHER DISCHARGE	2733522	MSD CONTRACTOR CLEANED AND SANITIZED THE IMPACTED AREA	HAULED SEWAGE UNTIL FORCE MAIN COULD BE REPAIRED
HITE CREEK	KY0022420	7104 COVERED COVE WAY	11/19/2016 14:30	11/19/2016 15:45	800	SEWER MAIN	68562-AG	DITCH	HUNTING CREEK	CONTRACTOR HIT SEWAGE FORCE MAIN WHILE EXCAVATING	UTILITY DAMAGED MSD ASSET	DISDW DRY WEATHER DISCHARGE	2647172	CONTRACTOR CLEANED AND SANITIZED THE AREA	SHUT OFF PUMPS, HAUL STATION WHILE REPAIRS MADE
HITE CREEK	KY0022420	7106 COVERED COVE WAY	11/19/2016 13:50	11/19/2016 15:45	25	SEWER MAIN	66847H-CO	DITCH	HUNTING CREEK	CONTRACTOR DAMAGED FORCE MAIN.	UTILITY DAMAGED MSD ASSET	DISDW DRY WEATHER DISCHARGE	2647186	CONTRACTOR CLEANED AND SANITIZED THE AREA	REFERRED TO AREA SUPERVISOR FOR REPAIRS
HITE CREEK	KY0022420	9810 U S HIGHWAY 42	12/18/2016 1:38	12/18/2016 4:53	3150	SEWER MANHOLE	116490	DITCH	HUNTING CREEK	MOTOR FAILURE ON ONE PUMP, THE OTHER STOPPED UP WITH DEBRIS.	MECHANICAL FAILURE	DISREV RAIN EVENT DISCHARGE	2657894	NO CLEAN UP PERFORMED - PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	PULLED GOOD PUMP AND REMOVED DEBRIS
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	12/17/2016 11:07	12/18/2016 10:50	1833191	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657856	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	1/17/2017 7:00	1/17/2017 11:36	129686	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2671190	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	1/20/2017 1:06	1/20/2017 19:04	1705851	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672620	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	3/1/2017 7:48	3/1/2017 19:14	1425772	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690717	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	4/29/2017 5:19	4/29/2017 11:48	187278	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724325	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1001 BRECKENRIDGE LN	5/5/2017 7:57	5/6/2017 1:41	1697213	SEWER MANHOLE	08935-SM	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726804	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	12/18/2016 1:35	12/18/2016 9:19	1000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657876	WO# 2657949	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	1/17/2017 8:55	1/17/2017 13:20	6000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2671309	WO# 2671474	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

Appendix D-1 Discharge Work Orders – Waters of the United States

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	1011 ALTA CIR	1/20/2017 3:15	1/20/2017 18:38	180000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672568	WO# 2672945	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	3/1/2017 10:00	3/1/2017 18:19	180000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690997	WO# 2691234	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	4/16/2017 21:30	4/17/2017 8:43	200000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2717468	WO# 2718346	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	4/29/2017 8:15	4/29/2017 20:49	10000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724315	WO# 2724389	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1011 ALTA CIR	5/5/2017 7:20	5/6/2017 10:35	216000	SEWER MANHOLE	45796	DITCH	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726811	WO# 2727559	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1012 ALTA CIR	12/18/2016 1:38	12/18/2016 9:21	1000	SEWER MANHOLE	27005	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657877	WO# 2657950	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1012 ALTA CIR	12/18/2016 1:48	12/18/2016 9:24	1000	SEWER MANHOLE	40559	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657881	WO# 2657954	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1012 ALTA CIR	1/20/2017 2:15	1/20/2017 12:45	12000	SEWER MANHOLE	27005	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672569	WO# 2672863	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1012 ALTA CIR	5/5/2017 7:30	5/5/2017 13:55	7500	SEWER MANHOLE	40559	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726814	WO# 2727507	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1013 ALTA CIR	12/18/2016 1:32	12/18/2016 9:18	10000	SEWER MANHOLE	27007	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657874	WO# 2657948	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	12/18/2016 1:20	12/18/2016 9:10	48000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657872	WO# 2657946	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	1/17/2017 8:48	1/17/2017 15:25	8400	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2671303	WO# 2671470	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	1/20/2017 2:00	1/20/2017 12:34	30000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672566	WO# 2672846	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	3/1/2017 9:50	3/1/2017 18:10	49500	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690995	WO# 2691232	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	4/16/2017 21:13	4/17/2017 8:30	54000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2717467	WO# 2718272	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	4/29/2017 8:00	4/29/2017 20:41	36000	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724312	WO# 2724388	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1132 ROSTREVOR CIR	5/5/2017 7:06	5/6/2017 10:25	43200	SEWER MANHOLE	45835	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726810	WO# 2727558	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1218 S 3RD ST	6/2/2017 11:20	6/22/2017 16:28	306	SEWER MANHOLE	CSO197	STREAM	OHIO RIVER	OBSTRUCTION DOWNSTREAM OF WEIR	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2743455	NO CLEAN UP PERFORMED - PIPE DISCHARGING TO CENTRAL RELIEF DRAIN	MSD CREWS FLUSHED DOWNSTREAM LINE
MORRIS FORMAN	KY0022411	1218 S 3RD ST	6/9/2017 12:00	6/11/2017 12:45	2925	SEWER MANHOLE	CSO197	STREAM	OHIO RIVER	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2749987	NO CLEAN UP PERFORMED - PIPE DISCHARGING TO CENTRAL RELIEF DRAIN	MSD CREWS FLUSHED DOWNSTREAM LINE
MORRIS FORMAN	KY0022411	1316 CASTLEWOOD DELL	4/13/2017 9:00	4/14/2017 15:36	124387	SEWER MANHOLE	CSO151	STREAM	SOUTH FORK BEARGRASS CREEK	FLOWABLE FILL FOUND IN SEWER MAIN UPSTREAM AND DOWNSTREAM OF CSO DAM. SOURCE IDENTIFIED AS A REPAIR ON THE LWC MAIN AT EASTERN PARKWAY & QUADRANT AVE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2716342	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	REMOVED FLOWABLE FILL FROM BAR SCREEN AND SIPHON TO RESTORE FLOW
MORRIS FORMAN	KY0022411	1316 CASTLEWOOD DELL	5/9/2017 12:17	5/9/2017 14:24	25400	SEWER MANHOLE	CSO151	STREAM	SOUTH FORK BEARGRASS CREEK	MSD CONTRACTOR CREW WORKING TO REPAIR OBSTRUCTION IN CSO151 IDENTIFIED OVERFLOW WHILE REMOVING MATERIAL FROM CSO CHAMBER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2728688	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	SET PUMP TO PUMP CHAMBER BACK TO SANITARY SEWER
MORRIS FORMAN	KY0022411	1316 CASTLEWOOD DELL	5/15/2017 10:30	5/17/2017 15:45	15975	SEWER MANHOLE	CSO151	STREAM	SOUTH FORK BEARGRASS CREEK	CONTRACTOR REMOVING HEAVY DEBRIS FROM DOWN STREAM SANITARY LINE.	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2731895	MSD CONTRACTORS CLEANED AND SANITIZED THE IMPACTED AREA	MSD CONTRACTORS CONTINUE TO WORKING ON THE DOWN STREAM LINE
MORRIS FORMAN	KY0022411	1316 CASTLEWOOD DELL	6/28/2017 17:06	6/29/2017 16:45	111260	SEWER MANHOLE	CSO151	STREAM	SOUTH FORK BEARGRASS CREEK	CONTRACTOR REMOVING HEAVY DEBRIS FROM DOWN STREAM SANITARY LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2768074	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	CONTRACTOR ARE WORKING ON REMOVING THE CUTTER FROM THE LINE
MORRIS FORMAN	KY0022411	1418 TREVILIAN WAY	5/5/2017 9:18	5/5/2017 14:27	21000	SEWER MANHOLE	51594	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726830	WO# 2727510	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1604 CHEROKEE RD	12/18/2016 1:39	12/18/2016 9:22	1000	SEWER MANHOLE	72288	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657879	WO# 2657951	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	12/18/2016 1:33	12/18/2016 9:23	1000	SEWER MANHOLE	72289	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657880	WO# 2657953	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	12/18/2016 1:55	12/18/2016 9:27	1000	SEWER MANHOLE	15195	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657882	WO# 2657955	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1700 SULGRAVE RD	5/5/2017 7:30	5/5/2017 13:55	37500	SEWER MANHOLE	72289	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726812	WO# 2727506	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	12/17/2016 22:15	12/18/2016 5:45	10500	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657926	WO# 2657943	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	1/20/2017 0:45	1/20/2017 12:30	10000	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672619	WO#2672871	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

Appendix D-1 Discharge Work Orders – Waters of the United States

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	1726 FRASER DR	3/1/2017 3:45	3/1/2017 17:15	12000	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690713	WO# 2691237	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	4/16/2017 19:00	4/16/2017 23:00	177877	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2717514	WO# 2717530	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	4/29/2017 3:45	4/29/2017 6:00	3500	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724327	WO# 2724328	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1726 FRASER DR	5/4/2017 21:30	5/5/2017 21:30	48000	SEWER MANHOLE	16649	DITCH	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726777	WO# 2727557	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	1800 NIGHTINGALE RD	12/17/2016 15:51	12/20/2016 5:06	1354990	SEWER MANHOLE	CSO018	STREAM	SOUTH FORK BEARGRASS CREEK	PUMPS WERE SHUT OFF AT NIGHTINGALE PS TO REDUCE THE VOLUME BEHIND THE SWGS TO PREVENT SEWER RELATED FLOODING	MECHANICAL FAILURE	DISREV RAIN EVENT DISCHARGE	2657914	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	PUMPS RESTARTED WHEN SYSTEM RECOVERED
MORRIS FORMAN	KY0022411	1926 ARBORO PL	6/10/2017 16:22	6/10/2017 17:00	50	SEWER MANHOLE	02276	GROUND	SOUTH FORK BEARGRASS CREEK	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2750146	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE OBSTRUCTION FROM THE SEWER
MORRIS FORMAN	KY0022411	2002 MILLVALE RD	12/18/2016 1:30	12/18/2016 9:15	12000	SEWER MANHOLE	45829	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657873	WO# 2657947	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	201 BULLITT LN	1/20/2017 3:30	1/20/2017 13:00	24000	SEWER MANHOLE	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672571	WO# 2672866	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	201 BULLITT LN	3/1/2017 11:40	3/1/2017 18:50	12000	SEWER MANHOLE	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2691052	WO# 2691236	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	201 BULLITT LN	4/29/2017 8:50	4/29/2017 21:10	20000	SEWER MANHOLE	47582	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724318	WO# 2724391	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	12/18/2016 2:23	12/18/2016 9:50	10500	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657925	WO# 2657961	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	1/20/2017 3:30	1/20/2017 19:00	180000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672570	WO# 2672946	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	3/1/2017 11:40	3/1/2017 18:45	162000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2691049	WO# 2691235	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	4/29/2017 8:50	4/29/2017 21:10	20000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2724317	WO# 2724390	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	202 OXMOOR LN	5/5/2017 8:13	5/6/2017 11:05	144000	SEWER MANHOLE	47583	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2726815	WO# 2727560	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	2105 INDIAN HILLS TRL	4/29/2017 12:40	4/29/2017 13:15	525	SEWER MANHOLE	40872	GROUND	MUDDY FORK BEARGRASS CREEK	ELECTRICAL PROBLEMS AT MSD	ELECTRICAL PROBLEMS AT MSD	DISREV RAIN EVENT DISCHARGE	2724335	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	MANUALLY STARTED TWO MORE PUMPS
MORRIS FORMAN	KY0022411	2120 INDIAN HILLS TRL	4/29/2017 6:53	4/29/2017 13:15	6630	SEWER MANHOLE	40871	DITCH	MUDDY FORK BEARGRASS CREEK	ELECTRICAL PROBLEMS AT MSD	ELECTRICAL PROBLEMS AT MSD	DISREV RAIN EVENT DISCHARGE	2724286	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	MANUALLY STARTED TWO MORE PUMPS
MORRIS FORMAN	KY0022411	310 BRUNSWICK RD	5/7/2017 17:45	5/7/2017 18:30	60	SEWER MANHOLE	21425	GROUND	MIDDLE FORK BEARGRASS CREEK	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2727751	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM THE MAIN SEWER
MORRIS FORMAN	KY0022411	3305 INDIAN CREEK CT	3/1/2017 10:00	3/1/2017 13:53	15000	SEWER MANHOLE	51160	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690979	WO# 2691162	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3406 CHARLANE PKY	3/1/2017 8:52	3/1/2017 13:25	7500	SEWER MANHOLE	28451	GROUND	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690756	WO# 2691141	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3500 ST EDWARDS DR	12/18/2016 2:30	12/18/2016 10:15	11250	SEWER MANHOLE	28249	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657930	WO# 2657965	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3500 ST EDWARDS DR	3/1/2017 8:56	3/1/2017 13:30	7500	SEWER MANHOLE	28249	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690777	WO# 2691154	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3506 CHARLANE PKY	3/1/2017 8:54	3/1/2017 13:27	7500	SEWER MANHOLE	28250	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690761	WO# 2691147	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3506 CHARLANE PKY	5/5/2017 10:42	5/5/2017 14:04	9000	SEWER MANHOLE	28250	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2727374	WO# 2727511	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	12/18/2016 2:20	12/18/2016 4:30	1000	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657883	WO# 2657956	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	12/18/2016 2:20	12/18/2016 4:30	9000	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657884	WO# 2657960	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	1/20/2017 3:30	1/20/2017 5:37	15000	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672572	WO# 2672768	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	3/1/2017 5:10	3/1/2017 5:28	450	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690703	WO# 2690731	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

Appendix D-1 Discharge Work Orders – Waters of the United States

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	FACILITY DISCHARGES TO	RECEIVING STREAM	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	3/1/2017 5:10	3/1/2017 14:28	49500	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690705	WO# 2691164	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	3/1/2017 9:20	3/1/2017 12:05	6000	SEWER MANHOLE	66349	GROUND	CAMP TAYLOR DITCH	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690781	WO# 2691056	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	3726 FINCASTLE RD	5/5/2017 10:20	5/5/2017 14:45	3600	SEWER MANHOLE	08717	GROUND	SOUTH FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2727376	WO# 2727512	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	4010 BELLS LN	9/14/2016 7:05	9/14/2016 19:30	260000	SEWER MANHOLE	CSO191	STREAM	OHIO RIVER	ELECTRICAL MALFUNCTION	ELECTRICAL PROBLEMS AT MSD	DISDW DRY WEATHER DISCHARGE	2617614	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	REPLACED PLC MODULE
MORRIS FORMAN	KY0022411	4010 BELLS LN	6/14/2017 13:48	6/14/2017 15:01	5000000	SEWER MANHOLE	CSO015	STREAM	OHIO RIVER	MECHANICAL FAILURE OF BAR SCREEN	MECHANICAL FAILURE	DISREV RAIN EVENT DISCHARGE	2755569	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	CONTRACTOR REPAIRING EQUIPMENT.
MORRIS FORMAN	KY0022411	4522 ALGONQUIN PKY	8/15/2016 4:45	8/17/2016 6:20	9100000	SEWER TREATMENT PLANT	MSD0278	STREAM	OHIO RIVER	POWER OUTAGE	BYPASS AT WQTC	DISREV RAIN EVENT DISCHARGE	2601696	WASHED DOWN AREA TO CATCH BASINS THAT RETURN FLOW TO HEADWORKS OF PLANT AND VACTORING DEBRIS	POWER RESTORED TO THE PLANT
MORRIS FORMAN	KY0022411	4522 ALGONQUIN PKY	11/28/2016 20:15	11/28/2016 21:15	150000	SEWER TREATMENT PLANT	MSD0278	STREAM	OHIO RIVER	MECHANICAL FAILURE WEST HEADWORKS	BYPASS AT WQTC	DISREV RAIN EVENT DISCHARGE	2649740	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	DIVERTED FLOW FROM WEST HEADWORKS.
MORRIS FORMAN	KY0022411	4522 ALGONQUIN PKY	12/17/2016 18:27	12/17/2016 21:05	50000	SEWER TREATMENT PLANT	MSD0278	STREAM	OHIO RIVER	ELECTRICAL FAULT. EAST HEADWORKS ELECTRICAL ROOM DAMAGED BY STORM AND ROOF FAILURE	BYPASS AT WQTC	DISREV RAIN EVENT DISCHARGE	2657831	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	POWER TEMPORARILY RE-ROUTED UNTIL PERMANENT REPAIRS ARE COMPLETE.
MORRIS FORMAN	KY0022411	4522 ALGONQUIN PKY	1/20/2017 11:42	1/20/2017 13:12	49000	SEWER TREATMENT PLANT	MSD0278	STREAM	OHIO RIVER	ELECTRICAL FAILURE	BYPASS AT WQTC	DISREV RAIN EVENT DISCHARGE	2672831	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM	RESTARTED PUMPS
MORRIS FORMAN	KY0022411	5222 BLAKELY RIDGE RD	6/29/2017 11:57	6/29/2017 12:37	150000	SEWER VALVE	69053B-V	GROUND	MUDDY FORK BEARGRASS CREEK	STRUCTURAL FAILURE OF FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2768409	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REPLACED TOP OF FAILED ARV (WO NUMBER)
MORRIS FORMAN	KY0022411	5233 ROLLINGWOOD TRL	4/10/2017 11:07	4/10/2017 11:42	175	SEWER MANHOLE	55082	DITCH	NORTHERN DITCH	ROOTS IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2714934	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REFERRED TO CREW TO REPAIR SEWER
MORRIS FORMAN	KY0022411	6126 SPRINGHOUSE FARM LN	12/12/2016 14:30	12/12/2016 19:40	1240	SEWER MAIN	113063	STREAM	GOOSE CREEK	DRAINAGE UNDERMINED SANITARY SEWER LINE, RESULTING IN COLLAPSE AND OVERFLOW	STRUCTURAL FAILURE	DISREV RAIN EVENT DISCHARGE	2655074	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	CONTRACTOR TO REPAIR THE LINE.
MORRIS FORMAN	KY0022411	7305 BROWNSBORO RD	3/11/2017 18:30	3/11/2017 19:00	1000	SEWER VALVE	66279A-V	GROUND	GOOSE CREEK	AIR RELIEF VALVE FAILED AND WAS LEAKING OUT OF TOP OF VALVE	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2696473	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	SHUT OFF OLD BROWNSBORO PLACE PUMP STATION TO STOP DISCHARGE. SHUT OFF VALVE UNDER AIR RELIEF TO ALLOW FOR REPLACEMENT OF VALVE
MORRIS FORMAN	KY0022411	7900 SHELBYVILLE RD	12/18/2016 2:36	12/18/2016 10:03	12000	SEWER MANHOLE	02935	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657927	WO# 2657962	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	7900 SHELBYVILLE RD	12/18/2016 2:42	12/18/2016 10:06	63000	SEWER MANHOLE	02933	STREAM	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657928	WO# 2657963	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	7913 SHELBYVILLE RD	12/18/2016 2:58	12/18/2016 10:20	63000	SEWER MANHOLE	84155	GROUND	MIDDLE FORK BEARGRASS CREEK	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2657929	WO# 2657964	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP
MORRIS FORMAN	KY0022411	9200 TAYLORSVILLE RD	1/27/2017 15:08	1/27/2017 17:00	100	SEWER MANHOLE	99387	GROUND	AVOCA CREEK	GREASE IN THE MAIN SEWER FROM RESTAURANT IWD WAS CALLED HEAVY GREASE IN THE MAIN AND MANHOLES 99386, 99387, 24692 . DUE TO GREASE TRAPS NOT MAINTAINED	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2675968	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED ALL MAIN SEWERS IN AREA
MORRIS FORMAN	KY0022411	9707 WILLOWWOOD WAY	3/1/2017 9:02	3/1/2017 13:35	7500	SEWER MANHOLE	28336	DITCH	CHENOWETH RUN	LACK OF SYSTEM CAPACITY DUE TO RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2690779	WO# 2691158	A SOLUTION FOR THIS LOCATION IS INCLUDED IN THE IOAP

Appendix D-2 Discharge Work Orders – Ground

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Appendix D-2 Discharge Work Orders – Ground

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
CEDAR CREEK	KY0098540	9606 MICHAEL EDWARD DR	7/6/2016 21:00	7/6/2016 21:44	1	SEWER SERVICE LINE	BE09161069	ROOTS ON MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2581553	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PIPE AND 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	11621 LOWER RIVER RD	12/19/2016 12:58	12/19/2016 11:30	250	SEWER TREATMENT PLANT	MSD0277	OPERATIONS DRAINING TOO MANY PROCESSES AT ONE TIME	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2658217	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	11621 LOWER RIVER RD	2/3/2017 10:53	2/3/2017 14:51	3	SEWER TREATMENT PLANT	MSD0277	STRUCTURAL FAILURE, BROKEN PIPE FOR THE PROCESS WATER	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2680694	NO CLEAN UP NEEDED	CONTRACTOR (CHEROKEE CONSTRUCTION) REPAIRING INFLUENT LINE TO THE PROCESS WATER PUMPS
DEREK R. GUTHRIE	KY0078956	200 SOUTHWOOD TER	7/28/2016 21:05	7/28/2016 21:43	1	SEWER SERVICE LINE	062P00870000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2596028	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED LINE #2596030
DEREK R. GUTHRIE	KY0078956	3824 IRON HORSE WAY	9/10/2016 13:20	9/10/2016 13:46	1	SEWER SERVICE LINE	135685	OBSTRUCTION IN MSD PORTION OF SERVICE LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2616665	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT TOWARDS THE MAIN #2617323
DEREK R. GUTHRIE	KY0078956	4047 GLENHURST AVE	3/8/2017 11:00	3/8/2017 11:58	1	SEWER SERVICE LINE	116400200000A	ROOTS / GREASE IN MSD MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2695216	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO RESTORE FLOW
DEREK R. GUTHRIE	KY0078956	4220 GLEN HILL MANOR DR	10/25/2016 23:30	10/25/2016 23:58	5	SEWER MANHOLE	62594	BLOCKAGE IN MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2635705	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER
DEREK R. GUTHRIE	KY0078956	423 ECHAPPE LN	7/31/2016 21:21	7/31/2016 21:58	10	SEWER MANHOLE	81440	DISCHARGE FROM MANHOLE DUE TO GREASE BLOCKAGE	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2596886	SPILL ON GRAVEL LIQUID ONLY NO SOLIDS OR DEBRIS	SHUT ONE PUMP OFF
DEREK R. GUTHRIE	KY0078956	423 ECHAPPE LN	5/5/2017 9:50	5/5/2017 10:45	825	SEWER LIFT STATION	MSD0140-PS	STRUCTURAL FAILURE IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	STRUCTURAL FAILURE	DISREV RAIN EVENT DISCHARGE	2727460	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REFERRED TO SUPERVISOR TO MAKE NEEDED REPAIRS
DEREK R. GUTHRIE	KY0078956	4815 GRANADA DR	9/9/2016 20:35	9/9/2016 21:06	1	SEWER SERVICE LINE	32503	ROOTS IN THE PSC ON MSD	ROOTS	DISDW DRY WEATHER DISCHARGE	2616633	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	4840 OUTER LOOP	11/16/2016 16:30	11/16/2016 17:01	6	SEWER SERVICE LINE	114244840	UNKNOWN OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2646434	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	PIPE EYES FLSUHED THE MAIN SEWER
DEREK R. GUTHRIE	KY0078956	5454 BRUCE AVE	9/5/2016 11:45	9/5/2016 12:14	1	SEWER SERVICE LINE	062M02050000A	OBST IN MSD PORTION OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2613828	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	7104 DUNKIRK LN	9/11/2016 14:22	9/11/2016 15:00	5	SEWER SERVICE LINE	DD70792029	ROOTS IN PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2616692	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	CHAINCUT LINE TO OPEN SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	8210 SEALSTON DR	8/18/2016 18:10	8/18/2016 18:43	1	SEWER SERVICE LINE	PC09952099	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2603305	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED AND FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	8218 GLIMMER WAY	5/4/2017 19:25	5/4/2017 19:50	100	SEWER MANHOLE	09128	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2726761	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM MAIN SEWER
DEREK R. GUTHRIE	KY0078956	8800 ADMIRAL DR	5/5/2017 8:45	5/5/2017 10:45	650	SEWER LIFT STATION	MSD1051-PS	PUMP 1 WAS ONLY PUMP RUNNING. ISSUES WITH CONTROL ON PUMP 2 KEPT OTHER PUMPS FROM RUNNING. ELECTRICAL INTERLOCK NOT ALLOWING PUMP TO START	ELECTRICAL PROBLEMS AT MSD	DISREV RAIN EVENT DISCHARGE	2727458	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	INVESTIGATION INDICATED THAT ADDITIONAL REPAIRS WERE NOT REQUIRED BY MSD
DEREK R. GUTHRIE	KY0078956	8903 MAPLECREEK DR	8/14/2016 21:15	8/14/2016 21:41	1	SEWER SERVICE LINE	PC07280059	ROOT BLOCKAGE NEAR THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2601625	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	9114 CINDERELLA LN	4/17/2017 9:03	4/17/2017 9:30	25	SEWER LIFT STATION	MSD1013-PS	LACK OF SYSTEM CAPACITY-HEAVY RAIN	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2718256	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	SITE FOUND DURING RAIN EVENT RECON - WILL BE MONITORED AND EVALUATED FOR REPAIR
FLOYDS FORK	KY0102784	12401 ALFRED BERRY CT	11/13/2016 18:40	11/13/2016 19:15	3	SEWER MAIN	00159	ROOTS IN SEWER MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2645529	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER, ROOTCUT, AND TV
FLOYDS FORK	KY0102784	13001 PLANTSIDE DR	7/25/2016 11:45	7/25/2016 17:00	1500	SEWER MANHOLE	117836	A PLUG PLACED IN THE LINE BY A UNKNOWN CONTRACTOR	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2590757	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED LINE #2590883
FLOYDS FORK	KY0102784	13200 BLAKEY MEADOW LN	10/26/2016 9:05	10/27/2016 9:10	20	SEWER LIFT STATION	MSD1112-PS	VALVE LEFT OPEN	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2636368	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	VALVE CLOSED
FLOYDS FORK	KY0102784	14307 WAKEFIELD PL	10/24/2016 9:14	10/24/2016 9:59	2	SEWER MAIN	80337	FORCE MAIN BREAK	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2634904	CUSTOMER CLEANED AREA	CONTRACTOR TO REPAIR FORCE MAIN
FLOYDS FORK	KY0102784	14307 WAKEFIELD PL	12/12/2016 19:40	12/12/2016 19:57	1	SEWER MAIN	80337	FORCED MAIN HAS BROKEDOWN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2655118	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REFFERED TO OPERATIONS FOR REPAIR
FLOYDS FORK	KY0102784	14423 WILLOW GROVE CIR	3/30/2017 15:00	12:00:00 AM	5	SEWER MAIN	80453-T	STRUCTURAL FAILURE ON ABANDONED FORCE MAIN	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2710528	CONTRACTOR CLEANED THE IMPACTED AREA	CONTRACTOR REPAIRED THE FORCE MAIN. REPAIR WORK ORDER # 2710167
FLOYDS FORK	KY0102784	16716 SHAKES CREEK DR	8/31/2016 11:50	8/31/2016 11:55	200	SEWER LIFT STATION	MSD1193-PS	CONTRACTOR HAD A VEHICLE ACCIDENT RESULTING IN A SPILL	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2610190	CONTRACTOR CLEANED AND SANITIZED THE AREA	ACCIDENT SCENE WAS CLEARED
HITE CREEK	KY0022420	5000 CHAMBERLAIN LN	10/21/2016 11:00	10/21/2016 11:20	25	SEWER LIFT STATION	MSD1158-PS	VALVE ON B&H VACUUM TRUCK STARTED LEAKING	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2634702	WASHED OFF ASPHALT AREA AND LIMED GRAVEL AREA	B&H EMPTIED VACUUM TRUCK INTO PUMPER TRUCK
HITE CREEK	KY0022420	5500 HITT RD	12/1/2016 10:00	12/1/2016 10:05	50	SEWER TREATMENT PLANT	MSD0202	SCUM IN LINE CAME OUT OF MANHOLE WHEN CLARIFER WAS DRAINING	MECHANICAL FAILURE	DISDW DRY WEATHER DISCHARGE	2650995	CONTRACTORS CLEANED AND SANITIZED	ADD DEFOAMER TO LINE
HITE CREEK	KY0022420	5500 HITT RD	2/3/2017 13:30	2/3/2017 14:24	750	SEWER TREATMENT PLANT	MSD0202	OVER WASTED #1 DIGESTER, WAS BACK FLOWED FROM THE DIGESTER DUMP PAD OPENING	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2680794	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	OPERATOR TRANSFERRED WAS INTO AN EMPTY DIGESTER
HITE CREEK	KY0022420	5500 HITT RD	5/1/2017 8:10	5/1/2017 12:10	120	SEWER TREATMENT PLANT	MSD0202	BROKEN PIPE AT EFFLUENT END OF AERATION BASIN #3	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2725114	CONTRACTOR VACTORED AREA, MSD PERSONNEL SPREAD LIME IN AREA	PIPE REPAIRED BY CONTRACTOR
HITE CREEK	KY0022420	6415 SHIRLEY AVE	8/30/2016 21:40	8/30/2016 22:04	1	SEWER SERVICE LINE	124186415A	SOMETHING BORED THROUGH PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2608214	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED C/O
HITE CREEK	KY0022420	8619 WESTOVER DR	7/22/2016 9:30	7/25/2016 21:05	25	SEWER MAIN	MSD1064-PS	STRUCTURAL FAILURE.....FORCE MAIN BREAK BETWEEN WETWELL AND VALVE VAULT AT STATION	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2590238	CONTRACTOR CLEANED AND SANITIZED THE IMPACTED AREA AS PART OF REPAIRS.	CONTRACTOR REPAIRED BROKEN LINE
MORRIS FORMAN	KY0022411	104 S 44TH ST	7/14/2016 18:50	7/14/2016 19:42	1	SEWER SERVICE LINE	130221	UNKNOWN OBSTRUCTION IN THE PSC ON MSD PORTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2584726	CUSTOMER CLEANED IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	1121 RIDGE LINE DR	2/24/2017 16:15	2/24/2017 17:35	1	SEWER MAIN	48744	ROOTS IN MSD'S SEWER MAIN/ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2688534	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOTCUT SEWER MAIN/REFERRED TO A SUPERVISOR TO MAKE NEEDED REPAIR TO THE PROPERTY SERVICE CONNECTION ALSO
MORRIS FORMAN	KY0022411	1222 LARCHMONT AVE	6/23/2017 17:50	6/23/2017 18:05	200	SEWER MANHOLE	51914A	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2760069	WATER HAS NOT RECEDED - CUSTOMER ADVISED TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	INVESTIGATION INDICATED THAT ADDITIONAL REPAIRS WERE NOT REQUIRED BY MSD

Appendix D-2 Discharge Work Orders – Ground

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	1363 TRINITY PARK DR	12/13/2016 9:20	12/13/2016 10:15	20	SEWER MANHOLE	51380	GREASE BLOCKAGE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2655216	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	1654 CHEROKEE RD	9/13/2016 17:15	9/13/2016 18:30	1	SEWER SERVICE LINE	147881654	PRIVATE PROPERTY ISSUE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2617366	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED MAIN SEWER AND MAIN; ADDITIONAL FLUSHING OF PSC BY TV DEPT; TO REMOVE GREASE
MORRIS FORMAN	KY0022411	1827 DRESCHER BRIDGE AVE	8/15/2016 16:00	8/15/2016 17:06	100	SEWER MAIN	31748	BROKEN PIPE DURING CONSTRUCTION	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2602065	CONTRACTOR TO CLEAN AND SANITIZE	CONTRACTOR REPAIRED LINE
MORRIS FORMAN	KY0022411	1903 CHARBDIN PL	7/8/2016 9:22	7/8/2016 10:00	600	SEWER MANHOLE	65624	GREASE IN THE MAIN SEWER SOME ROOTS A LARGE ROCK WAS RECOVERED ROCK STOPPED THE FLOW	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2582349	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	MSD FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	1910 CHARBDIN PL	10/9/2016 14:06	10/9/2016 18:35	10	SEWER MAIN	16454-ST	GREASE BLOCKAGE IN THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2628221	CUSTOMER CLEANED AREA	FLUSHED AND VACTORED MAIN
MORRIS FORMAN	KY0022411	2018 PEABODY LN	9/13/2016 16:30	9/13/2016 16:56	5	SEWER SERVICE LINE	80996	ROOT BLOCKAGE IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2617362	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	216 RIDGEWAY AVE	8/4/2016 19:00	8/4/2016 19:40	1	SEWER SERVICE LINE	87934	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2599453	CUSTOMER CLEANED IMPACTED AREA	ROOT CUT THE PSC
MORRIS FORMAN	KY0022411	2566 CHEROSEN RD	8/9/2016 11:40	8/9/2016 13:09	35	SEWER SERVICE LINE	X08188019	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2600382	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT LINE #2600384
MORRIS FORMAN	KY0022411	2901 GLENAFTON LN	7/10/2016 10:52	7/10/2016 10:55	1	SEWER MAIN	10476	ROOT BLOCKAGE LOCATED IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2582717	CUSTOMER CLEANED IMPACTED AREA	ROOT CUT LINE TO OPEN #2582716
MORRIS FORMAN	KY0022411	3036 BARDSTOWN RD	7/15/2016 11:00	7/15/2016 12:45	30	SEWER SERVICE LINE	Z30440019	GREASE TRAPS FULL	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2585295	SHOPPING CENTER IS RESPONSIBLE	CONTRACTOR CLEANED GREASE TRAPS
MORRIS FORMAN	KY0022411	3104 WOODLAND AVE	1/19/2017 20:20	1/19/2017 20:52	1	SEWER MAIN	05277	GREASE IN THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2672532	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER 25' AND GOT LINE OPEN
MORRIS FORMAN	KY0022411	3220 COMMANDER DR	11/30/2016 20:20	11/30/2016 21:08	1	SEWER SERVICE LINE	41313220	ROOTS IN THE SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2650354	CUSTOMER CLEANED IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	3307 EMERALD DR	7/21/2016 21:40	7/21/2016 22:11	1	SEWER SERVICE LINE	057801550000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2590013	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED TO OPEN LINE #2590014
MORRIS FORMAN	KY0022411	3320 BARDSTOWN RD	11/2/2016 14:44	11/2/2016 21:23	50	SEWER MAIN	65731A	FIRE AT HIGH RISE RAGS AND GREASE IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2640208	CUSTOMER CLEANED AREA	FLUSHED MAIN SEWER #2640283; REFERRED FOR TV CREW
MORRIS FORMAN	KY0022411	3408 BRECKENRIDGE LN	7/1/2016 10:33	7/1/2016 10:36	1	SEWER MAIN	25414	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2580575	CUSTOMER CLEANED IMPACTED AREA	REMOVED ROOTS, FLUSHED LINE, REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	3470 ILLINOIS AVE	1/31/2017 17:05	1/31/2017 17:30	1	SEWER SERVICE LINE	KK09892029	UNKNOWN OBSTRUCTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2678684	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE 6" MAIN GOT THE PSC OPEN
MORRIS FORMAN	KY0022411	3501 BENNETT LN	7/27/2016 18:20	7/27/2016 18:42	1	SEWER SERVICE LINE	063200240000A	GREASE IN THE PSC	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2593981	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE PSC 5' TO THE MAIN
MORRIS FORMAN	KY0022411	3526 DUTCHMANS LN	11/1/2016 14:35	11/1/2016 14:17	30	SEWER SERVICE LINE	143564	GREASE FROM THE NURSING HOME	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2639764	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	VACTORED AND FLUSHED LINE; REFERRED TO IWD FOR COST RECOVERY
MORRIS FORMAN	KY0022411	3536 FINCASTLE RD	1/19/2017 13:14	1/19/2017 13:40	5	SEWER MANHOLE	99259	GREASE BLOCKAGE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2672504	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	3611 FINCASTLE RD	3/16/2017 14:54	3/16/2017 18:00	10	SEWER MANHOLE	99262	ROOTS IN MSD'S MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2698643	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO REMOVE ROOTS AND RESTORE FLOW. W/O #2698640
MORRIS FORMAN	KY0022411	3731 FINCASTLE RD	3/20/2017 12:45	3/20/2017 13:35	5	SEWER NODE	99280-CO	ROOTS / GREASE IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2699182	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	3800 FINCASTLE RD	8/2/2016 12:30	8/2/2016 12:44	1	SEWER SERVICE LINE	34093800	COMBINED AREA OVERLOADED 6" MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2598017	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	AREA IS PART OF CAMP TAYLOR PROJECT- MSD IS REPAIRING SEWERS IN THIS AREA
MORRIS FORMAN	KY0022411	3822 POPLAR LEVEL RD	5/5/2017 21:00	5/5/2017 23:38	100	SEWER MAIN	54501	CAPACITY ISSUE / ROOTS IN THE MAIN SEWER	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2727513	CONTRACTOR CLEANED AREA	ROOT CUT MAIN SEWER
MORRIS FORMAN	KY0022411	3901 TALLY HO CT	7/15/2016 18:05	7/15/2016 18:35	1	SEWER SERVICE LINE	JT02081499	UNKNOWN OBSTRUCTION IN THE MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2587374	CUSTOMER CLEANED IMPACTED AREA	MSD FLUSHED THE MAIN
MORRIS FORMAN	KY0022411	3980 FINCASTLE RD	2/16/2017 16:30	2/16/2017 17:30	200	SEWER MAIN	99287	PIPE BROKE ON MSD PORTION	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2685829	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	REFER OVER TO MACK CONSTRUCTION**REFER FOR TVI
MORRIS FORMAN	KY0022411	408 GEORGE UNSELD TER	7/17/2016 17:30	7/17/2016 19:57	1	SEWER SERVICE LINE	27499016	8" RUBBER PLUG WAS IN THE 8" MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2587450	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	MSD PULLED THE PLUG OUT OF THE LINE
MORRIS FORMAN	KY0022411	4208 WALLINGFORD LN	1/15/2017 11:19	1/15/2017 12:33	5	SEWER SERVICE LINE	BJ14714569	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2670779	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO RELIEVE ROOTS WORK ORDER # 2670777
MORRIS FORMAN	KY0022411	4339 CAVELLE AVE	4/9/2017 20:55	4/9/2017 22:05	20	SEWER SERVICE LINE	20488	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2714754	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED DEBRIS FROM SEWER
MORRIS FORMAN	KY0022411	4526 JANICE WAY	7/23/2016 8:20	7/23/2016 9:15	5	SEWER SERVICE LINE	DE33664029	ROOTS IN MSD PORTION OF SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2590321	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	4836 PARTRIDGE RUN	2/13/2017 9:15	2/13/2017 9:30	500	SEWER MANHOLE	27922	UNKNOWN OBSTRUCTION IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2683198	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED AND ROOT CUT MAIN TO RESTORE FLOW WORK ORDER #2683184

Appendix D-2 Discharge Work Orders – Ground

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	508 HILL RIDGE RD	12/27/2016 10:10	12/27/2016 11:10	20	SEWER MANHOLE	55083	ROOT BLOCKAGE IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2661194	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO REMOVE ROOTS
MORRIS FORMAN	KY0022411	5233 ROLLINGWOOD TRL	10/14/2016 18:00	10/14/2016 19:56	5	SEWER MAIN	09693	UNKNOWN OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2632468	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	5417 WINDING RD	4/27/2017 11:29	4/27/2017 11:40	50	SEWER MANHOLE	55126	GREASE BLOCKAGE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2721825	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	611 EDITH RD	11/15/2016 17:00	11/15/2016 17:50	1	SEWER SERVICE LINE	088B00630000A	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2646177	UNKNOWN AT THIS TIME	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	729 MIDDLE WAY	8/27/2016 15:50	8/27/2016 16:22	3	SEWER SERVICE LINE	70644	BLOCKAGE IN THE PSC ON MSD	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2605986	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	DUG DOWN AND REPLACED PROPERTY SERVICE CONNECTION
MORRIS FORMAN	KY0022411	7700 TEMPSCLAIR RD	10/19/2016 11:25	10/19/2016 12:23	8	SEWER MAIN	32453	GREASE AND PAPER IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2633847	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED LINE TO OPEN #2633850
MORRIS FORMAN	KY0022411	803 INVERNESS AVE	9/2/2016 17:15	9/2/2016 17:32	1	SEWER SERVICE LINE	061E00410000A	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2612284	CUSTOMER WILL CLEAN IMPACTED AREA	REPLACED PIPE INCLUDING C/O
MORRIS FORMAN	KY0022411	9303 NEW LA GRANGE RD	11/5/2016 13:00	11/5/2016 13:39	2	SEWER MAIN	24615	UNKNOWN OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2640864	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER 200'
MORRIS FORMAN	KY0022411	9324 TIVERTON WAY	1/9/2017 21:15	1/9/2017 22:24	1	SEWER MAIN	22585	MAIN SEWER WAS STOPPED UP WITH AN UNKNOWN OBSTRUCTIOIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2667871	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER AND REFFERED FOR MAIN TO BE TV'D
MORRIS FORMAN	KY0022411	9800 CYPRESS CREEK DR	4/29/2017 13:00	4/29/2017 13:05	20	SEWER SERVICE LINE	HP09867059	OBSTRUCTION IN MSD'S SEWER MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2724385	NO CLEANUP IS NEEDED	FLUSHED MAIN SEWER RELEASED OBSTRUCTION
MORRIS FORMAN	KY0022411	984 SWAN ST	1/18/2017 10:00	1/18/2017 10:45	1	SEWER MANHOLE	CSO146	RAIN EVENT	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2672026	MSD PERSONNEL CLEANED AND SANITIZED THE IMPACTED AREA	VACTORING BASIN

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Appendix D-3 Discharge Work Orders – Interior

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Appendix D-3 Discharge Work Orders – Interior

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
CEDAR CREEK	KY0098540	10309 LARK PARK DR	6/12/2017 22:05	6/12/2017 23:00	1	SEWER SERVICE LINE	BE07747429	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2752803	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER
CEDAR CREEK	KY0098540	4202 WILLOWVIEW BLVD	7/11/2016 13:05	7/11/2016 13:28	1	SEWER SERVICE LINE	176640	ROOTS IN MSD AND CUSTOMER PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2582961	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
CEDAR CREEK	KY0098540	5414 LOVERS LN	6/17/2017 13:35	6/17/2017 14:10	1	SEWER SERVICE LINE	BE09371819	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2756034	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER
CEDAR CREEK	KY0098540	6708 SHIBLEY AVE	7/18/2016 9:55	7/18/2016 10:25	1	SEWER SERVICE LINE	1313913	GREASE IN MSD PORTION OF THE PSC	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2587603	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PIPE INCLUDING 2-WAY C/O
CEDAR CREEK	KY0098540	8204 CASUALWOOD WAY	9/7/2016 18:38	9/7/2016 19:55	1	SEWER SERVICE LINE	BW05541069	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2615794	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
CEDAR CREEK	KY0098540	9606 MICHAEL EDWARD DR	7/8/2016 18:40	7/8/2016 19:01	1	SEWER SERVICE LINE	BE09161069	OBSTRUCTION ON MSD PORTION OF PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2582668	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE PSC
DEREK R. GUTHRIE	KY0078956	1000 RUNELL RD	7/17/2016 14:40	7/17/2016 14:43	1	SEWER SERVICE LINE	062K00730000A	GREASE BLOCKAGE ON MSD PORTION OF SERVICE CONNECTION	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2587439	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE TO OPEN #2587440
DEREK R. GUTHRIE	KY0078956	10000 MCCREA LN	9/24/2016 21:45	9/24/2016 22:10	1	SEWER SERVICE LINE	PD06424029	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2622065	UNKNOWN AT THIS TIME	FLUSEHD THE MAIN AND GOT IT OPEN. REFFERED TO GET MAIN ROOT CUT.
DEREK R. GUTHRIE	KY0078956	10000 MCCREA LN	1/10/2017 23:31	1/11/2017 0:32	125	SEWER SERVICE LINE	PD06424029	ROOT IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2668176	MSD CLEANED AND SANITIZED THE IMPACTED AREA	ROOT CUT MAIN SEWER TO REMOVE ROOTS WORK ORDER # 2668175
DEREK R. GUTHRIE	KY0078956	10104 CHARLESWOOD RD	7/18/2016 9:20	7/18/2016 9:33	1	SEWER SERVICE LINE	PD18875329	ROOT BLOCKAGED NEAR THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2587556	UNKNOWN AT THIS TIME	FLUSHED AND VACTORED LINE**CREW DUG DOWN AND REPAIR THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	10201 CHARLESWOOD RD	7/5/2016 13:15	7/5/2016 13:49	1	SEWER SERVICE LINE	PD20562039	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2581084	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	1032 SARAH DR	4/10/2017 17:20	4/10/2017 18:15	1	SEWER SERVICE LINE	065101490000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2715173	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
DEREK R. GUTHRIE	KY0078956	1115 HENNEPIN DR	7/2/2016 19:25	7/2/2016 20:18	1	SEWER SERVICE LINE	062M01370000A	ROOTS IN THE PSC ON MSD	ROOTS	DISDW DRY WEATHER DISCHARGE	2580765	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE PSC AND GOT ROOTS OUT
DEREK R. GUTHRIE	KY0078956	11703 WAREING CT	8/31/2016 15:40	8/31/2016 16:55	1	SEWER SERVICE LINE	DD87301019	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2610252	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED 2-WAY C/O #2610363
DEREK R. GUTHRIE	KY0078956	13321 FORGE CIR	12/28/2016 16:00	12/28/2016 16:05	2	SEWER SERVICE LINE	DD71180019	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2665052	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE
DEREK R. GUTHRIE	KY0078956	14114 HENDERSON AVE	7/4/2016 15:20	7/4/2016 15:25	2	SEWER SERVICE LINE	1399814114	GREASE BLOCKAGE	GREASE BLOCKAGE	DISREV RAIN EVENT DISCHARGE	2580858	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2580859
DEREK R. GUTHRIE	KY0078956	1700 HERBERT AVE	1/17/2017 23:00	1/17/2017 23:07	1	SEWER SERVICE LINE	171295	GREASE IN THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2671641	CUSTOMER CLEANED THE IMPACTED AREA	FLUSH MAIN SEWER 60FT
DEREK R. GUTHRIE	KY0078956	1702 STALLINGS AVE	8/21/2016 14:15	8/21/2016 14:49	1	SEWER SERVICE LINE	109101720000A	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603712	MSD CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED PSC #2603713**CREW DUG DOWN AND REPAIRED THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	1950 APPLETON LN	8/7/2016 22:56	8/7/2016 23:36	1	SEWER SERVICE LINE	109202440000A	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2599803	CUSTOMER CLEANED THE IMPACTED AREA	REFERED FOR REPAIRS W/O 2599802; FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	213 MILITIA DR	6/5/2017 14:38	6/5/2017 16:15	1	SEWER SERVICE LINE	WW08907029	OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2745859	CUSTOMER CLEANED THE IMPACTED AREA	CUT MAIN SEWER TO RESTORE FLOW
DEREK R. GUTHRIE	KY0078956	2138 EAST LN	7/1/2016 16:00	7/1/2016 17:06	1	SEWER SERVICE LINE	27524	GREASE OBSTRUCTION IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2580710	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER #2580692
DEREK R. GUTHRIE	KY0078956	2222 CRUMS LN	2/10/2017 13:20	2/10/2017 14:20	1	SEWER SERVICE LINE	101501600000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2682928	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER
DEREK R. GUTHRIE	KY0078956	2305 PIKES PEAK BLVD	7/8/2016 11:54	7/8/2016 11:54	1	SEWER SERVICE LINE	DE28932019	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2582404	UNKNOWN AT THIS TIME	FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	2306 DEVERON DR	10/19/2016 0:06	10/19/2016 0:17	2	SEWER SERVICE LINE	23530	ROOTS ON MSD PORTION OF SERVICE CONNEECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2633633	MSD CLEANED AND SANITIZED THE IMPACTED AREA	ROOT-CUT SERVICE CONNECTION WO#2633634
DEREK R. GUTHRIE	KY0078956	2328 EMBASSY LN	12/12/2016 16:35	12/12/2016 18:00	1	SEWER SERVICE LINE	102005280000A	BLOCKAGE IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2655110	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER AND GOT IT OPEN
DEREK R. GUTHRIE	KY0078956	2528 JENLEE LN	1/17/2017 10:45	1/17/2017 12:36	1	SEWER SERVICE LINE	51392	GREASE BLOCKAGE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2671361	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER TO REMOVE GREASE
DEREK R. GUTHRIE	KY0078956	2606 MARGUERITE DR	7/5/2016 17:24	-53503.72708	1	SEWER SERVICE LINE	136852	ROOTS ON MSD PORTION OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2581180	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED A CLEAN OUT AND REPLACED PIPE
DEREK R. GUTHRIE	KY0078956	3 PRISCILLA CT	9/12/2016 19:30	9/12/2016 19:53	1	SEWER SERVICE LINE	121400820000A	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2617051	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE MAIN
DEREK R. GUTHRIE	KY0078956	3200 APPLETON CT	8/6/2016 15:40	8/6/2016 16:15	1	SEWER SERVICE LINE	3525	ROOTS IN MSD PORTION OF SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2599752	CUSTOMER CLEANED THE IMPACTED AREA	RAN RODS AND FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	3333 FERN LEA RD	8/26/2016 17:00	8/26/2016 17:18	1	SEWER SERVICE LINE	RR13691019	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2605936	CUSTOMER CLEANED THE IMPACTED AREA	CREW DUG DOWN AND REPAIR THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	3443 HEATHERFIELD DR	11/7/2016 20:30	11/7/2016 21:15	1	SEWER SERVICE LINE	RR14471039	UNKNOWN OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2643124	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT MAIN SEWER

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DEREK R. GUTHRIE	KY0078956	3445 FERNHEATHER DR	11/15/2016 22:00	11/15/2016 22:28	1	SEWER SERVICE LINE	RR14408049	ROOTS ON MSD PORTION OF PIPRE	ROOTS	DISDW DRY WEATHER DISCHARGE	2646191	UNKNOWN AT THIS TIME	REPLACED PIPE AND 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	3628 ROBIN DR	5/3/2017 18:00	5/3/2017 18:50	1	SEWER SERVICE LINE	116100990000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2726209	MSD CONTRACTOR CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM SEWER
DEREK R. GUTHRIE	KY0078956	3636 ROBIN DR	7/6/2016 11:00	7/6/2016 11:45	5	SEWER SERVICE LINE	89050	OBSTRUCTION AT THE SHARED JOINT	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2581398	WATER HAS NOT RECEDED,ADVISED CUSTOMER TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	ROOT CUT LINE TO OPEN #2581400
DEREK R. GUTHRIE	KY0078956	4101 HILLVIEW AVE	5/5/2017 9:10	5/5/2017 12:30	20	SEWER SERVICE LINE	55574	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2727408	WILL NEED TO SEE RESULTS FROM TVI OF THE MAIN SEWER	ROOT CUT AND FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	4101 HILLVIEW AVE	5/5/2017 9:10	5/5/2017 12:30	30	SEWER SERVICE LINE	55574	ROOTS IN MAIN SEWER	ROOTS	DISREV RAIN EVENT DISCHARGE	2727462	WILL NEED TO SEE RESULTS FROM TVINOF THE MAIN SEWER	REFERRED TO TV CREW FOR TV INSPECTION OF THE MAIN SEWER
DEREK R. GUTHRIE	KY0078956	4105 SAMOSET CT	7/12/2016 18:57	7/12/2016 19:45	1	SEWER SERVICE LINE	T168A4105	ROOTS IN TAP PORTIN OF THE SSL	ROOTS	DISDW DRY WEATHER DISCHARGE	2583494	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2583498; REFERRED FOR AREA SUPERVISOR FOR POSSIBLE LINE
DEREK R. GUTHRIE	KY0078956	4107 COTTAGEHILL RD	9/8/2016 22:00	9/8/2016 22:25	1	SEWER SERVICE LINE	T168A4107	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2616142	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	4107 SAMOSET CT	7/12/2016 1:08	7/12/2016 1:11	1	SEWER SERVICE LINE	T168A4107B	BLOCKAGE ON MSD PORTION OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2583079	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED & RODDED LINE
DEREK R. GUTHRIE	KY0078956	4108 TIMOTHY LN	12/17/2016 23:00	12/17/2016 23:42	1	SEWER SERVICE LINE	010100440000A	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2657845	MSD CLEANED AND SANITIZED THE IMPACTED AREA	FLUSHED THE MAIN SEWER AND GOT ROOTS OUT
DEREK R. GUTHRIE	KY0078956	4115 MORAY CT	7/7/2016 9:30	7/7/2016 10:00	1	SEWER SERVICE LINE	72276	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2582049	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	4411 HANEY WAY	7/2/2016 16:25	7/2/2016 17:06	1	SEWER SERVICE LINE	DD40024019	ROOTS ON MSD PORTION OF THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2580758	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE PSC
DEREK R. GUTHRIE	KY0078956	4516 GRANDVIEW DR	10/1/2016 16:10	10/1/2016 16:38	1	SEWER SERVICE LINE	DE38100029	MAIN SEWER WAS STOPPED UP	ROOTS	DISDW DRY WEATHER DISCHARGE	2626067	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER AND GOT IT OPEN
DEREK R. GUTHRIE	KY0078956	4612 KIEFER RD	7/22/2016 8:35	7/22/2016 8:35	1	SEWER SERVICE LINE	102004360000A	ROOTS AT THE TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2590195	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	4732 LYNN LEA RD	5/5/2017 18:30	5/5/2017 20:00	20	SEWER SERVICE LINE	63736	ROOTS IN THE MAIN SEWER	ROOTS	DISREV RAIN EVENT DISCHARGE	2727541	RESULTS FROM TVI OF THE MAIN SEWER WILL DETERMINE	ROOT CUT THE MAIN SEWER
DEREK R. GUTHRIE	KY0078956	5205 MICHAEL EDWARD CT	7/12/2016 11:15	7/12/2016 11:59	1	SEWER SERVICE LINE	BE09123459	ROOTS AT THE SHARED JOINT OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2583326	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT & FLUSHED LINE
DEREK R. GUTHRIE	KY0078956	5252 BARDSTOWN RD	7/9/2016 14:11	7/9/2016 14:14	1	SEWER SERVICE LINE	106565252	GREASE BLOCKAGE	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2582694	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE; ADVISED CUSTOMER TO CONTACT A PLUMBER
DEREK R. GUTHRIE	KY0078956	5252 BARDSTOWN RD	10/22/2016 13:29	10/22/2016 13:59	1	SEWER SERVICE LINE	106565252	OBSTRUCTION IN MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2634795	NO CLEANUP NEEDED	FLUSHED MAIN SEWER WORK ORDER # 2634797
DEREK R. GUTHRIE	KY0078956	5302 VISTA JOHN DR	8/12/2016 9:35	8/12/2016 10:38	1	SEWER SERVICE LINE	DE31308019	ROOTS AT THE SHARED JOINT OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2601475	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	5607 MACO LN	7/20/2016 10:50	7/20/2016 11:27	1	SEWER SERVICE LINE	PB16056019	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2588383	CUSTOMER CLEANED THE IMPACTED AREA	CREW DUG DOWN AND REPAIRED THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	6501 MANDEVILLE CT	7/10/2016 15:07	7/10/2016 15:10	1	SEWER SERVICE LINE	PB17136039	ROOTS IN THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2582731	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	6624 ASHBY LN	7/1/2016 13:10	7/1/2016 13:36	1	SEWER SERVICE LINE	124916624	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2580616	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED AND ROOT CUT LINE
DEREK R. GUTHRIE	KY0078956	6700 MUSKET DR	7/11/2016 14:30	7/11/2016 15:07	1	SEWER SERVICE LINE	PC09375019	ROOTS PACKED AT THE TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2583021	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	6717 CURRINGTON CIR	7/7/2016 21:55	7/7/2016 22:14	1	SEWER SERVICE LINE	131326717	BLOCKAGE ON MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2582257	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	7206 SUPREMUS DR	9/8/2016 11:45	9/8/2016 12:15	1	SEWER SERVICE LINE	1197206A	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2616028	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE, REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	7526 MERLYN CIR	7/28/2016 19:20	7/28/2016 19:58	1	SEWER SERVICE LINE	062L02850000A	ROOTS IN MSD PORTION OF THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2596024	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	7911 CORTLAND DR	7/7/2016 11:05	7/7/2016 12:32	1	SEWER SERVICE LINE	PB13728029	ROOTS IN THE SHARED JOINT OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2582114	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2582078
DEREK R. GUTHRIE	KY0078956	8006 CORTLAND DR	7/25/2016 10:38	7/25/2016 10:38	1	SEWER SERVICE LINE	PB13090019	ROOTS AT THE TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2590668	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2590940
DEREK R. GUTHRIE	KY0078956	8100 ATLANTA PKY	9/6/2016 17:00	9/6/2016 17:49	1	SEWER SERVICE LINE	WW09538059	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2615093	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	8107 ZELMA FIELDS AVE	9/9/2016 14:20	9/9/2016 15:43	2	SEWER SERVICE LINE	143393	ROOTS IN SERVICE CONNECTION AND IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2616597	MSD CONTRACTOR CLEANED THE IMPACTED AREA	ROOT CUT SERVICE CONNECTION AND MAIN SEWER
DEREK R. GUTHRIE	KY0078956	8205 LINDA RD	11/20/2016 9:15	11/20/2016 9:20	1	SEWER SERVICE LINE	179014	ROOTS IN MSD'S POTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2647204	CUSTOMER CLEANED THE IMPACTED AREA	CREW DUG DOWN AND REPAIRED THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	8307 MILLINGTON CT	8/30/2016 18:00	8/30/2016 18:33	1	SEWER SERVICE LINE	103218307	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2608196	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2608198

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ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
DEREK R. GUTHRIE	KY0078956	8417 MICHAEL EDWARD DR	7/29/2016 13:50	7/29/2016 13:52	3	SEWER SERVICE LINE	BE08911029	ROOTS ON MSD'S PORTION OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2596633	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	8512 LAVERNE DR	10/25/2016 15:30	10/25/2016 16:45	1	SEWER SERVICE LINE	BE08757659	OBSTRUCTION IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2635692	UNKNOWN AT THIS TIME	FLUSHED LINE TO OPEN
DEREK R. GUTHRIE	KY0078956	8514 COCO CT	9/6/2016 17:00	9/6/2016 17:14	1	SEWER SERVICE LINE	171368	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2615076	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE***CREW DUG DOWN AND REPAIR THE PROPERTY SERVICE CONNECTION
DEREK R. GUTHRIE	KY0078956	8519 SEAFORTH DR	8/21/2016 19:50	8/21/2016 20:10	1	SEWER SERVICE LINE	125348519	OBSTRUCTION IN MSD'S PORTION OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603737	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED CONNECTION TO REOPEN
DEREK R. GUTHRIE	KY0078956	8605 MICHAEL RAY DR	9/14/2016 13:50	9/14/2016 15:57	2	SEWER SERVICE LINE	181190	ROOTWS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2617781	WATER HAS NOT RECEDED, ADVISED CUSTOMER TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	8902 WALTLEE RD	6/23/2017 23:45	6/24/2017 0:15	1	SEWER SERVICE LINE	179069	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2760080	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM MAIN SEWER
DEREK R. GUTHRIE	KY0078956	9011 ADMIRAL DR	7/8/2016 11:30	7/8/2016 12:08	1	SEWER SERVICE LINE	176027	ROOTS AT SHARED JOINT OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2582412	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND INSTALLED PIPE
DEREK R. GUTHRIE	KY0078956	9016 WHIPPOORWILL RD	7/18/2016 19:00	7/18/2016 19:19	1	SEWER SERVICE LINE	6600267	ROOTS IN MSD POPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2587843	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	9107 LAKERIDGE DR	7/11/2016 8:50	7/11/2016 9:18	1	SEWER SERVICE LINE	169644	ROOTS IN THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2582815	UNKNOWN AT THIS TIME	REPLACED PIPE INCLUDING 2-WAY C/O
DEREK R. GUTHRIE	KY0078956	9116 LOCH LEA LN	8/5/2016 19:25	8/5/2016 19:38	1	SEWER SERVICE LINE	609070	ROOTS IN MSD'S PORTION OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2599710	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT CONNECTION TO REMOVE ROOTS
DEREK R. GUTHRIE	KY0078956	9213 WILLOWWOOD WAY	7/18/2016 10:45	7/18/2016 11:07	1	SEWER SERVICE LINE	T168B124	ROOTS A THE SHARED JOINT. MAY HAVE BEEN HIT BY UNDERGROUND BORING	ROOTS	DISDW DRY WEATHER DISCHARGE	2587643	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED A 2-WAY C/O ALSO REPLACED PIPE
DEREK R. GUTHRIE	KY0078956	9412 PIROUETTE AVE	7/31/2016 15:00	7/31/2016 15:00	5	SEWER SERVICE LINE	AU11210039	GREASE HOLDING LEVEL INSTRUMENTS AT MSD'S LIFT STATION	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2596871	MSD WILL CLEAN THE IMPACTED AREA	MSD PUMPED OUT GREASE FROM LIFT STATION
DEREK R. GUTHRIE	KY0078956	9414 PIROUETTE AVE	7/31/2016 15:00	7/31/2016 15:00	5	SEWER SERVICE LINE	AU11211039	GREASE HOLDING LEVEL INSTRUMENTS AT MSD'S LIFT STATION	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2596870	MSD WILL CLEAN THE IMPACTED AREA	FLUSHED LINE #2597041
DEREK R. GUTHRIE	KY0078956	9617 BRITANNIA CT	12/16/2016 21:00	12/17/2016 0:26	1	SEWER SERVICE LINE	AU12407069	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2657775	MSD WILL CLEAN IMPACTED AREA	FLUSHED THE MAIN SEWER
FLOYDS FORK	KY0102784	2002 ASCENDER CT	4/17/2017 13:05	4/17/2017 13:30	1	SEWER SERVICE LINE	341050259	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2718594	MSD PERSONNEL CLEANED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM THE SEWER
FLOYDS FORK	KY0102784	310 LAKE FOREST PKY	7/18/2016 21:00	7/18/2016 21:36	1	SEWER SERVICE LINE	T3143310	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2587853	MSD CLEANED AND RESTORED AREA AND MAY ISSUE COURTESY CLEANING	INSTALLED PIPE INCLUDING 2-WAY C/O
FLOYDS FORK	KY0102784	3411 SASSE WAY	7/9/2016 18:00	7/9/2016 18:18	1	SEWER SERVICE LINE	15065107	GREASE IN THE PSC ON PRIVATE PROPERTY	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2582706	CUSTOMER CLEANED THE IMPACTED AREA	ADVISED P/O TO CONTACT A PLUMBER
HITE CREEK	KY0022420	10524 BAY POINTE CT	8/6/2016 11:40	8/6/2016 12:14	1	SEWER SERVICE LINE	260200180000A	OBSTRUCTION IN MSD PORTION OF SERVICE LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2599738	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED (2600341) AND VACTORED (2600337) LINE
HITE CREEK	KY0022420	12007 ROCK SPRING DR	8/23/2016 15:00	8/23/2016 15:57	1	SEWER SERVICE LINE	169702170000A	ROOTS IN MSD PORTION OF THE SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2604554	UNKNOWN AT THIS TIME	VACTORED DEBRIS #2605128
HITE CREEK	KY0022420	3907 RIVEROAKS LN	7/5/2016 14:22	7/5/2016 14:53	1	SEWER SERVICE LINE	181741	ROOTS AT THE TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2581088	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2581125
HITE CREEK	KY0022420	4505 DICKERSON CT	8/12/2016 19:20	8/12/2016 19:48	1	SEWER SERVICE LINE	163001860000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2601554	CUSTOMER CLEANED THE IMPACTED AREA	REMOVED ROOTS; INSTALLED PIPE INCLUDING C/O
HITE CREEK	KY0022420	6123 PARK RD	8/23/2016 15:17	8/23/2016 16:02	2	SEWER SERVICE LINE	14551167	ROOTS ON MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2604527	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2605354
HITE CREEK	KY0022420	6210 DEEP CREEK CT	7/8/2016 14:04	7/8/2016 14:54	2	SEWER SERVICE LINE	EP47640019	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2582484	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE; INSTALLED PIPE INCLUDING 2-WAY C/O
HITE CREEK	KY0022420	9408 NORTON COMMONS BLVD	9/3/2016 16:45	9/3/2016 17:30	1	SEWER SERVICE LINE	14210104	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2612310	UNKNOWN AT THIS TIME	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	1 RIDGE RD	11/22/2016 5:10	11/22/2016 5:15	4	SEWER SERVICE LINE	X02858019	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2647509	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	10305 TURNSTILE CT	8/23/2016 12:15	8/23/2016 12:39	1	SEWER SERVICE LINE	196605350000A	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2604424	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	1032 S SHELBY ST	8/24/2016 19:30	8/24/2016 19:55	1	SEWER SERVICE LINE	94001	SAW ROOTS ON MSD'S PORTION OF THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2604977	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED 2-WAY C/O
MORRIS FORMAN	KY0022411	1041 SAMUEL ST	8/7/2016 19:55	8/7/2016 20:27	1	SEWER SERVICE LINE	92103	OBSTRUCTION AT THE HOOK-UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2599804	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED SERVICE LINE TO GET OPEN
MORRIS FORMAN	KY0022411	110 BOSTON CT	8/8/2016 19:30	8/8/2016 20:00	1	SEWER SERVICE LINE	A08567019	BROKE DOWN ON MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2600161	CUSTOMER CLEANED THE IMPACTED AREA	TVD LINE- LINE CLEAR
MORRIS FORMAN	KY0022411	1108 W MAIN ST	8/26/2016 11:18	8/26/2016 12:05	1	SEWER SERVICE LINE	65573	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2605429	NO CLEAN UP REQUIRED	FLUSHED LINE #2605485; REFERRED FOR SLIP LINE
MORRIS FORMAN	KY0022411	112 CAMBRIDGE DR	11/15/2016 22:00	11/15/2016 22:22	1	SEWER SERVICE LINE	Y11366019	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2646189	UNKNOWN AT THIS TIME	DUG DOWN AND REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	1155 S 36TH ST	10/25/2016 14:30	10/26/2016 7:36	1	SEWER SERVICE LINE	127522	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2635686	UNKNOWN AT THSI TIME	REPLACED PIPE INCLUDING 2-WAY C/O

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ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	120 BLAINE RD	7/22/2016 13:19	7/22/2016 14:03	1	SEWER SERVICE LINE	6120	ROOTS IN MSD PORTION OF THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2590184	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	1203 ABBEYWOOD RD	7/3/2016 19:35	7/3/2016 20:49	1	SEWER SERVICE LINE	5	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2580821	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE TO OPEN
MORRIS FORMAN	KY0022411	1244 SPRINGDALE DR	12/3/2016 22:10	12/3/2016 22:49	1	SEWER SERVICE LINE	KK13390319	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2651317	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN 200'
MORRIS FORMAN	KY0022411	1244 SPRINGDALE DR	1/7/2017 17:05	1/7/2017 17:34	1	SEWER SERVICE LINE	KK13390319	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2667394	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER 100'
MORRIS FORMAN	KY0022411	1245 ORMSBY CT	8/2/2016 11:25	8/2/2016 11:45	1	SEWER SERVICE LINE	R05880019	ROOTS AT THE SHARED JOINT OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2597992	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	1265 SPRINGDALE DR	8/2/2016 0:30	8/2/2016 3:40	10	SEWER SERVICE LINE	KK13382439	MSD MANHOLE 13901 WAS HOLDING WITH SEWAGE, MAIN SEWER CAUSED BACKUP.	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2597331	MSD EMPLOYEES CLEANED AND SANITIZED THE AREA	FLUSHED MAIN SEWER WO#2597299.
MORRIS FORMAN	KY0022411	1315 SCHOLAR ST	7/10/2016 16:40	7/10/2016 16:53	1	SEWER SERVICE LINE	087H00950000A	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2582738	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE
MORRIS FORMAN	KY0022411	1323 SHORT ST	1/26/2017 20:00	1/26/2017 21:01	1	SEWER SERVICE LINE	KK13786089	UNKNOWN OBSTRUCTION IN THE 6" MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2675138	UNKNOWN AT THIS TIME	FLUSHED LINE
MORRIS FORMAN	KY0022411	1339 HOERTZ AVE	8/1/2016 14:05	8/1/2016 14:32	1	SEWER SERVICE LINE	K08805089	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2597210	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE #2597212
MORRIS FORMAN	KY0022411	1352 S BROOK ST	7/12/2016 9:02	7/12/2016 9:55	1	SEWER SERVICE LINE	11878	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2583172	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2584569
MORRIS FORMAN	KY0022411	1507 DELLWOOD DR	12/3/2016 12:15	12/3/2016 12:20	1	SEWER SERVICE LINE	090H01000000A	ROOTS ON MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2651291	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED 2-WAY C/O
MORRIS FORMAN	KY0022411	1516 CARDINAL DR	8/9/2016 12:45	8/9/2016 13:46	1	SEWER SERVICE LINE	KK15031029	OBSTRUCTION AT THE SHARED JOINT	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2600401	WATER HAS NOT RECEDED,ADVISED CUSTOMER TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	MSD CONTRACTOR WILL MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	1601 TARTAN WAY	9/13/2016 11:30	9/13/2016 13:16	1	SEWER SERVICE LINE	080J00740000A	GREASE OBSTRUCTION IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2617282	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER
MORRIS FORMAN	KY0022411	1605 RUSSELL AVE	6/15/2017 14:51	6/15/2017 16:00	1	SEWER SERVICE LINE	KK09613019	CONTRACTOR RIPPED OUT MAIN SEWER DURING INSTALLATION PROJECT	UTILITY DAMAGED MSD ASSET	DISDW DRY WEATHER DISCHARGE	2755635	CUSTOMER CLEANED THE IMPACTED AREA	CONTRACTOR WILL MAKE REPAIRS TO MAIN SEWER
MORRIS FORMAN	KY0022411	1605 RUSSELL AVE	6/16/2017 14:00	6/16/2017 17:10	1	SEWER SERVICE LINE	KK09613019	MSD CONTRACTOR DAMAGED THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2756002	CUSTOMER CLEANED THE IMPACTED AREA	MSD CONTRACTOR WILL MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	1615 SUTHERLAND DR	12/6/2016 21:01	12/6/2016 21:04	1	SEWER SERVICE LINE	080J01290000A	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2652296	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER
MORRIS FORMAN	KY0022411	1634 DIXDALE AVE	8/7/2016 15:42	8/7/2016 18:33	2	SEWER SERVICE LINE	R04461069	GREASE AND ROOTS	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2599787	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	1660 HAROLD AVE	1/15/2017 20:20	1/16/2017 0:25	1	SEWER SERVICE LINE	1273236	GREASE IN THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2670812	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED AND VACTORED THE MAIN SEWER
MORRIS FORMAN	KY0022411	1703 MARLOW RD	12/23/2016 9:00	12/23/2016 9:05	1	SEWER SERVICE LINE	68436	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2660816	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	1712 S 35TH ST	8/25/2016 11:40	8/25/2016 12:12	1	SEWER SERVICE LINE	13143352	BLOCKAGE ON MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2605115	CONTRACTOR CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED 2-WAY C/O
MORRIS FORMAN	KY0022411	1715 GLENVIEW PL	9/7/2016 16:36	9/7/2016 16:41	1	SEWER SERVICE LINE	47867	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2615776	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	1753 BELMAR DR	1/12/2017 11:58	1/12/2017 12:59	2	SEWER SERVICE LINE	34091753	ROOTS AND GREASE IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2668631	MSD CLEANED AREA	ROOT CUT AND FLUSHED MAIN SEWERS
MORRIS FORMAN	KY0022411	1801 ARBORO PL	7/18/2016 13:42	7/18/2016 14:08	1	SEWER SERVICE LINE	199500320000A	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2587702	CUSTOMER CLEANED THE IMPACTED AREA	REMOVED ROOTS, REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	1882 PRINCETON DR	8/11/2016 16:35	8/11/2016 17:26	1	SEWER SERVICE LINE	84536	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2601169	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	1913 DECATUR DR	8/25/2016 12:30	8/25/2016 13:15	1	SEWER SERVICE LINE	23106	ROOTS AT THE SHARED JOINT AT THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2605232	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE AND INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	1915 S HURSTBOURNE PKY	7/14/2016 9:19	7/14/2016 9:58	1	SEWER SERVICE LINE	JT20266019	MAIN WAS HOLDING AND SHOP TOWELS IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2584350	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE TO OPEN #2584366
MORRIS FORMAN	KY0022411	1935 RICHMOND DR	9/1/2016 16:25	9/1/2016 16:39	1	SEWER SERVICE LINE	87544	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2611818	UNKNOWN AT THIS TIME	FLUSHED LINE #2612303
MORRIS FORMAN	KY0022411	2013 BASHFORD MANOR LN	10/7/2016 17:30	10/7/2016 17:51	1	SEWER SERVICE LINE	7176	GREASE I N THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2628150	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN 50'
MORRIS FORMAN	KY0022411	2013 BASHFORD MANOR LN	5/22/2017 18:28	5/21/2017 18:33	2	SEWER SERVICE LINE	7176	ROOTS IM MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2734525	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE
MORRIS FORMAN	KY0022411	205 HIAWATHA AVE	8/16/2016 10:20	8/16/2016 10:53	1	SEWER SERVICE LINE	44968	FURTHER INVESTIGATION REQUIRED	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2602230	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2602814
MORRIS FORMAN	KY0022411	2101 DUNCAN ST	8/30/2016 8:30	8/30/2016 9:14	1	SEWER SERVICE LINE	30414	OBSTRUCTION IN PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2607959	CUSTOMER CLEANED THE IMPACTED AREA	DUG DOWN AND REPLACED PIPE

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MORRIS FORMAN	KY0022411	2101 WINSTON AVE	8/29/2016 16:55	8/29/2016 17:13	2	SEWER SERVICE LINE	112826	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2607466	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2608069
MORRIS FORMAN	KY0022411	211 CLOVER LN	8/17/2016 12:40	8/17/2016 13:21	1	SEWER SERVICE LINE	2111214412	GREASE IN THE MAIN	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2602753	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN AND REFFERED IT TO BE VACTORED
MORRIS FORMAN	KY0022411	2125 OLD SHEPHERDSVILLE RD	3/7/2017 17:35	3/7/2017 19:16	1	SEWER SERVICE LINE	081300140000A	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2694968	UNSURE OF AT THIS TIME	SERVICE LINE OPEN AND CLEAN
MORRIS FORMAN	KY0022411	219 S LYNDON LN	7/30/2016 13:28	7/30/2016 13:42	1	SEWER SERVICE LINE	HU14410029	OBSTRUCTION AT THE SHARED JOINT OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2596828	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	2200 STEEPLECHASE DR	8/21/2016 16:25	8/21/2016 20:01	1	SEWER SERVICE LINE	182700870000A	OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603746	MSD WILL CLEAN IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	2201 RENOWN DR	8/21/2016 16:25	8/21/2016 20:01	10	SEWER SERVICE LINE	182700880000A	OBSTRUCTION THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603738	MSD WILL CLEAN IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	221 N LONGWORTH AVE	11/29/2016 21:00	11/29/2016 21:12	1	SEWER SERVICE LINE	61631	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2650084	UNKNOWN AT THIS TIME	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	2211 DATE ST	9/5/2016 13:49	9/5/2016 14:43	1	SEWER SERVICE LINE	23135	PRIVATE PROPERTY ISSUE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2614234	CUSTOMER CLEANED THE IMPACTED AREA	ADVISED CUSTOMER TO CALL PLUMBER
MORRIS FORMAN	KY0022411	2211 RENOWN DR	8/21/2016 16:25	8/21/2016 20:01	1	SEWER SERVICE LINE	182700920000A	UNKNOWN OBSTRUCTION IN THE MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603744	MSD CLEANED IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	2214 BASHFORD MANOR LN	7/13/2016 13:49	7/13/2016 14:55	1	SEWER SERVICE LINE	7275	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2583739	UNSURE OF AT THIS TIME	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	2214 RENOWN DR	8/14/2016 19:40	8/14/2016 20:09	1	SEWER SERVICE LINE	182701890000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2601619	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE PSC
MORRIS FORMAN	KY0022411	2221 FORT ST	7/28/2016 11:15	7/28/2016 12:00	1	SEWER SERVICE LINE	28852221	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2595556	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE #2596860
MORRIS FORMAN	KY0022411	2226 WOODBOURNE AVE	7/18/2016 15:24	7/18/2016 16:00	1	SEWER SERVICE LINE	113442	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2587782	UNSURE OF AT THIS TIME	ROOT CUT LINE #2588133
MORRIS FORMAN	KY0022411	2228 HALE AVE	7/20/2016 16:30	7/20/2016 16:40	1	SEWER SERVICE LINE	40680	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2589678	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-+WAY C/O
MORRIS FORMAN	KY0022411	2232 FRANKFORT AVE	1/21/2017 12:35	1/21/2017 12:56	1	SEWER SERVICE LINE	33851	ROOTS IN MAIN SEWER LINE ON N.JANE STREET	ROOTS	DISDW DRY WEATHER DISCHARGE	2672990	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT, FLUSHED AND VACTORED LINE
MORRIS FORMAN	KY0022411	2244 FRANKFORT AVE	7/21/2016 21:35	7/21/2016 23:57	2	SEWER SERVICE LINE	34334	GREASE IN THE MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2590020	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	2255 FRANKFORT AVE	11/25/2016 19:00	11/25/2016 19:41	1	SEWER SERVICE LINE	5112255	BLOCKAGE ON MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2648148	CUSTOMER CLEANED THE IMPACTED AREA	FLUSH THE PROPERTY SERVICE CONNECTION
MORRIS FORMAN	KY0022411	2301 RENOWN DR	8/21/2016 16:25	8/21/2016 20:01	1	SEWER SERVICE LINE	182700940000A	OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603740	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	231 CLOVER LN	8/23/2016 16:46	8/23/2016 17:29	3	SEWER SERVICE LINE	028000320000A	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2604569	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED AND VACTORED LINE
MORRIS FORMAN	KY0022411	2405 EMIL AVE	7/11/2016 15:21	7/11/2016 16:00	2	SEWER SERVICE LINE	KK12828029	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2583019	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2583328
MORRIS FORMAN	KY0022411	2421 WESTWOOD AVE	8/18/2016 19:50	8/18/2016 20:25	1	SEWER SERVICE LINE	089H01660000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2603314	UNKNOWN AT THIS TIME	FLUSHED THE PSC
MORRIS FORMAN	KY0022411	2501 W OAK ST	9/8/2016 13:45	9/8/2016 14:12	1	SEWER SERVICE LINE	78047	FURTHER INVESTIGATION REQUIRED	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2616070	CUSTOMER CLEANED THE IMPACTED AREA	ADVISED CUSTOMER ON SITE
MORRIS FORMAN	KY0022411	2504 STEEPLECHASE DR	8/19/2016 14:05	8/19/2016 14:15	1	SEWER SERVICE LINE	182600620000A	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2603469	UNKNOWN AT THIS TIME	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	2506 TAYLORSVILLE RD	8/21/2016 9:10	8/21/2016 9:37	1	SEWER SERVICE LINE	102004	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2603695	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE PSC
MORRIS FORMAN	KY0022411	2506 TAYLORSVILLE RD	9/9/2016 18:35	9/9/2016 18:44	1	SEWER SERVICE LINE	102004	ROOTS IN THE PSC AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2616619	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE PSC
MORRIS FORMAN	KY0022411	2508 DORMA AVE	8/8/2016 16:15	8/8/2016 16:30	1	SEWER SERVICE LINE	26904	ROOTS ON MSD PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2600146	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT PSC TOWARDS THE MAIN #2600145
MORRIS FORMAN	KY0022411	2606 ALIA CIR	8/5/2016 16:50	8/5/2016 17:34	1	SEWER SERVICE LINE	172383	ROOTS IN THE MAIN	ROOTS	DISDW DRY WEATHER DISCHARGE	2599697	MSD CLEANED IMPACTED AREA	FLUSHED THE MAIN
MORRIS FORMAN	KY0022411	2612 DELOR AVE	7/27/2016 20:35	7/27/2016 21:38	1	SEWER SERVICE LINE	024L00380000A	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2593989	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED AND VACTORED MAIN SEWER
MORRIS FORMAN	KY0022411	2623 HALE AVE	9/7/2016 15:35	9/7/2016 16:20	1	SEWER SERVICE LINE	40982	ROOTS IN PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2615782	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2616384
MORRIS FORMAN	KY0022411	2623 MCCOY WAY	7/30/2016 11:41	7/30/2016 12:59	10	SEWER SERVICE LINE	078L01800000A	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2596814	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2596817
MORRIS FORMAN	KY0022411	2702 ALANMEDE RD	8/15/2016 12:35	8/15/2016 13:12	1	SEWER SERVICE LINE	081H00310000A	UNKNOWN OBSTRUCTION IN PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2601947	CUSTOMER CLEANED THE IMPACTED AREA	PUSHED BLOCKAGE OUT WITH FLUSHER HOSE

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ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	2727 LAMONT RD	2/23/2017 13:13	2/23/2017 13:16	1	SEWER SERVICE LINE	57001	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2687924	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED TO GET OPEN REFER TO FLUSH W/O 2687926
MORRIS FORMAN	KY0022411	2791 S FLOYD ST	8/9/2016 10:00	8/9/2016 10:57	1	SEWER SERVICE LINE	CC06516039	MSD'S PORTION OF THE PSC IS CRUSHED	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2600340	CUSTOMER CLEANED THE IMPACTED AREA	CONTRACTOR TO MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	2805 TYSON PL	1/15/2017 17:50	1/15/2017 19:04	1	SEWER SERVICE LINE	091E01100000A	MAIN SEWER WAS STOPPED UP. REMOVED MASSIVE ROOT BLOCKAGE FROM MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2670791	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED AND ROOT CUT THE MAIN. ROOT CUT MAIN SEWER AND REMOVED ROOT BLOCKAGE
MORRIS FORMAN	KY0022411	2834 TREMONT DR	12/30/2016 16:10	12/30/2016 16:31	1	SEWER SERVICE LINE	104173	ROOTS IN MSD PORTION OF SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2665822	CUSTOMER CLEANED THE IMPACTED AREA	EXCAVATED AND INSTALLED 2-WAY
MORRIS FORMAN	KY0022411	2842 ELEANOR AVE	12/6/2016 16:54	12/6/2016 17:42	1	SEWER SERVICE LINE	080H00790000A	OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2652277	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER WO#2652250
MORRIS FORMAN	KY0022411	2912 RODMAN ST	7/21/2016 8:45	7/21/2016 9:12	1	SEWER SERVICE LINE	89384	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2589801	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	2932 SLEVIN ST	7/26/2016 20:53	7/26/2016 20:53	1	SEWER SERVICE LINE	96039	OBSTRUCTION ON MSD'S PORTION OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2593592	UNKNOWN AT THIS TIME	FLUSHED LINE TO OPEN; REPLACED PIPE INCLUDING CLEANOUT
MORRIS FORMAN	KY0022411	3012 KAYE LAWN DR	8/22/2016 17:52	8/22/2016 18:14	1	SEWER SERVICE LINE	BJ13769029	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2604219	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE; INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3017 DEBERA WAY	8/10/2016 14:45	8/10/2016 14:58	1	SEWER SERVICE LINE	091N01160000A	ROOTS AT THE SHARED JOINT OF PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2600810	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE MAIN
MORRIS FORMAN	KY0022411	3020 WURTELE AVE	8/19/2016 17:40	8/19/2016 18:20	1	SEWER SERVICE LINE	108800470000A	UNKNOWN OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603465	CUSTOMER CLEANED THE IMPACTED AREA	PLUMBER GOT BLOCKAGE OUT
MORRIS FORMAN	KY0022411	3024 SHERBROOKE RD	7/14/2016 10:40	7/14/2016 12:04	1	SEWER SERVICE LINE	94628	ROOTS AT SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2584411	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	3031 DALE ANN DR	7/5/2016 9:50	7/5/2016 10:26	1	SEWER SERVICE LINE	24304	OBSTRUCTION AT THE SHARED JOINT	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2581017	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3032 DARTMOUTH AVE	8/1/2016 12:50	8/1/2016 13:01	1	SEWER SERVICE LINE	27997	OBSTRUCTION IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2597170	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2597994 REFERRED TO A SUPERVISOR TO MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	3042 HENDON RD	1/3/2017 22:00	1/3/2017 22:58	1	SEWER SERVICE LINE	39823	ROOTS IN THE MAIN	ROOTS	DISDW DRY WEATHER DISCHARGE	2666455	UNKNOWN AT THIS TIME	ROOT CUT AND REPLACED PIPE
MORRIS FORMAN	KY0022411	3102 FREYS HILL RD	7/15/2016 19:25	7/15/2016 20:08	1	SEWER SERVICE LINE	HP10011069	ROOTS AT THE TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2587379	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE PSC
MORRIS FORMAN	KY0022411	3105 ROSELAWN BLVD	7/1/2016 17:15	7/1/2016 17:26	1	SEWER SERVICE LINE	89546	ROOTS AT SHARED JOINT OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2580713	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	3107 DUNLIETH CT	8/31/2016 10:49	8/31/2016 11:23	2	SEWER SERVICE LINE	HP11536019	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2608376	UNSURE OF AT THIS TIME	ROOT CUT LINE #2611722
MORRIS FORMAN	KY0022411	311 CAMBRIDGE STATION RD	7/28/2016 18:00	7/28/2016 18:19	1	SEWER SERVICE LINE	191902780000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2596018	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE PSC
MORRIS FORMAN	KY0022411	311 FALL HARVEST CT	10/2/2016 11:15	10/2/2016 11:20	1	SEWER SERVICE LINE	196604690000A	ROOTS IN MSD'S PORTION OF THE PROPETY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2626085	CUSTOMER CLEANED THE IMPACTED AREA	VACTORED DEBRIS #2627129
MORRIS FORMAN	KY0022411	312 WESTPORT DR	8/30/2016 14:16	8/30/2016 15:11	1	SEWER SERVICE LINE	031000160000A	MSD CLEANOUT HOLDING	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2608108	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2608165
MORRIS FORMAN	KY0022411	3121 DELL BROOKE AVE	7/13/2016 22:45	7/13/2016 23:10	1	SEWER SERVICE LINE	082Z00400000A	PSC IS BROKE DOWN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2584209	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND RAISED JOINT
MORRIS FORMAN	KY0022411	3121 DELL BROOKE AVE	3/24/2017 17:50	3/24/2017 18:25	1	SEWER SERVICE LINE	082Z00400000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2701592	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE OBSTRUCTION / DEBRIS FROM THE SEWER
MORRIS FORMAN	KY0022411	3123 ORIOLE DR	7/8/2016 14:15	7/8/2016 14:52	1	SEWER SERVICE LINE	069600250000A	ROOTS ON MSD PORTION OFPIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2582506	WATER HAS NOT RECEDED,ADVISED CUSTOMER TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	ROOT CUT TO MAIN; INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3129 MYLANTA PL	8/24/2016 14:33	8/24/2016 15:15	1	SEWER SERVICE LINE	XX10927019	ROOTS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2604891	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE; INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3137 COMMANDER DR	8/1/2016 15:45	8/1/2016 16:02	1	SEWER SERVICE LINE	22816	OBSTRUCTION IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2597237	CUSTOMER CLEANED THE IMPACTED AREA	DUG DOWN AND INSTALLED PIPE
MORRIS FORMAN	KY0022411	3208 ELLIS WAY	9/11/2016 20:45	9/11/2016 20:58	1	SEWER SERVICE LINE	30149	UNKNOWN OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2616701	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE PSC AND GOT OBSTRUCTION OUT
MORRIS FORMAN	KY0022411	3220 ROCK CREEK DR	9/9/2016 19:53	9/9/2016 19:55	1	SEWER SERVICE LINE	H08458029	ROOOTS IN CUSTOMER AND MSD	ROOTS	DISDW DRY WEATHER DISCHARGE	2616623	CUSTOMER CLEANED THE IMPACTED AREA	DUG DOWN & REMOVED ROOTS; REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	3224 CAWEIN WAY	11/25/2016 15:00	11/25/2016 15:35	1	SEWER SERVICE LINE	XX10376029	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2648131	UNKNOWN AT THIS TIME	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3302 MARDALE DR	11/26/2016 11:00	11/26/2016 11:30	1	SEWER SERVICE LINE	057801070000A	ROOTS ON MSD'S PORTION OF PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2648167	UNKNOWN AT THIS TIME	CREW DUG DOWN AND REPAIRED THE PROPERTY SERVICE CONNECTION
MORRIS FORMAN	KY0022411	3304 CROSS POINTE RD	7/3/2016 9:53	7/3/2016 9:56	1	SEWER SERVICE LINE	HP11015039	BLOCKAGE ON MSD PORTION OF PIPE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2580786	CUSTOMER CLEANED THE IMPACTED AREA	DUG DOWN AND INSTALLED A C/O
MORRIS FORMAN	KY0022411	3312 HUNSINGER LN	11/28/2016 10:30	11/28/2016 11:30	1	SEWER SERVICE LINE	191800260000A	ROOTS IN MSD PORTION OF SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2649589	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE

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ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	3315 ELLIS WAY	8/29/2016 11:55	8/29/2016 12:01	2	SEWER SERVICE LINE	30169	OBSTRUCTION ON MSD'S PORTION OF THE LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2607371	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE
MORRIS FORMAN	KY0022411	3321 SCHNEITER AVE	5/9/2017 15:05	5/9/2017 16:30	1	SEWER SERVICE LINE	064B01040000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2728719	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	339 N 27TH ST	7/16/2016 20:25	7/16/2016 20:34	1	SEWER SERVICE LINE	124850	OBSTRUCTION ON MSD'S PORTION OF SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2587427	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	3402 NORITA CT	7/19/2016 9:42	7/19/2016 11:09	1	SEWER SERVICE LINE	174287	GREASE IN CUSTOMER AND MSD PORTION	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2587967	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2588035
MORRIS FORMAN	KY0022411	3407 MARDALE DR	8/2/2016 22:19	8/2/2016 22:19	1	SEWER SERVICE LINE	057800890000A	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2598713	CUSTOMER CLEANED THE IMPACTED AREA	CHAIN CUT THE LINE #2598712; REFERRED TO SLIP LINE CREW
MORRIS FORMAN	KY0022411	3508 ST GERMAINE CT	8/21/2016 21:30	8/22/2016	1	SEWER SERVICE LINE	082X01570000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2603752	MSD CLEANED IMPACTED AREA	FLUSHED THE PSC #2603754
MORRIS FORMAN	KY0022411	3518 CAPRI DR	8/9/2016 13:58	8/9/2016 14:12	1	SEWER SERVICE LINE	087F02600000A	ROOTS IN MSD'S PORTION AS WELL AS AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2600394	CUSTOMER CLEANED THE IMPACTED AREA	RODDED LINE #2600432
MORRIS FORMAN	KY0022411	3533 KERRY DR	5/21/2017 18:28	5/21/2017 19:26	2	SEWER SERVICE LINE	087F01680000A	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2734529	CONTRATOR CLEAN UP THE IMPACTED AREA	ROOT CUT MAIN
MORRIS FORMAN	KY0022411	3600 ETHELWOOD DR	10/12/2016 17:15	10/12/2016 18:03	1	SEWER SERVICE LINE	059300970000A	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2631815	MSD WILL CLEAN IMPACTED AREA	FLUSHED THE MAIN 400'
MORRIS FORMAN	KY0022411	3607 ST EDWARDS DR	7/26/2016 14:43	7/26/2016 15:29	1	SEWER SERVICE LINE	058700610000A	ROOTS IN MSD PORTION AT TAP	ROOTS	DISDW DRY WEATHER DISCHARGE	2592814	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	3695 STANTON BLVD	7/2/2016 20:40	7/2/2016 20:53	1	SEWER SERVICE LINE	98885	ROOTS IN MSD'S PORTION OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2580768	CUSTOMER CLEANED THE IMPACTED AREA	REFERRED TO AREA SUPERVISOR TO MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	3701 HYCLIFFE AVE	8/23/2016 13:45	8/23/2016 13:47	1	SEWER SERVICE LINE	54209	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2604453	NO CLEAN UP REQUIRED	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	3704 HILLCREEK RD	4/23/2017 11:55	4/23/2017 12:45	1	SEWER SERVICE LINE	091P00180000A	OBSTRUCTION IN MANHOLE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2720432	MSD CONTRACTOR CLEANED & SANITIZED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM THE SEWER
MORRIS FORMAN	KY0022411	3704 HILLSBORO RD	8/27/2016 14:30	8/27/2016 15:48	75	SEWER SERVICE LINE	057100410000A	OBSTRUCTION IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2605979	MSD CONTRACTOR WILL NEED TO CLEAN THE AREA AFTER REPAIRS ARE MADE	ROOT CUT AND FLUSHED LINE
MORRIS FORMAN	KY0022411	3705 ST GERMAINE CT	7/5/2016 10:32	7/5/2016 11:07	1	SEWER SERVICE LINE	051000210000A	ROOTS IN MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2581022	UNSURE OF AT THIS TIME	ROOT CUT LINE; REPLACED PIPE
MORRIS FORMAN	KY0022411	3722 ROSEMONT BLVD	2/1/2017 18:00	2/1/2017 18:30	2	SEWER SERVICE LINE	055700760000A	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2678987	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE TO OPEN
MORRIS FORMAN	KY0022411	3731 FINCASTLE RD	1/4/2017 15:05	1/4/2017 17:10	8	SEWER SERVICE LINE	3409A3731	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2666642	MSD CLEANED AREA	FLUSHED LINE
MORRIS FORMAN	KY0022411	3731 FINCASTLE RD	1/9/2017 11:11	1/9/2017 12:07	1	SEWER SERVICE LINE	3409A3731	ROOTS IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2667608	MSD CLEANERDECAREA	ROOT CUT LINE
MORRIS FORMAN	KY0022411	3739 GLENMEADE RD	12/23/2016 18:25	12/23/2016 18:30	1	SEWER SERVICE LINE	49229	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2660883	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE TO OPEN
MORRIS FORMAN	KY0022411	3758 UNION ST	2/17/2017 18:12	2/17/2017 18:50	1	SEWER SERVICE LINE	KK14566029	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2686192	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE OBSTRUCTION FROM THE SEWER
MORRIS FORMAN	KY0022411	3801 CHATHAM RD	7/26/2016 16:01	7/26/2016 16:30	2	SEWER SERVICE LINE	091E02100000A	ROOTS THROUGH OUT MSD PORTION WITH A BLOCKAGE AT THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2592884	CUSTOMER CLEANED THE IMPACTED AREA	INSTALLED PVC INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3806 MAMARONECK RD	7/3/2016 13:21	7/3/2016 13:24	1	SEWER SERVICE LINE	091E00480000A	BLOCKAGE ON MSD PORTION OF SERVICE LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2580807	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSH LINE
MORRIS FORMAN	KY0022411	3821 ELMWOOD AVE	8/17/2016 11:40	8/17/2016 11:50	1	SEWER SERVICE LINE	38414	UNKNOWN OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2602712	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED LINE #2603213
MORRIS FORMAN	KY0022411	3822 ILLINOIS AVE	5/22/2017 23:15	5/23/2017	2	SEWER SERVICE LINE	KK09657019	OBSTRUCTION IN MANHOLE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2735038	CUSTOMER CLEANED THE IMPACTED AREA	FLUSH & ROOT THE MAIN SEWER
MORRIS FORMAN	KY0022411	3822 ILLINOIS AVE	5/29/2017 14:55	5/29/2017 16:50	5	SEWER SERVICE LINE	KK09657019	SHOP TOWELS IN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2739711	MSD CLEANED IMPACTED AREA	FLUSHED MAIN SEWER TO GET OPEN
MORRIS FORMAN	KY0022411	3843 DARLENE DR	7/12/2016 18:43	7/19/2016 15:26	1	SEWER SERVICE LINE	54725	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2583492	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	3901 TALLY HO CT	7/1/2016 17:45	7/1/2016 18:09	1	SEWER SERVICE LINE	JT02081499	UNKNOWN BLOCKAGE IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2580717	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE PSC AND GOT OBSTRUCTION OUT
MORRIS FORMAN	KY0022411	3913 SPRINGHILL RD	7/12/2016 14:45	7/12/2016 16:35	1	SEWER SERVICE LINE	080600240000A	ROOTS IN CUSTOMER PORTION AND MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2583415	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT AND FLUSHED LINE #2583398
MORRIS FORMAN	KY0022411	3919 MANNER DALE DR	7/7/2016 17:10	7/7/2016 17:33	1	SEWER SERVICE LINE	66688	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2582242	CUSTOMER CLEANED THE IMPACTED AREA	REMOVED PIPE AND ROOT CUT
MORRIS FORMAN	KY0022411	3975 FINCASTLE RD	9/25/2016 8:58	9/25/2016 11:35	25	SEWER SERVICE LINE	34093975	LINE BROKE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2622075	MSD WILL CLEAN AREA	SLIPLINED MANHOLE
MORRIS FORMAN	KY0022411	4004 BROOKFIELD AVE	8/2/2016 23:00	8/2/2016 23:54	1	SEWER SERVICE LINE	14688	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2598718	MSD CONTRACT CLEAN UP CREW	REMOVED ROOTS; REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	4004 ELMWOOD AVE	6/26/2017 15:35	6/26/2017 16:30	1	SEWER SERVICE LINE	37877	ROOTS IN MAIN SEWER; PRIVATE PROPERTY ISSUE	ROOTS	DISDW DRY WEATHER DISCHARGE	2762326	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED THE MAIN SEWER ; ROOTCUT SEWER MAIN

Appendix D-3 Discharge Work Orders – Interior

ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	4016 GLOUCESTER RD	5/5/2017 14:36	5/5/2017 16:32	15	SEWER SERVICE LINE	053100540000A	ROOTS IN THE MAIN SEWER	ROOTS	DISREV RAIN EVENT DISCHARGE	2727484	MSD CONTRACTOR CLEANED AREA	REFERED FOR FURTHER CLEANNING OF MSD MAIN SEWER
MORRIS FORMAN	KY0022411	4018 WIMPOLE RD	1/21/2017 22:15	1/21/2017 23:10	1	SEWER SERVICE LINE	111842	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2673001	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT THE MAIN SEWER
MORRIS FORMAN	KY0022411	4022 ELFIN AVE	3/14/2017 20:00	3/14/2017 20:30	1	SEWER SERVICE LINE	164916	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2697317	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM MAIN SEWER
MORRIS FORMAN	KY0022411	4042 ORMOND RD	2/28/2017 13:09	2/28/2017 14:01	20	SEWER SERVICE LINE	031300060000A	ROOTS IN SEWER MAIN	ROOTS	DISDW DRY WEATHER DISCHARGE	2690433	MSD CONTRACTOR CLEANED THE IMPACTED AREA	FLUSHED MAIN SEWER/ROOTCUT AND TVED SEWER MAIN
MORRIS FORMAN	KY0022411	406 WALLACE AVE	7/18/2016 20:00	7/18/2016 20:32	1	SEWER SERVICE LINE	041301080000A	ROOTS IN THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2587849	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2587850
MORRIS FORMAN	KY0022411	4106 HANDLEY AVE	5/29/2017 2:30	5/29/2017 5:50	30	SEWER SERVICE LINE	44433	MAIN SEWER OBSTRUCTED AND HOLDING, UNKNOWN AT THIS TIME OF CUSTOMER'S LATERAL LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2739643	NONE CURRENTLY ON IMPACTED AREA	REFER TO TELE-INSPECTION FOR FURTHER INSPECTION OF CUSTOMER'S LATERAL LINE
MORRIS FORMAN	KY0022411	4115 PIXLEY WAY	12/4/2016 20:00	12/4/2016 20:29	1	SEWER SERVICE LINE	168988	ROOTS ON THE SHARE JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2651344	UNKNOWN AT THSI TIME	ROOT CUT TO OPEN LINE
MORRIS FORMAN	KY0022411	4147 MONROE AVE	9/25/2016 11:18	9/25/2016 11:45	2	SEWER SERVICE LINE	144523	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2622081	CUSTOMER CCLEANED AREA	FLUSHED LINE TO OPEN #2622083
MORRIS FORMAN	KY0022411	4184 RESERVOIR AVE	7/2/2016 14:23	7/2/2016 14:26	1	SEWER SERVICE LINE	KK15125019	CONTRACTOR HIT THE CONNECTION WHILE INSTALLING NEW SEWERS	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2580754	CUSTOMER CLEANED IMPACTED AREA	REFER TO CONTRACTOR TO MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	422 TRINITY HILLS LN	8/31/2016 11:52	8/31/2016 12:03	1	SEWER SERVICE LINE	104509	ROOTS NEAR THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2608422	CUSTOMER CLEANED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	424 BROWNS LN	7/14/2016 17:30	7/14/2016 18:17	1	SEWER SERVICE LINE	052100080000A	OFFSET PIPE ON MSD PORTION OF PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2584721	CUSTOMER CLEANED IMPACTED AREA	PSC TO BE SLIPPED LINED
MORRIS FORMAN	KY0022411	424 BROWNS LN	8/23/2016 14:00	8/23/2016 14:42	1	SEWER SERVICE LINE	052100080000A	SAW PIPE HAS SHIFTED ON MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2604581	CUSTOMER CLEANED AREA	FLUSHED LINE #2604583
MORRIS FORMAN	KY0022411	4241 NORTHWESTERN PKY	12/19/2016 13:00	12/19/2016 13:28	1	SEWER SERVICE LINE	76646	LACK OF SYSTEM CAPACITY	LACK OF SYSTEM CAPACITY	DISREV RAIN EVENT DISCHARGE	2658231	CUSTOMER CLEANED IMPACTED AREA	ADVISED CUSTOMER TO INQUIRE ABOUT BACK FLOW VALVE
MORRIS FORMAN	KY0022411	4316 MANNER DALE DR	10/16/2016 10:30	10/16/2016 10:30	15	SEWER SERVICE LINE	66742	ROOTS IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2632519	CUSTOMER CALLED THEIR INSURANCE COMPANY	FLUSHED LINE #2632517
MORRIS FORMAN	KY0022411	4316 MANNER DALE DR	10/17/2016 13:00	10/17/2016 14:39	2	SEWER SERVICE LINE	66742	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2632973	CLEANING COMPANY	ROOT-CUT THE MAIN SEWER AND REFRRED TO CLEANING CREW TO CLEAN SEWAGE WO#2632973
MORRIS FORMAN	KY0022411	4410 BROWNHURST WAY	8/7/2016 12:30	8/7/2016 13:03	2	SEWER SERVICE LINE	263600480000A	UTILITY COMPANY DAMAGED PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2599784	CUSTOMER CLEAN UP THE IMPACTED AREA AT THIS TIME	VACTORED AREA
MORRIS FORMAN	KY0022411	4422 MALCOLM RD	8/10/2016 12:05	8/10/2016 12:28	1	SEWER SERVICE LINE	66186	ROOTS AT THE SHARED JOINT OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2600733	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	4505 SEDGEFIELD CT	7/29/2016 15:00	7/29/2016 16:48	1	SEWER SERVICE LINE	DE32640029	ROOTS AT THE SHARED JOINT OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2596777	CUSTOMER CLEANED THE IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	4729 S RUTLAND AVE	8/15/2016 8:30	8/15/2016 10:01	10	SEWER SERVICE LINE	35774729	FURTHER INVESTIGATION REQUIRED	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2601796	WATER HAS NOT RECEDED,ADVISED CUSTOMER TO CONTACT CUSTOMER RELATIONS WHEN WATER RECEDES	FLUSHED MAIN SEWER #2601779
MORRIS FORMAN	KY0022411	4901 UNSELD BLVD	7/4/2016 17:30	7/4/2016 18:03	1	SEWER SERVICE LINE	170670	UNKNOWN AT THIS TIME	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2580866	CUSTOMER CLEANED IMPACTED AREA	REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	5004 MANSFIELD LN	7/7/2016 15:35	7/7/2016 15:43	1	SEWER SERVICE LINE	PA09084019	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2582216	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2582696
MORRIS FORMAN	KY0022411	5006 MANSFIELD LN	7/7/2016 15:00	7/7/2016 15:32	1	SEWER SERVICE LINE	PA09085049	ROOT BLOCKAGE NEAR THE SHARED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2582205	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT LINE #2582697
MORRIS FORMAN	KY0022411	5007 MANSFIELD LN	8/28/2016 16:40	8/28/2016 16:52	1	SEWER SERVICE LINE	PA09020099	C/O DROPPED	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2607148	CUSTOMER CLEANED IMPACTED AREA	REPAIR AND RESET C/O
MORRIS FORMAN	KY0022411	5009 RURAL WAY	9/19/2016 19:00	9/19/2016 19:20	1	SEWER SERVICE LINE	085900950000A	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2619038	CUSTOMER CLEANED IMPACTED AREA	REFERRED TO AREA SUPERVISOR TO REPAIR***CREW DUG DOWN AND REPAIR THE PROPERTY SERVICE CONNECTION
MORRIS FORMAN	KY0022411	5014 POPLAR LEVEL RD	4/23/2017 13:00	4/23/2017 13:45	1	SEWER SERVICE LINE	83115D	OBSTRUCTION IN MANHOLE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2720434	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM THE SEWER
MORRIS FORMAN	KY0022411	5123 EMERY AVE	2/24/2017 18:50	2/24/2017 19:05	1	SEWER SERVICE LINE	45409	MAIN SEWER BACKUP ROOTS	ROOTS	DISDW DRY WEATHER DISCHARGE	2688525	CUSTOMER CLEANED THE IMPACTED AREA	ROOT CUT MAIN SEWER
MORRIS FORMAN	KY0022411	515 CORNELL PL	8/22/2016 12:28	8/22/2016 13:14	1	SEWER SERVICE LINE	MA09549019	OBSTRUCTION IN THE LINE	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603981	UNSURE OF AT THIS TIME	FLUSHED LINE TO OPEN
MORRIS FORMAN	KY0022411	5325 SOUTHDALE RD	8/20/2016 17:40	8/20/2016 18:07	5	SEWER SERVICE LINE	067J01540000A	ROOTS IN THE MAIN	ROOTS	DISREV RAIN EVENT DISCHARGE	2603531	CUSTOMER CLEANED IMPACTED AREA	CLAIM FILED FOR DAMAGES #2604343
MORRIS FORMAN	KY0022411	5327 SOUTHDALE RD	8/20/2016 19:00	8/20/2016 19:10	1	SEWER SERVICE LINE	067J01570000A	PARTIAL ROOT BLOCKAGE IN MAIN SEWER	ROOTS	DISREV RAIN EVENT DISCHARGE	2603680	UNKNOWN AT THIS TIME	ROOT CUT MAIN SEWER
MORRIS FORMAN	KY0022411	5329 SOUTHDALE RD	8/21/2016 15:00	8/21/2016 15:58	1	SEWER SERVICE LINE	067J00780000A	ROOT BLOCKAGE IN MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2603721	CUSTOMER HAD CONTRACTOR CLEAN IMPACTED AREA	ROOT CUT MAIN SEWER
MORRIS FORMAN	KY0022411	5333 SOUTHDALE RD	8/20/2016 18:08	8/20/2016 18:56	5	SEWER SERVICE LINE	067J01640000A	ROOT BLOCKAGE IN MAIN SEWER	ROOTS	DISREV RAIN EVENT DISCHARGE	2603536	UNKNOWN AT THIS TIME	ROOT CUT MAIN SEWER
MORRIS FORMAN	KY0022411	5411 WESTHALL AVE	12/27/2016 14:35	12/27/2016 15:20	20	SEWER SERVICE LINE	110053	GREASE BLOCKAGE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2661348	CUSTOMER CLEANED IMPACTED AREA	FLUSHED MAIN SEWER TO RESTORE FLOW
MORRIS FORMAN	KY0022411	5505 LAGOONA DR	11/28/2016 12:05	11/28/2016 12:52	5	SEWER SERVICE LINE	091101710000A	OBSTRUCTION IN MSD POTION OF SERVICE LINE	STRUCTURAL FAILURE	DISDW DRY WEATHER DISCHARGE	2649711	THE CUSTOMER CLEANED THE IMPACTED AREA	VACTORED AND FLUSHED LINE
MORRIS FORMAN	KY0022411	5811 BRITTANY VALLEY RD	9/8/2016 13:25	9/8/2016 14:24	1	SEWER SERVICE LINE	EP03540019	ROOTS AT THE SHRED JOINT	ROOTS	DISDW DRY WEATHER DISCHARGE	2616046	CUSTOMER CLEANED AREA	REMOVED ROOTS; REPLACED PIPE AND INSTALLED A 2-WAY C/O

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ASSOCIATED WASTEWATER TREATMENT PLANT NAME	ASSOCIATED TREATMENT PLANT KPDES #	OVERFLOW LOCATION	OVERFLOW START DATE & TIME	OVERFLOW STOP DATE & TIME	VOLUME OF OVERFLOW (GAL)	SOURCE ASSET TYPE	SOURCE ASSET ID	CAUSE OF OVERFLOW	DUE TO	WEATHER	WO #	CLEANUP EFFORTS BY MSD	REPAIR EFFORTS BY MSD
MORRIS FORMAN	KY0022411	604 EMILY RD	1/16/2017 15:00	1/16/2017 15:00	3	SEWER SERVICE LINE	088B00720000A	PLUMBERS RODS ON MSD' S PORTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2670859	CUSTOMER CLEANED THE IMPACTED AREA	EXCAVATED AND REPLACED PIPE
MORRIS FORMAN	KY0022411	609 YANCY LN	3/20/2017 15:45	3/20/2017 16:45	1	SEWER SERVICE LINE	152500260000A	OBSTRUCTION IN MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2699501	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED OBSTRUCTION FROM MAIN SEWER
MORRIS FORMAN	KY0022411	6103 GLEN HILL RD	7/6/2016 12:24	7/6/2016 13:14	1	SEWER SERVICE LINE	114636103	ROOTS IN THE MSD SERVICE LINE	ROOTS	DISDW DRY WEATHER DISCHARGE	2581397	CUSTOMER CLEANED AREA	REPLACED PVC INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	6117 CATHEEN WAY	11/25/2016 9:00	11/25/2016 9:47	1	SEWER SERVICE LINE	063203120000A	ROOTS ON MSD POERTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2648102	UNKNOWN AT THIS TIME	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	617 W OAK ST	8/10/2016 18:15	8/10/2016 18:45	1	SEWER SERVICE LINE	77550	OBSTRUCTION ON MSD'S PORTION OF PROPERTY SERVICE CONNECTION	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2600851	CUSTOMER CLEANED IMPACTED AREA	FLUSHED LINE #2602045; REFERRED TO AREA SUPERVISOR TO MAKE NEEDED REPAIRS
MORRIS FORMAN	KY0022411	6215 VALLEY FOREST DR	9/9/2016 11:32	9/9/2016 15:16	1	SEWER SERVICE LINE	1535633	OBSTRUCTION IN THE MAIN	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2616377	NO CLEAN UP REQUIRED	FLUSHED MAIN SEWERS #2616457
MORRIS FORMAN	KY0022411	6408 LIME RIDGE PL	7/8/2016 13:10	7/8/2016 13:51	15	SEWER SERVICE LINE	EP04785039	ROOTS ON MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2582425	CUSTOMER CONTRACTOR CLEANED AREA	ROOT CUT AND INSTALLED PIPE
MORRIS FORMAN	KY0022411	7019 CHIPPENHAM RD	7/1/2016 14:32	7/1/2016 14:35	1	SEWER SERVICE LINE	168101500000A	ROOTS LOCATED ON MSD PORTION OF SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2580640	CUSTOMER CLEANED IMPACTED AREA	RODDED AND REMOVED ROOTS
MORRIS FORMAN	KY0022411	703 RUGBY PL	8/19/2016 11:50	8/19/2016 12:43	1	SEWER SERVICE LINE	186105280000A	BLOCKAGE IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603468	UNKNOWN AT THIS TIME	FLUSHED THE MAIN SEWER
MORRIS FORMAN	KY0022411	720 KENTUCKY AVE	8/21/2016 22:45	8/22/2016 0:23	1	SEWER SERVICE LINE	52699	OBSTRUCTION IN THE MAIN SEWER	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603759	UNKNOWN AT THIS TIME	FLUSHED THE MAIN TO OPEN
MORRIS FORMAN	KY0022411	7508 LANFAIR DR	9/6/2016 17:08	9/6/2016 17:38	1	SEWER SERVICE LINE	EP35555019	ROOTS INSIDE MSD'S PORTION OF THE PROPERTY SEWER CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2614868	UNSURE OF AT THIS TIME	FLUSHED LINE #2616396
MORRIS FORMAN	KY0022411	7606 WOLFPEN RIDGE CT	7/31/2016 16:50	7/31/2016 17:29	1	SEWER SERVICE LINE	176767	UNKNOWN OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2596873	CUSTOMER CLEANED IMPACTED AREA	REMOVED BLOCKAGE; REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	7607 LANCELOT CT	7/21/2016 10:34	7/21/2016 10:34	1	SEWER SERVICE LINE	177547	SAW ROOTS ON MSD'S PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2589898	CUSTOMER CLEANED THE IMPACTED AREA	INSTALL CLEAN OUT #2589927
MORRIS FORMAN	KY0022411	7609 OLD SALEM CT	10/30/2016 11:14	10/30/2016 11:26	2	SEWER SERVICE LINE	T1797609A	BROKEN TAP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2639126	CUSTOMER CLEAN UP THE IMPACTED AREA	INSTALLED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	7611 SIX MILE LN	8/18/2016 17:05	8/18/2016 17:46	1	SEWER SERVICE LINE	186705080000A	UNKNOWN OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2603298	CUSTOMER CLEANED IMPACTED AREA	FLUSHED THE PSC #2603299
MORRIS FORMAN	KY0022411	8 RIDGE RD	7/22/2016 9:39	7/22/2016 11:26	1	SEWER SERVICE LINE	87722	ROOTS ON MSD'S PORTION OF THE PSC	ROOTS	DISDW DRY WEATHER DISCHARGE	2590117	CUSTOMER CLEANED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	8200 SALFORD WAY	7/8/2016 16:18	7/8/2016 16:19	1	SEWER SERVICE LINE	195209650000A	FURTHER INVESTIGATION REQUIRED	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2582649	CUSTOMER CLEANED AREA	MINICAMMED LINE #2582660
MORRIS FORMAN	KY0022411	8900 NOTTINGHAM PKY	8/3/2016 21:30	8/3/2016 22:02	1	SEWER SERVICE LINE	183302540000A	OBSTRUCTION IN THE PSC	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2599022	CUSTOMER CLEANED IMPACTED AREA	REPLACED PIPE AND INSTALLED A 2-WAY C/O
MORRIS FORMAN	KY0022411	8908 MIDDLE POINTE RD	7/3/2016 21:00	7/3/2016 21:10	1	SEWER SERVICE LINE	HP11065079	ROOTS ON MSD PORTION OF PIPE	ROOTS	DISDW DRY WEATHER DISCHARGE	2580824	CUSTOMER CLEANED IMPACTED AREA	ROOT CUT LINE; REPLACED PIPE INCLUDING 2-WAY C/O
MORRIS FORMAN	KY0022411	9503 GARDEN DR	7/6/2016 13:50	7/6/2016 14:25	1	SEWER SERVICE LINE	059300260000A	ROOTS IN CUSTOMER PORTION SOME IN MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2581435	CUSTOMER CLEANED AREA	ROOT CUT LINE #2581459
MORRIS FORMAN	KY0022411	9506 WESSEX PL	11/17/2016 9:04	11/17/2016 11:00	2	SEWER SERVICE LINE	HU16848039	ROOTS IN THE MAIN SEWER	ROOTS	DISDW DRY WEATHER DISCHARGE	2646502	UNSURE IF ONE IS REQUIRED	REFERRED FOR ROOT TREATMENT
MORRIS FORMAN	KY0022411	9612 GALENE DR	10/25/2016 17:00	10/25/2016 17:15	1	SEWER SERVICE LINE	JT00908229	UNKNOWN AT THIS TIME	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2635695	UNKNOWN AT THIS TIME	REFERRED TO CONTRACTORS FOR REPAIR
MORRIS FORMAN	KY0022411	9613 CAMILLE RD	8/24/2016 13:00	8/24/2016 13:42	1	SEWER SERVICE LINE	JT00876219	ROOTS IN CUSTOMER AND MSD PORTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2604873	CUSTOMER CLEANED IMPACTED AREA	FLUSHED AND VACTORED LINE
MORRIS FORMAN	KY0022411	9800 CYPRESS CREEK DR	8/17/2016 22:35	8/17/2016 23:50	1	SEWER SERVICE LINE	HP09867059	MAIN SEWER WAS STOPPED UP	OBSTRUCTION-NOT GREASE / ROOTS	DISDW DRY WEATHER DISCHARGE	2602965	CUSTOMER CLEANED IMPACTED AREA	FLUSHED MAIN AND REFFERED TO TV CREW
MORRIS FORMAN	KY0022411	9800 CYPRESS CREEK DR	11/17/2016 12:52	11/17/2016 12:53	3	SEWER SERVICE LINE	HP09867059	GREASE IN MAIN SEWER	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2646695	CUSTOMER CLEANED AREA	FLUSHED LINE
MORRIS FORMAN	KY0022411	1015 WOODWAY LN	9/9/2016 13:13	9/9/2016 13:45	1	SEWER SERVICE LINE	044B00770000A	GREASE OBSTRUCTION IN SERVICE CONNECTION	GREASE BLOCKAGE	DISDW DRY WEATHER DISCHARGE	2616594	CUSTOMER CLEANED THE IMPACTED AREA	FLUSHED SERVICE CONNECTION
MORRIS FORMAN	KY0022411	3702 STANTON BLVD	10/13/2016 15:19	10/13/2016 16:33	3	SEWER SERVICE LINE	082E02120000A	ROOTS IN MSD'S PORTION OF THE PROPERTY SERVICE CONNECTION	ROOTS	DISDW DRY WEATHER DISCHARGE	2632049	CUSTOMER CLEANED AREA	ROOT CUT LINE

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Appendix E CSSA Annual Report

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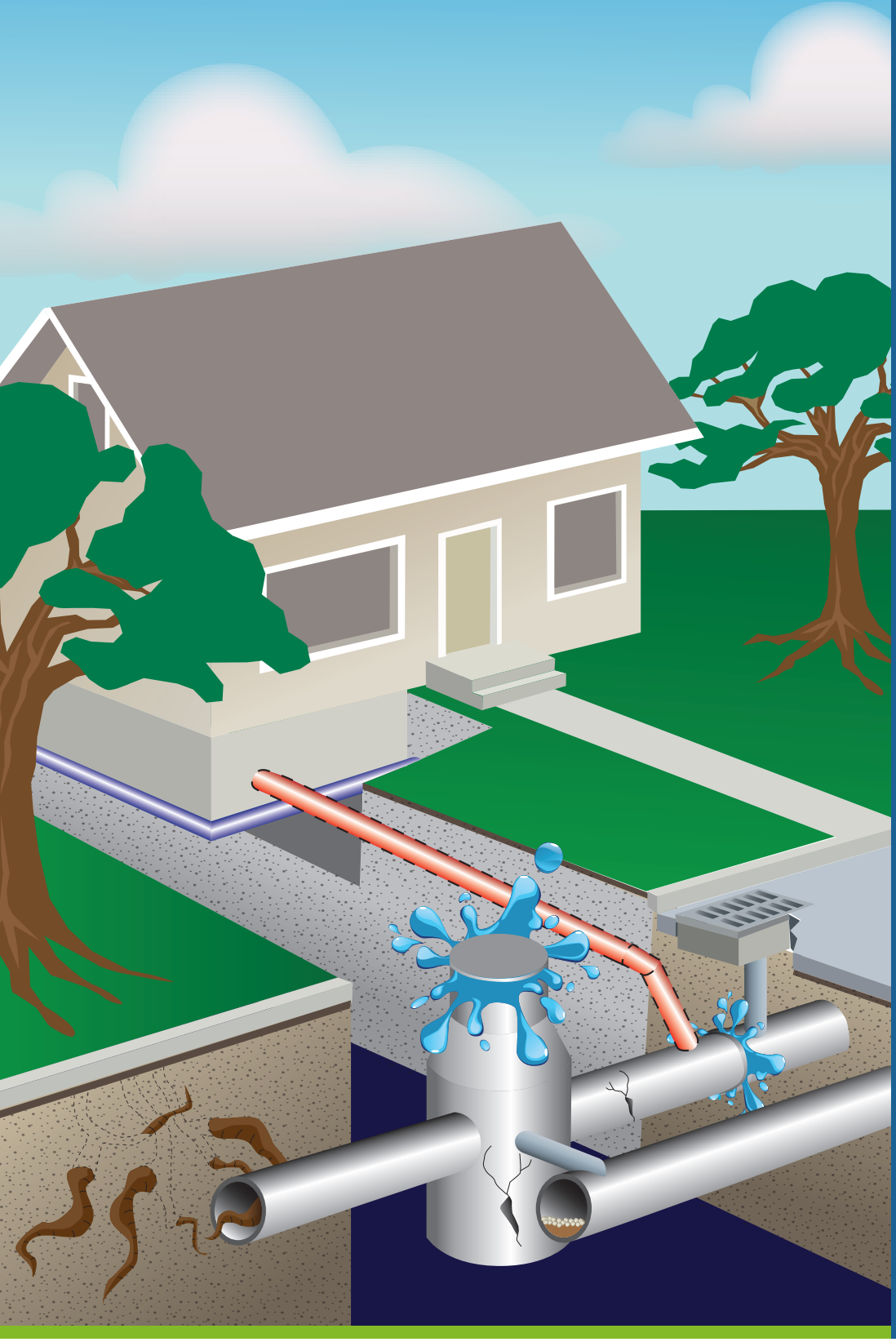

CONTINUOUS SEWER SYSTEM ASSESSMENT AND BLOCKAGE ABATEMENT PROGRAM

FISCAL YEAR 2017
ANNUAL REPORT

COMPILED AND SUBMITTED BY:
Louisville and Jefferson County
Metropolitan Sewer District
700 West Liberty Street
Louisville, KY 40203

msd
Safe, clean waterways

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ACRONYMS AND ABBREVIATIONS

ACD	**Amended Consent Decree**
BAP	**Blockage Abatement Program**
CCTV	**Closed Circuit Television**
CIPP	**Cured-In-Place Pipe**
CMOM	**Capacity, Management, Operations and Maintenance**
CSO	**Combined Sewer Overflow**
CSS	**Combined Sewer System**
CSSA	**Continuous Sewer System Assessment**
EUM	**Effective Utility Management**
FY	**Fiscal Year**
GIS	**Geographic Information Systems**
GLPM	**Gravity Line Preventive Maintenance**
I/I	**Infiltration and Inflow**
ICA	**Interceptor Condition and Assessment**
IT	**Information Technology**
LACP	**Lateral Assessment Certification Program**
LF	**Linear Feet**
MACP	**Manhole Assessment Certification Program**
MSD	**Louisville and Jefferson County Metropolitan Sewer District**
NASSCO	**National Association of Sewer Service Companies**
NMC	**Nine Minimum Controls**
PACP	**Pipeline Assessment and Certification Program**
QA/QC	**Quality Assurance/Quality Control**
SCAP	**System Capacity Assurance Plan**
SSES	**Sanitary Sewer Evaluation Study**
SSO	**Sanitary Sewer Overflow**
TISCIT	**Total Integrated Sonar and CCTV Inspection Technology**
WQTC	**Water Quality Treatment Center**

1. PROGRAM BACKGROUND

The Louisville and Jefferson County Metropolitan Sewer District (MSD) is responsible for the operation and maintenance of the sewer system within the public right-of-way and dedicated easements in Jefferson County, Kentucky, in addition to small areas in several of the surrounding counties. The sanitary sewer collection system includes over 3,300 miles of sewers ranging from 6 inches to 27.5 feet in diameter, built between the mid-1800's and present day. The construction materials consist of brick, iron, polyvinyl chloride, clay, vitrified clay, and reinforced concrete. There are over 75,000 combined and separate sanitary manholes in the system constructed of reinforced concrete and brick materials. MSD also operates and maintains the following assets:

- 68,609 catch basins and yard drains
- 250 sanitary pump stations
- 16 flood pump stations
- 5 regional water quality treatment centers (WQTCs)

MSD is currently conducting an intensive sewer condition evaluation to comply with its federal Amended Consent Decree as well as the Capacity, Management, Operations and Maintenance (CMOM) and Nine Minimum Control (NMC) programs. The Continuous Sewer System Assessment (CSSA) program and Blockage Abatement Program (BAP) addresses certain aspects of Paragraph 24c., "CMOM (Capacity, Management, Operations and Maintenance) Programs Self-Assessment" and Paragraph 24a. "Nine Minimum Controls (NMC)" from the Amended Consent Decree (ACD).

The primary objective of evaluating infrastructure assets is to develop and implement maintenance and rehabilitation recommendations that reduce sewer overflows and improve the capacity, structural integrity and functionality of existing assets. This annual report summarizes the CSSA and BAP accomplishments for the 2017 Fiscal Year (FY17, July 1, 2016 – June 30, 2017) along with anticipated actions for FY18.

The CSSA and BAP programs require a defined approach to prioritize, perform, and track the inspection, cleaning, rehabilitation, replacement, and maintenance of sewer assets on a consistent and prioritized cycle. The two programs are also intended to improve compliance with NMC 1 and 2, which require the proper operation, regular maintenance, and maximum use of MSD's combined sewer system (CSS) to prevent dry weather Combined Sewer Overflows (CSOs) and reduce wet weather CSOs to the extent possible.

In FY08, MSD committed to performing an initial system characterization over the next 10 years. Since that time, MSD has spent over fifteen million dollars and inspected approximately 89% of the combined and separate gravity sewer system. Based on historical experience with pipe inspection and standard operating procedures that include first and second attempts to inspect pipe that is inaccessible, MSD considers a project to be completed when 85% of the line segments and 85% of the pipe footage in an assigned area are successfully inspected. By the end of FY18, at least one inspection will have been attempted for each gravity main in the system, and MSD continues to undertake second-attempt inspections in order to meet this commitment. Table 1 shows the inspection progress for the system. Table 2 shows inspection and cleaning costs per fiscal year.

Once inspection of a study area is complete, inspection data is evaluated through a pipe condition assessment process and appropriate maintenance and rehabilitation actions are taken. The inspection and

rehabilitation activities are carried out under MSD's CSSA program, while recurring maintenance activities are addressed by the BAP. The process workflow for the two programs is outlined in Figure 1 and has been updated to reflect current processes.

The BAP, a subsidiary program to the CSSA, encompasses sewer lines identified through the CSSA inspection and data analysis as having recurring maintenance needs due to root blockages, sedimentation, or oil and grease deposits. This program tracks the segments with operational defects, sets up recurring work orders, assigns work to available resources, tracks progress and documents the work performed. In the past, this program has been referred to as the Gravity Line Preventive Maintenance (GLPM) program.

Previous annual reports since FY08 describe the general programmatic structure in more detail and can be referenced in the Project WIN Annual Reports, available on the Project WIN website at http://www.msdprojectwin.org/Library.aspx under Consent Decree Reporting and included as an appendix to the Project WIN Annual Report.

Upcoming efforts will focus on continued second-attempt gravity main inspections, targeted gravity manhole inspections, risk-based inspection cycles for gravity assets, improved remediation recommendations for gravity assets, and improved flow monitoring capabilities.

Table 1. Gravity Main Inspection Status

	SMALL DIAMETER	LARGE DIAMETER	SYSTEMWIDE
Total Mileage	3,024	125	3,149
Miles Completed	2,708	85	2,793
Percent Completed	90%	68%	89%

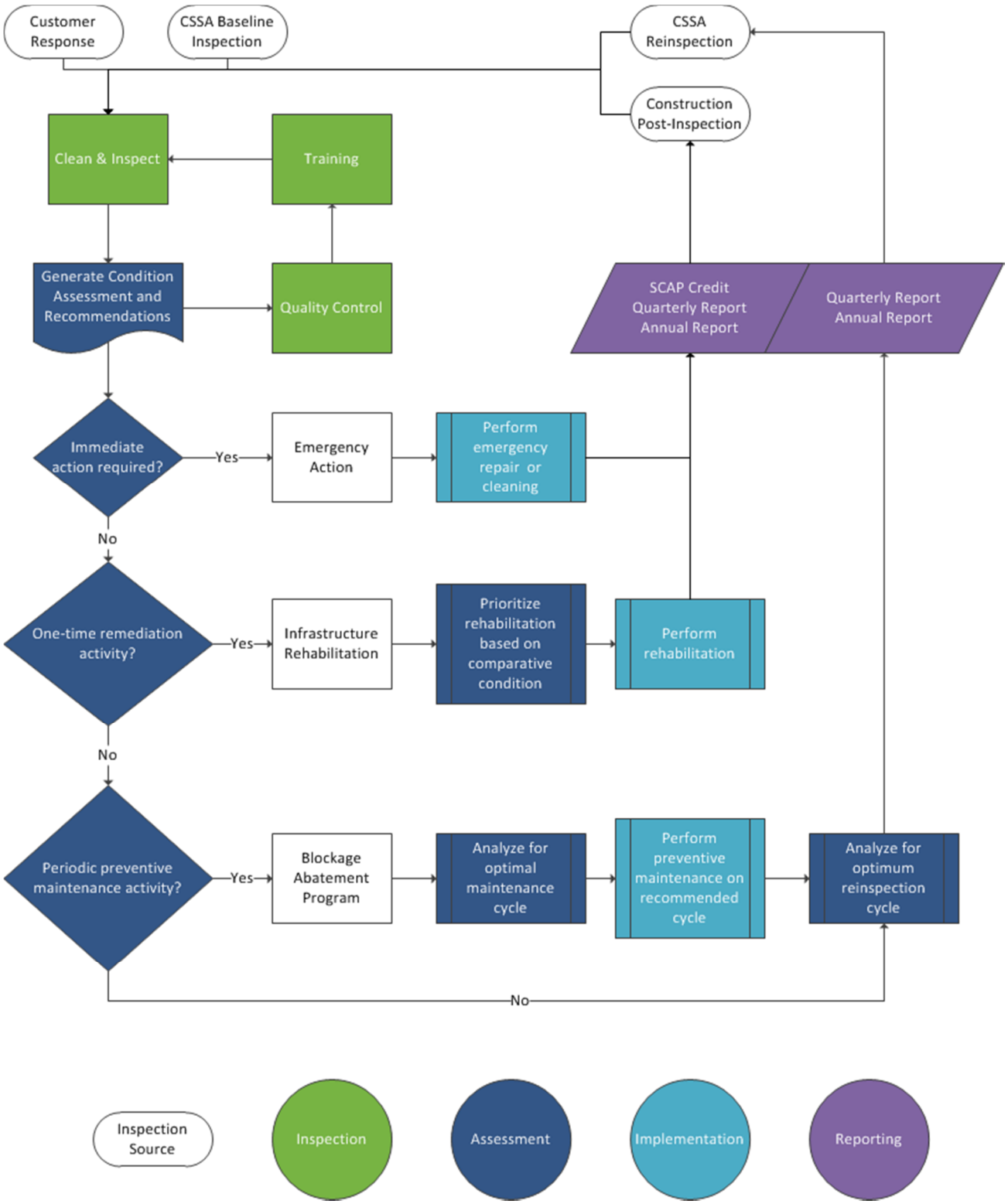
Table 2. Cleaning & Inspection Expenditure Summary

FY	INTERNAL CLEANING AND INSPECTION	CONTRACTOR CLEANING AND INSPECTION	TOTAL CLEANING AND INSPECTION
FY09	$290,346	$0	$290,346
FY10	$440,041	$1,976,449	$2,416,490
FY11	$407,921	$1,950,969	$2,358,890
FY12	$503,843	$2,035,149	$2,538,992
FY13	$401,345	$1,993,993	$2,395,338
FY14	$897,308	$961,818	$1,859,126
FY15	$292,052	$740,121	$1,032,173
FY16	$312,473	$690,365	$1,002,838
FY17	$326,154	$1,257,246	$1,583,400
Total	**$3,871,484**	**$11,606,109**	**$15,477,593**

2. DECISION FRAMEWORK

To proactively address current and upcoming infrastructure issues, a detailed decision framework has been developed including inspection, assessment, implementation and reporting in a continuous cycle, as illustrated in Figure 1. Inspection includes mainline and manhole inspections, including gravity lines and force mains, as well as flow monitoring in mains and at pump stations. Assessment includes evaluation of inspection data for major defects or issues, recommending remediation activities as needed, and prioritizing activities based on likelihood and consequence of failure. Implementation includes infrastructure rehabilitation and replacement as well as proactive maintenance activities like periodic cleaning. Reporting includes post-construction inspection and monitoring as well as calculation of credits in accordance with the approved SCAP procedure.

Figure 1. CSSA and BAP Process Workflow



3. INSPECTION

During the reporting period, the division of labor related to the assessment of MSD's collection system using internal and external resources, based on pipe diameter and internal resource availability, was managed by Engineering.

MSD employs six TVI field specialists: two field specialists are primarily dedicated to CSSA CCTV work; three are dedicated to customer request response and maintenance crew support; and one performs customer request response during periods of heavy request volumes, and CSSA work during other times. An off-shift crew continues to provide additional resources in the department. Each CSSA CCTV truck is coupled with a flusher or combination vacuum cleaner truck when resources allow, so that cleaning is a more timely and responsive aspect of their condition assessment activities. Additionally, MSD holds an annual cleaning and inspection contract to supplement internal staff.

MSD utilizes the National Association of Sewer Service Companies (NASSCO) standard Pipeline Assessment and Certification Program (PACP) coding protocols for gravity mains and employs a standard QA/QC process to ensure deliverables meet a consistent and acceptable standard. During the current reporting period, MSD maintained PACP certification for 18 employees. During the upcoming reporting period, MSD plans to expand the number of employees certified in PACP to over 30, including additional engineers, field inspectors, TVI field specialists, and support staff. All new and existing PACP-certified staff will also be trained in Manhole Assessment and Certification Program (MACP) and Lateral Pipeline Assessment and Certification Program (LACP) coding protocols to expand MSD's internal understanding of condition assessment and create opportunity for using MSD's existing PACP software for other types of inspections.

MSD uses Neztek software to communicate with the Hansen system to facilitate data transfer for PACP TV inspections from the Hansen asset management system to remote inspection software and back. Engineering staff have continued to work with IT staff to develop a strategy for integrating CCTV videos with Hansen 8 and eB, and have continued to consolidate internal and external CCTV videos and field inspection pictures in support of that effort.

During CSSA program development, MSD utilized a three-pronged approach to gather asset inspection data. Using operational knowledge and various program drivers, MSD staff identified specific areas for the following:

- Sanitary Sewer Evaluation Studies (SSESs) on targeted areas for condition assessment. Each SSES project included CCTV, manhole inspections, smoke testing, private property inspections, and wet weather inspections
- Interceptor Condition Assessments (ICAs) for CCTV and manhole inspections on large interceptors. This effort requires higher tech equipment and brighter lighting sources.
- CCTV assessment on select System Capacity Assurance Plan (SCAP) sub-basins, generally looking at small-diameter mains under 48 inches in diameter. Inspection of sewers in these areas began in FY11.

As the initial baseline data-gathering effort has progressed significantly for gravity mains, focus has shifted to the following:

- Inspection of small-diameter gravity mains by SCAP sub-basins using CCTV and Total Integrated Sonar and CCTV Inspection Technology (TISCIT). Initial inspection has been performed in each basin and efforts are focused on second-attempt inspections.
- Inspection of large-diameter gravity mains using CCTV, TISCIT, sonar and laser profiling. Baseline condition assessment will be finalized in FY18.
- Inspection of manholes by SCAP sub-basins regardless of main size. Manhole inspection areas are identified and prioritized based on requirements to support IOAP project post-construction compliance monitoring; to abate dry weather discharges due to O&M issues; and to reduce I/I and increase system capacity during wet weather.

Gravity main inspection projects completed during the reporting period are included in Table 3. The completion rate shown includes all inspections performed during the reporting period as well as unsuccessful inspections closed at the end of the project, which may span reporting periods. Gravity main inspection projects anticipated to be completed in the next reporting period are detailed in Table 4. A map depicting these project areas is included in Figure 2.

Gravity manhole inspection projects completed during the reporting period are included in Table 5. Gravity manhole inspection projects anticipated to be completed in the next reporting period are detailed in Table 6. A map depicting these project areas is included in Figure 3.

Table 3. Completed Gravity Main Inspection Areas

PROJECT AREA	ASSIGNMENT	PIPE ASSIGNED (LF)	PIPE ASSIGNED (MI)	PIPE SURVEYED (LF)	PIPE SURVEYED (MI)	% COMPLETE
33249 FLOYDS FORK AREA E (FFE)	Internal	53,624	10.2	51,465	9.7	96%
34311 CSSA SECOND ATTEMPT IN ORFM	Contracted	117,044	22.2	98,656	18.7	84%
36070 CSO108 LARGE DIAMETER SEWER INVESTIGATION	Internal	10,356	2.0	10,311	2.0	100%
36071 CHEROKEE ENTERPRISE SEWER INVESTIGATION	Internal	3,891	0.7	3,737	0.7	96%
36107 COMBINED SEWER AREA P (CSP) 6"-48"	Contracted	219,316	41.5	188,701	35.7	86%
36110 SECOND ATTEMPT POND CREEK EAST 6"-48"	Contracted	135,040	25.6	121,800	23.1	90%
36377 SHIVELY INTERCEPTOR ANNUAL INSPECTION	Contracted	18,238	3.5	18,216	3.4	100%
36379 SECOND ATTEMPT FLOYDS FORK WEST (FFB FFC FFD FFG) 6"-48"	Contracted	62,083	11.8	59,755	11.3	96%
36380 TRUNK-INTERCEPTOR MIDDLE FORK 6"-48"	Contracted	45,577	8.6	39,437	7.5	87%

Table 3. Completed Gravity Main Inspection Areas

PROJECT AREA	ASSIGNMENT	PIPE ASSIGNED (LF)	PIPE ASSIGNED (MI)	PIPE SURVEYED (LF)	PIPE SURVEYED (MI)	% COMPLETE
36746 SOUTHEASTERN INTERCEPTOR, SOUTHEASTERN INTERCEPTOR RELIEF, AND HIKES LANE INTERCEPTOR	Contracted	29,979	5.7	29,406	5.6	98%
36747 BEALS BRANCH TRUNK	Internal	11,845	2.2	11,987	2.3	100%
36748 BLACK POND INTERCEPTOR & MILL CREEK INTERCEPTOR	Contracted	24,103	4.6	23,640	4.5	98%
36749 DRY RUN & KENTUCKY STREET SEWERS	Contracted	10,342	2.0	10,439	2.0	100%
36750 NORTHEASTERN INTERCEPTOR & BROWNSBORO ROAD TRUNK	Internal	7,591	1.4	8,054	1.5	100%
36751 21ST STREET, 23RD STREET RELIEF, 25TH STREET, AND OLIVE STREET	Contracted	20,649	3.9	19,989	3.8	97%
36752 SOUTHERN OUTFALL & FEEDERS OVER 48" DIAMETER FROM DIXIE HWY TO CSO211	Contracted	32,225	6.1	32,112	6.1	100%
36753 OVER 48" DIAMETER SEWER IN CSM, CST & CSU	Contracted	15,923	3.0	15,542	2.9	98%
36756 FY18 CSSA - SOUTHERN OUTFALL & FEEDERS OVER 48" DIAMETER FROM BOHANNON AVENUE TO DIXIE HWY	Internal	41,867	7.9	34,820	6.6	83%
36757 OVER 48" DIAMETER IN CSA	Internal	22,438	4.2	19,485	3.7	87%
36761 OVER 48" DIAMETER IN CSE	Internal	13,073	2.5	12,349	2.3	94%
36762 MIDDLE FORK TRUNK & GRINSTEAD DRIVE	Contracted	15,311	2.9	14,883	2.8	97%
36763 OVER 48" DIAMETER IN CSH, CSI, CSR, CSP, CSW	Internal	23,319	4.4	22,804	4.3	98%
36764 ALGONQUIN PARKWAY TRUNK & OVER 48" DIAMETER IN CSF & CSL	Internal	5,517	1.0	5,456	1.0	99%
38258 CSSA SECOND ATTEMPT IN HITE CREEK (HCA, HCB, HCC, HCD, HCE, HCF, HCG, HCH)	Internal	76,246	14.4	81,070	15.4	100%
39037 CSSA SECOND ATTEMPT IN MILL CREEK 6"-48" (MINUS MCJ)	Contracted	118,194	22.4	96,309	18.2	81%

Table 3. Completed Gravity Main Inspection Areas

PROJECT AREA	ASSIGNMENT	PIPE ASSIGNED (LF)	PIPE ASSIGNED (MI)	PIPE SURVEYED (LF)	PIPE SURVEYED (MI)	% COMPLETE
40033 CSSA SECOND ATTEMPT IN COMBINED SEWER AREA A, E, B, H (CSA, CSE, CSB, CSH)	Contracted	42,697	8.1	38,407	7.3	90%
40811 CSSA SECOND ATTEMPT IN COMBINED SEWER AREA I (CSI) 6"-96"	Internal	8,236	1.6	7,447	1.4	90%
TOTAL		**1,184,724**	**224.4**	**1,076,277**	**203.8**	**91%**

Table 4. Projected Gravity Main Inspection Areas

PROJECT AREA	ASSIGNMENT	PIPE (LF)	PIPE (MILES)
36743 – NORTHERN DITCH & POND CREEK INTERCEPTORS	Contracted	88,754	16.8
36744 - SOUTHWESTERN OUTFALL, SOUTHWESTERN BRANCH INTERCEPTOR, 7TH STREET ROAD TRUNK, & MONTANA AVENUE (LARGE DIAM)	Contracted	31,371	5.9
36745 BEARGRASS INTERCEPTOR	Contracted	7,098	1.3
36746 - CSSA SOUTHEASTERN INTERCEPTOR, SOUTHEASTERN INTERCEPTOR RELIEF, & HIKES LANE INTERCEPTOR	Contracted	1,251	0.2
36749 - CSSA DRY RUN & KENTUCKY STREET	Contracted	3,068	0.6
36753 – OVER 48" CSSA COMBINED SEWER AREA M, T, U (CSM, CST, & CSU)	Contracted	16,620	3.1
36754 – SOUTHERN OUTFALL FEEDERS UPSTREAM OF BOHANNON AVE & SOUTH LOUISVILLE BRANCH	Contracted	36,115	6.8
36755 – FLOYDS FORK INTERCEPTOR	Contracted	664	0.1
39546 - BROADWAY (LARGE DIAM)	Contracted	7,212	1.4
40033 - CSSA COMBINED SEWER AREA A, E, B, H (CSA, CSE, CSB, CSH) – 2ND ATTEMPT	Contracted	43,928	8.3
40811 - CSSA COMBINED SEWER AREA I (CSI) – 2ND ATTEMPT	Internal	66,558	12.6
40815 - CSO 108 - CLEAN & INSPECT	Contracted	17,181	3.3
41756 - CAMP TAYLOR 2A	Internal	7,128	1.4
42171 - CAMP TAYLOR 2B & 4	Internal	142	0.0
42199 - MCB MCC - 2ND ATTEMPT & PM CLEANING	Internal	38,556	7.3
42673 - CSF - 2ND ATTEMPT & PM CLEANING (SMALL DIAM)	Contracted	72,337	13.7
42674 - SEDE PCO SE-JTE 2ND ATTEMPT & PM CLEANING	Internal	23,578	4.5
42675 - NDB NDC NDD 2ND ATTEMPT & PM CLEANING	Internal	73,131	13.9
43094 - OHIO RIVER INTERCEPTOR (ORI)	Contracted	11,558	2.2

Table 4. Projected Gravity Main Inspection Areas

PROJECT AREA	ASSIGNMENT	PIPE (LF)	PIPE (MILES)
43096 - 4TH STREET RELIEF AND DOWNTOWN MISC. LINES (LARGE DIAM)	Contracted	5,321	1.0
CSG 2ND ATTEMPT & PM CLEANING	Internal	16,372	3.1
CSK 2ND ATTEMPT & PM CLEANING	Internal	7,455	1.4
CSL 2ND ATTEMPT & PM CLEANING	Internal	14,870	2.8
CSM 2ND ATTEMPT & PM CLEANING	Internal	15,162	2.9
CSN 2ND ATTEMPT & PM CLEANING	Internal	26,185	5.0
CSP 2ND ATTEMPT & PM CLEANING	Internal	15,793	3.0
CST 2ND ATTEMPT & PM CLEANING	Internal	18,357	3.5
CSU 2ND ATTEMPT & PM CLEANING	Internal	38,078	7.2
CSV 2ND ATTEMPT & PM CLEANING	Internal	46	0.0
MFB 2ND ATTEMPT & PM CLEANING	Internal	8,816	1.7
MFC 2ND ATTEMPT & PM CLEANING	Internal	3,392	0.6
MFD 2ND ATTEMPT & PM CLEANING	Internal	3,243	0.6
MFE 2ND ATTEMPT & PM CLEANING	Internal	10,318	2.0
MFF 2ND ATTEMPT & PM CLEANING	Internal	5,325	1.0
MFG 2ND ATTEMPT & PM CLEANING	Internal	15,406	2.9
MFH 2ND ATTEMPT & PM CLEANING	Internal	4,045	0.8
MFI 2ND ATTEMPT & PM CLEANING	Internal	10,874	2.1
MFJ 2ND ATTEMPT & PM CLEANING	Internal	5,877	1.1
MFK 2ND ATTEMPT & PM CLEANING	Internal	9,101	1.7
MFL 2ND ATTEMPT & PM CLEANING	Internal	1,659	0.3
TOTAL		**781,945**	**148.1**

Figure 2. Completed and Projected Gravity Main Inspection Areas

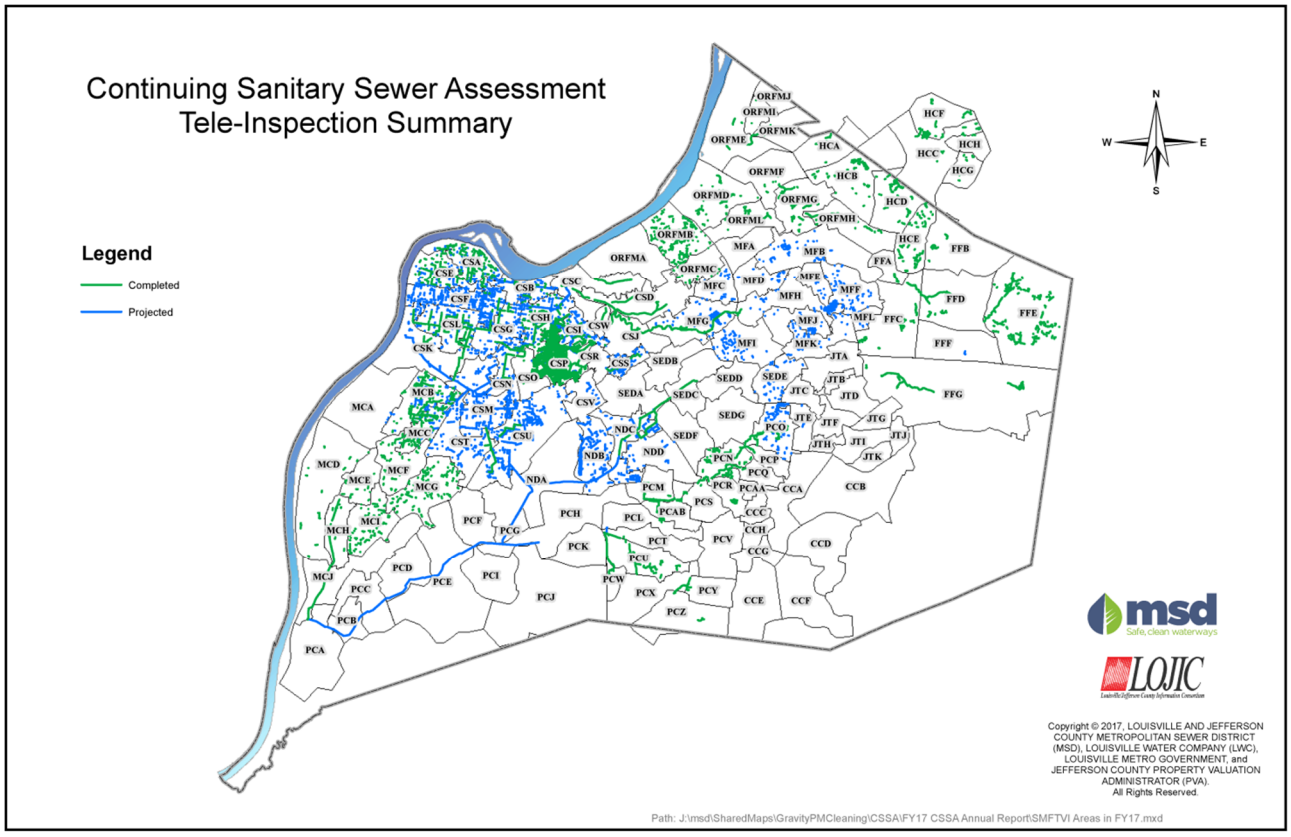


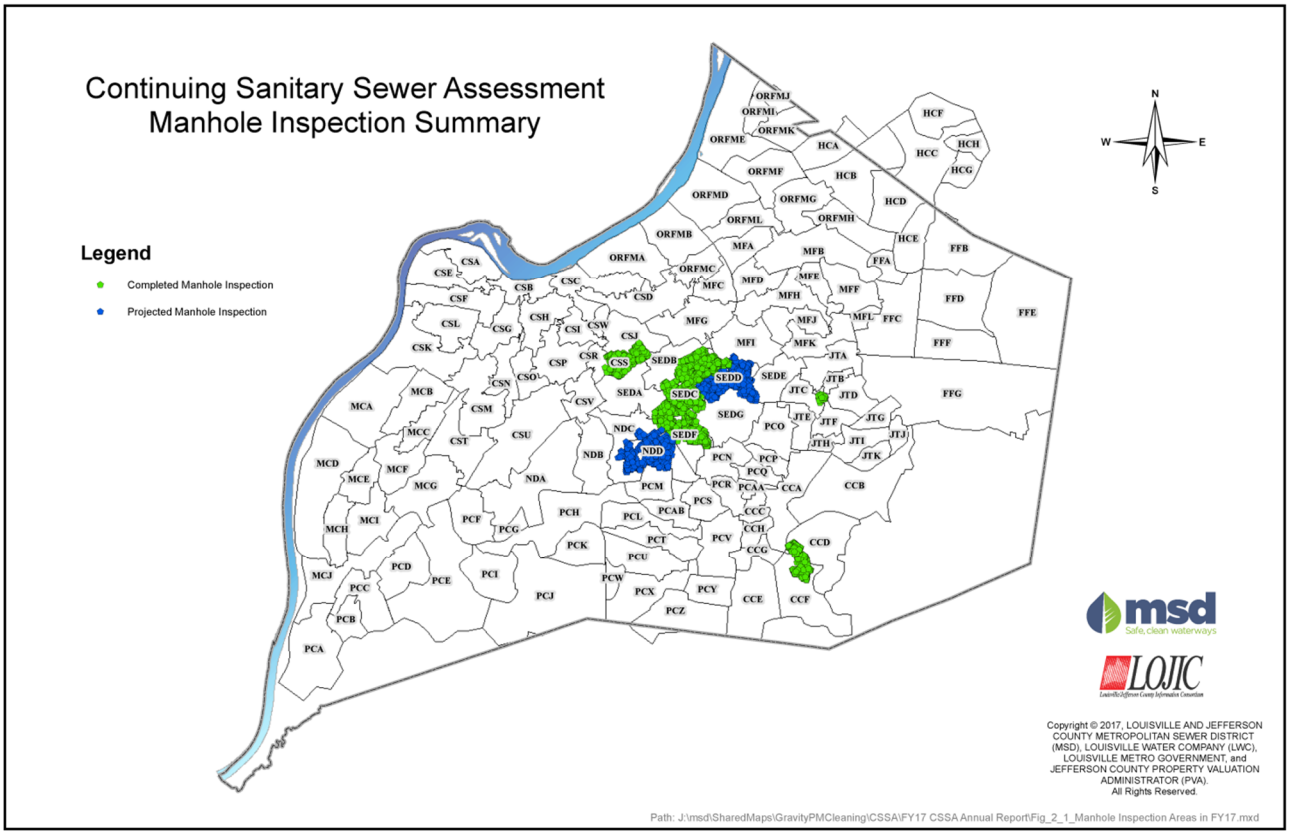
Table 5. Completed Manhole Inspection Projects

PROJECT	MANHOLES	PROJECT SELECTION CRITERIA
BARDSTOWN ROAD PUMP STATION	185	System Capacity
SOUTHEAST DIVERSION AREA SEDF	415	Post-Construction Compliance
SOUTHEAST DIVERSION AREA SE-JTF	30	EUM BAP Support
CSO108 SEWERSHED	480	Post-Construction Compliance
SOUTHEAST DIVERSION AREA SEDC	827	EUM BAP Support
PROVIDENCE COURT PUMP STATION	95	System Capacity
TOTAL	**2,032**	

Table 6. Projected Manhole Inspection Projects

PROJECT	MANHOLES	PROJECT SELECTION CRITERIA
SOUTHEAST DIVERSION AREA SEDD	815	EUM BAP Support
NORTHERN DITCH AREA NDD	411	EUM BAP Support
TOTAL	**1,226**	

Figure 3. Completed and Projected Gravity Manhole Inspection Areas



4. ASSESSMENT

Under SSES and ICA efforts, a findings report was developed for each study area including a summary of the area and issues present, rehabilitation or remediation and maintenance recommendations, cost estimates, maps, bid documents, and a determination of the future inspection interval. In order to maximize the benefit of the CSSA program, MSD moved in FY16 to utilize existing teleinspection reports in conjunction with contracted manhole inspections that are used to generate recommendation packages. A pilot process was created to generate recommendations for rehabilitation and maintenance activities, including cost estimates based on current contract prices, based on inspections and other data housed in Hansen and the GIS. This process includes recommendations for rehabilitation and maintenance activities, prioritized based on comparative condition to the rest of the system.

Through the updated assessment process, SCAP sub-basins and smaller targeted areas are selected for analysis to identify the cause of specific sewer overflows, capacity and performance, or Inflow and Infiltration (I/I) problems. Recommendations are generated the same day using available inspection data, including lining or point repairs for small-diameter mains and lining or frame repair / replacement for manholes, and reviewed by Engineering staff. Additional engineering support may be acquired as needed to develop rehabilitation solutions on a case-by-case basis for large-diameter gravity mains.

In FY17, MSD worked to verify the efficacy of the recommendations. Feedback was solicited from field inspection and Operations staff as well as contractors. The feedback was generally positive for manholes and small-diameter mains and included recommendations for minor alterations to improve the process. During FY18, feedback will be included in the tool, and options will be explored for improving recommendations for large-diameter gravity mains.

Additional next steps to begin in FY18 include translating the current condition assessment scoring system to a likelihood of failure (LOF) index, taking into account not only current condition but anticipated remaining life before failure based on attributes like age and material. LOF can then be used to inform prioritization of rehabilitation projects, as well as frequency of reinspection beyond baseline in the continuous assessment process, in a consistent and data-driven process based on risk.

A parallel initiative involves the development of consequence of failure (COF) index, which rate the criticality of a piece of infrastructure. Critical infrastructure is defined as combined and sanitary sewer infrastructure that would have a significant negative impact to the community in the event of failure. MSD has undertaken several initiatives to assist in determining infrastructure that qualify as critical. In FY17, MSD worked through the draft consequence of failure matrix developed by the Wet Weather Team in FY10 to identify any outstanding factors as well as data sources for the criteria within Hansen or the GIS. Efforts in FY18 will focus on developing a process to calculate criticality out of existing data sources, and identifying data gaps and next steps to gather data to fulfill the COF index.

5. IMPLEMENTATION

5.1. INFRASTRUCTURE REHABILITATION

Rehabilitation activities are selected and prioritized through the assessment process. Utilizing the recommendations, projects are advertised and awarded to contractors or assigned to annual contractors and rehabilitation work is completed. Table 7 summarizes project areas completed in the current reporting period. Table 8 summarizes work projected for the upcoming reporting period.

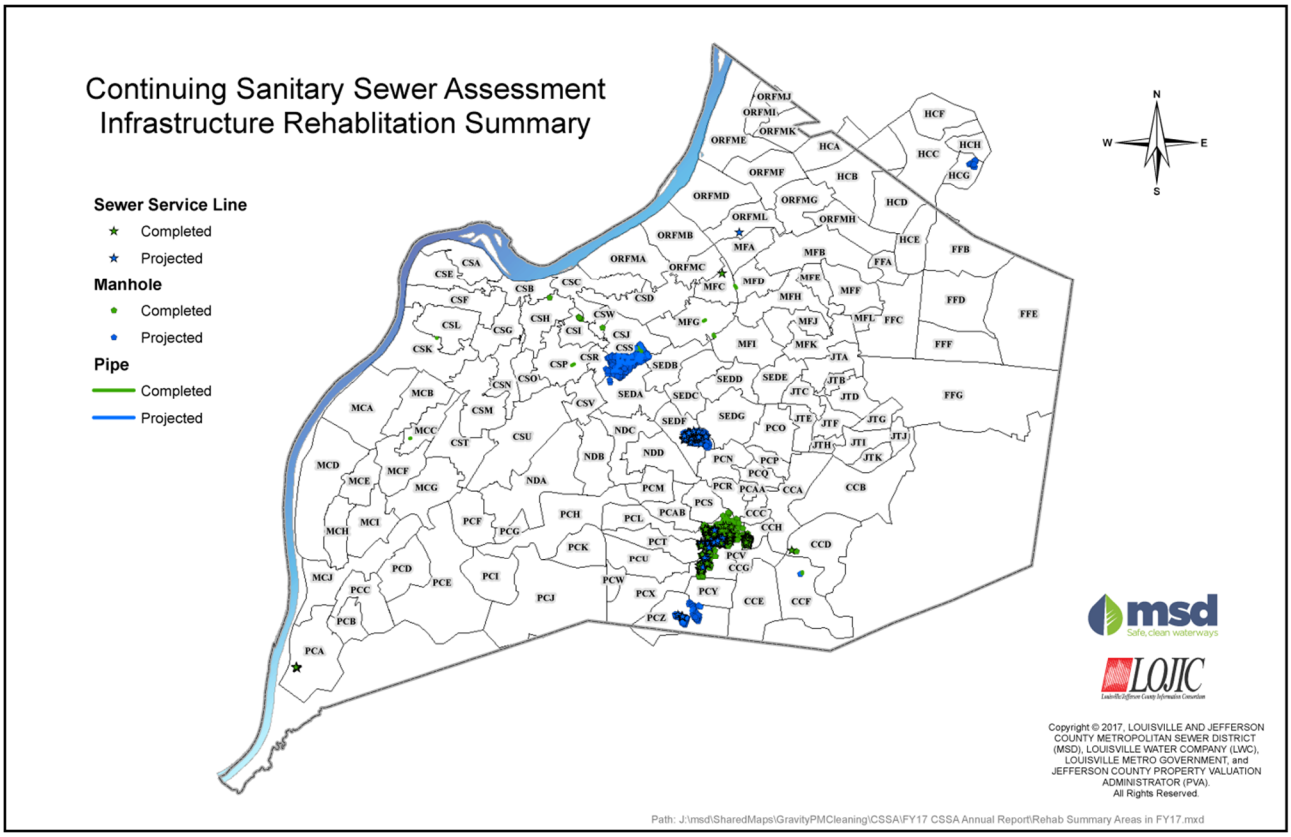
Table 7. Completed Rehabilitation Projects

REHABILITATION AREA	PIPE (LF)	PIPE (MI)	MANHOLES	COST
OPERATIONS SUPPORT – CEDAR CREEK	264	0.0	0	$4,599
OPERATIONS SUPPORT - COMBINED SYSTEM	446	0.1	1	$3,814
OPERATIONS SUPPORT - MIDDLE FORK BEARGRASS CREEK	1,407	0.3	0	$66,391
OPERATIONS SUPPORT - MILL CREEK	124	0.0	0	$3,492
OPERATIONS SUPPORT - POND CREEK	487	0.1	0	$35,661
OPERATIONS SUPPORT - PROVIDENCE COURT	481	0.1	1	$9,466
ADMIRAL PUMP STATION	3,619	0.7	383	$1,816,145
CSO 108	770	0.1	0	$21,683
TOTAL	**7,598**	**1.4**	**385**	**$1,961,251**

Table 8. Projected Rehabilitation Projects

REHABILITATION AREA	PIPE (LF)	PIPE (MI)	MANHOLES	ESTIMATED COSTS
ADMIRAL PUMP STATION	1,027	0.2	2	$156,452
CSO 108	10,465	2.0	478	$577,254
FLOYDSBURG RD PUMP STATION	0	0	14	$10,527
MOUNT WASHINGTON RD PUMP STATION	1,346	0.3	98	$224,218
SOUTHEAST DIVERSION – AREA F	6,945	1.3	130	$541,232
OPERATIONS SUPPORT – BARDSTOWN RD	0	0	1	$547
OPERATIONS SUPPORT – CEDAR CREEK	156	0.0	0	$2,985
OPERATIONS SUPPORT – SOUTH FORK BEARGRASS CREEK	0	0	2	$7,024
TOTAL	**19,939**	**3.8**	**725**	**$1,520,239**

Figure 4. Completed and Projected Rehabilitation Areas



5.2. BLOCKAGE ABATEMENT PROGRAM

MSD currently performs condition-driven maintenance activities on portions of the sewer system under the BAP program as a refinement of the gravity line preventive maintenance that MSD has implemented over the years. Maintenance activities related to this program include flushing, vacuum cleaning, root cutting, chemical root treatment, and chemical grease treatment. As the system is inspected, MSD identifies gravity mains exhibiting operational or maintenance-related defect conditions and initiates routine maintenance activities on those assets as recommended. Consistent, periodic preventive maintenance of the sewer system to maximize asset life and minimize overflows, property damage and health risks is the primary goal of the program.

MSD is re-evaluating the approach of the BAP, based on the assessment results generated through the tool discussed previously. This new approach will allow MSD to prioritize and schedule maintenance activities, reinspection, and reassessment. Gravity mains currently maintained within the program will remain and sewer lines identified as needing recurring maintenance through proactive condition assessment will be incorporated as needed. Over time, the gravity mains in the program will be reviewed to determine if the current maintenance schedule needs to be adjusted or if the asset should be remediated to eliminate a recurring maintenance activity. The sewers requiring intensive maintenance will be placed on a priority list for replacement and correction to minimize future maintenance. MSD will focus on reviewing reported overflows

caused by blockages, grease, or roots to actively re-inspect and maintain lines to keep the overflows from recurring.

Completed BAP activities for the reporting period are summarized in Table 9. Projected BAP activities for the upcoming reporting period are summarized in Table 10.

Table 9. Completed BAP Activities

ACTIVITY	PIPE (LF)	PIPE (MILES)
Flushing	789,559	149.5
Vacuum Cleaning	1,448	0.3
Root Cutting	40,447	7.7
Chemical Root Treatment	390,059	73.9
Chemical Grease Treatment	2,557	0.5
Total	**1,224,070**	**231.8**

Table 10. Projected BAP Activities

ACTIVITY	PIPE (LF)	PIPE (MILES)
Flushing	727,209	137.7
Vacuum Cleaning	3,000	0.6
Root Cutting	54,736	10.4
Chemical Root Treatment	400,000	75.8
Chemical Grease Treatment	5,000	0.9
Total	**1,189,945**	**225.4**

6. REPORTING

MSD's approved SCAP manual documents the process for accumulating capacity credits through I/I removal projects and estimated flow reduction from these projects, credits are calculated from I/I removal, and how credits are tracked and distributed to new flow requests within Hansen. MSD calculates these credits for each rehabilitation project completed, as well as for maintenance activities completed and illicit connections removed from the system.

During FY17, SCAP credit calculation for rehabilitation projects was automated to account for remediation activities performed by contractors in response to customer issues in addition to project areas.

Additional efforts were made to review work orders completed by MSD Operations and calculate credits as appropriate. During this process, MSD staff identified process and documentation improvements that will allow credits for maintenance activities to be automated and reported in a more consistent and timely manner. These improvements will be implemented in FY18 and beyond as resources allow.

Quarterly reports will continue to include progress on inspection and maintenance efforts and include regular updates to the SCAP balance. Annual reports will continue to include programmatic updates on progress, refinements, and upcoming efforts.

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Louisville, KY 40203-1911
LouisvilleMSD.org
24/7 Customer Relations
502.587.0603

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Appendix F Public Notification

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What you don't see could harm you!

Sewers can overflow into waterways during rainstorms.

Those waters could contain harmful bacteria, which can make you sick.

Rainwater can overwhelm the sanitary sewer system and cause overflows into local waterways. You should **minimize contact with waterways to be safe during storms and even for 48 hours after the rain has ended. During these times, avoid swimming, fishing, wading and splashing in the water.**

MSD has made significant progress in decreasing sewer overflows into our waterways, but there is more work to be done. Please follow the instructions that are posted on our overflow advisory signs. **Wash with warm, soapy water** if you come into contact with water that may have been contaminated by a sewage overflow.

PROJECT WIN
Wastewater Improvements Now
MSDProjectWIN.org

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What you don't see can harm you!

Look inside for safety tips for those living near Beargrass Creek and the Ohio River.

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Safe, clean waterways

What you don't see could harm you!

Sewers can overflow into waterways during rainstorms.

Those waters could contain harmful bacteria, which can make you sick.

Rainwater can overwhelm the sanitary sewer system and cause overflows into local waterways. You should **minimize contact with waterways to be safe during storms and even for 48 hours after the rain has ended. During these times, avoid swimming, fishing, wading and splashing in the water.**

MSD has made significant progress in decreasing sewer overflows into our waterways, but there is more work to be done. Please follow the instructions that are posted on our overflow advisory signs. Wash with warm, soapy water if you come into contact with water that may have been contaminated by a sewage overflow.

PROJECT WIN
Waterway Improvements Now
MSDProjectWIN.org

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You can help improve our waterways

What we do on our land and in our homes affects our waterways

Rainwater flows over rooftops, lawns, parking lots and roadways as it travels to storm drains and ditches. This water collects pollutants along its journey—such as lawn chemicals, oil, litter and pet waste—which flow directly to our waterways.

Put pet waste in the trash. Dogs in Jefferson County produce four dump truck loads of waste everyday. Please dispose of it in the trash so the bacteria does not enter our waterways.

Dispose of fats, oils, grease and food scraps in the trash to prevent clogging your sewer line and causing a sewage backup into your home.

Compost grass clippings, and decrease use of fertilizer and pesticides. When it rains, these chemicals make their way to our streams.

Do not flush medications. Once, it was common practice to flush medications down the toilet. Your doctor or pharmacist may have directed you to do this. We now know that these substances are bad for our environment. The wastewater treatment process does not remove the substances contained in them, so they end up back in our waterways.

Please properly dispose of your medications at:

- **Jefferson County Sheriff's Office**
  531 Court Place, Suite 600
  M-F, 8 am to 4 pm
- **St. Matthews Police Department**
  3940 Grandview Avenue
  M-F, 8 am to 4 pm

Delay using washing machines and dishwashers during rain events —they can fill up the sanitary sewers and contribute to sewer overflows.

'Flushable' wipes...

don't let the name fool you.

Avoid a potential backup in your home by tossing wipes into the trash.

Wipes do not break down, even if their labels read "flushable." They can cause problems for plumbing systems and lead to sewage backups in your home or work place. Wipes also clog and damage sewer line pumps, screens and other mechanical parts at MSD water quality treatment centers.

Avoid the mess, toss your wipes into the trash!

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(23,000) 04/17

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Safe, clean waterways

700 West Liberty Street | Louisville, KY 40203-1911
502.540.6000 | louisvillemsd.org

April 21, 2017

Dear Louisville Metro Resident:

Throughout MSD's service area, there are hundreds of points where a combination of wastewater and rainwater may discharge onto streets and into local waterways when it rains. These sewer overflow locations act as relief when the sanitary system becomes overwhelmed with rainwater.

MSD's Project WIN (Waterway Improvements Now) defines a plan to rehabilitate our aging sewer system and reduce the number of overflows that send raw, untreated sewage into our local waterways during rain events. In the past year we have moved closer to that goal by:

- Completing a 36-year journey to eliminate more than 300 inefficient and outdated package wastewater treatment plants scattered throughout the community, leaving us with five regional water quality treatment centers;
- Constructing underground storage to lessen sewer overflows. The 17 million-gallon Logan Street Basin is well underway, and is one of seven storage basins citywide in planning or construction phases, along with a 2.5-mile tunnel under Louisville's downtown that together will help us achieve the goal of capturing and treating 98 percent of combined sewer overflow volume by 2020.

You have received this letter because you live near Beargrass Creek, the Ohio River or one of their tributaries. Because of this, you are more likely to come in contact with polluted water from one of these overflows. As MSD continues its work to reduce sewer overflows, we must caution you to stay out of these waterways during—and for 48-hours after—a rain event.

The enclosed flyer provides easy steps that you can take to protect your health and safety should you come in contact with sewage-polluted water. It is important to keep children and pets out of these waterways during and following a rain event.

MSD seeks to be a good steward of our ratepayers' dollars, and we are committed to providing safe, clean waterways for our community. We continually collect water-quality data and seek ways to improve our creeks, streams and the Ohio River for recreational use, as well as fish and wildlife habitats.

Please call 502.587.0603 or visit us online at www.msdprojectwin.org for more information about Project WIN, and become a part of the WINning team. Together we can achieve safe, clean waterways for a healthy and vibrant community.

Sincerely,

James A. Parrott
Executive Director

Message to the community
—aging critical infrastructure

Tony Parrott
MSD Executive
Director

Louisville, like many cities, is faced with aging infrastructure that must be maintained and refurbished in order to continue to serve a growing community. Some of MSD's underground infrastructure predates the Civil War, and much of our flood protection system was built in the 1940s and '50s. In addition, an increased frequency of severe storms in recent years has amplified the need for our system to be ready to protect against the worst of today's weather.

MSD has completed an extensive analysis of these systems and has developed a Critical Repair & Reinvestment Plan to address the challenges posed by this aging infrastructure. The difficult truth is the solutions come with a price tag of $4.3 billion over the next 20 years.

We want to hear from you

Input is needed from the community to determine how soon the critical projects should be completed. The Critical Repair & Reinvestment Plan is online for your review, as well as available in each of Louisville's public library branches.

To view the Plan and provide feedback, visit:
LouisvilleMSD.org/CriticalRepairPlan

At MSD, we're here to make Louisville a better place.
A cleaner place. A healthier place. To have a real impact on the quality of life of the place we all call home.
Working together, we can continue to pursue our Vision of "Safe, Clean Waterways for a Healthy and Vibrant Community."

Sincerely,
James A. Parrott
MSD Executive Director

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Safe, clean waterways

OUR MISSION
Providing Exceptional Wastewater, Drainage and Flood Protection Services for Our Community

24/7/365
Customer Relations · 502.587.0603
CustomerRelations@LouisvilleMSD.org

LouisvilleMSD

MAKING A DIFFERENCE IN OUR WATERWAYS

MSD proudly sponsors Ohio River Sweep, which is one of the nation's largest and longest-running environmental cleanup events. Picking up trash along the shoreline is a little thing that makes a big difference as we all work together.

You can volunteer and make a difference!

Ohio River Sweep · Saturday, June 17 · 9 AM to Noon

MSD employees will equip volunteers with gloves and bags. For location information visit:

LouisvilleMSD.org/OhioRiverSweep2017

Together, we can achieve safe, clean waterways for our community.

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502.587.0603

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MAKE A DIFFERENCE FOR OUR WATERWAYS . . .

...by planting a rain garden

Going green today means healthy waterways tomorrow. Rain gardens help infiltrate rainwater before it reaches the drainage system, and reduce the amount of stormwater and pollutants running into storm drains, combined sewers or streams. **Contact us for your FREE Rain Garden Guide.**

Together we can achieve safe, clean waterways for our community.

Learn more at **LouisvilleMSD.org.**

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WE ALSO MAKE RAIN, RAIN GO AWAY.

You may think you know MSD, as well as all that MSD does for you. But did you know that we manage more than 600 million gallons of water on a high rain-event day? Or that we're planting 1,000 trees a year in the metro area for the next eight years to redirect 1.35 million gallons of rainwater annually from entering our sewers? Or that we educate more than 4,500 local students a year on how to conserve and protect our waterways?

We're MSD. And we're doing more for you than you ever imagined. Learn more at **LouisvilleMSD.org.**

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@LouisvilleMSD

Message to the community—aging critical infrastructure

February/March 2017

Louisville, like many cities, is faced with aging infrastructure that must be maintained and refurbished in order to continue to serve a growing community. Some of MSD's underground infrastructure predates the Civil War, and much of our flood protection system was built in the 1940s and '50s. In addition, an increased frequency of severe storms in recent years has amplified the need for our system to be ready to protect against the worst of today's weather.

Tony Parrott
MSD Executive Director

MSD has completed an extensive analysis of these systems and has developed a Critical Repair & Reinvestment Plan to address the challenges posed by this aging infrastructure. The difficult truth is the solutions come with a price tag of $4.3 billion over the next 20 years, including almost $500 million to finish the remaining Consent Decree projects to meet the federal order to reduce sewer overflows.

We want to hear from you:

Louisville can no longer avoid renewing and restoring its vital wastewater, flood protection and stormwater management facilities. Input is needed from the community to determine how soon the critical projects should be completed.

The entire Critical Repair & Reinvestment Plan is online for your review, as well as available in each of Louisville's public library branches. To view the Plan and provide feedback, visit **LouisvilleMSD.org/CriticalRepairPlan**

The bottom line is this: at MSD, we're here to make Louisville a better place. A cleaner place. A healthier place. To have a real impact on the quality of life of the place we all call home. Working together, we can continue to pursue our Vision of "Safe, Clean Waterways for a Healthy and Vibrant Community."

Sincerely,

James A. Parrott
MSD Executive Director

Plan your rain garden now

Rain gardens help infiltrate rainwater before it reaches the drainage system, and reduce the amount of stormwater and pollutants running into storm drains, combined sewers or streams.

For your **FREE Rain Garden Guide,** contact MSD Customer Relations at 502.587.0603, or online at CustomerRelations@LouisvilleMSD.org.

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CONTACT US 24/7/365
502.587.0603

CustomerRelations@LouisvilleMSD.org

LouisvilleMSD

MSD Bill Insert Feb/Mar 2017.indd 1 1/23/17 5:10 PM

‘Flushable’ wipes… are **more expensive** than you think

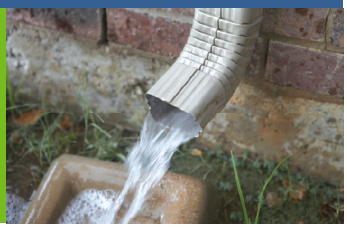
Toss your wipes into the trash—NOT into the toilet!

Wipes do not break down quickly, even if their labels read “flushable.” They can cause problems for home plumbing systems and lead to sewer backups. Wipes also clog and damage sewer line pumps, screens and other mechanical parts at water quality treatment centers. This costs wastewater utilities nationwide a great deal of expense. MSD employees must repair clogged pumps an average of two out of every three days. Wipes cause 60 percent of these clogs.

Shawn Smith clears a clog containing flushable wipes at MSD’s Cedar Creek Water Quality Treatment Center.

Disconnecting **your downspouts** can **pay big** dividends

one-time incentive
$100 per downspout*
disconnection from sewer system



Keeping rainwater out of the sewer system helps prevent sewer overflows into our local waterways and sewer backups into homes.

To see if your downspouts or sump pump connect to the sewer system, residential customers can contact MSD at **502.587.0603** or **CustomerRelations@LouisvilleMSD.org.**

Downspout Disconnection Program

A typical 8-inch neighborhood sanitary sewer pipe can handle wastewater from approximately 200 homes. This pipe can become overwhelmed when as few as six homes have downspouts connected to the sewer line. To relieve this situation, MSD offers residential customers a one-time incentive of **$100 per downspout*** for disconnection from the sewer system. **Customers must contact MSD in advance of the disconnection.**

Sump Pump Disconnection

The typical 8-inch neighborhood sanitary sewer pipe can become overwhelmed with as few as eight sump pumps connected to the system. MSD’s Plumbing Modification Program **pays for a licensed plumber to disconnect the sump pump from the sanitary sewer** and redirect the water in a safe and effective way.

* To be eligible to receive the downspout disconnection incentive payment, MSD MUST INSPECT your downspouts PRIOR to disconnection. Offer expires 11-30-2017.

OUR VISION

Achieving Safe, Clean Waterways for a Healthy and Vibrant Community

OUR MISSION

Providing Exceptional Wastewater, Drainage and Flood Protection Services for Our Community

CONTACT US 24/7/365

502.587.0603

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About MSD

Learn more about these programs and other ways MSD is helping protect our community's waterways.

MSDStormwaterQuality.org

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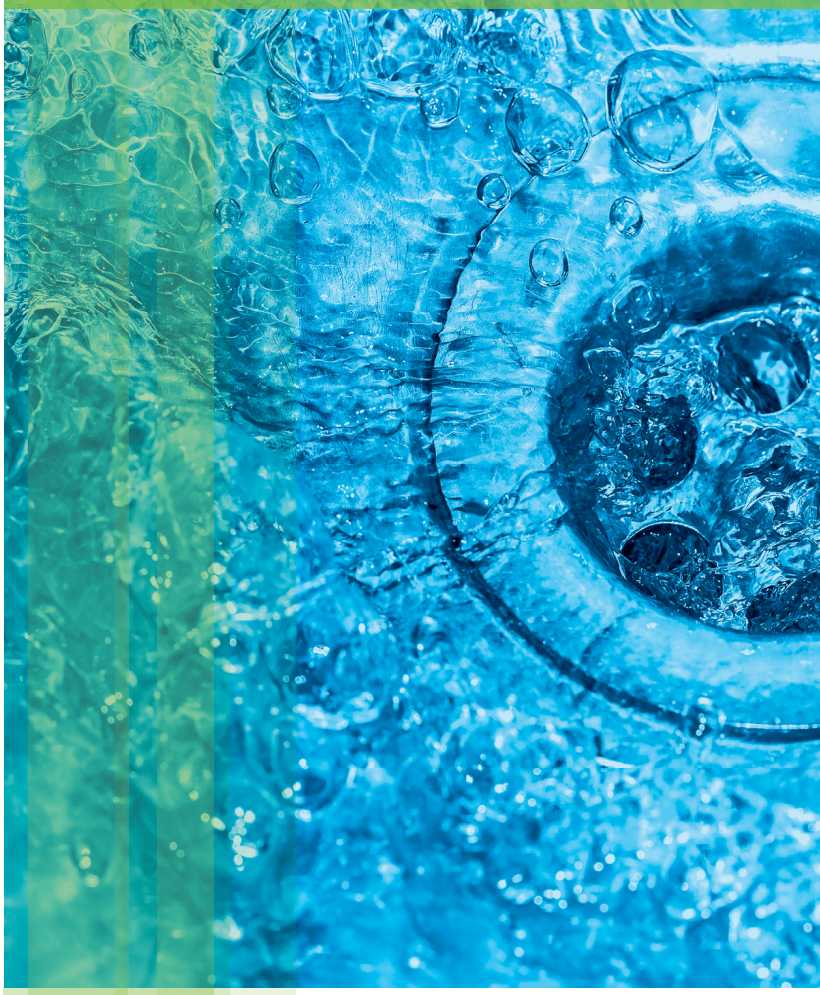
(3,000) 02/17

HOW TO PROTECT YOUR HOME FROM BACKUPS

FOG—FATS, OILS AND GREASE



Fats, Oils and Grease can be a real drain on clean streams and rivers

If you wash fats, oils and grease (FOG) down your drain, a build up may occur in your sewer line. This may clog the sewer pipe and cause sewage overflows into your home, onto the ground and into our local waterways.

It is important to keep our sewers fat free.

When greasy wastes are washed into the plumbing system through your sink or garbage disposal, they can stick to the pipes. **Using your garbage disposal or a grease-cutting detergent does not keep FOG out of the plumbing system.** Garbage disposals shred solid material into smaller pieces, but do not prevent FOG from flowing down the drain. Grease dissolving detergents can pass FOG through your household plumbing, but the grease may still cause problems in the sewerlines.

Effects of FOG in sewer pipes:

- Raw sewage overflows into your home or yard.
- Raw sewage overflows into our parks and streams.
- Potential contact with disease-causing bacteria and viruses.
- Increased operational costs for you as an MSD customer.
- Blockages, obstructions and raw sewage overflows that affect others in your community.

Tips to help keep FOG out of the sewers:

Can the grease!

Never pour fats, oils and grease down a sink, drain or toilet. Pour used grease into an empty, heat-safe container, such as a soup can, and store it in the freezer. Once the grease has become solid, toss the can into the garbage.

Scrape your food waste into the trash. Wipe all pots, pans, dishes and cooking utensils with a paper towel to soak up grease before washing them.

Catch the scraps in your sink with a basket or strainer, instead of using the garbage disposal, and throw them away in the trash can.

Recycle your deep-fryer oil by taking it to Louisville Metro's grease drop-off location at 7501 Grade Lane.

Where does FOG come from?

Fats, oils and greases come from your kitchen.

- Butter
- Cake icing
- Cooking oil
- Gravy
- Ice cream
- Lard
- Margarine
- Mayonnaise
- Meat and fat
- Salad dressing
- Sauces
- Shortening

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Appendix G Organizational Chart

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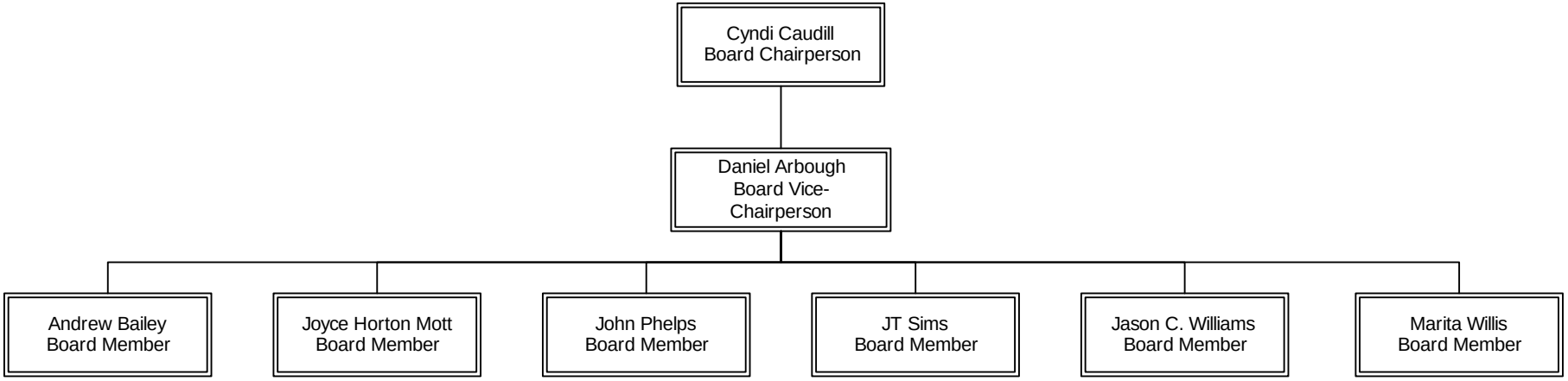
Louisville and Jefferson County Metropolitan Sewer District

Organizational Chart
Effective 07/01/17

Organizational Summary

	Total Positions	Current Actual	Vacant (Budgeted)	New/ Unbudgeted (Vacant)	Exempt	Non-Exempt	Unit	Net Overbudget
Executive Offices Division								
Executive Offices	6	5	1	0	5	1	0	0
Customer Relations	21	17	4	0	4	17	0	0
Facilities, Safety & Security	15	12	3	0	8	7	0	0
Legal Division	10	6	4	0	8	2	0	0
Human Resources Division	16	15	1	0	11	5	0	0
Information Technology Division	33	29	4	0	28	5	0	0
Finance Division	34	32	2	0	15	19	0	0
Engineering Division								
Eng Admin, Reg Compliance, Records & GIS	19.5	15	4.5	0	11	8.5	0	0
Engineering Technical Services	36	29	7	0	28	8	0	0
Development & Stormwater Services	45	42	3	0	19	26	0	0
Operations Division								
Administration	2	2	0	0	1	1	0	0
Treatment Facilities	92	87	5	0	20	18	54	0
Treatment Facilities (Maintenance)	38	37	1	0	5	0	33	0
Collections System	86	83	3	0	13	22	51	0
Collections System (Sanitary)	72	70	2	0	8	2	62	0
Drainage and Flood Protection	100	94	6	0	10	4	86	0
Support Services	50	46	4	0	10	26	14	0
Performance Metrics	10	8	2	0	4	6	0	0
DISTRICT TOTAL	**685.5**	**629**	**56.5**	**0**	**208**	**177.5**	**300**	**0**

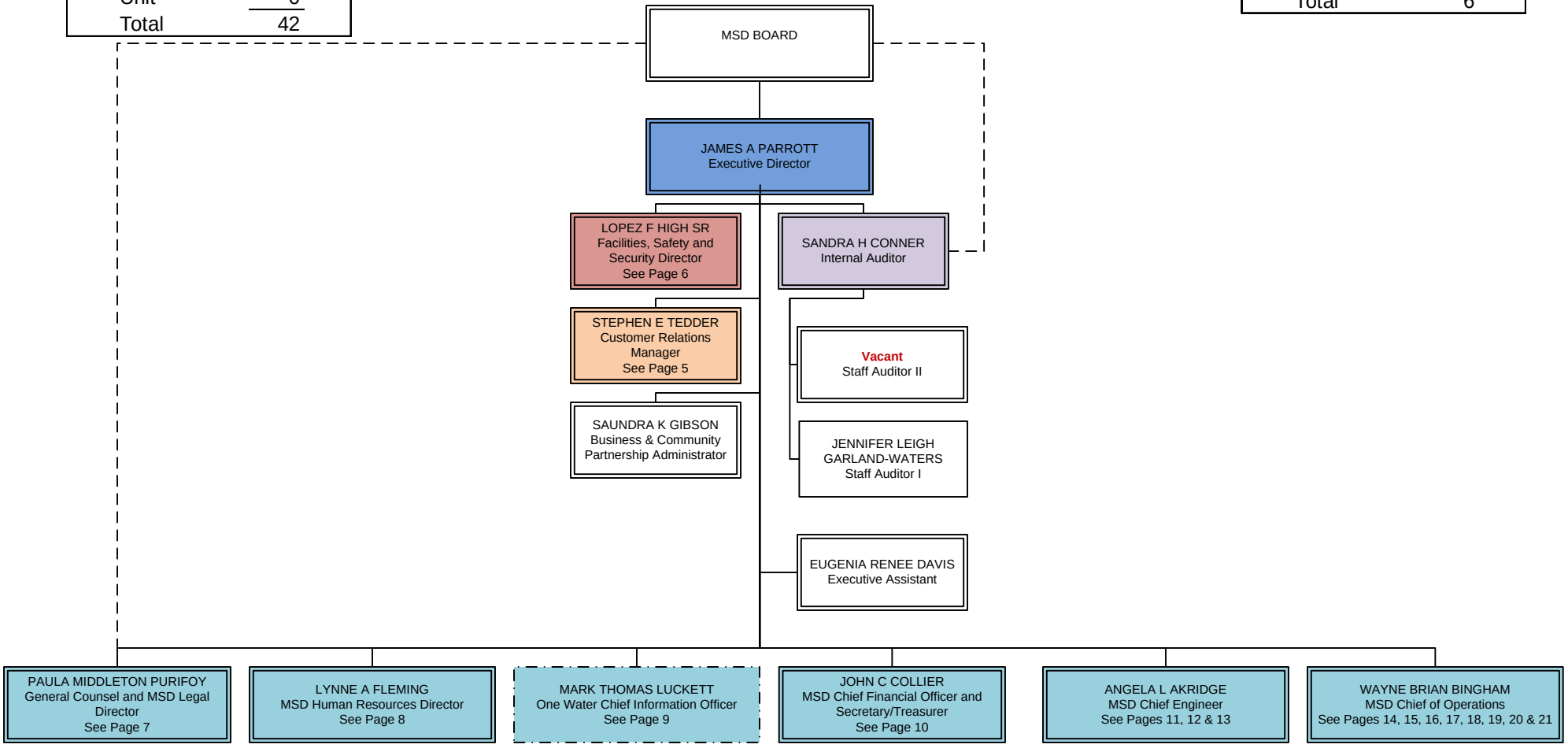
Board Members



Executive Offices Division
Executive Offices

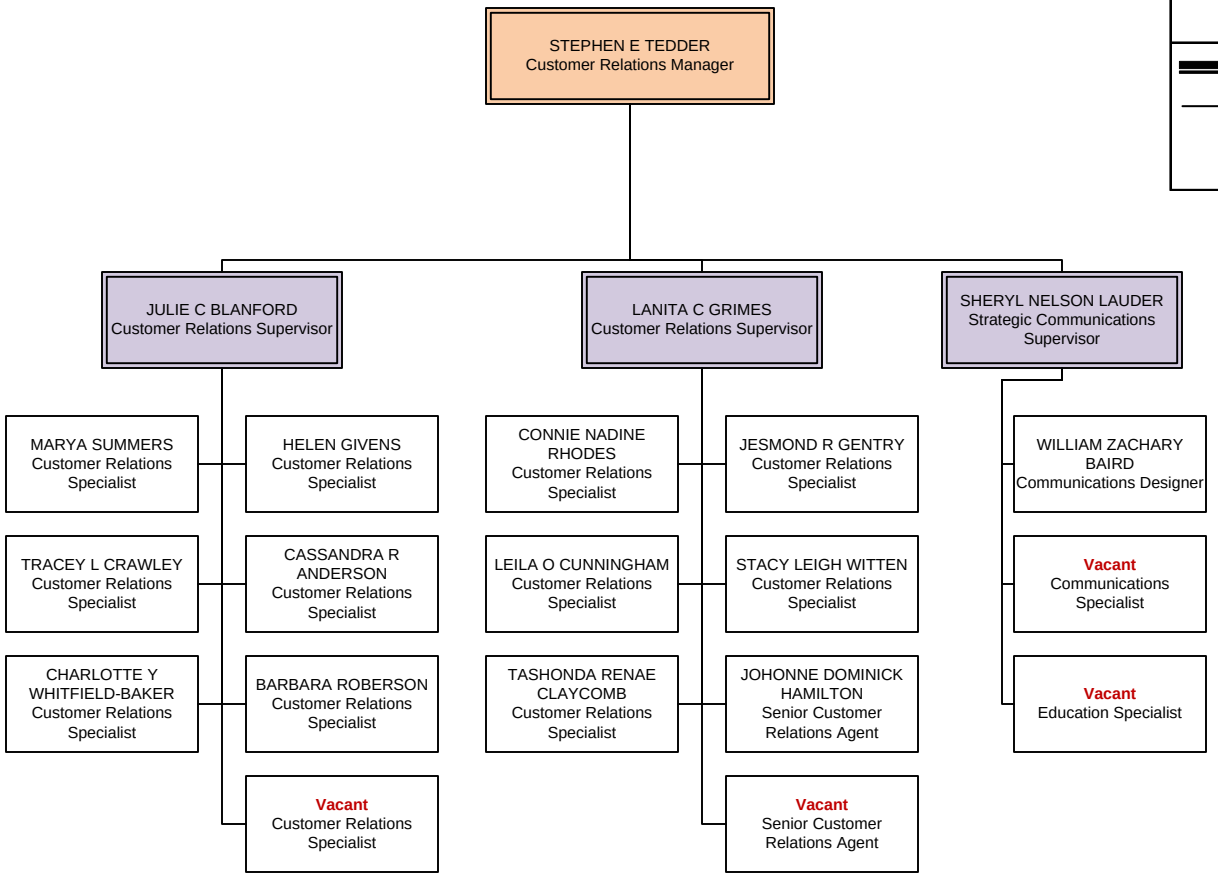
DIVISION BUDGET STATUS	
Actual	34
Vacant	8
Authorized	42
Exempt	17
Non-Exempt	25
Unit	0
Total	42

BUDGET STATUS	
Actual	5
Vacant	1
Authorized	6
Exempt	5
Non-Exempt	1
Unit	0
Total	6



Executive Offices Division
Customer Relations

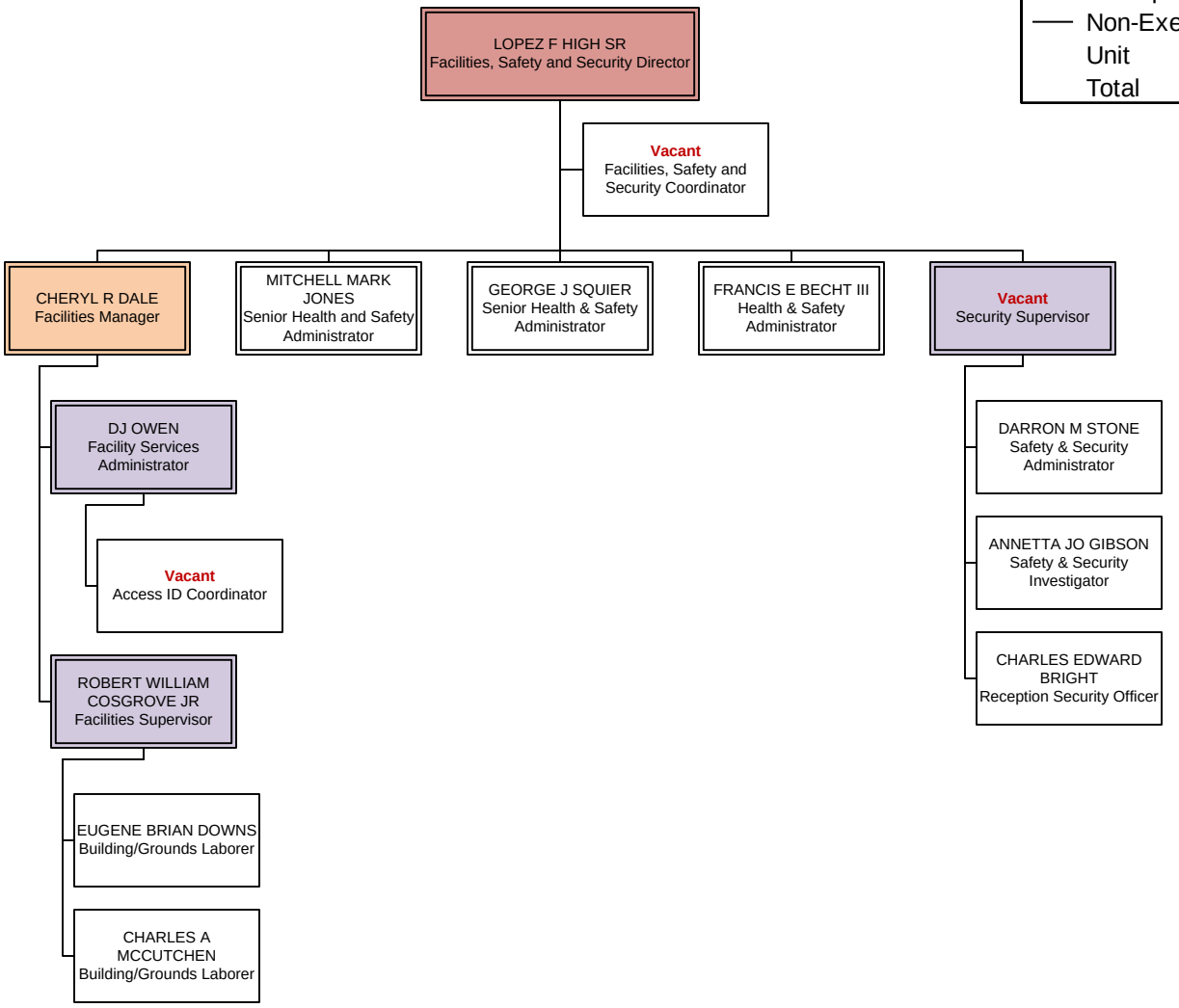
BUDGET STATUS	
Actual	17
Vacant	4
Authorized	21
Exempt	4
Non-Exempt	17
Unit	0
Total	21



Executive Director | MSD C-Level | Director | Manager | Supervisor

Executive Offices Division
Facilities, Safety & Security

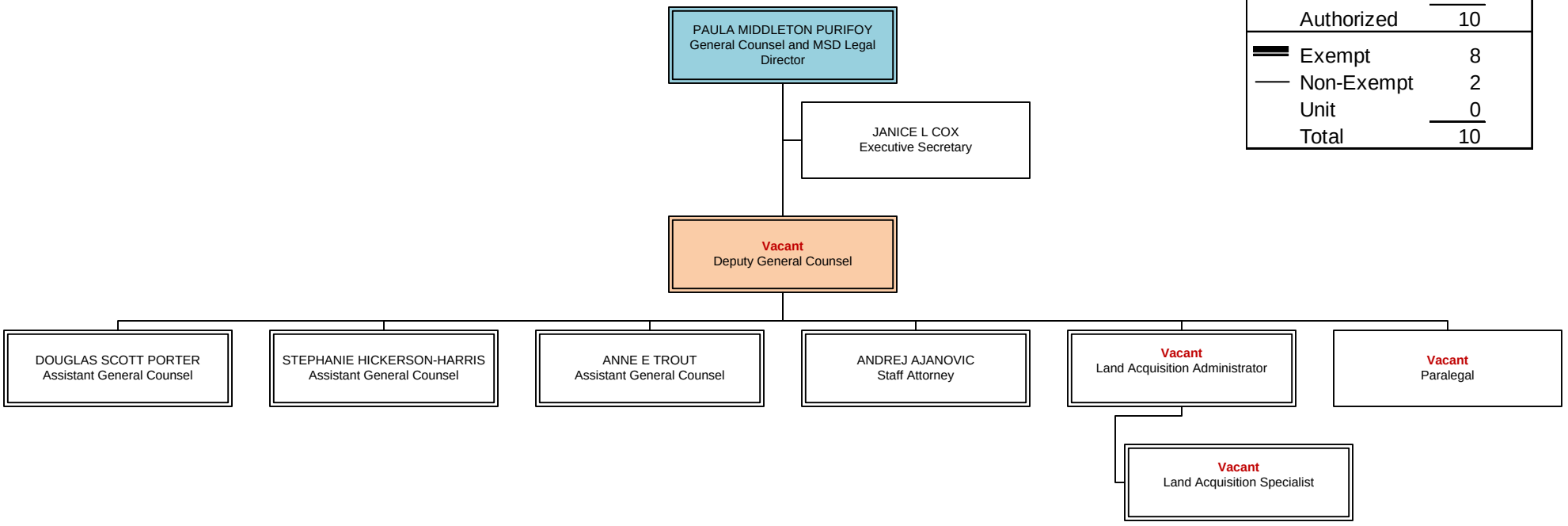
BUDGET STATUS	
Actual	12.0
Vacant	3.0
Authorized	15.0
Exempt	8.0
Non-Exempt	7.0
Unit	0.0
Total	15.0



Executive Director | MSD C-Level | Director | Manager | Supervisor

Legal Division

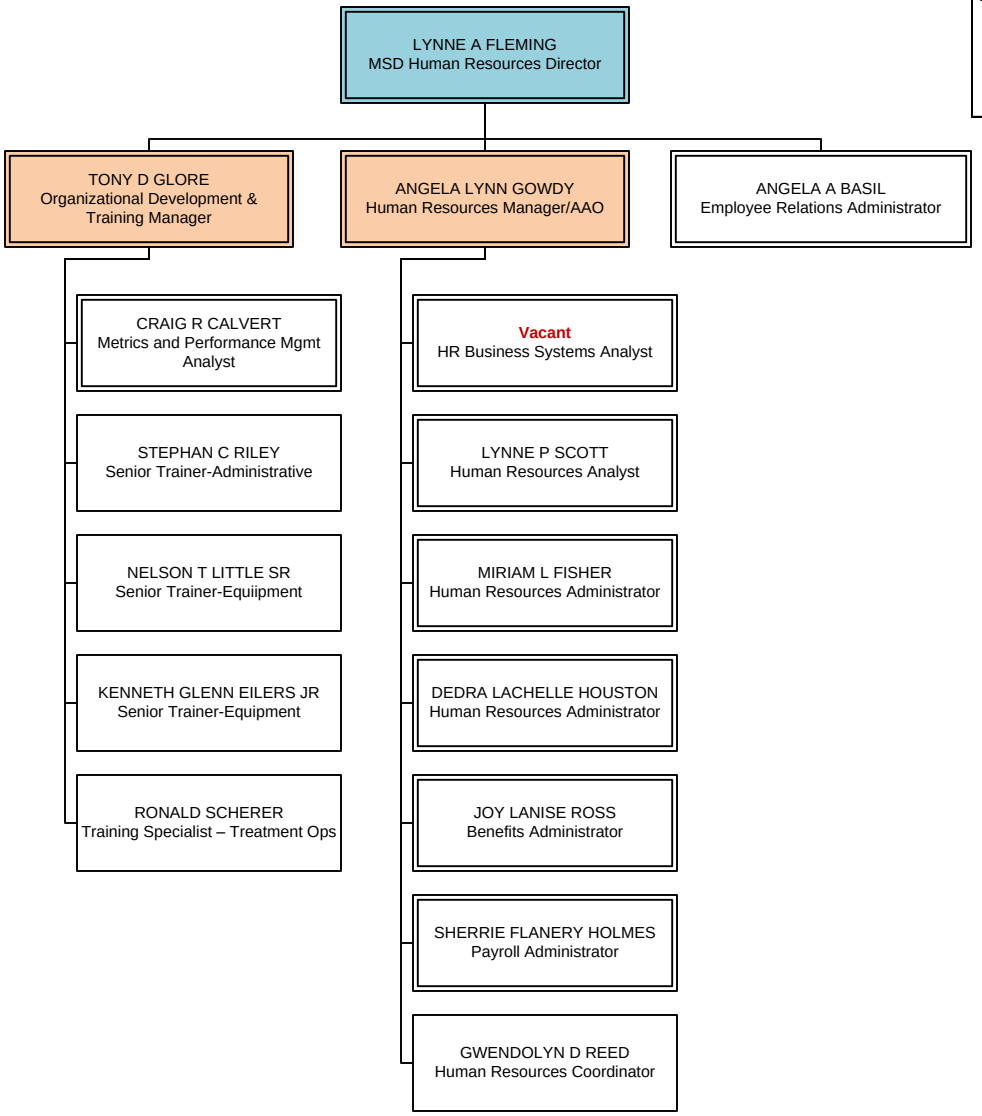
BUDGET STATUS	
Actual	6
Vacant	4
Authorized	10
Exempt	8
Non-Exempt	2
Unit	0
Total	10



Executive Director | MSD C-Level | Director | Manager | Supervisor

Human Resources Division

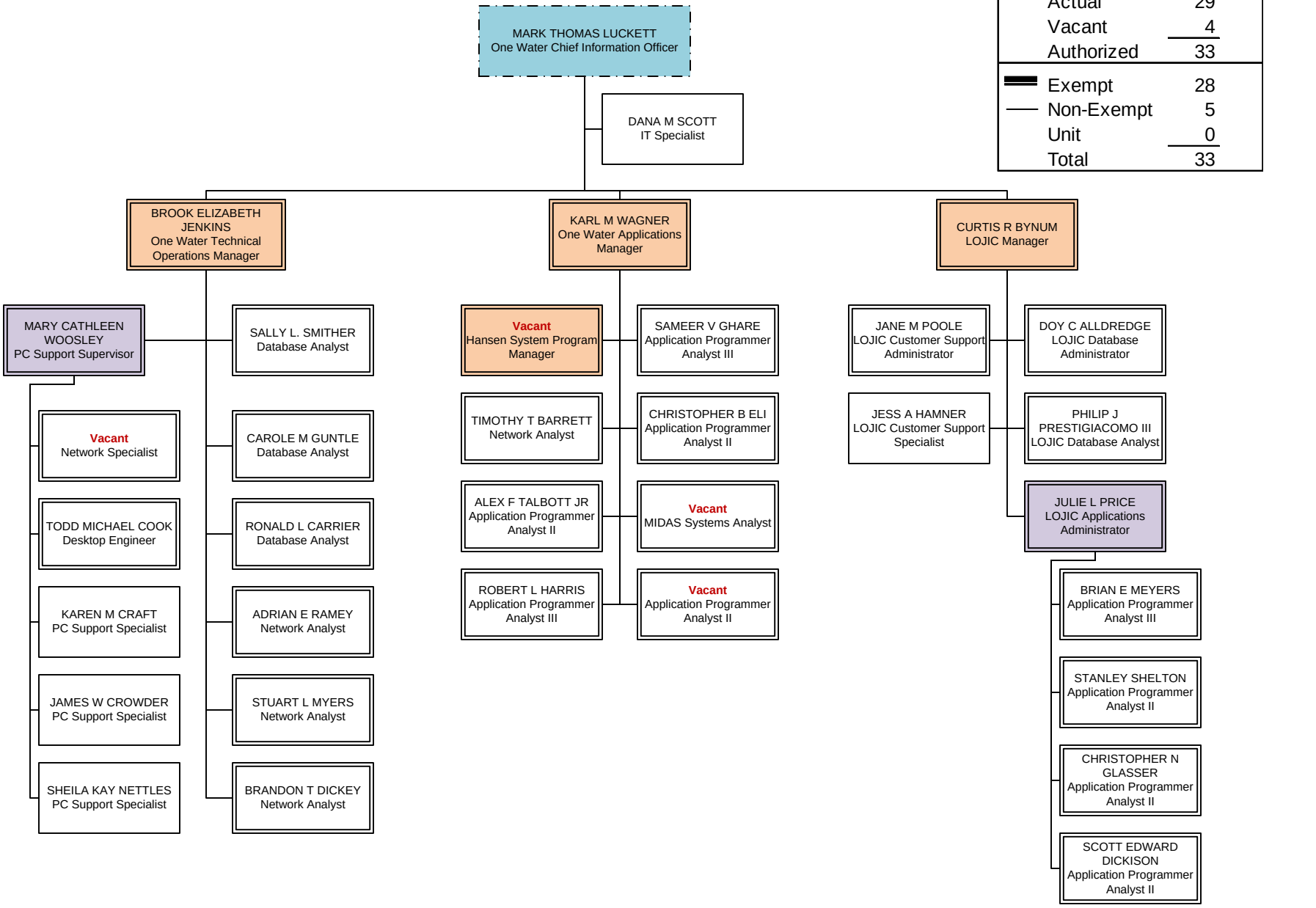
BUDGET STATUS	
Actual	15.0
Vacant	1.0
Authorized	16.0
Exempt	11.0
Non-Exempt	5.0
Unit	0.0
Total	16.0



Executive Director | MSD C-Level | Director | Manager | Supervisor

Information Technology Division

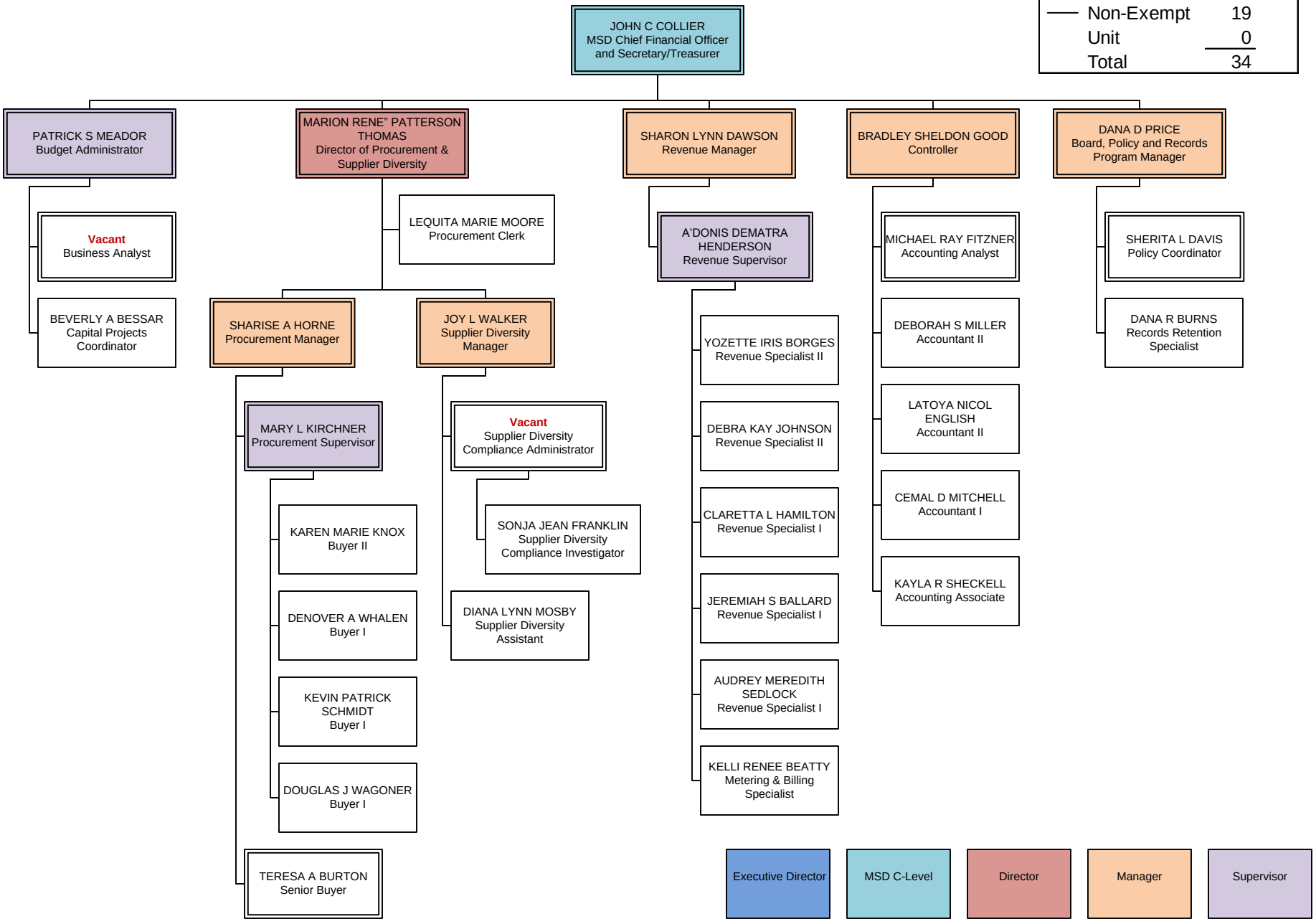
BUDGET STATUS	
Actual	29
Vacant	4
Authorized	33
Exempt	28
Non-Exempt	5
Unit	0
Total	33



Executive Director | MSD C-Level | Director | Manager | Supervisor

Finance Division

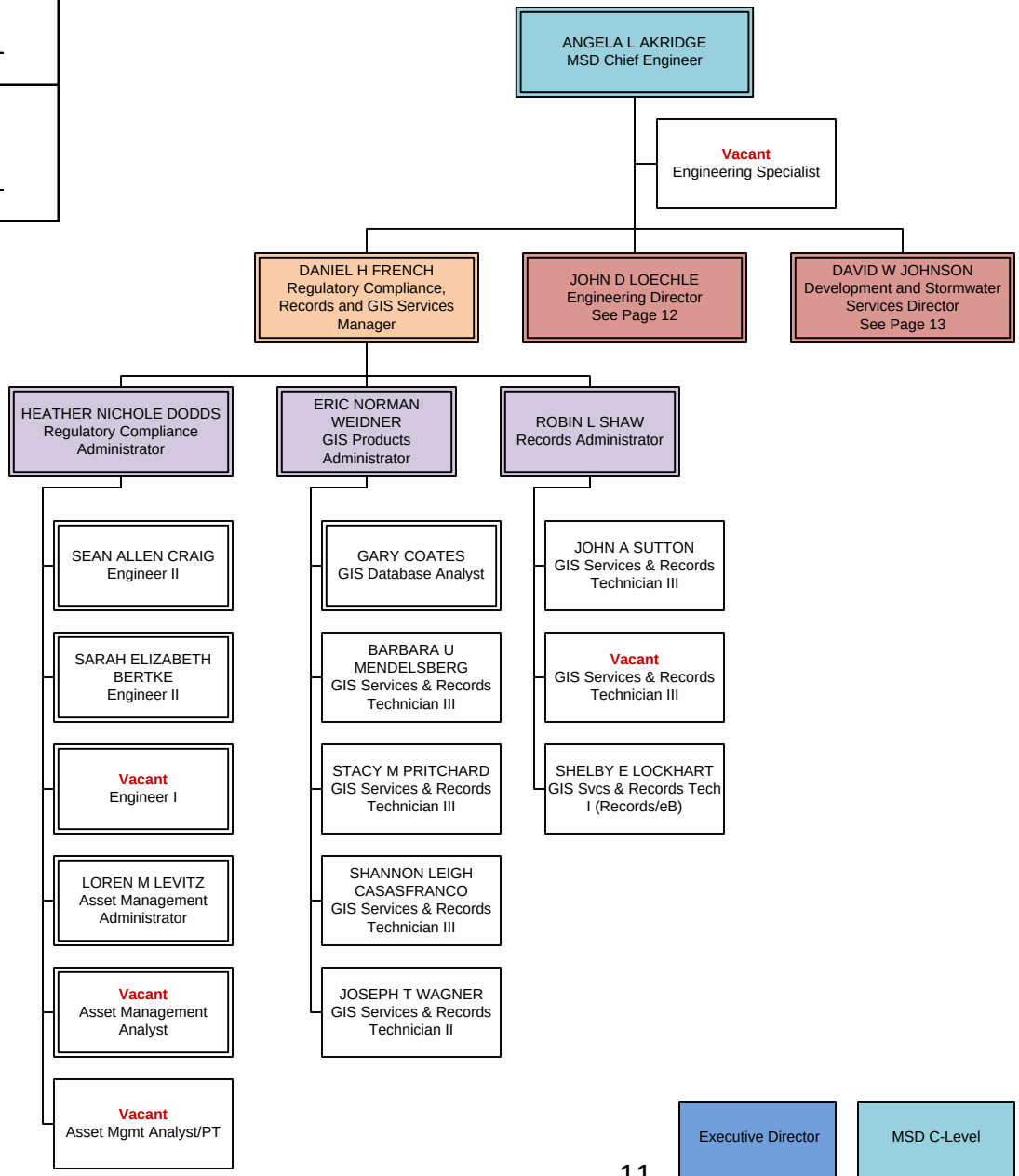
BUDGET STATUS	
Actual	32
Vacant	2
Authorized	34
Exempt	15
Non-Exempt	19
Unit	0
Total	34



Engineering Division
Engineering Admin, Regulatory Compliance, Records & GIS

DIVISION BUDGET STATUS	
Actual	86.0
Vacant	14.5
Authorized	100.5
Exempt	58.0
Non-Exempt	42.5
Unit	0.0
Total	100.5

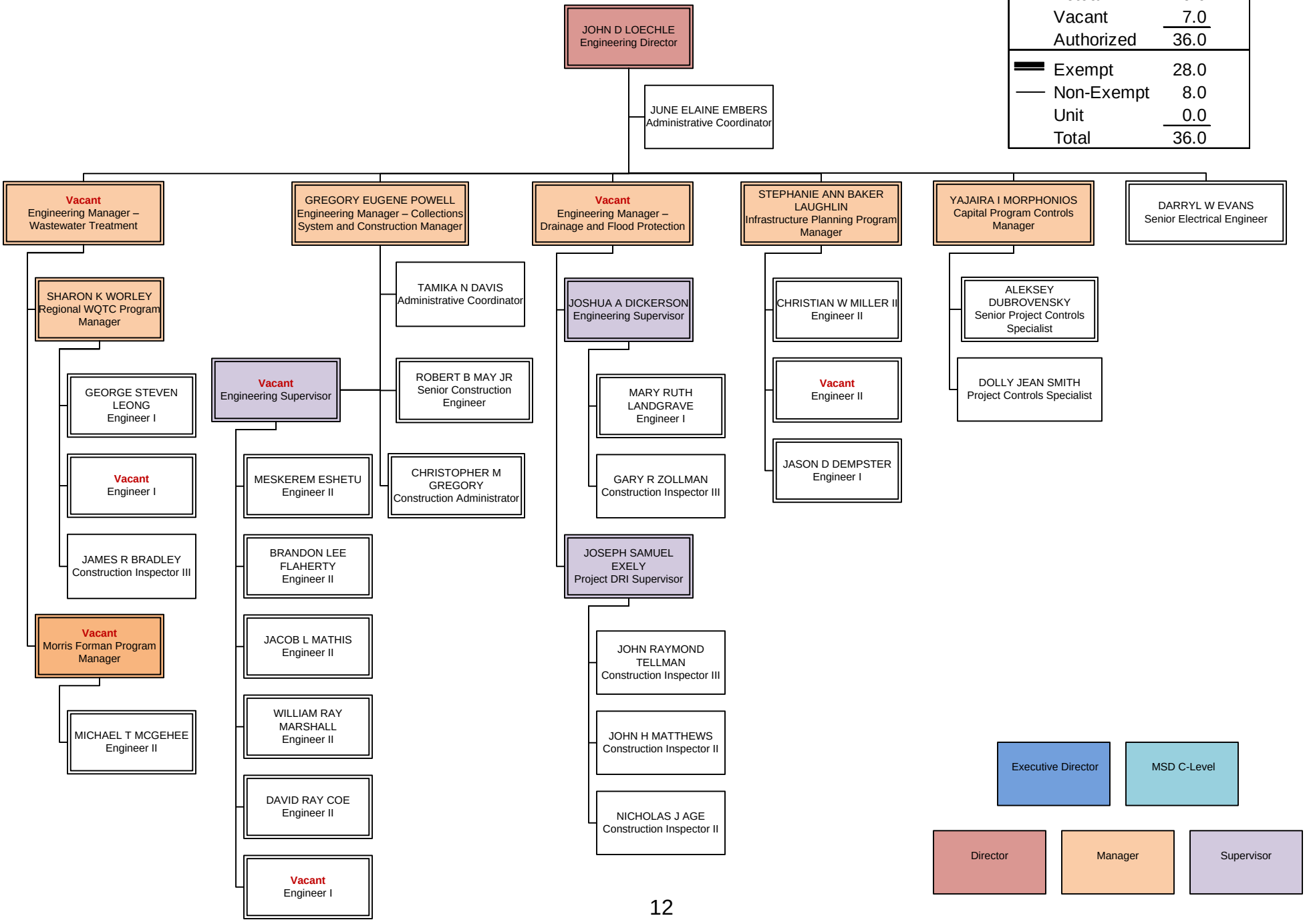
BUDGET STATUS	
Actual	15.0
Vacant	4.5
Authorized	19.5
Exempt	11.0
Non-Exempt	8.5
Unit	0.0
Total	19.5



Executive Director | MSD C-Level | Director | Manager | Supervisor

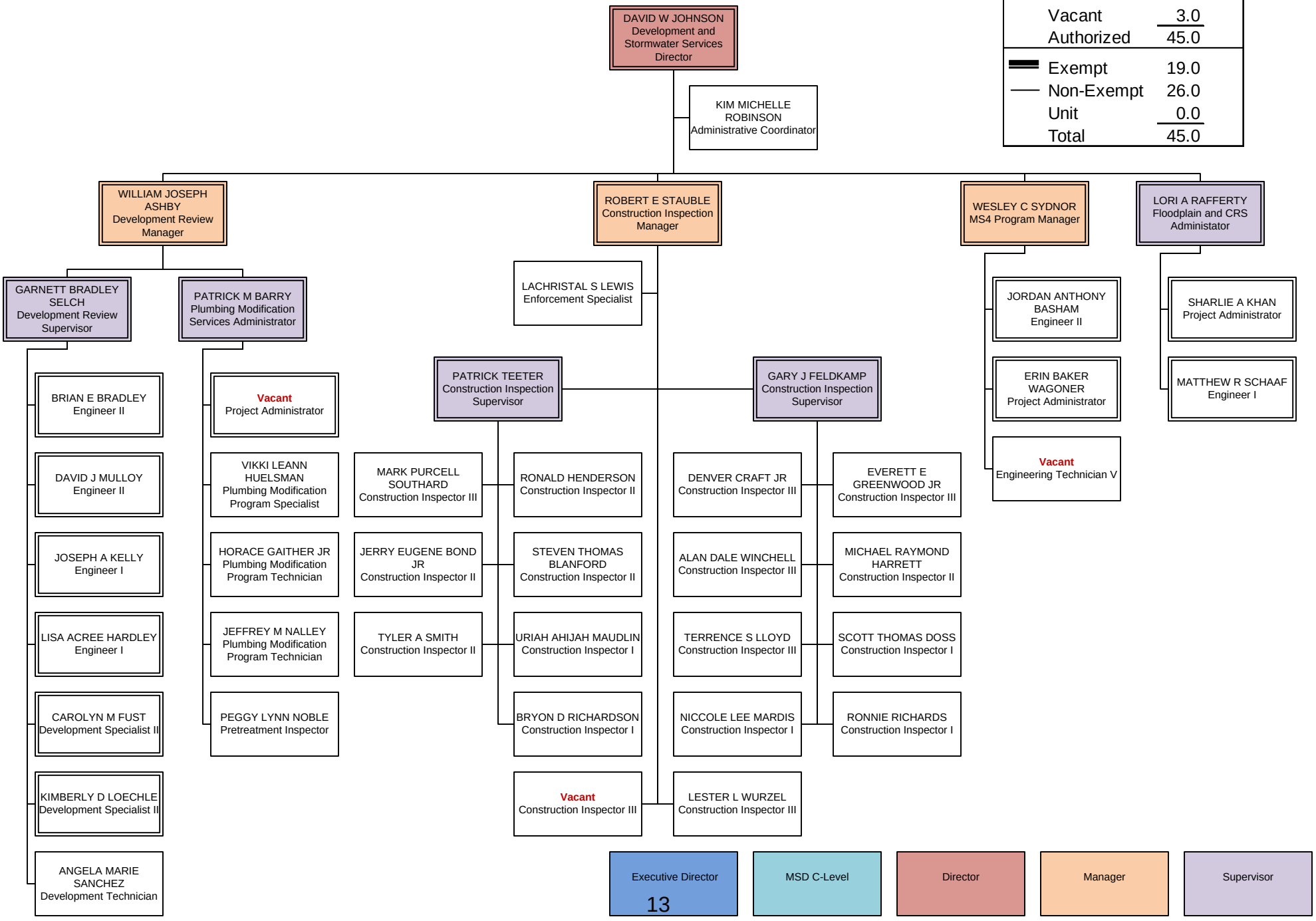
Engineering Division
Engineering Technical Services

BUDGET STATUS	
Actual	29.0
Vacant	7.0
Authorized	36.0
Exempt	28.0
Non-Exempt	8.0
Unit	0.0
Total	36.0



Engineering Division
Development & Stormwater Svcs

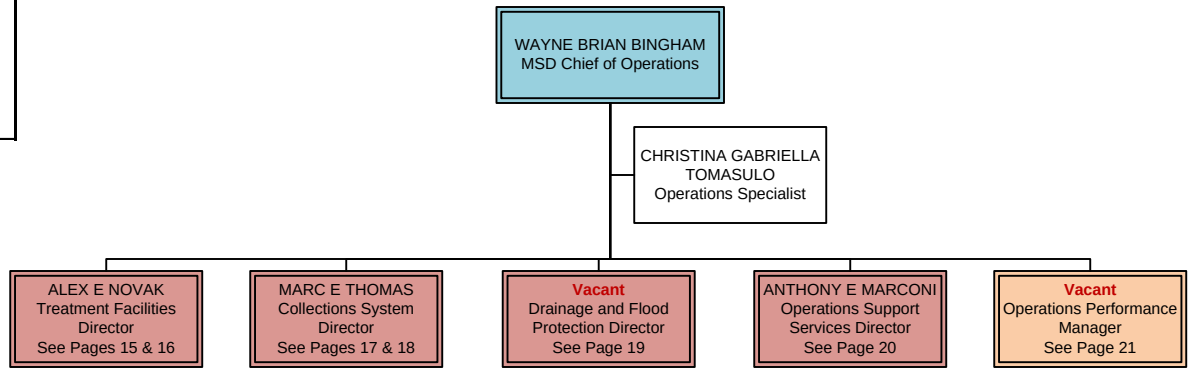
BUDGET STATUS	
Actual	42.0
Vacant	3.0
Authorized	45.0
Exempt	19.0
Non-Exempt	26.0
Unit	0.0
Total	45.0



Operations Division
Administration

DIVISION BUDGET STATUS	
Actual	428
Vacant	22
Authorized	450
Exempt	71
Non-Exempt	79
Unit	300
Total	450

BUDGET STATUS	
Actual	2
Vacant	0
Authorized	2
Exempt	1
Non-Exempt	1
Unit	0
Total	2



Executive Director | MSD C-Level | Director | Manager | Supervisor

Operations Division
Treatment Facilities

BUDGET STATUS	
Actual	87
Vacant	5
Authorized	92
Exempt	20
Non-Exempt	18
Unit	54
Total	92

ALEX E NOVAK
Treatment Facilities Director

VANESSA D GRAVES
Executive Secretary

RHONDA A BOYLE-CROTZER
Performance Metrics Supervisor

- JONATHAN O BALDRIDGE — Maintenance Planner
- TERRY E HAMMACK — Maintenance Planner
- **Vacant** — Contracting and Invoicing Assistant

ROBIN RAE BURCH
Process Support Supervisor

- NORMAN D HALE III — Process Control Operator
- NICOLE C NEAL — Process Control Operator
- LATASHA A MCALMONT — Process Control Operator
- AARON C SMITH — Process Control Operator
- ANTOINE HAMILTON SR — Process Control Operator
- SHAWN MICHAEL MURPHY — Process Control Operator

Vacant
Operations Treatment Facilities Manager

CARYN M MULLIGAN
Process Supervisor-Operations (A Shift)

- 8 -Process Technician III
- 1 -Process Technician I

WILLIAM H BACON JR
Process Supervisor-Operations (B Shift)

- 4 -Process Technician III
- 1 -Process Technician II
- 1 -Process Technician Trainee

JAMES T BRIDGES JR
Treatment Facilities Maintenance Manager
See Page 16

LARRY W DUKE
Process Supervisor-Operations (B Shift)

- 6 -Process Technician III

JAMES ALEXANDER SKINNER JR
Process Supervisor-Operations (C Shift)

- 1 -Process Specialist
- 3 -Process Technician III
- 2 -Process Technician II
- 6 -Process Technician I
- 1 -Process Technician Trainee

JOHN M KESSEL
Operations Treatment Facilities Manager

KEVIN L THOMPSON
Process Supervisor-Operations (DRGWQTC)

- 4 -Process Specialist
- 1 -Operator

DUANE V WRIGHT
Process Supervisor-Operations (CCWQTC)

- 4 -Process Specialist **(1 vac.)**
- 1 -Senior Operator
- 1 -Tractor-Trailer Driver

STACI HUBER
Process Supervisor-Operations (HCWQTC)

- 4 -Process Specialist
- 1 -Tractor-Trailer Driver

Vacant
Process Supervisor-Operations (FFWQTC)

- 3 -Process Specialist
- 1 -Tractor-Trailer Driver

ZONETTA E ENGLISH
Research Manager

DAYMOND M TALLEY
Assistant Director – Treatment Facilities

ROBERT W BATES
Operations Special Projects Program Manager

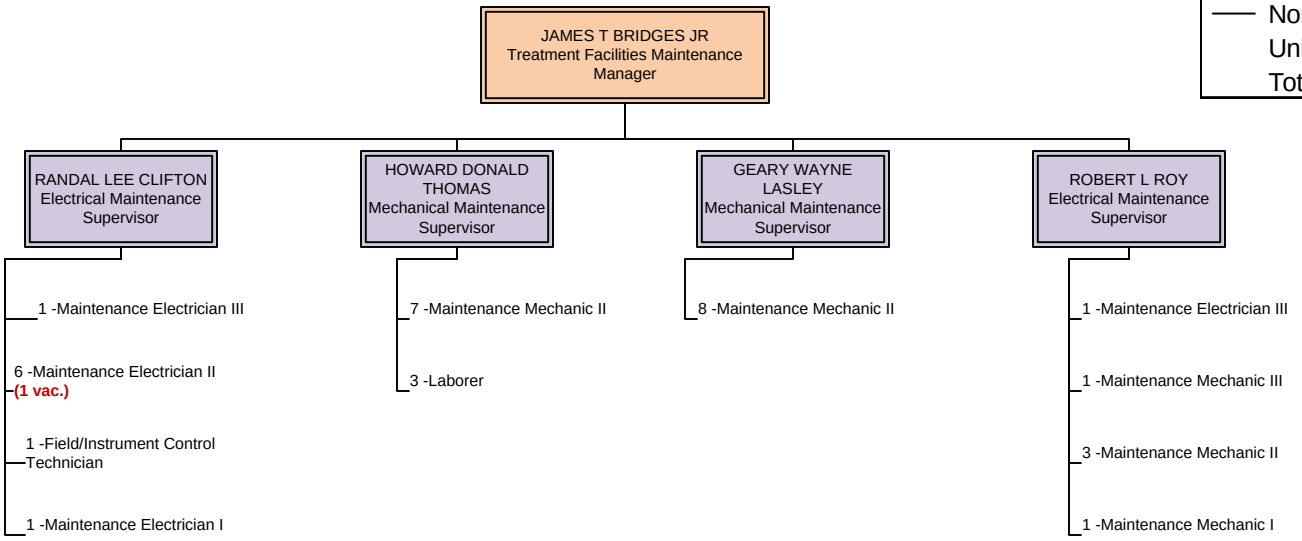
- **Vacant** — Research Chemist
- LISA MARGARET GOWIN — Chemist
- JACQUELINE C SHAVER — Laboratory Tech III
- NICOLE V DESHURKO — Laboratory Tech II
- KAITLIN GRACE CRAIG — Laboratory Tech II

- JOSEPH J FALLERI — Operations Project Specialist
- DAVID ROBERT RADKE JR — Quality Assurance Specialist
- RHONDA JO GREEN — Laboratory Technician IV
- HOUSTON L MATHES — Laboratory Tech II
- PHAEDRA A JONES — Laboratory Technician II
- ALICIA LEE RICKETTS — Laboratory Tech II
- SHEILA L EDWARDS — Laboratory Tech I

Executive Director | MSD C-Level | Director | Manager | Supervisor

Operations Division
Treatment Facilities (Maintenance)

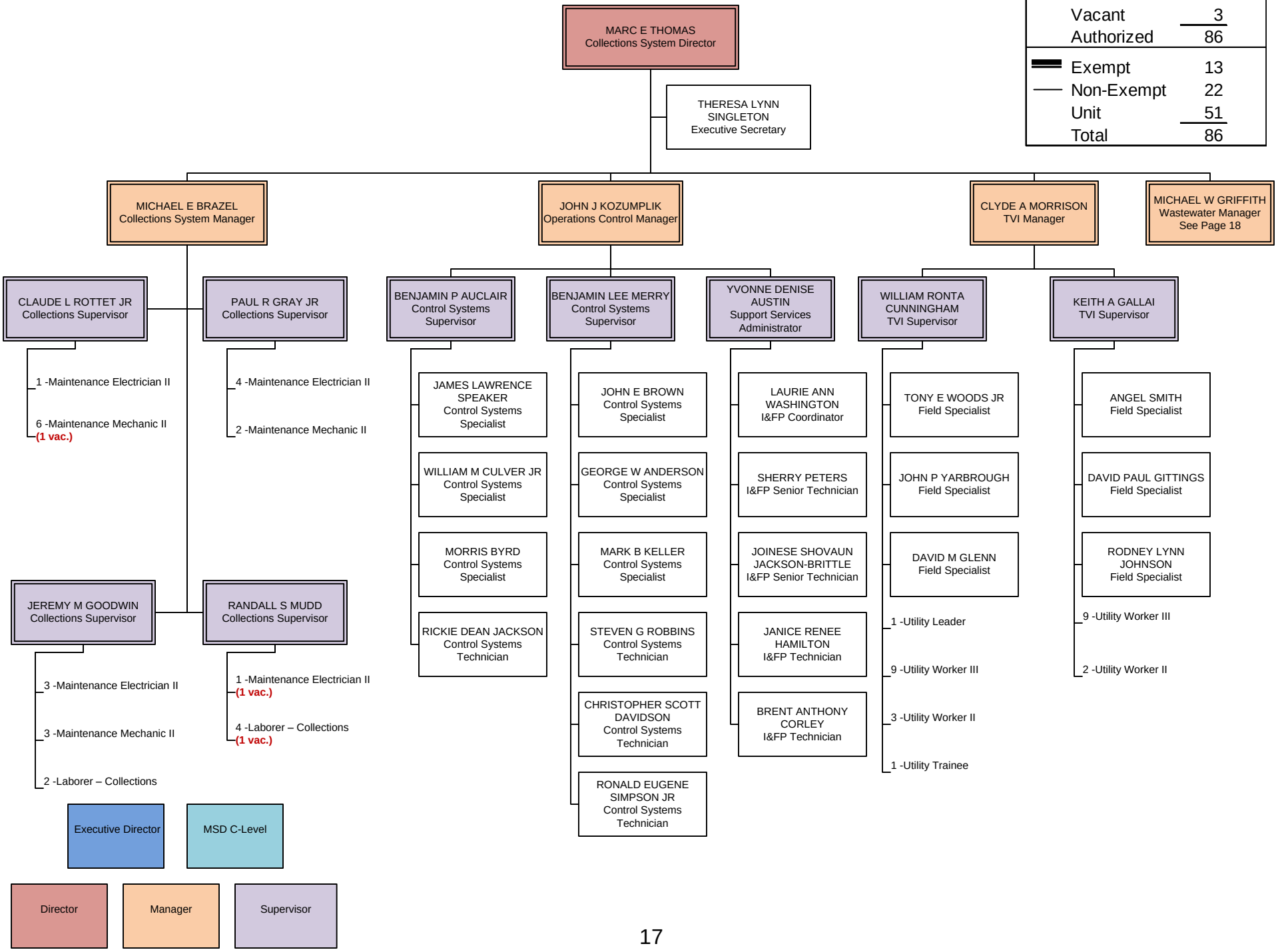
BUDGET STATUS	
Actual	37
Vacant	1
Authorized	38
Exempt	5
Non-Exempt	0
Unit	33
Total	38



Executive Director | MSD C-Level | Director | Manager | Supervisor

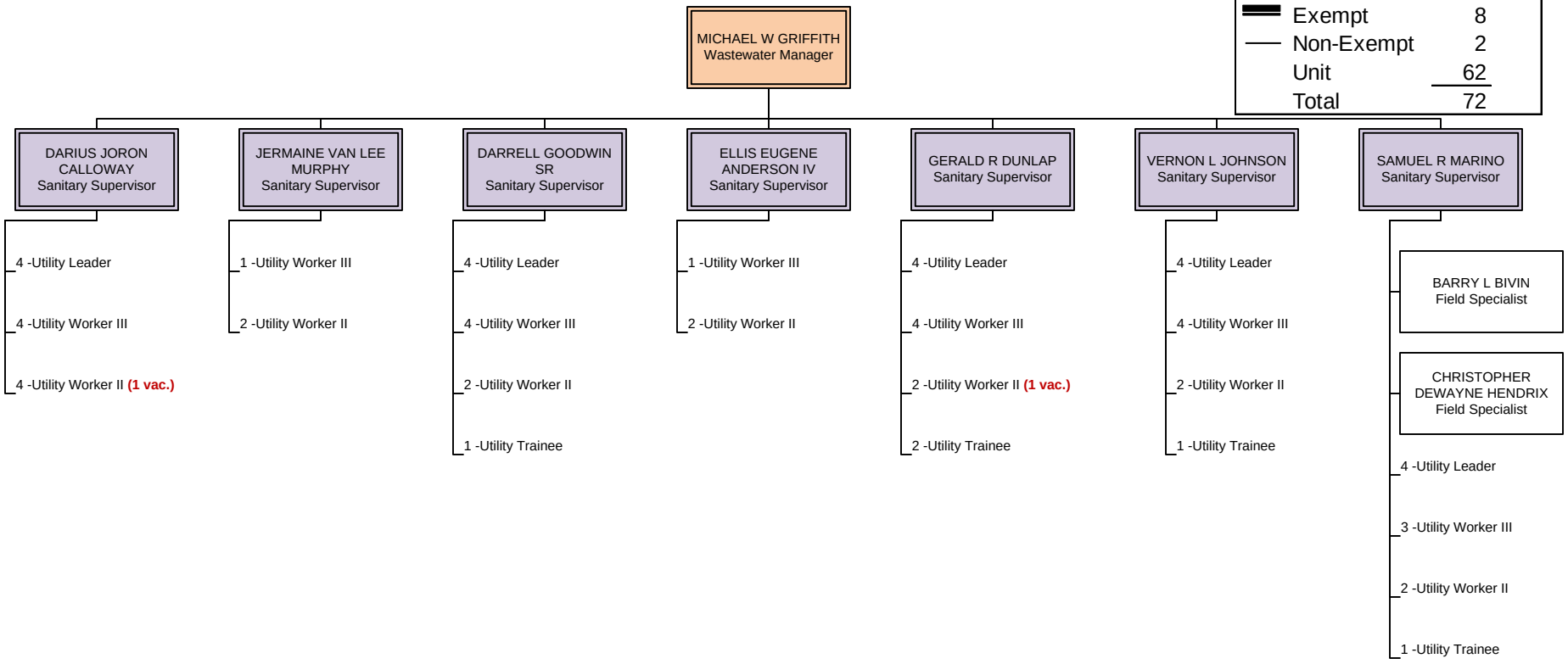
Operations Division
Collections System

BUDGET STATUS	
Actual	83
Vacant	3
Authorized	86
Exempt	13
Non-Exempt	22
Unit	51
Total	86



Operations Division
Collections System (Sanitary)

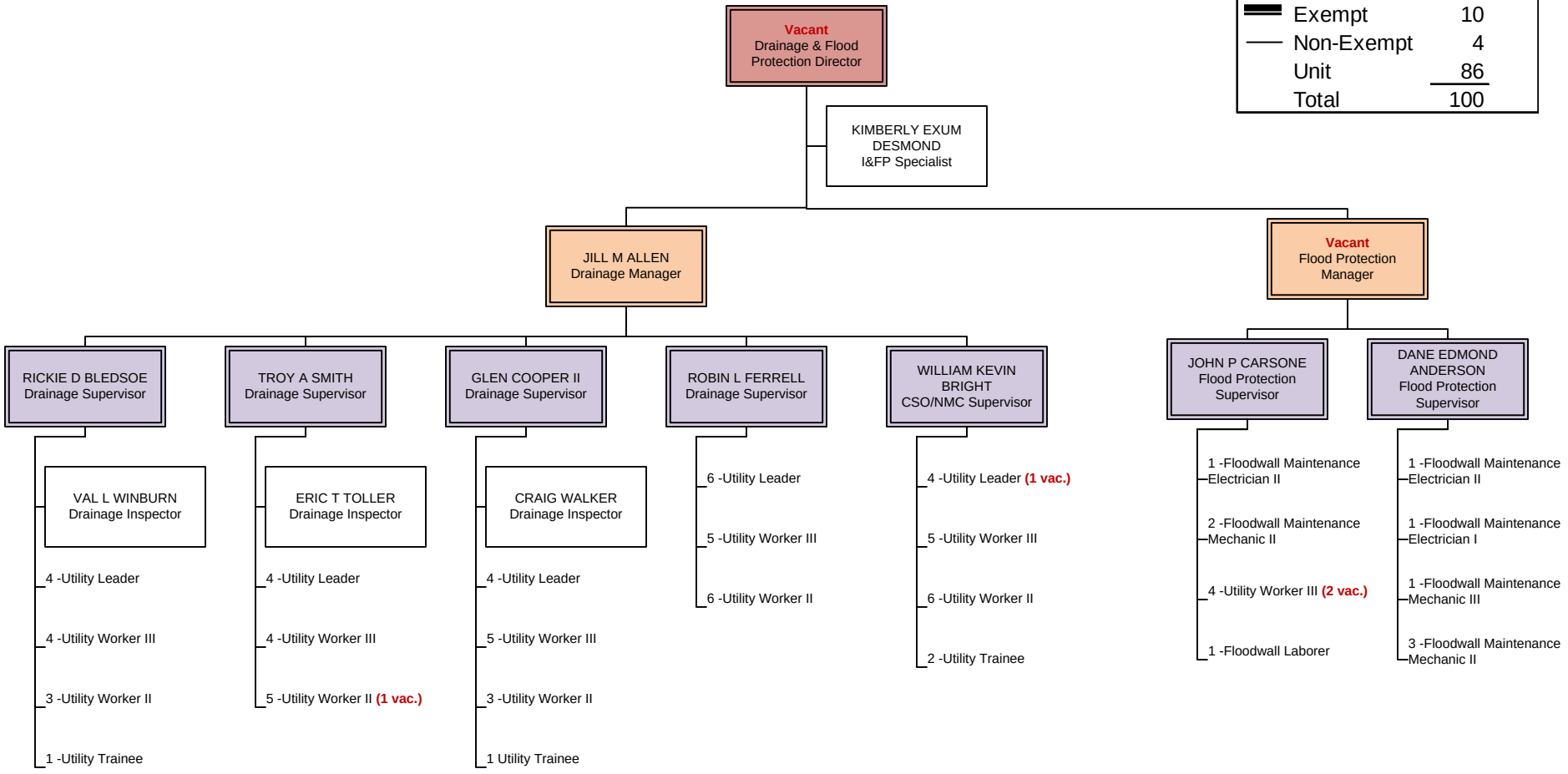
BUDGET STATUS	
Actual	70
Vacant	2
Authorized	72
Exempt	8
Non-Exempt	2
Unit	62
Total	72



Executive Director | MSD C-Level | Director | Manager | Supervisor

Operations Division
Drainage and Flood Protection

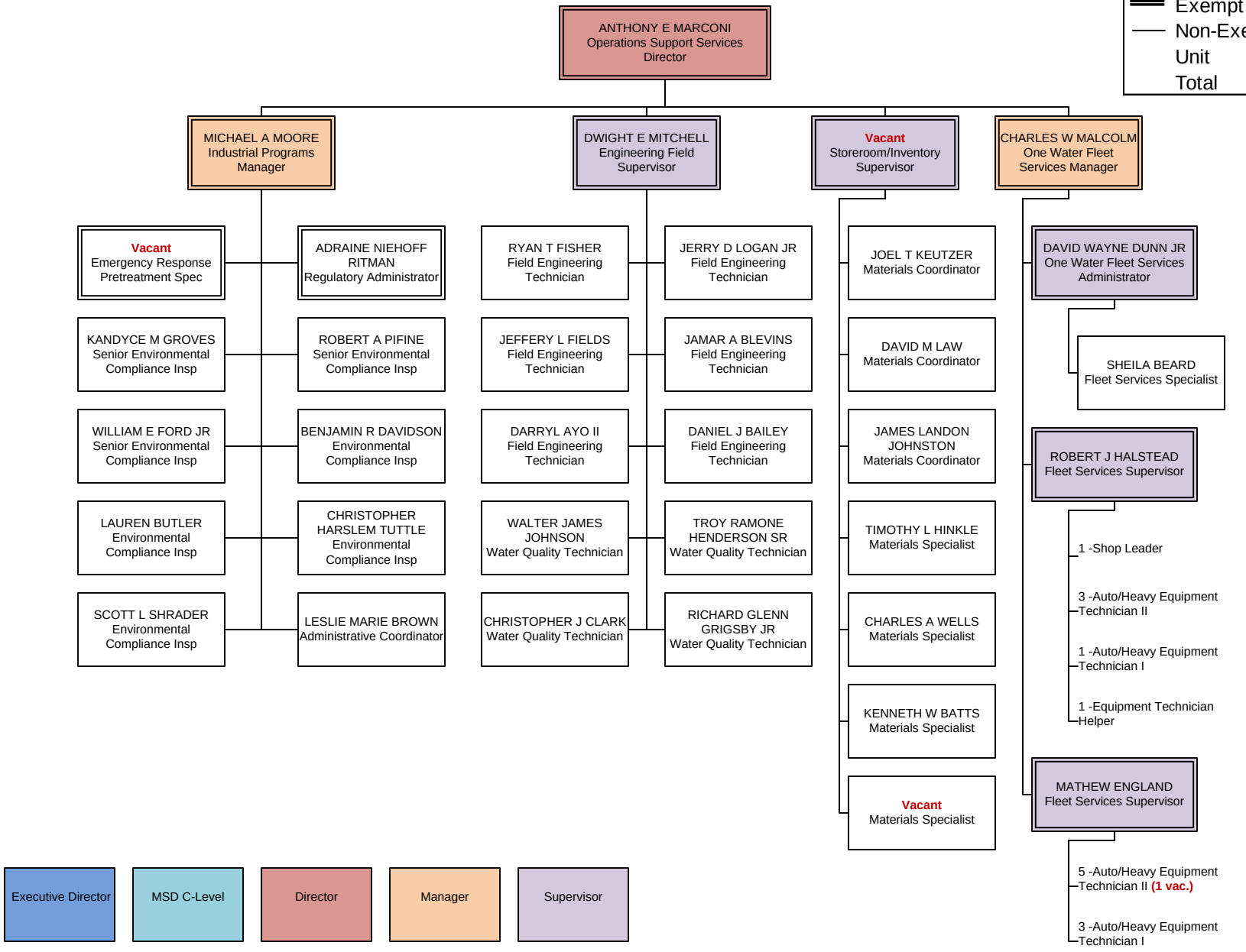
BUDGET STATUS	
Actual	94
Vacant	6
Authorized	100
Exempt	10
Non-Exempt	4
Unit	86
Total	100



Executive Director | MSD C-Level | Director | Manager | Supervisor

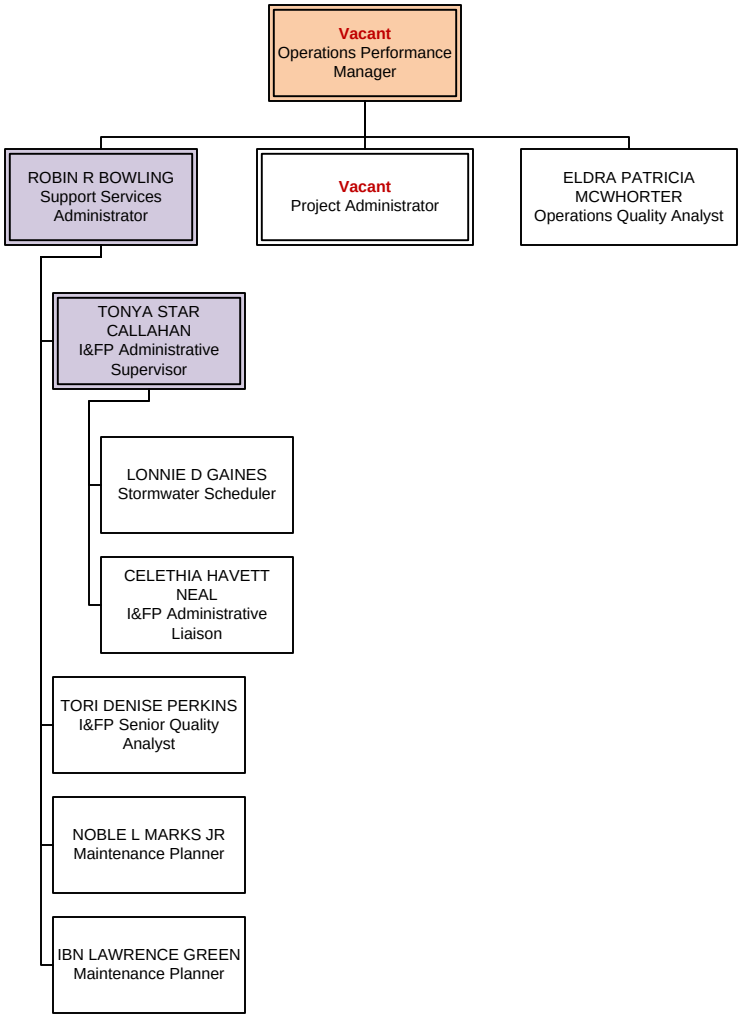
Operations Division
Support Services

BUDGET STATUS	
Actual	46
Vacant	4
Authorized	50
Exempt	10
Non-Exempt	26
Unit	14
Total	50



Operations Division
Performance Metrics

BUDGET STATUS	
Actual	8
Vacant	2
Authorized	10
Exempt	4
Non-Exempt	6
Unit	0
Total	10



Executive Director | MSD C-Level | Director | Manager | Supervisor

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Appendix H CSO Revised Historical Volume

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The data in this appendix includes updated CSO flow data developed through FY16 for the initial 33 CSOs identified as the highest priority to review, correct data, document SOPs, and implement changes, as well as two additional CSO locations included in the review due to interaction with priority CSOs.

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. 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). Historical data for all CSOs reviewed during this reporting period has been included in this appendix for consistency.

CSO	REVISION START DATE	REVISION END DATE
015	1/7/2007	6/30/2016
016	N/A	N/A
018	8/19/2006	6/30/2016
020	3/12/2010	6/30/2016
036	7/14/2012	6/30/2016
054	N/A	N/A
058	4/24/2010	6/30/2016
088	1/20/2010	6/30/2016
093	12/20/2011	6/30/2016
104	9/26/2012	6/30/2016
105	12/8/2009	6/30/2016
106	11/3/2011	6/30/2016
108	4/23/2011	6/30/2016
109	9/26/2012	6/30/2016
110	6/11/2009	6/30/2016
118	N/A	N/A
121	1/17/2010	6/30/2016
125	6/16/2009	6/30/2016
126	8/7/2011	6/30/2016
127	N/A	N/A
130	1/18/2011	6/30/2016
132	8/16/2007	6/30/2016
140	7/4/2006	6/30/2016
146	N/A	N/A
149	N/A	N/A
154	11/22/2011	6/30/2016
160	9/17/2012	6/30/2016
166	6/20/2009	6/30/2016
167	10/27/2011	6/30/2016
189	7/4/2006	6/30/2016
190	6/3/2006	6/30/2016
191	3/20/2006	6/30/2016
206	7/4/2009	6/30/2016
210	N/A	N/A
211	1/11/2012	6/30/2016

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CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**1/7/2007 13:45**	1/7/2007 23:15	**570**	Discharge						14,183,253	1
	2/6/2007 10:00	2/6/2007 10:00	**0**	Discharge						607	1
	2/9/2007 19:00	2/9/2007 19:00	**0**	Discharge						211,103	1
	2/10/2007 6:00	2/10/2007 6:00	**0**	Discharge						211,103	1
	2/11/2007 13:30	2/11/2007 13:30	**0**	Discharge						211,103	1
	2/12/2007 7:30	2/12/2007 7:30	**0**	Discharge						211,103	1
	2/12/2007 22:30	2/14/2007 2:30	**1680**	Discharge						72,161,773	1
	2/17/2007 3:45	2/17/2007 4:45	**60**	Discharge						422,206	1
	2/19/2007 7:15	2/19/2007 8:45	**90**	Discharge						422,206	1
	2/20/2007 9:45	2/20/2007 9:45	**0**	Discharge						211,103	1
	2/22/2007 17:00	2/22/2007 17:00	**0**	Discharge						248	1
	2/24/2007 19:45	2/25/2007 10:00	**855**	Discharge						70,129,083	1
	2/25/2007 20:45	2/25/2007 20:45	**0**	Discharge						12,172	1
	3/14/2007 16:15	3/14/2007 19:15	**180**	Discharge						8,744,329	1
	3/15/2007 6:30	3/15/2007 13:15	**405**	Discharge						1,418,038	1
	4/3/2007 18:00	4/3/2007 23:00	**300**	Discharge						26,681,578	1
	4/11/2007 9:45	4/11/2007 19:15	**570**	Discharge						15,868,370	1
	4/14/2007 5:15	4/15/2007 2:30	**1275**	Discharge						96,741,093	1
	4/16/2007 5:45	4/16/2007 5:45	**0**	Discharge						1,294	1
	4/26/2007 8:45	4/26/2007 17:45	**540**	Discharge						4,781,989	1
	5/3/2007 12:00	5/3/2007 15:45	**225**	Discharge						10,880,166	1
	5/4/2007 10:15	5/5/2007 3:15	**1020**	Discharge						43,360,297	1
	5/5/2007 12:45	5/5/2007 13:15	**30**	Discharge						715,581	1
	6/23/2007 19:45	6/23/2007 19:45	**0**	Discharge						216,804	1
	7/5/2007 5:15	7/5/2007 6:00	**45**	Discharge						2,518,794	1
	7/19/2007 17:15	7/19/2007 23:30	**375**	Discharge						37,597,737	1
	8/16/2007 17:30	8/16/2007 17:30	**0**	Discharge						917,809	1
	8/17/2007 21:45	8/17/2007 21:45	**0**	Discharge						211,103	1
	8/20/2007 5:30	8/20/2007 5:30	**0**	Discharge						211,103	1
	8/21/2007 9:00	8/21/2007 11:00	**120**	Discharge						28,803,742	1
	8/24/2007 5:15	8/24/2007 5:15	**0**	Discharge						2,301	1
	8/27/2007 13:45	8/27/2007 13:45	**0**	Discharge						918	1
	8/28/2007 12:00	8/28/2007 12:00	**0**	Discharge						211,103	1
	9/5/2007 5:15	9/5/2007 5:15	**0**	Discharge						211,103	1
	9/10/2007 6:30	9/10/2007 6:30	**0**	Discharge						211,103	1
	9/27/2007 5:30	9/27/2007 13:30	**480**	Discharge						57,697,971	1
	10/18/2007 7:00	10/18/2007 8:15	**75**	Discharge						6,593,840	1
	10/18/2007 23:00	10/19/2007 2:30	**210**	Discharge						20,589,748	1
	10/22/2007 5:30	10/24/2007 13:45	**3375**	Discharge						584,257,680	1
	10/29/2007 5:45	10/29/2007 5:45	**0**	Discharge						211,103	1
	11/25/2007 18:00	11/25/2007 18:00	**0**	Discharge						25,132	1
	11/26/2007 6:30	11/26/2007 6:30	**0**	Discharge						39,792	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**11/26/2007 15:00**	11/26/2007 16:45	**105**	Discharge						7,709,222	1
	12/2/2007 17:45	12/3/2007 6:30	**765**	Discharge						35,001,697	1
	12/9/2007 14:30	12/10/2007 12:45	**1335**	Discharge						46,844,377	1
	12/13/2007 5:30	12/15/2007 21:30	**3840**	Discharge						459,446,571	1
	12/16/2007 12:15	12/18/2007 20:45	**3390**	Discharge						495,714,716	1
	12/20/2007 11:00	12/21/2007	**780**	Discharge						16,811,047	1
	12/21/2007 11:15	12/21/2007 15:45	**270**	Discharge						699,232	1
	12/23/2007 5:00	12/23/2007 6:45	**105**	Discharge						3,257,373	1
	1/2/2008 6:15	1/2/2008 6:15	**0**	Discharge						7,535	1
	1/7/2008 6:30	1/7/2008 6:30	**0**	Discharge						4,769	1
	1/8/2008 21:00	1/9/2008 0:15	**195**	Discharge						13,554,080	1
	1/10/2008 15:15	1/11/2008 21:15	**1800**	Discharge						67,493,053	1
	1/22/2008 6:45	1/22/2008 6:45	**0**	Discharge						4,831	1
	1/29/2008 21:00	1/29/2008 22:30	**90**	Discharge						4,502,949	1
	2/5/2008 9:45	2/15/2008 21:45	**15120**	Discharge						8,671,474,977	1
	2/21/2008 4:15	2/21/2008 4:15	**0**	Discharge						15,552	1
	2/22/2008 7:30	2/22/2008 19:30	**720**	Discharge						21,129,279	1
	3/3/2008 22:30	3/17/2008 8:00	**19290**	Discharge						13,225,788,104	1
	3/18/2008 9:15	4/1/2008 23:00	**20985**	Discharge						14,018,329,573	1
	4/3/2008 12:30	4/10/2008 4:45	**9615**	Discharge						5,991,132,699	1
	4/11/2008 4:30	4/11/2008 18:45	**855**	Discharge						47,575,525	1
	4/12/2008 15:30	4/12/2008 16:00	**30**	Discharge						654,609	1
	4/26/2008 15:45	4/26/2008 15:45	**0**	Discharge						450,828	1
	5/2/2008 15:15	5/3/2008 18:00	**1605**	Discharge						164,440,825	1
	5/5/2008 10:45	5/5/2008 10:45	**0**	Discharge						218,939	1
	5/14/2008 8:00	5/14/2008 12:15	**255**	Discharge						19,238,030	1
	5/15/2008 17:15	5/19/2008 4:15	**4980**	Discharge						3,090,147,545	1
	6/3/2008 8:15	6/3/2008 8:45	**30**	Discharge						7,599,056	1
	7/28/2008 9:30	7/28/2008 10:30	**60**	0.26	**28,771,573**	0.31	**0.21**	1	Atlas	7,480,609	1
	7/30/2008 10:30	7/30/2008 11:15	**45**	1.06	**4,373,090**	0.63	**0.41**	24	Atlas	4,635,475	1
	7/31/2008 1:45	7/31/2008 6:15	**270**	1.06	**34,934,640**	1.33	**0.41**	24	Atlas	37,030,719	1
	10/8/2008 4:15	10/8/2008 4:30	**15**	1.43	**3,097,284**	1.41	**0.55**	24	Atlas	4,429,116	1
	10/24/2008 5:15	10/24/2008 17:00	**705**	1.4	**22,911,207**	1.41	**0.64**	12	Atlas	32,075,690	1
	11/5/2008 9:30	11/5/2008 11:15	**105**	Discharge						2,592,236	1
	12/1/2008 7:45	12/1/2008 8:00	**15**	0.2	**2,393,391**	0.34	**0.06**	48	Atlas	478,678	1
	12/3/2008 11:30	12/3/2008 12:30	**60**	Discharge						1,053,314	1
	12/4/2008 6:30	12/4/2008 7:00	**30**	0.34	**1,459,966**	0.59	**0.17**	1	Atlas	496,388	1
	12/5/2008 2:30	12/5/2008 3:15	**45**	Discharge						902,058	1
	12/6/2008 2:45	12/6/2008 3:45	**60**	Discharge						1,127,573	1
	12/6/2008 18:00	12/6/2008 20:00	**120**	Discharge						676,544	1
	12/9/2008 14:15	12/9/2008 19:45	**330**	1.19	**26,072,416**	1.48	**0.57**	6	Atlas	31,026,175	1
	12/19/2008 10:00	12/19/2008 11:15	**75**	0.48	**16,588,148**	0.89	**0.27**	3	Atlas	7,962,311	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**12/24/2008 3:30**	12/25/2008 4:15	**1485**	2.19	**70,446,365**	2.8	**0.75**	24	Atlas	154,277,540	1
	12/28/2008 2:15	12/28/2008 5:15	**180**	0.62	**26,463,730**	2.82	**0.41**	3	Atlas	16,407,513	1
	12/31/2008 8:45	12/31/2008 8:45	**0**	Discharge						1,730,264	1
	1/28/2009 3:15	1/28/2009 19:00	**945**	1.43	**27,070,268**	1.53	**0.47**	24	Atlas	38,710,484	1
	2/1/2009 17:00	2/1/2009 22:00	**300**	Discharge						9,964,801	1
	2/11/2009 5:30	2/11/2009 23:30	**1080**	0.85	**44,059,610**	1.01	**0.28**	48	Atlas	37,450,669	1
	2/12/2009 12:30	2/12/2009 13:15	**45**	Discharge						758,224	1
	2/27/2009 4:00	2/27/2009 12:30	**510**	0.91	**63,086,507**	1.46	**0.51**	3	Atlas	57,408,721	1
	4/2/2009 21:15	4/3/2009 7:00	**585**	1.07	**44,773,453**	1.81	**0.49**	3	Atlas	47,907,595	1
	4/13/2009 21:30	4/14/2009 0:15	**165**	0.8	**26,002,784**	1.33	**0.32**	12	Atlas	20,802,227	1
	4/19/2009 12:45	4/20/2009 6:45	**1080**	1.52	**42,554,467**	2.3	**0.60**	12	Atlas	64,682,790	1
	5/6/2009 12:45	5/6/2009 14:45	**120**	Discharge						6,483,770	1
	5/8/2009 5:30	5/9/2009 9:15	**1665**	Discharge						719,338,640	1
	6/3/2009 4:30	6/3/2009 7:00	**150**	0.06	**41,344,340**	0.09	**0.04**	1	Atlas	2,480,660	1
	6/4/2009 7:00	6/4/2009 7:00	**0**	0.22	**1,025,066**	0.14	**0.10**	12	Atlas	225,515	1
	6/10/2009 12:15	6/10/2009 14:00	**105**	1.1	**18,423,102**	1.41	**0.61**	3	Atlas	20,265,412	1
	6/11/2009 3:15	6/11/2009 6:00	**165**	1.59	**16,282,499**	2	**0.61**	24	Atlas	25,889,174	1
	6/11/2009 17:30	6/12/2009 0:45	**435**	1.59	**54,100,160**	2.76	**0.61**	24	Atlas	86,019,255	1
	6/15/2009 16:45	6/15/2009 19:00	**135**	0.27	**38,418,706**	3.18	**0.20**	1	Atlas	10,373,051	1
	6/18/2009 10:15	6/19/2009 22:00	**2145**	0.69	**542,250,846**	2.9	**0.43**	3	Atlas	374,153,084	1
	6/22/2009 10:15	6/22/2009 18:00	**465**	0.59	**66,240,636**	2.6	**0.35**	3	Atlas	39,081,975	1
	6/26/2009 3:15	6/26/2009 11:00	**465**	1.79	**59,508,459**	2.69	**0.95**	3	Atlas	106,520,141	1
	7/17/2009 5:15	7/17/2009 5:30	**15**	0.59	**1,766,783**	1.23	**0.39**	3	Atlas	1,042,402	1
	7/22/2009 9:45	7/22/2009 16:30	**405**	1.88	**15,979,367**	2.99	**0.82**	12	Atlas	30,041,210	1
	7/29/2009 4:45	7/29/2009 11:30	**405**	1.2	**111,136,098**	3.18	**0.51**	12	Atlas	133,363,318	1
	7/29/2009 19:45	7/29/2009 20:45	**60**	1.2	**4,135,291**	1.75	**0.51**	12	Atlas	4,962,349	1
	8/4/2009 8:15	8/5/2009 11:00	**1605**	5.76	**72,308,922**	7.79				416,499,391	1
	8/10/2009 19:45	8/10/2009 20:30	**45**	0.83	**17,518,121**	6.54	**0.52**	3	Atlas	14,540,040	1
	9/20/2009 9:00	9/21/2009 14:45	**1785**	2.82	**88,188,471**	2.83	**1.47**	24	Cloudburst	248,691,488	1
	9/24/2009 22:15	9/25/2009 1:30	**195**	0.92	**10,328,979**	3.93	**0.31**	24	Atlas	9,502,660	1
	9/26/2009 21:30	9/26/2009 22:15	**45**	0.36	**18,775,942**	4.43	**0.30**	1	Atlas	6,759,339	1
	10/2/2009 5:15	10/2/2009 7:45	**150**	0.86	**19,610,994**	1.34	**0.55**	3	Atlas	16,865,455	1
	10/5/2009 6:15	10/5/2009 7:00	**45**	Discharge						902,058	1
	10/8/2009 18:45	10/9/2009 13:45	**1140**	2	**53,410,186**	2.82	**0.66**	24	Atlas	106,820,371	1
	10/9/2009 22:15	10/9/2009 23:30	**75**	2	**1,755,649**	2.1	**0.66**	24	Atlas	3,511,299	1
	10/14/2009 7:30	10/14/2009 8:00	**30**	0.61	**7,890,418**	2.61	**0.40**	3	Atlas	4,813,155	1
	10/27/2009 22:00	10/28/2009 2:30	**270**	1.14	**35,555,639**	1.81	**0.51**	12	Atlas	40,533,429	1
	10/30/2009 22:15	10/31/2009 9:45	**690**	1.03	**45,588,098**	2.19	**0.46**	12	Atlas	46,955,741	1
	11/6/2009 7:45	11/6/2009 12:45	**300**	Discharge						4,735,806	1
	12/8/2009 19:00	12/9/2009 1:15	**375**	2.11	**24,896,929**	2.24	**0.85**	12	Atlas	52,532,521	1
	1/20/2010 15:45	1/20/2010 15:45	**0**	0.39	**532,666**	0.62	**0.20**	6	Atlas	207,740	1
	1/21/2010 15:00	1/22/2010 3:45	**765**	1.02	**49,321,226**	1.64	**0.39**	24	Atlas	50,307,651	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**1/24/2010 5:45**	1/25/2010 2:45	**1260**	0.87	**48,549,913**	2.47	**0.33**	24	Atlas	42,238,425	1
	2/5/2010 14:00	2/6/2010 2:45	**765**	1.18	**37,793,206**	1.33	**0.43**	24	Atlas	44,595,983	1
	4/8/2010 4:00	4/8/2010 7:15	**195**	1.26	**17,423,047**	1.39	**0.61**	6	Atlas	21,953,039	1
	4/24/2010 15:00	4/24/2010 22:30	**450**	1.54	**53,090,615**	1.76	**0.73**	6	Atlas	81,759,547	1
	5/1/2010 5:30	5/3/2010 10:45	**3195**	4.43	**165,576,249**	6.42	**4.55**	48	Atlas	733,502,784	1
	5/12/2010 9:45	5/12/2010 10:45	**60**	0.84	**23,838,696**	1.21	**0.61**	1	Atlas	20,024,504	1
	5/14/2010 14:15	5/14/2010 14:15	**0**	Discharge						222,993	1
	5/21/2010 20:15	5/22/2010 9:15	**780**	0.78	**64,777,305**	1.3	**0.61**	1	Atlas	50,526,298	1
	6/9/2010 5:15	6/9/2010 17:00	**705**	1.55	**63,314,138**	1.73	**0.73**	3	Atlas	98,136,913	1
	6/19/2010 6:30	6/19/2010 8:15	**105**	0.55	**11,033,718**	1.4	**0.32**	3	Atlas	6,068,545	1
	7/13/2010 6:15	7/13/2010 11:00	**285**	1.5	**30,537,662**	1.94	**0.80**	3	Atlas	45,806,493	1
	7/20/2010 5:15	7/20/2010 6:15	**60**	0.63	**55,404,727**	1.37	**0.38**	1	Atlas	34,904,978	1
	7/31/2010 5:00	7/31/2010 6:15	**75**	0.66	**24,841,766**	0.77	**0.37**	3	Atlas	16,395,566	1
	8/14/2010 17:15	8/14/2010 18:15	**60**	0.3	**23,354,339**	0.41	**0.24**	1	Atlas	7,006,302	1
	11/16/2010 16:15	11/16/2010 20:00	**225**	0.82	**11,162,860**	0.89	**0.37**	12	Atlas	9,153,545	1
	11/24/2010 14:30	11/24/2010 15:45	**75**	0.65	**5,683,675**	1.03	**0.31**	3	Atlas	3,694,389	1
	11/25/2010 11:15	11/26/2010 2:00	**885**	2.43	**51,209,227**	3.36	**0.92**	24	Atlas	124,438,421	1
	11/30/2010 2:00	11/30/2010 15:00	**780**	1.92	**25,864,431**	5.17	**0.74**	24	Atlas	49,659,708	1
	1/1/2011 9:30	1/1/2011 10:15	**45**	0.64	**2,020,871**	1.18	**0.28**	12	Atlas	1,293,357	1
	2/1/2011 19:30	2/1/2011 20:15	**45**	0.94	**15,314,756**	0.84	**0.34**	6	Atlas	14,395,871	1
	2/24/2011 21:00	2/25/2011 23:30	**1590**	2.48	**130,823,619**	2.67	**0.98**	12	Atlas	324,442,575	1
	2/28/2011 5:45	3/1/2011 6:30	**1485**	1.04	**495,924,082**	3.68	**0.42**	6	Atlas	515,761,046	1
	3/5/2011 12:15	3/6/2011 7:30	**1155**	0.9	**27,112,804**	1.94	**0.31**	24	Atlas	24,401,524	1
	3/9/2011 0:30	3/11/2011 14:00	**3690**	2.96	**155,058,080**	3.88	**1.74**	12	Cloudburst	458,971,916	1
	3/14/2011 14:45	3/15/2011 19:45	**1740**	0.75	**41,928,649**	3.73	**0.25**	12	Atlas	31,446,487	1
	4/4/2011 16:15	4/4/2011 17:30	**75**	0.63	**13,662,352**	0.76	**0.32**	6	Atlas	8,607,282	1
	4/9/2011 11:30	4/9/2011 17:15	**345**	0.43	**141,966,471**	1.11	**0.29**	3	Atlas	61,045,583	1
	4/11/2011 16:45	4/13/2011 19:15	**3030**	3.12	**117,214,018**	3.6	**2.12**	24	Cloudburst	365,707,736	1
	4/14/2011 4:00	4/14/2011 14:45	**645**	Discharge						7,799,642	1
	4/20/2011 3:45	4/20/2011 7:00	**195**	0.76	**24,928,173**	1.1	**0.42**	6	Atlas	18,945,412	1
	4/23/2011 1:00	4/28/2011 7:30	**7590**	4.67	**320,703,086**	7.6	**2.33**	48	Cloudburst	1,497,683,410	1
	4/28/2011 16:00	4/29/2011 3:00	**660**	Discharge						39,999,350	1
	4/30/2011 6:45	4/30/2011 19:30	**765**	Discharge						10,339,108	1
	5/1/2011 6:00	5/6/2011 5:45	**7185**	3.3	**351,334,634**	6.69				1,159,404,291	1
	5/21/2011 19:00	5/21/2011 22:00	**180**	0.61	**43,595,527**	0.88	**0.43**	1	Atlas	26,593,272	1
	5/23/2011 18:00	5/24/2011 6:00	**720**	0.78	**110,156,065**	1.92	**0.49**	3	Atlas	85,921,731	1
	5/25/2011 23:30	5/27/2011 4:15	**1725**	1.33	**102,012,425**	3.24	**0.63**	3	Atlas	135,676,525	1
	6/15/2011 9:45	6/15/2011 10:45	**60**	0.9	**16,891,807**	1.11	**0.55**	3	Atlas	15,202,626	1
	6/18/2011 6:30	6/18/2011 10:00	**210**	0.78	**34,592,311**	1.72	**0.47**	3	Atlas	26,982,003	1
	6/19/2011 8:30	6/19/2011 10:15	**105**	0.77	**13,662,315**	2.47	**0.48**	3	Atlas	10,519,983	1
	6/20/2011 2:15	6/20/2011 4:30	**135**	0.67	**36,488,595**	3.14	**0.57**	1	Atlas	24,447,358	1
	6/22/2011 21:00	6/23/2011 14:00	**1020**	3.08	**58,818,738**	5.58	**9.44**	3	Atlas	181,161,714	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**7/12/2011 17:45**	7/12/2011 17:45	**0**	0.29	**1,557,429**	0.99	**0.15**	6	Atlas	451,654	1
	7/19/2011 23:15	7/20/2011 0:30	**75**	1.19	**30,645,451**	1.2	**1.00**	1	Atlas	36,468,087	1
	8/7/2011 3:30	8/7/2011 6:15	**165**	1.33	**39,886,617**	1.34	**0.75**	3	Atlas	53,049,201	1
	8/13/2011 17:15	8/13/2011 18:15	**60**	0.77	**12,891,387**	2.47	**0.56**	1	Atlas	9,926,368	1
	9/23/2011 8:30	9/23/2011 9:00	**30**	0.75	**2,296,285**	1.48	**0.34**	12	Atlas	1,722,214	1
	9/26/2011	9/26/2011 10:30	**630**	3.68	**57,050,198**	5.21	**9.52**	12	Cloudburst	209,944,730	1
	10/27/2011 0:30	10/27/2011 14:15	**825**	1.01	**47,772,611**	1.35	**0.42**	12	Atlas	48,250,337	1
	11/14/2011 23:15	11/14/2011 23:45	**30**	1.88	**1,511,374**	0.44	**0.61**	48	Atlas	2,841,383	1
	11/15/2011 9:45	11/15/2011 16:15	**390**	1.88	**9,218,777**	1.44	**0.61**	48	Atlas	17,331,300	1
	11/16/2011 6:15	11/16/2011 13:00	**405**	1.88	**11,801,918**	1.9	**0.61**	48	Atlas	22,187,606	1
	11/22/2011 6:45	11/22/2011 16:30	**585**	1.72	**32,054,671**	2.98	**0.50**	48	Atlas	55,134,034	1
	11/27/2011 22:00	11/30/2011 5:15	**3315**	2.93	**88,678,175**	4.27	**0.91**	48	Atlas	259,827,053	1
	12/4/2011 19:15	12/7/2011 2:45	**3330**	3.12	**129,044,143**	5.38	**1.07**	48	Cloudburst	402,617,726	1
	12/21/2011 7:30	12/21/2011 8:15	**45**	0.67	**8,932,045**	1.27	**0.31**	12	Atlas	5,984,470	1
	12/22/2011 16:45	12/22/2011 18:45	**120**	0.51	**18,909,781**	1.17	**0.23**	12	Atlas	9,643,988	1
	12/27/2011 10:15	12/27/2011 17:15	**420**	0.63	**29,768,067**	1.82	**0.25**	12	Atlas	18,753,882	1
	1/11/2012 7:15	1/11/2012 12:00	**285**	0.9	**10,906,220**	0.79	**0.36**	12	Atlas	9,815,598	1
	1/17/2012 12:45	1/17/2012 13:45	**60**	0.45	**17,477,795**	1.47	**0.21**	12	Atlas	7,865,008	1
	1/23/2012 4:30	1/23/2012 5:45	**75**	0.66	**18,689,287**	1.13	**0.37**	3	Atlas	12,334,929	1
	1/26/2012 6:45	1/27/2012 23:30	**2445**	1.71	**78,565,092**	2.4	**0.57**	24	Atlas	134,346,307	1
	3/8/2012 14:00	3/8/2012 21:15	**435**	0.72	**35,757,155**	1.01	**0.34**	6	Atlas	25,745,152	1
	3/16/2012 0:15	3/16/2012 5:30	**315**	1.07	**34,251,627**	1.25	**0.48**	12	Atlas	36,649,241	1
	3/17/2012 21:15	3/18/2012 7:15	**600**	0.62	**73,687,526**	1.87	**0.33**	3	Atlas	45,686,266	1
	3/19/2012	3/19/2012 1:00	**60**	Discharge						1,173,382	1
	3/23/2012 12:00	3/24/2012 5:15	**1035**	1.51	**80,422,890**	2.13	**0.57**	24	Atlas	121,438,564	1
	4/1/2012 10:00	4/1/2012 17:45	**465**	1.11	**55,195,237**	1.24	**0.66**	3	Atlas	61,266,713	1
	4/28/2012 19:30	4/28/2012 20:45	**75**	0.68	**15,479,619**	0.74	**0.50**	1	Atlas	10,526,141	1
	5/5/2012 1:30	5/5/2012 6:45	**315**	1.32	**60,084,565**	2.46	**0.68**	6	Atlas	79,311,625	1
	5/13/2012 2:45	5/13/2012 18:30	**945**	2.01	**60,653,565**	2.06	**0.81**	3	Atlas	121,913,666	1
	5/29/2012 7:00	5/30/2012 0:30	**1050**	3.38	**38,159,328**	3.38	**38.46**	3	Cloudburst	128,978,528	1
	5/31/2012 18:45	6/1/2012 7:00	**735**	1.2	**41,328,949**	4.58	**0.52**	12	Atlas	49,594,739	1
	7/14/2012 14:00	7/14/2012 16:30	**150**	0.8	**55,645,252**	1.02	**0.47**	3	Atlas	44,516,202	1
	7/19/2012 17:45	7/20/2012 2:15	**510**	1.02	**66,310,689**	1.94	**0.77**	1	Atlas	67,636,903	1
	7/20/2012 16:00	7/20/2012 16:15	**15**	0.13	**41,673,199**	2.07	**0.11**	1	Atlas	5,417,516	1
	7/27/2012 20:30	7/27/2012 21:45	**75**	0.54	**14,639,543**	0.78	**0.43**	1	Atlas	7,905,353	1
	8/16/2012 22:45	8/17/2012 0:30	**105**	0.63	**12,162,948**	0.76	**0.35**	3	Atlas	7,662,657	1
	9/1/2012 15:15	9/1/2012 18:15	**180**	0.32	**40,566,779**	0.38	**0.17**	6	Atlas	12,981,369	1
	9/2/2012 14:45	9/2/2012 15:30	**45**	0.51	**6,859,119**	0.87	**0.24**	1	Atlas	3,498,150	1
	9/5/2012 15:30	9/5/2012 18:45	**195**	0.75	**58,278,697**	1.65	**0.57**	1	Atlas	43,709,022	1
	9/8/2012 0:15	9/8/2012 7:30	**435**	1.92	**17,022,256**	3.54	**1.67**	3	Atlas	32,682,731	1
	9/26/2012 23:00	9/27/2012 1:30	**150**	1.12	**36,477,176**	1.98	**0.61**	3	Atlas	40,854,437	1
	10/1/2012 19:00	10/1/2012 19:45	**45**	0.64	**10,264,115**	2.6	**0.25**	6	Atlas	6,569,034	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**10/23/2012 8:45**	10/23/2012 10:00	**75**	Discharge						1,336,796	1
	12/7/2012 6:00	12/9/2012 9:30	**3090**	0.92	**99,651,886**	2.1	**0.44**	6	Atlas	91,679,735	1
	12/9/2012 22:30	12/10/2012 8:30	**600**	1.28	**66,589,427**	3.06	**0.63**	3	Atlas	85,234,467	1
	12/20/2012 10:45	12/20/2012 13:15	**150**	0.68	**22,532,982**	0.9	**0.33**	6	Atlas	15,322,428	1
	12/26/2012 6:30	12/26/2012 15:45	**555**	0.88	**34,024,196**	1.61	**0.34**	24	Atlas	29,941,292	1
	1/11/2013 8:00	1/11/2013 11:00	**180**	0.58	**4,931,772**	0.8	**0.31**	3	Atlas	2,860,428	1
	1/13/2013 4:15	1/14/2013 15:15	**2100**	2.24	**115,532,821**	3.03	**0.86**	24	Atlas	258,793,518	1
	1/22/2013 20:15	1/22/2013 20:15	**0**	Discharge						2,268,611	1
	1/28/2013 8:30	1/28/2013 8:30	**0**	0.22	**1,025,066**	0.24	**0.10**	6	Atlas	225,515	1
	1/30/2013 5:00	1/30/2013 14:00	**540**	0.9	**25,344,317**	1.16	**0.45**	6	Atlas	22,809,885	1
	3/11/2013 6:00	3/11/2013 14:15	**495**	1.03	**53,257,385**	1.55	**0.41**	12	Atlas	54,855,106	1
	3/17/2013 14:45	3/18/2013 18:00	**1635**	1.78	**81,356,167**	2.82	**0.58**	48	Atlas	144,813,977	1
	3/19/2013 10:15	3/19/2013 11:45	**90**	Discharge						1,430,789	1
	4/11/2013 8:00	4/11/2013 8:30	**30**	1.17	**3,466,034**	0.43	**0.45**	24	Atlas	4,055,260	1
	4/11/2013 17:30	4/12/2013 2:45	**555**	1.17	**13,247,448**	1.17	**0.45**	24	Atlas	15,499,514	1
	4/16/2013 22:15	4/16/2013 22:45	**30**	0.45	**3,730,168**	1.58	**0.35**	1	Atlas	1,678,575	1
	4/19/2013 3:00	4/19/2013 6:00	**180**	0.87	**60,437,550**	1.33	**0.48**	6	Atlas	52,580,668	1
	4/24/2013 9:15	4/24/2013 11:00	**105**	0.7	**25,738,931**	1.66	**0.39**	3	Atlas	18,017,252	1
	5/4/2013 15:30	5/5/2013 10:00	**1110**	1.66	**28,487,509**	1.66	**0.53**	24	Atlas	47,289,265	1
	5/10/2013 15:00	5/11/2013 1:45	**645**	1.02	**31,949,352**	2.83	**0.45**	6	Atlas	32,588,339	1
	6/17/2013 23:00	6/18/2013 0:45	**105**	0.34	**6,322,651**	0.66	**0.18**	3	Atlas	2,149,701	1
	6/26/2013 17:00	6/27/2013 1:00	**480**	1.6	**115,264,573**	2.19	**0.84**	1	Atlas	184,423,317	1
	6/28/2013 11:45	6/28/2013 12:45	**60**	Discharge						1,055,515	1
	6/29/2013 22:30	6/29/2013 22:45	**15**	0.59	**3,744,103**	2.77	**0.33**	3	Atlas	2,209,021	1
	7/1/2013 20:00	7/1/2013 20:15	**15**	0.27	**5,869,902**	2.9	**0.11**	12	Atlas	1,584,874	1
	7/6/2013 4:45	7/6/2013 9:45	**300**	0.46	**27,680,214**	1.94	**0.20**	12	Atlas	12,732,899	1
	7/10/2013 15:00	7/10/2013 16:00	**60**	0.46	**3,323,324**	1.54	**0.36**	1	Atlas	1,528,729	1
	7/21/2013 20:45	7/21/2013 22:00	**75**	2.65	**2,163,950**	1.9	**1.93**	3	Atlas	5,734,468	1
	7/22/2013 8:00	7/22/2013 16:15	**495**	2.65	**35,622,498**	2.8	**1.93**	3	Atlas	94,399,621	1
	8/9/2013 17:45	8/9/2013 18:45	**60**	0.11	**98,274,247**	0.15	**0.06**	1	Atlas	10,810,167	1
	8/12/2013 15:15	8/12/2013 16:15	**60**	1.12	**14,467,449**	1.15	**0.63**	1	Atlas	16,203,542	1
	8/13/2013 4:30	8/13/2013 5:00	**30**	1.12	**3,012,364**	1.36	**0.63**	1	Atlas	3,373,847	1
	8/26/2013 12:45	8/26/2013 14:00	**75**	Discharge						1,127,573	1
	8/31/2013 21:30	9/1/2013 4:45	**435**	1.14	**4,307,164**	1.14	**0.52**	12	Atlas	4,910,167	1
	9/2/2013 15:15	9/2/2013 16:00	**45**	0.68	**6,603,071**	1.82	**0.59**	1	Atlas	4,490,088	1
	9/10/2013 11:30	9/10/2013 12:00	**30**	Discharge						1,833,844	1
	9/20/2013 20:15	9/21/2013 6:30	**615**	2.06	**23,896,571**	2.07	**0.86**	12	Atlas	49,226,937	1
	10/4/2013 19:15	10/4/2013 20:15	**60**	0.2	**10,949,960**	0.26	**0.17**	1	Atlas	2,189,992	1
	10/5/2013 13:00	10/6/2013 19:30	**1830**	4.54	**164,899,400**	4.8	**10.13**	24	Cloudburst	748,643,274	1
	10/30/2013 5:15	10/30/2013 10:15	**300**	1.32	**44,418,686**	1.33	**0.67**	6	Atlas	58,632,666	1
	10/31/2013 22:15	11/1/2013	**105**	0.88	**5,613,089**	2.2	**0.36**	12	Atlas	4,939,518	1
	11/17/2013 7:00	11/17/2013 20:15	**795**	2.65	**117,296,758**	2.87	**2.12**	6	Cloudburst	310,836,408	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**11/26/2013 8:30**	11/26/2013 12:30	**240**	0.05	**71,774,992**	0.17	**0.02**	12	Atlas	3,588,750	1
	12/14/2013 12:00	12/14/2013 14:15	**135**	0.78	**7,309,182**	1.27	**0.32**	6	Atlas	5,701,162	1
	12/21/2013 9:00	12/22/2013 16:15	**1875**	1.37	**207,249,477**	3.27	**0.63**	12	Atlas	283,931,783	1
	1/5/2014 19:15	1/5/2014 21:00	**105**	0.48	**22,809,977**	0.75	**0.24**	3	Atlas	10,948,789	1
	1/11/2014 2:15	1/11/2014 7:00	**285**	0.85	**47,038,345**	1.35	**0.45**	6	Atlas	39,982,593	1
	2/4/2014 21:00	2/5/2014 9:30	**750**	0.67	**134,279,366**	1.29	**0.33**	6	Atlas	89,967,175	1
	2/17/2014 17:00	2/17/2014 22:15	**315**	0.62	**44,713,483**	0.89	**0.39**	3	Atlas	27,722,360	1
	3/2/2014 12:00	3/2/2014 12:30	**30**	0.51	**7,242,807**	0.28	**0.19**	24	Atlas	3,693,831	1
	3/29/2014 8:15	3/29/2014 14:00	**345**	0.89	**22,872,482**	1.22	**0.41**	12	Atlas	20,356,509	1
	4/3/2014 13:30	4/5/2014 3:00	**2250**	2.77	**133,193,592**	3.99	**0.95**	24	Atlas	368,946,249	1
	4/7/2014 11:45	4/7/2014 21:00	**555**	1.11	**55,736,349**	3.95	**0.76**	1	Atlas	61,867,347	1
	4/14/2014 22:30	4/15/2014 3:00	**270**	0.61	**13,836,039**	1.12	**0.29**	6	Atlas	8,439,984	1
	4/23/2014 10:00	4/23/2014 13:15	**195**	Discharge						2,956,624	1
	4/28/2014 5:15	4/28/2014 21:00	**945**	1.81	**53,623,202**	1.96	**0.73**	3	Atlas	97,057,996	1
	5/9/2014 20:00	5/10/2014 17:15	**1275**	2.04	**28,547,644**	2.11	**0.78**	24	Atlas	58,237,194	1
	5/14/2014 19:30	5/15/2014 2:15	**405**	1.13	**22,422,596**	3.28	**0.42**	24	Atlas	25,337,533	1
	5/22/2014 4:00	5/22/2014 5:00	**60**	0.36	**43,729,327**	0.47	**0.23**	1	Atlas	15,742,558	1
	5/28/2014 20:00	5/28/2014 22:30	**150**	0.28	**70,195,080**	0.64	**0.23**	1	Atlas	19,654,622	1
	5/29/2014 21:30	5/29/2014 21:45	**15**	0.27	**8,982,890**	0.55	**0.23**	1	Atlas	2,425,380	1
	7/13/2014 23:15	7/14/2014 1:00	**105**	0.75	**29,303,989**	0.88	**0.44**	1	Atlas	21,977,992	1
	7/26/2014 22:00	7/27/2014 10:00	**720**	1.1	**43,804,240**	1.13	**0.50**	12	Atlas	48,184,664	1
	8/8/2014 6:00	8/8/2014 9:00	**180**	0.77	**118,271,562**	0.63	**0.38**	6	Atlas	91,069,103	1
	8/11/2014 19:15	8/11/2014 20:00	**45**	0.32	**34,609,491**	1.81	**0.17**	6	Atlas	11,075,037	1
	8/23/2014 20:15	8/23/2014 22:30	**135**	0.85	**37,607,684**	1.77	**0.41**	6	Atlas	31,966,532	1
	8/25/2014 9:00	8/25/2014 11:00	**120**	Discharge						1,789,709	1
	8/30/2014 15:15	8/30/2014 16:45	**90**	0.71	**4,901,948**	1.76	**0.42**	1	Atlas	3,480,383	1
	9/11/2014 1:30	9/11/2014 10:30	**540**	1.71	**113,855,758**	1.72	**0.95**	3	Atlas	194,693,347	1
	9/18/2014 7:30	9/18/2014 9:45	**135**	Discharge						2,111,029	1
	10/10/2014 3:30	10/10/2014 4:00	**30**	0.92	**5,284,950**	1.35	**0.36**	3	Atlas	4,862,154	1
	10/13/2014 7:30	10/13/2014 8:15	**45**	0.56	**3,251,118**	1.98	**0.36**	3	Atlas	1,820,626	1
	10/14/2014 0:30	10/14/2014 11:45	**675**	1.55	**27,954,786**	3.24	**0.68**	12	Atlas	43,329,918	1
	11/23/2014 19:00	11/23/2014 21:15	**135**	0.96	**31,158,034**	1.23	**0.41**	6	Atlas	29,911,713	1
	11/24/2014 6:00	11/24/2014 8:00	**120**	0.96	**2,114,087**	1.02	**0.41**	6	Atlas	2,029,523	1
	12/6/2014 0:45	12/6/2014 12:15	**690**	1.92	**50,763,990**	2.8	**0.62**	48	Atlas	97,466,860	1
	3/4/2015 0:30	3/6/2015 1:15	**2925**	1.66	**253,442,653**	1.83	**0.54**	48	Atlas	420,714,804	1
	3/10/2015 9:45	3/11/2015 8:45	**1380**	1.12	**697,746,745**	2.78	**0.50**	12	Atlas	781,476,354	1
	3/13/2015 15:00	3/15/2015 1:15	**2055**	1.85	**592,513,965**	2.97	**0.70**	24	Atlas	1,096,150,834	1
	3/15/2015 15:15	3/15/2015 16:30	**75**	Discharge						4,552,490	1
	3/26/2015 6:45	3/26/2015 7:15	**30**	0.67	**3,377,769**	0.82	**0.34**	3	Atlas	2,263,105	1
	4/2/2015 12:30	4/4/2015 22:45	**3495**	6.2	**103,552,212**	6.32	**36.46**	6	Cloudburst	642,023,712	1
	4/7/2015 12:30	4/8/2015 4:15	**945**	0.88	**173,797,738**	7.09	**0.39**	1	Atlas	152,942,010	1
	4/8/2015 19:00	4/10/2015 5:30	**2070**	0.08	**4,632,184,607**	7.51	**0.04**	6	Atlas	370,574,769	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**4/14/2015 12:15**	4/14/2015 19:30	**435**	0.47	**14,670,247**	1.36	**0.18**	24	Atlas	6,895,016	1
	4/19/2015 14:45	4/20/2015 5:00	**855**	0.85	**47,040,614**	1.49	**0.36**	12	Atlas	39,984,522	1
	6/17/2015 5:15	6/17/2015 8:45	**210**	0.67	**54,526,862**	0.68	**0.36**	3	Atlas	36,532,998	1
	6/18/2015 17:00	6/18/2015 21:00	**240**	0.6	**112,946,989**	1.34	**0.28**	3	Atlas	67,768,194	1
	6/20/2015 4:45	6/20/2015 10:30	**345**	1.09	**48,871,702**	2.53	**0.43**	12	Atlas	53,270,155	1
	6/26/2015 0:15	6/26/2015 3:45	**210**	0.9	**53,566,363**	2.34	**0.49**	6	Atlas	48,209,727	1
	6/26/2015 17:15	6/27/2015 2:45	**570**	1.12	**41,077,998**	3.37	**0.60**	1	Atlas	46,007,357	1
	7/2/2015 2:30	7/2/2015 9:00	**390**	0.82	**14,857,367**	3.11	**0.48**	3	Atlas	12,183,041	1
	7/2/2015 22:00	7/2/2015 22:45	**45**	0.82	**948,842**	3.13	**0.48**	3	Atlas	778,050	1
	7/3/2015 15:30	7/3/2015 18:15	**165**	1.04	**13,169,896**	3.26	**0.85**	1	Atlas	13,696,692	1
	7/7/2015 13:00	7/7/2015 18:15	**315**	0.94	**19,083,779**	2.86	**0.50**	6	Atlas	17,938,752	1
	7/10/2015 11:15	7/10/2015 18:45	**450**	0.52	**29,487,740**	2.95	**0.26**	6	Atlas	15,333,625	1
	7/12/2015 6:45	7/12/2015 9:45	**180**	0.67	**43,113,898**	2.58	**0.47**	1	Atlas	28,886,312	1
	7/13/2015 15:15	7/15/2015 2:45	**2130**	0.54	**1,205,440,095**	3.58	**0.46**	1	Atlas	650,937,651	1
	7/18/2015 0:15	7/18/2015 14:30	**855**	0.72	**789,335,235**	2.39	**0.48**	3	Atlas	568,321,369	1
	8/4/2015 20:15	8/5/2015	**225**	0.25	**874,925,584**	0.42	**0.21**	1	Atlas	218,731,396	1
	8/6/2015 15:00	8/6/2015 18:30	**210**	0.8	**274,120,612**	1.05	**0.30**	1	Atlas	219,296,489	1
	9/29/2015 16:30	9/30/2015 3:15	**645**	0.5	**836,283,256**	0.58	**0.19**	24	Atlas	418,141,628	1
	10/2/2015 17:00	10/5/2015 7:45	**3765**	0.47	**143,158,043**	1.19	**0.22**	12	Atlas	67,284,280	1
	10/6/2015 14:45	10/6/2015 19:15	**270**	Discharge						4,010,955	1
	10/7/2015 10:00	10/7/2015 14:00	**240**	Discharge						2,744,338	1
	10/8/2015 7:45	10/8/2015 12:30	**285**	Discharge						4,222,058	1
	10/9/2015 7:00	10/9/2015 10:00	**180**	Discharge						2,744,338	1
	10/9/2015 18:30	10/9/2015 20:00	**90**	0.11	**13,433,822**	0.29	**0.05**	6	Atlas	1,477,720	1
	10/13/2015 7:45	10/13/2015 8:15	**30**	Discharge						633,309	1
	10/15/2015 10:00	10/15/2015 11:15	**75**	Discharge						1,266,618	1
	10/20/2015 8:45	10/20/2015 9:00	**15**	Discharge						422,206	1
	10/21/2015 11:45	10/21/2015 12:15	**30**	Discharge						633,309	1
	10/27/2015 18:00	10/28/2015 12:45	**1125**	3.43	**37,661,483**	3.81	**1.75**	24	Cloudburst	129,178,887	1
	11/6/2015 4:00	11/6/2015 10:30	**390**	1.01	**42,678,796**	1.18	**0.64**	3	Atlas	43,105,584	1
	11/12/2015 1:30	11/12/2015 2:15	**45**	0.35	**12,980,905**	1.94	**0.21**	3	Atlas	4,543,317	1
	11/14/2015 5:00	11/15/2015 11:30	**1830**	Discharge						25,965,659	1
	11/18/2015 10:00	11/19/2015 1:45	**945**	1.83	**81,527,521**	2.4	**0.92**	6	Atlas	149,195,364	1
	11/28/2015 18:15	11/28/2015 22:45	**270**	0.91	**13,401,960**	0.88	**0.30**	48	Atlas	12,195,784	1
	11/30/2015 23:00	12/1/2015 7:45	**525**	0.65	**61,876,735**	1.62	**0.29**	12	Atlas	40,219,878	1
	12/22/2015 2:00	12/22/2015 6:15	**255**	0.65	**35,852,311**	0.67	**0.25**	24	Atlas	23,304,002	1
	12/23/2015 19:30	12/24/2015 9:45	**855**	0.91	**88,663,493**	1.58	**0.63**	1	Atlas	80,683,778	1
	12/26/2015 14:15	12/26/2015 21:15	**420**	0.6	**7,293,142**	2.27	**0.27**	12	Atlas	4,375,885	1
	12/27/2015 10:45	12/27/2015 20:30	**585**	2.8	**69,463,092**	3.89	**0.91**	48	Atlas	194,496,659	1
	12/28/2015 17:15	12/29/2015 2:45	**570**	2.8	**4,255,293**	4.85	**0.91**	48	Atlas	11,914,819	1
	1/6/2016 12:30	1/6/2016 22:15	**585**	Discharge						105,070,093	1
	1/14/2016 11:00	1/14/2016 13:45	**165**	Discharge						14,692,201	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO015	**1/28/2016 13:00**	1/28/2016 16:15	**195**	Discharge						15,144,277	1
	2/2/2016 21:15	2/3/2016 14:00	**1005**	1.54	**90,741,109**	1.61	**0.76**	6	Atlas	139,741,308	1
	2/21/2016 7:15	2/21/2016 16:45	**570**	0.73	**55,722,784**	0.91	**0.33**	12	Atlas	40,677,633	1
	2/24/2016 0:30	2/24/2016 23:00	**1350**	2.14	**258,912,126**	2.85	**0.81**	24	Atlas	554,071,950	1
	3/1/2016 14:30	3/1/2016 20:45	**375**	0.61	**15,806,791**	2.8	**0.32**	6	Atlas	9,642,142	1
	3/10/2016 15:45	3/11/2016 6:45	**900**	1.33	**47,245,733**	1.39	**0.45**	12	Atlas	62,836,824	1
	3/12/2016 20:30	3/13/2016 15:30	**1140**	0.47	**177,247,724**	1.86	**0.18**	24	Atlas	83,306,430	1
	3/24/2016 18:30	3/24/2016 20:15	**105**	0.24	**75,568,994**	0.37	**0.16**	1	Atlas	18,136,559	1
	3/27/2016 21:30	3/28/2016 2:15	**285**	0.75	**77,738,841**	0.99	**0.50**	3	Atlas	58,304,131	1
	3/31/2016 6:15	3/31/2016 10:00	**225**	1.33	**22,146,923**	1.81	**0.51**	24	Atlas	29,455,408	1
	4/1/2016 1:30	4/1/2016 2:00	**30**	1.33	**9,015,105**	2.08	**0.51**	24	Atlas	11,990,089	1
	4/1/2016 13:45	4/2/2016 17:30	**1665**	Discharge						76,236,951	1
	4/11/2016 17:15	4/12/2016 0:30	**435**	0.96	**51,666,259**	1.18	**0.43**	12	Atlas	49,599,608	1
	4/26/2016 22:15	4/26/2016 22:45	**30**	0.25	**9,845,742**	0.68	**0.15**	1	Atlas	2,461,436	1
	4/27/2016 20:45	4/28/2016	**195**	1.18	**154,123,439**	1.84	**0.54**	3	Atlas	181,865,658	1
	4/30/2016 11:30	4/30/2016 13:00	**90**	0.83	**5,355,494**	1.99	**0.31**	24	Atlas	4,445,060	1
	5/1/2016 15:15	5/1/2016 17:45	**150**	0.36	**91,200,943**	2.62	**0.24**	1	Atlas	32,832,340	1
	5/7/2016 23:15	5/8/2016	**45**	0.3	**2,700,278**	1.03	**0.16**	3	Atlas	810,083	1
	5/10/2016 15:30	5/10/2016 23:15	**465**	0.85	**22,075,318**	1.49	**0.32**	24	Atlas	18,764,020	1
	5/11/2016 19:30	5/12/2016	**270**	0.38	**107,398,226**	1.63	**0.17**	6	Atlas	40,811,326	1
	5/17/2016 7:45	5/17/2016 8:30	**45**	0.72	**2,808,168**	1.77	**0.25**	24	Atlas	2,021,881	1
	5/20/2016 14:30	5/21/2016 4:45	**855**	0.79	**69,567,968**	1.54	**0.45**	3	Atlas	54,958,695	1
	5/26/2016 14:15	5/26/2016 16:30	**135**	0.54	**18,119,591**	1.46	**0.36**	3	Atlas	9,784,579	1
	6/2/2016 15:30	6/2/2016 16:45	**75**	0.87	**34,198,799**	1.14	**0.69**	1	Atlas	29,752,956	1
	6/4/2016 18:45	6/4/2016 19:30	**45**	0.41	**11,692,259**	1.32	**0.19**	3	Atlas	4,793,826	1
	6/12/2016 18:45	6/12/2016 20:15	**90**	0.74	**17,480,859**	0.87	**0.63**	1	Atlas	12,935,836	1
	6/14/2016 16:30	6/14/2016 22:45	**375**	1.08	**69,242,423**	1.82	**0.59**	6	Atlas	74,781,817	1
	6/15/2016 14:15	6/15/2016 15:15	**60**	0.05	**80,710,103**	1.86	**0.03**	1	Atlas	4,035,505	1
	6/23/2016 16:30	6/24/2016 2:30	**600**	2.15	**107,838,454**	2.19	**0.99**	12	Atlas	231,852,677	1
Grand Total										**72,247,580,701**	**365**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**3/26/2009 10:00**	3/26/2009 14:15	**255**	0.16	**14,624,579**	0.59	**0.09**	6	Atlas	2,339,933	1
	3/28/2009 21:00	3/29/2009 2:15	**315**	0.63	**8,649,523**	1.18	**0.32**	1	Atlas	5,449,200	1
	4/2/2009 20:15	4/3/2009 6:45	**630**	1.04	**8,658,166**	1.78	**0.48**	12	Atlas	9,004,492	1
	4/5/2009 18:45	4/5/2009 21:30	**165**	0.37	**5,151,714**	1.49	**0.23**	3	Atlas	1,906,134	1
	4/10/2009 21:45	4/10/2009 22:45	**60**	0.59	**108,493**	0.99	**0.24**	12	Atlas	64,011	1
	4/13/2009 15:45	4/14/2009 1:30	**585**	0.78	**7,685,234**	1.37	**0.31**	12	Atlas	5,994,482	1
	4/19/2009 9:45	4/19/2009 19:15	**570**	1.6	**4,823,759**	2.2	**0.64**	12	Atlas	7,718,015	1
	4/28/2009 10:15	4/28/2009 11:15	**60**	0.32	**281,154**	0.36	**0.20**	3	Atlas	89,969	1
	5/6/2009 12:30	5/6/2009 14:45	**135**	Discharge						1,941,120	1
	5/8/2009 4:00	5/8/2009 21:30	**1050**	Discharge						11,800,034	1
	5/14/2009 7:30	5/14/2009 8:45	**75**	Discharge						160,391	1
	5/16/2009 6:30	5/16/2009 7:15	**45**	Discharge						68,925	1
	6/10/2009 11:45	6/10/2009 15:45	**240**	1.01	**3,751,040**	1.39	**0.52**	3	Atlas	3,788,551	1
	6/11/2009 4:00	6/11/2009 7:00	**180**	1.35	**1,957,676**	2.02	**0.52**	24	Atlas	2,642,863	1
	6/11/2009 18:00	6/12/2009 2:30	**510**	1.35	**6,684,905**	2.44	**0.52**	24	Atlas	9,024,622	1
	6/16/2009 16:30	6/16/2009 18:45	**135**	0.77	**900,558**	3.78	**0.47**	1	Atlas	693,430	1
	6/18/2009 10:15	6/19/2009 22:00	**2145**	0.8	**63,780,562**	2.92	**0.49**	3	Atlas	51,024,450	1
	6/22/2009 9:30	6/22/2009 14:00	**270**	0.52	**10,719,059**	2.71	**0.31**	3	Atlas	5,573,911	1
	6/26/2009 3:45	6/26/2009 10:00	**375**	1.54	**4,635,404**	2.31	**0.87**	3	Atlas	7,138,522	1
	7/15/2009 11:15	7/15/2009 14:00	**165**	0.61	**3,427,683**	0.64	**0.39**	3	Atlas	2,090,887	1
	7/17/2009 4:30	7/17/2009 6:45	**135**	0.58	**2,062,751**	1.21	**0.39**	3	Atlas	1,196,396	1
	7/22/2009 7:15	7/22/2009 19:45	**750**	1.82	**5,496,570**	3.01	**0.80**	12	Atlas	10,003,758	1
	7/29/2009 3:15	7/29/2009 10:00	**405**	1.08	**8,678,427**	3.35	**0.46**	12	Atlas	9,372,701	1
	7/30/2009 20:45	7/31/2009 2:30	**345**	0.83	**5,572,954**	2.6	**0.35**	12	Atlas	4,625,552	1
	8/4/2009 8:00	8/4/2009 21:30	**810**	5.45	**3,966,357**	7.31				21,616,644	1
	8/10/2009 19:15	8/10/2009 23:30	**255**	0.88	**4,471,328**	6.32	**0.55**	3	Atlas	3,934,768	1
	9/20/2009 7:30	9/21/2009 5:00	**1290**	2.89	**7,464,189**	2.9	**1.61**	24	Cloudburst	21,571,506	1
	9/22/2009 19:15	9/23/2009 8:15	**780**	0.31	**36,475,555**	3.21	**0.14**	12	Atlas	11,307,422	1
	9/24/2009 21:15	9/25/2009 0:15	**180**	1	**1,086,037**	4.08	**0.35**	24	Atlas	1,086,037	1
	9/26/2009 20:30	9/27/2009 1:15	**285**	0.38	**10,611,571**	4.63	**0.31**	1	Atlas	4,032,397	1
	10/2/2009 4:45	10/2/2009 10:15	**330**	0.74	**5,831,153**	1.25	**0.47**	3	Atlas	4,315,053	1
	10/8/2009 14:30	10/10/2009 4:15	**2265**	2.17	**19,870,902**	3	**0.72**	24	Atlas	43,119,858	1
	10/14/2009 6:45	10/14/2009 10:00	**195**	0.62	**4,623,462**	2.79	**0.41**	3	Atlas	2,866,547	1
	10/15/2009 5:45	10/15/2009 6:15	**30**	0.14	**189,109**	2.85	**0.09**	1	Atlas	26,475	1
	10/23/2009 8:00	10/23/2009 11:15	**195**	0.68	**105,595**	0.69	**0.29**	12	Atlas	71,805	1
	10/27/2009 21:15	10/28/2009 3:15	**360**	1.14	**5,154,547**	1.82	**0.51**	12	Atlas	5,876,184	1
	10/30/2009 21:00	10/31/2009 7:15	**615**	1	**10,821,414**	2.15	**0.45**	12	Atlas	10,821,414	1
	11/11/2009 12:00	11/12/2009 0:15	**735**	Discharge						9,199,608	1
	11/17/2009 19:15	11/18/2009 1:00	**345**	0.61	**6,082,860**	0.61	**0.23**	24	Atlas	3,710,544	1
	12/8/2009 18:00	12/9/2009 1:30	**450**	2.21	**3,477,591**	2.34	**0.89**	12	Atlas	7,685,475	1
	12/13/2009 8:00	12/13/2009 9:15	**75**	0.27	**614,927**	2.56	**0.17**	3	Atlas	166,030	1
	1/20/2010 11:45	1/20/2010 14:30	**165**	1.5	**400,317**	0.6	**0.49**	48	Atlas	600,475	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**1/21/2010 12:00**	1/21/2010 22:00	**600**	1.5	**4,356,644**	1.73	**0.49**	48	Atlas	6,534,966	1
	1/24/2010 4:45	1/24/2010 12:00	**435**	0.88	**4,779,958**	2.31	**0.34**	24	Atlas	4,206,363	1
	1/24/2010 22:30	1/25/2010 4:45	**375**	0.88	**3,635,033**	2.38	**0.34**	24	Atlas	3,198,829	1
	2/5/2010 8:30	2/6/2010 7:00	**1350**	1.2	**17,360,396**	1.4	**0.44**	24	Atlas	20,832,475	1
	3/22/2010 0:15	3/22/2010 3:30	**195**	0.76	**2,157,034**	0.76	**0.34**	12	Atlas	1,639,346	1
	4/8/2010 2:00	4/8/2010 8:15	**375**	1.24	**5,359,621**	1.36	**0.58**	6	Atlas	6,645,930	1
	4/24/2010 15:00	4/24/2010 23:15	**495**	1.37	**6,460,564**	1.58	**0.64**	6	Atlas	8,850,973	1
	5/1/2010 5:15	5/1/2010 11:30	**375**	4.12	**1,626,957**	2.9	**3.48**	48	Atlas	6,703,062	1
	5/2/2010 1:45	5/2/2010 20:45	**1140**	4.12	**5,090,884**	4.66	**3.48**	48	Atlas	20,974,444	1
	5/12/2010 10:00	5/12/2010 13:15	**195**	0.72	**4,221,101**	0.91	**0.54**	1	Atlas	3,039,192	1
	7/26/2010 14:00	7/26/2010 15:15	**75**	Discharge						4,313,585	1
	7/27/2010 7:30	7/27/2010 7:45	**15**	Discharge						780,558	1
	7/31/2010 5:00	7/31/2010 9:45	**285**	0.61	**7,749,675**	0.74	**0.35**	3	Atlas	4,727,302	1
	8/14/2010 17:15	8/14/2010 20:00	**165**	0.33	**6,076,269**	0.5	**0.26**	1	Atlas	2,005,169	1
	8/21/2010 8:15	8/21/2010 13:00	**285**	0.45	**9,309,550**	0.81	**0.28**	3	Atlas	4,189,297	1
	10/13/2010 20:45	10/13/2010 22:30	**105**	0.39	**2,560,761**	0.4	**0.25**	3	Atlas	998,697	1
	10/26/2010 12:15	10/26/2010 15:30	**195**	0.54	**780,242**	0.56	**0.30**	6	Atlas	421,331	1
	11/16/2010 13:30	11/16/2010 22:00	**510**	0.81	**9,837,856**	0.91	**0.36**	12	Atlas	7,968,664	1
	11/23/2010 5:00	11/23/2010 5:30	**30**	0.28	**146,902**	1.15	**0.15**	3	Atlas	41,132	1
	11/24/2010 13:45	11/24/2010 18:30	**285**	0.64	**6,562,437**	0.99	**0.31**	3	Atlas	4,199,959	1
	11/25/2010 10:30	11/26/2010 2:00	**930**	2.42	**8,627,669**	3.34	**0.92**	24	Atlas	20,878,959	1
	11/30/2010 0:30	11/30/2010 7:00	**390**	1.76	**4,283,470**	4.69	**0.68**	24	Atlas	7,538,907	1
	1/1/2011 6:00	1/1/2011 9:45	**225**	0.64	**2,993,734**	1.19	**0.29**	12	Atlas	1,915,990	1
	2/1/2011 18:15	2/1/2011 23:00	**285**	0.93	**5,302,665**	0.83	**0.34**	6	Atlas	4,931,478	1
	2/24/2011 20:30	2/25/2011 5:30	**540**	2.6	**4,769,461**	2.78	**1.14**	12	Cloudburst	12,400,598	1
	2/28/2011 6:00	2/28/2011 13:45	**465**	0.84	**8,109,106**	3.79	**0.39**	6	Atlas	6,811,649	1
	3/5/2011 7:45	3/5/2011 10:15	**150**	0.87	**1,645,883**	1.85	**0.30**	24	Atlas	1,431,919	1
	3/8/2011 23:45	3/9/2011 20:00	**1215**	3.01	**7,724,327**	3.91	**1.86**	12	Cloudburst	23,250,224	1
	4/4/2011 14:15	4/4/2011 19:45	**330**	0.65	**6,259,329**	0.78	**0.33**	6	Atlas	4,068,564	1
	4/9/2011 11:15	4/9/2011 13:45	**150**	0.46	**6,559,798**	1.15	**0.30**	3	Atlas	3,017,507	1
	4/11/2011 16:15	4/12/2011 7:00	**885**	2.99	**6,892,145**	3.5	**1.80**	24	Cloudburst	20,607,515	1
	4/13/2011 9:45	4/13/2011 9:45	**0**	Discharge						694,792	1
	4/20/2011 2:30	4/20/2011 7:00	**270**	0.77	**6,347,407**	1.14	**0.42**	6	Atlas	4,887,504	1
	4/22/2011 17:45	4/23/2011 21:30	**1665**	4.74	**5,644,683**	4.4	**2.83**	48	Atlas	26,755,799	1
	4/24/2011 8:45	4/24/2011 22:15	**810**	4.74	**1,257,026**	5.11	**2.83**	48	Atlas	5,958,306	1
	4/27/2011 1:15	4/27/2011 9:45	**510**	2.1	**4,406,451**	6.86	**0.78**	24	Atlas	9,253,548	1
	5/1/2011 6:00	5/1/2011 7:15	**75**	0.7	**790,085**	4.22				553,059	1
	5/2/2011 5:15	5/2/2011 7:00	**105**	2.6	**912,374**	4.17	**0.84**	48	Atlas	2,372,173	1
	5/2/2011 23:45	5/3/2011 6:45	**420**	2.6	**1,071,994**	5.29	**0.84**	48	Atlas	2,787,185	1
	5/8/2011 1:45	5/8/2011 4:15	**150**	0.28	**9,928,142**	3.5	**0.18**	1	Atlas	2,779,880	1
	5/21/2011 18:45	5/21/2011 22:00	**195**	0.62	**5,669,203**	0.95	**0.43**	1	Atlas	3,514,906	1
	5/23/2011 5:15	5/23/2011 7:00	**105**	0.43	**1,758,478**	1.2	**0.27**	3	Atlas	756,145	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**5/23/2011 18:00**	5/23/2011 23:45	**345**	0.92	**7,548,004**	2.11	**0.58**	3	Atlas	6,944,164	1
	5/25/2011 23:30	5/26/2011 13:45	**855**	1.43	**16,518,891**	3.31	**0.66**	3	Atlas	23,622,014	1
	6/11/2011 5:45	6/11/2011 8:00	**135**	0.2	**3,543,452**	0.24	**0.15**	1	Atlas	708,690	1
	6/15/2011 9:45	6/15/2011 16:00	**375**	1.03	**7,047,642**	1.29	**0.63**	3	Atlas	7,259,071	1
	6/18/2011 7:15	6/18/2011 13:00	**345**	0.74	**7,957,299**	1.82	**0.45**	3	Atlas	5,888,401	1
	6/19/2011 8:15	6/19/2011 14:00	**345**	0.8	**7,840,825**	2.6	**0.51**	3	Atlas	6,272,660	1
	6/20/2011 1:45	6/20/2011 6:45	**300**	0.67	**7,053,585**	3.27	**0.57**	1	Atlas	4,725,902	1
	6/21/2011 17:00	6/21/2011 21:30	**270**	0.26	**6,287,175**	3.51	**0.15**	3	Atlas	1,634,665	1
	6/22/2011 20:00	6/23/2011 17:45	**1305**	3.18	**7,695,578**	5.66	**10.00**	3	Atlas	24,471,938	1
	7/12/2011 18:30	7/12/2011 22:45	**255**	0.22	**244,657**	0.9	**0.11**	6	Atlas	53,825	1
	7/19/2011 23:00	7/20/2011 4:00	**300**	1.19	**4,157,798**	1.2	**1.04**	1	Atlas	4,947,779	1
	8/7/2011 3:30	8/7/2011 13:00	**570**	1.42	**7,402,620**	1.45	**0.82**	3	Atlas	10,511,721	1
	8/8/2011 16:30	8/8/2011 16:30	**0**	0.26	**13,418**	1.71	**0.17**	3	Atlas	3,489	1
	8/13/2011 17:45	8/13/2011 22:15	**270**	0.67	**6,278,608**	2.5	**0.50**	1	Atlas	4,206,668	1
	9/19/2011 8:00	9/19/2011 12:45	**285**	0.71	**5,138,391**	0.82	**0.27**	24	Atlas	3,648,257	1
	9/23/2011 3:30	9/23/2011 11:30	**480**	0.73	**10,673,803**	1.48	**0.33**	12	Atlas	7,791,876	1
	9/25/2011 23:30	9/26/2011 11:00	**690**	3.61	**5,061,786**	5.16	**8.75**	12	Cloudburst	18,273,047	1
	10/13/2011 8:45	10/13/2011 10:00	**75**	0.47	**374,378**	0.33	**0.21**	12	Atlas	175,958	1
	10/27/2011 0:30	10/27/2011 3:15	**165**	0.99	**2,212,324**	1.19	**0.41**	3	Atlas	2,190,201	1
	11/14/2011 22:30	11/15/2011 17:30	**1140**	1.88	**7,606,794**	1.47	**0.61**	48	Atlas	14,300,773	1
	11/16/2011 7:00	11/16/2011 13:00	**360**	1.88	**1,961,681**	1.9	**0.61**	48	Atlas	3,687,961	1
	11/20/2011 18:15	11/20/2011 22:00	**225**	1.63	**367,063**	2.35	**0.51**	48	Atlas	598,312	1
	11/22/2011 1:15	11/22/2011 14:15	**780**	1.63	**5,385,817**	3.11	**0.51**	48	Atlas	8,778,882	1
	11/27/2011 7:30	11/27/2011 11:30	**240**	2.98	**791,523**	2.23	**0.92**	48	Atlas	2,358,739	1
	11/27/2011 23:30	11/29/2011 5:30	**1800**	2.98	**10,260,718**	4.21	**0.92**	48	Atlas	30,576,939	1
	12/4/2011 17:15	12/6/2011 0:30	**1875**	3.26	**10,992,976**	5.59	**1.30**	48	Cloudburst	35,837,101	1
	12/15/2011 7:30	12/15/2011 10:45	**195**	0.51	**1,128,614**	0.46	**0.23**	6	Atlas	575,593	1
	12/21/2011 6:45	12/21/2011 10:15	**210**	0.71	**3,815,697**	1.25	**0.33**	12	Atlas	2,709,145	1
	12/22/2011 15:15	12/22/2011 21:45	**390**	0.49	**11,838,046**	1.23	**0.22**	12	Atlas	5,800,643	1
	12/27/2011 4:30	12/27/2011 16:30	**720**	0.64	**13,186,668**	1.84	**0.25**	12	Atlas	8,439,467	1
	1/11/2012 6:00	1/11/2012 14:00	**480**	0.91	**7,743,565**	0.8	**0.36**	12	Atlas	7,046,644	1
	1/17/2012 12:45	1/17/2012 14:00	**75**	0.34	**1,330,501**	1.38	**0.16**	12	Atlas	452,370	1
	1/23/2012 4:00	1/23/2012 7:00	**180**	0.6	**4,023,197**	0.96	**0.31**	3	Atlas	2,413,918	1
	1/26/2012 6:15	1/26/2012 10:15	**240**	1.74	**907,390**	1.27	**0.58**	24	Atlas	1,578,858	1
	1/26/2012 19:15	1/27/2012 2:15	**420**	1.74	**3,699,744**	2.35	**0.58**	24	Atlas	6,437,554	1
	2/4/2012 11:00	2/4/2012 11:45	**45**	0.34	**100,071**	0.38	**0.20**	3	Atlas	34,024	1
	2/28/2012 12:15	2/28/2012 12:15	**0**	Discharge						104,167	1
	2/29/2012 10:15	2/29/2012 10:30	**15**	0.55	**35,126**	0.65	**0.28**	1	Atlas	19,319	1
	3/8/2012 13:15	3/8/2012 17:00	**225**	0.71	**3,402,613**	0.88	**0.33**	6	Atlas	2,415,855	1
	3/16/2012 2:00	3/16/2012 5:00	**180**	1	**2,010,443**	1.19	**0.45**	12	Atlas	2,010,443	1
	3/17/2012 21:30	3/17/2012 23:30	**120**	0.54	**1,068,296**	1.71	**0.29**	3	Atlas	576,880	1
	3/23/2012 13:15	3/24/2012 7:30	**1095**	1.56	**5,059,180**	2.1	**0.59**	24	Atlas	7,892,321	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**4/1/2012 9:15**	4/1/2012 13:45	**270**	1.3	**3,503,240**	1.46	**0.73**	3	Atlas	4,554,212	1
	4/28/2012 19:30	4/28/2012 22:30	**180**	0.74	**3,750,393**	0.79	**0.54**	1	Atlas	2,775,291	1
	5/5/2012 0:30	5/5/2012 6:00	**330**	1.48	**3,374,765**	2.64	**0.77**	6	Atlas	4,994,652	1
	5/13/2012 2:30	5/13/2012 17:45	**915**	2.08	**7,773,287**	2.15	**0.80**	12	Atlas	16,168,437	1
	5/29/2012 6:45	5/29/2012 14:45	**480**	3.17	**3,548,123**	3.17	**25.64**	3	Cloudburst	11,247,549	1
	5/31/2012 19:30	6/1/2012 3:15	**465**	1.24	**2,231,856**	4.29	**0.54**	12	Atlas	2,767,502	1
	7/1/2012 21:15	7/1/2012 21:30	**15**	0.19	**271,047**	0.16	**0.12**	1	Atlas	51,499	1
	7/8/2012 13:15	7/8/2012 16:15	**180**	0.15	**22,094,062**	0.54	**0.08**	1	Atlas	3,314,109	1
	7/14/2012 14:00	7/14/2012 17:15	**195**	0.7	**4,749,682**	0.9	**0.39**	3	Atlas	3,324,777	1
	7/19/2012 18:00	7/19/2012 22:15	**255**	1.19	**3,106,932**	1.78	**0.77**	1	Atlas	3,697,249	1
	7/24/2012 21:00	7/24/2012 22:45	**105**	0.22	**3,449,941**	1.47	**0.18**	1	Atlas	758,987	1
	7/27/2012 20:30	7/28/2012	**210**	0.56	**7,234,093**	0.87	**0.44**	1	Atlas	4,051,092	1
	8/16/2012 21:30	8/17/2012 1:45	**255**	0.59	**6,208,822**	0.72	**0.33**	3	Atlas	3,663,205	1
	8/21/2012 14:30	8/21/2012 21:15	**405**	0.14	**45,465,998**	0.74	**0.12**	1	Atlas	6,365,240	1
	9/1/2012 15:45	9/1/2012 20:00	**255**	0.32	**10,108,109**	0.36	**0.17**	6	Atlas	3,234,595	1
	9/2/2012 13:45	9/2/2012 23:00	**555**	0.53	**5,574,459**	0.89	**0.27**	1	Atlas	2,954,463	1
	9/5/2012 15:30	9/5/2012 20:00	**270**	0.72	**6,189,072**	1.63	**0.56**	1	Atlas	4,456,132	1
	9/7/2012 23:30	9/8/2012 8:30	**540**	1.53	**3,875,546**	3.14	**0.88**	3	Atlas	5,929,586	1
	9/26/2012 1:30	9/26/2012 10:30	**540**	0.54	**12,753,033**	0.84	**0.27**	6	Atlas	6,886,638	1
	9/26/2012 20:45	9/27/2012 3:15	**390**	1.33	**5,763,209**	2.17	**0.71**	6	Atlas	7,665,068	1
	10/1/2012 17:45	10/1/2012 21:45	**240**	0.66	**4,291,265**	2.87	**0.27**	12	Atlas	2,832,235	1
	10/26/2012 15:15	10/26/2012 19:30	**255**	0.63	**3,308,119**	0.6	**0.31**	6	Atlas	2,084,115	1
	12/4/2012 16:45	12/4/2012 22:15	**330**	0.57	**7,898,055**	0.81	**0.35**	3	Atlas	4,501,892	1
	12/7/2012 6:00	12/8/2012 13:00	**1860**	0.94	**26,407,050**	2.06	**0.42**	6	Atlas	24,822,627	1
	12/9/2012 22:00	12/10/2012 7:30	**570**	1.19	**9,626,609**	2.97	**0.58**	3	Atlas	11,455,665	1
	12/20/2012 8:15	12/20/2012 17:00	**525**	0.66	**13,915,192**	0.95	**0.32**	6	Atlas	9,184,027	1
	12/26/2012 5:30	12/26/2012 19:00	**810**	0.94	**15,802,246**	1.66	**0.36**	12	Atlas	14,854,112	1
	1/11/2013 6:15	1/11/2013 10:45	**270**	0.62	**6,758,847**	0.83	**0.33**	6	Atlas	4,190,485	1
	1/13/2013 3:45	1/13/2013 22:30	**1125**	2.25	**11,195,983**	3.07	**0.86**	24	Atlas	25,190,961	1
	1/30/2013 5:00	1/30/2013 10:30	**330**	0.89	**4,538,753**	1.14	**0.44**	6	Atlas	4,039,490	1
	2/26/2013 16:15	2/26/2013 18:00	**105**	0.68	**169,753**	1.04	**0.26**	24	Atlas	115,432	1
	3/11/2013 5:00	3/11/2013 13:45	**525**	1.03	**2,828,711**	1.52	**0.41**	12	Atlas	2,913,572	1
	3/17/2013 14:15	3/17/2013 17:45	**210**	1.82	**1,059,670**	1.76	**0.59**	48	Atlas	1,928,599	1
	3/18/2013 4:45	3/18/2013 12:30	**465**	1.82	**3,024,132**	2.25	**0.59**	48	Atlas	5,503,919	1
	4/11/2013 7:15	4/11/2013 9:30	**135**	1.23	**1,437,003**	0.5	**0.47**	24	Atlas	1,767,514	1
	4/11/2013 18:15	4/11/2013 20:15	**120**	1.23	**250,525**	1.21	**0.47**	24	Atlas	308,146	1
	4/16/2013 20:15	4/16/2013 23:00	**165**	0.49	**4,647,036**	1.72	**0.41**	1	Atlas	2,277,047	1
	4/19/2013 2:30	4/19/2013 7:00	**270**	0.89	**4,581,121**	1.41	**0.49**	6	Atlas	4,077,198	1
	4/24/2013 8:30	4/24/2013 12:00	**210**	0.67	**3,887,534**	1.64	**0.39**	3	Atlas	2,604,648	1
	5/4/2013 14:15	5/4/2013 17:30	**195**	1.68	**1,089,207**	0.84	**0.53**	24	Atlas	1,829,869	1
	5/5/2013 5:30	5/5/2013 11:15	**345**	1.68	**2,879,889**	1.62	**0.53**	24	Atlas	4,838,213	1
	5/10/2013 12:45	5/11/2013 1:45	**780**	0.9	**1,713,230**	2.74	**0.39**	6	Atlas	1,541,907	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**6/10/2013 1:00**	6/10/2013 2:00	**60**	0.39	**354,244**	0.34	**0.15**	24	Atlas	138,155	1
	6/26/2013 4:15	6/26/2013 6:45	**150**	0.5	**2,359,822**	0.6	**0.36**	1	Atlas	1,179,911	1
	6/26/2013 16:30	6/27/2013	**450**	1.79	**3,401,223**	2.39	**0.99**	1	Atlas	6,088,189	1
	6/29/2013 21:00	6/29/2013 22:30	**90**	0.65	**261,244**	3.02	**0.37**	3	Atlas	169,809	1
	7/2/2013 14:15	7/2/2013 14:45	**30**	0.02	**3,878,307**	3.23	**0.02**	1	Atlas	77,566	1
	7/6/2013 4:45	7/6/2013 7:00	**135**	0.48	**1,090,385**	1.96	**0.21**	12	Atlas	523,385	1
	7/10/2013 14:15	7/10/2013 16:45	**150**	0.63	**3,777,161**	1.73	**0.50**	1	Atlas	2,379,612	1
	7/14/2013 20:30	7/14/2013 21:30	**60**	0.06	**1,772,351**	0.72	**0.05**	1	Atlas	106,341	1
	7/21/2013 20:30	7/21/2013 23:30	**180**	2.85	**663,725**	2.26	**3.14**	3	Atlas	1,891,616	1
	7/22/2013 7:45	7/22/2013 16:45	**540**	2.85	**2,142,178**	3	**3.14**	3	Atlas	6,105,209	1
	8/12/2013 14:45	8/12/2013 17:00	**135**	1.33	**1,240,045**	1.38	**0.82**	1	Atlas	1,649,260	1
	8/13/2013 4:00	8/13/2013 5:00	**60**	1.33	**147,270**	1.56	**0.82**	1	Atlas	195,869	1
	8/31/2013 20:45	9/1/2013 4:00	**435**	1.49	**892,874**	1.46	**0.68**	12	Atlas	1,330,382	1
	9/2/2013 14:15	9/2/2013 16:30	**135**	0.56	**2,923,875**	2.05	**0.49**	1	Atlas	1,637,370	1
	9/20/2013 17:45	9/21/2013 7:15	**810**	1.82	**6,751,280**	1.84	**0.76**	12	Atlas	12,287,330	1
	10/5/2013 13:30	10/6/2013 12:00	**1350**	4.5	**4,688,112**	4.73	**9.84**	24	Cloudburst	21,096,503	1
	10/30/2013 3:15	10/30/2013 8:45	**330**	1.47	**2,663,495**	1.47	**0.74**	6	Atlas	3,915,337	1
	10/31/2013 19:15	10/31/2013 22:45	**210**	0.95	**1,411,726**	2.42	**0.38**	12	Atlas	1,341,140	1
	11/17/2013 5:45	11/17/2013 22:00	**975**	2.84	**3,261,240**	3.01	**2.12**	6	Cloudburst	9,261,921	1
	12/5/2013 7:45	12/5/2013 9:45	**120**	0.81	**860,231**	0.22	**0.26**	48	Atlas	696,787	1
	12/14/2013 10:45	12/14/2013 13:15	**150**	0.74	**610,514**	1.19	**0.31**	12	Atlas	451,780	1
	12/21/2013 7:45	12/22/2013 6:15	**1350**	3.19	**3,347,973**	3.53	**1.90**	24	Cloudburst	10,680,032	1
	1/11/2014 1:15	1/11/2014 5:45	**270**	0.97	**1,537,508**	1.44	**0.51**	6	Atlas	1,491,383	1
	2/2/2014 6:15	2/2/2014 6:30	**15**	0.62	**6,269**	0.22	**0.23**	24	Atlas	3,887	1
	2/4/2014 20:30	2/5/2014 7:30	**660**	0.62	**25,564,385**	1.24	**0.30**	6	Atlas	15,849,918	1
	2/17/2014 16:30	2/17/2014 20:45	**255**	0.57	**6,174,417**	0.84	**0.35**	3	Atlas	3,519,418	1
	3/2/2014 11:30	3/2/2014 13:00	**90**	0.49	**636,901**	0.28	**0.18**	24	Atlas	312,082	1
	3/29/2014 7:30	3/29/2014 14:30	**420**	0.96	**1,998,067**	1.3	**0.45**	6	Atlas	1,918,145	1
	4/3/2014 12:45	4/4/2014 11:00	**1335**	2.56	**5,929,601**	3.86	**0.87**	24	Atlas	15,179,780	1
	4/7/2014 10:45	4/7/2014 15:00	**255**	1.09	**3,629,090**	3.72	**0.69**	1	Atlas	3,955,708	1
	4/14/2014 21:15	4/15/2014 2:45	**330**	1.02	**290,667**	1.07	**0.38**	24	Atlas	296,480	1
	4/28/2014 9:45	4/28/2014 19:15	**570**	1.8	**4,338,259**	1.97	**0.73**	3	Atlas	7,808,865	1
	5/9/2014 20:30	5/9/2014 21:00	**30**	1.64	**120,466**	0.35	**0.63**	24	Atlas	197,564	1
	5/10/2014 6:00	5/10/2014 17:45	**705**	1.64	**3,135,388**	1.71	**0.63**	24	Atlas	5,142,037	1
	5/14/2014 9:30	5/14/2014 22:45	**795**	1.07	**2,123,649**	2.82	**0.41**	24	Atlas	2,272,305	1
	5/22/2014 3:45	5/22/2014 6:00	**135**	0.41	**3,724,847**	0.54	**0.27**	1	Atlas	1,527,187	1
	5/28/2014 20:30	5/28/2014 22:30	**120**	0.39	**2,103,202**	0.79	**0.32**	1	Atlas	820,249	1
	5/29/2014 21:30	5/29/2014 23:15	**105**	0.11	**5,519,493**	0.51	**0.09**	1	Atlas	607,144	1
	7/13/2014 23:00	7/14/2014 1:00	**120**	0.69	**1,838,639**	0.79	**0.35**	1	Atlas	1,268,661	1
	7/26/2014 22:00	7/26/2014 23:45	**105**	1.02	**1,285,289**	0.54	**0.47**	12	Atlas	1,310,995	1
	8/8/2014 6:30	8/8/2014 10:00	**210**	0.75	**5,052,000**	0.73	**0.36**	6	Atlas	3,789,000	1
	8/10/2014 4:30	8/10/2014 7:15	**165**	0.72	**3,436,013**	1.64	**0.63**	1	Atlas	2,473,929	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**8/11/2014 15:45**	8/11/2014 18:00	**135**	0.2	**8,239,980**	1.77	**0.11**	6	Atlas	1,647,996	1
	8/17/2014 11:15	8/17/2014 11:30	**15**	0.5	**10,838**	0.97	**0.26**	3	Atlas	5,419	1
	8/23/2014 17:00	8/24/2014 1:00	**480**	1.01	**7,592,703**	2.04	**0.49**	6	Atlas	7,668,630	1
	8/27/2014 18:30	8/27/2014 19:00	**30**	0.23	**402,713**	1.52	**0.19**	1	Atlas	92,624	1
	8/30/2014 15:30	8/30/2014 18:45	**195**	0.96	**3,229,812**	2.25	**0.57**	3	Atlas	3,100,619	1
	9/2/2014 10:00	9/2/2014 10:30	**30**	0.34	**61,879**	1.66	**0.21**	3	Atlas	21,039	1
	9/11/2014 1:00	9/11/2014 8:30	**450**	2.11	**3,062,525**	2.11	**2.29**	3	Atlas	6,461,927	1
	10/6/2014 10:45	10/6/2014 11:45	**60**	0.46	**255,288**	0.67	**0.25**	3	Atlas	117,432	1
	10/10/2014 2:30	10/10/2014 5:45	**195**	0.86	**3,886,013**	1.45	**0.37**	3	Atlas	3,341,971	1
	10/13/2014 6:00	10/13/2014 9:00	**180**	0.49	**3,695,813**	1.99	**0.32**	3	Atlas	1,810,949	1
	10/14/2014	10/14/2014 12:30	**750**	1.44	**6,882,463**	2.99	**0.64**	12	Atlas	9,910,747	1
	11/23/2014 17:45	11/23/2014 21:15	**210**	0.92	**2,516,068**	1.25	**0.42**	6	Atlas	2,314,783	1
	12/1/2014 5:15	12/1/2014 6:45	**90**	0.87	**180,631**	0.47				157,149	1
	12/6/2014 0:15	12/6/2014 9:45	**570**	1.91	**4,622,115**	2.77	**0.62**	48	Atlas	8,828,240	1
	3/4/2015 0:15	3/4/2015 17:15	**1020**	1.71	**6,186,470**	1.4	**0.55**	48	Atlas	10,578,864	1
	3/10/2015 10:30	3/10/2015 16:45	**375**	1.09	**5,986,338**	2.79	**0.49**	12	Atlas	6,525,108	1
	3/13/2015 11:45	3/14/2015 6:30	**1125**	1.84	**5,449,515**	2.9	**0.70**	24	Atlas	10,027,108	1
	3/26/2015 6:30	3/26/2015 7:00	**30**	0.52	**17,044**	0.66	**0.23**	3	Atlas	8,863	1
	4/2/2015 11:15	4/3/2015 19:00	**1905**	5.44	**5,128,090**	5.57	**18.39**	6	Cloudburst	27,896,809	1
	4/7/2015 9:15	4/7/2015 19:30	**615**	0.89	**3,929,206**	6.34	**0.37**	12	Atlas	3,496,994	1
	4/8/2015 23:00	4/11/2015 10:30	**3570**	0.12	**377,279,271**	6.86	**0.09**	1	Atlas	45,273,512	1
	4/13/2015 21:00	4/14/2015 1:00	**240**	0.55	**3,714,883**	1.62	**0.21**	24	Atlas	2,043,186	1
	4/14/2015 9:15	4/14/2015 15:30	**375**	0.55	**5,485,508**	1.43	**0.21**	24	Atlas	3,017,030	1
	4/19/2015 8:45	4/19/2015 23:00	**855**	0.81	**13,317,847**	1.43	**0.33**	12	Atlas	10,787,456	1
	5/16/2015 12:15	5/16/2015 15:45	**210**	0.95	**1,912,695**	1.08	**0.58**	3	Atlas	1,817,061	1
	6/17/2015 5:45	6/17/2015 8:30	**165**	0.63	**3,933,085**	0.65	**0.34**	3	Atlas	2,477,844	1
	6/18/2015 17:30	6/18/2015 20:45	**195**	0.62	**6,389,228**	1.3	**0.36**	1	Atlas	3,961,321	1
	6/20/2015 4:15	6/20/2015 11:00	**405**	1.19	**4,992,556**	2.59	**0.49**	12	Atlas	5,941,142	1
	6/26/2015 0:45	6/26/2015 2:45	**120**	0.77	**920,440**	2.31	**0.42**	6	Atlas	708,739	1
	6/26/2015 17:15	6/27/2015 2:00	**525**	0.99	**2,774,804**	3.28	**0.55**	1	Atlas	2,747,056	1
	7/2/2015 1:30	7/2/2015 5:00	**210**	0.84	**3,552,829**	2.98	**0.47**	3	Atlas	2,984,376	1
	7/2/2015 21:30	7/2/2015 23:00	**90**	0.84	**386,544**	3.02	**0.47**	3	Atlas	324,697	1
	7/3/2015 15:00	7/3/2015 17:45	**165**	1.48	**1,240,420**	3.7	**2.47**	1	Atlas	1,835,821	1
	7/7/2015 12:15	7/7/2015 16:45	**270**	0.91	**3,485,606**	3.3	**0.48**	6	Atlas	3,171,901	1
	7/10/2015 16:15	7/10/2015 18:30	**135**	0.46	**2,569,541**	1.8	**0.24**	6	Atlas	1,181,989	1
	7/12/2015 6:15	7/13/2015 6:15	**1440**	0.73	**16,429,134**	2.5	**0.50**	1	Atlas	11,993,268	1
	7/13/2015 15:00	7/13/2015 18:00	**180**	0.51	**6,479,144**	3.01	**0.44**	1	Atlas	3,304,364	1
	7/14/2015 4:30	7/14/2015 7:30	**180**	0.3	**8,598,925**	3.31	**0.23**	1	Atlas	2,579,678	1
	7/14/2015 19:45	7/14/2015 20:30	**45**	0.16	**213,435**	2.56	**0.14**	1	Atlas	34,150	1
	7/17/2015 23:30	7/18/2015 7:00	**450**	0.83	**8,343,632**	2.53	**0.55**	3	Atlas	6,925,215	1
	8/4/2015 20:30	8/4/2015 21:45	**75**	0.18	**1,767,037**	0.35	**0.15**	1	Atlas	318,067	1
	8/6/2015 9:00	8/6/2015 10:45	**105**	0.78	**362,597**	0.86	**0.30**	1	Atlas	282,826	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO016	**10/2/2015 19:45**	10/2/2015 21:00	**75**	0.46	**150,222**	1.15	**0.21**	12	Atlas	69,102	1
	10/27/2015 16:00	10/28/2015 11:00	**1140**	3.44	**6,981,008**	3.82	**1.84**	24	Cloudburst	24,014,668	1
	11/6/2015 3:45	11/6/2015 8:30	**285**	1.05	**4,941,723**	1.22	**0.65**	3	Atlas	5,188,809	1
	11/9/2015 21:00	11/10/2015 0:30	**210**	0.6	**2,024,864**	1.65	**0.28**	12	Atlas	1,214,919	1
	11/12/2015 1:30	11/12/2015 3:30	**120**	0.3	**3,082,767**	1.95	**0.17**	3	Atlas	924,830	1
	11/18/2015 10:15	11/18/2015 21:00	**645**	1.76	**7,904,108**	2.27	**0.89**	6	Atlas	13,911,229	1
	11/28/2015 18:15	11/28/2015 21:45	**210**	0.87	**281,164**	0.82	**0.28**	48	Atlas	244,613	1
	11/30/2015 22:00	12/1/2015 7:00	**540**	0.56	**11,708,863**	1.49	**0.25**	12	Atlas	6,556,964	1
	12/22/2015 3:45	12/22/2015 6:00	**135**	0.7	**2,732,620**	0.73	**0.27**	24	Atlas	1,912,834	1
	12/23/2015 19:15	12/24/2015 0:45	**330**	1.01	**4,925,286**	1.73	**0.67**	1	Atlas	4,974,538	1
	12/26/2015 13:30	12/26/2015 20:00	**390**	0.58	**3,230,950**	2.4	**0.26**	12	Atlas	1,873,951	1
	12/27/2015 10:30	12/29/2015	**2250**	2.53	**9,133,276**	4.93	**0.82**	48	Atlas	23,107,187	1
	2/2/2016 20:00	2/3/2016 13:00	**1020**	1.51	**12,265,524**	1.58	**0.75**	6	Atlas	18,520,941	1
	2/21/2016 5:30	2/21/2016 17:15	**705**	1.07	**13,267,264**	1.26	**0.49**	12	Atlas	14,195,973	1
	2/23/2016 23:30	2/24/2016 16:30	**1020**	2.24	**8,892,305**	3.14	**0.86**	12	Atlas	19,918,763	1
	3/1/2016 13:00	3/1/2016 17:30	**270**	0.65	**5,824,026**	2.93	**0.34**	6	Atlas	3,785,617	1
	3/10/2016 14:30	3/11/2016 1:30	**660**	1.31	**9,501,103**	1.36	**0.43**	48	Atlas	12,446,445	1
	3/12/2016 21:30	3/13/2016 13:45	**975**	0.5	**14,155,587**	1.85	**0.19**	24	Atlas	7,077,794	1
	3/24/2016 18:30	3/24/2016 20:00	**90**	0.31	**2,237,161**	0.39	**0.21**	1	Atlas	693,520	1
	3/27/2016 21:30	3/28/2016 0:45	**195**	0.77	**5,306,478**	1.08	**0.53**	1	Atlas	4,085,988	1
	3/31/2016 5:30	3/31/2016 9:45	**255**	1.34	**2,712,784**	1.86	**0.51**	24	Atlas	3,635,131	1
	3/31/2016 23:00	4/1/2016 2:30	**210**	1.34	**2,810,016**	2.11	**0.51**	24	Atlas	3,765,421	1
	4/11/2016 17:00	4/12/2016 1:45	**525**	0.97	**10,977,771**	1.12	**0.44**	6	Atlas	10,648,438	1
	4/21/2016 16:30	4/21/2016 19:15	**165**	0.29	**4,895,471**	0.17	**0.11**	24	Atlas	1,419,687	1
	4/26/2016 22:30	4/27/2016 1:15	**165**	0.24	**7,249,257**	0.7	**0.14**	3	Atlas	1,739,822	1
	4/27/2016 14:45	4/28/2016 4:15	**810**	1.03	**8,658,001**	1.73	**0.49**	3	Atlas	8,917,741	1
	4/30/2016 11:30	4/30/2016 16:30	**300**	0.79	**8,205,775**	1.8	**0.30**	24	Atlas	6,482,563	1
	5/1/2016 15:45	5/1/2016 20:30	**285**	0.32	**13,807,624**	2.38	**0.21**	3	Atlas	4,418,440	1
	5/7/2016 21:45	5/8/2016 2:15	**270**	0.37	**12,549,350**	1.17	**0.19**	3	Atlas	4,643,260	1
	5/10/2016 15:15	5/11/2016 3:30	**735**	0.85	**17,387,805**	1.52	**0.32**	24	Atlas	14,779,634	1
	5/11/2016 22:15	5/12/2016 3:15	**300**	0.36	**12,119,803**	1.71	**0.17**	12	Atlas	4,363,129	1
	5/12/2016 18:30	5/13/2016	**330**	0.16	**20,290,733**	1.83	**0.10**	3	Atlas	3,246,517	1
	5/17/2016 7:30	5/17/2016 10:15	**165**	0.67	**3,372,657**	1.73	**0.22**	24	Atlas	2,259,680	1
	5/20/2016 14:45	5/20/2016 21:45	**420**	0.73	**9,616,340**	1.42	**0.43**	3	Atlas	7,019,928	1
	5/26/2016 15:00	5/26/2016 20:00	**300**	0.42	**12,552,379**	1.26	**0.28**	3	Atlas	5,271,999	1
	6/2/2016 15:30	6/2/2016 22:00	**390**	0.9	**8,059,496**	1.25	**0.73**	1	Atlas	7,253,546	1
	6/4/2016 17:30	6/4/2016 22:30	**300**	0.3	**19,609,625**	1.26	**0.13**	12	Atlas	5,882,887	1
	6/12/2016 18:45	6/13/2016 3:00	**495**	0.9	**8,811,974**	0.96	**0.77**	1	Atlas	7,930,777	1
	6/14/2016 16:30	6/15/2016 6:30	**840**	1.41	**11,003,099**	2.31	**0.77**	6	Atlas	15,514,369	1
	6/23/2016 16:30	6/24/2016 13:15	**1245**	2.03	**12,903,346**	2.08	**0.93**	12	Atlas	26,193,793	1
Grand Total										**1,775,634,313**	**292**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO018	**8/19/2006 11:00**	8/19/2006 13:00	**120**	Discharge						5,671	1
	8/20/2006 5:45	8/20/2006 12:45	**420**	Discharge						980,835	1
	9/12/2006 15:00	9/12/2006 17:00	**120**	Discharge						11,504	1
	9/22/2006 20:15	9/26/2006 8:00	**5025**	Discharge						43,625,673	1
	9/27/2006 21:45	9/28/2006 16:00	**1095**	Discharge						909,165	1
	10/17/2006	10/17/2006 5:45	**345**	Discharge						34,778	1
	10/18/2006 19:30	10/19/2006 7:15	**705**	Discharge						150,313	1
	10/19/2006 20:30	10/19/2006 23:00	**150**	Discharge						655,600	1
	10/27/2006 20:45	10/28/2006 19:30	**1365**	Discharge						4,142,294	1
	12/1/2006 4:30	12/1/2006 8:15	**225**	Discharge						17,852	1
	2/13/2007 13:45	2/13/2007 20:30	**405**	Discharge						1,383,241	1
	2/14/2007 6:45	2/14/2007 8:30	**105**	Discharge						457,158	1
	2/24/2007 20:45	2/25/2007 1:00	**255**	Discharge						16,482	1
	10/22/2007 14:15	10/24/2007 10:30	**2655**	Discharge						16,554,782	1
	12/2/2007 17:45	12/2/2007 19:30	**105**	Discharge						7,660	1
	12/13/2007 13:45	12/14/2007 2:00	**735**	Discharge						1,143,000	1
	12/15/2007 9:00	12/17/2007 15:45	**3285**	Discharge						16,046,453	1
	12/24/2007 23:45	12/25/2007 14:00	**855**	Discharge						2,492,556	1
	1/10/2008 13:30	1/11/2008 15:00	**1530**	Discharge						1,813,054	1
	2/5/2008 10:45	2/7/2008 23:45	**3660**	Discharge						8,191,843	1
	2/12/2008 13:00	2/13/2008 15:45	**1605**	Discharge						2,012,460	1
	3/4/2008 3:00	3/4/2008 21:00	**1080**	Discharge						5,190,433	1
	3/5/2008 8:30	3/5/2008 13:30	**300**	Discharge						167,799	1
	3/11/2008 11:30	3/11/2008 17:45	**375**	Discharge						140,942	1
	3/15/2008 16:30	3/15/2008 18:30	**120**	Discharge						52,660	1
	3/18/2008 9:30	3/18/2008 14:30	**300**	Discharge						1,139,853	1
	3/19/2008 2:30	3/20/2008 3:00	**1470**	Discharge						14,527,299	1
	3/21/2008 7:45	3/21/2008 7:45	**0**	Discharge						3	1
	3/22/2008 2:00	3/22/2008 2:00	**0**	Discharge						7,069	1
	3/22/2008 13:00	3/22/2008 13:30	**30**	Discharge						16,557	1
	3/27/2008 3:00	3/27/2008 4:45	**105**	Discharge						135,237	1
	3/27/2008 17:00	3/28/2008 22:45	**1785**	Discharge						1,911,574	1
	3/31/2008 9:00	3/31/2008 9:00	**0**	Discharge						6,866	1
	4/1/2008 1:00	4/1/2008 1:15	**15**	Discharge						8,919	1
	4/3/2008 11:00	4/5/2008 8:15	**2715**	Discharge						13,022,752	1
	4/11/2008 10:45	4/11/2008 11:15	**30**	Discharge						151,255	1
	5/3/2008 1:45	5/3/2008 11:00	**555**	Discharge						24,751	1
	12/19/2008 6:45	12/19/2008 9:00	**135**	0.66	**608,177**	0.88	**0.35**	6	Atlas	401,397	1
	12/24/2008 5:00	12/25/2008 1:45	**1245**	2.19	**1,226,314**	2.99	**0.71**	48	Atlas	2,685,629	1
	1/28/2009 4:45	1/29/2009 6:30	**1545**	1.7	**6,791,587**	1.81	**0.55**	24	Atlas	11,545,698	1
	2/27/2009 3:30	2/27/2009 3:30	**0**	0.82	**12,819**	0.87	**0.45**	3	Atlas	10,512	1
	4/3/2009 3:45	4/3/2009 13:00	**555**	1.15	**26,081**	1.61	**0.53**	12	Atlas	29,993	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO018	**4/19/2009 13:45**	4/19/2009 16:45	**180**	1.27	**144,603**	1.88	**0.48**	12	Atlas	183,646	1
	5/6/2009 11:00	5/6/2009 11:15	**15**	Discharge						21,601	1
	5/8/2009 14:15	5/9/2009 23:00	**1965**	Discharge						7,785,461	1
	6/10/2009 11:30	6/10/2009 12:00	**30**	0.95	**68,015**	1.12	**0.55**	3	Atlas	64,615	1
	6/11/2009 2:00	6/11/2009 4:45	**165**	2.06	**222,280**	2.64	**0.88**	3	Atlas	457,896	1
	6/11/2009 16:45	6/12/2009 4:45	**720**	2.06	**276,336**	3.08	**0.88**	3	Atlas	569,253	1
	6/18/2009 9:15	6/19/2009 21:00	**2145**	1.28	**3,998,481**	3.72	**0.81**	1	Atlas	5,118,056	1
	6/22/2009 8:30	6/22/2009 11:45	**195**	1.26	**427,678**	4.46	**0.80**	3	Atlas	538,874	1
	6/26/2009 2:45	6/26/2009 13:00	**615**	1.94	**41,546**	3.41	**0.89**	12	Atlas	80,600	1
	7/29/2009 3:30	7/29/2009 14:15	**645**	2.86	**599,546**	4.53	**4.07**	3	Atlas	1,714,701	1
	7/30/2009 11:30	7/31/2009 3:45	**975**	0.73	**2,036,469**	3.97	**0.29**	12	Atlas	1,486,623	1
	8/4/2009 7:00	8/5/2009 21:15	**2295**	5.95	**1,172,268**	9.57				6,974,995	1
	8/10/2009 18:15	8/10/2009 20:00	**105**	0.86	**422,744**	6.69	**0.54**	3	Atlas	363,560	1
	9/20/2009 19:00	9/21/2009 3:30	**510**	3.66	**197,652**	3.67	**4.28**	24	Cloudburst	723,406	1
	9/28/2009 10:00	9/28/2009 10:00	**0**	0.01	**452,490**	1.79	**0.01**	1	Atlas	4,525	1
	10/1/2009 12:45	10/1/2009 13:30	**45**	Discharge						5,310	1
	10/2/2009 5:00	10/2/2009 16:45	**705**	0.86	**47,343**	1.26	**0.50**	3	Atlas	40,715	1
	5/2/2010 0:15	5/4/2010 1:45	**2970**	4.39	**1,858,830**	4.99	**4.41**	48	Atlas	8,160,264	1
	5/6/2010 23:30	5/6/2010 23:30	**0**	Discharge						11,369	1
	5/11/2010 10:00	5/11/2010 20:30	**630**	0.07	**1,370,073**	0.33	**0.04**	3	Atlas	95,905	1
	5/20/2010 20:00	5/21/2010 11:30	**930**	0.01	**378,252,785**	0.85	**0.01**	1	Atlas	3,782,528	1
	6/7/2010 22:00	6/8/2010 16:00	**1080**	Discharge						212,688	1
	6/18/2010 6:15	6/18/2010 8:45	**150**	Discharge						18,410	1
	7/12/2010 6:00	7/12/2010 13:15	**435**	Discharge						82,148	1
	7/19/2010 5:00	7/19/2010 8:45	**225**	Discharge						234,142	1
	8/13/2010 17:15	8/13/2010 21:15	**240**	0.4	**52,382**	0.55	**0.30**	1	Atlas	20,953	1
	8/20/2010 6:00	8/20/2010 10:15	**255**	Discharge						12,111	1
	11/24/2010 17:30	11/25/2010 10:00	**990**	0.76	**2,826,827**	1.42	**0.39**	3	Atlas	2,148,388	1
	11/29/2010 2:45	11/29/2010 6:30	**225**	Discharge						196,991	1
	1/31/2011 22:00	1/31/2011 22:00	**0**	Discharge						1,523	1
	2/24/2011 10:00	2/24/2011 20:15	**615**	2.48	**236,548**	1.28	**1.02**	12	Cloudburst	586,639	1
	2/27/2011 10:45	2/28/2011 2:00	**915**	Discharge						1,691,900	1
	3/8/2011 0:30	3/9/2011 21:45	**2715**	0.01	**915,358,701**	3.74	**0.01**	1	Atlas	9,153,587	1
	4/3/2011 17:30	4/3/2011 17:45	**15**	Discharge						4,547	1
	4/11/2011 14:30	4/13/2011 5:00	**2310**	3.74	**795,343**	4.96	**4.60**	24	Cloudburst	2,974,584	1
	4/22/2011 0:45	4/24/2011 11:45	**3540**	Discharge						24,133,567	1
	4/24/2011 22:45	4/26/2011 3:30	**1725**	5	**393,766**	5.73	**3.24**	48	Atlas	1,968,829	1
	4/26/2011 13:15	4/28/2011 14:15	**2940**	0.06	**158,120,573**	8.53	**0.03**	3	Atlas	9,487,234	1
	4/30/2011 5:15	5/4/2011 1:15	**5520**	Discharge						19,626,693	1
	5/7/2011 1:15	5/7/2011 1:45	**30**	Discharge						51,205	1
	5/22/2011 18:00	5/23/2011 1:15	**435**	Discharge						2,374,857	1
	5/24/2011 23:00	5/25/2011 22:45	**1425**	Discharge						4,615,068	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO018	**6/15/2011 9:45**	6/15/2011 12:30	**165**	0.78	**15,625**	1.21	**0.47**	3	Atlas	12,188	1
	6/18/2011 8:15	6/18/2011 9:30	**75**	0.84	**14,509**	1.68	**0.51**	3	Atlas	12,188	1
	6/21/2011 14:15	6/21/2011 20:15	**360**	0.53	**456,564**	3.17	**0.32**	3	Atlas	241,979	1
	6/22/2011 21:00	6/24/2011 13:30	**2430**	3.18	**3,052,575**	5.56	**8.61**	3	Atlas	9,707,188	1
	7/12/2011 21:15	7/12/2011 22:15	**60**	0.64	**40,527**	1.11	**0.33**	6	Atlas	25,938	1
	7/17/2011 20:45	7/17/2011 21:15	**30**	0.2	**4,688**	0.84	**0.13**	1	Atlas	938	1
	7/19/2011 23:00	7/20/2011	**60**	1.3	**63,462**	1.51	**0.73**	1	Atlas	82,500	1
	7/30/2011 21:00	7/31/2011 1:15	**255**	0.7	**182,143**	0.91	**0.50**	1	Atlas	127,500	1
	8/7/2011 3:15	8/7/2011 8:30	**315**	1.92	**229,329**	1.96	**1.93**	3	Atlas	440,313	1
	8/13/2011 17:00	8/14/2011 2:15	**555**	0.71	**1,608,715**	3.08	**0.56**	1	Atlas	1,142,188	1
	8/18/2011 8:15	8/18/2011 8:45	**30**	0.46	**69,520**	1.18	**0.40**	1	Atlas	31,979	1
	9/25/2011 23:45	9/26/2011 13:45	**840**	3.29	**1,317,344**	5.03	**5.48**	12	Cloudburst	4,334,063	1
	10/27/2011 0:15	10/27/2011 5:00	**285**	1.17	**84,580**	1.55	**0.48**	12	Atlas	98,958	1
	11/22/2011 9:00	11/22/2011 14:45	**345**	1.37	**1,139,294**	3.52	**0.58**	12	Atlas	1,560,833	1
	11/28/2011	11/30/2011 10:00	**3480**	3.4	**5,317,249**	5.08	**1.30**	48	Cloudburst	18,078,646	1
	12/5/2011 4:45	12/7/2011 18:00	**3675**	3.05	**4,765,403**	5.01	**0.99**	48	Atlas	14,534,479	1
	12/24/2011 1:30	12/24/2011 6:00	**270**	Discharge						374,688	1
	1/10/2012 9:45	1/10/2012 9:45	**0**	Discharge						208	1
	1/23/2012 3:15	1/23/2012 3:30	**15**	0.7	**1,637**	0.92	**0.39**	3	Atlas	1,146	1
	1/26/2012 19:15	1/28/2012	**1725**	2.06	**983,920**	2.77	**0.68**	24	Atlas	2,026,875	1
	3/17/2012 18:15	3/18/2012 18:30	**1455**	1.18	**993,468**	2.52	**0.66**	1	Atlas	1,172,292	1
	3/23/2012 13:30	3/23/2012 23:45	**615**	1.43	**87,267**	2.61	**0.55**	24	Atlas	124,792	1
	4/1/2012 9:15	4/1/2012 16:45	**450**	1.67	**164,546**	1.81	**0.91**	6	Atlas	274,792	1
	5/5/2012 1:15	5/5/2012 3:15	**120**	1.42	**78,220**	2.39	**0.73**	6	Atlas	111,072	1
	5/13/2012 7:00	5/14/2012 2:30	**1170**	2.35	**669,228**	2.38	**0.96**	12	Atlas	1,572,685	1
	5/29/2012 7:00	5/29/2012 22:45	**945**	3.2	**251,192**	3.2	**24.08**	3	Atlas	803,816	1
	5/31/2012 18:45	6/1/2012 17:15	**1350**	1.42	**855,797**	4.62	**0.61**	12	Atlas	1,215,231	1
	7/19/2012 18:30	7/19/2012 19:00	**30**	0.76	**52,346**	1.57	**0.61**	1	Atlas	39,783	1
	7/27/2012 20:00	7/27/2012 22:30	**150**	0.6	**277,344**	0.99	**0.44**	1	Atlas	166,406	1
	9/5/2012 15:30	9/5/2012 16:30	**60**	0.9	**54,861**	2.44	**0.70**	1	Atlas	49,375	1
	9/8/2012 1:45	9/8/2012 4:15	**150**	1.11	**2,346**	3.45	**0.61**	3	Atlas	2,604	1
	12/7/2012 9:15	12/7/2012 22:00	**765**	1.46	**145,049**	2.1	**0.62**	12	Atlas	211,771	1
	12/8/2012 8:30	12/8/2012 13:30	**300**	0.63	**226,356**	2.73	**0.33**	6	Atlas	142,604	1
	12/9/2012 22:15	12/10/2012 10:15	**720**	1.23	**402,439**	3.79	**0.56**	3	Atlas	495,000	1
	1/13/2013 3:45	1/14/2013 21:45	**2520**	2.43	**1,507,073**	3.24	**0.93**	24	Atlas	3,662,188	1
	3/11/2013 10:45	3/11/2013 14:00	**195**	1.09	**127,963**	1.55	**0.44**	12	Atlas	139,479	1
	3/17/2013 21:00	3/19/2013 7:45	**2085**	1.67	**1,152,071**	2.72	**0.54**	48	Atlas	1,923,958	1
	4/19/2013 2:30	4/19/2013 5:15	**165**	0.85	**31,618**	1.35	**0.47**	3	Atlas	26,875	1
	5/10/2013 15:00	5/11/2013 1:15	**615**	1.11	**107,545**	2.63	**0.52**	6	Atlas	119,375	1
	6/17/2013 16:45	6/17/2013 21:15	**270**	1.14	**14,437**	1.31	**0.61**	1	Atlas	16,458	1
	6/21/2013 19:15	6/21/2013 19:30	**15**	0.84	**3,472**	2.2	**0.60**	1	Atlas	2,917	1
	6/26/2013 16:15	6/27/2013 10:15	**1080**	2.33	**127,548**	4.02	**2.06**	6	Cloudburst	297,188	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO018	**7/10/2013 14:30**	7/10/2013 15:00	**30**	0.76	**27,112**	2.3	**0.50**	3	Atlas	20,605	1
	7/21/2013 19:15	7/21/2013 20:15	**60**	3.65	**23,137**	2.75	**10.00**	1	Atlas	84,449	1
	7/22/2013 7:45	7/22/2013 18:30	**645**	3.65	**133,453**	3.86	**10.00**	1	Atlas	487,103	1
	8/9/2013 17:30	8/9/2013 17:45	**15**	0.48	**7,228**	0.51	**0.30**	1	Atlas	3,470	1
	8/12/2013 15:15	8/12/2013 16:00	**45**	1.01	**16,274**	1.25	**0.47**	1	Atlas	16,437	1
	8/13/2013 4:00	8/13/2013 4:00	**0**	1.01	**1,799**	1.63	**0.47**	1	Atlas	1,817	1
	9/2/2013 14:15	9/2/2013 14:30	**15**	0.68	**14,552**	1.99	**0.59**	1	Atlas	9,895	1
	9/21/2013 2:45	9/21/2013 2:45	**0**	1.7	**1,069**	1.44	**0.75**	12	Atlas	1,817	1
	10/5/2013 13:00	10/7/2013 12:15	**2835**	5.29	**532,156**	5.52	**21.54**	24	Atlas	2,815,104	1
	10/30/2013 5:00	10/30/2013 7:15	**135**	1.57	**45,913**	1.58	**0.82**	1	Atlas	72,083	1
	11/17/2013 6:30	11/18/2013 11:15	**1725**	2.88	**678,747**	3.06	**2.52**	6	Cloudburst	1,954,792	1
	12/21/2013 11:15	12/22/2013 23:00	**2145**	3.51	**640,343**	3.58	**4.71**	3	Atlas	2,247,604	1
	1/11/2014 3:15	1/11/2014 3:30	**15**	1.21	**3,170**	1.58	**0.65**	6	Atlas	3,836	1
	2/4/2014 22:30	2/5/2014 14:45	**975**	0.58	**1,941,441**	1.03	**0.27**	6	Atlas	1,126,036	1
	4/3/2014 19:00	4/5/2014 16:30	**2730**	2.57	**1,372,351**	4.3	**0.91**	24	Atlas	3,526,941	1
	4/7/2014 11:00	4/8/2014 2:00	**900**	0.73	**1,199,536**	3.45	**0.44**	1	Atlas	875,661	1
	4/28/2014 6:30	4/28/2014 8:15	**105**	1.64	**49,690**	1.42	**0.65**	3	Atlas	81,491	1
	5/15/2014 0:45	5/15/2014 5:45	**300**	1.22	**125,554**	3.22	**0.43**	24	Atlas	153,176	1
	7/13/2014 22:00	7/14/2014 2:00	**240**	0.75	**6,111**	1.45	**0.41**	3	Atlas	4,583	1
	7/26/2014 22:00	7/27/2014 0:30	**150**	1.5	**3,125**	0.82	**0.67**	12	Atlas	4,688	1
	8/22/2014 21:00	8/22/2014 22:45	**105**	0.45	**2,546**	1.08	**0.32**	1	Atlas	1,146	1
	8/23/2014 20:15	8/23/2014 20:30	**15**	0.82	**1,397**	1.59	**0.38**	12	Atlas	1,146	1
	8/27/2014 17:00	8/27/2014 19:45	**165**	0.84	**37,326**	2.12	**0.65**	1	Atlas	31,354	1
	9/11/2014 0:45	9/11/2014 8:45	**480**	1.87	**113,414**	1.89	**1.47**	3	Atlas	212,083	1
	12/6/2014 1:30	12/6/2014 12:15	**645**	1.86	**436,828**	2.58	**0.60**	48	Atlas	812,500	1
	3/4/2015 0:45	3/5/2015 7:15	**1830**	1.75	**1,884,657**	1.84	**0.57**	48	Atlas	3,298,149	1
	3/10/2015 8:45	3/11/2015 17:45	**1980**	1.3	**1,937,434**	3.05	**0.59**	12	Atlas	2,518,664	1
	3/13/2015 12:30	3/15/2015 20:00	**3330**	1.68	**2,251,266**	2.98	**0.63**	24	Atlas	3,782,126	1
	4/2/2015 15:15	4/5/2015 9:45	**3990**	6.05	**691,391**	6.1	**50.00**	6	Cloudburst	4,182,916	1
	4/7/2015 9:30	4/7/2015 21:00	**690**	0.68	**182,071**	6.74	**0.30**	1	Atlas	123,808	1
	4/8/2015 18:15	4/8/2015 22:45	**270**	0.28	**490,795**	7.02	**0.19**	1	Atlas	137,423	1
	4/9/2015 11:45	4/9/2015 15:15	**210**	0.59	**212,773**	7.16	**0.51**	1	Atlas	125,536	1
	4/10/2015 2:30	4/10/2015 3:00	**30**	0.15	**91,346**	4.04	**0.09**	3	Atlas	13,702	1
	6/18/2015 17:00	6/18/2015 23:00	**360**	1.37	**59,212**	2.19	**0.79**	3	Atlas	81,121	1
	6/20/2015 8:00	6/20/2015 11:30	**210**	1.28	**58,498**	3.6	**0.56**	12	Atlas	74,877	1
	6/26/2015 0:15	6/26/2015 4:30	**255**	0.65	**14,706**	2.24	**0.35**	6	Atlas	9,559	1
	6/26/2015 17:30	6/27/2015 1:30	**480**	0.7	**17,843**	2.78	**0.35**	1	Atlas	12,490	1
	7/10/2015 10:30	7/10/2015 16:15	**345**	0.7	**46,062**	2.03	**0.36**	1	Atlas	32,244	1
	7/12/2015 6:15	7/12/2015 23:00	**1005**	0.87	**629,399**	2.61	**0.58**	1	Atlas	547,577	1
	7/13/2015 14:15	7/14/2015 21:45	**1890**	0.56	**1,693,426**	3.8	**0.46**	1	Atlas	948,319	1
	7/17/2015 23:30	7/18/2015 12:00	**750**	1.12	**416,011**	3.18	**0.75**	3	Atlas	465,932	1
	8/6/2015 15:00	8/6/2015 15:15	**15**	1.29	**2,742**	1.51	**0.45**	24	Atlas	3,537	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO018	**10/27/2015 21:15**	10/27/2015 21:15	**0**	2.93	**322**	2.24	**0.89**	48	Atlas	942	1
	11/6/2015 4:00	11/6/2015 4:30	**30**	1.01	**13,096**	1.08	**0.63**	3	Atlas	13,227	1
	11/18/2015 11:00	11/18/2015 21:00	**600**	1.87	**208,397**	2.42	**0.96**	6	Atlas	389,703	1
	12/23/2015 19:30	12/24/2015 2:15	**405**	1.03	**98,083**	1.93	**0.77**	1	Atlas	101,026	1
	12/27/2015 10:45	12/29/2015 14:15	**3090**	2.5	**1,244,567**	4.98	**0.81**	48	Atlas	3,111,417	1
	12/31/2015 15:00	12/31/2015 23:30	**510**	Discharge						616,338	1
	2/2/2016 23:30	2/3/2016 6:00	**390**	1.61	**105,897**	1.72	**0.78**	6	Atlas	170,494	1
	2/24/2016 1:00	2/25/2016 0:15	**1395**	1.96	**927,742**	2.69	**0.76**	12	Atlas	1,818,375	1
	3/10/2016 18:15	3/10/2016 20:15	**120**	1.33	**5,216**	1.37	**0.45**	12	Atlas	6,937	1
	3/12/2016 23:15	3/12/2016 23:15	**0**	0.89	**1,513**	1.88	**0.33**	24	Atlas	1,346	1
	3/13/2016 9:00	3/13/2016 14:00	**300**	0.89	**189,816**	2.24	**0.33**	24	Atlas	168,936	1
	3/24/2016 17:45	3/24/2016 18:15	**30**	0.35	**50,890**	0.56	**0.25**	1	Atlas	17,811	1
	3/27/2016 21:30	3/27/2016 22:30	**60**	0.99	**69,174**	1.33	**0.65**	3	Atlas	68,482	1
	3/31/2016 23:30	3/31/2016 23:30	**0**	1.4	**1,226**	2.37	**0.53**	24	Atlas	1,717	1
	5/10/2016 22:00	5/10/2016 22:00	**0**	0.78	**21,152**	1.65	**0.28**	24	Atlas	16,499	1
	5/20/2016 15:00	5/20/2016 16:00	**60**	0.84	**61,845**	1.47	**0.49**	3	Atlas	51,950	1
	6/23/2016 20:30	6/24/2016 0:45	**255**	1.38	**68,914**	1.5	**0.70**	6	Atlas	95,102	1
Grand Total										**372,573,090**	**185**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**3/10/2010 10:30**	3/10/2010 11:15	**45**	Discharge						168,608	1
	3/11/2010 10:15	3/11/2010 10:15	**0**	Discharge						14,344	1
	3/12/2010 14:00	3/12/2010 16:00	**120**	0.24	**2,640,546**	0.26	**0.15**	3	Atlas	633,731	1
	3/21/2010 23:00	3/22/2010 2:30	**210**	0.51	**3,751,506**	0.51	**0.23**	12	Atlas	1,913,268	1
	3/25/2010 21:00	3/25/2010 23:00	**120**	0.66	**821,600**	1.17	**0.42**	1	Atlas	542,256	1
	4/8/2010 0:45	4/8/2010 8:30	**465**	1.17	**5,313,306**	1.24	**0.54**	12	Atlas	6,216,568	1
	4/19/2010 9:30	4/19/2010 9:30	**0**	Discharge						8,808	1
	4/24/2010 14:15	4/25/2010 0:45	**630**	1.89	**4,795,106**	2.12	**0.91**	6	Atlas	9,062,750	1
	4/27/2010 8:30	4/27/2010 12:00	**210**	0.31	**5,163,939**	2.59	**0.15**	6	Atlas	1,600,821	1
	5/1/2010 4:15	5/3/2010 17:15	**3660**	3.76	**16,700,152**	6.02	**2.26**	48	Cloudburst	62,792,570	1
	5/9/2010 20:00	5/9/2010 20:45	**45**	Discharge						370,487	1
	5/10/2010 8:00	5/12/2010 14:15	**3255**	Discharge						18,637,118	1
	5/13/2010 0:45	5/13/2010 0:45	**0**	Discharge						5,858	1
	5/13/2010 12:00	5/13/2010 12:45	**45**	0.11	**7,487,473**	1.11	**0.10**	1	Atlas	823,622	1
	5/14/2010 16:15	5/14/2010 16:45	**30**	Discharge						379,955	1
	5/16/2010 9:15	5/16/2010 21:00	**705**	0.51	**7,981,514**	1.32	**0.23**	12	Atlas	4,070,572	1
	5/17/2010 9:15	5/17/2010 9:30	**15**	Discharge						386,540	1
	5/17/2010 17:45	5/20/2010	**3255**	0.47	**28,825,883**	1.79	**0.30**	1	Atlas	13,548,165	1
	5/21/2010 19:45	5/22/2010 4:00	**495**	0.91	**5,706,052**	1.89	**0.66**	1	Atlas	5,192,507	1
	5/30/2010 20:45	5/30/2010 21:15	**30**	0.58	**22,329**	0.64	**0.34**	1	Atlas	12,951	1
	6/9/2010 3:45	6/9/2010 14:30	**645**	2.05	**3,874,896**	2.19	**1.57**	3	Atlas	7,943,537	1
	6/13/2010 23:00	6/14/2010 0:30	**90**	0.72	**1,265,347**	2.73	**0.33**	12	Atlas	911,050	1
	6/19/2010 5:30	6/19/2010 10:30	**300**	1.17	**3,798,270**	2.46	**0.69**	3	Atlas	4,443,976	1
	6/28/2010 2:15	6/28/2010 3:30	**75**	0.31	**1,773,728**	0.3	**0.21**	1	Atlas	549,856	1
	7/9/2010 12:45	7/10/2010 5:15	**990**	0.45	**12,187,046**	0.45	**0.17**	24	Atlas	5,484,171	1
	7/13/2010 4:45	7/13/2010 16:30	**705**	1.76	**6,564,210**	2.21	**0.81**	12	Atlas	11,553,010	1
	7/20/2010 5:00	7/20/2010 7:00	**120**	0.82	**1,778,691**	2.06	**0.41**	1	Atlas	1,458,527	1
	7/21/2010 6:45	7/21/2010 6:45	**0**	0.45	**4,432**	1.45	**0.35**	1	Atlas	1,995	1
	7/27/2010 16:00	7/27/2010 17:15	**75**	0.86	**320,388**	1.4	**0.60**	1	Atlas	275,533	1
	7/31/2010 5:30	7/31/2010 6:45	**75**	0.35	**1,143,722**	1.36	**0.19**	3	Atlas	400,303	1
	8/5/2010 10:00	8/5/2010 10:15	**15**	0.23	**91,148**	0.75	**0.17**	1	Atlas	20,964	1
	8/14/2010 16:30	8/14/2010 18:30	**120**	0.78	**1,249,801**	1.03	**0.62**	1	Atlas	974,845	1
	8/21/2010 7:45	8/21/2010 9:00	**75**	0.34	**2,312,881**	1.34	**0.20**	3	Atlas	786,379	1
	10/13/2010 19:30	10/13/2010 22:00	**150**	0.47	**4,356,974**	0.5	**0.30**	3	Atlas	2,047,778	1
	10/26/2010 11:45	10/26/2010 12:30	**45**	0.67	**143,228**	0.43	**0.37**	6	Atlas	95,963	1
	11/1/2010 0:30	11/1/2010 6:15	**345**	Discharge						2,209,468	1
	11/16/2010 12:15	11/16/2010 22:30	**615**	0.71	**13,136,120**	0.82	**0.32**	12	Atlas	9,326,646	1
	11/23/2010 4:30	11/23/2010 5:00	**30**	0.26	**242,637**	1.04	**0.14**	6	Atlas	63,086	1
	11/24/2010 13:00	11/24/2010 16:00	**180**	0.81	**3,561,107**	1.14	**0.39**	3	Atlas	2,884,497	1
	11/25/2010 9:45	11/26/2010 2:00	**975**	2.56	**6,964,192**	3.64	**0.98**	24	Atlas	17,828,332	1
	11/29/2010 21:15	11/30/2010 15:30	**1095**	1.69	**7,187,456**	5.32	**0.65**	24	Atlas	12,146,801	1
	12/30/2010 3:30	12/30/2010 9:45	**375**	0.54	**2,794,457**	0.64	**0.24**	12	Atlas	1,509,007	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**1/1/2011 4:45**	1/1/2011 10:45	**360**	0.59	**7,098,525**	1.15	**0.27**	12	Atlas	4,188,130	1
	1/18/2011 11:45	1/18/2011 13:00	**75**	0.38	**1,080,927**	0.37	**0.13**	24	Atlas	410,752	1
	2/1/2011 17:15	2/2/2011 0:30	**435**	0.93	**9,218,244**	0.85	**0.36**	6	Atlas	8,572,967	1
	2/5/2011 6:00	2/5/2011 16:45	**645**	0.22	**30,585,414**	1.15	**0.10**	12	Atlas	6,728,791	1
	2/7/2011 12:00	2/8/2011	**720**	0.21	**47,827,926**	1.36	**0.08**	24	Atlas	10,043,865	1
	2/21/2011 19:00	2/21/2011 22:30	**210**	0.16	**14,689,631**	0.2	**0.10**	3	Atlas	2,350,341	1
	2/24/2011 8:45	2/25/2011 22:00	**2235**	2.32	**19,496,745**	2.52	**0.89**	24	Atlas	45,232,447	1
	2/26/2011 9:00	2/26/2011 9:45	**45**	Discharge						3,791	1
	4/4/2011 13:45	4/4/2011 19:00	**315**	0.84	**6,566,171**	0.99	**0.43**	6	Atlas	5,515,584	1
	6/15/2011 9:30	6/15/2011 12:00	**150**	1.09	**2,326,175**	1.52	**0.70**	1	Atlas	2,535,531	1
	6/18/2011 7:15	6/18/2011 9:15	**120**	0.71	**1,477,545**	1.85	**0.43**	3	Atlas	1,049,057	1
	6/19/2011 8:30	6/19/2011 10:00	**90**	0.57	**1,038,664**	2.41	**0.35**	3	Atlas	592,039	1
	6/20/2011 1:30	6/20/2011 3:00	**90**	0.5	**1,278,373**	2.91	**0.43**	1	Atlas	639,187	1
	6/21/2011 16:15	6/21/2011 17:30	**75**	0.26	**762,703**	3.13	**0.15**	3	Atlas	198,303	1
	6/22/2011 19:30	6/23/2011 13:15	**1065**	3.75	**4,290,263**	5.8	**14.59**	3	Atlas	16,088,486	1
	6/24/2011 16:45	6/24/2011 16:45	**0**	Discharge						4,413	1
	7/19/2011 22:30	7/20/2011 0:15	**105**	1.72	**1,110,809**	1.74	**2.19**	1	Atlas	1,910,592	1
	8/1/2011 8:15	8/1/2011 8:15	**0**	Discharge						1,988	1
	8/7/2011 3:15	8/7/2011 7:30	**255**	1.62	**1,971,382**	1.67	**0.95**	3	Atlas	3,193,639	1
	9/19/2011 7:30	9/19/2011 8:45	**75**	0.7	**684,719**	0.61	**0.28**	12	Atlas	479,303	1
	9/23/2011 3:00	9/23/2011 9:15	**375**	0.74	**2,631,946**	1.49	**0.34**	12	Atlas	1,947,640	1
	9/25/2011 23:15	9/26/2011 14:45	**930**	3.56	**4,675,522**	5.11	**8.37**	12	Cloudburst	16,644,860	1
	10/13/2011 7:45	10/13/2011 9:15	**90**	0.49	**1,187,862**	0.37	**0.25**	3	Atlas	582,053	1
	10/27/2011	10/27/2011 6:30	**390**	1.05	**4,310,380**	1.46	**0.47**	3	Atlas	4,525,899	1
	11/3/2011 9:45	11/3/2011 12:15	**150**	0.52	**2,437,370**	0.46	**0.24**	3	Atlas	1,267,432	1
	11/14/2011 22:00	11/15/2011 17:30	**1170**	2.07	**5,308,723**	1.51	**0.67**	48	Atlas	10,989,056	1
	11/16/2011 5:45	11/16/2011 13:45	**480**	2.07	**3,330,293**	2.08	**0.67**	48	Atlas	6,893,706	1
	11/20/2011 17:45	11/20/2011 21:15	**210**	0.78	**1,122,536**	2.61	**0.28**	24	Atlas	875,578	1
	11/22/2011 0:15	11/22/2011 14:30	**855**	0.96	**6,671,287**	3.32	**0.42**	6	Atlas	6,404,436	1
	12/4/2011 18:00	12/5/2011 10:45	**1005**	3.23	**4,937,904**	4.43	**1.25**	48	Cloudburst	15,949,430	1
	12/15/2011 4:45	12/15/2011 10:00	**315**	0.47	**2,855,599**	0.41	**0.22**	12	Atlas	1,342,132	1
	12/21/2011 6:00	12/21/2011 9:00	**180**	0.68	**3,321,222**	1.17	**0.31**	12	Atlas	2,258,431	1
	12/22/2011 14:15	12/22/2011 20:30	**375**	0.55	**9,072,843**	1.23	**0.25**	12	Atlas	4,990,064	1
	12/27/2011 3:15	12/27/2011 16:00	**765**	0.7	**12,323,502**	1.93	**0.28**	12	Atlas	8,626,451	1
	1/11/2012 5:30	1/11/2012 22:45	**1035**	0.77	**9,790,362**	0.78	**0.30**	12	Atlas	7,538,579	1
	1/17/2012 12:00	1/17/2012 13:45	**105**	0.41	**2,948,122**	1.29	**0.19**	12	Atlas	1,208,730	1
	1/23/2012 3:00	1/23/2012 6:45	**225**	0.67	**5,075,026**	1.09	**0.33**	3	Atlas	3,400,268	1
	2/4/2012 10:00	2/4/2012 13:00	**180**	0.39	**3,950,427**	0.43	**0.22**	3	Atlas	1,540,667	1
	2/22/2012 23:45	2/23/2012	**15**	0.15	**66,998**	0.42	**0.11**	1	Atlas	10,050	1
	2/29/2012 9:00	2/29/2012 10:30	**90**	0.7	**864,043**	0.67	**0.32**	12	Atlas	604,830	1
	3/8/2012 14:30	3/8/2012 18:15	**225**	0.78	**3,336,729**	1.09	**0.38**	6	Atlas	2,602,649	1
	3/15/2012 20:00	3/16/2012 4:45	**525**	0.95	**4,107,051**	1.15	**0.42**	12	Atlas	3,901,698	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**3/17/2012 14:00**	3/17/2012 23:45	**585**	Discharge						3,319,599	1
	3/23/2012 5:45	3/24/2012 0:45	**1140**	1.53	**2,906,733**	2.26	**0.55**	24	Atlas	4,447,302	1
	4/1/2012 8:30	4/1/2012 14:30	**360**	1.36	**3,509,481**	1.55	**0.73**	6	Atlas	4,772,894	1
	4/4/2012 8:15	4/4/2012 8:45	**30**	0.06	**4,120,195**	1.61	**0.04**	1	Atlas	247,212	1
	4/4/2012 17:30	4/4/2012 18:15	**45**	0.24	**290,593**	1.69	**0.11**	12	Atlas	69,742	1
	4/28/2012 19:15	4/29/2012 2:00	**405**	0.75	**3,396,715**	0.88	**0.56**	1	Atlas	2,547,536	1
	4/30/2012 18:30	4/30/2012 19:30	**60**	0.38	**801,786**	1.17	**0.25**	3	Atlas	304,679	1
	5/4/2012 23:45	5/5/2012 6:45	**420**	1.35	**5,631,398**	2.51	**0.73**	3	Atlas	7,602,387	1
	5/13/2012 2:00	5/13/2012 18:00	**960**	2.21	**7,747,282**	2.26	**0.86**	12	Atlas	17,121,493	1
	5/16/2012 18:00	5/16/2012 19:30	**90**	0.22	**5,152,602**	2.44	**0.19**	1	Atlas	1,133,572	1
	5/29/2012 6:45	5/29/2012 23:45	**1020**	2.48	**8,504,780**	2.48	**6.94**	3	Atlas	21,091,854	1
	5/31/2012 18:30	6/1/2012 15:00	**1230**	1.28	**11,797,604**	3.76	**0.55**	12	Atlas	15,100,933	1
	7/1/2012 20:30	7/1/2012 21:30	**60**	0.42	**972,019**	0.38	**0.30**	1	Atlas	408,248	1
	7/14/2012 13:00	7/14/2012 16:15	**195**	0.56	**4,608,213**	0.72	**0.33**	3	Atlas	2,580,600	1
	7/18/2012 16:45	7/18/2012 19:00	**135**	Discharge						1,876,432	1
	7/19/2012 18:00	7/19/2012 20:30	**150**	0.71	**3,619,641**	1.26	**0.57**	1	Atlas	2,569,945	1
	7/27/2012 20:00	7/27/2012 23:45	**225**	0.6	**4,973,799**	0.99	**0.39**	3	Atlas	2,984,280	1
	8/16/2012 20:45	8/17/2012 1:45	**300**	0.51	**9,928,076**	0.63	**0.30**	3	Atlas	5,063,319	1
	8/21/2012 14:30	8/21/2012 15:45	**75**	0.21	**1,555,160**	0.74	**0.18**	1	Atlas	326,584	1
	9/1/2012 15:15	9/1/2012 19:30	**255**	0.34	**13,454,004**	0.36	**0.20**	3	Atlas	4,574,361	1
	9/2/2012 12:30	9/3/2012	**690**	0.59	**11,280,954**	0.95	**0.23**	24	Atlas	6,655,763	1
	9/3/2012 14:45	9/3/2012 16:15	**90**	0.06	**7,885,726**	1	**0.05**	1	Atlas	473,144	1
	9/5/2012 15:15	9/5/2012 20:00	**285**	0.8	**5,875,293**	1.8	**0.62**	1	Atlas	4,700,234	1
	9/7/2012 23:45	9/8/2012 11:00	**675**	1.26	**8,380,315**	3.05	**0.69**	3	Atlas	10,559,197	1
	9/26/2012 1:45	9/26/2012 3:00	**75**	0.44	**792,244**	0.65	**0.20**	12	Atlas	348,587	1
	9/26/2012 21:15	9/27/2012 4:15	**420**	1.9	**3,843,153**	2.77	**1.14**	6	Cloudburst	7,301,990	1
	10/1/2012 15:30	10/1/2012 21:00	**330**	0.65	**7,435,399**	3.38	**0.26**	12	Atlas	4,833,010	1
	10/26/2012 14:00	10/26/2012 18:45	**285**	0.75	**3,836,871**	0.7	**0.34**	6	Atlas	2,877,653	1
	11/12/2012 7:45	11/12/2012 10:30	**165**	0.44	**82,676**	0.44	**0.20**	12	Atlas	36,377	1
	12/4/2012 16:15	12/4/2012 21:45	**330**	0.57	**9,050,937**	0.82	**0.36**	3	Atlas	5,159,034	1
	12/7/2012 4:45	12/7/2012 18:45	**840**	1.1	**10,313,303**	1.92	**0.47**	12	Atlas	11,344,634	1
	12/8/2012 5:45	12/8/2012 10:30	**285**	0.32	**3,130,372**	2.24	**0.18**	1	Atlas	1,001,719	1
	12/9/2012 21:15	12/10/2012 2:00	**285**	1.1	**4,246,695**	2.99	**0.53**	3	Atlas	4,671,364	1
	12/15/2012 12:15	12/15/2012 13:30	**75**	0.18	**2,842,844**	1.28	**0.11**	3	Atlas	511,712	1
	12/20/2012 7:30	12/20/2012 17:30	**600**	0.74	**8,436,153**	1.2	**0.40**	6	Atlas	6,242,753	1
	12/26/2012 5:00	12/26/2012 17:00	**720**	0.66	**14,435,150**	1.49	**0.26**	12	Atlas	9,527,199	1
	1/11/2013 6:15	1/11/2013 9:15	**180**	0.6	**3,209,804**	0.76	**0.32**	6	Atlas	1,925,883	1
	1/13/2013 3:30	1/14/2013 20:15	**2445**	2.12	**15,001,536**	2.9	**0.81**	24	Atlas	31,803,256	1
	1/30/2013 4:45	1/30/2013 19:45	**900**	0.86	**9,464,038**	1.15	**0.45**	6	Atlas	8,139,073	1
	2/22/2013 0:15	2/22/2013 2:45	**150**	0.42	**3,733,706**	0.77	**0.19**	12	Atlas	1,568,157	1
	2/26/2013 13:30	2/26/2013 22:45	**555**	0.6	**10,192,838**	1.02	**0.23**	24	Atlas	6,115,703	1
	3/5/2013 16:15	3/5/2013 21:30	**315**	0.51	**7,015,366**	0.66	**0.20**	6	Atlas	3,577,837	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**3/11/2013 4:00**	3/11/2013 21:00	**1020**	1	**12,428,647**	1.54	**0.41**	12	Atlas	12,428,647	1
	3/17/2013 11:45	3/18/2013 10:30	**1365**	1.65	**7,532,227**	2.66	**0.54**	48	Atlas	12,428,175	1
	3/24/2013 8:45	3/24/2013 17:45	**540**	0.53	**1,076,404**	1.71	**0.20**	24	Atlas	570,494	1
	4/11/2013 6:30	4/12/2013 2:45	**1215**	1.34	**6,925,759**	1.34	**0.52**	24	Atlas	9,280,517	1
	4/16/2013 20:00	4/16/2013 22:30	**150**	0.64	**3,089,874**	1.96	**0.51**	1	Atlas	1,977,520	1
	4/19/2013 2:00	4/19/2013 7:45	**345**	0.92	**5,765,122**	1.58	**0.50**	6	Atlas	5,303,913	1
	4/24/2013 7:15	4/24/2013 12:30	**315**	0.72	**5,427,916**	1.68	**0.39**	6	Atlas	3,908,100	1
	5/4/2013 15:00	5/5/2013 10:45	**1185**	1.42	**1,902,750**	1.34	**0.43**	24	Atlas	2,701,905	1
	5/10/2013 12:45	5/11/2013 2:45	**840**	0.9	**5,989,813**	2.44	**0.40**	6	Atlas	5,390,832	1
	5/16/2013 10:45	5/16/2013 12:45	**120**	0.29	**3,709,818**	1.25	**0.24**	1	Atlas	1,075,847	1
	5/31/2013 19:30	5/31/2013 19:45	**15**	0.25	**20,314**	0.35	**0.11**	12	Atlas	5,079	1
	6/10/2013 0:30	6/10/2013 2:15	**105**	0.31	**1,747,686**	0.27	**0.14**	6	Atlas	541,783	1
	6/16/2013 17:30	6/16/2013 18:30	**60**	0.49	**388,463**	0.79	**0.33**	1	Atlas	190,347	1
	6/17/2013 16:15	6/18/2013 4:30	**735**	1.24	**10,281,387**	1.76	**0.69**	1	Atlas	12,748,920	1
	6/21/2013 19:45	6/21/2013 21:00	**75**	0.13	**3,912,545**	1.89	**0.09**	1	Atlas	508,631	1
	6/26/2013 3:30	6/28/2013 13:45	**3495**	3.33	**13,801,896**	3.9	**6.54**	1	Atlas	45,960,313	1
	6/29/2013 19:45	6/30/2013 0:45	**300**	0.44	**11,279,748**	4.19	**0.23**	6	Atlas	4,963,089	1
	7/1/2013 19:15	7/1/2013 20:45	**90**	0.27	**1,343,963**	4.17	**0.15**	3	Atlas	362,870	1
	7/2/2013 13:45	7/2/2013 14:45	**60**	0.15	**1,147,491**	4.32	**0.13**	1	Atlas	172,124	1
	7/4/2013 8:00	7/4/2013 19:00	**660**	0.5	**7,282,834**	1.51	**0.22**	12	Atlas	3,641,417	1
	7/6/2013 1:15	7/6/2013 12:15	**660**	0.64	**10,910,438**	2.16	**0.28**	12	Atlas	6,982,680	1
	7/10/2013 14:00	7/10/2013 18:45	**285**	0.96	**3,344,546**	2.2	**0.69**	1	Atlas	3,210,764	1
	7/14/2013 19:45	7/14/2013 21:30	**105**	0.2	**6,663,344**	1.24	**0.17**	1	Atlas	1,332,669	1
	7/21/2013 19:45	7/21/2013 21:30	**105**	1.88	**945,753**	1	**0.72**	24	Atlas	1,778,016	1
	7/22/2013 7:30	7/22/2013 23:45	**975**	1.88	**6,718,886**	2.06	**0.72**	24	Atlas	12,631,506	1
	8/12/2013 15:00	8/12/2013 17:30	**150**	0.57	**2,777,016**	0.59	**0.22**	24	Atlas	1,582,899	1
	8/13/2013 3:15	8/13/2013 5:15	**120**	0.57	**1,736,815**	0.79	**0.22**	24	Atlas	989,984	1
	8/20/2013 18:45	8/20/2013 20:00	**75**	0.17	**1,880,627**	0.19	**0.09**	6	Atlas	319,707	1
	8/31/2013 20:00	9/1/2013 5:00	**540**	1.23	**8,676,226**	1.23	**0.58**	1	Atlas	10,671,758	1
	9/2/2013 14:00	9/2/2013 15:45	**105**	0.13	**8,688,285**	1.36	**0.11**	1	Atlas	1,129,477	1
	9/20/2013 19:45	9/21/2013 8:45	**780**	1.22	**9,215,691**	1.28	**0.50**	12	Atlas	11,243,143	1
	10/5/2013 13:15	10/7/2013 22:45	**3450**	3.64	**16,404,230**	3.77	**4.00**	24	Cloudburst	59,711,398	1
	10/30/2013 2:15	10/30/2013 11:00	**525**	1.39	**5,483,974**	1.39	**0.68**	6	Atlas	7,622,724	1
	10/31/2013 19:45	11/1/2013 1:00	**315**	0.68	**6,194,432**	2.07	**0.26**	24	Atlas	4,212,214	1
	11/17/2013 5:45	11/18/2013 23:30	**2505**	2.31	**16,410,061**	2.43	**0.98**	6	Atlas	37,907,241	1
	12/5/2013 7:45	12/5/2013 13:00	**315**	0.83	**3,746,277**	0.29	**0.27**	48	Atlas	3,109,410	1
	12/6/2013 12:15	12/6/2013 14:45	**150**	0.83	**835,708**	0.65	**0.27**	48	Atlas	693,638	1
	12/14/2013 7:45	12/14/2013 19:15	**690**	0.77	**7,037,821**	1.14	**0.31**	12	Atlas	5,419,122	1
	12/21/2013 6:00	12/22/2013 15:00	**1980**	2.85	**10,787,186**	3.31	**1.27**	24	Cloudburst	30,743,480	1
	1/5/2014 15:45	1/5/2014 22:30	**405**	0.52	**10,897,699**	0.72	**0.26**	6	Atlas	5,666,804	1
	1/11/2014 0:45	1/11/2014 14:30	**825**	0.79	**10,994,551**	1.32	**0.42**	6	Atlas	8,685,695	1
	1/13/2014 15:15	1/13/2014 19:15	**240**	0.21	**7,003,896**	1.01	**0.10**	3	Atlas	1,470,818	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**2/2/2014 4:30**	2/2/2014 10:30	**360**	0.48	**8,907,741**	0.21	**0.18**	24	Atlas	4,275,716	1
	2/4/2014 19:30	2/6/2014 8:15	**2205**	0.5	**56,192,510**	0.98	**0.25**	6	Atlas	28,096,255	1
	2/14/2014 17:15	2/14/2014 20:45	**210**	0.48	**3,252,529**	0.52	**0.25**	6	Atlas	1,561,214	1
	2/17/2014 16:00	2/19/2014 16:15	**2895**	0.64	**20,776,398**	1.19	**0.39**	3	Atlas	13,296,895	1
	2/20/2014 20:30	2/21/2014 17:15	**1245**	0.17	**35,930,496**	1.36	**0.09**	6	Atlas	6,108,184	1
	3/2/2014 10:45	3/2/2014 12:30	**105**	0.48	**1,677,223**	0.22	**0.18**	24	Atlas	805,067	1
	3/26/2014 2:15	3/26/2014 3:15	**60**	Discharge						3,197,901	1
	3/28/2014 3:15	3/28/2014 6:45	**210**	0.31	**20,239,968**	0.37	**0.16**	6	Atlas	6,274,390	1
	3/29/2014 6:30	3/29/2014 15:45	**555**	0.92	**10,737,481**	1.29	**0.43**	6	Atlas	9,878,482	1
	4/3/2014 12:15	4/4/2014 13:45	**1530**	2.36	**12,368,140**	3.69	**0.82**	24	Atlas	29,188,811	1
	4/28/2014 4:15	4/28/2014 22:00	**1065**	1.59	**6,351,968**	1.66	**0.65**	3	Atlas	10,099,630	1
	5/9/2014 20:15	5/9/2014 20:15	**0**	1.62	**142**	0.25	**0.62**	24	Atlas	231	1
	5/10/2014 5:45	5/10/2014 18:00	**735**	1.62	**2,768,280**	1.7	**0.62**	24	Atlas	4,484,613	1
	5/14/2014 18:15	5/15/2014 0:30	**375**	0.85	**1,077,066**	2.61	**0.32**	24	Atlas	915,506	1
	5/22/2014 3:00	5/22/2014 5:00	**120**	0.52	**1,468,489**	0.59	**0.24**	1	Atlas	763,614	1
	5/29/2014 20:45	5/29/2014 22:30	**105**	0.1	**6,650,381**	0.35	**0.08**	1	Atlas	665,038	1
	7/13/2014 23:00	7/14/2014	**60**	0.59	**512,823**	1.31	**0.31**	1	Atlas	302,565	1
	7/14/2014 20:45	7/14/2014 21:00	**15**	0.44	**13,142**	1.62	**0.31**	1	Atlas	5,782	1
	7/29/2014 8:45	7/29/2014 8:45	**0**	Discharge						71,172	1
	8/8/2014 6:30	8/8/2014 8:45	**135**	0.78	**2,185,363**	0.58	**0.38**	6	Atlas	1,704,583	1
	8/10/2014 4:45	8/10/2014 5:00	**15**	0.64	**91,248**	1.51	**0.52**	1	Atlas	58,398	1
	8/22/2014 19:45	8/22/2014 20:30	**45**	0.26	**66,634**	0.95	**0.17**	1	Atlas	17,325	1
	8/23/2014 20:15	8/23/2014 22:45	**150**	0.52	**2,435,307**	1.44	**0.27**	3	Atlas	1,266,359	1
	8/30/2014 15:15	8/30/2014 16:30	**75**	0.61	**735,991**	1.39	**0.39**	1	Atlas	448,954	1
	9/11/2014 0:45	9/11/2014 8:45	**480**	1.92	**3,317,859**	1.92	**1.50**	3	Atlas	6,370,289	1
	10/10/2014 2:15	10/10/2014 4:00	**105**	1.24	**826,877**	1.59	**0.59**	3	Atlas	1,025,327	1
	10/13/2014 6:15	10/13/2014 7:00	**45**	0.42	**172,579**	2.12	**0.27**	3	Atlas	72,483	1
	10/14/2014	10/14/2014 11:45	**705**	0.87	**3,797,001**	2.77	**0.38**	12	Atlas	3,303,391	1
	10/27/2014 8:30	10/27/2014 8:30	**0**	Discharge						332,272	1
	11/23/2014 17:30	11/24/2014 0:15	**405**	0.7	**5,697,605**	1.09	**0.32**	12	Atlas	3,988,323	1
	12/1/2014 4:15	12/1/2014 5:45	**90**	0.89	**128,416**	0.44				114,290	1
	12/5/2014 21:30	12/6/2014 10:30	**780**	1.91	**4,244,751**	2.8	**0.62**	48	Atlas	8,107,475	1
	2/1/2015 13:45	2/1/2015 14:45	**60**	0.42	**2,532,504**	0.51	**0.20**	3	Atlas	1,063,652	1
	2/21/2015 15:30	2/21/2015 17:45	**135**	1.18	**74,408**	1.39	**0.46**	12	Atlas	87,801	1
	3/3/2015 20:00	3/5/2015 17:15	**2715**	1.73	**17,797,710**	1.83	**0.56**	48	Atlas	30,790,038	1
	3/26/2015 5:45	3/26/2015 7:00	**75**	0.41	**334,200**	0.6	**0.16**	12	Atlas	137,022	1
	4/2/2015 10:45	4/5/2015 11:30	**4365**	4.46	**18,195,278**	4.59	**6.29**	24	Cloudburst	81,150,942	1
	5/26/2015 14:15	5/26/2015 15:00	**45**	0.31	**607,885**	0.5	**0.23**	1	Atlas	188,444	1
	6/17/2015 5:15	6/17/2015 7:30	**135**	0.64	**1,330,407**	0.67	**0.36**	3	Atlas	851,461	1
	6/18/2015 17:00	6/18/2015 22:00	**300**	0.62	**6,786,048**	1.26	**0.34**	1	Atlas	4,207,350	1
	6/20/2015 2:00	6/20/2015 13:00	**660**	0.87	**9,037,124**	2.22	**0.38**	12	Atlas	7,862,298	1
	6/26/2015 1:00	6/26/2015 1:30	**30**	0.47	**18,327**	1.46	**0.25**	6	Atlas	8,614	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**6/26/2015 17:00**	6/27/2015 2:30	**570**	1.05	**3,688,899**	2.61	**0.55**	1	Atlas	3,873,343	1
	7/2/2015 1:15	7/2/2015 2:45	**90**	1.75	**191,151**	2.4	**0.67**	24	Atlas	334,514	1
	7/2/2015 19:30	7/2/2015 22:45	**195**	1.75	**1,290,584**	3.54	**0.67**	24	Atlas	2,258,522	1
	7/3/2015 15:15	7/3/2015 20:15	**300**	0.37	**1,494,165**	3.43	**0.20**	6	Atlas	552,841	1
	7/7/2015 12:00	7/7/2015 17:15	**315**	0.8	**2,196,750**	2.81	**0.34**	6	Atlas	1,757,400	1
	7/8/2015 12:30	7/8/2015 13:45	**75**	0.8	**376,860**	2.96	**0.34**	6	Atlas	301,488	1
	7/9/2015 7:00	7/9/2015 8:30	**90**	0.33	**1,185,891**	2.3	**0.15**	12	Atlas	391,344	1
	7/10/2015 10:45	7/10/2015 17:45	**420**	0.35	**2,780,748**	1.88	**0.17**	6	Atlas	973,262	1
	7/12/2015 6:00	7/13/2015 1:00	**1140**	1.54	**12,505,522**	3.05	**1.13**	3	Atlas	19,258,503	1
	7/13/2015 14:15	7/13/2015 17:15	**180**	0.56	**2,257,804**	3.61	**0.46**	1	Atlas	1,264,370	1
	7/14/2015 4:00	7/14/2015 22:45	**1125**	0.74	**19,083,498**	4.53	**0.60**	1	Atlas	14,121,788	1
	8/5/2015 15:45	8/5/2015 16:00	**15**	0.79	**43,604**	1.15	**0.29**	24	Atlas	34,447	1
	8/6/2015 8:15	8/6/2015 16:30	**495**	0.79	**755,385**	1.57	**0.29**	24	Atlas	596,754	1
	8/19/2015 8:30	8/19/2015 9:00	**30**	0.3	**47,126**	0.28	**0.12**	24	Atlas	14,138	1
	10/27/2015 17:30	10/28/2015 10:15	**1005**	2.37	**5,944,499**	2.69	**0.78**	24	Atlas	14,088,463	1
	11/6/2015 3:30	11/6/2015 6:30	**180**	0.87	**2,603,371**	0.98	**0.53**	3	Atlas	2,264,932	1
	11/9/2015 20:00	11/9/2015 23:00	**180**	0.57	**1,122,085**	1.44	**0.25**	12	Atlas	639,588	1
	11/12/2015 0:45	11/12/2015 2:00	**75**	0.28	**2,295,195**	1.71	**0.17**	3	Atlas	642,655	1
	11/18/2015 9:30	11/18/2015 20:15	**645**	1.34	**7,543,819**	1.76	**0.69**	6	Atlas	10,108,718	1
	11/28/2015 16:45	11/28/2015 21:30	**285**	0.66	**677,534**	0.76	**0.28**	12	Atlas	447,172	1
	11/30/2015 22:45	12/1/2015 6:30	**465**	0.6	**3,380,867**	1.45	**0.27**	12	Atlas	2,028,520	1
	12/22/2015	12/22/2015 6:15	**375**	0.55	**4,896,690**	0.57	**0.21**	24	Atlas	2,693,180	1
	12/23/2015 19:15	12/24/2015 3:00	**465**	0.79	**6,842,737**	1.39	**0.62**	1	Atlas	5,405,762	1
	12/26/2015 12:45	12/26/2015 15:00	**135**	0.32	**2,605,327**	1.71	**0.15**	12	Atlas	833,705	1
	2/2/2016 19:45	2/3/2016 10:30	**885**	1.36	**6,903,774**	1.41	**0.62**	12	Atlas	9,389,132	1
	2/21/2016 5:30	2/21/2016 14:00	**510**	0.89	**7,893,370**	1.07	**0.41**	12	Atlas	7,025,099	1
	2/23/2016 23:00	2/24/2016 20:45	**1305**	1.92	**10,749,667**	2.78	**0.75**	12	Atlas	20,639,361	1
	3/1/2016 12:30	3/1/2016 15:30	**180**	0.4	**2,712,937**	2.35	**0.21**	6	Atlas	1,085,175	1
	3/10/2016 14:00	3/10/2016 22:30	**510**	1.17	**3,858,433**	1.21	**0.38**	48	Atlas	4,514,366	1
	3/12/2016 20:45	3/13/2016 13:30	**1005**	0.72	**7,339,212**	1.93	**0.28**	24	Atlas	5,284,232	1
	3/24/2016 17:45	3/24/2016 19:30	**105**	0.27	**1,457,711**	0.33	**0.17**	1	Atlas	393,582	1
	3/27/2016 21:15	3/27/2016 23:45	**150**	0.81	**2,003,098**	1.08	**0.55**	1	Atlas	1,622,509	1
	3/31/2016 5:15	3/31/2016 8:30	**195**	1.11	**528,716**	1.73	**0.42**	24	Atlas	586,875	1
	3/31/2016 22:15	4/1/2016 1:30	**195**	1.11	**1,052,384**	1.92	**0.42**	24	Atlas	1,168,146	1
	4/11/2016 17:00	4/11/2016 21:45	**285**	1.02	**2,176,721**	1.16	**0.46**	6	Atlas	2,220,256	1
	4/26/2016 21:45	4/26/2016 22:15	**30**	0.27	**244,393**	0.61	**0.15**	3	Atlas	65,986	1
	4/27/2016 21:15	4/27/2016 23:00	**105**	0.7	**901,992**	1.28	**0.31**	12	Atlas	631,395	1
	5/10/2016 18:30	5/10/2016 23:45	**315**	0.69	**2,357,141**	1.42	**0.26**	24	Atlas	1,626,427	1
	5/11/2016 22:00	5/11/2016 23:15	**75**	0.2	**1,743,075**	1.41	**0.11**	3	Atlas	348,615	1
	5/20/2016 14:15	5/20/2016 18:00	**225**	0.54	**4,451,479**	1.2	**0.29**	3	Atlas	2,403,799	1
	6/2/2016 15:45	6/2/2016 16:45	**60**	0.3	**947,265**	0.43	**0.23**	1	Atlas	284,180	1
	6/12/2016 18:30	6/12/2016 19:00	**30**	0.18	**384,361**	0.21	**0.15**	1	Atlas	69,185	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO020	**6/14/2016 16:30**	6/14/2016 19:45	**195**	0.8	**2,621,314**	0.98	**0.53**	3	Atlas	2,097,051	1
	6/23/2016 16:00	6/24/2016 0:30	**510**	2.25	**2,338,619**	2.61	**2.12**	6	Cloudburst	5,261,892	1
Grand Total										**1,416,684,810**	**254**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO036	**7/14/2012 13:45**	7/14/2012 14:30	**45**	0.61	**20,701**	0.92	**0.39**	3	Atlas	12,628	1
	7/18/2012 16:15	7/18/2012 17:30	**75**	Discharge						8,382	1
	7/19/2012 18:15	7/19/2012 18:45	**30**	0.91	**222,595**	1.51	**0.74**	1	Atlas	202,562	1
	7/24/2012 20:00	7/24/2012 20:15	**15**	0.38	**10,636**	1.38	**0.32**	1	Atlas	4,042	1
	7/27/2012 20:00	7/27/2012 20:45	**45**	0.69	**9,106**	1.16	**0.48**	1	Atlas	6,283	1
	8/6/2012 5:45	8/6/2012 7:30	**105**	Discharge						1,767	1
	8/16/2012 20:15	8/16/2012 22:00	**105**	0.6	**25,560**	0.59	**0.35**	3	Atlas	15,336	1
	8/21/2012 13:45	8/21/2012 14:00	**15**	0.23	**36,473**	0.85	**0.20**	1	Atlas	8,389	1
	9/1/2012 15:15	9/1/2012 17:30	**135**	0.53	**44,884**	0.57	**0.33**	3	Atlas	23,789	1
	9/2/2012 12:00	9/2/2012 12:45	**45**	0.57	**10,704**	0.94	**0.22**	24	Atlas	6,101	1
	9/5/2012 15:30	9/5/2012 16:15	**45**	0.59	**134,044**	1.77	**0.46**	1	Atlas	79,086	1
	9/7/2012 23:30	9/8/2012 6:30	**420**	1.46	**21,522**	3.18	**0.80**	3	Atlas	31,422	1
	9/25/2012 23:45	9/26/2012 8:15	**510**	0.46	**11,180**	0.88	**0.21**	6	Atlas	5,143	1
	9/26/2012 20:45	9/27/2012 0:30	**225**	1.28	**225,309**	2.12	**0.68**	6	Atlas	288,395	1
	10/1/2012 15:00	10/1/2012 19:15	**255**	0.66	**45,931**	2.73	**0.25**	24	Atlas	30,314	1
	12/2/2012 11:30	12/2/2012 12:30	**60**	0.19	**3,630**	0.27	**0.11**	3	Atlas	690	1
	12/4/2012 15:30	12/5/2012 3:15	**705**	0.59	**131,437**	0.78	**0.38**	3	Atlas	77,548	1
	12/7/2012 5:15	12/7/2012 5:15	**0**	1.21	**1,086**	1.27	**0.51**	12	Atlas	1,314	1
	12/8/2012 5:45	12/8/2012 9:30	**225**	0.46	**22,083**	2.45	**0.25**	6	Atlas	10,158	1
	12/9/2012 8:30	12/9/2012 8:30	**0**	1.12	**865**	2.52	**0.52**	3	Atlas	969	1
	12/9/2012 21:30	12/9/2012 23:00	**90**	1.12	**44,852**	3.1	**0.52**	3	Atlas	50,234	1
	12/17/2012 17:00	12/17/2012 17:00	**0**	0.17	**3,661**	0.33	**0.09**	6	Atlas	622	1
	12/20/2012 7:00	12/20/2012 10:00	**180**	0.63	**6,249**	0.77	**0.34**	6	Atlas	3,937	1
	12/26/2012 4:45	12/26/2012 6:00	**75**	0.62	**44,447**	1.16	**0.24**	12	Atlas	27,557	1
	1/11/2013 5:30	1/11/2013 6:30	**60**	0.61	**16,116**	0.73	**0.32**	6	Atlas	9,830	1
	1/13/2013 3:15	1/13/2013 17:45	**870**	2.28	**39,410**	3	**0.87**	24	Atlas	89,855	1
	1/30/2013 4:45	1/30/2013 8:00	**195**	0.8	**46,102**	0.95	**0.41**	6	Atlas	36,882	1
	3/11/2013 3:15	3/11/2013 10:30	**435**	1	**6,575**	1.44	**0.40**	12	Atlas	6,575	1
	3/17/2013 13:45	3/17/2013 14:30	**45**	1.73	**3,281**	1.66	**0.56**	48	Atlas	5,675	1
	3/18/2013 4:15	3/18/2013 6:30	**135**	1.73	**11,860**	2.05	**0.56**	48	Atlas	20,517	1
	3/24/2013 7:45	3/24/2013 7:45	**0**	0.49	**2,141**	1.65	**0.18**	24	Atlas	1,049	1
	3/24/2013 16:00	3/24/2013 16:00	**0**	0.49	**5,525**	1.45	**0.18**	24	Atlas	2,707	1
	4/1/2013 23:15	4/1/2013 23:15	**0**	Discharge						361	1
	4/11/2013 6:30	4/12/2013 13:00	**1830**	1.3	**256,097**	1.3	**0.50**	24	Atlas	332,927	1
	4/12/2013 22:30	4/13/2013 11:15	**765**	Discharge						37,671	1
	4/13/2013 23:30	4/14/2013 8:15	**525**	Discharge						25,464	1
	4/16/2013 5:45	4/16/2013 9:00	**195**	Discharge						1,538	1
	4/16/2013 20:15	4/18/2013 12:30	**2415**	0.57	**15,874,492**	1.88	**0.46**	1	Atlas	9,048,460	1
	4/19/2013 2:30	4/21/2013 14:15	**3585**	0.95	**635,207**	1.54	**0.52**	3	Atlas	603,446	1
	4/23/2013 11:00	4/23/2013 11:00	**0**	Discharge						220	1
	4/23/2013 21:45	4/23/2013 21:45	**0**	0.02	**9,612**	1.02	**0.01**	3	Atlas	192	1
	4/24/2013 7:30	4/26/2013 14:15	**3285**	0.65	**936,533**	1.64	**0.37**	3	Atlas	608,747	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO036	**5/5/2013 8:15**	5/5/2013 8:15	**0**	1.56	**1,881**	1.39	**0.50**	24	Atlas	2,934	1
	5/9/2013 19:00	5/10/2013 0:15	**315**	Discharge						872	1
	5/10/2013 10:15	5/11/2013 11:00	**1485**	0.95	**143,774**	2.64	**0.44**	6	Atlas	136,586	1
	5/11/2013 21:00	5/12/2013 11:30	**870**	0.03	**898,222**	2	**0.03**	1	Atlas	26,947	1
	5/13/2013 2:45	5/13/2013 11:15	**510**	Discharge						11,546	1
	5/15/2013 5:15	5/17/2013 12:45	**3330**	Discharge						307,043	1
	5/18/2013 18:45	5/20/2013 11:15	**2430**	Discharge						1,122,711	1
	5/21/2013 7:15	5/21/2013 7:45	**30**	Discharge						1,070	1
	5/23/2013 2:30	5/24/2013 12:45	**2055**	Discharge						121,792	1
	5/24/2013 22:15	5/25/2013 3:00	**285**	Discharge						1,112	1
	5/28/2013 4:15	5/28/2013 11:00	**405**	Discharge						617	1
	5/29/2013 14:15	5/29/2013 14:15	**0**	Discharge						314	1
	5/30/2013 3:45	5/30/2013 3:45	**0**	Discharge						426	1
	5/31/2013 11:45	5/31/2013 15:15	**210**	0.25	**54,109**	0.24	**0.11**	12	Atlas	13,527	1
	6/1/2013 5:15	6/1/2013 5:30	**15**	0.14	**50,883**	0.37	**0.06**	12	Atlas	7,124	1
	6/1/2013 15:45	6/1/2013 15:45	**0**	0.14	**2,166**	0.43	**0.06**	12	Atlas	303	1
	6/2/2013 14:45	6/2/2013 19:00	**255**	Discharge						18,256	1
	6/3/2013 5:00	6/3/2013 13:15	**495**	Discharge						11,182	1
	6/3/2013 21:30	6/3/2013 21:30	**0**	Discharge						451	1
	6/4/2013 6:45	6/4/2013 7:00	**15**	Discharge						626	1
	6/7/2013 17:15	6/9/2013 4:45	**2130**	Discharge						10,670	1
	6/10/2013	6/10/2013	**0**	0.33	**2,155**	0.24	**0.14**	6	Atlas	711	1
	6/10/2013 22:45	6/11/2013 11:15	**750**	Discharge						12,448	1
	6/13/2013 9:00	6/14/2013 6:00	**1260**	0.02	**4,459,192**	0.36	**0.02**	1	Atlas	89,184	1
	6/17/2013 16:15	6/17/2013 23:00	**405**	0.86	**1,427**	1.17	**0.44**	6	Atlas	1,227	1
	6/18/2013 8:45	6/19/2013 12:15	**1650**	0.86	**30,733**	1.23	**0.44**	6	Atlas	26,430	1
	6/20/2013 0:30	6/20/2013 10:15	**585**	Discharge						6,581	1
	6/22/2013 19:00	6/22/2013 19:15	**15**	0.07	**40,194**	1.56	**0.04**	3	Atlas	2,814	1
	6/24/2013 8:30	6/24/2013 9:00	**30**	0.06	**14,532**	1.49	**0.04**	3	Atlas	872	1
	6/26/2013 2:30	6/26/2013 5:15	**165**	0.75	**113,202**	1.39	**0.50**	1	Atlas	84,901	1
	8/31/2013 20:15	8/31/2013 23:30	**195**	1.34	**12,749**	1.02	**0.62**	6	Atlas	17,083	1
	9/2/2013 13:45	9/2/2013 14:00	**15**	0.51	**76,433**	1.85	**0.44**	1	Atlas	38,981	1
	9/20/2013 16:30	9/21/2013 1:00	**510**	1.22	**6,032**	1.01	**0.51**	12	Atlas	7,359	1
	10/5/2013 13:00	10/6/2013 6:00	**1020**	4.1	**89,656**	3.6	**6.53**	24	Cloudburst	367,589	1
	10/30/2013 2:15	10/30/2013 5:45	**210**	1.51	**23,801**	1.49	**0.74**	6	Atlas	35,939	1
	10/31/2013 19:30	10/31/2013 19:30	**0**	0.71	**2,653**	2.07	**0.28**	12	Atlas	1,884	1
	11/17/2013 5:30	11/17/2013 8:45	**195**	2.16	**13,288**	1.76	**0.93**	6	Atlas	28,702	1
	12/5/2013 7:30	12/5/2013 7:30	**0**	0.84	**841**	0.18	**0.27**	48	Atlas	706	1
	12/21/2013 8:15	12/21/2013 10:45	**150**	2.56	**677**	1.12	**0.96**	24	Atlas	1,733	1
	12/21/2013 21:15	12/22/2013	**165**	2.56	**68,653**	2.37	**0.96**	24	Atlas	175,751	1
	1/5/2014 16:45	1/5/2014 16:45	**0**	0.51	**2,597**	0.59	**0.26**	6	Atlas	1,324	1
	1/11/2014 0:15	1/11/2014 4:00	**225**	1.01	**37,520**	1.43	**0.54**	6	Atlas	37,896	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO036	**2/2/2014 4:00**	2/2/2014 5:15	**75**	0.24	**26,259**	0.17	**0.13**	6	Atlas	6,302	1
	2/4/2014 19:00	2/4/2014 23:30	**270**	0.5	**76,987**	1	**0.25**	6	Atlas	38,493	1
	2/17/2014 16:00	2/17/2014 16:45	**45**	0.63	**23,003**	1.13	**0.37**	3	Atlas	14,492	1
	2/21/2014 6:45	2/21/2014 6:45	**0**	0.18	**183,869**	1.38	**0.10**	6	Atlas	33,097	1
	3/12/2014 7:15	3/12/2014 7:15	**0**	0.08	**9,157**	0.08	**0.04**	1	Atlas	733	1
	3/28/2014 4:30	3/28/2014 4:45	**15**	0.26	**19,239**	0.31	**0.12**	6	Atlas	5,002	1
	3/29/2014 6:15	3/29/2014 8:30	**135**	0.86	**8,931**	0.91	**0.40**	6	Atlas	7,680	1
	4/3/2014 12:00	4/4/2014 6:45	**1125**	2.8	**10,315**	3.86	**1.00**	24	Cloudburst	28,882	1
	4/7/2014 9:15	4/7/2014 15:15	**360**	0.7	**54,116**	3.63	**0.40**	3	Atlas	37,881	1
	4/14/2014 3:30	4/14/2014 10:15	**405**	0.34	**6,976**	1.06	**0.17**	6	Atlas	2,372	1
	4/14/2014 20:00	4/15/2014 1:15	**315**	0.58	**45,455**	0.88	**0.27**	12	Atlas	26,364	1
	4/28/2014 4:00	4/28/2014 7:30	**210**	1.62	**78,670**	1.22	**0.63**	3	Atlas	127,445	1
	4/28/2014 17:30	4/28/2014 17:30	**0**	1.62	**2,490**	1.53	**0.63**	3	Atlas	4,034	1
	5/9/2014 19:15	5/10/2014 15:00	**1185**	1.68	**39,467**	1.74	**0.65**	24	Atlas	66,305	1
	5/14/2014 7:00	5/14/2014 8:15	**75**	0.96	**41,820**	1.99	**0.37**	24	Atlas	40,148	1
	5/14/2014 18:00	5/14/2014 20:15	**135**	0.96	**1,658**	2.65	**0.37**	24	Atlas	1,592	1
	5/28/2014 20:30	5/28/2014 20:30	**0**	0.4	**731**	0.85	**0.34**	1	Atlas	293	1
	5/29/2014 20:45	5/29/2014 20:45	**0**	0.39	**1,264**	0.73	**0.30**	1	Atlas	493	1
	6/11/2014 14:00	6/11/2014 21:00	**420**	0.07	**857,206**	0.22	**0.03**	1	Atlas	60,004	1
	6/20/2014 17:15	6/20/2014 19:00	**105**	0.2	**187,574**	0.2	**0.13**	3	Atlas	37,515	1
	6/24/2014 13:30	6/24/2014 14:15	**45**	0.1	**132,424**	0.33	**0.05**	6	Atlas	13,242	1
	7/7/2014 19:30	7/7/2014 19:45	**15**	1.15	**19,032**	1.38	**1.00**	1	Atlas	21,887	1
	7/13/2014 22:30	7/13/2014 23:15	**45**	0.93	**48,085**	2.32	**0.49**	1	Atlas	44,719	1
	7/14/2014 20:00	7/14/2014 20:30	**30**	0.23	**64,990**	1.63	**0.19**	1	Atlas	14,948	1
	7/26/2014 21:45	7/26/2014 22:45	**60**	1.17	**74,978**	0.56	**0.54**	12	Atlas	87,724	1
	8/10/2014 4:00	8/10/2014 4:45	**45**	1.16	**73,267**	2.1	**0.97**	1	Atlas	84,990	1
	8/11/2014 15:30	8/11/2014 15:30	**0**	0.48	**31,726**	2.56	**0.40**	1	Atlas	15,229	1
	8/17/2014 9:30	8/17/2014 10:30	**60**	0.73	**17,348**	1.1	**0.27**	24	Atlas	12,664	1
	8/17/2014 23:00	8/17/2014 23:15	**15**	0.73	**28,635**	1.21	**0.27**	24	Atlas	20,904	1
	8/22/2014 19:15	8/22/2014 19:30	**15**	0.34	**118,453**	1.11	**0.26**	1	Atlas	40,274	1
	8/23/2014 15:45	8/23/2014 21:45	**360**	0.62	**184,101**	1.71	**0.31**	3	Atlas	114,142	1
	8/27/2014 17:15	8/27/2014 17:15	**0**	0.22	**17,459**	1.24	**0.15**	3	Atlas	3,841	1
	8/30/2014 15:15	8/30/2014 16:00	**45**	0.62	**168,453**	1.35	**0.39**	1	Atlas	104,441	1
	9/1/2014 19:15	9/1/2014 19:15	**0**	Discharge						24,800	1
	9/3/2014 2:15	9/3/2014 2:15	**0**	Discharge						17,896	1
	9/11/2014 0:30	9/11/2014 6:00	**330**	1.78	**78,899**	1.71	**0.99**	3	Atlas	140,441	1
	9/27/2014	9/27/2014	**0**	Discharge						24,282	1
	10/3/2014 3:30	10/3/2014 3:30	**0**	0.24	**3,975**	0.05	**0.09**	24	Atlas	954	1
	10/6/2014 9:45	10/6/2014 9:45	**0**	0.18	**3,355**	0.38	**0.08**	6	Atlas	604	1
	10/10/2014 1:45	10/10/2014 3:00	**75**	1.2	**45,283**	1.45	**0.55**	3	Atlas	54,340	1
	10/13/2014 23:30	10/14/2014 8:15	**525**	0.99	**7,928**	2.84	**0.44**	12	Atlas	7,849	1
	11/23/2014 17:30	11/23/2014 23:00	**330**	0.64	**45,850**	0.99	**0.27**	12	Atlas	29,344	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO036	12/1/2014 4:30	12/1/2014 4:30	0	0.9	761	0.42				685	1
	12/6/2014 2:15	12/6/2014 6:30	255	1.92	13,960	2.81	0.62	48	Atlas	26,804	1
	12/28/2014 1:00	12/28/2014 1:00	0	0.29	8,392	0.65	0.11	1	Atlas	2,434	1
	1/29/2015 5:15	1/29/2015 5:15	0	0.04	75,634	0.24				3,025	1
	2/4/2015 23:45	2/5/2015 16:45	1020	0.03	488,007	0.5	0.02	3	Atlas	14,640	1
	2/6/2015 1:30	2/6/2015 7:00	330	Discharge						5,350	1
	2/21/2015 13:15	2/21/2015 14:15	60	1.25	3,850	1.44	0.48	24	Atlas	4,813	1
	3/10/2015 10:45	3/10/2015 13:45	180	1.34	30,878	3.01	0.61	12	Atlas	41,377	1
	3/13/2015 10:30	3/14/2015 3:45	1035	1.89	38,646	3.15	0.71	24	Atlas	73,041	1
	3/26/2015 4:15	3/26/2015 5:45	90	0.55	18,364	0.65	0.22	3	Atlas	10,100	1
	4/2/2015 10:30	4/2/2015 15:15	285	5.34	42,639	0.99	15.08	6	Cloudburst	227,690	1
	4/3/2015	4/3/2015 16:45	1005	5.34	63,466	5.35	15.08	6	Cloudburst	338,910	1
	4/7/2015 9:15	4/7/2015 17:00	465	0.97	16,490	6.27	0.43	1	Atlas	15,995	1
	4/8/2015 18:00	4/8/2015 18:00	0	0.16	7,060	6.47	0.09	3	Atlas	1,130	1
	4/10/2015 2:00	4/10/2015 2:15	15	0.22	37,804	3.86	0.15	3	Atlas	8,317	1
	4/13/2015 20:15	4/13/2015 20:30	15	0.41	7,591	1.6	0.16	6	Atlas	3,112	1
	5/16/2015 11:45	5/16/2015 11:45	0	0.41	11,191	0.33	0.23	3	Atlas	4,588	1
	5/17/2015 14:15	5/17/2015 14:15	0	0.05	17,423	0.56	0.02	12	Atlas	871	1
	5/26/2015 14:00	5/26/2015 14:00	0	0.28	1,152	0.53	0.21	1	Atlas	322	1
	5/27/2015 16:45	5/27/2015 16:45	0	0.09	221,512	0.66	0.08	1	Atlas	19,936	1
	6/1/2015 4:45	6/1/2015 18:00	795	0.1	1,888,954	0.72	0.05	6	Atlas	188,895	1
	6/8/2015 8:15	6/8/2015 8:15	0	0.34	2,229	0.35	0.18	6	Atlas	758	1
	6/17/2015 5:00	6/17/2015 5:30	30	0.55	47,425	0.48	0.30	3	Atlas	26,084	1
	6/18/2015 17:15	6/22/2015 17:45	5790	1.42	3,244,417	2.37	0.46	48	Atlas	4,607,071	1
	6/26/2015 17:00	6/27/2015 7:30	870	0.9	1,982,439	2.39	0.49	1	Atlas	1,784,195	1
	7/2/2015 20:30	7/2/2015 21:00	30	1.19	63,076	2.76	0.46	24	Atlas	75,061	1
	7/10/2015 22:45	7/11/2015 9:00	615	0.55	30,289	1.75	0.28	6	Atlas	16,659	1
	7/12/2015 6:00	7/12/2015 14:30	510	1.16	405,945	2.91	0.79	1	Atlas	470,896	1
	7/14/2015 4:15	7/18/2015 1:30	5595	0.71	7,559,932	5.11	0.57	1	Atlas	5,367,552	1
	8/4/2015 20:15	8/5/2015 15:15	1140	0.21	87,300	0.36	0.16	1	Atlas	18,333	1
	8/6/2015 2:15	8/7/2015 2:45	1470	0.49	92,079	0.82	0.20	1	Atlas	45,119	1
	8/19/2015 17:00	8/19/2015 17:00	0	0.38	9,077	0.57	0.17	1	Atlas	3,449	1
	9/9/2015 5:00	9/9/2015 11:30	390	0.21	489,160	0.28	0.16	1	Atlas	102,724	1
	9/11/2015 18:30	9/11/2015 18:30	0	0.15	45,271	0.5	0.10	1	Atlas	6,791	1
	9/29/2015 19:00	9/29/2015 19:00	0	0.76	2,669	0.74	0.25	48	Atlas	2,028	1
	10/12/2015 19:15	10/12/2015 19:15	0	0.28	25,389	0.33	0.19	3	Atlas	7,109	1
	10/27/2015 17:00	10/28/2015 7:45	885	2.25	32,981	2.58	0.74	24	Atlas	74,207	1
	12/22/2015	12/22/2015 4:00	240	0.39	98,945	0.61	0.20	1	Atlas	38,589	1
	12/23/2015 19:15	12/23/2015 20:30	75	0.96	136,328	1.6	0.77	1	Atlas	130,875	1
	12/26/2015 12:45	12/26/2015 17:45	300	0.33	49,008	2.03	0.15	3	Atlas	16,173	1
	12/27/2015 10:00	12/27/2015 13:45	225	1.9	207,647	3.15	0.65	3	Atlas	394,530	1
	12/28/2015 16:30	12/28/2015 16:45	15	1.9	1,233	3.7	0.65	3	Atlas	2,343	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO036	**2/2/2016 14:45**	2/3/2016 0:15	**570**	1.21	**191,136**	1.18	**0.58**	6	Atlas	231,275	1
	2/21/2016 4:15	2/21/2016 10:45	**390**	1.1	**122,571**	1.26	**0.50**	12	Atlas	134,828	1
	2/23/2016 23:15	2/24/2016 7:15	**480**	1.98	**37,344**	2.76	**0.77**	12	Atlas	73,940	1
	3/1/2016 12:45	3/1/2016 13:00	**15**	0.27	**7,924**	2.22	**0.14**	6	Atlas	2,139	1
	3/9/2016 15:45	3/9/2016 15:45	**0**	1.12	**241**	0.22	**0.36**	48	Atlas	269	1
	3/10/2016 13:30	3/10/2016 16:30	**180**	1.12	**8,562**	0.89	**0.36**	48	Atlas	9,589	1
	3/12/2016 20:30	3/12/2016 23:30	**180**	0.77	**118,207**	1.68	**0.30**	24	Atlas	91,019	1
	3/13/2016 9:15	3/13/2016 10:00	**45**	0.77	**27,614**	1.91	**0.30**	24	Atlas	21,263	1
	3/24/2016 17:30	3/24/2016 17:45	**15**	0.47	**29,190**	0.57	**0.35**	1	Atlas	13,719	1
	3/27/2016 21:15	3/27/2016 22:00	**45**	0.72	**282,756**	1.17	**0.49**	1	Atlas	203,585	1
	3/31/2016 22:15	3/31/2016 23:15	**60**	1.07	**15,102**	1.74	**0.41**	24	Atlas	16,159	1
	4/11/2016 16:15	4/11/2016 18:00	**105**	0.92	**44,271**	0.84	**0.44**	6	Atlas	40,730	1
	4/21/2016 14:30	4/21/2016 15:30	**60**	0.33	**104,292**	0.21	**0.13**	3	Atlas	34,416	1
	4/26/2016 16:15	4/26/2016 21:15	**300**	0.33	**207,566**	0.65	**0.16**	6	Atlas	68,497	1
	4/27/2016 14:00	4/27/2016 22:00	**480**	0.7	**142,508**	1.34	**0.37**	1	Atlas	99,756	1
	4/30/2016 11:15	4/30/2016 11:30	**15**	0.6	**83,593**	1.36	**0.23**	6	Atlas	50,156	1
	5/1/2016 15:00	5/1/2016 15:00	**0**	0.2	**61,978**	1.72	**0.13**	3	Atlas	12,396	1
	5/7/2016 16:30	5/7/2016 20:15	**225**	0.65	**26,971**	1.08	**0.34**	6	Atlas	17,531	1
	5/10/2016 14:30	5/10/2016 22:00	**450**	0.94	**129,090**	1.85	**0.36**	12	Atlas	121,345	1
	5/11/2016 22:00	5/11/2016 22:00	**0**	0.24	**3,029**	1.85	**0.13**	3	Atlas	727	1
	5/12/2016 16:15	5/12/2016 16:15	**0**	0.15	**51,424**	1.94	**0.10**	3	Atlas	7,714	1
	5/20/2016 14:00	5/20/2016 15:45	**105**	0.51	**176,592**	1.2	**0.28**	3	Atlas	90,062	1
	5/25/2016 18:00	5/25/2016 18:00	**0**	0.02	**115,891**	0.59	**0.02**	1	Atlas	2,318	1
	6/2/2016 15:30	6/2/2016 15:45	**15**	0.34	**364,653**	0.44	**0.27**	1	Atlas	123,982	1
	6/4/2016 16:45	6/4/2016 17:00	**15**	0.23	**424,868**	0.63	**0.12**	1	Atlas	97,720	1
	6/14/2016 16:45	6/14/2016 17:00	**15**	0.84	**22,470**	0.64	**0.54**	3	Atlas	18,875	1
	6/22/2016 8:30	6/22/2016 8:30	**0**	0.17	**134,996**	0.13	**0.10**	3	Atlas	22,949	1
	6/23/2016 16:00	6/23/2016 21:00	**300**	1.88	**335,977**	2.05	**1.17**	6	Cloudburst	631,637	1
Grand Total										**32,304,826**	**196**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**1/12/2012 12:45**	1/12/2012 15:00	**135**	0.1	**103,259**	0.78	**0.05**	3	Atlas	10,326	1
	1/12/2012 23:15	1/13/2012 2:15	**180**	0.1	**700**	0.8	**0.05**	3	Atlas	70	1
	1/17/2012 2:15	1/17/2012 15:45	**810**	0.46	**50,874**	1.27	**0.21**	12	Atlas	23,402	1
	1/18/2012 0:15	1/18/2012 0:45	**30**	Discharge						56	1
	1/22/2012 22:45	1/23/2012 15:45	**1020**	0.57	**67,796**	1.06	**0.31**	3	Atlas	38,643	1
	1/25/2012 15:45	1/25/2012 19:30	**225**	1.82	**2,342**	0.85	**0.60**	24	Atlas	4,263	1
	1/26/2012 5:00	1/26/2012 23:45	**1125**	1.82	**29,730**	2.38	**0.60**	24	Atlas	54,108	1
	2/4/2012 9:00	2/4/2012 11:15	**135**	0.36	**35,727**	0.41	**0.21**	3	Atlas	12,862	1
	2/14/2012 6:00	2/14/2012 13:15	**435**	0.2	**69,506**	0.26	**0.10**	6	Atlas	13,901	1
	2/15/2012 23:45	2/16/2012 8:45	**540**	0.37	**18,295**	0.6	**0.16**	12	Atlas	6,769	1
	2/21/2012 9:45	2/21/2012 14:00	**255**	0.13	**2,869**	0.5	**0.07**	6	Atlas	373	1
	2/22/2012 22:45	2/22/2012 23:45	**60**	0.19	**6,457**	0.55	**0.15**	1	Atlas	1,227	1
	2/23/2012 14:00	2/23/2012 16:00	**120**	Discharge						57	1
	2/29/2012 2:00	2/29/2012 9:30	**450**	0.64	**8,364**	0.77	**0.30**	1	Atlas	5,353	1
	3/4/2012 23:00	3/5/2012 4:00	**300**	0.22	**5,207**	1	**0.11**	6	Atlas	1,145	1
	3/5/2012 13:30	3/5/2012 14:45	**75**	Discharge						631	1
	3/6/2012 11:15	3/6/2012 17:45	**390**	Discharge						262	1
	3/12/2012 7:15	3/12/2012 12:15	**300**	0.16	**7,856**	0.92	**0.07**	12	Atlas	1,257	1
	3/15/2012 17:45	3/16/2012 3:45	**600**	0.94	**8,683**	1.17	**0.41**	12	Atlas	8,162	1
	3/17/2012 18:30	3/17/2012 22:45	**255**	0.57	**20,470**	1.65	**0.29**	3	Atlas	11,668	1
	3/22/2012 15:30	3/23/2012 23:30	**1920**	1.69	**62,496**	3.15	**0.61**	3	Atlas	105,617	1
	3/30/2012 23:30	3/31/2012 0:45	**75**	0.18	**8,636**	0.21	**0.11**	3	Atlas	1,554	1
	4/1/2012 6:30	4/1/2012 11:45	**315**	1.63	**48,173**	1.85	**0.89**	6	Atlas	78,522	1
	4/4/2012 16:30	4/4/2012 17:15	**45**	0.25	**4,850**	1.96	**0.11**	12	Atlas	1,212	1
	4/9/2012 9:15	4/9/2012 9:30	**15**	Discharge						53	1
	4/13/2012 8:30	4/13/2012 9:30	**60**	Discharge						133	1
	4/14/2012 8:30	4/14/2012 10:00	**90**	0.25	**10,189**	0.19	**0.14**	6	Atlas	2,547	1
	4/16/2012 6:45	4/16/2012 6:45	**0**	0.18	**1,413**	0.34	**0.11**	3	Atlas	254	1
	4/20/2012 23:15	4/20/2012 23:15	**0**	0.23	**4,340**	0.51	**0.11**	12	Atlas	998	1
	4/26/2012 4:30	4/26/2012 4:45	**15**	0.06	**11,845**	0.35	**0.04**	3	Atlas	711	1
	4/28/2012 19:15	4/29/2012 1:00	**345**	0.72	**135,229**	0.84	**0.54**	1	Atlas	97,365	1
	4/30/2012 18:00	4/30/2012 20:30	**150**	0.46	**40,638**	1.3	**0.30**	3	Atlas	18,693	1
	5/4/2012 16:15	5/5/2012 4:30	**735**	1.4	**54,454**	2.59	**0.75**	3	Atlas	76,236	1
	5/13/2012	5/13/2012 20:30	**1230**	2.18	**23,017**	2.24	**0.83**	24	Atlas	50,178	1
	5/16/2012 17:30	5/16/2012 18:30	**60**	0.26	**16,133**	2.45	**0.23**	1	Atlas	4,195	1
	5/24/2012 9:00	5/24/2012 9:15	**15**	Discharge						238	1
	5/25/2012 8:30	5/25/2012 8:30	**0**	Discharge						94	1
	5/29/2012 6:15	5/29/2012 9:45	**210**	2.89	**99,584**	2.84	**15.82**	3	Atlas	287,799	1
	5/31/2012 18:15	6/1/2012 5:15	**660**	1.23	**12,677**	4.05	**0.53**	12	Atlas	15,592	1
	6/4/2012 14:00	6/4/2012 18:00	**240**	0.19	**4,477**	4.28	**0.09**	12	Atlas	851	1
	6/5/2012 10:15	6/5/2012 10:15	**0**	Discharge						97	1
	6/17/2012 11:15	6/17/2012 12:15	**60**	0.23	**26,773**	0.27	**0.18**	1	Atlas	6,158	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**6/25/2012 2:15**	6/25/2012 2:15	**0**	0.01	**81,797**	0.04	**0.01**	1	Atlas	818	1
	7/1/2012 19:45	7/1/2012 20:15	**30**	0.49	**24,236**	0.41	**0.35**	1	Atlas	11,876	1
	7/5/2012 2:00	7/5/2012 2:00	**0**	0.1	**1,478**	0.57	**0.08**	1	Atlas	148	1
	7/8/2012 12:45	7/8/2012 13:45	**60**	0.28	**113,217**	0.83	**0.20**	1	Atlas	31,701	1
	7/9/2012 8:15	7/9/2012 9:15	**60**	Discharge						2,246	1
	7/14/2012 12:15	7/14/2012 14:45	**150**	0.62	**44,034**	0.91	**0.39**	3	Atlas	27,301	1
	7/16/2012 9:30	7/16/2012 9:30	**0**	Discharge						97	1
	7/18/2012 16:15	7/18/2012 17:30	**75**	0.01	**6,404,526**	0.64	**0.01**	1	Atlas	64,045	1
	7/19/2012 13:30	7/19/2012 19:15	**345**	0.95	**135,346**	1.57	**0.75**	1	Atlas	128,579	1
	7/20/2012 7:45	7/20/2012 9:15	**90**	Discharge						1,030	1
	7/21/2012 9:00	7/21/2012 9:15	**15**	Discharge						595	1
	7/24/2012 19:45	7/24/2012 21:00	**75**	0.47	**38,251**	1.47	**0.40**	1	Atlas	17,978	1
	7/26/2012 8:30	7/26/2012 9:00	**30**	Discharge						137	1
	7/26/2012 21:15	7/26/2012 22:30	**75**	0.1	**48,789**	0.6	**0.05**	1	Atlas	4,879	1
	7/27/2012 8:00	7/27/2012 9:30	**90**	0.1	**7,414**	0.62	**0.05**	1	Atlas	741	1
	7/27/2012 18:45	7/27/2012 22:00	**195**	0.71	**147,905**	1.3	**0.48**	1	Atlas	105,012	1
	7/28/2012 7:30	7/28/2012 9:30	**120**	Discharge						1,363	1
	7/30/2012 8:15	7/30/2012 9:30	**75**	Discharge						479	1
	7/31/2012 8:00	7/31/2012 9:15	**75**	Discharge						633	1
	8/2/2012 8:15	8/2/2012 9:15	**60**	Discharge						475	1
	8/3/2012 8:00	8/3/2012 10:00	**120**	0.2	**2,840**	0.92	**0.09**	3	Atlas	568	1
	8/4/2012 9:00	8/4/2012 15:45	**405**	Discharge						757	1
	8/5/2012 17:15	8/5/2012 18:00	**45**	0.02	**110,092**	0.34	**0.02**	1	Atlas	2,202	1
	8/6/2012 8:30	8/6/2012 9:15	**45**	0.01	**20,205**	0.35	**0.01**	1	Atlas	202	1
	8/7/2012 8:15	8/7/2012 9:15	**60**	Discharge						197	1
	8/9/2012 8:30	8/9/2012 8:30	**0**	Discharge						82	1
	8/10/2012 14:30	8/10/2012 14:30	**0**	Discharge						3,023	1
	8/13/2012 11:00	8/13/2012 12:00	**60**	0.12	**13,003**	0.11	**0.08**	3	Atlas	1,560	1
	8/16/2012 20:00	8/16/2012 23:45	**225**	0.64	**7,136**	0.77	**0.37**	3	Atlas	4,567	1
	8/21/2012 13:30	8/21/2012 14:45	**75**	0.22	**163,237**	0.87	**0.19**	1	Atlas	35,912	1
	9/1/2012 15:00	9/1/2012 17:45	**165**	0.4	**29,236**	0.43	**0.26**	1	Atlas	11,694	1
	9/2/2012 11:45	9/2/2012 21:15	**570**	0.73	**22,157**	1.15	**0.28**	24	Atlas	16,175	1
	9/3/2012 10:00	9/3/2012 10:00	**0**	Discharge						246	1
	9/5/2012 15:15	9/5/2012 16:30	**75**	0.6	**182,067**	1.79	**0.43**	1	Atlas	109,240	1
	9/7/2012 23:00	9/8/2012 6:30	**450**	1.37	**23,841**	3.12	**0.77**	3	Atlas	32,662	1
	9/25/2012 8:30	9/25/2012 10:15	**105**	0.39	**3,809**	0.35	**0.21**	6	Atlas	1,486	1
	9/25/2012 23:30	9/26/2012 6:00	**390**	0.46	**21,647**	0.75	**0.21**	12	Atlas	9,958	1
	9/26/2012 19:45	9/27/2012 1:15	**330**	1.73	**72,481**	2.56	**0.92**	6	Atlas	125,391	1
	10/1/2012 13:15	10/1/2012 18:45	**330**	0.61	**7,444**	3.11	**0.24**	12	Atlas	4,541	1
	10/5/2012 23:15	10/6/2012 0:30	**75**	0.15	**12,950**	0.75	**0.08**	3	Atlas	1,942	1
	10/14/2012 16:15	10/14/2012 16:15	**0**	0.12	**660**	0.11	**0.08**	1	Atlas	79	1
	10/16/2012 9:15	10/16/2012 9:15	**0**	Discharge						300	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**10/18/2012 0:30**	10/18/2012 1:45	**75**	0.28	**4,131**	0.39	**0.19**	3	Atlas	1,157	1
	10/25/2012 9:15	10/25/2012 9:15	**0**	Discharge						10	1
	10/26/2012 10:30	10/26/2012 23:00	**750**	0.77	**5,192**	0.8	**0.36**	6	Atlas	3,998	1
	11/3/2012 9:15	11/3/2012 16:00	**405**	0.11	**6,165**	0.13	**0.05**	3	Atlas	678	1
	11/10/2012 9:00	11/10/2012 9:15	**15**	Discharge						37	1
	11/12/2012 2:45	11/12/2012 10:00	**435**	0.45	**3,740**	0.45	**0.21**	12	Atlas	1,683	1
	11/17/2012 9:00	11/17/2012 9:00	**0**	Discharge						948	1
	12/2/2012 11:00	12/2/2012 13:15	**135**	0.25	**30,862**	0.32	**0.15**	3	Atlas	7,716	1
	12/4/2012 14:45	12/4/2012 19:00	**255**	0.68	**27,265**	0.93	**0.44**	3	Atlas	18,540	1
	12/6/2012 16:15	12/7/2012 17:30	**1515**	Discharge						8,785	1
	12/8/2012 5:30	12/8/2012 9:15	**225**	0.37	**9,037**	2.44	**0.23**	1	Atlas	3,344	1
	12/9/2012 8:15	12/9/2012 8:45	**30**	1.13	**355**	2.51	**0.55**	3	Atlas	401	1
	12/9/2012 19:30	12/10/2012 3:15	**465**	1.13	**49,342**	3.26	**0.55**	3	Atlas	55,756	1
	12/15/2012 11:00	12/15/2012 12:30	**90**	0.17	**6,814**	1.31	**0.10**	3	Atlas	1,158	1
	12/17/2012 16:45	12/17/2012 17:30	**45**	0.35	**4,941**	0.53	**0.19**	6	Atlas	1,729	1
	12/20/2012 6:30	12/20/2012 12:00	**330**	0.7	**7,859**	1.22	**0.38**	6	Atlas	5,501	1
	12/26/2012 3:00	12/26/2012 11:00	**480**	0.67	**5,466**	1.4	**0.26**	24	Atlas	3,662	1
	12/31/2012 22:45	12/31/2012 23:45	**60**	0.12	**2,432**	0.84	**0.05**	24	Atlas	292	1
	1/10/2013 12:30	1/10/2013 15:15	**165**	0.15	**10,044**	0.17	**0.08**	6	Atlas	1,507	1
	1/11/2013 2:00	1/11/2013 8:00	**360**	0.67	**13,508**	0.84	**0.37**	3	Atlas	9,050	1
	1/13/2013 3:00	1/13/2013 18:45	**945**	2.3	**29,540**	3.1	**0.88**	24	Atlas	67,941	1
	1/15/2013 20:00	1/15/2013 20:00	**0**	0.21	**1,524**	3.25	**0.08**	12	Atlas	320	1
	1/27/2013 19:45	1/27/2013 20:15	**30**	0.22	**2,600**	0.11	**0.10**	6	Atlas	572	1
	1/28/2013 10:30	1/28/2013 10:30	**0**	0.07	**2,475**	0.29	**0.04**	1	Atlas	173	1
	1/30/2013 4:30	1/30/2013 8:45	**255**	0.8	**43,256**	1.04	**0.40**	6	Atlas	34,604	1
	1/30/2013 17:30	1/30/2013 17:30	**0**	0.8	**178**	1.1	**0.40**	6	Atlas	142	1
	2/4/2013 17:00	2/4/2013 18:00	**60**	0.11	**1,925**	1.01	**0.07**	3	Atlas	212	1
	2/10/2013 15:15	2/10/2013 15:45	**30**	0.18	**1,675**	0.36	**0.09**	3	Atlas	301	1
	2/13/2013 13:15	2/13/2013 13:45	**30**	0.07	**1,055**	0.35	**0.03**	12	Atlas	74	1
	2/18/2013 22:00	2/19/2013 3:30	**330**	0.34	**1,435**	0.38	**0.16**	12	Atlas	488	1
	2/21/2013 22:30	2/22/2013 1:00	**150**	0.43	**3,050**	0.75	**0.20**	12	Atlas	1,312	1
	2/26/2013 5:15	2/26/2013 19:15	**840**	0.56	**6,955**	0.96	**0.22**	24	Atlas	3,895	1
	3/5/2013 14:00	3/5/2013 19:00	**300**	0.45	**5,896**	0.68	**0.17**	24	Atlas	2,653	1
	3/11/2013 3:00	3/11/2013 11:45	**525**	1.06	**5,681**	1.51	**0.43**	12	Atlas	6,021	1
	3/17/2013 6:30	3/18/2013 7:15	**1485**	1.76	**4,776**	2.73	**0.57**	48	Atlas	8,406	1
	3/24/2013 4:30	3/24/2013 17:45	**795**	0.55	**7,116**	2.06	**0.20**	24	Atlas	3,914	1
	4/11/2013 5:00	4/12/2013 0:45	**1185**	1.27	**18,604**	1.26	**0.49**	24	Atlas	23,627	1
	4/16/2013 20:00	4/16/2013 21:15	**75**	0.59	**76,015**	1.82	**0.46**	1	Atlas	44,849	1
	4/19/2013 0:30	4/19/2013 4:15	**225**	0.8	**17,133**	1.42	**0.44**	6	Atlas	13,706	1
	4/24/2013 6:00	4/24/2013 10:45	**285**	0.7	**11,179**	1.56	**0.40**	3	Atlas	7,825	1
	5/3/2013 18:45	5/3/2013 18:45	**0**	0.1	**1,182**	0.15	**0.07**	1	Atlas	118	1
	5/4/2013 11:45	5/5/2013 8:15	**1230**	1.56	**4,317**	1.41	**0.48**	24	Atlas	6,735	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**5/6/2013 17:15**	5/6/2013 17:15	**0**	1.56	**5,356**	1.62	**0.48**	24	Atlas	8,356	1
	5/10/2013 9:30	5/10/2013 15:15	**345**	0.86	**6,622**	2.38	**0.38**	6	Atlas	5,695	1
	5/10/2013 23:30	5/10/2013 23:45	**15**	0.86	**1,609**	2.43	**0.38**	6	Atlas	1,384	1
	5/16/2013 10:15	5/16/2013 10:30	**15**	0.24	**71,329**	1.13	**0.20**	1	Atlas	17,119	1
	5/18/2013 18:45	5/18/2013 18:45	**0**	Discharge						82	1
	5/31/2013 11:00	5/31/2013 11:00	**0**	0.22	**1,850**	0.1	**0.10**	12	Atlas	407	1
	6/1/2013 5:30	6/1/2013 6:45	**75**	0.15	**4,693**	0.37	**0.07**	12	Atlas	704	1
	6/1/2013 16:00	6/1/2013 16:00	**0**	0.15	**2,663**	0.43	**0.07**	12	Atlas	399	1
	6/6/2013 5:00	6/6/2013 5:00	**0**	0.02	**3,865**	0.42	**0.01**	3	Atlas	77	1
	6/9/2013 23:30	6/10/2013 1:15	**105**	0.33	**34,861**	0.27	**0.13**	6	Atlas	11,504	1
	6/16/2013 16:30	6/16/2013 18:00	**90**	0.44	**28,964**	0.73	**0.30**	1	Atlas	12,744	1
	6/17/2013 19:00	6/17/2013 21:30	**150**	0.63	**5,178**	1.03	**0.31**	6	Atlas	3,262	1
	6/24/2013 9:00	6/24/2013 9:00	**0**	0.04	**6,075**	1	**0.03**	3	Atlas	243	1
	6/26/2013 3:00	6/26/2013 5:15	**135**	0.7	**77,256**	1.06	**0.50**	1	Atlas	54,079	1
	6/26/2013 16:00	6/26/2013 21:45	**345**	2.46	**133,187**	3.41	**2.75**	6	Cloudburst	327,640	1
	6/29/2013 19:45	6/29/2013 21:30	**105**	0.55	**8,511**	3.84	**0.30**	3	Atlas	4,681	1
	7/1/2013 18:30	7/1/2013 19:30	**60**	0.25	**9,065**	4.02	**0.12**	3	Atlas	2,266	1
	7/2/2013 13:00	7/2/2013 13:15	**15**	0.09	**413,857**	4.12	**0.08**	1	Atlas	37,247	1
	7/3/2013 17:00	7/3/2013 17:00	**0**	0.06	**4,229**	1.88	**0.04**	1	Atlas	254	1
	7/4/2013 6:15	7/4/2013 11:15	**300**	0.51	**12,297**	1.26	**0.21**	12	Atlas	6,271	1
	7/6/2013 0:15	7/6/2013 7:00	**405**	0.56	**4,592**	2.01	**0.25**	12	Atlas	2,571	1
	7/10/2013 13:45	7/10/2013 14:45	**60**	0.64	**79,311**	1.76	**0.43**	1	Atlas	50,759	1
	7/14/2013 19:15	7/14/2013 20:00	**45**	0.08	**62,993**	0.76	**0.07**	1	Atlas	5,039	1
	7/18/2013 15:30	7/18/2013 17:00	**90**	0.29	**220,466**	0.4	**0.23**	1	Atlas	63,935	1
	7/21/2013 19:45	7/22/2013 15:45	**1200**	1.96	**43,961**	2.28	**0.75**	24	Atlas	86,163	1
	7/30/2013 18:00	7/30/2013 18:00	**0**	0.11	**14,117**	0.12	**0.06**	3	Atlas	1,553	1
	8/12/2013 11:45	8/12/2013 14:45	**180**	0.83	**52,984**	0.66	**0.37**	1	Atlas	43,976	1
	8/13/2013 2:15	8/13/2013 3:15	**60**	0.83	**21,065**	1	**0.37**	1	Atlas	17,484	1
	8/20/2013 18:00	8/20/2013 19:15	**75**	0.17	**22,296**	0.19	**0.09**	6	Atlas	3,790	1
	8/31/2013 19:30	9/1/2013 3:15	**465**	1.34	**40,004**	1.28	**0.63**	1	Atlas	53,605	1
	9/2/2013 13:30	9/2/2013 13:45	**15**	0.25	**150,744**	1.59	**0.22**	1	Atlas	37,686	1
	9/12/2013 12:45	9/12/2013 12:45	**0**	0.02	**34,732**	0.04	**0.02**	1	Atlas	695	1
	9/19/2013 10:45	9/19/2013 10:45	**0**	0.03	**39,165**	0.08	**0.03**	1	Atlas	1,175	1
	9/20/2013 16:15	9/21/2013 5:15	**780**	1.36	**14,206**	1.42	**0.56**	12	Atlas	19,320	1
	10/5/2013 12:00	10/6/2013 12:00	**1440**	4.23	**118,502**	4.38	**7.98**	24	Cloudburst	501,263	1
	10/7/2013 8:15	10/7/2013 9:00	**45**	Discharge						56	1
	10/8/2013 8:30	10/8/2013 8:30	**0**	Discharge						194	1
	10/17/2013 9:30	10/17/2013 9:30	**0**	0.03	**280**	0.05	**0.03**	1	Atlas	8	1
	10/19/2013 7:00	10/19/2013 9:30	**150**	0.19	**4,640**	0.2	**0.10**	6	Atlas	882	1
	10/29/2013 20:45	10/30/2013 7:15	**630**	1.06	**25,279**	1.06	**0.50**	6	Atlas	26,795	1
	10/31/2013 11:30	10/31/2013 20:45	**555**	0.71	**20,484**	1.72	**0.28**	12	Atlas	14,544	1
	11/1/2013 8:00	11/1/2013 8:45	**45**	Discharge						2,682	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**11/6/2013 19:00**	11/6/2013 21:00	**120**	0.25	**1,559**	0.87	**0.11**	12	Atlas	390	1
	11/15/2013 18:00	11/15/2013 18:15	**15**	0.1	**5,472**	0.14	**0.09**	1	Atlas	547	1
	11/17/2013 3:00	11/17/2013 19:45	**1005**	2.59	**84,540**	2.73	**1.61**	6	Cloudburst	218,958	1
	11/18/2013 9:00	11/18/2013 9:00	**0**	Discharge						333	1
	11/21/2013 18:45	11/21/2013 19:00	**15**	0.13	**1,436**	2.79	**0.09**	1	Atlas	187	1
	12/5/2013 5:15	12/6/2013 13:45	**1950**	0.76	**22,982**	0.49	**0.25**	48	Atlas	17,467	1
	12/8/2013 13:00	12/8/2013 13:00	**0**	0.29	**1,235**	1.05	**0.19**	1	Atlas	358	1
	12/14/2013 5:45	12/14/2013 12:00	**375**	0.64	**6,657**	0.99	**0.26**	12	Atlas	4,260	1
	12/20/2013 7:15	12/20/2013 7:15	**0**	0.07	**2,497**	0.71	**0.05**	1	Atlas	175	1
	12/21/2013 1:45	12/21/2013 12:30	**645**	2.75	**2,994**	1.74	**1.08**	24	Cloudburst	8,235	1
	12/21/2013 21:00	12/22/2013 2:45	**345**	2.75	**65,279**	2.77	**1.08**	24	Cloudburst	179,517	1
	12/29/2013 1:30	12/29/2013 9:30	**480**	0.49	**11,016**	0.6	**0.21**	12	Atlas	5,398	1
	1/5/2014 14:30	1/5/2014 18:45	**255**	0.48	**6,991**	0.61	**0.25**	3	Atlas	3,356	1
	1/10/2014 23:45	1/11/2014 5:45	**360**	0.75	**12,290**	1.24	**0.39**	6	Atlas	9,217	1
	1/13/2014 14:00	1/13/2014 17:00	**180**	0.2	**5,674**	0.96	**0.09**	3	Atlas	1,135	1
	1/14/2014 18:15	1/14/2014 18:15	**0**	0.02	**20,779**	0.98	**0.02**	1	Atlas	416	1
	2/2/2014 2:30	2/2/2014 8:00	**330**	0.21	**20,966**	0.22	**0.11**	6	Atlas	4,403	1
	2/4/2014 18:45	2/5/2014 0:15	**330**	0.53	**12,785**	1.02	**0.26**	6	Atlas	6,776	1
	2/14/2014 15:45	2/14/2014 17:45	**120**	0.32	**4,486**	0.3	**0.17**	6	Atlas	1,435	1
	2/17/2014 14:15	2/17/2014 17:15	**180**	0.49	**12,749**	0.83	**0.29**	3	Atlas	6,247	1
	2/20/2014 22:30	2/20/2014 23:30	**60**	0.2	**3,940**	1.06	**0.11**	6	Atlas	788	1
	3/2/2014 9:15	3/2/2014 12:00	**165**	0.45	**6,115**	0.23	**0.17**	24	Atlas	2,752	1
	3/12/2014 7:00	3/12/2014 7:15	**15**	0.1	**9,099**	0.1	**0.05**	1	Atlas	910	1
	3/19/2014 8:15	3/19/2014 8:15	**0**	0.07	**3,464**	0.13	**0.05**	1	Atlas	243	1
	3/28/2014 3:45	3/28/2014 5:45	**120**	0.29	**10,437**	0.35	**0.15**	6	Atlas	3,027	1
	3/29/2014 5:00	3/29/2014 12:15	**435**	0.79	**10,377**	1.06	**0.36**	12	Atlas	8,198	1
	4/1/2014 20:30	4/1/2014 20:30	**0**	0.09	**1,392**	1.21	**0.06**	1	Atlas	125	1
	4/3/2014 4:45	4/4/2014 9:15	**1710**	2.91	**21,164**	4.12	**1.04**	24	Cloudburst	61,588	1
	4/7/2014 7:45	4/7/2014 15:15	**450**	0.82	**71,025**	3.84	**0.52**	1	Atlas	58,241	1
	4/14/2014 3:30	4/14/2014 10:15	**405**	1.14	**1,719**	1.32	**0.43**	24	Atlas	1,959	1
	4/14/2014 19:30	4/15/2014 1:15	**345**	1.14	**2,430**	1.12	**0.43**	24	Atlas	2,771	1
	4/25/2014 2:30	4/25/2014 2:45	**15**	0.13	**1,893**	0.07	**0.07**	6	Atlas	246	1
	4/28/2014 3:45	4/28/2014 7:45	**240**	1.69	**39,013**	1.34	**0.63**	24	Atlas	65,933	1
	4/28/2014 16:45	4/28/2014 20:00	**195**	1.69	**1,272**	1.8	**0.63**	24	Atlas	2,149	1
	4/29/2014 19:00	4/29/2014 19:30	**30**	0.18	**1,890**	1.9	**0.08**	12	Atlas	340	1
	5/9/2014 19:15	5/10/2014 16:15	**1260**	1.47	**56,019**	1.54	**0.57**	24	Atlas	82,348	1
	5/14/2014 7:00	5/15/2014 0:45	**1065**	0.72	**6,351**	2.31	**0.27**	24	Atlas	4,573	1
	5/16/2014 3:15	5/16/2014 3:45	**30**	0.1	**2,654**	2.4	**0.07**	1	Atlas	265	1
	5/21/2014 21:00	5/22/2014 4:45	**465**	0.73	**6,933**	0.9	**0.33**	12	Atlas	5,061	1
	5/28/2014 20:15	5/28/2014 21:15	**60**	0.49	**32,236**	1.22	**0.41**	1	Atlas	15,795	1
	6/1/2014 14:15	6/1/2014 22:15	**480**	0.12	**3,234**	0.63	**0.05**	12	Atlas	388	1
	6/10/2014 5:45	6/10/2014 6:00	**15**	0.05	**12,940**	0.07	**0.03**	6	Atlas	647	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**6/10/2014 15:30**	6/10/2014 17:00	**90**	0.09	**8,225**	0.16	**0.06**	3	Atlas	740	1
	6/11/2014 14:00	6/11/2014 14:45	**45**	0.13	**85,017**	0.29	**0.10**	1	Atlas	11,052	1
	6/20/2014 16:00	6/20/2014 18:00	**120**	0.18	**9,337**	0.17	**0.12**	3	Atlas	1,681	1
	6/23/2014 16:00	6/23/2014 16:00	**0**	0.1	**14,252**	0.22	**0.05**	6	Atlas	1,425	1
	6/24/2014 13:30	6/24/2014 14:30	**60**	0.07	**33,770**	0.3	**0.03**	1	Atlas	2,364	1
	7/1/2014 19:45	7/1/2014 22:30	**165**	0.29	**2,922**	0.34	**0.19**	3	Atlas	847	1
	7/2/2014 16:00	7/2/2014 16:45	**45**	0.18	**52,179**	0.52	**0.16**	1	Atlas	9,392	1
	7/7/2014 19:30	7/7/2014 20:15	**45**	0.31	**106,103**	0.78	**0.27**	1	Atlas	32,892	1
	7/8/2014 6:30	7/8/2014 7:30	**60**	0.38	**5,734**	1.16	**0.33**	1	Atlas	2,179	1
	7/13/2014 22:45	7/14/2014 4:15	**330**	0.92	**56,632**	1.48	**0.52**	1	Atlas	52,101	1
	7/14/2014 19:00	7/14/2014 20:45	**105**	0.46	**12,732**	2.07	**0.31**	3	Atlas	5,857	1
	7/26/2014 21:30	7/27/2014 9:45	**735**	0.89	**38,278**	0.96	**0.39**	12	Atlas	34,068	1
	8/8/2014 5:30	8/8/2014 11:00	**330**	0.79	**47,832**	0.81	**0.38**	6	Atlas	37,787	1
	8/10/2014 3:45	8/10/2014 5:30	**105**	0.73	**50,296**	1.62	**0.57**	1	Atlas	36,716	1
	8/11/2014 14:00	8/11/2014 16:00	**120**	0.33	**9,187**	1.94	**0.23**	1	Atlas	3,032	1
	8/16/2014 23:15	8/17/2014 11:00	**705**	0.68	**6,351**	1.63	**0.26**	24	Atlas	4,319	1
	8/17/2014 20:00	8/18/2014	**240**	0.68	**11,262**	1.01	**0.26**	24	Atlas	7,658	1
	8/20/2014 15:45	8/20/2014 15:45	**0**	0.01	**34,315**	0.69	**0.01**	1	Atlas	343	1
	8/22/2014 19:00	8/22/2014 19:45	**45**	0.16	**233,563**	0.81	**0.10**	3	Atlas	37,370	1
	8/23/2014 15:30	8/23/2014 23:00	**450**	0.83	**71,004**	1.67	**0.43**	3	Atlas	58,933	1
	8/26/2014 19:45	8/26/2014 20:30	**45**	0.11	**42,183**	1.11	**0.10**	1	Atlas	4,640	1
	8/27/2014 17:00	8/27/2014 18:00	**60**	0.11	**55,252**	1.21	**0.08**	1	Atlas	6,078	1
	8/30/2014 15:00	8/30/2014 18:30	**210**	0.72	**11,344**	1.67	**0.44**	1	Atlas	8,168	1
	9/2/2014 6:30	9/2/2014 15:30	**540**	0.49	**9,814**	1.43	**0.25**	3	Atlas	4,809	1
	9/11/2014	9/11/2014 8:30	**510**	2.08	**64,591**	2.08	**1.67**	3	Atlas	134,350	1
	9/15/2014 22:30	9/15/2014 22:45	**15**	0.03	**38,665**	2.11	**0.03**	1	Atlas	1,160	1
	9/21/2014 6:15	9/21/2014 6:15	**0**	0.02	**25,719**	0.04	**0.01**	3	Atlas	514	1
	10/3/2014 2:45	10/3/2014 20:15	**1050**	Discharge						19,459	1
	10/6/2014 6:30	10/6/2014 12:00	**330**	0.35	**86,990**	0.66	**0.18**	3	Atlas	30,446	1
	10/7/2014 11:15	10/7/2014 12:30	**75**	0.18	**11,444**	0.88	**0.14**	1	Atlas	2,060	1
	10/10/2014 1:45	10/10/2014 4:30	**165**	1.18	**44,547**	1.72	**0.54**	3	Atlas	52,566	1
	10/10/2014 17:00	10/10/2014 22:00	**300**	1.18	**834**	1.81	**0.54**	3	Atlas	984	1
	10/13/2014 4:15	10/13/2014 7:45	**210**	0.33	**15,846**	2.05	**0.21**	3	Atlas	5,229	1
	10/13/2014 23:00	10/14/2014 11:15	**735**	1.07	**16,422**	2.77	**0.48**	12	Atlas	17,572	1
	10/15/2014 7:30	10/15/2014 7:30	**0**	Discharge						74	1
	10/15/2014 17:45	10/15/2014 17:45	**0**	0.15	**1,564**	2.72	**0.07**	12	Atlas	235	1
	10/20/2014 6:45	10/20/2014 6:45	**0**	0.07	**1,993**	1.3	**0.06**	1	Atlas	140	1
	10/20/2014 19:45	10/20/2014 19:45	**0**	0.06	**1,143**	1.35	**0.05**	1	Atlas	69	1
	10/28/2014 12:00	10/28/2014 13:00	**60**	0.12	**750**	0.11	**0.07**	3	Atlas	90	1
	10/31/2014 12:30	10/31/2014 12:30	**0**	0.12	**2,999**	0.17	**0.05**	24	Atlas	360	1
	11/5/2014 18:45	11/5/2014 18:45	**0**	0.01	**8,273**	0.26	**0.01**	1	Atlas	83	1
	11/16/2014 23:30	11/17/2014 4:00	**270**	0.46	**290**	0.38	**0.19**	12	Atlas	134	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**11/23/2014 13:45**	11/23/2014 22:45	**540**	0.65	**9,419**	1.1	**0.29**	6	Atlas	6,122	1
	12/1/2014 0:45	12/1/2014 17:00	**975**	1.02	**7,396**	0.97				7,544	1
	12/5/2014 5:45	12/6/2014 6:00	**1455**	1.97	**18,381**	2.96	**0.64**	48	Atlas	36,211	1
	12/16/2014 2:45	12/16/2014 5:45	**180**	0.1	**9,787**	0.1	**0.05**	3	Atlas	979	1
	12/22/2014 22:15	12/22/2014 23:45	**90**	0.23	**6,056**	0.32	**0.14**	3	Atlas	1,393	1
	12/23/2014 19:30	12/23/2014 20:15	**45**	0.04	**10,428**	0.28	**0.03**	3	Atlas	417	1
	12/24/2014 13:15	12/24/2014 13:30	**15**	0.19	**2,511**	0.36	**0.08**	12	Atlas	477	1
	12/27/2014 16:45	12/28/2014 1:30	**525**	0.35	**22,457**	0.81	**0.13**	24	Atlas	7,860	1
	1/3/2015 5:45	1/3/2015 13:15	**450**	0.41	**2,988**	0.51	**0.15**	24	Atlas	1,225	1
	1/4/2015 0:45	1/4/2015 4:00	**195**	0.41	**511**	0.48	**0.15**	24	Atlas	209	1
	1/12/2015 5:15	1/12/2015 5:15	**0**	0.16	**153**	0.14	**0.06**	24	Atlas	24	1
	1/18/2015 3:00	1/18/2015 3:15	**15**	0.07	**2,464**	0.23	**0.05**	1	Atlas	172	1
	1/25/2015 20:45	1/25/2015 21:30	**45**	0.17	**748**	0.22	**0.07**	12	Atlas	127	1
	1/29/2015 5:00	1/29/2015 5:00	**0**	0.04	**3,100**	0.27				124	1
	2/1/2015 11:00	2/1/2015 17:30	**390**	0.43	**4,212**	0.59	**0.21**	3	Atlas	1,811	1
	3/3/2015 18:15	3/4/2015 15:15	**1260**	1.92	**6,667**	1.47	**0.62**	48	Atlas	12,801	1
	3/7/2015 16:00	3/7/2015 17:45	**105**	Discharge						318	1
	3/10/2015 6:30	3/10/2015 14:30	**480**	1.15	**56,839**	3.06	**0.52**	12	Atlas	65,365	1
	3/13/2015 9:45	3/14/2015 9:30	**1425**	2	**13,339**	3.13	**0.75**	24	Atlas	26,678	1
	3/19/2015 18:45	3/19/2015 19:15	**30**	0.2	**2,475**	2.17	**0.08**	24	Atlas	495	1
	3/24/2015 14:15	3/24/2015 20:00	**345**	0.14	**4,265**	0.32	**0.09**	1	Atlas	597	1
	3/26/2015 3:00	3/26/2015 5:45	**165**	0.62	**1,656**	0.79	**0.29**	3	Atlas	1,027	1
	4/2/2015 9:15	4/3/2015 16:45	**1890**	4.94	**103,621**	5.1	**9.44**	24	Cloudburst	511,890	1
	4/7/2015 4:15	4/7/2015 17:15	**780**	1.11	**58,436**	6.04	**0.54**	1	Atlas	64,864	1
	4/8/2015 15:30	4/8/2015 15:30	**0**	0.06	**2,282**	6.1	**0.04**	1	Atlas	137	1
	4/9/2015 11:30	4/9/2015 12:15	**45**	0.26	**1,858**	5.99	**0.23**	1	Atlas	483	1
	4/10/2015 1:45	4/10/2015 3:00	**75**	0.22	**135,952**	4.11	**0.14**	3	Atlas	29,909	1
	4/13/2015 19:45	4/13/2015 21:00	**75**	0.66	**2,270**	1.88	**0.25**	24	Atlas	1,498	1
	4/14/2015 6:30	4/14/2015 11:30	**300**	0.66	**1,156**	2.24	**0.25**	24	Atlas	763	1
	4/19/2015 6:15	4/19/2015 18:00	**705**	0.68	**6,361**	1.39	**0.28**	12	Atlas	4,325	1
	4/20/2015 3:15	4/20/2015 3:15	**0**	0.1	**2,525**	1.49	**0.09**	1	Atlas	253	1
	4/25/2015 8:45	4/25/2015 9:15	**30**	0.17	**4,308**	0.98	**0.08**	12	Atlas	732	1
	4/25/2015 18:45	4/25/2015 18:45	**0**	0.08	**914**	1.01	**0.05**	3	Atlas	73	1
	4/30/2015 12:30	4/30/2015 13:45	**75**	0.17	**18,386**	0.42	**0.15**	1	Atlas	3,126	1
	5/9/2015 3:15	5/9/2015 4:00	**45**	0.09	**12,825**	0.08	**0.05**	3	Atlas	1,154	1
	5/11/2015 17:30	5/11/2015 17:30	**0**	0.06	**22,666**	0.15	**0.05**	1	Atlas	1,360	1
	5/16/2015 11:15	5/16/2015 15:15	**240**	0.6	**55,599**	0.7	**0.35**	3	Atlas	33,359	1
	5/17/2015 14:00	5/17/2015 15:00	**60**	0.08	**169,963**	0.76	**0.04**	12	Atlas	13,597	1
	5/25/2015 6:15	5/25/2015 10:00	**225**	0.28	**17,006**	0.29	**0.13**	12	Atlas	4,762	1
	5/26/2015 14:00	5/26/2015 14:45	**45**	0.16	**12,962**	0.4	**0.10**	1	Atlas	2,074	1
	5/27/2015 13:45	5/27/2015 14:00	**15**	0.1	**7,182**	0.54	**0.09**	1	Atlas	718	1
	6/8/2015 7:00	6/8/2015 9:30	**150**	0.18	**39,237**	0.25	**0.11**	3	Atlas	7,063	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**6/17/2015 4:45**	6/17/2015 7:30	**165**	0.64	**9,717**	0.66	**0.35**	3	Atlas	6,219	1
	6/17/2015 17:15	6/17/2015 17:15	**0**	0.07	**599**	0.72	**0.05**	1	Atlas	42	1
	6/18/2015 16:15	6/18/2015 20:45	**270**	0.67	**17,533**	1.3	**0.38**	1	Atlas	11,747	1
	6/20/2015 0:30	6/20/2015 9:45	**555**	0.95	**29,436**	2.35	**0.39**	12	Atlas	27,965	1
	6/22/2015 6:00	6/22/2015 6:45	**45**	0.24	**2,825**	2.55	**0.11**	3	Atlas	678	1
	6/25/2015 23:45	6/26/2015 4:30	**285**	0.57	**6,016**	1.85	**0.31**	6	Atlas	3,429	1
	6/26/2015 17:00	6/27/2015 1:15	**495**	1.05	**62,052**	2.81	**0.54**	1	Atlas	65,155	1
	6/29/2015 3:45	6/29/2015 3:45	**0**	0.25	**6,565**	1.81	**0.12**	1	Atlas	1,641	1
	6/29/2015 13:30	6/29/2015 15:00	**90**	0.25	**9,580**	1.87	**0.12**	1	Atlas	2,395	1
	7/1/2015 23:45	7/2/2015 20:45	**1260**	2.57	**39,406**	4.45	**0.98**	1	Atlas	101,273	1
	7/3/2015 14:45	7/3/2015 18:45	**240**	0.44	**41,670**	4.32	**0.35**	1	Atlas	18,335	1
	7/7/2015 10:45	7/8/2015 0:15	**810**	1.04	**8,169**	3.93	**0.48**	3	Atlas	8,496	1
	7/8/2015 10:00	7/8/2015 12:45	**165**	1.04	**909**	4.05	**0.48**	3	Atlas	946	1
	7/9/2015 5:00	7/9/2015 13:45	**525**	0.42	**13,134**	3.44	**0.19**	12	Atlas	5,516	1
	7/10/2015 10:15	7/10/2015 16:15	**360**	0.43	**7,954**	2.35	**0.22**	6	Atlas	3,420	1
	7/12/2015 6:00	7/12/2015 7:30	**90**	1.1	**103,329**	3.01	**0.79**	1	Atlas	113,662	1
	7/13/2015 14:15	7/13/2015 15:30	**75**	0.47	**20,585**	3.49	**0.39**	1	Atlas	9,675	1
	7/14/2015 3:30	7/14/2015 5:00	**90**	0.99	**60,042**	4.46	**0.81**	1	Atlas	59,441	1
	7/17/2015 22:15	7/18/2015 2:15	**240**	1.66	**120,871**	4.28	**1.53**	3	Atlas	200,646	1
	7/29/2015 17:30	7/29/2015 17:45	**15**	0.17	**1,883**	0.21	**0.15**	1	Atlas	320	1
	8/4/2015 18:45	8/4/2015 20:00	**75**	0.55	**64,068**	0.72	**0.46**	1	Atlas	35,238	1
	8/5/2015 14:45	8/5/2015 16:15	**90**	0.31	**29,766**	1.03	**0.27**	1	Atlas	9,227	1
	8/6/2015 2:15	8/6/2015 15:00	**765**	0.44	**14,010**	1.3	**0.27**	1	Atlas	6,165	1
	8/10/2015 20:30	8/10/2015 20:45	**15**	0.06	**42,986**	1.37	**0.05**	1	Atlas	2,579	1
	8/15/2015 16:30	8/15/2015 17:30	**60**	0.02	**994,639**	0.09	**0.02**	1	Atlas	19,893	1
	8/19/2015 7:30	8/19/2015 17:00	**570**	0.41	**6,911**	0.4	**0.17**	3	Atlas	2,834	1
	9/5/2015 17:30	9/5/2015 18:15	**45**	0.1	**60,572**	0.06	**0.05**	6	Atlas	6,057	1
	9/9/2015 4:30	9/9/2015 12:15	**465**	Discharge						12,136	1
	9/11/2015 18:30	9/11/2015 21:30	**180**	0.24	**5,232**	0.77	**0.13**	3	Atlas	1,256	1
	9/25/2015 20:30	9/25/2015 20:45	**15**	0.11	**12,220**	0.08	**0.05**	6	Atlas	1,344	1
	9/29/2015 9:15	9/29/2015 10:15	**60**	0.67	**829**	0.44	**0.22**	48	Atlas	556	1
	9/29/2015 18:45	9/29/2015 19:45	**60**	0.67	**547**	0.6	**0.22**	48	Atlas	366	1
	9/30/2015 8:15	9/30/2015 8:30	**15**	0.67	**424**	0.78	**0.22**	48	Atlas	284	1
	10/2/2015 15:00	10/2/2015 22:15	**435**	0.57	**3,210**	1.35	**0.27**	6	Atlas	1,829	1
	10/12/2015 18:00	10/12/2015 20:00	**120**	0.35	**9,471**	0.4	**0.26**	1	Atlas	3,315	1
	10/24/2015 14:45	10/24/2015 18:00	**195**	0.31	**3,032**	0.23	**0.14**	6	Atlas	940	1
	10/27/2015 9:45	10/28/2015 23:15	**2250**	2.55	**35,405**	3.02	**0.86**	24	Atlas	90,282	1
	10/31/2015 21:45	10/31/2015 23:15	**90**	0.15	**9,086**	2.88	**0.10**	3	Atlas	1,363	1
	11/6/2015 3:00	11/6/2015 7:00	**240**	0.95	**22,836**	1.1	**0.59**	3	Atlas	21,694	1
	11/9/2015 16:00	11/9/2015 23:30	**450**	0.6	**5,524**	1.55	**0.27**	12	Atlas	3,314	1
	11/11/2015 23:30	11/12/2015 2:00	**150**	0.32	**13,181**	1.86	**0.19**	3	Atlas	4,218	1
	11/18/2015 8:30	11/18/2015 19:00	**630**	1.25	**61,945**	1.76	**0.62**	6	Atlas	77,431	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**11/21/2015 15:00**	11/21/2015 15:15	**15**	0.07	**9,514**	1.51	**0.05**	1	Atlas	666	1
	11/28/2015 12:00	11/28/2015 20:15	**495**	0.68	**3,619**	0.83	**0.28**	12	Atlas	2,461	1
	11/30/2015 21:30	12/1/2015 5:30	**480**	0.66	**6,626**	1.57	**0.30**	12	Atlas	4,373	1
	12/14/2015 4:45	12/14/2015 9:00	**255**	0.26	**9,126**	0.27	**0.14**	6	Atlas	2,373	1
	12/21/2015 10:30	12/21/2015 12:00	**90**	0.6	**1,696**	0.24	**0.23**	24	Atlas	1,018	1
	12/21/2015 23:00	12/22/2015 4:30	**330**	0.6	**8,084**	0.62	**0.23**	24	Atlas	4,851	1
	12/23/2015 6:15	12/23/2015 7:00	**45**	0.03	**8,445**	0.65	**0.02**	3	Atlas	253	1
	12/23/2015 19:15	12/23/2015 21:00	**105**	0.74	**153,371**	1.39	**0.56**	1	Atlas	113,495	1
	12/25/2015 9:00	12/25/2015 9:15	**15**	0.13	**1,443**	1.48	**0.07**	3	Atlas	188	1
	12/26/2015 11:00	12/26/2015 18:30	**450**	0.54	**4,989**	2.04	**0.26**	3	Atlas	2,694	1
	12/27/2015 9:45	12/28/2015 21:15	**2130**	2.21	**55,309**	4.25	**0.72**	6	Atlas	122,233	1
	1/8/2016 1:15	1/8/2016 7:00	**345**	0.1	**1,042**	0.12	**0.05**	6	Atlas	104	1
	1/9/2016 18:45	1/9/2016 23:15	**270**	0.18	**7,712**	0.23	**0.08**	12	Atlas	1,388	1
	1/15/2016 15:15	1/15/2016 15:15	**0**	0.1	**1,202**	0.36	**0.05**	6	Atlas	120	1
	2/2/2016 14:30	2/3/2016 2:30	**720**	1.49	**44,141**	1.54	**0.72**	6	Atlas	65,770	1
	2/8/2016 10:15	2/8/2016 10:45	**30**	0.14	**16,710**	1.6	**0.06**	12	Atlas	2,339	1
	2/21/2016 3:45	2/21/2016 11:15	**450**	0.86	**22,516**	1.03	**0.39**	12	Atlas	19,363	1
	2/23/2016 22:15	2/24/2016 14:30	**975**	1.9	**23,947**	2.58	**0.72**	24	Atlas	45,499	1
	2/29/2016 1:15	2/29/2016 1:45	**30**	0.03	**22,541**	1.95	**0.02**	3	Atlas	676	1
	3/1/2016 8:45	3/1/2016 15:00	**375**	0.5	**11,467**	2.44	**0.27**	6	Atlas	5,733	1
	3/9/2016 15:00	3/9/2016 20:15	**315**	1.32	**1,450**	0.32	**0.44**	12	Atlas	1,914	1
	3/10/2016 7:00	3/10/2016 20:30	**810**	1.32	**9,263**	1.37	**0.44**	12	Atlas	12,227	1
	3/12/2016 20:15	3/13/2016 0:15	**240**	0.87	**33,241**	2.04	**0.37**	6	Atlas	28,920	1
	3/13/2016 9:00	3/13/2016 11:15	**135**	0.87	**3,610**	2.23	**0.37**	6	Atlas	3,141	1
	3/24/2016 17:15	3/24/2016 18:45	**90**	0.29	**57,703**	0.36	**0.17**	1	Atlas	16,734	1
	3/27/2016 20:00	3/27/2016 22:15	**135**	0.73	**52,424**	1.02	**0.49**	3	Atlas	38,270	1
	3/31/2016 1:00	4/1/2016	**1380**	1.33	**4,760**	2.35	**0.50**	24	Atlas	6,331	1
	4/10/2016 18:00	4/10/2016 18:00	**0**	0.02	**6,058**	0.13	**0.02**	1	Atlas	121	1
	4/11/2016 13:15	4/11/2016 20:15	**420**	1.03	**11,222**	1.14	**0.47**	6	Atlas	11,559	1
	4/21/2016 14:15	4/21/2016 16:30	**135**	0.42	**7,872**	0.22	**0.15**	24	Atlas	3,306	1
	4/22/2016 0:45	4/22/2016 3:30	**165**	0.42	**2,546**	0.33	**0.15**	24	Atlas	1,069	1
	4/26/2016 16:00	4/26/2016 22:15	**375**	0.31	**14,664**	0.72	**0.20**	1	Atlas	4,546	1
	4/27/2016 12:00	4/27/2016 22:30	**630**	0.82	**24,501**	1.48	**0.36**	12	Atlas	20,091	1
	4/30/2016 8:30	4/30/2016 13:15	**285**	0.83	**5,881**	1.69	**0.32**	24	Atlas	4,881	1
	4/30/2016 23:15	5/1/2016 2:00	**165**	0.83	**1,160**	1.9	**0.32**	24	Atlas	963	1
	5/1/2016 14:45	5/1/2016 16:00	**75**	0.28	**2,109**	2.22	**0.19**	3	Atlas	590	1
	5/4/2016 10:45	5/4/2016 11:30	**45**	0.2	**1,439**	2.09	**0.11**	3	Atlas	288	1
	5/7/2016 16:15	5/7/2016 22:30	**375**	0.69	**7,004**	1.43	**0.36**	6	Atlas	4,833	1
	5/10/2016 8:15	5/10/2016 22:30	**855**	0.9	**35,109**	1.83	**0.34**	24	Atlas	31,598	1
	5/11/2016 7:00	5/11/2016 7:00	**0**	0.04	**1,037**	1.87	**0.03**	1	Atlas	41	1
	5/11/2016 21:15	5/11/2016 22:00	**45**	0.22	**2,431**	1.82	**0.11**	3	Atlas	535	1
	5/12/2016 16:00	5/12/2016 16:45	**45**	0.17	**11,591**	1.97	**0.11**	3	Atlas	1,970	1
	5/17/2016 5:30	5/17/2016 7:00	**90**	0.64	**1,513**	1.61	**0.22**	24	Atlas	968	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO054	**5/17/2016 20:00**	5/17/2016 20:45	**45**	0.64	**719**	1.11	**0.22**	24	Atlas	460	1
	5/20/2016 12:45	5/20/2016 16:15	**210**	0.53	**23,490**	1.21	**0.29**	3	Atlas	12,450	1
	5/25/2016 17:45	5/25/2016 18:15	**30**	0.04	**121,411**	0.65	**0.03**	1	Atlas	4,856	1
	5/26/2016 13:30	5/26/2016 15:45	**135**	0.3	**6,969**	0.95	**0.20**	3	Atlas	2,091	1
	6/1/2016 22:15	6/1/2016 22:15	**0**	0.68	**530**	0.39	**0.51**	1	Atlas	360	1
	6/2/2016 15:15	6/2/2016 16:30	**75**	0.68	**102,867**	0.79	**0.51**	1	Atlas	69,950	1
	6/4/2016 11:30	6/4/2016 18:15	**405**	0.53	**16,531**	1.28	**0.27**	1	Atlas	8,762	1
	6/12/2016 18:00	6/12/2016 18:15	**15**	0.03	**47,686**	0.07	**0.02**	3	Atlas	1,431	1
	6/14/2016 16:30	6/14/2016 19:30	**180**	1.07	**105,446**	1.09	**0.69**	3	Atlas	112,827	1
	6/15/2016 13:15	6/15/2016 13:15	**0**	0.04	**14,538**	1.13	**0.03**	3	Atlas	582	1
	6/22/2016 8:15	6/22/2016 11:15	**180**	0.55	**6,638**	0.59	**0.35**	3	Atlas	3,651	1
	6/23/2016 15:45	6/23/2016 21:30	**345**	2.37	**62,456**	2.92	**2.92**	6	Cloudburst	148,021	1
Grand Total										**7,659,488**	**391**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**4/24/2010 19:15**	4/24/2010 19:15	**0**	1.65	**214,939**	1.8	**0.78**	6	Atlas	354,649	1
	5/2/2010 1:00	5/2/2010 5:15	**255**	4.02	**235,823**	3.34	**3.14**	48	Atlas	948,010	1
	5/12/2010 10:00	5/12/2010 10:00	**0**	0.78	**110,458**	1.23	**0.58**	1	Atlas	86,157	1
	5/21/2010 19:45	5/21/2010 20:00	**15**	0.92	**269,257**	1.8	**0.68**	1	Atlas	247,716	1
	5/30/2010 20:15	5/30/2010 20:15	**0**	0.56	**21,305**	0.61	**0.30**	6	Atlas	11,931	1
	6/19/2010 5:45	6/19/2010 6:00	**15**	0.99	**166,932**	1.96	**0.57**	3	Atlas	165,263	1
	7/13/2010 5:45	7/13/2010 5:45	**0**	1.87	**60**	1.74	**0.86**	12	Atlas	113	1
	7/20/2010 5:00	7/20/2010 5:30	**30**	0.74	**92,577**	2.03	**0.49**	1	Atlas	68,507	1
	7/27/2010 16:00	7/27/2010 16:15	**15**	1	**444,645**	1.55	**0.67**	1	Atlas	444,645	1
	8/14/2010 16:15	8/14/2010 16:15	**0**	0.59	**48,758**	0.75	**0.47**	1	Atlas	28,767	1
	11/25/2010 11:15	11/25/2010 11:15	**0**	2.36	**13,740**	1.67	**0.90**	24	Atlas	32,426	1
	11/30/2010 2:45	11/30/2010 2:45	**0**	1.82	**11,087**	4.56	**0.70**	24	Atlas	20,179	1
	4/11/2011 23:30	4/12/2011 2:30	**180**	3.15	**201,232**	3.26	**2.24**	24	Cloudburst	633,881	1
	4/20/2011 2:45	4/20/2011 4:00	**75**	0.78	**305,006**	1.26	**0.43**	6	Atlas	237,905	1
	4/23/2011 0:30	4/23/2011 14:45	**855**	4.88	**921,617**	4.39	**3.97**	48	Atlas	4,497,493	1
	5/8/2011 1:15	5/8/2011 1:15	**0**	0.25	**519,708**	3.74	**0.15**	1	Atlas	129,927	1
	5/23/2011 18:00	5/23/2011 18:15	**15**	0.84	**202,150**	1.36	**0.53**	3	Atlas	169,806	1
	5/26/2011 11:15	5/26/2011 11:30	**15**	1.43	**298,164**	3.03	**0.59**	3	Atlas	426,375	1
	6/15/2011 9:30	6/15/2011 10:00	**30**	1.03	**1,028,204**	1.3	**0.63**	1	Atlas	1,059,050	1
	6/22/2011 20:00	6/23/2011 2:45	**405**	4.36	**949,332**	6.41	**49.36**	3	Cloudburst	4,139,089	1
	8/7/2011 3:30	8/7/2011 4:00	**30**	1.91	**317,740**	1.39	**1.63**	3	Atlas	606,883	1
	9/25/2011 23:30	9/26/2011 3:45	**255**	3.78	**1,395,606**	5.17	**10.83**	12	Atlas	5,275,392	1
	4/14/2012 8:45	4/14/2012 8:45	**0**	0.22	**2,491**	0.1	**0.12**	6	Atlas	548	1
	4/28/2012 19:15	4/29/2012	**285**	0.77	**45,003**	0.9	**0.58**	1	Atlas	34,652	1
	4/30/2012 18:00	4/30/2012 18:00	**0**	0.51	**1,231**	1.13	**0.34**	3	Atlas	628	1
	5/4/2012 23:30	5/5/2012 1:15	**105**	1.41	**509,772**	2.44	**0.73**	3	Atlas	718,778	1
	5/13/2012 1:45	5/13/2012 7:45	**360**	2.15	**6,000**	1.96	**0.84**	12	Atlas	12,899	1
	5/16/2012 17:30	5/16/2012 17:45	**15**	0.22	**32,045**	2.38	**0.19**	1	Atlas	7,050	1
	5/29/2012 6:30	5/29/2012 8:45	**135**	2.84	**1,258,730**	2.7	**13.98**	3	Atlas	3,574,792	1
	5/31/2012 18:15	5/31/2012 18:15	**0**	1.25	**2,053**	3.09	**0.54**	12	Atlas	2,566	1
	6/17/2012 11:15	6/17/2012 11:45	**30**	0.39	**8,349**	0.31	**0.23**	3	Atlas	3,256	1
	7/8/2012 12:45	7/8/2012 13:00	**15**	0.24	**12,096**	0.64	**0.17**	1	Atlas	2,903	1
	7/14/2012 14:00	7/14/2012 14:00	**0**	0.54	**3,809**	0.75	**0.34**	3	Atlas	2,057	1
	7/18/2012 17:00	7/18/2012 17:15	**15**	Discharge						224,399	1
	7/19/2012 18:00	7/19/2012 18:30	**30**	0.94	**2,336,201**	1.46	**0.76**	1	Atlas	2,196,029	1
	7/24/2012 19:45	7/24/2012 20:00	**15**	0.27	**8,000**	1.23	**0.22**	1	Atlas	2,160	1
	7/27/2012 19:45	7/27/2012 20:30	**45**	0.7	**9,450**	1.12	**0.49**	1	Atlas	6,615	1
	8/16/2012 20:00	8/16/2012 20:00	**0**	0.54	**1,563**	0.25	**0.31**	3	Atlas	844	1
	8/21/2012 13:45	8/21/2012 13:45	**0**	0.31	**4,458**	0.86	**0.27**	1	Atlas	1,382	1
	9/1/2012 15:00	9/1/2012 15:00	**0**	0.41	**2,710**	0.3	**0.26**	3	Atlas	1,111	1
	9/2/2012 11:45	9/2/2012 12:30	**45**	0.56	**3,113**	0.74	**0.22**	24	Atlas	1,743	1
	9/3/2012 14:45	9/3/2012 14:45	**0**	0.05	**13,940**	1.03	**0.03**	1	Atlas	697	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**9/5/2012 15:15**	9/5/2012 15:45	**30**	0.67	**1,161,266**	1.63	**0.52**	1	Atlas	778,048	1
	9/7/2012 23:15	9/8/2012 6:15	**420**	1.48	**1,885**	3.14	**0.83**	3	Atlas	2,790	1
	9/26/2012 1:00	9/26/2012 1:00	**0**	0.51	**2,982**	0.69	**0.23**	12	Atlas	1,521	1
	9/26/2012 20:45	9/26/2012 23:00	**135**	1.67	**182,349**	2.43	**0.89**	6	Atlas	304,522	1
	10/1/2012 14:30	10/2/2012 4:45	**855**	0.64	**890,166**	3.29	**0.25**	12	Atlas	569,706	1
	10/6/2012	10/6/2012 10:15	**615**	0.13	**1,875,423**	0.77	**0.07**	3	Atlas	243,805	1
	10/18/2012 0:45	10/18/2012 8:30	**465**	0.25	**896,900**	0.43	**0.17**	3	Atlas	224,225	1
	10/26/2012 12:00	10/27/2012 9:45	**1305**	0.68	**1,227,512**	0.7	**0.31**	6	Atlas	834,708	1
	11/3/2012 16:15	11/3/2012 19:45	**210**	0.18	**85,278**	0.2	**0.08**	12	Atlas	15,350	1
	11/12/2012 5:30	11/12/2012 21:45	**975**	0.43	**1,102,947**	0.51	**0.20**	12	Atlas	474,267	1
	12/2/2012 11:15	12/2/2012 21:30	**615**	0.19	**1,535,963**	0.26	**0.11**	3	Atlas	291,833	1
	12/4/2012 15:00	12/5/2012 12:45	**1305**	0.61	**967,511**	0.8	**0.39**	3	Atlas	590,182	1
	12/6/2012 21:15	12/10/2012 1:00	**4545**	1.15	**3,869,438**	3.25	**0.48**	12	Atlas	4,449,854	1
	12/20/2012 8:00	12/20/2012 10:00	**120**	0.67	**3,622**	0.95	**0.37**	6	Atlas	2,427	1
	12/26/2012 5:30	12/26/2012 5:30	**0**	0.68	**1,428**	1.16	**0.27**	12	Atlas	971	1
	1/8/2013 9:45	1/8/2013 10:00	**15**	Discharge						1,053	1
	1/8/2013 20:45	1/9/2013 10:30	**825**	Discharge						38,104	1
	1/9/2013 20:15	1/10/2013 5:30	**555**	Discharge						159,846	1
	1/11/2013 5:45	1/11/2013 6:15	**30**	0.61	**6,998**	0.7	**0.33**	3	Atlas	4,269	1
	1/13/2013 3:00	1/13/2013 17:45	**885**	2.35	**10,298**	3.05	**0.90**	24	Atlas	24,201	1
	1/30/2013 4:45	1/30/2013 6:00	**75**	0.87	**11,087**	0.81	**0.45**	6	Atlas	9,646	1
	2/22/2013 0:45	2/22/2013 0:45	**0**	0.42	**1,638**	0.79	**0.19**	12	Atlas	688	1
	3/11/2013 3:45	3/11/2013 10:15	**390**	1.01	**9,465**	1.44	**0.40**	12	Atlas	9,560	1
	3/17/2013 6:45	3/17/2013 15:15	**510**	1.67	**10,845**	1.72	**0.54**	48	Atlas	18,111	1
	3/18/2013 3:45	3/18/2013 10:00	**375**	1.67	**16,544**	2.21	**0.54**	48	Atlas	27,628	1
	3/24/2013 7:30	3/24/2013 16:00	**510**	0.52	**14,440**	1.7	**0.20**	24	Atlas	7,509	1
	4/11/2013 5:30	4/11/2013 7:30	**120**	1.32	**159,734**	0.51	**0.51**	24	Atlas	210,849	1
	4/11/2013 18:00	4/11/2013 22:30	**270**	1.32	**1,311**	1.29	**0.51**	24	Atlas	1,731	1
	4/16/2013 20:00	4/16/2013 20:15	**15**	0.55	**1,074,962**	1.83	**0.44**	1	Atlas	591,229	1
	4/19/2013 2:00	4/19/2013 4:15	**135**	0.96	**13,678**	1.51	**0.52**	6	Atlas	13,131	1
	4/24/2013 8:15	4/24/2013 9:15	**60**	0.69	**9,052**	1.65	**0.38**	6	Atlas	6,246	1
	5/10/2013 12:00	5/10/2013 12:00	**0**	0.87	**1,443**	2.08	**0.39**	6	Atlas	1,255	1
	5/10/2013 23:30	5/10/2013 23:30	**0**	0.87	**1,740**	2.4	**0.39**	6	Atlas	1,514	1
	5/16/2013 10:15	5/16/2013 10:15	**0**	0.24	**7,913**	1.16	**0.21**	1	Atlas	1,899	1
	6/1/2013 6:00	6/1/2013 6:00	**0**	0.14	**5,429**	0.34	**0.06**	12	Atlas	760	1
	6/9/2013 23:45	6/9/2013 23:45	**0**	0.3	**11,503**	0.19	**0.13**	6	Atlas	3,451	1
	6/16/2013 16:30	6/16/2013 17:00	**30**	0.4	**14,288**	0.65	**0.26**	1	Atlas	5,715	1
	6/17/2013 16:15	6/17/2013 21:00	**285**	1.09	**24,460**	1.41	**0.56**	6	Atlas	26,661	1
	6/26/2013 3:15	6/26/2013 4:30	**75**	0.76	**228,983**	1.35	**0.51**	3	Atlas	174,027	1
	6/26/2013 16:00	6/26/2013 20:45	**285**	2.28	**2,537,620**	3.3	**2.47**	1	Atlas	5,785,774	1
	6/29/2013 19:45	6/29/2013 19:45	**0**	0.39	**8,582**	3.59	**0.20**	6	Atlas	3,347	1
	7/1/2013 19:00	7/1/2013 19:00	**0**	0.27	**3,363**	3.71	**0.14**	3	Atlas	908	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**7/2/2013 13:00**	7/2/2013 13:00	**0**	0.14	**37,500**	3.82	**0.12**	1	Atlas	5,250	1
	7/6/2013 4:45	7/6/2013 4:45	**0**	0.64	**755**	1.88	**0.28**	12	Atlas	483	1
	7/10/2013 14:00	7/10/2013 14:15	**15**	0.85	**951,607**	2.04	**0.61**	1	Atlas	808,866	1
	7/14/2013 19:15	7/14/2013 19:30	**15**	0.13	**23,285**	1.04	**0.11**	1	Atlas	3,027	1
	7/22/2013 6:45	7/22/2013 13:45	**420**	2.07	**1,103,231**	2.29	**0.80**	24	Atlas	2,283,688	1
	8/12/2013 14:30	8/12/2013 14:45	**15**	0.77	**9,471**	0.67	**0.31**	1	Atlas	7,293	1
	8/13/2013 2:15	8/13/2013 2:45	**30**	0.77	**4,134**	0.95	**0.31**	1	Atlas	3,183	1
	8/20/2013 18:00	8/20/2013 18:00	**0**	0.19	**14,147**	0.16	**0.11**	3	Atlas	2,688	1
	8/31/2013 19:45	8/31/2013 22:15	**150**	1.39	**7,211**	0.99	**0.70**	1	Atlas	10,023	1
	9/2/2013 13:30	9/2/2013 13:45	**15**	0.44	**8,325**	1.83	**0.38**	1	Atlas	3,663	1
	9/20/2013 16:15	9/20/2013 22:30	**375**	1.16	**4,269**	0.71	**0.47**	12	Atlas	4,952	1
	10/5/2013 13:00	10/6/2013 6:00	**1020**	4.09	**682,209**	3.55	**6.45**	24	Cloudburst	2,790,234	1
	10/30/2013 2:00	10/30/2013 5:15	**195**	1.45	**2,632**	1.36	**0.71**	6	Atlas	3,817	1
	10/31/2013 19:15	10/31/2013 19:15	**0**	0.63	**4,870**	1.96	**0.25**	12	Atlas	3,068	1
	11/12/2013 5:15	11/12/2013 5:15	**0**	0.03	**18,133**	0.24	**0.01**	12	Atlas	544	1
	11/17/2013 5:30	11/17/2013 8:30	**180**	2.34	**64,668**	1.8	**1.03**	6	Cloudburst	151,323	1
	11/17/2013 17:45	11/17/2013 17:45	**0**	2.34	**1,792**	2.35	**1.03**	6	Cloudburst	4,193	1
	11/23/2013 18:00	11/23/2013 20:30	**150**	Discharge						6,161	1
	11/29/2013 5:45	11/29/2013 5:45	**0**	Discharge						474	1
	12/5/2013 5:15	12/5/2013 7:30	**135**	0.82	**2,998**	0.19	**0.27**	48	Atlas	2,458	1
	12/6/2013 2:30	12/6/2013 2:30	**0**	0.82	**580**	0.35	**0.27**	48	Atlas	476	1
	12/6/2013 10:45	12/6/2013 12:15	**90**	0.82	**2,599**	0.49	**0.27**	48	Atlas	2,131	1
	12/7/2013 12:30	12/7/2013 12:45	**15**	Discharge						912	1
	12/13/2013 12:15	12/13/2013 12:15	**0**	Discharge						593	1
	12/14/2013 6:30	12/14/2013 15:45	**555**	0.82	**25,551**	1.32	**0.33**	12	Atlas	20,952	1
	12/21/2013 7:30	12/21/2013 8:00	**30**	1.14	**1,392**	1.04	**0.52**	12	Atlas	1,587	1
	12/21/2013 21:00	12/21/2013 23:00	**120**	1.75	**1,219,188**	2.48	**0.95**	3	Atlas	2,133,579	1
	1/11/2014	1/11/2014	**0**	0.85	**1,389**	0.71	**0.45**	6	Atlas	1,181	1
	2/17/2014 16:00	2/17/2014 16:00	**0**	0.72	**3,013**	1.05	**0.43**	3	Atlas	2,169	1
	3/29/2014 6:30	3/29/2014 6:30	**0**	1.07	**779**	0.83	**0.51**	3	Atlas	833	1
	4/3/2014 11:45	4/4/2014 3:30	**945**	2.87	**332,749**	3.84	**1.04**	24	Cloudburst	954,990	1
	4/7/2014 10:30	4/7/2014 11:45	**75**	0.74	**432,954**	3.7	**0.43**	3	Atlas	320,386	1
	4/28/2014 4:00	4/28/2014 6:45	**165**	1.51	**776,322**	1.1	**0.56**	3	Atlas	1,172,246	1
	5/10/2014 2:15	5/10/2014 5:30	**195**	1.85	**2,619**	0.8	**0.68**	24	Atlas	4,845	1
	5/10/2014 13:45	5/10/2014 15:15	**90**	1.85	**486,198**	1.84	**0.68**	24	Atlas	899,466	1
	5/14/2014 19:00	5/14/2014 20:45	**105**	0.84	**51,724**	2.66	**0.32**	24	Atlas	43,448	1
	5/21/2014 21:00	5/21/2014 21:00	**0**	0.57	**8,077**	0.26	**0.26**	12	Atlas	4,604	1
	5/28/2014 20:30	5/28/2014 20:30	**0**	0.2	**25,035**	0.76	**0.17**	1	Atlas	5,007	1
	6/11/2014 14:15	6/11/2014 14:15	**0**	0.12	**33,700**	0.29	**0.09**	1	Atlas	4,044	1
	6/20/2014 17:30	6/20/2014 17:30	**0**	0.25	**5,540**	0.25	**0.17**	3	Atlas	1,385	1
	6/24/2014 13:45	6/24/2014 14:15	**30**	0.1	**16,580**	0.37	**0.05**	6	Atlas	1,658	1
	7/2/2014 16:15	7/2/2014 16:15	**0**	0.06	**13,833**	0.25	**0.04**	1	Atlas	830	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**7/7/2014 19:30**	7/7/2014 19:30	**0**	0.85	**15,847**	1.06	**0.74**	1	Atlas	13,470	1
	7/13/2014 23:00	7/13/2014 23:00	**0**	0.99	**25,449**	2.09	**0.48**	3	Atlas	25,195	1
	7/14/2014 20:00	7/14/2014 20:00	**0**	0.25	**3,656**	1.77	**0.18**	1	Atlas	914	1
	7/21/2014 17:30	7/21/2014 17:30	**0**	Discharge						1,041	1
	7/26/2014 21:45	7/26/2014 22:15	**30**	1.34	**12,430**	0.49	**0.61**	12	Atlas	16,656	1
	7/27/2014 7:00	7/27/2014 7:45	**45**	1.34	**3,711**	1.27	**0.61**	12	Atlas	4,973	1
	8/8/2014 5:45	8/8/2014 7:30	**105**	0.77	**816,712**	0.59	**0.37**	6	Atlas	628,868	1
	8/10/2014 4:00	8/10/2014 4:30	**30**	0.89	**10,190**	1.77	**0.73**	1	Atlas	9,069	1
	8/17/2014 9:30	8/17/2014 9:30	**0**	0.72	**2,807**	0.89	**0.27**	24	Atlas	2,021	1
	8/22/2014 19:15	8/22/2014 19:15	**0**	0.26	**2,635**	0.98	**0.18**	1	Atlas	685	1
	8/23/2014 20:00	8/23/2014 20:00	**0**	0.65	**5,302**	1.38	**0.34**	3	Atlas	3,446	1
	8/30/2014 15:15	8/30/2014 16:15	**60**	0.58	**328,122**	1.25	**0.35**	1	Atlas	190,311	1
	9/11/2014 0:30	9/11/2014 6:15	**345**	1.78	**1,507,401**	1.73	**1.00**	3	Atlas	2,683,173	1
	10/6/2014 7:45	10/6/2014 7:45	**0**	0.18	**2,644**	0.35	**0.08**	6	Atlas	476	1
	10/10/2014 1:45	10/10/2014 3:15	**90**	1.2	**356,414**	1.51	**0.55**	3	Atlas	427,697	1
	10/13/2014 4:15	10/13/2014 6:00	**105**	0.44	**11,525**	2.05	**0.29**	3	Atlas	5,071	1
	10/13/2014 23:30	10/13/2014 23:30	**0**	0.95	**2,408**	2.16	**0.42**	12	Atlas	2,288	1
	10/14/2014 7:45	10/14/2014 8:30	**45**	0.95	**27,804**	2.77	**0.42**	12	Atlas	26,414	1
	11/23/2014 17:30	11/23/2014 22:45	**315**	0.7	**2,373**	1.05	**0.30**	12	Atlas	1,661	1
	12/6/2014 2:00	12/6/2014 3:15	**75**	1.99	**86,248**	2.71	**0.64**	48	Atlas	171,634	1
	2/21/2015 15:15	2/21/2015 16:00	**45**	1.28	**1,530**	1.52	**0.49**	24	Atlas	1,959	1
	3/3/2015 18:45	3/4/2015 17:15	**1350**	1.82	**28,554**	1.44	**0.59**	24	Atlas	51,968	1
	3/6/2015 12:00	3/6/2015 12:00	**0**	Discharge						757	1
	3/9/2015 9:00	3/9/2015 9:30	**30**	Discharge						1,711	1
	3/10/2015 6:45	3/10/2015 18:15	**690**	1.19	**53,065**	3.01	**0.53**	12	Atlas	63,147	1
	3/13/2015 10:30	3/14/2015 11:15	**1485**	1.89	**8,551**	3.08	**0.72**	24	Atlas	16,161	1
	3/26/2015 4:15	3/26/2015 11:30	**435**	0.51	**9,286**	0.74	**0.21**	3	Atlas	4,736	1
	4/2/2015 10:30	4/2/2015 15:30	**300**	5.08	**4,275**	1.13	**9.60**	24	Cloudburst	21,715	1
	4/3/2015 0:15	4/3/2015 17:00	**1005**	5.08	**21,611**	5.1	**9.60**	24	Cloudburst	109,784	1
	4/7/2015 9:15	4/7/2015 17:45	**510**	0.89	**30,802**	5.97	**0.43**	1	Atlas	27,414	1
	4/9/2015 11:30	4/9/2015 11:45	**15**	0.11	**31,173**	5.81	**0.10**	1	Atlas	3,429	1
	4/10/2015 2:15	4/10/2015 2:30	**15**	0.21	**15,381**	3.41	**0.13**	3	Atlas	3,230	1
	4/13/2015 20:45	4/13/2015 21:15	**30**	0.4	**7,953**	1.53	**0.15**	24	Atlas	3,181	1
	4/19/2015 7:30	4/19/2015 14:30	**420**	0.73	**3,100**	1.06	**0.31**	12	Atlas	2,263	1
	4/30/2015 12:45	4/30/2015 12:45	**0**	0.19	**5,132**	0.39	**0.17**	1	Atlas	975	1
	5/16/2015 11:45	5/16/2015 11:45	**0**	0.56	**5,693**	0.4	**0.28**	3	Atlas	3,188	1
	5/17/2015 14:15	5/17/2015 14:15	**0**	0.04	**73,225**	0.64	**0.02**	12	Atlas	2,929	1
	5/26/2015 14:00	5/26/2015 14:00	**0**	0.16	**32,463**	0.42	**0.10**	1	Atlas	5,194	1
	6/8/2015 7:00	6/8/2015 8:15	**75**	0.25	**16,716**	0.29	**0.13**	6	Atlas	4,179	1
	6/17/2015 4:45	6/17/2015 6:00	**75**	0.65	**9,082**	0.61	**0.37**	3	Atlas	5,903	1
	6/18/2015 17:15	6/18/2015 17:45	**30**	1.48	**26,447**	1.14	**0.48**	48	Atlas	39,141	1
	6/20/2015 1:30	6/20/2015 8:00	**390**	1.48	**5,091**	2.2	**0.48**	48	Atlas	7,534	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**6/25/2015 23:45**	6/25/2015 23:45	**0**	0.5	**3,356**	1.45	**0.26**	6	Atlas	1,678	1
	6/26/2015 17:00	6/27/2015	**420**	0.92	**36,134**	2.5	**0.49**	1	Atlas	33,243	1
	6/29/2015 13:45	6/29/2015 13:45	**0**	0.24	**4,038**	1.65	**0.14**	1	Atlas	969	1
	7/2/2015 0:15	7/2/2015 20:45	**1230**	1.93	**27,279**	3.66	**0.74**	24	Atlas	52,649	1
	7/3/2015 18:45	7/3/2015 18:45	**0**	0.4	**4,750**	2.97	**0.29**	1	Atlas	1,900	1
	7/7/2015 11:30	7/7/2015 11:45	**15**	0.87	**3,870**	2.87	**0.45**	6	Atlas	3,367	1
	7/8/2015 12:00	7/8/2015 12:00	**0**	0.13	**6,462**	3.36	**0.10**	1	Atlas	840	1
	7/9/2015 6:15	7/9/2015 13:15	**420**	0.35	**5,549**	2.83	**0.17**	3	Atlas	1,942	1
	7/10/2015 16:00	7/10/2015 16:00	**0**	0.42	**2,312**	1.86	**0.21**	6	Atlas	971	1
	7/12/2015 5:45	7/12/2015 7:30	**105**	1.3	**882,209**	3.09	**0.87**	3	Atlas	1,146,872	1
	7/13/2015 14:45	7/13/2015 15:00	**15**	0.54	**5,969**	3.64	**0.45**	1	Atlas	3,223	1
	7/14/2015 4:00	7/14/2015 4:45	**45**	0.67	**23,134**	4.28	**0.52**	1	Atlas	15,500	1
	7/17/2015 22:15	7/18/2015 1:15	**180**	1.45	**877,263**	4.03	**0.96**	3	Atlas	1,272,031	1
	8/4/2015 18:45	8/4/2015 19:00	**15**	0.46	**17,870**	0.49	**0.39**	1	Atlas	8,220	1
	8/5/2015 15:00	8/5/2015 15:00	**0**	0.71	**1,172**	0.77	**0.25**	24	Atlas	832	1
	8/6/2015 2:15	8/6/2015 2:15	**0**	0.71	**869**	0.84	**0.25**	24	Atlas	617	1
	8/15/2015 16:30	8/15/2015 16:30	**0**	0.04	**57,225**	0.14	**0.03**	1	Atlas	2,289	1
	8/19/2015 8:15	8/19/2015 8:15	**0**	0.29	**1,910**	0.21	**0.11**	24	Atlas	554	1
	8/19/2015 17:00	8/19/2015 17:00	**0**	0.29	**2,166**	0.34	**0.11**	24	Atlas	628	1
	9/9/2015 5:00	9/9/2015 11:15	**375**	Discharge						3,747	1
	10/27/2015 18:00	10/28/2015 3:15	**555**	2.35	**3,049**	2.16	**0.78**	24	Atlas	7,165	1
	11/6/2015 3:00	11/6/2015 4:00	**60**	0.92	**9,958**	0.87	**0.55**	3	Atlas	9,161	1
	11/12/2015	11/12/2015 0:45	**45**	0.27	**8,919**	1.73	**0.16**	3	Atlas	2,408	1
	11/18/2015 9:15	11/18/2015 13:45	**270**	1.31	**19,121**	1.61	**0.67**	6	Atlas	25,049	1
	12/14/2015 5:00	12/14/2015 5:00	**0**	0.24	**2,279**	0.05	**0.13**	3	Atlas	547	1
	12/21/2015 11:00	12/21/2015 11:15	**15**	0.7	**1,461**	0.23	**0.27**	1	Atlas	1,023	1
	12/21/2015 23:45	12/22/2015 3:45	**240**	0.7	**8,219**	0.71	**0.27**	1	Atlas	5,753	1
	12/23/2015 19:15	12/23/2015 20:00	**45**	0.7	**47,567**	1.34	**0.51**	1	Atlas	33,297	1
	12/26/2015 17:30	12/26/2015 17:30	**0**	0.42	**2,474**	1.96	**0.19**	12	Atlas	1,039	1
	12/27/2015 10:15	12/27/2015 13:15	**180**	2.05	**8,391**	3.18	**0.69**	3	Atlas	17,202	1
	2/2/2016 20:00	2/3/2016	**240**	1.37	**7,940**	1.33	**0.66**	6	Atlas	10,878	1
	2/21/2016 4:00	2/21/2016 10:15	**375**	1.07	**2,466**	1.22	**0.49**	12	Atlas	2,639	1
	2/24/2016 5:00	2/24/2016 7:00	**120**	1.92	**1,221**	2.64	**0.74**	12	Atlas	2,344	1
	3/12/2016 22:30	3/12/2016 23:00	**30**	0.8	**10,029**	1.73	**0.32**	6	Atlas	8,023	1
	3/13/2016 9:00	3/13/2016 9:45	**45**	0.8	**3,050**	1.97	**0.32**	6	Atlas	2,440	1
	3/24/2016 17:30	3/24/2016 17:30	**0**	0.41	**2,022**	0.46	**0.29**	1	Atlas	829	1
	3/27/2016 21:00	3/27/2016 21:30	**30**	0.71	**15,899**	1.05	**0.47**	3	Atlas	11,288	1
	3/31/2016 22:00	3/31/2016 22:00	**0**	1.13	**422**	1.71	**0.43**	24	Atlas	477	1
	4/11/2016 17:15	4/11/2016 17:30	**15**	0.99	**1,069**	0.81	**0.46**	6	Atlas	1,058	1
	4/26/2016 16:00	4/26/2016 16:00	**0**	0.34	**42,732**	0.38	**0.17**	1	Atlas	14,529	1
	4/27/2016 20:45	4/27/2016 20:45	**0**	0.67	**10,412**	1.04	**0.31**	3	Atlas	6,976	1
	4/30/2016 11:00	4/30/2016 11:00	**0**	0.63	**1,990**	1.35	**0.25**	6	Atlas	1,254	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO058	**5/7/2016 4:00**	5/8/2016 9:00	**1740**	Discharge						222,550	1
	5/10/2016 18:30	5/10/2016 21:45	**195**	0.94	**6,502**	1.77	**0.35**	12	Atlas	6,112	1
	5/17/2016 9:00	5/18/2016 16:45	**1905**	0.37	**316,741**	1.96	**0.16**	12	Atlas	117,194	1
	5/19/2016 12:15	5/20/2016 18:00	**1785**	Discharge						92,331	1
	5/25/2016 17:45	5/25/2016 17:45	**0**	0.03	**51,433**	0.61	**0.03**	1	Atlas	1,543	1
	5/26/2016 13:30	5/26/2016 13:30	**0**	0.27	**3,070**	0.7	**0.18**	3	Atlas	829	1
	6/2/2016 15:15	6/2/2016 15:45	**30**	0.34	**35,741**	0.46	**0.26**	1	Atlas	12,152	1
	6/4/2016 16:30	6/4/2016 16:45	**15**	0.28	**115,154**	0.7	**0.17**	1	Atlas	32,243	1
	6/12/2016 17:45	6/12/2016 18:00	**15**	0.07	**161,543**	0.1	**0.06**	1	Atlas	11,308	1
	6/14/2016 16:30	6/14/2016 17:00	**30**	0.94	**33,434**	0.76	**0.61**	3	Atlas	31,428	1
	6/22/2016 8:00	6/22/2016 8:15	**15**	0.26	**11,988**	0.17	**0.17**	3	Atlas	3,117	1
	6/23/2016 15:45	6/23/2016 21:00	**315**	2.46	**415,092**	2.71	**3.50**	6	Cloudburst	1,021,126	1
Grand Total										**62,830,249**	**222**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**1/20/2010 12:15**	1/20/2010 12:15	**0**	1.33	**12**	0.64	**0.43**	48	Atlas	16	1
	1/20/2010 23:45	1/21/2010	**15**	1.33	**21,485**	0.77	**0.43**	48	Atlas	28,575	1
	1/21/2010 14:15	1/21/2010 19:15	**300**	1.33	**33,848**	1.59	**0.43**	48	Atlas	45,017	1
	1/24/2010 3:45	1/24/2010 5:00	**75**	0.82	**81,824**	1.87	**0.32**	24	Atlas	67,095	1
	1/24/2010 21:15	1/24/2010 22:00	**45**	0.82	**11,632**	2.12	**0.32**	24	Atlas	9,538	1
	1/28/2010 7:00	1/30/2010 21:00	**3720**	0.01	**611,914,882**	1.88	**0.01**	1	Atlas	6,119,149	1
	2/5/2010 13:00	2/5/2010 17:30	**270**	1.21	**6,111**	0.68	**0.44**	12	Atlas	7,395	1
	3/15/2010 22:00	3/19/2010 19:00	**5580**	Discharge						20,891,088	1
	3/25/2010 21:30	3/25/2010 21:30	**0**	0.69	**1,431**	1.2	**0.43**	1	Atlas	987	1
	4/8/2010 1:30	4/8/2010 6:00	**270**	1.19	**57,508**	1.27	**0.56**	6	Atlas	68,435	1
	4/24/2010 14:45	4/24/2010 20:15	**330**	1.88	**292,874**	2.1	**0.90**	6	Atlas	550,603	1
	4/27/2010 10:00	4/27/2010 10:15	**15**	0.29	**3,466**	2.53	**0.14**	6	Atlas	1,005	1
	5/1/2010 4:45	5/1/2010 8:30	**225**	3.73	**81,734**	3.04	**2.16**	48	Cloudburst	304,869	1
	5/2/2010 1:00	5/2/2010 11:45	**645**	3.73	**528,584**	3.57	**2.16**	48	Cloudburst	1,971,617	1
	5/2/2010 23:45	5/3/2010	**15**	3.73	**397**	4.02	**2.16**	48	Cloudburst	1,479	1
	5/4/2010 13:45	5/7/2010 23:15	**4890**	Discharge						24,923,298	1
	5/12/2010 9:45	5/12/2010 10:30	**45**	0.66	**367,040**	1.13	**0.50**	1	Atlas	242,246	1
	5/17/2010 19:30	5/17/2010 20:00	**30**	0.54	**103,972**	1.85	**0.35**	3	Atlas	56,145	1
	5/21/2010 19:45	5/21/2010 20:30	**45**	0.93	**285,341**	1.98	**0.64**	1	Atlas	265,367	1
	5/30/2010 16:15	5/30/2010 20:30	**255**	0.49	**257,061**	0.58	**0.31**	1	Atlas	125,960	1
	6/9/2010 3:30	6/9/2010 13:00	**570**	2.21	**283,365**	2.35	**2.21**	3	Atlas	626,237	1
	6/13/2010 22:45	6/14/2010 6:00	**435**	0.64	**154,202**	3.2	**0.31**	1	Atlas	98,689	1
	6/19/2010 5:00	6/19/2010 6:45	**105**	1.14	**238,350**	2.33	**0.68**	3	Atlas	271,719	1
	7/9/2010 8:45	7/9/2010 8:45	**0**	0.48	**331**	0.38	**0.18**	24	Atlas	159	1
	7/13/2010 4:15	7/13/2010 11:15	**420**	1.71	**289,576**	2.16	**0.78**	12	Atlas	495,175	1
	7/19/2010 18:45	7/19/2010 19:00	**15**	0.21	**264,005**	2.07	**0.17**	1	Atlas	55,441	1
	7/20/2010 4:45	7/20/2010 6:15	**90**	0.67	**529,744**	2.32	**0.43**	1	Atlas	354,928	1
	7/21/2010 6:00	7/21/2010 6:15	**15**	0.43	**66,622**	1.49	**0.34**	1	Atlas	28,648	1
	7/27/2010 16:00	7/27/2010 16:15	**15**	0.76	**164,511**	1.26	**0.52**	1	Atlas	125,028	1
	7/31/2010 5:00	7/31/2010 6:15	**75**	0.35	**56,169**	1.26	**0.19**	3	Atlas	19,659	1
	8/5/2010 9:15	8/5/2010 9:30	**15**	0.22	**267,690**	0.72	**0.17**	1	Atlas	58,892	1
	8/14/2010 16:30	8/14/2010 17:00	**30**	0.82	**193,110**	1.07	**0.64**	1	Atlas	158,350	1
	8/21/2010 7:00	8/21/2010 8:30	**90**	0.35	**22,058**	1.38	**0.22**	3	Atlas	7,720	1
	10/13/2010 18:30	10/13/2010 20:45	**135**	0.47	**114,193**	0.51	**0.31**	3	Atlas	53,670	1
	10/26/2010 11:00	10/26/2010 11:15	**15**	0.7	**35,064**	0.4	**0.38**	6	Atlas	24,544	1
	11/16/2010 12:45	11/16/2010 18:30	**345**	0.72	**35,026**	0.75	**0.33**	12	Atlas	25,218	1
	11/23/2010 4:00	11/23/2010 4:00	**0**	0.3	**39,215**	1.04	**0.17**	3	Atlas	11,764	1
	11/24/2010 13:30	11/24/2010 20:45	**435**	0.8	**29,845**	1.17	**0.37**	3	Atlas	23,876	1
	11/25/2010 9:30	11/25/2010 23:00	**810**	2.46	**53,091**	3.44	**0.94**	24	Atlas	130,604	1
	11/29/2010 21:45	11/30/2010 4:00	**375**	1.61	**74,355**	4.73	**0.62**	24	Atlas	119,711	1
	12/2/2010 9:30	12/2/2010 9:30	**0**	Discharge						42	1
	1/1/2011 6:00	1/1/2011 6:30	**30**	0.56	**20,869**	1.01	**0.25**	12	Atlas	11,687	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**2/1/2011 18:00**	2/1/2011 20:15	**135**	0.93	**58,316**	0.84	**0.36**	6	Atlas	54,234	1
	2/24/2011 20:00	2/25/2011 17:00	**1260**	2.26	**1,147,792**	2.47	**0.87**	24	Atlas	2,594,010	1
	2/26/2011 10:30	3/4/2011 17:00	**9030**	Discharge						54,839,447	1
	3/5/2011 7:30	3/5/2011 13:00	**330**	0.94	**434,003**	2.3	**0.31**	24	Atlas	407,962	1
	3/9/2011	3/11/2011 23:15	**4275**	3.04	**3,362,986**	4.02	**1.88**	12	Cloudburst	10,223,477	1
	3/13/2011 10:15	3/13/2011 10:15	**0**	Discharge						2,171	1
	3/14/2011 20:45	3/16/2011 9:15	**2190**	0.76	**1,043,810**	3.84	**0.25**	48	Atlas	793,296	1
	3/20/2011 4:30	3/20/2011 5:15	**45**	0.01	**820,468**	0.94	**0.01**	1	Atlas	8,205	1
	4/4/2011 13:15	4/4/2011 16:45	**210**	0.83	**116,833**	0.99	**0.42**	6	Atlas	96,972	1
	4/9/2011 10:30	4/9/2011 12:00	**90**	0.54	**28,775**	1.42	**0.38**	1	Atlas	15,538	1
	4/11/2011 12:15	4/12/2011 9:45	**1290**	3.1	**738,708**	4.44	**2.04**	24	Cloudburst	2,289,994	1
	4/20/2011 2:45	4/20/2011 5:00	**135**	0.74	**450,389**	1.23	**0.40**	6	Atlas	333,288	1
	4/22/2011 16:30	4/25/2011 7:30	**3780**	4.92	**1,149,933**	5.93	**4.48**	48	Atlas	5,657,669	1
	4/25/2011 19:15	4/29/2011 18:00	**5685**	4.92	**467,636**	8.76	**4.48**	48	Atlas	2,300,768	1
	5/1/2011 4:45	5/7/2011 4:15	**8610**	0.66	**5,596,540**	7.62				3,693,717	1
	5/8/2011 1:30	5/8/2011 1:30	**0**	0.18	**577**	3.59	**0.10**	6	Atlas	104	1
	5/21/2011 18:15	5/21/2011 18:45	**30**	0.4	**95,808**	0.7	**0.29**	1	Atlas	38,323	1
	5/23/2011 17:45	5/23/2011 21:30	**225**	0.89	**56,911**	1.77	**0.57**	3	Atlas	50,651	1
	5/25/2011 22:45	5/26/2011 1:30	**165**	1.35	**75,622**	2.48	**0.52**	24	Atlas	102,089	1
	5/26/2011 11:30	5/26/2011 11:45	**15**	1.35	**2,114**	2.85	**0.52**	24	Atlas	2,854	1
	6/11/2011 4:30	6/11/2011 4:45	**15**	0.33	**11,673**	0.38	**0.29**	1	Atlas	3,852	1
	6/15/2011 9:30	6/15/2011 10:30	**60**	1.11	**375,571**	1.51	**0.76**	1	Atlas	416,884	1
	6/18/2011 6:30	6/18/2011 8:15	**105**	0.76	**4,559**	1.89	**0.45**	3	Atlas	3,465	1
	6/19/2011 7:45	6/19/2011 8:00	**15**	0.53	**25,234**	2.22	**0.33**	3	Atlas	13,374	1
	6/20/2011 1:30	6/20/2011 2:00	**30**	0.5	**208,932**	2.93	**0.43**	1	Atlas	104,466	1
	6/22/2011 19:30	6/23/2011 5:00	**570**	3.65	**311,808**	5.71	**15.51**	3	Atlas	1,138,099	1
	7/19/2011 22:30	7/19/2011 23:45	**75**	1.78	**275,500**	1.82	**2.00**	1	Atlas	490,390	1
	7/27/2011 19:15	8/16/2011 23:45	**29070**	Discharge						315,244	1
	9/5/2011 21:30	9/6/2011 6:30	**540**	0.2	**83**	0.28	**0.08**	12	Atlas	17	1
	9/11/2011 19:30	9/11/2011 19:45	**15**	0.31	**2,351**	0.57	**0.20**	3	Atlas	729	1
	9/19/2011 7:15	9/19/2011 7:45	**30**	0.69	**57,102**	0.59	**0.28**	12	Atlas	39,401	1
	9/23/2011 7:15	9/23/2011 7:30	**15**	0.8	**1,841**	1.52	**0.37**	12	Atlas	1,473	1
	9/25/2011 20:00	9/26/2011 6:15	**615**	3.46	**473,610**	5.14	**7.40**	12	Cloudburst	1,638,690	1
	10/13/2011 7:45	10/13/2011 7:45	**0**	0.48	**4,270**	0.29	**0.25**	3	Atlas	2,050	1
	10/27/2011 0:15	10/27/2011 1:15	**60**	0.99	**105,939**	1.2	**0.42**	3	Atlas	104,880	1
	11/14/2011 21:45	11/14/2011 21:45	**0**	2.06	**1,593**	0.35	**0.67**	48	Atlas	3,281	1
	11/16/2011 6:45	11/16/2011 6:45	**0**	2.06	**35**	1.84	**0.67**	48	Atlas	71	1
	11/21/2011 4:00	11/21/2011 4:15	**15**	1.81	**1,235**	2.76	**0.54**	48	Atlas	2,236	1
	11/22/2011 3:00	11/22/2011 9:15	**375**	1.81	**40,537**	3.19	**0.54**	48	Atlas	73,371	1
	11/27/2011 8:15	11/27/2011 9:15	**60**	3.07	**68**	2.28	**0.95**	48	Atlas	209	1
	11/27/2011 23:00	11/29/2011 10:45	**2145**	3.07	**432,749**	4.3	**0.95**	48	Atlas	1,328,539	1
	11/29/2011 20:00	11/30/2011 4:15	**495**	0.07	**313,985**	3.14	**0.04**	1	Atlas	21,979	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**11/30/2011 16:15**	12/1/2011 12:00	**1185**	Discharge						24,612	1
	12/5/2011 3:15	12/6/2011 4:15	**1500**	3.12	**1,133,058**	5.02	**1.07**	48	Cloudburst	3,535,141	1
	12/21/2011 6:30	12/21/2011 6:45	**15**	0.61	**208,901**	1.1	**0.28**	12	Atlas	127,430	1
	12/27/2011 11:30	12/27/2011 11:30	**0**	0.67	**75**	1.8	**0.27**	12	Atlas	50	1
	1/23/2012 2:45	1/23/2012 4:30	**105**	0.7	**88,649**	1.06	**0.33**	3	Atlas	62,054	1
	1/26/2012 5:45	1/26/2012 6:30	**45**	1.69	**103,347**	1.43	**0.55**	48	Atlas	174,656	1
	1/26/2012 19:00	1/27/2012 3:30	**510**	1.69	**522,516**	2.4	**0.55**	48	Atlas	883,051	1
	3/8/2012 12:45	3/8/2012 14:30	**105**	0.77	**4,511**	1.01	**0.37**	6	Atlas	3,474	1
	3/16/2012 1:30	3/16/2012 1:45	**15**	0.98	**421**	1	**0.43**	12	Atlas	413	1
	3/17/2012 18:45	3/17/2012 18:45	**0**	0.86	**21**	1.76	**0.50**	1	Atlas	18	1
	3/23/2012 5:30	3/23/2012 22:45	**1035**	1.53	**221,029**	2.4	**0.56**	24	Atlas	338,175	1
	4/1/2012 8:30	4/1/2012 11:00	**150**	1.27	**596,833**	1.46	**0.68**	6	Atlas	757,978	1
	4/28/2012 19:15	4/28/2012 19:45	**30**	0.74	**132,585**	0.75	**0.54**	1	Atlas	98,113	1
	4/30/2012 10:30	4/30/2012 18:00	**450**	Discharge						67,265	1
	5/4/2012 23:45	5/5/2012 1:45	**120**	1.36	**316,387**	2.42	**0.73**	3	Atlas	430,286	1
	5/13/2012 2:15	5/13/2012 14:15	**720**	2.07	**233,456**	2.12	**0.81**	12	Atlas	483,253	1
	5/16/2012 17:45	5/16/2012 18:00	**15**	0.24	**377,776**	2.32	**0.20**	1	Atlas	90,666	1
	5/29/2012 6:45	5/29/2012 16:15	**570**	2.34	**882,097**	2.34	**5.14**	3	Atlas	2,064,107	1
	5/31/2012 19:00	5/31/2012 19:00	**0**	1.24	**22**	2.8	**0.54**	12	Atlas	27	1
	7/1/2012 20:00	7/1/2012 20:00	**0**	0.4	**60,002**	0.32	**0.28**	1	Atlas	24,001	1
	7/14/2012 12:15	7/14/2012 14:15	**120**	0.73	**311,849**	0.85	**0.46**	3	Atlas	227,649	1
	7/18/2012 17:15	7/18/2012 17:30	**15**	Discharge						96,491	1
	7/19/2012 18:15	7/19/2012 18:30	**15**	0.61	**455,332**	1.33	**0.48**	1	Atlas	277,753	1
	7/27/2012 20:00	7/27/2012 20:45	**45**	0.6	**188,195**	0.92	**0.39**	3	Atlas	112,917	1
	8/16/2012 20:00	8/16/2012 22:15	**135**	0.55	**23,201**	0.57	**0.32**	3	Atlas	12,760	1
	8/21/2012 13:30	8/21/2012 13:45	**15**	0.12	**608**	0.67	**0.10**	1	Atlas	73	1
	9/1/2012 15:00	9/1/2012 17:30	**150**	0.32	**35,189**	0.34	**0.19**	3	Atlas	11,260	1
	9/2/2012 11:45	9/2/2012 12:30	**45**	0.64	**16,895**	0.68	**0.25**	24	Atlas	10,813	1
	9/2/2012 21:00	9/2/2012 21:45	**45**	0.64	**2,734**	0.98	**0.25**	24	Atlas	1,750	1
	9/26/2012 19:30	9/27/2012 0:15	**285**	1.81	**56,095**	2.61	**0.97**	6	Atlas	101,531	1
	10/1/2012 14:45	10/1/2012 18:30	**225**	0.71	**822**	3.27	**0.28**	12	Atlas	583	1
	12/4/2012 17:00	12/4/2012 19:45	**165**	0.53	**3,723**	0.79	**0.33**	3	Atlas	1,973	1
	12/7/2012 8:45	12/7/2012 8:45	**0**	1.09	**30**	1.66	**0.47**	12	Atlas	33	1
	12/8/2012 5:45	12/8/2012 5:45	**0**	0.37	**340**	2.15	**0.21**	1	Atlas	126	1
	12/9/2012 22:00	12/9/2012 23:30	**90**	1.15	**251,602**	2.93	**0.56**	3	Atlas	289,343	1
	12/20/2012 9:45	12/20/2012 12:00	**135**	0.68	**317**	1.06	**0.37**	6	Atlas	215	1
	12/26/2012 5:30	12/26/2012 6:15	**45**	0.74	**275**	1.3	**0.29**	12	Atlas	204	1
	1/11/2013 6:00	1/11/2013 7:30	**90**	0.63	**56,434**	0.76	**0.33**	6	Atlas	35,553	1
	1/13/2013 3:15	1/13/2013 18:45	**930**	2.09	**92,945**	2.85	**0.80**	24	Atlas	194,256	1
	1/30/2013 4:45	1/30/2013 8:15	**210**	0.89	**161,887**	1.07	**0.45**	6	Atlas	144,080	1
	2/3/2013 11:45	2/5/2013 7:15	**2610**	0.01	**291,861,744**	1.38	**0.01**	1	Atlas	2,918,617	1
	3/9/2013 14:45	3/9/2013 14:45	**0**	Discharge						1	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**3/10/2013 9:30**	3/10/2013 16:30	**420**	0.01	**491**	0.44	**0.01**	1	Atlas	5	1
	3/11/2013 1:30	3/11/2013 11:15	**585**	1	**18,797**	1.42	**0.40**	12	Atlas	18,797	1
	3/14/2013 22:30	3/14/2013 22:30	**0**	0.01	**27**	1.03	**0.01**	1	Atlas	0	1
	3/16/2013 11:30	3/16/2013 12:00	**30**	Discharge						2	1
	3/17/2013 14:00	3/17/2013 15:15	**75**	1.67	**10,935**	1.7	**0.54**	48	Atlas	18,262	1
	3/18/2013 4:15	3/18/2013 7:45	**210**	1.67	**160,687**	2.07	**0.54**	48	Atlas	268,348	1
	3/19/2013 1:15	3/19/2013 8:30	**435**	Discharge						68	1
	3/29/2013 10:30	3/29/2013 10:30	**0**	Discharge						2	1
	3/30/2013 13:45	3/30/2013 15:30	**105**	Discharge						22	1
	4/3/2013 16:00	4/3/2013 16:00	**0**	Discharge						2	1
	4/4/2013 19:00	4/4/2013 20:00	**60**	Discharge						7	1
	4/5/2013 12:15	4/5/2013 21:30	**555**	Discharge						40	1
	4/6/2013 9:15	4/7/2013 19:30	**2055**	Discharge						100	1
	4/8/2013 12:00	4/8/2013 20:30	**510**	Discharge						34	1
	4/9/2013 8:30	4/9/2013 17:30	**540**	Discharge						40	1
	4/10/2013 2:45	4/12/2013 3:30	**2925**	Discharge						71,486	1
	4/12/2013 12:15	4/13/2013	**705**	Discharge						138	1
	4/13/2013 11:15	4/14/2013 22:15	**2100**	Discharge						201	1
	4/15/2013 8:45	4/15/2013 8:45	**0**	Discharge						234	1
	4/16/2013 1:15	4/17/2013 2:45	**1530**	Discharge						96,599	1
	4/18/2013 7:00	4/18/2013 10:30	**210**	Discharge						20	1
	4/19/2013 2:15	4/19/2013 4:30	**135**	0.91	**198,294**	1.48	**0.50**	6	Atlas	180,448	1
	4/20/2013 19:15	4/20/2013 22:15	**180**	Discharge						3	1
	4/22/2013 4:45	4/22/2013 19:45	**900**	Discharge						1,664	1
	4/23/2013 9:30	4/24/2013 9:45	**1455**	Discharge						41,991	1
	5/10/2013 12:30	5/10/2013 15:45	**195**	0.91	**34,742**	2.27	**0.41**	6	Atlas	31,615	1
	5/11/2013	5/11/2013 7:15	**435**	0.91	**793**	2.3	**0.41**	6	Atlas	721	1
	5/12/2013 15:15	5/13/2013	**525**	Discharge						1	1
	5/13/2013 9:30	5/13/2013 10:30	**60**	Discharge						0	1
	5/16/2013 10:30	5/16/2013 10:30	**0**	0.21	**90,474**	1.19	**0.18**	1	Atlas	19,000	1
	5/22/2013 16:00	5/22/2013 16:00	**0**	0.13	**48,318**	0.33	**0.09**	1	Atlas	6,281	1
	6/16/2013 16:45	6/16/2013 17:00	**15**	0.53	**121,977**	0.78	**0.36**	1	Atlas	64,648	1
	6/17/2013 16:30	6/17/2013 17:00	**30**	1.3	**161,119**	1.39	**0.72**	1	Atlas	209,455	1
	6/26/2013 3:30	6/26/2013 4:45	**75**	0.67	**311,617**	1.4	**0.45**	3	Atlas	208,783	1
	6/26/2013 16:15	6/27/2013 5:00	**765**	2.64	**1,451,973**	4.04	**5.00**	1	Atlas	3,833,209	1
	7/6/2013 1:45	7/6/2013 1:45	**0**	0.65	**3,296**	1.75	**0.28**	12	Atlas	2,142	1
	7/10/2013 14:15	7/10/2013 14:30	**15**	0.96	**153,127**	2.13	**0.66**	1	Atlas	147,002	1
	7/14/2013 19:30	7/14/2013 19:45	**15**	0.23	**531,448**	1.25	**0.20**	1	Atlas	122,233	1
	7/22/2013 7:45	7/22/2013 14:15	**390**	1.91	**346,566**	2.01	**0.73**	24	Atlas	661,941	1
	8/12/2013 14:45	8/12/2013 15:00	**15**	0.53	**93,275**	0.5	**0.20**	24	Atlas	49,435	1
	8/31/2013 19:45	9/1/2013 0:45	**300**	1.34	**221,162**	1.15	**0.67**	3	Atlas	296,357	1
	9/20/2013 19:30	9/24/2013 12:45	**5355**	1.48	**107,112**	1.55	**0.62**	12	Atlas	158,525	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**10/5/2013 13:00**	10/6/2013 14:45	**1545**	3.89	**1,321,278**	3.97	**5.08**	24	Cloudburst	5,139,772	1
	10/30/2013 4:45	10/30/2013 5:45	**60**	1.16	**37,049**	1.1	**0.56**	6	Atlas	42,977	1
	10/31/2013 20:45	10/31/2013 21:00	**15**	0.65	**634**	1.73	**0.25**	24	Atlas	412	1
	11/17/2013 5:30	11/17/2013 19:15	**825**	2.17	**376,874**	2.3	**0.89**	6	Atlas	817,817	1
	12/5/2013 7:15	12/5/2013 7:45	**30**	0.78	**253**	0.16	**0.25**	48	Atlas	198	1
	12/14/2013 10:30	12/14/2013 10:30	**0**	0.77	**155**	1.03	**0.31**	12	Atlas	119	1
	12/21/2013 7:45	12/21/2013 12:15	**270**	2.81	**25,694**	1.41	**1.24**	24	Cloudburst	72,200	1
	12/21/2013 21:30	12/22/2013 3:45	**375**	2.81	**332,935**	2.89	**1.24**	24	Cloudburst	935,547	1
	12/23/2013 9:45	12/23/2013 9:45	**0**	Discharge						481	1
	12/25/2013 4:15	12/26/2013 9:15	**1740**	Discharge						1,072,255	1
	1/11/2014 0:15	1/11/2014 4:15	**240**	0.8	**28,137**	1.22	**0.43**	6	Atlas	22,510	1
	2/4/2014 19:45	2/5/2014 0:30	**285**	0.51	**50,920**	0.95	**0.25**	6	Atlas	25,969	1
	2/7/2014 22:00	2/8/2014 14:15	**975**	Discharge						30,125	1
	2/17/2014 16:00	2/17/2014 17:00	**60**	0.55	**219,996**	1.04	**0.33**	3	Atlas	120,998	1
	2/23/2014 6:45	2/26/2014 13:30	**4725**	Discharge						6,539,779	1
	3/29/2014 6:45	3/29/2014 7:00	**15**	0.98	**342**	0.8	**0.45**	6	Atlas	335	1
	4/3/2014 12:15	4/3/2014 12:30	**15**	2.59	**606**	1.95	**0.90**	24	Atlas	1,570	1
	4/4/2014 3:15	4/4/2014 17:00	**825**	2.59	**550,574**	3.83	**0.90**	24	Atlas	1,425,985	1
	4/5/2014 8:30	4/6/2014 0:30	**960**	Discharge						31,253	1
	4/7/2014 10:45	4/7/2014 16:15	**330**	0.82	**65,796**	3.5	**0.49**	3	Atlas	53,952	1
	4/13/2014 2:00	4/15/2014 21:15	**4035**	Discharge						130,516	1
	6/11/2014 14:30	6/11/2014 14:30	**0**	0.11	**32,118**	0.3	**0.07**	1	Atlas	3,533	1
	7/7/2014 19:45	7/7/2014 20:00	**15**	0.49	**70,738**	0.82	**0.43**	1	Atlas	34,662	1
	7/13/2014 23:00	7/13/2014 23:15	**15**	0.62	**39,799**	1.24	**0.28**	12	Atlas	24,675	1
	7/14/2014 20:15	7/14/2014 20:30	**15**	0.34	**21,472**	1.31	**0.23**	3	Atlas	7,300	1
	7/26/2014 22:00	7/26/2014 22:15	**15**	0.94	**10,110**	0.47	**0.41**	12	Atlas	9,504	1
	7/27/2014 7:15	7/27/2014 8:15	**60**	0.94	**16,042**	0.93	**0.41**	12	Atlas	15,080	1
	8/8/2014 6:30	8/8/2014 7:45	**75**	0.84	**112,744**	0.63	**0.41**	6	Atlas	94,705	1
	8/10/2014 4:15	8/10/2014 4:15	**0**	0.53	**7,857**	1.41	**0.44**	1	Atlas	4,164	1
	8/17/2014 9:45	8/17/2014 9:45	**0**	0.7	**7,576**	0.82	**0.26**	24	Atlas	5,303	1
	8/22/2014 19:15	8/22/2014 19:15	**0**	0.31	**13,411**	0.95	**0.21**	1	Atlas	4,157	1
	8/23/2014 16:00	8/23/2014 20:30	**270**	0.48	**37,746**	1.31	**0.23**	3	Atlas	18,118	1
	8/27/2014 15:00	8/27/2014 15:00	**0**	0.18	**23,513**	1.15	**0.11**	1	Atlas	4,232	1
	8/30/2014 15:30	8/30/2014 15:45	**15**	0.55	**64,598**	1.21	**0.34**	1	Atlas	35,529	1
	9/11/2014 0:45	9/11/2014 2:30	**105**	1.92	**106,876**	1.65	**1.43**	3	Atlas	205,202	1
	10/10/2014 2:15	10/10/2014 3:15	**60**	0.83	**61,999**	1.62	**0.53**	3	Atlas	51,459	1
	10/13/2014 23:45	10/14/2014 8:30	**525**	0.95	**12,803**	2.63	**0.42**	12	Atlas	12,163	1
	11/23/2014 17:45	11/23/2014 17:45	**0**	0.81	**547**	0.86	**0.37**	12	Atlas	443	1
	12/6/2014 2:15	12/6/2014 6:00	**225**	1.82	**25,735**	2.66	**0.59**	48	Atlas	46,837	1
	3/4/2015 4:00	3/4/2015 5:30	**90**	1.7	**19,061**	0.79	**0.55**	24	Atlas	32,404	1
	3/6/2015 7:45	3/6/2015 9:30	**105**	Discharge						11,423	1
	3/7/2015 15:00	3/7/2015 17:15	**135**	Discharge						11,667	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**3/10/2015 7:15**	3/12/2015 13:00	**3225**	1.09	**351,594**	2.79	**0.49**	12	Atlas	383,237	1
	3/13/2015 12:15	3/15/2015 20:15	**3360**	1.69	**252,810**	2.78	**0.63**	24	Atlas	427,249	1
	3/20/2015	3/20/2015 2:00	**120**	0.19	**859,066**	1.88	**0.07**	24	Atlas	163,223	1
	4/2/2015 11:00	4/2/2015 15:45	**285**	3.87	**10,358**	0.97	**3.28**	24	Cloudburst	40,086	1
	4/3/2015 0:30	4/3/2015 22:30	**1320**	3.87	**586,454**	3.89	**3.28**	24	Cloudburst	2,269,578	1
	5/17/2015 14:45	5/17/2015 14:45	**0**	0.1	**97,306**	0.6	**0.05**	1	Atlas	9,731	1
	5/26/2015 14:15	5/26/2015 14:30	**15**	0.41	**41,186**	0.61	**0.31**	1	Atlas	16,886	1
	6/17/2015 5:15	6/17/2015 5:30	**15**	0.62	**13,402**	0.5	**0.36**	3	Atlas	8,309	1
	6/18/2015 17:30	6/18/2015 18:15	**45**	1.47	**97,372**	1.13	**0.48**	48	Atlas	143,137	1
	6/20/2015 2:00	6/20/2015 9:00	**420**	1.47	**39,791**	2.19	**0.48**	48	Atlas	58,493	1
	6/26/2015 17:30	6/26/2015 18:00	**30**	0.95	**49,881**	2.11	**0.51**	1	Atlas	47,387	1
	7/2/2015 2:00	7/2/2015 2:00	**0**	1.67	**539**	2.19	**0.63**	24	Atlas	900	1
	7/2/2015 15:30	7/2/2015 21:15	**345**	1.67	**101,575**	3.24	**0.63**	24	Atlas	169,630	1
	7/7/2015 12:15	7/7/2015 13:00	**45**	0.78	**5,653**	2.43	**0.32**	6	Atlas	4,409	1
	7/8/2015 0:30	7/8/2015 0:30	**0**	0.78	**516**	2.59	**0.32**	6	Atlas	402	1
	7/9/2015 13:45	7/9/2015 13:45	**0**	0.34	**4,089**	2.26	**0.16**	12	Atlas	1,390	1
	7/10/2015 16:30	7/10/2015 16:30	**0**	0.41	**22,645**	1.69	**0.20**	6	Atlas	9,284	1
	7/12/2015 6:15	7/12/2015 8:30	**135**	1.75	**302,045**	3.3	**2.28**	1	Atlas	528,578	1
	7/13/2015 14:30	7/13/2015 15:15	**45**	0.67	**36,065**	3.97	**0.58**	1	Atlas	24,164	1
	7/14/2015 4:30	7/14/2015 19:15	**885**	0.68	**383,486**	4.83	**0.55**	1	Atlas	260,770	1
	7/18/2015	7/18/2015 19:30	**1170**	1.54	**687,539**	4.82	**1.10**	3	Atlas	1,058,810	1
	8/4/2015 19:15	8/4/2015 19:30	**15**	0.52	**126,768**	0.58	**0.44**	1	Atlas	65,919	1
	8/5/2015 15:15	8/5/2015 15:30	**15**	0.29	**47,168**	0.88	**0.24**	1	Atlas	13,679	1
	8/6/2015 8:15	8/6/2015 15:30	**435**	0.53	**45,196**	1.34	**0.22**	12	Atlas	23,954	1
	8/19/2015 8:45	8/19/2015 8:45	**0**	0.34	**36,333**	0.26	**0.13**	12	Atlas	12,353	1
	8/19/2015 17:15	8/19/2015 17:30	**15**	0.34	**2,724**	0.46	**0.13**	12	Atlas	926	1
	10/27/2015 18:15	10/28/2015 3:30	**555**	2.38	**21,059**	2.23	**0.78**	24	Atlas	50,120	1
	11/6/2015 3:30	11/6/2015 4:30	**60**	0.74	**68,885**	0.82	**0.45**	3	Atlas	50,975	1
	11/12/2015 1:00	11/12/2015 1:00	**0**	0.31	**17,563**	1.58	**0.19**	3	Atlas	5,445	1
	11/18/2015 9:45	11/18/2015 14:15	**270**	1.38	**88,634**	1.77	**0.70**	6	Atlas	122,314	1
	12/22/2015 3:15	12/22/2015 4:00	**45**	0.47	**31,617**	0.66	**0.27**	1	Atlas	14,860	1
	12/23/2015 19:30	12/23/2015 20:30	**60**	0.83	**112,702**	1.5	**0.63**	1	Atlas	93,543	1
	12/27/2015 10:45	1/1/2016 8:45	**7080**	1.98	**2,712,417**	3.93	**0.65**	3	Atlas	5,370,586	1
	2/2/2016 20:15	2/3/2016 0:30	**255**	1.49	**46,877**	1.47	**0.68**	12	Atlas	69,847	1
	2/21/2016 10:30	2/21/2016 10:30	**0**	0.92	**13,199**	1.08	**0.42**	12	Atlas	12,143	1
	2/24/2016 2:45	2/24/2016 7:45	**300**	2	**46,492**	2.61	**0.78**	12	Atlas	92,985	1
	3/12/2016 23:00	3/12/2016 23:00	**0**	0.76	**10,576**	1.58	**0.29**	24	Atlas	8,038	1
	3/13/2016 10:00	3/13/2016 10:00	**0**	0.76	**5,851**	1.86	**0.29**	24	Atlas	4,447	1
	3/24/2016 17:45	3/24/2016 17:45	**0**	0.27	**18,506**	0.31	**0.17**	1	Atlas	4,997	1
	3/27/2016 21:30	3/27/2016 21:45	**15**	0.75	**17,720**	0.98	**0.50**	3	Atlas	13,290	1
	4/11/2016 17:30	4/11/2016 18:15	**45**	0.99	**17,477**	0.96	**0.44**	6	Atlas	17,303	1
	4/26/2016 16:30	4/26/2016 16:30	**0**	0.26	**14,059**	0.36	**0.15**	3	Atlas	3,655	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO088	**4/27/2016 21:15**	4/27/2016 21:15	**0**	0.66	**7,242**	1.03	**0.28**	12	Atlas	4,779	1
Grand Total										**196,480,870**	**253**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO093	**12/20/2011 23:15**	12/21/2011 7:15	**480**	0.62	**34,781**	1.15	**0.28**	12	Atlas	21,564	1
	12/22/2011 11:15	12/22/2011 17:45	**390**	0.59	**46,835**	1.22	**0.26**	12	Atlas	27,633	1
	12/27/2011 2:15	12/27/2011 11:45	**570**	0.71	**31,563**	1.89	**0.28**	12	Atlas	22,410	1
	1/11/2012 4:30	1/11/2012 11:15	**405**	0.78	**38,177**	0.66	**0.31**	6	Atlas	29,778	1
	1/11/2012 19:45	1/11/2012 21:15	**90**	0.78	**3,768**	0.8	**0.31**	6	Atlas	2,939	1
	1/12/2012 12:45	1/12/2012 12:45	**0**	0.08	**5,199**	0.85	**0.04**	3	Atlas	416	1
	1/17/2012 2:15	1/17/2012 12:30	**615**	0.4	**30,084**	1.28	**0.18**	12	Atlas	12,034	1
	1/22/2012 22:30	1/23/2012 4:45	**375**	0.7	**79,779**	1.09	**0.35**	3	Atlas	55,846	1
	1/25/2012 15:30	1/25/2012 19:15	**225**	1.86	**3,790**	1	**0.60**	48	Atlas	7,049	1
	1/26/2012 5:00	1/26/2012 6:45	**105**	1.86	**16,835**	1.49	**0.60**	48	Atlas	31,314	1
	1/26/2012 17:15	1/27/2012 1:00	**465**	1.86	**29,113**	2.56	**0.60**	48	Atlas	54,150	1
	2/4/2012 8:45	2/4/2012 11:45	**180**	0.37	**21,376**	0.42	**0.21**	3	Atlas	7,909	1
	2/15/2012 23:30	2/16/2012 8:15	**525**	0.34	**9,040**	0.57	**0.14**	12	Atlas	3,074	1
	2/22/2012 22:45	2/22/2012 23:15	**30**	0.17	**21,965**	0.45	**0.12**	1	Atlas	3,734	1
	2/29/2012 4:00	2/29/2012 9:00	**300**	0.58	**18,951**	0.69	**0.27**	12	Atlas	10,991	1
	3/4/2012 23:00	3/5/2012 4:30	**330**	0.21	**12,371**	0.9	**0.11**	6	Atlas	2,598	1
	3/8/2012 9:45	3/8/2012 17:15	**450**	0.8	**39,546**	1.08	**0.38**	6	Atlas	31,637	1
	3/12/2012 4:00	3/12/2012 13:00	**540**	0.18	**416,956**	0.98	**0.08**	12	Atlas	75,052	1
	3/15/2012 18:30	3/16/2012 3:15	**525**	0.96	**25,913**	1.18	**0.42**	12	Atlas	24,877	1
	3/17/2012 18:30	3/17/2012 22:15	**225**	1.03	**21,795**	2.15	**0.64**	1	Atlas	22,449	1
	3/23/2012 4:45	3/23/2012 22:45	**1080**	1.58	**66,004**	2.61	**0.60**	24	Atlas	104,286	1
	3/28/2012 14:15	3/28/2012 14:30	**15**	0.05	**34,140**	1.63	**0.04**	1	Atlas	1,707	1
	3/30/2012 23:30	3/31/2012 0:15	**45**	0.16	**28,221**	0.2	**0.10**	3	Atlas	4,515	1
	4/1/2012 7:15	4/1/2012 11:15	**240**	1.52	**117,484**	1.71	**0.82**	6	Atlas	178,576	1
	4/4/2012 16:00	4/4/2012 17:30	**90**	0.24	**26,607**	1.85	**0.11**	12	Atlas	6,386	1
	4/14/2012 9:00	4/14/2012 9:00	**0**	0.24	**3,719**	0.09	**0.13**	6	Atlas	893	1
	4/16/2012 6:45	4/16/2012 7:00	**15**	0.16	**12,590**	0.31	**0.10**	3	Atlas	2,014	1
	4/28/2012 19:15	4/29/2012 0:15	**300**	0.74	**36,149**	0.87	**0.54**	1	Atlas	26,750	1
	4/30/2012 18:00	4/30/2012 19:00	**60**	0.49	**8,510**	1.27	**0.33**	3	Atlas	4,170	1
	5/4/2012 23:30	5/5/2012 4:45	**315**	1.4	**113,802**	2.65	**0.75**	3	Atlas	159,323	1
	5/13/2012	5/13/2012 14:15	**855**	1.95	**51,635**	1.99	**0.78**	12	Atlas	100,689	1
	5/16/2012 17:45	5/16/2012 18:15	**30**	0.23	**405,577**	2.18	**0.19**	1	Atlas	93,283	1
	5/29/2012 6:30	5/29/2012 9:30	**180**	2.39	**95,581**	2.31	**5.69**	3	Atlas	228,438	1
	5/31/2012 18:15	6/1/2012 5:15	**660**	1.18	**50,255**	3.49	**0.50**	12	Atlas	59,301	1
	6/4/2012 16:30	6/4/2012 17:30	**60**	0.22	**5,698**	3.75	**0.10**	12	Atlas	1,254	1
	6/17/2012 11:30	6/17/2012 12:00	**30**	0.52	**12,005**	0.47	**0.32**	3	Atlas	6,242	1
	7/1/2012 19:45	7/1/2012 20:15	**30**	0.4	**9,261**	0.33	**0.29**	1	Atlas	3,704	1
	7/8/2012 13:15	7/8/2012 13:30	**15**	0.15	**17,095**	0.55	**0.10**	1	Atlas	2,564	1
	7/14/2012 12:00	7/14/2012 14:45	**165**	0.61	**65,987**	0.75	**0.38**	3	Atlas	40,252	1
	7/18/2012 16:15	7/18/2012 17:30	**75**	Discharge						25,162	1
	7/19/2012 18:15	7/19/2012 19:00	**45**	0.88	**110,079**	1.47	**0.72**	1	Atlas	96,870	1
	7/24/2012 19:45	7/24/2012 20:15	**30**	0.15	**29,333**	1.04	**0.12**	1	Atlas	4,400	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO093	**7/26/2012 21:30**	7/26/2012 21:45	**15**	0.18	**5,639**	0.26	**0.08**	12	Atlas	1,015	1
	7/27/2012 19:45	7/27/2012 21:00	**75**	0.62	**103,183**	0.95	**0.41**	3	Atlas	63,974	1
	8/3/2012 8:00	8/3/2012 10:30	**150**	0.21	**23,944**	0.84	**0.10**	3	Atlas	5,028	1
	8/13/2012 11:45	8/13/2012 11:45	**0**	0.1	**6,967**	0.09	**0.07**	3	Atlas	697	1
	8/16/2012 20:00	8/16/2012 23:30	**210**	0.59	**31,816**	0.7	**0.34**	3	Atlas	18,771	1
	8/21/2012 13:45	8/21/2012 14:00	**15**	0.19	**15,517**	0.79	**0.17**	1	Atlas	2,948	1
	9/1/2012 15:00	9/1/2012 17:45	**165**	0.38	**22,937**	0.41	**0.23**	3	Atlas	8,716	1
	9/2/2012 11:45	9/2/2012 22:00	**615**	0.68	**41,337**	1.08	**0.26**	24	Atlas	28,109	1
	9/3/2012 14:15	9/3/2012 14:45	**30**	0.11	**51,968**	1.19	**0.10**	1	Atlas	5,716	1
	9/5/2012 15:15	9/5/2012 16:45	**90**	0.82	**46,434**	2	**0.65**	1	Atlas	38,076	1
	9/7/2012 23:00	9/8/2012 6:45	**465**	1.31	**15,108**	3.28	**0.73**	3	Atlas	19,791	1
	9/25/2012 9:00	9/25/2012 10:15	**75**	0.43	**12,770**	0.37	**0.24**	3	Atlas	5,491	1
	9/25/2012 23:30	9/26/2012 5:30	**360**	0.44	**27,553**	0.83	**0.20**	6	Atlas	12,123	1
	9/26/2012 19:45	9/27/2012 1:15	**330**	1.46	**32,510**	2.31	**0.78**	6	Atlas	47,465	1
	10/1/2012 14:30	10/1/2012 19:00	**270**	0.75	**30,319**	3	**0.30**	12	Atlas	22,739	1
	10/6/2012	10/6/2012 0:45	**45**	0.11	**38,034**	0.85	**0.06**	6	Atlas	4,184	1
	10/14/2012 18:45	10/14/2012 18:45	**0**	0.19	**3,982**	0.19	**0.14**	1	Atlas	757	1
	10/18/2012 0:45	10/18/2012 2:00	**75**	0.25	**26,730**	0.45	**0.17**	3	Atlas	6,683	1
	10/26/2012 11:00	10/26/2012 23:00	**720**	0.76	**18,328**	0.78	**0.34**	6	Atlas	13,929	1
	11/3/2012 16:15	11/3/2012 16:15	**0**	0.17	**4,679**	0.19	**0.08**	12	Atlas	795	1
	11/12/2012 5:00	11/12/2012 10:00	**300**	0.47	**23,377**	0.47	**0.22**	12	Atlas	10,987	1
	12/2/2012 11:00	12/2/2012 12:45	**105**	0.2	**19,917**	0.27	**0.12**	3	Atlas	3,983	1
	12/4/2012 15:00	12/4/2012 18:30	**210**	0.56	**15,452**	0.76	**0.35**	3	Atlas	8,653	1
	12/7/2012 2:00	12/7/2012 17:45	**945**	1.11	**15,021**	1.87	**0.47**	6	Atlas	16,673	1
	12/8/2012 5:30	12/8/2012 9:15	**225**	0.45	**7,357**	2.32	**0.25**	6	Atlas	3,311	1
	12/9/2012 8:30	12/9/2012 8:45	**15**	1.14	**928**	2.37	**0.55**	3	Atlas	1,058	1
	12/9/2012 20:45	12/10/2012 0:30	**225**	1.14	**44,615**	3.12	**0.55**	3	Atlas	50,861	1
	12/15/2012 11:00	12/15/2012 12:00	**60**	0.19	**34,206**	1.32	**0.11**	3	Atlas	6,499	1
	12/17/2012 16:45	12/17/2012 17:00	**15**	0.21	**5,731**	0.4	**0.10**	6	Atlas	1,203	1
	12/20/2012 6:30	12/20/2012 12:30	**360**	0.75	**27,916**	1.1	**0.38**	6	Atlas	20,937	1
	12/26/2012 1:00	12/26/2012 13:15	**735**	0.71	**39,850**	1.48	**0.28**	12	Atlas	28,293	1
	12/31/2012 23:30	12/31/2012 23:45	**15**	0.11	**3,743**	0.86	**0.04**	24	Atlas	412	1
	1/10/2013 12:45	1/10/2013 14:45	**120**	0.74	**4,090**	0.16	**0.31**	6	Atlas	3,027	1
	1/11/2013 2:00	1/11/2013 7:30	**330**	0.74	**13,487**	0.74	**0.31**	6	Atlas	9,981	1
	1/12/2013 20:30	1/13/2013 19:30	**1380**	2.21	**31,417**	2.95	**0.85**	24	Atlas	69,431	1
	1/28/2013 10:45	1/28/2013 17:00	**375**	0.06	**29,914**	0.28	**0.04**	1	Atlas	1,795	1
	1/30/2013 4:30	1/30/2013 9:00	**270**	0.94	**32,325**	1.13	**0.46**	6	Atlas	30,385	1
	1/30/2013 17:30	1/30/2013 17:30	**0**	0.94	**1,562**	1.22	**0.46**	6	Atlas	1,469	1
	2/4/2013 17:15	2/4/2013 18:00	**45**	0.1	**16,920**	1.15	**0.07**	3	Atlas	1,692	1
	2/10/2013 15:15	2/10/2013 15:45	**30**	0.16	**11,525**	0.34	**0.08**	3	Atlas	1,844	1
	2/18/2013 23:30	2/19/2013 3:45	**255**	0.34	**8,731**	0.37	**0.16**	12	Atlas	2,969	1
	2/21/2013 22:45	2/22/2013 1:00	**135**	0.39	**22,855**	0.72	**0.18**	12	Atlas	8,914	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO093	**2/26/2013 5:30**	2/26/2013 19:30	**840**	0.62	**28,399**	0.99	**0.24**	12	Atlas	17,607	1
	3/5/2013 15:30	3/5/2013 17:45	**135**	0.43	**17,546**	0.58	**0.16**	24	Atlas	7,545	1
	3/11/2013 3:00	3/11/2013 12:00	**540**	0.99	**27,009**	1.44	**0.40**	12	Atlas	26,739	1
	3/17/2013 6:30	3/18/2013 7:45	**1515**	1.64	**17,129**	2.56	**0.53**	48	Atlas	28,092	1
	3/24/2013 7:30	3/24/2013 16:15	**525**	0.49	**8,420**	1.69	**0.18**	24	Atlas	4,126	1
	4/11/2013 5:00	4/12/2013 1:00	**1200**	1.34	**24,591**	1.33	**0.52**	24	Atlas	32,952	1
	4/16/2013 19:45	4/16/2013 20:45	**60**	0.61	**34,728**	1.92	**0.50**	1	Atlas	21,184	1
	4/19/2013 1:00	4/19/2013 4:30	**210**	0.92	**30,142**	1.56	**0.50**	6	Atlas	27,730	1
	4/24/2013 7:00	4/24/2013 9:00	**120**	0.65	**11,523**	1.51	**0.36**	3	Atlas	7,490	1
	5/3/2013 18:45	5/3/2013 18:45	**0**	0.12	**5,282**	0.18	**0.08**	1	Atlas	634	1
	5/4/2013 12:15	5/5/2013 8:00	**1185**	1.41	**20,089**	1.29	**0.42**	24	Atlas	28,326	1
	5/6/2013 17:30	5/6/2013 17:30	**0**	1.41	**634**	1.5	**0.42**	24	Atlas	894	1
	5/10/2013 10:00	5/11/2013 0:45	**885**	0.93	**19,347**	2.48	**0.42**	6	Atlas	17,993	1
	5/16/2013 10:30	5/16/2013 10:45	**15**	0.25	**7,309**	1.23	**0.22**	1	Atlas	1,827	1
	5/22/2013 15:45	5/22/2013 16:00	**15**	0.14	**12,799**	0.37	**0.09**	3	Atlas	1,792	1
	6/15/2013 18:15	6/16/2013 4:45	**630**	Discharge						55,653	1
	6/16/2013 17:00	6/16/2013 17:00	**0**	0.5	**22,934**	0.74	**0.36**	1	Atlas	11,467	1
	6/17/2013 16:30	6/17/2013 16:30	**0**	1.41	**85,429**	1.3	**0.82**	1	Atlas	120,455	1
	6/23/2013 12:30	6/23/2013 12:30	**0**	0.35	**15,531**	2.39	**0.27**	1	Atlas	5,436	1
	6/26/2013 3:30	6/26/2013 4:30	**60**	0.71	**8,882**	1.3	**0.47**	3	Atlas	6,306	1
	6/26/2013 16:15	6/26/2013 20:45	**270**	2.58	**56,935**	3.51	**4.16**	1	Atlas	146,893	1
	7/10/2013 14:15	7/10/2013 14:15	**0**	0.93	**29,302**	2.2	**0.65**	1	Atlas	27,251	1
	7/14/2013 19:30	7/14/2013 19:30	**0**	0.23	**112,318**	1.24	**0.20**	1	Atlas	25,833	1
	7/22/2013 7:45	7/22/2013 14:00	**375**	2.21	**67,204**	2.33	**0.85**	24	Atlas	148,521	1
	8/12/2013 14:45	8/12/2013 14:45	**0**	0.71	**25,199**	0.63	**0.29**	1	Atlas	17,891	1
	8/31/2013 20:15	8/31/2013 22:30	**135**	1.2	**6,113**	0.82	**0.55**	12	Atlas	7,336	1
	10/5/2013 14:00	10/5/2013 23:45	**585**	4.3	**26,211**	3.05	**8.06**	24	Cloudburst	112,706	1
	2/20/2014 13:15	2/20/2014 14:45	**90**	0.01	**535,022**	1.11	**0.01**	1	Atlas	5,350	1
	2/22/2014 14:15	2/22/2014 15:00	**45**	Discharge						3,793	1
	2/24/2014 10:15	2/24/2014 10:15	**0**	Discharge						5,809	1
	2/25/2014 12:00	2/25/2014 12:00	**0**	Discharge						26,559	1
	4/4/2014 3:15	4/4/2014 3:15	**0**	2.48	**3,111**	3.26	**0.87**	24	Atlas	7,716	1
	4/7/2014 10:45	4/7/2014 10:45	**0**	0.78	**1,119**	3.08	**0.46**	3	Atlas	873	1
	5/23/2014 17:15	5/24/2014 8:15	**900**	Discharge						128,640	1
	5/29/2014 20:45	5/29/2014 21:00	**15**	0.61	**131,995**	0.82	**0.50**	1	Atlas	80,517	1
	6/9/2014 22:45	6/9/2014 22:45	**0**	0.05	**250,414**	0.04	**0.02**	12	Atlas	12,521	1
	6/10/2014 13:45	6/10/2014 14:45	**60**	Discharge						51,502	1
	6/15/2014 23:00	6/16/2014 6:30	**450**	Discharge						49,138	1
	6/20/2014 1:00	6/20/2014 1:00	**0**	0.01	**423,791**	0.04	**0.01**	1	Atlas	4,238	1
	6/21/2014 15:45	6/21/2014 15:45	**0**	Discharge						20,645	1
	6/24/2014 13:30	6/24/2014 13:30	**0**	0.16	**17,019**	0.34	**0.10**	1	Atlas	2,723	1
	8/22/2014 19:15	8/22/2014 19:15	**0**	0.27	**328**	0.96	**0.17**	3	Atlas	89	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO093	**8/30/2014 15:15**	8/30/2014 15:15	**0**	0.61	**10,088**	1.22	**0.39**	1	Atlas	6,154	1
	9/11/2014 0:45	9/11/2014 2:15	**90**	1.92	**45,368**	1.63	**1.47**	3	Atlas	87,107	1
	10/10/2014 2:15	10/10/2014 3:00	**45**	1.09	**10,722**	1.48	**0.49**	3	Atlas	11,687	1
	11/12/2014 10:45	11/12/2014 11:00	**15**	Discharge						29,016	1
	11/24/2014 16:15	11/24/2014 21:00	**285**	0.85	**192,757**	0.87	**0.38**	6	Atlas	163,843	1
	11/25/2014 15:30	11/26/2014 8:00	**990**	Discharge						175,315	1
	11/27/2014 13:00	11/27/2014 15:30	**150**	Discharge						249,022	1
	11/30/2014 14:15	11/30/2014 18:45	**270**	Discharge						154,648	1
	3/10/2015 12:15	3/10/2015 13:15	**60**	1.1	**11,486**	2.68	**0.50**	12	Atlas	12,635	1
	3/14/2015 3:45	3/14/2015 3:45	**0**	1.63	**96**	2.67	**0.61**	24	Atlas	156	1
	4/2/2015 10:30	4/2/2015 15:15	**285**	4.42	**34,729**	1.16	**5.24**	24	Cloudburst	153,503	1
	4/3/2015 0:15	4/3/2015 15:30	**915**	4.42	**40,844**	4.34	**5.24**	24	Cloudburst	180,529	1
	4/7/2015 9:15	4/7/2015 17:30	**495**	0.86	**142,707**	5.29	**0.42**	1	Atlas	122,728	1
	4/8/2015 18:15	4/8/2015 18:15	**0**	0.15	**161,884**	5.43	**0.10**	1	Atlas	24,283	1
	4/9/2015 11:30	4/9/2015 11:30	**0**	0.29	**173,019**	5.26	**0.25**	1	Atlas	50,176	1
	4/10/2015 2:15	4/10/2015 2:15	**0**	0.16	**132,867**	3.16	**0.11**	3	Atlas	21,259	1
	4/13/2015 20:45	4/13/2015 21:00	**15**	0.38	**78,863**	1.56	**0.15**	6	Atlas	29,968	1
	4/19/2015 14:15	4/19/2015 14:30	**15**	0.78	**53,405**	1.16	**0.33**	12	Atlas	41,656	1
	5/16/2015 11:45	5/16/2015 13:30	**105**	0.34	**6,443**	0.4	**0.19**	3	Atlas	2,190	1
	5/17/2015 14:30	5/17/2015 14:30	**0**	0.16	**2,852**	0.6	**0.12**	1	Atlas	456	1
	5/25/2015 7:15	5/25/2015 8:30	**75**	0.27	**2,035**	0.23	**0.12**	12	Atlas	549	1
	5/27/2015 13:45	5/27/2015 13:45	**0**	0.09	**3,605**	0.71	**0.08**	1	Atlas	324	1
	5/30/2015 16:15	5/30/2015 16:15	**0**	0.04	**19,035**	0.73	**0.03**	1	Atlas	761	1
	6/8/2015 7:15	6/8/2015 7:30	**15**	0.2	**2,585**	0.19	**0.12**	3	Atlas	517	1
	6/17/2015 5:30	6/17/2015 6:30	**60**	0.65	**8,909**	0.69	**0.37**	3	Atlas	5,791	1
	6/18/2015 16:30	6/18/2015 17:45	**75**	1.48	**14,579**	1.17	**0.48**	48	Atlas	21,576	1
	6/20/2015 4:00	6/20/2015 11:00	**420**	1.48	**1,018**	2.23	**0.48**	48	Atlas	1,507	1
	6/22/2015 6:15	6/22/2015 6:30	**15**	0.21	**4,047**	2.36	**0.10**	3	Atlas	850	1
	6/26/2015 1:15	6/26/2015 3:00	**105**	0.45	**1,193**	1.57	**0.24**	6	Atlas	537	1
	6/26/2015 17:15	6/27/2015 1:00	**465**	0.88	**3,007**	2.41	**0.52**	1	Atlas	2,647	1
	6/29/2015 3:45	6/29/2015 3:45	**0**	0.34	**506**	1.54	**0.19**	1	Atlas	172	1
	6/29/2015 13:30	6/29/2015 14:45	**75**	0.34	**1,073**	1.67	**0.19**	1	Atlas	365	1
	7/2/2015 0:15	7/2/2015 5:30	**315**	1.53	**1,661**	2.42	**0.59**	24	Atlas	2,541	1
	7/2/2015 14:30	7/2/2015 21:30	**420**	1.53	**3,645**	3.26	**0.59**	24	Atlas	5,578	1
	7/3/2015 15:00	7/3/2015 15:15	**15**	0.36	**623**	3.04	**0.20**	1	Atlas	224	1
	7/7/2015 11:45	7/8/2015 0:30	**765**	0.72	**2,938**	2.67	**0.37**	6	Atlas	2,115	1
	7/8/2015 12:15	7/8/2015 13:15	**60**	0.1	**13,591**	2.75	**0.07**	1	Atlas	1,359	1
	7/9/2015 6:15	7/9/2015 13:45	**450**	0.29	**5,248**	2.31	**0.13**	12	Atlas	1,522	1
	7/10/2015 10:15	7/10/2015 16:15	**360**	0.45	**2,923**	1.94	**0.21**	6	Atlas	1,316	1
	7/12/2015 6:00	7/12/2015 8:15	**135**	1.36	**53,972**	2.93	**1.04**	1	Atlas	73,401	1
	7/13/2015 14:15	7/13/2015 14:15	**0**	0.49	**2,158**	3.21	**0.41**	1	Atlas	1,057	1
	7/14/2015 3:45	7/14/2015 5:15	**90**	0.65	**34,066**	4.07	**0.52**	1	Atlas	22,143	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO093	**7/14/2015 18:45**	7/14/2015 19:00	**15**	0.18	**1,792**	3.56	**0.16**	1	Atlas	323	1
	7/17/2015 22:30	7/18/2015 0:45	**135**	1.4	**54,114**	4.08	**0.93**	3	Atlas	75,760	1
	8/4/2015 19:00	8/4/2015 19:15	**15**	0.35	**25,576**	0.4	**0.30**	1	Atlas	8,952	1
	8/5/2015 15:00	8/5/2015 15:15	**15**	0.9	**626**	0.66	**0.32**	24	Atlas	563	1
	8/6/2015 2:30	8/6/2015 15:30	**780**	0.9	**1,060**	1.24	**0.32**	24	Atlas	954	1
	8/19/2015 8:30	8/19/2015 8:30	**0**	0.38	**7,598**	0.36	**0.15**	12	Atlas	2,887	1
	8/19/2015 17:00	8/19/2015 17:15	**15**	0.38	**13,264**	0.54	**0.15**	12	Atlas	5,040	1
	9/9/2015 11:30	9/9/2015 11:30	**0**	0.26	**50,044**	1.26	**0.23**	1	Atlas	13,011	1
	9/11/2015 18:45	9/11/2015 18:45	**0**	0.19	**731**	1.43	**0.13**	3	Atlas	139	1
	9/29/2015 9:30	9/29/2015 12:30	**180**	0.84	**998**	0.7	**0.27**	48	Atlas	838	1
	9/30/2015 8:45	9/30/2015 8:45	**0**	0.84	**1,085**	0.98	**0.27**	48	Atlas	911	1
	10/2/2015 17:45	10/2/2015 19:30	**105**	0.56	**4,345**	1.45	**0.27**	6	Atlas	2,433	1
	10/12/2015 18:45	10/12/2015 19:30	**45**	0.28	**2,007**	0.33	**0.19**	3	Atlas	562	1
	10/24/2015 17:15	10/24/2015 17:15	**0**	0.32	**279**	0.22	**0.17**	3	Atlas	89	1
	10/27/2015 10:00	10/28/2015 8:30	**1350**	2.51	**4,283**	2.84	**0.82**	24	Atlas	10,750	1
	10/31/2015 23:15	10/31/2015 23:15	**0**	0.18	**163**	2.86	**0.11**	3	Atlas	29	1
	11/6/2015 3:00	11/6/2015 5:00	**120**	0.85	**1,647**	0.95	**0.52**	3	Atlas	1,400	1
	11/9/2015 16:15	11/9/2015 21:30	**315**	0.55	**2,738**	1.38	**0.25**	12	Atlas	1,506	1
	11/10/2015 8:45	11/10/2015 14:45	**360**	Discharge						6,048	1
	11/12/2015	11/12/2015 1:00	**60**	0.29	**1,562**	1.67	**0.17**	3	Atlas	453	1
	11/18/2015 9:15	11/18/2015 18:15	**540**	1.51	**10,143**	1.93	**0.78**	6	Atlas	15,315	1
	11/21/2015 15:00	11/21/2015 15:15	**15**	0.11	**3,240**	1.75	**0.10**	1	Atlas	356	1
	11/28/2015 12:15	11/28/2015 20:30	**495**	0.64	**4,639**	0.81	**0.26**	12	Atlas	2,969	1
	11/30/2015 21:45	12/1/2015 5:00	**435**	0.67	**4,454**	1.49	**0.30**	12	Atlas	2,984	1
	12/14/2015 5:00	12/14/2015 7:15	**135**	0.25	**10,087**	0.19	**0.13**	6	Atlas	2,522	1
	12/21/2015 23:15	12/22/2015 4:00	**285**	0.59	**1,393**	0.76	**0.33**	1	Atlas	822	1
	12/23/2015 19:30	12/23/2015 19:30	**0**	0.87	**333**	1.38	**0.70**	1	Atlas	290	1
	1/16/2016 23:30	1/18/2016 18:00	**2550**	Discharge						32,539	1
	1/19/2016 11:00	1/19/2016 11:00	**0**	Discharge						335	1
	1/20/2016 14:45	1/21/2016 13:15	**1350**	0.18	**270,815**	0.24	**0.08**	12	Atlas	48,747	1
	1/23/2016 9:00	1/23/2016 10:15	**75**	Discharge						1,628	1
	1/23/2016 22:45	1/24/2016 2:45	**240**	Discharge						1,085	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.19	**444**	0.61	**0.10**	3	Atlas	84	1
	6/23/2016 16:15	6/23/2016 16:15	**0**	1.94	**2,478**	1.13	**1.31**	6	Cloudburst	4,807	1
Grand Total										**5,410,722**	**202**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO104	**9/26/2012 20:45**	9/27/2012 0:15	**210**	1.48	**127,354**	2.1	**0.80**	6	Atlas	188,484	1
	12/9/2012 22:15	12/9/2012 23:45	**90**	1.23	**78,797**	2.85	**0.63**	3	Atlas	96,920	1
	1/11/2013 6:15	1/11/2013 6:45	**30**	0.69	**11,505**	0.86	**0.37**	3	Atlas	7,938	1
	1/13/2013 3:45	1/13/2013 17:45	**840**	2.19	**45,645**	3.01				99,963	1
	1/30/2013 4:45	1/30/2013 6:30	**105**	0.85	**120,579**	0.93	**0.43**	6	Atlas	102,492	1
	3/18/2013 5:00	3/18/2013 6:15	**75**	1.63	**14,347**	1.81	**0.53**	48	Atlas	23,385	1
	4/11/2013 7:15	4/11/2013 7:15	**0**	1.17	**720**	0.42	**0.45**	24	Atlas	842	1
	4/16/2013 20:00	4/16/2013 21:15	**75**	0.42	**310,691**	1.57	**0.34**	1	Atlas	130,490	1
	4/19/2013 2:30	4/19/2013 4:00	**90**	0.85	**52,665**	1.31	**0.46**	6	Atlas	44,765	1
	4/24/2013 9:00	4/24/2013 9:00	**0**	0.62	**1,026**	1.49	**0.35**	3	Atlas	636	1
	5/10/2013 23:30	5/10/2013 23:30	**0**	0.73	**8,436**	2.5	**0.32**	6	Atlas	6,158	1
	6/26/2013 4:30	6/26/2013 5:15	**45**	0.46	**67,392**	0.59	**0.33**	1	Atlas	31,000	1
	6/26/2013 16:45	6/26/2013 22:00	**315**	1.64	**558,404**	2.19	**0.85**	6	Atlas	915,782	1
	7/4/2013 16:45	7/5/2013 0:15	**450**	0.44	**21,761**	1.42	**0.20**	12	Atlas	9,575	1
	7/6/2013 12:30	7/6/2013 13:00	**30**	0.45	**4,979**	1.86	**0.20**	12	Atlas	2,241	1
	7/10/2013 14:15	7/10/2013 15:00	**45**	0.66	**157,844**	1.67	**0.53**	1	Atlas	104,177	1
	7/21/2013 20:15	7/21/2013 22:30	**135**	2.72	**9,065**	2.15	**3.43**	3	Atlas	24,657	1
	7/22/2013 7:45	7/22/2013 14:15	**390**	2.72	**45,407**	2.77	**3.43**	3	Atlas	123,506	1
	8/12/2013 14:45	8/12/2013 15:30	**45**	0.91	**31,009**	0.79	**0.51**	1	Atlas	28,218	1
	8/31/2013 22:30	8/31/2013 22:30	**0**	1.41	**473**	0.81	**0.65**	12	Atlas	668	1
	10/30/2013 4:45	10/30/2013 7:30	**165**	1.7	**859,119**	1.7	**0.84**	6	Atlas	1,460,503	1
	10/31/2013 19:15	10/31/2013 20:15	**60**	1.1	**47,806**	2.7	**0.50**	1	Atlas	52,587	1
	11/17/2013 6:00	11/17/2013 10:45	**285**	2.72	**465,642**	2.66	**2.87**	6	Cloudburst	1,266,545	1
	12/21/2013 21:45	12/22/2013 1:15	**210**	3.31	**344,944**	3.24	**2.24**	24	Cloudburst	1,141,766	1
	2/17/2014 16:45	2/17/2014 16:45	**0**	0.56	**2,762**	0.75	**0.32**	3	Atlas	1,547	1
	4/4/2014 2:00	4/4/2014 5:15	**195**	2.93	**42,835**	3.62	**1.14**	24	Cloudburst	125,505	1
	4/7/2014 11:15	4/7/2014 12:45	**90**	1.06	**265,172**	4.05	**0.64**	1	Atlas	281,082	1
	4/28/2014 5:45	4/28/2014 8:45	**180**	1.8	**343,624**	1.59	**0.73**	3	Atlas	618,523	1
	5/9/2014 19:30	5/9/2014 21:00	**90**	1.44	**1,213**	0.24	**0.63**	1	Atlas	1,746	1
	5/10/2014 14:15	5/10/2014 20:30	**375**	1.44	**210,899**	1.51	**0.63**	1	Atlas	303,695	1
	5/28/2014 20:15	5/29/2014 2:30	**375**	0.04	**1,966,658**	0.59	**0.03**	3	Atlas	78,666	1
	7/13/2014 23:15	7/13/2014 23:45	**30**	0.69	**16,690**	0.46	**0.32**	12	Atlas	11,516	1
	7/26/2014 21:45	7/26/2014 22:45	**60**	1.04	**40,199**	0.65	**0.48**	12	Atlas	41,807	1
	8/8/2014 7:00	8/8/2014 7:00	**0**	0.62	**3,081**	0.46	**0.31**	6	Atlas	1,910	1
	8/10/2014 4:45	8/10/2014 5:30	**45**	1.14	**31,961**	1.92	**0.98**	1	Atlas	36,435	1
	8/23/2014 16:15	8/23/2014 21:30	**315**	0.96	**86,559**	1.82	**0.46**	6	Atlas	83,096	1
	8/30/2014 15:15	8/30/2014 16:15	**60**	1.27	**60,790**	2.24	**0.80**	1	Atlas	77,204	1
	9/11/2014 0:45	9/11/2014 3:15	**150**	2.3	**361,620**	2.03	**3.14**	3	Atlas	831,725	1
	10/10/2014 2:45	10/10/2014 3:30	**45**	1.02	**19,502**	1.5	**0.46**	3	Atlas	19,892	1
	10/13/2014 23:45	10/14/2014	**15**	1.56	**4,027**	2.4	**0.70**	12	Atlas	6,282	1
	12/6/2014 2:15	12/6/2014 3:45	**90**	1.75	**28,856**	2.59	**0.56**	48	Atlas	50,498	1
	3/10/2015 12:30	3/10/2015 14:00	**90**	0.95	**36,676**	2.57	**0.42**	12	Atlas	34,842	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO104	**3/14/2015 3:45**	3/14/2015 4:15	**30**	1.91	**3,968**	2.79	**0.72**	24	Atlas	7,578	1
	4/2/2015 15:00	4/2/2015 16:00	**60**	4.8	**13,376**	0.9	**10.76**	6	Cloudburst	64,203	1
	4/3/2015 0:15	4/3/2015 7:15	**420**	4.8	**518,341**	4.38	**10.76**	6	Cloudburst	2,488,038	1
	4/7/2015 9:15	4/7/2015 10:30	**75**	1.03	**73,778**	5.5	**0.45**	1	Atlas	75,991	1
	5/16/2015 11:45	5/16/2015 13:45	**120**	0.94	**54,121**	0.98	**0.50**	3	Atlas	50,874	1
	6/8/2015 8:00	6/8/2015 8:45	**45**	0.14	**14,934**	0.18	**0.08**	3	Atlas	2,091	1
	6/17/2015 5:15	6/17/2015 7:30	**135**	0.66	**8,645**	0.67	**0.37**	3	Atlas	5,706	1
	6/18/2015 16:30	6/19/2015	**450**	Discharge						22,779	1
	6/20/2015 0:15	6/20/2015 4:45	**270**	1.14	**1,748**	2.33	**0.46**	12	Atlas	1,993	1
	6/21/2015 21:15	6/22/2015 9:45	**750**	0.25	**415,765**	2.96	**0.11**	12	Atlas	103,941	1
	6/26/2015 0:15	6/26/2015 4:15	**240**	0.85	**4,856**	2.32	**0.46**	6	Atlas	4,128	1
	6/26/2015 17:00	6/27/2015 2:30	**570**	0.89	**405,114**	3.13	**0.50**	1	Atlas	360,551	1
	6/29/2015 14:30	6/29/2015 14:45	**15**	0.29	**6,451**	2.03	**0.14**	1	Atlas	1,871	1
	7/2/2015 16:00	7/2/2015 23:00	**420**	0.99	**22,665**	3.08	**0.50**	3	Atlas	22,438	1
	7/3/2015 14:45	7/3/2015 18:30	**225**	1.51	**120,482**	3.71	**2.75**	1	Atlas	181,928	1
	7/7/2015 12:30	7/7/2015 14:45	**135**	1.07	**26,148**	3.51	**0.58**	3	Atlas	27,978	1
	7/10/2015 16:15	7/10/2015 17:30	**75**	0.46	**5,209**	1.89	**0.23**	6	Atlas	2,396	1
	7/12/2015 6:00	7/12/2015 8:00	**120**	0.7	**173,777**	2.55	**0.47**	3	Atlas	121,644	1
	7/13/2015 14:00	7/13/2015 16:00	**120**	Discharge						63,120	1
	7/14/2015 1:45	7/14/2015 4:00	**135**	Discharge						1,978	1
	7/14/2015 18:45	7/14/2015 19:30	**45**	0.14	**29,837**	2.35	**0.11**	1	Atlas	4,177	1
	7/17/2015 21:45	7/18/2015 2:15	**270**	Discharge						689,064	1
	7/29/2015 17:30	7/29/2015 17:30	**0**	0.33	**1,621**	0.36	**0.28**	1	Atlas	535	1
	8/19/2015 16:15	8/19/2015 17:00	**45**	0.8	**54,601**	0.79	**0.50**	1	Atlas	43,681	1
	9/9/2015 11:15	9/9/2015 11:15	**0**	0.85	**2,136**	0.91	**0.74**	1	Atlas	1,815	1
	10/27/2015 18:30	10/27/2015 20:30	**120**	3.38	**13,420**	2.42	**1.47**	24	Cloudburst	45,359	1
	11/6/2015 3:45	11/6/2015 5:00	**75**	0.91	**84,085**	1	**0.56**	3	Atlas	76,517	1
	11/18/2015 10:30	11/18/2015 14:00	**210**	1.75	**67,279**	2.15	**0.90**	6	Atlas	117,738	1
	12/23/2015 19:15	12/23/2015 21:15	**120**	1.28	**576,927**	1.8	**0.81**	1	Atlas	738,467	1
	12/27/2015 10:30	12/27/2015 14:15	**225**	2.65	**84,909**	3.63	**0.86**	48	Atlas	225,008	1
	2/2/2016 23:00	2/3/2016 1:30	**150**	1.34	**437,324**	1.39	**0.67**	6	Atlas	586,015	1
	2/21/2016 10:15	2/21/2016 10:45	**30**	0.8	**10,850**	0.97	**0.37**	12	Atlas	8,680	1
	2/24/2016 3:45	2/24/2016 8:00	**255**	2.32	**76,931**	2.79	**0.91**	12	Atlas	178,479	1
	3/27/2016 21:30	3/27/2016 22:30	**60**	0.73	**55,188**	1.24	**0.51**	1	Atlas	40,287	1
	4/11/2016 18:00	4/11/2016 18:00	**0**	1.14	**1,569**	1.16	**0.52**	6	Atlas	1,789	1
	4/27/2016 20:15	4/28/2016 12:00	**945**	0.91	**90,264**	1.59	**0.43**	3	Atlas	82,140	1
	5/11/2016 22:00	5/11/2016 22:00	**0**	0.3	**2,897**	1.58	**0.14**	3	Atlas	869	1
	6/2/2016 15:30	6/2/2016 17:15	**105**	1.49	**325,470**	1.72	**2.75**	1	Atlas	484,950	1
	6/12/2016 17:45	6/12/2016 20:00	**135**	0.59	**22,978**	0.6	**0.50**	1	Atlas	13,557	1
	6/14/2016 16:15	6/14/2016 21:00	**285**	1.46	**498,682**	2.05	**0.87**	1	Atlas	728,076	1
	6/22/2016 9:00	6/22/2016 9:30	**30**	0.17	**18,477**	0.16	**0.09**	6	Atlas	3,141	1
	6/23/2016 16:00	6/24/2016 0:45	**525**	2.12	**199,489**	2.29	**1.11**	6	Cloudburst	422,917	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
Grand Total										**16,573,757**	**84**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**12/8/2009 18:00**	12/8/2009 23:15	**315**	2.05	**1,853,765**	2.22	**0.84**	12	Atlas	3,800,218	1
	12/13/2009 7:45	12/13/2009 8:00	**15**	0.28	**32,229**	2.42	**0.18**	3	Atlas	9,024	1
	1/20/2010 12:15	1/20/2010 12:45	**30**	0.37	**45,942**	0.59	**0.19**	6	Atlas	16,999	1
	1/21/2010 15:00	1/21/2010 19:30	**270**	0.98	**877,956**	1.57	**0.39**	12	Atlas	860,397	1
	1/24/2010 4:15	1/24/2010 6:15	**120**	0.91	**1,203,830**	1.97	**0.35**	24	Atlas	1,095,486	1
	1/24/2010 22:30	1/24/2010 23:00	**30**	0.91	**14,937**	2.26	**0.35**	24	Atlas	13,593	1
	2/5/2010 13:30	2/5/2010 18:15	**285**	1.17	**354,982**	0.86	**0.43**	24	Atlas	415,329	1
	3/21/2010 23:45	3/22/2010 1:30	**105**	0.77	**510,077**	0.77	**0.35**	12	Atlas	392,759	1
	4/8/2010 0:45	4/8/2010 7:00	**375**	1.29	**2,090,824**	1.4	**0.62**	6	Atlas	2,697,163	1
	4/24/2010 14:30	4/24/2010 21:15	**405**	1.36	**4,395,186**	1.55	**0.64**	6	Atlas	5,977,454	1
	5/1/2010 4:45	5/1/2010 9:30	**285**	4.01	**1,428,705**	2.83	**3.10**	48	Atlas	5,729,107	1
	5/2/2010 1:15	5/2/2010 16:45	**930**	4.01	**4,787,800**	4.43	**3.10**	48	Atlas	19,199,079	1
	5/12/2010 9:30	5/12/2010 11:45	**135**	0.66	**4,455,734**	1.15	**0.50**	1	Atlas	2,940,784	1
	5/13/2010 12:30	5/13/2010 13:15	**45**	0.07	**1,233,417**	1.22	**0.06**	1	Atlas	86,339	1
	5/17/2010 19:30	5/17/2010 21:00	**90**	0.23	**3,705,533**	1.37	**0.15**	3	Atlas	852,273	1
	5/21/2010 19:30	5/21/2010 21:45	**135**	0.45	**6,162,316**	1.02	**0.37**	1	Atlas	2,773,042	1
	6/9/2010 3:00	6/9/2010 13:30	**630**	1.17	**8,147,877**	1.32	**0.56**	3	Atlas	9,533,016	1
	6/13/2010 22:45	6/14/2010 7:30	**525**	0.67	**4,406,960**	1.99	**0.45**	1	Atlas	2,952,663	1
	6/19/2010 6:00	6/19/2010 8:30	**150**	0.49	**4,451,821**	1.4	**0.28**	3	Atlas	2,181,392	1
	6/28/2010 1:30	6/28/2010 3:30	**120**	0.42	**2,084,946**	0.4	**0.30**	1	Atlas	875,677	1
	7/9/2010 9:00	7/9/2010 9:45	**45**	0.26	**276,986**	0.23	**0.10**	12	Atlas	72,016	1
	7/13/2010 5:45	7/13/2010 10:30	**285**	1	**2,829,804**	1.24	**0.54**	3	Atlas	2,829,804	1
	7/20/2010 5:00	7/20/2010 7:30	**150**	0.56	**8,702,167**	1.16	**0.35**	1	Atlas	4,873,214	1
	7/21/2010 6:15	7/21/2010 7:30	**75**	0.38	**1,466,334**	1.2	**0.29**	1	Atlas	557,207	1
	7/31/2010 4:30	7/31/2010 7:15	**165**	0.47	**5,654,735**	0.67	**0.27**	3	Atlas	2,657,725	1
	8/5/2010 9:30	8/5/2010 10:30	**60**	0.17	**1,015,393**	0.64	**0.12**	1	Atlas	172,617	1
	8/14/2010 16:30	8/14/2010 18:15	**105**	0.27	**4,998,799**	0.45	**0.21**	1	Atlas	1,349,676	1
	8/21/2010 8:15	8/21/2010 9:30	**75**	0.55	**433,726**	0.85	**0.35**	3	Atlas	238,549	1
	10/13/2010 20:15	10/13/2010 21:30	**75**	0.47	**599,206**	0.48	**0.31**	3	Atlas	281,627	1
	10/26/2010 11:30	10/26/2010 12:30	**60**	0.48	**544,175**	0.3	**0.26**	6	Atlas	261,204	1
	11/16/2010 13:15	11/16/2010 17:00	**225**	0.82	**453,911**	0.78	**0.37**	12	Atlas	372,207	1
	11/24/2010 13:30	11/24/2010 16:00	**150**	0.6	**1,160,411**	0.94	**0.29**	3	Atlas	696,246	1
	11/25/2010 9:45	11/25/2010 23:30	**825**	2.52	**3,753,282**	3.31	**0.96**	24	Atlas	9,458,270	1
	11/29/2010 22:00	11/30/2010 5:00	**420**	1.54	**3,685,359**	4.54	**0.59**	24	Atlas	5,675,452	1
	1/1/2011 6:00	1/1/2011 7:00	**60**	0.58	**142,417**	1	**0.26**	12	Atlas	82,602	1
	2/1/2011 18:15	2/1/2011 20:30	**135**	0.84	**1,272,166**	0.74	**0.31**	6	Atlas	1,068,620	1
	2/24/2011 20:15	2/25/2011 2:15	**360**	2.57	**5,019,281**	2.75	**1.00**	12	Cloudburst	12,899,551	1
	2/28/2011 5:30	2/28/2011 12:00	**390**	1.01	**670,178**	4.03	**0.48**	6	Atlas	676,880	1
	3/5/2011 7:15	3/5/2011 8:30	**75**	0.84	**482,716**	2.07	**0.28**	24	Atlas	405,482	1
	3/8/2011 23:15	3/9/2011 17:15	**1080**	2.87	**3,467,914**	3.71	**1.63**	12	Cloudburst	9,952,913	1
	3/10/2011 4:45	3/10/2011 18:00	**795**	Discharge						70,721	1
	3/14/2011 1:45	3/14/2011 19:30	**1065**	0.68	**819,893**	3.46	**0.24**	12	Atlas	557,527	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**3/15/2011 13:30**	3/15/2011 13:30	**0**	0.68	**151,894**	3.54	**0.24**	12	Atlas	103,288	1
	3/16/2011 4:15	3/16/2011 12:15	**480**	Discharge						88,707	1
	4/4/2011 14:00	4/4/2011 17:00	**180**	0.63	**1,105,902**	0.77	**0.32**	6	Atlas	696,718	1
	4/9/2011 11:00	4/9/2011 12:15	**75**	0.43	**1,036,964**	1.08	**0.30**	1	Atlas	445,894	1
	4/11/2011 16:15	4/12/2011 6:00	**825**	2.96	**4,366,909**	3.41	**1.75**	24	Cloudburst	12,926,050	1
	4/20/2011 2:45	4/20/2011 5:00	**135**	0.78	**1,132,100**	1.13	**0.43**	6	Atlas	883,038	1
	4/23/2011 0:30	4/24/2011 16:30	**2400**	4.66	**5,049,555**	4.8	**2.83**	48	Atlas	23,530,926	1
	4/27/2011 1:15	4/27/2011 2:30	**75**	1.93	**90,190**	5.83	**0.72**	24	Atlas	174,066	1
	4/29/2011 9:00	4/30/2011 13:30	**1710**	Discharge						17,880,318	1
	5/8/2011 1:15	5/8/2011 2:30	**75**	0.4	**2,202,111**	3.43	**0.29**	1	Atlas	880,845	1
	5/14/2011 15:15	5/14/2011 16:15	**60**	0.18	**1,869,420**	0.61	**0.11**	3	Atlas	336,496	1
	5/21/2011 18:30	5/21/2011 19:45	**75**	0.57	**1,293,914**	0.95	**0.40**	1	Atlas	737,531	1
	5/23/2011 4:30	5/23/2011 5:15	**45**	0.38	**133,503**	1.11	**0.23**	3	Atlas	50,731	1
	5/23/2011 17:45	5/23/2011 21:00	**195**	0.98	**2,462,828**	2.09	**0.61**	3	Atlas	2,413,571	1
	5/25/2011 23:00	5/26/2011 2:30	**210**	1.18	**2,434,020**	2.99	**0.59**	3	Atlas	2,872,144	1
	5/26/2011 12:00	5/26/2011 12:15	**15**	1.18	**24,039**	3.1	**0.59**	3	Atlas	28,366	1
	6/11/2011 5:00	6/11/2011 5:30	**30**	0.14	**608,076**	0.16	**0.10**	1	Atlas	85,131	1
	6/15/2011 9:30	6/15/2011 11:30	**120**	0.89	**3,709,714**	1.07	**0.56**	3	Atlas	3,301,646	1
	6/18/2011 7:30	6/18/2011 9:00	**90**	0.83	**435,100**	1.77	**0.50**	3	Atlas	361,133	1
	6/19/2011 8:00	6/19/2011 9:30	**90**	0.7	**1,208,826**	2.44	**0.44**	3	Atlas	846,178	1
	6/20/2011 1:45	6/20/2011 3:00	**75**	0.51	**1,745,431**	2.95	**0.43**	1	Atlas	890,170	1
	6/22/2011 20:00	6/23/2011 4:00	**480**	3.17	**4,957,895**	5.48	**8.33**	3	Atlas	15,716,527	1
	7/19/2011 23:00	7/20/2011 1:45	**165**	1.36	**7,650,374**	1.37	**1.83**	1	Atlas	10,404,509	1
	8/7/2011 3:45	8/7/2011 7:00	**195**	1.2	**3,794,154**	1.22	**0.69**	3	Atlas	4,552,984	1
	8/8/2011 15:00	8/8/2011 16:00	**60**	0.36	**368,812**	1.58	**0.24**	3	Atlas	132,772	1
	8/13/2011 17:45	8/13/2011 18:45	**60**	0.49	**710,589**	2.17	**0.35**	1	Atlas	348,188	1
	9/19/2011 7:30	9/19/2011 8:45	**75**	0.66	**717,903**	0.6	**0.25**	24	Atlas	473,816	1
	9/23/2011 2:00	9/23/2011 8:45	**405**	0.64	**556,809**	1.43	**0.29**	12	Atlas	356,358	1
	9/25/2011 23:30	9/26/2011 7:00	**450**	3.08	**11,804,614**	4.61	**4.37**	12	Cloudburst	36,358,210	1
	10/27/2011 0:15	10/27/2011 2:30	**135**	0.92	**2,107,670**	1.1	**0.38**	12	Atlas	1,939,057	1
	11/14/2011 22:00	11/14/2011 23:15	**75**	1.74	**226,357**	0.4	**0.56**	48	Atlas	393,862	1
	11/16/2011 7:00	11/16/2011 8:00	**60**	1.74	**25,148**	1.64	**0.56**	48	Atlas	43,757	1
	11/22/2011 7:00	11/22/2011 10:45	**225**	1.5	**1,075,709**	2.62	**0.47**	48	Atlas	1,613,564	1
	11/27/2011 8:45	11/27/2011 9:00	**15**	3.02	**2,308**	2.1	**0.93**	48	Atlas	6,969	1
	11/28/2011 0:30	11/28/2011 2:00	**90**	3.02	**15,750**	2.39	**0.93**	48	Atlas	47,564	1
	11/28/2011 12:15	11/29/2011 1:45	**810**	3.02	**214,974**	3.89	**0.93**	48	Atlas	649,223	1
	12/4/2011 16:45	12/5/2011 19:15	**1590**	3.5	**4,558,526**	5.79	**1.70**	48	Cloudburst	15,954,841	1
	12/21/2011 6:30	12/21/2011 7:45	**75**	0.7	**601,919**	1.15	**0.32**	12	Atlas	421,343	1
	12/22/2011 15:30	12/22/2011 17:00	**90**	0.48	**165,959**	1.15	**0.22**	12	Atlas	79,660	1
	1/11/2012 6:15	1/11/2012 7:30	**75**	0.95	**196,353**	0.59	**0.39**	12	Atlas	186,535	1
	1/17/2012 12:15	1/17/2012 12:30	**15**	0.43	**17,541**	1.49	**0.20**	12	Atlas	7,543	1
	1/23/2012 3:15	1/23/2012 5:15	**120**	0.7	**965,762**	1.16	**0.35**	3	Atlas	676,033	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**1/26/2012 5:45**	1/26/2012 7:30	**105**	0.45	**3,956,918**	1.38	**0.27**	3	Atlas	1,780,613	1
	1/26/2012 19:00	1/26/2012 23:30	**270**	1.13	**2,819,755**	2.46	**0.51**	12	Atlas	3,186,323	1
	2/29/2012 9:00	2/29/2012 9:45	**45**	0.43	**184,261**	0.59	**0.20**	1	Atlas	79,232	1
	3/8/2012 13:15	3/8/2012 14:00	**45**	0.72	**97,480**	0.91	**0.34**	6	Atlas	70,186	1
	3/15/2012 18:45	3/16/2012 3:30	**525**	0.93	**342,019**	1.16	**0.42**	12	Atlas	318,078	1
	3/17/2012 18:30	3/17/2012 19:30	**60**	0.51	**619,707**	1.45	**0.29**	3	Atlas	316,050	1
	3/23/2012 13:15	3/23/2012 23:00	**585**	1.45	**1,721,410**	1.96	**0.54**	24	Atlas	2,496,044	1
	4/1/2012 8:45	4/1/2012 12:00	**195**	1.35	**2,844,446**	1.51	**0.73**	6	Atlas	3,840,002	1
	4/28/2012 19:15	4/28/2012 20:45	**90**	0.72	**730,493**	0.73	**0.52**	1	Atlas	525,955	1
	5/5/2012 1:00	5/5/2012 1:00	**0**	1.46	**396,260**	2.14	**0.77**	6	Atlas	578,540	1
	5/29/2012 6:15	5/29/2012 12:30	**375**	2.73	**10,500,679**	2.73	**12.76**	3	Atlas	28,666,853	1
	5/31/2012 18:15	6/1/2012 6:45	**750**	1.05	**6,616,597**	3.78	**0.45**	12	Atlas	6,947,427	1
	6/4/2012 14:00	6/4/2012 18:15	**255**	0.2	**22,296**	3.97	**0.10**	6	Atlas	4,459	1
	6/17/2012 11:15	6/17/2012 13:30	**135**	0.13	**1,578,092**	0.14	**0.11**	1	Atlas	205,152	1
	7/1/2012 20:00	7/1/2012 20:15	**15**	0.21	**3,572**	0.16	**0.13**	1	Atlas	750	1
	7/5/2012 1:15	7/5/2012 4:15	**180**	0.31	**3,249,242**	0.52	**0.22**	1	Atlas	1,007,265	1
	7/8/2012 12:45	7/8/2012 15:45	**180**	0.23	**25,374,670**	0.71	**0.16**	1	Atlas	5,836,174	1
	7/14/2012 11:45	7/14/2012 16:45	**300**	0.55	**5,475,322**	0.8	**0.30**	6	Atlas	3,011,427	1
	7/18/2012 17:00	7/18/2012 19:15	**135**	Discharge						682,367	1
	7/19/2012 13:30	7/19/2012 13:45	**15**	0.66	**4,286**	0.7	**0.44**	1	Atlas	2,829	1
	8/13/2012 12:00	8/13/2012 12:30	**30**	0.11	**1,681**	0.12	**0.07**	3	Atlas	185	1
	8/16/2012 20:00	8/17/2012 0:45	**285**	0.5	**209,337**	0.63	**0.27**	6	Atlas	104,668	1
	8/21/2012 13:45	8/21/2012 16:00	**135**	0.05	**690,449**	0.56	**0.04**	1	Atlas	34,522	1
	9/1/2012 15:00	9/1/2012 17:15	**135**	0.22	**365,755**	0.23	**0.13**	1	Atlas	80,466	1
	9/2/2012 11:45	9/2/2012 22:00	**615**	0.35	**124,916**	0.6	**0.15**	12	Atlas	43,721	1
	9/5/2012 15:15	9/5/2012 18:45	**210**	0.59	**209,357**	1.38	**0.45**	1	Atlas	123,521	1
	9/7/2012 23:15	9/8/2012 4:45	**330**	1.42	**37,108**	2.7	**0.79**	3	Atlas	52,694	1
	10/14/2012 16:00	10/14/2012 18:00	**120**	0.05	**213,233**	0.04	**0.03**	3	Atlas	10,662	1
	10/18/2012 0:30	10/18/2012 3:00	**150**	0.3	**39,423**	0.37	**0.20**	3	Atlas	11,827	1
	10/26/2012 11:00	10/26/2012 17:45	**405**	0.62	**633,183**	0.61	**0.30**	6	Atlas	392,574	1
	11/3/2012 10:45	11/3/2012 16:45	**360**	0.13	**126,022**	0.14	**0.06**	12	Atlas	16,383	1
	11/12/2012 3:00	11/12/2012 12:45	**585**	0.38	**41,929**	0.43	**0.17**	6	Atlas	15,933	1
	12/2/2012 11:15	12/2/2012 13:15	**120**	0.27	**68,848**	0.35	**0.15**	3	Atlas	18,589	1
	12/4/2012 14:45	12/4/2012 19:45	**300**	0.56	**4,403,791**	0.83	**0.35**	3	Atlas	2,466,123	1
	12/6/2012 16:30	12/7/2012 18:45	**1575**	0.93	**3,917,171**	1.76	**0.39**	12	Atlas	3,642,969	1
	12/8/2012 5:30	12/8/2012 8:00	**150**	0.27	**608,852**	2.02	**0.19**	1	Atlas	164,390	1
	12/9/2012 8:15	12/9/2012 9:00	**45**	1.23	**3,261**	2.13	**0.63**	3	Atlas	4,011	1
	12/9/2012 19:30	12/10/2012 3:30	**480**	1.23	**10,267,806**	2.97	**0.63**	3	Atlas	12,629,401	1
	12/15/2012 11:00	12/15/2012 12:45	**105**	0.14	**72,874**	1.4	**0.08**	3	Atlas	10,202	1
	12/17/2012 12:15	12/17/2012 17:15	**300**	0.24	**51,286**	0.41	**0.13**	6	Atlas	12,309	1
	12/20/2012 6:45	12/20/2012 14:30	**465**	0.61	**8,152,422**	1	**0.30**	6	Atlas	4,972,978	1
	12/26/2012 1:15	12/26/2012 14:30	**795**	0.9	**4,409,008**	1.6	**0.36**	12	Atlas	3,968,107	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**12/28/2012 22:15**	12/29/2012 10:15	**720**	0.06	**86,268**	1.03	**0.03**	12	Atlas	5,176	1
	12/31/2012 23:00	1/1/2013 1:15	**135**	0.51	**7,143**	1.47	**0.34**	1	Atlas	3,643	1
	1/10/2013 12:15	1/10/2013 13:30	**75**	0.18	**18,749**	0.18	**0.09**	6	Atlas	3,375	1
	1/11/2013 2:15	1/11/2013 9:00	**405**	0.69	**7,046,884**	0.88	**0.37**	3	Atlas	4,862,350	1
	1/12/2013 20:45	1/13/2013 21:15	**1470**	2.19	**12,965,063**	3.06	**0.84**	24	Atlas	28,393,487	1
	1/15/2013 20:00	1/15/2013 20:30	**30**	0.19	**10,209**	3.19	**0.07**	12	Atlas	1,940	1
	1/27/2013 19:45	1/27/2013 21:30	**105**	0.21	**33,296**	0.13	**0.10**	12	Atlas	6,992	1
	1/28/2013 10:30	1/28/2013 11:00	**30**	0.08	**13,461**	0.3	**0.06**	1	Atlas	1,077	1
	1/30/2013 4:30	1/30/2013 18:00	**810**	0.85	**12,244,163**	1.15	**0.43**	6	Atlas	10,407,538	1
	2/2/2013 11:45	2/2/2013 12:15	**30**	0.01	**95,357**	1.21	**0.01**	1	Atlas	954	1
	2/4/2013 17:00	2/4/2013 18:45	**105**	0.12	**132,973**	1.06	**0.08**	3	Atlas	15,957	1
	2/8/2013 2:30	2/8/2013 3:15	**45**	0.08	**20,612**	0.21	**0.05**	3	Atlas	1,649	1
	2/10/2013 15:15	2/10/2013 16:00	**45**	0.18	**6,221**	0.38	**0.09**	3	Atlas	1,120	1
	2/13/2013 11:45	2/13/2013 12:15	**30**	0.06	**30,332**	0.33	**0.03**	12	Atlas	1,820	1
	2/18/2013 21:45	2/19/2013 4:30	**405**	0.35	**7,978**	0.42	**0.16**	12	Atlas	2,792	1
	2/21/2013 20:30	2/22/2013 4:15	**465**	0.44	**1,603,617**	0.8	**0.20**	12	Atlas	705,591	1
	2/26/2013 5:15	2/26/2013 19:30	**855**	0.69	**1,914,538**	1.1	**0.28**	12	Atlas	1,321,031	1
	3/5/2013 14:15	3/5/2013 19:45	**330**	0.46	**2,492,321**	0.7	**0.17**	24	Atlas	1,146,468	1
	3/11/2013 2:00	3/11/2013 13:30	**690**	1.01	**5,911,985**	1.49	**0.41**	12	Atlas	5,971,105	1
	3/17/2013 4:00	3/18/2013 9:30	**1770**	1.63	**7,817,399**	2.62	**0.53**	48	Atlas	12,742,361	1
	3/24/2013 8:15	3/24/2013 9:15	**60**	0.58	**440,349**	1.57	**0.21**	24	Atlas	255,402	1
	4/11/2013 6:30	4/11/2013 8:45	**135**	1.17	**1,252,036**	0.44	**0.45**	24	Atlas	1,464,882	1
	4/11/2013 18:00	4/11/2013 19:00	**60**	1.17	**36,565**	1.14	**0.45**	24	Atlas	42,781	1
	4/16/2013 19:45	4/16/2013 22:45	**180**	0.42	**16,509,376**	1.57	**0.34**	1	Atlas	6,933,938	1
	4/19/2013 2:15	4/19/2013 5:45	**210**	0.85	**5,848,783**	1.31	**0.46**	6	Atlas	4,971,466	1
	4/24/2013 7:30	4/24/2013 11:15	**225**	0.62	**5,228,127**	1.57	**0.35**	3	Atlas	3,241,439	1
	5/4/2013 13:45	5/4/2013 16:15	**150**	1.76	**406,551**	0.82	**0.55**	24	Atlas	715,530	1
	5/5/2013 5:00	5/5/2013 9:45	**285**	1.76	**1,497,125**	1.62	**0.55**	24	Atlas	2,634,940	1
	5/10/2013 10:00	5/11/2013 1:45	**945**	0.73	**3,636,175**	2.61	**0.32**	6	Atlas	2,654,408	1
	6/10/2013 0:15	6/10/2013 2:00	**105**	0.36	**2,922,244**	0.31	**0.14**	24	Atlas	1,052,008	1
	6/16/2013 16:30	6/16/2013 18:15	**105**	0.57	**414,711**	0.87	**0.43**	1	Atlas	236,385	1
	6/17/2013 19:00	6/17/2013 22:30	**210**	0.29	**2,770,927**	0.84	**0.15**	3	Atlas	803,569	1
	6/24/2013 9:00	6/24/2013 9:00	**0**	0.07	**475**	0.44	**0.04**	3	Atlas	33	1
	6/26/2013 3:00	6/26/2013 7:15	**255**	0.46	**11,586,719**	0.59	**0.33**	1	Atlas	5,329,891	1
	6/26/2013 16:15	6/27/2013 0:15	**480**	1.64	**14,730,770**	2.23	**0.85**	6	Atlas	24,158,462	1
	6/29/2013 19:45	6/29/2013 19:45	**0**	0.61	**167**	2.71	**0.37**	3	Atlas	102	1
	7/1/2013 9:00	7/1/2013 9:15	**15**	0.22	**5,087**	2.86	**0.09**	12	Atlas	1,119	1
	7/1/2013 19:00	7/1/2013 20:30	**90**	0.22	**9,128**	2.93	**0.09**	12	Atlas	2,008	1
	7/2/2013 13:45	7/2/2013 15:30	**105**	0.02	**62,096,211**	2.97	**0.02**	1	Atlas	1,241,924	1
	7/3/2013 16:00	7/3/2013 17:15	**75**	0.11	**117,159**	2.25	**0.09**	1	Atlas	12,888	1
	7/4/2013 6:15	7/4/2013 17:15	**660**	0.44	**139,313**	1.4	**0.20**	12	Atlas	61,298	1
	7/6/2013 0:15	7/6/2013 7:45	**450**	0.45	**4,653,135**	1.84	**0.20**	12	Atlas	2,093,911	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**7/10/2013 13:45**	7/10/2013 17:15	**210**	0.66	**11,732,391**	1.68	**0.53**	1	Atlas	7,743,378	1
	7/14/2013 19:30	7/14/2013 21:45	**135**	0.06	**24,147,049**	0.74	**0.05**	1	Atlas	1,448,823	1
	7/18/2013 16:30	7/18/2013 18:15	**105**	0.06	**18,260,629**	0.19	**0.04**	1	Atlas	1,095,638	1
	7/21/2013 20:00	7/22/2013 16:45	**1245**	2.72	**6,690,069**	2.82	**3.43**	3	Atlas	18,196,989	1
	7/30/2013 18:30	7/30/2013 18:30	**0**	0.09	**78,712**	0.12	**0.05**	3	Atlas	7,084	1
	8/11/2013 15:15	8/11/2013 16:45	**90**	Discharge						466,327	1
	8/12/2013 11:45	8/12/2013 17:30	**345**	0.91	**6,537,745**	0.84	**0.51**	1	Atlas	5,949,348	1
	8/13/2013 2:45	8/13/2013 5:00	**135**	0.91	**619,974**	1.05	**0.51**	1	Atlas	564,176	1
	8/20/2013 15:30	8/20/2013 16:15	**45**	0.18	**221,399**	0.19	**0.15**	1	Atlas	39,852	1
	8/31/2013 20:00	9/1/2013 4:15	**495**	1.41	**3,891,255**	1.39	**0.65**	12	Atlas	5,486,669	1
	9/2/2013 13:45	9/2/2013 16:30	**165**	0.97	**3,853,157**	2.38	**0.84**	1	Atlas	3,737,562	1
	9/12/2013 13:45	9/12/2013 13:45	**0**	0.02	**2,455**	0.06	**0.02**	1	Atlas	49	1
	9/20/2013 16:30	9/21/2013 6:30	**840**	1.71	**4,991,965**	1.75	**0.70**	12	Atlas	8,536,261	1
	10/2/2013 15:30	10/2/2013 16:15	**45**	0.13	**72,621**	0.19	**0.07**	1	Atlas	9,441	1
	10/5/2013 12:15	10/6/2013 16:00	**1665**	4.19	**13,284,012**	4.52	**7.10**	24	Cloudburst	55,660,011	1
	10/17/2013 9:45	10/17/2013 10:15	**30**	0.04	**134,947**	0.08	**0.03**	1	Atlas	5,398	1
	10/19/2013 7:30	10/19/2013 12:30	**300**	0.16	**49,755**	0.24	**0.08**	6	Atlas	7,961	1
	10/29/2013 21:30	10/30/2013 9:00	**690**	1.7	**2,226,671**	1.7	**0.84**	6	Atlas	3,785,340	1
	10/31/2013 10:45	10/31/2013 23:15	**750**	1.1	**6,221,373**	2.8	**0.50**	1	Atlas	6,843,511	1
	11/6/2013 18:45	11/7/2013 2:30	**465**	0.22	**41,542**	1.33	**0.10**	12	Atlas	9,139	1
	11/15/2013 18:30	11/15/2013 19:15	**45**	0.09	**64,299**	0.15	**0.07**	1	Atlas	5,787	1
	11/17/2013 3:30	11/17/2013 21:15	**1065**	2.72	**12,004,469**	2.87	**2.87**	6	Cloudburst	32,652,157	1
	11/21/2013 19:15	11/21/2013 19:15	**0**	0.14	**1,418**	2.93	**0.09**	3	Atlas	199	1
	12/5/2013 5:15	12/5/2013 12:45	**450**	0.72	**1,855,935**	0.21	**0.23**	48	Atlas	1,336,273	1
	12/6/2013 2:45	12/6/2013 14:00	**675**	0.72	**23,984**	0.48	**0.23**	48	Atlas	17,269	1
	12/7/2013 12:30	12/7/2013 23:00	**630**	Discharge						19,820	1
	12/8/2013 15:45	12/8/2013 15:45	**0**	0.29	**23,549**	1.01	**0.19**	3	Atlas	6,829	1
	12/13/2013 20:15	12/14/2013 13:45	**1050**	0.72	**1,614,024**	1.08	**0.29**	12	Atlas	1,162,098	1
	12/14/2013 23:15	12/14/2013 23:15	**0**	Discharge						382	1
	12/20/2013 11:15	12/20/2013 11:15	**0**	0.08	**4,996**	0.81	**0.04**	6	Atlas	400	1
	12/21/2013 2:00	12/22/2013 5:45	**1665**	3.31	**10,243,310**	4.03	**2.24**	24	Cloudburst	33,905,355	1
	12/29/2013 0:45	12/29/2013 11:00	**615**	0.54	**28,705**	0.72	**0.23**	12	Atlas	15,501	1
	1/11/2014	1/11/2014 7:30	**450**	0.91	**8,106,258**	1.4	**0.48**	6	Atlas	7,376,695	1
	1/11/2014 16:45	1/11/2014 16:45	**0**	Discharge						205	1
	1/12/2014 7:30	1/12/2014 7:30	**0**	Discharge						6,508	1
	1/13/2014 14:15	1/13/2014 18:15	**240**	0.28	**35,764**	1.2	**0.13**	3	Atlas	10,014	1
	1/14/2014 18:30	1/14/2014 18:45	**15**	0.02	**48,962**	1.23	**0.02**	1	Atlas	979	1
	1/21/2014 3:30	1/21/2014 16:00	**750**	0.15	**54,365**	0.2	**0.07**	6	Atlas	8,155	1
	1/25/2014 12:00	1/25/2014 16:00	**240**	0.04	**228,617**	0.22	**0.02**	6	Atlas	9,145	1
	1/26/2014 5:15	1/26/2014 5:15	**0**	Discharge						907	1
	1/30/2014 18:00	1/30/2014 18:15	**15**	Discharge						1,610	1
	2/2/2014 2:30	2/2/2014 7:45	**315**	0.58	**839,214**	0.25	**0.22**	24	Atlas	486,744	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**2/2/2014 17:15**	2/2/2014 17:30	**15**	0.58	**5,088**	0.29	**0.22**	24	Atlas	2,951	1
	2/3/2014 11:15	2/3/2014 14:30	**195**	Discharge						12,959	1
	2/4/2014 18:15	2/5/2014 8:00	**825**	0.67	**17,296,942**	1.25	**0.33**	6	Atlas	11,588,951	1
	2/14/2014 15:45	2/14/2014 23:00	**435**	0.23	**47,837**	0.29	**0.13**	6	Atlas	11,002	1
	2/15/2014 12:15	2/15/2014 13:15	**60**	Discharge						3,744	1
	2/17/2014 14:30	2/17/2014 21:15	**405**	0.56	**9,442,183**	0.82	**0.32**	3	Atlas	5,287,623	1
	2/18/2014 13:15	2/18/2014 13:45	**30**	Discharge						874	1
	2/20/2014 20:15	2/21/2014 0:45	**270**	0.24	**860,516**	1.06	**0.13**	6	Atlas	206,524	1
	3/2/2014 9:30	3/2/2014 13:00	**210**	0.47	**2,147,360**	0.28	**0.18**	24	Atlas	1,009,259	1
	3/3/2014 15:30	3/3/2014 17:00	**90**	0.47	**11,184**	0.47	**0.18**	24	Atlas	5,257	1
	3/4/2014 12:45	3/4/2014 16:30	**225**	Discharge						21,165	1
	3/12/2014 7:15	3/12/2014 11:45	**270**	0.11	**41,154**	0.11	**0.06**	1	Atlas	4,527	1
	3/16/2014 17:30	3/17/2014 2:45	**555**	0.04	**102,560**	0.17	**0.03**	3	Atlas	4,102	1
	3/19/2014 8:00	3/19/2014 8:45	**45**	0.06	**23,032**	0.12	**0.04**	3	Atlas	1,382	1
	3/26/2014 10:30	3/26/2014 10:30	**0**	Discharge						53	1
	3/27/2014 23:15	3/28/2014 6:15	**420**	0.26	**1,223,819**	0.35	**0.14**	6	Atlas	318,193	1
	3/29/2014 4:30	3/29/2014 14:15	**585**	0.84	**4,449,870**	1.19	**0.39**	12	Atlas	3,737,891	1
	4/1/2014 20:30	4/1/2014 20:30	**0**	0.04	**4,984**	1.21	**0.03**	1	Atlas	199	1
	4/3/2014 4:45	4/4/2014 10:15	**1770**	2.93	**10,945,448**	4.13	**1.14**	24	Cloudburst	32,070,161	1
	4/7/2014 5:30	4/7/2014 15:30	**600**	1.06	**10,450,854**	4.06	**0.64**	1	Atlas	11,077,905	1
	4/14/2014 3:15	4/14/2014 11:30	**495**	0.43	**40,951**	1.54	**0.21**	6	Atlas	17,609	1
	4/14/2014 19:45	4/15/2014 13:00	**1035**	0.55	**4,401,440**	1.05	**0.25**	12	Atlas	2,420,792	1
	4/25/2014 2:30	4/25/2014 11:00	**510**	0.18	**84,444**	0.18	**0.09**	6	Atlas	15,200	1
	4/28/2014 3:45	4/28/2014 21:15	**1050**	1.8	**9,870,999**	1.95	**0.73**	3	Atlas	17,767,797	1
	4/29/2014 19:00	4/29/2014 22:15	**195**	0.21	**30,444**	2.16	**0.10**	12	Atlas	6,393	1
	5/9/2014 19:15	5/10/2014 18:15	**1380**	1.44	**11,701,631**	1.51	**0.63**	1	Atlas	16,850,349	1
	5/14/2014 7:00	5/15/2014 1:00	**1080**	1.17	**1,177,069**	2.74	**0.45**	24	Atlas	1,377,171	1
	5/16/2014 3:15	5/16/2014 12:30	**555**	0.13	**113,372**	2.87	**0.10**	1	Atlas	14,738	1
	5/17/2014 1:00	5/17/2014 1:00	**0**	Discharge						10,941	1
	5/21/2014 17:15	5/22/2014 5:45	**750**	Discharge						2,155,798	1
	5/28/2014 20:00	5/28/2014 23:00	**180**	0.04	**120,659,885**	0.59	**0.03**	3	Atlas	4,826,395	1
	6/1/2014 22:00	6/1/2014 23:00	**60**	0.13	**21,882**	0.22	**0.06**	1	Atlas	2,845	1
	6/2/2014 22:15	6/2/2014 22:15	**0**	0.02	**29,624**	0.25	**0.01**	3	Atlas	592	1
	6/10/2014 5:30	6/10/2014 6:45	**75**	0.06	**49,761**	0.08	**0.03**	6	Atlas	2,986	1
	6/10/2014 15:30	6/10/2014 17:15	**105**	0.11	**31,061**	0.19	**0.07**	3	Atlas	3,417	1
	6/11/2014 13:45	6/11/2014 16:15	**150**	0.09	**17,540,080**	0.28	**0.06**	1	Atlas	1,578,607	1
	6/20/2014 12:30	6/20/2014 19:00	**390**	Discharge						909,271	1
	6/24/2014 13:30	6/24/2014 18:45	**315**	0.18	**20,375**	0.57	**0.09**	6	Atlas	3,667	1
	6/28/2014 15:45	6/28/2014 15:45	**0**	0.01	**76,227**	0.29	**0.01**	1	Atlas	762	1
	7/1/2014 19:30	7/1/2014 22:30	**180**	0.6	**537,472**	0.62	**0.39**	3	Atlas	322,483	1
	7/2/2014 15:45	7/2/2014 16:30	**45**	0.1	**41,835**	0.73	**0.09**	1	Atlas	4,184	1
	7/7/2014 19:15	7/7/2014 22:00	**165**	0.03	**86,602,524**	0.73	**0.03**	1	Atlas	2,598,076	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**7/8/2014 6:45**	7/8/2014 7:45	**60**	0.06	**45,372**	0.79	**0.05**	1	Atlas	2,722	1
	7/13/2014 22:30	7/14/2014 4:45	**375**	0.69	**5,292,836**	0.68	**0.32**	12	Atlas	3,652,057	1
	7/14/2014 20:00	7/14/2014 21:45	**105**	0.42	**1,153,912**	1.17	**0.30**	1	Atlas	484,643	1
	7/26/2014 21:30	7/27/2014 10:15	**765**	1.04	**5,290,140**	1.14	**0.48**	12	Atlas	5,501,746	1
	8/8/2014 5:15	8/8/2014 11:00	**345**	0.62	**7,465,840**	0.67	**0.31**	6	Atlas	4,628,821	1
	8/10/2014 3:15	8/10/2014 7:15	**240**	1.14	**5,256,224**	1.92	**0.98**	1	Atlas	5,992,095	1
	8/11/2014 14:45	8/11/2014 17:15	**150**	0.15	**12,563,877**	2.04	**0.10**	1	Atlas	1,884,582	1
	8/16/2014 23:45	8/17/2014 0:15	**30**	0.83	**3,049**	1.63	**0.32**	24	Atlas	2,530	1
	8/17/2014 8:45	8/17/2014 16:15	**450**	0.83	**1,221,060**	0.97	**0.32**	24	Atlas	1,013,480	1
	8/22/2014 20:00	8/22/2014 21:00	**60**	0.13	**2,387,103**	0.94	**0.07**	6	Atlas	310,323	1
	8/23/2014 16:00	8/24/2014	**480**	0.96	**12,740,138**	1.94	**0.46**	6	Atlas	12,230,532	1
	8/25/2014 19:45	8/25/2014 19:45	**0**	Discharge						855	1
	8/26/2014 20:00	8/26/2014 20:30	**30**	0.12	**42,661**	1.23	**0.10**	1	Atlas	5,119	1
	8/27/2014 17:00	8/27/2014 17:30	**30**	0.11	**31,408**	1.32	**0.10**	1	Atlas	3,455	1
	8/30/2014 15:00	8/30/2014 18:15	**195**	1.27	**5,000,316**	2.38	**0.80**	1	Atlas	6,350,401	1
	9/2/2014 6:45	9/2/2014 10:30	**225**	0.53	**1,466,903**	1.95	**0.30**	3	Atlas	777,459	1
	9/11/2014	9/11/2014 7:30	**450**	2.3	**7,993,901**	2.29	**3.14**	3	Atlas	18,385,972	1
	10/3/2014 12:45	10/3/2014 20:15	**450**	0.22	**31,849**	0.22	**0.08**	24	Atlas	7,007	1
	10/6/2014 7:30	10/6/2014 19:00	**690**	0.56	**2,494,441**	0.55	**0.18**	48	Atlas	1,396,887	1
	10/7/2014 11:15	10/7/2014 13:00	**105**	0.56	**15,090**	0.77	**0.18**	48	Atlas	8,451	1
	10/10/2014 1:30	10/10/2014 5:30	**240**	1.02	**5,864,096**	1.53	**0.46**	3	Atlas	5,981,378	1
	10/10/2014 17:00	10/11/2014 3:00	**600**	1.02	**19,185**	1.69	**0.46**	3	Atlas	19,569	1
	10/13/2014 4:00	10/13/2014 8:45	**285**	0.45	**6,580,278**	2.07	**0.29**	3	Atlas	2,961,125	1
	10/13/2014 22:15	10/14/2014 15:15	**1020**	1.56	**6,071,032**	3.29	**0.70**	12	Atlas	9,470,810	1
	10/15/2014 18:15	10/15/2014 19:00	**45**	0.19	**10,892**	3.26	**0.09**	12	Atlas	2,069	1
	10/28/2014 11:45	10/28/2014 13:15	**90**	0.09	**31,843**	0.09	**0.06**	3	Atlas	2,866	1
	11/5/2014 18:45	11/5/2014 19:00	**15**	0.01	**108,023**	0.27	**0.01**	1	Atlas	1,080	1
	11/16/2014 21:30	11/17/2014 12:30	**900**	0.41	**82,906**	0.43	**0.15**	12	Atlas	33,992	1
	11/23/2014 14:30	11/24/2014	**570**	0.86	**4,029,817**	1.26	**0.39**	6	Atlas	3,465,643	1
	12/1/2014 1:15	12/1/2014 16:30	**915**	0.91	**671,649**	0.88				611,200	1
	12/4/2014 9:00	12/6/2014 8:45	**2865**	1.75	**6,905,479**	2.65	**0.56**	48	Atlas	12,084,589	1
	12/16/2014 3:00	12/16/2014 6:00	**180**	0.09	**90,683**	0.11	**0.05**	3	Atlas	8,161	1
	12/22/2014 22:30	12/22/2014 23:45	**75**	0.21	**37,653**	0.31	**0.12**	3	Atlas	7,907	1
	12/23/2014 19:45	12/23/2014 20:45	**60**	0.05	**80,396**	0.29	**0.03**	1	Atlas	4,020	1
	12/24/2014 12:00	12/24/2014 14:30	**150**	0.2	**50,268**	0.41	**0.08**	12	Atlas	10,054	1
	12/27/2014 8:45	12/28/2014 2:45	**1080**	0.33	**132,441**	0.79	**0.13**	24	Atlas	43,706	1
	1/3/2015 5:15	1/4/2015 4:30	**1395**	0.59	**52,090**	0.93	**0.22**	24	Atlas	30,733	1
	1/12/2015 0:30	1/12/2015 10:15	**585**	0.17	**102,536**	0.2	**0.07**	24	Atlas	17,431	1
	1/13/2015 21:00	1/13/2015 22:00	**60**	Discharge						625	1
	1/18/2015 3:15	1/18/2015 4:00	**45**	0.1	**27,660**	0.28	**0.08**	1	Atlas	2,766	1
	1/25/2015 16:30	1/25/2015 22:45	**375**	0.17	**19,092**	0.22	**0.07**	12	Atlas	3,246	1
	2/1/2015 11:30	2/1/2015 19:30	**480**	0.37	**871,114**	0.6	**0.17**	3	Atlas	322,312	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**2/17/2015 15:00**	2/17/2015 21:00	**360**	0.01	**319,168**	0.28	**0.01**	1	Atlas	3,192	1
	2/18/2015 6:00	2/19/2015 5:15	**1395**	0.06	**161,394**	0.35	**0.03**	6	Atlas	9,684	1
	2/19/2015 14:30	2/19/2015 21:15	**405**	Discharge						2,187	1
	2/21/2015 3:45	2/22/2015 1:00	**1275**	1.35	**50,479**	1.68	**0.54**	12	Atlas	68,147	1
	2/22/2015 12:00	2/22/2015 22:30	**630**	Discharge						13,095	1
	2/23/2015 12:45	2/23/2015 14:15	**90**	0.02	**149,521**	1.48	**0.01**	3	Atlas	2,990	1
	2/24/2015 1:00	2/24/2015 1:00	**0**	Discharge						1,180	1
	2/24/2015 12:30	2/25/2015 21:30	**1980**	Discharge						13,837	1
	2/26/2015 7:15	2/26/2015 20:45	**810**	Discharge						7,154	1
	3/3/2015 14:15	3/4/2015 18:30	**1695**	1.65	**10,841,999**	1.43	**0.54**	48	Atlas	17,889,298	1
	3/5/2015 14:30	3/5/2015 21:45	**435**	1.65	**9,708**	1.82	**0.54**	48	Atlas	16,019	1
	3/6/2015 11:15	3/6/2015 20:00	**525**	Discharge						21,911	1
	3/7/2015 13:15	3/7/2015 17:45	**270**	Discharge						7,218	1
	3/8/2015 12:45	3/12/2015 13:30	**5805**	Discharge						14,607,853	1
	3/13/2015 1:00	3/14/2015 5:15	**1695**	Discharge						13,897,325	1
	3/16/2015 4:30	3/16/2015 4:30	**0**	Discharge						114,427	1
	3/19/2015 17:15	3/20/2015 11:30	**1095**	0.22	**1,292,580**	2.13	**0.08**	24	Atlas	284,368	1
	3/22/2015 20:45	3/22/2015 20:45	**0**	Discharge						1,016	1
	3/24/2015 13:45	3/24/2015 22:30	**525**	0.14	**45,166**	0.33	**0.07**	1	Atlas	6,323	1
	3/26/2015 3:15	3/26/2015 12:00	**525**	0.51	**4,423,207**	0.8	**0.25**	3	Atlas	2,255,835	1
	3/29/2015 22:30	3/29/2015 22:30	**0**	0.03	**19,325**	0.69	**0.02**	3	Atlas	580	1
	4/2/2015 9:15	4/3/2015 19:45	**2070**	4.8	**15,064,608**	4.95	**10.76**	6	Cloudburst	72,310,119	1
	4/7/2015 4:30	4/7/2015 19:45	**915**	1.03	**10,068,486**	5.83	**0.45**	1	Atlas	10,370,540	1
	4/8/2015 15:45	4/8/2015 16:15	**30**	0.05	**30,406**	5.87	**0.03**	1	Atlas	1,520	1
	4/9/2015 11:30	4/9/2015 13:15	**105**	0.25	**180,809**	5.91	**0.21**	1	Atlas	45,202	1
	4/10/2015 2:00	4/10/2015 5:00	**180**	0.28	**11,109,996**	3.91	**0.19**	1	Atlas	3,110,799	1
	4/13/2015 19:00	4/14/2015 12:00	**1020**	0.87	**2,008,183**	2.47	**0.33**	24	Atlas	1,747,119	1
	4/16/2015 10:00	4/16/2015 10:00	**0**	0.04	**8,221**	1.45	**0.03**	3	Atlas	329	1
	4/19/2015 6:45	4/20/2015 4:30	**1305**	0.83	**1,081,961**	1.84	**0.34**	12	Atlas	898,027	1
	4/25/2015 8:45	4/25/2015 20:45	**720**	0.22	**59,859**	1.14	**0.08**	24	Atlas	13,169	1
	5/9/2015 3:15	5/9/2015 3:45	**30**	0.08	**70,358**	0.08	**0.04**	1	Atlas	5,629	1
	5/11/2015 16:45	5/11/2015 17:45	**60**	0.09	**24,123**	0.18	**0.07**	1	Atlas	2,171	1
	5/16/2015 11:30	5/16/2015 15:15	**225**	0.94	**5,790,655**	1.02	**0.50**	3	Atlas	5,443,216	1
	5/17/2015 14:00	5/17/2015 16:15	**135**	0.09	**148,793**	1.11	**0.04**	1	Atlas	13,391	1
	5/25/2015 6:15	5/25/2015 9:30	**195**	0.3	**33,017**	0.32	**0.15**	6	Atlas	9,905	1
	5/25/2015 18:30	5/25/2015 18:30	**0**	0.3	**36,815**	0.32	**0.15**	6	Atlas	11,044	1
	5/26/2015 13:30	5/26/2015 14:30	**60**	0.32	**33,025**	0.57	**0.23**	1	Atlas	10,568	1
	5/27/2015 13:45	5/27/2015 13:45	**0**	0.08	**8,320**	0.69	**0.07**	1	Atlas	666	1
	5/30/2015 13:15	5/31/2015 6:30	**1035**	0.1	**309,484**	0.8	**0.05**	1	Atlas	30,948	1
	6/1/2015 7:15	6/1/2015 9:30	**135**	0.16	**35,236**	0.81	**0.09**	3	Atlas	5,638	1
	6/8/2015 6:45	6/8/2015 10:00	**195**	0.14	**662,561**	0.26	**0.08**	3	Atlas	92,759	1
	6/11/2015 23:00	6/11/2015 23:00	**0**	Discharge						3,496	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**6/13/2015 18:15**	6/14/2015 2:00	**465**	Discharge						1,129	1
	6/15/2015 0:15	6/15/2015 0:15	**0**	0.01	**248,488**	0.15	**0.01**	1	Atlas	2,485	1
	6/17/2015 4:45	6/17/2015 8:15	**210**	0.66	**5,386,841**	0.67	**0.37**	3	Atlas	3,555,315	1
	6/18/2015 17:15	6/18/2015 20:15	**180**	0.83	**4,138,405**	1.48	**0.54**	1	Atlas	3,434,876	1
	6/19/2015 17:45	6/19/2015 18:15	**30**	1.14	**2,811**	1.71	**0.46**	12	Atlas	3,205	1
	6/20/2015 11:15	6/20/2015 12:15	**60**	1.14	**23,022**	2.72	**0.46**	12	Atlas	26,245	1
	6/21/2015 2:30	6/23/2015 10:15	**3345**	Discharge						645,626	1
	6/25/2015 14:15	6/25/2015 14:15	**0**	Discharge						13,643	1
	6/25/2015 23:45	6/26/2015 4:15	**270**	0.85	**1,315,299**	2.33	**0.46**	6	Atlas	1,118,004	1
	6/26/2015 17:00	6/27/2015 2:15	**555**	0.89	**11,338,031**	3.13	**0.50**	1	Atlas	10,090,847	1
	6/29/2015 5:00	6/29/2015 15:45	**645**	0.29	**2,975,682**	2.18	**0.14**	1	Atlas	862,948	1
	7/1/2015 23:30	7/2/2015 23:30	**1440**	0.99	**8,378,865**	3.08	**0.50**	3	Atlas	8,295,076	1
	7/3/2015 14:30	7/3/2015 18:00	**210**	1.51	**3,879,510**	3.71	**2.75**	1	Atlas	5,858,061	1
	7/7/2015 10:45	7/7/2015 16:30	**345**	1.07	**4,957,294**	3.55	**0.58**	3	Atlas	5,304,305	1
	7/8/2015 9:45	7/8/2015 12:45	**180**	1.07	**19,981**	3.63	**0.58**	3	Atlas	21,380	1
	7/9/2015 6:30	7/9/2015 13:45	**435**	0.28	**1,366,662**	3.02	**0.14**	1	Atlas	382,665	1
	7/10/2015 10:15	7/10/2015 18:15	**480**	0.46	**1,847,108**	3.37	**0.23**	6	Atlas	849,670	1
	7/12/2015 6:00	7/12/2015 9:45	**225**	0.7	**12,339,406**	2.55	**0.47**	3	Atlas	8,637,584	1
	7/13/2015 14:45	7/13/2015 17:45	**180**	0.38	**9,759,705**	2.93	**0.33**	1	Atlas	3,708,688	1
	7/14/2015 4:15	7/14/2015 7:00	**165**	0.27	**9,080,409**	3.2	**0.18**	1	Atlas	2,451,710	1
	7/14/2015 18:45	7/14/2015 21:15	**150**	0.14	**14,254,079**	2.35	**0.11**	1	Atlas	1,995,571	1
	7/16/2015 12:00	7/16/2015 18:45	**405**	Discharge						10,813	1
	7/17/2015 14:45	7/18/2015 4:15	**810**	Discharge						17,068,067	1
	7/18/2015 12:45	7/18/2015 12:45	**0**	Discharge						419	1
	7/27/2015 9:45	7/27/2015 10:00	**15**	0.04	**675,730**	0.07	**0.03**	1	Atlas	27,029	1
	7/29/2015 17:30	7/29/2015 19:15	**105**	0.33	**477,802**	0.38	**0.28**	1	Atlas	157,675	1
	8/2/2015 11:15	8/2/2015 11:15	**0**	Discharge						745	1
	8/3/2015 6:00	8/3/2015 6:30	**30**	Discharge						3,149	1
	8/3/2015 17:00	8/4/2015 7:30	**870**	Discharge						7,842	1
	8/4/2015 18:45	8/4/2015 20:45	**120**	0.28	**194,624**	0.61	**0.23**	1	Atlas	54,495	1
	8/5/2015 14:30	8/5/2015 20:45	**375**	1.24	**1,064,308**	1.33	**0.63**	1	Atlas	1,319,742	1
	8/6/2015 7:30	8/6/2015 10:30	**180**	1.24	**1,426,931**	1.42	**0.63**	1	Atlas	1,769,394	1
	8/9/2015 19:30	8/10/2015 7:30	**720**	Discharge						16,661	1
	8/10/2015 20:30	8/10/2015 20:45	**15**	0.1	**50,335**	1.65	**0.09**	1	Atlas	5,033	1
	8/13/2015 20:30	8/13/2015 20:30	**0**	Discharge						3,378	1
	8/14/2015 11:30	8/14/2015 11:30	**0**	Discharge						7,285	1
	8/14/2015 21:15	8/14/2015 21:45	**30**	Discharge						11,339	1
	8/15/2015 16:45	8/15/2015 18:30	**105**	0.01	**25,231,016**	0.14	**0.01**	1	Atlas	252,310	1
	8/19/2015 7:15	8/19/2015 18:45	**690**	0.8	**3,085,656**	0.79	**0.50**	1	Atlas	2,468,525	1
	8/23/2015 2:30	8/23/2015 2:30	**0**	0.07	**2,513**	0.83	**0.04**	1	Atlas	176	1
	8/23/2015 13:00	8/23/2015 13:00	**0**	0.07	**8,622**	0.88	**0.04**	1	Atlas	604	1
	8/25/2015 5:30	8/25/2015 5:30	**0**	Discharge						101	1
	8/25/2015 14:30	8/26/2015 8:00	**1050**	Discharge						50,142	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**8/27/2015 14:45**	8/27/2015 14:45	**0**	Discharge						99	1
	8/28/2015 1:45	8/28/2015 5:15	**210**	Discharge						5,450	1
	8/28/2015 17:00	8/29/2015 1:00	**480**	Discharge						7,066	1
	9/9/2015 4:30	9/9/2015 13:15	**525**	Discharge						2,291,358	1
	9/11/2015 17:45	9/11/2015 18:45	**60**	0.24	**16,092**	1.43	**0.14**	1	Atlas	3,862	1
	9/25/2015 22:45	9/25/2015 22:45	**0**	0.11	**136,598**	0.11	**0.05**	6	Atlas	15,026	1
	9/29/2015 6:15	9/29/2015 9:45	**210**	0.85	**26,394**	0.46	**0.28**	48	Atlas	22,435	1
	9/29/2015 18:15	9/29/2015 19:15	**60**	0.85	**15,249**	0.7	**0.28**	48	Atlas	12,962	1
	9/30/2015 8:00	9/30/2015 8:00	**0**	0.85	**693**	0.95	**0.28**	48	Atlas	589	1
	10/2/2015 15:30	10/2/2015 23:00	**450**	0.47	**2,000,838**	1.43	**0.22**	12	Atlas	940,394	1
	10/7/2015 14:00	10/7/2015 14:00	**0**	Discharge						439	1
	10/12/2015 17:45	10/12/2015 20:45	**180**	0.35	**650,044**	0.4	**0.25**	1	Atlas	227,515	1
	10/24/2015 16:45	10/24/2015 18:45	**120**	0.32	**39,355**	0.28	**0.17**	1	Atlas	12,594	1
	10/27/2015 15:15	10/28/2015 10:30	**1155**	3.38	**7,873,786**	3.59	**1.47**	24	Cloudburst	26,613,395	1
	11/6/2015 3:30	11/6/2015 7:00	**210**	0.91	**8,699,271**	1.05	**0.56**	3	Atlas	7,916,336	1
	11/9/2015 19:45	11/9/2015 23:00	**195**	0.65	**1,716,575**	1.56	**0.29**	12	Atlas	1,115,774	1
	11/12/2015 1:00	11/12/2015 3:00	**120**	0.29	**4,669,854**	1.85	**0.17**	3	Atlas	1,354,258	1
	11/18/2015 9:30	11/18/2015 16:45	**435**	1.75	**10,072,500**	2.18	**0.90**	6	Atlas	17,626,876	1
	11/28/2015 14:30	11/28/2015 20:00	**330**	0.83	**672,357**	0.75	**0.27**	48	Atlas	558,056	1
	11/30/2015 23:15	12/1/2015 6:45	**450**	0.51	**6,214,189**	1.41	**0.23**	12	Atlas	3,169,236	1
	12/14/2015 7:00	12/14/2015 8:45	**105**	0.27	**233,574**	0.26	**0.14**	6	Atlas	63,065	1
	12/21/2015 12:15	12/21/2015 12:15	**0**	0.5	**4,922**	0.24	**0.19**	24	Atlas	2,461	1
	12/22/2015 0:15	12/22/2015 6:00	**345**	0.5	**3,884,476**	0.53	**0.19**	24	Atlas	1,942,238	1
	12/23/2015 19:15	12/23/2015 23:30	**255**	1.28	**12,353,032**	1.8	**0.81**	1	Atlas	15,811,881	1
	12/26/2015 13:15	12/26/2015 19:30	**375**	0.42	**5,520,714**	2.32	**0.19**	12	Atlas	2,318,700	1
	12/27/2015 10:30	12/27/2015 19:15	**525**	2.65	**9,761,235**	3.81	**0.86**	48	Atlas	25,867,274	1
	12/28/2015 6:15	12/28/2015 7:15	**60**	2.65	**10,214**	4.12	**0.86**	48	Atlas	27,066	1
	12/28/2015 16:30	12/28/2015 22:15	**345**	2.65	**1,237,135**	4.76	**0.86**	48	Atlas	3,278,408	1
	2/2/2016 19:45	2/3/2016 4:00	**495**	1.34	**15,781,846**	1.39	**0.67**	6	Atlas	21,147,674	1
	2/21/2016 4:45	2/21/2016 13:15	**510**	0.8	**10,634,788**	1	**0.37**	12	Atlas	8,507,830	1
	2/23/2016 23:30	2/24/2016 10:45	**675**	2.32	**12,010,210**	2.79	**0.91**	12	Atlas	27,863,688	1
	3/1/2016 12:30	3/1/2016 15:30	**180**	0.71	**2,346,226**	3.08	**0.38**	6	Atlas	1,665,821	1
	3/9/2016 16:30	3/9/2016 18:15	**105**	1.31	**332,944**	0.37	**0.43**	48	Atlas	436,157	1
	3/10/2016 14:15	3/10/2016 21:30	**435**	1.31	**5,182,302**	1.34	**0.43**	48	Atlas	6,788,815	1
	3/12/2016 21:00	3/13/2016 1:45	**285**	0.48	**10,950,774**	1.65	**0.18**	24	Atlas	5,256,371	1
	3/13/2016 10:15	3/13/2016 12:15	**120**	0.48	**2,546,686**	1.82	**0.18**	24	Atlas	1,222,409	1
	3/24/2016 17:30	3/24/2016 19:45	**135**	0.51	**3,413,486**	0.58	**0.39**	1	Atlas	1,740,878	1
	3/27/2016 21:30	3/28/2016 0:30	**180**	0.73	**8,450,509**	1.24	**0.51**	1	Atlas	6,168,872	1
	3/31/2016 5:00	3/31/2016 9:30	**270**	1.38	**2,179,248**	2.03	**0.52**	24	Atlas	3,007,362	1
	3/31/2016 22:30	4/1/2016 2:00	**210**	1.38	**2,243,035**	2.11	**0.52**	24	Atlas	3,095,389	1
	4/11/2016 16:45	4/11/2016 21:00	**255**	1.14	**5,302,468**	1.3	**0.52**	6	Atlas	6,044,813	1
	4/21/2016 16:15	4/21/2016 17:15	**60**	0.41	**231,919**	0.16	**0.15**	24	Atlas	95,087	1
	4/26/2016 22:15	4/26/2016 23:15	**60**	0.24	**493,288**	0.67	**0.15**	1	Atlas	118,389	1
	4/27/2016 14:15	4/28/2016 0:15	**600**	0.91	**5,156,341**	1.58	**0.43**	3	Atlas	4,692,270	1
	4/30/2016 11:30	4/30/2016 14:45	**195**	0.79	**3,042,728**	1.58	**0.30**	24	Atlas	2,403,755	1
	5/1/2016 15:15	5/1/2016 17:30	**135**	0.65	**720,525**	2.59	**0.43**	3	Atlas	468,341	1
	5/7/2016 20:30	5/7/2016 23:45	**195**	0.52	**3,804,519**	1.76	**0.27**	3	Atlas	1,978,350	1
	5/10/2016 14:30	5/11/2016 0:15	**585**	0.72	**6,431,665**	1.53	**0.29**	3	Atlas	4,630,799	1
	5/11/2016 22:00	5/11/2016 23:45	**105**	0.3	**1,311,498**	1.6	**0.14**	3	Atlas	393,450	1
	5/17/2016 1:45	5/17/2016 5:30	**225**	0.64	**48,785**	1.47	**0.21**	24	Atlas	31,222	1
	5/20/2016 14:15	5/20/2016 18:00	**225**	0.63	**9,098,355**	1.29	**0.35**	3	Atlas	5,731,964	1
	5/26/2016 15:15	5/26/2016 16:15	**60**	0.36	**38,814**	1.09	**0.24**	3	Atlas	13,973	1
	5/31/2016 13:30	5/31/2016 13:30	**0**	Discharge						25,314	1
	6/2/2016 15:30	6/2/2016 18:45	**195**	1.49	**8,255,773**	1.72	**2.75**	1	Atlas	12,301,102	1
	6/4/2016 17:30	6/4/2016 19:00	**90**	0.18	**5,387,771**	1.74	**0.07**	12	Atlas	969,799	1
	6/12/2016 14:00	6/12/2016 20:00	**360**	Discharge						1,102,500	1
	6/14/2016 14:45	6/14/2016 20:45	**360**	1.46	**10,046,027**	2.05	**0.87**	1	Atlas	14,667,199	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO105	**6/15/2016 20:45**	6/15/2016 20:45	**0**	0.04	**45,293**	2.09	**0.03**	1	Atlas	1,812	1
	6/17/2016 0:15	6/17/2016 0:15	**0**	Discharge						7,877	1
	6/18/2016 14:15	6/18/2016 20:30	**375**	Discharge						5,212	1
	6/21/2016 15:00	6/21/2016 15:00	**0**	Discharge						7,041	1
	6/23/2016 16:00	6/24/2016 0:45	**525**	2.12	**8,838,732**	2.29	**1.11**	6	Cloudburst	18,738,111	1
Grand Total										**1,396,318,449**	**441**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO106	**11/3/2011 11:15**	11/3/2011 11:15	**0**	0.51	**1**	0.41	**0.23**	3	Atlas	0	1
	12/4/2011 16:45	12/4/2011 17:45	**60**	2.87	**314**	3.18	**0.93**	48	Atlas	902	1
	12/5/2011 3:15	12/6/2011 5:30	**1575**	2.87	**51,093**	4.83	**0.93**	48	Atlas	146,637	1
	12/27/2011 10:00	12/27/2011 12:00	**120**	0.8	**4,202**	1.98	**0.33**	12	Atlas	3,361	1
	2/2/2012 11:45	2/3/2012 9:45	**1320**	Discharge						74,088	1
	2/22/2012 23:00	2/22/2012 23:00	**0**	0.15	**3,343**	0.35	**0.11**	1	Atlas	501	1
	2/29/2012 6:00	2/29/2012 8:45	**165**	0.64	**6,532**	0.78	**0.29**	12	Atlas	4,181	1
	3/8/2012 13:00	3/8/2012 14:45	**105**	0.83	**1,949**	1.14	**0.38**	12	Atlas	1,618	1
	3/16/2012 0:45	3/16/2012 3:00	**135**	1.05	**2,953**	1.23	**0.46**	12	Atlas	3,101	1
	3/17/2012 18:30	3/17/2012 22:30	**240**	1.14	**15,540**	2.33	**0.69**	1	Atlas	17,716	1
	3/23/2012 5:00	3/23/2012 23:00	**1080**	1.6	**27,390**	2.74	**0.61**	24	Atlas	43,824	1
	4/1/2012 8:45	4/1/2012 14:30	**345**	1.87	**16,983**	2.04	**1.14**	6	Cloudburst	31,758	1
	4/28/2012 19:15	4/29/2012 0:15	**300**	0.79	**7,770**	0.93	**0.58**	1	Atlas	6,138	1
	4/30/2012 18:00	4/30/2012 18:00	**0**	0.32	**16,652**	1.18	**0.22**	1	Atlas	5,329	1
	5/5/2012	5/5/2012 1:45	**105**	1.39	**18,371**	2.26	**0.72**	6	Atlas	25,536	1
	5/13/2012 2:00	5/13/2012 9:30	**450**	2.2	**13,215**	2.1	**0.90**	12	Atlas	29,072	1
	5/29/2012 6:45	5/29/2012 17:45	**660**	3.11	**74,670**	3.11	**21.33**	3	Atlas	232,225	1
	5/31/2012 18:30	5/31/2012 21:15	**165**	1.32	**4,986**	3.98	**0.58**	12	Atlas	6,581	1
	7/1/2012 20:00	7/1/2012 20:00	**0**	0.52	**5,601**	0.44	**0.39**	1	Atlas	2,912	1
	7/8/2012 13:15	7/8/2012 13:15	**0**	0.13	**96,317**	0.68	**0.09**	1	Atlas	12,521	1
	7/14/2012 12:30	7/14/2012 14:30	**120**	0.7	**31,895**	0.88	**0.45**	3	Atlas	22,327	1
	7/18/2012 16:30	7/18/2012 17:30	**60**	Discharge						6,031	1
	7/19/2012 18:15	7/19/2012 19:00	**45**	0.81	**28,806**	1.5	**0.65**	1	Atlas	23,333	1
	7/24/2012 20:15	7/24/2012 20:15	**0**	0.2	**1,662**	1.1	**0.17**	1	Atlas	332	1
	7/27/2012 20:00	7/27/2012 21:00	**60**	0.71	**12,701**	1.05	**0.51**	1	Atlas	9,018	1
	8/16/2012 20:15	8/16/2012 20:15	**0**	0.63	**7,565**	0.36	**0.36**	3	Atlas	4,766	1
	8/21/2012 14:00	8/21/2012 14:00	**0**	0.16	**36,444**	0.8	**0.14**	1	Atlas	5,831	1
	9/1/2012 15:15	9/1/2012 15:15	**0**	0.63	**5,424**	0.43	**0.39**	3	Atlas	3,417	1
	9/2/2012 12:00	9/2/2012 21:30	**570**	0.82	**9,132**	1.5	**0.32**	24	Atlas	7,488	1
	9/5/2012 15:30	9/5/2012 16:45	**75**	0.97	**17,312**	2.49	**0.75**	1	Atlas	16,793	1
	9/7/2012 23:30	9/8/2012 6:30	**420**	1.17	**922**	3.62	**0.65**	3	Atlas	1,079	1
	9/25/2012 8:45	9/25/2012 8:45	**0**	0.44	**721**	0.24	**0.25**	3	Atlas	317	1
	9/25/2012 23:45	9/26/2012 1:45	**120**	0.4	**1,411**	0.7	**0.19**	6	Atlas	565	1
	9/26/2012 21:15	9/26/2012 23:45	**150**	0.94	**13,498**	1.74	**0.53**	3	Atlas	12,688	1
	10/1/2012 16:15	10/1/2012 18:45	**150**	0.85	**6,270**	2.61	**0.36**	12	Atlas	5,330	1
	10/2/2012 8:15	10/2/2012 8:15	**0**	Discharge						316	1
	12/4/2012 17:00	12/4/2012 17:00	**0**	0.5	**949**	0.67	**0.32**	3	Atlas	474	1
	12/7/2012 1:45	12/7/2012 18:15	**990**	1.37	**5,412**	2.06	**0.58**	12	Atlas	7,414	1
	12/8/2012 5:30	12/8/2012 9:45	**255**	0.65	**2,299**	2.71	**0.35**	6	Atlas	1,495	1
	12/9/2012 20:30	12/10/2012 3:45	**435**	1.14	**35,358**	3.6	**0.52**	3	Atlas	40,308	1
	12/20/2012 6:30	12/20/2012 11:30	**300**	0.76	**11,888**	1.05	**0.39**	6	Atlas	9,035	1
	12/26/2012 5:15	12/26/2012 9:00	**225**	0.81	**10,423**	1.48	**0.32**	12	Atlas	8,442	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO106	**1/11/2013 5:30**	1/11/2013 6:15	**45**	0.62	**1,827**	0.67	**0.32**	6	Atlas	1,132	1
	1/13/2013 3:00	1/13/2013 23:30	**1230**	2.42	**31,943**	3.21	**0.93**	24	Atlas	77,301	1
	1/28/2013 17:00	1/28/2013 17:00	**0**	0.07	**11,136**	0.34	**0.04**	1	Atlas	780	1
	1/30/2013 4:45	1/30/2013 7:45	**180**	0.8	**1,722**	0.95	**0.40**	6	Atlas	1,377	1
	2/26/2013 13:30	2/26/2013 13:30	**0**	0.65	**36**	0.79	**0.25**	12	Atlas	23	1
	3/11/2013 5:30	3/11/2013 6:30	**60**	1	**2,955**	1.27	**0.39**	12	Atlas	2,955	1
	3/17/2013 13:45	3/17/2013 14:45	**60**	1.71	**332**	1.61	**0.56**	48	Atlas	568	1
	3/18/2013 4:00	3/18/2013 11:00	**420**	1.71	**24,840**	2.21	**0.56**	48	Atlas	42,476	1
	3/24/2013 7:45	3/24/2013 15:45	**480**	0.49	**2,029**	1.73	**0.18**	24	Atlas	994	1
	4/11/2013 6:45	4/11/2013 7:15	**30**	1.22	**14,183**	0.47	**0.47**	24	Atlas	17,303	1
	4/16/2013 20:00	4/16/2013 20:15	**15**	0.48	**18,315**	1.67	**0.38**	1	Atlas	8,791	1
	4/19/2013 2:00	4/19/2013 4:15	**135**	0.85	**23,368**	1.35	**0.46**	6	Atlas	19,863	1
	4/24/2013 8:15	4/24/2013 9:00	**45**	0.74	**4,431**	1.55	**0.41**	3	Atlas	3,279	1
	5/10/2013 14:00	5/10/2013 23:30	**570**	1.11	**951**	2.69	**0.50**	6	Atlas	1,056	1
	6/17/2013 16:15	6/17/2013 20:45	**270**	1.05	**25,994**	1.21	**0.54**	6	Atlas	27,294	1
	6/21/2013 18:30	6/21/2013 19:30	**60**	0.64	**156,960**	1.97	**0.49**	1	Atlas	100,454	1
	6/24/2013 22:00	6/24/2013 22:00	**0**	Discharge						124	1
	6/25/2013 7:30	6/25/2013 12:45	**315**	Discharge						553	1
	6/25/2013 21:30	6/26/2013 4:45	**435**	Discharge						39,167	1
	6/26/2013 16:00	6/26/2013 21:30	**330**	2.5	**74,947**	3.81	**3.50**	1	Atlas	187,369	1
	6/29/2013 19:45	6/29/2013 19:45	**0**	0.47	**21,060**	3.64	**0.30**	3	Atlas	9,898	1
	7/3/2013 18:15	7/3/2013 18:15	**0**	0.07	**1,074**	1.82	**0.05**	3	Atlas	75	1
	7/6/2013 1:00	7/6/2013 1:30	**30**	0.66	**34,120**	1.85	**0.28**	12	Atlas	22,519	1
	7/10/2013 14:00	7/10/2013 14:15	**15**	0.8	**14,154**	2.18	**0.53**	3	Atlas	11,323	1
	7/14/2013 19:15	7/14/2013 19:15	**0**	0.2	**68,482**	1.11	**0.17**	1	Atlas	13,696	1
	7/21/2013 19:00	7/21/2013 20:00	**60**	3.37	**6,819**	2.53	**5.14**	3	Atlas	22,980	1
	7/22/2013 7:30	7/22/2013 17:15	**585**	3.37	**9,792**	3.57	**5.14**	3	Atlas	33,000	1
	8/9/2013 17:00	8/9/2013 17:30	**30**	0.5	**18,245**	0.43	**0.24**	1	Atlas	9,123	1
	8/12/2013 14:45	8/12/2013 15:00	**15**	0.89	**79,690**	1.02	**0.37**	3	Atlas	70,924	1
	8/13/2013 2:15	8/13/2013 2:15	**0**	0.89	**11,669**	1.25	**0.37**	3	Atlas	10,386	1
	8/20/2013 17:45	8/20/2013 18:00	**15**	0.28	**37,526**	0.27	**0.19**	1	Atlas	10,507	1
	8/31/2013 19:30	8/31/2013 20:15	**45**	1.14	**8,251**	0.56	**0.52**	6	Atlas	9,406	1
	9/2/2013 13:45	9/2/2013 14:15	**30**	0.64	**22,879**	1.78	**0.56**	1	Atlas	14,642	1
	9/11/2013 10:15	9/11/2013 10:15	**0**	0.04	**4,092**	0.05	**0.03**	1	Atlas	164	1
	9/20/2013 19:15	9/21/2013 3:45	**510**	1.59	**15,824**	1.47	**0.66**	12	Atlas	25,161	1
	10/4/2013 18:45	10/4/2013 18:45	**0**	0.15	**1,945**	0.21	**0.13**	1	Atlas	292	1
	10/5/2013 12:30	10/6/2013 19:00	**1830**	5.83	**78,753**	6.06	**34.87**	24	Atlas	459,128	1
	10/30/2013 1:15	10/30/2013 6:00	**285**	1.96	**20,340**	1.91	**1.57**	1	Atlas	39,867	1
	11/17/2013 5:30	11/17/2013 21:30	**960**	2.64	**55,517**	2.81	**2.29**	6	Cloudburst	146,565	1
	11/21/2013 19:00	11/21/2013 20:00	**60**	0.07	**10,716**	2.8	**0.05**	1	Atlas	750	1
	11/24/2013 11:00	11/25/2013 2:00	**900**	Discharge						3,245	1
	11/25/2013 10:15	11/25/2013 10:15	**0**	Discharge						107	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO106	**11/26/2013 8:45**	11/26/2013 15:45	**420**	0.03	**36,826**	0.11	**0.01**	12	Atlas	1,105	1
	11/27/2013 8:30	11/27/2013 13:00	**270**	Discharge						737	1
	11/27/2013 21:45	11/27/2013 21:45	**0**	Discharge						197	1
	11/28/2013 6:45	11/28/2013 10:15	**210**	Discharge						2,105	1
	11/29/2013 22:45	11/29/2013 22:45	**0**	Discharge						279	1
	12/5/2013 7:30	12/5/2013 8:00	**30**	0.7	**4,673**	0.17	**0.23**	48	Atlas	3,271	1
	12/14/2013 10:45	12/14/2013 11:15	**30**	1.09	**3,479**	1.29	**0.48**	6	Atlas	3,792	1
	12/21/2013 8:00	12/22/2013 9:15	**1515**	2.81	**48,007**	3.21	**1.33**	3	Atlas	134,900	1
	1/11/2014 0:15	1/11/2014 5:00	**285**	1.08	**6,580**	1.6	**0.58**	6	Atlas	7,107	1
	2/4/2014 19:45	2/5/2014 3:00	**435**	0.48	**19,359**	0.88	**0.23**	6	Atlas	9,292	1
	2/17/2014 16:00	2/17/2014 17:15	**75**	0.39	**36,295**	0.82	**0.23**	3	Atlas	14,155	1
	2/20/2014 22:45	2/20/2014 22:45	**0**	0.24	**3,774**	1.04	**0.13**	6	Atlas	906	1
	3/2/2014 10:15	3/2/2014 10:30	**15**	0.64	**2,389**	0.24	**0.24**	24	Atlas	1,529	1
	3/29/2014 6:45	3/29/2014 8:30	**105**	1.21	**4,253**	1.07	**0.56**	6	Atlas	5,146	1
	4/3/2014 12:00	4/4/2014 14:30	**1590**	2.63	**28,028**	4.23	**0.92**	24	Atlas	73,713	1
	4/7/2014 10:30	4/7/2014 13:45	**195**	0.74	**20,230**	3.49	**0.46**	1	Atlas	14,970	1
	4/14/2014 20:00	4/14/2014 21:00	**60**	0.61	**1,137**	0.72	**0.28**	12	Atlas	694	1
	4/27/2014 20:15	4/28/2014 8:15	**720**	1.75	**23,165**	1.48	**0.65**	24	Atlas	40,539	1
	4/28/2014 17:30	4/28/2014 17:30	**0**	1.75	**36**	1.75	**0.65**	24	Atlas	62	1
	5/9/2014 19:15	5/10/2014 15:15	**1200**	1.74	**53,119**	1.79	**0.67**	24	Atlas	92,426	1
	5/14/2014 7:00	5/14/2014 7:00	**0**	1.18	**127**	1.99	**0.42**	24	Atlas	150	1
	5/14/2014 18:00	5/14/2014 18:30	**30**	1.18	**2,812**	2.71	**0.42**	24	Atlas	3,319	1
	5/22/2014 2:30	5/22/2014 2:30	**0**	0.52	**682**	0.36	**0.26**	1	Atlas	355	1
	5/29/2014 20:45	5/29/2014 21:30	**45**	0.67	**52,830**	0.76	**0.47**	1	Atlas	35,396	1
	6/11/2014 14:15	6/11/2014 14:15	**0**	0.16	**74,460**	0.4	**0.10**	1	Atlas	11,914	1
	6/20/2014 15:45	6/20/2014 17:30	**105**	0.22	**11,065**	0.22	**0.15**	3	Atlas	2,434	1
	6/24/2014 13:30	6/24/2014 13:30	**0**	0.27	**530**	0.53	**0.19**	1	Atlas	143	1
	7/2/2014 16:15	7/2/2014 16:15	**0**	0.16	**1,532**	0.35	**0.14**	1	Atlas	245	1
	7/13/2014 21:45	7/13/2014 23:15	**90**	0.73	**36,672**	1.57	**0.39**	3	Atlas	26,771	1
	7/26/2014 21:30	7/27/2014 9:00	**690**	1.39	**13,502**	1.41	**0.63**	12	Atlas	18,768	1
	8/8/2014 5:30	8/8/2014 7:45	**135**	1.01	**19,457**	0.85	**0.50**	3	Atlas	19,651	1
	8/9/2014 3:45	8/9/2014 3:45	**0**	0.08	**3,243**	1.1	**0.04**	6	Atlas	259	1
	8/11/2014 15:15	8/11/2014 15:30	**15**	0.32	**14,170**	1.57	**0.22**	1	Atlas	4,535	1
	8/17/2014 9:30	8/17/2014 10:00	**30**	0.69	**222**	0.87	**0.25**	24	Atlas	153	1
	8/22/2014 19:00	8/22/2014 23:00	**240**	0.63	**18,525**	1.33	**0.48**	1	Atlas	11,671	1
	8/23/2014 20:00	8/23/2014 20:00	**0**	0.61	**22,851**	1.61	**0.28**	12	Atlas	13,939	1
	8/27/2014 15:00	8/27/2014 17:45	**165**	0.62	**11,959**	1.87	**0.41**	3	Atlas	7,415	1
	8/30/2014 15:00	8/30/2014 15:45	**45**	0.52	**13,551**	1.57	**0.30**	1	Atlas	7,046	1
	9/2/2014 8:15	9/2/2014 8:15	**0**	0.3	**31,126**	1.33	**0.20**	3	Atlas	9,338	1
	9/11/2014 0:30	9/11/2014 9:45	**555**	2.03	**36,226**	2.04	**1.70**	3	Atlas	73,539	1
	10/3/2014 3:15	10/3/2014 4:00	**45**	0.18	**19,615**	0.12	**0.07**	24	Atlas	3,531	1
	10/6/2014 7:45	10/6/2014 7:45	**0**	0.14	**3,853**	0.27	**0.05**	24	Atlas	539	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO106	**10/7/2014 11:45**	10/7/2014 11:45	**0**	0.16	**3,759**	0.48	**0.13**	1	Atlas	601	1
	10/10/2014 1:45	10/10/2014 2:45	**60**	0.82	**10,464**	1.01	**0.36**	3	Atlas	8,580	1
	10/13/2014 5:30	10/13/2014 5:30	**0**	0.5	**353**	1.51	**0.33**	3	Atlas	177	1
	10/13/2014 23:15	10/13/2014 23:30	**15**	1.21	**18,942**	1.86	**0.54**	12	Atlas	22,920	1
	10/14/2014 8:15	10/14/2014 8:15	**0**	1.21	**67**	2.58	**0.54**	12	Atlas	81	1
	10/31/2014 17:45	11/1/2014 17:30	**1425**	0.17	**106,759**	0.27	**0.06**	24	Atlas	18,149	1
	11/2/2014 8:45	11/2/2014 18:30	**585**	Discharge						11,467	1
	11/3/2014 8:00	11/3/2014 12:15	**255**	Discharge						2,130	1
	11/23/2014 17:15	11/23/2014 18:00	**45**	0.81	**2,428**	0.94	**0.37**	6	Atlas	1,966	1
	12/1/2014 4:15	12/1/2014 4:30	**15**	0.73	**918**	0.29				670	1
	12/5/2014 23:00	12/6/2014 8:45	**585**	1.84	**8,741**	2.56	**0.59**	48	Atlas	16,083	1
	12/22/2014 23:15	12/22/2014 23:15	**0**	0.24	**1,583**	0.23	**0.15**	3	Atlas	380	1
	12/28/2014 1:00	12/28/2014 1:00	**0**	0.28	**3,328**	0.72	**0.13**	1	Atlas	932	1
	1/3/2015 10:30	1/3/2015 10:30	**0**	0.32	**559**	0.37	**0.12**	24	Atlas	179	1
	3/3/2015 23:15	3/4/2015 12:45	**810**	1.63	**23,896**	1.12	**0.53**	48	Atlas	38,950	1
	3/4/2015 21:45	3/4/2015 22:30	**45**	1.63	**235**	1.52	**0.53**	48	Atlas	382	1
	3/19/2015 11:30	3/19/2015 14:30	**180**	0.18	**1**	1.66	**0.07**	24	Atlas	0	1
	3/24/2015 16:15	3/24/2015 19:00	**165**	0.1	**864**	0.21	**0.05**	1	Atlas	86	1
	3/26/2015 4:15	3/26/2015 4:30	**15**	0.46	**11,490**	0.5	**0.20**	3	Atlas	5,285	1
	4/2/2015 10:30	4/3/2015 19:30	**1980**	5.54	**120,044**	5.68	**28.12**	6	Cloudburst	665,046	1
	4/4/2015 12:15	4/4/2015 12:15	**0**	Discharge						485	1
	4/7/2015 9:15	4/8/2015 21:30	**2175**	0.69	**89,374**	6.41	**0.29**	12	Atlas	61,668	1
	4/9/2015 11:30	4/9/2015 14:30	**180**	0.36	**31,639**	6.39	**0.31**	1	Atlas	11,390	1
	4/10/2015 2:15	4/10/2015 2:15	**0**	0.15	**1,133**	3.75	**0.09**	3	Atlas	170	1
	4/19/2015 14:00	4/19/2015 14:30	**30**	0.72	**32,830**	1.25	**0.31**	12	Atlas	23,638	1
	4/20/2015 3:15	4/20/2015 3:15	**0**	0.07	**3,745**	1.37	**0.06**	1	Atlas	262	1
	4/25/2015 18:45	4/25/2015 18:45	**0**	0.05	**23,150**	0.92	**0.03**	3	Atlas	1,158	1
	5/11/2015 17:30	5/11/2015 17:30	**0**	0.14	**89,375**	0.29	**0.12**	1	Atlas	12,512	1
	5/17/2015 14:15	5/17/2015 14:15	**0**	0.11	**7,022**	0.51	**0.08**	1	Atlas	772	1
	5/26/2015 13:30	5/26/2015 14:00	**30**	0.25	**11,010**	0.47	**0.15**	1	Atlas	2,753	1
	5/27/2015 13:30	5/27/2015 13:30	**0**	0.27	**3,391**	0.79	**0.23**	1	Atlas	916	1
	6/8/2015 8:15	6/8/2015 8:15	**0**	0.35	**12,697**	0.38	**0.19**	3	Atlas	4,444	1
	6/17/2015 4:30	6/17/2015 5:30	**60**	0.6	**26,683**	0.78	**0.33**	3	Atlas	16,010	1
	6/18/2015 16:00	6/18/2015 17:30	**90**	2.28	**40,167**	1.94	**0.74**	48	Atlas	91,582	1
	6/19/2015 2:45	6/19/2015 2:45	**0**	2.28	**29**	2.07	**0.74**	48	Atlas	66	1
	6/20/2015 1:30	6/20/2015 8:45	**435**	2.28	**22,617**	3.3	**0.74**	48	Atlas	51,567	1
	6/25/2015 23:45	6/26/2015 1:45	**120**	0.63	**13,918**	1.94	**0.34**	6	Atlas	8,768	1
	6/26/2015 17:00	6/27/2015 2:45	**585**	0.75	**32,946**	2.68	**0.35**	1	Atlas	24,709	1
	6/29/2015 13:15	6/29/2015 13:45	**30**	0.14	**63,608**	1.52	**0.10**	1	Atlas	8,905	1
	7/2/2015 0:30	7/2/2015 1:45	**75**	0.74	**3,052**	2.12	**0.37**	3	Atlas	2,258	1
	7/2/2015 10:15	7/2/2015 21:00	**645**	0.74	**20,283**	2.33	**0.37**	3	Atlas	15,010	1
	7/3/2015 14:45	7/3/2015 20:00	**315**	0.3	**30,057**	1.99	**0.17**	1	Atlas	9,017	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO106	**7/7/2015 11:45**	7/7/2015 16:15	**270**	0.68	**3,361**	1.76	**0.35**	6	Atlas	2,286	1
	7/9/2015 6:00	7/9/2015 6:15	**15**	0.21	**12,768**	1.28	**0.13**	3	Atlas	2,681	1
	7/10/2015 9:45	7/10/2015 18:00	**495**	0.67	**65,143**	1.95	**0.33**	6	Atlas	43,646	1
	7/12/2015 5:45	7/12/2015 8:15	**150**	0.9	**65,163**	2.55	**0.63**	1	Atlas	58,647	1
	7/13/2015 14:15	7/13/2015 16:00	**105**	0.4	**12,817**	2.96	**0.33**	1	Atlas	5,127	1
	7/14/2015 4:00	7/14/2015 5:30	**90**	0.5	**45,276**	3.45	**0.37**	1	Atlas	22,638	1
	7/14/2015 15:30	7/14/2015 21:45	**375**	Discharge						1,386	1
	7/17/2015 22:30	7/18/2015 0:45	**135**	0.87	**51,572**	2.71	**0.58**	3	Atlas	44,868	1
	7/29/2015 17:15	7/29/2015 17:15	**0**	0.06	**22,200**	0.14	**0.05**	1	Atlas	1,332	1
	8/4/2015 19:00	8/4/2015 19:00	**0**	0.18	**2,174**	0.19	**0.14**	1	Atlas	391	1
	8/5/2015 14:45	8/5/2015 14:45	**0**	1.08	**98**	0.29	**0.40**	24	Atlas	106	1
	8/6/2015 7:30	8/6/2015 15:30	**480**	1.08	**34,088**	1.26	**0.40**	24	Atlas	36,815	1
	8/19/2015 7:30	8/19/2015 8:15	**45**	0.65	**8,745**	0.31	**0.27**	1	Atlas	5,684	1
	8/19/2015 16:45	8/19/2015 16:45	**0**	0.65	**13,560**	0.66	**0.27**	1	Atlas	8,814	1
	9/7/2015 17:45	9/7/2015 18:30	**45**	1.05	**39,956**	1.15	**0.91**	1	Atlas	41,954	1
	9/9/2015 11:15	9/9/2015 11:15	**0**	0.1	**3,332**	1.25	**0.08**	1	Atlas	333	1
	9/29/2015 18:45	9/29/2015 18:45	**0**	1.02	**391**	0.94	**0.33**	48	Atlas	399	1
	10/12/2015 19:00	10/12/2015 19:00	**0**	0.29	**16,374**	0.38	**0.19**	3	Atlas	4,749	1
	10/27/2015 17:00	10/28/2015 6:30	**810**	2.68	**4,386**	3.02	**0.87**	48	Atlas	11,753	1
	11/4/2015 14:15	11/4/2015 14:30	**15**	Discharge						531	1
	11/6/2015 3:45	11/6/2015 5:30	**105**	0.66	**15,463**	0.79	**0.41**	3	Atlas	10,205	1
	2/2/2016 8:45	2/2/2016 10:30	**105**	Discharge						6,797	1
	2/3/2016 14:15	2/3/2016 14:30	**15**	Discharge						1,473	1
	2/4/2016 7:00	2/7/2016 19:45	**5085**	Discharge						138,460	1
	2/8/2016 6:30	2/9/2016 0:45	**1095**	0.11	**269,864**	1.62	**0.04**	24	Atlas	29,685	1
	2/9/2016 9:00	2/9/2016 20:30	**690**	Discharge						19,576	1
	2/10/2016 9:30	2/10/2016 20:00	**630**	Discharge						18,838	1
	2/11/2016 8:00	2/13/2016 1:00	**2460**	Discharge						49,472	1
	2/13/2016 10:15	2/13/2016 19:45	**570**	Discharge						23,124	1
	2/14/2016 13:00	2/14/2016 14:45	**105**	0.17	**19,765**	0.21	**0.08**	12	Atlas	3,360	1
	2/15/2016 1:30	2/16/2016 17:45	**2415**	0.17	**574,080**	0.34	**0.08**	12	Atlas	97,594	1
	2/17/2016 7:30	2/17/2016 18:00	**630**	Discharge						17,996	1
	2/18/2016 10:30	2/18/2016 12:00	**90**	Discharge						3,312	1
Grand Total										**4,795,608**	**201**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO108	**4/23/2011 14:15**	4/23/2011 19:00	**285**	5.12	**1,793,330**	4.46	**3.59**	48	Atlas	9,181,849	1
	4/27/2011 1:00	4/27/2011 12:45	**705**	2.92	**18,991,472**	8.12	**1.63**	24	Cloudburst	55,455,099	1
	5/2/2011 23:45	5/3/2011 8:30	**525**	2.93	**499,482**	6.7	**0.95**	48	Atlas	1,463,481	1
	5/23/2011 18:00	5/23/2011 18:00	**0**	0.78	**168,871**	1.38	**0.51**	3	Atlas	131,719	1
	6/22/2011 21:15	6/23/2011 7:15	**600**	3.2	**16,559,352**	5.63	**10.00**	3	Atlas	52,989,925	1
	7/30/2011 20:30	7/30/2011 21:00	**30**	0.94	**1,382,441**	1.48	**0.69**	1	Atlas	1,299,495	1
	8/7/2011 3:00	8/7/2011 3:15	**15**	1.9	**302,626**	1.19	**1.87**	3	Atlas	574,989	1
	9/26/2011	9/26/2011 6:15	**375**	3.35	**3,445,782**	5.07	**6.06**	12	Cloudburst	11,543,371	1
	11/28/2011 13:30	11/29/2011 1:30	**720**	3.42	**182,391**	4.69	**1.37**	48	Cloudburst	623,778	1
	12/5/2011 14:45	12/5/2011 19:15	**270**	3.15	**1,108,887**	4.21	**1.12**	48	Cloudburst	3,492,995	1
	12/17/2011 21:30	12/19/2011 5:00	**1890**	Discharge						86,698,772	1
	12/19/2011 15:45	12/21/2011 10:30	**2565**	Discharge						28,775,115	1
	12/26/2011 20:45	12/27/2011 14:45	**1080**	Discharge						5,055,038	1
	12/28/2011 4:45	12/28/2011 5:45	**60**	Discharge						1,242,088	1
	12/31/2011 14:30	12/31/2011 20:30	**360**	Discharge						2,700,217	1
	1/1/2012 5:45	1/2/2012 22:45	**2460**	Discharge						97,053,647	1
	1/26/2012 20:15	1/26/2012 22:00	**105**	1.92	**536,283**	2.42	**0.62**	48	Atlas	1,029,663	1
	1/28/2012 19:30	1/28/2012 19:30	**0**	Discharge						67,882	1
	2/1/2012 8:00	2/3/2012 13:30	**3210**	Discharge						206,257,955	1
	3/17/2012 18:30	3/17/2012 18:30	**0**	1.23	**219,559**	2	**0.65**	3	Atlas	270,057	1
	4/1/2012 10:15	4/1/2012 10:15	**0**	1.53	**19,380**	1.61	**0.83**	6	Atlas	29,651	1
	4/28/2012 19:15	4/28/2012 19:15	**0**	0.78	**486,663**	0.78	**0.55**	1	Atlas	379,597	1
	5/5/2012 0:15	5/5/2012 3:15	**180**	1.42	**232,060**	2.41	**0.73**	3	Atlas	329,525	1
	5/13/2012 3:00	5/13/2012 17:00	**840**	2.43	**341,505**	2.47	**0.99**	12	Atlas	829,858	1
	5/29/2012 7:00	5/29/2012 18:15	**675**	3.12	**18,943,804**	3.12	**21.63**	3	Atlas	59,104,668	1
	5/31/2012 19:15	6/1/2012 0:30	**315**	1.44	**306,576**	4.13	**0.63**	12	Atlas	441,470	1
	6/1/2012 9:00	6/3/2012 10:00	**2940**	1.44	**391,801**	4.58	**0.63**	12	Atlas	564,194	1
	7/1/2012 20:15	7/1/2012 20:30	**15**	0.4	**267,915**	0.32	**0.28**	1	Atlas	107,166	1
	7/14/2012 14:00	7/14/2012 14:45	**45**	0.87	**195,131**	1	**0.57**	3	Atlas	169,764	1
	7/18/2012 16:45	7/18/2012 16:45	**0**	Discharge						28,462	1
	7/19/2012 18:15	7/19/2012 18:45	**30**	0.7	**347,306**	1.58	**0.57**	1	Atlas	243,114	1
	9/1/2012 15:30	9/1/2012 15:30	**0**	0.55	**50,700**	0.42	**0.35**	3	Atlas	27,885	1
	9/5/2012 15:30	9/5/2012 16:15	**45**	0.82	**403,509**	2.34	**0.63**	1	Atlas	330,877	1
	9/26/2012 23:15	9/26/2012 23:30	**15**	0.83	**17,135**	1.57	**0.49**	3	Atlas	14,222	1
	10/1/2012 18:30	10/1/2012 18:30	**0**	1.14	**4,198**	2.83	**0.49**	12	Atlas	4,786	1
	12/9/2012 22:15	12/10/2012 4:15	**360**	1.2	**855,889**	3.94	**0.51**	3	Atlas	1,027,067	1
	1/11/2013 6:15	1/11/2013 6:15	**0**	0.67	**82,225**	0.7	**0.35**	6	Atlas	55,091	1
	1/13/2013 4:00	1/14/2013 4:15	**1455**	2.33	**8,479,077**	3.17	**0.89**	24	Atlas	19,756,249	1
	3/18/2013 4:45	3/18/2013 14:45	**600**	1.68	**1,633,346**	2.15	**0.55**	48	Atlas	2,744,021	1
	4/16/2013 20:00	4/16/2013 20:45	**45**	0.52	**2,248,771**	1.74	**0.41**	1	Atlas	1,169,361	1
	4/19/2013 2:45	4/19/2013 3:15	**30**	1	**504,568**	1.36	**0.55**	3	Atlas	504,568	1
	4/24/2013 9:15	4/24/2013 9:15	**0**	0.67	**664**	1.66	**0.37**	6	Atlas	445	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO108	**5/10/2013 14:15**	5/11/2013 0:45	**630**	1.06	**83,955**	2.58	**0.49**	6	Atlas	88,992	1
	6/17/2013 16:15	6/17/2013 23:00	**405**	1.52	**1,236,417**	1.74	**0.89**	1	Atlas	1,879,354	1
	6/21/2013 19:15	6/21/2013 20:30	**75**	0.82	**451,830**	2.61	**0.53**	1	Atlas	370,501	1
	6/26/2013 3:30	6/26/2013 4:00	**30**	0.62	**348,640**	1.6	**0.41**	3	Atlas	216,157	1
	6/26/2013 16:15	6/27/2013 11:15	**1140**	2.42	**12,925,470**	4.18	**3.22**	1	Atlas	31,279,637	1
	6/29/2013 20:15	6/29/2013 20:30	**15**	0.55	**399,931**	3.76	**0.35**	3	Atlas	219,962	1
	7/10/2013 14:00	7/10/2013 15:00	**60**	0.89	**867,487**	2.41	**0.58**	3	Atlas	772,063	1
	7/14/2013 19:45	7/14/2013 20:00	**15**	0.17	**287,059**	1.17	**0.15**	1	Atlas	48,800	1
	7/21/2013 19:15	7/21/2013 20:00	**45**	3.43	**54,881**	2.43	**8.46**	1	Atlas	188,242	1
	7/22/2013 7:45	7/22/2013 16:45	**540**	3.43	**516,432**	3.63	**8.46**	1	Atlas	1,771,361	1
	8/9/2013 17:30	8/9/2013 18:00	**30**	0.45	**553,149**	0.48	**0.27**	3	Atlas	248,917	1
	8/12/2013 14:45	8/12/2013 15:45	**60**	1.02	**900,070**	1.25	**0.50**	1	Atlas	918,071	1
	8/13/2013 2:45	8/13/2013 3:00	**15**	1.02	**137,525**	1.55	**0.50**	1	Atlas	140,275	1
	8/31/2013 20:00	8/31/2013 20:15	**15**	1.3	**112,682**	0.53	**0.60**	6	Atlas	146,486	1
	9/2/2013 14:00	9/2/2013 14:45	**45**	0.74	**745,104**	2.04	**0.64**	1	Atlas	551,377	1
	9/20/2013 19:45	9/20/2013 23:00	**195**	1.58	**27,171**	0.89	**0.71**	12	Atlas	42,930	1
	10/4/2013 19:15	10/4/2013 19:30	**15**	0.15	**202,440**	0.22	**0.13**	1	Atlas	30,366	1
	10/5/2013 13:00	10/7/2013 13:15	**2895**	5.35	**25,070,562**	5.57	**22.20**	24	Atlas	134,127,507	1
	10/30/2013 5:00	10/30/2013 8:15	**195**	1.52	**1,440,046**	1.52	**0.77**	6	Atlas	2,188,870	1
	11/17/2013 6:45	11/17/2013 22:45	**960**	2.85	**3,638,611**	3.03	**3.04**	6	Cloudburst	10,370,041	1
	12/5/2013 8:00	12/5/2013 8:00	**0**	0.72	**2,801**	0.14	**0.23**	48	Atlas	2,017	1
	12/21/2013 14:15	12/24/2013 10:30	**4095**	2.85	**5,372,711**	2.94	**1.40**	3	Atlas	15,312,227	1
	2/4/2014 23:15	2/5/2014 3:00	**225**	0.57	**412,488**	1.05	**0.26**	6	Atlas	235,118	1
	2/17/2014 16:30	2/17/2014 16:45	**15**	0.57	**156,202**	1.2	**0.37**	1	Atlas	89,035	1
	4/3/2014 12:30	4/6/2014 12:45	**4335**	2.65	**2,180,918**	3.97	**0.94**	24	Atlas	5,779,432	1
	4/7/2014 11:00	4/7/2014 12:45	**105**	0.76	**63,354**	3.58	**0.49**	1	Atlas	48,149	1
	4/8/2014 23:30	4/10/2014 14:00	**2310**	0.06	**9,148,133**	3.47	**0.04**	1	Atlas	548,888	1
	4/27/2014 20:15	4/28/2014 7:30	**675**	1.82	**318,787**	1.58	**0.72**	3	Atlas	580,192	1
	5/9/2014 19:45	5/9/2014 20:00	**15**	1.83	**54,133**	0.49	**0.70**	24	Atlas	99,063	1
	5/10/2014 7:15	5/10/2014 15:15	**480**	1.83	**94,802**	1.91	**0.70**	24	Atlas	173,488	1
	7/13/2014 21:45	7/13/2014 23:30	**105**	1.04	**300,801**	1.31	**0.65**	1	Atlas	312,833	1
	7/26/2014 21:45	7/26/2014 22:30	**45**	1.48	**103,799**	0.61	**0.67**	12	Atlas	153,622	1
	8/11/2014 15:45	8/11/2014 16:00	**15**	0.24	**388,825**	1.38	**0.13**	6	Atlas	93,318	1
	8/22/2014 19:30	8/22/2014 19:45	**15**	0.66	**95,230**	1.25	**0.50**	1	Atlas	62,852	1
	8/23/2014 20:15	8/23/2014 21:00	**45**	0.89	**94,296**	1.97	**0.41**	12	Atlas	83,923	1
	8/27/2014 16:45	8/27/2014 17:45	**60**	0.75	**742,209**	2.3	**0.60**	1	Atlas	556,657	1
	9/2/2014 8:45	9/2/2014 8:45	**0**	0.32	**47,728**	1.36	**0.21**	3	Atlas	15,273	1
	9/11/2014 0:45	9/11/2014 8:15	**450**	2.16	**2,989,607**	2.18	**2.21**	3	Atlas	6,457,551	1
	10/13/2014 23:45	10/14/2014	**15**	1.08	**5,844**	1.74	**0.49**	12	Atlas	6,311	1
	12/6/2014 3:15	12/6/2014 7:30	**255**	1.78	**85,174**	2.48	**0.58**	48	Atlas	151,610	1
	3/4/2015 3:45	3/4/2015 20:00	**975**	1.84	**531,403**	1.61	**0.60**	48	Atlas	977,781	1
	3/6/2015 2:45	3/6/2015 7:30	**285**	Discharge						6,955	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO108	**3/8/2015 6:30**	3/8/2015 6:30	**0**	Discharge						381	1
	3/10/2015 11:00	3/10/2015 21:00	**600**	1.37	**2,029,346**	3.2	**0.62**	12	Atlas	2,780,204	1
	3/13/2015 15:15	3/15/2015 8:45	**2490**	1.75	**721,797**	3.12	**0.65**	24	Atlas	1,263,144	1
	3/17/2015 11:00	3/17/2015 11:15	**15**	Discharge						554	1
	3/17/2015 19:30	3/18/2015 7:00	**690**	Discharge						25,184	1
	4/2/2015 11:00	4/5/2015 9:15	**4215**	6.12	**40,345,752**	6.25	**46.87**	6	Cloudburst	246,916,005	1
	4/7/2015 9:45	4/7/2015 18:00	**495**	0.84	**74,233**	6.96	**0.35**	12	Atlas	62,356	1
	4/8/2015 18:15	4/8/2015 19:30	**75**	0.36	**403,972**	7.33	**0.26**	1	Atlas	145,430	1
	4/9/2015 11:45	4/9/2015 12:45	**60**	0.43	**89,112**	7.17	**0.37**	1	Atlas	38,318	1
	4/20/2015 19:45	4/21/2015 3:45	**480**	Discharge						18,639	1
	5/11/2015 18:00	5/11/2015 18:15	**15**	0.38	**38,332**	0.57	**0.33**	1	Atlas	14,566	1
	5/12/2015 5:45	5/12/2015 9:15	**210**	Discharge						8,312	1
	5/12/2015 23:45	5/13/2015 5:00	**315**	Discharge						3,688	1
	6/18/2015 16:30	6/18/2015 23:15	**405**	3	**1,651,637**	2.38	**0.99**	3	Atlas	4,954,910	1
	6/20/2015 8:00	6/20/2015 9:00	**60**	3	**53,137**	3.83	**0.99**	3	Atlas	159,411	1
	6/26/2015 0:15	6/26/2015 0:30	**15**	0.71	**92,776**	2.08	**0.38**	6	Atlas	65,871	1
	6/26/2015 17:30	6/26/2015 17:45	**15**	0.68	**69,224**	2.57	**0.31**	1	Atlas	47,072	1
	6/29/2015 13:30	6/29/2015 14:15	**45**	0.23	**2,608,748**	1.62	**0.17**	1	Atlas	600,012	1
	7/3/2015 15:30	7/3/2015 15:30	**0**	0.31	**44,771**	2.1	**0.16**	6	Atlas	13,879	1
	7/10/2015 10:30	7/10/2015 14:45	**255**	0.81	**107,093**	1.94	**0.41**	1	Atlas	86,745	1
	7/12/2015 6:00	7/12/2015 18:15	**735**	1.02	**37,661,015**	2.76	**0.69**	1	Atlas	38,414,235	1
	7/13/2015 14:30	7/13/2015 15:30	**60**	0.57	**125,698**	3.33	**0.47**	1	Atlas	71,648	1
	7/14/2015 4:15	7/14/2015 13:00	**525**	0.62	**3,181,142**	3.95	**0.43**	1	Atlas	1,972,308	1
	7/17/2015 23:45	7/18/2015 4:30	**285**	1.25	**985,606**	3.5	**0.83**	3	Atlas	1,232,008	1
	8/6/2015 15:00	8/6/2015 15:15	**15**	1.32	**46,837**	1.63	**0.46**	24	Atlas	61,825	1
	8/19/2015 17:15	8/19/2015 17:15	**0**	0.55	**50,705**	0.54	**0.25**	1	Atlas	27,888	1
	9/7/2015 18:15	9/7/2015 18:45	**30**	1.37	**177,825**	1.41	**1.96**	1	Atlas	243,620	1
	10/23/2015 7:45	10/23/2015 7:45	**0**	Discharge						505	1
	10/29/2015 2:15	10/29/2015 7:30	**315**	3.01	**1,937**	3.46	**0.91**	48	Atlas	5,831	1
	10/30/2015 3:45	10/30/2015 4:00	**15**	Discharge						782	1
	11/6/2015 3:45	11/6/2015 4:45	**60**	1.05	**139,764**	1.15	**0.65**	3	Atlas	146,752	1
	11/6/2015 20:45	11/7/2015 10:45	**840**	Discharge						42,150	1
	11/8/2015 8:15	11/8/2015 8:15	**0**	Discharge						502	1
	11/12/2015 19:00	11/13/2015 9:30	**870**	Discharge						35,921	1
	11/13/2015 21:00	11/14/2015 9:00	**720**	Discharge						14,716	1
	11/18/2015 11:00	11/19/2015 9:45	**1365**	1.83	**1,324,163**	2.38	**0.94**	6	Atlas	2,423,218	1
	11/19/2015 19:00	11/20/2015 9:15	**855**	Discharge						57,791	1
	11/21/2015 19:30	11/22/2015 10:15	**885**	0.16	**121,881**	2.13	**0.13**	1	Atlas	19,501	1
	11/28/2015 23:15	11/28/2015 23:30	**15**	0.71	**1,110**	0.86	**0.30**	12	Atlas	788	1
	12/2/2015 22:30	12/3/2015 11:45	**795**	0.03	**2,665,900**	1.71	**0.02**	1	Atlas	79,977	1
	12/3/2015 22:15	12/3/2015 23:00	**45**	Discharge						1,054	1
	12/4/2015 8:00	12/4/2015 8:15	**15**	Discharge						826	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO108	**12/14/2015 21:45**	12/15/2015 11:30	**825**	Discharge						23,998	1
	12/17/2015 3:15	12/19/2015 10:45	**3330**	0.03	**1,540,533**	0.34	**0.02**	1	Atlas	46,216	1
	12/22/2015 3:30	12/22/2015 3:45	**15**	0.88	**39,218**	0.9	**0.36**	6	Atlas	34,512	1
	12/23/2015 19:15	12/24/2015 11:30	**975**	0.99	**2,915,995**	1.9	**0.75**	1	Atlas	2,886,835	1
	12/27/2015 10:45	12/28/2015 17:15	**1830**	3.13	**11,326,167**	5.14	**0.89**	48	Atlas	35,450,904	1
	12/29/2015 8:30	12/29/2015 18:30	**600**	0.01	**2,593,300**	4.33	**0.01**	1	Atlas	25,933	1
	1/4/2016 6:15	1/4/2016 10:45	**270**	0.02	**400,000**	0.65	**0.01**	3	Atlas	8,000	1
	1/4/2016 20:45	1/5/2016 6:45	**600**	Discharge						10,130	1
	1/10/2016 4:15	1/11/2016 6:30	**1575**	0.18	**1,253,900**	0.39	**0.08**	12	Atlas	225,702	1
	1/12/2016 15:45	1/13/2016 6:15	**870**	0.02	**3,161,300**	0.39	**0.02**	1	Atlas	63,226	1
	1/16/2016 0:45	1/16/2016 12:15	**690**	Discharge						24,282	1
	1/17/2016 18:15	1/18/2016 8:45	**870**	0.01	**3,900,000**	0.12	**0.01**	1	Atlas	39,000	1
	1/19/2016 4:45	1/19/2016 10:15	**330**	Discharge						31,176	1
	2/2/2016 23:30	2/3/2016 3:15	**225**	1.59	**363,931**	1.73	**0.77**	6	Atlas	578,650	1
	2/24/2016 3:00	2/24/2016 12:00	**540**	1.95	**673,529**	2.46	**0.75**	12	Atlas	1,313,382	1
	3/24/2016 17:45	3/24/2016 18:15	**30**	0.43	**410,714**	0.62	**0.33**	1	Atlas	176,607	1
	3/27/2016 21:15	3/27/2016 22:15	**60**	0.96	**326,999**	1.36	**0.62**	3	Atlas	313,919	1
	3/31/2016 22:30	3/31/2016 22:30	**0**	1.42	**10,036**	2.25	**0.54**	24	Atlas	14,251	1
	5/1/2016 14:45	5/1/2016 15:30	**45**	0.38	**667,689**	2.14	**0.25**	3	Atlas	253,722	1
	5/10/2016 19:00	5/10/2016 22:00	**180**	0.89	**51,183**	1.65	**0.33**	24	Atlas	45,553	1
	5/20/2016 15:00	5/20/2016 16:00	**60**	0.81	**81,294**	1.45	**0.47**	3	Atlas	65,848	1
	6/23/2016 16:30	6/24/2016	**450**	1.38	**166,659**	1.52	**0.73**	6	Atlas	229,989	1
Grand Total										**1,215,035,742**	**148**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO109	**9/26/2012 21:15**	9/26/2012 23:00	**105**	0.87	**49,510**	1.53	**0.51**	3	Atlas	43,074	1
	12/9/2012 22:30	12/9/2012 22:45	**15**	1.23	**217,327**	3.39	**0.56**	3	Atlas	267,312	1
	1/13/2013 3:30	1/13/2013 20:00	**990**	2.43	**336,562**	3.2	**0.93**	24	Atlas	817,846	1
	3/18/2013 4:15	3/18/2013 4:15	**0**	1.67	**1,907**	1.53	**0.54**	48	Atlas	3,185	1
	4/11/2013 7:15	4/11/2013 7:15	**0**	1.14	**36,636**	0.36	**0.44**	24	Atlas	41,765	1
	4/16/2013 20:15	4/16/2013 20:15	**0**	0.49	**62,843**	1.58	**0.38**	1	Atlas	30,793	1
	4/19/2013 2:45	4/19/2013 2:45	**0**	0.85	**57,482**	1.05	**0.47**	3	Atlas	48,860	1
	6/17/2013 16:30	6/17/2013 21:30	**300**	1.14	**135,193**	1.32	**0.61**	1	Atlas	154,120	1
	6/21/2013 19:00	6/21/2013 19:30	**30**	0.84	**1,636,478**	2.2	**0.60**	1	Atlas	1,374,642	1
	6/26/2013 3:15	6/26/2013 4:45	**90**	0.53	**562,764**	1.69	**0.35**	3	Atlas	298,265	1
	6/26/2013 16:30	6/27/2013 3:00	**630**	2.33	**4,501,359**	4.01	**2.06**	6	Cloudburst	10,488,166	1
	6/29/2013 20:15	6/29/2013 20:15	**0**	0.49	**293,775**	3.52	**0.32**	3	Atlas	143,950	1
	7/10/2013 12:45	7/10/2013 14:30	**105**	0.76	**1,063,322**	2.27	**0.50**	3	Atlas	808,125	1
	7/14/2013 19:30	7/14/2013 19:30	**0**	0.17	**1,425,402**	1.04	**0.15**	1	Atlas	242,318	1
	7/18/2013 16:15	7/18/2013 16:30	**15**	0.19	**1,504,867**	0.39	**0.15**	1	Atlas	285,925	1
	7/21/2013 19:15	7/21/2013 19:45	**30**	3.65	**117,241**	2.63	**10.00**	1	Atlas	427,929	1
	7/22/2013 8:00	7/22/2013 16:15	**495**	3.65	**315,192**	3.86	**10.00**	1	Atlas	1,150,452	1
	8/9/2013 17:30	8/9/2013 17:45	**15**	0.48	**100,301**	0.51	**0.30**	1	Atlas	48,145	1
	8/12/2013 15:00	8/12/2013 15:15	**15**	1.01	**1,293,493**	1.23	**0.47**	1	Atlas	1,306,428	1
	8/20/2013 18:15	8/20/2013 18:15	**0**	0.35	**164,793**	0.35	**0.28**	1	Atlas	57,678	1
	8/31/2013 19:45	8/31/2013 20:00	**15**	1.31	**350,496**	0.49	**0.60**	12	Atlas	459,150	1
	9/2/2013 14:00	9/2/2013 14:15	**15**	0.68	**998,804**	1.99	**0.59**	1	Atlas	679,187	1
	9/20/2013 19:30	9/20/2013 19:30	**0**	1.7	**4,887**	0.59	**0.75**	12	Atlas	8,309	1
	10/5/2013 13:15	10/6/2013 15:45	**1590**	5.29	**17,567,074**	5.44	**21.54**	24	Atlas	92,929,821	1
	10/30/2013 5:00	10/30/2013 6:00	**60**	1.57	**631,436**	1.52	**0.82**	1	Atlas	991,354	1
	11/17/2013 6:30	11/17/2013 18:30	**720**	2.88	**2,887,576**	2.88	**2.52**	6	Cloudburst	8,316,218	1
	12/21/2013 21:30	12/22/2013 3:45	**375**	3.51	**2,385,929**	3.53	**4.71**	3	Atlas	8,374,610	1
	2/17/2014 16:15	2/17/2014 16:30	**15**	0.51	**387,168**	1.04	**0.31**	3	Atlas	197,456	1
	4/3/2014 12:15	4/4/2014 7:45	**1170**	2.57	**527,445**	4.27	**0.91**	24	Atlas	1,355,535	1
	4/7/2014 11:00	4/7/2014 12:00	**60**	0.73	**312,143**	3.43	**0.44**	1	Atlas	227,864	1
	4/27/2014 20:15	4/28/2014 7:00	**645**	1.64	**577,547**	1.37	**0.65**	3	Atlas	947,177	1
	5/9/2014 19:30	5/9/2014 19:30	**0**	1.86	**58,830**	0.41	**0.72**	24	Atlas	109,424	1
	5/10/2014 5:45	5/10/2014 15:15	**570**	1.86	**512,220**	1.93	**0.72**	24	Atlas	952,730	1
	5/14/2014 7:00	5/14/2014 7:00	**0**	1.22	**192,837**	2.23	**0.43**	24	Atlas	235,261	1
	5/29/2014 21:15	5/29/2014 21:45	**30**	0.21	**3,303,716**	0.32	**0.16**	1	Atlas	693,780	1
	7/13/2014 22:00	7/13/2014 23:00	**60**	0.75	**525,327**	1.39	**0.41**	3	Atlas	393,996	1
	7/26/2014 21:45	7/26/2014 22:00	**15**	1.5	**370,233**	0.58	**0.67**	12	Atlas	555,350	1
	8/8/2014 6:15	8/8/2014 6:30	**15**	1.02	**97,717**	0.77	**0.52**	3	Atlas	99,671	1
	8/11/2014 15:45	8/11/2014 15:45	**0**	0.26	**162,226**	1.42	**0.14**	6	Atlas	42,179	1
	8/22/2014 19:15	8/22/2014 19:30	**15**	0.45	**1,017,679**	1	**0.32**	1	Atlas	457,956	1
	8/23/2014 20:15	8/23/2014 20:15	**0**	0.82	**184,523**	1.58	**0.38**	12	Atlas	151,309	1
	8/27/2014 17:00	8/27/2014 17:15	**15**	0.84	**794,017**	2.12	**0.65**	1	Atlas	666,974	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO109	**9/2/2014 8:30**	9/2/2014 8:30	**0**	0.25	**390,919**	1.57	**0.17**	3	Atlas	97,730	1
	9/11/2014 0:45	9/11/2014 6:45	**360**	1.87	**2,554,806**	1.84	**1.47**	3	Atlas	4,777,486	1
	10/10/2014 3:00	10/10/2014 3:00	**0**	0.73	**63,095**	0.95	**0.30**	3	Atlas	46,059	1
	12/6/2014 3:15	12/6/2014 5:45	**150**	1.86	**31,228**	2.52	**0.60**	48	Atlas	58,083	1
	3/4/2015 7:30	3/4/2015 7:30	**0**	1.75	**256**	0.9	**0.57**	48	Atlas	448	1
	3/10/2015 11:00	3/10/2015 17:15	**375**	1.3	**1,457,760**	3.04	**0.59**	12	Atlas	1,895,088	1
	3/14/2015 3:45	3/14/2015 8:00	**255**	1.68	**331,485**	2.94	**0.63**	24	Atlas	556,895	1
	4/2/2015 10:45	4/2/2015 15:15	**270**	6.05	**131,593**	0.96	**50.00**	6	Cloudburst	796,137	1
	4/3/2015 0:15	4/4/2015 0:30	**1455**	6.05	**25,120,123**	6.07	**50.00**	6	Cloudburst	151,976,742	1
	4/7/2015 9:30	4/7/2015 17:15	**465**	0.68	**440,838**	6.73	**0.30**	1	Atlas	299,770	1
	4/8/2015 18:15	4/8/2015 18:30	**15**	0.28	**2,390,852**	7.02	**0.19**	1	Atlas	669,438	1
	4/9/2015 11:45	4/9/2015 11:45	**0**	0.59	**377,397**	7.16	**0.51**	1	Atlas	222,664	1
	4/19/2015 14:30	4/19/2015 14:30	**0**	0.7	**42,537**	1.26	**0.28**	12	Atlas	29,776	1
	5/11/2015 17:45	5/11/2015 17:45	**0**	0.25	**326,353**	0.43	**0.22**	1	Atlas	81,588	1
	6/18/2015 16:15	6/18/2015 18:30	**135**	1.37	**1,789,673**	2.13	**0.79**	3	Atlas	2,451,852	1
	6/20/2015 7:45	6/20/2015 8:15	**30**	1.28	**208,788**	3.57	**0.56**	12	Atlas	267,249	1
	6/26/2015	6/26/2015	**0**	0.65	**554,325**	1.95	**0.35**	6	Atlas	360,311	1
	6/26/2015 17:00	6/26/2015 17:15	**15**	0.7	**329,330**	2.48	**0.35**	1	Atlas	230,531	1
	6/29/2015 13:30	6/29/2015 13:45	**15**	0.15	**2,825,918**	1.5	**0.10**	1	Atlas	423,888	1
	7/2/2015 21:00	7/2/2015 21:00	**0**	0.78	**99,303**	2.38	**0.41**	3	Atlas	77,456	1
	7/10/2015 10:15	7/10/2015 16:15	**360**	0.7	**80,087**	2.03	**0.36**	1	Atlas	56,061	1
	7/12/2015 6:00	7/12/2015 16:15	**615**	0.87	**16,591,417**	2.61	**0.58**	1	Atlas	14,434,533	1
	7/13/2015 15:00	7/13/2015 15:15	**15**	0.56	**139,353**	3.17	**0.46**	1	Atlas	78,038	1
	7/14/2015 4:15	7/14/2015 9:45	**330**	0.6	**2,314,544**	3.77	**0.43**	1	Atlas	1,388,726	1
	7/17/2015 23:15	7/18/2015 1:00	**105**	1.12	**824,695**	3.18	**0.75**	3	Atlas	923,658	1
	8/6/2015 14:30	8/6/2015 15:00	**30**	1.29	**206,516**	1.51	**0.45**	24	Atlas	266,406	1
	8/19/2015 8:15	8/19/2015 8:15	**0**	0.53	**43,627**	0.17	**0.26**	1	Atlas	23,122	1
	8/19/2015 17:00	8/19/2015 17:00	**0**	0.53	**21,705**	0.53	**0.26**	1	Atlas	11,504	1
	9/7/2015 18:00	9/7/2015 18:30	**30**	1.43	**1,216,887**	1.49	**2.47**	1	Atlas	1,740,148	1
	11/6/2015 3:30	11/6/2015 4:15	**45**	1.01	**384,639**	1.05	**0.63**	3	Atlas	388,485	1
	11/12/2015	11/12/2015	**0**	0.41	**113,714**	1.8	**0.26**	3	Atlas	46,623	1
	11/18/2015 10:45	11/18/2015 15:00	**255**	1.87	**622,953**	2.36	**0.96**	6	Atlas	1,164,923	1
	12/22/2015 3:15	12/22/2015 4:00	**45**	0.87	**262,216**	0.9	**0.37**	6	Atlas	228,128	1
	12/23/2015 19:30	12/23/2015 21:00	**90**	1.03	**1,953,080**	1.93	**0.77**	1	Atlas	2,011,673	1
	12/27/2015 10:45	12/27/2015 20:45	**600**	2.5	**6,140,475**	4.09	**0.81**	48	Atlas	15,351,187	1
	2/2/2016 23:45	2/3/2016 2:00	**135**	1.61	**273,441**	1.72	**0.78**	6	Atlas	440,240	1
	2/21/2016 9:00	2/21/2016 10:30	**90**	0.74	**67,517**	0.92	**0.34**	12	Atlas	49,963	1
	2/24/2016 5:30	2/24/2016 7:45	**135**	1.96	**318,473**	2.39	**0.76**	12	Atlas	624,208	1
	3/12/2016 22:45	3/12/2016 22:45	**0**	0.89	**42,865**	1.8	**0.33**	24	Atlas	38,150	1
	3/13/2016 9:00	3/13/2016 9:00	**0**	0.89	**6,750**	2.1	**0.33**	24	Atlas	6,008	1
	3/24/2016 17:45	3/24/2016 18:00	**15**	0.35	**899,540**	0.56	**0.25**	1	Atlas	314,839	1
	3/27/2016 21:30	3/27/2016 21:45	**15**	0.99	**696,819**	1.25	**0.65**	3	Atlas	689,851	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO109	**3/31/2016 22:15**	3/31/2016 22:15	**0**	1.4	**76,757**	2.24	**0.53**	24	Atlas	107,460	1
	4/11/2016 18:00	4/11/2016 18:00	**0**	0.8	**22,208**	0.74	**0.38**	6	Atlas	17,766	1
	4/27/2016 21:00	4/27/2016 21:00	**0**	0.7	**104,851**	1.34	**0.32**	3	Atlas	73,396	1
	5/1/2016 15:00	5/1/2016 15:15	**15**	0.36	**2,863,438**	1.97	**0.24**	3	Atlas	1,030,838	1
	5/10/2016 18:45	5/10/2016 22:00	**195**	0.78	**887,956**	1.65	**0.28**	24	Atlas	692,606	1
	5/20/2016 14:45	5/20/2016 15:15	**30**	0.84	**257,314**	1.43	**0.49**	3	Atlas	216,144	1
	6/2/2016 15:45	6/2/2016 15:45	**0**	0.55	**151,446**	0.66	**0.46**	1	Atlas	83,295	1
	6/12/2016 18:00	6/12/2016 18:00	**0**	0.64	**299,342**	0.61	**0.54**	1	Atlas	191,579	1
	6/23/2016 16:30	6/23/2016 21:00	**270**	1.38	**571,204**	1.41	**0.70**	6	Atlas	788,262	1
Grand Total										**345,681,293**	**93**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**6/11/2009 17:45**	6/11/2009 20:45	**180**	2.28	**67,085**	3.23	**0.88**	24	Atlas	152,955	1
	6/16/2009 9:15	6/16/2009 10:00	**45**	0.78	**220,694**	4.34	**0.48**	1	Atlas	172,141	1
	6/18/2009 10:00	6/18/2009 17:00	**420**	1.2	**1,752,924**	3.81	**0.75**	1	Atlas	2,103,509	1
	6/22/2009 9:00	6/22/2009 11:00	**120**	1.22	**499,788**	4.28	**0.80**	1	Atlas	609,741	1
	6/26/2009 3:15	6/26/2009 6:45	**210**	2.11	**619,439**	3.57	**0.97**	12	Atlas	1,307,017	1
	6/26/2009 15:45	6/26/2009 16:30	**45**	0.2	**794,794**	3.77	**0.17**	1	Atlas	158,959	1
	7/15/2009 10:30	7/15/2009 11:45	**75**	0.4	**907,415**	0.42	**0.25**	3	Atlas	362,966	1
	7/17/2009 3:45	7/17/2009 4:30	**45**	0.41	**273,230**	0.81	**0.27**	3	Atlas	112,024	1
	7/22/2009 7:00	7/22/2009 19:00	**720**	1.49	**1,050,730**	2.3	**0.66**	12	Atlas	1,565,588	1
	7/29/2009 1:15	7/29/2009 13:00	**705**	2.37	**2,028,375**	4.26	**1.81**	6	Cloudburst	4,807,248	1
	7/30/2009 19:30	7/31/2009 2:00	**390**	0.83	**873,307**	3.63	**0.35**	12	Atlas	724,845	1
	8/4/2009 7:30	8/5/2009 16:30	**1980**	6.23	**2,755,869**	9.45				17,169,063	1
	8/10/2009 19:00	8/10/2009 21:15	**135**	1.01	**577,559**	7.19	**0.64**	3	Atlas	583,335	1
	9/20/2009 10:45	9/21/2009 3:45	**1020**	3.49	**1,768,306**	3.51	**3.60**	24	Cloudburst	6,171,386	1
	9/22/2009 18:30	9/23/2009 0:30	**360**	0.66	**457,193**	4.18	**0.34**	6	Atlas	301,748	1
	9/24/2009 7:15	9/24/2009 8:00	**45**	0.76	**152,391**	4.35	**0.26**	24	Atlas	115,817	1
	9/24/2009 18:45	9/24/2009 22:45	**240**	0.76	**245,237**	4.9	**0.26**	24	Atlas	186,380	1
	9/26/2009 20:15	9/26/2009 21:45	**90**	0.36	**1,827,339**	5.32	**0.29**	1	Atlas	657,842	1
	10/2/2009 3:45	10/2/2009 7:15	**210**	0.76	**900,532**	1.2	**0.47**	3	Atlas	684,404	1
	10/8/2009 13:45	10/9/2009 22:45	**1980**	2.04	**1,852,714**	2.89	**0.68**	24	Atlas	3,779,536	1
	10/14/2009 5:30	10/14/2009 7:45	**135**	0.63	**1,018,801**	2.67	**0.41**	3	Atlas	641,844	1
	10/15/2009 4:30	10/15/2009 5:45	**75**	0.15	**693,695**	2.77	**0.10**	3	Atlas	104,054	1
	10/23/2009 6:30	10/23/2009 10:45	**255**	0.51	**408,102**	0.53	**0.22**	12	Atlas	208,132	1
	10/27/2009 20:30	10/28/2009 0:45	**255**	1.07	**1,335,678**	1.58	**0.48**	12	Atlas	1,429,176	1
	10/30/2009 20:15	10/31/2009 5:30	**555**	1.03	**885,263**	2.08	**0.47**	12	Atlas	911,821	1
	11/17/2009 8:45	11/17/2009 21:30	**765**	0.86	**655,330**	0.83	**0.33**	24	Atlas	563,584	1
	12/8/2009 15:30	12/8/2009 23:30	**480**	1.57	**1,477,258**	1.8	**0.65**	12	Atlas	2,319,295	1
	12/13/2009 6:45	12/13/2009 7:30	**45**	0.28	**212,729**	1.91	**0.18**	3	Atlas	59,564	1
	12/19/2009 2:45	12/19/2009 3:30	**45**	0.48	**116,759**	0.39	**0.17**	24	Atlas	56,045	1
	1/20/2010 10:00	1/20/2010 12:45	**165**	0.48	**605,730**	0.72	**0.25**	6	Atlas	290,750	1
	1/20/2010 23:45	1/21/2010 0:30	**45**	0.15	**575,729**	0.89	**0.13**	1	Atlas	86,359	1
	1/21/2010 11:30	1/21/2010 20:30	**540**	0.93	**1,797,954**	1.82	**0.43**	12	Atlas	1,672,097	1
	1/24/2010 3:45	1/24/2010 11:15	**450**	0.89	**797,434**	2.39	**0.34**	24	Atlas	709,716	1
	1/24/2010 21:00	1/24/2010 23:45	**165**	0.89	**435,254**	2.45	**0.34**	24	Atlas	387,376	1
	2/5/2010 6:45	2/5/2010 21:00	**855**	1.02	**1,661,586**	1.04	**0.36**	24	Atlas	1,694,818	1
	3/12/2010 14:15	3/12/2010 14:15	**0**	0.27	**34,321**	0.26	**0.17**	3	Atlas	9,267	1
	3/21/2010 19:30	3/22/2010 1:30	**360**	0.57	**345,941**	0.57	**0.26**	12	Atlas	197,186	1
	3/25/2010 21:30	3/25/2010 22:15	**45**	0.56	**180,498**	1.12	**0.33**	1	Atlas	101,079	1
	4/8/2010 1:15	4/8/2010 6:30	**315**	1.07	**791,050**	1.14	**0.53**	6	Atlas	846,423	1
	4/24/2010 14:30	4/24/2010 21:00	**390**	1.82	**725,280**	2.06	**0.85**	6	Atlas	1,320,010	1
	4/27/2010 7:45	4/27/2010 10:45	**180**	0.34	**861,931**	2.55	**0.16**	6	Atlas	293,056	1
	5/1/2010 4:30	5/1/2010 9:30	**300**	4.38	**316,555**	3.32	**4.38**	48	Atlas	1,386,511	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**5/2/2010 1:00**	5/3/2010 4:00	**1620**	4.38	**2,542,299**	4.89	**4.38**	48	Atlas	11,135,268	1
	5/7/2010 23:00	5/7/2010 23:30	**30**	0.2	**466,777**	4.59	**0.15**	1	Atlas	93,355	1
	5/12/2010 9:30	5/12/2010 10:45	**75**	0.96	**560,673**	1.27	**0.74**	1	Atlas	538,246	1
	5/13/2010 12:15	5/13/2010 12:45	**30**	0.23	**694,992**	1.5	**0.19**	1	Atlas	159,848	1
	5/16/2010 9:45	5/16/2010 9:45	**0**	0.69	**10,208**	1.64	**0.32**	12	Atlas	7,043	1
	5/16/2010 18:15	5/16/2010 18:15	**0**	0.69	**6,325**	1.98	**0.32**	12	Atlas	4,364	1
	5/17/2010 19:30	5/17/2010 20:30	**60**	0.3	**547,546**	2.27	**0.21**	1	Atlas	164,264	1
	5/21/2010 19:45	5/22/2010 1:00	**315**	1.05	**898,005**	2.04	**0.82**	1	Atlas	942,905	1
	5/30/2010 20:00	5/30/2010 20:30	**30**	0.34	**554,676**	0.59	**0.19**	6	Atlas	188,590	1
	6/9/2010 4:00	6/9/2010 12:45	**525**	2.42	**513,236**	2.56	**2.43**	3	Atlas	1,242,031	1
	6/12/2010 1:15	6/12/2010 1:30	**15**	0.26	**186,898**	2.68	**0.15**	1	Atlas	48,593	1
	6/13/2010 23:00	6/13/2010 23:15	**15**	0.29	**134,237**	2.85	**0.13**	1	Atlas	38,929	1
	6/19/2010 5:30	6/19/2010 8:15	**165**	0.79	**1,186,263**	1.62	**0.47**	3	Atlas	937,148	1
	6/28/2010 1:45	6/28/2010 2:30	**45**	0.27	**405,406**	0.24	**0.17**	1	Atlas	109,460	1
	7/13/2010 4:30	7/13/2010 7:00	**150**	1.99	**225,262**	1.96	**0.91**	12	Atlas	448,271	1
	7/20/2010 4:30	7/20/2010 6:15	**105**	0.83	**869,754**	2.25	**0.52**	1	Atlas	721,896	1
	7/21/2010 6:00	7/21/2010 6:30	**30**	0.39	**504,020**	1.47	**0.30**	1	Atlas	196,568	1
	7/22/2010 14:15	7/22/2010 14:45	**30**	0.2	**728,058**	1.69	**0.17**	1	Atlas	145,612	1
	7/27/2010 14:15	7/27/2010 16:30	**135**	1.13	**471,356**	1.69	**0.73**	3	Atlas	532,632	1
	7/31/2010 4:30	7/31/2010 6:15	**105**	0.52	**689,356**	1.8	**0.29**	3	Atlas	358,465	1
	7/31/2010 20:45	7/31/2010 21:15	**30**	0.16	**863,457**	1.96	**0.14**	1	Atlas	138,153	1
	8/5/2010 9:15	8/5/2010 9:15	**0**	0.25	**21,523**	0.91	**0.20**	1	Atlas	5,381	1
	8/11/2010 17:15	8/11/2010 17:15	**0**	0.1	**175,223**	0.35	**0.08**	1	Atlas	17,522	1
	8/13/2010 18:15	8/13/2010 18:15	**0**	0.37	**13,766**	0.52	**0.30**	1	Atlas	5,093	1
	8/14/2010 16:15	8/14/2010 17:30	**75**	0.61	**751,525**	1.13	**0.50**	1	Atlas	458,430	1
	8/21/2010 6:45	8/21/2010 9:00	**135**	0.52	**448,709**	1.16	**0.32**	3	Atlas	233,329	1
	9/7/2010 9:15	9/7/2010 9:15	**0**	0.15	**302,353**	0.15	**0.13**	1	Atlas	45,353	1
	10/13/2010 19:15	10/13/2010 20:45	**90**	0.37	**685,402**	0.41	**0.25**	3	Atlas	253,599	1
	10/26/2010 11:15	10/26/2010 11:30	**15**	0.57	**38,152**	0.32	**0.31**	6	Atlas	21,747	1
	11/16/2010 12:15	11/16/2010 20:30	**495**	0.71	**1,256,681**	0.81	**0.32**	12	Atlas	892,243	1
	11/23/2010 3:45	11/23/2010 4:00	**15**	0.24	**1,551,417**	0.95	**0.13**	6	Atlas	372,340	1
	11/24/2010 12:30	11/24/2010 15:30	**180**	0.7	**878,723**	0.98	**0.34**	3	Atlas	615,106	1
	11/25/2010 10:00	11/25/2010 23:45	**825**	2.38	**1,109,927**	3.17	**0.91**	24	Atlas	2,641,626	1
	11/29/2010 21:30	11/30/2010 13:30	**960**	1.64	**807,442**	4.92	**0.63**	24	Atlas	1,324,204	1
	12/30/2010 3:00	12/30/2010 8:15	**315**	0.51	**556,193**	0.57	**0.23**	12	Atlas	283,659	1
	1/1/2011 4:30	1/1/2011 7:30	**180**	0.59	**873,769**	1.05	**0.27**	6	Atlas	515,524	1
	2/1/2011 18:15	2/1/2011 20:30	**135**	0.93	**668,991**	0.84	**0.36**	6	Atlas	622,162	1
	2/24/2011 20:00	2/25/2011 7:15	**675**	2.17	**2,624,627**	2.36	**0.84**	6	Atlas	5,695,441	1
	2/27/2011 17:45	2/27/2011 17:45	**0**	0.13	**166,190**	2.45	**0.07**	3	Atlas	21,605	1
	2/28/2011 5:00	2/28/2011 13:15	**495**	1.33	**1,781,230**	3.79	**0.65**	6	Atlas	2,369,036	1
	3/5/2011 7:00	3/5/2011 19:00	**720**	0.97	**784,210**	2.41	**0.32**	24	Atlas	760,683	1
	3/8/2011 22:45	3/10/2011 2:30	**1665**	3.08	**3,479,887**	4.08	**1.94**	24	Cloudburst	10,718,053	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**3/14/2011 3:30**	3/14/2011 16:15	**765**	0.94	**478,218**	3.86	**0.31**	48	Atlas	449,525	1
	3/15/2011 7:00	3/15/2011 13:00	**360**	0.94	**353,279**	4.05	**0.31**	48	Atlas	332,082	1
	3/18/2011 22:00	3/18/2011 22:00	**0**	0.25	**55,848**	1.17	**0.11**	12	Atlas	13,962	1
	4/4/2011 13:15	4/4/2011 17:15	**240**	0.89	**1,223,327**	1.01	**0.45**	6	Atlas	1,088,761	1
	4/9/2011 10:30	4/9/2011 12:00	**90**	0.61	**706,583**	1.55	**0.43**	1	Atlas	431,016	1
	4/11/2011 10:15	4/12/2011 16:15	**1800**	3.58	**3,269,442**	5.09	**3.96**	24	Cloudburst	11,704,603	1
	4/15/2011 12:30	4/15/2011 14:00	**90**	0.38	**587,034**	4.36	**0.15**	24	Atlas	223,073	1
	4/15/2011 22:45	4/15/2011 22:45	**0**	0.38	**30,446**	4.47	**0.15**	24	Atlas	11,570	1
	4/20/2011 0:15	4/20/2011 5:00	**285**	0.74	**1,103,197**	1.18	**0.40**	6	Atlas	816,366	1
	4/22/2011 16:30	4/25/2011 7:30	**3780**	4.64	**1,683,083**	5.59	**2.73**	48	Cloudburst	7,809,505	1
	4/27/2011 0:45	4/28/2011 22:00	**2715**	2.64	**4,987,875**	8.09	**1.10**	24	Cloudburst	13,167,989	1
	5/1/2011 4:15	5/1/2011 7:00	**165**	0.73	**1,054,719**	4.84				769,945	1
	5/1/2011 19:15	5/2/2011 8:30	**795**	2.77	**471,690**	4.93	**0.90**	48	Atlas	1,306,582	1
	5/2/2011 16:45	5/3/2011 23:15	**1830**	2.77	**2,169,187**	6.45	**0.90**	48	Atlas	6,008,648	1
	5/8/2011 0:45	5/8/2011 2:00	**75**	0.45	**719,899**	3.88	**0.32**	1	Atlas	323,954	1
	5/21/2011 18:15	5/21/2011 19:30	**75**	0.49	**793,634**	0.94	**0.36**	1	Atlas	388,881	1
	5/23/2011 3:45	5/23/2011 5:00	**75**	0.41	**566,311**	1.05	**0.31**	1	Atlas	232,188	1
	5/23/2011 17:30	5/23/2011 22:00	**270**	0.81	**1,619,628**	1.88	**0.51**	3	Atlas	1,311,899	1
	5/25/2011 22:45	5/26/2011 16:30	**1065**	1.4	**1,491,418**	3.23	**0.62**	3	Atlas	2,087,985	1
	6/11/2011 5:00	6/11/2011 5:00	**0**	0.34	**17,488**	0.35	**0.28**	1	Atlas	5,946	1
	6/15/2011 9:30	6/15/2011 11:00	**90**	1.01	**565,598**	1.39	**0.61**	3	Atlas	571,254	1
	6/18/2011 6:15	6/18/2011 8:45	**150**	0.87	**693,632**	1.94	**0.55**	3	Atlas	603,459	1
	6/19/2011 7:30	6/19/2011 9:45	**135**	0.53	**737,287**	2.45	**0.33**	3	Atlas	390,762	1
	6/20/2011 1:30	6/20/2011 2:30	**60**	0.51	**727,514**	2.96	**0.43**	1	Atlas	371,032	1
	6/21/2011 14:15	6/21/2011 17:00	**165**	0.43	**342,557**	3.35	**0.25**	3	Atlas	147,300	1
	6/22/2011 19:15	6/23/2011 10:30	**915**	3.8	**1,892,700**	6.15	**29.49**	3	Cloudburst	7,192,261	1
	6/26/2011 4:30	6/26/2011 5:15	**45**	0.3	**191,885**	5.5	**0.16**	6	Atlas	57,565	1
	7/12/2011 16:45	7/12/2011 18:00	**75**	0.54	**194,798**	1.07	**0.29**	6	Atlas	105,191	1
	7/19/2011 22:45	7/20/2011	**75**	1.41	**316,872**	1.5	**0.98**	1	Atlas	446,789	1
	8/7/2011 3:00	8/7/2011 7:15	**255**	1.81	**938,664**	1.83	**1.50**	3	Atlas	1,698,982	1
	8/8/2011 15:00	8/8/2011 15:00	**0**	0.18	**66,317**	2.01	**0.11**	3	Atlas	11,937	1
	8/13/2011 17:00	8/13/2011 18:30	**90**	0.95	**842,020**	3.06	**0.75**	1	Atlas	799,919	1
	8/18/2011 8:00	8/18/2011 9:00	**60**	0.45	**912,097**	1.4	**0.38**	1	Atlas	410,444	1
	9/19/2011 7:00	9/19/2011 7:45	**45**	0.72	**251,918**	0.63	**0.29**	12	Atlas	181,381	1
	9/23/2011 3:00	9/23/2011 8:15	**315**	0.81	**465,298**	1.56	**0.37**	12	Atlas	376,891	1
	9/25/2011 20:00	9/26/2011 8:45	**765**	3.87	**2,101,357**	5.56	**12.50**	12	Atlas	8,132,253	1
	10/13/2011 7:30	10/13/2011 8:15	**45**	0.44	**569,093**	0.29	**0.21**	3	Atlas	250,401	1
	10/26/2011 23:45	10/27/2011 5:30	**345**	1.18	**1,478,925**	1.54	**0.48**	12	Atlas	1,745,131	1
	11/3/2011 10:00	11/3/2011 11:15	**75**	0.52	**191,227**	0.43	**0.24**	3	Atlas	99,438	1
	11/14/2011 21:30	11/14/2011 23:30	**120**	2.19	**333,657**	0.38	**0.71**	48	Atlas	730,708	1
	11/15/2011 8:15	11/15/2011 15:15	**420**	2.19	**326,274**	1.53	**0.71**	48	Atlas	714,540	1
	11/16/2011 5:30	11/16/2011 11:45	**375**	2.19	**263,249**	2.17	**0.71**	48	Atlas	576,514	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**11/20/2011 17:15**	11/20/2011 20:30	**195**	2.22	**158,830**	2.97	**0.67**	48	Atlas	352,602	1
	11/21/2011 10:30	11/21/2011 10:30	**0**	2.22	**2,060**	3.15	**0.67**	48	Atlas	4,573	1
	11/22/2011	11/22/2011 12:00	**720**	2.22	**625,833**	3.98	**0.67**	48	Atlas	1,389,350	1
	11/27/2011 5:45	11/29/2011 5:30	**2865**	3.13	**1,654,407**	5.29	**0.98**	48	Atlas	5,178,293	1
	11/29/2011 18:30	11/29/2011 20:00	**90**	0.06	**957,592**	3.22	**0.04**	3	Atlas	57,456	1
	12/4/2011 16:00	12/6/2011 8:45	**2445**	2.91	**3,096,853**	5.44	**0.94**	48	Atlas	9,011,843	1
	12/15/2011 4:00	12/15/2011 8:45	**285**	0.42	**862,653**	0.42	**0.22**	6	Atlas	362,314	1
	12/21/2011 5:15	12/21/2011 7:45	**150**	0.55	**1,495,867**	0.99	**0.25**	12	Atlas	822,727	1
	12/22/2011 12:00	12/22/2011 18:00	**360**	0.61	**943,889**	1.14	**0.27**	12	Atlas	575,772	1
	12/27/2011 2:30	12/27/2011 12:15	**585**	0.69	**851,867**	1.84	**0.28**	12	Atlas	587,788	1
	1/11/2012 5:00	1/11/2012 11:15	**375**	0.77	**1,429,677**	0.66	**0.30**	6	Atlas	1,100,851	1
	1/11/2012 20:15	1/11/2012 20:15	**0**	0.77	**39,591**	0.76	**0.30**	6	Atlas	30,485	1
	1/17/2012 3:45	1/17/2012 12:45	**540**	0.35	**1,797,125**	1.22	**0.16**	12	Atlas	628,994	1
	1/23/2012 2:45	1/23/2012 5:15	**150**	0.54	**2,010,491**	0.9	**0.27**	3	Atlas	1,085,665	1
	1/25/2012 17:00	1/25/2012 19:15	**135**	1.93	**34,181**	0.85	**0.63**	48	Atlas	65,969	1
	1/26/2012 5:15	1/26/2012 7:15	**120**	1.93	**268,418**	1.35	**0.63**	48	Atlas	518,047	1
	1/26/2012 18:30	1/27/2012 3:00	**510**	1.93	**1,667,167**	2.47	**0.63**	48	Atlas	3,217,633	1
	2/4/2012 9:15	2/4/2012 12:00	**165**	0.43	**931,562**	0.46	**0.24**	3	Atlas	400,572	1
	2/22/2012 23:00	2/22/2012 23:15	**15**	0.15	**359,268**	0.37	**0.11**	1	Atlas	53,890	1
	2/29/2012 6:00	2/29/2012 9:30	**210**	0.66	**310,837**	0.8	**0.30**	12	Atlas	205,152	1
	3/8/2012 10:00	3/8/2012 17:30	**450**	0.83	**1,503,694**	1.21	**0.38**	6	Atlas	1,248,066	1
	3/15/2012 19:15	3/16/2012 3:45	**510**	1.05	**992,860**	1.25	**0.46**	12	Atlas	1,042,503	1
	3/17/2012 18:30	3/18/2012 1:30	**420**	1.06	**857,370**	2.3	**0.59**	1	Atlas	908,813	1
	3/23/2012 5:00	3/24/2012	**1140**	1.66	**1,483,337**	2.73	**0.63**	24	Atlas	2,462,340	1
	4/1/2012 8:30	4/1/2012 13:15	**285**	1.86	**1,116,949**	2.04	**1.23**	3	Atlas	2,077,525	1
	4/28/2012 19:15	4/29/2012 0:30	**315**	0.78	**718,266**	0.92	**0.58**	1	Atlas	560,248	1
	4/30/2012 18:00	4/30/2012 18:45	**45**	0.27	**694,664**	1.16	**0.18**	3	Atlas	187,559	1
	5/4/2012 23:45	5/5/2012 4:45	**300**	1.35	**851,496**	2.4	**0.69**	6	Atlas	1,149,520	1
	5/13/2012 1:45	5/13/2012 14:45	**780**	2.12	**1,370,516**	2.16	**0.87**	12	Atlas	2,905,494	1
	5/29/2012 6:30	5/29/2012 16:45	**615**	3.15	**1,467,635**	3.15	**22.55**	3	Atlas	4,623,051	1
	5/31/2012 18:30	6/1/2012 5:15	**645**	1.22	**992,700**	4.31	**0.53**	12	Atlas	1,211,094	1
	7/1/2012 19:45	7/1/2012 20:30	**45**	0.49	**446,063**	0.42	**0.37**	1	Atlas	218,571	1
	7/8/2012 13:15	7/8/2012 13:30	**15**	0.14	**245,098**	0.65	**0.10**	1	Atlas	34,314	1
	7/14/2012 12:30	7/14/2012 14:45	**135**	0.61	**957,337**	0.79	**0.39**	3	Atlas	583,976	1
	7/18/2012 16:15	7/18/2012 18:00	**105**	Discharge						453,771	1
	7/19/2012 18:00	7/19/2012 19:30	**90**	0.93	**1,088,587**	1.52	**0.75**	1	Atlas	1,012,386	1
	7/24/2012 20:00	7/24/2012 20:00	**0**	0.22	**56,283**	1.25	**0.17**	1	Atlas	12,382	1
	7/27/2012 3:15	7/27/2012 3:15	**0**	0.1	**135,376**	0.43	**0.05**	1	Atlas	13,538	1
	7/27/2012 19:45	7/27/2012 21:30	**105**	0.69	**918,217**	1.01	**0.50**	1	Atlas	633,570	1
	8/16/2012 20:15	8/16/2012 22:45	**150**	0.72	**1,320,294**	0.77	**0.41**	3	Atlas	950,611	1
	8/21/2012 13:45	8/21/2012 14:15	**30**	0.16	**995,986**	0.89	**0.14**	1	Atlas	159,358	1
	9/1/2012 15:00	9/1/2012 16:15	**75**	0.58	**641,858**	0.41	**0.36**	3	Atlas	372,278	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**9/2/2012 11:45**	9/2/2012 22:15	**630**	0.75	**1,302,326**	1.38	**0.29**	24	Atlas	976,745	1
	9/5/2012 15:15	9/5/2012 17:15	**120**	0.8	**817,076**	2.2	**0.62**	1	Atlas	653,661	1
	9/7/2012 23:30	9/8/2012 2:30	**180**	1.2	**611,399**	3.28	**0.67**	3	Atlas	733,678	1
	9/26/2012 21:00	9/27/2012 1:15	**255**	0.85	**1,662,843**	1.67	**0.47**	3	Atlas	1,413,417	1
	10/1/2012 15:00	10/1/2012 19:30	**270**	0.8	**1,200,975**	2.5	**0.33**	12	Atlas	960,780	1
	10/26/2012 14:45	10/26/2012 17:30	**165**	0.86	**248,138**	0.78	**0.39**	6	Atlas	213,399	1
	12/4/2012 16:45	12/4/2012 19:00	**135**	0.53	**632,111**	0.7	**0.35**	3	Atlas	335,019	1
	12/7/2012 3:45	12/7/2012 18:30	**885**	1.38	**1,320,155**	2.08	**0.59**	12	Atlas	1,821,814	1
	12/8/2012 5:30	12/8/2012 10:15	**285**	0.6	**1,227,475**	2.68	**0.32**	6	Atlas	736,485	1
	12/9/2012 8:45	12/9/2012 9:15	**30**	1.07	**28,722**	2.79	**0.47**	3	Atlas	30,732	1
	12/9/2012 22:00	12/10/2012 3:30	**330**	1.07	**1,752,629**	3.52	**0.47**	3	Atlas	1,875,314	1
	12/15/2012 11:30	12/15/2012 11:30	**0**	0.19	**2,975**	1.23	**0.11**	3	Atlas	565	1
	12/20/2012 7:00	12/20/2012 12:45	**345**	0.66	**1,491,547**	1	**0.36**	6	Atlas	984,421	1
	12/26/2012 5:30	12/26/2012 11:45	**375**	0.77	**759,792**	1.45	**0.30**	12	Atlas	585,040	1
	1/11/2013 5:45	1/11/2013 8:15	**150**	0.6	**1,331,019**	0.79	**0.31**	6	Atlas	798,612	1
	1/13/2013 3:15	1/14/2013	**1245**	2.36	**2,884,898**	3.14	**0.91**	24	Atlas	6,808,359	1
	1/30/2013 4:45	1/30/2013 9:45	**300**	0.84	**1,206,844**	1.1	**0.42**	6	Atlas	1,013,749	1
	2/19/2013 5:00	2/19/2013 5:00	**0**	0.38	**16,751**	0.43	**0.17**	12	Atlas	6,365	1
	2/22/2013 0:30	2/22/2013 1:45	**75**	0.4	**668,508**	0.77	**0.18**	12	Atlas	267,403	1
	2/26/2013 13:30	2/26/2013 17:00	**210**	0.62	**869,029**	0.95	**0.24**	12	Atlas	538,798	1
	3/5/2013 16:00	3/5/2013 19:00	**180**	0.43	**1,427,186**	0.55	**0.16**	24	Atlas	613,690	1
	3/11/2013 3:30	3/11/2013 13:00	**570**	1	**1,757,093**	1.44	**0.40**	12	Atlas	1,757,093	1
	3/17/2013 10:15	3/18/2013 11:15	**1500**	1.82	**2,288,827**	2.83	**0.59**	48	Atlas	4,165,665	1
	3/24/2013 7:45	3/24/2013 17:30	**585**	0.48	**828,608**	1.83	**0.18**	24	Atlas	397,732	1
	4/11/2013 6:15	4/11/2013 8:00	**105**	1.18	**543,462**	0.45	**0.45**	24	Atlas	641,285	1
	4/11/2013 16:15	4/12/2013 1:15	**540**	1.18	**302,293**	1.18	**0.45**	24	Atlas	356,705	1
	4/16/2013 20:00	4/16/2013 21:15	**75**	0.57	**608,569**	1.71	**0.44**	1	Atlas	346,885	1
	4/19/2013 2:00	4/19/2013 5:15	**195**	0.86	**1,687,080**	1.44	**0.47**	6	Atlas	1,450,889	1
	4/24/2013 7:15	4/24/2013 10:30	**195**	0.75	**1,441,721**	1.65	**0.43**	3	Atlas	1,081,291	1
	5/4/2013 13:15	5/4/2013 15:30	**135**	1.53	**123,729**	0.67	**0.49**	24	Atlas	189,306	1
	5/5/2013 4:00	5/5/2013 9:00	**300**	1.53	**436,733**	1.42	**0.49**	24	Atlas	668,201	1
	5/10/2013 12:30	5/11/2013 1:00	**750**	1.04	**1,017,190**	2.71	**0.47**	6	Atlas	1,057,878	1
	5/22/2013 15:30	5/22/2013 15:30	**0**	0.27	**145,438**	0.75	**0.18**	1	Atlas	39,268	1
	7/4/2013 11:30	7/4/2013 14:15	**165**	0.59	**119,220**	1.41	**0.24**	12	Atlas	70,340	1
	7/6/2013 1:30	7/6/2013 8:45	**435**	0.65	**893,239**	2.17	**0.28**	12	Atlas	580,605	1
	7/10/2013 14:30	7/10/2013 15:45	**75**	0.62	**411,117**	2.02	**0.41**	3	Atlas	254,893	1
	7/14/2013 19:45	7/14/2013 20:15	**30**	0.16	**919,918**	0.87	**0.14**	1	Atlas	147,187	1
	7/18/2013 17:00	7/18/2013 17:00	**0**	0.21	**23,377**	0.4	**0.14**	3	Atlas	4,909	1
	7/21/2013 19:30	7/21/2013 21:45	**135**	3.27	**201,447**	2.5	**5.14**	3	Atlas	658,732	1
	7/22/2013 7:45	7/22/2013 17:30	**585**	3.27	**360,584**	3.5	**5.14**	3	Atlas	1,179,110	1
	8/9/2013 17:30	8/9/2013 18:45	**75**	0.44	**1,419,640**	0.36	**0.19**	1	Atlas	624,642	1
	8/12/2013 15:15	8/12/2013 16:45	**90**	0.86	**919,006**	1.05	**0.37**	1	Atlas	790,345	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**8/13/2013 2:45**	8/13/2013 4:45	**120**	0.86	**381,397**	1.33	**0.37**	1	Atlas	328,002	1
	8/20/2013 18:15	8/20/2013 19:30	**75**	0.3	**1,509,739**	0.32	**0.17**	3	Atlas	452,922	1
	8/31/2013 20:00	9/1/2013 4:30	**510**	0.91	**823,789**	0.9	**0.42**	12	Atlas	749,648	1
	9/2/2013 14:15	9/2/2013 15:45	**90**	0.59	**1,405,005**	1.5	**0.51**	1	Atlas	828,953	1
	9/20/2013 19:30	9/21/2013 6:00	**630**	1.3	**2,091,834**	1.33	**0.53**	12	Atlas	2,719,385	1
	10/5/2013 12:45	10/7/2013 0:15	**2130**	4.79	**1,825,465**	5.03	**13.46**	24	Atlas	8,743,978	1
	10/30/2013 2:30	10/30/2013 5:45	**195**	1.97	**854,136**	1.93	**1.39**	1	Atlas	1,682,648	1
	10/31/2013 20:45	10/31/2013 23:30	**165**	0.58	**981,057**	2.55	**0.22**	12	Atlas	569,013	1
	11/17/2013 5:45	11/18/2013 0:15	**1110**	2.49	**531,214**	2.64	**1.81**	6	Cloudburst	1,322,723	1
	12/5/2013 7:30	12/5/2013 10:15	**165**	0.69	**499,084**	0.19	**0.22**	48	Atlas	344,368	1
	12/6/2013 12:15	12/6/2013 13:30	**75**	0.69	**59,574**	0.42	**0.22**	48	Atlas	41,106	1
	12/14/2013 7:45	12/14/2013 13:00	**315**	0.97	**745,440**	1.31	**0.42**	6	Atlas	723,077	1
	12/21/2013 5:30	12/22/2013 19:00	**2250**	2.47	**2,218,626**	3.1	**0.93**	24	Atlas	5,480,006	1
	12/29/2013 3:00	12/29/2013 7:30	**270**	0.56	**358,793**	0.54	**0.24**	12	Atlas	200,924	1
	1/5/2014 15:30	1/5/2014 20:45	**315**	0.51	**1,353,465**	0.76	**0.25**	6	Atlas	690,267	1
	1/11/2014 0:45	1/11/2014 6:45	**360**	1.08	**1,343,065**	1.6	**0.58**	6	Atlas	1,450,510	1
	1/13/2014 15:00	1/13/2014 16:30	**90**	0.2	**638,836**	1.24	**0.09**	12	Atlas	127,767	1
	2/2/2014 5:15	2/2/2014 8:15	**180**	0.43	**561,479**	0.18	**0.16**	24	Atlas	241,436	1
	2/4/2014 19:30	2/5/2014 6:15	**645**	0.54	**3,856,621**	0.97	**0.26**	6	Atlas	2,082,575	1
	2/14/2014 17:15	2/14/2014 19:30	**135**	0.52	**473,518**	0.55	**0.28**	6	Atlas	246,230	1
	2/17/2014 15:45	2/17/2014 19:45	**240**	0.43	**1,960,346**	1.01	**0.27**	3	Atlas	842,949	1
	2/20/2014 23:15	2/21/2014 0:30	**75**	0.24	**574,197**	1.25	**0.13**	6	Atlas	137,807	1
	3/2/2014 10:15	3/2/2014 12:30	**135**	0.66	**581,879**	0.34	**0.25**	24	Atlas	384,040	1
	3/29/2014 7:15	3/29/2014 14:00	**405**	1	**1,266,841**	1.29	**0.47**	6	Atlas	1,266,841	1
	4/3/2014 12:15	4/5/2014 0:45	**2190**	2.6	**2,364,458**	3.97	**0.90**	24	Atlas	6,147,592	1
	4/7/2014 8:00	4/7/2014 21:00	**780**	0.73	**2,060,322**	3.46	**0.43**	1	Atlas	1,504,035	1
	4/14/2014 4:00	4/14/2014 11:15	**435**	0.38	**129,533**	1.14	**0.19**	6	Atlas	49,222	1
	4/14/2014 20:15	4/15/2014 3:45	**450**	0.61	**1,464,749**	1.03	**0.28**	12	Atlas	893,497	1
	4/27/2014 20:45	4/28/2014 21:00	**1455**	1.73	**1,320,518**	1.84	**0.67**	3	Atlas	2,284,496	1
	5/9/2014 19:30	5/10/2014 16:30	**1260**	1.84	**1,081,388**	1.91	**0.71**	24	Atlas	1,989,755	1
	5/14/2014 7:15	5/15/2014 1:15	**1080**	1.15	**1,077,050**	3.1	**0.43**	24	Atlas	1,238,608	1
	5/16/2014 4:30	5/16/2014 4:30	**0**	0.07	**85,538**	3.17	**0.05**	1	Atlas	5,988	1
	5/22/2014 3:00	5/22/2014 5:00	**120**	0.52	**786,091**	0.6	**0.28**	1	Atlas	408,767	1
	5/29/2014 20:45	5/29/2014 22:30	**105**	1.09	**788,826**	1.26	**0.84**	1	Atlas	859,820	1
	6/11/2014 14:30	6/11/2014 15:15	**45**	0.12	**1,876,086**	0.35	**0.06**	1	Atlas	225,130	1
	6/20/2014 16:45	6/20/2014 18:15	**90**	0.22	**643,760**	0.22	**0.15**	3	Atlas	141,627	1
	6/24/2014 13:45	6/24/2014 13:45	**0**	0.24	**27,859**	0.49	**0.17**	1	Atlas	6,686	1
	7/2/2014 17:00	7/2/2014 17:00	**0**	0.15	**166,004**	0.37	**0.12**	1	Atlas	24,901	1
	7/13/2014 22:00	7/14/2014 0:30	**150**	0.7	**1,379,728**	1.61	**0.37**	3	Atlas	965,810	1
	7/26/2014 21:45	7/27/2014 10:30	**765**	1.3	**1,294,992**	1.32	**0.59**	12	Atlas	1,683,489	1
	8/8/2014 6:15	8/8/2014 8:45	**150**	1.02	**1,180,426**	0.81	**0.46**	6	Atlas	1,204,035	1
	8/11/2014 15:45	8/11/2014 16:45	**60**	0.36	**813,119**	1.62	**0.24**	1	Atlas	292,723	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**8/17/2014 10:15**	8/17/2014 10:45	**30**	0.71	**175,643**	0.96	**0.26**	24	Atlas	124,706	1
	8/22/2014 19:30	8/22/2014 20:15	**45**	0.4	**616,203**	1.05	**0.28**	1	Atlas	246,481	1
	8/23/2014 16:00	8/23/2014 22:15	**375**	0.63	**506,293**	1.71	**0.29**	12	Atlas	318,965	1
	8/27/2014 15:15	8/27/2014 18:45	**210**	0.48	**2,542,107**	1.53	**0.31**	3	Atlas	1,220,211	1
	8/30/2014 15:30	8/30/2014 16:45	**75**	0.45	**873,824**	1.42	**0.24**	1	Atlas	393,221	1
	9/2/2014 8:45	9/2/2014 9:45	**60**	0.34	**614,123**	1.25	**0.21**	3	Atlas	208,802	1
	9/11/2014 0:45	9/11/2014 9:30	**525**	1.97	**1,680,232**	1.97	**1.60**	3	Atlas	3,310,056	1
	10/10/2014 2:15	10/10/2014 3:45	**90**	0.75	**1,148,500**	0.98	**0.29**	24	Atlas	861,375	1
	10/13/2014 5:45	10/13/2014 7:00	**75**	0.42	**606,403**	1.48	**0.27**	3	Atlas	254,689	1
	10/13/2014 23:45	10/14/2014 10:45	**660**	1.24	**782,606**	2.62	**0.56**	12	Atlas	970,431	1
	11/23/2014 17:45	11/23/2014 21:00	**195**	0.81	**697,018**	1.15	**0.37**	6	Atlas	564,585	1
	12/1/2014 4:15	12/1/2014 6:00	**105**	0.82	**250,789**	0.37				205,647	1
	12/5/2014 23:15	12/6/2014 9:00	**585**	1.86	**1,049,311**	2.68	**0.60**	48	Atlas	1,951,719	1
	12/28/2014 1:30	12/28/2014 2:30	**60**	0.27	**405,832**	0.68	**0.12**	1	Atlas	109,575	1
	2/1/2015 14:00	2/1/2015 14:30	**30**	0.36	**34,677**	0.42	**0.17**	12	Atlas	12,484	1
	2/21/2015 15:15	2/21/2015 18:15	**180**	1.25	**200,168**	1.41	**0.48**	24	Atlas	250,210	1
	3/3/2015 19:45	3/4/2015 21:30	**1545**	1.62	**2,390,089**	1.47	**0.53**	48	Atlas	3,871,944	1
	3/7/2015 14:00	3/7/2015 19:15	**315**	Discharge						316,897	1
	3/10/2015 7:15	3/11/2015 1:45	**1110**	1.34	**2,193,867**	2.96	**0.61**	12	Atlas	2,939,782	1
	3/11/2015 21:45	3/12/2015 1:30	**225**	Discharge						861,067	1
	3/13/2015 10:45	3/14/2015 22:00	**2115**	1.71	**2,507,177**	3.05	**0.64**	24	Atlas	4,287,273	1
	3/26/2015 4:45	3/26/2015 7:15	**150**	0.43	**624,142**	0.57	**0.18**	12	Atlas	268,381	1
	4/2/2015 11:00	4/5/2015 3:45	**3885**	5.83	**2,069,098**	5.96	**36.46**	6	Cloudburst	12,062,840	1
	4/7/2015 8:00	4/7/2015 21:00	**780**	0.74	**1,307,612**	6.58	**0.31**	12	Atlas	967,633	1
	4/8/2015 18:15	4/8/2015 20:30	**135**	0.24	**3,203,649**	6.82	**0.17**	1	Atlas	768,876	1
	4/9/2015 11:45	4/9/2015 14:00	**135**	0.23	**2,388,720**	6.64	**0.20**	1	Atlas	549,406	1
	4/10/2015 2:45	4/10/2015 4:15	**90**	0.15	**774,978**	3.32	**0.10**	3	Atlas	116,247	1
	4/13/2015 21:00	4/13/2015 22:00	**60**	0.45	**217,234**	1.47	**0.18**	6	Atlas	97,755	1
	4/14/2015 10:00	4/14/2015 12:15	**135**	0.45	**259,176**	1.37	**0.18**	6	Atlas	116,629	1
	4/19/2015 14:15	4/19/2015 16:00	**105**	0.75	**550,936**	1.22	**0.32**	12	Atlas	413,202	1
	4/20/2015 3:30	4/20/2015 4:00	**30**	0.07	**301,819**	1.38	**0.06**	1	Atlas	21,127	1
	5/17/2015 14:30	5/17/2015 14:45	**15**	0.17	**720,786**	0.59	**0.12**	1	Atlas	122,534	1
	5/26/2015 14:15	5/26/2015 15:00	**45**	0.42	**371,801**	0.64	**0.30**	1	Atlas	156,156	1
	6/17/2015 5:00	6/17/2015 7:15	**135**	0.7	**847,542**	1.04	**0.37**	3	Atlas	593,279	1
	6/18/2015 16:15	6/19/2015 0:15	**480**	2.11	**683,661**	2.08	**0.69**	48	Atlas	1,442,526	1
	6/20/2015 2:00	6/20/2015 12:45	**645**	2.11	**430,832**	3.28	**0.69**	48	Atlas	909,056	1
	6/26/2015 0:15	6/26/2015 4:45	**270**	0.51	**723,958**	1.93	**0.27**	6	Atlas	369,218	1
	6/26/2015 17:15	6/27/2015 2:15	**540**	0.77	**1,043,237**	2.48	**0.37**	1	Atlas	803,293	1
	6/29/2015 13:45	6/29/2015 14:45	**60**	0.17	**987,065**	1.45	**0.10**	1	Atlas	167,801	1
	7/2/2015 1:00	7/2/2015 3:30	**150**	0.77	**463,156**	2.15	**0.41**	3	Atlas	356,630	1
	7/2/2015 21:15	7/2/2015 22:15	**60**	0.77	**186,933**	2.27	**0.41**	3	Atlas	143,939	1
	7/3/2015 15:15	7/3/2015 20:15	**300**	0.28	**588,561**	2.02	**0.17**	1	Atlas	164,797	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**7/7/2015 12:00**	7/7/2015 17:30	**330**	0.72	**497,652**	1.8	**0.37**	6	Atlas	358,309	1
	7/9/2015 6:45	7/9/2015 8:30	**105**	0.22	**386,622**	1.39	**0.13**	3	Atlas	85,057	1
	7/10/2015 10:30	7/10/2015 17:30	**420**	0.56	**1,078,845**	1.88	**0.26**	6	Atlas	604,153	1
	7/12/2015 6:15	7/12/2015 21:45	**930**	0.94	**1,801,463**	2.54	**0.63**	1	Atlas	1,693,375	1
	7/13/2015 14:45	7/14/2015 20:15	**1770**	0.36	**5,038,232**	3.31	**0.30**	1	Atlas	1,813,764	1
	7/17/2015 23:00	7/18/2015 6:45	**465**	0.86	**1,627,843**	2.57	**0.57**	3	Atlas	1,399,945	1
	7/29/2015 17:45	7/29/2015 17:45	**0**	0.05	**76,041**	0.14	**0.04**	1	Atlas	3,802	1
	8/4/2015 19:45	8/4/2015 20:00	**15**	0.18	**204,556**	0.23	**0.15**	1	Atlas	36,820	1
	8/6/2015 8:15	8/6/2015 16:30	**495**	1.08	**535,276**	1.25	**0.40**	24	Atlas	578,098	1
	8/19/2015 8:45	8/19/2015 9:00	**15**	0.69	**115,446**	0.5	**0.33**	1	Atlas	79,658	1
	8/19/2015 17:15	8/19/2015 17:45	**30**	0.69	**84,221**	0.72	**0.33**	1	Atlas	58,112	1
	9/7/2015 18:15	9/7/2015 19:15	**60**	0.24	**2,002,950**	0.31	**0.21**	1	Atlas	480,708	1
	10/2/2015 19:00	10/2/2015 20:30	**90**	0.62	**191,339**	1.63	**0.30**	6	Atlas	118,630	1
	10/12/2015 19:30	10/12/2015 20:15	**45**	0.29	**346,191**	0.42	**0.19**	3	Atlas	100,395	1
	10/27/2015 15:45	10/28/2015 9:15	**1050**	2.65	**855,402**	3.09	**0.86**	48	Atlas	2,266,815	1
	10/28/2015 23:00	10/28/2015 23:00	**0**	0.17	**29,233**	3.24	**0.09**	6	Atlas	4,970	1
	11/6/2015 3:45	11/6/2015 7:45	**240**	0.66	**1,419,661**	0.81	**0.40**	3	Atlas	936,976	1
	11/9/2015 19:30	11/9/2015 23:00	**210**	0.49	**627,021**	1.15	**0.22**	12	Atlas	307,240	1
	11/12/2015 0:15	11/12/2015 2:15	**120**	0.32	**1,060,947**	1.46	**0.19**	3	Atlas	339,503	1
	11/18/2015 9:30	11/18/2015 20:45	**675**	1.76	**2,114,265**	2.21	**0.90**	6	Atlas	3,721,106	1
	11/28/2015 14:15	11/28/2015 22:00	**465**	0.68	**1,197,974**	0.94	**0.28**	12	Atlas	814,622	1
	11/30/2015 22:15	12/1/2015 8:30	**615**	0.73	**1,545,123**	1.64	**0.33**	12	Atlas	1,127,940	1
	12/14/2015 7:15	12/14/2015 8:30	**75**	0.26	**81,106**	0.25	**0.14**	6	Atlas	21,087	1
	12/22/2015	12/22/2015 5:45	**345**	0.56	**1,707,321**	0.76	**0.30**	6	Atlas	956,100	1
	12/23/2015 19:45	12/24/2015 2:15	**390**	0.95	**1,612,412**	1.72	**0.67**	1	Atlas	1,531,792	1
	12/25/2015 9:30	12/25/2015 10:45	**75**	0.11	**572,239**	1.81	**0.06**	6	Atlas	62,946	1
	12/26/2015 11:30	12/26/2015 19:00	**450**	0.31	**938,711**	2.13	**0.14**	12	Atlas	291,001	1
	12/27/2015 10:15	12/29/2015 0:15	**2280**	2.05	**2,334,384**	4.18	**0.67**	48	Atlas	4,785,488	1
	2/2/2016 20:00	2/3/2016 5:15	**555**	1.28	**1,738,810**	1.37	**0.61**	6	Atlas	2,225,676	1
	2/21/2016 4:45	2/21/2016 12:45	**480**	0.94	**965,120**	1.12	**0.43**	12	Atlas	907,213	1
	2/23/2016 23:15	2/24/2016 23:15	**1440**	2.03	**1,536,967**	2.96	**0.79**	12	Atlas	3,120,044	1
	2/29/2016 2:00	2/29/2016 2:30	**30**	0.02	**1,989,246**	2.05	**0.01**	3	Atlas	39,785	1
	3/1/2016 12:15	3/1/2016 15:30	**195**	0.29	**1,571,466**	2.33	**0.17**	3	Atlas	455,725	1
	3/10/2016 13:45	3/10/2016 21:45	**480**	1.07	**949,738**	1.11	**0.36**	12	Atlas	1,016,220	1
	3/12/2016 20:30	3/13/2016 13:30	**1020**	0.9	**1,147,581**	1.98	**0.34**	24	Atlas	1,032,823	1
	3/24/2016 18:00	3/24/2016 19:30	**90**	0.43	**692,842**	0.6	**0.32**	1	Atlas	297,922	1
	3/27/2016 21:30	3/27/2016 23:45	**135**	0.97	**923,154**	1.4	**0.65**	1	Atlas	895,460	1
	3/31/2016 4:00	4/1/2016 1:45	**1305**	1.15	**924,207**	2.55	**0.44**	24	Atlas	1,062,838	1
	4/11/2016 17:00	4/11/2016 21:45	**285**	0.91	**557,651**	1.02	**0.42**	6	Atlas	507,462	1
	4/21/2016 16:15	4/21/2016 17:00	**45**	0.3	**244,156**	0.22	**0.11**	3	Atlas	73,247	1
	4/26/2016 21:30	4/26/2016 23:00	**90**	0.32	**350,629**	0.63	**0.16**	6	Atlas	112,201	1
	4/27/2016 14:15	4/27/2016 23:30	**555**	0.6	**785,835**	1.23	**0.29**	1	Atlas	471,501	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO110	**4/30/2016 11:30**	4/30/2016 14:15	**165**	0.48	**223,757**	1.28	**0.18**	24	Atlas	107,404	1
	5/1/2016 15:15	5/1/2016 17:15	**120**	0.53	**592,758**	1.93	**0.37**	1	Atlas	314,162	1
	5/4/2016 11:45	5/4/2016 12:45	**60**	0.19	**353,321**	1.77	**0.11**	3	Atlas	67,131	1
	5/7/2016 17:00	5/7/2016 23:15	**375**	0.82	**434,287**	1.65	**0.43**	6	Atlas	356,115	1
	5/10/2016 14:45	5/10/2016 23:30	**525**	0.76	**860,223**	1.8	**0.28**	24	Atlas	653,770	1
	5/11/2016 19:30	5/11/2016 23:30	**240**	0.27	**447,801**	1.87	**0.14**	3	Atlas	120,906	1
	5/12/2016 17:30	5/12/2016 18:30	**60**	0.1	**228,285**	1.99	**0.08**	1	Atlas	22,829	1
	5/17/2016 6:45	5/17/2016 8:15	**90**	0.35	**279,583**	1.48	**0.15**	12	Atlas	97,854	1
	5/17/2016 20:45	5/17/2016 22:15	**90**	0.26	**379,793**	1.22	**0.13**	6	Atlas	98,746	1
	5/20/2016 14:00	5/20/2016 17:30	**210**	0.69	**1,232,662**	1.33	**0.39**	3	Atlas	850,537	1
	5/26/2016 15:15	5/26/2016 16:30	**75**	0.26	**324,798**	1.02	**0.17**	3	Atlas	84,448	1
	6/2/2016 15:45	6/2/2016 17:00	**75**	0.51	**370,458**	0.62	**0.43**	1	Atlas	188,933	1
	6/12/2016 18:15	6/12/2016 19:30	**75**	0.39	**439,663**	0.43	**0.33**	1	Atlas	171,468	1
	6/14/2016 17:00	6/14/2016 19:15	**135**	0.66	**616,819**	1.05	**0.43**	3	Atlas	407,101	1
	6/23/2016 16:15	6/23/2016 23:45	**450**	1.68	**699,183**	1.79	**0.89**	6	Atlas	1,174,627	1
Grand Total										**400,426,384**	**351**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**6/18/2009 10:00**	6/18/2009 10:00	**0**	1.43	**6,528**	3.48	**0.93**	1	Atlas	9,334	1
	6/20/2009 4:00	6/20/2009 4:30	**30**	0.12	**185,614**	3.12	**0.10**	1	Atlas	22,274	1
	6/22/2009 8:30	6/22/2009 9:00	**30**	1.14	**461**	3.97	**0.77**	1	Atlas	525	1
	7/5/2009 5:45	7/5/2009 5:45	**0**	0.16	**2,758**	0.29	**0.07**	12	Atlas	441	1
	7/8/2009 6:15	7/8/2009 6:15	**0**	0.18	**22,636**	0.56	**0.15**	1	Atlas	4,075	1
	7/17/2009 3:30	7/17/2009 3:30	**0**	0.32	**8,514**	0.55	**0.21**	3	Atlas	2,724	1
	7/22/2009 12:15	7/22/2009 19:00	**405**	1.52	**24,844**	1.84	**0.67**	12	Atlas	37,763	1
	7/25/2009 21:15	7/25/2009 21:15	**0**	0.62	**8,889**	2.11	**0.24**	24	Atlas	5,511	1
	7/28/2009 13:30	7/28/2009 13:30	**0**	2.35	**913**	2.31	**1.78**	6	Cloudburst	2,146	1
	7/28/2009 23:30	7/29/2009 4:15	**285**	2.35	**25,070**	2.93	**1.78**	6	Cloudburst	58,915	1
	7/30/2009 19:30	7/30/2009 19:30	**0**	1.28	**2,119**	3.71	**0.54**	12	Atlas	2,712	1
	8/4/2009 7:30	8/4/2009 9:45	**135**	6.24	**244,482**	9.2				1,525,566	1
	8/10/2009 20:30	8/10/2009 20:30	**0**	1.17	**3,985**	7.35	**0.75**	1	Atlas	4,663	1
	10/6/2009 10:15	10/6/2009 11:45	**90**	0.1	**1,967,053**	0.87	**0.06**	1	Atlas	196,705	1
	10/8/2009 12:45	10/9/2009 22:30	**2025**	1.98	**2,667,935**	2.85	**0.66**	24	Atlas	5,282,512	1
	10/14/2009 5:15	10/14/2009 7:45	**150**	0.7	**2,130,809**	2.68	**0.46**	3	Atlas	1,491,566	1
	10/15/2009 3:45	10/15/2009 5:30	**105**	0.14	**1,671,115**	2.77	**0.09**	3	Atlas	233,956	1
	10/23/2009 1:45	10/23/2009 10:30	**525**	0.62	**563,987**	0.64	**0.27**	12	Atlas	349,672	1
	10/27/2009 13:30	10/27/2009 23:45	**615**	1.18	**2,194,244**	1.8	**0.53**	12	Atlas	2,589,208	1
	10/30/2009 19:00	10/31/2009 5:15	**615**	1.02	**1,655,716**	2.18	**0.46**	12	Atlas	1,688,831	1
	11/17/2009 6:30	11/17/2009 22:45	**975**	0.88	**1,184,956**	0.89	**0.34**	24	Atlas	1,042,761	1
	12/8/2009 12:30	12/8/2009 23:15	**645**	1.73	**1,553,639**	1.94	**0.71**	12	Atlas	2,687,795	1
	12/13/2009 6:15	12/13/2009 7:30	**75**	0.29	**609,466**	2.08	**0.19**	3	Atlas	176,745	1
	12/18/2009 19:45	12/19/2009 8:00	**735**	0.37	**7,314**	0.42	**0.13**	24	Atlas	2,706	1
	12/24/2009 21:00	12/25/2009 11:15	**855**	0.28	**20,960**	0.65	**0.10**	24	Atlas	5,869	1
	12/30/2009 23:00	12/31/2009 1:00	**120**	0.08	**7,089**	0.53	**0.05**	3	Atlas	567	1
	1/17/2010 8:45	1/17/2010 12:30	**225**	0.26	**1,861**	0.26	**0.11**	12	Atlas	484	1
	1/20/2010 8:45	1/20/2010 14:00	**315**	0.44	**391,059**	0.71	**0.23**	6	Atlas	172,066	1
	1/20/2010 23:30	1/21/2010 0:30	**60**	0.88	**413,717**	0.82	**0.35**	12	Atlas	364,071	1
	1/21/2010 9:30	1/21/2010 19:45	**615**	0.88	**1,905,540**	1.58	**0.35**	12	Atlas	1,676,876	1
	1/24/2010 3:30	1/24/2010 23:30	**1200**	0.95	**2,147,773**	2.52	**0.37**	24	Atlas	2,040,384	1
	1/30/2010 4:30	1/30/2010 11:00	**390**	0.08	**22,755**	1.19	**0.03**	12	Atlas	1,820	1
	2/5/2010 2:15	2/6/2010 4:45	**1590**	1.13	**1,082,419**	1.31	**0.40**	24	Atlas	1,223,134	1
	2/9/2010	2/9/2010 0:15	**15**	0.37	**3,343**	1.3	**0.13**	24	Atlas	1,237	1
	2/9/2010 12:00	2/9/2010 13:15	**75**	0.37	**2,938**	1.43	**0.13**	24	Atlas	1,087	1
	2/11/2010 13:45	2/11/2010 13:45	**0**	Discharge						269	1
	2/15/2010 13:15	2/15/2010 14:45	**90**	0.17	**13,612**	0.56	**0.06**	24	Atlas	2,314	1
	3/12/2010 13:00	3/12/2010 14:45	**105**	0.25	**730,493**	0.26	**0.15**	3	Atlas	182,623	1
	3/14/2010 9:00	3/14/2010 11:45	**165**	0.08	**45,639**	0.37	**0.05**	3	Atlas	3,651	1
	3/21/2010 17:45	3/22/2010 1:45	**480**	0.56	**484,776**	0.56	**0.25**	12	Atlas	271,475	1
	3/25/2010 13:15	3/26/2010 1:45	**750**	0.52	**421,557**	1.1	**0.30**	1	Atlas	219,209	1
	3/28/2010 10:30	3/28/2010 21:30	**660**	0.2	**35,750**	1.29	**0.08**	24	Atlas	7,150	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**4/3/2010 9:45**	4/3/2010 10:00	**15**	0.07	**11,839**	0.27	**0.05**	1	Atlas	829	1
	4/7/2010 22:45	4/8/2010 6:30	**465**	1.1	**2,175,200**	1.18	**0.51**	6	Atlas	2,392,720	1
	4/16/2010 18:00	4/16/2010 19:45	**105**	0.17	**27,097**	0.14	**0.10**	3	Atlas	4,606	1
	4/23/2010 5:00	4/23/2010 9:15	**255**	0.2	**45,198**	0.4	**0.10**	6	Atlas	9,040	1
	4/24/2010 2:45	4/24/2010 20:30	**1065**	1.63	**3,152,533**	1.86	**0.76**	6	Atlas	5,138,630	1
	4/25/2010 17:15	4/25/2010 18:15	**60**	0.19	**16,433**	2.02	**0.10**	6	Atlas	3,122	1
	4/27/2010 7:00	4/27/2010 10:45	**225**	0.32	**612,735**	2.35	**0.16**	6	Atlas	196,075	1
	5/1/2010 4:30	5/1/2010 16:30	**720**	4.15	**779,144**	3.33	**3.59**	48	Atlas	3,233,446	1
	5/2/2010 0:45	5/3/2010 1:30	**1485**	4.15	**2,455,957**	4.66	**3.59**	48	Atlas	10,192,222	1
	5/7/2010 23:00	5/7/2010 23:30	**30**	0.16	**729,477**	4.33	**0.13**	1	Atlas	116,716	1
	5/12/2010 6:15	5/12/2010 11:00	**285**	0.86	**3,016,325**	1.11	**0.65**	1	Atlas	2,594,039	1
	5/13/2010 12:15	5/13/2010 12:30	**15**	0.09	**6,705**	1.2	**0.08**	1	Atlas	603	1
	5/16/2010 9:00	5/16/2010 18:45	**585**	0.54	**10,580**	1.58	**0.25**	12	Atlas	5,713	1
	5/17/2010 18:00	5/17/2010 20:15	**135**	0.39	**2,335,748**	1.96	**0.26**	3	Atlas	910,942	1
	5/21/2010 19:30	5/21/2010 22:45	**195**	1.15	**2,467,202**	2.09	**0.85**	1	Atlas	2,837,282	1
	5/30/2010 16:15	5/30/2010 21:00	**285**	0.39	**4,290,874**	0.48	**0.21**	6	Atlas	1,673,441	1
	6/3/2010 6:00	6/3/2010 6:00	**0**	0.08	**11,034**	0.6	**0.04**	6	Atlas	883	1
	6/9/2010 3:00	6/9/2010 13:15	**615**	2.35	**2,360,136**	2.48	**2.57**	3	Atlas	5,546,319	1
	6/11/2010 22:45	6/11/2010 22:45	**0**	0.19	**981**	2.43	**0.10**	6	Atlas	186	1
	6/13/2010 22:30	6/14/2010 6:30	**480**	0.53	**3,442,342**	3.07	**0.25**	1	Atlas	1,824,442	1
	6/15/2010 20:30	6/15/2010 20:45	**15**	0.42	**3,917**	3.47	**0.27**	3	Atlas	1,645	1
	6/19/2010 5:00	6/19/2010 8:15	**195**	0.9	**3,576,252**	1.88	**0.52**	3	Atlas	3,218,627	1
	6/28/2010 1:15	6/28/2010 2:45	**90**	0.26	**3,030,671**	0.24	**0.18**	1	Atlas	787,975	1
	7/9/2010 7:30	7/9/2010 9:45	**135**	0.49	**11,323**	0.45	**0.19**	24	Atlas	5,548	1
	7/13/2010 3:45	7/13/2010 11:15	**450**	1.83	**2,443,850**	2.3	**0.84**	12	Atlas	4,472,246	1
	7/19/2010 19:30	7/19/2010 19:45	**15**	0.16	**11,914**	2.15	**0.12**	1	Atlas	1,906	1
	7/20/2010 4:30	7/20/2010 6:15	**105**	0.7	**5,495,486**	2.26	**0.44**	1	Atlas	3,846,840	1
	7/21/2010 5:45	7/21/2010 6:30	**45**	0.46	**1,746,273**	1.46	**0.37**	1	Atlas	803,285	1
	7/27/2010 15:00	7/27/2010 16:45	**105**	1	**1,328,779**	1.55	**0.64**	3	Atlas	1,328,779	1
	7/31/2010 3:45	7/31/2010 6:15	**150**	0.43	**3,349,824**	1.61	**0.23**	3	Atlas	1,440,424	1
	7/31/2010 20:45	7/31/2010 21:15	**30**	0.26	**279,590**	1.87	**0.23**	1	Atlas	72,693	1
	8/5/2010 9:00	8/5/2010 9:45	**45**	0.22	**1,955,994**	0.89	**0.17**	1	Atlas	430,319	1
	8/11/2010 16:45	8/11/2010 17:15	**30**	0.1	**31,419**	0.32	**0.07**	1	Atlas	3,142	1
	8/12/2010 14:45	8/12/2010 15:00	**15**	0.06	**30,395**	0.15	**0.04**	1	Atlas	1,824	1
	8/14/2010 16:15	8/14/2010 17:00	**45**	0.53	**3,199,369**	0.86	**0.43**	1	Atlas	1,695,666	1
	8/21/2010 6:45	8/21/2010 8:45	**120**	0.49	**1,235,633**	1.08	**0.30**	3	Atlas	605,460	1
	8/26/2010 10:15	8/26/2010 15:45	**330**	Discharge						704	1
	9/7/2010 9:15	9/7/2010 10:30	**75**	0.06	**15,859**	0.06	**0.05**	1	Atlas	952	1
	10/3/2010 12:00	10/3/2010 12:30	**30**	Discharge						880	1
	10/13/2010 18:00	10/13/2010 21:00	**180**	0.43	**1,620,891**	0.47	**0.29**	3	Atlas	696,983	1
	10/25/2010 6:15	10/25/2010 6:15	**0**	0.02	**14,058**	0.03	**0.02**	1	Atlas	281	1
	10/26/2010 10:45	10/26/2010 15:15	**270**	0.58	**1,378,787**	0.55	**0.32**	6	Atlas	799,697	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**11/4/2010 12:30**	11/4/2010 12:45	**15**	Discharge						176	1
	11/14/2010 1:15	11/14/2010 2:45	**90**	0.12	**6,183**	0.12	**0.06**	12	Atlas	742	1
	11/16/2010 10:30	11/16/2010 20:30	**600**	0.79	**2,043,741**	0.9	**0.36**	12	Atlas	1,614,555	1
	11/23/2010 1:45	11/23/2010 4:30	**165**	0.27	**1,060,204**	1.11	**0.15**	6	Atlas	286,255	1
	11/29/2010 20:15	11/30/2010 13:45	**1050**	1.69	**2,477,943**	5	**0.65**	24	Atlas	4,187,723	1
	12/11/2010 17:00	12/12/2010 3:45	**645**	0.34	**33,451**	0.4	**0.12**	12	Atlas	11,373	1
	12/16/2010 1:30	12/16/2010 4:45	**195**	0.36	**1,828**	0.69	**0.16**	12	Atlas	658	1
	12/30/2010 0:45	12/30/2010 10:15	**570**	0.54	**295,564**	0.64	**0.24**	12	Atlas	159,604	1
	1/1/2011 0:30	1/1/2011 9:30	**540**	0.61	**1,312,357**	1.18	**0.27**	12	Atlas	800,538	1
	1/11/2011 7:45	1/11/2011 11:15	**210**	0.05	**88,992**	0.1	**0.02**	12	Atlas	4,450	1
	1/18/2011 4:00	1/18/2011 15:45	**705**	0.38	**49,928**	0.41	**0.13**	24	Atlas	18,973	1
	1/20/2011 14:15	1/20/2011 16:15	**120**	0.28	**2,695**	0.63	**0.11**	24	Atlas	755	1
	2/1/2011 8:45	2/1/2011 20:45	**720**	0.91	**2,417,486**	0.83	**0.37**	6	Atlas	2,199,913	1
	2/5/2011 3:45	2/5/2011 6:45	**180**	0.22	**14,356**	1.06	**0.10**	12	Atlas	3,158	1
	2/7/2011 10:45	2/7/2011 16:15	**330**	0.25	**17,761**	1.33	**0.10**	24	Atlas	4,440	1
	2/20/2011 9:45	2/20/2011 9:45	**0**	0.03	**17,755**	0.03	**0.03**	1	Atlas	533	1
	2/21/2011 18:00	2/21/2011 19:15	**75**	0.17	**15,089**	0.2	**0.10**	3	Atlas	2,565	1
	2/24/2011 4:30	2/25/2011 8:45	**1695**	2.24	**4,894,488**	2.45	**0.87**	12	Atlas	10,963,652	1
	2/27/2011 16:30	2/27/2011 17:15	**45**	0.13	**6,406**	2.5	**0.07**	3	Atlas	833	1
	2/28/2011 4:45	2/28/2011 12:30	**465**	1.35	**2,486,639**	3.89	**0.63**	6	Atlas	3,356,962	1
	3/4/2011 22:00	3/5/2011 19:00	**1260**	0.92	**1,579,736**	2.4	**0.30**	24	Atlas	1,453,358	1
	3/6/2011 6:30	3/7/2011 8:00	**1530**	Discharge						4,239	1
	3/8/2011 20:00	3/9/2011 20:00	**1440**	3.15	**5,453,228**	4.07	**2.04**	24	Cloudburst	17,177,667	1
	3/10/2011 22:45	3/12/2011 6:15	**1890**	0.02	**1,284,500**	4.09	**0.01**	3	Atlas	25,690	1
	3/14/2011 3:30	3/15/2011 12:45	**1995**	0.88	**156,054**	4.05	**0.29**	12	Atlas	137,328	1
	3/17/2011 8:30	3/17/2011 9:00	**30**	Discharge						2,746	1
	3/18/2011 11:15	3/18/2011 22:00	**645**	Discharge						210,007	1
	4/1/2011 20:15	4/1/2011 20:45	**30**	0.13	**5,120**	0.3	**0.08**	1	Atlas	666	1
	4/4/2011 13:00	4/4/2011 18:15	**315**	0.84	**3,098,881**	1	**0.43**	6	Atlas	2,603,060	1
	4/9/2011 10:30	4/9/2011 12:45	**135**	0.53	**2,411,939**	1.43	**0.37**	1	Atlas	1,278,328	1
	4/11/2011 10:15	4/12/2011 6:15	**1200**	3.23	**5,103,997**	4.61	**2.56**	24	Cloudburst	16,485,909	1
	4/13/2011 9:15	4/13/2011 9:15	**0**	Discharge						404	1
	4/15/2011 12:15	4/15/2011 14:00	**105**	0.18	**1,263,997**	3.94	**0.11**	3	Atlas	227,519	1
	4/15/2011 22:45	4/16/2011 10:15	**690**	0.21	**42,129**	4.15	**0.10**	12	Atlas	8,847	1
	4/17/2011 4:30	4/17/2011 9:45	**315**	Discharge						503	1
	4/18/2011 23:45	4/18/2011 23:45	**0**	0.05	**13,587**	1.41	**0.03**	1	Atlas	679	1
	4/20/2011	4/20/2011 10:30	**630**	0.79	**2,345,542**	1.28	**0.43**	6	Atlas	1,852,978	1
	4/22/2011 16:30	4/28/2011 3:30	**7860**	4.73	**7,994,856**	8.74	**3.28**	48	Atlas	37,815,669	1
	4/28/2011 12:00	4/29/2011 23:15	**2115**	Discharge						1,166,363	1
	4/30/2011 21:45	5/4/2011 4:30	**4725**	0.73	**20,258,882**	7.93				14,788,984	1
	5/4/2011 13:00	5/5/2011 10:15	**1275**	Discharge						45,949	1
	5/5/2011 21:45	5/5/2011 23:00	**75**	Discharge						466	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**5/8/2011 0:45**	5/8/2011 2:15	**90**	0.21	**9,994,827**	3.72	**0.12**	3	Atlas	2,098,914	1
	5/14/2011 14:45	5/14/2011 16:00	**75**	0.26	**855,058**	0.5	**0.19**	1	Atlas	222,315	1
	5/15/2011 12:00	5/16/2011 1:15	**795**	0.3	**13,225**	0.59	**0.17**	3	Atlas	3,968	1
	5/18/2011 7:45	5/18/2011 9:00	**75**	0.04	**63,581**	0.61	**0.02**	6	Atlas	2,543	1
	5/18/2011 23:30	5/19/2011 1:15	**105**	0.1	**45,065**	0.71	**0.05**	6	Atlas	4,507	1
	5/21/2011 18:15	5/21/2011 19:45	**90**	0.44	**3,585,725**	0.89	**0.30**	1	Atlas	1,577,719	1
	5/23/2011 4:00	5/23/2011 5:30	**90**	0.38	**1,315,414**	0.96	**0.26**	1	Atlas	499,857	1
	5/23/2011 17:45	5/23/2011 22:00	**255**	0.8	**4,386,646**	1.77	**0.51**	3	Atlas	3,509,317	1
	5/25/2011 22:45	5/26/2011 17:00	**1095**	1.48	**2,463,135**	3.19	**0.67**	3	Atlas	3,645,440	1
	6/11/2011 4:30	6/11/2011 5:45	**75**	0.31	**2,013,929**	0.34	**0.26**	1	Atlas	624,318	1
	6/15/2011 7:45	6/15/2011 11:00	**195**	1.04	**3,295,704**	1.41	**0.65**	1	Atlas	3,427,533	1
	6/18/2011 6:15	6/18/2011 8:45	**150**	0.82	**1,451,896**	1.91	**0.51**	3	Atlas	1,190,555	1
	6/19/2011 7:30	6/19/2011 9:30	**120**	0.46	**2,143,933**	2.37	**0.28**	3	Atlas	986,209	1
	6/20/2011 1:15	6/20/2011 2:30	**75**	0.52	**3,888,282**	2.89	**0.45**	1	Atlas	2,021,906	1
	6/21/2011 14:00	6/21/2011 17:00	**180**	0.41	**317,148**	3.24	**0.24**	3	Atlas	130,031	1
	6/22/2011 19:00	6/23/2011 3:45	**525**	4.11	**3,313,388**	6.33	**32.05**	3	Cloudburst	13,618,023	1
	6/26/2011 2:00	6/26/2011 4:45	**165**	0.32	**6,975**	5.74	**0.17**	6	Atlas	2,232	1
	7/5/2011 17:15	7/5/2011 18:00	**45**	0.21	**118,011**	0.17	**0.13**	3	Atlas	24,782	1
	7/8/2011 2:45	7/8/2011 5:00	**135**	0.44	**211,747**	0.69	**0.23**	3	Atlas	93,169	1
	7/12/2011 16:45	7/12/2011 21:00	**255**	0.35	**632,500**	0.96	**0.18**	6	Atlas	221,375	1
	7/19/2011 22:30	7/20/2011 0:15	**105**	1.58	**2,464,433**	1.64	**1.61**	1	Atlas	3,893,805	1
	8/7/2011 2:45	8/7/2011 6:45	**240**	1.9	**2,196,016**	1.92	**1.70**	3	Atlas	4,172,431	1
	8/8/2011 14:30	8/8/2011 15:00	**30**	0.17	**1,316**	2.1	**0.11**	3	Atlas	224	1
	8/10/2011 2:30	8/10/2011 3:15	**45**	0.16	**543,751**	2.2	**0.10**	3	Atlas	87,000	1
	8/13/2011 17:00	8/13/2011 18:00	**60**	0.73	**1,192,848**	2.9	**0.57**	1	Atlas	870,779	1
	8/18/2011 7:30	8/18/2011 8:45	**75**	0.32	**271,286**	1.04	**0.25**	1	Atlas	86,812	1
	9/4/2011 20:30	9/4/2011 21:00	**30**	0.13	**649,980**	0.11	**0.05**	1	Atlas	84,497	1
	9/6/2011 3:15	9/6/2011 3:15	**0**	0.22	**259**	0.28	**0.09**	12	Atlas	57	1
	9/10/2011 19:45	9/10/2011 20:00	**15**	0.05	**13,436**	0.4	**0.03**	1	Atlas	672	1
	9/11/2011 19:00	9/11/2011 20:30	**90**	0.27	**6,296**	0.61	**0.17**	1	Atlas	1,700	1
	9/14/2011 21:30	9/14/2011 21:30	**0**	0.21	**264**	0.41	**0.11**	3	Atlas	55	1
	9/19/2011 6:45	9/19/2011 23:00	**975**	0.7	**1,770,208**	0.93	**0.28**	12	Atlas	1,239,146	1
	9/21/2011 12:15	9/21/2011 12:15	**0**	0.02	**2,614**	0.95	**0.01**	6	Atlas	52	1
	9/23/2011 0:45	9/23/2011 8:15	**450**	0.79	**564,843**	1.53	**0.36**	12	Atlas	446,226	1
	9/25/2011 18:45	9/26/2011 9:15	**870**	3.64	**4,683,927**	5.29	**9.04**	12	Cloudburst	17,049,494	1
	10/13/2011 6:45	10/13/2011 18:00	**675**	0.39	**1,493,104**	0.37	**0.19**	3	Atlas	582,311	1
	10/18/2011 19:30	10/18/2011 20:45	**75**	0.1	**161,659**	0.49	**0.07**	1	Atlas	16,166	1
	10/19/2011 17:15	10/20/2011 7:45	**870**	0.43	**3,869**	0.9	**0.17**	24	Atlas	1,664	1
	10/26/2011 20:30	10/27/2011 5:15	**525**	1.14	**1,798,446**	1.52	**0.47**	12	Atlas	2,050,228	1
	11/3/2011 9:00	11/3/2011 22:15	**795**	0.56	**364,744**	0.62	**0.26**	3	Atlas	204,257	1
	11/14/2011 21:15	11/15/2011 15:00	**1065**	2.04	**583,988**	1.41	**0.66**	48	Atlas	1,191,335	1
	11/16/2011 4:30	11/16/2011 11:15	**405**	2.04	**328,857**	2.04	**0.66**	48	Atlas	670,868	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**11/20/2011 3:30**	11/20/2011 3:45	**15**	0.86	**148**	2.1	**0.30**	24	Atlas	127	1
	11/20/2011 12:15	11/21/2011 10:30	**1335**	0.86	**265,066**	2.91	**0.30**	24	Atlas	227,957	1
	11/21/2011 23:30	11/22/2011 19:15	**1185**	1.14	**2,127,354**	3.75	**0.49**	12	Atlas	2,425,184	1
	11/27/2011 2:30	11/29/2011 3:45	**2955**	3.13	**2,927,179**	5.12	**0.97**	48	Atlas	9,162,070	1
	11/29/2011 18:00	11/29/2011 19:30	**90**	0.07	**9,073**	3.21	**0.04**	1	Atlas	635	1
	12/4/2011 14:30	12/6/2011 0:45	**2055**	3.1	**2,798,409**	5.67	**1.03**	48	Cloudburst	8,675,068	1
	12/15/2011 3:30	12/15/2011 8:45	**315**	0.45	**695,203**	0.41	**0.22**	6	Atlas	312,842	1
	12/20/2011 23:00	12/21/2011 7:30	**510**	0.63	**1,792,030**	1.11	**0.29**	12	Atlas	1,128,979	1
	12/22/2011 10:45	12/22/2011 19:45	**540**	0.59	**1,371,758**	1.25	**0.26**	12	Atlas	809,337	1
	12/27/2011 0:45	12/27/2011 14:00	**795**	0.65	**1,001,736**	1.87	**0.26**	12	Atlas	651,129	1
	1/11/2012 4:00	1/11/2012 21:15	**1035**	0.73	**2,418,672**	0.73	**0.28**	24	Atlas	1,765,631	1
	1/12/2012 11:45	1/12/2012 14:15	**150**	0.08	**7,951**	0.8	**0.04**	3	Atlas	636	1
	1/17/2012 2:15	1/17/2012 12:45	**630**	0.33	**1,515,634**	1.16	**0.15**	12	Atlas	500,159	1
	1/22/2012 22:00	1/23/2012 11:30	**810**	0.52	**3,437,600**	0.88	**0.29**	3	Atlas	1,787,552	1
	1/25/2012 15:00	1/27/2012 2:45	**2145**	1.72	**4,402,057**	2.25	**0.56**	48	Atlas	7,571,538	1
	2/4/2012 8:00	2/4/2012 12:00	**240**	0.39	**433,665**	0.44	**0.23**	3	Atlas	169,129	1
	2/4/2012 21:15	2/4/2012 21:45	**30**	0.02	**1,806**	0.45	**0.01**	3	Atlas	36	1
	2/14/2012 3:00	2/14/2012 11:30	**510**	0.21	**9,902**	0.26	**0.10**	6	Atlas	2,079	1
	2/15/2012 22:45	2/16/2012 8:00	**555**	0.32	**9,061**	0.55	**0.13**	12	Atlas	2,900	1
	2/21/2012 5:45	2/21/2012 10:15	**270**	0.08	**6,678**	0.42	**0.05**	1	Atlas	534	1
	2/22/2012 22:30	2/22/2012 23:45	**75**	0.16	**1,350,289**	0.44	**0.12**	1	Atlas	216,046	1
	2/29/2012 1:15	2/29/2012 9:30	**495**	0.66	**920,004**	0.79	**0.30**	1	Atlas	607,203	1
	3/2/2012 6:45	3/2/2012 17:30	**645**	0.1	**3,746**	0.77	**0.05**	12	Atlas	375	1
	3/4/2012 22:00	3/5/2012 4:00	**360**	0.25	**5,881**	1.02	**0.13**	6	Atlas	1,470	1
	3/8/2012 9:15	3/8/2012 17:15	**480**	0.8	**1,599,184**	1.12	**0.38**	6	Atlas	1,279,347	1
	3/12/2012 3:30	3/12/2012 12:15	**525**	0.19	**7,909**	0.99	**0.09**	12	Atlas	1,503	1
	3/15/2012 17:45	3/16/2012 3:30	**585**	0.95	**2,116,576**	1.19	**0.41**	12	Atlas	2,010,747	1
	3/17/2012 18:15	3/17/2012 22:30	**255**	1.08	**853,017**	2.18	**0.65**	1	Atlas	921,258	1
	3/22/2012 23:45	3/23/2012 23:15	**1410**	1.55	**3,305,709**	3.05	**0.58**	24	Atlas	5,123,850	1
	3/30/2012 22:30	3/31/2012 0:30	**120**	0.13	**43,408**	0.16	**0.09**	1	Atlas	5,643	1
	4/1/2012 6:45	4/1/2012 12:15	**330**	1.58	**3,140,877**	1.75	**0.86**	6	Atlas	4,962,586	1
	4/4/2012 6:15	4/4/2012 6:45	**30**	0.04	**8,759**	1.79	**0.03**	3	Atlas	350	1
	4/4/2012 16:15	4/5/2012 1:30	**555**	0.25	**463,495**	1.99	**0.11**	12	Atlas	115,874	1
	4/14/2012 8:45	4/14/2012 9:15	**30**	0.2	**551**	0.08	**0.10**	6	Atlas	110	1
	4/16/2012 6:45	4/16/2012 8:00	**75**	0.13	**6,981**	0.32	**0.09**	3	Atlas	908	1
	4/20/2012 23:15	4/21/2012 4:30	**315**	0.23	**2,500**	0.52	**0.11**	12	Atlas	575	1
	4/26/2012 4:30	4/26/2012 5:00	**30**	0.08	**3,034**	0.37	**0.05**	3	Atlas	243	1
	4/28/2012 19:00	4/29/2012 0:45	**345**	0.78	**2,934,404**	0.91	**0.59**	1	Atlas	2,288,835	1
	4/30/2012 18:00	4/30/2012 19:30	**90**	0.34	**2,515,879**	1.19	**0.23**	3	Atlas	855,399	1
	5/4/2012 16:15	5/5/2012 5:15	**780**	1.69	**3,229,249**	2.82	**0.90**	3	Atlas	5,457,431	1
	5/12/2012 23:30	5/13/2012 14:45	**915**	2.1	**3,241,532**	2.13	**0.84**	12	Atlas	6,807,217	1
	5/16/2012 17:30	5/16/2012 18:45	**75**	0.19	**2,158,875**	2.29	**0.17**	1	Atlas	410,186	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**5/29/2012 6:30**	5/29/2012 19:00	**750**	2.72	**3,899,903**	2.72	**10.31**	3	Atlas	10,607,737	1
	5/31/2012 18:15	6/1/2012 6:45	**750**	1.22	**1,933,216**	3.94	**0.52**	12	Atlas	2,358,524	1
	6/4/2012 14:00	6/4/2012 18:15	**255**	0.21	**2,330**	4.13	**0.10**	12	Atlas	489	1
	6/13/2012 14:45	6/13/2012 14:45	**0**	Discharge						6,384	1
	6/17/2012 11:15	6/17/2012 12:15	**60**	0.41	**107,539**	0.3	**0.26**	3	Atlas	44,091	1
	7/1/2012 19:45	7/1/2012 20:45	**60**	0.46	**1,422,062**	0.39	**0.33**	1	Atlas	654,148	1
	7/8/2012 12:45	7/8/2012 13:45	**60**	0.21	**4,143,797**	0.68	**0.15**	1	Atlas	870,197	1
	7/14/2012 12:00	7/14/2012 15:15	**195**	0.49	**3,495,773**	0.73	**0.30**	3	Atlas	1,712,929	1
	7/18/2012 16:15	7/18/2012 18:00	**105**	Discharge						2,461,662	1
	7/19/2012 18:00	7/19/2012 19:45	**105**	0.81	**4,017,203**	1.28	**0.66**	1	Atlas	3,253,935	1
	7/24/2012 19:45	7/24/2012 20:45	**60**	0.25	**2,014,300**	1.08	**0.20**	1	Atlas	503,575	1
	7/26/2012 21:30	7/27/2012 3:30	**360**	0.12	**2,712**	0.41	**0.06**	12	Atlas	325	1
	7/27/2012 19:45	7/27/2012 21:30	**105**	0.63	**3,177,924**	1.01	**0.41**	3	Atlas	2,002,092	1
	8/3/2012 8:00	8/3/2012 10:30	**150**	0.23	**46,477**	0.87	**0.11**	3	Atlas	10,690	1
	8/5/2012 17:30	8/5/2012 17:30	**0**	0.04	**1,078**	0.36	**0.03**	1	Atlas	43	1
	8/13/2012 11:30	8/13/2012 11:45	**15**	0.11	**1,788**	0.11	**0.07**	3	Atlas	197	1
	8/16/2012 20:00	8/16/2012 23:45	**225**	0.59	**2,390,356**	0.72	**0.34**	3	Atlas	1,410,310	1
	8/21/2012 13:45	8/21/2012 14:45	**60**	0.21	**3,983,957**	0.82	**0.18**	1	Atlas	836,631	1
	9/1/2012 15:00	9/1/2012 18:15	**195**	0.58	**2,176,489**	0.62	**0.36**	3	Atlas	1,262,363	1
	9/2/2012 11:45	9/2/2012 22:15	**630**	0.67	**1,683,775**	1.29	**0.26**	24	Atlas	1,128,130	1
	9/3/2012 14:15	9/3/2012 15:15	**60**	0.09	**3,554,204**	1.37	**0.07**	1	Atlas	319,878	1
	9/5/2012 15:15	9/5/2012 17:15	**120**	0.63	**5,044,163**	1.99	**0.50**	1	Atlas	3,177,823	1
	9/7/2012 23:00	9/8/2012 7:00	**480**	1.45	**1,196,436**	3.42	**0.81**	3	Atlas	1,734,832	1
	9/25/2012 8:45	9/25/2012 9:15	**30**	0.42	**2,327**	0.28	**0.23**	6	Atlas	978	1
	9/25/2012 23:30	9/26/2012 5:45	**375**	0.43	**846,593**	0.81	**0.20**	6	Atlas	364,035	1
	9/26/2012 19:45	9/27/2012 1:15	**330**	1.21	**2,923,446**	2.05	**0.64**	6	Atlas	3,537,370	1
	10/1/2012 13:30	10/1/2012 20:15	**405**	0.73	**1,897,850**	2.78	**0.29**	12	Atlas	1,385,430	1
	10/5/2012 23:45	10/6/2012 1:00	**75**	0.11	**20,495**	0.83	**0.06**	6	Atlas	2,254	1
	10/14/2012 18:45	10/14/2012 20:30	**105**	0.14	**5,697**	0.13	**0.09**	1	Atlas	798	1
	10/18/2012 0:30	10/18/2012 2:30	**120**	0.25	**558,220**	0.39	**0.16**	3	Atlas	139,555	1
	10/26/2012 10:30	10/26/2012 23:00	**750**	0.77	**289,728**	0.8	**0.36**	6	Atlas	223,090	1
	11/3/2012 10:45	11/3/2012 10:45	**0**	0.18	**1,193**	0.11	**0.08**	12	Atlas	215	1
	11/12/2012 6:30	11/12/2012 9:30	**180**	0.44	**63,031**	0.45	**0.20**	12	Atlas	27,733	1
	12/2/2012 11:15	12/2/2012 12:15	**60**	0.19	**5,686**	0.26	**0.11**	3	Atlas	1,080	1
	12/4/2012 15:00	12/4/2012 19:00	**240**	0.6	**1,731,910**	0.79	**0.38**	3	Atlas	1,039,146	1
	12/6/2012 22:30	12/7/2012 18:00	**1170**	1.16	**1,332,883**	1.95	**0.49**	12	Atlas	1,546,144	1
	12/8/2012 4:30	12/8/2012 9:45	**315**	0.42	**942,815**	2.37	**0.22**	6	Atlas	395,982	1
	12/9/2012 8:15	12/9/2012 9:00	**45**	1.16	**5,364**	2.45	**0.55**	3	Atlas	6,222	1
	12/9/2012 20:45	12/10/2012 0:45	**240**	1.16	**2,473,456**	3.21	**0.55**	3	Atlas	2,869,209	1
	12/15/2012 11:00	12/15/2012 12:15	**75**	0.18	**326,107**	1.33	**0.11**	3	Atlas	58,699	1
	12/17/2012 17:00	12/17/2012 17:00	**0**	0.18	**1,510**	0.37	**0.09**	6	Atlas	272	1
	12/20/2012 6:30	12/20/2012 12:30	**360**	0.67	**1,992,581**	1.03	**0.36**	6	Atlas	1,335,029	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**12/24/2012 4:45**	12/24/2012 4:45	**0**	0.06	**613**	0.94	**0.03**	3	Atlas	37	1
	12/26/2012 0:45	12/26/2012 11:00	**615**	0.66	**1,321,713**	1.35	**0.26**	12	Atlas	872,330	1
	12/28/2012 22:15	12/29/2012 3:15	**300**	0.05	**4,737**	0.76	**0.02**	12	Atlas	237	1
	12/31/2012 23:00	1/1/2013	**60**	0.11	**3,538**	0.81	**0.04**	24	Atlas	389	1
	1/10/2013 12:30	1/10/2013 14:45	**135**	0.15	**5,194**	0.16	**0.08**	6	Atlas	779	1
	1/11/2013 2:15	1/11/2013 7:45	**330**	0.65	**1,813,821**	0.81	**0.34**	6	Atlas	1,178,983	1
	1/12/2013 20:45	1/13/2013 20:30	**1425**	2.24	**3,283,111**	3.04	**0.86**	24	Atlas	7,354,168	1
	1/15/2013 19:45	1/16/2013 2:30	**405**	0.22	**658**	3.26	**0.08**	24	Atlas	145	1
	1/27/2013 19:45	1/27/2013 20:45	**60**	0.2	**4,358**	0.1	**0.09**	12	Atlas	872	1
	1/28/2013 10:45	1/28/2013 17:00	**375**	0.07	**15,126**	0.29	**0.05**	1	Atlas	1,059	1
	1/30/2013 4:30	1/30/2013 17:45	**795**	0.83	**3,744,574**	1.12	**0.42**	6	Atlas	3,107,996	1
	2/2/2013 10:15	2/2/2013 10:15	**0**	0.02	**1,767**	1.18	**0.01**	3	Atlas	35	1
	2/4/2013 17:15	2/4/2013 18:30	**75**	0.1	**7,981**	1.02	**0.06**	3	Atlas	798	1
	2/8/2013 2:15	2/8/2013 4:45	**150**	0.08	**5,118**	0.22	**0.04**	6	Atlas	409	1
	2/10/2013 15:15	2/10/2013 16:15	**60**	0.16	**7,286**	0.34	**0.08**	3	Atlas	1,166	1
	2/18/2013 22:00	2/19/2013 4:15	**375**	0.36	**3,747**	0.41	**0.17**	12	Atlas	1,349	1
	2/21/2013 22:45	2/22/2013 3:45	**300**	0.42	**636,475**	0.78	**0.19**	12	Atlas	267,320	1
	2/26/2013 5:15	2/26/2013 19:30	**855**	0.56	**529,179**	0.96	**0.22**	12	Atlas	296,340	1
	3/5/2013 14:00	3/5/2013 18:45	**285**	0.45	**596,203**	0.67	**0.17**	24	Atlas	268,291	1
	3/10/2013 23:00	3/11/2013 12:30	**810**	0.99	**2,215,790**	1.46	**0.39**	12	Atlas	2,193,632	1
	3/17/2013 4:15	3/18/2013 8:00	**1665**	1.68	**1,858,858**	2.59	**0.55**	48	Atlas	3,122,881	1
	3/24/2013 4:45	3/24/2013 16:45	**720**	0.51	**452,127**	1.92	**0.19**	24	Atlas	230,585	1
	4/11/2013 4:45	4/12/2013 1:00	**1215**	1.25	**1,357,155**	1.24	**0.48**	24	Atlas	1,696,444	1
	4/16/2013 20:00	4/16/2013 21:15	**75**	0.6	**2,853,381**	1.83	**0.50**	1	Atlas	1,712,029	1
	4/19/2013 1:00	4/19/2013 5:00	**240**	0.92	**3,237,681**	1.54	**0.50**	6	Atlas	2,978,666	1
	4/24/2013 6:00	4/24/2013 10:30	**270**	0.68	**2,195,746**	1.63	**0.37**	3	Atlas	1,493,107	1
	4/27/2013 21:00	4/27/2013 21:00	**0**	0.06	**357**	0.73	**0.03**	12	Atlas	21	1
	4/28/2013 8:45	4/28/2013 9:00	**15**	0.06	**587**	0.77	**0.03**	12	Atlas	35	1
	5/4/2013 11:00	5/5/2013 19:30	**1950**	1.47	**661,640**	1.49	**0.46**	24	Atlas	972,611	1
	5/6/2013 17:15	5/6/2013 17:30	**15**	1.47	**243**	1.57	**0.46**	24	Atlas	358	1
	5/10/2013 9:45	5/11/2013 1:00	**915**	0.97	**1,529,697**	2.58	**0.43**	6	Atlas	1,483,806	1
	5/16/2013 10:15	5/16/2013 10:30	**15**	0.25	**7,281**	1.27	**0.22**	1	Atlas	1,820	1
	5/18/2013 18:45	5/18/2013 19:15	**30**	0.01	**28,827,585**	0.32	**0.01**	1	Atlas	288,276	1
	5/21/2013 7:15	5/21/2013 7:15	**0**	Discharge						178	1
	5/22/2013 15:45	5/22/2013 16:15	**30**	0.15	**245,121**	0.38	**0.10**	3	Atlas	36,768	1
	5/31/2013 15:30	5/31/2013 18:15	**165**	0.17	**3,816**	0.24	**0.08**	12	Atlas	649	1
	6/1/2013 5:45	6/1/2013 6:15	**30**	0.14	**3,344**	0.28	**0.06**	12	Atlas	468	1
	6/1/2013 16:15	6/1/2013 16:15	**0**	0.14	**3,179**	0.37	**0.06**	12	Atlas	445	1
	6/9/2013 23:00	6/10/2013 1:30	**150**	0.33	**2,056,924**	0.3	**0.15**	6	Atlas	678,785	1
	6/16/2013 16:45	6/16/2013 17:30	**45**	0.45	**43,727**	0.76	**0.32**	1	Atlas	19,677	1
	6/17/2013 16:15	6/17/2013 22:15	**360**	1.05	**2,107,427**	1.45	**0.55**	1	Atlas	2,212,798	1
	6/21/2013 18:45	6/21/2013 19:30	**45**	0.25	**298,335**	1.75	**0.19**	1	Atlas	74,584	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**6/23/2013 12:30**	6/23/2013 13:00	**30**	0.28	**4,221**	2	**0.21**	1	Atlas	1,182	1
	6/24/2013 9:00	6/24/2013 9:30	**30**	0.07	**4,003**	1.66	**0.05**	3	Atlas	280	1
	6/26/2013 3:15	6/26/2013 5:30	**135**	0.82	**2,625,450**	1.43	**0.55**	3	Atlas	2,152,869	1
	6/26/2013 16:15	6/26/2013 22:15	**360**	2.33	**4,659,469**	3.7	**1.97**	6	Cloudburst	10,856,563	1
	6/29/2013 19:30	6/29/2013 22:15	**165**	0.47	**2,571,013**	3.97	**0.26**	3	Atlas	1,208,376	1
	7/1/2013 18:45	7/1/2013 19:45	**60**	0.33	**206,830**	4.02	**0.16**	3	Atlas	68,254	1
	7/2/2013 13:15	7/2/2013 14:00	**45**	0.09	**12,858,087**	4.12	**0.08**	1	Atlas	1,157,228	1
	7/4/2013 6:30	7/4/2013 12:00	**330**	0.54	**24,384**	1.3	**0.23**	12	Atlas	13,167	1
	7/6/2013 0:30	7/6/2013 7:45	**435**	0.66	**1,408,382**	2.19	**0.28**	12	Atlas	929,532	1
	7/10/2013 14:00	7/10/2013 15:15	**75**	0.75	**3,209,814**	2.07	**0.50**	1	Atlas	2,407,360	1
	7/14/2013 19:30	7/14/2013 20:30	**60**	0.12	**3,464,623**	0.95	**0.10**	1	Atlas	415,755	1
	7/18/2013 16:30	7/18/2013 16:30	**0**	0.18	**453**	0.33	**0.13**	1	Atlas	82	1
	7/21/2013 19:30	7/21/2013 21:00	**90**	2.39	**385,534**	1.49	**0.92**	24	Atlas	921,426	1
	7/22/2013 6:30	7/22/2013 16:45	**615**	2.39	**2,567,155**	2.59	**0.92**	24	Atlas	6,135,500	1
	7/30/2013 18:00	7/30/2013 18:00	**0**	0.14	**774**	0.15	**0.08**	3	Atlas	108	1
	8/12/2013 14:30	8/12/2013 15:45	**75**	0.92	**2,857,923**	0.81	**0.42**	1	Atlas	2,629,289	1
	8/13/2013 2:15	8/13/2013 3:45	**90**	0.92	**375,337**	1.18	**0.42**	1	Atlas	345,310	1
	8/20/2013 17:45	8/20/2013 19:15	**90**	0.19	**2,037,555**	0.21	**0.10**	1	Atlas	387,135	1
	8/31/2013 19:30	9/1/2013 3:30	**480**	1.19	**2,013,694**	1.15	**0.55**	6	Atlas	2,396,295	1
	9/2/2013 13:30	9/2/2013 14:30	**60**	0.41	**4,538,253**	1.6	**0.36**	1	Atlas	1,860,684	1
	9/11/2013 10:00	9/11/2013 10:15	**15**	0.03	**3,481**	0.04	**0.03**	1	Atlas	104	1
	9/12/2013 12:45	9/12/2013 12:45	**0**	0.02	**11,724**	0.05	**0.02**	1	Atlas	234	1
	9/20/2013 15:45	9/21/2013 4:45	**780**	1.26	**3,170,922**	1.28	**0.53**	12	Atlas	3,995,361	1
	10/5/2013 12:00	10/6/2013 8:45	**1245**	4.28	**4,016,904**	4.33	**7.90**	24	Cloudburst	17,192,351	1
	10/17/2013 9:45	10/17/2013 9:45	**0**	0.02	**3,423**	0.03	**0.01**	3	Atlas	68	1
	10/19/2013 7:15	10/19/2013 7:15	**0**	0.19	**736**	0.09	**0.10**	6	Atlas	140	1
	10/30/2013 1:00	10/30/2013 7:00	**360**	1.3	**2,109,056**	1.3	**0.63**	6	Atlas	2,741,772	1
	10/31/2013 11:30	10/31/2013 22:45	**675**	0.6	**1,036,990**	1.9	**0.23**	24	Atlas	622,194	1
	11/6/2013 18:30	11/6/2013 21:00	**150**	0.21	**1,146**	0.75	**0.09**	12	Atlas	241	1
	11/17/2013 5:15	11/17/2013 19:45	**870**	2.68	**4,107,715**	2.87	**1.89**	6	Cloudburst	11,008,675	1
	11/21/2013 19:00	11/21/2013 19:15	**15**	0.12	**543**	2.92	**0.09**	1	Atlas	65	1
	12/5/2013 5:15	12/5/2013 18:00	**765**	0.78	**1,070,284**	0.29	**0.25**	48	Atlas	834,821	1
	12/6/2013 2:15	12/6/2013 11:30	**555**	0.78	**1,174**	0.45	**0.25**	48	Atlas	916	1
	12/14/2013 3:45	12/14/2013 14:45	**660**	0.81	**337,188**	1.11	**0.33**	12	Atlas	273,122	1
	12/21/2013 1:45	12/21/2013 13:00	**675**	2.57	**899,420**	1.78	**0.95**	24	Atlas	2,311,509	1
	12/21/2013 21:15	12/22/2013 6:00	**525**	2.57	**2,789,370**	2.66	**0.95**	24	Atlas	7,168,682	1
	12/29/2013 0:15	12/29/2013 10:00	**585**	0.51	**89,388**	0.75	**0.22**	12	Atlas	45,588	1
	1/2/2014 3:15	1/2/2014 10:15	**420**	0.24	**1,356**	0.73	**0.13**	3	Atlas	325	1
	1/5/2014 14:30	1/5/2014 19:30	**300**	0.47	**504,609**	0.66	**0.23**	6	Atlas	237,166	1
	1/10/2014 23:45	1/11/2014 5:30	**345**	0.95	**2,312,185**	1.43	**0.51**	6	Atlas	2,196,576	1
	1/13/2014 14:00	1/13/2014 17:30	**210**	0.2	**4,284**	1.16	**0.09**	12	Atlas	857	1
	1/21/2014 3:15	1/21/2014 13:15	**600**	0.15	**2,338**	0.17	**0.07**	12	Atlas	351	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**1/25/2014 11:45**	1/25/2014 13:30	**105**	0.05	**4,070**	0.22	**0.03**	6	Atlas	203	1
	2/2/2014 2:45	2/2/2014 7:00	**255**	0.21	**1,051,852**	0.2	**0.11**	6	Atlas	220,889	1
	2/2/2014 16:30	2/2/2014 16:45	**15**	0.25	**439**	0.23	**0.11**	12	Atlas	110	1
	2/3/2014 9:45	2/3/2014 14:45	**300**	0.25	**4,581**	0.46	**0.11**	12	Atlas	1,145	1
	2/4/2014 18:00	2/5/2014 3:15	**555**	0.51	**6,058,205**	0.97	**0.26**	6	Atlas	3,089,684	1
	2/14/2014 15:45	2/14/2014 19:45	**240**	0.5	**10,785**	0.52	**0.26**	6	Atlas	5,392	1
	2/17/2014 14:15	2/17/2014 18:30	**255**	0.55	**2,441,264**	1.11	**0.33**	3	Atlas	1,342,695	1
	2/20/2014 19:00	2/20/2014 23:45	**285**	0.17	**354,230**	1.27	**0.09**	6	Atlas	60,219	1
	3/2/2014 9:15	3/2/2014 18:45	**570**	0.57	**820,955**	0.34	**0.22**	24	Atlas	467,945	1
	3/3/2014 13:30	3/3/2014 16:00	**150**	0.57	**1,057**	0.58	**0.22**	24	Atlas	603	1
	3/4/2014 13:00	3/4/2014 14:00	**60**	Discharge						60	1
	3/12/2014 7:15	3/12/2014 7:30	**15**	0.06	**6,321**	0.06	**0.03**	12	Atlas	379	1
	3/16/2014 17:30	3/16/2014 19:30	**120**	0.08	**3,093**	0.15	**0.05**	3	Atlas	247	1
	3/19/2014 8:00	3/19/2014 8:30	**30**	0.07	**4,100**	0.15	**0.04**	1	Atlas	287	1
	3/28/2014 4:30	3/28/2014 5:30	**60**	0.25	**638,288**	0.3	**0.12**	6	Atlas	159,572	1
	3/29/2014 5:15	3/29/2014 13:15	**480**	0.94	**2,168,282**	1.22	**0.43**	12	Atlas	2,038,185	1
	4/1/2014 20:30	4/1/2014 20:45	**15**	0.08	**2,286**	1.32	**0.06**	1	Atlas	183	1
	4/3/2014 5:00	4/4/2014 12:45	**1905**	2.63	**2,648,219**	3.94	**0.92**	24	Atlas	6,964,815	1
	4/7/2014 7:45	4/7/2014 16:45	**540**	0.74	**4,747,576**	3.47	**0.43**	3	Atlas	3,513,206	1
	4/14/2014 3:30	4/14/2014 10:30	**420**	1.02	**1,057**	1.18	**0.39**	24	Atlas	1,078	1
	4/14/2014 19:30	4/15/2014 3:00	**450**	1.02	**925,568**	1.07	**0.39**	24	Atlas	944,079	1
	4/25/2014 2:30	4/25/2014 10:30	**480**	0.1	**1,114**	0.11	**0.05**	3	Atlas	111	1
	4/27/2014 20:30	4/28/2014 20:30	**1440**	1.8	**2,946,833**	1.9	**0.71**	3	Atlas	5,304,299	1
	4/29/2014 19:00	4/29/2014 22:15	**195**	0.2	**1,117**	2.06	**0.09**	12	Atlas	223	1
	5/9/2014 19:15	5/10/2014 16:15	**1260**	1.5	**4,171,466**	1.58	**0.58**	24	Atlas	6,257,200	1
	5/14/2014 7:00	5/15/2014 1:00	**1080**	1.09	**1,025,905**	2.72	**0.42**	24	Atlas	1,118,236	1
	5/16/2014 3:30	5/16/2014 4:15	**45**	0.06	**6,568**	2.78	**0.04**	1	Atlas	394	1
	5/21/2014 21:00	5/22/2014 4:30	**450**	0.43	**2,319,457**	0.57	**0.20**	12	Atlas	997,366	1
	5/28/2014 20:15	5/28/2014 21:30	**75**	0.35	**4,628,860**	0.79	**0.30**	1	Atlas	1,620,101	1
	5/29/2014 20:45	5/29/2014 22:00	**75**	0.76	**2,476,350**	1.14	**0.64**	1	Atlas	1,882,026	1
	6/1/2014 22:30	6/1/2014 22:30	**0**	0.09	**12,516**	1.26	**0.04**	6	Atlas	1,126	1
	6/2/2014 22:15	6/2/2014 22:15	**0**	0.01	**164,572**	1.29	**0.01**	1	Atlas	1,646	1
	6/5/2014 21:00	6/5/2014 22:00	**60**	Discharge						5,599	1
	6/10/2014 15:30	6/10/2014 17:00	**90**	0.14	**40,460**	0.21	**0.09**	3	Atlas	5,664	1
	6/11/2014 14:15	6/11/2014 15:00	**45**	0.07	**5,792,611**	0.28	**0.04**	1	Atlas	405,483	1
	6/20/2014 16:00	6/20/2014 18:15	**135**	0.22	**718,793**	0.22	**0.15**	3	Atlas	158,134	1
	6/24/2014 13:30	6/24/2014 14:45	**75**	0.16	**2,393,605**	0.41	**0.10**	1	Atlas	382,977	1
	6/30/2014 8:30	6/30/2014 8:30	**0**	0.02	**3,620**	0.32	**0.02**	1	Atlas	72	1
	7/1/2014 20:00	7/1/2014 20:00	**0**	0.13	**1,083**	0.11	**0.08**	3	Atlas	141	1
	7/2/2014 16:15	7/2/2014 17:00	**45**	0.08	**801,807**	0.29	**0.07**	1	Atlas	64,145	1
	7/7/2014 19:30	7/7/2014 20:30	**60**	1.04	**991,535**	1.25	**0.90**	1	Atlas	1,031,197	1
	7/8/2014 7:15	7/8/2014 7:15	**0**	0.36	**313**	1.61	**0.30**	1	Atlas	113	1
	7/13/2014 22:00	7/14/2014 4:15	**375**	0.68	**1,995,628**	2.02	**0.39**	1	Atlas	1,357,027	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**7/14/2014 20:00**	7/14/2014 21:00	**60**	0.1	**6,931,961**	1.14	**0.09**	1	Atlas	693,196	1
	7/26/2014 21:45	7/27/2014 10:15	**750**	1.22	**2,710,659**	1.25	**0.56**	12	Atlas	3,307,004	1
	8/8/2014 3:45	8/8/2014 10:45	**420**	0.9	**3,770,033**	0.9	**0.43**	6	Atlas	3,393,029	1
	8/9/2014 4:00	8/9/2014 4:00	**0**	Discharge						52	1
	8/10/2014 3:45	8/10/2014 5:15	**90**	0.62	**1,823,557**	1.61	**0.50**	1	Atlas	1,130,605	1
	8/11/2014 15:30	8/11/2014 16:15	**45**	0.44	**1,676,646**	2.04	**0.37**	1	Atlas	737,724	1
	8/17/2014	8/17/2014 0:15	**15**	0.7	**439**	1.38	**0.27**	24	Atlas	307	1
	8/17/2014 9:00	8/17/2014 11:00	**120**	0.7	**806,812**	1.06	**0.27**	24	Atlas	564,769	1
	8/17/2014 23:00	8/17/2014 23:45	**45**	0.7	**124,460**	1.15	**0.27**	24	Atlas	87,122	1
	8/20/2014 16:00	8/20/2014 16:00	**0**	0.08	**1,555**	0.79	**0.07**	1	Atlas	124	1
	8/22/2014 19:15	8/22/2014 20:00	**45**	0.45	**2,432,812**	1.18	**0.35**	1	Atlas	1,094,766	1
	8/23/2014 15:45	8/23/2014 22:15	**390**	0.55	**2,938,480**	1.74	**0.25**	3	Atlas	1,616,164	1
	8/26/2014 20:00	8/26/2014 20:00	**0**	0.15	**1,061**	1.23	**0.13**	1	Atlas	159	1
	8/27/2014 15:00	8/27/2014 18:00	**180**	0.24	**2,421,015**	1.47	**0.17**	1	Atlas	581,044	1
	8/30/2014 15:15	8/30/2014 16:45	**90**	0.5	**4,268,784**	1.32	**0.30**	1	Atlas	2,134,392	1
	9/2/2014 8:15	9/2/2014 9:15	**60**	0.34	**195,337**	1.22	**0.22**	3	Atlas	66,415	1
	9/11/2014 0:15	9/11/2014 6:30	**375**	1.93	**2,891,012**	1.88	**1.47**	3	Atlas	5,579,653	1
	9/15/2014 22:45	9/15/2014 22:45	**0**	0.03	**2,835**	1.96	**0.03**	1	Atlas	85	1
	10/3/2014 3:30	10/3/2014 4:15	**45**	0.25	**138,274**	0.09	**0.10**	1	Atlas	34,569	1
	10/3/2014 19:15	10/3/2014 20:15	**60**	0.25	**2,737**	0.26	**0.10**	1	Atlas	684	1
	10/6/2014 7:45	10/6/2014 11:00	**195**	0.39	**1,546,184**	0.6	**0.23**	1	Atlas	603,012	1
	10/7/2014 11:30	10/7/2014 12:30	**60**	0.18	**920,675**	0.82	**0.16**	1	Atlas	165,721	1
	10/10/2014 1:45	10/10/2014 3:45	**120**	1.17	**1,833,456**	1.66	**0.55**	3	Atlas	2,145,144	1
	10/10/2014 17:15	10/10/2014 21:00	**225**	1.17	**1,080**	1.85	**0.55**	3	Atlas	1,264	1
	10/13/2014 4:30	10/13/2014 7:00	**150**	0.48	**1,600,170**	2.22	**0.31**	3	Atlas	768,082	1
	10/13/2014 23:30	10/14/2014 10:30	**660**	0.96	**1,971,781**	2.81	**0.42**	12	Atlas	1,892,910	1
	10/20/2014 7:15	10/20/2014 7:15	**0**	0.05	**2,810**	1.19	**0.04**	1	Atlas	141	1
	10/20/2014 20:00	10/20/2014 20:00	**0**	0.08	**11,758**	1.26	**0.07**	1	Atlas	941	1
	10/28/2014 13:00	10/28/2014 13:00	**0**	0.12	**5,103**	0.11	**0.07**	3	Atlas	612	1
	11/23/2014 17:30	11/23/2014 23:30	**360**	0.68	**1,970,554**	1.05	**0.31**	6	Atlas	1,339,977	1
	11/24/2014 11:30	11/24/2014 11:30	**0**	0.02	**1,831**	0.74	**0.02**	1	Atlas	37	1
	12/1/2014 3:45	12/1/2014 16:15	**750**	0.81	**263,259**	0.76				213,240	1
	12/4/2014 14:30	12/5/2014 6:15	**945**	1.74	**719**	1.18	**0.56**	48	Atlas	1,251	1
	12/5/2014 20:30	12/6/2014 7:30	**660**	1.74	**1,866,987**	2.55	**0.56**	48	Atlas	3,248,557	1
	12/16/2014 5:00	12/16/2014 5:45	**45**	0.1	**238,869**	0.1	**0.06**	1	Atlas	23,887	1
	12/22/2014 22:30	12/23/2014 0:15	**105**	0.21	**9,908**	0.3	**0.13**	3	Atlas	2,081	1
	12/23/2014 20:00	12/23/2014 20:15	**15**	0.04	**10,253**	0.26	**0.03**	3	Atlas	410	1
	12/24/2014 12:45	12/24/2014 14:15	**90**	0.14	**4,582**	0.35	**0.06**	3	Atlas	641	1
	12/27/2014 17:00	12/28/2014 2:00	**540**	0.3	**662,130**	0.69	**0.12**	24	Atlas	198,639	1
	1/3/2015 5:45	1/4/2015 4:00	**1335**	0.33	**6,268**	0.64	**0.12**	24	Atlas	2,069	1
	2/1/2015 12:00	2/1/2015 18:00	**360**	0.39	**163,270**	0.51	**0.18**	3	Atlas	63,675	1
	2/21/2015 3:30	2/21/2015 15:45	**735**	1.2	**8,208**	1.44	**0.46**	24	Atlas	9,849	1
	3/3/2015 18:45	3/4/2015 17:00	**1335**	1.67	**2,568,702**	1.31	**0.54**	48	Atlas	4,289,732	1
	3/7/2015 13:15	3/7/2015 19:00	**345**	Discharge						644,891	1
	3/10/2015 6:45	3/10/2015 15:30	**525**	1.21	**5,313,546**	2.88	**0.55**	12	Atlas	6,429,390	1
	3/13/2015 10:00	3/15/2015 20:00	**3480**	1.72	**6,384,212**	2.93	**0.65**	24	Atlas	10,980,845	1
	3/19/2015 19:00	3/19/2015 19:45	**45**	0.19	**1,921**	1.9	**0.08**	6	Atlas	365	1
	3/24/2015 14:45	3/24/2015 20:30	**345**	0.12	**6,301**	0.29	**0.06**	1	Atlas	756	1
	3/26/2015 4:15	3/26/2015 6:45	**150**	0.47	**1,248,694**	0.62	**0.18**	12	Atlas	586,886	1
	3/26/2015 15:15	3/26/2015 16:00	**45**	0.47	**657**	0.72	**0.18**	12	Atlas	309	1
	4/2/2015 9:30	4/3/2015 17:15	**1905**	4.71	**4,007,100**	4.87	**8.02**	6	Cloudburst	18,873,439	1
	4/7/2015 9:15	4/7/2015 19:15	**600**	0.86	**5,075,043**	5.58	**0.39**	1	Atlas	4,364,537	1
	4/8/2015 18:15	4/8/2015 19:15	**60**	0.11	**3,398,900**	5.68	**0.06**	3	Atlas	373,879	1
	4/9/2015 11:30	4/9/2015 12:45	**75**	0.26	**2,865,841**	5.6	**0.23**	1	Atlas	745,119	1
	4/10/2015 2:15	4/10/2015 3:45	**90**	0.17	**4,968,019**	3.42	**0.10**	3	Atlas	844,563	1
	4/13/2015 20:15	4/13/2015 22:00	**105**	0.37	**1,325,755**	1.48	**0.15**	6	Atlas	490,529	1
	4/14/2015 7:15	4/14/2015 12:30	**315**	0.37	**619,130**	1.68	**0.15**	6	Atlas	229,078	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO118	**4/16/2015 10:15**	4/16/2015 10:15	**0**	0.04	**1,853**	0.88	**0.03**	1	Atlas	74	1
	4/17/2015 6:45	4/17/2015 11:15	**270**	Discharge						2,880	1
	4/18/2015 11:00	4/18/2015 11:00	**0**	Discharge						2,451	1
	4/19/2015 6:30	4/19/2015 18:30	**720**	0.7	**1,287,766**	1.15	**0.29**	12	Atlas	901,436	1
	4/20/2015 3:30	4/20/2015 3:30	**0**	0.07	**3,621**	1.21	**0.06**	1	Atlas	253	1
	4/25/2015 9:00	4/25/2015 9:45	**45**	0.21	**42,764**	0.9	**0.08**	24	Atlas	8,980	1
	4/25/2015 19:00	4/25/2015 19:00	**0**	0.21	**1,281**	0.96	**0.08**	24	Atlas	269	1
	4/30/2015 13:00	4/30/2015 13:30	**30**	0.09	**7,174**	0.3	**0.08**	1	Atlas	646	1
	5/9/2015 3:30	5/9/2015 3:30	**0**	0.09	**409**	0.06	**0.05**	3	Atlas	37	1
	5/11/2015 17:45	5/11/2015 17:45	**0**	0.07	**516**	0.16	**0.06**	1	Atlas	36	1
	5/16/2015 11:45	5/16/2015 13:45	**120**	0.37	**772,294**	0.39	**0.17**	3	Atlas	285,749	1
	5/17/2015 14:15	5/17/2015 15:00	**45**	0.08	**5,401,771**	0.5	**0.05**	1	Atlas	432,142	1
	5/25/2015 6:30	5/25/2015 8:45	**135**	0.25	**39,066**	0.22	**0.11**	12	Atlas	9,767	1
	5/26/2015 13:45	5/26/2015 15:00	**75**	0.28	**2,389,021**	0.48	**0.20**	1	Atlas	668,926	1
	5/27/2015 13:45	5/27/2015 13:45	**0**	0.1	**3,961**	0.63	**0.09**	1	Atlas	396	1
	5/30/2015 16:15	5/30/2015 16:15	**0**	0.1	**1,180**	0.71	**0.07**	1	Atlas	118	1
	6/8/2015 7:15	6/8/2015 9:00	**105**	0.22	**1,890,393**	0.29	**0.12**	6	Atlas	415,886	1
	6/17/2015 4:45	6/17/2015 7:15	**150**	0.54	**2,934,880**	0.61	**0.29**	3	Atlas	1,584,835	1
	6/17/2015 17:15	6/17/2015 17:15	**0**	0.09	**2,104**	0.69	**0.07**	1	Atlas	189	1
	6/18/2015 16:15	6/18/2015 17:15	**60**	1.61	**434,594**	1.07	**0.52**	48	Atlas	699,696	1
	7/12/2015 6:30	7/12/2015 6:30	**0**	1.06	**808**	2.51	**0.78**	1	Atlas	856	1
	2/2/2016 19:00	2/3/2016 2:00	**420**	1.2	**5,034,350**	1.28	**0.57**	6	Atlas	6,041,219	1
	2/21/2016 4:00	2/21/2016 11:15	**435**	1.12	**2,506,411**	1.29	**0.51**	12	Atlas	2,807,180	1
	2/23/2016 22:30	2/24/2016 8:15	**585**	2.02	**3,598,251**	2.85	**0.79**	12	Atlas	7,268,467	1
	3/1/2016 12:00	3/1/2016 14:15	**135**	0.25	**1,921,484**	2.29	**0.15**	3	Atlas	480,371	1
	3/9/2016 15:45	3/9/2016 16:45	**60**	1.03	**19,087**	0.27	**0.33**	48	Atlas	19,660	1
	3/10/2016 13:30	3/10/2016 19:45	**375**	1.03	**2,008,362**	1.07	**0.33**	48	Atlas	2,068,612	1
	3/12/2016 20:30	3/13/2016	**210**	0.92	**2,324,761**	1.71	**0.37**	6	Atlas	2,138,780	1
	3/13/2016 8:45	3/13/2016 11:00	**135**	0.92	**1,591,801**	1.99	**0.37**	6	Atlas	1,464,457	1
	3/24/2016 17:15	3/24/2016 18:00	**45**	0.59	**1,172,648**	0.68	**0.45**	1	Atlas	691,862	1
	3/27/2016 21:00	3/27/2016 22:30	**90**	0.8	**3,228,527**	1.39	**0.54**	1	Atlas	2,582,822	1
	3/31/2016 4:00	3/31/2016 7:45	**225**	0.99	**717,117**	1.99	**0.37**	24	Atlas	709,946	1
	3/31/2016 22:00	4/1/2016 0:15	**135**	0.99	**1,117,088**	1.79	**0.37**	24	Atlas	1,105,917	1
	4/11/2016 16:15	4/11/2016 19:30	**195**	0.89	**2,111,356**	0.94	**0.42**	6	Atlas	1,879,107	1
	4/21/2016 14:15	4/21/2016 16:00	**105**	0.29	**1,438,278**	0.22	**0.13**	3	Atlas	417,101	1
	4/22/2016 0:45	4/22/2016 0:45	**0**	0.29	**273**	0.27	**0.13**	3	Atlas	79	1
	4/26/2016 16:00	4/26/2016 22:00	**360**	0.39	**1,823,110**	0.72	**0.20**	6	Atlas	711,013	1
	4/27/2016 13:45	4/27/2016 22:30	**525**	0.51	**3,004,944**	1.19	**0.23**	3	Atlas	1,532,521	1
	4/30/2016 11:00	4/30/2016 13:15	**135**	0.48	**1,429,532**	1.26	**0.19**	6	Atlas	686,175	1
	5/1/2016 14:45	5/1/2016 15:15	**30**	0.23	**784,685**	1.52	**0.15**	3	Atlas	180,478	1
	5/4/2016 11:30	5/4/2016 11:45	**15**	0.2	**303,034**	1.39	**0.12**	1	Atlas	60,607	1
	5/7/2016 16:15	5/7/2016 22:15	**360**	0.61	**417,316**	1.16	**0.32**	6	Atlas	254,563	1
	5/10/2016 14:15	5/10/2016 22:15	**480**	0.79	**3,354,060**	1.62	**0.29**	24	Atlas	2,649,707	1
	5/11/2016 21:30	5/11/2016 22:15	**45**	0.21	**1,335,361**	1.62	**0.12**	3	Atlas	280,426	1
	5/12/2016 16:00	5/12/2016 16:15	**15**	0.12	**616,220**	1.68	**0.08**	3	Atlas	73,946	1
	5/17/2016 6:30	5/17/2016 7:00	**30**	0.63	**56,575**	1.45	**0.21**	24	Atlas	35,642	1
	5/17/2016 20:15	5/17/2016 20:45	**30**	0.63	**78,781**	1.15	**0.21**	24	Atlas	49,632	1
	5/20/2016 13:30	5/20/2016 16:15	**165**	0.57	**4,241,473**	1.24	**0.32**	3	Atlas	2,417,640	1
	5/26/2016 13:30	5/26/2016 15:15	**105**	0.23	**657,340**	0.87	**0.15**	3	Atlas	151,188	1
	6/2/2016 15:15	6/2/2016 16:15	**60**	0.34	**3,316,284**	0.49	**0.26**	1	Atlas	1,127,537	1
	6/4/2016 16:30	6/4/2016 17:00	**30**	0.13	**7,040,965**	0.58	**0.06**	12	Atlas	915,326	1
	6/12/2016 17:45	6/12/2016 18:15	**30**	0.17	**985,274**	0.19	**0.14**	1	Atlas	167,497	1
	6/14/2016 16:30	6/14/2016 18:45	**135**	0.68	**5,042,584**	0.83	**0.43**	3	Atlas	3,428,957	1
	6/22/2016 8:15	6/22/2016 8:30	**15**	0.18	**2,681,264**	0.11	**0.11**	3	Atlas	482,628	1
	6/23/2016 15:45	6/23/2016 21:30	**345**	1.87	**3,603,761**	2.04	**1.11**	6	Cloudburst	6,739,034	1
Grand Total										**671,168,277**	**491**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**1/17/2010 10:15**	1/17/2010 13:00	**165**	0.25	**7,128**	0.25	**0.11**	12	Atlas	1,782	1
	1/20/2010 9:30	1/20/2010 11:15	**105**	1.26	**379**	0.51	**0.41**	48	Atlas	477	1
	1/20/2010 23:45	1/20/2010 23:45	**0**	1.26	**12,164**	0.77	**0.41**	48	Atlas	15,327	1
	1/21/2010 10:15	1/21/2010 18:30	**495**	1.26	**36,910**	1.49	**0.41**	48	Atlas	46,506	1
	1/24/2010 3:15	1/24/2010 4:30	**75**	0.91	**45,410**	1.84	**0.35**	24	Atlas	41,323	1
	1/24/2010 21:00	1/24/2010 21:15	**15**	0.91	**35,903**	2.08	**0.35**	24	Atlas	32,672	1
	2/3/2010 3:30	2/3/2010 3:30	**0**	Discharge						1,888	1
	2/5/2010 16:30	2/5/2010 16:45	**15**	1.2	**13,184**	0.64	**0.44**	12	Atlas	15,821	1
	3/12/2010 14:00	3/12/2010 14:00	**0**	0.24	**69,660**	0.23	**0.15**	3	Atlas	16,718	1
	3/25/2010 21:15	3/25/2010 21:15	**0**	0.63	**7,957**	1.11	**0.37**	1	Atlas	5,013	1
	4/8/2010 1:15	4/8/2010 5:15	**240**	1.22	**86,846**	1.24	**0.57**	6	Atlas	105,952	1
	4/24/2010 14:30	4/24/2010 19:45	**315**	1.63	**283,177**	1.85	**0.77**	6	Atlas	461,579	1
	4/27/2010 10:00	4/27/2010 10:00	**0**	0.33	**4,783**	2.35	**0.16**	6	Atlas	1,578	1
	5/1/2010 5:00	5/1/2010 7:00	**120**	3.87	**28,241**	2.7	**2.63**	48	Cloudburst	109,291	1
	5/2/2010 1:00	5/2/2010 16:00	**900**	3.87	**388,972**	4.32	**2.63**	48	Cloudburst	1,505,322	1
	5/7/2010 23:00	5/7/2010 23:15	**15**	0.25	**199,100**	4.15	**0.22**	1	Atlas	49,775	1
	5/12/2010 9:30	5/12/2010 10:15	**45**	0.79	**402,268**	1.12	**0.58**	1	Atlas	317,792	1
	5/13/2010 16:30	5/13/2010 16:30	**0**	0.09	**13,851**	1.22	**0.08**	1	Atlas	1,247	1
	5/17/2010 19:45	5/17/2010 19:45	**0**	0.57	**26,518**	2.02	**0.37**	3	Atlas	15,115	1
	5/21/2010 19:45	5/21/2010 20:00	**15**	0.92	**415,798**	1.99	**0.66**	1	Atlas	382,534	1
	5/30/2010 16:15	5/30/2010 20:15	**240**	0.49	**402,876**	0.54	**0.30**	1	Atlas	197,409	1
	6/2/2010 16:15	6/2/2010 16:45	**30**	0.04	**10,226**	0.59	**0.03**	1	Atlas	409	1
	6/9/2010 4:00	6/9/2010 12:00	**480**	2.27	**64,664**	2.41	**2.50**	3	Atlas	146,786	1
	6/13/2010 22:45	6/13/2010 23:15	**30**	0.55	**79,466**	2.87	**0.26**	1	Atlas	43,706	1
	6/19/2010 5:30	6/19/2010 6:30	**60**	1.06	**232,686**	2.01	**0.61**	3	Atlas	246,647	1
	6/28/2010 1:45	6/28/2010 1:45	**0**	0.29	**15,733**	0.22	**0.21**	1	Atlas	4,563	1
	7/13/2010 4:00	7/13/2010 5:30	**90**	1.79	**64,242**	1.48	**0.82**	12	Atlas	114,993	1
	7/19/2010 18:45	7/19/2010 18:45	**0**	0.16	**20,290**	2.08	**0.13**	1	Atlas	3,246	1
	7/20/2010 4:30	7/20/2010 5:45	**75**	0.71	**30,785**	2.31	**0.45**	1	Atlas	21,857	1
	7/21/2010 6:00	7/21/2010 6:00	**0**	0.46	**87,802**	1.48	**0.37**	1	Atlas	40,389	1
	7/27/2010 15:15	7/27/2010 16:30	**75**	0.88	**257,041**	1.38	**0.62**	1	Atlas	226,196	1
	7/31/2010 4:30	7/31/2010 5:00	**30**	0.38	**38,634**	1.33	**0.21**	3	Atlas	14,681	1
	7/31/2010 21:00	7/31/2010 21:00	**0**	0.25	**2,844**	1.66	**0.22**	1	Atlas	711	1
	8/5/2010 9:30	8/5/2010 9:30	**0**	0.24	**17,055**	0.85	**0.18**	1	Atlas	4,093	1
	8/14/2010 16:30	8/14/2010 16:30	**0**	0.68	**169,842**	0.88	**0.55**	1	Atlas	115,493	1
	8/21/2010 7:00	8/21/2010 8:30	**90**	0.38	**29,130**	1.15	**0.23**	3	Atlas	11,069	1
	10/13/2010 20:30	10/13/2010 20:30	**0**	0.49	**3,624**	0.52	**0.33**	3	Atlas	1,776	1
	10/26/2010 11:00	10/26/2010 11:15	**15**	0.62	**31,281**	0.34	**0.34**	6	Atlas	19,394	1
	11/16/2010 15:30	11/16/2010 15:30	**0**	0.77	**3,312**	0.71	**0.34**	12	Atlas	2,551	1
	11/24/2010 14:45	11/24/2010 14:45	**0**	0.82	**23,524**	1.06	**0.39**	3	Atlas	19,290	1
	11/25/2010 11:00	11/25/2010 11:30	**30**	2.39	**7,981**	1.68	**0.92**	24	Atlas	19,075	1
	11/30/2010 1:15	11/30/2010 3:30	**135**	1.75	**43,238**	4.77	**0.67**	24	Atlas	75,666	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**12/15/2010 23:00**	12/15/2010 23:00	**0**	0.37	**3,168**	0.59	**0.17**	12	Atlas	1,172	1
	12/29/2010 21:45	12/29/2010 21:45	**0**	0.53	**2,536**	0.12	**0.24**	12	Atlas	1,344	1
	1/1/2011 6:00	1/1/2011 6:00	**0**	0.58	**6,475**	1.02	**0.25**	12	Atlas	3,756	1
	1/11/2011 16:00	1/11/2011 21:30	**330**	0.05	**217,406**	0.11	**0.02**	12	Atlas	10,870	1
	1/12/2011 18:30	1/12/2011 19:45	**75**	Discharge						2,421	1
	1/14/2011 18:45	1/14/2011 22:15	**210**	Discharge						5,772	1
	1/16/2011 20:15	1/16/2011 20:15	**0**	Discharge						1,210	1
	1/17/2011 15:00	1/17/2011 16:00	**60**	0.38	**12,410**	0.08	**0.13**	24	Atlas	4,716	1
	1/23/2011 19:30	1/23/2011 20:00	**30**	Discharge						2,387	1
	1/24/2011 14:00	1/27/2011 15:00	**4380**	Discharge						1,946,138	1
	1/28/2011 16:45	1/28/2011 23:45	**420**	Discharge						196,277	1
	1/29/2011 8:30	1/29/2011 14:00	**330**	Discharge						11,436	1
	1/30/2011 7:15	1/30/2011 20:45	**810**	0.01	**1,176,431**	0.12	**0.01**	1	Atlas	11,764	1
	2/12/2011 7:45	2/15/2011 11:15	**4530**	Discharge						1,556,946	1
	2/21/2011 18:15	2/21/2011 18:15	**0**	0.19	**6,104**	0.17	**0.11**	3	Atlas	1,160	1
	2/24/2011 7:30	2/24/2011 8:00	**30**	2.28	**557**	0.42	**0.88**	24	Atlas	1,270	1
	2/24/2011 17:45	2/25/2011 1:45	**480**	2.28	**196,011**	2.49	**0.88**	24	Atlas	446,905	1
	2/28/2011 5:00	2/28/2011 11:45	**405**	1.34	**154,885**	3.96	**0.65**	6	Atlas	207,546	1
	3/5/2011 7:15	3/5/2011 7:30	**15**	0.89	**23,877**	2.21	**0.30**	24	Atlas	21,250	1
	3/8/2011 23:30	3/9/2011 17:45	**1095**	3.2	**473,774**	4.08	**2.34**	12	Cloudburst	1,516,077	1
	3/10/2011 10:30	3/10/2011 18:00	**450**	Discharge						2,640	1
	3/11/2011 20:30	3/11/2011 20:30	**0**	Discharge						2,105	1
	3/12/2011 6:00	3/12/2011 6:00	**0**	Discharge						124	1
	3/14/2011 13:15	3/14/2011 13:45	**30**	0.8	**845**	3.79	**0.26**	12	Atlas	676	1
	3/15/2011 12:30	3/15/2011 12:30	**0**	0.8	**259**	3.99	**0.26**	12	Atlas	207	1
	3/18/2011 8:00	3/18/2011 8:45	**45**	Discharge						352	1
	4/1/2011 20:15	4/1/2011 20:45	**30**	0.14	**3,990**	0.31	**0.10**	1	Atlas	559	1
	4/4/2011 13:15	4/4/2011 16:30	**195**	0.83	**120,498**	1	**0.43**	6	Atlas	100,013	1
	4/9/2011 10:30	4/9/2011 11:30	**60**	0.51	**119,670**	1.39	**0.36**	1	Atlas	61,032	1
	4/11/2011 15:15	4/12/2011 12:45	**1290**	3.15	**683,044**	3.94	**2.24**	24	Cloudburst	2,151,590	1
	4/13/2011 14:15	4/14/2011 9:45	**1170**	Discharge						9,971	1
	4/15/2011 6:45	4/16/2011 19:15	**2190**	Discharge						83,925	1
	4/20/2011 1:00	4/21/2011 10:30	**2010**	0.76	**182,992**	1.33	**0.41**	6	Atlas	139,074	1
	4/22/2011 16:30	4/24/2011 21:00	**3150**	4.74	**585,886**	5.56	**3.59**	48	Atlas	2,777,098	1
	4/25/2011 5:30	4/25/2011 14:45	**555**	4.74	**12,675**	5.52	**3.59**	48	Atlas	60,081	1
	4/26/2011 5:00	4/26/2011 8:30	**210**	Discharge						2,863	1
	4/26/2011 21:15	4/28/2011 2:15	**1740**	2.82	**1,469,370**	8.42	**1.45**	24	Cloudburst	4,143,624	1
	4/28/2011 13:30	5/1/2011 6:45	**3915**	Discharge						404,932	1
	5/1/2011 23:30	5/3/2011 10:15	**2085**	2.82	**521,031**	6.93	**0.92**	48	Atlas	1,469,307	1
	5/3/2011 20:30	5/3/2011 21:15	**45**	Discharge						4,059	1
	5/4/2011 14:00	5/4/2011 21:00	**420**	Discharge						3,957	1
	5/8/2011 1:45	5/8/2011 1:45	**0**	0.21	**1,620**	3.64	**0.12**	3	Atlas	340	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**5/14/2011 15:00**	5/14/2011 15:00	**0**	0.25	**57,794**	0.46	**0.17**	1	Atlas	14,448	1
	5/15/2011 23:30	5/15/2011 23:30	**0**	0.27	**6,508**	0.55	**0.15**	3	Atlas	1,757	1
	5/21/2011 18:15	5/21/2011 18:45	**30**	0.42	**121,030**	0.78	**0.30**	1	Atlas	50,832	1
	5/23/2011 4:00	5/23/2011 4:15	**15**	0.36	**83,937**	0.83	**0.23**	1	Atlas	30,217	1
	5/23/2011 17:45	5/23/2011 21:00	**195**	0.87	**210,938**	1.77	**0.57**	3	Atlas	183,516	1
	5/25/2011 23:00	5/26/2011 1:30	**150**	1.21	**64,016**	2.51	**0.51**	3	Atlas	77,459	1
	5/26/2011 11:45	5/26/2011 11:45	**0**	1.21	**10,455**	2.83	**0.51**	3	Atlas	12,650	1
	6/11/2011 4:30	6/11/2011 5:00	**30**	0.29	**80,060**	0.33	**0.23**	1	Atlas	23,217	1
	6/15/2011 9:30	6/15/2011 11:15	**105**	1.03	**522,332**	1.39	**0.61**	1	Atlas	538,002	1
	6/18/2011 6:15	6/18/2011 13:45	**450**	0.79	**258,488**	1.87	**0.48**	3	Atlas	204,205	1
	6/19/2011 7:00	6/20/2011 1:45	**1125**	0.54	**1,463,084**	2.87	**0.33**	3	Atlas	790,065	1
	6/22/2011 19:30	6/23/2011 3:00	**450**	4.12	**500,587**	6.23	**37.82**	3	Cloudburst	2,062,420	1
	7/8/2011 3:15	7/8/2011 3:15	**0**	0.4	**2,472**	0.44	**0.21**	3	Atlas	989	1
	7/19/2011 23:00	7/19/2011 23:45	**45**	1.71	**306,848**	1.74	**2.75**	1	Atlas	524,711	1
	8/7/2011 3:15	8/7/2011 5:30	**135**	1.89	**268,788**	1.74	**1.67**	3	Atlas	508,009	1
	8/13/2011 17:30	8/13/2011 17:30	**0**	0.7	**8,053**	2.8	**0.54**	1	Atlas	5,637	1
	8/18/2011 8:15	8/18/2011 8:15	**0**	0.32	**36,480**	1	**0.26**	1	Atlas	11,674	1
	9/4/2011 20:45	9/4/2011 20:45	**0**	0.14	**130,425**	0.13	**0.05**	24	Atlas	18,259	1
	9/11/2011 20:30	9/11/2011 20:30	**0**	0.27	**28,178**	0.52	**0.17**	3	Atlas	7,608	1
	9/19/2011 7:15	9/19/2011 7:45	**30**	0.64	**40,468**	0.54	**0.26**	12	Atlas	25,900	1
	9/23/2011 5:00	9/23/2011 7:15	**135**	0.8	**20,328**	1.45	**0.37**	12	Atlas	16,263	1
	9/25/2011 20:00	9/26/2011 5:15	**555**	3.39	**639,158**	5	**6.73**	12	Cloudburst	2,166,745	1
	10/13/2011 7:15	10/13/2011 7:45	**30**	0.4	**136,718**	0.23	**0.19**	3	Atlas	54,687	1
	10/27/2011 0:15	10/27/2011 0:45	**30**	1.05	**120,335**	1.22	**0.44**	12	Atlas	126,351	1
	11/14/2011 21:30	11/14/2011 21:30	**0**	2	**3,989**	0.3	**0.65**	48	Atlas	7,979	1
	11/16/2011 7:15	11/16/2011 7:15	**0**	2	**443**	1.76	**0.65**	48	Atlas	887	1
	11/21/2011 4:00	11/21/2011 4:00	**0**	0.76	**26,057**	2.64	**0.27**	24	Atlas	19,803	1
	11/22/2011 3:00	11/22/2011 10:00	**420**	1	**52,252**	3.13	**0.43**	12	Atlas	52,252	1
	11/27/2011 22:45	11/29/2011 2:00	**1635**	3.04	**201,144**	4.25	**0.94**	48	Atlas	611,477	1
	12/4/2011 15:15	12/4/2011 17:00	**105**	3.14	**1,160**	2.95	**1.10**	48	Cloudburst	3,642	1
	12/5/2011 4:45	12/5/2011 17:45	**780**	3.14	**121,592**	4.88	**1.10**	48	Cloudburst	381,798	1
	12/21/2011 6:30	12/21/2011 6:45	**15**	0.65	**34,776**	1.15	**0.29**	12	Atlas	22,605	1
	1/11/2012 6:00	1/11/2012 6:45	**45**	0.73	**39,057**	0.44	**0.28**	24	Atlas	28,512	1
	1/23/2012 2:30	1/23/2012 4:15	**105**	0.6	**86,236**	0.98	**0.31**	3	Atlas	51,742	1
	1/25/2012 17:30	1/25/2012 17:30	**0**	1.68	**955**	0.87	**0.55**	48	Atlas	1,604	1
	1/26/2012 5:30	1/26/2012 6:30	**60**	1.68	**83,333**	1.35	**0.55**	48	Atlas	139,999	1
	1/26/2012 18:30	1/27/2012 2:00	**450**	1.68	**264,474**	2.29	**0.55**	48	Atlas	444,316	1
	2/22/2012 22:45	2/22/2012 22:45	**0**	0.17	**84,235**	0.44	**0.13**	1	Atlas	14,320	1
	2/29/2012 8:30	2/29/2012 8:45	**15**	0.67	**14,800**	0.77	**0.30**	1	Atlas	9,916	1
	3/4/2012 22:00	3/4/2012 23:00	**60**	0.21	**6,133**	0.83	**0.11**	6	Atlas	1,288	1
	3/8/2012 12:45	3/8/2012 13:15	**30**	0.81	**27,256**	1.03	**0.39**	6	Atlas	22,077	1
	3/16/2012 1:45	3/16/2012 2:30	**45**	0.96	**50,977**	1.14	**0.42**	12	Atlas	48,938	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**3/17/2012 18:30**	3/17/2012 18:30	**0**	0.83	**18,654**	1.71	**0.48**	1	Atlas	15,483	1
	3/23/2012 5:15	3/23/2012 22:15	**1020**	1.58	**136,721**	2.41	**0.58**	24	Atlas	216,020	1
	4/1/2012 8:15	4/1/2012 10:45	**150**	1.56	**84,370**	1.73	**0.84**	6	Atlas	131,618	1
	4/4/2012 16:30	4/4/2012 16:30	**0**	0.24	**38,429**	1.86	**0.11**	12	Atlas	9,223	1
	4/28/2012 19:00	4/29/2012	**300**	0.73	**238,491**	0.88	**0.54**	1	Atlas	174,098	1
	4/30/2012 17:45	4/30/2012 18:00	**15**	0.46	**102,888**	1.11	**0.31**	3	Atlas	47,328	1
	5/4/2012 23:30	5/5/2012 1:30	**120**	1.43	**320,485**	2.41	**0.75**	3	Atlas	458,293	1
	5/13/2012 1:45	5/13/2012 8:45	**420**	2.1	**237,666**	1.95	**0.83**	12	Atlas	499,098	1
	5/16/2012 17:30	5/16/2012 17:45	**15**	0.23	**166,146**	2.32	**0.19**	1	Atlas	38,214	1
	5/29/2012 6:30	5/29/2012 9:45	**195**	2.71	**532,219**	2.65	**9.86**	3	Atlas	1,442,312	1
	5/31/2012 18:15	6/1/2012 1:15	**420**	1.24	**139,347**	3.73	**0.54**	12	Atlas	172,790	1
	6/4/2012 14:30	6/4/2012 14:30	**0**	0.21	**4,771**	4.03	**0.10**	12	Atlas	1,002	1
	6/17/2012 11:45	6/17/2012 11:45	**0**	0.43	**38,414**	0.36	**0.27**	3	Atlas	16,518	1
	7/1/2012 19:45	7/1/2012 19:45	**0**	0.42	**42,117**	0.32	**0.30**	1	Atlas	17,689	1
	7/8/2012 13:15	7/8/2012 13:15	**0**	0.17	**59,350**	0.58	**0.11**	1	Atlas	10,089	1
	7/14/2012 12:15	7/14/2012 14:00	**105**	0.54	**40,126**	0.67	**0.33**	3	Atlas	21,668	1
	7/18/2012 16:00	7/18/2012 16:00	**0**	Discharge						1,139	1
	7/19/2012 18:00	7/19/2012 18:30	**30**	0.88	**1,106,186**	1.4	**0.71**	1	Atlas	973,444	1
	7/27/2012 20:00	7/27/2012 20:45	**45**	0.65	**55,526**	1.07	**0.43**	3	Atlas	36,092	1
	8/13/2012 11:15	8/13/2012 11:15	**0**	0.11	**3,213**	0.08	**0.07**	3	Atlas	353	1
	8/16/2012 20:00	8/16/2012 22:00	**120**	0.56	**92,188**	0.54	**0.33**	3	Atlas	51,625	1
	8/21/2012 14:00	8/21/2012 14:00	**0**	0.23	**21,212**	0.79	**0.20**	1	Atlas	4,879	1
	9/1/2012 15:00	9/1/2012 17:30	**150**	0.39	**234,701**	0.41	**0.25**	3	Atlas	91,533	1
	9/2/2012 12:00	9/2/2012 21:15	**555**	0.63	**147,489**	1.02	**0.24**	24	Atlas	92,918	1
	9/3/2012 14:15	9/3/2012 14:30	**15**	0.06	**1,482,447**	1.1	**0.05**	1	Atlas	88,947	1
	9/5/2012 15:15	9/5/2012 16:30	**75**	0.74	**338,794**	1.84	**0.57**	1	Atlas	250,708	1
	9/7/2012 23:30	9/8/2012 1:30	**120**	1.44	**61,111**	3.1	**0.82**	3	Atlas	88,000	1
	9/25/2012 23:45	9/26/2012 5:00	**315**	0.47	**52,816**	0.8	**0.22**	12	Atlas	24,823	1
	9/26/2012 19:45	9/26/2012 23:45	**240**	1.59	**87,366**	2.44	**0.84**	6	Atlas	138,912	1
	10/1/2012 15:00	10/1/2012 18:30	**210**	0.68	**53,101**	3.11	**0.28**	12	Atlas	36,109	1
	10/26/2012 15:00	10/26/2012 15:00	**0**	0.71	**21,349**	0.54	**0.32**	6	Atlas	15,158	1
	12/4/2012 17:00	12/4/2012 18:15	**75**	0.59	**49,481**	0.78	**0.37**	3	Atlas	29,194	1
	12/7/2012 5:15	12/7/2012 5:45	**30**	1.14	**7,292**	1.41	**0.48**	12	Atlas	8,313	1
	12/9/2012 21:30	12/9/2012 23:00	**90**	1.1	**163,597**	2.97	**0.53**	3	Atlas	179,957	1
	12/15/2012 11:00	12/15/2012 11:00	**0**	0.2	**159**	1.2	**0.11**	3	Atlas	32	1
	12/20/2012 8:00	12/20/2012 11:45	**225**	0.71	**96,862**	1.18	**0.39**	6	Atlas	68,772	1
	12/26/2012 5:30	12/26/2012 6:00	**30**	0.71	**92,090**	1.28	**0.28**	12	Atlas	65,384	1
	1/11/2013 5:15	1/11/2013 6:30	**75**	0.59	**40,584**	0.67	**0.31**	6	Atlas	23,945	1
	1/13/2013 3:00	1/13/2013 18:45	**945**	2.3	**155,871**	3.02	**0.88**	24	Atlas	358,504	1
	1/30/2013 4:45	1/30/2013 8:00	**195**	0.9	**150,387**	1.05	**0.46**	6	Atlas	135,349	1
	2/26/2013 16:00	2/26/2013 16:00	**0**	0.59	**822**	0.93	**0.23**	24	Atlas	485	1
	3/5/2013 14:45	3/5/2013 14:45	**0**	0.47	**2,131**	0.46	**0.18**	6	Atlas	1,002	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**3/11/2013 5:30**	3/11/2013 6:30	**60**	1.01	**76,167**	1.34	**0.40**	12	Atlas	76,929	1
	3/17/2013 14:00	3/17/2013 19:15	**315**	1.69	**16,440**	1.77	**0.55**	48	Atlas	27,784	1
	3/18/2013 4:15	3/18/2013 5:45	**90**	1.69	**63,880**	1.85	**0.55**	48	Atlas	107,957	1
	3/24/2013 16:00	3/24/2013 16:00	**0**	0.51	**16,216**	1.39	**0.19**	24	Atlas	8,270	1
	4/11/2013 6:45	4/11/2013 7:15	**30**	1.29	**172,815**	0.53	**0.50**	24	Atlas	222,932	1
	4/16/2013 20:00	4/16/2013 20:30	**30**	0.56	**768,300**	1.82	**0.46**	1	Atlas	430,248	1
	4/19/2013 3:00	4/19/2013 4:15	**75**	0.98	**44,933**	1.55	**0.53**	6	Atlas	44,034	1
	4/24/2013 7:00	4/24/2013 9:15	**135**	0.69	**71,341**	1.63	**0.38**	6	Atlas	49,225	1
	5/5/2013 8:00	5/5/2013 8:00	**0**	1.43	**6,169**	1.23	**0.44**	24	Atlas	8,822	1
	5/10/2013 12:30	5/10/2013 12:30	**0**	0.9	**4,541**	2.1	**0.40**	6	Atlas	4,087	1
	5/10/2013 23:45	5/10/2013 23:45	**0**	0.9	**9,093**	2.37	**0.40**	6	Atlas	8,184	1
	5/16/2013 10:15	5/16/2013 10:15	**0**	0.24	**56,425**	1.18	**0.21**	1	Atlas	13,542	1
	5/22/2013 15:45	5/22/2013 15:45	**0**	0.16	**152,100**	0.37	**0.11**	3	Atlas	24,336	1
	6/10/2013	6/10/2013	**0**	0.3	**48,159**	0.2	**0.13**	6	Atlas	14,448	1
	6/16/2013 17:00	6/16/2013 17:00	**0**	0.48	**29,502**	0.71	**0.33**	1	Atlas	14,161	1
	6/17/2013 16:15	6/17/2013 21:00	**285**	1.23	**335,172**	1.62	**0.67**	1	Atlas	412,261	1
	6/23/2013 12:30	6/23/2013 12:45	**15**	0.26	**116,217**	2.1	**0.19**	1	Atlas	30,216	1
	6/26/2013 3:15	6/26/2013 4:30	**75**	0.79	**96,831**	1.29	**0.53**	3	Atlas	76,496	1
	6/26/2013 16:00	6/26/2013 22:00	**360**	2.48	**575,483**	3.66	**4.06**	1	Atlas	1,427,198	1
	7/6/2013 1:00	7/6/2013 5:15	**255**	0.67	**75,305**	2.03	**0.29**	12	Atlas	50,454	1
	7/10/2013 14:00	7/10/2013 14:30	**30**	0.91	**313,351**	2.15	**0.61**	1	Atlas	285,149	1
	7/14/2013 19:30	7/14/2013 19:30	**0**	0.19	**28,528**	1.18	**0.17**	1	Atlas	5,420	1
	7/21/2013 20:30	7/21/2013 20:30	**0**	2.15	**3,055**	1.18	**0.83**	24	Atlas	6,569	1
	7/22/2013 7:00	7/22/2013 16:00	**540**	2.15	**136,899**	2.38	**0.83**	24	Atlas	294,332	1
	8/12/2013 14:30	8/12/2013 14:45	**15**	0.76	**227,011**	0.66	**0.30**	1	Atlas	172,529	1
	8/13/2013 3:00	8/13/2013 3:15	**15**	0.76	**31,771**	0.99	**0.30**	1	Atlas	24,146	1
	8/20/2013 18:15	8/20/2013 18:15	**0**	0.16	**334,483**	0.16	**0.10**	1	Atlas	53,517	1
	8/31/2013 20:00	9/1/2013 0:30	**270**	1.29	**73,742**	1.06	**0.63**	1	Atlas	95,127	1
	9/2/2013 14:00	9/2/2013 14:00	**0**	0.25	**206,907**	1.54	**0.22**	1	Atlas	51,727	1
	9/20/2013 16:15	9/21/2013 4:00	**705**	1.23	**133,694**	1.22	**0.51**	12	Atlas	164,444	1
	10/5/2013 13:00	10/6/2013 10:00	**1260**	4.21	**1,054,583**	4.28	**7.58**	24	Cloudburst	4,439,794	1
	10/30/2013 2:15	10/30/2013 5:45	**210**	1.35	**41,849**	1.31	**0.67**	6	Atlas	56,496	1
	10/31/2013 18:45	10/31/2013 21:00	**135**	0.65	**58,059**	1.91	**0.25**	24	Atlas	37,738	1
	11/17/2013 5:30	11/17/2013 19:15	**825**	2.23	**102,408**	2.36	**0.93**	6	Atlas	228,370	1
	12/5/2013 5:15	12/5/2013 7:45	**150**	0.81	**48,796**	0.2	**0.26**	48	Atlas	39,525	1
	12/14/2013 10:30	12/14/2013 10:30	**0**	0.77	**536**	1.1	**0.31**	12	Atlas	413	1
	12/21/2013 7:45	12/21/2013 10:00	**135**	1.07	**27,980**	1.12	**0.49**	12	Atlas	29,939	1
	12/21/2013 21:30	12/22/2013 0:45	**195**	1.67	**637,108**	2.64	**0.89**	3	Atlas	1,063,971	1
	1/11/2014 0:15	1/11/2014 3:15	**180**	0.81	**158,254**	1.16	**0.43**	6	Atlas	128,186	1
	2/4/2014 20:00	2/4/2014 23:45	**225**	0.51	**444,658**	0.96	**0.25**	6	Atlas	226,776	1
	2/14/2014 16:00	2/14/2014 17:15	**75**	0.49	**3,479**	0.36	**0.26**	6	Atlas	1,705	1
	2/17/2014 16:00	2/17/2014 16:45	**45**	0.65	**85,092**	1.13	**0.39**	3	Atlas	55,310	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**3/19/2014 8:30**	3/19/2014 8:30	**0**	0.06	**17,146**	0.14	**0.03**	1	Atlas	1,029	1
	3/28/2014 4:30	3/28/2014 4:30	**0**	0.32	**11,429**	0.34	**0.17**	1	Atlas	3,657	1
	3/29/2014 6:15	3/29/2014 8:15	**120**	0.94	**69,272**	1.02	**0.43**	6	Atlas	65,116	1
	4/3/2014 12:30	4/4/2014 7:30	**1140**	2.61	**119,245**	3.92	**0.91**	24	Atlas	311,229	1
	4/7/2014 9:15	4/7/2014 15:30	**375**	0.76	**382,893**	3.46	**0.46**	3	Atlas	290,999	1
	4/14/2014 20:00	4/14/2014 21:00	**60**	1.03	**18,894**	0.8	**0.39**	24	Atlas	19,461	1
	4/25/2014 2:15	4/25/2014 2:15	**0**	0.1	**5,408**	0.06	**0.05**	6	Atlas	541	1
	4/28/2014 4:00	4/28/2014 7:15	**195**	1.87	**301,445**	1.48	**0.73**	3	Atlas	563,702	1
	4/28/2014 17:30	4/28/2014 17:45	**15**	1.87	**16,408**	1.85	**0.73**	3	Atlas	30,682	1
	5/9/2014 19:30	5/10/2014 14:45	**1155**	1.9	**51,374**	1.61	**0.70**	24	Atlas	97,611	1
	5/14/2014 7:15	5/14/2014 7:15	**0**	1	**12,739**	2.13	**0.38**	24	Atlas	12,739	1
	5/14/2014 18:00	5/14/2014 18:15	**15**	1	**17,795**	2.63	**0.38**	24	Atlas	17,795	1
	5/21/2014 21:00	5/22/2014 3:00	**360**	0.49	**239,381**	0.53	**0.22**	12	Atlas	117,297	1
	5/28/2014 20:15	5/28/2014 20:15	**0**	0.25	**53,171**	0.71	**0.21**	1	Atlas	13,293	1
	5/29/2014 21:00	5/29/2014 21:00	**0**	0.45	**472,216**	0.69	**0.38**	1	Atlas	212,497	1
	6/11/2014 14:15	6/11/2014 14:15	**0**	0.12	**59,594**	0.3	**0.09**	1	Atlas	7,151	1
	6/24/2014 13:30	6/24/2014 13:30	**0**	0.12	**217,566**	0.32	**0.07**	1	Atlas	26,108	1
	7/2/2014 16:15	7/2/2014 16:15	**0**	0.12	**46,187**	0.38	**0.10**	1	Atlas	5,542	1
	7/7/2014 19:30	7/7/2014 19:45	**15**	0.62	**236,902**	0.95	**0.54**	1	Atlas	146,879	1
	7/13/2014 22:45	7/13/2014 22:45	**0**	0.69	**203,492**	1.48	**0.34**	1	Atlas	140,410	1
	7/14/2014 20:15	7/14/2014 20:15	**0**	0.3	**139,628**	1.41	**0.20**	3	Atlas	41,888	1
	7/26/2014 21:30	7/26/2014 22:45	**75**	0.97	**64,980**	0.56	**0.43**	12	Atlas	63,031	1
	7/27/2014 7:15	7/27/2014 9:15	**120**	0.97	**34,728**	1.01	**0.43**	12	Atlas	33,687	1
	8/8/2014 5:45	8/8/2014 7:30	**105**	0.87	**193,354**	0.66	**0.42**	6	Atlas	168,218	1
	8/10/2014 4:15	8/10/2014 4:15	**0**	0.78	**22,168**	1.74	**0.65**	1	Atlas	17,291	1
	8/11/2014 15:15	8/11/2014 15:30	**15**	0.35	**65,848**	2.1	**0.30**	1	Atlas	23,047	1
	8/17/2014 9:30	8/17/2014 9:45	**15**	0.72	**41,437**	0.89	**0.27**	24	Atlas	29,835	1
	8/22/2014 19:15	8/22/2014 19:15	**0**	0.22	**440,503**	0.94	**0.13**	3	Atlas	96,911	1
	8/23/2014 20:15	8/23/2014 20:15	**0**	0.52	**112,508**	1.27	**0.26**	3	Atlas	58,504	1
	8/27/2014 15:00	8/27/2014 15:00	**0**	0.12	**242,220**	1.01	**0.09**	1	Atlas	29,066	1
	8/30/2014 15:00	8/30/2014 16:00	**60**	0.54	**435,103**	1.12	**0.31**	1	Atlas	234,956	1
	9/2/2014 8:15	9/2/2014 8:15	**0**	0.4	**35,156**	1	**0.25**	3	Atlas	14,063	1
	9/11/2014 1:00	9/11/2014 6:00	**300**	1.86	**92,490**	1.81	**1.27**	3	Atlas	172,031	1
	10/6/2014 9:30	10/6/2014 9:45	**15**	0.22	**264,776**	0.42	**0.09**	6	Atlas	58,251	1
	10/7/2014 11:45	10/7/2014 11:45	**0**	0.22	**87,091**	0.7	**0.18**	1	Atlas	19,160	1
	10/10/2014 1:45	10/10/2014 2:15	**30**	1.19	**19,100**	1.1	**0.55**	1	Atlas	22,729	1
	10/13/2014 4:15	10/13/2014 4:30	**15**	0.42	**143,802**	1.78	**0.27**	3	Atlas	60,397	1
	10/13/2014 23:15	10/13/2014 23:45	**30**	0.88	**39,432**	2.14	**0.39**	12	Atlas	34,700	1
	10/14/2014 8:00	10/14/2014 8:15	**15**	0.88	**43,143**	2.65	**0.39**	12	Atlas	37,965	1
	11/5/2014 0:15	11/5/2014 0:15	**0**	0.1	**10,007**	0.23	**0.05**	3	Atlas	1,001	1
	11/23/2014 13:30	11/23/2014 19:00	**330**	0.74	**54,489**	0.97	**0.32**	12	Atlas	40,322	1
	12/6/2014 1:45	12/6/2014 6:00	**255**	1.85	**98,581**	2.68	**0.60**	48	Atlas	182,375	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**12/28/2014 1:00**	12/28/2014 1:00	**0**	0.3	**61,808**	0.74	**0.12**	24	Atlas	18,542	1
	1/3/2015 11:45	1/3/2015 11:45	**0**	0.36	**1,901**	0.37	**0.13**	24	Atlas	684	1
	2/21/2015 5:00	2/21/2015 22:00	**1020**	1.24	**47,329**	1.53	**0.48**	24	Atlas	58,688	1
	2/22/2015 10:30	2/22/2015 18:15	**465**	Discharge						16,268	1
	2/23/2015 12:00	2/23/2015 15:15	**195**	Discharge						7,466	1
	2/25/2015 11:15	2/26/2015 1:30	**855**	Discharge						30,715	1
	2/26/2015 12:30	2/26/2015 20:00	**450**	Discharge						10,221	1
	2/27/2015 14:45	2/27/2015 14:45	**0**	Discharge						995	1
	2/28/2015 19:00	2/28/2015 20:15	**75**	Discharge						3,480	1
	3/1/2015 7:45	3/1/2015 12:15	**270**	0.06	**208,355**	0.11	**0.02**	24	Atlas	12,501	1
	3/2/2015 14:00	3/2/2015 15:45	**105**	Discharge						3,992	1
	3/3/2015 10:30	3/4/2015 23:15	**2205**	Discharge						181,601	1
	3/5/2015 11:15	3/8/2015 1:00	**3705**	1.76	**172,498**	1.87	**0.57**	24	Atlas	303,597	1
	3/8/2015 10:30	3/9/2015 18:45	**1935**	Discharge						107,886	1
	3/10/2015 4:30	3/11/2015 0:45	**1215**	1.13	**1,302,597**	2.89	**0.51**	12	Atlas	1,471,935	1
	3/13/2015 10:30	3/15/2015 19:15	**3405**	1.81	**1,803,050**	2.94	**0.68**	24	Atlas	3,263,521	1
	3/16/2015 14:00	3/16/2015 14:00	**0**	Discharge						1,996	1
	3/19/2015 20:30	3/20/2015 7:45	**675**	0.2	**38,843**	2.01	**0.08**	12	Atlas	7,769	1
	3/24/2015 14:15	3/24/2015 20:45	**390**	0.12	**11,448**	0.31	**0.07**	1	Atlas	1,374	1
	3/26/2015 4:00	3/26/2015 6:00	**120**	0.48	**109,721**	0.62	**0.19**	3	Atlas	52,666	1
	3/26/2015 15:30	3/26/2015 15:45	**15**	0.48	**6,992**	0.74	**0.19**	3	Atlas	3,356	1
	3/27/2015 5:30	3/28/2015 7:30	**1560**	Discharge						19,432	1
	4/2/2015 9:15	4/2/2015 15:30	**375**	4.76	**54,556**	1.09	**7.33**	6	Cloudburst	259,687	1
	4/3/2015	4/3/2015 17:30	**1050**	4.76	**750,468**	4.79	**7.33**	6	Cloudburst	3,572,226	1
	4/7/2015 7:30	4/7/2015 19:15	**705**	0.92	**194,075**	5.68	**0.46**	1	Atlas	178,549	1
	4/8/2015 18:00	4/8/2015 18:15	**15**	0.28	**144,319**	5.96	**0.21**	1	Atlas	40,409	1
	4/9/2015 12:00	4/9/2015 12:00	**0**	0.18	**189,181**	5.71	**0.16**	1	Atlas	34,053	1
	4/10/2015 2:15	4/10/2015 2:30	**15**	0.19	**606,561**	3.44	**0.12**	3	Atlas	115,247	1
	4/13/2015 20:30	4/13/2015 21:00	**30**	0.37	**101,640**	1.66	**0.15**	6	Atlas	37,607	1
	4/14/2015 7:15	4/14/2015 7:45	**30**	0.37	**6,907**	1.69	**0.15**	6	Atlas	2,556	1
	4/19/2015 6:45	4/19/2015 14:45	**480**	0.76	**149,168**	1.1	**0.32**	12	Atlas	113,368	1
	5/16/2015 11:45	5/16/2015 11:45	**0**	0.46	**50,940**	0.33	**0.23**	3	Atlas	23,433	1
	5/17/2015 14:15	5/17/2015 14:15	**0**	0.08	**310,646**	0.58	**0.05**	1	Atlas	24,852	1
	6/8/2015 8:15	6/8/2015 8:15	**0**	0.22	**296,287**	0.24	**0.13**	3	Atlas	65,183	1
	6/17/2015 4:45	6/17/2015 6:00	**75**	0.63	**38,819**	0.61	**0.36**	3	Atlas	24,456	1
	6/18/2015 17:15	6/18/2015 18:00	**45**	1.38	**83,175**	1.11	**0.45**	48	Atlas	114,782	1
	6/20/2015 0:30	6/20/2015 8:30	**480**	1.38	**277,841**	2.13	**0.45**	48	Atlas	383,421	1
	6/25/2015 23:45	6/26/2015	**15**	0.49	**129,739**	1.4	**0.26**	6	Atlas	63,572	1
	6/26/2015 17:00	6/27/2015	**420**	0.93	**396,136**	2.45	**0.53**	1	Atlas	368,406	1
	7/2/2015 0:15	7/2/2015 1:30	**75**	1.66	**15,700**	2.4	**0.64**	24	Atlas	26,063	1
	7/2/2015 15:00	7/2/2015 21:00	**360**	1.66	**458,683**	3.44	**0.64**	24	Atlas	761,414	1
	7/3/2015 18:45	7/3/2015 18:45	**0**	0.35	**63,890**	2.67	**0.19**	1	Atlas	22,361	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**7/7/2015 12:00**	7/7/2015 12:45	**45**	0.87	**33,124**	2.64	**0.41**	6	Atlas	28,818	1
	7/8/2015 0:15	7/8/2015 0:15	**0**	0.87	**11,642**	2.84	**0.41**	6	Atlas	10,128	1
	7/8/2015 12:15	7/8/2015 12:30	**15**	0.87	**65,242**	2.91	**0.41**	6	Atlas	56,761	1
	7/9/2015 6:15	7/9/2015 13:30	**435**	0.31	**192,031**	2.38	**0.15**	3	Atlas	59,530	1
	7/10/2015 14:00	7/10/2015 16:15	**135**	0.43	**149,811**	1.98	**0.21**	6	Atlas	64,419	1
	7/12/2015 6:15	7/12/2015 16:00	**585**	1.35	**328,942**	2.98	**0.91**	1	Atlas	444,072	1
	7/13/2015 14:15	7/13/2015 14:15	**0**	0.5	**35,794**	3.23	**0.41**	1	Atlas	17,897	1
	7/14/2015 4:15	7/14/2015 11:45	**450**	0.73	**108,940**	4.21	**0.57**	1	Atlas	79,526	1
	7/17/2015 22:30	7/18/2015 2:00	**210**	1.6	**197,861**	4.32	**1.33**	3	Atlas	316,577	1
	7/29/2015 17:30	7/29/2015 17:30	**0**	0.08	**153,690**	0.1	**0.07**	1	Atlas	12,295	1
	8/4/2015 19:15	8/4/2015 19:15	**0**	0.44	**64,752**	0.5	**0.37**	1	Atlas	28,491	1
	8/5/2015 15:00	8/5/2015 15:00	**0**	0.77	**181,608**	0.77	**0.28**	24	Atlas	139,838	1
	8/6/2015 8:00	8/6/2015 15:15	**435**	0.77	**238,563**	1.21	**0.28**	24	Atlas	183,694	1
	8/19/2015 8:15	8/19/2015 8:30	**15**	0.28	**100,093**	0.27	**0.11**	24	Atlas	28,026	1
	8/19/2015 17:00	8/19/2015 17:00	**0**	0.28	**185,844**	0.41	**0.11**	24	Atlas	52,036	1
	9/9/2015 11:30	9/9/2015 11:30	**0**	0.27	**96,493**	0.99	**0.23**	1	Atlas	26,053	1
	9/11/2015 18:30	9/11/2015 18:30	**0**	0.19	**68,499**	1.14	**0.12**	1	Atlas	13,015	1
	10/12/2015 19:15	10/12/2015 19:15	**0**	0.27	**108,280**	0.32	**0.18**	3	Atlas	29,236	1
	10/27/2015 17:00	10/28/2015 6:15	**795**	2.51	**112,968**	2.51	**0.78**	48	Atlas	283,550	1
	11/6/2015 3:00	11/6/2015 4:45	**105**	0.85	**199,164**	0.89	**0.49**	3	Atlas	169,290	1
	11/12/2015 0:45	11/12/2015 1:00	**15**	0.28	**95,685**	1.67	**0.16**	3	Atlas	26,792	1
	11/18/2015 8:45	11/18/2015 14:30	**345**	1.4	**307,458**	1.76	**0.72**	6	Atlas	430,441	1
	11/30/2015 22:00	12/1/2015 4:30	**390**	0.64	**236,505**	1.52	**0.29**	12	Atlas	151,363	1
	12/22/2015 3:15	12/22/2015 4:00	**45**	0.74	**47,567**	0.76	**0.30**	1	Atlas	35,199	1
	12/23/2015 19:15	12/23/2015 20:30	**75**	0.72	**280,470**	1.49	**0.57**	1	Atlas	201,938	1
	12/26/2015 12:45	12/26/2015 17:45	**300**	0.36	**147,114**	1.96	**0.17**	12	Atlas	52,961	1
	12/27/2015 10:15	12/28/2015 6:00	**1185**	1.97	**311,892**	3.44	**0.65**	3	Atlas	614,427	1
	12/28/2015 16:30	12/28/2015 16:45	**15**	1.97	**13,972**	3.69	**0.65**	3	Atlas	27,525	1
	2/3/2016	2/3/2016 0:15	**15**	1.34	**128,190**	1.3	**0.62**	6	Atlas	171,774	1
	2/21/2016 4:15	2/21/2016 10:45	**390**	1.1	**73,773**	1.27	**0.50**	12	Atlas	81,151	1
	2/23/2016 23:00	2/24/2016 7:30	**510**	2.04	**242,653**	2.82	**0.79**	12	Atlas	495,013	1
	3/1/2016 12:00	3/1/2016 13:00	**60**	0.29	**125,136**	2.29	**0.15**	3	Atlas	36,290	1
	3/10/2016 13:45	3/10/2016 16:45	**180**	1.11	**86,566**	0.91	**0.36**	48	Atlas	96,088	1
	3/12/2016 22:45	3/12/2016 23:30	**45**	0.8	**65,120**	1.68	**0.31**	6	Atlas	52,096	1
	3/13/2016 9:15	3/13/2016 10:00	**45**	0.8	**294,398**	1.92	**0.31**	6	Atlas	235,519	1
	3/24/2016 17:45	3/24/2016 17:45	**0**	0.51	**28,840**	0.57	**0.38**	1	Atlas	14,709	1
	3/27/2016 21:15	3/27/2016 22:00	**45**	0.75	**110,393**	1.24	**0.51**	1	Atlas	82,795	1
	3/31/2016 22:15	3/31/2016 23:15	**60**	1.04	**43,463**	1.74	**0.40**	24	Atlas	45,202	1
	4/11/2016 17:00	4/11/2016 18:15	**75**	1.04	**247,526**	1	**0.46**	6	Atlas	257,427	1
	4/26/2016 21:15	4/26/2016 21:30	**15**	0.43	**14,773**	0.74	**0.22**	6	Atlas	6,352	1
	4/27/2016 14:00	4/27/2016 22:00	**480**	0.58	**437,472**	1.29	**0.25**	12	Atlas	253,734	1
	4/30/2016 11:00	4/30/2016 11:15	**15**	0.53	**261,220**	1.3	**0.20**	6	Atlas	138,447	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO121	**5/1/2016 15:00**	5/1/2016 15:00	**0**	0.26	**5,482**	1.69	**0.17**	3	Atlas	1,425	1
	5/10/2016 14:15	5/10/2016 22:00	**465**	0.7	**81,503**	1.44	**0.26**	24	Atlas	57,052	1
	5/11/2016 21:45	5/11/2016 22:00	**15**	0.21	**30,476**	1.43	**0.12**	3	Atlas	6,400	1
	5/12/2016 16:15	5/12/2016 16:15	**0**	0.21	**62,687**	1.56	**0.14**	3	Atlas	13,164	1
	5/20/2016 14:00	5/20/2016 15:45	**105**	0.53	**311,905**	1.22	**0.29**	3	Atlas	165,310	1
	6/2/2016 15:45	6/2/2016 15:45	**0**	0.34	**93,436**	0.47	**0.26**	1	Atlas	31,768	1
	6/4/2016 16:45	6/4/2016 17:00	**15**	0.22	**445,131**	0.66	**0.13**	1	Atlas	97,929	1
	6/12/2016 18:00	6/12/2016 18:00	**0**	0.09	**8,125**	0.13	**0.08**	1	Atlas	731	1
	6/14/2016 16:30	6/14/2016 17:15	**45**	0.82	**217,224**	0.73	**0.53**	3	Atlas	178,123	1
	6/22/2016 8:30	6/22/2016 8:30	**0**	0.26	**28,742**	0.13	**0.16**	3	Atlas	7,473	1
Grand Total										**69,138,575**	**346**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**6/16/2009 16:45**	6/16/2009 17:00	**15**	0.78	**202,003**	3.86	**0.51**	1	Atlas	157,562	1
	6/18/2009 10:30	6/18/2009 18:30	**480**	1.46	**1,312,518**	3.41	**0.92**	1	Atlas	1,916,276	1
	6/20/2009 4:15	6/20/2009 4:15	**0**	0.1	**87,465**	2.95	**0.08**	1	Atlas	8,746	1
	6/22/2009 10:15	6/22/2009 10:15	**0**	0.97	**12,009**	3.88	**0.67**	1	Atlas	11,649	1
	6/26/2009 3:30	6/26/2009 4:00	**30**	1.06	**42,414**	2.01	**0.49**	12	Atlas	44,959	1
	7/8/2009 6:30	7/8/2009 6:45	**15**	0.12	**295,945**	0.49	**0.10**	1	Atlas	35,513	1
	7/15/2009 11:00	7/15/2009 11:30	**30**	0.3	**204,441**	0.33	**0.19**	3	Atlas	61,332	1
	7/22/2009 8:30	7/22/2009 11:15	**165**	1.55	**65,396**	2.08	**0.67**	12	Atlas	101,363	1
	7/29/2009 1:30	7/29/2009 18:15	**1005**	2.54	**1,888,328**	4.72	**1.94**	6	Cloudburst	4,796,353	1
	7/30/2009 20:00	7/30/2009 23:00	**180**	1.35	**63,004**	4.42	**0.56**	12	Atlas	85,055	1
	8/10/2009 20:00	8/11/2009 0:15	**255**	1.2	**49,011**	6.46	**0.76**	3	Atlas	58,814	1
	9/20/2009 11:00	9/20/2009 11:00	**0**	3.99	**2,503**	0.9	**6.21**	24	Cloudburst	9,987	1
	9/20/2009 20:00	9/21/2009 1:30	**330**	3.99	**999,429**	3.98	**6.21**	24	Cloudburst	3,987,722	1
	9/22/2009 5:00	9/22/2009 7:15	**135**	Discharge						20,573	1
	9/22/2009 18:45	9/23/2009	**315**	0.68	**61,734**	4.68	**0.34**	6	Atlas	41,979	1
	9/26/2009 21:30	9/26/2009 21:30	**0**	0.36	**62,600**	5.8	**0.29**	1	Atlas	22,536	1
	10/2/2009 5:15	10/2/2009 6:45	**90**	0.77	**38,081**	1.22	**0.46**	3	Atlas	29,322	1
	10/8/2009 14:30	10/8/2009 18:45	**255**	2.12	**63,961**	2.06	**0.70**	24	Atlas	135,596	1
	10/9/2009 3:15	10/9/2009 15:30	**735**	2.12	**1,661,304**	2.6	**0.70**	24	Atlas	3,521,964	1
	10/14/2009 7:00	10/14/2009 7:00	**0**	0.73	**42,008**	2.84	**0.47**	3	Atlas	30,666	1
	10/27/2009 20:45	10/27/2009 23:15	**150**	1.11	**488,888**	1.67	**0.50**	12	Atlas	542,666	1
	10/30/2009 20:00	10/31/2009	**240**	0.93	**128,094**	1.67	**0.42**	12	Atlas	119,128	1
	11/17/2009 7:45	11/17/2009 7:45	**0**	0.99	**9,175**	0.28	**0.38**	24	Atlas	9,084	1
	11/17/2009 17:00	11/17/2009 20:15	**195**	0.99	**194,498**	0.95	**0.38**	24	Atlas	192,553	1
	1/20/2010 12:15	1/20/2010 12:15	**0**	0.49	**12,849**	0.66	**0.19**	6	Atlas	6,296	1
	1/21/2010	1/21/2010 0:15	**15**	0.49	**111,812**	0.8	**0.19**	6	Atlas	54,788	1
	2/5/2010 13:15	2/5/2010 17:15	**240**	1.27	**40,819**	0.74	**0.47**	12	Atlas	51,840	1
	4/8/2010 5:30	4/8/2010 5:30	**0**	1.17	**21,964**	1.28	**0.56**	6	Atlas	25,698	1
	4/24/2010 20:00	4/25/2010 1:45	**345**	1.47	**36,209**	1.72	**0.67**	6	Atlas	53,228	1
	4/27/2010 10:00	4/27/2010 10:15	**15**	0.36	**169,906**	2.24	**0.18**	6	Atlas	61,166	1
	5/1/2010 5:30	5/1/2010 12:45	**435**	4.14	**5,315**	3.01				22,003	1
	5/2/2010 2:30	5/2/2010 2:45	**15**	4.14	**15,348**	2.82	**3.55**	48	Atlas	63,542	1
	5/16/2010 9:45	5/16/2010 9:45	**0**	0.54	**35,214**	1.21	**0.25**	12	Atlas	19,016	1
	5/17/2010 20:00	5/17/2010 20:00	**0**	0.54	**28,576**	2.07	**0.37**	1	Atlas	15,431	1
	5/30/2010 16:30	5/30/2010 16:30	**0**	0.34	**72,298**	0.3	**0.20**	1	Atlas	24,581	1
	6/9/2010 4:30	6/9/2010 15:30	**660**	2.06	**152,542**	2.16	**1.70**	3	Atlas	314,238	1
	6/13/2010 23:15	6/13/2010 23:15	**0**	0.58	**91,062**	2.67	**0.30**	1	Atlas	52,816	1
	6/19/2010 5:30	6/19/2010 5:45	**15**	0.89	**68,981**	1.9	**0.51**	3	Atlas	61,393	1
	6/28/2010 1:45	6/28/2010 1:45	**0**	0.48	**15,376**	0.38	**0.35**	1	Atlas	7,381	1
	7/8/2010 23:45	7/9/2010 1:00	**75**	0.56	**310,774**	0.31	**0.21**	24	Atlas	174,034	1
	7/13/2010 16:45	7/13/2010 17:30	**45**	1.77	**77,617**	2.33	**0.81**	12	Atlas	137,382	1
	7/20/2010 4:45	7/20/2010 4:45	**0**	0.9	**114,024**	2.19	**0.51**	1	Atlas	102,622	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**7/31/2010 4:45**	7/31/2010 4:45	**0**	0.33	**55,931**	1.08	**0.17**	3	Atlas	18,457	1
	8/5/2010 9:30	8/5/2010 9:30	**0**	0.21	**60,391**	0.59	**0.16**	1	Atlas	12,682	1
	8/14/2010 22:45	8/14/2010 23:30	**45**	0.7	**52,901**	1.01	**0.54**	1	Atlas	37,031	1
	11/16/2010 12:30	11/16/2010 15:15	**165**	0.75	**109,332**	0.71	**0.33**	12	Atlas	81,999	1
	11/23/2010 4:00	11/23/2010 4:00	**0**	0.31	**108,080**	1.07	**0.17**	6	Atlas	33,505	1
	11/24/2010 13:00	11/24/2010 15:00	**120**	0.78	**369,596**	1.05	**0.37**	3	Atlas	288,285	1
	11/25/2010 9:30	11/26/2010 4:00	**1110**	2.33	**1,263,911**	3.45	**0.89**	24	Atlas	2,944,912	1
	11/30/2010 0:45	11/30/2010 9:30	**525**	1.7	**501,589**	4.81	**0.65**	24	Atlas	852,701	1
	2/24/2011 22:45	2/25/2011 14:00	**915**	2.23	**4,426,587**	2.41	**0.86**	24	Atlas	9,871,290	1
	2/28/2011 5:30	2/28/2011 18:15	**765**	1.17	**2,350,311**	3.73	**0.56**	6	Atlas	2,749,864	1
	3/9/2011 1:00	3/10/2011 5:15	**1695**	2.81	**6,378,247**	3.71	**1.35**	24	Cloudburst	17,922,875	1
	4/4/2011 16:00	4/4/2011 16:15	**15**	0.92	**20,268**	1.07	**0.47**	6	Atlas	18,646	1
	4/9/2011 10:45	4/9/2011 11:00	**15**	0.54	**59,008**	1.4	**0.37**	1	Atlas	31,864	1
	4/11/2011 16:00	4/12/2011 21:00	**1740**	3.26	**7,106,821**	3.91	**2.68**	24	Cloudburst	23,168,236	1
	4/20/2011 0:15	4/20/2011 3:30	**195**	0.67	**77,869**	1.11	**0.37**	6	Atlas	52,172	1
	4/23/2011 1:30	4/25/2011 16:15	**3765**	4.75	**3,925,300**	5.54	**3.34**	48	Atlas	18,645,177	1
	4/27/2011 1:15	4/28/2011 6:30	**1755**	2.95	**6,968,323**	8.29	**1.71**	24	Cloudburst	20,556,552	1
	4/28/2011 19:00	4/28/2011 19:00	**0**	0.2	**75,905**	7.95	**0.13**	3	Atlas	15,181	1
	5/1/2011 4:45	5/1/2011 5:00	**15**	0.67	**85,604**	4.86				57,355	1
	5/1/2011 23:30	5/3/2011 19:45	**2655**	2.77	**7,395,838**	6.94	**0.90**	48	Atlas	20,486,471	1
	5/21/2011 19:00	5/21/2011 19:00	**0**	0.45	**17,377**	0.78	**0.32**	1	Atlas	7,819	1
	5/23/2011 4:15	5/23/2011 4:15	**0**	0.3	**71,034**	0.79	**0.23**	1	Atlas	21,310	1
	5/23/2011 21:00	5/24/2011 1:45	**285**	1.16	**14,807**	2.02	**0.75**	3	Atlas	17,177	1
	5/26/2011 0:15	5/26/2011 0:15	**0**	1.21	**14,358**	2.53	**0.52**	3	Atlas	17,373	1
	5/26/2011 12:00	5/26/2011 12:30	**30**	1.21	**252,769**	3.1	**0.52**	3	Atlas	305,850	1
	6/15/2011 9:45	6/15/2011 9:45	**0**	0.98	**125,979**	1.31	**0.63**	1	Atlas	123,459	1
	6/18/2011 6:30	6/18/2011 8:00	**90**	0.82	**82,845**	1.79	**0.50**	3	Atlas	67,933	1
	6/21/2011 16:15	6/21/2011 16:15	**0**	0.36	**27,407**	3.2	**0.21**	3	Atlas	9,866	1
	6/22/2011 20:30	6/23/2011 2:45	**375**	3.71	**2,145,558**	5.96	**25.00**	3	Atlas	7,960,022	1
	7/12/2011 17:45	7/12/2011 17:45	**0**	0.43	**31,280**	0.83	**0.23**	6	Atlas	13,451	1
	7/24/2011 17:15	7/24/2011 17:15	**0**	0.8	**66,720**	2.76	**0.61**	1	Atlas	53,376	1
	7/30/2011 20:30	7/30/2011 20:30	**0**	0.66	**43,229**	1.39	**0.49**	1	Atlas	28,531	1
	8/7/2011 4:15	8/7/2011 7:00	**165**	1.67	**150,619**	1.71	**0.97**	3	Atlas	251,534	1
	8/13/2011 21:15	8/13/2011 22:45	**90**	0.9	**41,493**	2.74	**0.70**	1	Atlas	37,343	1
	9/10/2011 20:15	9/10/2011 20:15	**0**	0.05	**424,436**	0.41	**0.03**	3	Atlas	21,222	1
	9/11/2011 20:00	9/11/2011 20:00	**0**	0.3	**178,232**	0.64	**0.19**	1	Atlas	53,470	1
	9/19/2011 7:30	9/19/2011 7:30	**0**	0.74	**20,028**	0.62	**0.30**	12	Atlas	14,821	1
	9/23/2011 3:00	9/23/2011 3:00	**0**	0.81	**30,336**	1.13	**0.37**	12	Atlas	24,572	1
	9/26/2011 1:00	9/26/2011 5:15	**255**	3.24	**3,387,650**	4.83	**5.19**	12	Cloudburst	10,975,986	1
	10/13/2011 7:30	10/13/2011 8:15	**45**	0.5	**52,042**	0.37	**0.27**	3	Atlas	26,021	1
	10/27/2011 0:45	10/27/2011 1:15	**30**	0.98	**201,258**	1.15	**0.41**	3	Atlas	197,233	1
	11/14/2011 22:00	11/14/2011 22:45	**45**	2.07	**35,815**	0.35	**0.67**	48	Atlas	74,137	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**11/15/2011 12:15**	11/15/2011 12:15	**0**	2.07	**26,195**	1.21	**0.67**	48	Atlas	54,223	1
	11/16/2011 7:00	11/16/2011 7:30	**30**	2.07	**55,016**	1.86	**0.67**	48	Atlas	113,883	1
	11/20/2011 17:30	11/20/2011 17:45	**15**	0.9	**49,587**	2.61	**0.31**	24	Atlas	44,628	1
	11/21/2011 4:30	11/21/2011 4:30	**0**	0.9	**86,418**	2.82	**0.31**	24	Atlas	77,776	1
	11/22/2011 3:15	11/22/2011 10:45	**450**	1.15	**320,253**	3.57	**0.49**	12	Atlas	368,291	1
	12/22/2011 15:15	12/22/2011 15:45	**30**	0.64	**117,201**	1.21	**0.28**	12	Atlas	75,008	1
	12/27/2011 4:45	12/27/2011 11:45	**420**	0.76	**111,383**	2.03	**0.30**	12	Atlas	84,651	1
	1/11/2012 5:00	1/11/2012 6:45	**105**	0.88	**176,051**	0.54	**0.34**	12	Atlas	154,924	1
	1/17/2012 4:00	1/17/2012 12:15	**495**	0.33	**950,553**	1.3	**0.15**	12	Atlas	313,683	1
	1/23/2012 3:15	1/23/2012 4:45	**90**	0.61	**1,155,780**	0.93	**0.32**	3	Atlas	705,026	1
	1/26/2012 5:45	1/26/2012 6:45	**60**	1.82	**117,757**	1.4	**0.59**	48	Atlas	214,318	1
	1/26/2012 18:45	1/27/2012 1:30	**405**	1.82	**2,336,143**	2.44	**0.59**	48	Atlas	4,251,780	1
	3/8/2012 13:00	3/8/2012 15:00	**120**	0.77	**538,285**	1.03	**0.37**	6	Atlas	414,479	1
	3/15/2012 19:15	3/16/2012 3:00	**465**	0.99	**568,796**	1.2	**0.43**	12	Atlas	563,108	1
	4/1/2012 10:45	4/1/2012 17:00	**375**	1.28	**259,750**	1.49	**0.68**	6	Atlas	332,479	1
	5/16/2012 18:00	5/16/2012 18:15	**15**	0.21	**1,673,486**	2.25	**0.18**	1	Atlas	351,432	1
	5/29/2012 6:45	5/29/2012 20:30	**825**	2.28	**2,100,916**	2.28	**4.57**	3	Atlas	4,790,089	1
	5/31/2012 18:45	6/1/2012 1:45	**420**	1.14	**873,501**	3.26	**0.49**	12	Atlas	995,792	1
	6/14/2012 7:15	6/14/2012 7:15	**0**	Discharge						248,819	1
	7/1/2012 20:00	7/1/2012 20:15	**15**	0.4	**705,751**	0.32	**0.28**	1	Atlas	282,300	1
	7/14/2012 12:15	7/14/2012 14:30	**135**	0.8	**631,639**	0.88	**0.51**	3	Atlas	505,311	1
	7/18/2012 16:15	7/18/2012 17:45	**90**	Discharge						730,506	1
	7/19/2012 18:15	7/19/2012 19:00	**45**	0.53	**1,982,237**	1.36	**0.43**	1	Atlas	1,050,586	1
	7/26/2012 21:45	7/27/2012 3:30	**345**	0.19	**1,098,148**	0.31	**0.09**	12	Atlas	208,648	1
	7/27/2012 20:00	7/27/2012 21:00	**60**	0.55	**775,200**	0.83	**0.36**	3	Atlas	426,360	1
	8/16/2012 20:15	8/16/2012 22:15	**120**	0.57	**830,647**	0.57	**0.34**	3	Atlas	473,469	1
	9/1/2012 15:30	9/1/2012 16:15	**45**	0.36	**283,998**	0.24	**0.23**	3	Atlas	102,239	1
	9/2/2012 12:00	9/2/2012 22:00	**600**	0.95	**359,111**	1.32	**0.37**	24	Atlas	341,156	1
	9/5/2012 15:30	9/5/2012 16:45	**75**	0.87	**1,879,830**	2.28	**0.70**	1	Atlas	1,635,452	1
	9/7/2012 23:15	9/8/2012 6:15	**420**	1.16	**907,284**	3.41	**0.63**	3	Atlas	1,052,449	1
	9/26/2012 1:45	9/26/2012 2:00	**15**	0.41	**431,753**	0.7	**0.20**	6	Atlas	177,019	1
	9/26/2012 21:15	9/27/2012	**165**	1.38	**884,300**	2.19	**0.73**	6	Atlas	1,220,335	1
	10/1/2012 14:45	10/1/2012 19:00	**255**	0.81	**1,092,394**	3.02	**0.34**	12	Atlas	884,839	1
	10/26/2012 15:15	10/26/2012 15:15	**0**	0.78	**68,848**	0.62	**0.36**	6	Atlas	53,702	1
	12/2/2012 11:30	12/2/2012 11:30	**0**	0.15	**48,809**	0.2	**0.09**	3	Atlas	7,321	1
	12/4/2012 16:15	12/4/2012 18:30	**135**	0.55	**507,383**	0.69	**0.35**	3	Atlas	279,060	1
	12/7/2012 4:00	12/7/2012 17:45	**825**	1.18	**370,277**	1.88	**0.49**	6	Atlas	436,927	1
	12/8/2012 5:45	12/8/2012 9:45	**240**	0.47	**442,070**	2.35	**0.26**	6	Atlas	207,773	1
	12/9/2012 22:00	12/10/2012 0:30	**150**	1.17	**2,119,159**	3.23	**0.55**	3	Atlas	2,479,416	1
	12/10/2012 10:15	12/10/2012 10:15	**0**	1.17	**22,475**	3.33	**0.55**	3	Atlas	26,296	1
	12/15/2012 11:30	12/15/2012 11:45	**15**	0.17	**262,253**	1.32	**0.09**	3	Atlas	44,583	1
	12/20/2012 7:00	12/20/2012 12:15	**315**	0.59	**1,108,230**	0.93	**0.32**	6	Atlas	653,856	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**12/26/2012 5:45**	12/26/2012 15:45	**600**	0.93	**988,806**	1.6	**0.36**	12	Atlas	919,590	1
	1/11/2013 6:00	1/11/2013 7:30	**90**	0.6	**1,763,353**	0.73	**0.32**	6	Atlas	1,058,012	1
	1/13/2013 3:15	1/13/2013 21:30	**1095**	2.2	**7,711,919**	2.94	**0.84**	24	Atlas	16,966,222	1
	1/30/2013 5:00	1/30/2013 9:00	**240**	0.85	**1,113,715**	1.04	**0.43**	6	Atlas	946,658	1
	2/22/2013 1:00	2/22/2013 1:15	**15**	0.39	**269,314**	0.69	**0.18**	12	Atlas	105,033	1
	3/5/2013 17:30	3/5/2013 17:30	**0**	0.41	**5,804**	0.48	**0.15**	24	Atlas	2,380	1
	3/11/2013 4:00	3/11/2013 11:15	**435**	1.05	**100,807**	1.46	**0.42**	12	Atlas	105,847	1
	3/15/2013 18:30	3/15/2013 18:45	**15**	Discharge						6,012	1
	3/18/2013 4:30	3/18/2013 8:15	**225**	1.61	**114,122**	1.99	**0.52**	48	Atlas	183,736	1
	3/24/2013 8:30	3/24/2013 16:15	**465**	0.47	**31,167**	1.6	**0.18**	24	Atlas	14,649	1
	4/11/2013 5:45	4/11/2013 7:30	**105**	1.23	**125,658**	0.46	**0.47**	24	Atlas	154,560	1
	4/16/2013 20:15	4/16/2013 20:30	**15**	0.65	**330,455**	1.84	**0.53**	1	Atlas	214,795	1
	4/19/2013 2:00	4/19/2013 4:30	**150**	0.91	**502,580**	1.57	**0.50**	3	Atlas	457,348	1
	4/24/2013 7:30	4/24/2013 10:00	**150**	0.59	**750,767**	1.54	**0.32**	6	Atlas	442,953	1
	5/5/2013 6:15	5/5/2013 8:30	**135**	1.26	**82,007**	1.13	**0.38**	24	Atlas	103,329	1
	5/10/2013 14:00	5/10/2013 15:45	**105**	0.94	**172,910**	2.21	**0.42**	6	Atlas	162,535	1
	5/11/2013	5/11/2013 0:15	**15**	0.94	**62,204**	2.24	**0.42**	6	Atlas	58,471	1
	5/16/2013 10:30	5/16/2013 10:30	**0**	0.37	**170,684**	1.34	**0.31**	1	Atlas	63,153	1
	5/22/2013 16:00	5/22/2013 17:30	**90**	0.29	**54,303**	0.67	**0.19**	3	Atlas	15,748	1
	5/31/2013 15:00	5/31/2013 18:30	**210**	0.31	**163,016**	0.36	**0.14**	12	Atlas	50,535	1
	6/10/2013 0:15	6/10/2013 0:15	**0**	0.33	**33,050**	0.25	**0.15**	6	Atlas	10,906	1
	6/16/2013 17:15	6/16/2013 17:15	**0**	0.35	**11,098**	0.64	**0.22**	1	Atlas	3,884	1
	6/17/2013 16:30	6/18/2013 1:00	**510**	1.51	**2,415,665**	1.87	**0.82**	1	Atlas	3,647,654	1
	6/26/2013 16:30	6/27/2013 8:00	**930**	2.82	**10,533,455**	4.24	**5.00**	1	Atlas	29,704,343	1
	6/30/2013 18:30	6/30/2013 19:00	**30**	0.24	**292,852**	4.26	**0.19**	1	Atlas	70,284	1
	7/10/2013 14:15	7/10/2013 14:45	**30**	1.07	**10,951**	2.4	**0.82**	1	Atlas	11,717	1
	7/14/2013 19:30	7/14/2013 19:45	**15**	0.3	**118,441**	1.47	**0.26**	1	Atlas	35,532	1
	8/12/2013 15:00	8/12/2013 15:00	**0**	0.7	**3,402**	0.61	**0.27**	1	Atlas	2,381	1
	9/20/2013 19:45	9/20/2013 19:45	**0**	1.77	**1,553**	0.83	**0.74**	12	Atlas	2,748	1
	10/5/2013 13:15	10/6/2013 17:00	**1665**	5.16	**5,290,390**	5.14	**16.26**	24	Atlas	27,298,414	1
	10/30/2013 2:15	10/30/2013 5:30	**195**	1.04	**20,490**	0.98	**0.49**	6	Atlas	21,309	1
	11/17/2013 6:15	11/17/2013 21:30	**915**	2.54	**1,120,123**	2.7	**1.94**	6	Cloudburst	2,845,111	1
	12/5/2013 5:45	12/5/2013 8:00	**135**	0.79	**77,150**	0.25	**0.26**	48	Atlas	60,948	1
	12/14/2013 10:45	12/14/2013 11:15	**30**	0.98	**49,672**	1.02	**0.42**	6	Atlas	48,678	1
	12/21/2013 6:00	12/21/2013 12:45	**405**	2.67	**180,898**	1.41	**1.02**	24	Cloudburst	482,999	1
	12/21/2013 21:30	12/22/2013 9:15	**705**	2.67	**4,514,749**	2.73	**1.02**	24	Cloudburst	12,054,379	1
	1/11/2014 0:45	1/11/2014 5:30	**285**	1.07	**758,474**	1.53	**0.58**	6	Atlas	811,567	1
	2/2/2014 5:30	2/2/2014 5:30	**0**	0.37	**14,783**	0.12	**0.14**	24	Atlas	5,470	1
	2/4/2014 20:00	2/5/2014 1:45	**345**	0.4	**2,930,344**	0.76	**0.20**	6	Atlas	1,172,138	1
	2/17/2014 16:30	2/17/2014 18:15	**105**	0.38	**1,008,953**	0.78	**0.23**	3	Atlas	383,402	1
	2/20/2014 23:30	2/20/2014 23:30	**0**	0.2	**149,972**	0.99	**0.11**	6	Atlas	29,994	1
	3/2/2014 10:15	3/2/2014 11:30	**75**	0.53	**261,504**	0.29	**0.20**	24	Atlas	138,597	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**3/28/2014 4:45**	3/28/2014 5:00	**15**	0.27	**249,546**	0.32	**0.14**	1	Atlas	67,377	1
	3/29/2014 7:00	3/29/2014 12:30	**330**	1.23	**474,680**	1.48	**0.56**	12	Atlas	583,857	1
	4/3/2014 12:15	4/4/2014 16:15	**1680**	2.07	**5,379,835**	3.68	**0.71**	24	Atlas	11,136,258	1
	4/7/2014 11:00	4/7/2014 12:45	**105**	1.07	**559,616**	3.2	**0.61**	3	Atlas	598,789	1
	4/14/2014 20:15	4/14/2014 21:30	**75**	0.87	**273,246**	0.65	**0.33**	24	Atlas	237,724	1
	4/27/2014 20:15	4/28/2014 7:30	**675**	2.12	**49,343**	1.68	**0.80**	3	Atlas	104,606	1
	4/28/2014 17:45	4/28/2014 18:00	**15**	2.12	**4,367**	1.99	**0.80**	3	Atlas	9,257	1
	5/9/2014 19:30	5/10/2014 16:00	**1230**	1.75	**422,380**	1.82	**0.67**	24	Atlas	739,166	1
	5/14/2014 7:15	5/15/2014	**1005**	1.15	**228,659**	3	**0.42**	24	Atlas	262,958	1
	5/21/2014 21:15	5/22/2014 3:15	**360**	0.58	**178,163**	0.73	**0.27**	12	Atlas	103,334	1
	5/28/2014 20:45	5/28/2014 20:45	**0**	0.17	**39,497**	0.59	**0.13**	1	Atlas	6,714	1
	5/29/2014 21:15	5/29/2014 22:15	**60**	1.02	**515,119**	1.2	**0.85**	1	Atlas	525,421	1
	6/11/2014 14:45	6/11/2014 15:00	**15**	0.14	**315,965**	0.42	**0.07**	1	Atlas	44,235	1
	7/2/2014 16:30	7/2/2014 16:45	**15**	0.2	**838,219**	0.59	**0.17**	1	Atlas	167,644	1
	7/7/2014 19:45	7/7/2014 20:00	**15**	0.76	**175,778**	1.13	**0.66**	1	Atlas	133,591	1
	7/13/2014 23:00	7/13/2014 23:15	**15**	0.51	**92,347**	1.41	**0.24**	3	Atlas	47,097	1
	7/14/2014 20:30	7/14/2014 20:30	**0**	0.2	**185,400**	1.02	**0.13**	3	Atlas	37,080	1
	7/26/2014 21:45	7/26/2014 22:15	**30**	1.12	**158,842**	0.56	**0.49**	12	Atlas	177,903	1
	7/27/2014 7:15	7/27/2014 8:00	**45**	1.12	**97,758**	1.09	**0.49**	12	Atlas	109,488	1
	8/8/2014 6:00	8/8/2014 7:45	**105**	1.08	**59,183**	0.84	**0.55**	6	Atlas	63,918	1
	8/10/2014 4:15	8/10/2014 4:30	**15**	0.27	**239,884**	1.43	**0.23**	1	Atlas	64,769	1
	8/11/2014 15:30	8/11/2014 15:45	**15**	0.28	**193,017**	1.7	**0.23**	1	Atlas	54,045	1
	8/17/2014 20:15	8/17/2014 20:15	**0**	0.73	**5,107**	1	**0.27**	24	Atlas	3,728	1
	8/22/2014 19:00	8/22/2014 19:30	**30**	0.39	**779,773**	1	**0.25**	3	Atlas	304,112	1
	8/23/2014 16:00	8/23/2014 21:45	**345**	0.73	**1,083,579**	1.79	**0.35**	6	Atlas	791,013	1
	8/27/2014 16:45	8/27/2014 17:30	**45**	0.42	**1,008,397**	1.57	**0.27**	3	Atlas	423,527	1
	8/30/2014 15:30	8/30/2014 16:00	**30**	0.42	**449,035**	1.44	**0.22**	1	Atlas	188,595	1
	9/2/2014 8:30	9/2/2014 8:45	**15**	0.37	**449,946**	1.16	**0.23**	3	Atlas	166,480	1
	9/11/2014 0:45	9/11/2014 7:00	**375**	1.9	**917,277**	1.86	**1.33**	3	Atlas	1,742,827	1
	9/28/2014 19:45	9/28/2014 20:00	**15**	0.15	**1,747,593**	0.15	**0.13**	1	Atlas	262,139	1
	10/6/2014 9:45	10/6/2014 10:00	**15**	0.37	**210,765**	0.56	**0.19**	3	Atlas	77,983	1
	10/7/2014 12:00	10/7/2014 12:00	**0**	0.18	**321,392**	0.79	**0.15**	1	Atlas	57,851	1
	10/10/2014 2:00	10/10/2014 3:15	**75**	1.06	**508,706**	1.58	**0.52**	3	Atlas	539,229	1
	10/13/2014 5:30	10/13/2014 6:30	**60**	0.5	**198,344**	2.12	**0.32**	3	Atlas	99,172	1
	10/13/2014 23:30	10/14/2014 10:30	**660**	1.19	**584,295**	2.95	**0.53**	12	Atlas	695,311	1
	11/23/2014 17:30	11/23/2014 19:45	**135**	0.77	**322,193**	1.05	**0.34**	6	Atlas	248,089	1
	12/1/2014 3:30	12/1/2014 3:30	**0**	0.76	**20,393**	0.22				15,499	1
	12/5/2014 23:15	12/6/2014 7:15	**480**	1.69	**1,027,943**	2.44	**0.55**	48	Atlas	1,737,224	1
	12/28/2014 1:15	12/28/2014 1:30	**15**	0.32	**131,625**	0.84	**0.13**	1	Atlas	42,120	1
	3/3/2015 23:30	3/4/2015 17:00	**1050**	1.66	**1,211,256**	1.31	**0.54**	48	Atlas	2,010,685	1
	3/10/2015 7:15	3/10/2015 20:30	**795**	1.08	**2,475,740**	2.74	**0.49**	12	Atlas	2,673,799	1
	3/13/2015 10:45	3/14/2015 12:45	**1560**	1.5	**1,620,259**	2.59	**0.56**	24	Atlas	2,430,389	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**3/26/2015 4:30**	3/26/2015 5:00	**30**	0.4	**375,825**	0.47	**0.17**	12	Atlas	150,330	1
	4/2/2015 10:45	4/4/2015 4:30	**2505**	4.31	**12,072,625**	4.46	**4.56**	24	Cloudburst	52,033,016	1
	4/7/2015 9:30	4/7/2015 18:15	**525**	0.77	**1,465,030**	5.08	**0.37**	1	Atlas	1,128,073	1
	4/8/2015 18:15	4/8/2015 18:45	**30**	0.12	**2,236,576**	5.21	**0.08**	1	Atlas	268,389	1
	4/9/2015 11:45	4/9/2015 12:15	**30**	0.26	**1,099,459**	5.11	**0.22**	1	Atlas	285,859	1
	4/10/2015 2:30	4/10/2015 3:15	**45**	0.14	**786,589**	2.92	**0.09**	3	Atlas	110,122	1
	4/13/2015 21:15	4/13/2015 21:30	**15**	0.12	**1,378,582**	1.41	**0.07**	3	Atlas	165,430	1
	4/19/2015 6:45	4/19/2015 15:15	**510**	0.83	**604,215**	1.25	**0.33**	12	Atlas	501,498	1
	4/25/2015 19:15	4/25/2015 19:15	**0**	0.15	**195,171**	1.17	**0.10**	1	Atlas	29,276	1
	5/11/2015 18:00	5/11/2015 18:00	**0**	0.07	**366,215**	0.22	**0.06**	1	Atlas	25,635	1
	5/26/2015 14:00	5/26/2015 14:30	**30**	0.36	**501,525**	0.63	**0.23**	1	Atlas	180,549	1
	5/27/2015 14:00	5/27/2015 14:00	**0**	0.09	**533,062**	0.82	**0.08**	1	Atlas	47,976	1
	6/5/2015 0:45	6/5/2015 1:30	**45**	Discharge						46,960	1
	6/17/2015 5:00	6/17/2015 6:00	**60**	0.61	**111,711**	0.63	**0.35**	3	Atlas	68,144	1
	6/18/2015 2:00	6/18/2015 5:45	**225**	0.06	**59,887,740**	0.74	**0.04**	1	Atlas	3,593,264	1
	6/18/2015 16:30	6/20/2015 8:45	**2415**	1.94	**573,960**	2.67	**0.63**	48	Atlas	1,113,483	1
	6/26/2015	6/26/2015 7:30	**450**	0.38	**124,437**	1.77	**0.21**	6	Atlas	47,286	1
	6/26/2015 17:15	6/27/2015 1:15	**480**	0.7	**511,697**	2.34	**0.35**	1	Atlas	358,188	1
	7/2/2015 1:00	7/2/2015 2:00	**60**	1.64	**12,773**	1.84	**0.63**	24	Atlas	20,947	1
	7/2/2015 19:15	7/2/2015 21:45	**150**	1.64	**400,553**	2.94	**0.63**	24	Atlas	656,906	1
	7/3/2015 15:30	7/3/2015 19:00	**210**	0.35	**119,387**	2.9	**0.19**	1	Atlas	41,786	1
	7/7/2015 11:45	7/7/2015 13:15	**90**	0.77	**357,642**	2.5	**0.33**	6	Atlas	275,384	1
	7/8/2015 12:45	7/8/2015 12:45	**0**	0.77	**62,039**	2.79	**0.33**	6	Atlas	47,770	1
	7/9/2015 6:30	7/9/2015 7:45	**75**	0.3	**51,284**	2.36	**0.14**	12	Atlas	15,385	1
	7/10/2015 10:30	7/10/2015 16:30	**360**	0.42	**185,959**	1.86	**0.21**	6	Atlas	78,103	1
	7/12/2015 6:00	7/12/2015 6:45	**45**	1.8	**393,094**	2.84	**2.00**	3	Atlas	707,570	1
	8/5/2015 15:15	8/5/2015 15:15	**0**	1.03	**3,523**	0.63	**0.35**	24	Atlas	3,629	1
	8/6/2015 8:00	8/6/2015 15:15	**435**	1.03	**23,048**	1.36	**0.35**	24	Atlas	23,740	1
	8/19/2015 8:30	8/19/2015 17:15	**525**	0.62	**521,029**	0.69	**0.27**	1	Atlas	323,038	1
	9/1/2015 18:45	9/1/2015 19:00	**15**	Discharge						7,281	1
	9/10/2015 4:45	9/10/2015 5:00	**15**	0.34	**329,892**	1.11	**0.23**	1	Atlas	112,163	1
	9/29/2015 9:30	9/29/2015 10:00	**30**	1.04	**207,646**	0.69	**0.34**	48	Atlas	215,952	1
	10/12/2015 19:15	10/12/2015 19:30	**15**	0.26	**433,912**	0.31	**0.17**	3	Atlas	112,817	1
	10/16/2015 20:00	10/16/2015 21:00	**60**	Discharge						188,082	1
	10/27/2015 17:15	10/28/2015 6:45	**810**	2.73	**428,269**	2.93	**0.89**	48	Atlas	1,169,174	1
	11/6/2015 3:15	11/6/2015 5:00	**105**	1	**867,508**	1.1	**0.62**	3	Atlas	867,508	1
	11/12/2015	11/12/2015 1:15	**75**	0.3	**883,115**	1.81	**0.18**	3	Atlas	264,934	1
	11/18/2015 9:15	11/18/2015 14:30	**315**	1.96	**194,748**	2.33	**1.08**	6	Cloudburst	381,706	1
	11/28/2015 17:00	11/28/2015 18:00	**60**	0.59	**95,827**	0.53	**0.24**	12	Atlas	56,538	1
	11/30/2015 22:00	12/1/2015 4:45	**405**	0.69	**335,461**	1.44	**0.31**	12	Atlas	231,468	1
	12/22/2015	12/22/2015 4:30	**270**	0.8	**756,556**	0.82	**0.34**	6	Atlas	605,245	1
	12/23/2015 19:30	12/24/2015 3:30	**480**	0.86	**760,197**	1.7	**0.69**	1	Atlas	653,769	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO125	**12/27/2015 10:45**	12/28/2015 6:00	**1155**	2.17	**11,907,297**	3.84	**0.73**	3	Atlas	25,838,834	1
	12/28/2015 16:15	12/28/2015 17:00	**45**	2.17	**12,428**	4.17	**0.73**	3	Atlas	26,968	1
	2/2/2016 20:00	2/3/2016 2:00	**360**	1.61	**52,251**	1.68	**0.74**	6	Atlas	84,124	1
	2/21/2016 4:30	2/21/2016 10:45	**375**	0.83	**20,479**	1	**0.38**	12	Atlas	16,998	1
	2/23/2016 23:30	2/24/2016 9:45	**615**	2.03	**148,118**	2.59	**0.81**	12	Atlas	300,679	1
	3/1/2016 12:30	3/1/2016 13:15	**45**	0.37	**58,730**	2.37	**0.22**	3	Atlas	21,730	1
	3/10/2016 14:00	3/10/2016 19:00	**300**	1.18	**78,063**	1.2	**0.38**	48	Atlas	92,115	1
	3/12/2016 20:15	3/12/2016 23:30	**195**	0.89	**63,617**	1.68	**0.34**	24	Atlas	56,619	1
	3/13/2016 9:15	3/13/2016 10:15	**60**	0.89	**58,829**	2.07	**0.34**	24	Atlas	52,357	1
	3/24/2016 17:45	3/24/2016 18:15	**30**	0.47	**397,047**	0.55	**0.34**	1	Atlas	186,612	1
	3/27/2016 21:30	3/27/2016 22:15	**45**	0.86	**178,268**	1.32	**0.57**	3	Atlas	153,310	1
	3/31/2016 4:45	3/31/2016 7:30	**165**	1.1	**49,700**	2	**0.42**	24	Atlas	54,670	1
	3/31/2016 22:15	4/1/2016	**105**	1.1	**90,435**	1.96	**0.42**	24	Atlas	99,478	1
	4/11/2016 17:15	4/11/2016 18:30	**75**	0.85	**155,153**	0.84	**0.38**	12	Atlas	131,880	1
	4/26/2016 21:30	4/26/2016 22:00	**30**	0.38	**53,615**	0.7	**0.20**	6	Atlas	20,374	1
	4/27/2016 21:15	4/27/2016 22:15	**60**	0.62	**32,826**	1.28	**0.28**	3	Atlas	20,352	1
	5/1/2016 15:15	5/1/2016 15:15	**0**	0.16	**115,085**	1.59	**0.11**	3	Atlas	18,414	1
	5/7/2016 21:00	5/7/2016 21:00	**0**	0.49	**14,527**	0.85	**0.25**	6	Atlas	7,118	1
	5/10/2016 18:45	5/10/2016 22:30	**225**	1.02	**496,823**	1.73	**0.38**	24	Atlas	506,759	1
	5/11/2016 22:15	5/11/2016 22:15	**0**	0.22	**23,137**	1.75	**0.12**	3	Atlas	5,090	1
	5/20/2016 14:15	5/20/2016 16:00	**105**	0.85	**155,818**	1.4	**0.50**	3	Atlas	132,445	1
	6/12/2016 18:00	6/12/2016 18:15	**15**	0.27	**307,891**	0.3	**0.23**	1	Atlas	83,131	1
	6/14/2016 17:00	6/14/2016 17:30	**30**	0.85	**132,282**	0.94	**0.55**	3	Atlas	112,440	1
	6/22/2016 8:30	6/22/2016 8:45	**15**	0.29	**882,051**	0.22	**0.18**	3	Atlas	255,795	1
	6/23/2016 16:15	6/23/2016 23:00	**405**	1.88	**993,873**	2.17	**1.00**	6	Cloudburst	1,868,481	1
Grand Total										**410,790,776**	**277**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO126	**8/7/2011 3:15**	8/7/2011 11:00	**465**	1.67	**141,523**	1.72	**0.97**	3	Atlas	236,344	1
	8/13/2011 17:15	8/14/2011	**405**	0.9	**182,740**	2.74	**0.70**	1	Atlas	164,466	1
	9/19/2011 7:30	9/19/2011 7:30	**0**	0.74	**8,341**	0.62	**0.30**	12	Atlas	6,172	1
	9/25/2011 23:45	9/26/2011 15:15	**930**	3.24	**365,793**	4.85	**5.19**	12	Cloudburst	1,185,171	1
	10/27/2011 4:15	10/27/2011 5:45	**90**	0.98	**26,602**	1.21	**0.41**	3	Atlas	26,070	1
	11/20/2011 12:15	11/22/2011 21:30	**3435**	0.9	**246,239**	4.13	**0.31**	24	Atlas	221,615	1
	11/23/2011 9:30	11/24/2011 2:45	**1035**	Discharge						61	1
	11/27/2011 12:00	11/30/2011 22:00	**4920**	3.23	**115,017**	5.26	**1.00**	48	Atlas	371,506	1
	12/4/2011 20:30	12/6/2011 3:00	**1830**	2.98	**305,711**	5.48	**0.97**	48	Atlas	911,017	1
	12/6/2011 11:30	12/7/2011 0:30	**780**	Discharge						26,604	1
	12/15/2011 7:00	12/16/2011 12:30	**1770**	0.46	**1,407**	0.48	**0.24**	6	Atlas	647	1
	12/21/2011 6:45	12/23/2011 15:30	**3405**	0.66	**572,000**	1.79	**0.30**	12	Atlas	377,520	1
	12/24/2011 4:15	12/24/2011 11:00	**405**	Discharge						13	1
	12/27/2011 13:15	12/28/2011 10:00	**1245**	0.76	**7**	2.06	**0.30**	12	Atlas	5	1
	1/2/2012 23:00	1/3/2012 4:45	**345**	Discharge						4,317	1
	1/4/2012 10:30	1/4/2012 10:30	**0**	Discharge						8	1
	1/11/2012 19:15	1/12/2012 19:00	**1425**	0.88	**41,356**	0.94	**0.34**	12	Atlas	36,393	1
	1/17/2012 11:45	1/18/2012 9:15	**1290**	0.33	**389,118**	1.3	**0.15**	12	Atlas	128,409	1
	1/23/2012 3:00	1/27/2012 23:45	**7005**	0.61	**1,667,129**	2.8	**0.32**	3	Atlas	1,016,949	1
	1/28/2012 9:15	1/28/2012 10:30	**75**	0.01	**381,751**	2.45	**0.01**	1	Atlas	3,818	1
	2/1/2012 21:15	2/1/2012 22:30	**75**	0.01	**1,278,172**	1.57	**0.01**	1	Atlas	12,782	1
	2/2/2012 6:45	2/2/2012 8:15	**90**	Discharge						25,609	1
	2/2/2012 20:00	2/2/2012 22:00	**120**	Discharge						17,678	1
	2/16/2012 8:15	2/17/2012 2:30	**1095**	0.31	**634,731**	0.51	**0.12**	12	Atlas	196,767	1
	2/23/2012 18:00	2/24/2012 8:15	**855**	Discharge						105,670	1
	2/29/2012 7:30	3/3/2012 2:45	**4035**	0.47	**2,092,177**	0.77	**0.21**	12	Atlas	983,323	1
	3/3/2012 11:30	3/3/2012 11:30	**0**	Discharge						4,059	1
	3/8/2012 7:45	3/9/2012 19:30	**2145**	0.77	**325,923**	1.12	**0.37**	6	Atlas	250,961	1
	3/12/2012 7:15	3/13/2012 8:15	**1500**	0.2	**1,189,078**	0.97	**0.09**	6	Atlas	237,816	1
	3/13/2012 17:45	3/14/2012 9:30	**945**	Discharge						13,816	1
	3/14/2012 19:15	3/14/2012 20:30	**75**	Discharge						1,288	1
	3/17/2012 20:15	3/18/2012 2:15	**360**	1.11	**3,364**	2.31	**0.67**	1	Atlas	3,734	1
	3/23/2012 17:15	3/23/2012 23:30	**375**	1.77	**17,771**	2.88	**0.67**	24	Atlas	31,455	1
	4/1/2012 10:15	4/1/2012 18:30	**495**	1.28	**125,132**	1.49	**0.68**	6	Atlas	160,169	1
	5/5/2012 0:15	5/5/2012 7:15	**420**	1.44	**173,386**	2.67	**0.79**	3	Atlas	249,676	1
	5/13/2012 7:00	5/13/2012 14:15	**435**	2.04	**287,327**	2.07	**0.82**	12	Atlas	586,147	1
	5/16/2012 17:45	5/16/2012 18:00	**15**	0.21	**38,470**	2.25	**0.18**	1	Atlas	8,079	1
	5/29/2012 6:45	5/31/2012 7:15	**2910**	2.28	**1,305,137**	2.28	**4.57**	3	Atlas	2,975,713	1
	5/31/2012 21:00	6/1/2012 1:45	**285**	1.14	**30,508**	3.26	**0.49**	12	Atlas	34,780	1
	7/1/2012 20:00	7/1/2012 20:00	**0**	0.4	**2,967**	0.32	**0.28**	1	Atlas	1,187	1
	7/14/2012 12:15	7/14/2012 12:15	**0**	0.8	**4,922**	0.63	**0.51**	3	Atlas	3,937	1
	7/18/2012 16:15	7/18/2012 16:15	**0**	Discharge						2,322	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO126	**7/19/2012 18:15**	7/19/2012 18:30	**15**	0.53	**97,714**	1.35	**0.43**	1	Atlas	51,788	1
	7/27/2012 20:00	7/27/2012 20:00	**0**	0.55	**11,692**	0.71	**0.36**	3	Atlas	6,430	1
	9/3/2012 2:00	9/3/2012 5:15	**195**	0.95	**61,388**	1.33	**0.37**	24	Atlas	58,319	1
	9/5/2012 15:30	9/5/2012 15:45	**15**	0.87	**39,091**	2.19	**0.70**	1	Atlas	34,009	1
	9/8/2012 2:45	9/8/2012 9:45	**420**	1.16	**101,874**	3.43	**0.63**	3	Atlas	118,173	1
	9/26/2012 23:00	9/26/2012 23:15	**15**	1.38	**29,553**	2.12	**0.73**	6	Atlas	40,783	1
	10/1/2012 21:15	10/1/2012 23:15	**120**	0.81	**37,606**	3.1	**0.34**	12	Atlas	30,461	1
	12/7/2012 8:45	12/7/2012 15:15	**390**	1.18	**34,047**	1.8	**0.49**	6	Atlas	40,175	1
	12/8/2012 10:15	12/8/2012 15:45	**330**	0.47	**100,531**	2.35	**0.26**	6	Atlas	47,250	1
	12/9/2012 22:15	12/10/2012 8:15	**600**	1.17	**182,191**	3.32	**0.55**	3	Atlas	213,163	1
	12/26/2012 11:15	12/26/2012 18:00	**405**	0.93	**54,457**	1.61	**0.36**	12	Atlas	50,645	1
	1/13/2013 5:30	1/14/2013 2:15	**1245**	2.2	**804,434**	2.94	**0.84**	24	Atlas	1,769,755	1
	3/11/2013 10:15	3/11/2013 18:45	**510**	1.05	**68,410**	1.49	**0.42**	12	Atlas	71,831	1
	3/17/2013 18:45	3/17/2013 19:15	**30**	1.61	**2,267**	1.77	**0.52**	48	Atlas	3,649	1
	3/18/2013 4:15	3/18/2013 16:45	**750**	1.61	**211,547**	2.09	**0.52**	48	Atlas	340,591	1
	4/11/2013 7:15	4/11/2013 7:15	**0**	1.23	**3,833**	0.46	**0.47**	24	Atlas	4,715	1
	4/16/2013 20:15	4/18/2013 4:00	**1905**	0.65	**2,202,567**	1.89	**0.53**	1	Atlas	1,431,668	1
	4/19/2013 2:30	4/19/2013 10:45	**495**	0.91	**65,526**	1.57	**0.50**	3	Atlas	59,629	1
	4/24/2013 9:00	4/24/2013 9:00	**0**	0.59	**3,405**	1.48	**0.32**	6	Atlas	2,009	1
	5/5/2013 10:30	5/5/2013 16:30	**360**	1.26	**1,942**	1.22	**0.38**	24	Atlas	2,447	1
	5/6/2013 5:00	5/6/2013 5:00	**0**	1.26	**1,131**	1.28	**0.38**	24	Atlas	1,426	1
	5/6/2013 19:45	5/7/2013 5:30	**585**	1.26	**3,654**	1.41	**0.38**	24	Atlas	4,604	1
	5/7/2013 19:30	5/8/2013 16:30	**1260**	Discharge						6,428	1
	5/9/2013 23:45	5/10/2013 2:45	**180**	0.01	**257,248**	1.41	**0.01**	1	Atlas	2,572	1
	5/10/2013 17:15	5/11/2013 2:45	**570**	0.94	**68,729**	2.33	**0.42**	6	Atlas	64,605	1
	6/17/2013 16:30	6/19/2013 15:45	**2835**	1.51	**2,063,802**	1.91	**0.82**	1	Atlas	3,116,341	1
	6/21/2013 19:30	6/23/2013 22:45	**3075**	0.28	**5,988,988**	2.51	**0.19**	3	Atlas	1,676,917	1
	6/26/2013 3:30	6/28/2013 7:00	**3090**	0.73	**10,183,802**	4.25	**0.49**	3	Atlas	7,434,176	1
	8/31/2013 19:45	9/1/2013 6:45	**660**	1.44	**149,030**	1.44	**0.73**	1	Atlas	214,603	1
	9/21/2013 1:00	9/22/2013 12:15	**2115**	1.77	**1,947,572**	1.86	**0.74**	12	Atlas	3,447,202	1
	10/5/2013 14:15	10/7/2013 8:00	**2505**	5.16	**2,747,858**	5.28	**16.26**	24	Atlas	14,178,945	1
	10/30/2013 9:00	10/30/2013 9:00	**0**	1.04	**932**	1.05	**0.49**	6	Atlas	970	1
	11/1/2013 1:00	11/1/2013 1:00	**0**	0.58	**2,488**	1.62	**0.22**	12	Atlas	1,443	1
	11/17/2013 7:45	11/19/2013 11:15	**3090**	2.54	**2,703,904**	2.7	**1.94**	6	Cloudburst	6,867,915	1
	12/5/2013 8:45	12/13/2013 0:45	**11040**	0.79	**27,123,849**	0.84	**0.26**	48	Atlas	21,427,840	1
	12/14/2013 4:45	12/14/2013 11:45	**420**	0.98	**77,062**	1.02	**0.42**	6	Atlas	75,520	1
	12/15/2013 0:30	12/16/2013 12:00	**2130**	Discharge						1,031,679	1
	12/17/2013 21:00	12/18/2013 11:45	**885**	Discharge						264,862	1
	12/21/2013 12:00	12/21/2013 12:30	**30**	2.67	**3,782**	0.99	**1.02**	24	Cloudburst	10,097	1
	12/21/2013 22:00	12/22/2013 8:00	**600**	2.67	**454,236**	2.73	**1.02**	24	Cloudburst	1,212,811	1
	2/4/2014 23:30	2/5/2014 0:30	**60**	0.4	**63,713**	0.76	**0.20**	6	Atlas	25,485	1
	2/17/2014 16:15	2/17/2014 16:15	**0**	0.38	**9,510**	0.69	**0.23**	3	Atlas	3,614	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO126	**3/2/2014 15:30**	3/4/2014 10:45	**2595**	0.53	**1,261,344**	0.55	**0.20**	24	Atlas	668,512	1
	3/6/2014 3:15	3/6/2014 11:45	**510**	Discharge						137,434	1
	4/3/2014 15:30	4/6/2014 0:45	**3435**	2.07	**1,607,877**	3.68	**0.71**	24	Atlas	3,328,306	1
	4/7/2014 10:45	4/7/2014 14:00	**195**	1.07	**76,290**	3.2	**0.61**	3	Atlas	81,630	1
	4/27/2014 20:00	4/27/2014 20:00	**0**	2.12	**8,644**	0.28	**0.80**	3	Atlas	18,325	1
	4/28/2014 6:00	4/28/2014 10:15	**255**	2.12	**105,077**	1.72	**0.80**	3	Atlas	222,763	1
	5/10/2014 5:45	5/10/2014 5:45	**0**	1.75	**4,544**	1.02	**0.67**	24	Atlas	7,951	1
	5/10/2014 14:15	5/10/2014 18:30	**255**	1.75	**46,003**	1.82	**0.67**	24	Atlas	80,505	1
	5/14/2014 7:00	5/14/2014 7:00	**0**	1.15	**10,979**	2.09	**0.42**	24	Atlas	12,626	1
	5/14/2014 21:15	5/15/2014 1:15	**240**	1.15	**13,808**	3	**0.42**	24	Atlas	15,879	1
	5/21/2014 21:00	5/22/2014 8:30	**690**	0.58	**82,775**	0.76	**0.27**	12	Atlas	48,010	1
	5/29/2014 21:00	5/31/2014 3:45	**1845**	1.02	**1,036,255**	1.23	**0.85**	1	Atlas	1,056,980	1
	7/7/2014 19:30	7/7/2014 19:30	**0**	0.76	**29,211**	1.05	**0.66**	1	Atlas	22,201	1
	7/26/2014 21:45	7/26/2014 21:45	**0**	1.12	**12,579**	0.48	**0.49**	12	Atlas	14,089	1
	7/27/2014 7:45	7/27/2014 7:45	**0**	1.12	**5,821**	1.09	**0.49**	12	Atlas	6,520	1
	7/28/2014 5:45	7/28/2014 15:30	**585**	Discharge						78,750	1
	8/22/2014 19:00	8/23/2014 2:15	**435**	0.39	**104,191**	1.12	**0.25**	3	Atlas	40,634	1
	8/23/2014 20:00	8/23/2014 20:15	**15**	0.73	**45,666**	1.53	**0.35**	6	Atlas	33,337	1
	8/27/2014 17:15	8/27/2014 20:15	**180**	0.42	**41,745**	1.58	**0.27**	3	Atlas	17,533	1
	8/30/2014 17:15	8/31/2014 14:15	**1260**	0.42	**726,351**	1.43	**0.22**	1	Atlas	305,067	1
	9/11/2014 1:00	9/11/2014 11:30	**630**	1.9	**497,516**	1.9	**1.33**	3	Atlas	945,281	1
	10/14/2014 15:45	10/14/2014 22:45	**420**	1.19	**49,898**	2.78	**0.53**	12	Atlas	59,379	1
	12/6/2014 2:45	12/6/2014 7:00	**255**	1.69	**191,909**	2.44	**0.55**	48	Atlas	324,327	1
	3/4/2015 3:30	3/4/2015 13:15	**585**	1.66	**229,121**	1.18	**0.54**	48	Atlas	380,341	1
	3/10/2015 10:45	3/11/2015 2:00	**915**	1.08	**3,479,404**	2.73	**0.49**	12	Atlas	3,757,756	1
	3/13/2015 10:45	3/14/2015 21:15	**2070**	1.5	**5,150,788**	2.59	**0.56**	24	Atlas	7,726,182	1
	4/2/2015 15:00	4/2/2015 16:00	**60**	4.31	**37,595**	1.14	**4.56**	24	Cloudburst	162,033	1
	4/3/2015 0:15	4/5/2015 11:15	**3540**	4.31	**4,190,233**	4.35	**4.56**	24	Cloudburst	18,059,905	1
	4/7/2015 9:30	4/7/2015 18:15	**525**	0.77	**83,944**	5.08	**0.37**	1	Atlas	64,637	1
	4/9/2015 12:00	4/9/2015 12:15	**15**	0.26	**20,527**	5.11	**0.22**	1	Atlas	5,337	1
	4/19/2015 14:15	4/19/2015 15:00	**45**	0.83	**13,157**	1.25	**0.33**	12	Atlas	10,920	1
	5/17/2015 14:15	5/17/2015 14:15	**0**	0.11	**151,374**	0.54	**0.08**	1	Atlas	16,651	1
	6/18/2015 3:00	6/18/2015 4:15	**75**	0.06	**363,702**	0.74	**0.04**	1	Atlas	21,822	1
	6/18/2015 17:15	6/18/2015 21:15	**240**	1.94	**179,797**	1.45	**0.63**	48	Atlas	348,807	1
	6/20/2015 8:15	6/22/2015 4:45	**2670**	1.94	**987,595**	2.73	**0.63**	48	Atlas	1,915,934	1
	6/26/2015 0:45	6/28/2015 19:15	**3990**	0.38	**2,274,415**	2.47	**0.21**	6	Atlas	864,278	1
	6/29/2015 16:00	6/30/2015 10:45	**1125**	0.18	**883,211**	1.26	**0.10**	1	Atlas	158,978	1
	7/2/2015 4:15	7/2/2015 14:15	**600**	1.64	**16,686**	2.04	**0.63**	24	Atlas	27,364	1
	7/7/2015 11:45	7/8/2015 21:45	**2040**	0.77	**409,036**	2.8	**0.33**	6	Atlas	314,958	1
	7/11/2015 5:00	7/11/2015 15:15	**615**	Discharge						68,707	1
	7/12/2015 6:15	7/13/2015 16:00	**2025**	1.8	**4,008,296**	3.93	**2.00**	3	Atlas	7,214,934	1
	7/14/2015 4:15	7/16/2015 20:30	**3855**	0.6	**4,784,331**	4.65	**0.44**	1	Atlas	2,870,599	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO126	**7/17/2015 23:15**	7/19/2015 0:30	**1515**	1.46	**1,163,267**	4.6	**0.97**	3	Atlas	1,698,370	1
	8/4/2015 19:00	8/4/2015 19:00	**0**	0.34	**49,259**	0.38	**0.29**	1	Atlas	16,748	1
	8/19/2015 8:15	8/19/2015 8:15	**0**	0.62	**14,416**	0.45	**0.27**	1	Atlas	8,938	1
	10/27/2015 22:45	10/27/2015 22:45	**0**	2.73	**590**	2.28	**0.89**	48	Atlas	1,610	1
	11/18/2015 11:15	11/18/2015 15:15	**240**	1.96	**186,725**	2.34	**1.08**	6	Cloudburst	365,982	1
	12/22/2015 3:15	12/22/2015 4:00	**45**	0.8	**9,738**	0.82	**0.34**	6	Atlas	7,790	1
	12/23/2015 20:00	12/23/2015 21:45	**105**	0.86	**445,843**	1.7	**0.69**	1	Atlas	383,425	1
	12/27/2015 11:00	12/28/2015 8:00	**1260**	2.17	**1,052,752**	3.84	**0.73**	3	Atlas	2,284,472	1
	2/2/2016 23:15	2/3/2016 2:15	**180**	1.61	**122,737**	1.68	**0.74**	6	Atlas	197,606	1
	2/21/2016 10:30	2/21/2016 10:45	**15**	0.83	**6,967**	0.98	**0.38**	12	Atlas	5,783	1
	2/24/2016 3:00	2/24/2016 15:00	**720**	2.03	**695,025**	2.74	**0.81**	12	Atlas	1,410,900	1
	3/10/2016 17:00	3/10/2016 19:15	**135**	1.18	**3,412**	1.21	**0.38**	48	Atlas	4,026	1
	3/12/2016 23:30	3/12/2016 23:30	**0**	0.89	**5,326**	1.68	**0.34**	24	Atlas	4,741	1
	3/13/2016 9:45	3/13/2016 10:00	**15**	0.89	**11,036**	2.06	**0.34**	24	Atlas	9,822	1
	3/24/2016 17:45	3/24/2016 17:45	**0**	0.47	**9,382**	0.54	**0.34**	1	Atlas	4,410	1
	3/27/2016 21:45	3/27/2016 21:45	**0**	0.86	**7,382**	1.27	**0.57**	3	Atlas	6,348	1
	3/31/2016 23:15	4/1/2016	**45**	1.1	**12,612**	1.96	**0.42**	24	Atlas	13,873	1
	4/27/2016 21:00	4/27/2016 21:00	**0**	0.62	**6,548**	1.05	**0.28**	3	Atlas	4,059	1
	5/10/2016 21:45	5/10/2016 22:30	**45**	1.02	**179,815**	1.73	**0.38**	24	Atlas	183,411	1
	5/20/2016 15:15	5/20/2016 15:15	**0**	0.85	**6,110**	1.3	**0.50**	3	Atlas	5,193	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.19	**33,518**	0.57	**0.10**	1	Atlas	6,368	1
Grand Total										**134,211,677**	**147**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**8/8/2006 11:00**	8/8/2006 12:00	**60**	Discharge						20,500	1
	8/9/2006 11:00	8/9/2006 13:00	**120**	Discharge						183,000	1
	8/10/2006 16:00	8/10/2006 20:00	**240**	Discharge						117,583	1
	8/19/2006 11:00	8/19/2006 12:00	**60**	Discharge						446,875	1
	8/20/2006 6:00	8/20/2006 7:00	**60**	Discharge						293,708	1
	8/28/2006 2:00	8/29/2006	**1320**	Discharge						852,417	1
	9/11/2006 5:00	9/11/2006 13:00	**480**	Discharge						148,000	1
	9/12/2006 13:00	9/12/2006 16:00	**180**	Discharge						174,292	1
	9/22/2006 7:00	9/24/2006 12:00	**3180**	Discharge						21,318,333	1
	9/27/2006 21:00	9/28/2006 11:00	**840**	Discharge						822,833	1
	10/16/2006 16:00	10/17/2006 7:00	**900**	Discharge						535,458	1
	10/19/2006 21:00	10/19/2006 23:00	**120**	Discharge						82,750	1
	10/27/2006 8:00	10/28/2006 2:00	**1080**	Discharge						273,458	1
	11/1/2006 8:00	11/1/2006 9:00	**60**	Discharge						7,708	1
	11/7/2006 3:00	11/7/2006 7:00	**240**	Discharge						7,250	1
	11/15/2006 11:00	11/15/2006 15:00	**240**	Discharge						113,417	1
	11/16/2006 2:00	11/16/2006 4:00	**120**	Discharge						78,292	1
	11/30/2006 18:00	12/1/2006 6:00	**720**	Discharge						183,875	1
	12/12/2006 14:00	12/12/2006 15:00	**60**	Discharge						7,958	1
	12/22/2006 4:00	12/22/2006 6:00	**120**	Discharge						18,750	1
	12/25/2006 12:00	12/26/2006	**720**	Discharge						332,542	1
	12/31/2006 6:00	12/31/2006 16:00	**600**	Discharge						19,250	1
	1/7/2007 11:00	1/7/2007 13:00	**120**	Discharge						53,417	1
	1/13/2007 6:00	1/14/2007 8:00	**1560**	Discharge						211,292	1
	1/15/2007 6:00	1/15/2007 13:00	**420**	Discharge						259,833	1
	1/21/2007 6:00	1/21/2007 7:00	**60**	Discharge						28,917	1
	2/12/2007 19:00	2/13/2007 17:00	**1320**	Discharge						438,125	1
	2/24/2007 17:00	2/24/2007 22:00	**300**	Discharge						481,042	1
	3/1/2007 8:00	3/1/2007 19:00	**660**	Discharge						235,125	1
	3/14/2007 3:00	3/14/2007 4:00	**60**	Discharge						68,083	1
	3/14/2007 16:00	3/14/2007 18:00	**120**	Discharge						651,208	1
	3/15/2007 7:00	3/15/2007 8:00	**60**	Discharge						2,375	1
	3/19/2007 13:00	3/19/2007 18:00	**300**	Discharge						117,750	1
	3/28/2007 7:00	3/28/2007 8:00	**60**	Discharge						13,208	1
	4/3/2007 18:00	4/3/2007 21:00	**180**	Discharge						357,875	1
	4/11/2007 9:00	4/11/2007 18:00	**540**	Discharge						113,917	1
	4/14/2007 2:00	4/14/2007 19:00	**1020**	Discharge						268,000	1
	4/26/2007 5:00	4/26/2007 17:00	**720**	Discharge						230,125	1
	5/3/2007 9:00	5/3/2007 10:00	**60**	Discharge						24,042	1
	5/4/2007 10:00	5/4/2007 20:00	**600**	Discharge						206,542	1
	5/15/2007 22:00	5/15/2007 23:00	**60**	Discharge						81,833	1
	5/27/2007 22:00	5/27/2007 22:00	**0**	Discharge						30,708	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**6/4/2007 15:00**	6/4/2007 15:00	**0**	Discharge						125	1
	6/5/2007 16:00	6/5/2007 16:00	**0**	Discharge						65,583	1
	6/19/2007 15:00	6/19/2007 16:00	**60**	Discharge						51,542	1
	6/23/2007 13:00	6/23/2007 21:00	**480**	Discharge						87,167	1
	6/24/2007 13:00	6/24/2007 13:00	**0**	Discharge						50,417	1
	6/28/2007 15:00	6/28/2007 19:00	**240**	Discharge						88,917	1
	7/4/2007 23:00	7/5/2007 9:00	**600**	Discharge						486,958	1
	7/10/2007 12:00	7/10/2007 12:00	**0**	Discharge						37,375	1
	7/19/2007 17:00	7/19/2007 19:00	**120**	Discharge						140,625	1
	7/27/2007 6:00	7/27/2007 6:00	**0**	Discharge						1,542	1
	7/27/2007 18:00	7/27/2007 23:00	**300**	Discharge						1,070,875	1
	8/5/2007	8/5/2007	**0**	Discharge						45,958	1
	8/16/2007 16:00	8/16/2007 17:00	**60**	Discharge						252,792	1
	8/21/2007 6:00	8/21/2007 10:00	**240**	Discharge						1,017,250	1
	8/25/2007 15:00	8/25/2007 15:00	**0**	Discharge						68,542	1
	8/30/2007 1:00	8/30/2007 1:00	**0**	Discharge						119,208	1
	9/9/2007 12:00	9/9/2007 12:00	**0**	Discharge						68,542	1
	9/27/2007 5:00	9/27/2007 6:00	**60**	Discharge						2,128,458	1
	10/15/2007 16:00	10/15/2007 17:00	**60**	Discharge						43,583	1
	10/17/2007 10:00	10/17/2007 14:00	**240**	Discharge						141,875	1
	10/18/2007 5:00	10/18/2007 7:00	**120**	Discharge						104,750	1
	10/21/2007 15:00	10/23/2007 5:00	**2280**	Discharge						7,319,000	1
	10/25/2007 13:00	10/25/2007 13:00	**0**	Discharge						2,833	1
	11/4/2007 6:00	11/4/2007 6:00	**0**	Discharge						6,250	1
	11/11/2007 12:00	11/11/2007 14:00	**120**	Discharge						48,292	1
	11/19/2007 10:00	11/19/2007 20:00	**600**	Discharge						39,792	1
	11/23/2007 10:00	11/23/2007 11:00	**60**	Discharge						11,333	1
	11/23/2007 20:00	11/24/2007 6:00	**600**	Discharge						94,042	1
	11/30/2007 2:00	11/30/2007 5:00	**180**	Discharge						168,292	1
	12/6/2007 11:00	12/7/2007 2:00	**900**	Discharge						227,042	1
	12/9/2007 3:00	12/9/2007 4:00	**60**	Discharge						2,583	1
	12/10/2007 3:00	12/10/2007 8:00	**300**	Discharge						101,083	1
	12/12/2007 5:00	12/13/2007 3:00	**1320**	Discharge						3,076,667	1
	12/17/2007 11:00	12/17/2007 15:00	**240**	Discharge						79,583	1
	12/19/2007 14:00	12/19/2007 14:00	**0**	Discharge						12,375	1
	12/24/2007 17:00	12/24/2007 17:00	**0**	Discharge						35,250	1
	1/8/2008 19:00	1/8/2008 21:00	**120**	Discharge						236,875	1
	1/10/2008 12:00	1/10/2008 18:00	**360**	Discharge						481,542	1
	4/25/2008 1:00	4/25/2008 2:00	**60**	Discharge						92,208	1
	5/1/2008 7:00	5/1/2008 22:00	**900**	Discharge						1,326,917	1
	5/6/2008 5:00	5/6/2008 7:00	**120**	Discharge						41,917	1
	5/6/2008 23:00	5/7/2008 1:00	**120**	Discharge						32,292	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**5/9/2008 11:00**	5/9/2008 12:00	**60**	Discharge						82,833	1
	5/12/2008 11:00	5/12/2008 13:00	**120**	Discharge						288,417	1
	5/13/2008 20:00	5/14/2008 1:00	**300**	Discharge						469,250	1
	5/25/2008 12:00	5/25/2008 13:00	**60**	Discharge						33,500	1
	5/31/2008 12:00	5/31/2008 17:00	**300**	Discharge						843,167	1
	6/10/2008 12:00	6/10/2008 19:00	**420**	Discharge						33,875	1
	6/13/2008 3:00	6/13/2008 3:00	**0**	Discharge						4,375	1
	6/16/2008 12:00	6/16/2008 12:00	**0**	Discharge						1,054,208	1
	6/16/2008 23:00	6/16/2008 23:00	**0**	Discharge						41,375	1
	6/19/2008 6:00	6/19/2008 6:00	**0**	Discharge						125	1
	6/24/2008 8:00	6/24/2008 9:00	**60**	Discharge						245,417	1
	7/4/2008 4:00	7/4/2008 5:00	**60**	0.79	**45,042**	0.21	**0.30**	24	Atlas	35,583	1
	7/4/2008 20:00	7/4/2008 20:00	**0**	0.79	**10,759**	0.7	**0.30**	24	Atlas	8,500	1
	7/12/2008 21:00	7/12/2008 23:00	**120**	Discharge						355,250	1
	7/20/2008 20:00	7/20/2008 21:00	**60**	0.27	**173,302**	0.26	**0.21**	1	Atlas	46,792	1
	7/28/2008 7:00	7/28/2008 8:00	**60**	0.46	**3,158,243**	0.66	**0.31**	3	Atlas	1,452,792	1
	7/30/2008 9:00	7/30/2008 9:00	**0**	0.47	**482,092**	0.61	**0.33**	1	Atlas	226,583	1
	7/31/2008	7/31/2008 3:00	**180**	1	**1,036,250**	1.8	**0.55**	6	Atlas	1,036,250	1
	9/3/2008 9:00	9/3/2008 9:00	**0**	0.3	**28,750**	0.22	**0.20**	3	Atlas	8,625	1
	9/29/2008 23:00	9/30/2008	**60**	0.31	**70,699**	0.23	**0.21**	3	Atlas	21,917	1
	10/7/2008 15:00	10/7/2008 15:45	**45**	0.83	**23,670**	0.25	**0.32**	24	Atlas	19,646	1
	10/8/2008 1:00	10/8/2008 3:45	**165**	0.83	**54,229**	0.79	**0.32**	24	Atlas	45,010	1
	10/24/2008 4:00	10/24/2008 13:15	**555**	1.55	**118,972**	1.55	**0.71**	12	Atlas	184,406	1
	11/12/2008 23:45	11/13/2008 0:30	**45**	0.34	**70,558**	0.49	**0.14**	12	Atlas	23,990	1
	11/15/2008 0:30	11/15/2008 7:00	**390**	0.99	**23,822**	0.86	**0.41**	12	Atlas	23,583	1
	11/24/2008 3:30	11/24/2008 7:15	**225**	0.66	**40,404**	0.61	**0.33**	6	Atlas	26,667	1
	12/3/2008 23:30	12/4/2008 0:30	**60**	0.27	**83,719**	0.42	**0.13**	3	Atlas	22,604	1
	12/9/2008 11:30	12/9/2008 16:15	**285**	1.13	**142,561**	1.27	**0.52**	6	Atlas	161,094	1
	12/19/2008 6:45	12/19/2008 10:00	**195**	0.64	**145,654**	1.04	**0.35**	6	Atlas	93,219	1
	12/23/2008 23:00	12/24/2008 14:45	**945**	2.49	**256,957**	3.27	**0.81**	48	Atlas	639,823	1
	12/28/2008 0:15	12/28/2008 2:15	**120**	0.5	**390,896**	3	**0.33**	3	Atlas	195,448	1
	1/10/2009 7:30	1/10/2009 15:00	**450**	0.42	**120,784**	1.1	**0.26**	3	Atlas	50,729	1
	1/28/2009 2:15	1/28/2009 8:00	**345**	1.68	**58,141**	1.76	**0.55**	24	Atlas	97,677	1
	2/10/2009 5:15	2/10/2009 6:00	**45**	1.11	**8,371**	0.33	**0.36**	48	Atlas	9,292	1
	2/10/2009 18:30	2/10/2009 19:15	**45**	1.11	**12,134**	0.72	**0.36**	48	Atlas	13,469	1
	2/11/2009 4:45	2/11/2009 5:30	**45**	1.11	**53,707**	0.9	**0.36**	48	Atlas	59,615	1
	2/11/2009 13:45	2/11/2009 14:30	**45**	1.11	**81,991**	1.09	**0.36**	48	Atlas	91,010	1
	2/18/2009 5:15	2/18/2009 5:30	**15**	0.19	**9,923**	0.35	**0.10**	1	Atlas	1,885	1
	2/27/2009 3:15	2/27/2009 5:00	**105**	0.68	**1,023,698**	1.08	**0.39**	3	Atlas	696,115	1
	3/25/2009 5:30	3/25/2009 5:45	**15**	0.3	**42,396**	0.53	**0.13**	12	Atlas	12,719	1
	3/28/2009 20:45	3/28/2009 21:15	**30**	0.42	**363,864**	0.92	**0.24**	1	Atlas	152,823	1
	4/2/2009 19:15	4/3/2009 4:00	**525**	1.09	**660,159**	1.59	**0.49**	12	Atlas	719,573	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**4/5/2009 17:30**	4/5/2009 17:45	**15**	0.3	**237,708**	1.38	**0.19**	3	Atlas	71,313	1
	4/10/2009 11:30	4/10/2009 11:30	**0**	0.38	**19,572**	0.46	**0.15**	12	Atlas	7,438	1
	4/13/2009 16:15	4/13/2009 22:15	**360**	0.87	**188,949**	1.23	**0.35**	12	Atlas	164,385	1
	4/14/2009 9:00	4/14/2009 9:15	**15**	0.87	**13,625**	1.25	**0.35**	12	Atlas	11,854	1
	4/19/2009 7:45	4/19/2009 23:45	**960**	1.22	**200,700**	2.06	**0.47**	12	Atlas	244,854	1
	4/28/2009 8:15	4/28/2009 9:30	**75**	0.26	**229,647**	0.26	**0.16**	3	Atlas	59,708	1
	5/1/2009 1:45	5/1/2009 2:00	**15**	0.03	**1,267,708**	0.39	**0.02**	1	Atlas	38,031	1
	5/1/2009 23:00	5/1/2009 23:15	**15**	Discharge						29,260	1
	5/6/2009 10:45	5/6/2009 12:30	**105**	Discharge						269,833	1
	5/8/2009 3:15	5/8/2009 4:15	**60**	Discharge						252,458	1
	5/8/2009 14:30	5/8/2009 20:15	**345**	Discharge						3,341,552	1
	5/14/2009 5:45	5/14/2009 7:00	**75**	Discharge						63,448	1
	5/16/2009 5:15	5/16/2009 5:30	**15**	Discharge						65,719	1
	5/25/2009 3:15	5/25/2009 3:30	**15**	Discharge						50,344	1
	5/27/2009 12:45	5/27/2009 13:15	**30**	Discharge						148,542	1
	6/4/2009 11:15	6/4/2009 11:15	**0**	0.24	**1,128**	0.28	**0.11**	12	Atlas	271	1
	6/10/2009 9:45	6/10/2009 13:00	**195**	0.84	**905,866**	1.14	**0.43**	3	Atlas	760,927	1
	6/11/2009 2:30	6/11/2009 4:45	**135**	1.65	**1,432,140**	2.13	**0.65**	3	Atlas	2,363,031	1
	6/11/2009 17:15	6/11/2009 20:45	**210**	1.65	**658,327**	2.53	**0.65**	3	Atlas	1,086,240	1
	6/16/2009 9:30	6/16/2009 17:00	**450**	0.81	**131,667**	3.91	**0.52**	1	Atlas	106,650	1
	6/18/2009 10:15	6/18/2009 12:15	**120**	1.37	**1,657,094**	3.37	**0.86**	1	Atlas	2,270,219	1
	6/20/2009 4:15	6/20/2009 4:30	**15**	0.08	**54,665**	2.86	**0.06**	1	Atlas	4,373	1
	6/22/2009 9:00	6/22/2009 10:45	**105**	1.12	**602,251**	4.01	**0.77**	1	Atlas	674,521	1
	6/26/2009 3:30	6/26/2009 6:15	**165**	1.18	**587,805**	2.46	**0.54**	12	Atlas	693,610	1
	6/26/2009 16:00	6/26/2009 16:30	**30**	0.12	**225,027**	2.62	**0.10**	1	Atlas	27,003	1
	7/8/2009 6:30	7/8/2009 7:00	**30**	0.1	**135,741**	0.49	**0.09**	1	Atlas	13,574	1
	7/15/2009 10:45	7/15/2009 12:00	**75**	0.3	**269,456**	0.34	**0.19**	3	Atlas	80,837	1
	7/17/2009 3:30	7/17/2009 4:15	**45**	0.35	**85,638**	0.62	**0.23**	3	Atlas	29,973	1
	7/22/2009 6:15	7/22/2009 11:30	**315**	1.46	**186,523**	2.04	**0.64**	12	Atlas	272,324	1
	7/25/2009 6:45	7/25/2009 6:45	**0**	0.61	**522**	1.65	**0.23**	24	Atlas	318	1
	7/25/2009 21:15	7/25/2009 21:45	**30**	0.61	**29,280**	2.07	**0.23**	24	Atlas	17,861	1
	7/28/2009 13:30	7/28/2009 13:45	**15**	2.63	**2,146**	2.28	**2.52**	6	Cloudburst	5,645	1
	7/29/2009 1:15	7/29/2009 8:30	**435**	2.63	**922,290**	4.61	**2.52**	6	Cloudburst	2,425,623	1
	7/30/2009 11:15	7/30/2009 23:00	**705**	1.04	**200,855**	4.1	**0.44**	12	Atlas	208,889	1
	8/4/2009 7:30	8/5/2009 1:15	**1065**	5.46	**2,063,410**	9.15	**424.75**	3	Cloudburst	11,266,218	1
	8/10/2009 18:45	8/10/2009 21:00	**135**	1.06	**1,858,768**	6.47	**0.67**	3	Atlas	1,970,295	1
	8/20/2009 9:15	8/20/2009 9:30	**15**	0.3	**76,092**	0.33	**0.20**	3	Atlas	22,827	1
	9/6/2009 1:00	9/6/2009 1:15	**15**	0.27	**145,966**	0.21	**0.18**	1	Atlas	39,411	1
	9/20/2009 6:00	9/20/2009 22:15	**975**	3.67	**345,233**	3.44	**4.28**	24	Cloudburst	1,267,005	1
	9/22/2009 18:30	9/22/2009 18:30	**0**	0.65	**98,635**	3.92	**0.33**	6	Atlas	64,113	1
	10/23/2009 6:30	10/23/2009 10:30	**240**	0.58	**39,071**	0.61	**0.25**	12	Atlas	22,661	1
	10/27/2009 20:30	10/27/2009 23:30	**180**	1.11	**30,909**	1.69	**0.50**	12	Atlas	34,309	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**10/30/2009 19:45**	10/31/2009 0:45	**300**	0.98	**55,807**	1.73	**0.44**	12	Atlas	54,691	1
	11/17/2009 7:30	11/17/2009 20:30	**780**	0.94	**41,939**	0.9	**0.36**	24	Atlas	39,423	1
	12/8/2009 15:30	12/8/2009 23:00	**450**	1.58	**92,736**	1.85	**0.68**	12	Atlas	146,523	1
	12/13/2009 6:45	12/13/2009 7:15	**30**	0.26	**44,362**	1.89	**0.17**	3	Atlas	11,534	1
	1/20/2010 10:00	1/20/2010 12:45	**165**	0.4	**119,832**	0.7	**0.21**	6	Atlas	47,933	1
	1/21/2010 0:15	1/21/2010 0:30	**15**	0.15	**42,697**	0.86	**0.13**	1	Atlas	6,405	1
	1/21/2010 10:30	1/21/2010 19:45	**555**	0.9	**160,251**	1.76	**0.41**	12	Atlas	144,226	1
	1/24/2010 4:00	1/24/2010 6:00	**120**	1.03	**73,576**	2.15	**0.40**	24	Atlas	75,783	1
	1/24/2010 21:30	1/24/2010 22:45	**75**	1.03	**61,869**	2.47	**0.40**	24	Atlas	63,725	1
	2/5/2010 11:45	2/5/2010 19:30	**465**	1.18	**214,254**	1.12	**0.42**	24	Atlas	252,820	1
	3/12/2010 13:30	3/12/2010 14:30	**60**	0.25	**208,704**	0.25	**0.15**	3	Atlas	52,176	1
	3/21/2010 23:15	3/22/2010 1:30	**135**	0.47	**21,998**	0.47	**0.22**	12	Atlas	10,339	1
	3/25/2010 21:30	3/25/2010 22:15	**45**	0.56	**40,264**	1.01	**0.31**	1	Atlas	22,548	1
	4/7/2010 23:30	4/8/2010 6:00	**390**	1.15	**160,174**	1.26	**0.56**	6	Atlas	184,200	1
	4/24/2010 14:45	4/24/2010 20:30	**345**	1.57	**1,044,522**	1.82	**0.72**	6	Atlas	1,639,899	1
	4/27/2010 7:45	4/27/2010 10:45	**180**	0.34	**196,789**	2.34	**0.16**	6	Atlas	66,908	1
	5/1/2010 4:45	5/1/2010 9:15	**270**	4.23	**12,427**	3.01				52,567	1
	5/2/2010 1:15	5/3/2010 0:45	**1410**	4.23	**1,572,908**	4.77	**3.86**	48	Atlas	6,653,401	1
	5/7/2010 23:15	5/7/2010 23:15	**0**	0.2	**7,826**	4.44	**0.16**	1	Atlas	1,565	1
	5/12/2010 9:45	5/12/2010 10:45	**60**	0.75	**4,220,172**	1.04	**0.57**	1	Atlas	3,165,129	1
	5/13/2010 12:45	5/13/2010 13:00	**15**	0.16	**99,253**	1.21	**0.14**	1	Atlas	15,881	1
	5/16/2010 9:30	5/16/2010 10:00	**30**	0.55	**119,277**	1.24	**0.25**	12	Atlas	65,602	1
	5/17/2010 19:45	5/17/2010 20:15	**30**	0.44	**2,823,080**	1.99	**0.32**	1	Atlas	1,242,155	1
	5/21/2010 19:45	5/21/2010 21:00	**75**	1.12	**784,524**	2.12	**0.85**	1	Atlas	878,667	1
	5/30/2010 16:15	5/30/2010 20:30	**255**	0.39	**195,653**	0.46	**0.23**	1	Atlas	76,305	1
	6/9/2010 4:30	6/9/2010 12:45	**495**	2.08	**131,719**	2.19	**1.57**	3	Atlas	273,975	1
	6/12/2010 1:30	6/12/2010 1:45	**15**	0.29	**34,545**	2.37	**0.17**	1	Atlas	10,018	1
	6/13/2010 23:00	6/13/2010 23:30	**30**	0.47	**1,195,804**	2.72	**0.29**	1	Atlas	562,028	1
	6/15/2010 21:00	6/15/2010 21:15	**15**	0.5	**14,698**	3.4	**0.36**	1	Atlas	7,349	1
	6/19/2010 5:15	6/19/2010 7:15	**120**	0.85	**1,765,160**	1.82	**0.49**	3	Atlas	1,500,386	1
	6/28/2010 1:45	6/28/2010 2:45	**60**	0.4	**163,598**	0.38	**0.28**	1	Atlas	65,439	1
	7/13/2010 4:00	7/13/2010 7:30	**210**	1.79	**428,166**	1.77	**0.82**	12	Atlas	766,418	1
	7/13/2010 16:00	7/13/2010 16:00	**0**	1.79	**749**	2.38	**0.82**	12	Atlas	1,342	1
	7/20/2010 4:45	7/20/2010 6:15	**90**	0.72	**339,958**	2.3	**0.50**	1	Atlas	244,770	1
	7/21/2010 6:00	7/21/2010 6:30	**30**	0.41	**191,944**	1.42	**0.32**	1	Atlas	78,697	1
	7/22/2010 14:45	7/22/2010 15:00	**15**	0.07	**379,414**	1.51	**0.06**	1	Atlas	26,559	1
	7/27/2010 16:15	7/27/2010 16:45	**30**	0.78	**131,349**	1.23	**0.50**	3	Atlas	102,452	1
	7/28/2010 16:30	7/28/2010 16:45	**15**	0.31	**43,424**	1.14	**0.23**	1	Atlas	13,461	1
	7/31/2010 4:30	7/31/2010 6:30	**120**	0.35	**247,004**	1.44	**0.19**	3	Atlas	86,451	1
	7/31/2010 21:00	7/31/2010 21:15	**15**	0.12	**78,429**	1.56	**0.10**	1	Atlas	9,412	1
	8/5/2010 9:15	8/5/2010 9:45	**30**	0.24	**184,182**	0.68	**0.18**	1	Atlas	44,204	1
	8/14/2010 16:30	8/14/2010 17:30	**60**	0.58	**590,277**	0.82	**0.47**	1	Atlas	342,361	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**8/21/2010 7:15**	8/21/2010 9:00	**105**	0.49	**108,660**	1.19	**0.30**	3	Atlas	53,243	1
	9/7/2010 9:45	9/7/2010 9:45	**0**	0.05	**159,213**	0.03	**0.03**	1	Atlas	7,961	1
	10/13/2010 18:30	10/13/2010 21:00	**150**	0.45	**236,232**	0.56	**0.29**	3	Atlas	106,305	1
	10/26/2010 11:15	10/26/2010 11:45	**30**	0.51	**238,128**	0.24	**0.28**	6	Atlas	121,445	1
	11/16/2010 12:30	11/16/2010 18:45	**375**	0.77	**157,452**	0.81	**0.34**	12	Atlas	121,238	1
	11/23/2010 4:00	11/23/2010 4:30	**30**	0.31	**75,856**	1.11	**0.17**	6	Atlas	23,515	1
	11/24/2010 12:45	11/24/2010 15:30	**165**	0.76	**576,405**	1.07	**0.37**	3	Atlas	438,068	1
	11/25/2010 9:45	11/25/2010 23:30	**825**	2.32	**461,907**	3.29	**0.89**	24	Atlas	1,071,623	1
	11/29/2010 20:45	11/30/2010 12:15	**930**	1.71	**182,915**	5.01	**0.66**	24	Atlas	312,785	1
	12/30/2010 3:30	12/30/2010 8:15	**285**	0.53	**225,796**	0.59	**0.24**	12	Atlas	119,672	1
	1/1/2011 4:30	1/1/2011 7:30	**180**	0.65	**417,326**	1.14	**0.28**	12	Atlas	271,262	1
	1/6/2011 11:45	1/7/2011 8:15	**1230**	Discharge						499,395	1
	2/1/2011 16:45	2/1/2011 20:15	**210**	1	**433,620**	0.91	**0.42**	6	Atlas	433,620	1
	2/21/2011 18:30	2/21/2011 18:30	**0**	0.18	**13,795**	0.2	**0.11**	3	Atlas	2,483	1
	2/24/2011 17:00	2/25/2011 6:30	**810**	2.23	**1,005,833**	2.45	**0.86**	24	Atlas	2,243,007	1
	2/28/2011 5:15	2/28/2011 12:30	**435**	1.13	**517,587**	3.68	**0.54**	6	Atlas	584,874	1
	3/5/2011 4:30	3/5/2011 10:15	**345**	0.88	**172,850**	2.06	**0.29**	24	Atlas	152,108	1
	3/5/2011 19:00	3/5/2011 19:00	**0**	0.88	**584**	2.14	**0.29**	24	Atlas	514	1
	3/8/2011 22:45	3/9/2011 23:15	**1470**	2.82	**1,112,548**	3.73	**1.43**	24	Cloudburst	3,137,385	1
	3/14/2011 4:15	3/14/2011 4:45	**30**	0.81	**19,543**	3.12	**0.26**	48	Atlas	15,829	1
	3/15/2011 7:30	3/15/2011 13:00	**330**	0.81	**59,594**	3.67	**0.26**	48	Atlas	48,271	1
	3/18/2011 21:15	3/18/2011 22:00	**45**	0.22	**584,726**	1.02	**0.11**	6	Atlas	128,640	1
	4/1/2011 20:45	4/1/2011 21:15	**30**	0.14	**254,931**	0.31	**0.10**	1	Atlas	35,690	1
	4/4/2011 13:30	4/4/2011 16:45	**195**	0.93	**151,154**	1.1	**0.48**	6	Atlas	140,573	1
	4/9/2011 10:45	4/9/2011 11:45	**60**	0.63	**380,339**	1.62	**0.45**	1	Atlas	239,614	1
	4/11/2011 10:30	4/12/2011 17:15	**1845**	3.26	**2,575,113**	4.82	**2.68**	24	Cloudburst	8,394,870	1
	4/15/2011 13:15	4/15/2011 13:45	**30**	0.45	**92,755**	4.1	**0.17**	24	Atlas	41,740	1
	4/20/2011 0:30	4/20/2011 4:45	**255**	0.68	**273,033**	1.2	**0.37**	6	Atlas	185,662	1
	4/22/2011 16:45	4/25/2011 8:30	**3825**	4.61	**1,379,166**	5.56	**2.66**	48	Cloudburst	6,357,957	1
	4/25/2011 17:30	4/25/2011 17:45	**15**	4.61	**4,158**	5.35	**2.66**	48	Cloudburst	19,166	1
	4/26/2011 10:15	4/26/2011 10:30	**15**	0.07	**69,957**	5.41	**0.04**	1	Atlas	4,897	1
	4/27/2011 1:00	4/28/2011 20:30	**2610**	3.09	**3,319,104**	8.51	**1.98**	24	Cloudburst	10,256,032	1
	5/1/2011 4:30	5/1/2011 6:45	**135**	0.71	**570,547**	5.28				405,089	1
	5/1/2011 19:30	5/2/2011 7:45	**735**	2.81	**189,374**	5.33	**0.91**	48	Atlas	532,141	1
	5/2/2011 17:00	5/3/2011 21:15	**1695**	2.81	**1,138,215**	6.9	**0.91**	48	Atlas	3,198,384	1
	5/8/2011 1:15	5/8/2011 2:00	**45**	0.21	**2,990,484**	3.66	**0.12**	3	Atlas	628,002	1
	5/14/2011 15:00	5/14/2011 15:00	**0**	0.12	**135,534**	0.34	**0.07**	1	Atlas	16,264	1
	5/21/2011 18:30	5/21/2011 19:30	**60**	0.47	**619,356**	0.83	**0.35**	1	Atlas	291,098	1
	5/23/2011 4:15	5/23/2011 5:00	**45**	0.29	**284,382**	0.87	**0.22**	1	Atlas	82,471	1
	5/23/2011 17:45	5/23/2011 21:15	**210**	0.92	**894,075**	1.81	**0.59**	3	Atlas	822,549	1
	5/25/2011 23:00	5/26/2011 2:00	**180**	1.28	**944,268**	2.65	**0.57**	3	Atlas	1,208,664	1
	5/26/2011 11:30	5/26/2011 12:30	**60**	1.28	**1,088,484**	2.98	**0.57**	3	Atlas	1,393,260	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**6/11/2011 4:45**	6/11/2011 5:15	**30**	0.33	**115,320**	0.37	**0.28**	1	Atlas	38,056	1
	6/15/2011 9:45	6/15/2011 10:30	**45**	1.04	**1,229,565**	1.43	**0.67**	1	Atlas	1,278,748	1
	6/18/2011 6:30	6/18/2011 8:45	**135**	0.82	**255,281**	1.91	**0.51**	3	Atlas	209,330	1
	6/19/2011 7:45	6/19/2011 9:15	**90**	0.48	**382,015**	2.38	**0.29**	3	Atlas	183,367	1
	6/20/2011 1:45	6/20/2011 2:15	**30**	0.61	**77,696**	2.98	**0.51**	1	Atlas	47,395	1
	6/21/2011 14:15	6/21/2011 16:45	**150**	0.43	**620,309**	3.38	**0.26**	3	Atlas	266,733	1
	6/22/2011 19:30	6/23/2011 7:00	**690**	3.96	**1,218,872**	6.31	**41.03**	3	Cloudburst	4,826,735	1
	6/26/2011 4:45	6/26/2011 5:00	**15**	0.27	**111,778**	5.68	**0.14**	6	Atlas	30,180	1
	7/3/2011 20:45	7/3/2011 20:45	**0**	0.07	**26,611**	0.08	**0.05**	3	Atlas	1,863	1
	7/8/2011 3:15	7/8/2011 4:00	**45**	0.47	**169,544**	0.7	**0.25**	3	Atlas	79,686	1
	7/19/2011 22:45	7/19/2011 23:45	**60**	1.7	**1,213,121**	1.9	**1.13**	1	Atlas	2,062,306	1
	7/20/2011 16:00	7/20/2011 16:00	**0**	0.2	**2,149**	2.09	**0.17**	1	Atlas	430	1
	7/30/2011 21:15	7/30/2011 21:30	**15**	0.82	**46,837**	1.64	**0.61**	1	Atlas	38,406	1
	8/7/2011 3:15	8/7/2011 6:30	**195**	1.8	**537,834**	1.82	**1.37**	3	Atlas	968,101	1
	9/10/2011 20:00	9/10/2011 20:15	**15**	0.05	**443,260**	0.44	**0.03**	1	Atlas	22,163	1
	9/11/2011 21:00	9/11/2011 22:00	**60**	0.28	**12,613**	0.65	**0.17**	3	Atlas	3,532	1
	9/19/2011 7:00	9/19/2011 8:00	**60**	0.72	**87,517**	0.64	**0.29**	12	Atlas	63,012	1
	9/23/2011 2:15	9/23/2011 8:00	**345**	0.83	**300,292**	1.57	**0.38**	12	Atlas	249,243	1
	9/25/2011 20:00	9/26/2011 7:00	**660**	3.17	**578,531**	4.84	**4.71**	12	Cloudburst	1,833,944	1
	10/13/2011 7:30	10/13/2011 8:15	**45**	0.45	**49,176**	0.33	**0.24**	3	Atlas	22,129	1
	10/27/2011	10/27/2011 5:00	**300**	0.94	**30,100**	1.32	**0.39**	12	Atlas	28,294	1
	11/3/2011 9:30	11/3/2011 11:45	**135**	0.65	**55,529**	0.52	**0.29**	3	Atlas	36,094	1
	11/14/2011 21:45	11/15/2011 14:15	**990**	2.13	**46,698**	1.5	**0.69**	48	Atlas	99,466	1
	11/16/2011 5:15	11/16/2011 11:15	**360**	2.13	**35,657**	2.12	**0.69**	48	Atlas	75,948	1
	11/20/2011 12:45	11/20/2011 18:15	**330**	2.15	**14,952**	2.79	**0.65**	48	Atlas	32,146	1
	11/21/2011 10:30	11/21/2011 10:45	**15**	2.15	**2,590**	3.13	**0.65**	48	Atlas	5,569	1
	11/22/2011 0:15	11/22/2011 11:30	**675**	2.15	**129,039**	3.87	**0.65**	48	Atlas	277,435	1
	11/27/2011 6:15	11/29/2011 3:45	**2730**	3.31	**513,490**	5.4	**1.17**	48	Cloudburst	1,699,653	1
	11/29/2011 19:00	11/29/2011 19:45	**45**	0.08	**114,013**	3.38	**0.05**	1	Atlas	9,121	1
	12/4/2011 16:15	12/6/2011 4:15	**2160**	3.12	**714,386**	5.77	**1.07**	48	Cloudburst	2,228,884	1
	12/15/2011 4:00	12/15/2011 8:00	**240**	0.42	**168,464**	0.39	**0.22**	6	Atlas	70,755	1
	12/21/2011 5:15	12/21/2011 7:15	**120**	0.59	**90,382**	1.03	**0.27**	12	Atlas	53,325	1
	12/22/2011 11:45	12/22/2011 17:30	**345**	0.66	**354,140**	1.22	**0.29**	12	Atlas	233,732	1
	12/27/2011 2:45	12/27/2011 11:45	**540**	0.83	**323,199**	2.04	**0.34**	12	Atlas	268,255	1
	1/11/2012 5:00	1/11/2012 10:15	**315**	0.86	**248,607**	0.67	**0.33**	24	Atlas	213,802	1
	1/11/2012 20:30	1/11/2012 20:30	**0**	0.86	**2,210**	0.84	**0.33**	24	Atlas	1,901	1
	1/17/2012 4:00	1/17/2012 12:30	**510**	0.31	**320,279**	1.27	**0.14**	12	Atlas	99,287	1
	1/22/2012 22:45	1/23/2012 5:00	**375**	0.63	**327,353**	0.95	**0.33**	3	Atlas	206,232	1
	1/26/2012 5:30	1/26/2012 7:00	**90**	1.89	**75,611**	1.38	**0.61**	48	Atlas	142,905	1
	1/26/2012 17:45	1/27/2012 1:45	**480**	1.89	**267,751**	2.52	**0.61**	48	Atlas	506,049	1
	2/4/2012 9:00	2/4/2012 10:30	**90**	0.35	**119,356**	0.37	**0.20**	3	Atlas	41,775	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.19	**95,643**	0.4	**0.14**	1	Atlas	18,172	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**2/29/2012 6:15**	2/29/2012 9:15	**180**	0.62	**58,515**	0.78	**0.28**	12	Atlas	36,280	1
	3/8/2012 10:15	3/8/2012 17:15	**420**	0.82	**200,120**	1.15	**0.38**	6	Atlas	164,098	1
	3/15/2012 19:00	3/16/2012 3:30	**510**	0.98	**293,857**	1.19	**0.44**	12	Atlas	287,980	1
	3/17/2012 18:30	3/17/2012 22:30	**240**	1.24	**195,312**	2.37	**0.74**	1	Atlas	242,187	1
	3/23/2012 5:00	3/23/2012 23:00	**1080**	1.59	**459,549**	2.84	**0.61**	24	Atlas	730,683	1
	4/1/2012 8:30	4/1/2012 11:45	**195**	1.26	**935,573**	1.45	**0.68**	6	Atlas	1,178,822	1
	4/16/2012 7:00	4/16/2012 7:15	**15**	0.17	**143,816**	0.32	**0.11**	3	Atlas	24,449	1
	4/28/2012 19:15	4/29/2012 0:30	**315**	0.75	**309,432**	0.88	**0.52**	1	Atlas	232,074	1
	4/30/2012 18:15	4/30/2012 18:30	**15**	0.44	**94,288**	1.15	**0.29**	3	Atlas	41,487	1
	5/4/2012 23:45	5/5/2012 5:00	**315**	1.49	**821,038**	2.69	**0.80**	3	Atlas	1,223,347	1
	5/13/2012 1:45	5/13/2012 13:30	**705**	2.23	**341,056**	2.24	**0.91**	12	Atlas	760,555	1
	5/16/2012 18:00	5/16/2012 18:30	**30**	0.24	**353,889**	2.47	**0.21**	1	Atlas	84,933	1
	5/29/2012 6:45	5/29/2012 17:00	**615**	2.5	**1,609,942**	2.5	**7.08**	3	Atlas	4,024,855	1
	5/31/2012 18:30	6/1/2012 5:15	**645**	1.19	**96,252**	3.63	**0.52**	12	Atlas	114,540	1
	6/17/2012 12:15	6/17/2012 12:15	**0**	0.41	**14,909**	0.34	**0.25**	3	Atlas	6,113	1
	6/30/2012 1:15	6/30/2012 3:45	**150**	Discharge						162,703	1
	7/1/2012 20:00	7/1/2012 20:30	**30**	0.4	**448,839**	0.33	**0.29**	1	Atlas	179,536	1
	7/8/2012 13:30	7/8/2012 13:45	**15**	0.08	**95,007**	0.48	**0.05**	1	Atlas	7,601	1
	7/14/2012 12:15	7/14/2012 14:45	**150**	0.92	**496,410**	1	**0.59**	3	Atlas	456,697	1
	7/18/2012 16:30	7/18/2012 17:45	**75**	Discharge						91,197	1
	10/26/2012 12:15	10/26/2012 15:45	**210**	0.85	**32,777**	0.78	**0.40**	6	Atlas	27,861	1
	11/3/2012 16:30	11/3/2012 16:30	**0**	0.16	**24,176**	0.18	**0.07**	12	Atlas	3,868	1
	11/12/2012 7:00	11/12/2012 7:30	**30**	0.5	**18,167**	0.48	**0.23**	12	Atlas	9,083	1
	12/2/2012 11:30	12/2/2012 11:30	**0**	0.2	**18,737**	0.25	**0.12**	3	Atlas	3,747	1
	12/4/2012 16:15	12/4/2012 18:45	**150**	0.5	**177,385**	0.7	**0.33**	3	Atlas	88,692	1
	12/7/2012 2:15	12/7/2012 18:15	**960**	1.27	**176,077**	1.97	**0.54**	12	Atlas	223,618	1
	12/8/2012 5:45	12/8/2012 10:00	**255**	0.56	**109,806**	2.53	**0.30**	6	Atlas	61,491	1
	12/9/2012 9:00	12/9/2012 9:15	**15**	1.21	**8,975**	2.62	**0.56**	3	Atlas	10,860	1
	12/9/2012 21:00	12/10/2012 1:00	**240**	1.21	**202,444**	3.42	**0.56**	3	Atlas	244,958	1
	12/20/2012 6:45	12/20/2012 12:30	**345**	0.59	**246,132**	0.92	**0.32**	6	Atlas	145,218	1
	12/26/2012 4:00	12/26/2012 10:00	**360**	0.94	**85,641**	1.46	**0.37**	12	Atlas	80,503	1
	1/11/2013 5:45	1/11/2013 8:00	**135**	0.67	**222,604**	0.83	**0.36**	6	Atlas	149,145	1
	1/13/2013 3:15	1/13/2013 21:30	**1095**	2.31	**291,882**	3.13	**0.88**	24	Atlas	674,249	1
	1/28/2013 11:00	1/28/2013 17:30	**390**	0.06	**276,809**	0.29	**0.04**	1	Atlas	16,609	1
	1/30/2013 4:45	1/30/2013 9:15	**270**	0.85	**249,094**	1.07	**0.43**	6	Atlas	211,730	1
	1/30/2013 17:45	1/30/2013 18:00	**15**	0.85	**9,964**	1.14	**0.43**	6	Atlas	8,470	1
	2/4/2013 18:15	2/4/2013 18:30	**15**	0.11	**27,737**	1.06	**0.08**	1	Atlas	3,051	1
	2/19/2013 4:00	2/19/2013 4:30	**30**	0.3	**33,587**	0.36	**0.14**	12	Atlas	10,076	1
	2/22/2013 0:15	2/22/2013 1:15	**60**	0.39	**181,398**	0.68	**0.18**	12	Atlas	70,745	1
	2/26/2013 13:30	2/26/2013 16:30	**180**	0.68	**135,814**	0.99	**0.26**	24	Atlas	92,354	1
	3/5/2013 16:15	3/5/2013 18:00	**105**	0.4	**195,798**	0.51	**0.15**	24	Atlas	78,319	1
	3/11/2013 3:30	3/11/2013 12:30	**540**	1.09	**284,502**	1.51	**0.43**	12	Atlas	310,107	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**3/17/2013 10:30**	3/18/2013 8:45	**1335**	1.68	**441,768**	2.7	**0.55**	48	Atlas	742,170	1
	3/24/2013 8:00	3/24/2013 17:00	**540**	0.48	**201,073**	1.71	**0.18**	24	Atlas	96,515	1
	4/11/2013 5:30	4/12/2013 0:30	**1140**	1.2	**211,983**	1.19	**0.46**	24	Atlas	254,379	1
	4/16/2013 20:00	4/16/2013 20:45	**45**	0.66	**1,167,876**	1.86	**0.55**	1	Atlas	770,798	1
	4/19/2013 1:30	4/19/2013 4:45	**195**	0.97	**624,326**	1.65	**0.53**	6	Atlas	605,596	1
	4/24/2013 6:30	4/24/2013 10:15	**225**	0.57	**802,539**	1.59	**0.31**	6	Atlas	457,447	1
	4/28/2013 9:00	4/28/2013 9:00	**0**	0.08	**117,248**	0.68	**0.03**	6	Atlas	9,380	1
	5/3/2013 18:45	5/3/2013 19:00	**15**	0.1	**169,905**	0.18	**0.06**	1	Atlas	16,990	1
	5/4/2013 14:00	5/5/2013 8:45	**1125**	1.37	**239,672**	1.25	**0.41**	24	Atlas	328,351	1
	5/10/2013 12:15	5/11/2013 0:15	**720**	0.98	**315,116**	2.45	**0.43**	6	Atlas	308,813	1
	5/16/2013 10:30	5/16/2013 10:45	**15**	0.36	**55,790**	1.36	**0.30**	1	Atlas	20,084	1
	5/22/2013 16:00	5/22/2013 16:15	**15**	0.27	**153,200**	0.55	**0.18**	3	Atlas	41,364	1
	5/31/2013 18:30	5/31/2013 18:30	**0**	0.19	**110,579**	0.26	**0.09**	12	Atlas	21,010	1
	6/10/2013	6/10/2013 0:45	**45**	0.36	**102,890**	0.32	**0.17**	6	Atlas	37,040	1
	6/17/2013 16:15	6/18/2013 3:45	**690**	1.55	**955,517**	1.91	**0.88**	1	Atlas	1,481,051	1
	6/21/2013 18:45	6/21/2013 18:45	**0**	0.46	**522,959**	2.18	**0.31**	3	Atlas	240,561	1
	10/30/2013 1:30	10/30/2013 6:45	**315**	0.91	**485,390**	0.92	**0.42**	6	Atlas	441,705	1
	10/31/2013 20:45	10/31/2013 22:30	**105**	0.47	**59,990**	1.38	**0.18**	24	Atlas	28,195	1
	11/15/2013 18:45	11/15/2013 18:45	**0**	0.11	**16,470**	0.17	**0.08**	1	Atlas	1,812	1
	11/17/2013 5:15	11/17/2013 21:45	**990**	2.71	**252,688**	2.88	**2.52**	6	Cloudburst	684,784	1
	12/5/2013 5:45	12/5/2013 10:30	**285**	0.78	**127,569**	0.27	**0.25**	48	Atlas	99,504	1
	12/6/2013 4:00	12/6/2013 11:45	**465**	0.78	**16,929**	0.45	**0.25**	48	Atlas	13,204	1
	12/14/2013 9:00	12/14/2013 11:30	**150**	1.04	**102,616**	1.09	**0.45**	6	Atlas	106,721	1
	12/21/2013 5:30	12/21/2013 13:15	**465**	2.81	**163,335**	1.53	**1.33**	3	Atlas	458,971	1
	12/21/2013 21:30	12/22/2013 7:00	**570**	2.81	**919,185**	2.87	**1.33**	3	Atlas	2,582,909	1
	12/29/2013 5:30	12/29/2013 6:45	**75**	0.63	**23,098**	0.54	**0.28**	12	Atlas	14,551	1
	1/5/2014 15:00	1/5/2014 20:15	**315**	0.47	**279,679**	0.7	**0.23**	6	Atlas	131,449	1
	1/11/2014 0:30	1/11/2014 5:45	**315**	1.03	**390,610**	1.51	**0.55**	6	Atlas	402,328	1
	1/13/2014 15:00	1/13/2014 15:00	**0**	0.23	**328**	1.19	**0.11**	3	Atlas	75	1
	2/2/2014 4:00	2/2/2014 7:45	**225**	0.41	**456,813**	0.16	**0.15**	24	Atlas	187,293	1
	2/4/2014 19:00	2/5/2014 2:15	**435**	0.46	**1,535,095**	0.87	**0.22**	6	Atlas	706,144	1
	2/14/2014 16:45	2/14/2014 18:45	**120**	0.39	**244,469**	0.4	**0.20**	6	Atlas	95,343	1
	2/17/2014 16:15	2/17/2014 18:30	**135**	0.44	**197,872**	0.88	**0.27**	3	Atlas	87,064	1
	2/20/2014 20:45	2/21/2014	**195**	0.22	**167,252**	1.1	**0.12**	6	Atlas	36,795	1
	3/2/2014 10:00	3/2/2014 11:30	**90**	0.59	**226,398**	0.31	**0.22**	24	Atlas	133,575	1
	3/28/2014 4:30	3/28/2014 5:00	**30**	0.19	**72,475**	0.23	**0.09**	6	Atlas	13,770	1
	3/29/2014 5:30	3/29/2014 13:00	**450**	1.44	**268,274**	1.64	**0.66**	12	Atlas	386,314	1
	4/1/2014 20:45	4/1/2014 20:45	**0**	0.11	**6,575**	1.77	**0.07**	3	Atlas	723	1
	4/3/2014 12:15	4/4/2014 19:00	**1845**	2.19	**1,527,184**	3.95	**0.77**	24	Atlas	3,344,533	1
	4/7/2014 8:15	4/7/2014 13:30	**315**	0.98	**520,744**	3.24	**0.58**	1	Atlas	510,329	1
	4/14/2014 3:45	4/14/2014 10:30	**405**	0.39	**78,155**	1.36	**0.20**	6	Atlas	30,480	1
	4/14/2014 19:45	4/15/2014 2:15	**390**	0.48	**553,825**	0.87	**0.22**	12	Atlas	265,836	1
	4/27/2014 20:00	4/28/2014 8:45	**765**	2.25	**883,252**	1.84	**0.88**	3	Atlas	1,987,317	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**4/28/2014 17:15**	4/28/2014 20:30	**195**	2.25	**44,037**	2.36	**0.88**	3	Atlas	99,082	1
	4/29/2014 19:15	4/29/2014 22:15	**180**	0.25	**4,913**	2.56	**0.11**	12	Atlas	1,228	1
	5/9/2014 19:15	5/10/2014 16:00	**1245**	1.8	**367,715**	1.79	**0.66**	24	Atlas	661,886	1
	5/14/2014 7:00	5/15/2014	**1020**	1.26	**395,894**	3.09	**0.45**	24	Atlas	498,827	1
	5/21/2014 21:00	5/22/2014 4:00	**420**	0.48	**298,390**	0.66	**0.22**	12	Atlas	143,227	1
	5/28/2014 20:45	5/28/2014 20:45	**0**	0.19	**2,233**	0.63	**0.13**	1	Atlas	424	1
	5/29/2014 21:00	5/29/2014 22:15	**75**	0.83	**1,759,841**	1.06	**0.70**	1	Atlas	1,460,668	1
	6/11/2014 9:00	6/11/2014 15:00	**360**	0.21	**116,419**	0.47	**0.14**	1	Atlas	24,448	1
	6/20/2014 16:00	6/20/2014 18:00	**120**	0.14	**651,708**	0.15	**0.09**	3	Atlas	91,239	1
	6/24/2014 13:45	6/24/2014 14:00	**15**	0.16	**292,519**	0.36	**0.10**	1	Atlas	46,803	1
	7/2/2014 16:15	7/2/2014 17:00	**45**	0.22	**158,046**	0.49	**0.19**	1	Atlas	34,770	1
	7/7/2014 19:30	7/7/2014 19:45	**15**	0.75	**64,610**	1.14	**0.65**	1	Atlas	48,458	1
	7/13/2014 22:00	7/13/2014 23:30	**90**	0.63	**117,894**	1.52	**0.33**	3	Atlas	74,273	1
	7/14/2014 20:15	7/14/2014 20:30	**15**	0.09	**368,655**	1.01	**0.07**	1	Atlas	33,179	1
	7/26/2014 21:45	7/27/2014 8:15	**630**	1.24	**1,315,685**	1.19	**0.54**	12	Atlas	1,631,450	1
	8/8/2014 5:45	8/8/2014 8:00	**135**	1.05	**235,835**	0.84	**0.53**	6	Atlas	247,627	1
	8/9/2014 4:00	8/9/2014 4:15	**15**	0.06	**473,602**	1.11	**0.03**	1	Atlas	28,416	1
	8/10/2014 4:00	8/10/2014 4:30	**30**	0.17	**791,498**	1.31	**0.15**	1	Atlas	134,555	1
	8/11/2014 15:30	8/11/2014 16:00	**30**	0.35	**755,724**	1.64	**0.29**	1	Atlas	264,503	1
	8/17/2014 0:30	8/17/2014 0:45	**15**	0.7	**1,968**	0.85	**0.26**	24	Atlas	1,378	1
	8/17/2014 9:30	8/17/2014 10:45	**75**	0.7	**93,879**	0.95	**0.26**	24	Atlas	65,715	1
	8/17/2014 20:00	8/17/2014 20:15	**15**	0.7	**29,854**	1.04	**0.26**	24	Atlas	20,898	1
	8/22/2014 19:00	8/23/2014 2:30	**450**	0.53	**1,467,344**	1.25	**0.36**	1	Atlas	777,692	1
	8/23/2014 15:30	8/23/2014 22:00	**390**	0.75	**622,829**	1.95	**0.39**	3	Atlas	467,122	1
	8/27/2014 14:45	8/27/2014 17:45	**180**	0.42	**3,181,124**	1.74	**0.28**	3	Atlas	1,336,072	1
	8/30/2014 15:15	8/30/2014 16:15	**60**	0.55	**1,331,104**	1.53	**0.30**	1	Atlas	732,107	1
	9/2/2014 8:15	9/2/2014 9:00	**45**	0.33	**328,603**	1.29	**0.21**	3	Atlas	108,439	1
	9/11/2014 0:30	9/11/2014 7:15	**405**	2.01	**1,532,223**	1.99	**1.67**	3	Atlas	3,079,769	1
	10/3/2014 4:15	10/3/2014 4:30	**15**	0.18	**24,968**	0.18	**0.07**	24	Atlas	4,494	1
	10/3/2014 19:30	10/3/2014 19:30	**0**	0.18	**712**	0.26	**0.07**	24	Atlas	128	1
	10/6/2014 8:00	10/6/2014 10:00	**120**	0.19	**157,535**	0.33	**0.09**	3	Atlas	29,932	1
	10/7/2014 11:45	10/7/2014 12:15	**30**	0.17	**760,500**	0.55	**0.14**	1	Atlas	129,285	1
	10/10/2014 17:30	10/10/2014 21:30	**240**	1.15	**15,394**	1.61	**0.57**	3	Atlas	17,703	1
	10/13/2014 4:45	10/13/2014 6:45	**120**	0.5	**694,540**	2.03	**0.32**	3	Atlas	347,270	1
	10/13/2014 23:30	10/14/2014 10:30	**660**	1.26	**541,451**	3.09	**0.56**	12	Atlas	682,228	1
	11/23/2014 14:45	11/23/2014 20:15	**330**	0.79	**506,996**	1.07	**0.36**	6	Atlas	400,527	1
	12/1/2014 3:30	12/1/2014 5:45	**135**	0.71	**192,397**	0.37				136,602	1
	12/1/2014 14:45	12/1/2014 15:30	**45**	0.71	**36,161**	0.64				25,674	1
	12/5/2014 4:45	12/5/2014 7:00	**135**	1.64	**20,557**	1.18	**0.53**	48	Atlas	33,713	1
	12/5/2014 20:45	12/6/2014 7:45	**660**	1.64	**586,066**	2.34	**0.53**	48	Atlas	961,148	1
	12/16/2014 5:30	12/16/2014 5:45	**15**	0.12	**48,592**	0.11	**0.07**	3	Atlas	5,831	1
	12/22/2014 23:00	12/23/2014 0:15	**75**	0.28	**92,559**	0.39	**0.17**	3	Atlas	25,917	1
	12/23/2014 20:15	12/23/2014 20:30	**15**	0.06	**180,922**	0.36	**0.04**	1	Atlas	10,855	1
	12/24/2014 13:45	12/24/2014 14:00	**15**	0.17	**59,149**	0.47	**0.09**	3	Atlas	10,055	1
	12/28/2014 1:15	12/28/2014 2:00	**45**	0.31	**481,145**	0.82	**0.14**	1	Atlas	149,155	1
	1/3/2015 11:00	1/3/2015 11:15	**15**	0.45	**90,696**	0.44	**0.17**	24	Atlas	40,813	1
	1/4/2015 3:45	1/4/2015 4:00	**15**	0.45	**3,148**	0.46	**0.17**	24	Atlas	1,417	1
	2/1/2015 13:00	2/1/2015 18:15	**315**	0.37	**122,961**	0.49	**0.17**	12	Atlas	45,495	1
	2/21/2015 14:15	2/21/2015 15:45	**90**	1.07	**10,655**	1.19	**0.41**	24	Atlas	11,400	1
	3/3/2015 19:00	3/4/2015 18:00	**1380**	1.67	**544,313**	1.35	**0.54**	48	Atlas	909,003	1
	3/7/2015 15:30	3/7/2015 17:15	**105**	Discharge						11,433	1
	3/10/2015 7:00	3/10/2015 21:15	**855**	1.09	**1,037,840**	2.76	**0.50**	12	Atlas	1,131,246	1
	3/13/2015 8:45	3/14/2015 13:00	**1695**	1.55	**928,951**	2.64	**0.58**	24	Atlas	1,439,874	1
	3/26/2015 4:45	3/26/2015 6:30	**105**	0.42	**94,499**	0.56	**0.17**	3	Atlas	39,690	1
	4/2/2015 10:00	4/4/2015 4:15	**2535**	4.73	**3,750,368**	4.87	**7.44**	6	Cloudburst	17,739,239	1
	4/7/2015 9:15	4/7/2015 18:15	**540**	0.73	**167,231**	5.47	**0.33**	1	Atlas	122,078	1
	4/8/2015 18:15	4/8/2015 19:00	**45**	0.15	**1,299,441**	5.61	**0.08**	6	Atlas	194,916	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**4/9/2015 11:45**	4/9/2015 12:30	**45**	0.28	**210,757**	5.52	**0.24**	1	Atlas	59,012	1
	4/10/2015 2:30	4/10/2015 3:30	**60**	0.13	**771,177**	3.04	**0.09**	3	Atlas	100,253	1
	4/13/2015 20:45	4/13/2015 21:30	**45**	0.49	**165,984**	1.39	**0.20**	6	Atlas	81,332	1
	4/14/2015 10:15	4/14/2015 12:00	**105**	0.49	**28,587**	1.27	**0.20**	6	Atlas	14,008	1
	4/19/2015 8:00	4/19/2015 18:45	**645**	0.94	**232,393**	1.39	**0.36**	24	Atlas	218,450	1
	4/20/2015 3:30	4/20/2015 3:45	**15**	0.94	**67,627**	1.51	**0.36**	24	Atlas	63,570	1
	4/25/2015 9:30	4/25/2015 9:30	**0**	0.19	**24,545**	1.05	**0.07**	24	Atlas	4,663	1
	4/25/2015 19:00	4/25/2015 19:15	**15**	0.19	**180,153**	1.11	**0.07**	24	Atlas	34,229	1
	5/11/2015 17:45	5/11/2015 18:00	**15**	0.1	**1,684,536**	0.26	**0.09**	1	Atlas	168,454	1
	5/16/2015 13:15	5/16/2015 13:30	**15**	0.36	**4,482**	0.41	**0.15**	3	Atlas	1,613	1
	5/17/2015 14:30	5/17/2015 14:45	**15**	0.15	**827,188**	0.6	**0.10**	1	Atlas	124,078	1
	5/25/2015 7:00	5/25/2015 8:45	**105**	0.32	**55,929**	0.25	**0.15**	12	Atlas	17,897	1
	5/26/2015 13:45	5/26/2015 14:30	**45**	0.36	**330,484**	0.57	**0.22**	1	Atlas	118,974	1
	5/27/2015 13:45	5/27/2015 14:15	**30**	0.07	**1,614,237**	0.75	**0.06**	1	Atlas	112,997	1
	6/8/2015 8:30	6/8/2015 8:45	**15**	0.19	**431,001**	0.22	**0.10**	6	Atlas	81,890	1
	6/13/2015 14:45	6/13/2015 14:45	**0**	0.14	**26,857**	0.33	**0.12**	1	Atlas	3,760	1
	6/18/2015 16:15	6/18/2015 18:45	**150**	2.15	**817,443**	1.76	**0.70**	48	Atlas	1,757,503	1
	6/20/2015 1:45	6/20/2015 11:15	**570**	2.15	**193,668**	3.09	**0.70**	48	Atlas	416,387	1
	6/22/2015 6:30	6/22/2015 6:45	**15**	0.18	**98,791**	3.1	**0.08**	12	Atlas	17,782	1
	6/26/2015	6/26/2015 1:45	**105**	0.46	**1,308,326**	1.73	**0.25**	6	Atlas	601,830	1
	6/26/2015 17:00	6/27/2015 1:30	**510**	0.77	**1,437,309**	2.51	**0.41**	1	Atlas	1,106,728	1
	6/29/2015 13:30	6/29/2015 14:15	**45**	0.2	**678,084**	1.41	**0.12**	1	Atlas	135,617	1
	7/2/2015 0:30	7/2/2015 2:45	**135**	1.68	**183,806**	2.13	**0.63**	24	Atlas	308,795	1
	7/2/2015 20:30	7/2/2015 21:45	**75**	1.68	**415,642**	3.12	**0.63**	24	Atlas	698,278	1
	7/3/2015 15:00	7/3/2015 19:30	**270**	0.63	**337,159**	3.27	**0.44**	1	Atlas	212,410	1
	7/7/2015 11:30	7/8/2015 0:30	**780**	0.73	**406,114**	2.96	**0.33**	6	Atlas	296,463	1
	7/8/2015 12:15	7/8/2015 13:00	**45**	0.73	**145,684**	3.04	**0.33**	6	Atlas	106,349	1
	7/9/2015 6:15	7/9/2015 8:00	**105**	0.3	**839,556**	2.57	**0.17**	3	Atlas	251,867	1
	7/10/2015 10:15	7/10/2015 16:45	**390**	0.5	**433,403**	2.18	**0.25**	6	Atlas	216,701	1
	7/12/2015 6:00	7/12/2015 6:15	**15**	2.04	**1,457,272**	2.78	**3.71**	3	Atlas	2,972,834	1
	7/29/2015 17:30	7/29/2015 18:15	**45**	0.07	**622,879**	0.09	**0.06**	1	Atlas	43,602	1
	8/4/2015 19:00	8/4/2015 21:15	**135**	0.23	**557,774**	0.3	**0.18**	1	Atlas	128,288	1
	8/5/2015 15:00	8/5/2015 18:15	**195**	1.14	**103,422**	0.52	**0.40**	24	Atlas	117,901	1
	8/6/2015 2:30	8/7/2015 19:00	**2430**	1.14	**402,468**	1.37	**0.40**	24	Atlas	458,813	1
	8/19/2015 7:45	8/19/2015 8:45	**60**	0.62	**113,889**	0.48	**0.30**	1	Atlas	70,611	1
	8/19/2015 17:00	8/19/2015 17:30	**30**	0.62	**28,281**	0.66	**0.30**	1	Atlas	17,534	1
	9/5/2015 17:30	9/5/2015 17:30	**0**	0.25	**12,509**	0.21	**0.18**	1	Atlas	3,127	1
	9/7/2015 18:00	9/7/2015 18:45	**45**	0.64	**95,704**	0.89	**0.53**	1	Atlas	61,250	1
	9/9/2015 11:30	9/9/2015 11:45	**15**	0.17	**18,929**	0.98	**0.08**	1	Atlas	3,218	1
	9/10/2015 5:15	9/10/2015 5:15	**0**	0.17	**12,556**	1.06	**0.08**	1	Atlas	2,135	1
	9/29/2015 9:45	9/29/2015 19:30	**585**	1.07	**43,844**	0.99	**0.35**	48	Atlas	46,913	1
	10/2/2015 17:30	10/2/2015 19:45	**135**	0.52	**57,298**	1.65	**0.26**	6	Atlas	29,795	1
	10/12/2015 18:15	10/12/2015 19:30	**75**	0.29	**58,889**	0.35	**0.19**	3	Atlas	17,078	1
	10/24/2015 20:00	10/24/2015 20:00	**0**	0.31	**12,144**	0.27	**0.13**	12	Atlas	3,765	1
	10/27/2015 11:30	10/28/2015 7:15	**1185**	2.65	**187,392**	2.92	**0.86**	48	Atlas	496,589	1
	10/28/2015 22:30	10/28/2015 23:00	**30**	0.18	**102,390**	3.13	**0.10**	1	Atlas	18,430	1
	10/31/2015 23:15	10/31/2015 23:30	**15**	0.18	**35,634**	3.01				6,414	1
	11/6/2015 3:00	11/6/2015 5:15	**135**	1.04	**124,662**	1.15	**0.64**	3	Atlas	129,649	1
	11/9/2015 18:30	11/9/2015 22:15	**225**	0.51	**65,551**	1.55	**0.22**	12	Atlas	33,431	1
	11/12/2015	11/12/2015 1:30	**90**	0.35	**189,978**	1.9	**0.22**	3	Atlas	66,492	1
	11/18/2015 8:45	11/18/2015 18:15	**570**	1.93	**140,847**	2.41	**0.98**	6	Atlas	271,835	1
	11/21/2015 15:00	11/21/2015 15:30	**30**	0.14	**58,184**	2.2	**0.12**	1	Atlas	8,146	1
	11/28/2015 12:30	11/28/2015 20:15	**465**	0.65	**76,761**	0.83	**0.26**	12	Atlas	49,894	1
	11/30/2015 22:00	12/1/2015 5:15	**435**	0.63	**182,968**	1.47	**0.28**	12	Atlas	115,270	1
	12/14/2015 6:45	12/14/2015 9:30	**165**	0.28	**55,869**	0.28	**0.15**	6	Atlas	15,643	1
	12/21/2015 11:30	12/21/2015 11:45	**15**	0.18	**70,432**	0.19	**0.09**	6	Atlas	12,678	1
	12/21/2015 23:15	12/22/2015 4:45	**330**	0.52	**341,275**	0.72	**0.28**	1	Atlas	177,463	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO127	**12/23/2015 19:30**	12/23/2015 22:15	**165**	0.85	**1,654,837**	1.59	**0.69**	1	Atlas	1,406,612	1
	12/25/2015 9:30	12/25/2015 9:45	**15**	0.11	**69,139**	1.67	**0.06**	6	Atlas	7,605	1
	12/26/2015 12:15	12/26/2015 18:00	**345**	0.28	**153,659**	1.97	**0.14**	3	Atlas	43,025	1
	12/27/2015 10:15	12/28/2015 6:45	**1230**	2.23	**1,504,916**	3.67	**0.75**	3	Atlas	3,355,962	1
	12/28/2015 15:00	12/28/2015 18:00	**180**	2.23	**155,806**	4.02	**0.75**	3	Atlas	347,448	1
	2/2/2016 15:00	2/3/2016 2:45	**705**	1.63	**421,155**	1.71	**0.76**	6	Atlas	686,482	1
	2/21/2016 4:15	2/21/2016 11:30	**435**	1.02	**408,785**	1.2	**0.47**	12	Atlas	416,961	1
	2/23/2016 22:30	2/24/2016 9:30	**660**	2.05	**346,904**	2.76	**0.80**	12	Atlas	711,153	1
	3/1/2016 12:15	3/1/2016 14:30	**135**	0.33	**296,329**	2.39	**0.17**	6	Atlas	97,789	1
	3/9/2016 15:45	3/9/2016 17:00	**75**	1.24	**24,992**	0.29	**0.40**	12	Atlas	30,990	1
	3/10/2016 13:45	3/10/2016 20:45	**420**	1.24	**349,939**	1.29	**0.40**	12	Atlas	433,924	1
	3/12/2016 20:15	3/13/2016	**225**	0.88	**136,902**	1.78	**0.33**	24	Atlas	120,474	1
	3/13/2016 9:00	3/13/2016 11:30	**150**	0.88	**325,337**	2.13	**0.33**	24	Atlas	286,296	1
	3/24/2016 17:45	3/24/2016 18:30	**45**	0.46	**54,811**	0.6	**0.33**	1	Atlas	25,213	1
	3/27/2016 21:00	3/27/2016 23:00	**120**	0.85	**1,342,139**	1.31	**0.56**	3	Atlas	1,140,818	1
	3/31/2016 2:00	4/1/2016 0:45	**1365**	1.15	**436,635**	2.46	**0.44**	24	Atlas	502,131	1
	4/11/2016 16:30	4/11/2016 19:45	**195**	0.84	**214,324**	0.91	**0.40**	6	Atlas	180,032	1
	4/21/2016 14:45	4/21/2016 16:30	**105**	0.32	**204,924**	0.23	**0.12**	3	Atlas	65,576	1
	4/26/2016 21:15	4/26/2016 22:00	**45**	0.34	**146,533**	0.68	**0.17**	6	Atlas	49,821	1
	4/27/2016 13:15	4/27/2016 22:30	**555**	0.66	**401,815**	1.31	**0.29**	3	Atlas	265,198	1
	4/30/2016 9:00	4/30/2016 13:45	**285**	0.54	**118,088**	1.38	**0.20**	24	Atlas	63,767	1
	4/30/2016 23:30	4/30/2016 23:45	**15**	0.54	**5,946**	1.51	**0.20**	24	Atlas	3,211	1
	5/1/2016 15:00	5/1/2016 16:45	**105**	0.33	**1,247,145**	1.87	**0.23**	1	Atlas	411,558	1
	5/4/2016 11:30	5/4/2016 12:15	**45**	0.19	**181,856**	1.7	**0.12**	1	Atlas	34,553	1
	5/7/2016 16:45	5/7/2016 22:30	**345**	0.58	**74,002**	1.27	**0.30**	6	Atlas	42,921	1
	5/10/2016 8:45	5/10/2016 22:45	**840**	1.04	**489,523**	1.85	**0.38**	24	Atlas	509,104	1
	5/11/2016 21:45	5/11/2016 22:45	**60**	0.21	**521,471**	1.84	**0.11**	3	Atlas	109,509	1
	5/17/2016 6:30	5/17/2016 7:30	**60**	0.55	**63,699**	1.61	**0.18**	24	Atlas	35,035	1
	5/17/2016 20:30	5/17/2016 21:00	**30**	0.55	**63,378**	1.15	**0.18**	24	Atlas	34,858	1
	5/20/2016 13:30	5/20/2016 16:30	**180**	0.94	**559,772**	1.51	**0.56**	3	Atlas	526,186	1
	5/26/2016 13:45	5/26/2016 15:45	**120**	0.21	**357,156**	1.25	**0.14**	3	Atlas	75,003	1
	6/2/2016 15:30	6/2/2016 16:15	**45**	0.51	**151,072**	0.64	**0.42**	1	Atlas	77,047	1
	6/4/2016 17:00	6/4/2016 18:45	**105**	0.15	**235,571**	0.76	**0.07**	1	Atlas	35,336	1
	6/12/2016 18:00	6/12/2016 18:45	**45**	0.6	**1,419,633**	0.63	**0.51**	1	Atlas	851,780	1
	6/14/2016 17:00	6/14/2016 19:00	**120**	0.68	**178,349**	1.27	**0.44**	3	Atlas	121,277	1
	6/22/2016 8:30	6/22/2016 8:45	**15**	0.3	**425,558**	0.21	**0.19**	3	Atlas	127,667	1
	6/23/2016 16:15	6/23/2016 22:15	**360**	1.69	**1,216,297**	1.99	**0.91**	6	Atlas	2,055,542	1
Grand Total										**266,951,960**	**530**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**1/18/2011 5:00**	1/18/2011 16:00	**660**	0.35	**91,328**	0.39	**0.12**	24	Atlas	31,965	1
	1/22/2011 14:30	1/22/2011 14:45	**15**	Discharge						984	1
	2/1/2011 9:00	2/2/2011 5:15	**1215**	0.93	**419,597**	0.87	**0.36**	6	Atlas	390,225	1
	2/2/2011 22:30	2/2/2011 22:30	**0**	0.93	**128**	0.95	**0.36**	6	Atlas	119	1
	2/3/2011 19:30	2/3/2011 19:30	**0**	Discharge						194	1
	2/5/2011 4:30	2/5/2011 15:15	**645**	0.22	**53,545**	1.16	**0.10**	12	Atlas	11,780	1
	2/7/2011 11:15	2/7/2011 19:30	**495**	0.21	**283,842**	1.36	**0.08**	24	Atlas	59,607	1
	2/21/2011 18:00	2/22/2011 14:15	**1215**	0.17	**33,033**	0.21	**0.11**	3	Atlas	5,616	1
	2/24/2011 4:30	2/25/2011 18:45	**2295**	2.26	**1,095,053**	2.47	**0.87**	24	Atlas	2,474,820	1
	2/28/2011 5:00	2/28/2011 10:30	**330**	1.27	**432,793**	3.73	**0.61**	6	Atlas	549,647	1
	3/8/2011 23:30	3/13/2011 6:00	**6150**	3.04	**5,897,904**	4.02	**1.88**	12	Cloudburst	17,929,627	1
	3/13/2011 17:30	3/15/2011 8:00	**2310**	Discharge						1,314,771	1
	3/15/2011 16:30	3/15/2011 20:15	**225**	0.76	**243,280**	3.81	**0.25**	48	Atlas	184,893	1
	3/16/2011 17:00	3/16/2011 21:45	**285**	Discharge						49,324	1
	3/17/2011 6:00	3/19/2011 15:30	**3450**	Discharge						4,636,462	1
	3/21/2011 16:15	3/21/2011 16:15	**0**	Discharge						45,466	1
	4/1/2011 20:15	4/1/2011 20:45	**30**	0.14	**2,607**	0.31	**0.09**	1	Atlas	365	1
	4/4/2011 13:30	4/4/2011 18:30	**300**	0.83	**341,504**	1	**0.42**	6	Atlas	283,448	1
	4/9/2011 10:30	4/9/2011 13:15	**165**	0.54	**426,320**	1.42	**0.38**	1	Atlas	230,213	1
	4/11/2011 11:00	4/28/2011 18:45	**24945**	3.1	**20,415,510**	13.61	**2.04**	24	Cloudburst	63,288,080	1
	5/1/2011 5:45	5/1/2011 6:15	**30**	0.66	**94,259**	4.76				62,211	1
	5/2/2011 4:15	5/6/2011 20:45	**6750**	2.83	**5,465,840**	6.73	**0.92**	48	Atlas	15,468,329	1
	5/8/2011 0:45	5/8/2011 3:00	**135**	0.18	**556,348**	3.63	**0.10**	6	Atlas	100,143	1
	5/10/2011 11:30	5/11/2011 11:15	**1425**	Discharge						62,507	1
	5/14/2011 6:00	5/14/2011 15:30	**570**	Discharge						1,850	1
	5/15/2011 12:00	5/15/2011 12:30	**30**	0.23	**764**	0.33	**0.13**	3	Atlas	176	1
	5/18/2011 23:30	5/18/2011 23:45	**15**	0.04	**7,455**	0.48	**0.02**	6	Atlas	298	1
	5/21/2011 18:15	5/21/2011 18:15	**0**	0.4	**52,346**	0.61	**0.29**	1	Atlas	20,938	1
	5/23/2011 17:45	5/23/2011 23:45	**360**	0.89	**756,839**	1.77	**0.57**	3	Atlas	673,587	1
	5/24/2011 14:15	5/24/2011 14:15	**0**	0.04	**552,670**	1.81	**0.02**	6	Atlas	22,107	1
	5/25/2011 9:30	5/25/2011 11:30	**120**	Discharge						17,667	1
	5/25/2011 20:30	5/26/2011 18:30	**1320**	Discharge						625,584	1
	5/28/2011 15:15	5/28/2011 22:00	**405**	Discharge						11,362	1
	5/30/2011 1:00	5/30/2011 6:15	**315**	Discharge						6,875	1
	6/1/2011 1:00	6/1/2011 1:00	**0**	Discharge						6,854	1
	6/11/2011 4:30	6/11/2011 5:00	**30**	0.33	**33,936**	0.39	**0.29**	1	Atlas	11,199	1
	6/15/2011 3:15	6/15/2011 11:00	**465**	Discharge						329,750	1
	6/16/2011 0:15	6/16/2011 0:15	**0**	0.01	**56,674**	1.52	**0.01**	1	Atlas	567	1
	6/18/2011 6:00	6/18/2011 8:15	**135**	0.76	**16,607**	1.89	**0.45**	3	Atlas	12,621	1
	6/19/2011 7:45	6/19/2011 15:15	**450**	0.53	**117,962**	2.44	**0.33**	3	Atlas	62,520	1
	6/20/2011 1:30	6/20/2011 3:00	**90**	0.5	**247,668**	2.94	**0.43**	1	Atlas	123,834	1
	6/21/2011 14:00	6/21/2011 17:30	**210**	0.26	**171,834**	3.16	**0.14**	3	Atlas	44,677	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**6/22/2011 19:15**	6/23/2011 13:15	**1080**	3.65	**600,528**	5.71	**15.51**	3	Atlas	2,191,928	1
	6/24/2011 1:30	6/24/2011 1:30	**0**	Discharge						18,409	1
	6/24/2011 12:45	6/25/2011 1:45	**780**	Discharge						247,969	1
	6/25/2011 13:30	6/26/2011 4:45	**915**	Discharge						29,338	1
	7/8/2011 3:00	7/8/2011 5:00	**120**	0.39	**23,414**	0.61	**0.21**	3	Atlas	9,131	1
	7/12/2011 17:30	7/13/2011 13:30	**1200**	0.35	**94,141**	0.88	**0.19**	6	Atlas	32,949	1
	7/17/2011 22:15	7/17/2011 22:15	**0**	0.04	**10,594**	0.39	**0.03**	1	Atlas	424	1
	7/19/2011 7:15	7/19/2011 11:30	**255**	Discharge						12,839	1
	7/19/2011 22:30	7/20/2011 15:45	**1035**	1.78	**221,270**	1.95	**2.00**	1	Atlas	393,860	1
	7/21/2011 6:30	7/22/2011 6:30	**1440**	Discharge						55,403	1
	7/25/2011	7/25/2011	**0**	0.36	**22,948**	2.28	**0.29**	1	Atlas	8,261	1
	7/25/2011 19:15	7/25/2011 19:15	**0**	Discharge						77	1
	7/26/2011 8:45	7/26/2011 8:45	**0**	Discharge						238	1
	7/30/2011 22:45	7/31/2011 0:30	**105**	0.19	**88,193**	0.58	**0.16**	1	Atlas	16,757	1
	8/7/2011 3:00	8/7/2011 12:30	**570**	1.85	**190,178**	1.89	**1.43**	3	Atlas	351,829	1
	8/8/2011 14:00	8/8/2011 14:45	**45**	0.23	**4,016**	2.12	**0.15**	3	Atlas	924	1
	8/10/2011 2:45	8/10/2011 2:45	**0**	0.08	**1,922**	2.18	**0.05**	1	Atlas	154	1
	8/13/2011 17:15	8/14/2011 1:00	**465**	0.8	**90,733**	2.92	**0.63**	1	Atlas	72,587	1
	8/18/2011 8:15	8/18/2011 8:30	**15**	0.56	**5,733**	1.33	**0.45**	1	Atlas	3,210	1
	9/4/2011 20:45	9/4/2011 20:45	**0**	0.12	**9,024**	0.11	**0.05**	24	Atlas	1,083	1
	9/6/2011 3:15	9/6/2011 3:45	**30**	0.2	**1,122**	0.26	**0.08**	12	Atlas	224	1
	9/7/2011 5:30	9/8/2011 6:45	**1515**	0.01	**362,954**	0.34	**0.01**	1	Atlas	3,630	1
	9/8/2011 16:30	9/9/2011 3:30	**660**	Discharge						1,684	1
	9/9/2011 16:00	9/9/2011 16:00	**0**	Discharge						108	1
	9/10/2011 20:00	9/10/2011 20:15	**15**	0.03	**23,397**	0.36	**0.02**	3	Atlas	702	1
	9/11/2011 19:15	9/11/2011 21:45	**150**	0.31	**223,923**	0.61	**0.20**	3	Atlas	69,416	1
	9/12/2011 12:45	9/12/2011 12:45	**0**	Discharge						1,882	1
	9/13/2011 0:30	9/13/2011 0:30	**0**	Discharge						780	1
	9/14/2011 21:45	9/15/2011 6:00	**495**	0.22	**4,466**	0.56	**0.12**	3	Atlas	983	1
	9/18/2011 21:45	9/18/2011 22:45	**60**	0.69	**1,140**	0.3	**0.28**	12	Atlas	787	1
	9/19/2011 7:00	9/19/2011 8:15	**75**	0.69	**88,592**	0.59	**0.28**	12	Atlas	61,129	1
	9/21/2011 12:30	9/21/2011 12:30	**0**	0.03	**7,931**	0.95	**0.02**	1	Atlas	238	1
	9/23/2011 0:30	9/23/2011 8:45	**495**	0.8	**35,479**	1.53	**0.37**	12	Atlas	28,384	1
	9/25/2011 19:45	9/27/2011 1:00	**1755**	3.46	**456,581**	5.14	**7.40**	12	Cloudburst	1,579,770	1
	9/27/2011 23:45	9/27/2011 23:45	**0**	Discharge						282	1
	9/30/2011 1:00	9/30/2011 1:00	**0**	0.01	**52,741**	4.23	**0.01**	1	Atlas	527	1
	10/3/2011 10:00	10/3/2011 10:00	**0**	Discharge						4,996	1
	10/4/2011 6:45	10/4/2011 10:00	**195**	Discharge						2,864	1
	10/7/2011 7:15	10/7/2011 8:30	**75**	Discharge						395	1
	10/10/2011 4:45	10/10/2011 12:00	**435**	Discharge						713	1
	10/11/2011 5:30	10/11/2011 10:30	**300**	Discharge						3,559	1
	10/12/2011 3:30	10/12/2011 8:15	**285**	Discharge						3,481	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**10/13/2011 7:45**	10/13/2011 9:00	**75**	0.48	**4,346**	0.35	**0.25**	3	Atlas	2,086	1
	10/27/2011	10/27/2011 5:30	**330**	0.99	**127,290**	1.39	**0.42**	3	Atlas	126,017	1
	1/2/2012 15:45	1/2/2012 16:15	**30**	0.03	**12,741**	0.7	**0.01**	12	Atlas	382	1
	1/3/2012 17:15	1/3/2012 18:45	**90**	Discharge						593	1
	1/4/2012 12:45	1/4/2012 18:00	**315**	Discharge						646	1
	1/5/2012 6:15	1/5/2012 6:15	**0**	Discharge						334	1
	1/11/2012 4:30	1/11/2012 12:00	**450**	0.77	**112,934**	0.65	**0.30**	12	Atlas	86,960	1
	1/11/2012 20:15	1/11/2012 20:15	**0**	0.77	**44**	0.75	**0.30**	12	Atlas	34	1
	1/17/2012 11:30	1/17/2012 13:15	**105**	0.39	**30,916**	1.27	**0.18**	12	Atlas	12,057	1
	1/22/2012 4:45	1/22/2012 4:45	**0**	Discharge						724	1
	1/23/2012 2:45	1/23/2012 5:45	**180**	0.7	**198,197**	1.07	**0.33**	3	Atlas	138,738	1
	1/25/2012 18:30	1/25/2012 20:30	**120**	1.69	**62,772**	1	**0.55**	48	Atlas	106,085	1
	1/26/2012 5:30	1/28/2012 15:30	**3480**	1.69	**3,045,810**	2.44	**0.55**	48	Atlas	5,147,419	1
	1/29/2012 2:45	1/29/2012 3:00	**15**	Discharge						8,057	1
	2/4/2012 11:00	2/4/2012 11:00	**0**	0.39	**12**	0.43	**0.23**	3	Atlas	5	1
	2/22/2012 22:45	2/22/2012 23:00	**15**	0.14	**31,265**	0.43	**0.10**	1	Atlas	4,377	1
	2/29/2012 4:15	2/29/2012 10:15	**360**	0.59	**20,697**	0.63	**0.27**	12	Atlas	12,211	1
	3/8/2012 10:00	3/8/2012 17:45	**465**	0.77	**320,930**	1.07	**0.37**	6	Atlas	247,116	1
	3/9/2012 12:00	3/9/2012 13:15	**75**	Discharge						2,033	1
	3/15/2012 19:00	3/16/2012 4:30	**570**	0.98	**236,934**	1.19	**0.43**	12	Atlas	232,195	1
	3/17/2012 14:45	3/17/2012 23:15	**510**	Discharge						111,341	1
	3/23/2012 5:00	3/24/2012 0:30	**1170**	1.53	**305,898**	2.4	**0.56**	24	Atlas	468,024	1
	3/24/2012 18:45	3/24/2012 18:45	**0**	Discharge						127	1
	4/1/2012 8:15	4/1/2012 18:00	**585**	1.27	**521,314**	1.48	**0.68**	6	Atlas	662,068	1
	4/4/2012 9:00	4/4/2012 16:45	**465**	0.07	**9,513**	1.63	**0.05**	1	Atlas	666	1
	4/28/2012 19:15	4/29/2012 0:15	**300**	0.74	**146,928**	0.86	**0.54**	1	Atlas	108,727	1
	4/29/2012 12:00	4/29/2012 12:00	**0**	Discharge						470	1
	4/30/2012 18:00	4/30/2012 19:15	**75**	0.48	**178,607**	1.25	**0.32**	3	Atlas	85,732	1
	5/4/2012 23:45	5/5/2012 5:45	**360**	1.36	**375,019**	2.61	**0.73**	3	Atlas	510,026	1
	5/13/2012 2:00	5/13/2012 16:45	**885**	2.07	**824,892**	2.12	**0.81**	12	Atlas	1,707,526	1
	5/14/2012 14:30	5/14/2012 23:00	**510**	0.01	**173,820**	2.13	**0.01**	1	Atlas	1,738	1
	5/16/2012 17:45	5/16/2012 19:30	**105**	0.24	**308,212**	2.32	**0.20**	1	Atlas	73,971	1
	5/29/2012 6:45	5/31/2012 0:45	**2520**	2.34	**529,094**	2.34	**5.14**	3	Atlas	1,238,080	1
	5/31/2012 18:30	6/1/2012 9:30	**900**	1.24	**737,328**	3.58	**0.54**	12	Atlas	914,287	1
	6/1/2012 21:15	6/2/2012 16:00	**1125**	Discharge						17,365	1
	6/17/2012 11:30	6/17/2012 12:00	**30**	0.4	**3,670**	0.39	**0.23**	3	Atlas	1,468	1
	7/1/2012 20:00	7/1/2012 21:15	**75**	0.4	**16,544**	0.35	**0.28**	1	Atlas	6,617	1
	7/8/2012 13:45	7/8/2012 13:45	**0**	0.14	**1,511**	0.53	**0.09**	1	Atlas	212	1
	7/14/2012 12:15	7/14/2012 15:45	**210**	0.73	**195,796**	0.88	**0.46**	3	Atlas	142,931	1
	7/18/2012 17:15	7/18/2012 18:45	**90**	Discharge						109,972	1
	7/19/2012 18:15	7/19/2012 20:00	**105**	0.61	**531,473**	1.33	**0.48**	1	Atlas	324,199	1
	7/24/2012 20:00	7/24/2012 20:15	**15**	0.11	**10,674**	0.74	**0.09**	1	Atlas	1,174	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**7/26/2012 21:30**	7/26/2012 21:30	**0**	0.2	**30,133**	0.29	**0.12**	1	Atlas	6,027	1
	7/27/2012 20:00	7/27/2012 23:45	**225**	0.6	**161,385**	0.93	**0.39**	3	Atlas	96,831	1
	8/16/2012 20:15	8/17/2012 0:30	**255**	0.55	**258,241**	0.67	**0.32**	3	Atlas	142,032	1
	8/21/2012 14:00	8/21/2012 14:30	**30**	0.12	**4,910**	0.68	**0.10**	1	Atlas	589	1
	9/1/2012 15:15	9/1/2012 19:00	**225**	0.32	**320,928**	0.35	**0.19**	3	Atlas	102,697	1
	9/2/2012 12:00	9/2/2012 23:30	**690**	0.64	**284,475**	0.99	**0.25**	24	Atlas	182,064	1
	9/3/2012 14:30	9/3/2012 14:45	**15**	0.11	**64,418**	1.1	**0.10**	1	Atlas	7,086	1
	9/5/2012 15:30	9/5/2012 18:00	**150**	0.91	**447,669**	2	**0.72**	1	Atlas	407,379	1
	9/7/2012 23:15	9/8/2012 8:30	**555**	1.29	**346,304**	3.27	**0.71**	3	Atlas	446,732	1
	9/25/2012 23:45	9/26/2012 5:30	**345**	0.42	**20,051**	0.78	**0.19**	12	Atlas	8,422	1
	9/26/2012 20:00	9/27/2012 2:15	**375**	1.81	**331,789**	2.63	**0.97**	6	Atlas	600,538	1
	9/27/2012 12:15	9/27/2012 12:15	**0**	Discharge						1,740	1
	10/1/2012 15:00	10/1/2012 20:15	**315**	0.71	**229,503**	3.32	**0.28**	12	Atlas	162,947	1
	10/26/2012 15:00	10/26/2012 16:15	**75**	0.73	**832**	0.63	**0.33**	6	Atlas	608	1
	12/2/2012 11:15	12/2/2012 11:15	**0**	0.26	**10,195**	0.31	**0.17**	1	Atlas	2,651	1
	12/4/2012 15:15	12/4/2012 19:30	**255**	0.53	**156,477**	0.79	**0.33**	3	Atlas	82,933	1
	12/7/2012 4:45	12/7/2012 18:45	**840**	1.09	**332,969**	1.88	**0.47**	12	Atlas	362,936	1
	12/8/2012 5:45	12/8/2012 10:30	**285**	0.37	**59,909**	2.25	**0.21**	1	Atlas	22,166	1
	12/9/2012 8:30	12/9/2012 9:00	**30**	1.15	**271**	2.3	**0.56**	3	Atlas	312	1
	12/9/2012 20:45	12/10/2012 5:15	**510**	1.15	**433,220**	3.06	**0.56**	3	Atlas	498,202	1
	12/12/2012 6:15	12/12/2012 6:15	**0**	Discharge						962	1
	12/17/2012 17:00	12/17/2012 17:00	**0**	0.22	**16,099**	0.4	**0.11**	6	Atlas	3,542	1
	12/20/2012 7:00	12/20/2012 14:00	**420**	0.68	**194,742**	1.07	**0.37**	6	Atlas	132,425	1
	12/26/2012 5:30	12/26/2012 15:00	**570**	0.74	**260,446**	1.5	**0.29**	12	Atlas	192,730	1
	1/11/2013 5:45	1/11/2013 8:45	**180**	0.63	**88,501**	0.78	**0.33**	6	Atlas	55,756	1
	1/13/2013 3:15	1/15/2013 0:45	**2730**	2.09	**854,752**	2.91	**0.80**	24	Atlas	1,786,433	1
	1/30/2013 5:00	1/30/2013 17:45	**765**	0.89	**357,366**	1.19	**0.45**	6	Atlas	318,055	1
	2/22/2013 1:00	2/22/2013 2:00	**60**	0.41	**2,561**	0.74	**0.19**	12	Atlas	1,050	1
	2/26/2013 13:45	2/26/2013 21:15	**450**	0.6	**57,978**	1	**0.23**	24	Atlas	34,787	1
	3/5/2013 17:15	3/5/2013 19:00	**105**	0.41	**30,846**	0.5	**0.16**	24	Atlas	12,647	1
	3/11/2013 4:30	3/11/2013 14:15	**585**	1	**554,972**	1.44	**0.40**	12	Atlas	554,972	1
	3/17/2013 13:00	3/18/2013 13:45	**1485**	1.67	**512,186**	2.68	**0.54**	48	Atlas	855,350	1
	3/24/2013 16:00	3/24/2013 18:00	**120**	0.48	**8,956**	1.42	**0.18**	24	Atlas	4,299	1
	4/11/2013 6:30	4/12/2013 2:30	**1200**	1.28	**143,484**	1.28	**0.49**	24	Atlas	183,659	1
	4/16/2013 20:30	4/16/2013 22:00	**90**	0.55	**88,576**	1.81	**0.44**	1	Atlas	48,717	1
	4/19/2013 2:30	4/19/2013 6:00	**210**	0.91	**416,729**	1.48	**0.50**	6	Atlas	379,224	1
	4/20/2013 9:30	4/20/2013 9:30	**0**	Discharge						51	1
	4/24/2013 8:15	4/24/2013 11:30	**195**	0.72	**212,271**	1.67	**0.39**	6	Atlas	152,835	1
	5/5/2013 5:15	5/5/2013 9:15	**240**	1.34	**31,137**	1.22	**0.41**	24	Atlas	41,723	1
	5/6/2013 2:30	5/6/2013 2:30	**0**	1.34	**21**	1.35	**0.41**	24	Atlas	28	1
	5/10/2013 12:15	5/11/2013 1:45	**810**	0.91	**375,530**	2.42	**0.41**	6	Atlas	341,732	1
	5/12/2013 0:15	5/12/2013 2:30	**135**	0.05	**4,334**	1.81	**0.04**	1	Atlas	217	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**5/16/2013 10:30**	5/16/2013 11:45	**75**	0.21	**45,827**	1.19	**0.18**	1	Atlas	9,624	1
	5/22/2013 16:00	5/22/2013 16:00	**0**	0.13	**9,844**	0.33	**0.09**	1	Atlas	1,280	1
	5/31/2013 23:00	5/31/2013 23:00	**0**	0.24	**20,516**	0.34	**0.11**	12	Atlas	4,924	1
	6/10/2013	6/10/2013 0:15	**15**	0.31	**4,208**	0.22	**0.14**	6	Atlas	1,304	1
	6/16/2013 16:45	6/16/2013 17:00	**15**	0.53	**43,660**	0.78	**0.36**	1	Atlas	23,140	1
	6/17/2013 16:30	6/18/2013 4:15	**705**	1.3	**665,941**	1.84	**0.72**	1	Atlas	865,724	1
	6/21/2013 19:30	6/21/2013 20:45	**75**	0.14	**50,317**	1.98	**0.09**	3	Atlas	7,044	1
	6/23/2013 12:30	6/23/2013 13:00	**30**	0.52	**1,665**	2.45	**0.41**	1	Atlas	866	1
	6/26/2013 3:15	6/26/2013 7:15	**240**	0.67	**417,142**	1.4	**0.45**	3	Atlas	279,485	1
	6/26/2013 16:15	6/28/2013 16:30	**2895**	2.64	**662,965**	4.04	**5.00**	1	Atlas	1,750,228	1
	6/29/2013 20:00	6/30/2013 6:45	**645**	0.44	**589,190**	4.33	**0.23**	6	Atlas	259,244	1
	7/1/2013 19:15	7/1/2013 19:15	**0**	0.2	**27,853**	4.15	**0.11**	3	Atlas	5,571	1
	7/2/2013 13:45	7/2/2013 13:45	**0**	0.14	**35,876**	4.31	**0.12**	1	Atlas	5,023	1
	7/4/2013 12:00	7/4/2013 16:30	**270**	0.51	**29,817**	1.47	**0.22**	12	Atlas	15,207	1
	7/6/2013 1:15	7/6/2013 9:00	**465**	0.65	**290,539**	2.16	**0.28**	12	Atlas	188,850	1
	7/6/2013 22:00	7/7/2013 5:15	**435**	Discharge						66,281	1
	7/10/2013 14:15	7/10/2013 17:00	**165**	0.96	**132,915**	2.19	**0.66**	1	Atlas	127,598	1
	7/14/2013 19:30	7/14/2013 21:00	**90**	0.23	**87,690**	1.25	**0.20**	1	Atlas	20,169	1
	7/21/2013 20:15	7/21/2013 20:45	**30**	1.91	**27,035**	0.9	**0.73**	24	Atlas	51,637	1
	7/22/2013 7:15	7/22/2013 18:15	**660**	1.91	**346,371**	2.03	**0.73**	24	Atlas	661,568	1
	8/12/2013 15:00	8/12/2013 16:15	**75**	0.53	**36,766**	0.52	**0.20**	24	Atlas	19,486	1
	8/13/2013 3:15	8/13/2013 4:30	**75**	0.53	**8,532**	0.76	**0.20**	24	Atlas	4,522	1
	8/20/2013 18:15	8/20/2013 18:45	**30**	0.17	**122,216**	0.18	**0.10**	1	Atlas	20,777	1
	8/31/2013 19:45	9/1/2013 4:00	**495**	1.34	**468,880**	1.32	**0.67**	3	Atlas	628,299	1
	9/2/2013 14:00	9/2/2013 15:00	**60**	0.11	**90,212**	1.45	**0.10**	1	Atlas	9,923	1
	9/20/2013 16:30	9/21/2013 6:15	**825**	1.48	**345,493**	1.55	**0.62**	12	Atlas	511,330	1
	10/5/2013 13:00	10/8/2013 3:00	**3720**	3.89	**363,383**	4	**5.08**	24	Cloudburst	1,413,561	1
	10/30/2013 3:30	10/30/2013 8:00	**270**	1.16	**194,731**	1.16	**0.56**	6	Atlas	225,888	1
	10/30/2013 22:15	11/1/2013 0:15	**1560**	Discharge						793,833	1
	11/2/2013 8:15	11/3/2013 20:30	**2175**	Discharge						1,154,335	1
	11/17/2013 5:45	11/19/2013 13:30	**3345**	2.17	**1,085,849**	2.3	**0.89**	6	Atlas	2,356,292	1
	11/23/2013 11:30	11/24/2013 0:15	**765**	Discharge						37,836	1
	11/24/2013 10:45	11/24/2013 11:30	**45**	Discharge						32,331	1
	12/5/2013 5:30	12/5/2013 9:15	**225**	0.78	**13,296**	0.17	**0.25**	48	Atlas	10,371	1
	12/14/2013 0:30	12/14/2013 14:30	**840**	0.77	**51,095**	1.04	**0.31**	12	Atlas	39,343	1
	12/14/2013 23:45	12/14/2013 23:45	**0**	Discharge						1,335	1
	12/17/2013 5:30	12/17/2013 8:15	**165**	Discharge						488	1
	12/21/2013 7:45	12/22/2013 23:00	**2355**	2.81	**377,698**	3.14	**1.24**	24	Cloudburst	1,061,330	1
	12/29/2013 6:15	12/29/2013 7:30	**75**	0.48	**93,842**	0.41	**0.21**	12	Atlas	45,044	1
	1/5/2014 18:00	1/5/2014 21:00	**180**	0.47	**32,396**	0.66	**0.23**	6	Atlas	15,226	1
	1/11/2014 1:15	1/11/2014 7:15	**360**	0.8	**263,398**	1.28	**0.43**	6	Atlas	210,718	1
	2/4/2014 20:00	2/5/2014 9:30	**810**	0.51	**1,519,345**	0.95	**0.25**	6	Atlas	774,866	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**2/17/2014 16:15**	2/17/2014 21:15	**300**	0.55	**653,456**	1.08	**0.33**	3	Atlas	359,401	1
	2/20/2014 23:15	2/21/2014 1:15	**120**	0.19	**272,835**	1.27	**0.10**	6	Atlas	51,839	1
	3/2/2014 11:15	3/2/2014 12:00	**45**	0.48	**6,147**	0.23	**0.18**	24	Atlas	2,951	1
	3/29/2014 6:30	3/29/2014 14:30	**480**	0.98	**283,713**	1.31	**0.45**	6	Atlas	278,038	1
	4/3/2014 12:15	4/5/2014 15:30	**3075**	2.59	**786,758**	3.93	**0.90**	24	Atlas	2,037,703	1
	4/7/2014 9:00	4/7/2014 22:45	**825**	0.82	**1,374,226**	3.5	**0.49**	3	Atlas	1,126,866	1
	4/10/2014 10:45	4/10/2014 10:45	**0**	Discharge						1,982	1
	4/10/2014 22:00	4/11/2014 3:15	**315**	Discharge						25,380	1
	4/14/2014 20:30	4/15/2014 4:00	**450**	0.62	**84,335**	1.1	**0.28**	12	Atlas	52,288	1
	4/15/2014 13:30	4/15/2014 13:30	**0**	Discharge						206	1
	4/27/2014 20:30	4/28/2014 21:30	**1500**	1.85	**357,759**	1.92	**0.70**	3	Atlas	661,853	1
	4/29/2014 20:45	4/30/2014 2:00	**315**	0.19	**107,089**	2.12	**0.09**	6	Atlas	20,347	1
	5/3/2014 5:30	5/3/2014 5:30	**0**	Discharge						41,197	1
	5/4/2014 22:15	5/4/2014 22:15	**0**	Discharge						2,495	1
	5/9/2014 19:30	5/10/2014 17:15	**1305**	1.59	**271,225**	1.66	**0.61**	24	Atlas	431,248	1
	5/14/2014 7:15	5/14/2014 21:30	**855**	0.98	**66,879**	2.6	**0.37**	24	Atlas	65,541	1
	5/15/2014 13:45	5/16/2014 12:00	**1335**	Discharge						56,551	1
	5/19/2014 16:30	5/19/2014 17:15	**45**	Discharge						1,070	1
	5/21/2014 3:15	5/21/2014 3:15	**0**	Discharge						14,723	1
	5/21/2014 21:00	5/22/2014 4:45	**465**	0.58	**149,167**	0.72	**0.27**	12	Atlas	86,517	1
	5/22/2014 17:00	5/22/2014 17:00	**0**	Discharge						9,314	1
	5/28/2014 20:30	5/28/2014 21:45	**75**	0.21	**73,066**	0.8	**0.18**	1	Atlas	15,344	1
	5/29/2014 21:00	5/29/2014 22:45	**105**	0.41	**170,937**	0.65	**0.35**	1	Atlas	70,084	1
	6/11/2014 14:30	6/11/2014 14:30	**0**	0.11	**3,888**	0.3	**0.07**	1	Atlas	428	1
	6/24/2014 13:45	6/24/2014 13:45	**0**	0.14	**15,818**	0.23	**0.09**	1	Atlas	2,215	1
	7/2/2014 16:15	7/2/2014 17:30	**75**	0.13	**37,948**	0.42	**0.10**	1	Atlas	4,933	1
	7/7/2014 19:45	7/7/2014 19:45	**0**	0.49	**10,873**	0.82	**0.43**	1	Atlas	5,328	1
	7/13/2014 22:30	7/13/2014 23:45	**75**	0.62	**27,522**	1.24	**0.28**	12	Atlas	17,063	1
	7/14/2014 20:15	7/14/2014 20:15	**0**	0.34	**20,023**	1.31	**0.23**	3	Atlas	6,808	1
	7/26/2014 21:45	7/28/2014 16:15	**2550**	0.94	**1,529,106**	0.97	**0.41**	12	Atlas	1,437,360	1
	8/8/2014 6:00	8/8/2014 8:45	**165**	0.84	**125,051**	0.63	**0.41**	6	Atlas	105,043	1
	8/10/2014 4:15	8/10/2014 5:00	**45**	0.53	**16,470**	1.46	**0.44**	1	Atlas	8,729	1
	8/11/2014 15:30	8/11/2014 16:00	**30**	0.3	**93,080**	1.75	**0.21**	1	Atlas	27,924	1
	8/17/2014 9:45	8/17/2014 9:45	**0**	0.7	**5,630**	0.82	**0.26**	24	Atlas	3,941	1
	8/22/2014 19:15	8/22/2014 19:30	**15**	0.31	**110,845**	0.95	**0.21**	1	Atlas	34,362	1
	8/23/2014 14:15	8/23/2014 22:15	**480**	Discharge						352,419	1
	8/24/2014 10:45	8/24/2014 13:30	**165**	Discharge						268,114	1
	8/25/2014 12:00	8/25/2014 12:00	**0**	Discharge						683	1
	8/26/2014 21:00	8/26/2014 22:45	**105**	0.22	**944,608**	1.02	**0.19**	1	Atlas	207,814	1
	8/27/2014 15:00	8/27/2014 15:00	**0**	0.18	**17,856**	1.15	**0.11**	1	Atlas	3,214	1
	8/28/2014 18:30	8/30/2014 16:15	**2745**	Discharge						1,947,412	1
	9/1/2014 23:00	9/1/2014 23:00	**0**	Discharge						8,885	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**9/2/2014 8:30**	9/2/2014 8:30	**0**	0.42	**27**	1.24	**0.27**	3	Atlas	11	1
	9/3/2014 18:15	9/3/2014 18:15	**0**	Discharge						1,099	1
	9/4/2014 21:30	9/4/2014 22:15	**45**	Discharge						12,600	1
	9/11/2014 0:30	9/11/2014 11:45	**675**	1.92	**412,599**	1.92	**1.43**	3	Atlas	792,189	1
	9/12/2014 17:45	9/13/2014 4:30	**645**	Discharge						13,200	1
	9/13/2014 17:00	9/13/2014 17:00	**0**	Discharge						2,010	1
	9/18/2014 1:00	9/18/2014 1:00	**0**	Discharge						647	1
	9/21/2014 6:30	9/21/2014 6:30	**0**	0.01	**137,464**	0.03	**0.01**	1	Atlas	1,375	1
	10/3/2014 3:30	10/3/2014 4:30	**60**	0.23	**24,323**	0.1	**0.09**	24	Atlas	5,594	1
	10/6/2014 8:00	10/6/2014 10:00	**120**	0.38	**27,228**	0.55	**0.20**	1	Atlas	10,347	1
	10/7/2014 11:45	10/7/2014 12:15	**30**	0.23	**24,316**	0.83	**0.18**	1	Atlas	5,593	1
	10/8/2014 5:00	10/8/2014 5:00	**0**	Discharge						7,485	1
	10/10/2014 2:00	10/10/2014 3:45	**105**	0.83	**138,409**	1.64	**0.53**	3	Atlas	114,879	1
	10/10/2014 21:15	10/10/2014 21:15	**0**	0.27	**26,332**	1.69	**0.12**	12	Atlas	7,110	1
	10/13/2014 4:30	10/13/2014 6:15	**105**	0.41	**42,825**	2.11	**0.27**	3	Atlas	17,558	1
	10/13/2014 23:30	10/14/2014 12:00	**750**	0.95	**210,416**	2.71	**0.42**	12	Atlas	199,896	1
	10/20/2014 20:00	10/20/2014 20:00	**0**	0.03	**42,441**	1.21	**0.03**	1	Atlas	1,273	1
	10/31/2014 20:15	10/31/2014 21:15	**60**	0.17	**14,763**	0.27	**0.06**	12	Atlas	2,510	1
	11/4/2014 22:45	11/5/2014 4:30	**345**	0.11	**20,447**	0.28	**0.05**	12	Atlas	2,249	1
	11/5/2014 18:45	11/5/2014 19:15	**30**	0.01	**271,739**	0.29	**0.01**	1	Atlas	2,717	1
	11/11/2014 18:00	11/11/2014 19:00	**60**	0.05	**130,149**	0.15	**0.02**	12	Atlas	6,507	1
	11/12/2014 10:45	11/12/2014 10:45	**0**	Discharge						17,906	1
	11/16/2014 18:45	11/17/2014 0:30	**345**	Discharge						57,223	1
	11/23/2014 13:30	11/23/2014 19:30	**360**	0.81	**15,249**	1.07	**0.37**	12	Atlas	12,352	1
	12/1/2014 1:00	12/1/2014 15:00	**840**	0.86	**17,070**	0.74				14,680	1
	12/4/2014 8:30	12/5/2014 6:45	**1335**	1.82	**8,166**	1.28	**0.59**	48	Atlas	14,862	1
	12/5/2014 17:30	12/6/2014 2:00	**510**	1.82	**4,042**	2.26	**0.59**	48	Atlas	7,356	1
	12/14/2014 6:15	12/14/2014 6:15	**0**	Discharge						873	1
	12/16/2014 5:00	12/16/2014 5:00	**0**	0.12	**26,360**	0.12	**0.08**	1	Atlas	3,163	1
	12/22/2014 22:15	12/23/2014	**105**	0.25	**16,981**	0.36	**0.15**	3	Atlas	4,245	1
	12/23/2014 19:45	12/23/2014 20:15	**30**	0.05	**32,783**	0.3	**0.03**	1	Atlas	1,639	1
	12/24/2014 12:30	12/24/2014 13:30	**60**	0.16	**8,635**	0.36	**0.07**	12	Atlas	1,382	1
	12/27/2014 17:00	12/28/2014 1:30	**510**	0.31	**17,172**	0.77	**0.12**	24	Atlas	5,323	1
	1/3/2015 5:15	1/4/2015 3:15	**1320**	0.34	**13,930**	0.64	**0.13**	24	Atlas	4,736	1
	1/11/2015 23:45	1/12/2015 5:30	**345**	0.16	**25,381**	0.14	**0.06**	24	Atlas	4,061	1
	1/23/2015 19:00	1/23/2015 20:00	**60**	0.08	**5,059**	0.15	**0.05**	3	Atlas	405	1
	1/25/2015 16:00	1/25/2015 22:15	**375**	0.15	**6,541**	0.23	**0.07**	12	Atlas	981	1
	1/29/2015 5:15	1/29/2015 6:00	**45**	0.03	**27,917**	0.26	**0.02**	3	Atlas	838	1
	2/1/2015 11:15	2/1/2015 20:00	**525**	0.39	**30,860**	0.59	**0.18**	3	Atlas	12,035	1
	2/14/2015 13:45	2/14/2015 13:45	**0**	0.04	**1,629**	0.05	**0.03**	3	Atlas	65	1
	2/19/2015 14:00	2/19/2015 14:00	**0**	Discharge						934	1
	2/21/2015 3:15	2/22/2015 17:15	**2280**	1.15	**58,969**	1.39	**0.44**	12	Atlas	67,815	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO130	**2/23/2015 5:30**	2/23/2015 21:15	**945**	Discharge						4,107	1
	2/24/2015 12:00	2/24/2015 14:00	**120**	Discharge						8,880	1
	2/25/2015 12:30	2/25/2015 14:45	**135**	Discharge						1,360	1
	3/10/2015 12:30	3/10/2015 12:30	**0**	1.09	**1,522**	2.58	**0.49**	12	Atlas	1,659	1
	4/2/2015 15:00	4/2/2015 15:00	**0**	3.87	**22,203**	0.9	**3.28**	24	Cloudburst	85,926	1
	4/3/2015 0:15	4/3/2015 0:15	**0**	3.87	**20,600**	1.58	**3.28**	24	Cloudburst	79,723	1
	6/18/2015 17:15	6/18/2015 17:15	**0**	1.47	**54,588**	1.04	**0.48**	48	Atlas	80,245	1
	6/26/2015 17:15	6/26/2015 17:15	**0**	0.95	**76,015**	2.06	**0.51**	1	Atlas	72,214	1
	7/2/2015 19:30	7/2/2015 19:30	**0**	1.67	**562**	2.71	**0.63**	24	Atlas	938	1
	7/12/2015 6:00	7/12/2015 7:15	**75**	1.75	**96,406**	3.28	**2.28**	1	Atlas	168,710	1
	7/14/2015 4:15	7/14/2015 4:30	**15**	0.68	**167,934**	4.62	**0.55**	1	Atlas	114,195	1
	7/18/2015 0:30	7/18/2015 0:30	**0**	1.54	**6,147**	4.76	**1.10**	3	Atlas	9,467	1
	8/4/2015 19:00	8/4/2015 19:00	**0**	0.52	**43,490**	0.57	**0.44**	1	Atlas	22,615	1
	8/10/2015 15:45	8/11/2015 5:45	**840**	Discharge						46,971	1
	8/11/2015 23:30	8/12/2015 5:15	**345**	Discharge						22,339	1
	8/25/2015 10:00	8/25/2015 10:00	**0**	Discharge						4,889	1
	11/6/2015 4:00	11/6/2015 4:00	**0**	0.74	**5,826**	0.76	**0.45**	3	Atlas	4,312	1
	12/23/2015 19:30	12/23/2015 19:30	**0**	0.83	**14,339**	1.19	**0.63**	1	Atlas	11,901	1
	2/3/2016	2/3/2016	**0**	1.49	**6,524**	1.42	**0.68**	12	Atlas	9,721	1
	4/26/2016 16:15	4/26/2016 16:15	**0**	0.26	**3,684**	0.36	**0.15**	3	Atlas	958	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.31	**1,757**	0.6	**0.17**	1	Atlas	545	1
	6/14/2016 16:45	6/14/2016 16:45	**0**	0.81	**54,154**	0.74	**0.53**	3	Atlas	43,865	1
	6/23/2016 16:15	6/23/2016 20:30	**255**	2.04	**29,935**	2.44	**1.56**	6	Cloudburst	61,067	1
Grand Total										**161,081,880**	**317**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**8/16/2007 16:00**	8/16/2007 17:00	**60**	Discharge						27,448	1
	8/21/2007 6:00	8/21/2007 10:00	**240**	Discharge						26,729	1
	8/25/2007 15:00	8/25/2007 15:00	**0**	Discharge						4,854	1
	9/9/2007 11:00	9/9/2007 12:00	**60**	Discharge						3,354	1
	9/26/2007 14:00	9/26/2007 15:00	**60**	Discharge						23,802	1
	9/27/2007 4:00	9/27/2007 7:00	**180**	Discharge						6,875	1
	10/15/2007 15:00	10/15/2007 17:00	**120**	Discharge						8,021	1
	10/17/2007 9:00	10/17/2007 14:00	**300**	Discharge						12,833	1
	10/18/2007 1:00	10/18/2007 7:00	**360**	Discharge						7,323	1
	10/21/2007 17:00	10/24/2007 21:00	**4560**	Discharge						396,740	1
	10/25/2007 13:00	10/25/2007 14:00	**60**	Discharge						7,250	1
	11/4/2007 6:00	11/4/2007 7:00	**60**	Discharge						9,875	1
	11/11/2007 13:00	11/11/2007 14:00	**60**	Discharge						9,813	1
	11/19/2007 9:00	11/19/2007 21:00	**720**	Discharge						35,927	1
	11/23/2007 9:00	11/24/2007 12:00	**1620**	Discharge						85,844	1
	11/29/2007 19:00	11/30/2007 8:00	**780**	Discharge						45,792	1
	12/5/2007 3:00	12/5/2007 7:00	**240**	Discharge						37,500	1
	12/5/2007 22:00	12/5/2007 23:00	**60**	Discharge						5,604	1
	12/6/2007 11:00	12/8/2007 14:00	**3060**	Discharge						185,083	1
	12/9/2007 3:00	12/9/2007 11:00	**480**	Discharge						18,646	1
	12/10/2007 2:00	12/15/2007 2:00	**7200**	Discharge						344,104	1
	12/17/2007 10:00	12/17/2007 18:00	**480**	Discharge						7,167	1
	12/19/2007 13:00	12/20/2007 1:00	**720**	Discharge						9,708	1
	12/24/2007 18:00	12/25/2007	**360**	Discharge						8,063	1
	12/28/2007 3:00	12/28/2007 3:00	**0**	Discharge						135	1
	1/5/2008 9:00	1/5/2008 16:00	**420**	Discharge						27,594	1
	1/8/2008 21:00	1/9/2008	**180**	Discharge						11,552	1
	1/10/2008 12:00	1/11/2008 23:00	**2100**	Discharge						122,406	1
	1/13/2008 10:00	1/13/2008 15:00	**300**	Discharge						23,365	1
	1/29/2008 2:00	1/29/2008 22:00	**1200**	Discharge						173,406	1
	1/31/2008 22:00	2/1/2008 7:00	**540**	Discharge						128,333	1
	2/4/2008 7:00	2/4/2008 9:00	**120**	Discharge						19,750	1
	2/5/2008 8:00	2/10/2008 11:00	**7380**	Discharge						654,885	1
	2/10/2008 22:00	2/11/2008 6:00	**480**	Discharge						2,771	1
	2/12/2008 6:00	2/14/2008 23:00	**3900**	Discharge						247,948	1
	2/15/2008 8:00	2/16/2008	**960**	Discharge						41,510	1
	2/16/2008 10:00	2/16/2008 23:00	**780**	Discharge						5,844	1
	2/17/2008 9:00	2/17/2008 23:00	**840**	Discharge						91,938	1
	2/21/2008 16:00	2/22/2008 21:00	**1740**	Discharge						147,292	1
	2/24/2008 19:00	2/24/2008 21:00	**120**	Discharge						7,313	1
	2/25/2008 11:00	2/25/2008 14:00	**180**	Discharge						21,156	1
	2/26/2008	2/26/2008 13:00	**780**	Discharge						106,052	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**4/25/2008 1:00**	4/25/2008 4:00	**180**	Discharge						10,740	1
	5/1/2008 6:00	5/2/2008 13:00	**1860**	Discharge						31,583	1
	5/6/2008 5:00	5/6/2008 10:00	**300**	Discharge						22,292	1
	5/6/2008 23:00	5/7/2008 1:00	**120**	Discharge						7,083	1
	5/9/2008 11:00	5/9/2008 13:00	**120**	Discharge						33,885	1
	5/9/2008 23:00	5/10/2008 1:00	**120**	Discharge						4,542	1
	5/12/2008 11:00	5/12/2008 15:00	**240**	Discharge						13,750	1
	5/13/2008 18:00	5/15/2008	**1800**	Discharge						58,781	1
	5/21/2008 19:00	5/21/2008 19:00	**0**	Discharge						5,990	1
	5/25/2008 5:00	5/25/2008 14:00	**540**	Discharge						64,656	1
	5/31/2008 12:00	5/31/2008 18:00	**360**	Discharge						271,052	1
	6/7/2008 7:00	6/7/2008 7:00	**0**	Discharge						1,125	1
	6/8/2008 13:00	6/8/2008 13:00	**0**	Discharge						354	1
	6/10/2008 12:00	6/10/2008 19:00	**420**	Discharge						11,302	1
	6/13/2008 3:00	6/13/2008 4:00	**60**	Discharge						2,219	1
	6/16/2008 12:00	6/17/2008	**720**	Discharge						90,823	1
	6/19/2008 5:00	6/19/2008 6:00	**60**	Discharge						38,927	1
	6/23/2008 3:00	6/23/2008 6:00	**180**	Discharge						98,552	1
	6/24/2008 7:00	6/24/2008 10:00	**180**	Discharge						198,448	1
	7/4/2008 4:00	7/4/2008 15:00	**660**	0.7	**258,274**	0.51	**0.27**	24	Atlas	180,792	1
	7/8/2008 16:00	7/8/2008 16:00	**0**	0.19	**94,846**	0.95	**0.11**	1	Atlas	18,021	1
	7/12/2008 21:00	7/12/2008 22:00	**60**	Discharge						7,125	1
	7/30/2008 9:00	7/30/2008 9:00	**0**	1.29	**258**	0.77	**0.50**	24	Atlas	333	1
	7/31/2008 1:00	7/31/2008 2:00	**60**	1.29	**23,207**	1.65	**0.50**	24	Atlas	29,938	1
	9/3/2008 9:00	9/3/2008 10:00	**60**	0.34	**13,388**	0.41	**0.23**	3	Atlas	4,552	1
	9/5/2008 5:00	9/5/2008 5:00	**0**	0.34	**827**	0.79	**0.13**	24	Atlas	281	1
	9/9/2008 8:00	9/9/2008 9:00	**60**	0.29	**72,522**	0.97	**0.13**	12	Atlas	21,031	1
	10/7/2008 15:30	10/7/2008 15:45	**15**	0.84	**47,383**	0.27	**0.32**	24	Atlas	39,802	1
	10/8/2008 1:00	10/8/2008 3:15	**135**	0.84	**131,436**	0.75	**0.32**	24	Atlas	110,406	1
	11/14/2008 23:15	11/15/2008 12:00	**765**	1.09	**692,737**	1.51	**0.44**	12	Atlas	755,083	1
	11/24/2008 3:15	11/24/2008 10:15	**420**	0.65	**710,417**	0.7	**0.32**	6	Atlas	461,771	1
	12/3/2008 23:30	12/4/2008 1:00	**90**	0.23	**898,143**	0.39	**0.12**	1	Atlas	206,573	1
	12/9/2008 11:15	12/9/2008 19:00	**465**	1.21	**2,210,856**	1.37	**0.57**	6	Atlas	2,675,135	1
	12/10/2008 4:45	12/10/2008 5:00	**15**	1.21	**22,374**	1.46	**0.57**	6	Atlas	27,073	1
	12/15/2008 8:45	12/15/2008 9:15	**30**	0.22	**110,843**	1.41	**0.09**	12	Atlas	24,385	1
	12/19/2008 6:15	12/19/2008 11:15	**300**	0.5	**1,242,292**	0.91	**0.27**	3	Atlas	621,146	1
	12/23/2008 21:30	12/24/2008 23:15	**1545**	2.12	**976,199**	2.76	**0.69**	24	Atlas	2,069,542	1
	12/28/2008 0:15	12/28/2008 3:30	**195**	0.51	**890,053**	2.65	**0.34**	3	Atlas	453,927	1
	1/3/2009 16:15	1/3/2009 17:15	**60**	0.15	**301,389**	0.6	**0.08**	3	Atlas	45,208	1
	1/6/2009 14:15	1/6/2009 20:45	**390**	0.18	**1,108,333**	0.4	**0.07**	12	Atlas	199,500	1
	1/10/2009 6:15	1/10/2009 10:15	**240**	0.47	**410,195**	1.08	**0.29**	3	Atlas	192,792	1
	1/27/2009 17:45	1/28/2009 17:30	**1425**	1.76	**536,979**	1.82	**0.57**	24	Atlas	945,083	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**2/1/2009 12:30**	2/1/2009 18:15	**345**	Discharge						280,958	1
	2/10/2009 5:15	2/10/2009 6:30	**75**	0.92	**52,321**	0.34	**0.31**	24	Atlas	48,135	1
	2/10/2009 18:15	2/10/2009 20:45	**150**	0.92	**55,174**	0.78	**0.31**	24	Atlas	50,760	1
	2/11/2009 5:00	2/11/2009 17:30	**750**	0.92	**309,828**	1.12	**0.31**	24	Atlas	285,042	1
	2/18/2009 4:15	2/18/2009 6:00	**105**	0.21	**169,246**	0.46	**0.11**	1	Atlas	35,542	1
	2/21/2009 14:15	2/21/2009 15:45	**90**	0.23	**274,185**	0.48	**0.10**	6	Atlas	63,063	1
	2/26/2009 8:15	2/26/2009 10:45	**150**	0.25	**122,625**	0.46	**0.14**	6	Atlas	30,656	1
	2/27/2009	2/27/2009 9:30	**570**	0.78	**199,599**	1.26	**0.45**	3	Atlas	155,688	1
	3/28/2009 20:30	3/28/2009 21:45	**75**	0.48	**240,430**	1.02	**0.31**	1	Atlas	115,406	1
	4/2/2009 19:15	4/3/2009 5:45	**630**	1.03	**2,553,044**	1.59	**0.47**	12	Atlas	2,629,635	1
	4/5/2009 17:15	4/5/2009 19:30	**135**	0.3	**445,035**	1.38	**0.19**	3	Atlas	133,510	1
	4/10/2009 11:30	4/10/2009 21:45	**615**	0.34	**355,852**	0.69	**0.14**	12	Atlas	120,990	1
	4/13/2009 16:00	4/13/2009 23:00	**420**	0.82	**290,028**	1.24	**0.37**	12	Atlas	237,823	1
	4/19/2009 7:45	4/20/2009 0:45	**1020**	1.31	**1,998,322**	2.17	**0.50**	24	Atlas	2,617,802	1
	4/28/2009 8:30	4/28/2009 10:15	**105**	0.24	**942,969**	0.25	**0.14**	3	Atlas	226,313	1
	5/1/2009 1:15	5/1/2009 2:30	**75**	0.03	**8,344,444**	0.37	**0.02**	1	Atlas	250,333	1
	5/1/2009 19:15	5/1/2009 23:45	**270**	Discharge						263,979	1
	5/2/2009 18:30	5/2/2009 18:30	**0**	Discharge						7,583	1
	5/3/2009 20:15	5/3/2009 22:15	**120**	Discharge						6,219	1
	5/6/2009 10:45	5/6/2009 13:15	**150**	Discharge						658,583	1
	5/8/2009 3:15	5/8/2009 5:15	**120**	Discharge						222,583	1
	5/8/2009 14:00	5/9/2009 23:00	**1980**	Discharge						1,768,917	1
	5/10/2009 22:45	5/10/2009 22:45	**0**	Discharge						1,438	1
	5/14/2009 5:45	5/14/2009 8:00	**135**	Discharge						127,896	1
	5/16/2009 4:45	5/16/2009 6:00	**75**	Discharge						89,729	1
	5/23/2009 14:30	5/23/2009 15:15	**45**	Discharge						101,813	1
	5/25/2009 3:15	5/25/2009 7:15	**240**	Discharge						192,677	1
	5/27/2009 12:45	5/27/2009 15:00	**135**	Discharge						140,240	1
	6/4/2009 11:00	6/4/2009 11:45	**45**	0.24	**142,318**	0.38	**0.11**	12	Atlas	34,156	1
	6/10/2009 9:45	6/10/2009 13:45	**240**	0.84	**170,114**	1.16	**0.43**	3	Atlas	142,896	1
	6/11/2009 2:30	6/11/2009 6:15	**225**	1.34	**122,816**	2.09	**0.57**	3	Atlas	164,573	1
	6/11/2009 17:30	6/11/2009 22:00	**270**	1.34	**102,052**	2.24	**0.57**	3	Atlas	136,750	1
	6/16/2009 9:00	6/16/2009 17:15	**495**	1.23	**299,433**	3.93	**0.89**	1	Atlas	368,302	1
	6/18/2009 9:45	6/18/2009 18:45	**540**	1.43	**410,300**	3.57	**0.90**	1	Atlas	586,729	1
	6/20/2009 4:15	6/20/2009 5:00	**45**	0.14	**151,948**	3.31	**0.11**	1	Atlas	21,273	1
	6/21/2009 10:15	6/21/2009 10:30	**15**	0.11	**26,789**	3.33	**0.07**	1	Atlas	2,947	1
	6/22/2009 10:15	6/22/2009 11:30	**75**	1.01	**36,406**	4.27	**0.71**	1	Atlas	36,770	1
	6/26/2009 4:00	6/26/2009 6:30	**150**	1.33	**69,595**	2.59	**0.61**	12	Atlas	92,561	1
	7/8/2009 6:30	7/8/2009 7:00	**30**	0.13	**153,580**	0.47	**0.11**	1	Atlas	19,965	1
	7/15/2009 10:30	7/15/2009 12:00	**90**	0.36	**116,444**	0.4	**0.23**	3	Atlas	41,920	1
	7/17/2009 3:45	7/17/2009 4:45	**60**	0.38	**56,646**	0.77	**0.25**	3	Atlas	21,526	1
	7/22/2009 6:15	7/22/2009 20:00	**825**	1.55	**380,585**	2.29	**0.67**	12	Atlas	589,907	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**7/25/2009 6:15**	7/25/2009 22:30	**975**	0.84	**514,370**	2.39	**0.32**	24	Atlas	432,071	1
	7/28/2009 13:30	7/28/2009 14:15	**45**	2.11	**25,502**	2.6	**0.97**	6	Atlas	53,808	1
	7/28/2009 23:45	7/29/2009 23:15	**1410**	2.11	**5,694,028**	4.47	**0.97**	6	Atlas	12,014,399	1
	7/30/2009 17:00	8/1/2009	**1860**	1.61	**6,387,708**	4.57	**0.69**	6	Atlas	10,284,209	1
	8/4/2009 7:15	8/7/2009 20:00	**5085**	5.23	**5,851,920**	8.98	**341.58**	3	Cloudburst	30,605,542	1
	8/10/2009 18:45	8/11/2009 12:15	**1050**	1.3	**4,994,974**	6.53	**0.83**	3	Atlas	6,493,467	1
	8/20/2009 9:15	8/20/2009 10:00	**45**	0.27	**430,973**	0.28	**0.18**	3	Atlas	116,363	1
	8/29/2009 0:30	8/29/2009 0:45	**15**	0.08	**369,733**	0.53	**0.06**	1	Atlas	29,579	1
	9/6/2009 1:45	9/6/2009 2:15	**30**	0.29	**45,374**	0.32	**0.19**	3	Atlas	13,159	1
	9/7/2009 7:00	9/7/2009 7:30	**30**	0.37	**55,532**	0.69	**0.22**	1	Atlas	20,547	1
	9/20/2009 6:00	9/21/2009 9:45	**1665**	3.69	**206,953**	3.71	**4.40**	24	Cloudburst	763,655	1
	9/22/2009 19:00	9/23/2009 1:15	**375**	0.62	**129,102**	4.33	**0.32**	6	Atlas	80,043	1
	9/24/2009 7:30	9/25/2009 6:30	**1380**	0.82	**209,240**	5.11	**0.27**	24	Atlas	171,577	1
	9/26/2009 21:30	9/27/2009 0:45	**195**	0.34	**220,184**	5.51	**0.28**	1	Atlas	74,862	1
	10/2/2009 3:30	10/2/2009 8:15	**285**	0.8	**238,192**	1.26	**0.50**	3	Atlas	190,554	1
	10/6/2009 10:30	10/6/2009 12:00	**90**	0.1	**999,123**	0.9	**0.07**	3	Atlas	99,912	1
	10/8/2009 13:00	10/10/2009 19:00	**3240**	2.21	**642,931**	3.12	**0.73**	24	Atlas	1,420,878	1
	10/14/2009 5:15	10/14/2009 13:30	**495**	0.72	**329,330**	2.93	**0.47**	3	Atlas	237,118	1
	10/15/2009 4:15	10/15/2009 7:00	**165**	0.15	**762,927**	3.03	**0.10**	3	Atlas	114,439	1
	10/23/2009 2:15	10/23/2009 11:15	**540**	0.56	**503,724**	0.59	**0.24**	12	Atlas	282,086	1
	10/27/2009 15:30	10/28/2009 3:00	**690**	1.09	**236,373**	1.65	**0.49**	12	Atlas	257,647	1
	10/30/2009 19:15	10/31/2009 20:45	**1530**	0.96	**708,483**	2.07	**0.44**	12	Atlas	680,143	1
	11/17/2009 6:45	11/17/2009 23:00	**975**	1.02	**1,309,468**	1.02	**0.39**	24	Atlas	1,335,657	1
	12/2/2009 16:30	12/2/2009 16:45	**15**	0.3	**23,980**	0.48	**0.14**	12	Atlas	7,194	1
	12/8/2009 0:30	12/8/2009 0:45	**15**	Discharge						8,447	1
	12/8/2009 13:15	12/9/2009 1:15	**720**	1.74	**401,012**	1.94	**0.72**	12	Atlas	697,761	1
	12/25/2009 10:45	12/25/2009 11:30	**45**	0.27	**112,580**	0.68	**0.10**	24	Atlas	30,397	1
	12/31/2009 0:45	12/31/2009 1:15	**30**	0.07	**643,096**	0.52	**0.04**	3	Atlas	45,017	1
	1/17/2010 10:45	1/17/2010 12:45	**120**	0.27	**44,187**	0.27	**0.12**	12	Atlas	11,930	1
	1/20/2010 9:45	1/20/2010 13:00	**195**	1.36	**384,306**	0.64	**0.44**	48	Atlas	522,656	1
	1/21/2010 0:15	1/21/2010 1:00	**45**	1.36	**77,375**	0.76	**0.44**	48	Atlas	105,230	1
	1/21/2010 10:15	1/22/2010 17:00	**1845**	1.36	**1,574,778**	1.64	**0.44**	48	Atlas	2,141,699	1
	1/24/2010 3:45	1/26/2010 9:45	**3240**	0.81	**2,661,609**	2.58	**0.31**	24	Atlas	2,155,903	1
	2/5/2010 6:00	2/6/2010 17:30	**2130**	1.21	**4,604,569**	1.37	**0.44**	12	Atlas	5,571,529	1
	3/12/2010 13:30	3/12/2010 15:00	**90**	0.25	**606,033**	0.26	**0.16**	3	Atlas	151,508	1
	3/21/2010 19:30	3/22/2010 2:00	**390**	0.51	**463,144**	0.51	**0.23**	12	Atlas	236,203	1
	3/25/2010 14:00	3/26/2010 1:00	**660**	0.48	**295,247**	1.01	**0.25**	1	Atlas	141,718	1
	3/28/2010 21:15	3/28/2010 21:30	**15**	0.19	**17,139**	0.91	**0.07**	24	Atlas	3,256	1
	4/3/2010 10:30	4/3/2010 10:30	**0**	0.08	**2,983**	0.27	**0.05**	3	Atlas	239	1
	4/7/2010 23:30	4/8/2010 8:15	**525**	1.16	**680,155**	1.25	**0.55**	6	Atlas	788,979	1
	4/24/2010 3:45	4/24/2010 3:45	**0**	1.82	**522**	0.34	**0.86**	6	Atlas	949	1
	4/24/2010 14:45	4/24/2010 23:30	**525**	1.82	**1,567,877**	2.05	**0.86**	6	Atlas	2,853,536	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**4/25/2010 17:45**	4/25/2010 18:15	**30**	0.17	**54,384**	2.2	**0.09**	3	Atlas	9,245	1
	4/27/2010 7:45	4/27/2010 11:30	**225**	0.32	**1,365,952**	2.54	**0.15**	6	Atlas	437,105	1
	5/1/2010 4:45	5/6/2010 22:30	**8265**	3.88	**4,431,947**	6.08	**2.66**	48	Cloudburst	17,195,953	1
	5/7/2010 11:15	5/7/2010 12:15	**60**	Discharge						4,067	1
	5/7/2010 23:15	5/8/2010 0:15	**60**	0.3	**501,890**	4.2	**0.24**	1	Atlas	150,567	1
	5/12/2010 9:45	5/12/2010 12:00	**135**	0.66	**1,692,712**	1.03	**0.50**	1	Atlas	1,117,190	1
	5/16/2010 9:30	5/16/2010 20:00	**630**	0.49	**1,831,050**	1.32	**0.22**	12	Atlas	897,215	1
	5/17/2010 19:45	5/17/2010 21:15	**90**	0.6	**2,554,599**	1.91	**0.40**	1	Atlas	1,532,760	1
	5/21/2010 19:45	5/21/2010 23:00	**195**	0.99	**1,214,030**	2.1	**0.65**	3	Atlas	1,201,889	1
	5/30/2010 16:00	5/30/2010 17:15	**75**	0.41	**724,195**	0.38	**0.24**	1	Atlas	296,920	1
	6/9/2010 3:15	6/9/2010 14:30	**675**	2.11	**420,545**	2.24	**1.83**	3	Atlas	887,350	1
	6/13/2010 22:45	6/14/2010 7:00	**495**	0.6	**1,971,180**	3.03	**0.28**	1	Atlas	1,182,708	1
	6/15/2010 21:00	6/15/2010 21:30	**30**	0.55	**305,333**	3.62	**0.37**	1	Atlas	167,933	1
	6/19/2010 5:15	6/19/2010 10:00	**285**	0.96	**2,680,148**	2.17	**0.56**	3	Atlas	2,572,942	1
	6/28/2010 1:45	6/28/2010 3:15	**90**	0.45	**260,214**	0.44	**0.33**	1	Atlas	117,096	1
	7/9/2010 8:45	7/9/2010 9:00	**15**	0.52	**37,071**	0.45	**0.20**	24	Atlas	19,277	1
	7/13/2010 4:30	7/13/2010 12:00	**450**	1.66	**3,312,481**	2.18	**0.76**	12	Atlas	5,498,719	1
	7/19/2010 19:00	7/19/2010 20:00	**60**	0.94	**318,943**	2.07	**0.47**	1	Atlas	299,806	1
	7/20/2010 4:45	7/20/2010 6:45	**120**	0.94	**2,232,292**	2.38	**0.47**	1	Atlas	2,098,355	1
	7/21/2010 6:00	7/21/2010 6:45	**45**	0.45	**649,919**	1.56	**0.36**	1	Atlas	292,463	1
	7/27/2010 16:00	7/27/2010 16:45	**45**	0.64	**1,260,604**	1.15	**0.41**	3	Atlas	806,787	1
	7/28/2010 16:15	7/28/2010 16:45	**30**	0.14	**681,518**	0.85	**0.10**	1	Atlas	95,413	1
	7/31/2010 4:45	7/31/2010 6:30	**105**	0.35	**1,734,364**	1.14	**0.19**	3	Atlas	607,027	1
	8/5/2010 9:15	8/5/2010 9:45	**30**	0.22	**782,753**	0.66	**0.17**	1	Atlas	172,206	1
	8/14/2010 16:30	8/14/2010 18:00	**90**	0.74	**1,031,543**	1.04	**0.57**	1	Atlas	763,342	1
	8/21/2010 7:00	8/21/2010 9:00	**120**	0.39	**1,361,335**	1.35	**0.24**	3	Atlas	530,920	1
	9/11/2010 5:00	9/11/2010 5:15	**15**	0.05	**555,986**	0.12	**0.03**	3	Atlas	27,799	1
	10/13/2010 18:15	10/13/2010 21:15	**180**	0.51	**239,282**	0.54	**0.33**	3	Atlas	122,034	1
	10/26/2010 11:15	10/26/2010 11:45	**30**	0.72	**113,991**	0.45	**0.39**	6	Atlas	82,074	1
	11/16/2010 10:45	11/16/2010 20:45	**600**	0.71	**458,707**	0.81	**0.32**	12	Atlas	325,682	1
	11/23/2010 2:15	11/23/2010 4:30	**135**	0.3	**120,970**	1.05	**0.17**	3	Atlas	36,291	1
	11/24/2010 12:45	11/24/2010 21:15	**510**	0.78	**99,158**	1.14	**0.37**	3	Atlas	77,344	1
	11/25/2010 9:15	11/26/2010 0:45	**930**	2.38	**302,736**	3.43	**0.91**	24	Atlas	720,512	1
	11/29/2010 20:45	11/30/2010 14:00	**1035**	1.6	**434,641**	5.03	**0.62**	24	Atlas	695,425	1
	12/30/2010 3:30	12/30/2010 8:30	**300**	0.51	**75,175**	0.58	**0.23**	12	Atlas	38,339	1
	1/1/2011 4:45	1/1/2011 7:45	**180**	0.54	**535,081**	1	**0.24**	12	Atlas	288,944	1
	2/1/2011 16:45	2/1/2011 21:00	**255**	0.93	**390,199**	0.85	**0.36**	6	Atlas	362,885	1
	2/7/2011 13:00	2/7/2011 13:30	**30**	0.21	**41,835**	1.29	**0.08**	12	Atlas	8,785	1
	2/21/2011 18:30	2/21/2011 19:00	**30**	0.2	**97,155**	0.22	**0.12**	1	Atlas	19,431	1
	2/24/2011 17:00	2/25/2011 18:15	**1515**	2.19	**3,251,641**	2.42	**0.84**	24	Atlas	7,121,094	1
	2/28/2011 5:00	2/28/2011 15:30	**630**	1.37	**902,760**	3.92	**0.67**	6	Atlas	1,236,781	1
	3/4/2011 21:45	3/5/2011 20:00	**1335**	0.94	**3,236,634**	2.47	**0.32**	24	Atlas	3,042,436	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**3/8/2011 20:45**	3/17/2011 13:30	**12525**	3.04	**25,207,302**	4.76	**1.82**	24	Cloudburst	76,630,198	1
	3/18/2011 21:15	3/19/2011 11:45	**870**	0.17	**2,045,453**	0.93	**0.10**	1	Atlas	347,727	1
	4/1/2011 21:00	4/1/2011 21:15	**15**	0.16	**14,091**	0.32	**0.10**	1	Atlas	2,255	1
	4/4/2011 13:30	4/4/2011 17:30	**240**	0.83	**967,114**	1.02	**0.42**	6	Atlas	802,704	1
	4/9/2011 10:30	4/9/2011 12:15	**105**	0.55	**223,009**	1.43	**0.38**	1	Atlas	122,655	1
	4/11/2011 10:30	4/13/2011 15:00	**3150**	3.03	**2,695,793**	4.41	**1.88**	24	Cloudburst	8,168,251	1
	4/14/2011 1:30	4/14/2011 1:30	**0**	Discharge						75,711	1
	4/14/2011 10:00	4/14/2011 13:45	**225**	Discharge						137,537	1
	4/15/2011 1:45	4/16/2011 16:15	**2310**	Discharge						1,683,560	1
	4/20/2011 0:15	5/6/2011 14:00	**23865**	0.76	**384,356,584**	12.57	**0.42**	6	Atlas	292,111,004	1
	5/8/2011 0:45	5/8/2011 2:15	**90**	0.18	**1,766,803**	3.55	**0.09**	3	Atlas	318,024	1
	5/14/2011 15:00	5/14/2011 15:15	**15**	0.12	**463,232**	0.31	**0.08**	1	Atlas	55,588	1
	5/21/2011 18:30	5/21/2011 19:45	**75**	0.4	**325,367**	0.75	**0.29**	1	Atlas	130,147	1
	5/23/2011 4:15	5/23/2011 5:00	**45**	0.36	**157,442**	0.85	**0.25**	1	Atlas	56,679	1
	5/23/2011 17:45	5/23/2011 22:00	**255**	0.96	**316,318**	1.83	**0.62**	3	Atlas	303,666	1
	5/25/2011 23:00	5/26/2011 13:30	**870**	1.32	**540,746**	2.91	**0.51**	24	Atlas	713,785	1
	6/11/2011 4:45	6/11/2011 5:15	**30**	0.24	**184,200**	0.28	**0.20**	1	Atlas	44,208	1
	6/15/2011 9:30	6/15/2011 11:15	**105**	1.01	**3,725,982**	1.31	**0.64**	1	Atlas	3,763,242	1
	6/18/2011 6:45	6/18/2011 9:00	**135**	0.79	**414,082**	1.83	**0.47**	3	Atlas	327,125	1
	6/19/2011 7:45	6/19/2011 9:30	**105**	0.46	**322,477**	2.29	**0.28**	3	Atlas	148,339	1
	6/20/2011 1:30	6/20/2011 2:30	**60**	0.49	**1,539,679**	2.78	**0.42**	1	Atlas	754,443	1
	6/21/2011 14:30	6/21/2011 17:00	**150**	0.28	**259,478**	3.02	**0.16**	3	Atlas	72,654	1
	6/22/2011 19:45	6/23/2011 19:00	**1395**	3.91	**6,021,230**	5.93	**26.28**	3	Cloudburst	23,543,010	1
	6/26/2011 2:30	6/26/2011 5:15	**165**	0.3	**84,558**	5.38	**0.16**	6	Atlas	25,367	1
	7/8/2011 3:45	7/8/2011 5:15	**90**	0.37	**130,561**	0.63	**0.19**	3	Atlas	48,308	1
	7/12/2011 17:45	7/12/2011 18:15	**30**	0.41	**220,488**	0.76	**0.21**	6	Atlas	90,400	1
	7/19/2011 22:30	7/20/2011	**90**	1.6	**930,863**	1.66	**1.17**	1	Atlas	1,489,381	1
	8/7/2011 3:15	8/7/2011 7:00	**225**	1.89	**1,444,230**	1.95	**1.50**	3	Atlas	2,729,594	1
	8/13/2011 17:15	8/13/2011 18:00	**45**	0.84	**151,093**	2.92	**0.67**	1	Atlas	126,918	1
	8/18/2011 8:15	8/18/2011 8:45	**30**	0.57	**959,031**	1.4	**0.48**	1	Atlas	546,648	1
	9/4/2011 21:00	9/4/2011 21:15	**15**	0.11	**130,821**	0.08	**0.04**	24	Atlas	14,390	1
	9/10/2011 20:30	9/10/2011 20:30	**0**	0.03	**184,784**	0.33	**0.02**	3	Atlas	5,544	1
	9/11/2011 19:30	9/11/2011 21:00	**90**	0.33	**274,309**	0.61	**0.21**	3	Atlas	90,522	1
	9/19/2011 7:00	9/19/2011 8:15	**75**	0.74	**649,548**	0.6	**0.30**	12	Atlas	480,666	1
	9/23/2011 2:45	9/23/2011 8:15	**330**	0.82	**147,845**	1.6	**0.38**	12	Atlas	121,233	1
	9/25/2011 20:00	9/26/2011 11:00	**900**	3.32	**1,416,664**	5.04	**5.96**	12	Cloudburst	4,703,324	1
	10/13/2011 7:30	10/13/2011 8:30	**60**	0.47	**437,599**	0.35	**0.25**	3	Atlas	205,672	1
	10/27/2011	10/27/2011 5:15	**315**	0.99	**292,900**	1.39	**0.42**	6	Atlas	289,971	1
	11/3/2011 9:30	11/3/2011 11:45	**135**	0.65	**379,105**	0.5	**0.29**	3	Atlas	246,418	1
	11/14/2011 21:30	11/15/2011 15:00	**1050**	2.06	**157,220**	1.52	**0.67**	48	Atlas	323,873	1
	11/16/2011 5:30	11/16/2011 11:30	**360**	2.06	**140,062**	2.04	**0.67**	48	Atlas	288,528	1
	11/20/2011 17:30	11/20/2011 18:45	**75**	0.82	**74,537**	2.57	**0.28**	24	Atlas	61,121	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**11/21/2011 4:15**	11/21/2011 9:00	**285**	0.82	**87,980**	2.86	**0.28**	24	Atlas	72,144	1
	11/22/2011 0:15	11/22/2011 12:45	**750**	1	**702,500**	3.4	**0.43**	6	Atlas	702,500	1
	11/27/2011 6:15	11/30/2011 3:15	**4140**	3.07	**5,441,493**	4.88	**0.95**	48	Atlas	16,705,383	1
	12/4/2011 16:30	12/7/2011 2:15	**3465**	3.04	**8,288,664**	5.54	**0.99**	48	Atlas	25,197,539	1
	12/15/2011 4:00	12/15/2011 8:15	**255**	0.47	**1,259,822**	0.44	**0.23**	6	Atlas	592,117	1
	12/21/2011 5:15	12/21/2011 7:45	**150**	0.63	**3,173,591**	1.12	**0.29**	12	Atlas	1,999,363	1
	12/22/2011 11:45	12/22/2011 18:30	**405**	0.6	**2,675,660**	1.2	**0.27**	12	Atlas	1,605,396	1
	12/27/2011 3:00	12/27/2011 14:00	**660**	0.75	**1,855,356**	1.97	**0.30**	12	Atlas	1,391,517	1
	1/11/2012 5:00	1/11/2012 11:30	**390**	0.85	**648,204**	0.72	**0.34**	6	Atlas	550,974	1
	1/11/2012 20:30	1/11/2012 20:45	**15**	0.85	**9,229**	0.84	**0.34**	6	Atlas	7,844	1
	1/17/2012 4:15	1/17/2012 12:45	**510**	0.36	**953,545**	1.31	**0.17**	12	Atlas	343,276	1
	1/23/2012 2:45	1/23/2012 5:15	**150**	0.76	**145,795**	1.12	**0.39**	3	Atlas	110,804	1
	1/25/2012 18:45	1/25/2012 19:45	**60**	1.82	**18,422**	1.04	**0.60**	24	Atlas	33,528	1
	1/26/2012 5:30	1/26/2012 8:30	**180**	1.82	**722,381**	1.51	**0.60**	24	Atlas	1,314,734	1
	1/26/2012 17:45	1/28/2012 3:00	**1995**	1.82	**1,972,608**	2.6	**0.60**	24	Atlas	3,590,147	1
	2/4/2012 9:45	2/4/2012 12:15	**150**	0.39	**379,536**	0.44	**0.21**	3	Atlas	148,019	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.16	**834,698**	0.43	**0.12**	1	Atlas	133,552	1
	2/29/2012 4:30	2/29/2012 9:30	**300**	0.51	**159,095**	0.63	**0.23**	12	Atlas	81,138	1
	3/8/2012 10:30	3/8/2012 17:45	**435**	0.75	**340,836**	1.03	**0.36**	6	Atlas	255,627	1
	3/15/2012 19:00	3/16/2012 4:00	**540**	0.95	**840,511**	1.17	**0.42**	12	Atlas	798,486	1
	3/17/2012 18:45	3/17/2012 22:45	**240**	1.08	**59,173**	2.19	**0.68**	1	Atlas	63,907	1
	3/23/2012 5:15	3/24/2012 0:30	**1155**	1.5	**1,519,776**	2.58	**0.57**	24	Atlas	2,279,663	1
	3/28/2012 14:30	3/28/2012 15:00	**30**	0.07	**1,297,446**	1.57	**0.06**	1	Atlas	90,821	1
	3/31/2012	3/31/2012 0:30	**30**	0.16	**46,674**	0.23	**0.10**	3	Atlas	7,468	1
	4/1/2012 7:30	4/1/2012 15:00	**450**	1.18	**3,808,894**	1.42	**0.63**	6	Atlas	4,494,495	1
	4/4/2012 16:15	4/4/2012 17:45	**90**	0.23	**887,484**	1.51	**0.11**	12	Atlas	204,121	1
	4/16/2012 7:00	4/16/2012 7:15	**15**	0.15	**281,513**	0.28	**0.09**	3	Atlas	42,227	1
	4/28/2012 19:15	4/29/2012 0:30	**315**	0.7	**836,746**	0.83	**0.50**	1	Atlas	585,722	1
	4/30/2012 18:00	4/30/2012 18:45	**45**	0.45	**919,573**	1.22	**0.30**	3	Atlas	413,808	1
	5/4/2012 23:45	5/5/2012 5:15	**330**	1.42	**716,804**	2.6	**0.79**	3	Atlas	1,017,861	1
	5/13/2012 2:00	5/13/2012 16:30	**870**	1.97	**1,521,399**	2.02	**0.77**	12	Atlas	2,997,155	1
	5/16/2012 17:45	5/16/2012 18:45	**60**	0.26	**3,270,029**	2.23	**0.21**	1	Atlas	850,208	1
	5/29/2012 6:45	5/29/2012 15:00	**495**	2.22	**658,680**	2.22	**4.14**	3	Atlas	1,462,270	1
	5/31/2012 18:45	6/1/2012 6:15	**690**	1.24	**217,682**	3.43	**0.54**	12	Atlas	269,925	1
	6/17/2012 12:00	6/17/2012 14:45	**165**	0.48	**213,932**	0.77	**0.31**	1	Atlas	102,687	1
	7/1/2012 20:00	7/1/2012 20:30	**30**	0.39	**379,347**	0.32	**0.27**	1	Atlas	147,945	1
	7/14/2012 12:30	7/14/2012 15:00	**150**	0.81	**1,216,507**	0.93	**0.51**	3	Atlas	985,370	1
	7/18/2012 16:15	7/18/2012 18:00	**105**	Discharge						397,331	1
	7/19/2012 18:15	7/19/2012 19:30	**75**	0.57	**3,185,487**	1.4	**0.46**	1	Atlas	1,815,728	1
	7/26/2012 21:30	7/26/2012 22:00	**30**	0.2	**1,069,689**	0.26	**0.11**	1	Atlas	213,938	1
	7/27/2012 20:00	7/27/2012 21:15	**75**	0.62	**1,793,926**	0.92	**0.41**	3	Atlas	1,112,234	1
	8/5/2012 23:15	8/5/2012 23:30	**15**	0.08	**762,268**	0.39	**0.06**	1	Atlas	60,981	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**8/16/2012 20:15**	8/16/2012 23:45	**210**	0.55	**856,077**	0.67	**0.33**	3	Atlas	470,842	1
	8/21/2012 14:00	8/21/2012 14:15	**15**	0.09	**99,537**	0.65	**0.07**	1	Atlas	8,958	1
	9/1/2012 15:15	9/1/2012 18:00	**165**	1	**255,963**	0.34	**0.32**	48	Atlas	255,963	1
	9/2/2012 12:00	9/2/2012 22:30	**630**	1	**666,842**	1.02	**0.32**	48	Atlas	666,842	1
	9/5/2012 15:45	9/5/2012 17:15	**90**	0.84	**144,816**	1.96	**0.67**	1	Atlas	121,646	1
	9/7/2012 23:15	9/8/2012 7:15	**480**	1.21	**257,182**	3.16	**0.67**	3	Atlas	311,190	1
	9/25/2012 9:30	9/25/2012 9:45	**15**	0.43	**30,679**	0.33	**0.23**	6	Atlas	13,192	1
	9/26/2012 0:15	9/26/2012 6:00	**345**	0.4	**155,772**	0.76	**0.18**	12	Atlas	62,309	1
	9/26/2012 20:00	9/27/2012 1:45	**345**	1.61	**360,150**	2.42	**0.86**	6	Atlas	579,842	1
	10/1/2012 14:45	10/1/2012 19:45	**300**	0.76	**610,512**	3.17	**0.32**	12	Atlas	463,989	1
	10/18/2012 1:30	10/18/2012 2:00	**30**	0.22	**110,779**	0.38	**0.14**	3	Atlas	24,371	1
	10/26/2012 14:45	10/26/2012 16:15	**90**	0.75	**145,638**	0.65	**0.34**	6	Atlas	109,228	1
	12/2/2012 11:45	12/2/2012 11:45	**0**	0.21	**27,543**	0.27	**0.13**	1	Atlas	5,784	1
	12/4/2012 15:30	12/4/2012 19:15	**225**	0.52	**324,309**	0.73	**0.33**	3	Atlas	168,641	1
	12/7/2012 4:15	12/7/2012 18:30	**855**	1.12	**867,572**	1.85	**0.47**	12	Atlas	971,680	1
	12/8/2012 5:45	12/8/2012 6:45	**60**	0.4	**398,848**	2.14	**0.21**	6	Atlas	159,539	1
	12/10/2012 0:15	12/10/2012 1:15	**60**	1.17	**32,480**	3.1	**0.56**	3	Atlas	38,002	1
	12/15/2012 11:30	12/15/2012 12:30	**60**	0.17	**199,595**	1.34	**0.10**	3	Atlas	33,931	1
	12/17/2012 17:15	12/17/2012 17:30	**15**	0.18	**44,066**	0.34	**0.08**	6	Atlas	7,932	1
	12/20/2012 6:45	12/20/2012 12:45	**360**	0.65	**184,300**	1	**0.36**	6	Atlas	119,795	1
	12/26/2012 5:15	12/26/2012 12:15	**420**	0.79	**523,637**	1.49	**0.31**	12	Atlas	413,673	1
	1/11/2013 5:45	1/11/2013 8:15	**150**	0.61	**305,307**	0.76	**0.33**	6	Atlas	186,237	1
	1/13/2013 3:15	1/14/2013 9:45	**1830**	2.12	**967,300**	2.87	**0.81**	24	Atlas	2,050,676	1
	1/30/2013 4:45	1/30/2013 9:45	**300**	0.93	**402,721**	1.16	**0.47**	6	Atlas	374,530	1
	1/30/2013 18:00	1/30/2013 18:00	**0**	0.93	**2,027**	1.22	**0.47**	6	Atlas	1,885	1
	2/22/2013 0:30	2/22/2013 1:30	**60**	0.4	**545,744**	0.71	**0.18**	12	Atlas	218,298	1
	2/26/2013 13:45	2/26/2013 20:00	**375**	0.64	**192,360**	1.02	**0.25**	24	Atlas	123,110	1
	3/5/2013 16:30	3/5/2013 18:45	**135**	0.44	**164,445**	0.56	**0.17**	24	Atlas	72,356	1
	3/11/2013 3:45	3/11/2013 13:45	**600**	1.01	**281,196**	1.48	**0.41**	12	Atlas	284,008	1
	3/17/2013 10:45	3/18/2013 13:00	**1575**	1.75	**596,445**	2.77	**0.57**	48	Atlas	1,043,779	1
	3/24/2013 8:00	3/24/2013 17:15	**555**	0.45	**500,246**	1.74	**0.17**	24	Atlas	225,111	1
	4/11/2013 5:45	4/12/2013 1:30	**1185**	1.21	**428,190**	1.21	**0.47**	24	Atlas	518,110	1
	4/16/2013 20:30	4/16/2013 21:15	**45**	0.55	**248,803**	1.72	**0.43**	1	Atlas	136,841	1
	4/19/2013 1:45	4/19/2013 5:45	**240**	0.87	**1,447,031**	1.43	**0.48**	6	Atlas	1,258,917	1
	4/24/2013 7:15	4/24/2013 10:45	**210**	0.68	**1,953,033**	1.59	**0.37**	3	Atlas	1,328,062	1
	4/28/2013 9:15	4/28/2013 9:15	**0**	0.01	**94,099**	0.77	**0.01**	1	Atlas	941	1
	5/4/2013 21:15	5/5/2013 9:00	**705**	1.33	**601,423**	1.24	**0.40**	24	Atlas	799,892	1
	5/6/2013 17:30	5/6/2013 17:30	**0**	1.33	**3,427**	1.43	**0.40**	24	Atlas	4,558	1
	5/10/2013 12:30	5/11/2013 1:00	**750**	0.87	**1,273,996**	2.34	**0.38**	6	Atlas	1,108,376	1
	5/16/2013 10:30	5/16/2013 11:00	**30**	0.2	**476,042**	1.11	**0.17**	1	Atlas	95,208	1
	5/22/2013 16:00	5/22/2013 17:45	**105**	0.19	**1,072,055**	0.4	**0.13**	3	Atlas	203,691	1
	5/31/2013 18:45	5/31/2013 18:45	**0**	0.27	**45,678**	0.36	**0.12**	12	Atlas	12,333	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**6/10/2013 0:15**	6/10/2013 1:00	**45**	0.31	**530,787**	0.25	**0.14**	6	Atlas	164,544	1
	6/16/2013 17:00	6/16/2013 18:00	**60**	0.44	**291,935**	0.73	**0.29**	1	Atlas	128,452	1
	6/17/2013 16:30	6/17/2013 22:30	**360**	1.38	**2,801,176**	1.79	**0.77**	1	Atlas	3,865,623	1
	6/21/2013 19:00	6/21/2013 19:30	**30**	0.16	**1,519,287**	2	**0.11**	1	Atlas	243,086	1
	6/23/2013 12:00	6/23/2013 12:15	**15**	0.48	**13,886**	2.34	**0.37**	1	Atlas	6,665	1
	6/26/2013 3:30	6/26/2013 5:45	**135**	3.29	**285,756**	1.4	**4.06**	1	Atlas	940,138	1
	6/26/2013 16:15	6/27/2013 14:00	**1305**	3.29	**1,683,002**	4	**4.06**	1	Atlas	5,537,075	1
	6/29/2013 19:45	6/29/2013 22:30	**165**	0.45	**1,267,546**	4.28	**0.24**	6	Atlas	570,396	1
	6/30/2013 19:00	6/30/2013 19:00	**0**	0.24	**138,027**	4.05	**0.19**	1	Atlas	33,126	1
	7/1/2013 19:15	7/1/2013 19:30	**15**	0.21	**516,006**	4.19	**0.11**	3	Atlas	108,361	1
	7/2/2013 13:30	7/2/2013 13:45	**15**	0.12	**118,068**	4.32	**0.10**	1	Atlas	14,168	1
	7/4/2013 7:30	7/4/2013 14:30	**420**	0.51	**756,588**	1.46	**0.22**	12	Atlas	385,860	1
	7/6/2013 1:15	7/6/2013 9:15	**480**	0.68	**1,553,954**	2.22	**0.30**	12	Atlas	1,056,689	1
	7/10/2013 14:15	7/10/2013 15:30	**75**	0.94	**164,543**	2.21	**0.70**	1	Atlas	154,671	1
	7/14/2013 19:30	7/14/2013 20:30	**60**	0.19	**5,457,923**	1.2	**0.17**	1	Atlas	1,037,005	1
	7/21/2013 20:30	7/21/2013 20:45	**15**	1.97	**7,348**	0.85	**0.76**	24	Atlas	14,475	1
	7/22/2013 7:15	7/22/2013 16:45	**570**	1.97	**552,964**	2.03	**0.76**	24	Atlas	1,089,339	1
	8/12/2013 14:45	8/12/2013 15:30	**45**	0.59	**143,707**	0.54	**0.23**	24	Atlas	84,787	1
	8/13/2013 2:30	8/13/2013 3:45	**75**	0.59	**182,143**	0.81	**0.23**	24	Atlas	107,465	1
	8/20/2013 18:15	8/20/2013 18:30	**15**	0.18	**90,820**	0.19	**0.12**	1	Atlas	16,348	1
	8/31/2013 19:45	9/1/2013 3:00	**435**	1.3	**656,025**	1.24	**0.63**	3	Atlas	852,833	1
	9/2/2013 14:00	9/2/2013 14:00	**0**	0.1	**46,387**	1.4	**0.09**	1	Atlas	4,639	1
	9/19/2013 11:15	9/19/2013 11:30	**15**	0.05	**344,120**	0.09	**0.04**	1	Atlas	17,206	1
	9/20/2013 19:30	9/21/2013 4:45	**555**	1.61	**801,673**	1.63	**0.67**	12	Atlas	1,290,694	1
	10/5/2013 13:00	10/6/2013 22:00	**1980**	4.4	**775,274**	4.49	**8.39**	24	Cloudburst	3,411,205	1
	10/30/2013 1:30	10/30/2013 7:15	**345**	1.04	**64,405**	1.04	**0.49**	6	Atlas	66,982	1
	10/31/2013 20:00	10/31/2013 22:00	**120**	0.61	**28,322**	1.58	**0.23**	24	Atlas	17,277	1
	11/17/2013 4:30	11/18/2013 2:45	**1335**	2.78	**380,695**	2.94	**2.00**	6	Cloudburst	1,058,333	1
	12/5/2013 5:30	12/5/2013 8:30	**180**	0.72	**428,881**	0.14	**0.23**	48	Atlas	308,795	1
	12/6/2013 11:45	12/6/2013 11:45	**0**	0.72	**1,832**	0.39	**0.23**	48	Atlas	1,319	1
	12/13/2013 7:45	12/13/2013 8:45	**60**	Discharge						11,295	1
	12/14/2013 9:00	12/14/2013 11:45	**165**	0.83	**581,299**	1.02	**0.33**	12	Atlas	482,478	1
	12/21/2013 5:30	12/21/2013 14:00	**510**	1.03	**1,072,781**	1.52	**0.47**	12	Atlas	1,104,965	1
	12/21/2013 22:15	12/22/2013 23:00	**1485**	1.55	**687,535**	2.66	**0.83**	3	Atlas	1,065,679	1
	12/29/2013 5:30	12/29/2013 7:15	**105**	0.49	**131,407**	0.43	**0.22**	12	Atlas	64,390	1
	1/5/2014 15:00	1/5/2014 20:30	**330**	0.45	**360,918**	0.62	**0.22**	6	Atlas	162,413	1
	1/7/2014 1:30	1/7/2014 2:45	**75**	Discharge						23,900	1
	1/11/2014 0:15	1/11/2014 9:15	**540**	0.91	**261,614**	1.37	**0.49**	6	Atlas	238,069	1
	1/13/2014 15:00	1/13/2014 17:45	**165**	0.22	**70,121**	1.14	**0.11**	3	Atlas	15,427	1
	2/2/2014 4:15	2/2/2014 7:45	**210**	0.43	**146,465**	0.18	**0.16**	24	Atlas	62,980	1
	2/4/2014 19:00	2/5/2014 10:30	**930**	0.51	**503,741**	0.94	**0.25**	6	Atlas	256,908	1
	2/14/2014 17:00	2/14/2014 18:00	**60**	0.46	**30,090**	0.39	**0.24**	6	Atlas	13,841	1
	2/17/2014 16:30	2/17/2014 19:15	**165**	0.47	**162,089**	0.99	**0.29**	3	Atlas	76,182	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**2/20/2014 20:45**	2/21/2014	**195**	0.21	**239,088**	1.2	**0.11**	6	Atlas	50,209	1
	3/2/2014 9:45	3/2/2014 11:45	**120**	0.47	**141,440**	0.24	**0.18**	24	Atlas	66,477	1
	3/12/2014 7:30	3/12/2014 7:45	**15**	0.09	**35,176**	0.08	**0.04**	12	Atlas	3,166	1
	3/28/2014 4:45	3/28/2014 5:15	**30**	0.23	**1,365,046**	0.29	**0.11**	6	Atlas	313,961	1
	3/29/2014 6:30	3/29/2014 13:45	**435**	1	**752,182**	1.29	**0.46**	6	Atlas	752,182	1
	4/3/2014 5:45	4/5/2014 22:30	**3885**	2.55	**919,625**	3.9	**0.89**	24	Atlas	2,345,045	1
	4/7/2014 8:15	4/7/2014 23:00	**885**	0.84	**841,627**	3.49	**0.50**	1	Atlas	706,967	1
	4/8/2014 16:45	4/8/2014 17:00	**15**	0.14	**95,702**	3.58	**0.10**	1	Atlas	13,398	1
	4/14/2014 3:45	4/14/2014 10:45	**420**	0.36	**164,601**	1.33	**0.18**	6	Atlas	59,256	1
	4/14/2014 19:30	4/15/2014 3:45	**495**	0.61	**1,818,270**	1.11	**0.28**	12	Atlas	1,109,145	1
	4/27/2014 19:15	4/28/2014 21:45	**1590**	2.03	**645,689**	2.12	**0.75**	3	Atlas	1,310,748	1
	5/9/2014 19:15	5/10/2014 18:15	**1380**	1.66	**1,073,523**	1.73	**0.64**	24	Atlas	1,782,048	1
	5/14/2014 7:00	5/15/2014 1:30	**1110**	1.03	**1,398,650**	2.81	**0.40**	24	Atlas	1,440,610	1
	5/21/2014 21:00	5/22/2014 4:15	**435**	0.71	**849,327**	0.86	**0.33**	12	Atlas	603,022	1
	5/29/2014 20:45	5/29/2014 22:45	**120**	0.74	**3,675,004**	0.94	**0.63**	1	Atlas	2,719,503	1
	6/11/2014 14:15	6/11/2014 15:00	**45**	0.09	**2,030,854**	0.33	**0.04**	1	Atlas	182,777	1
	6/24/2014 13:45	6/24/2014 14:00	**15**	0.14	**122,510**	0.24	**0.09**	1	Atlas	17,151	1
	6/27/2014 18:15	6/27/2014 18:30	**15**	0.13	**260,681**	0.3	**0.07**	6	Atlas	33,889	1
	7/2/2014 16:45	7/2/2014 17:00	**15**	0.15	**209,450**	0.53	**0.12**	1	Atlas	31,418	1
	7/7/2014 19:30	7/7/2014 20:15	**45**	0.74	**842,453**	1.09	**0.64**	1	Atlas	623,415	1
	7/13/2014 23:15	7/13/2014 23:30	**15**	0.59	**32,994**	1.43	**0.27**	3	Atlas	19,466	1
	7/14/2014 19:30	7/14/2014 20:45	**75**	0.3	**1,007,415**	1.36	**0.20**	3	Atlas	302,225	1
	7/26/2014 21:45	7/27/2014 9:45	**720**	0.98	**459,559**	1.01	**0.43**	12	Atlas	450,368	1
	8/8/2014 6:00	8/8/2014 8:15	**135**	0.89	**677,603**	0.65	**0.43**	6	Atlas	603,067	1
	8/10/2014 4:15	8/10/2014 4:45	**30**	0.44	**1,011,406**	1.4	**0.37**	1	Atlas	445,018	1
	8/11/2014 15:30	8/11/2014 16:00	**30**	0.22	**1,135,566**	1.61	**0.16**	1	Atlas	249,825	1
	8/17/2014 0:45	8/17/2014 0:45	**0**	0.66	**42,820**	0.96	**0.25**	24	Atlas	28,261	1
	8/17/2014 9:45	8/17/2014 10:45	**60**	0.66	**427,716**	0.77	**0.25**	24	Atlas	282,293	1
	8/22/2014 19:30	8/22/2014 19:45	**15**	0.45	**104,664**	1.04	**0.32**	1	Atlas	47,099	1
	8/23/2014 16:15	8/23/2014 22:15	**360**	0.49	**126,138**	1.57	**0.25**	3	Atlas	61,808	1
	8/27/2014 15:00	8/27/2014 17:30	**150**	0.21	**587,307**	1.21	**0.13**	1	Atlas	123,335	1
	8/30/2014 15:45	8/30/2014 16:30	**45**	0.51	**254,536**	1.06	**0.31**	1	Atlas	129,813	1
	9/2/2014 9:00	9/2/2014 9:30	**30**	0.4	**18,233**	1.16	**0.25**	3	Atlas	7,293	1
	9/11/2014 0:45	9/11/2014 7:00	**375**	1.95	**570,757**	1.91	**1.60**	3	Atlas	1,112,976	1
	9/28/2014 20:00	9/28/2014 20:15	**15**	0.07	**186,372**	0.07	**0.06**	1	Atlas	13,046	1
	10/6/2014 9:30	10/6/2014 10:15	**45**	0.45	**178,644**	0.63	**0.28**	1	Atlas	80,390	1
	10/10/2014 2:00	10/10/2014 3:45	**105**	1.02	**276,843**	1.65	**0.49**	3	Atlas	282,380	1
	10/10/2014 21:30	10/10/2014 21:45	**15**	1.02	**9,307**	1.69	**0.49**	3	Atlas	9,493	1
	10/13/2014 4:45	10/13/2014 7:00	**135**	0.46	**90,788**	2.16	**0.29**	3	Atlas	41,762	1
	10/14/2014 0:15	10/14/2014 11:15	**660**	1.04	**176,193**	2.77	**0.47**	12	Atlas	183,241	1
	11/23/2014 17:45	11/23/2014 20:30	**165**	0.85	**207,184**	1.12	**0.39**	6	Atlas	176,107	1
	12/1/2014 2:30	12/1/2014 5:00	**150**	0.8	**76,037**	0.38				60,830	1
	12/1/2014 14:45	12/1/2014 16:15	**90**	0.8	**54,906**	0.74				43,925	1
	12/5/2014 6:15	12/5/2014 6:45	**30**	1.79	**6,050**	1.21	**0.58**	48	Atlas	10,830	1
	12/5/2014 20:45	12/6/2014 10:30	**825**	1.79	**166,925**	2.59	**0.58**	48	Atlas	298,796	1
	12/16/2014 5:15	12/16/2014 5:30	**15**	0.14	**149,541**	0.13	**0.09**	1	Atlas	20,936	1
	12/22/2014 23:45	12/23/2014	**15**	0.26	**40,047**	0.39	**0.16**	3	Atlas	10,412	1
	12/24/2014 13:45	12/24/2014 14:15	**30**	0.17	**3,955**	0.42	**0.08**	12	Atlas	672	1
	12/28/2014 1:45	12/28/2014 2:00	**15**	0.31	**23,985**	0.8	**0.12**	12	Atlas	7,435	1
	1/3/2015 11:00	1/3/2015 11:00	**0**	0.38	**18,808**	0.37	**0.14**	24	Atlas	7,147	1
	1/4/2015 3:45	1/4/2015 4:00	**15**	0.38	**3,418**	0.39	**0.14**	24	Atlas	1,299	1
	2/1/2015 13:15	2/1/2015 18:00	**285**	0.38	**70,153**	0.51	**0.17**	12	Atlas	26,658	1
	2/21/2015 14:15	2/21/2015 17:15	**180**	1.09	**161,067**	1.27	**0.42**	12	Atlas	175,563	1
	3/3/2015 19:00	3/5/2015 20:45	**2985**	1.67	**666,932**	1.78	**0.55**	24	Atlas	1,113,777	1
	3/7/2015 13:45	3/7/2015 23:45	**600**	Discharge						3,898,893	1
	3/8/2015 12:45	3/8/2015 16:45	**240**	Discharge						419,301	1
	3/9/2015 4:15	3/20/2015 7:45	**16050**	Discharge						178,263,255	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**3/21/2015 9:45**	3/21/2015 11:30	**105**	Discharge						9,770	1
	3/24/2015 20:30	3/24/2015 20:30	**0**	0.12	**127,133**	0.28	**0.06**	1	Atlas	15,256	1
	3/26/2015 4:30	3/26/2015 6:45	**135**	0.4	**866,857**	0.56	**0.16**	12	Atlas	346,743	1
	4/2/2015 10:00	4/5/2015 12:45	**4485**	4.03	**3,638,340**	4.18	**3.72**	24	Cloudburst	14,662,509	1
	4/6/2015 7:30	4/8/2015 22:00	**3750**	0.01	**619,298,343**	4.99	**0.01**	1	Atlas	6,192,983	1
	4/9/2015 11:30	4/9/2015 14:45	**195**	0.15	**1,765,167**	4.8	**0.12**	1	Atlas	264,775	1
	4/10/2015 2:15	4/10/2015 5:15	**180**	0.16	**1,296,903**	2.92	**0.11**	3	Atlas	207,505	1
	4/13/2015 1:45	4/17/2015 10:15	**6270**	Discharge						19,602,236	1
	4/18/2015 17:15	4/20/2015 4:00	**2085**	Discharge						4,384,466	1
	4/25/2015 9:15	4/25/2015 9:45	**30**	0.12	**481,980**	0.91	**0.05**	12	Atlas	57,838	1
	4/25/2015 19:00	4/25/2015 19:30	**30**	0.25	**396,962**	1.12	**0.18**	1	Atlas	99,241	1
	5/16/2015 13:30	5/16/2015 13:30	**0**	0.36	**2,837**	0.41	**0.21**	3	Atlas	1,021	1
	5/17/2015 14:15	5/17/2015 14:45	**30**	0.08	**7,584,956**	0.53	**0.05**	1	Atlas	606,796	1
	5/25/2015 7:00	5/25/2015 7:15	**15**	0.28	**163,442**	0.2	**0.13**	3	Atlas	45,764	1
	5/26/2015 13:45	5/26/2015 14:30	**45**	0.5	**3,466,829**	0.74	**0.39**	1	Atlas	1,733,414	1
	5/27/2015 13:45	5/27/2015 14:15	**30**	0.08	**3,420,205**	0.87	**0.07**	1	Atlas	273,616	1
	6/8/2015 8:30	6/8/2015 8:45	**15**	0.24	**128,695**	0.24	**0.14**	3	Atlas	30,887	1
	6/17/2015 4:45	6/17/2015 7:00	**135**	0.68	**2,497,569**	0.72	**0.39**	3	Atlas	1,698,347	1
	6/18/2015 16:30	6/18/2015 20:15	**225**	1.42	**3,057,153**	1.2	**0.46**	48	Atlas	4,341,157	1
	6/19/2015 17:45	6/20/2015 11:45	**1080**	1.42	**2,879,356**	2.2	**0.46**	48	Atlas	4,088,685	1
	6/26/2015	6/26/2015 3:00	**180**	0.36	**892,657**	1.51	**0.19**	6	Atlas	321,357	1
	6/26/2015 17:00	6/27/2015 1:30	**510**	0.84	**2,629,106**	2.3	**0.47**	1	Atlas	2,208,449	1
	6/29/2015 14:00	6/29/2015 14:00	**0**	0.15	**32,245**	1.35	**0.08**	1	Atlas	4,837	1
	7/2/2015 0:45	7/2/2015 2:30	**105**	1.77	**68,621**	1.99	**0.67**	24	Atlas	121,459	1
	7/2/2015 15:15	7/2/2015 23:00	**465**	1.77	**3,444,921**	3.13	**0.67**	24	Atlas	6,097,510	1
	7/3/2015 15:30	7/3/2015 19:15	**225**	0.25	**138,144**	3	**0.13**	6	Atlas	34,536	1
	7/7/2015 11:45	7/7/2015 15:15	**210**	0.72	**644,294**	2.55	**0.30**	6	Atlas	463,892	1
	7/8/2015 0:15	7/8/2015 0:45	**30**	0.72	**243,391**	2.61	**0.30**	6	Atlas	175,242	1
	7/8/2015 12:15	7/8/2015 13:15	**60**	0.72	**320,302**	2.74	**0.30**	6	Atlas	230,618	1
	7/9/2015 6:15	7/9/2015 14:00	**465**	0.34	**919,683**	2.38	**0.20**	1	Atlas	312,692	1
	7/10/2015 10:30	7/10/2015 17:00	**390**	0.36	**707,611**	1.7	**0.17**	6	Atlas	254,740	1
	7/12/2015 6:00	7/12/2015 6:00	**0**	1.86	**28,969**	2.63	**2.66**	1	Atlas	53,882	1
	11/6/2015 4:30	11/6/2015 5:45	**75**	0.79	**113,276**	0.88	**0.49**	3	Atlas	89,488	1
	11/9/2015 19:30	11/9/2015 22:45	**195**	0.55	**489,400**	1.34	**0.24**	12	Atlas	269,170	1
	11/12/2015	11/12/2015 1:45	**105**	0.31	**510,872**	1.64	**0.18**	3	Atlas	158,370	1
	11/18/2015 9:00	11/18/2015 20:30	**690**	1.51	**511,932**	1.96	**0.78**	6	Atlas	773,017	1
	11/21/2015 15:00	11/21/2015 15:30	**30**	0.09	**291,416**	1.74	**0.08**	1	Atlas	26,227	1
	11/28/2015 12:45	11/28/2015 21:30	**525**	0.63	**541,260**	0.8	**0.26**	12	Atlas	340,993	1
	11/30/2015 21:45	12/1/2015 6:30	**525**	0.68	**593,457**	1.48	**0.31**	12	Atlas	403,551	1
	12/14/2015 5:15	12/14/2015 7:15	**120**	0.24	**364,009**	0.19	**0.13**	3	Atlas	87,362	1
	12/21/2015 11:15	12/21/2015 11:45	**30**	0.67	**47,442**	0.17	**0.33**	1	Atlas	31,786	1
	12/21/2015 23:30	12/22/2015 5:15	**345**	0.67	**238,767**	0.69	**0.33**	1	Atlas	159,974	1
	12/23/2015 19:30	12/24/2015 1:00	**330**	0.81	**477,768**	1.52	**0.63**	1	Atlas	386,992	1
	12/25/2015 9:15	12/25/2015 9:45	**30**	0.11	**307,986**	1.6	**0.07**	3	Atlas	33,878	1
	12/26/2015 12:15	12/26/2015 18:15	**360**	0.34	**556,516**	1.96	**0.16**	12	Atlas	189,215	1
	12/27/2015 10:00	12/30/2015 14:15	**4575**	1.96	**10,215,586**	3.92	**0.65**	3	Atlas	20,022,548	1
	12/31/2015 1:30	12/31/2015 9:15	**465**	Discharge						1,203,636	1
	2/2/2016 14:45	2/3/2016 7:45	**1020**	1.51	**938,606**	1.57	**0.69**	12	Atlas	1,417,296	1
	2/21/2016 4:15	2/21/2016 11:45	**450**	0.94	**643,366**	1.12	**0.43**	12	Atlas	604,764	1
	2/23/2016 22:30	2/25/2016 9:30	**2100**	1.99	**5,026,061**	2.93	**0.77**	12	Atlas	10,001,862	1
	3/1/2016 12:00	3/1/2016 14:45	**165**	0.34	**2,840,853**	2.33	**0.19**	3	Atlas	965,890	1
	3/9/2016 15:45	3/9/2016 17:00	**75**	1.12	**187,823**	0.31	**0.36**	48	Atlas	210,362	1
	3/10/2016 13:30	3/10/2016 21:30	**480**	1.12	**1,703,926**	1.16	**0.36**	48	Atlas	1,908,397	1
	3/12/2016 20:00	3/13/2016 0:45	**285**	0.81	**694,036**	1.62	**0.30**	24	Atlas	562,169	1
	3/13/2016 9:00	3/13/2016 13:45	**285**	0.81	**2,176,234**	1.95	**0.30**	24	Atlas	1,762,749	1
	3/24/2016 17:30	3/24/2016 18:30	**60**	0.29	**5,312,900**	0.34	**0.19**	1	Atlas	1,540,741	1
	3/27/2016 21:30	3/27/2016 23:00	**90**	0.73	**164,994**	1.02	**0.48**	3	Atlas	120,446	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO132	**3/31/2016 2:00**	4/1/2016 1:00	**1380**	0.99	**410,965**	2.01	**0.38**	24	Atlas	406,855	1
	4/11/2016 16:15	4/11/2016 21:00	**285**	0.86	**491,994**	0.98	**0.38**	6	Atlas	423,115	1
	4/21/2016 14:45	4/21/2016 16:15	**90**	0.3	**189,891**	0.2	**0.11**	3	Atlas	56,967	1
	4/22/2016 1:15	4/22/2016 1:15	**0**	0.3	**13,758**	0.26	**0.11**	3	Atlas	4,128	1
	4/26/2016 16:00	4/26/2016 22:15	**375**	0.34	**88,374**	0.66	**0.17**	6	Atlas	30,047	1
	4/27/2016 14:15	4/27/2016 22:45	**510**	0.63	**151,634**	1.25	**0.29**	3	Atlas	95,529	1
	4/30/2016 9:15	4/30/2016 13:30	**255**	0.5	**131,267**	1.33	**0.19**	6	Atlas	65,633	1
	4/30/2016 23:30	4/30/2016 23:30	**0**	0.5	**24,809**	1.44	**0.19**	6	Atlas	12,405	1
	5/1/2016 15:15	5/1/2016 15:15	**0**	0.2	**46,938**	1.6	**0.13**	3	Atlas	9,388	1
	5/4/2016 11:30	5/4/2016 12:00	**30**	0.17	**136,869**	1.48	**0.11**	3	Atlas	23,268	1
	5/7/2016 16:30	5/7/2016 22:30	**360**	0.51	**173,487**	1.03	**0.26**	6	Atlas	88,478	1
	5/10/2016 8:45	5/10/2016 23:00	**855**	0.75	**468,934**	1.47	**0.28**	24	Atlas	351,701	1
	5/11/2016 21:45	5/11/2016 22:45	**60**	0.19	**270,599**	1.47	**0.11**	3	Atlas	51,414	1
	5/17/2016 7:00	5/17/2016 7:15	**15**	0.61	**29,565**	1.36	**0.20**	24	Atlas	18,034	1
	5/17/2016 20:30	5/17/2016 21:00	**30**	0.61	**46,727**	1.05	**0.20**	24	Atlas	28,504	1
	5/20/2016 13:30	5/20/2016 16:30	**180**	0.66	**613,959**	1.27	**0.37**	3	Atlas	405,213	1
	5/26/2016 13:45	5/26/2016 15:30	**105**	0.22	**525,480**	1.01	**0.15**	3	Atlas	115,606	1
	6/2/2016 15:30	6/2/2016 16:15	**45**	0.28	**172,393**	0.43	**0.22**	1	Atlas	48,270	1
	6/4/2016 16:30	6/4/2016 17:15	**45**	0.27	**465,947**	0.6	**0.14**	3	Atlas	125,806	1
	6/12/2016 17:45	6/12/2016 18:30	**45**	0.18	**5,689,198**	0.21	**0.16**	1	Atlas	1,024,056	1
	6/14/2016 16:30	6/14/2016 19:00	**150**	0.9	**832,479**	1.07	**0.58**	3	Atlas	749,231	1
	6/15/2016 13:30	6/15/2016 13:45	**15**	0.13	**130,450**	1.21	**0.10**	1	Atlas	16,959	1
	6/22/2016 8:45	6/22/2016 11:00	**135**	0.39	**49,058**	0.51	**0.24**	3	Atlas	19,133	1
	6/23/2016 16:00	6/23/2016 23:45	**465**	1.87	**1,484,236**	2.26	**1.00**	6	Cloudburst	2,775,522	1
Grand Total										**1,021,750,209**	**517**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**7/4/2006 13:00**	7/4/2006 15:00	**120**	Discharge						76,406	1
	7/5/2006 8:00	7/5/2006 8:00	**0**	Discharge						18,552	1
	7/11/2006 4:00	7/11/2006 4:00	**0**	Discharge						146	1
	7/11/2006 18:00	7/11/2006 19:00	**60**	Discharge						13,396	1
	7/13/2006 5:00	7/13/2006 5:00	**0**	Discharge						63	1
	7/14/2006 19:00	7/15/2006 10:00	**900**	Discharge						392,229	1
	7/22/2006 17:00	7/22/2006 18:00	**60**	Discharge						25,677	1
	8/9/2006 11:00	8/9/2006 12:00	**60**	Discharge						65,958	1
	8/10/2006 16:00	8/10/2006 19:00	**180**	Discharge						110,042	1
	8/19/2006 11:00	8/19/2006 11:00	**0**	Discharge						53,063	1
	8/20/2006 6:00	8/20/2006 6:00	**0**	Discharge						64,833	1
	8/28/2006 3:00	8/28/2006 10:00	**420**	Discharge						151,865	1
	8/28/2006 23:00	8/29/2006	**60**	Discharge						23,698	1
	9/11/2006 9:00	9/11/2006 11:00	**120**	Discharge						43,063	1
	9/12/2006 13:00	9/12/2006 16:00	**180**	Discharge						16,104	1
	9/22/2006 7:00	9/22/2006 9:00	**120**	Discharge						42,063	1
	9/22/2006 21:00	9/24/2006 5:00	**1920**	Discharge						1,214,406	1
	9/27/2006 21:00	9/28/2006 11:00	**840**	Discharge						139,490	1
	10/16/2006 17:00	10/17/2006 7:00	**840**	Discharge						43,135	1
	10/19/2006 21:00	10/19/2006 22:00	**60**	Discharge						19,135	1
	10/27/2006 15:00	10/28/2006 5:00	**840**	Discharge						292,583	1
	11/15/2006 13:00	11/15/2006 14:00	**60**	Discharge						23,073	1
	11/16/2006 2:00	11/16/2006 4:00	**120**	Discharge						21,229	1
	11/30/2006 18:00	12/1/2006 1:00	**420**	Discharge						21,260	1
	12/12/2006 14:00	12/12/2006 14:00	**0**	Discharge						688	1
	12/22/2006 6:00	12/22/2006 6:00	**0**	Discharge						73	1
	12/25/2006 12:00	12/25/2006 14:00	**120**	Discharge						22,344	1
	12/31/2006 15:00	12/31/2006 15:00	**0**	Discharge						563	1
	1/7/2007 11:00	1/7/2007 12:00	**60**	Discharge						10,542	1
	1/13/2007 6:00	1/13/2007 10:00	**240**	Discharge						5,198	1
	1/13/2007 19:00	1/14/2007 15:00	**1200**	Discharge						328,021	1
	1/15/2007 4:00	1/15/2007 20:00	**960**	Discharge						225,333	1
	2/13/2007 12:00	2/14/2007 5:00	**1020**	Discharge						68,063	1
	2/24/2007 16:00	2/24/2007 22:00	**360**	Discharge						16,323	1
	3/1/2007 15:00	3/2/2007 1:00	**600**	Discharge						256,844	1
	3/14/2007 3:00	3/14/2007 3:00	**0**	Discharge						19,927	1
	3/14/2007 15:00	3/15/2007 9:00	**1080**	Discharge						319,458	1
	3/19/2007 13:00	3/19/2007 18:00	**300**	Discharge						31,313	1
	4/3/2007 18:00	4/4/2007 3:00	**540**	Discharge						153,333	1
	4/11/2007 9:00	4/11/2007 18:00	**540**	Discharge						82,083	1
	4/14/2007 8:00	4/14/2007 20:00	**720**	Discharge						64,885	1
	4/26/2007 5:00	4/26/2007 14:00	**540**	Discharge						37,708	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**5/4/2007 10:00**	5/4/2007 18:00	**480**	Discharge						12,833	1
	5/15/2007 22:00	5/15/2007 22:00	**0**	Discharge						21	1
	5/27/2007 21:00	5/27/2007 21:00	**0**	Discharge						625	1
	6/5/2007 15:00	6/5/2007 15:00	**0**	Discharge						14,708	1
	6/19/2007 15:00	6/19/2007 15:00	**0**	Discharge						21,250	1
	6/23/2007 13:00	6/23/2007 20:00	**420**	Discharge						33,885	1
	6/24/2007 13:00	6/24/2007 13:00	**0**	Discharge						5,948	1
	6/28/2007 18:00	6/28/2007 18:00	**0**	Discharge						8,521	1
	7/4/2007 22:00	7/5/2007 9:00	**660**	Discharge						76,729	1
	7/10/2007 12:00	7/10/2007 12:00	**0**	Discharge						2,188	1
	7/19/2007 16:00	7/19/2007 17:00	**60**	Discharge						18,698	1
	7/27/2007 6:00	7/27/2007 6:00	**0**	Discharge						3,896	1
	7/27/2007 18:00	7/27/2007 23:00	**300**	Discharge						79,927	1
	8/4/2007 23:00	8/4/2007 23:00	**0**	Discharge						583	1
	8/16/2007 16:00	8/16/2007 16:00	**0**	Discharge						52,094	1
	8/21/2007 6:00	8/21/2007 9:00	**180**	Discharge						39,042	1
	8/25/2007 15:00	8/25/2007 15:00	**0**	Discharge						1,323	1
	9/9/2007 11:00	9/9/2007 11:00	**0**	Discharge						375	1
	9/26/2007 14:00	9/26/2007 14:00	**0**	Discharge						563	1
	9/27/2007 4:00	9/27/2007 6:00	**120**	Discharge						111,542	1
	10/15/2007 15:00	10/15/2007 16:00	**60**	Discharge						3,167	1
	10/17/2007 10:00	10/17/2007 13:00	**180**	Discharge						6,229	1
	10/18/2007 5:00	10/18/2007 5:00	**0**	Discharge						34,448	1
	10/21/2007 15:00	10/23/2007 21:00	**3240**	Discharge						1,229,292	1
	10/25/2007 13:00	10/25/2007 13:00	**0**	Discharge						333	1
	11/4/2007 5:00	11/4/2007 5:00	**0**	Discharge						21,073	1
	11/19/2007 9:00	11/19/2007 12:00	**180**	Discharge						1,896	1
	11/23/2007 11:00	11/23/2007 11:00	**0**	Discharge						2,823	1
	11/24/2007 5:00	11/24/2007 15:00	**600**	Discharge						312,281	1
	11/30/2007 2:00	11/30/2007 14:00	**720**	Discharge						371,354	1
	12/6/2007 11:00	12/7/2007 9:00	**1320**	Discharge						549,885	1
	12/8/2007 13:00	12/8/2007 13:00	**0**	Discharge						406	1
	12/10/2007 3:00	12/10/2007 19:00	**960**	Discharge						658,438	1
	12/12/2007 5:00	12/13/2007 14:00	**1980**	Discharge						1,177,990	1
	4/1/2008 3:00	4/1/2008 3:00	**0**	Discharge						240	1
	4/5/2008 12:00	4/5/2008 20:00	**480**	Discharge						16,594	1
	4/6/2008 8:00	4/6/2008 15:00	**420**	Discharge						2,802	1
	4/7/2008 3:00	4/7/2008 18:00	**900**	Discharge						4,365	1
	4/10/2008 18:00	4/11/2008 12:00	**1080**	Discharge						22,240	1
	4/11/2008 22:00	4/12/2008 7:00	**540**	Discharge						25,750	1
	4/12/2008 20:00	4/13/2008 20:00	**1440**	Discharge						21,490	1
	6/16/2008 12:00	6/16/2008 12:00	**0**	Discharge						448	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/24/2008 9:00**	6/24/2008 9:00	**0**	Discharge						2,646	1
	7/12/2008 22:00	7/12/2008 22:00	**0**	0.36	**3,443**	0.5	**0.24**	3	Atlas	1,240	1
	7/30/2008 9:00	7/30/2008 9:00	**0**	1.21	**3,065**	0.86	**0.46**	24	Atlas	3,708	1
	7/31/2008 1:00	7/31/2008 1:00	**0**	1.21	**6,878**	1.42	**0.46**	24	Atlas	8,323	1
	8/5/2008 10:00	8/5/2008 10:00	**0**	0.32	**391**	1.28	**0.16**	3	Atlas	125	1
	10/24/2008 5:00	10/24/2008 11:00	**360**	1.36	**5,086**	1.05	**0.62**	12	Atlas	6,917	1
	11/12/2008 23:45	11/12/2008 23:45	**0**	0.39	**2,083**	0.42	**0.17**	3	Atlas	813	1
	11/15/2008 6:00	11/15/2008 6:15	**15**	1.16	**4,059**	0.84	**0.48**	12	Atlas	4,708	1
	12/9/2008 12:30	12/9/2008 22:45	**615**	1.19	**967,341**	1.39	**0.57**	6	Atlas	1,151,135	1
	12/19/2008 6:30	12/19/2008 9:30	**180**	0.59	**84,057**	0.91	**0.32**	6	Atlas	49,594	1
	12/24/2008 4:15	12/24/2008 20:00	**945**	2.04	**458,594**	2.75	**0.68**	24	Atlas	935,531	1
	12/28/2008	12/28/2008 1:45	**105**	0.51	**241,340**	2.51	**0.34**	3	Atlas	123,083	1
	1/10/2009 7:30	1/10/2009 7:45	**15**	0.47	**5,984**	1.03	**0.30**	3	Atlas	2,813	1
	2/11/2009 4:45	2/11/2009 4:45	**0**	1.19	**18,417**	0.91	**0.39**	48	Atlas	21,917	1
	2/11/2009 13:45	2/11/2009 14:00	**15**	1.19	**20,509**	1.16	**0.39**	48	Atlas	24,406	1
	2/27/2009 3:15	2/27/2009 4:15	**60**	0.74	**362,472**	1.06	**0.42**	3	Atlas	268,229	1
	3/28/2009 20:45	3/28/2009 20:45	**0**	0.46	**8,039**	0.96	**0.29**	1	Atlas	3,698	1
	4/2/2009 21:15	4/3/2009 2:30	**315**	1.09	**183,266**	1.58	**0.50**	12	Atlas	199,760	1
	4/5/2009 17:15	4/5/2009 17:30	**15**	0.29	**618,606**	1.38	**0.18**	3	Atlas	179,396	1
	4/13/2009 20:30	4/13/2009 20:45	**15**	0.98	**116,528**	0.97	**0.42**	1	Atlas	114,198	1
	4/19/2009 13:30	4/19/2009 14:45	**75**	1.32	**14,315**	2.05	**0.50**	24	Atlas	18,896	1
	5/1/2009 22:45	5/1/2009 22:45	**0**	Discharge						21,240	1
	5/6/2009 10:45	5/6/2009 11:45	**60**	Discharge						24,792	1
	5/8/2009 3:15	5/8/2009 3:45	**30**	Discharge						76,750	1
	5/8/2009 14:00	5/8/2009 15:45	**105**	Discharge						593,667	1
	5/16/2009 4:45	5/16/2009 5:00	**15**	Discharge						5,167	1
	5/27/2009 12:45	5/27/2009 13:00	**15**	Discharge						17,208	1
	6/10/2009 9:30	6/10/2009 12:30	**180**	0.84	**13,814**	1.08	**0.45**	3	Atlas	11,604	1
	6/11/2009 2:30	6/11/2009 3:30	**60**	1.45	**12,119**	1.73	**0.58**	3	Atlas	17,573	1
	6/11/2009 17:15	6/11/2009 20:15	**180**	1.45	**13,872**	2.3	**0.58**	3	Atlas	20,115	1
	6/16/2009 16:00	6/16/2009 16:30	**30**	1.04	**15,170**	4.02	**0.72**	1	Atlas	15,776	1
	6/18/2009 10:00	6/18/2009 11:00	**60**	1.49	**492,789**	3.67	**0.95**	1	Atlas	734,256	1
	6/18/2009 21:45	6/18/2009 22:45	**60**	Discharge						217,030	1
	6/20/2009 4:00	6/20/2009 4:00	**0**	0.15	**29,954**	3.37	**0.12**	1	Atlas	4,493	1
	6/22/2009 8:30	6/22/2009 9:45	**75**	0.87	**215,981**	4.22	**0.58**	1	Atlas	187,904	1
	6/26/2009 3:00	6/26/2009 5:30	**150**	1.42	**178,925**	2.44	**0.65**	12	Atlas	254,073	1
	7/8/2009 6:15	7/8/2009 6:15	**0**	0.16	**42,532**	0.52	**0.14**	1	Atlas	6,805	1
	7/15/2009 10:30	7/15/2009 10:30	**0**	0.34	**38,669**	0.17	**0.21**	3	Atlas	13,147	1
	7/22/2009 8:15	7/22/2009 10:45	**150**	1.51	**91**	2.02	**0.67**	12	Atlas	138	1
	7/30/2009 16:45	7/30/2009 22:45	**360**	1.43	**1,653**	4.23	**0.60**	6	Atlas	2,364	1
	8/4/2009 7:30	8/5/2009 7:45	**1455**	5.43	**268,294**	9.06	**416.83**	3	Cloudburst	1,456,834	1
	8/10/2009 18:45	8/11/2009 3:30	**525**	1.07	**526,971**	6.5	**0.67**	3	Atlas	563,859	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**9/6/2009 0:45**	9/6/2009 1:00	**15**	0.23	**166,042**	0.19	**0.17**	1	Atlas	38,190	1
	9/11/2009 8:45	9/21/2009 11:00	**14535**	Discharge						4,892,884	1
	9/22/2009 12:45	9/23/2009	**675**	Discharge						34,044	1
	9/23/2009 22:45	9/24/2009 12:15	**810**	Discharge						81,779	1
	9/25/2009 9:00	9/25/2009 20:15	**675**	0.77	**4,474**	4.94	**0.27**	24	Atlas	3,445	1
	9/26/2009 5:45	9/26/2009 5:45	**0**	0.01	**38,813**	4.95	**0.01**	1	Atlas	388	1
	9/26/2009 14:30	9/27/2009 3:15	**765**	Discharge						154,590	1
	9/27/2009 12:45	9/27/2009 12:45	**0**	Discharge						402	1
	9/28/2009	9/28/2009	**0**	Discharge						377	1
	9/28/2009 15:15	9/28/2009 15:15	**0**	Discharge						461	1
	9/29/2009 4:00	9/29/2009 4:00	**0**	Discharge						405	1
	10/1/2009 1:30	10/2/2009 15:15	**2265**	Discharge						732,577	1
	10/3/2009	10/3/2009 4:15	**255**	Discharge						1,255	1
	10/5/2009 3:00	10/11/2009 19:00	**9600**	Discharge						3,545,279	1
	10/12/2009 8:15	10/12/2009 8:15	**0**	Discharge						452	1
	10/14/2009 5:30	10/14/2009 6:45	**75**	0.73	**64,673**	2.84	**0.47**	3	Atlas	47,211	1
	10/23/2009 6:45	10/23/2009 6:45	**0**	0.59	**7,455**	0.56	**0.26**	12	Atlas	4,398	1
	10/27/2009 20:30	10/28/2009 5:30	**540**	1.07	**129,242**	1.66	**0.48**	12	Atlas	138,289	1
	10/30/2009 21:00	10/31/2009 7:30	**630**	1.01	**220,240**	2.1	**0.45**	12	Atlas	222,443	1
	11/17/2009 18:15	11/17/2009 18:15	**0**	0.91	**2,371**	0.76	**0.35**	24	Atlas	2,157	1
	12/8/2009 17:45	12/9/2009 5:15	**690**	1.68	**54,534**	1.98	**0.70**	12	Atlas	91,618	1
	1/20/2010 23:45	1/21/2010	**15**	1.25	**73,673**	0.75	**0.41**	48	Atlas	92,091	1
	1/21/2010 14:15	1/22/2010 7:15	**1020**	1.25	**333,836**	1.52	**0.41**	48	Atlas	417,295	1
	1/24/2010 3:45	1/24/2010 4:00	**15**	0.91	**65,778**	1.8	**0.35**	24	Atlas	59,858	1
	1/24/2010 21:15	1/24/2010 21:30	**15**	0.91	**12,545**	2.1	**0.35**	24	Atlas	11,416	1
	2/5/2010 16:45	2/6/2010 2:45	**600**	1.25	**12,321**	1.37	**0.46**	12	Atlas	15,402	1
	4/8/2010 1:30	4/8/2010 11:00	**570**	1.19	**301,537**	1.26	**0.56**	6	Atlas	358,829	1
	4/24/2010 14:30	4/25/2010 0:15	**585**	1.56	**356,953**	1.79	**0.72**	6	Atlas	556,847	1
	5/1/2010 4:30	5/1/2010 16:00	**690**	3.92	**56,043**	3.11	**2.79**	48	Atlas	219,689	1
	5/2/2010 1:00	5/3/2010 5:15	**1695**	3.92	**850,481**	4.49	**2.79**	48	Atlas	3,333,886	1
	5/12/2010 9:45	5/12/2010 10:15	**30**	0.8	**225,653**	1.15	**0.61**	1	Atlas	180,522	1
	5/17/2010 19:30	5/17/2010 19:45	**15**	0.61	**323,312**	2.12	**0.40**	3	Atlas	197,221	1
	5/21/2010 19:45	5/22/2010 7:45	**720**	0.97	**1,222,423**	2.1	**0.70**	1	Atlas	1,185,750	1
	5/30/2010 16:15	5/30/2010 20:15	**240**	0.51	**570,997**	0.61	**0.32**	1	Atlas	291,208	1
	6/9/2010 3:30	6/9/2010 17:00	**810**	2.18	**687,675**	2.31	**1.97**	3	Atlas	1,499,131	1
	6/13/2010 22:45	6/14/2010 6:00	**435**	0.52	**192,236**	3.04	**0.24**	12	Atlas	99,962	1
	6/15/2010 20:45	6/15/2010 20:45	**0**	0.5	**9,911**	3.54	**0.34**	1	Atlas	4,955	1
	6/19/2010 5:00	6/19/2010 12:45	**465**	0.94	**1,170,160**	2.01	**0.55**	3	Atlas	1,099,950	1
	6/28/2010 1:30	6/28/2010 1:30	**0**	0.29	**137,784**	0.17	**0.19**	1	Atlas	39,957	1
	7/8/2010 21:45	7/9/2010 3:00	**315**	0.52	**947,451**	0.29	**0.20**	24	Atlas	492,674	1
	7/13/2010 4:00	7/13/2010 19:15	**915**	1.72	**1,065,680**	2.24	**0.79**	12	Atlas	1,832,969	1
	7/19/2010 18:45	7/19/2010 18:45	**0**	0.17	**274,507**	1.99	**0.13**	1	Atlas	46,666	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**7/20/2010 4:45**	7/20/2010 5:45	**60**	0.67	**347,551**	2.2	**0.45**	1	Atlas	232,860	1
	7/21/2010 5:45	7/21/2010 6:00	**15**	0.38	**104,580**	1.36	**0.30**	1	Atlas	39,740	1
	7/27/2010 16:00	7/27/2010 16:15	**15**	0.88	**237,552**	1.3	**0.62**	1	Atlas	209,045	1
	7/31/2010 4:45	7/31/2010 6:00	**75**	0.37	**133,578**	1.42	**0.21**	3	Atlas	49,424	1
	8/5/2010 9:00	8/5/2010 9:15	**15**	0.22	**321,906**	0.79	**0.17**	1	Atlas	70,819	1
	8/14/2010 16:15	8/14/2010 16:45	**30**	0.69	**174,966**	0.94	**0.55**	1	Atlas	120,727	1
	8/21/2010 7:00	8/21/2010 8:15	**75**	0.35	**55,904**	1.15	**0.21**	3	Atlas	19,566	1
	10/13/2010 18:15	10/13/2010 20:15	**120**	0.47	**55,017**	0.52	**0.31**	3	Atlas	25,858	1
	10/26/2010 11:00	10/26/2010 11:00	**0**	0.65	**65,613**	0.35	**0.36**	6	Atlas	42,648	1
	11/16/2010 15:15	11/16/2010 15:15	**0**	0.76	**8,097**	0.71	**0.34**	12	Atlas	6,154	1
	11/23/2010 4:00	11/23/2010 4:00	**0**	0.29	**7,669**	1.06	**0.16**	3	Atlas	2,224	1
	11/24/2010 13:15	11/24/2010 14:45	**90**	0.8	**29,446**	1.03	**0.37**	3	Atlas	23,557	1
	11/25/2010 9:15	11/25/2010 21:30	**735**	2.34	**295,720**	3.15	**0.90**	24	Atlas	691,984	1
	11/26/2010 6:45	11/26/2010 8:00	**75**	2.34	**387**	3.43	**0.90**	24	Atlas	906	1
	11/29/2010 20:30	11/30/2010 9:30	**780**	1.73	**117,314**	4.86	**0.67**	24	Atlas	202,954	1
	1/1/2011 5:45	1/1/2011 5:45	**0**	0.56	**18,340**	0.99	**0.25**	6	Atlas	10,271	1
	2/1/2011 18:30	2/1/2011 19:30	**60**	0.85	**88,317**	0.75	**0.33**	6	Atlas	75,070	1
	2/24/2011 19:45	2/25/2011 14:15	**1110**	2.18	**1,102,172**	2.37	**0.84**	24	Atlas	2,402,735	1
	2/28/2011 4:45	2/28/2011 17:30	**765**	1.37	**1,228,255**	3.85	**0.67**	6	Atlas	1,682,709	1
	3/5/2011 7:00	3/5/2011 7:15	**15**	0.86	**70,694**	2.15	**0.28**	24	Atlas	60,797	1
	3/8/2011 22:30	3/10/2011 9:00	**2070**	3.14	**974,760**	4	**2.00**	24	Cloudburst	3,060,748	1
	3/15/2011 7:15	3/15/2011 7:15	**0**	0.8	**2,032**	3.85	**0.26**	48	Atlas	1,625	1
	4/4/2011 13:15	4/4/2011 16:15	**180**	0.86	**98,429**	1.04	**0.44**	6	Atlas	84,649	1
	4/9/2011 10:30	4/9/2011 11:15	**45**	0.55	**73,782**	1.43	**0.38**	1	Atlas	40,580	1
	4/11/2011 15:00	4/12/2011 19:00	**1680**	3.08	**983,918**	3.99	**1.98**	24	Cloudburst	3,030,466	1
	4/20/2011	4/20/2011 3:45	**225**	0.72	**42,856**	1.18	**0.39**	6	Atlas	30,857	1
	4/22/2011 16:15	4/25/2011 22:30	**4695**	4.54	**1,900,332**	5.62	**3.00**	48	Atlas	8,627,507	1
	4/27/2011 1:00	4/28/2011 4:45	**1665**	2.81	**820,892**	7.98	**1.41**	24	Cloudburst	2,306,706	1
	4/28/2011 17:30	4/29/2011 2:45	**555**	0.17	**386,127**	7.57	**0.11**	3	Atlas	65,642	1
	5/1/2011 5:00	5/1/2011 12:30	**450**	0.7	**110,222**	4.87				77,156	1
	5/1/2011 22:15	5/4/2011 6:45	**3390**	2.78	**1,169,742**	6.79	**0.90**	48	Atlas	3,251,883	1
	5/8/2011 0:30	5/8/2011 1:15	**45**	0.2	**37,043**	3.59	**0.11**	3	Atlas	7,409	1
	5/21/2011 18:15	5/21/2011 18:30	**15**	0.41	**250,776**	0.7	**0.29**	1	Atlas	102,818	1
	5/23/2011 4:00	5/23/2011 4:00	**0**	0.31	**14,101**	0.73	**0.22**	1	Atlas	4,371	1
	5/23/2011 17:30	5/23/2011 20:45	**195**	0.84	**213,653**	1.67	**0.54**	3	Atlas	179,468	1
	5/25/2011 22:45	5/26/2011 14:15	**930**	1.27	**155,819**	2.81	**0.49**	24	Atlas	197,890	1
	6/11/2011 4:30	6/11/2011 4:30	**0**	0.29	**107,961**	0.32	**0.23**	1	Atlas	31,309	1
	6/15/2011 9:30	6/15/2011 10:00	**30**	1.02	**181,901**	1.35	**0.65**	1	Atlas	185,539	1
	6/18/2011 6:15	6/18/2011 7:45	**90**	0.84	**25,344**	1.8	**0.51**	3	Atlas	21,289	1
	6/19/2011 7:30	6/19/2011 7:45	**15**	0.56	**41,855**	2.24	**0.35**	3	Atlas	23,439	1
	6/20/2011 1:15	6/20/2011 1:45	**30**	0.5	**231,185**	2.95	**0.43**	1	Atlas	115,592	1
	6/22/2011 19:15	6/23/2011 16:15	**1260**	3.78	**1,088,716**	6	**22.24**	3	Atlas	4,115,346	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/26/2011 2:00**	6/26/2011 2:00	**0**	0.32	**80,310**	5.19	**0.17**	6	Atlas	25,699	1
	7/19/2011 22:30	7/19/2011 23:30	**60**	1.79	**326,596**	1.86	**2.09**	1	Atlas	584,608	1
	8/7/2011 3:00	8/7/2011 11:15	**495**	1.96	**173,353**	2	**1.87**	3	Atlas	339,772	1
	8/13/2011 17:00	8/13/2011 17:15	**15**	0.79	**127,081**	2.94	**0.61**	1	Atlas	100,394	1
	8/18/2011 8:00	8/18/2011 8:00	**0**	0.48	**38,609**	1.26	**0.40**	1	Atlas	18,532	1
	9/4/2011 20:30	9/4/2011 20:30	**0**	0.12	**55,601**	0.1	**0.05**	24	Atlas	6,672	1
	9/11/2011 19:30	9/11/2011 19:30	**0**	0.3	**97,009**	0.55	**0.19**	1	Atlas	29,103	1
	9/19/2011 6:45	9/19/2011 7:30	**45**	0.69	**139,498**	0.6	**0.28**	12	Atlas	96,254	1
	9/23/2011 7:00	9/23/2011 7:00	**0**	0.81	**9,801**	1.48	**0.37**	12	Atlas	7,939	1
	9/25/2011 19:45	9/26/2011 14:30	**1125**	3.27	**1,223,747**	4.93	**5.48**	12	Cloudburst	4,001,652	1
	10/13/2011 7:30	10/13/2011 7:30	**0**	0.41	**77,651**	0.21	**0.20**	3	Atlas	31,837	1
	10/26/2011 23:45	10/27/2011 0:45	**60**	1.02	**105,630**	1.2	**0.42**	12	Atlas	107,743	1
	11/14/2011 21:15	11/14/2011 21:30	**15**	2	**15,707**	0.3	**0.65**	48	Atlas	31,414	1
	11/21/2011 4:00	11/21/2011 4:00	**0**	0.79	**55,246**	2.68	**0.28**	24	Atlas	43,645	1
	11/22/2011 2:45	11/22/2011 10:00	**435**	1.02	**49,904**	3.2	**0.44**	12	Atlas	50,902	1
	11/27/2011 22:45	11/29/2011 12:45	**2280**	3.08	**517,113**	4.32	**0.95**	48	Atlas	1,592,709	1
	12/5/2011 3:15	12/6/2011 10:45	**1890**	3.06	**949,300**	4.93	**0.99**	48	Atlas	2,904,857	1
	12/15/2011 3:30	12/15/2011 7:15	**225**	0.49	**53,054**	0.43	**0.24**	6	Atlas	25,997	1
	12/21/2011 4:45	12/21/2011 6:45	**120**	0.62	**75,919**	1.14	**0.28**	12	Atlas	47,070	1
	12/27/2011 10:45	12/27/2011 10:45	**0**	0.71	**941**	1.77	**0.28**	12	Atlas	668	1
	1/11/2012 6:30	1/11/2012 6:30	**0**	0.78	**16,592**	0.46	**0.31**	6	Atlas	12,942	1
	1/17/2012 11:45	1/17/2012 11:45	**0**	0.4	**12,098**	1.25	**0.18**	12	Atlas	4,839	1
	1/23/2012 2:30	1/23/2012 4:15	**105**	0.7	**43,358**	1.08	**0.35**	3	Atlas	30,351	1
	1/26/2012 5:30	1/26/2012 6:15	**45**	1.86	**82,772**	1.49	**0.60**	48	Atlas	153,956	1
	1/26/2012 18:15	1/27/2012 10:45	**990**	1.86	**831,626**	2.58	**0.60**	48	Atlas	1,546,824	1
	2/22/2012 22:30	2/22/2012 22:45	**15**	0.17	**48,847**	0.45	**0.12**	1	Atlas	8,304	1
	2/29/2012 8:30	2/29/2012 8:30	**0**	0.58	**124,238**	0.67	**0.27**	12	Atlas	72,058	1
	3/8/2012 12:30	3/8/2012 14:30	**120**	0.8	**24,445**	1.03	**0.38**	6	Atlas	19,556	1
	3/16/2012 1:15	3/16/2012 2:30	**75**	0.96	**38,867**	1.14	**0.42**	12	Atlas	37,313	1
	3/17/2012 18:30	3/17/2012 18:30	**0**	1.03	**4,083**	1.89	**0.64**	1	Atlas	4,206	1
	3/23/2012 4:45	3/24/2012	**1155**	1.58	**122,665**	2.61	**0.60**	24	Atlas	193,811	1
	4/1/2012 8:15	4/1/2012 20:15	**720**	1.52	**664,223**	1.73	**0.82**	6	Atlas	1,009,618	1
	4/4/2012 16:30	4/4/2012 16:30	**0**	0.24	**13,458**	1.83	**0.11**	12	Atlas	3,230	1
	4/28/2012 19:00	4/29/2012	**300**	0.74	**75,269**	0.87	**0.54**	1	Atlas	55,699	1
	4/30/2012 18:00	4/30/2012 18:00	**0**	0.49	**12,447**	1.13	**0.33**	3	Atlas	6,099	1
	5/29/2012 6:45	5/30/2012 0:45	**1080**	2.39	**999,016**	2.39	**5.69**	3	Atlas	2,387,648	1
	5/31/2012 18:30	6/1/2012 4:15	**585**	1.18	**145,505**	3.44	**0.50**	12	Atlas	171,695	1
	6/17/2012 11:30	6/17/2012 12:00	**30**	0.52	**29,224**	0.47	**0.32**	3	Atlas	15,196	1
	7/1/2012 20:00	7/1/2012 20:00	**0**	0.4	**107,243**	0.32	**0.29**	1	Atlas	42,897	1
	7/14/2012 12:15	7/14/2012 14:30	**135**	0.61	**522,840**	0.75	**0.38**	3	Atlas	318,933	1
	7/18/2012 17:00	7/18/2012 17:30	**30**	Discharge						121,233	1
	7/19/2012 18:15	7/19/2012 19:00	**45**	0.88	**640,088**	1.47	**0.72**	1	Atlas	563,278	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**7/26/2012 21:30**	7/26/2012 21:30	**0**	0.18	**70,214**	0.26	**0.08**	12	Atlas	12,639	1
	7/27/2012 20:00	7/27/2012 20:45	**45**	0.62	**192,793**	0.95	**0.41**	3	Atlas	119,532	1
	8/3/2012 9:30	8/3/2012 9:30	**0**	0.21	**28,522**	0.83	**0.10**	3	Atlas	5,990	1
	8/16/2012 20:15	8/16/2012 21:15	**60**	0.59	**71,759**	0.43	**0.34**	3	Atlas	42,338	1
	8/21/2012 13:45	8/21/2012 14:00	**15**	0.19	**228,446**	0.79	**0.17**	1	Atlas	43,405	1
	9/1/2012 15:15	9/1/2012 17:30	**135**	0.38	**140,577**	0.4	**0.23**	3	Atlas	53,419	1
	9/2/2012 12:00	9/2/2012 21:00	**540**	0.68	**119,025**	1.03	**0.26**	24	Atlas	80,937	1
	9/5/2012 15:30	9/5/2012 16:30	**60**	0.82	**600,201**	2	**0.65**	1	Atlas	492,165	1
	9/7/2012 23:30	9/8/2012 10:15	**645**	1.31	**107,752**	3.3	**0.73**	3	Atlas	141,155	1
	9/25/2012 23:45	9/26/2012 1:45	**120**	0.44	**40,188**	0.68	**0.20**	6	Atlas	17,683	1
	9/26/2012 21:00	9/26/2012 23:45	**165**	1.46	**298,237**	2.27	**0.78**	6	Atlas	435,426	1
	10/1/2012 15:00	10/1/2012 18:45	**225**	0.75	**111,785**	3	**0.30**	12	Atlas	83,839	1
	10/26/2012 14:00	10/26/2012 15:15	**75**	0.76	**33,961**	0.6	**0.34**	6	Atlas	25,810	1
	12/2/2012 11:15	12/2/2012 11:15	**0**	0.2	**59,582**	0.24	**0.12**	3	Atlas	11,916	1
	12/4/2012 15:15	12/4/2012 16:15	**60**	0.56	**4,784**	0.53	**0.35**	3	Atlas	2,679	1
	12/7/2012 4:45	12/7/2012 5:30	**45**	1.11	**14,054**	1.3	**0.47**	6	Atlas	15,600	1
	12/8/2012 5:45	12/8/2012 5:45	**0**	0.45	**22,846**	2.19	**0.25**	6	Atlas	10,281	1
	12/9/2012 20:45	12/10/2012 9:00	**735**	1.14	**1,049,486**	3.2	**0.55**	3	Atlas	1,196,414	1
	12/17/2012 17:00	12/17/2012 17:00	**0**	0.21	**14,193**	0.4	**0.10**	6	Atlas	2,981	1
	12/20/2012 6:30	12/20/2012 10:00	**210**	0.75	**57,513**	0.94	**0.38**	6	Atlas	43,135	1
	12/26/2012 5:30	12/26/2012 5:30	**0**	0.71	**22,110**	1.25	**0.28**	12	Atlas	15,698	1
	1/11/2013 5:45	1/11/2013 7:15	**90**	0.74	**72,418**	0.73	**0.31**	6	Atlas	53,589	1
	1/13/2013 3:15	1/14/2013 8:30	**1755**	2.21	**1,424,118**	2.95	**0.85**	24	Atlas	3,147,300	1
	1/30/2013 4:45	1/30/2013 8:00	**195**	0.94	**445,600**	1.05	**0.46**	6	Atlas	418,864	1
	2/22/2013 1:00	2/22/2013 1:00	**0**	0.39	**281**	0.72	**0.18**	12	Atlas	110	1
	3/11/2013 5:30	3/11/2013 19:15	**825**	0.99	**52,824**	1.44	**0.40**	12	Atlas	52,296	1
	3/17/2013 13:45	3/17/2013 20:00	**375**	1.64	**19,327**	1.79	**0.53**	48	Atlas	31,697	1
	3/18/2013 4:15	3/18/2013 18:00	**825**	1.64	**291,134**	2.11	**0.53**	48	Atlas	477,460	1
	3/24/2013 16:00	3/24/2013 16:00	**0**	0.49	**11,787**	1.34	**0.18**	24	Atlas	5,776	1
	4/11/2013 5:15	4/11/2013 7:15	**120**	1.34	**88,894**	0.57	**0.52**	24	Atlas	119,118	1
	4/16/2013 20:00	4/16/2013 20:30	**30**	0.61	**320,034**	1.92	**0.50**	1	Atlas	195,221	1
	4/19/2013 2:15	4/19/2013 11:00	**525**	0.92	**221,047**	1.55	**0.50**	6	Atlas	203,363	1
	4/24/2013 7:00	4/24/2013 9:15	**135**	0.65	**97,585**	1.52	**0.36**	3	Atlas	63,430	1
	5/6/2013 17:15	5/6/2013 17:15	**0**	1.41	**20,100**	1.5	**0.42**	24	Atlas	28,340	1
	5/10/2013 12:45	5/10/2013 15:30	**165**	0.93	**15,279**	2.33	**0.42**	6	Atlas	14,210	1
	5/10/2013 23:45	5/11/2013 3:15	**210**	0.93	**101,531**	2.37	**0.42**	6	Atlas	94,424	1
	5/16/2013 10:15	5/16/2013 10:30	**15**	0.25	**14,257**	1.23	**0.22**	1	Atlas	3,564	1
	5/22/2013 15:45	5/22/2013 15:45	**0**	0.14	**1,051,117**	0.37	**0.09**	3	Atlas	147,156	1
	6/10/2013	6/10/2013	**0**	0.29	**19,184**	0.2	**0.13**	6	Atlas	5,563	1
	6/16/2013 16:45	6/16/2013 17:00	**15**	0.5	**93,781**	0.74	**0.36**	1	Atlas	46,890	1
	6/17/2013 16:15	6/18/2013 6:15	**840**	1.41	**1,366,422**	1.94	**0.82**	1	Atlas	1,926,655	1
	6/21/2013 19:00	6/21/2013 19:00	**0**	0.17	**21,000**	2.06	**0.11**	3	Atlas	3,570	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/23/2013 12:30**	6/23/2013 12:30	**0**	0.35	**13,905**	2.39	**0.27**	1	Atlas	4,867	1
	6/26/2013 3:15	6/26/2013 4:45	**90**	0.71	**265,322**	1.31	**0.47**	3	Atlas	188,378	1
	6/26/2013 16:15	6/27/2013 10:30	**1095**	2.58	**1,290,704**	3.89	**4.16**	1	Atlas	3,330,017	1
	6/29/2013 19:30	6/29/2013 21:45	**135**	0.41	**82,859**	4.14	**0.23**	3	Atlas	33,972	1
	7/1/2013 19:00	7/1/2013 19:00	**0**	0.23	**38,604**	4.12	**0.11**	3	Atlas	8,879	1
	7/2/2013 13:15	7/2/2013 13:15	**0**	0.15	**156,109**	4.29	**0.13**	1	Atlas	23,416	1
	7/6/2013 1:15	7/6/2013 1:45	**30**	0.68	**33,997**	1.81	**0.29**	12	Atlas	23,118	1
	7/10/2013 14:00	7/10/2013 14:30	**30**	0.93	**319,577**	2.2	**0.65**	1	Atlas	297,206	1
	7/14/2013 19:30	7/14/2013 19:30	**0**	0.23	**332,369**	1.24	**0.20**	1	Atlas	76,445	1
	7/21/2013 19:30	7/21/2013 19:30	**0**	2.21	**3,871**	0.69	**0.85**	24	Atlas	8,555	1
	7/22/2013 7:00	7/22/2013 19:45	**765**	2.21	**434,442**	2.35	**0.85**	24	Atlas	960,116	1
	8/12/2013 14:45	8/12/2013 15:00	**15**	0.71	**190,480**	0.63	**0.29**	1	Atlas	135,241	1
	8/13/2013 2:30	8/13/2013 3:00	**30**	0.71	**9,933**	0.9	**0.29**	1	Atlas	7,053	1
	8/20/2013 18:00	8/20/2013 18:15	**15**	0.16	**175,125**	0.17	**0.10**	1	Atlas	28,020	1
	8/31/2013 19:45	9/1/2013 7:45	**720**	1.2	**1,169,813**	1.2	**0.55**	12	Atlas	1,403,775	1
	9/2/2013 13:45	9/2/2013 13:45	**0**	0.22	**297,982**	1.42	**0.19**	1	Atlas	65,556	1
	9/20/2013 19:30	9/21/2013 7:30	**720**	1.52	**639,854**	1.6	**0.63**	12	Atlas	972,578	1
	10/5/2013 13:00	10/6/2013 16:45	**1665**	4.3	**769,148**	4.38	**8.06**	24	Cloudburst	3,307,335	1
	10/30/2013 2:15	10/30/2013 5:30	**195**	1.24	**69,570**	1.15	**0.58**	6	Atlas	86,267	1
	10/31/2013 20:45	10/31/2013 20:45	**0**	0.66	**9,610**	1.76	**0.26**	12	Atlas	6,342	1
	11/17/2013 5:30	11/18/2013 6:00	**1470**	2.65	**1,350,632**	2.79	**1.81**	6	Cloudburst	3,579,174	1
	12/5/2013 6:45	12/5/2013 7:30	**45**	0.8	**37,012**	0.21	**0.26**	48	Atlas	29,609	1
	12/14/2013 10:30	12/14/2013 10:30	**0**	0.79	**2,156**	0.98	**0.32**	6	Atlas	1,703	1
	12/21/2013 8:00	12/22/2013 10:45	**1605**	1.01	**2,658,101**	2.93	**0.46**	12	Atlas	2,684,682	1
	1/11/2014 0:15	1/11/2014 3:15	**180**	0.84	**72,545**	1.13	**0.45**	6	Atlas	60,938	1
	1/11/2014 13:45	1/11/2014 13:45	**0**	Discharge						277	1
	2/4/2014 19:45	2/5/2014 11:45	**960**	0.5	**571,402**	0.94	**0.25**	6	Atlas	285,701	1
	2/17/2014 16:00	2/17/2014 16:30	**30**	0.57	**142,494**	1.04	**0.35**	3	Atlas	81,222	1
	3/12/2014 7:15	3/12/2014 7:15	**0**	0.07	**4,774**	0.06	**0.03**	12	Atlas	334	1
	3/29/2014 6:15	3/29/2014 6:45	**30**	1.03	**76,407**	0.77	**0.47**	12	Atlas	78,699	1
	4/3/2014 12:00	4/5/2014 1:00	**2220**	2.48	**1,488,496**	3.9	**0.87**	24	Atlas	3,691,470	1
	4/7/2014 10:30	4/7/2014 12:15	**105**	0.78	**268,219**	3.33	**0.46**	3	Atlas	209,211	1
	4/14/2014 3:30	4/14/2014 3:30	**0**	0.38	**23,896**	1	**0.19**	6	Atlas	9,081	1
	4/14/2014 20:00	4/15/2014 0:15	**255**	0.64	**36,645**	0.93	**0.29**	12	Atlas	23,453	1
	4/27/2014 20:00	4/28/2014 17:30	**1290**	1.96	**418,310**	1.92	**0.75**	3	Atlas	819,887	1
	5/9/2014 19:15	5/9/2014 19:15	**0**	1.76	**66,960**	0.38	**0.68**	24	Atlas	117,850	1
	5/10/2014 5:30	5/10/2014 16:15	**645**	1.76	**255,348**	1.83	**0.68**	24	Atlas	449,413	1
	5/14/2014 7:00	5/14/2014 7:00	**0**	1.08	**22,312**	2.08	**0.41**	24	Atlas	24,097	1
	5/14/2014 18:00	5/15/2014 6:15	**735**	1.08	**1,023,722**	2.94	**0.41**	24	Atlas	1,105,620	1
	5/21/2014 21:00	5/22/2014 8:45	**705**	0.49	**59,945**	0.63	**0.22**	12	Atlas	29,373	1
	5/28/2014 20:30	5/28/2014 20:30	**0**	0.25	**23,593**	0.75	**0.21**	1	Atlas	5,898	1
	5/29/2014 20:45	5/29/2014 21:15	**30**	0.61	**430,625**	0.86	**0.50**	1	Atlas	262,681	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/11/2014 14:15**	6/11/2014 14:30	**15**	0.15	**293,596**	0.36	**0.11**	1	Atlas	44,039	1
	6/20/2014 17:30	6/20/2014 17:30	**0**	0.15	**9,092**	0.16	**0.10**	3	Atlas	1,364	1
	6/24/2014 13:30	6/24/2014 13:30	**0**	0.16	**283,059**	0.34	**0.10**	1	Atlas	45,289	1
	7/7/2014 19:45	7/7/2014 19:45	**0**	0.66	**155,457**	1	**0.57**	1	Atlas	102,602	1
	7/13/2014 23:00	7/13/2014 23:00	**0**	0.65	**200,340**	1.46	**0.31**	3	Atlas	130,221	1
	7/14/2014 20:15	7/14/2014 20:30	**15**	0.27	**177,914**	1.28	**0.18**	3	Atlas	48,037	1
	7/26/2014 21:45	7/26/2014 22:00	**15**	1.02	**92,808**	0.45	**0.45**	12	Atlas	94,664	1
	7/27/2014 7:00	7/27/2014 8:00	**60**	1.02	**55,635**	1	**0.45**	12	Atlas	56,747	1
	8/8/2014 6:00	8/8/2014 7:30	**90**	0.97	**163,198**	0.72	**0.46**	6	Atlas	158,302	1
	8/10/2014 4:15	8/10/2014 4:15	**0**	0.5	**91,378**	1.52	**0.41**	1	Atlas	45,689	1
	8/11/2014 15:30	8/11/2014 15:30	**0**	0.3	**504,981**	1.83	**0.24**	1	Atlas	151,494	1
	8/17/2014 9:45	8/17/2014 9:45	**0**	0.71	**23,011**	0.84	**0.27**	24	Atlas	16,337	1
	8/22/2014 19:15	8/22/2014 19:15	**0**	0.27	**521,661**	0.96	**0.17**	3	Atlas	140,848	1
	8/23/2014 16:00	8/23/2014 20:30	**270**	0.55	**109,026**	1.38	**0.27**	3	Atlas	59,964	1
	8/27/2014 14:45	8/27/2014 17:15	**150**	0.2	**155,637**	1.2	**0.13**	1	Atlas	31,127	1
	8/30/2014 15:15	8/30/2014 16:00	**45**	0.61	**357,763**	1.33	**0.39**	1	Atlas	218,236	1
	9/2/2014 8:30	9/2/2014 8:30	**0**	0.36	**6,816**	1.18	**0.23**	3	Atlas	2,454	1
	9/11/2014 0:45	9/11/2014 14:45	**840**	1.92	**415,229**	1.92	**1.47**	3	Atlas	797,239	1
	10/6/2014 9:45	10/6/2014 9:45	**0**	0.31	**141,012**	0.48	**0.17**	1	Atlas	43,714	1
	10/7/2014 12:00	10/7/2014 12:00	**0**	0.21	**51,851**	0.75	**0.17**	1	Atlas	10,889	1
	10/10/2014 2:15	10/10/2014 3:00	**45**	1.09	**78,583**	1.48	**0.49**	3	Atlas	85,655	1
	10/13/2014 23:30	10/14/2014	**30**	1.08	**75,861**	2.02	**0.48**	12	Atlas	81,930	1
	10/14/2014 8:15	10/14/2014 10:00	**105**	1.08	**42,436**	2.78	**0.48**	12	Atlas	45,831	1
	10/20/2014 20:00	10/20/2014 20:00	**0**	0.04	**123,411**	1.35	**0.03**	1	Atlas	4,936	1
	11/23/2014 14:30	11/23/2014 17:45	**195**	0.85	**236,734**	0.89	**0.38**	6	Atlas	201,224	1
	12/6/2014 2:45	12/6/2014 10:30	**465**	1.76	**461,119**	2.58	**0.57**	48	Atlas	811,570	1
	12/28/2014 1:00	12/28/2014 1:00	**0**	0.3	**27,679**	0.73	**0.12**	24	Atlas	8,304	1
	3/3/2015 23:15	3/4/2015 12:45	**810**	1.67	**163,078**	1.18	**0.54**	24	Atlas	272,341	1
	3/7/2015 15:45	3/7/2015 17:30	**105**	Discharge						35,002	1
	3/10/2015 9:30	3/10/2015 23:00	**810**	1.1	**729,978**	2.77	**0.50**	12	Atlas	802,975	1
	3/13/2015 10:30	3/14/2015 4:30	**1080**	1.63	**799,566**	2.68	**0.61**	24	Atlas	1,303,292	1
	3/14/2015 20:15	3/15/2015 3:15	**420**	Discharge						65,006	1
	3/26/2015 4:30	3/26/2015 4:30	**0**	0.45	**27,040**	0.51	**0.17**	12	Atlas	12,168	1
	4/2/2015 10:45	4/3/2015 23:45	**2220**	4.42	**790,361**	4.55	**5.24**	24	Cloudburst	3,493,395	1
	4/7/2015 9:15	4/7/2015 18:15	**540**	0.86	**506,257**	5.29	**0.42**	1	Atlas	435,381	1
	4/8/2015 18:15	4/8/2015 18:15	**0**	0.15	**122,513**	5.43	**0.10**	1	Atlas	18,377	1
	4/9/2015 11:30	4/9/2015 12:15	**45**	0.29	**742,341**	5.37	**0.25**	1	Atlas	215,279	1
	4/10/2015 2:15	4/10/2015 2:30	**15**	0.16	**105,280**	3.17	**0.11**	3	Atlas	16,845	1
	4/13/2015 20:45	4/13/2015 21:00	**15**	0.38	**38,719**	1.56	**0.15**	6	Atlas	14,713	1
	4/19/2015 14:15	4/19/2015 14:45	**30**	0.78	**110,352**	1.16	**0.33**	12	Atlas	86,075	1
	5/17/2015 14:15	5/17/2015 14:30	**15**	0.16	**846,622**	0.6	**0.12**	1	Atlas	135,460	1
	5/26/2015 13:45	5/26/2015 14:00	**15**	0.36	**224,401**	0.57	**0.26**	1	Atlas	80,784	1
	6/8/2015 8:15	6/8/2015 8:15	**0**	0.2	**146,735**	0.21	**0.12**	3	Atlas	29,347	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/17/2015 4:45**	6/17/2015 6:00	**75**	0.65	**97,310**	0.62	**0.37**	3	Atlas	63,251	1
	6/18/2015 16:15	6/18/2015 18:45	**150**	1.48	**375,424**	1.2	**0.48**	48	Atlas	555,628	1
	6/19/2015 13:00	6/19/2015 13:15	**15**	1.48	**6,934**	1.36	**0.48**	48	Atlas	10,262	1
	6/20/2015 1:30	6/20/2015 11:15	**585**	1.48	**225,750**	2.23	**0.48**	48	Atlas	334,110	1
	6/20/2015 21:00	6/21/2015 2:15	**315**	Discharge						998	1
	6/21/2015 23:15	6/23/2015 13:15	**2280**	0.21	**1,287,628**	2.39	**0.10**	3	Atlas	270,402	1
	6/24/2015 7:45	6/24/2015 7:45	**0**	Discharge						129	1
	6/26/2015	6/26/2015	**0**	0.45	**7,828**	1.39	**0.24**	6	Atlas	3,522	1
	6/26/2015 17:00	6/27/2015	**420**	0.88	**263,865**	2.36	**0.52**	1	Atlas	232,201	1
	7/2/2015 0:45	7/2/2015 0:45	**0**	1.53	**270**	2.12	**0.59**	24	Atlas	413	1
	7/2/2015 19:30	7/2/2015 21:00	**90**	1.53	**270,597**	3.25	**0.59**	24	Atlas	414,013	1
	7/7/2015 11:45	7/7/2015 12:45	**60**	0.72	**22,407**	2.46	**0.37**	6	Atlas	16,133	1
	7/8/2015 12:30	7/8/2015 12:30	**0**	0.1	**116,074**	2.74	**0.07**	1	Atlas	11,607	1
	7/9/2015 6:15	7/9/2015 13:15	**420**	0.29	**57,137**	2.31	**0.13**	12	Atlas	16,570	1
	7/10/2015 14:00	7/10/2015 21:15	**435**	0.45	**43,004**	1.94	**0.21**	6	Atlas	19,352	1
	7/12/2015 6:00	7/12/2015 9:00	**180**	1.36	**934,860**	2.93	**1.04**	1	Atlas	1,271,409	1
	7/13/2015 14:15	7/14/2015 9:15	**1140**	0.49	**1,614,815**	4.08	**0.41**	1	Atlas	791,259	1
	7/14/2015 18:45	7/14/2015 20:00	**75**	0.18	**1,314,715**	3.56	**0.16**	1	Atlas	236,649	1
	7/17/2015 22:30	7/18/2015 2:00	**210**	1.4	**599,306**	4.08	**0.93**	3	Atlas	839,028	1
	8/4/2015 19:00	8/4/2015 19:00	**0**	0.35	**473,291**	0.4	**0.30**	1	Atlas	165,652	1
	8/5/2015 15:00	8/5/2015 15:15	**15**	0.9	**17,209**	0.66	**0.32**	24	Atlas	15,488	1
	8/6/2015 2:15	8/6/2015 15:15	**780**	0.9	**102,189**	1.24	**0.32**	24	Atlas	91,970	1
	8/19/2015 8:15	8/19/2015 8:30	**15**	0.38	**246,561**	0.36	**0.15**	12	Atlas	93,693	1
	8/19/2015 17:00	8/19/2015 17:00	**0**	0.38	**36,307**	0.54	**0.15**	12	Atlas	13,797	1
	9/5/2015 17:15	9/5/2015 17:15	**0**	0.28	**64,132**	0.23	**0.20**	1	Atlas	17,957	1
	9/9/2015 11:30	9/9/2015 11:30	**0**	0.26	**193,507**	1.26	**0.23**	1	Atlas	50,312	1
	9/11/2015 18:30	9/11/2015 18:30	**0**	0.19	**512**	1.42	**0.13**	3	Atlas	97	1
	10/12/2015 19:15	10/12/2015 19:15	**0**	0.28	**19,487**	0.32	**0.19**	3	Atlas	5,456	1
	10/27/2015 18:00	10/28/2015 6:00	**720**	2.51	**154,183**	2.66	**0.82**	24	Atlas	386,999	1
	10/28/2015 22:15	10/28/2015 22:15	**0**	0.17	**46,018**	2.98	**0.09**	6	Atlas	7,823	1
	11/6/2015 4:00	11/6/2015 4:30	**30**	0.85	**94,341**	0.92	**0.52**	3	Atlas	80,190	1
	11/18/2015 11:00	11/18/2015 13:45	**165**	1.51	**154,728**	1.8	**0.78**	6	Atlas	233,640	1
	12/21/2015 23:45	12/22/2015 4:00	**255**	0.59	**70,715**	0.76	**0.33**	1	Atlas	41,722	1
	12/23/2015 19:15	12/23/2015 20:30	**75**	0.87	**480,412**	1.65	**0.70**	1	Atlas	417,958	1
	12/27/2015 10:15	12/28/2015 0:15	**840**	2.06	**521,065**	3.4	**0.69**	3	Atlas	1,073,394	1
	12/28/2015 15:15	12/28/2015 16:45	**90**	2.06	**14,625**	3.91	**0.69**	3	Atlas	30,128	1
	2/2/2016 19:00	2/3/2016 1:30	**390**	1.45	**235,073**	1.51	**0.67**	6	Atlas	340,856	1
	2/21/2016 5:45	2/21/2016 10:30	**285**	1.07	**64,074**	1.24	**0.49**	12	Atlas	68,560	1
	2/23/2016 23:30	2/24/2016 7:45	**495**	2.09	**185,996**	2.87	**0.83**	12	Atlas	388,732	1
	3/1/2016 12:45	3/1/2016 12:45	**0**	0.29	**15,590**	2.34	**0.16**	3	Atlas	4,521	1
	3/10/2016 13:30	3/10/2016 16:45	**195**	1.1	**50,399**	0.91	**0.36**	12	Atlas	55,439	1
	3/12/2016 22:45	3/12/2016 23:15	**30**	0.86	**17,888**	1.68	**0.33**	24	Atlas	15,383	1
	3/13/2016 8:45	3/13/2016 10:00	**75**	0.86	**66,286**	1.97	**0.33**	24	Atlas	57,006	1
	3/24/2016 17:30	3/24/2016 17:45	**15**	0.46	**84,933**	0.53	**0.34**	1	Atlas	39,069	1
	3/27/2016 21:15	3/27/2016 22:00	**45**	0.82	**365,082**	1.25	**0.57**	1	Atlas	299,367	1
	3/31/2016 4:30	3/31/2016 4:30	**0**	1.01	**5,353**	1.66	**0.38**	24	Atlas	5,406	1
	3/31/2016 22:00	3/31/2016 23:15	**75**	1.01	**27,264**	1.79	**0.38**	24	Atlas	27,537	1
	4/11/2016 16:45	4/11/2016 18:00	**75**	0.96	**72,408**	0.9	**0.42**	12	Atlas	69,511	1
	4/26/2016 21:00	4/26/2016 21:00	**0**	0.47	**560**	0.67	**0.24**	6	Atlas	263	1
	4/27/2016 20:45	4/27/2016 22:00	**75**	0.57	**215,723**	1.29	**0.25**	12	Atlas	122,962	1
	4/30/2016 11:15	4/30/2016 11:15	**0**	0.5	**13,380**	1.31	**0.19**	6	Atlas	6,690	1
	5/10/2016 21:30	5/10/2016 22:00	**30**	0.64	**176,813**	1.51	**0.24**	24	Atlas	113,160	1
	5/20/2016 14:00	5/20/2016 15:30	**90**	0.58	**101,446**	1.21	**0.32**	3	Atlas	58,839	1
	6/2/2016 15:30	6/2/2016 15:45	**15**	0.36	**44,354**	0.49	**0.28**	1	Atlas	15,967	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.19	**24,161**	0.61	**0.10**	3	Atlas	4,591	1
	6/12/2016 18:00	6/12/2016 18:00	**0**	0.15	**31,396**	0.19	**0.13**	1	Atlas	4,709	1
	6/14/2016 17:00	6/14/2016 17:15	**15**	0.74	**8,039**	0.69	**0.48**	3	Atlas	5,949	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO140	**6/22/2016 8:15**	6/22/2016 8:15	**0**	0.26	**65,729**	0.13	**0.17**	3	Atlas	17,090	1
	6/23/2016 16:00	6/23/2016 21:00	**300**	1.94	**306,582**	2.19	**1.31**	6	Cloudburst	594,769	1
Grand Total										**142,210,682**	**438**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**3/18/2008 4:00**	3/19/2008 19:00	**2340**	Discharge						2,013,292	1
	3/23/2008 14:00	3/23/2008 15:00	**60**	Discharge						6,115	1
	3/26/2008 17:00	3/27/2008 7:00	**840**	Discharge						854,490	1
	3/27/2008 22:00	3/28/2008 4:00	**360**	Discharge						594,990	1
	4/1/2008	4/1/2008 2:00	**120**	Discharge						141,396	1
	4/3/2008 8:00	4/4/2008 18:00	**2040**	Discharge						1,884,854	1
	4/10/2008 16:00	4/11/2008 3:00	**660**	Discharge						126,042	1
	4/25/2008 1:00	4/25/2008 2:00	**60**	Discharge						70,802	1
	5/1/2008 7:00	5/1/2008 22:00	**900**	Discharge						943,573	1
	5/6/2008 5:00	5/6/2008 7:00	**120**	Discharge						76,771	1
	5/6/2008 23:00	5/7/2008 1:00	**120**	Discharge						37,063	1
	5/9/2008 11:00	5/9/2008 12:00	**60**	Discharge						68,583	1
	5/10/2008	5/10/2008	**0**	Discharge						4,719	1
	5/12/2008 11:00	5/12/2008 14:00	**180**	Discharge						190,146	1
	5/13/2008 19:00	5/14/2008 1:00	**360**	Discharge						294,823	1
	5/25/2008 12:00	5/25/2008 13:00	**60**	Discharge						19,240	1
	5/31/2008 12:00	5/31/2008 17:00	**300**	Discharge						201,313	1
	6/10/2008 12:00	6/10/2008 19:00	**420**	Discharge						29,604	1
	6/16/2008 12:00	6/16/2008 13:00	**60**	Discharge						68,906	1
	6/16/2008 22:00	6/16/2008 23:00	**60**	Discharge						30,083	1
	6/23/2008 4:00	6/23/2008 5:00	**60**	Discharge						56,396	1
	6/24/2008 8:00	6/24/2008 9:00	**60**	Discharge						106,375	1
	7/4/2008 4:00	7/4/2008 6:00	**120**	0.61	**110,468**	0.28	**0.23**	24	Atlas	67,385	1
	7/4/2008 20:00	7/4/2008 20:00	**0**	0.61	**132,292**	0.6	**0.23**	24	Atlas	80,698	1
	7/12/2008 21:00	7/12/2008 23:00	**120**	Discharge						173,313	1
	7/20/2008 20:00	7/20/2008 21:00	**60**	0.18	**593,403**	0.17	**0.13**	1	Atlas	106,813	1
	7/28/2008 8:00	7/28/2008 9:00	**60**	0.59	**184,975**	0.64	**0.39**	3	Atlas	109,135	1
	7/30/2008 9:00	7/30/2008 10:00	**60**	1.24	**72,749**	1.05	**0.48**	24	Atlas	90,208	1
	7/31/2008 1:00	7/31/2008 4:00	**180**	1.24	**132,712**	1.78	**0.48**	24	Atlas	164,562	1
	8/5/2008 10:00	8/5/2008 10:00	**0**	0.29	**7,004**	1.26	**0.16**	3	Atlas	2,031	1
	8/14/2008 13:00	8/14/2008 13:00	**0**	0.14	**313,318**	0.1	**0.10**	1	Atlas	43,865	1
	9/9/2008 3:00	9/9/2008 9:00	**360**	0.24	**41,580**	0.69	**0.11**	12	Atlas	9,979	1
	9/29/2008 23:00	9/30/2008	**60**	0.25	**500,042**	0.19	**0.17**	3	Atlas	125,010	1
	10/7/2008 15:15	10/7/2008 15:45	**30**	0.96	**50,901**	0.3	**0.37**	24	Atlas	48,865	1
	10/8/2008 3:00	10/8/2008 4:00	**60**	0.96	**269,379**	0.93	**0.37**	24	Atlas	258,604	1
	10/24/2008 4:15	10/24/2008 13:30	**555**	1.38	**798,958**	1.39	**0.63**	12	Atlas	1,102,563	1
	11/12/2008 23:45	11/13/2008 0:30	**45**	0.37	**507,911**	0.51	**0.17**	3	Atlas	187,927	1
	11/15/2008 6:30	11/15/2008 6:45	**15**	1.11	**58,361**	0.88	**0.45**	12	Atlas	64,781	1
	11/24/2008 3:30	11/24/2008 7:30	**240**	0.6	**492,622**	0.57	**0.28**	6	Atlas	295,573	1
	12/3/2008 23:45	12/4/2008 0:45	**60**	0.29	**491,918**	0.45	**0.15**	3	Atlas	142,656	1
	12/9/2008 11:30	12/9/2008 16:45	**315**	1.18	**922,105**	1.34	**0.55**	6	Atlas	1,088,083	1
	12/19/2008 6:45	12/19/2008 10:00	**195**	0.74	**806,137**	1.13	**0.40**	6	Atlas	596,542	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**12/23/2008 23:15**	12/24/2008 14:30	**915**	2.25	**1,218,931**	3.11	**0.77**	24	Atlas	2,742,594	1
	12/28/2008 0:15	12/28/2008 2:30	**135**	0.43	**1,308,188**	2.69	**0.29**	3	Atlas	562,521	1
	1/3/2009 16:30	1/3/2009 16:45	**15**	0.16	**229,362**	0.54	**0.10**	1	Atlas	36,698	1
	1/10/2009 7:30	1/10/2009 8:30	**60**	0.41	**801,905**	1.02	**0.25**	3	Atlas	328,781	1
	1/28/2009 1:15	1/28/2009 8:30	**435**	1.78	**678,821**	1.8	**0.58**	48	Atlas	1,208,302	1
	2/1/2009 13:00	2/1/2009 16:30	**210**	Discharge						256,406	1
	2/10/2009 5:15	2/10/2009 6:00	**45**	0.96	**158,062**	0.25	**0.31**	48	Atlas	151,740	1
	2/10/2009 18:30	2/10/2009 19:30	**60**	0.96	**157,758**	0.61	**0.31**	48	Atlas	151,448	1
	2/11/2009 4:45	2/11/2009 14:45	**600**	0.96	**839,128**	0.95	**0.31**	48	Atlas	805,563	1
	2/18/2009 5:15	2/18/2009 5:45	**30**	0.23	**353,397**	0.37	**0.13**	1	Atlas	81,281	1
	2/21/2009 14:15	2/21/2009 15:30	**75**	0.26	**321,554**	0.53	**0.11**	12	Atlas	83,604	1
	2/26/2009 10:15	2/26/2009 10:15	**0**	0.24	**64,844**	0.46	**0.13**	6	Atlas	15,563	1
	2/27/2009 3:15	2/27/2009 5:30	**135**	0.82	**1,829,027**	1.3	**0.45**	3	Atlas	1,499,802	1
	4/2/2009 16:45	4/3/2009 4:15	**690**	1.1	**1,890,313**	1.76	**0.50**	12	Atlas	2,079,344	1
	4/5/2009 17:15	4/5/2009 18:15	**60**	0.27	**1,815,278**	1.37	**0.17**	3	Atlas	490,125	1
	4/10/2009 11:30	4/10/2009 11:45	**15**	0.41	**92,480**	0.44	**0.17**	12	Atlas	37,917	1
	4/10/2009 20:30	4/10/2009 21:30	**60**	0.41	**621,850**	0.71	**0.17**	12	Atlas	254,958	1
	4/13/2009 16:00	4/13/2009 22:30	**390**	0.85	**934,865**	1.33	**0.39**	12	Atlas	794,635	1
	4/14/2009 8:45	4/14/2009 9:15	**30**	0.04	**1,112,240**	1.36	**0.03**	3	Atlas	44,490	1
	4/19/2009 7:45	4/20/2009	**975**	1.33	**1,347,744**	2.25	**0.52**	12	Atlas	1,792,500	1
	4/28/2009 8:30	4/28/2009 9:45	**75**	0.26	**1,059,295**	0.28	**0.16**	3	Atlas	275,417	1
	5/1/2009 1:45	5/1/2009 2:15	**30**	0.05	**3,742,708**	0.41	**0.03**	6	Atlas	187,135	1
	5/1/2009 23:15	5/1/2009 23:30	**15**	Discharge						52,365	1
	5/6/2009 11:00	5/6/2009 12:45	**105**	Discharge						696,844	1
	5/8/2009 3:15	5/8/2009 4:30	**75**	Discharge						415,573	1
	5/8/2009 14:15	5/8/2009 19:45	**330**	Discharge						3,561,281	1
	5/14/2009 5:45	5/14/2009 7:30	**105**	Discharge						416,896	1
	5/16/2009 5:00	5/16/2009 6:00	**60**	Discharge						163,823	1
	5/25/2009 3:45	5/25/2009 3:45	**0**	Discharge						25,500	1
	5/27/2009 12:45	5/27/2009 13:15	**30**	Discharge						153,677	1
	6/10/2009 10:00	6/10/2009 13:30	**210**	0.87	**3,557,021**	1.12	**0.45**	3	Atlas	3,094,608	1
	6/11/2009 2:45	6/11/2009 5:30	**165**	1.86	**2,371,415**	2.16	**0.72**	24	Atlas	4,410,832	1
	6/11/2009 17:45	6/11/2009 21:45	**240**	1.86	**1,578,483**	2.78	**0.72**	24	Atlas	2,935,979	1
	6/16/2009 9:30	6/16/2009 17:15	**465**	0.81	**1,428,675**	4.17	**0.51**	1	Atlas	1,157,227	1
	6/18/2009 10:15	6/18/2009 12:45	**150**	1.42	**2,315,919**	3.64	**0.96**	1	Atlas	3,288,605	1
	6/20/2009 4:45	6/20/2009 4:45	**0**	0.13	**228,606**	2.99	**0.10**	1	Atlas	29,719	1
	6/22/2009 9:15	6/22/2009 11:15	**120**	1.34	**1,468,929**	4.39	**0.90**	1	Atlas	1,968,364	1
	6/25/2009 23:30	6/26/2009 7:00	**450**	1.98	**2,228,419**	3.58	**0.91**	12	Atlas	4,412,269	1
	6/26/2009 16:00	6/26/2009 16:45	**45**	0.16	**2,992,101**	3.74	**0.14**	1	Atlas	478,736	1
	7/15/2009 10:30	7/15/2009 11:45	**75**	0.42	**2,302,291**	0.44	**0.26**	3	Atlas	966,962	1
	7/17/2009 3:30	7/17/2009 4:45	**75**	0.36	**2,258,131**	0.81	**0.24**	3	Atlas	812,927	1
	7/22/2009 6:15	7/22/2009 13:00	**405**	1.56	**1,862,151**	2.33	**0.69**	12	Atlas	2,904,956	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**7/25/2009 6:45**	7/25/2009 6:45	**0**	0.63	**15,950**	1.74	**0.24**	24	Atlas	10,048	1
	7/29/2009 1:15	7/29/2009 8:30	**435**	2.04	**3,240,090**	4.12	**0.98**	6	Atlas	6,609,784	1
	7/30/2009 19:30	7/30/2009 23:15	**225**	1.04	**1,139,364**	3.55	**0.43**	12	Atlas	1,184,939	1
	8/4/2009 7:30	8/4/2009 19:45	**735**	6.41	**1,956,641**	9.35				12,542,069	1
	8/10/2009 18:45	8/10/2009 20:45	**120**	1.07	**1,009,308**	7.43	**0.68**	3	Atlas	1,079,959	1
	8/20/2009 9:15	8/20/2009 9:45	**30**	0.39	**336,072**	0.42	**0.25**	3	Atlas	131,068	1
	9/3/2009 16:30	9/3/2009 16:30	**0**	0.01	**1,976,426**	0.14	**0.01**	1	Atlas	19,764	1
	9/6/2009 1:30	9/6/2009 1:30	**0**	0.18	**25,004**	0.17	**0.12**	3	Atlas	4,501	1
	9/7/2009 2:00	9/7/2009 2:00	**0**	0.22	**35,824**	0.36	**0.09**	12	Atlas	7,881	1
	9/20/2009 6:00	9/21/2009 0:45	**1125**	3.66	**3,277,050**	3.66	**4.24**	24	Cloudburst	11,994,003	1
	9/22/2009 18:15	9/23/2009 0:15	**360**	0.64	**1,625,274**	4.32	**0.33**	6	Atlas	1,040,176	1
	9/24/2009 7:30	9/24/2009 8:00	**30**	0.79	**745,937**	4.48	**0.26**	24	Atlas	589,290	1
	9/24/2009 19:00	9/24/2009 23:00	**240**	0.79	**297,985**	5.04	**0.26**	24	Atlas	235,408	1
	9/26/2009 20:15	9/26/2009 21:30	**75**	0.53	**2,776,070**	5.65	**0.44**	1	Atlas	1,471,317	1
	10/2/2009 3:45	10/2/2009 7:00	**195**	0.77	**2,664,910**	1.41	**0.48**	3	Atlas	2,051,981	1
	10/6/2009 10:45	10/6/2009 11:45	**60**	0.11	**4,779,935**	0.87	**0.07**	1	Atlas	525,793	1
	10/8/2009 13:45	10/9/2009 12:45	**1380**	2.04	**3,334,214**	2.76	**0.68**	24	Atlas	6,801,796	1
	10/9/2009 21:15	10/9/2009 22:30	**75**	2.04	**146,300**	2.14	**0.68**	24	Atlas	298,451	1
	10/14/2009 5:30	10/14/2009 7:30	**120**	0.6	**2,970,219**	2.63	**0.39**	3	Atlas	1,782,131	1
	10/15/2009 4:15	10/15/2009 5:30	**75**	0.15	**3,299,545**	2.74	**0.10**	3	Atlas	494,932	1
	10/23/2009 2:30	10/23/2009 10:30	**480**	0.58	**1,083,242**	0.6	**0.25**	12	Atlas	628,280	1
	10/27/2009 15:45	10/27/2009 23:45	**480**	1.12	**1,814,038**	1.7	**0.50**	12	Atlas	2,031,723	1
	10/30/2009 19:30	10/31/2009 5:15	**585**	1.05	**1,445,432**	2.15	**0.47**	12	Atlas	1,517,704	1
	11/17/2009 7:30	11/17/2009 21:15	**825**	0.95	**938,557**	0.94	**0.37**	24	Atlas	891,629	1
	12/8/2009 15:45	12/8/2009 23:00	**435**	1.77	**826,402**	2.04	**0.74**	12	Atlas	1,462,732	1
	12/13/2009 6:45	12/13/2009 7:15	**30**	0.32	**575,670**	2.16	**0.21**	3	Atlas	184,215	1
	12/19/2009 3:00	12/19/2009 3:00	**0**	0.39	**6,180**	0.42	**0.13**	24	Atlas	2,410	1
	12/25/2009 11:00	12/25/2009 11:15	**15**	0.27	**135,705**	0.65	**0.09**	24	Atlas	36,640	1
	1/20/2010 9:45	1/20/2010 12:45	**180**	1.33	**731,328**	0.69	**0.43**	48	Atlas	972,667	1
	1/20/2010 23:45	1/21/2010 0:45	**60**	1.33	**240,541**	0.83	**0.43**	48	Atlas	319,919	1
	1/21/2010 10:15	1/21/2010 19:45	**570**	1.33	**1,470,889**	1.59	**0.43**	48	Atlas	1,956,282	1
	1/24/2010 3:45	1/24/2010 9:30	**345**	0.88	**1,118,317**	2.09	**0.34**	24	Atlas	984,119	1
	1/24/2010 21:15	1/24/2010 23:00	**105**	0.88	**321,194**	2.22	**0.34**	24	Atlas	282,651	1
	2/5/2010 11:30	2/5/2010 20:15	**525**	1.05	**619,115**	0.97	**0.38**	24	Atlas	650,071	1
	3/12/2010 13:45	3/12/2010 14:45	**60**	0.27	**314,086**	0.28	**0.17**	3	Atlas	84,803	1
	3/21/2010 19:45	3/22/2010 1:45	**360**	0.59	**347,211**	0.59	**0.27**	12	Atlas	204,855	1
	3/25/2010 14:15	3/25/2010 22:30	**495**	0.59	**572,942**	1.15	**0.35**	1	Atlas	338,036	1
	4/7/2010 23:45	4/8/2010 6:30	**405**	1.16	**884,657**	1.24	**0.55**	6	Atlas	1,026,202	1
	4/24/2010 14:30	4/24/2010 20:45	**375**	1.77	**2,978,983**	2.01	**0.84**	6	Atlas	5,272,800	1
	4/27/2010 7:45	4/27/2010 10:45	**180**	0.36	**1,948,308**	2.51	**0.17**	6	Atlas	701,391	1
	5/1/2010 4:30	5/2/2010 23:15	**2565**	4.6	**3,532,064**	6.78	**5.28**	48	Atlas	16,247,493	1
	5/7/2010 23:00	5/7/2010 23:45	**45**	0.29	**612,819**	4.92	**0.25**	1	Atlas	177,717	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**5/12/2010 9:30**	5/12/2010 11:00	**90**	0.97	**815,184**	1.35	**0.75**	1	Atlas	790,728	1
	5/13/2010 12:30	5/13/2010 13:00	**30**	0.19	**657,872**	1.54	**0.17**	1	Atlas	124,996	1
	5/16/2010 9:30	5/16/2010 18:45	**555**	0.53	**152,266**	1.78	**0.24**	12	Atlas	80,701	1
	5/17/2010 19:30	5/17/2010 20:15	**45**	0.27	**1,581,774**	2.04	**0.17**	3	Atlas	427,079	1
	5/21/2010 19:30	5/21/2010 21:15	**105**	1.16	**1,661,172**	1.97	**0.88**	1	Atlas	1,926,960	1
	5/30/2010 20:00	5/30/2010 20:45	**45**	0.37	**1,384,115**	0.54	**0.20**	6	Atlas	512,123	1
	6/9/2010 3:30	6/9/2010 13:00	**570**	2.31	**743,877**	2.44	**1.77**	3	Atlas	1,718,355	1
	6/12/2010 1:30	6/12/2010 1:45	**15**	0.26	**403,399**	2.56	**0.14**	6	Atlas	104,884	1
	6/13/2010 22:45	6/13/2010 23:30	**45**	0.4	**638,447**	2.79	**0.19**	1	Atlas	255,379	1
	6/14/2010 22:00	6/14/2010 22:00	**0**	0.05	**487,935**	3.01				24,397	1
	6/15/2010 6:30	6/15/2010 6:30	**0**	Discharge						905	1
	6/15/2010 20:45	6/15/2010 21:15	**30**	0.37	**152,239**	3.37	**0.24**	3	Atlas	56,328	1
	6/19/2010 5:30	6/19/2010 8:00	**150**	0.78	**1,538,666**	1.59	**0.45**	3	Atlas	1,200,160	1
	6/28/2010 1:30	6/28/2010 2:45	**75**	0.28	**384,737**	0.27	**0.19**	1	Atlas	107,726	1
	7/8/2010 6:00	7/8/2010 6:00	**0**	Discharge						1	1
	7/9/2010 7:15	7/9/2010 7:30	**15**	0.45	**24,621**	0.27	**0.17**	12	Atlas	11,080	1
	7/13/2010 3:45	7/13/2010 11:15	**450**	1.96	**825,421**	2.39	**0.90**	12	Atlas	1,617,825	1
	7/19/2010 7:00	7/19/2010 7:00	**0**	Discharge						2	1
	7/20/2010 4:30	7/20/2010 6:30	**120**	0.69	**1,183,828**	2.13	**0.41**	3	Atlas	816,841	1
	7/21/2010 5:45	7/21/2010 6:45	**60**	0.42	**602,096**	1.35	**0.32**	1	Atlas	252,881	1
	7/22/2010 14:15	7/22/2010 15:00	**45**	0.31	**732,348**	1.67	**0.27**	1	Atlas	227,028	1
	7/27/2010 14:30	7/27/2010 17:00	**150**	0.87	**368,346**	1.59	**0.56**	3	Atlas	320,461	1
	7/31/2010 4:00	7/31/2010 6:30	**150**	0.56	**682,241**	1.55	**0.33**	3	Atlas	382,055	1
	7/31/2010 20:45	7/31/2010 21:45	**60**	0.29	**842,864**	1.84	**0.25**	1	Atlas	244,430	1
	8/3/2010 20:45	8/3/2010 20:45	**0**	Discharge						9	1
	8/5/2010 9:00	8/5/2010 9:45	**45**	0.18	**336,709**	1.01	**0.14**	1	Atlas	60,608	1
	8/11/2010 17:15	8/11/2010 18:00	**45**	0.1	**1,273,801**	0.28	**0.08**	1	Atlas	127,380	1
	8/14/2010 16:15	8/14/2010 17:15	**60**	0.61	**409,074**	0.96	**0.50**	1	Atlas	249,535	1
	8/21/2010 7:00	8/21/2010 9:00	**120**	0.47	**651,343**	1.11	**0.29**	3	Atlas	306,131	1
	9/7/2010 9:30	9/7/2010 9:45	**15**	0.18	**61,927**	0.18	**0.16**	1	Atlas	11,147	1
	10/13/2010 18:45	10/13/2010 21:00	**135**	0.42	**209,575**	0.45	**0.28**	3	Atlas	88,021	1
	10/26/2010 11:00	10/26/2010 11:45	**45**	0.57	**256,142**	0.32	**0.31**	6	Atlas	146,001	1
	11/16/2010 11:00	11/16/2010 18:45	**465**	0.78	**381,466**	0.83	**0.35**	12	Atlas	297,543	1
	11/23/2010 2:15	11/23/2010 4:30	**135**	0.28	**229,407**	1.1	**0.15**	6	Atlas	64,234	1
	11/24/2010 12:30	11/24/2010 15:30	**180**	0.71	**448,420**	1.01	**0.33**	3	Atlas	318,378	1
	11/25/2010 9:30	11/25/2010 23:30	**840**	2.36	**622,277**	3.24	**0.90**	24	Atlas	1,468,573	1
	11/29/2010 20:45	11/30/2010 13:30	**1005**	1.68	**423,414**	4.99	**0.65**	24	Atlas	711,335	1
	12/30/2010 2:45	12/30/2010 8:15	**330**	0.53	**98,066**	0.59	**0.24**	12	Atlas	51,975	1
	1/1/2011 4:15	1/1/2011 7:30	**195**	0.62	**120,192**	1.11	**0.28**	6	Atlas	74,519	1
	2/1/2011 16:30	2/1/2011 20:30	**240**	0.85	**1,297,219**	0.77	**0.34**	6	Atlas	1,102,636	1
	2/7/2011 12:15	2/7/2011 13:00	**45**	0.25	**234,114**	1.18	**0.10**	24	Atlas	58,529	1
	2/21/2011 18:30	2/21/2011 19:00	**30**	0.16	**209,112**	0.19	**0.10**	3	Atlas	33,458	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**2/24/2011 16:45**	2/25/2011 4:30	**705**	2.27	**965,822**	2.47	**0.89**	12	Atlas	2,192,417	1
	2/27/2011 18:15	2/27/2011 18:15	**0**	0.15	**81,978**	2.57	**0.09**	3	Atlas	12,297	1
	2/28/2011 5:00	2/28/2011 12:45	**465**	1.3	**373,708**	3.88	**0.61**	6	Atlas	485,820	1
	3/5/2011 4:15	3/5/2011 19:15	**900**	0.9	**238,304**	2.33	**0.30**	24	Atlas	214,474	1
	3/8/2011 22:30	3/9/2011 20:30	**1320**	3.03	**433,547**	3.93	**1.76**	24	Cloudburst	1,313,646	1
	3/14/2011 3:45	3/14/2011 5:00	**75**	0.94	**95,339**	3.42	**0.31**	12	Atlas	89,619	1
	3/14/2011 13:15	3/14/2011 16:00	**165**	0.94	**71,480**	3.8	**0.31**	12	Atlas	67,191	1
	3/15/2011 7:15	3/15/2011 13:00	**345**	0.94	**21,849**	3.96	**0.31**	12	Atlas	20,538	1
	3/18/2011 21:15	3/18/2011 22:15	**60**	0.19	**136,667**	1.12	**0.09**	6	Atlas	25,967	1
	4/4/2011 13:30	4/4/2011 17:15	**225**	0.85	**134,538**	0.99	**0.44**	6	Atlas	114,357	1
	4/9/2011 10:30	4/9/2011 12:15	**105**	0.57	**213,430**	1.47	**0.38**	1	Atlas	121,655	1
	4/11/2011 10:30	4/12/2011 10:00	**1410**	3.26	**715,366**	4.68	**2.68**	24	Cloudburst	2,332,094	1
	4/15/2011 12:45	4/15/2011 13:45	**60**	0.18	**81,892**	4.01	**0.11**	3	Atlas	14,741	1
	4/20/2011 0:30	4/20/2011 5:00	**270**	0.7	**416,596**	1.14	**0.38**	6	Atlas	291,617	1
	4/22/2011 16:30	4/23/2011 21:00	**1710**	4.87	**387,718**	4.47	**3.76**	48	Atlas	1,888,186	1
	4/24/2011 7:45	4/25/2011 7:30	**1425**	4.87	**215,438**	5.55	**3.76**	48	Atlas	1,049,185	1
	4/27/2011 1:00	4/28/2011 0:45	**1425**	2.56	**1,771,368**	8.04	**0.98**	24	Atlas	4,534,701	1
	4/28/2011 18:45	4/28/2011 20:15	**90**	0.19	**703,526**	7.68	**0.13**	3	Atlas	133,670	1
	5/1/2011 4:15	5/1/2011 7:00	**165**	0.74	**840,798**	4.77				622,191	1
	5/1/2011 19:15	5/2/2011 8:00	**765**	2.71	**308,826**	4.77	**0.88**	48	Atlas	836,917	1
	5/2/2011 16:45	5/3/2011 15:00	**1335**	2.71	**796,418**	6.33	**0.88**	48	Atlas	2,158,293	1
	5/8/2011 0:45	5/8/2011 2:00	**75**	0.36	**955,419**	3.73	**0.24**	1	Atlas	343,951	1
	5/14/2011 14:45	5/14/2011 15:30	**45**	0.36	**386,979**	0.75	**0.28**	1	Atlas	139,313	1
	5/21/2011 18:30	5/21/2011 19:30	**60**	0.45	**597,517**	0.9	**0.33**	1	Atlas	268,883	1
	5/23/2011 4:00	5/23/2011 5:00	**60**	0.39	**354,044**	0.96	**0.28**	1	Atlas	138,077	1
	5/23/2011 17:45	5/23/2011 21:30	**225**	0.89	**661,741**	1.87	**0.56**	3	Atlas	588,950	1
	5/25/2011 22:45	5/26/2011 17:15	**1110**	1.56	**873,314**	3.39	**0.67**	3	Atlas	1,362,369	1
	6/11/2011 4:45	6/11/2011 5:15	**30**	0.25	**119,880**	0.28	**0.21**	1	Atlas	29,970	1
	6/15/2011 9:15	6/15/2011 10:45	**90**	1.04	**526,070**	1.34	**0.63**	3	Atlas	547,113	1
	6/18/2011 6:15	6/18/2011 9:15	**180**	0.86	**529,899**	1.95	**0.53**	3	Atlas	455,713	1
	6/19/2011 7:45	6/19/2011 10:00	**135**	0.54	**367,249**	2.47	**0.33**	3	Atlas	198,314	1
	6/20/2011 1:30	6/20/2011 2:30	**60**	0.46	**372,005**	2.94	**0.40**	1	Atlas	171,122	1
	6/21/2011 14:15	6/21/2011 17:00	**165**	0.38	**95,839**	3.28	**0.22**	3	Atlas	36,419	1
	6/22/2011 19:15	6/23/2011 4:45	**570**	3.57	**915,196**	5.82	**18.27**	3	Atlas	3,267,249	1
	6/26/2011 4:45	6/26/2011 5:15	**30**	0.33	**73,849**	5.21	**0.17**	6	Atlas	24,370	1
	7/8/2011 3:30	7/8/2011 5:00	**90**	0.46	**164,952**	0.89	**0.23**	3	Atlas	75,878	1
	7/12/2011 17:00	7/12/2011 21:00	**240**	0.49	**413,020**	1.12	**0.26**	6	Atlas	202,380	1
	7/19/2011 22:45	7/20/2011	**75**	1.43	**842,645**	1.47	**1.39**	1	Atlas	1,204,982	1
	8/7/2011 3:15	8/7/2011 6:45	**210**	1.88	**860,592**	1.91	**1.70**	3	Atlas	1,617,913	1
	8/8/2011 15:15	8/8/2011 15:30	**15**	0.2	**254,487**	2.12	**0.13**	3	Atlas	50,897	1
	8/10/2011 2:45	8/10/2011 3:15	**30**	0.22	**187,291**	2.24	**0.15**	3	Atlas	41,204	1
	8/11/2011 20:15	8/12/2011 3:15	**420**	Discharge						551,710	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**8/13/2011 17:00**	8/13/2011 18:00	**60**	0.91	**879,174**	3.15	**0.72**	1	Atlas	800,049	1
	8/18/2011 8:00	8/18/2011 9:00	**60**	0.24	**1,340,731**	1.15	**0.20**	1	Atlas	321,776	1
	9/10/2011 20:00	9/10/2011 20:15	**15**	0.06	**179,380**	0.41	**0.04**	3	Atlas	10,763	1
	9/19/2011 7:00	9/19/2011 8:00	**60**	0.7	**471,420**	0.61	**0.28**	12	Atlas	329,994	1
	9/23/2011 2:30	9/23/2011 8:00	**330**	0.82	**398,863**	1.56	**0.38**	12	Atlas	327,068	1
	9/25/2011 20:00	9/26/2011 6:30	**630**	3.94	**2,749,018**	5.63	**13.96**	12	Atlas	10,831,130	1
	10/13/2011 7:30	10/13/2011 8:15	**45**	0.4	**631,461**	0.27	**0.19**	3	Atlas	252,584	1
	10/27/2011	10/27/2011 5:15	**315**	1.12	**432,150**	1.5	**0.46**	12	Atlas	484,009	1
	11/3/2011 9:45	11/3/2011 16:45	**420**	0.53	**124,380**	0.57	**0.23**	12	Atlas	65,921	1
	11/14/2011 21:30	11/14/2011 23:15	**105**	2.23	**94,763**	0.42	**0.72**	48	Atlas	211,321	1
	11/15/2011 8:00	11/15/2011 14:15	**375**	2.23	**36,037**	1.55	**0.72**	48	Atlas	80,363	1
	11/16/2011 5:30	11/16/2011 11:30	**360**	2.23	**38,158**	2.21	**0.72**	48	Atlas	85,092	1
	11/20/2011 17:30	11/20/2011 18:30	**60**	0.94	**11,504**	2.85	**0.33**	24	Atlas	10,814	1
	11/22/2011	11/22/2011 11:30	**690**	1.15	**323,516**	3.85	**0.49**	12	Atlas	372,043	1
	11/27/2011 6:15	11/29/2011 3:15	**2700**	3.03	**492,237**	5.04	**0.94**	48	Atlas	1,491,478	1
	12/4/2011 16:15	12/5/2011 22:00	**1785**	3.04	**908,013**	5.49	**0.99**	48	Atlas	2,760,361	1
	12/15/2011 4:00	12/15/2011 8:00	**240**	0.45	**208,728**	0.42	**0.23**	6	Atlas	93,928	1
	12/21/2011 5:15	12/21/2011 7:30	**135**	0.66	**417,754**	1.13	**0.30**	12	Atlas	275,718	1
	12/22/2011 12:00	12/22/2011 18:00	**360**	0.58	**561,579**	1.22	**0.26**	12	Atlas	325,716	1
	12/27/2011 2:45	12/27/2011 12:00	**555**	0.64	**420,657**	1.84	**0.25**	12	Atlas	269,220	1
	1/11/2012 4:45	1/11/2012 11:30	**405**	0.71	**488,946**	0.6	**0.28**	12	Atlas	347,152	1
	1/11/2012 20:45	1/11/2012 20:45	**0**	0.71	**6,694**	0.71	**0.28**	12	Atlas	4,753	1
	1/17/2012 4:00	1/17/2012 12:45	**525**	0.36	**495,343**	1.17	**0.17**	12	Atlas	178,324	1
	1/23/2012 2:45	1/23/2012 5:00	**135**	0.54	**518,169**	0.91	**0.29**	3	Atlas	279,811	1
	1/25/2012 19:00	1/25/2012 19:15	**15**	1.7	**9,105**	0.81	**0.56**	24	Atlas	15,478	1
	1/26/2012 5:30	1/26/2012 7:00	**90**	1.7	**200,883**	1.2	**0.56**	24	Atlas	341,501	1
	1/26/2012 17:45	1/27/2012 1:45	**480**	1.7	**712,925**	2.25	**0.56**	24	Atlas	1,211,972	1
	2/4/2012 9:30	2/4/2012 10:45	**75**	0.43	**52,546**	0.46	**0.25**	3	Atlas	22,595	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.12	**348,332**	0.38	**0.09**	1	Atlas	41,800	1
	2/29/2012 6:15	2/29/2012 9:30	**195**	0.66	**217,765**	0.77	**0.31**	1	Atlas	143,725	1
	3/8/2012 10:15	3/8/2012 17:30	**435**	0.84	**361,000**	1.17	**0.39**	6	Atlas	303,240	1
	3/15/2012 19:00	3/16/2012 3:45	**525**	1.17	**513,493**	1.36	**0.52**	12	Atlas	600,786	1
	3/17/2012 18:45	3/17/2012 22:30	**225**	1.02	**233,392**	2.33	**0.58**	1	Atlas	238,060	1
	3/23/2012 5:15	3/23/2012 23:45	**1110**	1.42	**1,286,504**	2.45	**0.53**	24	Atlas	1,826,836	1
	4/1/2012 8:30	4/1/2012 11:45	**195**	1.88	**659,548**	2.06	**1.20**	3	Atlas	1,239,950	1
	4/4/2012 17:45	4/4/2012 17:45	**0**	0.28	**25,440**	2.15	**0.12**	12	Atlas	7,123	1
	4/16/2012 7:15	4/16/2012 7:15	**0**	0.13	**138,390**	0.3	**0.09**	3	Atlas	17,991	1
	4/28/2012 19:15	4/29/2012 0:45	**330**	0.78	**964,923**	0.9	**0.58**	1	Atlas	752,640	1
	4/30/2012 18:00	4/30/2012 18:45	**45**	0.32	**1,358,635**	1.17	**0.21**	3	Atlas	434,763	1
	5/4/2012 23:45	5/5/2012 5:15	**330**	1.35	**1,950,269**	2.47	**0.69**	6	Atlas	2,632,863	1
	5/13/2012 2:00	5/13/2012 14:45	**765**	2.09	**3,784,577**	2.13	**0.85**	12	Atlas	7,909,767	1
	5/16/2012 18:00	5/16/2012 18:00	**0**	0.18	**98,077**	2.28	**0.16**	1	Atlas	17,654	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**5/29/2012 6:45**	5/29/2012 13:15	**390**	3.09	**1,721,985**	3.09	**21.94**	3	Atlas	5,320,932	1
	5/31/2012 18:30	6/1/2012 5:45	**675**	1.21	**2,895,351**	4.24	**0.52**	12	Atlas	3,503,375	1
	7/1/2012 20:00	7/1/2012 20:30	**30**	0.44	**1,720,084**	0.37	**0.31**	1	Atlas	756,837	1
	7/8/2012 13:15	7/8/2012 13:45	**30**	0.21	**834,088**	0.68	**0.15**	1	Atlas	175,158	1
	7/14/2012 12:45	7/14/2012 15:00	**135**	0.53	**1,927,756**	0.79	**0.32**	3	Atlas	1,021,711	1
	7/18/2012 16:30	7/18/2012 18:00	**90**	Discharge						484,936	1
	7/19/2012 18:15	7/19/2012 19:30	**75**	0.86	**2,554,545**	1.37	**0.70**	1	Atlas	2,196,909	1
	7/24/2012 20:15	7/24/2012 20:45	**30**	0.36	**1,678,153**	1.29	**0.30**	1	Atlas	604,135	1
	7/27/2012 3:30	7/27/2012 3:45	**15**	0.08	**1,727,606**	0.53	**0.04**	6	Atlas	138,208	1
	7/27/2012 20:00	7/27/2012 21:30	**90**	0.67	**2,904,325**	1.12	**0.50**	1	Atlas	1,945,898	1
	8/3/2012 9:30	8/3/2012 10:15	**45**	0.26	**819,486**	0.94	**0.13**	3	Atlas	213,066	1
	8/16/2012 20:15	8/16/2012 23:45	**210**	0.69	**2,577,018**	0.82	**0.40**	3	Atlas	1,778,142	1
	8/21/2012 14:00	8/21/2012 14:45	**45**	0.22	**3,731,917**	0.93	**0.18**	1	Atlas	821,022	1
	9/1/2012 15:00	9/1/2012 18:00	**180**	0.57	**2,766,447**	0.6	**0.36**	3	Atlas	1,576,875	1
	9/2/2012 12:00	9/2/2012 22:15	**615**	0.71	**3,502,171**	1.31	**0.27**	24	Atlas	2,486,541	1
	9/3/2012 14:15	9/3/2012 15:00	**45**	0.06	**8,596,318**	1.35	**0.03**	1	Atlas	515,779	1
	9/5/2012 15:30	9/5/2012 17:15	**105**	0.68	**1,373,114**	2.04	**0.53**	1	Atlas	933,717	1
	9/7/2012 23:45	9/8/2012 7:15	**450**	1.38	**729,741**	3.4	**0.77**	3	Atlas	1,007,043	1
	9/25/2012 9:00	9/25/2012 10:30	**90**	0.4	**141,326**	0.36	**0.22**	6	Atlas	56,530	1
	9/26/2012 0:15	9/26/2012 6:00	**345**	0.48	**339,775**	0.8	**0.22**	12	Atlas	163,092	1
	9/26/2012 21:15	9/27/2012 0:45	**210**	1.17	**1,356,138**	2.02	**0.67**	3	Atlas	1,586,681	1
	10/1/2012 14:45	10/1/2012 19:30	**285**	0.73	**1,366,079**	2.77	**0.29**	12	Atlas	997,238	1
	10/18/2012 1:30	10/18/2012 2:15	**45**	0.3	**248,866**	0.45	**0.19**	3	Atlas	74,660	1
	10/26/2012 11:45	10/26/2012 16:15	**270**	0.81	**188,695**	0.72	**0.37**	6	Atlas	152,843	1
	11/3/2012 16:45	11/3/2012 16:45	**0**	0.16	**118,534**	0.17	**0.07**	12	Atlas	18,965	1
	11/12/2012 7:00	11/12/2012 7:45	**45**	0.43	**152,128**	0.43	**0.20**	12	Atlas	65,415	1
	12/4/2012 16:15	12/4/2012 19:00	**165**	0.61	**428,128**	0.8	**0.39**	3	Atlas	261,158	1
	12/7/2012 2:30	12/7/2012 18:15	**945**	1.27	**895,067**	2.08	**0.55**	12	Atlas	1,136,736	1
	12/8/2012 5:45	12/8/2012 10:15	**270**	0.71	**376,237**	2.79	**0.39**	6	Atlas	267,129	1
	12/9/2012 9:00	12/9/2012 9:30	**30**	1.14	**68,836**	2.88	**0.52**	3	Atlas	78,473	1
	12/9/2012 22:00	12/10/2012 1:15	**195**	1.14	**910,967**	3.63	**0.52**	3	Atlas	1,038,502	1
	12/15/2012 11:30	12/15/2012 12:30	**60**	0.18	**537,432**	1.33	**0.11**	3	Atlas	96,738	1
	12/20/2012 7:00	12/20/2012 12:45	**345**	0.64	**850,545**	0.97	**0.34**	6	Atlas	544,349	1
	12/26/2012 4:15	12/26/2012 10:00	**345**	0.74	**598,813**	1.34	**0.28**	24	Atlas	443,121	1
	1/10/2013 15:15	1/10/2013 15:15	**0**	0.16	**33,444**	0.17	**0.08**	6	Atlas	5,351	1
	1/11/2013 6:00	1/11/2013 8:15	**135**	0.64	**620,987**	0.81	**0.34**	6	Atlas	397,432	1
	1/13/2013 3:15	1/13/2013 20:45	**1050**	2.3	**1,211,169**	3.1	**0.88**	24	Atlas	2,785,689	1
	1/28/2013 17:30	1/28/2013 17:45	**15**	0.08	**279,853**	0.35	**0.05**	1	Atlas	22,388	1
	1/30/2013 4:45	1/30/2013 9:30	**285**	0.83	**771,104**	1.11	**0.42**	6	Atlas	640,016	1
	2/4/2013 18:30	2/4/2013 18:45	**15**	0.1	**254,657**	1.03	**0.06**	3	Atlas	25,466	1
	2/10/2013 16:15	2/10/2013 16:30	**15**	0.15	**212,418**	0.34	**0.07**	3	Atlas	31,863	1
	2/19/2013 4:15	2/19/2013 5:00	**45**	0.39	**298,582**	0.45	**0.18**	12	Atlas	116,447	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**2/22/2013 0:15**	2/22/2013 1:45	**90**	0.42	**468,086**	0.79	**0.19**	12	Atlas	196,596	1
	2/26/2013 13:45	2/26/2013 17:00	**195**	0.53	**422,113**	0.89	**0.21**	12	Atlas	223,720	1
	3/5/2013 16:30	3/5/2013 18:30	**120**	0.46	**589,776**	0.57	**0.18**	24	Atlas	271,297	1
	3/11/2013 3:45	3/11/2013 12:45	**540**	1	**954,373**	1.48	**0.40**	12	Atlas	954,373	1
	3/17/2013 10:45	3/18/2013 8:45	**1320**	1.78	**1,038,984**	2.73	**0.58**	48	Atlas	1,849,391	1
	3/24/2013 8:00	3/24/2013 17:00	**540**	0.49	**509,008**	1.8	**0.18**	24	Atlas	249,414	1
	4/11/2013 5:45	4/11/2013 23:15	**1050**	1.24	**482,243**	1.21	**0.48**	24	Atlas	597,982	1
	4/16/2013 20:15	4/16/2013 21:00	**45**	0.64	**380,672**	1.86	**0.52**	1	Atlas	243,630	1
	4/19/2013 1:45	4/19/2013 5:15	**210**	0.89	**1,022,623**	1.55	**0.49**	3	Atlas	910,134	1
	4/24/2013 7:15	4/24/2013 10:30	**195**	0.74	**792,632**	1.66	**0.43**	3	Atlas	586,548	1
	5/4/2013 13:00	5/5/2013 9:00	**1200**	1.57	**384,442**	1.46	**0.49**	24	Atlas	603,574	1
	5/10/2013 12:30	5/11/2013 0:45	**735**	1.02	**397,446**	2.69	**0.44**	6	Atlas	405,395	1
	5/22/2013 16:00	5/22/2013 16:30	**30**	0.12	**1,372,114**	0.43	**0.09**	1	Atlas	164,654	1
	5/31/2013 18:30	5/31/2013 18:45	**15**	0.17	**314,201**	0.25	**0.08**	6	Atlas	53,414	1
	6/10/2013 0:15	6/10/2013 1:00	**45**	0.33	**557,788**	0.28	**0.15**	6	Atlas	184,070	1
	6/17/2013 16:30	6/17/2013 22:15	**345**	0.83	**1,169,853**	1.03	**0.42**	6	Atlas	970,978	1
	6/21/2013 19:00	6/21/2013 20:00	**60**	0.43	**2,410,655**	1.5	**0.33**	1	Atlas	1,036,582	1
	6/24/2013 9:00	6/24/2013 9:00	**0**	0.08	**88,219**	1.58	**0.05**	3	Atlas	7,058	1
	6/26/2013 3:30	6/26/2013 5:30	**120**	0.66	**1,220,549**	1.42	**0.44**	3	Atlas	805,562	1
	6/26/2013 16:15	6/26/2013 23:30	**435**	2.48	**1,960,964**	3.9	**2.87**	6	Cloudburst	4,863,190	1
	6/29/2013 19:45	6/29/2013 22:30	**165**	0.44	**1,962,377**	3.89	**0.24**	3	Atlas	863,446	1
	7/1/2013 9:00	7/1/2013 9:15	**15**	0.31	**433,419**	3.71	**0.15**	3	Atlas	134,360	1
	7/1/2013 19:15	7/1/2013 19:30	**15**	0.31	**311,480**	3.9	**0.15**	3	Atlas	96,559	1
	7/2/2013 13:30	7/2/2013 14:00	**30**	0.12	**953,771**	4.02	**0.10**	1	Atlas	114,453	1
	7/4/2013 7:15	7/4/2013 12:15	**300**	0.54	**321,955**	1.24	**0.23**	12	Atlas	173,856	1
	7/6/2013 1:15	7/6/2013 8:00	**405**	0.6	**2,259,072**	2.05	**0.26**	12	Atlas	1,355,443	1
	7/10/2013 14:15	7/10/2013 15:15	**60**	0.68	**1,467,445**	1.94	**0.46**	1	Atlas	997,862	1
	7/14/2013 19:45	7/14/2013 20:15	**30**	0.09	**3,186,211**	0.84	**0.08**	1	Atlas	286,759	1
	7/21/2013 19:30	7/21/2013 21:00	**90**	2.7	**523,949**	1.84	**1.24**	24	Cloudburst	1,414,663	1
	7/22/2013 7:15	7/22/2013 16:45	**570**	2.7	**1,462,148**	3.01				3,947,800	1
	8/9/2013 17:30	8/9/2013 18:15	**45**	0.24	**1,931,614**	0.29	**0.14**	1	Atlas	463,587	1
	8/12/2013 15:00	8/12/2013 15:45	**45**	0.81	**1,787,980**	0.89	**0.39**	1	Atlas	1,448,264	1
	8/13/2013 3:00	8/13/2013 4:30	**90**	0.81	**686,193**	1.19	**0.39**	1	Atlas	555,816	1
	8/20/2013 18:15	8/20/2013 19:00	**45**	0.28	**2,752,053**	0.29	**0.15**	3	Atlas	770,575	1
	8/31/2013 19:45	9/1/2013 3:30	**465**	1.1	**1,262,684**	1.06	**0.50**	12	Atlas	1,388,952	1
	9/2/2013 14:00	9/2/2013 15:00	**60**	0.56	**2,536,878**	1.66	**0.49**	1	Atlas	1,420,651	1
	9/11/2013 10:45	9/11/2013 10:45	**0**	0.03	**1,497,344**	0.04	**0.03**	1	Atlas	44,920	1
	9/20/2013 16:30	9/21/2013 5:00	**750**	1.13	**2,812,428**	1.17	**0.46**	12	Atlas	3,178,043	1
	10/4/2013 19:15	10/4/2013 19:30	**15**	0.12	**1,850,084**	0.19	**0.10**	1	Atlas	222,010	1
	10/5/2013 13:00	10/6/2013 13:00	**1440**	4.4	**14,646,182**	4.55	**9.19**	24	Cloudburst	64,443,202	1
	10/30/2013 1:30	10/30/2013 7:30	**360**	1.69	**1,261,363**	1.69	**0.93**	1	Atlas	2,131,704	1
	10/31/2013 20:15	10/31/2013 22:30	**135**	0.62	**351,113**	2.27	**0.24**	24	Atlas	217,690	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**11/17/2013 5:30**	11/17/2013 20:30	**900**	2.68	**882,731**	2.86	**1.89**	6	Cloudburst	2,365,719	1
	12/5/2013 5:30	12/5/2013 8:45	**195**	0.76	**309,779**	0.17	**0.25**	48	Atlas	235,432	1
	12/6/2013 4:15	12/6/2013 12:00	**465**	0.76	**33,634**	0.43	**0.25**	48	Atlas	25,562	1
	12/14/2013 8:45	12/14/2013 11:45	**180**	0.86	**311,666**	1.28	**0.33**	12	Atlas	268,033	1
	12/21/2013 5:15	12/21/2013 13:15	**480**	2.41	**336,127**	1.5	**0.90**	24	Atlas	810,065	1
	12/21/2013 21:30	12/22/2013 6:15	**525**	2.41	**1,493,977**	2.5	**0.90**	24	Atlas	3,600,484	1
	12/29/2013 5:30	12/29/2013 7:15	**105**	0.51	**311,897**	0.42	**0.22**	12	Atlas	159,068	1
	1/5/2014 15:15	1/5/2014 20:15	**300**	0.48	**865,266**	0.69	**0.24**	6	Atlas	415,328	1
	1/11/2014 0:30	1/11/2014 6:00	**330**	1.03	**678,444**	1.52	**0.55**	6	Atlas	698,797	1
	1/13/2014 15:00	1/13/2014 15:45	**45**	0.2	**274,159**	1.18	**0.09**	12	Atlas	54,832	1
	2/2/2014 4:00	2/2/2014 7:45	**225**	0.47	**592,495**	0.21	**0.18**	24	Atlas	278,473	1
	2/4/2014 19:00	2/5/2014 3:00	**480**	0.51	**2,920,349**	0.98	**0.25**	6	Atlas	1,489,378	1
	2/14/2014 16:45	2/14/2014 19:00	**135**	0.5	**325,486**	0.53	**0.27**	6	Atlas	162,743	1
	2/17/2014 15:30	2/17/2014 19:00	**210**	0.56	**1,812,082**	1.12	**0.34**	3	Atlas	1,014,766	1
	2/20/2014 20:45	2/21/2014	**195**	0.18	**917,976**	1.3	**0.10**	6	Atlas	165,236	1
	3/2/2014 9:45	3/2/2014 12:00	**135**	0.62	**543,661**	0.34	**0.24**	24	Atlas	337,070	1
	3/28/2014 4:30	3/28/2014 5:15	**45**	0.25	**562,563**	0.31	**0.11**	6	Atlas	140,641	1
	3/29/2014 6:30	3/29/2014 13:45	**435**	1.05	**1,041,116**	1.35	**0.48**	12	Atlas	1,093,172	1
	4/3/2014 12:15	4/4/2014 10:45	**1350**	2.67	**1,876,181**	4.08	**0.93**	24	Atlas	5,009,404	1
	4/7/2014 8:15	4/7/2014 16:15	**480**	0.79	**3,082,869**	3.57	**0.47**	3	Atlas	2,435,466	1
	4/14/2014 4:00	4/14/2014 4:30	**30**	1.02	**50,781**	1	**0.39**	24	Atlas	51,797	1
	4/14/2014 20:15	4/15/2014 3:15	**420**	1.02	**1,573,506**	1.06	**0.39**	24	Atlas	1,604,976	1
	4/28/2014 4:15	4/28/2014 8:30	**255**	1.7	**2,228,791**	1.41	**0.70**	3	Atlas	3,788,945	1
	4/28/2014 17:30	4/28/2014 20:30	**180**	1.7	**269,944**	1.8	**0.70**	3	Atlas	458,905	1
	5/9/2014 19:15	5/10/2014 16:15	**1260**	1.63	**1,345,500**	1.71	**0.63**	24	Atlas	2,193,166	1
	5/14/2014 7:00	5/14/2014 23:45	**1005**	1.09	**487,277**	2.84	**0.42**	24	Atlas	531,132	1
	5/22/2014 3:00	5/22/2014 4:30	**90**	0.37	**844,952**	0.43	**0.17**	12	Atlas	312,632	1
	5/28/2014 20:15	5/28/2014 20:30	**15**	0.33	**40,939**	0.71	**0.27**	1	Atlas	13,510	1
	5/29/2014 20:30	5/29/2014 22:30	**120**	0.66	**3,617,101**	1.02	**0.56**	1	Atlas	2,387,287	1
	5/30/2014 14:00	5/30/2014 14:45	**45**	0.13	**4,928,064**	1.13	**0.08**	3	Atlas	640,648	1
	6/11/2014 14:15	6/11/2014 15:00	**45**	0.12	**3,048,478**	0.27	**0.08**	1	Atlas	365,817	1
	6/20/2014 16:15	6/20/2014 18:00	**105**	0.29	**405,296**	0.29	**0.19**	3	Atlas	117,536	1
	6/24/2014 13:30	6/24/2014 14:15	**45**	0.2	**1,510,652**	0.53	**0.15**	1	Atlas	302,130	1
	7/2/2014 16:15	7/2/2014 17:15	**60**	0.08	**2,239,636**	0.28	**0.07**	1	Atlas	179,171	1
	7/7/2014 19:30	7/7/2014 19:45	**15**	1.01	**175,156**	1.25	**0.88**	1	Atlas	176,908	1
	7/13/2014 22:00	7/14/2014	**120**	0.7	**1,394,437**	2.09	**0.35**	3	Atlas	976,106	1
	7/14/2014 20:15	7/14/2014 20:15	**0**	0.08	**128,206**	1.33	**0.07**	1	Atlas	10,256	1
	7/26/2014 21:30	7/27/2014 9:45	**735**	1.43	**1,304,910**	1.47	**0.66**	12	Atlas	1,866,022	1
	8/8/2014 5:45	8/8/2014 8:15	**150**	0.9	**1,372,654**	0.73	**0.43**	6	Atlas	1,235,388	1
	8/9/2014 4:00	8/9/2014 4:15	**15**	0.07	**336,493**	0.97	**0.04**	1	Atlas	23,554	1
	8/10/2014 4:00	8/10/2014 4:30	**30**	0.71	**49,548**	1.74	**0.58**	1	Atlas	35,179	1
	8/11/2014 15:15	8/11/2014 16:15	**60**	0.51	**1,845,361**	2.2	**0.40**	1	Atlas	941,134	1
	8/17/2014 0:15	8/17/2014 1:00	**45**	0.72	**46,579**	1.54	**0.27**	24	Atlas	33,537	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**8/17/2014 9:30**	8/17/2014 11:30	**120**	0.72	**532,539**	1.15	**0.27**	24	Atlas	383,428	1
	8/17/2014 23:15	8/17/2014 23:30	**15**	0.72	**30,694**	1.23	**0.27**	24	Atlas	22,100	1
	8/22/2014 19:15	8/22/2014 20:00	**45**	0.35	**1,470,056**	1.05	**0.26**	1	Atlas	514,519	1
	8/23/2014 16:00	8/23/2014 22:15	**375**	0.59	**1,222,706**	1.65	**0.28**	3	Atlas	721,396	1
	8/27/2014 15:00	8/27/2014 18:00	**180**	0.27	**3,011,370**	1.33	**0.18**	3	Atlas	813,070	1
	8/30/2014 15:15	8/30/2014 16:30	**75**	0.6	**1,828,483**	1.41	**0.38**	1	Atlas	1,097,090	1
	9/2/2014 8:15	9/2/2014 9:30	**75**	0.4	**512,988**	1.32	**0.24**	3	Atlas	205,195	1
	9/11/2014 0:30	9/11/2014 6:45	**375**	1.9	**1,961,204**	1.85	**1.37**	3	Atlas	3,726,287	1
	10/6/2014 9:45	10/6/2014 9:45	**0**	0.37	**97,009**	0.56	**0.22**	1	Atlas	35,893	1
	10/7/2014 12:00	10/7/2014 12:30	**30**	0.17	**583,522**	0.78	**0.14**	1	Atlas	99,199	1
	10/10/2014 1:45	10/10/2014 3:30	**105**	1.09	**757,895**	1.51	**0.47**	3	Atlas	826,105	1
	10/10/2014 17:45	10/10/2014 18:00	**15**	1.09	**30,448**	1.6	**0.47**	3	Atlas	33,188	1
	10/13/2014 5:00	10/13/2014 7:00	**120**	0.42	**789,830**	2.05	**0.27**	3	Atlas	331,729	1
	10/13/2014 23:30	10/14/2014 10:30	**660**	1	**1,155,932**	2.7	**0.44**	12	Atlas	1,155,932	1
	11/23/2014 17:30	11/23/2014 20:15	**165**	0.66	**678,054**	1.01	**0.31**	6	Atlas	447,516	1
	12/1/2014 3:30	12/1/2014 5:45	**135**	0.88	**226,163**	0.46				199,024	1
	12/1/2014 15:00	12/1/2014 15:30	**30**	0.88	**43,578**	0.79				38,349	1
	12/5/2014 6:30	12/5/2014 7:00	**30**	1.77	**36,760**	1.27	**0.57**	48	Atlas	65,065	1
	12/5/2014 20:45	12/6/2014 7:30	**645**	1.77	**917,871**	2.64	**0.57**	48	Atlas	1,624,631	1
	12/16/2014 5:30	12/16/2014 5:30	**0**	0.13	**59,049**	0.12	**0.09**	1	Atlas	7,676	1
	12/23/2014	12/23/2014 0:15	**15**	0.21	**57,810**	0.33	**0.13**	3	Atlas	12,140	1
	12/28/2014 1:15	12/28/2014 2:00	**45**	0.28	**316,916**	0.66	**0.11**	1	Atlas	88,736	1
	2/1/2015 13:00	2/1/2015 18:00	**300**	0.38	**325,211**	0.52	**0.17**	12	Atlas	123,580	1
	2/21/2015 13:45	2/21/2015 17:30	**225**	1.24	**204,000**	1.45	**0.48**	24	Atlas	252,960	1
	3/3/2015 19:15	3/4/2015 18:00	**1365**	1.66	**1,397,782**	1.33	**0.54**	48	Atlas	2,320,318	1
	3/7/2015 14:00	3/7/2015 18:00	**240**	Discharge						284,329	1
	3/10/2015 7:00	3/10/2015 19:15	**735**	1.31	**3,073,212**	2.97	**0.59**	12	Atlas	4,025,908	1
	3/13/2015 10:30	3/14/2015 12:15	**1545**	1.84	**3,390,893**	3.15	**0.69**	24	Atlas	6,239,243	1
	3/26/2015 4:30	3/26/2015 6:45	**135**	0.42	**1,381,250**	0.57	**0.17**	12	Atlas	580,125	1
	4/2/2015 10:30	4/3/2015 23:00	**2190**	5.36	**4,170,733**	5.5	**20.93**	6	Cloudburst	22,355,129	1
	4/7/2015 9:15	4/7/2015 18:45	**570**	0.84	**816,576**	6.2	**0.36**	12	Atlas	685,924	1
	4/8/2015 18:30	4/8/2015 19:30	**60**	0.16	**842,049**	6.36	**0.09**	3	Atlas	134,728	1
	4/9/2015 11:30	4/9/2015 13:00	**90**	0.22	**534,225**	6.11	**0.19**	1	Atlas	117,530	1
	4/10/2015 2:30	4/10/2015 3:45	**75**	0.17	**679,774**	3.49	**0.11**	3	Atlas	115,562	1
	4/13/2015 20:45	4/13/2015 21:45	**60**	0.37	**181,615**	1.47	**0.15**	6	Atlas	67,197	1
	4/14/2015 10:00	4/14/2015 12:15	**135**	0.37	**243,008**	1.23	**0.15**	6	Atlas	89,913	1
	4/19/2015 7:15	4/19/2015 18:45	**690**	0.71	**527,940**	1.17	**0.30**	12	Atlas	374,838	1
	4/20/2015 3:30	4/20/2015 4:00	**30**	0.07	**1,290,325**	1.23	**0.05**	1	Atlas	90,323	1
	4/25/2015 9:30	4/25/2015 9:45	**15**	0.12	**89,311**	0.92	**0.06**	6	Atlas	10,717	1
	5/11/2015 18:00	5/11/2015 18:15	**15**	0.08	**232,485**	0.19	**0.07**	1	Atlas	18,599	1
	5/16/2015 13:15	5/16/2015 13:45	**30**	0.39	**71,372**	0.43	**0.19**	3	Atlas	27,835	1
	5/17/2015 14:15	5/17/2015 15:00	**45**	0.12	**1,377,480**	0.58	**0.09**	1	Atlas	165,298	1
	5/25/2015 7:15	5/25/2015 7:15	**0**	0.24	**26,126**	0.14	**0.11**	12	Atlas	6,270	1
	5/26/2015 13:45	5/26/2015 14:45	**60**	0.35	**1,285,124**	0.54	**0.26**	1	Atlas	449,793	1
	5/27/2015 13:45	5/27/2015 14:00	**15**	0.09	**918,395**	0.68	**0.08**	1	Atlas	82,656	1
	6/8/2015 8:30	6/8/2015 8:45	**15**	0.26	**75,586**	0.28	**0.16**	3	Atlas	19,652	1
	6/13/2015 14:45	6/13/2015 14:45	**0**	0.12	**65,805**	0.38	**0.10**	1	Atlas	7,897	1
	6/17/2015 4:45	6/17/2015 7:00	**135**	0.58	**1,205,234**	0.71	**0.31**	3	Atlas	699,036	1
	6/18/2015 16:15	6/18/2015 19:00	**165**	1.82	**1,674,610**	1.69	**0.59**	48	Atlas	3,047,790	1
	6/19/2015 13:30	6/19/2015 13:30	**0**	1.82	**7,306**	1.86	**0.59**	48	Atlas	13,298	1
	6/20/2015 1:30	6/20/2015 9:30	**480**	1.82	**1,411,063**	2.74	**0.59**	48	Atlas	2,568,135	1
	6/22/2015 6:30	6/22/2015 7:00	**30**	0.24	**321,880**	2.83	**0.11**	3	Atlas	77,251	1
	6/25/2015 23:45	6/26/2015 3:00	**195**	0.59	**2,057,393**	1.77	**0.32**	6	Atlas	1,213,862	1
	6/26/2015 17:00	6/27/2015 1:45	**525**	0.89	**2,769,409**	2.6	**0.50**	1	Atlas	2,464,774	1
	6/29/2015 13:30	6/29/2015 14:15	**45**	0.19	**2,553,307**	1.65	**0.11**	1	Atlas	485,128	1
	7/1/2015 14:30	7/1/2015 14:45	**15**	0.05	**1,696,273**	1.73	**0.04**	1	Atlas	84,814	1
	7/2/2015 0:30	7/2/2015 3:00	**150**	0.93	**1,275,529**	2.46	**0.45**	3	Atlas	1,186,242	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO146	**7/2/2015 20:30**	7/2/2015 21:30	**60**	0.93	**594,153**	2.66	**0.45**	3	Atlas	552,562	1
	7/3/2015 14:45	7/3/2015 19:30	**285**	0.33	**1,995,013**	2.39	**0.23**	1	Atlas	658,354	1
	7/7/2015 11:30	7/7/2015 17:00	**330**	0.72	**1,778,652**	2.03	**0.37**	6	Atlas	1,280,629	1
	7/9/2015 6:30	7/9/2015 8:00	**90**	0.37	**1,023,543**	1.67	**0.23**	3	Atlas	378,711	1
	7/10/2015 10:15	7/10/2015 17:00	**405**	0.46	**2,445,966**	1.99	**0.23**	6	Atlas	1,125,144	1
	7/12/2015 6:00	7/12/2015 8:45	**165**	0.84	**3,802,252**	2.5	**0.60**	1	Atlas	3,193,892	1
	7/13/2015 14:45	7/13/2015 16:00	**75**	0.25	**3,271,650**	2.76	**0.21**	1	Atlas	817,913	1
	7/14/2015 3:30	7/14/2015 5:45	**135**	0.53	**3,368,502**	3.28	**0.39**	1	Atlas	1,785,306	1
	7/14/2015 18:45	7/14/2015 19:30	**45**	0.03	**11,664,028**	2.61	**0.03**	1	Atlas	349,921	1
	7/17/2015 22:30	7/18/2015 2:30	**240**	0.94	**4,619,301**	2.6	**0.62**	3	Atlas	4,342,143	1
	8/6/2015 2:30	8/6/2015 15:45	**795**	0.71	**2,079,281**	0.9	**0.27**	24	Atlas	1,476,290	1
	8/10/2015 21:00	8/10/2015 22:30	**90**	0.06	**891,572**	1.11	**0.05**	1	Atlas	53,494	1
	8/19/2015 8:00	8/19/2015 9:00	**60**	0.54	**2,502,578**	0.46	**0.23**	1	Atlas	1,351,392	1
	8/19/2015 17:15	8/19/2015 17:45	**30**	0.54	**207,589**	0.65	**0.23**	1	Atlas	112,098	1
	9/29/2015 12:45	9/29/2015 19:45	**420**	0.81	**63,380**	0.78	**0.26**	48	Atlas	51,338	1
	10/2/2015 18:00	10/2/2015 20:15	**135**	0.64	**698,930**	1.49	**0.30**	6	Atlas	447,315	1
	10/12/2015 18:45	10/12/2015 20:00	**75**	0.25	**848,277**	0.35	**0.17**	3	Atlas	212,069	1
	10/24/2015 20:15	10/24/2015 20:30	**15**	0.32	**87,693**	0.3	**0.15**	3	Atlas	28,062	1
	10/27/2015 12:15	10/28/2015 8:45	**1230**	2.33	**1,806,892**	2.65	**0.77**	24	Atlas	4,210,059	1
	10/28/2015 22:45	10/28/2015 23:15	**30**	0.17	**855,022**	2.81	**0.09**	6	Atlas	145,354	1
	10/31/2015 23:45	11/1/2015	**15**	0.17	**124,434**	2.67	**0.11**	3	Atlas	21,154	1
	11/6/2015 3:15	11/6/2015 5:45	**150**	0.77	**2,815,042**	0.91	**0.47**	3	Atlas	2,167,582	1
	11/9/2015 19:45	11/9/2015 22:30	**165**	0.5	**258,087**	1.27	**0.22**	12	Atlas	129,043	1
	11/12/2015 0:15	11/12/2015 1:45	**90**	0.29	**1,796,551**	1.55	**0.18**	3	Atlas	521,000	1
	11/18/2015 9:00	11/18/2015 18:45	**585**	1.42	**1,973,817**	1.85	**0.71**	6	Atlas	2,802,820	1
	11/28/2015 14:00	11/28/2015 21:15	**435**	0.74	**439,803**	0.94	**0.30**	12	Atlas	325,454	1
	11/30/2015 22:00	12/1/2015 5:45	**465**	0.74	**1,022,371**	1.69	**0.33**	12	Atlas	756,555	1
	12/14/2015 5:45	12/14/2015 7:45	**120**	0.24	**243,156**	0.21	**0.13**	6	Atlas	58,357	1
	12/21/2015 11:45	12/21/2015 12:00	**15**	0.18	**91,683**	0.21	**0.09**	6	Atlas	16,503	1
	12/21/2015 23:30	12/22/2015 5:00	**330**	0.51	**1,420,120**	0.72	**0.27**	6	Atlas	724,261	1
	12/23/2015 19:30	12/23/2015 22:00	**150**	0.76	**4,014,574**	1.5	**0.58**	1	Atlas	3,051,076	1
	12/25/2015 9:45	12/25/2015 10:00	**15**	0.11	**403,193**	1.58	**0.06**	6	Atlas	44,351	1
	12/26/2015 12:15	12/26/2015 18:15	**360**	0.34	**1,599,792**	1.93	**0.15**	12	Atlas	543,929	1
	12/27/2015 10:30	12/28/2015 18:30	**1920**	1.85	**5,202,960**	3.77	**0.61**	3	Atlas	9,625,476	1
	2/2/2016 15:15	2/3/2016 3:00	**705**	1.21	**2,410,248**	1.29	**0.57**	6	Atlas	2,916,401	1
Grand Total										**512,984,650**	**471**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**11/17/2009 18:00**	11/17/2009 21:15	**195**	0.95	**629,993**	0.94	**0.37**	24	Atlas	598,493	1
	12/8/2009 16:00	12/8/2009 21:45	**345**	1.77	**1,060,296**	2	**0.74**	12	Atlas	1,876,724	1
	12/13/2009 7:00	12/13/2009 7:30	**30**	0.32	**279,467**	2.16	**0.21**	3	Atlas	89,429	1
	12/25/2009 11:00	12/25/2009 11:15	**15**	0.27	**45,656**	0.65	**0.09**	24	Atlas	12,327	1
	1/20/2010 9:45	1/20/2010 12:45	**180**	1.33	**49,245**	0.69	**0.43**	48	Atlas	65,496	1
	1/20/2010 23:45	1/21/2010 0:30	**45**	1.33	**488,606**	0.83	**0.43**	48	Atlas	649,847	1
	1/21/2010 10:30	1/21/2010 19:15	**525**	1.33	**1,053,040**	1.58	**0.43**	48	Atlas	1,400,543	1
	1/24/2010 3:45	1/24/2010 5:30	**105**	0.88	**1,178,670**	1.93	**0.34**	24	Atlas	1,037,230	1
	1/24/2010 21:15	1/24/2010 22:30	**75**	0.88	**553,384**	2.2	**0.34**	24	Atlas	486,978	1
	2/5/2010 12:00	2/5/2010 17:45	**345**	1.05	**659,566**	0.71	**0.38**	24	Atlas	692,544	1
	3/12/2010 13:30	3/12/2010 14:45	**75**	0.27	**343,822**	0.28	**0.17**	3	Atlas	92,832	1
	3/21/2010 23:15	3/22/2010 1:30	**135**	0.59	**460,992**	0.59	**0.27**	12	Atlas	271,985	1
	3/25/2010 21:15	3/25/2010 22:15	**60**	0.59	**312,792**	1.15	**0.35**	1	Atlas	184,547	1
	4/7/2010 23:45	4/8/2010 6:15	**390**	1.16	**1,460,659**	1.24	**0.55**	6	Atlas	1,694,364	1
	4/24/2010 14:30	4/24/2010 20:30	**360**	1.77	**2,757,938**	2.01	**0.84**	6	Atlas	4,881,551	1
	4/27/2010 9:00	4/27/2010 10:45	**105**	0.36	**262,159**	2.51	**0.17**	6	Atlas	94,377	1
	5/1/2010 4:45	5/1/2010 9:00	**255**	4.6	**382,834**	3.36	**5.28**	48	Atlas	1,761,038	1
	5/2/2010 1:00	5/2/2010 22:00	**1260**	4.6	**2,490,556**	5.12	**5.28**	48	Atlas	11,456,559	1
	5/7/2010 23:15	5/7/2010 23:45	**30**	0.29	**448,469**	4.92	**0.25**	1	Atlas	130,056	1
	5/12/2010 9:45	5/12/2010 11:00	**75**	0.97	**2,233,709**	1.35	**0.75**	1	Atlas	2,166,698	1
	5/17/2010 19:45	5/17/2010 20:15	**30**	0.27	**2,570,285**	2.04	**0.17**	3	Atlas	693,977	1
	5/21/2010 19:45	5/22/2010 0:15	**270**	1.16	**1,501,489**	1.97	**0.88**	1	Atlas	1,741,727	1
	5/30/2010 20:15	5/30/2010 21:00	**45**	0.37	**1,564,159**	0.54	**0.20**	6	Atlas	578,739	1
	6/9/2010 3:45	6/9/2010 12:45	**540**	2.31	**1,194,154**	2.44	**1.77**	3	Atlas	2,758,496	1
	6/11/2010 23:00	6/11/2010 23:00	**0**	0.26	**136,952**	2.41	**0.14**	6	Atlas	35,607	1
	6/13/2010 23:00	6/13/2010 23:45	**45**	0.4	**1,359,777**	2.79	**0.19**	1	Atlas	543,911	1
	6/19/2010 5:45	6/19/2010 7:15	**90**	0.78	**2,314,044**	1.56	**0.45**	3	Atlas	1,804,954	1
	6/28/2010 1:45	6/28/2010 2:45	**60**	0.28	**826,981**	0.27	**0.19**	1	Atlas	231,555	1
	7/13/2010 4:00	7/13/2010 9:30	**330**	1.96	**1,378,222**	2.13	**0.90**	12	Atlas	2,701,314	1
	7/20/2010 4:45	7/20/2010 6:30	**105**	0.69	**2,443,272**	2.1	**0.41**	3	Atlas	1,685,858	1
	7/21/2010 6:00	7/21/2010 6:45	**45**	0.42	**995,605**	1.35	**0.32**	1	Atlas	418,154	1
	7/22/2010 14:30	7/22/2010 15:00	**30**	0.31	**1,190,502**	1.67	**0.27**	1	Atlas	369,056	1
	7/27/2010 16:00	7/27/2010 17:00	**60**	0.87	**497,208**	1.59	**0.56**	3	Atlas	432,571	1
	7/31/2010 4:30	7/31/2010 6:30	**120**	0.56	**1,177,361**	1.55	**0.33**	3	Atlas	659,322	1
	7/31/2010 21:00	7/31/2010 21:45	**45**	0.29	**1,211,275**	1.84	**0.25**	1	Atlas	351,270	1
	8/5/2010 9:15	8/5/2010 9:45	**30**	0.18	**748,651**	1.01	**0.14**	1	Atlas	134,757	1
	8/11/2010 17:30	8/11/2010 18:00	**30**	0.1	**944,244**	0.28	**0.08**	1	Atlas	94,424	1
	8/14/2010 16:30	8/14/2010 17:15	**45**	0.61	**670,899**	0.96	**0.50**	1	Atlas	409,248	1
	8/21/2010 7:00	8/21/2010 9:00	**120**	0.47	**1,057,435**	1.11	**0.29**	3	Atlas	496,994	1
	9/7/2010 9:45	9/7/2010 9:45	**0**	0.18	**10,147**	0.18	**0.16**	1	Atlas	1,827	1
	10/13/2010 19:00	10/13/2010 21:00	**120**	0.42	**608,240**	0.45	**0.28**	3	Atlas	255,461	1
	10/26/2010 11:00	10/26/2010 14:45	**225**	0.57	**193,877**	0.5	**0.31**	6	Atlas	110,510	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**11/16/2010 12:15**	11/16/2010 18:45	**390**	0.78	**914,716**	0.83	**0.35**	12	Atlas	713,479	1
	11/23/2010 2:15	11/23/2010 4:30	**135**	0.28	**413,960**	1.1	**0.15**	6	Atlas	115,909	1
	11/24/2010 12:45	11/24/2010 15:30	**165**	0.71	**631,885**	1.01	**0.33**	3	Atlas	448,638	1
	11/25/2010 9:30	11/25/2010 23:30	**840**	2.36	**932,459**	3.24	**0.90**	24	Atlas	2,200,604	1
	11/29/2010 21:30	11/30/2010 10:30	**780**	1.68	**676,150**	4.8	**0.65**	24	Atlas	1,135,932	1
	12/30/2010 3:15	12/30/2010 8:15	**300**	0.53	**108,814**	0.59	**0.24**	12	Atlas	57,671	1
	1/1/2011 4:30	1/1/2011 7:30	**180**	0.62	**427,341**	1.11	**0.28**	6	Atlas	264,951	1
	2/1/2011 16:45	2/1/2011 20:30	**225**	0.85	**729,906**	0.77	**0.34**	6	Atlas	620,421	1
	2/24/2011 17:00	2/25/2011 5:15	**735**	2.27	**1,378,731**	2.47	**0.89**	12	Atlas	3,129,719	1
	2/28/2011 5:15	2/28/2011 12:00	**405**	1.3	**707,294**	3.88	**0.61**	6	Atlas	919,482	1
	3/5/2011 4:30	3/5/2011 9:30	**300**	0.9	**182,279**	2.26	**0.30**	24	Atlas	164,051	1
	3/8/2011 22:45	3/9/2011 17:45	**1140**	3.03	**1,389,584**	3.92	**1.76**	24	Cloudburst	4,210,439	1
	3/14/2011 4:00	3/14/2011 4:45	**45**	0.94	**84,444**	3.42	**0.31**	12	Atlas	79,378	1
	3/15/2011 7:30	3/15/2011 12:45	**315**	0.94	**2,574**	3.96	**0.31**	12	Atlas	2,420	1
	3/18/2011 21:30	3/18/2011 22:15	**45**	0.19	**468,911**	1.12	**0.09**	6	Atlas	89,093	1
	4/4/2011 13:30	4/4/2011 17:00	**210**	0.85	**801,950**	0.99	**0.44**	6	Atlas	681,657	1
	4/9/2011 10:30	4/9/2011 12:15	**105**	0.57	**1,020,061**	1.47	**0.38**	1	Atlas	581,435	1
	4/11/2011 12:00	4/12/2011 11:15	**1395**	3.26	**2,016,828**	4.65	**2.68**	24	Cloudburst	6,574,861	1
	4/15/2011 13:00	4/15/2011 13:30	**30**	0.18	**226,104**	4.01	**0.11**	3	Atlas	40,699	1
	4/20/2011 1:30	4/20/2011 4:45	**195**	0.7	**1,113,472**	1.14	**0.38**	6	Atlas	779,430	1
	4/22/2011 16:30	4/23/2011 21:00	**1710**	4.87	**883,159**	4.47	**3.76**	48	Atlas	4,300,983	1
	4/24/2011 8:15	4/24/2011 20:30	**735**	4.87	**194,737**	5.35	**3.76**	48	Atlas	948,368	1
	4/25/2011 5:45	4/25/2011 6:15	**30**	4.87	**50,308**	5.51	**3.76**	48	Atlas	245,000	1
	4/27/2011 1:30	4/27/2011 17:15	**945**	2.56	**5,240,806**	7.92	**0.98**	24	Atlas	13,416,464	1
	4/28/2011 19:00	4/28/2011 19:45	**45**	0.19	**809,919**	7.68	**0.13**	3	Atlas	153,885	1
	5/1/2011 4:30	5/1/2011 6:45	**135**	0.74	**1,143,455**	4.77				846,157	1
	5/1/2011 22:45	5/2/2011 7:00	**495**	2.71	**312,046**	4.69	**0.88**	48	Atlas	845,643	1
	5/2/2011 17:00	5/3/2011 12:30	**1170**	2.71	**715,218**	6.33	**0.88**	48	Atlas	1,938,240	1
	5/8/2011 1:00	5/8/2011 2:00	**60**	0.36	**2,357,588**	3.72	**0.24**	1	Atlas	848,732	1
	5/14/2011 15:00	5/14/2011 15:30	**30**	0.36	**951,083**	0.75	**0.28**	1	Atlas	342,390	1
	5/21/2011 18:15	5/21/2011 19:30	**75**	0.45	**2,480,590**	0.9	**0.33**	1	Atlas	1,116,266	1
	5/23/2011 4:15	5/23/2011 5:00	**45**	0.39	**1,009,957**	0.96	**0.28**	1	Atlas	393,883	1
	5/23/2011 17:45	5/23/2011 21:15	**210**	0.89	**3,319,780**	1.87	**0.56**	3	Atlas	2,954,604	1
	5/25/2011 23:00	5/26/2011 2:00	**180**	1.56	**1,616,170**	2.84	**0.67**	3	Atlas	2,521,225	1
	5/26/2011 11:30	5/26/2011 12:00	**30**	1.56	**191,683**	3.27	**0.67**	3	Atlas	299,026	1
	6/11/2011 4:30	6/11/2011 5:15	**45**	0.25	**667,297**	0.28	**0.21**	1	Atlas	166,824	1
	6/15/2011 9:30	6/15/2011 11:00	**90**	1.04	**2,444,536**	1.34	**0.63**	3	Atlas	2,542,318	1
	6/18/2011 6:30	6/18/2011 9:00	**150**	0.86	**838,089**	1.95	**0.53**	3	Atlas	720,757	1
	6/19/2011 7:45	6/19/2011 9:30	**105**	0.54	**607,403**	2.47	**0.33**	3	Atlas	327,998	1
	6/20/2011 1:30	6/20/2011 2:30	**60**	0.46	**986,925**	2.94	**0.40**	1	Atlas	453,986	1
	6/21/2011 16:15	6/21/2011 16:45	**30**	0.38	**83,152**	3.28	**0.22**	3	Atlas	31,598	1
	6/22/2011 19:15	6/23/2011 9:00	**825**	3.57	**3,339,061**	5.82	**18.27**	3	Atlas	11,920,447	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**7/5/2011 17:45**	7/5/2011 18:15	**30**	0.41	**51,086**	0.4	**0.27**	3	Atlas	20,945	1
	7/8/2011 3:45	7/8/2011 4:15	**30**	0.46	**97,852**	0.83	**0.23**	3	Atlas	45,012	1
	7/12/2011 17:00	7/12/2011 17:45	**45**	0.49	**615,264**	0.94	**0.26**	6	Atlas	301,479	1
	7/19/2011 22:45	7/20/2011 0:15	**90**	1.43	**1,854,959**	1.47	**1.39**	1	Atlas	2,652,591	1
	7/23/2011 10:15	7/23/2011 10:45	**30**	Discharge						2,714	1
	8/7/2011 3:15	8/7/2011 6:30	**195**	1.88	**1,699,586**	1.9	**1.70**	3	Atlas	3,195,222	1
	8/10/2011 2:45	8/10/2011 3:15	**30**	0.22	**454,144**	2.24	**0.15**	3	Atlas	99,912	1
	8/13/2011 17:15	8/13/2011 18:00	**45**	0.91	**1,025,743**	3.15	**0.72**	1	Atlas	933,427	1
	8/18/2011 8:15	8/18/2011 8:45	**30**	0.24	**1,065,216**	1.15	**0.20**	1	Atlas	255,652	1
	9/4/2011 20:45	9/4/2011 20:45	**0**	0.16	**134,490**	0.13	**0.06**	24	Atlas	21,518	1
	9/10/2011 20:00	9/10/2011 20:15	**15**	0.06	**1,023,003**	0.41	**0.04**	3	Atlas	61,380	1
	9/19/2011 7:00	9/19/2011 8:15	**75**	0.7	**681,430**	0.62	**0.28**	12	Atlas	477,001	1
	9/23/2011 1:15	9/23/2011 8:00	**405**	0.82	**259,263**	1.56	**0.38**	12	Atlas	212,596	1
	9/25/2011 20:00	9/26/2011 7:30	**690**	3.94	**2,408,671**	5.63	**13.96**	12	Atlas	9,490,164	1
	10/13/2011 7:30	10/13/2011 8:15	**45**	0.4	**1,023,548**	0.27	**0.19**	3	Atlas	409,419	1
	10/18/2011 20:30	10/18/2011 20:45	**15**	0.15	**73,430**	0.56	**0.11**	1	Atlas	11,014	1
	10/27/2011	10/27/2011 5:00	**300**	1.12	**605,501**	1.5	**0.46**	12	Atlas	678,161	1
	11/3/2011 9:30	11/3/2011 16:30	**420**	0.53	**182,597**	0.57	**0.23**	12	Atlas	96,776	1
	11/14/2011 21:30	11/14/2011 23:15	**105**	2.23	**133,397**	0.42	**0.72**	48	Atlas	297,475	1
	11/15/2011 8:45	11/15/2011 14:00	**315**	2.23	**46,221**	1.53	**0.72**	48	Atlas	103,074	1
	11/16/2011 5:30	11/16/2011 8:15	**165**	2.23	**83,709**	2.03	**0.72**	48	Atlas	186,670	1
	11/20/2011 17:30	11/20/2011 18:30	**60**	0.94	**159,952**	2.85	**0.33**	24	Atlas	150,355	1
	11/21/2011 23:45	11/22/2011 11:15	**690**	1.15	**971,558**	3.86	**0.49**	12	Atlas	1,117,291	1
	11/27/2011 6:15	11/27/2011 9:00	**165**	3.03	**23,533**	2.51	**0.94**	48	Atlas	71,304	1
	11/27/2011 22:30	11/28/2011 2:15	**225**	3.03	**64,936**	2.59	**0.94**	48	Atlas	196,756	1
	11/28/2011 10:45	11/29/2011 2:00	**915**	3.03	**392,597**	4.18	**0.94**	48	Atlas	1,189,568	1
	12/4/2011 16:15	12/5/2011 19:45	**1650**	3.04	**1,302,996**	5.47	**0.99**	48	Atlas	3,961,107	1
	12/15/2011 4:00	12/15/2011 8:00	**240**	0.45	**305,973**	0.42	**0.23**	6	Atlas	137,688	1
	12/21/2011 5:00	12/21/2011 7:30	**150**	0.66	**566,070**	1.13	**0.30**	12	Atlas	373,606	1
	12/22/2011 14:30	12/22/2011 17:30	**180**	0.58	**343,136**	1.22	**0.26**	12	Atlas	199,019	1
	12/27/2011 3:00	12/27/2011 11:45	**525**	0.64	**329,531**	1.83	**0.25**	12	Atlas	210,900	1
	1/11/2012 4:45	1/11/2012 11:15	**390**	0.71	**921,733**	0.6	**0.28**	12	Atlas	654,431	1
	1/17/2012 4:00	1/17/2012 12:45	**525**	0.36	**623,579**	1.17	**0.17**	12	Atlas	224,489	1
	1/23/2012 2:45	1/23/2012 5:00	**135**	0.54	**1,483,989**	0.91	**0.29**	3	Atlas	801,354	1
	1/26/2012 5:30	1/26/2012 7:00	**90**	1.7	**230,688**	1.2	**0.56**	24	Atlas	392,170	1
	1/26/2012 18:45	1/26/2012 23:45	**300**	1.7	**810,033**	2.22	**0.56**	24	Atlas	1,377,057	1
	2/4/2012 9:45	2/4/2012 10:30	**45**	0.43	**190,895**	0.46	**0.25**	3	Atlas	82,085	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.12	**1,124,856**	0.38	**0.09**	1	Atlas	134,983	1
	2/29/2012 8:45	2/29/2012 9:30	**45**	0.66	**520,545**	0.77	**0.31**	1	Atlas	343,560	1
	3/8/2012 10:15	3/8/2012 15:15	**300**	0.84	**712,582**	1.11	**0.39**	6	Atlas	598,569	1
	3/15/2012 19:00	3/16/2012 3:30	**510**	1.17	**408,480**	1.36	**0.52**	12	Atlas	477,922	1
	3/17/2012 18:30	3/17/2012 22:30	**240**	1.02	**273,533**	2.33	**0.58**	1	Atlas	279,003	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**3/23/2012 5:15**	3/23/2012 23:15	**1080**	1.42	**1,459,601**	2.45	**0.53**	24	Atlas	2,072,633	1
	3/31/2012 0:15	3/31/2012 0:15	**0**	0.15	**2,769**	0.18	**0.10**	1	Atlas	415	1
	4/1/2012 8:30	4/1/2012 11:30	**180**	1.88	**516,205**	2.06	**1.20**	3	Atlas	970,465	1
	4/28/2012 19:15	4/29/2012 0:45	**330**	0.78	**1,848,733**	0.9	**0.58**	1	Atlas	1,442,011	1
	4/30/2012 18:00	4/30/2012 18:45	**45**	0.32	**1,521,399**	1.17	**0.21**	3	Atlas	486,848	1
	5/4/2012 23:45	5/5/2012 5:00	**315**	1.35	**1,260,586**	2.46	**0.69**	6	Atlas	1,701,791	1
	5/13/2012 1:45	5/13/2012 14:15	**750**	2.09	**809,275**	2.13	**0.85**	12	Atlas	1,691,385	1
	5/16/2012 18:00	5/16/2012 18:15	**15**	0.18	**316,383**	2.28	**0.16**	1	Atlas	56,949	1
	5/29/2012 6:45	5/29/2012 16:30	**585**	3.09	**3,108,641**	3.09	**21.94**	3	Atlas	9,605,702	1
	5/31/2012 18:30	6/1/2012 5:00	**630**	1.21	**697,223**	4.22	**0.52**	12	Atlas	843,640	1
	6/17/2012 12:00	6/17/2012 12:00	**0**	0.22	**6,461**	0.21	**0.15**	1	Atlas	1,421	1
	7/1/2012 19:45	7/1/2012 20:30	**45**	0.44	**825,715**	0.37	**0.31**	1	Atlas	363,314	1
	7/8/2012 12:45	7/8/2012 14:00	**75**	0.21	**2,041,805**	0.68	**0.15**	1	Atlas	428,779	1
	7/14/2012 12:30	7/14/2012 15:00	**150**	0.53	**1,096,587**	0.79	**0.32**	3	Atlas	581,191	1
	7/18/2012 16:15	7/18/2012 17:45	**90**	Discharge						488,436	1
	7/19/2012 18:00	7/19/2012 19:30	**90**	0.86	**4,160,486**	1.37	**0.70**	1	Atlas	3,578,018	1
	7/24/2012 20:00	7/24/2012 20:45	**45**	0.36	**762,125**	1.29	**0.30**	1	Atlas	274,365	1
	7/27/2012 3:30	7/27/2012 3:45	**15**	0.08	**175,612**	0.53	**0.04**	6	Atlas	14,049	1
	7/27/2012 19:45	7/27/2012 21:15	**90**	0.67	**506,457**	1.12	**0.50**	1	Atlas	339,326	1
	8/3/2012 9:30	8/3/2012 9:45	**15**	0.26	**63,153**	0.94	**0.13**	3	Atlas	16,420	1
	8/16/2012 20:15	8/16/2012 23:30	**195**	0.69	**707,637**	0.82	**0.40**	3	Atlas	488,270	1
	8/21/2012 14:00	8/21/2012 14:30	**30**	0.22	**955,577**	0.93	**0.18**	1	Atlas	210,227	1
	9/1/2012 15:00	9/1/2012 18:00	**180**	0.57	**1,687,110**	0.6	**0.36**	3	Atlas	961,653	1
	9/2/2012 12:00	9/2/2012 21:45	**585**	0.71	**1,541,382**	1.3	**0.27**	24	Atlas	1,094,382	1
	9/3/2012 14:30	9/3/2012 15:00	**30**	0.06	**609,376**	1.35	**0.03**	1	Atlas	36,563	1
	9/5/2012 15:15	9/5/2012 17:00	**105**	0.68	**4,674,682**	2.04	**0.53**	1	Atlas	3,178,784	1
	9/7/2012 23:30	9/8/2012 7:00	**450**	1.38	**673,594**	3.4	**0.77**	3	Atlas	929,560	1
	9/25/2012 9:15	9/25/2012 9:30	**15**	0.4	**8,757**	0.29	**0.22**	6	Atlas	3,503	1
	9/25/2012 23:45	9/26/2012 5:45	**360**	0.48	**785,163**	0.8	**0.22**	12	Atlas	376,878	1
	9/26/2012 21:00	9/27/2012 0:30	**210**	1.17	**2,249,602**	2.01	**0.67**	3	Atlas	2,632,035	1
	10/1/2012 14:45	10/1/2012 19:15	**270**	0.73	**1,077,905**	2.76	**0.29**	12	Atlas	786,870	1
	10/6/2012 0:15	10/6/2012 0:45	**30**	0.09	**6,378**	0.81	**0.05**	6	Atlas	574	1
	10/18/2012 1:15	10/18/2012 2:15	**60**	0.3	**440,552**	0.45	**0.19**	3	Atlas	132,166	1
	10/26/2012 14:15	10/26/2012 15:45	**90**	0.81	**206,261**	0.7	**0.37**	6	Atlas	167,071	1
	11/3/2012 16:30	11/3/2012 16:30	**0**	0.16	**11,931**	0.17	**0.07**	12	Atlas	1,909	1
	11/12/2012 7:00	11/12/2012 7:30	**30**	0.43	**39,367**	0.43	**0.20**	12	Atlas	16,928	1
	12/4/2012 15:30	12/4/2012 18:45	**195**	0.61	**865,762**	0.8	**0.39**	3	Atlas	528,115	1
	12/7/2012 4:15	12/7/2012 18:00	**825**	1.27	**698,991**	2.08	**0.55**	12	Atlas	887,718	1
	12/8/2012 5:45	12/8/2012 10:00	**255**	0.71	**477,630**	2.79	**0.39**	6	Atlas	339,117	1
	12/9/2012 8:45	12/9/2012 9:15	**30**	1.14	**30,424**	2.88	**0.52**	3	Atlas	34,684	1
	12/9/2012 21:45	12/10/2012 0:45	**180**	1.14	**1,415,280**	3.61	**0.52**	3	Atlas	1,613,419	1
	12/15/2012 11:30	12/15/2012 12:15	**45**	0.18	**417,106**	1.32	**0.11**	3	Atlas	75,079	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**12/20/2012 7:00**	12/20/2012 12:30	**330**	0.64	**1,911,845**	0.97	**0.34**	6	Atlas	1,223,581	1
	12/26/2012 4:00	12/26/2012 9:45	**345**	0.74	**1,762,238**	1.33	**0.28**	24	Atlas	1,304,056	1
	1/2/2013 21:45	1/2/2013 23:15	**90**	Discharge						70,163	1
	1/5/2013 18:30	1/5/2013 19:30	**60**	0.01	**3,095,744**	0.16	**0.01**	1	Atlas	30,957	1
	1/11/2013 5:45	1/11/2013 7:45	**120**	0.64	**1,957,207**	0.81	**0.34**	6	Atlas	1,252,612	1
	1/13/2013 3:15	1/15/2013 7:30	**3135**	2.3	**2,888,245**	3.15	**0.88**	24	Atlas	6,642,964	1
	1/28/2013 17:30	1/28/2013 17:30	**0**	0.08	**50,255**	0.35	**0.05**	1	Atlas	4,020	1
	1/30/2013 4:45	1/30/2013 9:15	**270**	0.83	**2,196,957**	1.1	**0.42**	6	Atlas	1,823,475	1
	2/19/2013 4:15	2/19/2013 4:30	**15**	0.39	**19,481**	0.44	**0.18**	12	Atlas	7,598	1
	2/22/2013 0:15	2/22/2013 1:30	**75**	0.42	**563,107**	0.79	**0.19**	12	Atlas	236,505	1
	2/26/2013 13:45	2/26/2013 16:45	**180**	0.53	**507,862**	0.89	**0.21**	12	Atlas	269,167	1
	3/5/2013 16:15	3/5/2013 18:00	**105**	0.46	**460,133**	0.56	**0.18**	24	Atlas	211,661	1
	3/11/2013 3:30	3/11/2013 12:15	**525**	1	**1,622,802**	1.48	**0.40**	12	Atlas	1,622,802	1
	3/17/2013 10:45	3/18/2013 8:00	**1275**	1.78	**1,653,985**	2.71	**0.58**	48	Atlas	2,944,094	1
	3/24/2013 7:45	3/24/2013 16:45	**540**	0.49	**586,841**	1.8	**0.18**	24	Atlas	287,552	1
	4/11/2013 6:15	4/11/2013 23:00	**1005**	1.24	**882,715**	1.21	**0.48**	24	Atlas	1,094,567	1
	4/16/2013 20:00	4/16/2013 20:45	**45**	0.64	**1,263,334**	1.85	**0.52**	1	Atlas	808,534	1
	4/19/2013 1:30	4/19/2013 4:45	**195**	0.89	**2,343,845**	1.55	**0.49**	3	Atlas	2,086,022	1
	4/24/2013 7:00	4/24/2013 10:15	**195**	0.74	**2,013,043**	1.66	**0.43**	3	Atlas	1,489,652	1
	5/4/2013 13:15	5/4/2013 15:30	**135**	1.57	**98,287**	0.66	**0.49**	24	Atlas	154,311	1
	5/5/2013 4:30	5/5/2013 8:45	**255**	1.57	**473,935**	1.4	**0.49**	24	Atlas	744,079	1
	5/10/2013 12:15	5/11/2013 0:30	**735**	1.02	**1,001,572**	2.69	**0.44**	6	Atlas	1,021,604	1
	5/21/2013 16:45	5/21/2013 16:45	**0**	Discharge						171	1
	5/22/2013 15:45	5/22/2013 16:15	**30**	0.12	**4,411,161**	0.43	**0.09**	1	Atlas	529,339	1
	5/31/2013 18:30	5/31/2013 18:30	**0**	0.17	**27,297**	0.25	**0.08**	6	Atlas	4,641	1
	6/1/2013 6:15	6/1/2013 6:30	**15**	0.16	**39,568**	0.31	**0.07**	12	Atlas	6,331	1
	6/9/2013 23:45	6/10/2013 0:45	**60**	0.33	**1,961,243**	0.27	**0.15**	6	Atlas	647,210	1
	6/17/2013 16:30	6/17/2013 21:30	**300**	0.83	**1,147,229**	1.01	**0.42**	6	Atlas	952,200	1
	6/21/2013 19:00	6/21/2013 19:30	**30**	0.43	**349,210**	1.49	**0.33**	1	Atlas	150,160	1
	6/26/2013 3:15	6/26/2013 5:15	**120**	0.66	**1,045,651**	1.42	**0.44**	3	Atlas	690,130	1
	6/26/2013 16:15	6/27/2013 3:45	**690**	2.48	**3,694,651**	3.9	**2.87**	6	Cloudburst	9,162,736	1
	6/29/2013 19:30	6/29/2013 22:00	**150**	0.44	**2,425,718**	3.89	**0.24**	3	Atlas	1,067,316	1
	7/1/2013 9:00	7/1/2013 9:00	**0**	0.31	**21,423**	3.71	**0.15**	3	Atlas	6,641	1
	7/1/2013 18:45	7/1/2013 19:30	**45**	0.31	**353,478**	3.9	**0.15**	3	Atlas	109,578	1
	7/2/2013 13:15	7/2/2013 14:00	**45**	0.12	**5,201,153**	4.02	**0.10**	1	Atlas	624,138	1
	7/4/2013 6:45	7/4/2013 11:45	**300**	0.54	**67,570**	1.22	**0.23**	12	Atlas	36,488	1
	7/6/2013 1:00	7/6/2013 7:15	**375**	0.6	**1,058,895**	2.03	**0.26**	12	Atlas	635,337	1
	7/10/2013 14:00	7/10/2013 15:00	**60**	0.68	**3,233,487**	1.93	**0.46**	1	Atlas	2,198,771	1
	7/14/2013 19:30	7/14/2013 20:15	**45**	0.09	**6,238,109**	0.84	**0.08**	1	Atlas	561,430	1
	7/18/2013 16:15	7/18/2013 16:30	**15**	0.28	**67,977**	0.41	**0.20**	1	Atlas	19,033	1
	7/21/2013 19:30	7/21/2013 21:00	**90**	2.7	**548,427**	1.84	**1.24**	24	Cloudburst	1,480,753	1
	7/22/2013 7:00	7/22/2013 16:15	**555**	2.7	**2,886,693**	3.01				7,794,071	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**8/9/2013 17:30**	8/9/2013 18:00	**30**	0.24	**164,604**	0.29	**0.14**	1	Atlas	39,505	1
	8/12/2013 14:45	8/12/2013 15:45	**60**	0.81	**4,078,891**	0.89	**0.39**	1	Atlas	3,303,902	1
	8/13/2013 3:00	8/13/2013 4:00	**60**	0.81	**318,536**	1.19	**0.39**	1	Atlas	258,014	1
	8/20/2013 18:15	8/20/2013 18:45	**30**	0.28	**1,148,228**	0.28	**0.15**	3	Atlas	321,504	1
	8/31/2013 19:45	9/1/2013 1:00	**315**	1.1	**1,231,344**	0.91	**0.50**	12	Atlas	1,354,479	1
	9/2/2013 13:45	9/2/2013 14:45	**60**	0.56	**2,732,138**	1.66	**0.49**	1	Atlas	1,529,997	1
	9/20/2013 16:15	9/21/2013 4:30	**735**	1.13	**2,375,030**	1.13	**0.46**	12	Atlas	2,683,784	1
	10/4/2013 19:15	10/6/2013 14:45	**2610**	0.12	**176,273,041**	4.55	**0.10**	1	Atlas	21,152,765	1
	10/10/2013 18:45	10/11/2013 9:00	**855**	Discharge						3,007	1
	10/14/2013 14:15	10/14/2013 18:45	**270**	Discharge						1,038	1
	10/15/2013 10:00	10/15/2013 22:45	**765**	Discharge						157	1
	10/16/2013 14:45	10/16/2013 14:45	**0**	Discharge						3	1
	10/30/2013 1:30	10/30/2013 6:30	**300**	1.69	**3,062,124**	1.69	**0.93**	1	Atlas	5,174,989	1
	10/31/2013 19:30	10/31/2013 21:45	**135**	0.62	**386,109**	2.25	**0.24**	24	Atlas	239,387	1
	11/17/2013 5:15	11/17/2013 19:45	**870**	2.68	**1,440,603**	2.86	**1.89**	6	Cloudburst	3,860,817	1
	12/5/2013 5:30	12/5/2013 8:30	**180**	0.76	**644,625**	0.17	**0.25**	48	Atlas	489,915	1
	12/14/2013 9:00	12/14/2013 11:30	**150**	0.86	**175,265**	1.28	**0.33**	12	Atlas	150,728	1
	12/21/2013 5:30	12/21/2013 12:45	**435**	2.41	**555,952**	1.47	**0.90**	24	Atlas	1,339,845	1
	12/21/2013 21:30	12/22/2013 3:15	**345**	2.41	**2,248,928**	2.47	**0.90**	24	Atlas	5,419,915	1
	12/29/2013 6:15	12/29/2013 6:30	**15**	0.51	**5,783**	0.41	**0.22**	12	Atlas	2,949	1
	1/5/2014 15:15	1/5/2014 18:15	**180**	0.48	**160,961**	0.65	**0.24**	6	Atlas	77,261	1
	1/11/2014 0:15	1/11/2014 5:30	**315**	1.03	**1,669,114**	1.51	**0.55**	6	Atlas	1,719,187	1
	1/25/2014 17:15	1/25/2014 20:00	**165**	Discharge						771	1
	2/2/2014 4:00	2/2/2014 5:45	**105**	0.47	**281,546**	0.16	**0.18**	24	Atlas	132,327	1
	2/4/2014 19:00	2/5/2014 1:15	**375**	0.51	**3,920,814**	0.98	**0.25**	6	Atlas	1,999,615	1
	2/14/2014 17:00	2/14/2014 18:15	**75**	0.5	**37,495**	0.48	**0.27**	6	Atlas	18,748	1
	2/17/2014 16:15	2/17/2014 18:15	**120**	0.56	**1,539,552**	1.12	**0.34**	3	Atlas	862,149	1
	2/20/2014 23:15	2/20/2014 23:30	**15**	0.18	**109,191**	1.3	**0.10**	6	Atlas	19,654	1
	3/2/2014 9:45	3/2/2014 11:30	**105**	0.62	**625,446**	0.34	**0.24**	24	Atlas	387,777	1
	3/15/2014 20:15	3/15/2014 20:15	**0**	Discharge						273	1
	3/16/2014 8:30	3/16/2014 21:45	**795**	Discharge						3,490	1
	3/28/2014 4:30	3/28/2014 5:15	**45**	0.25	**369,463**	0.31	**0.11**	6	Atlas	92,366	1
	3/29/2014 6:15	3/29/2014 12:45	**390**	1.05	**971,986**	1.32	**0.48**	12	Atlas	1,020,585	1
	4/3/2014 12:00	4/4/2014 8:15	**1215**	2.67	**1,761,044**	4.08	**0.93**	24	Atlas	4,701,989	1
	4/7/2014 9:15	4/7/2014 15:45	**390**	0.79	**2,869,082**	3.57	**0.47**	3	Atlas	2,266,575	1
	4/14/2014 3:45	4/14/2014 3:45	**0**	1.02	**2,233**	0.96	**0.39**	24	Atlas	2,278	1
	4/14/2014 20:00	4/15/2014 1:45	**345**	1.02	**613,428**	1.02	**0.39**	24	Atlas	625,696	1
	4/28/2014 4:15	4/28/2014 8:15	**240**	1.7	**2,164,910**	1.41	**0.70**	3	Atlas	3,680,346	1
	4/28/2014 17:15	4/28/2014 20:30	**195**	1.7	**137,471**	1.8	**0.70**	3	Atlas	233,700	1
	5/9/2014 19:30	5/10/2014 16:00	**1230**	1.63	**1,794,832**	1.7	**0.63**	24	Atlas	2,925,576	1
	5/14/2014 7:15	5/14/2014 23:45	**990**	1.09	**581,647**	2.84	**0.42**	24	Atlas	633,995	1
	5/21/2014 21:15	5/22/2014 4:15	**420**	0.37	**1,347,945**	0.5	**0.17**	12	Atlas	498,740	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**5/28/2014 20:30**	5/28/2014 21:00	**30**	0.33	**739,201**	0.71	**0.27**	1	Atlas	243,936	1
	5/29/2014 21:00	5/29/2014 22:30	**90**	0.66	**4,149,314**	1.02	**0.56**	1	Atlas	2,738,547	1
	5/30/2014 14:15	5/30/2014 14:45	**30**	0.13	**109,109**	1.13	**0.08**	3	Atlas	14,184	1
	6/11/2014 14:15	6/11/2014 15:00	**45**	0.12	**599,631**	0.27	**0.08**	1	Atlas	71,956	1
	6/20/2014 16:15	6/20/2014 18:00	**105**	0.29	**208,819**	0.29	**0.19**	3	Atlas	60,558	1
	6/24/2014 13:45	6/24/2014 14:30	**45**	0.2	**611,664**	0.53	**0.15**	1	Atlas	122,333	1
	7/2/2014 16:30	7/2/2014 17:15	**45**	0.08	**754,390**	0.28	**0.07**	1	Atlas	60,351	1
	7/7/2014 19:30	7/7/2014 20:15	**45**	1.01	**273,319**	1.25	**0.88**	1	Atlas	276,052	1
	7/13/2014 22:15	7/14/2014	**105**	0.7	**683,442**	2.09	**0.35**	3	Atlas	478,410	1
	7/14/2014 20:15	7/14/2014 20:45	**30**	0.08	**1,082,401**	1.33	**0.07**	1	Atlas	86,592	1
	7/26/2014 21:45	7/27/2014 10:00	**735**	1.43	**1,021,853**	1.47	**0.66**	12	Atlas	1,461,250	1
	8/8/2014 5:45	8/8/2014 8:15	**150**	0.9	**1,277,383**	0.73	**0.43**	6	Atlas	1,149,645	1
	8/10/2014 4:00	8/10/2014 5:00	**60**	0.71	**321,214**	1.74	**0.58**	1	Atlas	228,062	1
	8/11/2014 15:30	8/11/2014 16:30	**60**	0.51	**2,426,766**	2.2	**0.40**	1	Atlas	1,237,651	1
	8/17/2014 9:30	8/17/2014 11:00	**90**	0.72	**133,413**	1.14	**0.27**	24	Atlas	96,057	1
	8/17/2014 23:15	8/17/2014 23:45	**30**	0.72	**61,153**	1.23	**0.27**	24	Atlas	44,030	1
	8/22/2014 19:15	8/22/2014 20:00	**45**	0.35	**227,415**	1.05	**0.26**	1	Atlas	79,595	1
	8/23/2014 16:00	8/23/2014 22:15	**375**	0.59	**1,628,922**	1.65	**0.28**	3	Atlas	961,064	1
	8/27/2014 15:15	8/27/2014 18:00	**165**	0.27	**1,661,563**	1.32	**0.18**	3	Atlas	448,622	1
	8/30/2014 15:15	8/30/2014 16:30	**75**	0.6	**1,733,972**	1.41	**0.38**	1	Atlas	1,040,383	1
	9/2/2014 8:30	9/2/2014 9:30	**60**	0.4	**102,401**	1.32	**0.24**	3	Atlas	40,960	1
	9/11/2014 0:45	9/11/2014 1:15	**30**	1.9	**971,018**	1.24	**1.37**	3	Atlas	1,844,935	1
	4/3/2015 18:30	4/3/2015 18:45	**15**	5.36	**1,167**	5.38	**20.93**	6	Cloudburst	6,256	1
	5/16/2015 11:45	5/16/2015 13:45	**120**	0.39	**541,978**	0.43	**0.19**	3	Atlas	211,371	1
	5/17/2015 14:15	5/17/2015 15:00	**45**	0.12	**4,897,264**	0.58	**0.09**	1	Atlas	587,672	1
	5/25/2015 7:15	5/25/2015 8:30	**75**	0.24	**17,337**	0.21	**0.11**	12	Atlas	4,161	1
	5/26/2015 14:00	5/26/2015 14:45	**45**	0.35	**2,031,885**	0.54	**0.26**	1	Atlas	711,160	1
	5/27/2015 14:00	5/27/2015 14:00	**0**	0.09	**71,277**	0.68	**0.08**	1	Atlas	6,415	1
	6/8/2015 7:15	6/8/2015 9:00	**105**	0.26	**511,336**	0.33	**0.16**	3	Atlas	132,947	1
	6/17/2015 4:45	6/17/2015 7:00	**135**	0.58	**2,675,342**	0.71	**0.31**	3	Atlas	1,551,698	1
	6/18/2015 16:15	6/19/2015 0:30	**495**	1.82	**3,039,839**	1.75	**0.59**	48	Atlas	5,532,507	1
	6/20/2015 1:30	6/20/2015 9:45	**495**	1.82	**1,510,888**	2.74	**0.59**	48	Atlas	2,749,817	1
	6/22/2015 6:15	6/22/2015 6:45	**30**	0.24	**96,439**	2.82	**0.11**	3	Atlas	23,145	1
	6/26/2015	6/26/2015 6:00	**360**	0.59	**2,359,252**	1.82	**0.32**	6	Atlas	1,391,959	1
	6/26/2015 17:00	6/27/2015 1:30	**510**	0.89	**2,422,053**	2.6	**0.50**	1	Atlas	2,155,627	1
	6/29/2015 13:30	6/29/2015 14:15	**45**	0.19	**5,065,679**	1.65	**0.11**	1	Atlas	962,479	1
	7/2/2015 0:30	7/2/2015 2:45	**135**	0.93	**1,180,919**	2.46	**0.45**	3	Atlas	1,098,254	1
	7/2/2015 14:30	7/2/2015 21:30	**420**	0.93	**1,104,217**	2.66	**0.45**	3	Atlas	1,026,922	1
	7/3/2015 15:00	7/3/2015 19:30	**270**	0.33	**2,311,669**	2.39	**0.23**	1	Atlas	762,851	1
	7/7/2015 11:30	7/7/2015 17:00	**330**	0.72	**2,256,593**	2.03	**0.37**	6	Atlas	1,624,747	1
	7/8/2015 12:30	7/8/2015 13:00	**30**	0.09	**356,093**	2.12	**0.06**	1	Atlas	32,048	1
	7/9/2015 6:15	7/9/2015 8:00	**105**	0.37	**536,925**	1.67	**0.23**	3	Atlas	198,662	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**7/10/2015 10:30**	7/10/2015 16:45	**375**	0.46	**905,000**	1.99	**0.23**	6	Atlas	416,300	1
	7/12/2015 6:00	7/12/2015 20:00	**840**	0.84	**5,286,743**	2.51	**0.60**	1	Atlas	4,440,864	1
	7/13/2015 15:00	7/13/2015 18:45	**225**	0.25	**3,206,673**	2.76	**0.21**	1	Atlas	801,668	1
	7/14/2015 4:15	7/14/2015 19:30	**915**	0.53	**3,345,634**	3.32	**0.39**	1	Atlas	1,773,186	1
	7/17/2015 22:30	7/18/2015 7:15	**525**	0.94	**4,660,384**	2.6	**0.62**	3	Atlas	4,380,761	1
	8/4/2015 19:15	8/4/2015 19:45	**30**	0.1	**275,885**	0.15	**0.07**	1	Atlas	27,589	1
	8/5/2015 15:00	8/5/2015 15:45	**45**	0.09	**576,978**	0.25	**0.08**	1	Atlas	51,928	1
	8/6/2015 2:15	8/6/2015 15:45	**810**	0.71	**3,260,543**	0.9	**0.27**	24	Atlas	2,314,985	1
	8/10/2015 21:00	8/10/2015 21:15	**15**	0.06	**467,677**	1.11	**0.05**	1	Atlas	28,061	1
	8/15/2015 16:45	8/15/2015 17:15	**30**	0.13	**370,533**	0.34	**0.11**	1	Atlas	48,169	1
	8/19/2015 8:30	8/19/2015 9:00	**30**	0.54	**1,999,831**	0.46	**0.23**	1	Atlas	1,079,909	1
	8/19/2015 17:15	8/19/2015 17:30	**15**	0.54	**257,106**	0.65	**0.23**	1	Atlas	138,837	1
	9/29/2015 19:15	9/29/2015 19:15	**0**	0.81	**4,422**	0.78	**0.26**	48	Atlas	3,582	1
	10/2/2015 18:00	10/2/2015 19:45	**105**	0.64	**215,541**	1.48	**0.30**	6	Atlas	137,946	1
	10/12/2015 19:15	10/12/2015 19:45	**30**	0.25	**1,201,666**	0.34	**0.17**	3	Atlas	300,417	1
	10/27/2015 17:00	10/28/2015 8:30	**930**	2.33	**1,699,466**	2.65	**0.77**	24	Atlas	3,959,757	1
	11/6/2015 3:15	11/6/2015 5:15	**120**	0.77	**2,115,656**	0.9	**0.47**	3	Atlas	1,629,055	1
	11/9/2015 19:30	11/9/2015 21:45	**135**	0.5	**185,419**	1.26	**0.22**	12	Atlas	92,710	1
	11/12/2015 0:15	11/12/2015 1:30	**75**	0.29	**2,932,297**	1.55	**0.18**	3	Atlas	850,366	1
	11/18/2015 9:00	11/18/2015 18:15	**555**	1.42	**3,450,415**	1.85	**0.71**	6	Atlas	4,899,590	1
	11/28/2015 14:15	11/28/2015 18:15	**240**	0.74	**232,411**	0.78	**0.30**	12	Atlas	171,984	1
	11/30/2015 22:00	12/1/2015 5:15	**435**	0.74	**1,725,359**	1.69	**0.33**	12	Atlas	1,276,766	1
	12/14/2015 5:30	12/14/2015 7:15	**105**	0.24	**126,685**	0.18	**0.13**	6	Atlas	30,404	1
	12/21/2015 11:30	12/21/2015 11:30	**0**	0.18	**48,325**	0.2	**0.09**	6	Atlas	8,699	1
	12/21/2015 23:45	12/22/2015 4:45	**300**	0.51	**2,412,165**	0.72	**0.27**	6	Atlas	1,230,204	1
	12/23/2015 19:30	12/23/2015 21:15	**105**	0.76	**2,237,486**	1.5	**0.58**	1	Atlas	1,700,490	1
	12/26/2015 12:45	12/26/2015 14:00	**75**	0.34	**2,025**	1.83	**0.15**	12	Atlas	688	1
	12/27/2015 10:45	12/28/2015 6:00	**1155**	1.85	**274,747**	3.34	**0.61**	3	Atlas	508,283	1
	12/28/2015 16:15	12/28/2015 17:00	**45**	1.85	**1,302**	3.58	**0.61**	3	Atlas	2,408	1
	2/2/2016 19:15	2/3/2016 2:00	**405**	1.21	**180,087**	1.29	**0.57**	6	Atlas	217,906	1
	2/21/2016 4:15	2/21/2016 10:30	**375**	1.09	**12,561**	1.26	**0.50**	12	Atlas	13,692	1
	2/23/2016 23:15	2/24/2016 8:15	**540**	2.08	**130,946**	2.86	**0.81**	12	Atlas	272,368	1
	3/1/2016 12:15	3/1/2016 13:15	**60**	0.27	**8,415**	2.32	**0.14**	3	Atlas	2,272	1
	3/10/2016 13:45	3/10/2016 19:30	**345**	1.12	**40,258**	1.15	**0.36**	48	Atlas	45,089	1
	3/12/2016 20:45	3/13/2016	**195**	0.85	**36,590**	1.69	**0.32**	24	Atlas	31,101	1
	3/13/2016 9:30	3/13/2016 10:45	**75**	0.85	**12,168**	1.98	**0.32**	24	Atlas	10,343	1
	3/24/2016 17:45	3/24/2016 18:00	**15**	0.6	**8,816**	0.75	**0.46**	1	Atlas	5,290	1
	3/27/2016 21:30	3/27/2016 22:00	**30**	0.85	**47,948**	1.42	**0.60**	1	Atlas	40,756	1
	3/31/2016 22:15	4/1/2016	**105**	1.18	**6,797**	2.03	**0.45**	24	Atlas	8,021	1
	4/11/2016 17:15	4/11/2016 18:30	**75**	0.91	**7,162**	0.88	**0.44**	6	Atlas	6,517	1
	4/26/2016 21:15	4/26/2016 22:00	**45**	0.29	**16,701**	0.62	**0.15**	3	Atlas	4,843	1
	4/27/2016 14:00	4/27/2016 22:30	**510**	0.64	**19,925**	1.23	**0.32**	1	Atlas	12,752	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO149	**4/30/2016 11:15**	4/30/2016 11:45	**30**	0.51	**6,001**	1.18	**0.19**	24	Atlas	3,061	1
	5/7/2016 16:45	5/7/2016 22:15	**330**	0.84	**5,520**	1.47	**0.44**	6	Atlas	4,637	1
	5/10/2016 14:45	5/10/2016 22:30	**465**	0.9	**3,537**	1.96	**0.34**	12	Atlas	3,184	1
	5/11/2016 21:45	5/11/2016 22:15	**30**	0.25	**19,900**	2.01	**0.13**	3	Atlas	4,975	1
	5/17/2016 6:45	5/17/2016 7:00	**15**	0.65	**544**	1.62	**0.22**	24	Atlas	353	1
	5/17/2016 20:30	5/17/2016 20:30	**0**	0.65	**20**	1.22	**0.22**	24	Atlas	13	1
	5/20/2016 13:45	5/20/2016 15:15	**90**	0.57	**15,850**	1.24	**0.32**	3	Atlas	9,035	1
	5/26/2016 14:00	5/26/2016 14:00	**0**	0.23	**5,184**	0.75	**0.15**	3	Atlas	1,192	1
	6/2/2016 15:30	6/2/2016 16:00	**30**	0.46	**10,187**	0.57	**0.37**	1	Atlas	4,686	1
	6/4/2016 16:45	6/4/2016 17:00	**15**	0.12	**14,558**	0.62	**0.06**	1	Atlas	1,747	1
	6/14/2016 16:45	6/14/2016 18:30	**105**	0.64	**1,694,783**	0.88	**0.41**	3	Atlas	1,084,661	1
	6/22/2016 8:30	6/22/2016 8:30	**0**	0.15	**9,459**	0.18	**0.10**	3	Atlas	1,419	1
	6/23/2016 16:15	6/23/2016 23:15	**420**	1.6	**858,868**	1.75	**0.86**	6	Atlas	1,374,189	1
Grand Total										**378,538,316**	**349**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO154	**11/22/2011 3:15**	11/22/2011 9:45	**390**	1	**7,287**	3.22	**0.43**	6	Atlas	7,287	1
	11/27/2011 8:30	11/27/2011 9:45	**75**	3.07	**113,807**	2.22	**0.95**	48	Atlas	349,387	1
	11/27/2011 22:30	11/29/2011 10:30	**2160**	3.07	**3,363,824**	4.32	**0.95**	48	Atlas	10,326,938	1
	11/29/2011 19:30	11/29/2011 20:30	**60**	0.07	**4,437,891**	3.13	**0.04**	1	Atlas	310,652	1
	12/4/2011 16:30	12/5/2011 23:30	**1860**	3.04	**1,465,679**	5.54	**0.99**	48	Atlas	4,455,663	1
	12/21/2011 6:45	12/21/2011 7:00	**15**	0.63	**33,197**	1.12	**0.29**	12	Atlas	20,914	1
	12/26/2011 16:15	12/26/2011 16:15	**0**	Discharge						4,903	1
	12/27/2011 3:00	12/27/2011 15:30	**750**	0.75	**73,775**	1.98	**0.30**	12	Atlas	55,331	1
	12/28/2011 13:45	12/28/2011 13:45	**0**	Discharge						675	1
	12/29/2011 8:30	12/29/2011 8:30	**0**	Discharge						1,944	1
	12/31/2011 15:15	12/31/2011 15:15	**0**	Discharge						15,384	1
	1/1/2012 5:15	1/1/2012 10:30	**315**	Discharge						34,349	1
	1/1/2012 19:15	1/1/2012 19:30	**15**	Discharge						2,547	1
	1/11/2012 6:45	1/11/2012 7:00	**15**	0.85	**626**	0.52	**0.34**	6	Atlas	532	1
	1/20/2012 8:15	1/20/2012 8:30	**15**	Discharge						1,321	1
	1/23/2012 4:15	1/23/2012 4:30	**15**	0.76	**7,287**	1.11	**0.39**	3	Atlas	5,538	1
	1/25/2012 19:15	1/25/2012 19:30	**15**	1.82	**936**	1.04	**0.60**	24	Atlas	1,704	1
	1/26/2012 5:30	1/27/2012 18:15	**2205**	1.82	**3,687,987**	2.61	**0.60**	24	Atlas	6,712,137	1
	3/4/2012 23:00	3/4/2012 23:00	**0**	0.2	**10,631**	0.67	**0.11**	6	Atlas	2,126	1
	3/8/2012 10:30	3/8/2012 17:45	**435**	0.75	**190,579**	1.03	**0.36**	6	Atlas	142,934	1
	3/15/2012 20:00	3/16/2012 3:00	**420**	0.95	**36,247**	1.16	**0.42**	12	Atlas	34,434	1
	3/23/2012 13:45	3/23/2012 22:45	**540**	1.5	**25,098**	2.58	**0.57**	24	Atlas	37,647	1
	4/1/2012 8:30	4/1/2012 15:45	**435**	1.18	**356,227**	1.42	**0.63**	6	Atlas	420,347	1
	4/28/2012 19:15	4/28/2012 19:30	**15**	0.7	**9,788**	0.7	**0.50**	1	Atlas	6,852	1
	4/30/2012 18:00	4/30/2012 18:00	**0**	0.45	**32,002**	1.07	**0.30**	3	Atlas	14,401	1
	5/4/2012 23:45	5/5/2012 1:45	**120**	1.42	**104,397**	2.42	**0.79**	3	Atlas	148,244	1
	5/13/2012 2:30	5/13/2012 14:15	**705**	1.97	**95,682**	2.02	**0.77**	12	Atlas	188,494	1
	5/16/2012 17:45	5/16/2012 18:00	**15**	0.26	**72,501**	2.23	**0.21**	1	Atlas	18,850	1
	5/29/2012 7:15	5/29/2012 19:45	**750**	2.22	**1,704,710**	2.22	**4.14**	3	Atlas	3,784,457	1
	5/31/2012 18:30	6/1/2012 1:30	**420**	1.24	**7,171**	3.28	**0.54**	12	Atlas	8,892	1
	6/17/2012 14:15	6/17/2012 14:15	**0**	0.48	**6,341**	0.77	**0.31**	1	Atlas	3,044	1
	7/14/2012 12:30	7/14/2012 14:45	**135**	0.81	**2,044**	0.93	**0.51**	3	Atlas	1,656	1
	7/18/2012 17:15	7/18/2012 17:30	**15**	Discharge						2,287	1
	7/19/2012 18:30	7/19/2012 19:15	**45**	0.57	**821,565**	1.4	**0.46**	1	Atlas	468,292	1
	7/27/2012 20:00	7/27/2012 20:45	**45**	0.62	**9,660**	0.91	**0.41**	3	Atlas	5,989	1
	8/16/2012 22:00	8/16/2012 22:15	**15**	0.55	**753**	0.58	**0.33**	3	Atlas	414	1
	9/1/2012 17:45	9/1/2012 17:45	**0**	1	**311**	0.34	**0.32**	48	Atlas	311	1
	9/2/2012 13:00	9/2/2012 13:15	**15**	1	**819**	0.79	**0.32**	48	Atlas	819	1
	9/2/2012 22:00	9/2/2012 22:00	**0**	1	**206**	1.01	**0.32**	48	Atlas	206	1
	9/5/2012 15:45	9/5/2012 17:00	**75**	0.84	**29,690**	1.96	**0.67**	1	Atlas	24,940	1
	9/8/2012 0:15	9/8/2012 2:30	**135**	1.21	**9,486**	3.08	**0.67**	3	Atlas	11,478	1
	9/26/2012 21:00	9/26/2012 23:15	**135**	1.61	**4,448**	2.31	**0.86**	6	Atlas	7,161	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO154	**9/30/2012 13:15**	10/2/2012 11:00	**2745**	Discharge						77,238,764	1
	10/5/2012 17:00	10/7/2012 11:30	**2550**	Discharge						79,770,599	1
	12/5/2012 0:15	12/5/2012 4:30	**255**	0.52	**11,865,383**	0.73	**0.33**	3	Atlas	6,169,999	1
	12/9/2012 22:45	12/9/2012 22:45	**0**	1.17	**12,808**	2.88	**0.56**	3	Atlas	14,986	1
	1/13/2013 4:00	1/13/2013 4:00	**0**	2.12	**45**	1.06	**0.81**	24	Atlas	95	1
	1/30/2013 6:30	1/30/2013 6:30	**0**	0.93	**2,041**	0.85	**0.47**	6	Atlas	1,898	1
	3/18/2013 7:00	3/18/2013 7:15	**15**	1.75	**6,061**	1.81	**0.57**	48	Atlas	10,607	1
	9/20/2013 22:30	9/21/2013 4:00	**330**	1.61	**2,190**	1.58	**0.67**	12	Atlas	3,526	1
	10/5/2013 13:45	10/6/2013 6:00	**975**	4.4	**485,347**	3.5	**8.39**	24	Cloudburst	2,135,528	1
	10/30/2013 5:15	10/30/2013 5:30	**15**	1.04	**7,327**	0.94	**0.49**	6	Atlas	7,620	1
	11/17/2013 6:30	11/17/2013 9:15	**165**	2.78	**295,125**	2.36	**2.00**	6	Cloudburst	820,448	1
	11/17/2013 18:00	11/17/2013 23:00	**300**	2.78	**519**	2.94	**2.00**	6	Cloudburst	1,444	1
	12/21/2013 8:00	12/21/2013 12:30	**270**	1.03	**19,844**	1.33	**0.47**	12	Atlas	20,439	1
	12/21/2013 21:45	12/21/2013 23:15	**90**	1.55	**437,986**	2.18	**0.83**	3	Atlas	678,878	1
	1/11/2014 2:30	1/11/2014 3:30	**60**	0.91	**12,359**	1.23	**0.49**	6	Atlas	11,247	1
	2/4/2014 20:15	2/5/2014 1:30	**315**	0.51	**262,415**	0.94	**0.25**	6	Atlas	133,832	1
	2/17/2014 16:15	2/17/2014 17:00	**45**	0.47	**43,395**	0.96	**0.29**	3	Atlas	20,395	1
	3/29/2014 6:45	3/29/2014 8:45	**120**	1	**25,290**	1.03	**0.46**	6	Atlas	25,290	1
	4/3/2014 12:00	4/4/2014 13:45	**1545**	2.55	**424,262**	3.88	**0.89**	24	Atlas	1,081,869	1
	4/7/2014 10:45	4/7/2014 13:00	**135**	0.84	**4,294,201**	3.45	**0.50**	1	Atlas	3,607,129	1
	4/14/2014 20:45	4/14/2014 21:00	**15**	0.61	**13,305**	0.81	**0.28**	12	Atlas	8,116	1
	4/27/2014 20:00	4/28/2014 8:30	**750**	2.03	**563,560**	1.68	**0.75**	3	Atlas	1,144,026	1
	5/9/2014 19:15	5/9/2014 19:15	**0**	1.66	**440**	0.26	**0.64**	24	Atlas	730	1
	5/10/2014 5:45	5/10/2014 5:45	**0**	1.66	**424**	0.8	**0.64**	24	Atlas	704	1
	5/10/2014 14:15	5/10/2014 15:45	**90**	1.66	**137,737**	1.72	**0.64**	24	Atlas	228,643	1
	5/21/2014 21:00	5/21/2014 23:45	**165**	0.71	**23,066**	0.47	**0.33**	12	Atlas	16,377	1
	5/29/2014 20:45	5/29/2014 22:00	**75**	0.74	**365,982**	0.94	**0.63**	1	Atlas	270,827	1
	7/7/2014 19:45	7/7/2014 19:45	**0**	0.74	**47,597**	1.09	**0.64**	1	Atlas	35,222	1
	7/13/2014 23:00	7/13/2014 23:00	**0**	0.59	**339**	1.42	**0.27**	3	Atlas	200	1
	7/26/2014 22:00	7/27/2014 10:15	**735**	0.98	**78,015**	1.01	**0.43**	12	Atlas	76,455	1
	8/2/2014 10:00	8/2/2014 10:45	**45**	Discharge						4,062	1
	8/3/2014 23:45	8/3/2014 23:45	**0**	Discharge						1,698	1
	8/8/2014 7:00	8/8/2014 8:00	**60**	0.89	**73,067**	0.65	**0.43**	6	Atlas	65,029	1
	8/10/2014 4:15	8/10/2014 4:15	**0**	0.44	**17,535**	1.36	**0.37**	1	Atlas	7,715	1
	8/22/2014 19:00	8/23/2014 2:45	**465**	0.45	**272,781**	1.12	**0.32**	1	Atlas	122,752	1
	8/23/2014 20:30	8/23/2014 20:30	**0**	0.49	**1,840**	1.35	**0.25**	3	Atlas	901	1
	8/25/2014 2:15	8/25/2014 2:15	**0**	Discharge						254	1
	8/30/2014 15:30	8/30/2014 15:30	**0**	0.51	**324,694**	1.02	**0.31**	1	Atlas	165,594	1
	9/2/2014 4:15	9/2/2014 4:15	**0**	Discharge						685	1
	9/11/2014 0:45	9/11/2014 10:45	**600**	1.95	**378,127**	1.95	**1.60**	3	Atlas	737,349	1
	9/14/2014 9:15	9/14/2014 9:15	**0**	Discharge						459	1
	9/15/2014 17:15	9/15/2014 17:30	**15**	Discharge						2,477	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO154	**10/6/2014 9:45**	10/6/2014 9:45	**0**	0.45	**4,187**	0.63	**0.28**	1	Atlas	1,884	1
	10/10/2014 2:15	10/10/2014 3:15	**60**	1.02	**64,720**	1.64	**0.49**	3	Atlas	66,015	1
	10/14/2014 8:30	10/14/2014 8:30	**0**	1.04	**520**	2.65	**0.47**	12	Atlas	541	1
	10/15/2014 9:00	10/15/2014 9:00	**0**	Discharge						2	1
	12/6/2014 2:00	12/6/2014 12:30	**630**	1.79	**210,268**	2.59	**0.58**	48	Atlas	376,380	1
	12/10/2014 9:45	12/10/2014 9:45	**0**	Discharge						1,199	1
	5/26/2015 14:00	5/26/2015 14:15	**15**	0.5	**16,509**	0.74	**0.39**	1	Atlas	8,254	1
	5/31/2015 18:30	5/31/2015 18:30	**0**	Discharge						1,514	1
	6/18/2015 17:15	6/19/2015 0:15	**420**	1.42	**231,722**	1.21	**0.46**	48	Atlas	329,045	1
	6/20/2015 7:45	6/20/2015 9:00	**75**	1.42	**22,027**	2.2	**0.46**	48	Atlas	31,278	1
	6/22/2015 16:00	6/22/2015 20:30	**270**	Discharge						21,171	1
	6/26/2015 17:15	6/26/2015 18:00	**45**	0.84	**183,489**	2.03	**0.47**	1	Atlas	154,131	1
	7/1/2015 1:30	7/1/2015 1:30	**0**	0.01	**4,945**	1.36	**0.01**	1	Atlas	49	1
	7/2/2015 1:00	7/2/2015 3:00	**120**	1.77	**20,711**	1.99	**0.67**	24	Atlas	36,659	1
	7/2/2015 12:15	7/3/2015 6:15	**1080**	1.77	**475,775**	3.13	**0.67**	24	Atlas	842,122	1
	7/7/2015 13:00	7/7/2015 13:00	**0**	0.72	**312**	2.45	**0.30**	6	Atlas	225	1
	7/12/2015 6:00	7/14/2015 10:00	**3120**	1.86	**5,082,932**	4.55	**2.66**	1	Atlas	9,454,253	1
	7/14/2015 18:45	7/14/2015 19:45	**60**	0.19	**2,327,607**	4.18	**0.17**	1	Atlas	442,245	1
	7/17/2015 23:00	7/18/2015 5:45	**405**	1.31	**2,834,126**	4.6	**0.87**	3	Atlas	3,712,705	1
	7/20/2015 13:00	7/20/2015 13:00	**0**	Discharge						48	1
	8/4/2015 19:00	8/4/2015 19:00	**0**	0.51	**69,459**	0.54	**0.43**	1	Atlas	35,424	1
	8/5/2015 15:00	8/5/2015 15:15	**15**	0.9	**2,002**	0.81	**0.31**	24	Atlas	1,802	1
	10/27/2015 19:00	10/27/2015 20:30	**90**	2.72	**11,011**	2	**0.85**	48	Atlas	29,949	1
	10/28/2015 6:15	10/28/2015 6:15	**0**	2.72	**805**	2.72	**0.85**	48	Atlas	2,189	1
	11/6/2015 4:00	11/6/2015 4:00	**0**	0.79	**17,003**	0.75	**0.49**	3	Atlas	13,433	1
	11/18/2015 10:45	11/18/2015 18:15	**450**	1.51	**926,525**	1.96	**0.78**	6	Atlas	1,399,053	1
	12/22/2015 4:00	12/22/2015 4:00	**0**	0.67	**2,709**	0.69	**0.33**	1	Atlas	1,815	1
	12/23/2015 19:30	12/24/2015 4:45	**555**	0.81	**2,123,067**	1.52	**0.63**	1	Atlas	1,719,685	1
	12/26/2015 9:45	12/28/2015 20:45	**3540**	Discharge						17,019,388	1
	2/2/2016 23:00	2/3/2016 3:45	**285**	1.51	**587,351**	1.57	**0.69**	12	Atlas	886,900	1
	2/21/2016 10:30	2/21/2016 11:30	**60**	0.94	**61,207**	1.1	**0.43**	12	Atlas	57,535	1
	2/23/2016 23:45	2/25/2016 0:45	**1500**	1.99	**5,776,407**	2.92	**0.77**	12	Atlas	11,495,051	1
	3/1/2016 13:15	3/1/2016 13:15	**0**	0.34	**79,815**	2.29	**0.19**	3	Atlas	27,137	1
	3/13/2016 10:00	3/13/2016 10:00	**0**	0.81	**6,009**	1.92	**0.30**	24	Atlas	4,867	1
	3/27/2016 21:30	3/27/2016 21:30	**0**	0.73	**38,209**	0.94	**0.48**	3	Atlas	27,893	1
	4/11/2016 18:00	4/11/2016 18:00	**0**	0.86	**6,389**	0.81	**0.38**	6	Atlas	5,495	1
	5/10/2016 22:00	5/10/2016 22:00	**0**	0.75	**14,244**	1.47	**0.28**	24	Atlas	10,683	1
	5/20/2016 15:00	5/20/2016 15:45	**45**	0.66	**18,333**	1.27	**0.37**	3	Atlas	12,100	1
	6/2/2016 16:00	6/2/2016 16:00	**0**	0.28	**25,429**	0.43	**0.22**	1	Atlas	7,120	1
	6/12/2016 18:00	6/12/2016 18:00	**0**	0.18	**515,634**	0.21	**0.16**	1	Atlas	92,814	1
	6/14/2016 16:45	6/14/2016 17:15	**30**	0.9	**268,550**	0.87	**0.58**	3	Atlas	241,695	1
	6/23/2016 16:30	6/23/2016 23:45	**435**	1.87	**888,753**	2.26	**1.00**	6	Cloudburst	1,661,968	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
Grand Total										**252,520,062**	**126**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	**9/17/2012 14:15**	9/17/2012 15:00	**45**	0.08	**514**	0.06	**0.04**	6	Atlas	41	1
	9/25/2012 8:45	9/25/2012 11:15	**150**	0.41	**2,716**	0.43	**0.22**	6	Atlas	1,114	1
	9/25/2012 23:45	9/26/2012 6:00	**375**	0.47	**5,134**	0.82	**0.22**	12	Atlas	2,413	1
	9/26/2012 19:45	9/27/2012 1:30	**345**	1.65	**2,916**	2.52	**0.88**	6	Atlas	4,812	1
	10/1/2012 13:15	10/1/2012 18:45	**330**	0.59	**2,996**	3.04	**0.23**	24	Atlas	1,768	1
	10/5/2012 23:15	10/6/2012 0:45	**90**	0.14	**3,893**	0.71	**0.07**	3	Atlas	545	1
	10/15/2012 10:00	10/15/2012 10:00	**0**	Discharge						7,307	1
	10/18/2012 0:30	10/18/2012 3:15	**165**	0.26	**46,580**	0.41	**0.17**	3	Atlas	12,111	1
	10/19/2012 13:45	10/19/2012 15:15	**90**	0.02	**6,974**	0.44	**0.01**	3	Atlas	139	1
	10/23/2012 14:45	10/23/2012 14:45	**0**	Discharge						5	1
	10/26/2012 10:45	10/26/2012 23:45	**780**	0.71	**28,605**	0.73	**0.33**	6	Atlas	20,309	1
	11/3/2012 9:15	11/3/2012 17:00	**465**	0.19	**12,069**	0.21	**0.09**	12	Atlas	2,293	1
	11/12/2012 2:30	11/12/2012 13:15	**645**	0.45	**26,429**	0.51	**0.21**	12	Atlas	11,893	1
	12/2/2012 11:00	12/2/2012 14:30	**210**	0.18	**27,437**	0.26	**0.10**	3	Atlas	4,939	1
	12/4/2012 14:45	12/4/2012 19:45	**300**	0.61	**25,495**	0.79	**0.39**	3	Atlas	15,552	1
	12/6/2012 16:15	12/7/2012 19:00	**1605**	1.24	**36,175**	2.03	**0.52**	12	Atlas	44,856	1
	12/8/2012 4:45	12/8/2012 10:30	**345**	0.37	**32,193**	2.4	**0.20**	6	Atlas	11,911	1
	12/9/2012 8:15	12/9/2012 9:45	**90**	1.09	**2,599**	2.47	**0.51**	3	Atlas	2,833	1
	12/9/2012 19:30	12/10/2012 4:15	**525**	1.09	**31,703**	3.25	**0.51**	3	Atlas	34,557	1
	12/15/2012 11:00	12/15/2012 11:45	**45**	0.16	**3,019**	1.23	**0.09**	3	Atlas	483	1
	12/17/2012 14:30	12/17/2012 17:00	**150**	0.26	**1,781**	0.44	**0.14**	6	Atlas	463	1
	12/20/2012 6:30	12/20/2012 12:15	**345**	0.67	**3,436**	1.09	**0.36**	6	Atlas	2,302	1
	12/26/2012 1:00	12/26/2012 10:45	**585**	0.65	**3,471**	1.35	**0.26**	12	Atlas	2,256	1
	12/28/2012 22:15	12/29/2012 3:15	**300**	0.05	**1,112**	0.76	**0.02**	12	Atlas	56	1
	12/31/2012 22:45	1/1/2013 0:15	**90**	0.12	**1,766**	0.81	**0.05**	24	Atlas	212	1
	1/10/2013 12:30	1/10/2013 15:00	**150**	0.82	**274**	0.18	**0.34**	6	Atlas	225	1
	1/11/2013 2:00	1/11/2013 8:00	**360**	0.82	**2,801**	0.83	**0.34**	6	Atlas	2,297	1
	1/12/2013 20:45	1/13/2013 19:15	**1350**	2.38	**4,946**	3.2	**0.91**	24	Atlas	11,771	1
	1/15/2013 20:00	1/15/2013 20:00	**0**	0.25	**48**	3.33	**0.09**	24	Atlas	12	1
	1/27/2013 20:00	1/27/2013 20:15	**15**	0.26	**393**	0.11	**0.10**	24	Atlas	102	1
	1/28/2013 10:30	1/28/2013 17:15	**405**	0.26	**1,286**	0.29	**0.10**	24	Atlas	334	1
	1/30/2013 4:30	1/30/2013 9:00	**270**	0.89	**2,438**	1.12	**0.45**	6	Atlas	2,170	1
	1/30/2013 17:30	1/30/2013 17:45	**15**	0.89	**238**	1.17	**0.45**	6	Atlas	212	1
	2/2/2013 11:30	2/2/2013 11:30	**0**	0.02	**1,324**	1.23	**0.01**	3	Atlas	26	1
	2/4/2013 17:15	2/4/2013 18:30	**75**	0.1	**4,065**	1.08	**0.06**	3	Atlas	406	1
	2/8/2013 2:45	2/8/2013 4:30	**105**	0.08	**984**	0.22	**0.04**	6	Atlas	79	1
	2/10/2013 15:15	2/10/2013 16:30	**75**	0.16	**3,820**	0.35	**0.08**	3	Atlas	611	1
	2/18/2013 21:45	2/19/2013 4:30	**405**	0.35	**4,111**	0.42	**0.16**	12	Atlas	1,439	1
	2/21/2013 22:30	2/22/2013 4:00	**330**	0.41	**5,548**	0.76	**0.19**	12	Atlas	2,275	1
	2/26/2013 5:15	2/26/2013 19:30	**855**	0.53	**4,862**	0.91	**0.20**	24	Atlas	2,577	1
	3/5/2013 14:00	3/5/2013 19:00	**300**	0.46	**3,898**	0.67	**0.17**	24	Atlas	1,793	1
	3/10/2013 23:00	3/11/2013 12:15	**795**	1.04	**4,992**	1.51	**0.41**	12	Atlas	5,192	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	**3/17/2013 4:30**	3/18/2013 7:45	**1635**	1.75	**4,579**	2.71	**0.57**	48	Atlas	8,013	1
	3/24/2013 4:30	3/24/2013 17:30	**780**	0.53	**2,962**	2.03	**0.20**	24	Atlas	1,570	1
	4/11/2013 5:15	4/11/2013 7:15	**120**	1.32	**679**	0.52	**0.51**	24	Atlas	896	1
	4/11/2013 15:30	4/12/2013 1:30	**600**	1.32	**1,567**	1.32	**0.51**	24	Atlas	2,068	1
	4/16/2013 19:45	4/16/2013 20:00	**15**	0.55	**20,186**	1.83	**0.44**	1	Atlas	11,102	1
	4/19/2013 0:30	4/19/2013 4:45	**255**	0.91	**3,003**	1.48	**0.49**	6	Atlas	2,732	1
	4/24/2013 5:45	4/24/2013 9:45	**240**	0.7	**2,741**	1.66	**0.38**	6	Atlas	1,918	1
	4/27/2013 20:45	4/27/2013 20:45	**0**	0.07	**77**	0.75	**0.03**	12	Atlas	5	1
	5/4/2013 10:45	5/5/2013 19:45	**1980**	1.54	**3,309**	1.51	**0.47**	24	Atlas	5,096	1
	5/6/2013 17:15	5/6/2013 18:00	**45**	1.54	**65**	1.59	**0.47**	24	Atlas	100	1
	5/10/2013 9:30	5/11/2013 0:30	**900**	0.97	**1,965**	2.61	**0.43**	6	Atlas	1,906	1
	5/18/2013 18:30	5/18/2013 19:00	**30**	Discharge						258	1
	5/26/2013 14:15	5/26/2013 14:15	**0**	Discharge						11	1
	5/31/2013 11:00	5/31/2013 15:30	**270**	0.26	**1,164**	0.27	**0.12**	12	Atlas	303	1
	6/1/2013 5:15	6/1/2013 6:30	**75**	0.13	**2,546**	0.42	**0.06**	12	Atlas	331	1
	6/1/2013 16:00	6/1/2013 16:15	**15**	0.13	**1,023**	0.49	**0.06**	12	Atlas	133	1
	6/9/2013 23:00	6/10/2013 3:45	**285**	0.3	**4,745**	0.3	**0.12**	6	Atlas	1,423	1
	6/16/2013 16:30	6/16/2013 17:30	**60**	0.38	**2,238**	0.64	**0.24**	1	Atlas	851	1
	6/17/2013 16:15	6/17/2013 21:45	**330**	0.87	**2,749**	1.19	**0.44**	6	Atlas	2,392	1
	6/23/2013 12:45	6/23/2013 12:45	**0**	0.17	**1,255**	1.7	**0.12**	1	Atlas	213	1
	6/24/2013 9:00	6/24/2013 9:15	**15**	0.07	**3,335**	1.45	**0.04**	3	Atlas	233	1
	6/26/2013 3:15	6/26/2013 4:45	**90**	0.68	**3,160**	1.26	**0.45**	3	Atlas	2,149	1
	6/26/2013 16:00	6/26/2013 22:30	**390**	2.26	**6,765**	3.5	**2.56**	1	Atlas	15,288	1
	6/29/2013 19:30	6/29/2013 21:45	**135**	0.42	**2,582**	3.63	**0.21**	3	Atlas	1,084	1
	7/1/2013 18:30	7/1/2013 19:45	**75**	0.26	**1,090**	3.67	**0.13**	3	Atlas	284	1
	7/2/2013 13:00	7/2/2013 13:00	**0**	0.12	**11,214**	3.75	**0.10**	1	Atlas	1,346	1
	7/3/2013 17:00	7/3/2013 17:15	**15**	0.05	**2,784**	1.58	**0.03**	1	Atlas	139	1
	7/4/2013 6:15	7/4/2013 17:30	**675**	0.49	**2,982**	1.38	**0.21**	12	Atlas	1,461	1
	7/6/2013 0:15	7/6/2013 8:15	**480**	0.61	**4,298**	1.97	**0.27**	12	Atlas	2,622	1
	7/10/2013 13:45	7/10/2013 14:30	**45**	0.62	**2,522**	1.79	**0.45**	1	Atlas	1,564	1
	7/14/2013 19:15	7/14/2013 19:30	**15**	0.1	**4,016**	0.78	**0.09**	1	Atlas	402	1
	7/18/2013 15:30	7/18/2013 16:00	**30**	0.26	**2,978**	0.38	**0.19**	1	Atlas	774	1
	7/21/2013 20:00	7/22/2013 16:00	**1200**	1.89	**5,010**	2.17	**0.73**	24	Atlas	9,468	1
	7/27/2013 5:45	7/27/2013 5:45	**0**	0.04	**333**	1.94	**0.02**	12	Atlas	13	1
	7/30/2013 18:00	7/30/2013 19:30	**90**	0.12	**2,672**	0.16	**0.07**	6	Atlas	321	1
	8/10/2013 8:45	8/10/2013 10:00	**75**	0.07	**3,046**	0.25	**0.05**	1	Atlas	213	1
	8/12/2013 11:45	8/12/2013 16:15	**270**	0.82	**2,894**	0.77	**0.37**	1	Atlas	2,373	1
	8/13/2013 2:15	8/13/2013 3:45	**90**	0.82	**2,470**	1.07	**0.37**	1	Atlas	2,026	1
	8/20/2013 18:00	8/20/2013 19:15	**75**	0.17	**7,922**	0.19	**0.09**	3	Atlas	1,347	1
	8/31/2013 19:30	9/1/2013 5:00	**570**	1.38	**2,120**	1.38	**0.71**	1	Atlas	2,925	1
	9/2/2013 13:30	9/2/2013 14:00	**30**	0.56	**1,471**	1.94	**0.49**	1	Atlas	824	1
	9/12/2013 13:00	9/12/2013 13:00	**0**	0.04	**2,892**	0.05	**0.03**	3	Atlas	116	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	9/20/2013 16:15	9/21/2013 5:30	795	1.14	4,009	1.22	0.46	12	Atlas	4,570	1
	10/3/2013 2:30	10/3/2013 2:30	0	0.06	509	0.1	0.03	1	Atlas	31	1
	10/4/2013 19:00	10/4/2013 19:00	0	0.05	433	0.15	0.04	1	Atlas	22	1
	10/5/2013 12:15	10/6/2013 15:45	1650	3.98	3,099	4.08	5.56	24	Cloudburst	12,336	1
	10/17/2013 9:30	10/17/2013 9:30	0	0.02	4,749	0.03	0.02	1	Atlas	95	1
	10/19/2013 7:15	10/19/2013 11:00	225	0.2	1,274	0.24	0.10	6	Atlas	255	1
	10/29/2013 21:00	10/30/2013 7:00	600	1.42	5,086	1.42	0.69	6	Atlas	7,222	1
	10/31/2013 10:00	10/31/2013 23:00	780	0.65	3,861	2.07	0.25	12	Atlas	2,509	1
	11/6/2013 13:30	11/7/2013 6:30	1020	0.23	21,501	0.92	0.10	12	Atlas	4,945	1
	11/7/2013 20:30	11/7/2013 20:45	15	Discharge						241	1
	11/12/2013 4:00	11/12/2013 4:45	45	0.02	8,258	0.25	0.02	1	Atlas	165	1
	11/15/2013 18:00	11/15/2013 20:45	165	0.08	11,400	0.1	0.07	1	Atlas	912	1
	11/17/2013 2:45	11/17/2013 19:30	1005	2.35	6,153	2.45	1.08	6	Cloudburst	14,460	1
	11/21/2013 18:45	11/21/2013 21:00	135	0.11	15,020	2.54	0.08	1	Atlas	1,652	1
	12/5/2013 5:00	12/6/2013 14:00	1980	0.81	18,039	0.54	0.26	48	Atlas	14,612	1
	12/6/2013 22:15	12/7/2013 1:00	165	0.81	1,202	0.81	0.26	48	Atlas	974	1
	12/7/2013 10:45	12/7/2013 13:00	135	Discharge						129	1
	12/8/2013 12:45	12/9/2013 7:15	1110	0.45	2,339	1.26	0.30	1	Atlas	1,053	1
	12/13/2013 19:45	12/14/2013 14:45	1140	0.82	5,913	1.33	0.33	12	Atlas	4,849	1
	12/20/2013 7:15	12/20/2013 11:15	240	0.09	6,657	0.92	0.06	1	Atlas	599	1
	12/21/2013 1:45	12/22/2013 5:45	1680	2.97	11,999	3.79	1.55	24	Cloudburst	35,638	1
	12/29/2013 0:15	12/29/2013 10:45	630	0.51	7,296	0.78	0.22	12	Atlas	3,721	1
	1/2/2014 3:00	1/2/2014 9:30	390	0.23	3,108	0.71	0.11	3	Atlas	715	1
	1/5/2014 14:30	1/5/2014 21:45	435	0.59	17,917	0.82	0.30	6	Atlas	10,571	1
	1/10/2014 23:45	1/11/2014 6:00	375	0.87	9,815	1.47	0.46	6	Atlas	8,539	1
	1/13/2014 8:15	1/13/2014 17:15	540	0.19	8,949	1.07	0.09	12	Atlas	1,700	1
	1/14/2014 18:15	1/14/2014 18:45	30	0.01	11,421	1.08	0.01	1	Atlas	114	1
	1/21/2014 3:00	1/21/2014 14:30	690	0.16	5,711	0.18	0.07	12	Atlas	914	1
	1/25/2014 12:15	1/25/2014 14:00	105	0.06	4,501	0.24	0.03	12	Atlas	270	1
	1/26/2014 12:30	1/26/2014 13:30	60	Discharge						102	1
	2/2/2014 1:45	2/2/2014 8:15	390	0.51	5,092	0.22	0.19	24	Atlas	2,597	1
	2/2/2014 16:45	2/2/2014 20:45	240	0.51	292	0.32	0.19	24	Atlas	149	1
	2/3/2014 9:45	2/3/2014 15:00	315	0.51	825	0.51	0.19	24	Atlas	421	1
	2/4/2014 18:30	2/5/2014 0:45	375	0.53	11,441	1.04	0.26	6	Atlas	6,064	1
	2/14/2014 16:15	2/14/2014 18:00	105	0.44	1,314	0.4	0.23	6	Atlas	578	1
	2/17/2014 14:15	2/17/2014 18:00	225	0.71	2,635	1.21	0.43	3	Atlas	1,871	1
	2/20/2014 18:45	2/21/2014 0:30	345	0.16	22,409	1.37	0.09	6	Atlas	3,585	1
	3/2/2014 9:15	3/2/2014 11:45	150	0.55	2,069	0.27	0.21	24	Atlas	1,138	1
	3/3/2014 13:00	3/3/2014 14:45	105	0.55	251	0.56	0.21	24	Atlas	138	1
	3/12/2014 7:00	3/12/2014 7:45	45	0.08	7,111	0.08	0.04	1	Atlas	569	1
	3/16/2014 17:15	3/16/2014 19:15	120	0.08	2,530	0.17	0.05	3	Atlas	202	1
	3/19/2014 8:00	3/19/2014 9:00	60	0.07	5,431	0.17	0.05	1	Atlas	380	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	**3/27/2014 23:15**	3/28/2014 5:30	**375**	0.33	**8,793**	0.39	**0.17**	1	Atlas	2,902	1
	3/29/2014 5:00	3/29/2014 14:15	**555**	1.15	**6,391**	1.54	**0.56**	3	Atlas	7,350	1
	4/1/2014 20:15	4/1/2014 20:45	**30**	0.08	**8,054**	1.63	**0.06**	1	Atlas	644	1
	4/3/2014 4:45	4/4/2014 8:00	**1635**	3.03	**4,538**	4.67	**1.37**	24	Cloudburst	13,749	1
	4/7/2014 7:30	4/7/2014 15:15	**465**	0.62	**3,084**	3.78	**0.35**	3	Atlas	1,912	1
	4/14/2014 3:15	4/14/2014 10:45	**450**	0.96	**4,498**	1.02	**0.36**	24	Atlas	4,318	1
	4/14/2014 19:15	4/15/2014 2:30	**435**	0.96	**2,697**	1.01	**0.36**	24	Atlas	2,589	1
	4/25/2014 2:15	4/25/2014 10:15	**480**	0.09	**4,168**	0.1	**0.04**	12	Atlas	375	1
	4/27/2014 20:15	4/28/2014 19:45	**1410**	1.37	**9,433**	1.45	**0.49**	24	Atlas	12,923	1
	4/29/2014 19:15	4/29/2014 20:15	**60**	0.15	**871**	1.55	**0.07**	12	Atlas	131	1
	5/9/2014 19:00	5/10/2014 15:15	**1215**	1.66	**7,449**	1.74	**0.64**	24	Atlas	12,365	1
	5/13/2014 3:30	5/13/2014 3:30	**0**	Discharge						67	1
	5/14/2014 6:45	5/15/2014 1:00	**1095**	0.79	**3,852**	2.58	**0.30**	24	Atlas	3,043	1
	5/16/2014 3:15	5/16/2014 4:00	**45**	0.07	**4,383**	2.64	**0.04**	1	Atlas	307	1
	5/17/2014 3:30	5/17/2014 3:30	**0**	Discharge						67	1
	5/20/2014 3:30	5/20/2014 3:30	**0**	Discharge						638	1
	5/21/2014 20:45	5/22/2014 4:15	**450**	0.58	**5,841**	0.72	**0.27**	12	Atlas	3,388	1
	5/27/2014 3:45	5/27/2014 3:45	**0**	Discharge						41	1
	5/28/2014 20:15	5/28/2014 20:45	**30**	0.2	**32,934**	0.78	**0.17**	1	Atlas	6,587	1
	6/1/2014 14:15	6/1/2014 22:45	**510**	0.09	**9,342**	0.51	**0.04**	12	Atlas	841	1
	6/3/2014 3:45	6/3/2014 3:45	**0**	0.02	**3,239**	0.54	**0.01**	3	Atlas	65	1
	6/10/2014 15:30	6/10/2014 17:00	**90**	0.08	**4,230**	0.17	**0.05**	3	Atlas	338	1
	6/11/2014 14:00	6/11/2014 14:00	**0**	0.11	**3,418**	0.28	**0.08**	1	Atlas	376	1
	6/12/2014 3:45	6/12/2014 3:45	**0**	Discharge						111	1
	6/20/2014 16:00	6/20/2014 16:00	**0**	0.27	**478**	0.11	**0.18**	3	Atlas	129	1
	6/24/2014 13:30	6/24/2014 19:15	**345**	0.1	**8,269**	0.44	**0.05**	6	Atlas	827	1
	7/1/2014 21:45	7/1/2014 22:30	**45**	0.22	**2,179**	0.24	**0.14**	3	Atlas	479	1
	7/2/2014 16:15	7/2/2014 17:00	**45**	0.12	**2,179**	0.37	**0.10**	1	Atlas	261	1
	7/7/2014 19:30	7/7/2014 19:45	**15**	0.48	**18,720**	0.82	**0.42**	1	Atlas	8,986	1
	7/8/2014 6:30	7/8/2014 7:30	**60**	0.32	**2,909**	1.14	**0.28**	1	Atlas	931	1
	7/13/2014 22:15	7/14/2014 5:00	**405**	0.74	**6,833**	1.48	**0.37**	1	Atlas	5,056	1
	7/14/2014 19:15	7/14/2014 20:30	**75**	0.35	**945**	1.82	**0.23**	3	Atlas	331	1
	7/19/2014 4:00	7/19/2014 4:00	**0**	Discharge						6	1
	7/26/2014 21:30	7/27/2014 9:30	**720**	0.99	**7,073**	1.02	**0.44**	12	Atlas	7,003	1
	7/31/2014 4:00	7/31/2014 4:00	**0**	Discharge						9	1
	8/2/2014 4:00	8/2/2014 4:00	**0**	Discharge						7	1
	8/5/2014 4:00	8/5/2014 4:00	**0**	Discharge						7	1
	8/8/2014 5:45	8/8/2014 11:00	**315**	0.8	**7,234**	0.76	**0.35**	6	Atlas	5,787	1
	8/10/2014 4:15	8/10/2014 4:45	**30**	0.91	**1,718**	1.77	**0.75**	1	Atlas	1,564	1
	8/11/2014 15:30	8/11/2014 15:30	**0**	0.43	**286**	2.19	**0.36**	1	Atlas	123	1
	8/17/2014	8/17/2014	**0**	0.72	**1,437**	1.66	**0.27**	24	Atlas	1,035	1
	8/17/2014 9:45	8/17/2014 9:45	**0**	0.72	**252**	0.98	**0.27**	24	Atlas	182	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	**8/17/2014 23:30**	8/17/2014 23:45	**15**	0.72	**977**	1.15	**0.27**	24	Atlas	703	1
	8/22/2014 19:45	8/22/2014 19:45	**0**	0.29	**532**	1.01	**0.22**	1	Atlas	154	1
	8/23/2014 4:15	8/23/2014 4:15	**0**	0.29	**568**	1.05	**0.22**	1	Atlas	165	1
	8/23/2014 16:00	8/23/2014 21:00	**300**	0.73	**2,616**	1.61	**0.38**	3	Atlas	1,910	1
	8/27/2014 15:15	8/27/2014 15:30	**15**	0.12	**1,418**	1.2	**0.08**	3	Atlas	170	1
	8/30/2014 15:30	8/30/2014 16:15	**45**	0.58	**1,690**	1.29	**0.37**	1	Atlas	980	1
	9/2/2014 8:30	9/2/2014 9:30	**60**	0.45	**7,798**	1.09	**0.22**	3	Atlas	3,509	1
	9/11/2014 0:45	9/11/2014 6:15	**330**	1.88	**840**	1.82	**1.30**	3	Atlas	1,579	1
	9/30/2014 4:15	9/30/2014 4:15	**0**	Discharge						1,692	1
	10/3/2014 19:30	10/4/2014 4:15	**525**	0.25	**6,283**	0.26	**0.10**	24	Atlas	1,571	1
	10/6/2014 7:00	10/6/2014 10:00	**180**	0.21	**11,038**	0.4	**0.09**	6	Atlas	2,318	1
	10/7/2014 12:15	10/7/2014 12:30	**15**	0.25	**6,464**	0.71	**0.21**	1	Atlas	1,616	1
	10/8/2014 9:00	10/8/2014 15:30	**390**	Discharge						1,610	1
	10/10/2014 2:00	10/10/2014 3:30	**90**	1.17	**3,188**	1.52	**0.53**	3	Atlas	3,730	1
	10/10/2014 18:00	10/10/2014 22:15	**255**	1.17	**1,470**	1.75	**0.53**	3	Atlas	1,720	1
	10/13/2014 4:30	10/13/2014 7:00	**150**	0.44	**16,255**	2.08	**0.28**	3	Atlas	7,152	1
	10/13/2014 23:15	10/14/2014 10:30	**675**	1.01	**8,247**	2.9	**0.44**	12	Atlas	8,329	1
	10/28/2014 13:15	10/28/2014 13:15	**0**	0.15	**7,600**	0.14	**0.09**	3	Atlas	1,140	1
	11/16/2014 22:15	11/17/2014 2:00	**225**	0.37	**3,542**	0.24	**0.15**	12	Atlas	1,310	1
	11/23/2014 17:45	11/23/2014 23:00	**315**	0.72	**790**	1.06	**0.30**	12	Atlas	569	1
	12/1/2014 4:15	12/1/2014 16:45	**750**	0.88	**9,615**	0.84				8,461	1
	12/4/2014 14:30	12/4/2014 21:15	**405**	2.01	**2,979**	1.23	**0.65**	48	Atlas	5,988	1
	12/5/2014 6:15	12/5/2014 12:00	**345**	2.01	**1,213**	1.49	**0.65**	48	Atlas	2,437	1
	12/5/2014 21:00	12/6/2014 7:00	**600**	2.01	**1,849**	2.88	**0.65**	48	Atlas	3,716	1
	12/22/2014 22:45	12/23/2014	**75**	0.26	**6,729**	0.32	**0.13**	3	Atlas	1,749	1
	1/4/2015 4:15	1/4/2015 4:15	**0**	0.36	**3,080**	0.37	**0.13**	24	Atlas	1,109	1
	1/29/2015 5:30	1/29/2015 5:30	**0**	0.05	**8,321**	0.26				416	1
	2/1/2015 11:30	2/1/2015 19:15	**465**	0.42	**4,306**	0.62	**0.19**	3	Atlas	1,809	1
	2/21/2015 5:00	2/21/2015 21:15	**975**	1.3	**6,204**	1.61	**0.50**	12	Atlas	8,066	1
	3/3/2015 17:45	3/4/2015 17:45	**1440**	1.81	**3,993**	1.47	**0.59**	24	Atlas	7,228	1
	3/7/2015 12:15	3/7/2015 16:15	**240**	Discharge						623	1
	3/10/2015 5:15	3/10/2015 16:00	**645**	1.22	**7,407**	3.03	**0.55**	12	Atlas	9,037	1
	3/13/2015 9:30	3/14/2015 10:00	**1470**	1.9	**11,150**	3.12	**0.72**	24	Atlas	21,184	1
	3/19/2015 19:00	3/19/2015 20:00	**60**	0.2	**3,739**	2.09	**0.08**	12	Atlas	748	1
	3/26/2015 4:45	3/26/2015 4:45	**0**	0.52	**475**	0.63	**0.21**	3	Atlas	247	1
	4/2/2015 9:45	4/2/2015 15:15	**330**	5.15	**466**	1.17	**10.13**	24	Cloudburst	2,401	1
	4/3/2015 0:30	4/3/2015 17:45	**1035**	5.15	**1,949**	5.17	**10.13**	24	Cloudburst	10,038	1
	4/7/2015 4:45	4/7/2015 17:15	**750**	0.9	**5,595**	6.04	**0.45**	1	Atlas	5,036	1
	4/9/2015 11:45	4/9/2015 11:45	**0**	0.1	**5,146**	5.8	**0.08**	1	Atlas	515	1
	4/10/2015 2:30	4/10/2015 2:30	**0**	0.21	**1,428**	3.33	**0.13**	3	Atlas	300	1
	4/13/2015 21:00	4/13/2015 21:15	**15**	0.43	**1,506**	1.49	**0.17**	24	Atlas	648	1
	4/19/2015 13:00	4/19/2015 14:30	**90**	0.71	**448**	1.06	**0.30**	12	Atlas	318	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO160	**4/20/2015 3:45**	4/20/2015 4:00	**15**	0.07	**13,088**	1.29	**0.05**	1	Atlas	916	1
	5/16/2015 12:00	5/16/2015 14:00	**120**	0.54	**2,784**	0.61	**0.30**	3	Atlas	1,503	1
	5/17/2015 14:30	5/17/2015 14:30	**0**	0.04	**4,270**	0.69	**0.03**	1	Atlas	171	1
	5/26/2015 14:15	5/26/2015 14:15	**0**	0.16	**4,069**	0.4	**0.10**	1	Atlas	651	1
	6/8/2015 8:30	6/8/2015 8:30	**0**	0.24	**1,286**	0.25	**0.13**	6	Atlas	309	1
	6/17/2015 5:00	6/17/2015 6:15	**75**	0.67	**476**	0.66	**0.39**	3	Atlas	319	1
	6/18/2015 17:30	6/18/2015 17:30	**0**	1.53	**697**	1.16	**0.50**	48	Atlas	1,066	1
	6/20/2015 1:45	6/20/2015 1:45	**0**	1.53	**181**	1.66	**0.50**	48	Atlas	276	1
	6/26/2015 17:30	6/26/2015 17:30	**0**	0.89	**364**	2.1	**0.46**	1	Atlas	324	1
	6/29/2015 14:00	6/29/2015 14:00	**0**	0.22	**728**	1.6	**0.12**	1	Atlas	160	1
	7/2/2015 0:30	7/2/2015 20:45	**1215**	2.02	**538**	3.69	**0.78**	24	Atlas	1,087	1
	7/3/2015 19:00	7/3/2015 19:00	**0**	0.41	**512**	3.04	**0.32**	1	Atlas	210	1
	7/7/2015 11:45	7/7/2015 14:45	**180**	1.04	**2,150**	3.25	**0.45**	6	Atlas	2,237	1
	7/9/2015 5:30	7/9/2015 13:30	**480**	0.36	**10,196**	2.96	**0.17**	3	Atlas	3,671	1
	7/10/2015 10:30	7/10/2015 16:15	**345**	0.44	**6,233**	2.27	**0.22**	6	Atlas	2,743	1
	7/12/2015 6:15	7/12/2015 7:15	**60**	1.27	**5,728**	3.1	**0.85**	3	Atlas	7,274	1
	7/13/2015 15:00	7/13/2015 15:00	**0**	0.53	**307**	3.67	**0.45**	1	Atlas	163	1
	7/14/2015 4:15	7/14/2015 4:45	**30**	0.62	**3,455**	4.27	**0.49**	1	Atlas	2,142	1
	7/17/2015 23:15	7/18/2015 1:00	**105**	1.31	**1,396**	3.79	**0.87**	3	Atlas	1,829	1
	8/4/2015 19:15	8/4/2015 20:15	**60**	0.43	**1,442**	0.48	**0.37**	1	Atlas	620	1
	8/5/2015 15:15	8/5/2015 15:45	**30**	0.7	**354**	0.76	**0.25**	24	Atlas	248	1
	8/6/2015 2:30	8/6/2015 8:45	**375**	0.7	**2,561**	1.07	**0.25**	24	Atlas	1,793	1
	9/9/2015 11:15	9/9/2015 11:15	**0**	0.28	**2,647**	0.42	**0.24**	1	Atlas	741	1
	12/10/2015 10:30	12/10/2015 10:30	**0**	Discharge						75	1
	12/23/2015 19:15	12/23/2015 19:30	**15**	0.72	**66,199**	1.1	**0.51**	1	Atlas	47,663	1
	12/27/2015 10:30	12/27/2015 10:30	**0**	2.1	**5,292**	2.51	**0.72**	6	Atlas	11,113	1
	2/3/2016	2/3/2016	**0**	1.37	**6,540**	1.33	**0.68**	6	Atlas	8,960	1
	3/12/2016 22:45	3/12/2016 22:45	**0**	0.84	**9,288**	1.68	**0.34**	6	Atlas	7,802	1
	5/10/2016 21:45	5/10/2016 21:45	**0**	1.02	**21,244**	1.93	**0.39**	12	Atlas	21,668	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.3	**8,471**	0.71	**0.17**	1	Atlas	2,541	1
	6/14/2016 16:30	6/14/2016 16:45	**15**	0.95	**3,752**	0.73	**0.61**	3	Atlas	3,565	1
	6/22/2016 8:15	6/22/2016 8:15	**0**	0.26	**52,521**	0.18	**0.16**	3	Atlas	13,655	1
	6/23/2016 16:15	6/23/2016 20:30	**255**	2.48	**15,037**	2.74	**3.67**	6	Cloudburst	37,291	1
Grand Total										**883,223**	**243**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**6/20/2009 4:45**	6/20/2009 4:45	**0**	0.08	**125,494**	2.86	**0.06**	1	Atlas	10,040	1
	6/22/2009 9:15	6/22/2009 10:45	**90**	1.12	**617,661**	4.01	**0.77**	1	Atlas	691,780	1
	6/26/2009 3:45	6/26/2009 4:00	**15**	1.18	**200,672**	2.14	**0.54**	12	Atlas	236,793	1
	7/15/2009 11:00	7/15/2009 11:30	**30**	0.3	**265,612**	0.33	**0.19**	3	Atlas	79,684	1
	7/25/2009 21:30	7/25/2009 22:15	**45**	0.61	**703,537**	2.07	**0.23**	24	Atlas	429,157	1
	7/28/2009 14:00	7/28/2009 14:00	**0**	2.63	**23,248**	2.28	**2.52**	6	Cloudburst	61,142	1
	7/29/2009 3:00	7/29/2009 15:15	**735**	2.63	**1,878,494**	4.5	**2.52**	6	Cloudburst	4,940,438	1
	7/30/2009 17:30	7/30/2009 23:15	**345**	1.04	**680,442**	4.1	**0.44**	12	Atlas	707,660	1
	10/23/2009 6:45	10/23/2009 7:30	**45**	0.58	**228,394**	0.56	**0.25**	12	Atlas	132,469	1
	10/27/2009 20:45	10/27/2009 23:45	**180**	1.11	**1,018,933**	1.69	**0.50**	12	Atlas	1,131,015	1
	10/30/2009 20:15	10/31/2009 1:15	**300**	0.98	**907,224**	1.76	**0.44**	12	Atlas	889,079	1
	11/17/2009 17:30	11/17/2009 18:45	**75**	0.94	**384,147**	0.82	**0.36**	24	Atlas	361,099	1
	12/8/2009 17:45	12/8/2009 22:00	**255**	1.58	**2,038,693**	1.82	**0.68**	12	Atlas	3,221,135	1
	1/21/2010 10:45	1/21/2010 20:15	**570**	0.9	**4,960,056**	1.76	**0.41**	12	Atlas	4,464,050	1
	1/24/2010 4:00	1/24/2010 6:15	**135**	1.03	**761,484**	2.15	**0.40**	24	Atlas	784,329	1
	1/24/2010 21:45	1/24/2010 23:00	**75**	1.03	**301,402**	2.47	**0.40**	24	Atlas	310,444	1
	2/5/2010 13:00	2/5/2010 19:45	**405**	1.18	**2,009,519**	1.12	**0.42**	24	Atlas	2,371,232	1
	3/25/2010 22:15	3/25/2010 22:15	**0**	0.56	**58,315**	1.01	**0.31**	1	Atlas	32,657	1
	4/8/2010 1:45	4/8/2010 6:15	**270**	1.15	**1,660,368**	1.26	**0.56**	6	Atlas	1,909,423	1
	4/24/2010 14:45	4/24/2010 20:45	**360**	1.57	**3,233,196**	1.82	**0.72**	6	Atlas	5,076,118	1
	4/27/2010 10:15	4/27/2010 10:45	**30**	0.34	**529,209**	2.34	**0.16**	6	Atlas	179,931	1
	5/1/2010 4:45	5/1/2010 9:30	**285**	4.23	**1,089,259**	3.02	**3.86**	48	Atlas	4,607,564	1
	5/2/2010 1:15	5/3/2010 19:15	**2520**	4.23	**15,004,995**	4.77	**3.86**	48	Atlas	63,471,127	1
	5/7/2010 23:30	5/7/2010 23:45	**15**	0.2	**1,518,141**	4.45	**0.16**	1	Atlas	303,628	1
	5/12/2010 9:45	5/12/2010 11:00	**75**	0.75	**1,153,365**	1.04	**0.57**	1	Atlas	865,024	1
	5/13/2010 12:45	5/13/2010 13:15	**30**	0.16	**2,754,313**	1.21	**0.14**	1	Atlas	440,690	1
	5/16/2010 9:30	5/16/2010 10:15	**45**	0.55	**2,730,891**	1.25	**0.25**	12	Atlas	1,501,990	1
	5/17/2010 19:30	5/17/2010 20:45	**75**	0.44	**2,679,946**	1.99	**0.32**	1	Atlas	1,179,176	1
	5/21/2010 19:45	5/21/2010 21:45	**120**	1.12	**449,225**	2.12	**0.85**	1	Atlas	503,132	1
	5/30/2010 16:15	5/30/2010 16:15	**0**	0.39	**284,750**	0.35	**0.23**	1	Atlas	111,053	1
	5/31/2010 18:00	5/31/2010 18:15	**15**	0.03	**8,221,784**	0.49	**0.03**	1	Atlas	246,654	1
	6/9/2010 3:30	6/9/2010 13:00	**570**	2.08	**4,050,943**	2.19	**1.57**	3	Atlas	8,425,962	1
	6/12/2010 1:45	6/12/2010 2:00	**15**	0.29	**366,344**	2.37	**0.17**	1	Atlas	106,240	1
	6/13/2010 22:45	6/13/2010 23:45	**60**	0.47	**7,527,264**	2.72	**0.29**	1	Atlas	3,537,814	1
	6/15/2010 21:15	6/15/2010 21:15	**0**	0.5	**185,597**	3.4	**0.36**	1	Atlas	92,799	1
	6/19/2010 5:45	6/19/2010 7:15	**90**	0.85	**3,273,671**	1.82	**0.49**	3	Atlas	2,782,621	1
	7/8/2010 15:45	7/8/2010 15:45	**0**	0.59	**152,435**	0.08	**0.23**	24	Atlas	89,937	1
	7/13/2010 3:45	7/13/2010 5:30	**105**	1.79	**33,520**	1.53	**0.82**	12	Atlas	60,001	1
	10/13/2010 20:30	10/13/2010 21:00	**30**	0.45	**38,726**	0.56	**0.29**	3	Atlas	17,427	1
	10/26/2010 11:15	10/26/2010 11:45	**30**	0.51	**101,543**	0.24	**0.28**	6	Atlas	51,787	1
	11/16/2010 12:45	11/16/2010 15:45	**180**	0.77	**126,555**	0.73	**0.34**	12	Atlas	97,448	1
	11/23/2010 3:45	11/23/2010 4:30	**45**	0.31	**200,999**	1.11	**0.17**	6	Atlas	62,310	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**11/24/2010 13:30**	11/24/2010 15:45	**135**	0.76	**382,024**	1.14	**0.37**	3	Atlas	290,339	1
	11/25/2010 10:00	11/25/2010 23:45	**825**	2.32	**1,084,365**	3.31	**0.89**	24	Atlas	2,515,726	1
	11/29/2010 22:00	11/30/2010 5:00	**420**	1.71	**985,611**	4.64	**0.66**	24	Atlas	1,685,395	1
	12/30/2010 7:45	12/30/2010 8:00	**15**	0.53	**91,908**	0.59	**0.24**	12	Atlas	48,711	1
	1/1/2011 5:45	1/1/2011 7:00	**75**	0.65	**232,398**	1.13	**0.28**	12	Atlas	151,059	1
	2/1/2011 18:30	2/1/2011 20:30	**120**	1	**947,261**	0.92	**0.42**	6	Atlas	947,261	1
	2/24/2011 20:15	2/25/2011 10:45	**870**	2.23	**2,675,777**	2.45	**0.86**	24	Atlas	5,966,982	1
	2/28/2011 5:15	2/28/2011 13:15	**480**	1.13	**1,473,332**	3.68	**0.54**	6	Atlas	1,664,865	1
	3/5/2011 7:00	3/5/2011 9:00	**120**	0.88	**596,255**	2.04	**0.29**	24	Atlas	524,705	1
	3/8/2011 23:00	3/10/2011 17:00	**2520**	2.82	**6,303,736**	3.75	**1.43**	24	Cloudburst	17,776,536	1
	3/18/2011 21:45	3/18/2011 22:00	**15**	0.22	**8,090**	1.02	**0.11**	6	Atlas	1,780	1
	4/4/2011 13:30	4/4/2011 17:15	**225**	0.93	**944,156**	1.1	**0.48**	6	Atlas	878,065	1
	4/9/2011 10:15	4/9/2011 11:45	**90**	0.63	**492,340**	1.62	**0.45**	1	Atlas	310,174	1
	4/11/2011 10:30	4/13/2011 10:30	**2880**	3.26	**8,237,942**	4.82	**2.68**	24	Cloudburst	26,855,690	1
	4/15/2011 13:15	4/15/2011 14:00	**45**	0.45	**234,367**	4.1	**0.17**	24	Atlas	105,465	1
	4/20/2011 0:45	4/20/2011 5:15	**270**	0.68	**1,198,928**	1.2	**0.37**	6	Atlas	815,271	1
	4/22/2011 16:45	4/29/2011 23:00	**10455**	4.61	**19,067,435**	9.01	**2.66**	48	Cloudburst	87,900,874	1
	5/1/2011 4:45	5/1/2011 8:00	**195**	0.71	**2,262,489**	5.29				1,606,367	1
	5/1/2011 22:45	5/4/2011 22:15	**4290**	2.81	**7,464,108**	7.22	**0.91**	48	Atlas	20,974,143	1
	5/8/2011 1:30	5/8/2011 2:00	**30**	0.21	**25,599**	3.65	**0.12**	3	Atlas	5,376	1
	5/21/2011 18:45	5/21/2011 19:30	**45**	0.47	**1,286,380**	0.83	**0.35**	1	Atlas	604,599	1
	5/23/2011 3:45	5/23/2011 5:00	**75**	0.29	**1,200,050**	0.87	**0.22**	1	Atlas	348,015	1
	5/23/2011 18:00	5/23/2011 21:45	**225**	0.92	**1,434,504**	1.81	**0.59**	3	Atlas	1,319,744	1
	5/25/2011 23:00	5/26/2011 2:30	**210**	1.28	**1,456,992**	2.68	**0.57**	3	Atlas	1,864,950	1
	5/26/2011 11:15	5/26/2011 13:15	**120**	1.28	**487,803**	2.98	**0.57**	3	Atlas	624,388	1
	6/11/2011 5:00	6/11/2011 5:15	**15**	0.33	**72,630**	0.37	**0.28**	1	Atlas	23,968	1
	6/15/2011 9:30	6/15/2011 11:00	**90**	1.04	**1,184,668**	1.43	**0.67**	1	Atlas	1,232,055	1
	6/18/2011 7:30	6/18/2011 8:45	**75**	0.82	**520,701**	1.91	**0.51**	3	Atlas	426,974	1
	6/19/2011 8:15	6/19/2011 8:30	**15**	0.48	**28,154**	2.28	**0.29**	3	Atlas	13,514	1
	6/20/2011 1:15	6/20/2011 2:45	**90**	0.61	**501,483**	2.98	**0.51**	1	Atlas	305,905	1
	6/21/2011 14:00	6/21/2011 17:15	**195**	0.43	**4,514,720**	3.38	**0.26**	3	Atlas	1,941,330	1
	6/22/2011 19:15	6/23/2011 19:30	**1455**	3.96	**4,029,124**	6.31	**41.03**	3	Cloudburst	15,955,330	1
	6/26/2011 5:00	6/26/2011 5:15	**15**	0.27	**59,455**	5.69	**0.14**	6	Atlas	16,053	1
	7/3/2011 20:15	7/3/2011 21:00	**45**	0.07	**3,741,322**	0.08	**0.05**	3	Atlas	261,893	1
	7/19/2011 19:30	7/19/2011 23:45	**255**	1.7	**577,164**	2.07	**1.13**	1	Atlas	981,179	1
	7/20/2011 16:00	7/20/2011 16:30	**30**	0.2	**1,130,148**	2.09	**0.17**	1	Atlas	226,030	1
	7/24/2011 16:45	7/24/2011 18:15	**90**	0.8	**1,109,338**	2.87	**0.59**	1	Atlas	887,470	1
	7/30/2011 20:15	7/30/2011 20:45	**30**	0.82	**61,275**	1.58	**0.61**	1	Atlas	50,246	1
	8/7/2011 3:00	8/7/2011 7:00	**240**	1.8	**1,112,682**	1.84	**1.37**	3	Atlas	2,002,828	1
	8/13/2011 17:00	8/13/2011 18:30	**90**	0.92	**798,495**	2.91	**0.73**	1	Atlas	734,615	1
	8/18/2011 8:15	8/18/2011 9:00	**45**	0.55	**547,424**	1.47	**0.45**	1	Atlas	301,083	1
	9/10/2011 19:45	9/10/2011 19:45	**0**	0.05	**7,187**	0.43	**0.03**	1	Atlas	359	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**9/11/2011 20:00**	9/11/2011 20:45	**45**	0.28	**171,290**	0.67	**0.17**	3	Atlas	47,961	1
	9/19/2011 7:15	9/19/2011 7:45	**30**	0.72	**128,756**	0.63	**0.29**	12	Atlas	92,704	1
	9/23/2011 3:00	9/23/2011 8:00	**300**	0.83	**205,650**	1.57	**0.38**	12	Atlas	170,689	1
	9/25/2011 23:30	9/26/2011 11:30	**720**	3.17	**1,405,817**	4.77	**4.71**	12	Cloudburst	4,456,440	1
	10/13/2011 8:00	10/13/2011 8:30	**30**	0.45	**76,134**	0.34	**0.24**	3	Atlas	34,260	1
	10/27/2011 0:30	10/27/2011 2:00	**90**	0.94	**514,644**	1.17	**0.39**	12	Atlas	483,765	1
	11/3/2011 10:15	11/3/2011 10:15	**0**	0.65	**5,727**	0.42	**0.29**	3	Atlas	3,722	1
	11/14/2011 21:30	11/14/2011 23:15	**105**	2.13	**81,271**	0.36	**0.69**	48	Atlas	173,106	1
	11/15/2011 12:30	11/15/2011 14:15	**105**	2.13	**44,686**	1.5	**0.69**	48	Atlas	95,182	1
	11/16/2011 5:45	11/16/2011 8:45	**180**	2.13	**97,347**	2	**0.69**	48	Atlas	207,349	1
	11/20/2011 18:00	11/20/2011 18:30	**30**	2.15	**47,093**	2.79	**0.65**	48	Atlas	101,250	1
	11/21/2011 4:30	11/21/2011 11:00	**390**	2.15	**57,819**	3.13	**0.65**	48	Atlas	124,311	1
	11/22/2011 6:30	11/22/2011 12:15	**345**	2.15	**625,254**	3.66	**0.65**	48	Atlas	1,344,297	1
	11/27/2011 22:45	11/29/2011 21:15	**2790**	3.31	**2,265,512**	4.82	**1.17**	48	Cloudburst	7,498,845	1
	12/4/2011 17:30	12/4/2011 18:00	**30**	3.12	**15,079**	3.21	**1.07**	48	Cloudburst	47,047	1
	12/5/2011 3:00	12/6/2011 18:45	**2385**	3.12	**3,254,042**	5.06	**1.07**	48	Cloudburst	10,152,611	1
	12/15/2011 4:45	12/15/2011 4:45	**0**	0.42	**10,863**	0.25	**0.22**	6	Atlas	4,562	1
	12/21/2011 6:30	12/21/2011 8:00	**90**	0.59	**604,904**	1.03	**0.27**	12	Atlas	356,893	1
	12/22/2011 15:15	12/22/2011 18:15	**180**	0.66	**292,935**	1.22	**0.29**	12	Atlas	193,337	1
	12/27/2011 3:45	12/27/2011 12:30	**525**	0.83	**285,426**	2.05	**0.34**	12	Atlas	236,903	1
	1/11/2012 6:30	1/11/2012 7:45	**75**	0.86	**321,046**	0.53	**0.33**	24	Atlas	276,099	1
	1/17/2012 4:30	1/17/2012 12:45	**495**	0.31	**526,924**	1.27	**0.14**	12	Atlas	163,346	1
	1/23/2012 2:45	1/23/2012 5:15	**150**	0.63	**970,295**	0.95	**0.33**	3	Atlas	611,286	1
	1/26/2012 5:45	1/26/2012 7:15	**90**	1.89	**198,617**	1.38	**0.61**	48	Atlas	375,386	1
	1/26/2012 19:00	1/27/2012 10:15	**915**	1.89	**1,274,406**	2.54	**0.61**	48	Atlas	2,408,627	1
	2/4/2012 10:15	2/4/2012 10:30	**15**	0.35	**105,459**	0.37	**0.20**	3	Atlas	36,911	1
	2/22/2012 23:15	2/22/2012 23:45	**30**	0.19	**696,865**	0.39	**0.14**	1	Atlas	132,404	1
	2/29/2012 9:00	2/29/2012 9:45	**45**	0.62	**398,544**	0.78	**0.28**	12	Atlas	247,097	1
	3/8/2012 13:15	3/8/2012 17:45	**270**	0.82	**525,308**	1.16	**0.38**	6	Atlas	430,753	1
	3/16/2012 1:15	3/16/2012 4:00	**165**	0.98	**889,456**	1.17	**0.44**	12	Atlas	871,667	1
	3/17/2012 18:30	3/17/2012 23:00	**270**	1.24	**1,034,796**	2.37	**0.74**	1	Atlas	1,283,146	1
	3/23/2012 5:30	3/24/2012	**1110**	1.59	**992,890**	2.84	**0.61**	24	Atlas	1,578,694	1
	3/28/2012 14:45	3/28/2012 15:15	**30**	0.09	**1,679,908**	1.68	**0.08**	1	Atlas	151,192	1
	4/1/2012 7:45	4/1/2012 16:15	**510**	1.26	**1,365,302**	1.47	**0.68**	6	Atlas	1,720,281	1
	4/28/2012 19:15	4/29/2012 1:00	**345**	0.75	**690,434**	0.88	**0.52**	1	Atlas	517,825	1
	4/30/2012 18:00	4/30/2012 19:00	**60**	0.44	**251,557**	1.28	**0.29**	3	Atlas	110,685	1
	5/4/2012 23:45	5/5/2012 2:30	**165**	1.49	**1,289,381**	2.5	**0.80**	3	Atlas	1,921,178	1
	5/13/2012 2:00	5/13/2012 16:45	**885**	2.23	**1,953,226**	2.27	**0.91**	12	Atlas	4,355,694	1
	5/16/2012 18:00	5/16/2012 19:00	**60**	0.24	**1,198,926**	2.47	**0.21**	1	Atlas	287,742	1
	5/29/2012 7:00	5/29/2012 19:00	**720**	2.5	**3,140,812**	2.5	**7.08**	3	Atlas	7,852,031	1
	5/31/2012 19:00	6/1/2012 5:45	**645**	1.19	**690,402**	3.64	**0.52**	12	Atlas	821,578	1
	7/1/2012 20:15	7/1/2012 20:45	**30**	0.4	**441,838**	0.33	**0.29**	1	Atlas	176,735	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**7/14/2012 14:00**	7/14/2012 15:00	**60**	0.92	**529,924**	1	**0.59**	3	Atlas	487,530	1
	7/18/2012 16:15	7/18/2012 18:00	**105**	Discharge						2,090,324	1
	7/19/2012 18:15	7/19/2012 19:30	**75**	0.79	**3,071,339**	1.72	**0.65**	1	Atlas	2,426,358	1
	7/26/2012 22:00	7/26/2012 22:15	**15**	0.2	**430,068**	0.21	**0.09**	12	Atlas	86,014	1
	7/27/2012 20:00	7/27/2012 21:30	**90**	0.55	**634,674**	0.86	**0.36**	3	Atlas	349,071	1
	8/5/2012 23:30	8/5/2012 23:30	**0**	0.11	**124,818**	0.45	**0.07**	1	Atlas	13,730	1
	8/16/2012 20:30	8/16/2012 22:45	**135**	0.63	**690,771**	0.67	**0.37**	3	Atlas	435,186	1
	9/1/2012 15:30	9/1/2012 16:00	**30**	0.47	**104,543**	0.34	**0.29**	3	Atlas	49,135	1
	9/2/2012 13:00	9/2/2012 13:30	**30**	0.94	**182,709**	1.11	**0.36**	24	Atlas	171,746	1
	9/2/2012 22:00	9/2/2012 22:00	**0**	0.94	**19,347**	1.44	**0.36**	24	Atlas	18,186	1
	9/5/2012 15:30	9/5/2012 17:00	**90**	0.85	**599,457**	2.37	**0.68**	1	Atlas	509,538	1
	9/7/2012 23:30	9/8/2012 2:45	**195**	1.13	**820,625**	3.38	**0.61**	3	Atlas	927,307	1
	9/26/2012 2:15	9/26/2012 2:15	**0**	0.39	**35,832**	0.63	**0.17**	6	Atlas	13,975	1
	9/26/2012 21:30	9/27/2012 0:45	**195**	1.34	**869,981**	2.1	**0.71**	6	Atlas	1,165,775	1
	10/1/2012 16:15	10/1/2012 19:45	**210**	0.88	**771,684**	3.04	**0.38**	12	Atlas	679,082	1
	10/26/2012 15:30	10/26/2012 15:30	**0**	0.85	**26,045**	0.75	**0.40**	6	Atlas	22,138	1
	12/4/2012 18:15	12/4/2012 18:45	**30**	0.5	**63,141**	0.7	**0.33**	3	Atlas	31,571	1
	12/7/2012 4:30	12/7/2012 18:30	**840**	1.27	**375,198**	1.97	**0.54**	12	Atlas	476,502	1
	12/8/2012 6:00	12/8/2012 10:00	**240**	0.56	**404,908**	2.53	**0.30**	6	Atlas	226,749	1
	12/9/2012 22:15	12/10/2012 7:30	**555**	1.21	**457,546**	3.49	**0.56**	3	Atlas	553,630	1
	12/15/2012 12:00	12/15/2012 12:15	**15**	0.15	**128,618**	1.37	**0.09**	3	Atlas	19,293	1
	12/20/2012 7:30	12/20/2012 12:45	**315**	0.59	**522,380**	0.92	**0.32**	6	Atlas	308,204	1
	12/26/2012 6:00	12/26/2012 10:30	**270**	0.94	**515,150**	1.47	**0.37**	12	Atlas	484,241	1
	1/11/2013 6:15	1/11/2013 8:15	**120**	0.67	**687,815**	0.83	**0.36**	6	Atlas	460,836	1
	1/13/2013 3:30	1/14/2013 5:15	**1545**	2.31	**2,427,631**	3.13	**0.88**	24	Atlas	5,607,828	1
	1/30/2013 5:00	1/30/2013 12:00	**420**	0.85	**540,335**	1.09	**0.43**	6	Atlas	459,285	1
	2/7/2013 16:15	2/8/2013 1:00	**525**	Discharge						152,399	1
	2/8/2013 12:15	2/8/2013 12:15	**0**	0.08	**188,553**	0.24	**0.04**	6	Atlas	15,084	1
	2/26/2013 16:15	2/26/2013 16:45	**30**	0.68	**87,551**	0.99	**0.26**	24	Atlas	59,535	1
	3/5/2013 18:00	3/5/2013 18:00	**0**	0.4	**26,676**	0.48	**0.15**	24	Atlas	10,670	1
	3/11/2013 4:15	3/11/2013 13:00	**525**	1.09	**833,498**	1.51	**0.43**	12	Atlas	908,512	1
	3/17/2013 14:15	3/18/2013 14:30	**1455**	1.68	**1,371,357**	2.76	**0.55**	48	Atlas	2,303,880	1
	3/24/2013 8:30	3/24/2013 17:00	**510**	0.48	**277,975**	1.7	**0.18**	24	Atlas	133,428	1
	4/11/2013 6:45	4/11/2013 8:00	**75**	1.2	**180,129**	0.46	**0.46**	24	Atlas	216,155	1
	4/16/2013 20:00	4/16/2013 21:00	**60**	0.66	**355,071**	1.86	**0.55**	1	Atlas	234,347	1
	4/19/2013 2:15	4/19/2013 5:15	**180**	0.97	**1,203,339**	1.65	**0.53**	6	Atlas	1,167,239	1
	4/24/2013 7:45	4/24/2013 10:30	**165**	0.57	**999,462**	1.59	**0.31**	6	Atlas	569,693	1
	5/5/2013 5:45	5/5/2013 9:00	**195**	1.37	**149,821**	1.2	**0.41**	24	Atlas	205,254	1
	5/10/2013 14:15	5/11/2013 1:00	**645**	0.98	**425,290**	2.45	**0.43**	6	Atlas	416,784	1
	5/16/2013 10:15	5/16/2013 11:00	**45**	0.36	**270,341**	1.36	**0.30**	1	Atlas	97,323	1
	5/22/2013 17:30	5/22/2013 18:00	**30**	0.27	**376,623**	0.64	**0.18**	3	Atlas	101,688	1
	5/31/2013 12:15	5/31/2013 19:00	**405**	0.19	**556,162**	0.26	**0.09**	12	Atlas	105,671	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**6/17/2013 16:30**	6/18/2013 3:15	**645**	1.55	**1,868,648**	1.91	**0.88**	1	Atlas	2,896,404	1
	6/21/2013 19:00	6/21/2013 19:15	**15**	0.46	**99,397**	2.25	**0.31**	3	Atlas	45,723	1
	6/26/2013 3:30	6/26/2013 6:00	**150**	0.71	**1,728,054**	1.64	**0.47**	3	Atlas	1,226,918	1
	6/26/2013 16:15	6/27/2013 10:30	**1095**	2.81	**4,469,197**	4.45	**5.00**	1	Atlas	12,558,443	1
	6/29/2013 20:00	6/29/2013 22:30	**150**	0.43	**800,663**	4.42	**0.26**	3	Atlas	344,285	1
	6/30/2013 18:30	6/30/2013 20:00	**90**	0.17	**2,624,057**	4.24	**0.13**	1	Atlas	446,090	1
	7/1/2013 17:45	7/1/2013 18:00	**15**	0.24	**142,955**	4.23	**0.11**	3	Atlas	34,309	1
	7/4/2013 7:45	7/4/2013 13:30	**345**	0.61	**469,292**	1.43	**0.26**	12	Atlas	286,268	1
	7/6/2013 1:45	7/6/2013 8:30	**405**	0.7	**623,184**	2.25	**0.30**	12	Atlas	436,229	1
	7/10/2013 14:00	7/10/2013 16:15	**135**	1.1	**758,993**	2.53	**0.84**	1	Atlas	834,893	1
	7/14/2013 19:30	7/14/2013 20:30	**60**	0.21	**916,255**	1.4	**0.18**	1	Atlas	192,413	1
	7/22/2013 7:30	7/22/2013 15:15	**465**	2.6	**400,445**	2.68	**1.07**	3	Atlas	1,041,156	1
	8/12/2013 15:00	8/12/2013 15:45	**45**	0.78	**303,668**	0.76	**0.31**	1	Atlas	236,861	1
	9/20/2013 19:45	9/21/2013 4:45	**540**	1.61	**731,301**	1.63	**0.68**	12	Atlas	1,177,395	1
	10/5/2013 13:00	10/6/2013 21:30	**1950**	4.37	**7,590,898**	4.49	**7.74**	24	Cloudburst	33,172,223	1
	10/30/2013 2:30	10/30/2013 6:30	**240**	0.91	**392,043**	0.91	**0.42**	6	Atlas	356,760	1
	10/31/2013 21:00	10/31/2013 22:45	**105**	0.47	**434,571**	1.38	**0.18**	24	Atlas	204,248	1
	11/17/2013 6:00	11/18/2013 0:30	**1110**	2.71	**1,803,535**	2.88	**2.52**	6	Cloudburst	4,887,581	1
	12/5/2013 7:45	12/5/2013 8:45	**60**	0.78	**311,722**	0.22	**0.25**	48	Atlas	243,143	1
	12/14/2013 10:45	12/14/2013 11:45	**60**	1.04	**238,789**	1.09	**0.45**	6	Atlas	248,341	1
	12/21/2013 6:00	12/22/2013 20:45	**2325**	2.81	**3,477,431**	3.32	**1.33**	3	Atlas	9,771,580	1
	1/5/2014 18:00	1/5/2014 18:15	**15**	0.47	**109,480**	0.67	**0.23**	6	Atlas	51,456	1
	1/11/2014 0:45	1/11/2014 6:15	**330**	1.03	**1,902,696**	1.51	**0.55**	6	Atlas	1,959,777	1
	2/2/2014 5:30	2/2/2014 5:45	**15**	0.41	**57,737**	0.13	**0.15**	24	Atlas	23,672	1
	2/4/2014 20:00	2/5/2014 4:15	**495**	0.46	**4,827,175**	0.87	**0.22**	6	Atlas	2,220,500	1
	2/17/2014 16:30	2/17/2014 19:00	**150**	0.44	**982,652**	0.88	**0.27**	3	Atlas	432,367	1
	2/20/2014 23:30	2/21/2014	**30**	0.22	**197,308**	1.1	**0.12**	6	Atlas	43,408	1
	3/2/2014 10:15	3/2/2014 11:45	**90**	0.59	**223,025**	0.31	**0.22**	24	Atlas	131,585	1
	3/28/2014 4:45	3/28/2014 5:15	**30**	0.19	**126,049**	0.23	**0.09**	6	Atlas	23,949	1
	3/29/2014 7:15	3/29/2014 13:45	**390**	1.44	**622,821**	1.67	**0.66**	12	Atlas	896,862	1
	4/8/2014 17:15	4/8/2014 17:45	**30**	0.02	**2,692,239**	3.31	**0.01**	3	Atlas	53,845	1
	4/14/2014 21:00	4/15/2014 2:30	**330**	0.48	**795,586**	0.88	**0.22**	12	Atlas	381,881	1
	4/27/2014 20:00	4/28/2014 9:15	**795**	2.25	**738,394**	1.84	**0.88**	3	Atlas	1,661,386	1
	4/28/2014 18:00	4/28/2014 21:00	**180**	2.25	**47,689**	2.36	**0.88**	3	Atlas	107,301	1
	5/9/2014 19:45	5/9/2014 20:15	**30**	1.8	**131,277**	0.37	**0.66**	24	Atlas	236,299	1
	5/10/2014 5:45	5/10/2014 16:45	**660**	1.8	**709,219**	1.8	**0.66**	24	Atlas	1,276,593	1
	5/14/2014 9:30	5/15/2014 0:45	**915**	1.26	**429,366**	3.09	**0.45**	24	Atlas	541,001	1
	5/21/2014 21:15	5/22/2014 4:30	**435**	0.48	**2,003,660**	0.67	**0.22**	12	Atlas	961,757	1
	5/28/2014 20:30	5/28/2014 21:15	**45**	0.19	**306,423**	0.68	**0.13**	1	Atlas	58,220	1
	5/29/2014 21:00	5/29/2014 21:00	**0**	0.83	**176**	0.72	**0.70**	1	Atlas	146	1
	6/11/2014 15:15	6/11/2014 15:30	**15**	0.21	**69,851**	0.47	**0.14**	1	Atlas	14,669	1
	11/23/2014 18:00	11/23/2014 20:30	**150**	0.79	**580,489**	1.06	**0.36**	6	Atlas	458,587	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**12/1/2014 3:45**	12/1/2014 4:15	**30**	0.71	**79,720**	0.3				56,601	1
	12/5/2014 23:30	12/6/2014 11:30	**720**	1.64	**1,950,318**	2.35	**0.53**	48	Atlas	3,198,521	1
	12/28/2014 1:30	12/28/2014 2:00	**30**	0.31	**120,845**	0.82	**0.14**	1	Atlas	37,462	1
	4/2/2015 10:30	4/5/2015 5:15	**4005**	4.73	**13,144,972**	4.86	**7.44**	6	Cloudburst	62,175,717	1
	4/7/2015 9:30	4/7/2015 20:30	**660**	0.73	**3,433,923**	5.47	**0.33**	1	Atlas	2,506,764	1
	4/8/2015 18:30	4/8/2015 19:30	**60**	0.15	**2,340,239**	5.61	**0.08**	6	Atlas	351,036	1
	4/9/2015 12:00	4/9/2015 13:00	**60**	0.28	**2,768,479**	5.52	**0.24**	1	Atlas	775,174	1
	4/10/2015 2:45	4/10/2015 3:45	**60**	0.13	**1,083,616**	2.82	**0.09**	3	Atlas	140,870	1
	4/13/2015 21:15	4/13/2015 21:45	**30**	0.49	**128,322**	1.39	**0.20**	6	Atlas	62,878	1
	4/19/2015 14:15	4/19/2015 16:00	**105**	0.94	**732,498**	1.18	**0.36**	24	Atlas	688,549	1
	4/25/2015 19:30	4/25/2015 19:45	**15**	0.19	**102,341**	1.12	**0.07**	24	Atlas	19,445	1
	5/11/2015 18:00	5/11/2015 18:30	**30**	0.1	**2,871,097**	0.26	**0.09**	1	Atlas	287,110	1
	5/26/2015 14:00	5/26/2015 14:45	**45**	0.36	**933,521**	0.57	**0.22**	1	Atlas	336,068	1
	6/13/2015 14:45	6/13/2015 15:00	**15**	0.14	**1,558,581**	0.33	**0.12**	1	Atlas	218,201	1
	6/17/2015 5:15	6/17/2015 6:45	**90**	0.71	**979,978**	0.86	**0.42**	3	Atlas	695,784	1
	6/18/2015 16:30	6/18/2015 19:15	**165**	2.15	**998,468**	1.8	**0.70**	48	Atlas	2,146,705	1
	6/19/2015 17:45	6/19/2015 18:15	**30**	2.15	**66,310**	2.03	**0.70**	48	Atlas	142,566	1
	6/20/2015 4:00	6/20/2015 10:15	**375**	2.15	**970,115**	3.09	**0.70**	48	Atlas	2,085,746	1
	6/26/2015	6/26/2015 0:45	**45**	0.46	**889,827**	1.68	**0.25**	6	Atlas	409,320	1
	6/26/2015 17:00	6/27/2015 2:00	**540**	0.77	**3,730,714**	2.51	**0.41**	1	Atlas	2,872,650	1
	6/29/2015 14:15	6/29/2015 14:30	**15**	0.2	**93,797**	1.43	**0.12**	1	Atlas	18,759	1
	7/2/2015 1:15	7/2/2015 2:30	**75**	1.68	**109,180**	2.13	**0.63**	24	Atlas	183,423	1
	7/2/2015 19:45	7/2/2015 22:30	**165**	1.68	**1,099,375**	3.12	**0.63**	24	Atlas	1,846,951	1
	7/3/2015 15:30	7/3/2015 20:00	**270**	0.63	**1,172,049**	3.27	**0.44**	1	Atlas	738,391	1
	7/7/2015 12:00	7/7/2015 17:15	**315**	0.73	**942,615**	2.93	**0.33**	6	Atlas	688,109	1
	7/8/2015 13:00	7/8/2015 13:30	**30**	0.73	**205,819**	3.04	**0.33**	6	Atlas	150,248	1
	7/9/2015 6:45	7/9/2015 8:15	**90**	0.3	**541,789**	2.57	**0.17**	3	Atlas	162,537	1
	7/10/2015 10:45	7/10/2015 17:15	**390**	0.5	**1,660,811**	2.18	**0.25**	6	Atlas	830,405	1
	7/12/2015 5:45	7/15/2015 9:45	**4560**	2.04	**22,939,266**	4.85	**3.71**	3	Atlas	46,796,103	1
	7/17/2015 22:45	7/18/2015 15:15	**990**	1.34	**9,105,283**	4.64	**0.89**	3	Atlas	12,201,079	1
	8/4/2015 19:15	8/4/2015 19:45	**30**	0.23	**1,685,207**	0.3	**0.18**	1	Atlas	387,598	1
	8/5/2015 14:45	8/5/2015 16:00	**75**	1.14	**546,946**	0.52	**0.40**	24	Atlas	623,519	1
	8/6/2015 8:00	8/6/2015 16:00	**480**	1.14	**639,136**	1.37	**0.40**	24	Atlas	728,616	1
	8/19/2015 8:00	8/19/2015 17:45	**585**	0.62	**994,955**	0.66	**0.30**	1	Atlas	616,872	1
	9/1/2015 18:45	9/1/2015 19:45	**60**	Discharge						436,206	1
	9/10/2015 5:00	9/10/2015 5:15	**15**	0.17	**412,991**	1.06	**0.08**	1	Atlas	70,209	1
	9/29/2015 9:30	9/29/2015 10:15	**45**	1.07	**241,197**	0.69	**0.35**	48	Atlas	258,080	1
	10/12/2015 19:30	10/12/2015 19:45	**15**	0.29	**150,953**	0.36	**0.19**	3	Atlas	43,776	1
	10/27/2015 17:45	10/28/2015 7:15	**810**	2.65	**977,180**	2.92	**0.86**	48	Atlas	2,589,527	1
	11/6/2015 3:15	11/6/2015 5:30	**135**	1.04	**500,995**	1.15	**0.64**	3	Atlas	521,035	1
	11/12/2015 0:15	11/12/2015 1:45	**90**	0.35	**1,200,752**	1.9	**0.22**	3	Atlas	420,263	1
	11/18/2015 9:30	11/18/2015 19:00	**570**	1.93	**815,685**	2.41	**0.98**	6	Atlas	1,574,272	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO166	**11/28/2015 17:15**	11/28/2015 18:15	**60**	0.65	**137,097**	0.58	**0.26**	12	Atlas	89,113	1
	11/30/2015 22:00	12/1/2015 5:30	**450**	0.63	**2,195,375**	1.47	**0.28**	12	Atlas	1,383,086	1
	12/22/2015 0:45	12/22/2015 5:00	**255**	0.52	**1,525,751**	0.72	**0.28**	1	Atlas	793,390	1
	12/23/2015 19:15	12/24/2015 3:45	**510**	0.85	**4,388,838**	1.59	**0.69**	1	Atlas	3,730,512	1
	12/26/2015 14:15	12/26/2015 14:45	**30**	0.28	**254,019**	1.93	**0.14**	3	Atlas	71,125	1
	12/27/2015 10:30	12/27/2015 13:45	**195**	2.23	**755,393**	3.27	**0.75**	3	Atlas	1,684,526	1
	12/28/2015 0:15	12/29/2015 3:45	**1650**	2.23	**1,104,556**	4.2	**0.75**	3	Atlas	2,463,161	1
	2/2/2016 20:30	2/3/2016 3:30	**420**	1.63	**1,131,334**	1.71	**0.76**	6	Atlas	1,844,074	1
	2/21/2016 4:30	2/21/2016 12:00	**450**	1.02	**489,933**	1.2	**0.47**	12	Atlas	499,732	1
	2/23/2016 23:45	2/24/2016 22:00	**1335**	2.05	**1,678,944**	3.06	**0.80**	12	Atlas	3,441,835	1
	3/1/2016 12:45	3/1/2016 14:00	**75**	0.33	**725,490**	2.38	**0.17**	6	Atlas	239,412	1
	3/10/2016 14:15	3/10/2016 21:00	**405**	1.24	**684,689**	1.29	**0.40**	12	Atlas	849,015	1
	3/12/2016 20:30	3/13/2016 0:30	**240**	0.88	**456,970**	1.78	**0.33**	24	Atlas	402,133	1
	3/13/2016 9:15	3/13/2016 11:15	**120**	0.88	**352,493**	2.13	**0.33**	24	Atlas	310,194	1
	3/24/2016 18:00	3/24/2016 18:45	**45**	0.46	**312,742**	0.61	**0.33**	1	Atlas	143,861	1
	3/27/2016 21:15	3/27/2016 23:30	**135**	0.85	**373,285**	1.31	**0.56**	3	Atlas	317,292	1
	3/31/2016 5:15	3/31/2016 8:15	**180**	1.15	**54,528**	2	**0.44**	24	Atlas	62,707	1
	3/31/2016 22:30	4/1/2016 1:15	**165**	1.15	**564,769**	2	**0.44**	24	Atlas	649,485	1
	4/11/2016 17:45	4/11/2016 19:15	**90**	0.84	**380,301**	0.89	**0.40**	6	Atlas	319,453	1
	4/26/2016 22:00	4/26/2016 22:15	**15**	0.34	**82,228**	0.68	**0.17**	6	Atlas	27,957	1
	4/27/2016 21:30	4/27/2016 23:15	**105**	0.66	**379,439**	1.32	**0.29**	3	Atlas	250,430	1
	5/1/2016 15:15	5/1/2016 15:45	**30**	0.33	**337,979**	1.84	**0.23**	1	Atlas	111,533	1
	5/7/2016 17:00	5/7/2016 21:15	**255**	0.58	**38,846**	1.2	**0.30**	6	Atlas	22,531	1
	5/10/2016 19:00	5/10/2016 23:15	**255**	1.04	**590,011**	1.85	**0.38**	24	Atlas	613,611	1
	5/11/2016 22:15	5/11/2016 23:00	**45**	0.21	**97,163**	1.84	**0.11**	3	Atlas	20,404	1
	5/20/2016 14:30	5/20/2016 17:00	**150**	0.94	**621,624**	1.51	**0.56**	3	Atlas	584,326	1
	6/2/2016 16:00	6/2/2016 16:45	**45**	0.51	**251,672**	0.63	**0.42**	1	Atlas	128,353	1
	6/12/2016 18:00	6/12/2016 18:45	**45**	0.6	**2,419,865**	0.63	**0.51**	1	Atlas	1,451,919	1
	6/13/2016 4:30	6/13/2016 4:45	**15**	Discharge						29,626	1
	6/14/2016 17:00	6/14/2016 19:15	**135**	0.68	**1,230,544**	1.28	**0.44**	3	Atlas	836,770	1
	6/22/2016 8:30	6/22/2016 9:15	**45**	0.3	**2,808,448**	0.24	**0.19**	3	Atlas	842,534	1
	6/23/2016 16:15	6/23/2016 23:30	**435**	1.69	**2,329,409**	1.99	**0.91**	6	Atlas	3,936,702	1
Grand Total										**656,068,325**	**284**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**10/27/2011 0:15**	10/27/2011 4:45	**270**	0.99	**184,092**	1.37	**0.42**	6	Atlas	182,251	1
	11/3/2011 9:45	11/3/2011 10:30	**45**	0.65	**28,268**	0.43	**0.29**	3	Atlas	18,374	1
	11/14/2011 21:30	11/14/2011 23:00	**90**	2.06	**55,435**	0.43	**0.67**	48	Atlas	114,196	1
	11/15/2011 9:00	11/15/2011 14:00	**300**	2.06	**20,453**	1.49	**0.67**	48	Atlas	42,134	1
	11/16/2011 5:30	11/16/2011 11:15	**345**	2.06	**32,370**	2.04	**0.67**	48	Atlas	66,683	1
	11/20/2011 17:30	11/20/2011 18:30	**60**	0.82	**30,677**	2.57	**0.28**	24	Atlas	25,155	1
	11/21/2011 4:15	11/21/2011 4:45	**30**	0.82	**98,758**	2.77	**0.28**	24	Atlas	80,982	1
	11/22/2011 0:15	11/22/2011 11:30	**675**	1	**328,996**	3.4	**0.43**	6	Atlas	328,996	1
	11/27/2011 6:30	11/27/2011 9:15	**165**	3.07	**12,350**	2.23	**0.95**	48	Atlas	37,915	1
	11/27/2011 22:00	11/29/2011 20:45	**2805**	3.07	**412,122**	4.38	**0.95**	48	Atlas	1,265,215	1
	12/4/2011 16:30	12/6/2011 13:45	**2715**	3.04	**684,528**	5.54	**0.99**	48	Atlas	2,080,966	1
	12/15/2011 4:00	12/15/2011 8:00	**240**	0.47	**100,014**	0.42	**0.23**	6	Atlas	47,007	1
	12/21/2011 5:15	12/21/2011 7:30	**135**	0.63	**264,838**	1.12	**0.29**	12	Atlas	166,848	1
	12/22/2011 14:30	12/22/2011 18:00	**210**	0.6	**119,023**	1.2	**0.27**	12	Atlas	71,414	1
	12/27/2011 3:15	12/27/2011 12:00	**525**	0.75	**108,045**	1.94	**0.30**	12	Atlas	81,034	1
	1/11/2012 5:00	1/11/2012 11:15	**375**	0.85	**122,102**	0.72	**0.34**	6	Atlas	103,787	1
	1/17/2012 4:15	1/17/2012 12:30	**495**	0.36	**163,604**	1.31	**0.17**	12	Atlas	58,897	1
	1/23/2012 2:45	1/23/2012 5:00	**135**	0.76	**310,715**	1.12	**0.39**	3	Atlas	236,143	1
	1/25/2012 19:15	1/25/2012 19:15	**0**	1.82	**47**	1.04	**0.60**	24	Atlas	85	1
	1/26/2012 5:45	1/26/2012 7:00	**75**	1.82	**115,495**	1.51	**0.60**	24	Atlas	210,201	1
	1/26/2012 17:45	1/27/2012 11:45	**1080**	1.82	**389,052**	2.6	**0.60**	24	Atlas	708,075	1
	2/4/2012 9:45	2/4/2012 10:45	**60**	0.39	**62,344**	0.41	**0.21**	3	Atlas	24,314	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.16	**323,399**	0.43	**0.12**	1	Atlas	51,744	1
	2/29/2012 8:45	2/29/2012 9:15	**30**	0.51	**144,433**	0.63	**0.23**	12	Atlas	73,661	1
	3/8/2012 12:45	3/8/2012 17:15	**270**	0.75	**187,517**	1.02	**0.36**	6	Atlas	140,638	1
	3/15/2012 19:00	3/16/2012 3:30	**510**	0.95	**238,337**	1.17	**0.42**	12	Atlas	226,420	1
	3/17/2012 18:45	3/17/2012 22:30	**225**	1.08	**155,038**	2.19	**0.68**	1	Atlas	167,441	1
	3/23/2012 5:15	3/23/2012 23:15	**1080**	1.5	**309,164**	2.58	**0.57**	24	Atlas	463,746	1
	3/28/2012 14:30	3/28/2012 14:45	**15**	0.07	**592,834**	1.57	**0.06**	1	Atlas	41,498	1
	3/31/2012 0:15	3/31/2012 0:15	**0**	0.16	**2,774**	0.23	**0.10**	3	Atlas	444	1
	4/1/2012 7:30	4/1/2012 11:30	**240**	1.18	**598,459**	1.38	**0.63**	6	Atlas	706,182	1
	4/4/2012 16:15	4/4/2012 16:30	**15**	0.23	**15,242**	1.48	**0.11**	12	Atlas	3,506	1
	4/28/2012 19:15	4/29/2012 0:30	**315**	0.7	**272,361**	0.83	**0.50**	1	Atlas	190,653	1
	4/30/2012 18:00	4/30/2012 18:30	**30**	0.45	**219,329**	1.08	**0.30**	3	Atlas	98,698	1
	5/4/2012 23:45	5/5/2012 5:00	**315**	1.42	**743,584**	2.59	**0.79**	3	Atlas	1,055,889	1
	5/13/2012 2:00	5/13/2012 15:15	**795**	1.97	**582,949**	2.02	**0.77**	12	Atlas	1,148,409	1
	5/16/2012 17:45	5/16/2012 18:30	**45**	0.26	**400,165**	2.23	**0.21**	1	Atlas	104,043	1
	5/29/2012 6:45	5/29/2012 13:15	**390**	2.22	**402,078**	2.22	**4.14**	3	Atlas	892,613	1
	5/31/2012 18:30	6/1/2012 1:45	**435**	1.24	**76,718**	3.28	**0.54**	12	Atlas	95,130	1
	7/14/2012 12:15	7/14/2012 15:00	**165**	0.81	**474,420**	0.93	**0.51**	3	Atlas	384,280	1
	7/18/2012 16:15	7/18/2012 18:00	**105**	Discharge						243,035	1
	7/19/2012 18:15	7/19/2012 19:30	**75**	0.57	**610,287**	1.4	**0.46**	1	Atlas	347,864	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**7/26/2012 21:30**	7/26/2012 22:00	**30**	0.2	**274,589**	0.26	**0.11**	1	Atlas	54,918	1
	7/27/2012 19:45	7/27/2012 21:15	**90**	0.62	**321,575**	0.92	**0.41**	3	Atlas	199,377	1
	8/5/2012 23:15	8/5/2012 23:30	**15**	0.08	**677,796**	0.39	**0.06**	1	Atlas	54,224	1
	8/16/2012 20:15	8/16/2012 22:45	**150**	0.55	**257,510**	0.63	**0.33**	3	Atlas	141,630	1
	8/21/2012 14:15	8/21/2012 14:15	**0**	0.09	**22,106**	0.65	**0.07**	1	Atlas	1,990	1
	9/1/2012 15:15	9/1/2012 16:30	**75**	1	**38,674**	0.24	**0.32**	48	Atlas	38,674	1
	9/2/2012 12:00	9/2/2012 22:15	**615**	1	**185,767**	1.01	**0.32**	48	Atlas	185,767	1
	9/5/2012 15:30	9/5/2012 17:00	**90**	0.84	**438,637**	1.96	**0.67**	1	Atlas	368,455	1
	9/7/2012 23:30	9/8/2012 7:00	**450**	1.21	**178,295**	3.16	**0.67**	3	Atlas	215,737	1
	9/26/2012	9/26/2012 5:45	**345**	0.4	**224,343**	0.76	**0.18**	12	Atlas	89,737	1
	9/26/2012 20:00	9/27/2012 0:30	**270**	1.61	**316,811**	2.41	**0.86**	6	Atlas	510,066	1
	10/1/2012 15:00	10/1/2012 19:30	**270**	0.76	**383,861**	3.15	**0.32**	12	Atlas	291,734	1
	10/6/2012 0:30	10/6/2012 0:30	**0**	0.11	**24,879**	0.86	**0.06**	6	Atlas	2,737	1
	10/18/2012 1:45	10/18/2012 2:00	**15**	0.22	**16,225**	0.38	**0.14**	3	Atlas	3,569	1
	10/26/2012 15:00	10/26/2012 15:45	**45**	0.75	**44,943**	0.65	**0.34**	6	Atlas	33,707	1
	12/2/2012 11:15	12/2/2012 11:45	**30**	0.21	**165,071**	0.27	**0.13**	1	Atlas	34,665	1
	12/4/2012 15:30	12/4/2012 19:00	**210**	0.52	**196,998**	0.73	**0.33**	3	Atlas	102,439	1
	12/7/2012 4:30	12/7/2012 18:00	**810**	1.12	**152,679**	1.85	**0.47**	12	Atlas	171,000	1
	12/8/2012 5:45	12/8/2012 10:00	**255**	0.4	**104,637**	2.25	**0.21**	6	Atlas	41,855	1
	12/9/2012 22:00	12/10/2012 0:45	**165**	1.17	**343,694**	3.08	**0.56**	3	Atlas	402,121	1
	12/15/2012 11:30	12/15/2012 12:15	**45**	0.17	**87,964**	1.33	**0.10**	3	Atlas	14,954	1
	12/20/2012 7:00	12/20/2012 11:15	**255**	0.65	**72,730**	0.95	**0.36**	6	Atlas	47,274	1
	12/26/2012 5:45	12/26/2012 9:45	**240**	0.79	**87,290**	1.42	**0.31**	12	Atlas	68,959	1
	1/11/2013 6:00	1/11/2013 7:30	**90**	0.61	**113,846**	0.75	**0.33**	6	Atlas	69,446	1
	1/13/2013 3:15	1/13/2013 23:45	**1230**	2.12	**632,056**	2.87	**0.81**	24	Atlas	1,339,959	1
	1/30/2013 4:45	1/30/2013 8:15	**210**	0.93	**72,990**	1.09	**0.47**	6	Atlas	67,881	1
	2/22/2013 0:30	2/22/2013 1:30	**60**	0.4	**79,046**	0.71	**0.18**	12	Atlas	31,618	1
	2/26/2013 13:45	2/26/2013 16:30	**165**	0.64	**14,226**	0.95	**0.25**	24	Atlas	9,105	1
	3/5/2013 17:15	3/5/2013 18:00	**45**	0.44	**25,887**	0.51	**0.17**	24	Atlas	11,390	1
	3/11/2013 4:00	3/11/2013 12:30	**510**	1.01	**93,530**	1.48	**0.41**	12	Atlas	94,466	1
	3/17/2013 13:45	3/18/2013 8:15	**1110**	1.75	**403,179**	2.69	**0.57**	48	Atlas	705,564	1
	3/24/2013 8:15	3/24/2013 16:15	**480**	0.45	**12,798**	1.7	**0.17**	24	Atlas	5,759	1
	4/11/2013 6:30	4/11/2013 7:45	**75**	1.21	**112,238**	0.46	**0.47**	24	Atlas	135,808	1
	4/16/2013 20:15	4/16/2013 21:00	**45**	0.55	**297,580**	1.72	**0.43**	1	Atlas	163,669	1
	4/19/2013 2:30	4/19/2013 4:45	**135**	0.87	**289,867**	1.43	**0.48**	6	Atlas	252,184	1
	4/24/2013 7:30	4/24/2013 10:15	**165**	0.68	**293,716**	1.59	**0.37**	3	Atlas	199,727	1
	5/5/2013 5:00	5/5/2013 8:30	**210**	1.33	**62,463**	1.19	**0.40**	24	Atlas	83,075	1
	5/10/2013 12:15	5/10/2013 15:30	**195**	0.87	**32,059**	2.18	**0.38**	6	Atlas	27,891	1
	5/10/2013 23:45	5/11/2013 0:30	**45**	0.87	**28,849**	2.21	**0.38**	6	Atlas	25,098	1
	5/16/2013 10:15	5/16/2013 10:45	**30**	0.2	**137,755**	1.11	**0.17**	1	Atlas	27,551	1
	5/22/2013 16:00	5/22/2013 17:30	**90**	0.19	**395,505**	0.4	**0.13**	3	Atlas	75,146	1
	5/31/2013 18:45	5/31/2013 18:45	**0**	0.27	**3,371**	0.36	**0.12**	12	Atlas	910	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**6/10/2013 0:15**	6/10/2013 0:45	**30**	0.31	**74,650**	0.24	**0.14**	6	Atlas	23,142	1
	6/16/2013 17:00	6/16/2013 17:45	**45**	0.44	**306,361**	0.73	**0.29**	1	Atlas	134,799	1
	6/17/2013 16:30	6/17/2013 22:00	**330**	1.38	**301,923**	1.79	**0.77**	1	Atlas	416,653	1
	6/21/2013 19:00	6/21/2013 19:15	**15**	0.16	**343,621**	1.97	**0.11**	1	Atlas	54,979	1
	6/23/2013 12:30	6/23/2013 12:30	**0**	0.48	**266**	2.41	**0.37**	1	Atlas	127	1
	6/26/2013 3:30	6/26/2013 5:15	**105**	3.29	**92,533**	1.4	**4.06**	1	Atlas	304,433	1
	6/26/2013 16:15	6/27/2013 3:30	**675**	3.29	**397,397**	4	**4.06**	1	Atlas	1,307,435	1
	6/29/2013 19:45	6/29/2013 22:15	**150**	0.45	**221,552**	4.28	**0.24**	6	Atlas	99,698	1
	6/30/2013 18:45	6/30/2013 19:15	**30**	0.24	**246,852**	4.05	**0.19**	1	Atlas	59,244	1
	7/1/2013 19:15	7/1/2013 19:30	**15**	0.21	**53,228**	4.19	**0.11**	3	Atlas	11,178	1
	7/2/2013 13:30	7/2/2013 13:30	**0**	0.12	**62,710**	4.31	**0.10**	1	Atlas	7,525	1
	7/4/2013 8:00	7/4/2013 13:00	**300**	0.51	**97,191**	1.38	**0.22**	12	Atlas	49,568	1
	7/6/2013 1:30	7/6/2013 8:15	**405**	0.68	**193,357**	2.2	**0.30**	12	Atlas	131,482	1
	7/10/2013 14:15	7/10/2013 15:15	**60**	0.94	**257,704**	2.2	**0.70**	1	Atlas	242,242	1
	7/14/2013 19:30	7/14/2013 20:15	**45**	0.19	**1,273,288**	1.2	**0.17**	1	Atlas	241,925	1
	7/22/2013 7:15	7/22/2013 15:15	**480**	1.97	**313,566**	2.02	**0.76**	24	Atlas	617,726	1
	8/12/2013 15:00	8/12/2013 15:30	**30**	0.59	**202,351**	0.54	**0.23**	24	Atlas	119,387	1
	8/13/2013 2:45	8/13/2013 3:45	**60**	0.59	**53,882**	0.81	**0.23**	24	Atlas	31,790	1
	8/20/2013 18:30	8/20/2013 18:30	**0**	0.18	**14,770**	0.19	**0.12**	1	Atlas	2,659	1
	8/31/2013 19:45	9/1/2013 1:00	**315**	1.3	**328,475**	1.11	**0.63**	3	Atlas	427,017	1
	9/19/2013 11:30	9/19/2013 11:30	**0**	0.05	**34,965**	0.09	**0.04**	1	Atlas	1,748	1
	9/20/2013 19:30	9/21/2013 4:30	**540**	1.61	**256,331**	1.61	**0.67**	12	Atlas	412,693	1
	10/5/2013 13:00	10/6/2013 18:45	**1785**	4.4	**524,101**	4.49	**8.39**	24	Cloudburst	2,306,046	1
	10/30/2013 1:45	10/30/2013 7:15	**330**	1.04	**200,400**	1.04	**0.49**	6	Atlas	208,416	1
	10/31/2013 20:45	10/31/2013 21:45	**60**	0.61	**65,005**	1.58	**0.23**	24	Atlas	39,653	1
	11/17/2013 5:00	11/17/2013 21:45	**1005**	2.78	**579,689**	2.94	**2.00**	6	Cloudburst	1,611,534	1
	12/5/2013 5:45	12/5/2013 8:30	**165**	0.72	**187,557**	0.14	**0.23**	48	Atlas	135,041	1
	12/13/2013 8:00	12/13/2013 9:45	**105**	Discharge						44,646	1
	12/14/2013 9:15	12/14/2013 11:45	**150**	0.83	**65,850**	1.02	**0.33**	12	Atlas	54,655	1
	12/21/2013 5:45	12/21/2013 13:15	**450**	1.03	**365,904**	1.49	**0.47**	12	Atlas	376,881	1
	12/21/2013 21:30	12/22/2013 12:00	**870**	1.55	**655,949**	2.66	**0.83**	3	Atlas	1,016,721	1
	12/29/2013 6:15	12/29/2013 7:00	**45**	0.49	**15,519**	0.43	**0.22**	12	Atlas	7,604	1
	1/5/2014 15:00	1/5/2014 19:45	**285**	0.45	**94,386**	0.61	**0.22**	6	Atlas	42,474	1
	1/11/2014 0:15	1/11/2014 9:00	**525**	0.91	**441,563**	1.37	**0.49**	6	Atlas	401,823	1
	2/2/2014 4:30	2/2/2014 5:30	**60**	0.43	**72,901**	0.14	**0.16**	24	Atlas	31,347	1
	2/4/2014 19:00	2/5/2014 3:45	**525**	0.51	**1,096,942**	0.94	**0.25**	6	Atlas	559,441	1
	2/14/2014 17:15	2/14/2014 18:00	**45**	0.46	**5,893**	0.39	**0.24**	6	Atlas	2,711	1
	2/17/2014 16:00	2/17/2014 18:15	**135**	0.47	**615,471**	0.99	**0.29**	3	Atlas	289,271	1
	2/20/2014 23:00	2/20/2014 23:45	**45**	0.21	**84,985**	1.2	**0.11**	6	Atlas	17,847	1
	3/2/2014 9:45	3/2/2014 11:30	**105**	0.47	**166,467**	0.23	**0.18**	24	Atlas	78,240	1
	3/28/2014 4:15	3/28/2014 5:00	**45**	0.23	**138,929**	0.29	**0.11**	6	Atlas	31,954	1
	3/29/2014 6:15	3/29/2014 13:00	**405**	1	**335,798**	1.27	**0.46**	6	Atlas	335,798	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**4/3/2014 11:45**	4/5/2014 4:45	**2460**	2.55	**775,312**	3.88	**0.89**	24	Atlas	1,977,047	1
	4/7/2014 8:15	4/7/2014 17:30	**555**	0.84	**566,213**	3.49	**0.50**	1	Atlas	475,619	1
	4/8/2014 16:45	4/8/2014 16:45	**0**	0.14	**8,112**	3.58	**0.10**	1	Atlas	1,136	1
	4/14/2014 3:45	4/14/2014 4:00	**15**	0.36	**32,081**	1.11	**0.18**	6	Atlas	11,549	1
	4/14/2014 19:45	4/15/2014 2:30	**405**	0.61	**305,873**	1.1	**0.28**	12	Atlas	186,582	1
	4/27/2014 19:15	4/28/2014 8:45	**810**	2.03	**444,157**	1.68	**0.75**	3	Atlas	901,639	1
	4/28/2014 17:00	4/28/2014 20:30	**210**	2.03	**39,073**	2.12	**0.75**	3	Atlas	79,318	1
	5/9/2014 19:15	5/10/2014 16:45	**1290**	1.66	**480,188**	1.73	**0.64**	24	Atlas	797,113	1
	5/14/2014 7:00	5/15/2014	**1020**	1.03	**273,422**	2.81	**0.40**	24	Atlas	281,624	1
	5/21/2014 21:00	5/22/2014 4:00	**420**	0.71	**376,772**	0.85	**0.33**	12	Atlas	267,508	1
	5/29/2014 20:45	5/29/2014 22:30	**105**	0.74	**362,864**	0.94	**0.63**	1	Atlas	268,519	1
	6/11/2014 14:15	6/11/2014 15:00	**45**	0.09	**1,432,816**	0.33	**0.04**	1	Atlas	128,953	1
	6/24/2014 13:45	6/24/2014 14:00	**15**	0.14	**75,992**	0.24	**0.09**	1	Atlas	10,639	1
	6/27/2014 18:30	6/27/2014 18:30	**0**	0.13	**76,729**	0.3	**0.07**	6	Atlas	9,975	1
	7/2/2014 16:30	7/2/2014 17:00	**30**	0.15	**450,218**	0.53	**0.12**	1	Atlas	67,533	1
	7/7/2014 19:30	7/7/2014 20:15	**45**	0.74	**183,157**	1.09	**0.64**	1	Atlas	135,536	1
	7/13/2014 23:00	7/13/2014 23:30	**30**	0.59	**170,079**	1.43	**0.27**	3	Atlas	100,347	1
	7/14/2014 19:30	7/14/2014 20:45	**75**	0.3	**385,315**	1.36	**0.20**	3	Atlas	115,595	1
	7/26/2014 21:45	7/27/2014 8:30	**645**	0.98	**386,937**	0.97	**0.43**	12	Atlas	379,198	1
	8/8/2014 6:00	8/8/2014 8:15	**135**	0.89	**375,419**	0.65	**0.43**	6	Atlas	334,123	1
	8/10/2014 4:00	8/10/2014 4:45	**45**	0.44	**281,671**	1.4	**0.37**	1	Atlas	123,935	1
	8/11/2014 15:30	8/11/2014 16:00	**30**	0.22	**414,541**	1.61	**0.16**	1	Atlas	91,199	1
	8/17/2014 0:45	8/17/2014 0:45	**0**	0.66	**10,706**	0.96	**0.25**	24	Atlas	7,066	1
	8/17/2014 9:30	8/17/2014 10:45	**75**	0.66	**79,168**	0.77	**0.25**	24	Atlas	52,251	1
	8/22/2014 19:00	8/22/2014 19:45	**45**	0.45	**451,952**	1.04	**0.32**	1	Atlas	203,378	1
	8/23/2014 15:45	8/23/2014 22:00	**375**	0.49	**648,708**	1.57	**0.25**	3	Atlas	317,867	1
	8/27/2014 14:45	8/27/2014 17:30	**165**	0.21	**638,631**	1.21	**0.13**	1	Atlas	134,112	1
	8/30/2014 15:15	8/30/2014 16:30	**75**	0.51	**521,009**	1.14	**0.31**	1	Atlas	265,715	1
	9/2/2014 8:30	9/2/2014 9:00	**30**	0.4	**174,082**	1.15	**0.25**	3	Atlas	69,633	1
	9/11/2014 0:30	9/11/2014 6:45	**375**	1.95	**446,524**	1.91	**1.60**	3	Atlas	870,722	1
	9/28/2014 19:45	9/28/2014 20:15	**30**	0.07	**1,013,392**	0.07	**0.06**	1	Atlas	70,937	1
	10/6/2014 9:45	10/6/2014 10:15	**30**	0.45	**257,300**	0.63	**0.28**	1	Atlas	115,785	1
	10/7/2014 11:45	10/7/2014 12:15	**30**	0.22	**214,492**	0.9	**0.18**	1	Atlas	47,188	1
	10/10/2014 2:00	10/10/2014 3:30	**90**	1.02	**311,786**	1.65	**0.49**	3	Atlas	318,021	1
	10/10/2014 21:30	10/10/2014 21:30	**0**	1.02	**575**	1.69	**0.49**	3	Atlas	587	1
	10/13/2014 5:00	10/13/2014 6:45	**105**	0.46	**141,343**	2.16	**0.29**	3	Atlas	65,018	1
	10/13/2014 23:30	10/14/2014 10:45	**675**	1.04	**277,742**	2.77	**0.47**	12	Atlas	288,851	1
	11/17/2014 4:15	11/17/2014 4:15	**0**	0.34	**653**	0.28	**0.13**	12	Atlas	222	1
	11/23/2014 17:30	11/23/2014 20:15	**165**	0.85	**195,380**	1.12	**0.39**	6	Atlas	166,073	1
	12/1/2014 2:45	12/1/2014 5:00	**135**	0.8	**24,875**	0.38				19,900	1
	12/1/2014 15:00	12/1/2014 16:00	**60**	0.8	**2,643**	0.74				2,114	1
	12/5/2014 20:45	12/6/2014 8:15	**690**	1.79	**393,625**	2.59	**0.58**	48	Atlas	704,590	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**12/16/2014 5:15**	12/16/2014 5:30	**15**	0.14	**175,812**	0.13	**0.09**	1	Atlas	24,614	1
	12/23/2014	12/23/2014	**0**	0.26	**4,173**	0.39	**0.16**	3	Atlas	1,085	1
	12/28/2014 1:00	12/28/2014 1:45	**45**	0.31	**126,946**	0.8	**0.12**	12	Atlas	39,353	1
	1/3/2015 11:00	1/3/2015 11:00	**0**	0.38	**2,478**	0.37	**0.14**	24	Atlas	942	1
	2/1/2015 13:15	2/1/2015 13:45	**30**	0.38	**17,230**	0.43	**0.17**	12	Atlas	6,547	1
	2/21/2015 14:45	2/21/2015 15:45	**60**	1.09	**4,634**	1.27	**0.42**	12	Atlas	5,051	1
	3/3/2015 19:00	3/4/2015 20:30	**1530**	1.67	**609,609**	1.52	**0.55**	24	Atlas	1,018,047	1
	3/7/2015 14:15	3/9/2015 22:00	**3345**	Discharge						612,021	1
	3/10/2015 6:15	3/20/2015 13:30	**14835**	1.06	**6,333,378**	4.51	**0.48**	12	Atlas	6,713,381	1
	3/24/2015 20:30	3/24/2015 20:30	**0**	0.12	**4,924**	0.28	**0.06**	1	Atlas	591	1
	3/26/2015 4:30	3/26/2015 6:30	**120**	0.4	**270,491**	0.55	**0.16**	12	Atlas	108,197	1
	4/2/2015 10:30	4/5/2015 10:15	**4305**	4.03	**1,162,175**	4.16	**3.72**	24	Cloudburst	4,683,564	1
	4/7/2015 9:15	4/7/2015 21:15	**720**	0.78	**699,473**	4.82	**0.37**	1	Atlas	545,589	1
	4/8/2015 18:15	4/8/2015 19:15	**60**	0.17	**514,243**	4.99	**0.14**	1	Atlas	87,421	1
	4/9/2015 11:30	4/9/2015 12:45	**75**	0.15	**859,259**	4.79	**0.12**	1	Atlas	128,889	1
	4/10/2015 2:15	4/10/2015 3:45	**90**	0.16	**651,308**	2.92	**0.11**	3	Atlas	104,209	1
	4/25/2015 9:30	4/25/2015 9:45	**15**	0.12	**94,499**	0.91	**0.05**	12	Atlas	11,340	1
	4/25/2015 19:15	4/25/2015 19:30	**15**	0.25	**94,315**	1.12	**0.18**	1	Atlas	23,579	1
	4/28/2015 14:30	4/28/2015 14:30	**0**	Discharge						2,822	1
	5/17/2015 14:30	5/17/2015 15:00	**30**	0.08	**1,628,884**	0.53	**0.05**	1	Atlas	130,311	1
	5/25/2015 7:15	5/25/2015 7:30	**15**	0.28	**24,061**	0.2	**0.13**	3	Atlas	6,737	1
	5/26/2015 14:00	5/26/2015 14:45	**45**	0.5	**251,690**	0.74	**0.39**	1	Atlas	125,845	1
	5/27/2015 13:45	5/27/2015 14:15	**30**	0.08	**248,608**	0.87	**0.07**	1	Atlas	19,889	1
	6/8/2015 8:30	6/8/2015 8:45	**15**	0.24	**112,920**	0.24	**0.14**	3	Atlas	27,101	1
	6/17/2015 5:00	6/17/2015 7:00	**120**	0.68	**429,085**	0.72	**0.39**	3	Atlas	291,778	1
	6/18/2015 16:30	6/18/2015 18:45	**135**	1.42	**315,458**	1.15	**0.46**	48	Atlas	447,950	1
	6/19/2015 17:45	6/20/2015 11:15	**1050**	1.42	**371,660**	2.2	**0.46**	48	Atlas	527,757	1
	6/26/2015 0:15	6/26/2015 0:30	**15**	0.36	**123,881**	1.32	**0.19**	6	Atlas	44,597	1
	6/26/2015 17:15	6/27/2015 1:30	**495**	0.84	**505,111**	2.3	**0.47**	1	Atlas	424,293	1
	7/2/2015 0:45	7/2/2015 2:00	**75**	1.77	**57,996**	1.96	**0.67**	24	Atlas	102,652	1
	7/2/2015 15:00	7/2/2015 22:00	**420**	1.77	**324,886**	3.13	**0.67**	24	Atlas	575,048	1
	7/3/2015 19:00	7/3/2015 19:00	**0**	0.25	**26,256**	2.43	**0.13**	6	Atlas	6,564	1
	7/7/2015 11:45	7/7/2015 14:45	**180**	0.72	**240,654**	2.54	**0.30**	6	Atlas	173,271	1
	7/8/2015 0:30	7/8/2015 0:30	**0**	0.72	**34,494**	2.61	**0.30**	6	Atlas	24,836	1
	7/8/2015 12:30	7/8/2015 13:15	**45**	0.72	**121,688**	2.74	**0.30**	6	Atlas	87,615	1
	7/9/2015 6:30	7/9/2015 14:00	**450**	0.34	**210,594**	2.38	**0.20**	1	Atlas	71,602	1
	7/10/2015 10:45	7/10/2015 16:45	**360**	0.36	**313,086**	1.7	**0.17**	6	Atlas	112,711	1
	7/12/2015 6:00	7/12/2015 22:45	**1005**	1.86	**662,167**	3.31	**2.66**	1	Atlas	1,231,630	1
	7/13/2015 14:15	7/13/2015 16:30	**135**	0.7	**372,421**	4.01	**0.60**	1	Atlas	260,695	1
	7/14/2015 4:00	7/14/2015 23:45	**1185**	0.54	**1,327,008**	4.74	**0.43**	1	Atlas	716,584	1
	7/17/2015 22:30	7/18/2015 14:30	**960**	1.31	**777,542**	4.6	**0.87**	3	Atlas	1,018,581	1
	8/4/2015 19:00	8/4/2015 19:45	**45**	0.51	**348,597**	0.56	**0.43**	1	Atlas	177,784	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**8/5/2015 15:00**	8/5/2015 15:30	**30**	0.9	**239,524**	0.82	**0.31**	24	Atlas	215,571	1
	8/6/2015 7:45	8/6/2015 15:45	**480**	0.9	**217,414**	1.4	**0.31**	24	Atlas	195,672	1
	8/19/2015 8:30	8/19/2015 17:30	**540**	0.41	**541,827**	0.5	**0.17**	12	Atlas	222,149	1
	9/5/2015 17:15	9/5/2015 17:30	**15**	0.25	**117,404**	0.2	**0.17**	1	Atlas	29,351	1
	9/9/2015 11:30	9/9/2015 12:00	**30**	0.36	**191,394**	0.71	**0.30**	1	Atlas	68,902	1
	9/10/2015 3:45	9/10/2015 4:15	**30**	0.06	**33,422**	0.77	**0.03**	12	Atlas	2,005	1
	9/11/2015 18:45	9/11/2015 18:45	**0**	0.14	**20,201**	0.85	**0.09**	1	Atlas	2,828	1
	9/29/2015 9:30	9/29/2015 10:15	**45**	0.86	**97,045**	0.59	**0.28**	48	Atlas	83,459	1
	10/2/2015 18:15	10/2/2015 19:00	**45**	0.51	**19,261**	1.38	**0.25**	6	Atlas	9,823	1
	10/12/2015 18:30	10/12/2015 19:45	**75**	0.3	**149,749**	0.35	**0.20**	3	Atlas	44,925	1
	10/27/2015 15:45	10/28/2015 8:30	**1005**	2.72	**310,311**	2.84	**0.85**	48	Atlas	844,047	1
	10/28/2015 22:45	10/28/2015 23:00	**15**	2.72	**1,015**	3.04	**0.85**	48	Atlas	2,760	1
	11/6/2015 3:15	11/6/2015 5:30	**135**	0.79	**534,333**	0.87	**0.49**	3	Atlas	422,123	1
	11/9/2015 19:45	11/9/2015 22:15	**150**	0.55	**67,879**	1.34	**0.24**	12	Atlas	37,334	1
	11/12/2015 0:15	11/12/2015 1:30	**75**	0.31	**632,673**	1.64	**0.18**	3	Atlas	196,129	1
	11/18/2015 9:15	11/18/2015 18:45	**570**	1.51	**690,131**	1.96	**0.78**	6	Atlas	1,042,098	1
	11/21/2015 15:30	11/21/2015 15:30	**0**	0.09	**5,685**	1.74	**0.08**	1	Atlas	512	1
	11/28/2015 14:15	11/28/2015 20:45	**390**	0.63	**58,517**	0.77	**0.26**	12	Atlas	36,866	1
	11/30/2015 22:00	12/1/2015 5:30	**450**	0.68	**377,403**	1.48	**0.31**	12	Atlas	256,634	1
	12/21/2015 11:30	12/21/2015 11:45	**15**	0.67	**3,317**	0.17	**0.33**	1	Atlas	2,222	1
	12/21/2015 23:30	12/22/2015 4:45	**315**	0.67	**550,649**	0.69	**0.33**	1	Atlas	368,935	1
	12/23/2015 19:30	12/23/2015 22:15	**165**	0.81	**575,264**	1.52	**0.63**	1	Atlas	465,964	1
	12/26/2015 12:45	12/26/2015 18:15	**330**	0.34	**100,854**	1.96	**0.16**	12	Atlas	34,290	1
	12/27/2015 10:15	12/29/2015 1:00	**2325**	1.96	**918,517**	3.92	**0.65**	3	Atlas	1,800,294	1
	12/29/2015 10:30	12/30/2015 11:15	**1485**	Discharge						195,705	1
	2/2/2016 15:00	2/3/2016 3:15	**735**	1.51	**508,640**	1.57	**0.69**	12	Atlas	768,046	1
	2/21/2016 4:30	2/21/2016 11:15	**405**	0.94	**301,362**	1.12	**0.43**	12	Atlas	283,280	1
	2/23/2016 22:45	2/24/2016 16:45	**1080**	1.99	**681,490**	2.83	**0.77**	12	Atlas	1,356,165	1
	3/1/2016 12:15	3/1/2016 14:30	**135**	0.34	**370,865**	2.33	**0.19**	3	Atlas	126,094	1
	3/9/2016 16:00	3/9/2016 16:15	**15**	1.12	**2,357**	0.27	**0.36**	48	Atlas	2,640	1
	3/10/2016 13:45	3/10/2016 20:30	**405**	1.12	**271,619**	1.16	**0.36**	48	Atlas	304,214	1
	3/12/2016 20:15	3/13/2016	**225**	0.81	**210,422**	1.61	**0.30**	24	Atlas	170,442	1
	3/13/2016 9:00	3/13/2016 11:45	**165**	0.81	**271,806**	1.95	**0.30**	24	Atlas	220,163	1
	3/24/2016 17:30	3/24/2016 18:15	**45**	0.29	**424,754**	0.33	**0.19**	1	Atlas	123,179	1
	3/27/2016 21:15	3/27/2016 23:00	**105**	0.73	**373,714**	1.02	**0.48**	3	Atlas	272,812	1
	3/31/2016 4:45	4/1/2016 0:45	**1200**	0.99	**304,589**	2.01	**0.38**	24	Atlas	301,543	1
	4/11/2016 16:30	4/11/2016 19:30	**180**	0.86	**346,386**	0.92	**0.38**	6	Atlas	297,892	1
	4/21/2016 16:00	4/21/2016 16:15	**15**	0.3	**27,459**	0.2	**0.11**	3	Atlas	8,238	1
	4/26/2016 16:15	4/26/2016 22:15	**360**	0.34	**415,420**	0.66	**0.17**	6	Atlas	141,243	1
	4/27/2016 14:15	4/27/2016 22:45	**510**	0.63	**410,497**	1.25	**0.29**	3	Atlas	258,613	1
	4/30/2016 11:30	4/30/2016 11:45	**15**	0.5	**45,296**	1.24	**0.19**	6	Atlas	22,648	1
	4/30/2016 23:45	4/30/2016 23:45	**0**	0.5	**157**	1.44	**0.19**	6	Atlas	79	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO167	**5/4/2016 11:45**	5/4/2016 12:00	**15**	0.17	**10,254**	1.48	**0.11**	3	Atlas	1,743	1
	5/7/2016 16:45	5/7/2016 22:30	**345**	0.51	**26,084**	1.03	**0.26**	6	Atlas	13,303	1
	5/10/2016 9:00	5/10/2016 22:45	**825**	0.75	**465,756**	1.47	**0.28**	24	Atlas	349,317	1
	5/11/2016 22:00	5/11/2016 22:30	**30**	0.19	**143,450**	1.46	**0.11**	3	Atlas	27,255	1
	5/17/2016 20:45	5/17/2016 20:45	**0**	0.61	**5,965**	1.04	**0.20**	24	Atlas	3,639	1
	5/20/2016 14:00	5/20/2016 16:30	**150**	0.66	**567,062**	1.27	**0.37**	3	Atlas	374,261	1
	5/26/2016 14:00	5/26/2016 14:00	**0**	0.22	**52,795**	0.88	**0.15**	3	Atlas	11,615	1
	5/27/2016 6:45	5/27/2016 6:45	**0**	Discharge						2,004	1
	6/2/2016 15:30	6/2/2016 16:15	**45**	0.28	**437,877**	0.43	**0.22**	1	Atlas	122,606	1
	6/4/2016 16:45	6/4/2016 17:15	**30**	0.27	**366,852**	0.59	**0.14**	3	Atlas	99,050	1
	6/12/2016 18:00	6/12/2016 18:30	**30**	0.18	**750,378**	0.21	**0.16**	1	Atlas	135,068	1
	6/14/2016 16:45	6/14/2016 19:00	**135**	0.9	**267,420**	1.07	**0.58**	3	Atlas	240,678	1
	6/15/2016 13:30	6/15/2016 13:30	**0**	0.13	**1,810**	1.21	**0.10**	1	Atlas	235	1
	6/22/2016 8:15	6/22/2016 8:45	**30**	0.39	**226,447**	0.31	**0.24**	3	Atlas	88,314	1
	6/23/2016 16:15	6/23/2016 22:45	**390**	1.87	**448,342**	2.26	**1.00**	6	Cloudburst	838,400	1
Grand Total										**75,811,123**	**267**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**7/4/2006 19:00**	7/4/2006 19:00	**0**	Discharge						17,521	1
	7/5/2006 8:00	7/5/2006 9:00	**60**	Discharge						245,573	1
	7/11/2006 19:00	7/11/2006 20:00	**60**	Discharge						103,604	1
	7/12/2006 13:00	7/12/2006 13:00	**0**	Discharge						1,635	1
	7/13/2006 5:00	7/13/2006 6:00	**60**	Discharge						113,552	1
	7/14/2006 19:00	7/14/2006 23:00	**240**	Discharge						2,804,802	1
	7/21/2006 17:00	7/21/2006 20:00	**180**	Discharge						486,240	1
	8/8/2006 12:00	8/8/2006 12:00	**0**	Discharge						740	1
	8/9/2006 11:00	8/9/2006 13:00	**120**	Discharge						1,262,625	1
	8/10/2006 16:00	8/10/2006 21:00	**300**	Discharge						2,060,979	1
	8/19/2006 11:00	8/19/2006 12:00	**60**	Discharge						370,042	1
	8/20/2006 6:00	8/20/2006 8:00	**120**	Discharge						602,427	1
	8/28/2006 3:00	8/28/2006 11:00	**480**	Discharge						305,729	1
	8/29/2006	8/29/2006	**0**	Discharge						8,000	1
	9/11/2006 9:00	9/11/2006 13:00	**240**	Discharge						719,479	1
	9/12/2006 13:00	9/12/2006 18:00	**300**	Discharge						318,500	1
	9/22/2006 8:00	9/22/2006 10:00	**120**	Discharge						230,281	1
	9/22/2006 21:00	9/23/2006 23:00	**1560**	Discharge						23,197,417	1
	9/27/2006 21:00	9/28/2006 12:00	**900**	Discharge						595,656	1
	10/16/2006 17:00	10/17/2006 12:00	**1140**	Discharge						1,349,167	1
	10/19/2006 22:00	10/20/2006	**120**	Discharge						78,969	1
	10/27/2006 7:00	10/28/2006 9:00	**1560**	Discharge						1,610,656	1
	11/7/2006 2:00	11/7/2006 13:00	**660**	Discharge						188,917	1
	11/15/2006 12:00	11/16/2006 12:00	**1440**	Discharge						903,417	1
	11/30/2006 22:00	12/1/2006 11:00	**780**	Discharge						659,052	1
	12/12/2006 14:00	12/12/2006 16:00	**120**	Discharge						51,823	1
	12/22/2006 6:00	12/22/2006 7:00	**60**	Discharge						69,583	1
	12/25/2006 12:00	12/26/2006 10:00	**1320**	Discharge						447,167	1
	12/31/2006 7:00	12/31/2006 16:00	**540**	Discharge						35,344	1
	1/30/2007 17:00	1/30/2007 19:00	**120**	Discharge						120,302	1
	2/12/2007 16:00	2/12/2007 19:00	**180**	Discharge						812,240	1
	4/3/2007 18:00	4/3/2007 19:00	**60**	Discharge						48,510	1
	5/4/2007 18:00	5/4/2007 20:00	**120**	Discharge						387,552	1
	6/2/2007 16:00	6/2/2007 16:00	**0**	Discharge						104,333	1
	6/5/2007 16:00	6/5/2007 16:00	**0**	Discharge						1,813	1
	6/19/2007 15:00	6/19/2007 15:00	**0**	Discharge						979	1
	6/28/2007 18:00	6/28/2007 19:00	**60**	Discharge						7,490	1
	7/4/2007 23:00	7/4/2007 23:00	**0**	Discharge						91,094	1
	7/19/2007 17:00	7/19/2007 18:00	**60**	Discharge						8,094	1
	8/16/2007 16:00	8/16/2007 18:00	**120**	Discharge						250,677	1
	8/21/2007 8:00	8/21/2007 9:00	**60**	Discharge						150,031	1
	8/25/2007 15:00	8/25/2007 15:00	**0**	Discharge						12,969	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**9/26/2007 14:00**	9/26/2007 15:00	**60**	Discharge						64,219	1
	9/27/2007 4:00	9/27/2007 7:00	**180**	Discharge						1,332,708	1
	10/15/2007 16:00	10/15/2007 18:00	**120**	Discharge						67,188	1
	10/17/2007 10:00	10/17/2007 14:00	**240**	Discharge						165,833	1
	10/18/2007 1:00	10/18/2007 8:00	**420**	Discharge						1,405,094	1
	10/21/2007 15:00	10/23/2007 9:00	**2520**	Discharge						6,301,760	1
	11/4/2007 6:00	11/4/2007 6:00	**0**	Discharge						31,427	1
	11/19/2007 19:00	11/19/2007 20:00	**60**	Discharge						48,979	1
	11/23/2007 11:00	11/23/2007 12:00	**60**	Discharge						30,500	1
	11/23/2007 22:00	11/24/2007 7:00	**540**	Discharge						120,260	1
	11/30/2007 2:00	11/30/2007 7:00	**300**	Discharge						508,073	1
	12/6/2007 11:00	12/7/2007 2:00	**900**	Discharge						1,341,062	1
	12/10/2007 3:00	12/10/2007 11:00	**480**	Discharge						397,583	1
	12/12/2007 6:00	12/13/2007 4:00	**1320**	Discharge						2,104,281	1
	12/17/2007 13:00	12/17/2007 15:00	**120**	Discharge						89,594	1
	12/19/2007 15:00	12/19/2007 15:00	**0**	Discharge						31	1
	1/8/2008 20:00	1/8/2008 21:00	**60**	Discharge						189,208	1
	1/10/2008 13:00	1/10/2008 22:00	**540**	Discharge						585,771	1
	1/29/2008 14:00	1/29/2008 21:00	**420**	Discharge						165,896	1
	2/1/2008	2/1/2008 1:00	**60**	Discharge						48,865	1
	2/5/2008 8:00	2/5/2008 12:00	**240**	Discharge						315,760	1
	2/6/2008	2/6/2008 10:00	**600**	Discharge						1,880,802	1
	2/12/2008 12:00	2/12/2008 18:00	**360**	Discharge						77,917	1
	2/21/2008 20:00	2/21/2008 21:00	**60**	Discharge						18,271	1
	3/3/2008 21:00	3/4/2008 18:00	**1260**	Discharge						2,608,354	1
	6/16/2008 12:00	6/16/2008 13:00	**60**	Discharge						85,813	1
	6/23/2008 3:00	6/23/2008 6:00	**180**	Discharge						1,327,000	1
	6/24/2008 9:00	6/24/2008 10:00	**60**	Discharge						287,104	1
	7/4/2008 4:00	7/4/2008 5:00	**60**	0.39	**89,984**	0.18	**0.19**	3	Atlas	35,094	1
	7/20/2008 20:00	7/20/2008 21:00	**60**	0.18	**641,030**	0.17	**0.14**	1	Atlas	115,385	1
	7/30/2008 9:00	7/30/2008 10:00	**60**	0.34	**145,374**	0.42	**0.26**	1	Atlas	49,427	1
	7/31/2008 1:00	7/31/2008 3:00	**120**	0.64	**123,535**	0.98	**0.35**	6	Atlas	79,063	1
	9/12/2008 7:00	9/12/2008 7:00	**0**	0.16	**581,836**	0.48	**0.10**	1	Atlas	93,094	1
	9/30/2008	9/30/2008	**0**	0.29	**56,537**	0.25	**0.19**	3	Atlas	16,396	1
	10/7/2008 15:00	10/8/2008 4:15	**795**	1.32	**702,628**	1.28	**0.51**	24	Atlas	927,469	1
	10/24/2008 4:30	10/24/2008 13:30	**540**	1.31	**758,818**	1.32	**0.60**	12	Atlas	994,052	1
	11/13/2008	11/13/2008 1:00	**60**	0.45	**333,588**	0.57	**0.20**	6	Atlas	150,115	1
	12/9/2008 11:45	12/9/2008 17:15	**330**	1.14	**1,539,136**	1.3	**0.54**	6	Atlas	1,754,615	1
	12/19/2008 6:45	12/19/2008 8:45	**120**	0.48	**1,013,086**	0.82	**0.29**	1	Atlas	486,281	1
	12/24/2008 0:15	12/24/2008 15:45	**930**	1.98	**2,778,588**	2.63	**0.67**	24	Atlas	5,501,604	1
	12/28/2008 0:45	12/28/2008 3:15	**150**	0.66	**1,977,872**	2.67	**0.43**	3	Atlas	1,305,396	1
	1/10/2009 7:15	1/10/2009 9:00	**105**	0.44	**1,606,297**	1.06	**0.27**	3	Atlas	706,771	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**1/28/2009 2:45**	1/28/2009 9:00	**375**	1.25	**1,400,800**	1.29	**0.41**	24	Atlas	1,751,000	1
	2/1/2009 15:15	2/1/2009 17:00	**105**	Discharge						117,490	1
	2/10/2009 19:30	2/10/2009 20:30	**60**	1.08	**59,327**	0.71	**0.35**	48	Atlas	64,073	1
	2/11/2009 5:15	2/11/2009 15:30	**615**	1.08	**870,939**	1.07	**0.35**	48	Atlas	940,615	1
	4/2/2009 19:30	4/3/2009 4:30	**540**	1.08	**2,597,184**	1.78	**0.50**	6	Atlas	2,804,958	1
	4/5/2009 17:15	4/5/2009 19:45	**150**	0.39	**3,454,594**	1.53	**0.25**	3	Atlas	1,347,292	1
	4/10/2009 14:00	4/10/2009 14:45	**45**	0.65	**281,218**	0.73	**0.26**	12	Atlas	182,792	1
	4/13/2009 14:30	4/13/2009 23:45	**555**	0.58	**9,824,928**	1.29	**0.26**	12	Atlas	5,698,458	1
	4/19/2009 8:30	4/19/2009 17:00	**510**	1.52	**2,268,476**	1.96	**0.59**	12	Atlas	3,448,083	1
	5/6/2009 11:45	5/6/2009 13:00	**75**	Discharge						309,698	1
	5/8/2009 3:30	5/8/2009 5:00	**90**	Discharge						1,493,698	1
	5/8/2009 14:45	5/8/2009 19:30	**285**	Discharge						12,615,292	1
	5/14/2009 6:00	5/14/2009 7:00	**60**	Discharge						205,510	1
	5/16/2009 5:00	5/16/2009 5:30	**30**	Discharge						112,979	1
	5/27/2009 13:15	5/27/2009 13:45	**30**	Discharge						118,083	1
	6/10/2009 10:00	6/10/2009 13:30	**210**	0.89	**1,954,073**	1.31	**0.53**	3	Atlas	1,739,125	1
	6/11/2009 2:45	6/11/2009 5:15	**150**	1.22	**651,315**	1.95	**0.47**	24	Atlas	794,604	1
	6/11/2009 17:45	6/11/2009 21:45	**240**	1.22	**1,877,186**	2.19	**0.47**	24	Atlas	2,290,167	1
	6/15/2009 16:15	6/15/2009 17:30	**75**	0.2	**8,447,099**	2.57	**0.17**	1	Atlas	1,689,420	1
	6/16/2009 16:00	6/16/2009 18:15	**135**	0.85	**10,125,386**	3.42	**0.54**	1	Atlas	8,606,578	1
	6/18/2009 10:00	6/18/2009 13:30	**210**	0.68	**15,725,226**	2.53	**0.43**	1	Atlas	10,693,154	1
	6/22/2009 9:30	6/22/2009 12:15	**165**	0.47	**17,305,537**	2.47	**0.32**	1	Atlas	8,133,602	1
	6/26/2009 3:15	6/26/2009 8:15	**300**	1.42	**14,642,173**	2.16	**0.86**	3	Atlas	20,791,886	1
	7/15/2009 10:30	7/15/2009 12:30	**120**	0.58	**4,816,206**	0.63	**0.37**	3	Atlas	2,793,400	1
	7/17/2009 4:15	7/17/2009 5:15	**60**	0.39	**933,374**	1.02	**0.26**	3	Atlas	364,016	1
	7/22/2009 6:45	7/22/2009 18:15	**690**	1.71	**3,625,886**	2.68	**0.75**	12	Atlas	6,200,266	1
	7/25/2009 15:15	7/25/2009 22:45	**450**	0.98	**1,602,789**	2.69	**0.38**	12	Atlas	1,570,733	1
	7/29/2009 3:15	7/29/2009 8:15	**300**	1.02	**3,857,027**	3.45	**0.44**	12	Atlas	3,934,167	1
	7/30/2009 14:15	7/31/2009 6:30	**975**	1.16	**11,009,222**	3.16	**0.49**	12	Atlas	12,770,697	1
	8/4/2009 8:00	8/4/2009 23:15	**915**	5.71	**15,392,806**	7.9				87,892,924	1
	8/10/2009 19:00	8/11/2009 1:30	**390**	1.05	**16,432,601**	6.76	**0.67**	3	Atlas	17,254,231	1
	9/20/2009 6:30	9/21/2009 2:00	**1170**	3.24	**9,444,694**	3.24	**2.79**	3	Atlas	30,600,809	1
	9/24/2009 7:15	9/24/2009 9:30	**135**	1.19	**878,657**	3.87	**0.43**	24	Atlas	1,045,601	1
	9/24/2009 21:45	9/24/2009 22:30	**45**	1.19	**272,353**	4.57	**0.43**	24	Atlas	324,100	1
	9/26/2009 20:00	9/26/2009 22:15	**135**	0.35	**10,193,548**	5.07	**0.30**	1	Atlas	3,567,742	1
	10/2/2009 4:00	10/2/2009 6:15	**135**	0.73	**2,380,402**	1.17	**0.47**	3	Atlas	1,737,693	1
	10/6/2009 11:15	10/6/2009 11:45	**30**	0.1	**726,213**	0.83	**0.07**	3	Atlas	72,621	1
	10/8/2009 14:30	10/9/2009 13:00	**1350**	2.21	**4,393,573**	2.92	**0.75**	24	Atlas	9,709,796	1
	10/14/2009 6:00	10/14/2009 8:00	**120**	0.6	**3,065,093**	2.81	**0.39**	3	Atlas	1,839,056	1
	10/20/2009 6:15	10/20/2009 10:15	**240**	Discharge						3,351	1
	10/23/2009 3:45	10/23/2009 20:30	**1005**	0.71	**35,224**	0.73	**0.31**	12	Atlas	25,009	1
	10/24/2009 14:00	10/24/2009 22:15	**495**	Discharge						642	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**10/25/2009 10:15**	10/25/2009 10:30	**15**	Discharge						953	1
	10/25/2009 23:00	10/26/2009 7:30	**510**	Discharge						1,629	1
	10/26/2009 16:00	10/26/2009 16:00	**0**	Discharge						93	1
	10/27/2009 7:15	10/28/2009 4:15	**1260**	Discharge						4,147,935	1
	10/30/2009 21:15	10/31/2009 9:30	**735**	0.97	**2,492,815**	2.14	**0.44**	12	Atlas	2,418,030	1
	12/8/2009 18:00	12/9/2009 8:15	**855**	2.05	**2,638,129**	2.33	**0.84**	12	Atlas	5,408,164	1
	1/24/2010 4:15	1/24/2010 13:30	**555**	0.91	**1,346,391**	2.22	**0.35**	24	Atlas	1,225,216	1
	2/5/2010 12:30	2/6/2010 13:15	**1485**	1.17	**2,476,873**	1.35	**0.43**	24	Atlas	2,897,942	1
	2/21/2010 13:30	2/21/2010 18:15	**285**	Discharge						21,687	1
	2/22/2010 9:45	2/22/2010 9:45	**0**	Discharge						3,092	1
	2/25/2010 21:30	2/26/2010 1:30	**240**	Discharge						20,626	1
	2/26/2010 16:15	2/26/2010 19:30	**195**	Discharge						86,468	1
	2/27/2010 9:45	2/27/2010 14:45	**300**	Discharge						6,794	1
	2/28/2010 10:00	2/28/2010 10:00	**0**	Discharge						433	1
	2/28/2010 20:15	3/1/2010 11:30	**915**	Discharge						13,777	1
	3/5/2010 15:30	3/5/2010 16:45	**75**	Discharge						27,709	1
	3/7/2010 15:30	3/7/2010 15:30	**0**	Discharge						3,281	1
	3/8/2010 4:00	3/8/2010 4:00	**0**	0.02	**137,734**	0.02	**0.01**	3	Atlas	2,755	1
	3/9/2010 17:15	3/10/2010 3:30	**615**	Discharge						46,726	1
	3/10/2010 11:45	3/10/2010 11:45	**0**	Discharge						6,703	1
	3/11/2010 13:30	3/11/2010 13:30	**0**	Discharge						3,745	1
	3/12/2010 7:15	3/12/2010 15:00	**465**	Discharge						26,422	1
	3/21/2010 23:45	3/22/2010 2:00	**135**	0.77	**849,367**	0.77	**0.35**	12	Atlas	654,013	1
	4/8/2010 1:30	4/8/2010 7:00	**330**	1.29	**2,901,129**	1.4	**0.62**	6	Atlas	3,742,456	1
	4/24/2010 14:30	4/24/2010 21:30	**420**	1.36	**5,838,861**	1.55	**0.64**	6	Atlas	7,940,851	1
	5/1/2010 4:45	5/1/2010 9:45	**300**	4.01	**1,636,567**	2.84	**3.10**	48	Atlas	6,562,635	1
	5/2/2010 1:15	5/2/2010 22:00	**1245**	4.01	**7,026,057**	4.49	**3.10**	48	Atlas	28,174,489	1
	5/5/2010 20:30	5/5/2010 20:30	**0**	Discharge						24,363	1
	5/12/2010 9:45	5/12/2010 11:15	**90**	0.66	**7,436,746**	1.14	**0.50**	1	Atlas	4,908,252	1
	5/13/2010 12:45	5/13/2010 13:15	**30**	0.07	**2,317,573**	1.22	**0.06**	1	Atlas	162,230	1
	5/17/2010 13:15	5/17/2010 20:30	**435**	Discharge						897,459	1
	5/21/2010 19:45	5/21/2010 21:30	**105**	0.45	**9,586,540**	1.02	**0.37**	1	Atlas	4,313,943	1
	6/9/2010 3:15	6/9/2010 13:15	**600**	1.17	**7,597,327**	1.32	**0.56**	3	Atlas	8,888,873	1
	6/13/2010 23:00	6/14/2010 7:15	**495**	0.67	**5,815,621**	1.99	**0.45**	1	Atlas	3,896,466	1
	6/19/2010 5:45	6/19/2010 8:45	**180**	0.49	**6,647,942**	1.4	**0.28**	3	Atlas	3,257,491	1
	6/28/2010 1:30	6/28/2010 3:00	**90**	0.42	**2,850,343**	0.39	**0.30**	1	Atlas	1,197,144	1
	7/13/2010 5:30	7/13/2010 10:45	**315**	1	**4,896,044**	1.25	**0.54**	3	Atlas	4,896,044	1
	7/20/2010 5:00	7/20/2010 7:00	**120**	0.56	**6,531,498**	1.16	**0.35**	1	Atlas	3,657,639	1
	7/21/2010 6:15	7/21/2010 7:00	**45**	0.38	**1,418,757**	1.2	**0.29**	1	Atlas	539,127	1
	7/31/2010 4:45	7/31/2010 7:00	**135**	0.47	**4,368,457**	0.67	**0.27**	3	Atlas	2,053,175	1
	8/5/2010 9:30	8/5/2010 9:45	**15**	0.17	**304,522**	0.64	**0.12**	1	Atlas	51,769	1
	8/14/2010 16:30	8/14/2010 17:45	**75**	0.27	**5,015,697**	0.45	**0.21**	1	Atlas	1,354,238	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**8/21/2010 7:15**	8/21/2010 9:30	**135**	0.55	**809,515**	0.85	**0.35**	3	Atlas	445,233	1
	10/13/2010 20:30	10/13/2010 21:00	**30**	0.47	**601,584**	0.48	**0.31**	3	Atlas	282,745	1
	10/26/2010 11:30	10/26/2010 12:00	**30**	0.48	**538,970**	0.29	**0.26**	6	Atlas	258,705	1
	11/16/2010 13:15	11/16/2010 18:00	**285**	0.82	**2,050,361**	0.8	**0.37**	12	Atlas	1,681,296	1
	11/24/2010 13:30	11/24/2010 16:15	**165**	0.6	**2,760,189**	0.94	**0.29**	3	Atlas	1,656,113	1
	11/25/2010 8:45	11/26/2010 0:15	**930**	2.52	**5,659,514**	3.36	**0.96**	24	Atlas	14,261,976	1
	11/29/2010 22:00	11/30/2010 5:30	**450**	1.54	**7,309,193**	4.55	**0.59**	24	Atlas	11,256,157	1
	1/1/2011 5:45	1/1/2011 8:00	**135**	0.58	**1,270,338**	1.02	**0.26**	12	Atlas	736,796	1
	2/1/2011 18:00	2/1/2011 21:15	**195**	0.84	**3,810,686**	0.74	**0.31**	6	Atlas	3,200,976	1
	2/18/2011 1:30	2/18/2011 1:30	**0**	Discharge						3,449	1
	2/18/2011 17:15	2/19/2011 4:45	**690**	Discharge						9,056	1
	2/19/2011 21:15	2/19/2011 21:15	**0**	Discharge						3,443	1
	2/20/2011 16:45	2/20/2011 22:45	**360**	0.04	**217,539**	0.04	**0.03**	3	Atlas	8,702	1
	2/21/2011 7:00	2/21/2011 10:45	**225**	Discharge						6,200	1
	2/21/2011 20:00	2/22/2011 2:45	**405**	0.15	**43,104**	0.19	**0.09**	1	Atlas	6,466	1
	2/23/2011 3:30	2/23/2011 7:00	**210**	Discharge						5,484	1
	2/23/2011 19:00	2/24/2011 5:15	**615**	Discharge						14,692	1
	2/24/2011 20:15	2/25/2011 6:00	**585**	2.57	**8,241,613**	2.76	**1.00**	12	Cloudburst	21,180,945	1
	2/28/2011 5:30	2/28/2011 12:30	**420**	1.01	**1,978,833**	4.04	**0.48**	6	Atlas	1,998,622	1
	3/2/2011 19:15	3/2/2011 22:45	**210**	Discharge						60,497	1
	3/5/2011 7:15	3/5/2011 9:15	**120**	0.84	**1,573,197**	2.09	**0.28**	24	Atlas	1,321,486	1
	3/5/2011 20:45	3/5/2011 23:45	**180**	0.84	**182,161**	2.17	**0.28**	24	Atlas	153,015	1
	3/6/2011 10:15	3/6/2011 10:15	**0**	Discharge						106,720	1
	3/6/2011 19:30	3/7/2011	**270**	Discharge						608,315	1
	3/8/2011 23:15	3/13/2011 19:15	**6960**	2.87	**28,367,319**	3.73	**1.63**	12	Cloudburst	81,414,206	1
	3/16/2011 21:15	3/17/2011	**165**	Discharge						401,773	1
	3/18/2011 22:30	3/18/2011 22:30	**0**	0.13	**686,519**	0.8	**0.07**	1	Atlas	89,247	1
	3/19/2011 22:30	3/19/2011 22:30	**0**	Discharge						80,875	1
	3/20/2011 20:15	3/20/2011 20:15	**0**	Discharge						131,756	1
	3/26/2011 16:45	3/26/2011 22:45	**360**	0.13	**3,292,119**	0.16	**0.06**	1	Atlas	427,975	1
	3/27/2011 20:00	3/27/2011 21:45	**105**	Discharge						311,837	1
	3/29/2011 19:15	3/29/2011 19:15	**0**	Discharge						69,373	1
	3/30/2011 19:45	3/30/2011 19:45	**0**	Discharge						75,215	1
	4/4/2011 13:45	4/4/2011 17:00	**195**	0.63	**5,035,427**	0.77	**0.32**	6	Atlas	3,172,319	1
	4/6/2011 8:30	4/6/2011 8:45	**15**	Discharge						58,701	1
	4/9/2011 10:45	4/9/2011 12:30	**105**	0.43	**4,064,232**	1.08	**0.30**	1	Atlas	1,747,620	1
	4/11/2011 16:00	4/12/2011 11:15	**1155**	2.96	**9,237,521**	3.43	**1.75**	24	Cloudburst	27,343,063	1
	4/13/2011 16:30	4/16/2011 21:30	**4620**	Discharge						70,700,211	1
	4/19/2011 20:30	4/20/2011 5:15	**525**	Discharge						3,677,237	1
	4/20/2011 14:30	4/25/2011 8:30	**6840**	Discharge						125,090,485	1
	4/27/2011 1:15	4/27/2011 18:15	**1020**	1.93	**12,844,980**	7.14	**0.72**	24	Atlas	24,790,812	1
	4/28/2011 19:15	4/28/2011 19:30	**15**	0.17	**331,564**	6.76	**0.11**	3	Atlas	56,366	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**4/29/2011 9:45**	4/29/2011 19:45	**600**	Discharge						5,902,531	1
	4/30/2011 7:00	4/30/2011 17:00	**600**	Discharge						3,057,463	1
	5/1/2011 4:45	5/1/2011 10:00	**315**	0.69	**7,127,970**	4				4,918,299	1
	5/1/2011 19:45	5/4/2011 0:15	**3150**	2.42	**14,773,596**	5.74	**0.79**	48	Atlas	35,752,102	1
	5/6/2011 19:45	5/6/2011 19:45	**0**	Discharge						3,026	1
	5/7/2011 4:00	5/7/2011 4:00	**0**	Discharge						7,864	1
	5/8/2011 1:00	5/8/2011 3:00	**120**	0.4	**9,751,885**	3.45	**0.29**	1	Atlas	3,900,754	1
	5/14/2011 15:15	5/14/2011 16:15	**60**	0.18	**2,809,105**	0.61	**0.11**	3	Atlas	505,639	1
	5/21/2011 18:30	5/21/2011 20:00	**90**	0.57	**1,967,647**	0.95	**0.40**	1	Atlas	1,121,559	1
	5/23/2011 4:15	5/23/2011 5:30	**75**	0.38	**2,586,129**	1.11	**0.23**	3	Atlas	982,729	1
	5/23/2011 17:45	5/23/2011 22:15	**270**	0.98	**5,077,544**	2.09	**0.61**	3	Atlas	4,975,994	1
	5/25/2011 23:00	5/26/2011 3:30	**270**	1.18	**4,500,708**	3	**0.59**	3	Atlas	5,310,836	1
	6/15/2011 9:45	6/15/2011 12:00	**135**	0.89	**4,736,811**	1.07	**0.56**	3	Atlas	4,215,761	1
	6/18/2011 7:30	6/18/2011 9:15	**105**	0.83	**1,511,659**	1.77	**0.50**	3	Atlas	1,254,677	1
	6/19/2011 8:00	6/19/2011 10:00	**120**	0.7	**2,708,610**	2.44	**0.44**	3	Atlas	1,896,027	1
	6/20/2011 1:30	6/20/2011 3:15	**105**	0.51	**5,369,158**	2.95	**0.43**	1	Atlas	2,738,270	1
	6/22/2011 20:00	6/23/2011 8:45	**765**	3.17	**8,392,962**	5.48	**8.33**	3	Atlas	26,605,690	1
	7/19/2011 23:00	7/20/2011 1:45	**165**	1.36	**8,328,395**	1.37	**1.83**	1	Atlas	11,326,617	1
	8/7/2011 3:15	8/7/2011 7:30	**255**	1.2	**6,221,137**	1.22	**0.69**	3	Atlas	7,465,364	1
	8/8/2011 14:15	8/8/2011 15:45	**90**	0.36	**164,727**	1.58	**0.24**	3	Atlas	59,302	1
	8/13/2011 17:45	8/13/2011 18:15	**30**	0.49	**38,776**	2.17	**0.35**	1	Atlas	19,000	1
	9/19/2011 7:30	9/19/2011 8:45	**75**	0.66	**1,005,704**	0.6	**0.25**	24	Atlas	663,764	1
	9/23/2011 6:15	9/23/2011 8:30	**135**	0.64	**765,110**	1.43	**0.29**	12	Atlas	489,670	1
	9/25/2011 23:30	9/26/2011 11:00	**690**	3.08	**12,590,939**	4.61	**4.37**	12	Cloudburst	38,780,092	1
	10/27/2011 0:15	10/27/2011 2:30	**135**	0.92	**3,075,061**	1.1	**0.38**	12	Atlas	2,829,056	1
	11/14/2011 21:45	11/14/2011 23:45	**120**	1.74	**755,757**	0.42	**0.56**	48	Atlas	1,315,018	1
	11/15/2011 12:30	11/15/2011 14:00	**90**	1.74	**46,219**	1.34	**0.56**	48	Atlas	80,420	1
	11/16/2011 7:00	11/16/2011 8:45	**105**	1.74	**235,580**	1.65	**0.56**	48	Atlas	409,909	1
	11/21/2011 4:30	11/21/2011 5:00	**30**	1.5	**134,968**	2.35	**0.47**	48	Atlas	202,453	1
	11/22/2011 6:45	11/22/2011 11:30	**285**	1.5	**2,413,669**	2.64	**0.47**	48	Atlas	3,620,503	1
	11/27/2011 8:15	11/27/2011 9:30	**75**	3.02	**99,885**	2.1	**0.93**	48	Atlas	301,651	1
	11/27/2011 23:30	11/29/2011 10:45	**2115**	3.02	**2,890,982**	4.12	**0.93**	48	Atlas	8,730,765	1
	12/4/2011 16:45	12/6/2011 4:00	**2115**	3.5	**7,355,186**	5.81	**1.70**	48	Cloudburst	25,743,150	1
	12/22/2011 15:30	12/22/2011 18:15	**165**	0.48	**1,224,540**	1.15	**0.22**	12	Atlas	587,779	1
	12/27/2011 5:15	12/27/2011 11:00	**345**	0.63	**25,450**	1.73	**0.24**	24	Atlas	16,033	1
	1/11/2012 5:30	1/11/2012 12:00	**390**	0.95	**1,687,097**	0.83	**0.39**	12	Atlas	1,602,742	1
	1/17/2012 12:00	1/17/2012 12:45	**45**	0.43	**540,171**	1.49	**0.20**	12	Atlas	232,274	1
	1/23/2012 3:00	1/23/2012 6:30	**210**	0.7	**3,924,134**	1.16	**0.35**	3	Atlas	2,746,894	1
	1/26/2012 5:45	1/27/2012 8:30	**1605**	0.45	**32,840,342**	2.51	**0.27**	3	Atlas	14,778,154	1
	2/4/2012 10:30	2/4/2012 10:45	**15**	0.34	**18,190**	0.4	**0.20**	3	Atlas	6,185	1
	2/29/2012 8:45	2/29/2012 9:45	**60**	0.43	**1,234,065**	0.59	**0.20**	1	Atlas	530,648	1
	3/8/2012 12:30	3/8/2012 15:15	**165**	0.72	**790,938**	0.93	**0.34**	6	Atlas	569,475	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**3/15/2012 18:45**	3/16/2012 4:00	**555**	0.93	**1,734,617**	1.16	**0.42**	12	Atlas	1,613,194	1
	3/17/2012 18:30	3/18/2012 0:15	**345**	0.51	**4,341,847**	1.65	**0.29**	3	Atlas	2,214,342	1
	3/23/2012 10:45	3/24/2012	**795**	1.45	**4,138,428**	1.96	**0.54**	24	Atlas	6,000,721	1
	4/1/2012 8:45	4/1/2012 12:45	**240**	1.35	**5,662,353**	1.51	**0.73**	6	Atlas	7,644,177	1
	4/28/2012 19:15	4/29/2012 0:45	**330**	0.72	**6,296,259**	0.84	**0.52**	1	Atlas	4,533,307	1
	4/30/2012 18:00	4/30/2012 21:00	**180**	0.48	**4,264,535**	1.33	**0.32**	3	Atlas	2,046,977	1
	5/5/2012	5/5/2012 5:30	**330**	1.46	**5,084,807**	2.7	**0.77**	6	Atlas	7,423,819	1
	5/13/2012 2:30	5/13/2012 14:30	**720**	1.95	**4,334,389**	2.03	**0.75**	24	Atlas	8,452,058	1
	5/29/2012 6:30	5/29/2012 14:15	**465**	2.73	**10,618,754**	2.73	**12.76**	3	Atlas	28,989,198	1
	5/31/2012 18:30	6/1/2012 3:00	**510**	1.05	**3,209,973**	3.67	**0.45**	12	Atlas	3,370,472	1
	6/17/2012 11:45	6/17/2012 12:30	**45**	0.13	**1,724,686**	0.14	**0.11**	1	Atlas	224,209	1
	7/8/2012 13:15	7/8/2012 15:00	**105**	0.23	**19,005,986**	0.71	**0.16**	1	Atlas	4,371,377	1
	7/14/2012 12:00	7/14/2012 15:30	**210**	0.55	**1,498,217**	0.8	**0.30**	6	Atlas	824,019	1
	7/18/2012 17:45	7/18/2012 18:00	**15**	Discharge						27,435	1
	7/19/2012 18:00	7/19/2012 20:15	**135**	0.66	**12,330,313**	1.2	**0.44**	1	Atlas	8,138,006	1
	7/24/2012 20:15	7/24/2012 20:45	**30**	0.36	**296,729**	1.15	**0.30**	1	Atlas	106,823	1
	12/4/2012 15:15	12/4/2012 19:30	**255**	0.56	**2,521,590**	0.83	**0.35**	3	Atlas	1,412,091	1
	12/7/2012 6:30	12/7/2012 18:15	**705**	0.93	**1,140,891**	1.76	**0.39**	12	Atlas	1,061,029	1
	12/9/2012 22:00	12/10/2012 2:00	**240**	1.23	**8,480,236**	2.94	**0.63**	3	Atlas	10,430,690	1
	12/17/2012 17:15	12/17/2012 17:30	**15**	0.24	**189,984**	0.39	**0.13**	6	Atlas	45,596	1
	12/20/2012 8:30	12/20/2012 13:30	**300**	0.61	**3,652,774**	0.95	**0.30**	6	Atlas	2,228,192	1
	12/22/2012 15:00	12/22/2012 15:00	**0**	Discharge						17,410	1
	12/26/2012 5:30	12/26/2012 11:45	**375**	0.9	**2,120,981**	1.55	**0.36**	12	Atlas	1,908,883	1
	1/11/2013 6:00	1/11/2013 8:30	**150**	0.69	**4,574,533**	0.88	**0.37**	3	Atlas	3,156,428	1
	1/13/2013 3:30	1/13/2013 20:45	**1035**	2.19	**8,548,857**	3.06	**0.84**	24	Atlas	18,721,996	1
	1/30/2013 4:30	1/30/2013 9:15	**285**	0.85	**8,298,653**	1.09	**0.43**	6	Atlas	7,053,855	1
	2/22/2013 1:15	2/22/2013 1:45	**30**	0.44	**124,619**	0.78	**0.20**	12	Atlas	54,832	1
	2/26/2013 14:00	2/26/2013 17:00	**180**	0.69	**207,633**	1.07	**0.28**	12	Atlas	143,267	1
	3/5/2013 17:15	3/5/2013 18:15	**60**	0.46	**686,007**	0.54	**0.17**	24	Atlas	315,563	1
	3/11/2013 4:15	3/11/2013 12:45	**510**	1.01	**3,117,910**	1.49	**0.41**	12	Atlas	3,149,090	1
	3/17/2013 14:00	3/17/2013 16:30	**150**	1.63	**839,710**	1.69	**0.53**	48	Atlas	1,368,728	1
	3/18/2013 4:15	3/18/2013 13:30	**555**	1.63	**3,873,026**	2.11	**0.53**	48	Atlas	6,313,032	1
	3/24/2013 8:15	3/24/2013 8:45	**30**	0.58	**84,503**	1.57	**0.21**	24	Atlas	49,012	1
	4/11/2013 6:15	4/11/2013 8:15	**120**	1.17	**1,860,393**	0.43	**0.45**	24	Atlas	2,176,659	1
	4/11/2013 18:15	4/11/2013 19:15	**60**	1.17	**105,835**	1.14	**0.45**	24	Atlas	123,826	1
	4/16/2013 20:00	4/16/2013 21:30	**90**	0.42	**8,305,069**	1.57	**0.34**	1	Atlas	3,488,129	1
	4/19/2013 2:00	4/19/2013 5:30	**210**	0.85	**6,878,824**	1.31	**0.46**	6	Atlas	5,847,001	1
	4/24/2013 7:45	4/24/2013 10:15	**150**	0.62	**3,325,924**	1.57	**0.35**	3	Atlas	2,062,073	1
	5/4/2013 14:00	5/4/2013 16:00	**120**	1.76	**134,556**	0.82	**0.55**	24	Atlas	236,818	1
	5/5/2013 5:30	5/5/2013 9:30	**240**	1.76	**1,007,674**	1.61	**0.55**	24	Atlas	1,773,506	1
	5/10/2013 10:00	5/10/2013 14:45	**285**	0.73	**615,816**	2.48	**0.32**	6	Atlas	449,546	1
	5/10/2013 23:45	5/11/2013 0:30	**45**	0.73	**348,779**	2.5	**0.32**	6	Atlas	254,609	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**6/10/2013 0:30**	6/10/2013 1:00	**30**	0.36	**358,423**	0.3	**0.14**	24	Atlas	129,032	1
	6/16/2013 16:45	6/16/2013 18:00	**75**	0.57	**7,409,845**	0.87	**0.43**	1	Atlas	4,223,612	1
	6/17/2013 19:30	6/17/2013 21:15	**105**	0.29	**679,942**	0.83	**0.15**	3	Atlas	197,183	1
	6/26/2013 3:15	6/26/2013 5:45	**150**	0.46	**8,938,275**	0.59	**0.33**	1	Atlas	4,111,607	1
	6/26/2013 16:15	6/26/2013 22:45	**390**	1.64	**10,134,391**	2.23	**0.85**	6	Atlas	16,620,402	1
	6/29/2013 20:00	6/29/2013 20:30	**30**	0.61	**379,429**	2.74	**0.37**	3	Atlas	231,452	1
	7/6/2013 4:45	7/6/2013 5:45	**60**	0.45	**101,296**	1.76	**0.20**	12	Atlas	45,583	1
	7/10/2013 14:00	7/10/2013 15:45	**105**	0.66	**5,221,510**	1.68	**0.53**	1	Atlas	3,446,197	1
	7/14/2013 20:00	7/14/2013 20:30	**30**	0.06	**4,122,872**	0.74	**0.05**	1	Atlas	247,372	1
	7/18/2013 16:30	7/18/2013 17:00	**30**	0.06	**3,903,619**	0.19	**0.04**	1	Atlas	234,217	1
	7/21/2013 20:30	7/21/2013 22:30	**120**	2.72	**429,330**	2.15	**3.43**	3	Atlas	1,167,778	1
	7/22/2013 7:30	7/22/2013 15:15	**465**	2.72	**3,683,702**	2.78	**3.43**	3	Atlas	10,019,669	1
	8/12/2013 14:30	8/12/2013 16:00	**90**	0.91	**4,895,720**	0.8	**0.51**	1	Atlas	4,455,105	1
	8/13/2013 3:00	8/13/2013 4:00	**60**	0.91	**597,686**	1.05	**0.51**	1	Atlas	543,895	1
	8/31/2013 20:00	9/1/2013 0:30	**270**	1.41	**1,980,008**	1.13	**0.65**	12	Atlas	2,791,812	1
	9/2/2013 13:30	9/2/2013 15:00	**90**	0.97	**2,141,948**	2.38	**0.84**	1	Atlas	2,077,690	1
	9/20/2013 17:00	9/21/2013 5:30	**750**	1.71	**2,256,221**	1.75	**0.70**	12	Atlas	3,858,138	1
	10/5/2013 13:15	10/6/2013 10:15	**1260**	4.19	**10,226,924**	4.44	**7.10**	24	Cloudburst	42,850,811	1
	10/30/2013 2:15	10/30/2013 7:15	**300**	1.7	**4,852,537**	1.7	**0.84**	6	Atlas	8,249,314	1
	10/31/2013 19:00	10/31/2013 21:30	**150**	1.1	**5,622,218**	2.73	**0.50**	1	Atlas	6,184,440	1
	11/17/2013 5:15	11/17/2013 20:30	**915**	2.72	**9,687,993**	2.87	**2.87**	6	Cloudburst	26,351,340	1
	12/5/2013 7:30	12/5/2013 8:45	**75**	0.72	**886,002**	0.16	**0.23**	48	Atlas	637,921	1
	12/14/2013 10:45	12/14/2013 12:00	**75**	0.72	**442,711**	1.07	**0.29**	12	Atlas	318,752	1
	12/21/2013 2:15	12/22/2013 8:00	**1785**	3.31	**8,407,775**	4.02	**2.24**	24	Cloudburst	27,829,734	1
	1/5/2014 18:00	1/5/2014 18:15	**15**	0.47	**20,358**	0.58	**0.22**	6	Atlas	9,568	1
	1/11/2014 0:30	1/11/2014 5:45	**315**	0.91	**3,273,244**	1.4	**0.48**	6	Atlas	2,978,652	1
	2/2/2014 5:45	2/2/2014 5:45	**0**	0.58	**43,830**	0.21	**0.22**	24	Atlas	25,422	1
	2/4/2014 19:45	2/5/2014 2:15	**390**	0.67	**8,981,754**	1.25	**0.33**	6	Atlas	6,017,775	1
	2/17/2014 16:15	2/17/2014 21:30	**315**	0.56	**4,598,395**	0.82	**0.32**	3	Atlas	2,575,101	1
	3/2/2014 11:00	3/2/2014 12:00	**60**	0.47	**226,271**	0.28	**0.18**	24	Atlas	106,347	1
	3/28/2014 4:45	3/28/2014 5:30	**45**	0.26	**786,982**	0.35	**0.14**	6	Atlas	204,615	1
	3/29/2014 7:00	3/29/2014 9:45	**165**	0.84	**1,601,469**	0.96	**0.39**	12	Atlas	1,345,234	1
	4/3/2014 8:00	4/4/2014 10:30	**1590**	2.93	**9,036,807**	4.11	**1.14**	24	Cloudburst	26,477,845	1
	4/7/2014 11:00	4/7/2014 14:15	**195**	1.06	**9,456,854**	4.05	**0.64**	1	Atlas	10,024,265	1
	4/14/2014 20:30	4/15/2014 1:15	**285**	0.55	**1,259,072**	0.98	**0.25**	12	Atlas	692,490	1
	4/28/2014 4:30	4/28/2014 9:00	**270**	1.8	**7,087,599**	1.59	**0.73**	3	Atlas	12,757,678	1
	5/9/2014 19:45	5/10/2014 17:00	**1275**	1.44	**5,940,235**	1.51	**0.63**	1	Atlas	8,553,939	1
	5/14/2014 20:30	5/14/2014 21:30	**60**	1.17	**376,999**	2.67	**0.45**	24	Atlas	441,089	1
	5/22/2014 3:30	5/22/2014 5:00	**90**	0.53	**2,613,919**	0.66	**0.31**	1	Atlas	1,385,377	1
	5/28/2014 20:30	5/28/2014 22:00	**90**	0.04	**98,143,623**	0.57	**0.03**	3	Atlas	3,925,745	1
	6/11/2014 14:15	6/11/2014 15:15	**60**	0.09	**9,454,849**	0.28	**0.06**	1	Atlas	850,936	1
	6/20/2014 17:45	6/20/2014 18:30	**45**	0.3	**3,263,510**	0.31	**0.20**	3	Atlas	979,053	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**7/1/2014 20:00**	7/1/2014 21:00	**60**	0.6	**995,349**	0.45	**0.39**	3	Atlas	597,209	1
	7/2/2014 16:30	7/2/2014 17:00	**30**	0.1	**1,426,697**	0.73	**0.09**	1	Atlas	142,670	1
	7/13/2014 22:45	7/14/2014 0:30	**105**	0.69	**3,586,135**	0.48	**0.32**	12	Atlas	2,474,433	1
	7/14/2014 19:15	7/14/2014 21:15	**120**	0.42	**1,741,707**	1.18	**0.30**	1	Atlas	731,517	1
	7/26/2014 21:45	7/26/2014 23:15	**90**	1.04	**1,687,997**	0.69	**0.48**	12	Atlas	1,755,517	1
	7/27/2014 7:30	7/27/2014 8:00	**30**	1.04	**7,233**	1.05	**0.48**	12	Atlas	7,523	1
	8/8/2014 6:15	8/8/2014 8:00	**105**	0.62	**1,706,399**	0.48	**0.31**	6	Atlas	1,057,967	1
	8/10/2014 3:45	8/10/2014 5:45	**120**	1.14	**1,827,042**	1.92	**0.98**	1	Atlas	2,082,827	1
	8/11/2014 14:30	8/11/2014 16:15	**105**	0.15	**8,565,788**	2.04	**0.10**	1	Atlas	1,284,868	1
	8/17/2014 10:00	8/17/2014 10:45	**45**	0.83	**242,388**	0.86	**0.32**	24	Atlas	201,182	1
	8/22/2014 19:30	8/22/2014 20:00	**30**	0.13	**775,749**	0.91	**0.07**	6	Atlas	100,847	1
	8/23/2014 16:30	8/23/2014 22:45	**375**	0.96	**5,555,665**	1.91	**0.46**	6	Atlas	5,333,439	1
	8/30/2014 15:15	8/30/2014 17:15	**120**	1.27	**3,789,806**	2.35	**0.80**	1	Atlas	4,813,054	1
	9/2/2014 8:15	9/2/2014 9:45	**90**	0.53	**1,493,428**	1.95	**0.30**	3	Atlas	791,517	1
	9/11/2014 0:30	9/11/2014 6:30	**360**	2.3	**7,232,992**	2.24	**3.14**	3	Atlas	16,635,881	1
	10/6/2014 10:00	10/6/2014 10:30	**30**	0.56	**312,729**	0.51	**0.18**	48	Atlas	175,128	1
	10/10/2014 2:00	10/10/2014 4:15	**135**	1.02	**3,270,170**	1.51	**0.46**	3	Atlas	3,335,573	1
	10/13/2014 4:30	10/13/2014 7:00	**150**	0.45	**4,091,540**	2.07	**0.29**	3	Atlas	1,841,193	1
	10/13/2014 23:15	10/14/2014 11:00	**705**	1.56	**3,875,428**	3.28	**0.70**	12	Atlas	6,045,667	1
	11/23/2014 17:30	11/23/2014 20:30	**180**	0.86	**2,462,889**	1.19	**0.39**	6	Atlas	2,118,084	1
	12/6/2014	12/6/2014 7:45	**465**	1.75	**5,070,697**	2.65	**0.56**	48	Atlas	8,873,720	1
	3/3/2015 23:45	3/4/2015 18:00	**1095**	1.65	**5,891,036**	1.4	**0.54**	48	Atlas	9,720,209	1
	3/7/2015 5:00	3/7/2015 5:00	**0**	Discharge						47,383	1
	3/10/2015 11:15	3/10/2015 18:00	**405**	0.95	**8,204,818**	2.6	**0.42**	12	Atlas	7,794,577	1
	3/13/2015 10:45	3/14/2015 8:45	**1320**	1.91	**5,451,622**	2.81	**0.72**	24	Atlas	10,412,598	1
	3/26/2015 4:30	3/26/2015 6:45	**135**	0.51	**1,725,826**	0.74	**0.25**	3	Atlas	880,171	1
	4/2/2015 10:45	4/3/2015 17:30	**1845**	4.8	**15,519,021**	4.93	**10.76**	6	Cloudburst	74,491,303	1
	4/7/2015 9:15	4/7/2015 18:45	**570**	1.03	**11,643,343**	5.83	**0.45**	1	Atlas	11,992,643	1
	4/9/2015 11:45	4/9/2015 12:45	**60**	0.25	**3,213,022**	5.91	**0.21**	1	Atlas	803,255	1
	4/10/2015 2:15	4/10/2015 4:15	**120**	0.28	**10,091,530**	3.61	**0.19**	1	Atlas	2,825,628	1
	4/13/2015 20:30	4/14/2015 7:15	**645**	0.87	**1,100,766**	2.19	**0.33**	24	Atlas	957,666	1
	4/19/2015 13:15	4/19/2015 19:15	**360**	0.83	**340,440**	1.76	**0.34**	12	Atlas	282,565	1
	5/16/2015 11:45	5/16/2015 14:30	**165**	0.94	**4,291,892**	1.01	**0.50**	3	Atlas	4,034,378	1
	6/17/2015 5:15	6/17/2015 7:15	**120**	0.66	**2,288,815**	0.67	**0.37**	3	Atlas	1,510,618	1
	6/18/2015 17:15	6/18/2015 18:45	**90**	0.83	**4,734,583**	1.38	**0.54**	1	Atlas	3,929,704	1
	6/20/2015 1:45	6/20/2015 9:15	**450**	1.14	**2,952,405**	2.72	**0.46**	12	Atlas	3,365,742	1
	6/26/2015 0:15	6/26/2015 1:30	**75**	0.85	**287,106**	2.17	**0.46**	6	Atlas	244,040	1
	6/26/2015 17:00	6/27/2015 0:45	**465**	0.89	**10,513,203**	3.13	**0.50**	1	Atlas	9,356,751	1
	6/29/2015 14:00	6/29/2015 14:30	**30**	0.29	**945,465**	2.03	**0.14**	1	Atlas	274,185	1
	7/2/2015 1:00	7/2/2015 3:00	**120**	0.99	**797,042**	2.91	**0.50**	3	Atlas	789,072	1
	7/2/2015 15:00	7/2/2015 22:15	**435**	0.99	**6,438,010**	3.08	**0.50**	3	Atlas	6,373,630	1
	7/3/2015 14:45	7/3/2015 16:45	**120**	1.51	**4,400,568**	3.71	**2.75**	1	Atlas	6,644,858	1
	7/7/2015 11:45	7/7/2015 14:00	**135**	1.07	**2,028,553**	3.48	**0.58**	3	Atlas	2,170,552	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO189	**7/9/2015 13:30**	7/9/2015 14:00	**30**	0.28	**1,126,009**	2.94	**0.14**	1	Atlas	315,283	1
	7/10/2015 16:00	7/10/2015 17:00	**60**	0.46	**1,077,256**	1.89	**0.23**	6	Atlas	495,538	1
	7/12/2015 5:45	7/12/2015 9:00	**195**	0.7	**8,514,834**	2.55	**0.47**	3	Atlas	5,960,384	1
	7/13/2015 14:45	7/13/2015 16:15	**90**	0.38	**4,271,069**	2.93	**0.33**	1	Atlas	1,623,006	1
	7/14/2015 4:30	7/14/2015 6:00	**90**	0.27	**7,843,247**	3.19	**0.18**	1	Atlas	2,117,677	1
	7/14/2015 18:45	7/14/2015 19:45	**60**	0.14	**7,537,197**	2.35	**0.11**	1	Atlas	1,055,208	1
	7/17/2015 22:45	7/18/2015 3:30	**285**	1.16	**14,933,967**	2.65	**0.77**	3	Atlas	17,323,402	1
	7/29/2015 17:15	7/29/2015 18:15	**60**	0.33	**2,214,975**	0.38	**0.28**	1	Atlas	730,942	1
	8/4/2015 19:00	8/4/2015 20:00	**60**	0.28	**5,639,610**	0.6	**0.23**	1	Atlas	1,579,091	1
	8/5/2015 15:00	8/5/2015 16:15	**75**	1.24	**1,278,065**	1.33	**0.63**	1	Atlas	1,584,801	1
	8/6/2015 8:30	8/6/2015 9:45	**75**	1.24	**657,633**	1.42	**0.63**	1	Atlas	815,465	1
	8/19/2015 16:15	8/19/2015 18:00	**105**	0.8	**4,660,069**	0.79	**0.50**	1	Atlas	3,728,055	1
	9/9/2015 11:15	9/9/2015 12:30	**75**	0.85	**3,554,108**	0.91	**0.74**	1	Atlas	3,020,991	1
	10/27/2015 17:15	10/28/2015 9:00	**945**	3.38	**4,923,121**	3.59	**1.47**	24	Cloudburst	16,640,148	1
	11/6/2015 3:15	11/6/2015 6:15	**180**	0.91	**6,792,360**	1.03	**0.56**	3	Atlas	6,181,048	1
	11/9/2015 21:00	11/9/2015 21:45	**45**	0.65	**33,084**	1.56	**0.29**	12	Atlas	21,505	1
	11/12/2015 1:00	11/12/2015 1:45	**45**	0.29	**987,074**	1.84	**0.17**	3	Atlas	286,252	1
	11/18/2015 9:15	11/18/2015 16:15	**420**	1.75	**7,177,932**	2.18	**0.90**	6	Atlas	12,561,380	1
	12/1/2015 0:15	12/1/2015 5:15	**300**	0.51	**1,424,588**	1.41	**0.23**	12	Atlas	726,540	1
	12/22/2015 0:15	12/22/2015 4:30	**255**	0.5	**234,423**	0.53	**0.19**	24	Atlas	117,211	1
	12/23/2015 19:00	12/24/2015 0:30	**330**	1.28	**13,427,519**	1.8	**0.81**	1	Atlas	17,187,225	1
	12/26/2015 13:45	12/26/2015 15:15	**90**	0.42	**1,633,623**	2.21	**0.19**	12	Atlas	686,122	1
	12/27/2015 10:15	12/27/2015 19:00	**525**	2.65	**7,648,299**	3.81	**0.86**	48	Atlas	20,267,993	1
	12/28/2015 6:15	12/28/2015 7:00	**45**	2.65	**60,836**	4.12	**0.86**	48	Atlas	161,216	1
	12/28/2015 16:15	12/28/2015 21:30	**315**	2.65	**903,857**	4.76	**0.86**	48	Atlas	2,395,222	1
	2/2/2016 19:30	2/3/2016 3:45	**495**	1.34	**13,325,471**	1.39	**0.67**	6	Atlas	17,856,132	1
	2/21/2016 6:00	2/21/2016 12:15	**375**	0.8	**4,351,983**	1	**0.37**	12	Atlas	3,481,586	1
	2/23/2016 23:30	2/24/2016 12:15	**765**	2.32	**10,168,388**	2.81	**0.91**	12	Atlas	23,590,661	1
	3/1/2016 12:30	3/1/2016 14:45	**135**	0.71	**1,454,812**	3.07	**0.38**	6	Atlas	1,032,917	1
	3/9/2016 17:00	3/9/2016 17:15	**15**	1.31	**6,563**	0.37	**0.43**	48	Atlas	8,597	1
	3/10/2016 14:45	3/10/2016 21:15	**390**	1.31	**2,671,453**	1.33	**0.43**	48	Atlas	3,499,604	1
	3/12/2016 20:45	3/13/2016 0:30	**225**	0.48	**1,271,382**	1.63	**0.18**	24	Atlas	610,263	1
	3/13/2016 10:00	3/13/2016 11:15	**75**	0.48	**750,491**	1.82	**0.18**	24	Atlas	360,236	1
	3/24/2016 17:15	3/24/2016 18:30	**75**	0.51	**2,941,985**	0.58	**0.39**	1	Atlas	1,500,412	1
	3/27/2016 21:15	3/27/2016 23:15	**120**	0.73	**3,802,411**	1.24	**0.51**	1	Atlas	2,775,760	1
	3/31/2016 5:00	3/31/2016 8:30	**210**	1.38	**976,876**	2.01	**0.52**	24	Atlas	1,348,088	1
	3/31/2016 22:15	4/1/2016 1:15	**180**	1.38	**1,279,748**	2.11	**0.52**	24	Atlas	1,766,053	1
	4/11/2016 16:30	4/11/2016 20:15	**225**	1.14	**3,259,596**	1.29	**0.52**	6	Atlas	3,715,940	1
	4/27/2016 21:00	4/27/2016 23:00	**120**	0.91	**3,059,258**	1.55	**0.43**	3	Atlas	2,783,925	1
	4/30/2016 11:30	4/30/2016 14:00	**150**	0.79	**1,202,523**	1.58	**0.30**	24	Atlas	949,993	1
	5/1/2016 16:45	5/1/2016 17:00	**15**	0.65	**15,159**	2.59	**0.43**	3	Atlas	9,854	1
	5/7/2016 20:15	5/7/2016 23:00	**165**	0.52	**946,417**	1.75	**0.27**	3	Atlas	492,137	1
	5/10/2016 14:30	5/10/2016 20:00	**330**	0.72	**2,038,091**	1.51	**0.29**	3	Atlas	1,467,426	1
	5/11/2016 22:45	5/11/2016 22:45	**0**	0.3	**8,910**	1.59	**0.14**	3	Atlas	2,673	1
	5/20/2016 14:15	5/20/2016 17:00	**165**	0.63	**4,873,151**	1.29	**0.35**	3	Atlas	3,070,085	1
	5/26/2016 14:00	5/26/2016 14:15	**15**	0.36	**23,517**	0.96	**0.24**	3	Atlas	8,466	1
	5/28/2016 15:00	5/28/2016 15:15	**15**	0.18	**261,009**	0.53	**0.10**	6	Atlas	46,982	1
	6/2/2016 15:15	6/2/2016 17:45	**150**	1.49	**7,259,855**	1.73	**2.75**	1	Atlas	10,817,184	1
	6/4/2016 17:00	6/4/2016 17:15	**15**	0.18	**232,797**	1.73	**0.07**	12	Atlas	41,903	1
	6/12/2016 18:15	6/12/2016 19:15	**60**	0.59	**1,408,642**	0.6	**0.50**	1	Atlas	831,099	1
	6/14/2016 16:15	6/14/2016 20:00	**225**	1.46	**8,987,266**	2.05	**0.87**	1	Atlas	13,121,409	1
	6/23/2016 16:00	6/23/2016 23:30	**450**	2.12	**7,440,344**	2.29	**1.11**	6	Cloudburst	15,773,528	1
Grand Total										**1,924,851,781**	**431**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**6/3/2006 11:00**	6/3/2006 11:15	**15**	Discharge						15	1
	6/7/2006 20:00	6/7/2006 20:45	**45**	Discharge						127,628	1
	6/11/2006 10:45	6/11/2006 17:00	**375**	Discharge						3,050	1
	6/19/2006 17:45	6/20/2006 7:15	**810**	Discharge						1,776,259	1
	6/23/2006 16:45	6/23/2006 18:00	**75**	Discharge						573,185	1
	6/29/2006 0:15	6/29/2006 2:00	**105**	Discharge						279,961	1
	6/30/2006 19:45	6/30/2006 19:45	**0**	Discharge						101	1
	7/4/2006 13:30	7/4/2006 19:15	**345**	Discharge						372,876	1
	7/5/2006 7:00	7/5/2006 8:15	**75**	Discharge						394,021	1
	7/11/2006 18:15	7/11/2006 19:15	**60**	Discharge						109,547	1
	7/12/2006 4:30	7/12/2006 12:15	**465**	Discharge						15,883	1
	7/13/2006 4:15	7/13/2006 4:45	**30**	Discharge						72,734	1
	7/14/2006 18:45	7/14/2006 21:00	**135**	Discharge						1,290,947	1
	7/21/2006 16:15	7/21/2006 19:00	**165**	Discharge						526,325	1
	7/27/2006 17:30	7/27/2006 17:45	**15**	Discharge						17,579	1
	8/1/2006 9:45	8/1/2006 9:45	**0**	Discharge						903	1
	8/3/2006 14:45	8/4/2006 0:15	**570**	Discharge						587	1
	8/4/2006 12:00	8/4/2006 16:15	**255**	Discharge						866	1
	8/5/2006 1:45	8/6/2006 23:30	**2745**	Discharge						2,334	1
	8/7/2006 10:30	8/7/2006 12:00	**90**	Discharge						416	1
	8/8/2006 8:30	8/8/2006 11:00	**150**	Discharge						6,113	1
	8/9/2006 10:30	8/9/2006 12:00	**90**	Discharge						1,169,828	1
	8/10/2006 15:00	8/10/2006 19:15	**255**	Discharge						2,051,953	1
	8/19/2006 8:30	8/19/2006 11:00	**150**	Discharge						484,188	1
	8/20/2006 5:15	8/20/2006 6:45	**90**	Discharge						565,569	1
	8/22/2006 9:15	8/22/2006 15:30	**375**	Discharge						5,845	1
	8/24/2006 17:30	8/24/2006 17:45	**15**	Discharge						641	1
	8/25/2006 17:45	8/25/2006 17:45	**0**	Discharge						22	1
	8/26/2006 16:45	8/26/2006 18:00	**75**	Discharge						603	1
	8/28/2006 2:00	8/28/2006 9:15	**435**	Discharge						983,214	1
	8/28/2006 22:45	8/28/2006 23:30	**45**	Discharge						111,152	1
	9/11/2006 4:30	9/11/2006 12:00	**450**	Discharge						1,727,716	1
	9/12/2006 11:45	9/12/2006 17:15	**330**	Discharge						388,021	1
	9/18/2006 16:15	9/18/2006 17:00	**45**	Discharge						15,950	1
	9/22/2006 6:15	9/22/2006 9:30	**195**	Discharge						525,158	1
	9/22/2006 20:30	9/23/2006 15:30	**1140**	Discharge						9,736,181	1
	9/27/2006 19:45	9/28/2006 12:00	**975**	Discharge						997,019	1
	10/16/2006 15:45	10/17/2006 6:45	**900**	Discharge						1,365,516	1
	10/19/2006 21:15	10/19/2006 22:15	**60**	Discharge						82,110	1
	10/27/2006 6:30	10/28/2006 0:30	**1080**	Discharge						1,532,207	1
	11/1/2006 6:15	11/1/2006 6:15	**0**	Discharge						61	1
	11/7/2006 1:45	11/7/2006 7:30	**345**	Discharge						78,643	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**11/15/2006 11:45**	11/15/2006 15:00	**195**	Discharge						541,658	1
	11/16/2006 2:45	11/16/2006 4:30	**105**	Discharge						335,019	1
	12/12/2006 13:15	12/12/2006 16:45	**210**	Discharge						27,440	1
	12/22/2006 5:15	12/22/2006 5:45	**30**	Discharge						106,653	1
	12/25/2006 12:00	12/25/2006 23:45	**705**	Discharge						237,995	1
	12/31/2006 6:45	12/31/2006 7:15	**30**	Discharge						124,178	1
	12/31/2006 15:45	12/31/2006 16:00	**15**	Discharge						20,341	1
	1/7/2007 12:00	1/7/2007 13:30	**90**	Discharge						228,083	1
	1/13/2007 6:45	1/14/2007 7:30	**1485**	Discharge						299,179	1
	1/15/2007 6:00	1/15/2007 13:00	**420**	Discharge						51,319	1
	1/21/2007 6:45	1/21/2007 10:45	**240**	Discharge						5,672	1
	2/12/2007 19:15	2/13/2007 19:00	**1425**	Discharge						353,753	1
	2/24/2007 16:45	2/25/2007 3:15	**630**	Discharge						606,290	1
	4/3/2007 17:15	4/3/2007 20:45	**210**	Discharge						871,220	1
	4/11/2007 8:30	4/11/2007 17:45	**555**	Discharge						377,645	1
	4/14/2007 1:30	4/14/2007 20:30	**1140**	Discharge						592,565	1
	4/26/2007 4:15	4/26/2007 16:15	**720**	Discharge						297,615	1
	5/4/2007 9:15	5/4/2007 19:30	**615**	Discharge						646,587	1
	5/15/2007 20:30	5/15/2007 22:00	**90**	Discharge						115,145	1
	5/27/2007 21:00	5/27/2007 21:00	**0**	Discharge						27,897	1
	6/2/2007 15:15	6/2/2007 16:00	**45**	Discharge						908,606	1
	6/5/2007 14:45	6/5/2007 15:30	**45**	Discharge						282,221	1
	6/19/2007 14:15	6/19/2007 14:45	**30**	Discharge						375,225	1
	6/23/2007 12:15	6/23/2007 12:45	**30**	Discharge						159,355	1
	6/24/2007 12:00	6/24/2007 12:30	**30**	Discharge						27,826	1
	6/28/2007 17:30	6/28/2007 19:45	**135**	Discharge						484,062	1
	7/4/2007 23:00	7/5/2007 5:00	**360**	Discharge						1,491,184	1
	7/18/2007 21:00	7/18/2007 21:00	**0**	Discharge						583	1
	7/19/2007 16:00	7/19/2007 22:00	**360**	Discharge						580,125	1
	7/27/2007 6:00	7/27/2007 6:00	**0**	Discharge						583	1
	7/27/2007 18:00	7/28/2007 1:00	**420**	Discharge						511,167	1
	8/4/2007 23:00	8/5/2007	**60**	Discharge						52,958	1
	8/9/2007	8/9/2007 4:00	**240**	Discharge						1,708	1
	8/9/2007 19:00	8/9/2007 22:00	**180**	Discharge						750	1
	8/16/2007 16:00	8/16/2007 17:00	**60**	Discharge						545,958	1
	8/21/2007 5:00	8/21/2007 8:00	**180**	Discharge						604,625	1
	8/25/2007 14:00	8/25/2007 15:00	**60**	Discharge						46,875	1
	9/9/2007 10:00	9/9/2007 11:00	**60**	Discharge						71,875	1
	9/26/2007 14:00	9/26/2007 14:00	**0**	Discharge						370,583	1
	9/27/2007 4:00	9/27/2007 6:00	**120**	Discharge						1,624,708	1
	9/27/2007 21:00	9/27/2007 21:00	**0**	Discharge						208	1
	9/28/2007 8:00	9/28/2007 8:00	**0**	Discharge						1,292	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**10/15/2007 14:00**	10/15/2007 19:00	**300**	Discharge						188,625	1
	10/17/2007 8:00	10/17/2007 12:00	**240**	Discharge						389,500	1
	10/18/2007	10/18/2007 6:00	**360**	Discharge						1,480,167	1
	10/18/2007 18:00	10/18/2007 18:00	**0**	Discharge						333	1
	10/21/2007 15:00	10/23/2007 2:00	**2100**	Discharge						8,163,917	1
	10/31/2007 19:00	10/31/2007 21:00	**120**	Discharge						1,117,542	1
	11/4/2007 5:00	11/4/2007 9:00	**240**	Discharge						346,833	1
	11/11/2007 12:00	11/11/2007 13:00	**60**	Discharge						20,667	1
	11/19/2007 9:00	11/19/2007 19:00	**600**	Discharge						171,792	1
	11/23/2007 10:00	11/24/2007 6:00	**1200**	Discharge						368,917	1
	11/30/2007 2:00	11/30/2007 5:00	**180**	Discharge						864,667	1
	12/6/2007 11:00	12/6/2007 17:00	**360**	Discharge						2,835,875	1
	12/9/2007 3:00	12/9/2007 3:00	**0**	Discharge						917	1
	12/10/2007 2:00	12/10/2007 7:00	**300**	Discharge						583,833	1
	12/12/2007 5:00	12/12/2007 13:00	**480**	Discharge						3,624,792	1
	12/17/2007 12:00	12/17/2007 15:00	**180**	Discharge						209,542	1
	12/19/2007 14:00	12/19/2007 14:00	**0**	Discharge						26,750	1
	12/24/2007 17:00	12/24/2007 21:00	**240**	Discharge						45,083	1
	1/8/2008 19:00	1/8/2008 20:00	**60**	Discharge						481,542	1
	1/10/2008 12:00	1/10/2008 17:00	**300**	Discharge						853,333	1
	1/29/2008 2:00	1/29/2008 22:00	**1200**	Discharge						546,833	1
	1/31/2008 22:00	2/1/2008 3:00	**300**	Discharge						36,042	1
	2/4/2008 7:00	2/4/2008 7:00	**0**	Discharge						45,833	1
	2/5/2008 8:00	2/5/2008 9:00	**60**	Discharge						637,542	1
	2/5/2008 23:00	2/6/2008 3:00	**240**	Discharge						1,539,417	1
	2/12/2008 16:00	2/12/2008 16:00	**0**	Discharge						42	1
	2/17/2008 10:00	2/17/2008 12:00	**120**	Discharge						8,708	1
	5/31/2008 12:00	5/31/2008 17:00	**300**	Discharge						733,542	1
	6/10/2008 18:00	6/10/2008 18:00	**0**	Discharge						7,458	1
	6/16/2008 12:00	6/16/2008 12:00	**0**	Discharge						202,875	1
	6/23/2008 3:00	6/23/2008 4:00	**60**	Discharge						978,292	1
	6/24/2008 8:00	6/24/2008 9:00	**60**	Discharge						453,125	1
	7/4/2008 4:00	7/4/2008 4:00	**0**	0.61	**282,172**	0.05	**0.23**	24	Atlas	172,125	1
	7/8/2008 15:00	7/8/2008 16:00	**60**	Discharge						8,375	1
	7/12/2008 21:00	7/12/2008 22:00	**60**	Discharge						87,125	1
	7/20/2008 20:00	7/20/2008 20:00	**0**	0.2	**1,756,667**	0.02	**0.16**	1	Atlas	351,333	1
	7/28/2008 8:00	7/28/2008 8:00	**0**	0.3	**237,083**	0.27	**0.19**	3	Atlas	71,125	1
	7/30/2008 8:00	7/30/2008 9:00	**60**	1.09	**346,560**	0.49	**0.42**	24	Atlas	377,750	1
	7/31/2008	7/31/2008 1:00	**60**	1.09	**102,599**	1	**0.42**	24	Atlas	111,833	1
	8/6/2008	8/6/2008	**0**	0.28	**149**	1.29	**0.10**	24	Atlas	42	1
	8/8/2008 1:00	8/8/2008 3:00	**120**	Discharge						1,925,708	1
	10/7/2008 14:30	10/8/2008 3:45	**795**	1.2	**488,967**	1.16	**0.46**	24	Atlas	586,760	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**10/24/2008 3:00**	10/24/2008 18:30	**930**	1.27	**416,010**	1.28	**0.58**	12	Atlas	528,333	1
	10/26/2008 9:45	10/26/2008 9:45	**0**	Discharge						146	1
	11/12/2008 22:15	11/13/2008 5:30	**435**	0.47	**556,427**	0.6	**0.20**	6	Atlas	261,521	1
	11/14/2008 23:30	11/15/2008 10:00	**630**	1.6	**21,022**	1.78	**0.64**	3	Atlas	33,635	1
	11/24/2008 3:15	11/24/2008 7:15	**240**	0.61	**70,458**	0.58	**0.29**	6	Atlas	42,979	1
	12/4/2008	12/4/2008 0:15	**15**	0.28	**35,231**	0.43	**0.14**	6	Atlas	9,865	1
	12/9/2008 11:30	12/9/2008 16:30	**300**	1.19	**428,370**	1.36	**0.57**	6	Atlas	509,760	1
	12/19/2008 6:30	12/19/2008 8:00	**90**	0.51	**496,712**	0.85	**0.31**	3	Atlas	253,323	1
	12/23/2008 21:15	12/24/2008 14:00	**1005**	2.08	**591,767**	2.7	**0.68**	48	Atlas	1,230,875	1
	12/28/2008 0:15	12/28/2008 2:15	**120**	0.64	**751,595**	2.72	**0.42**	3	Atlas	481,021	1
	1/3/2009 16:15	1/3/2009 16:30	**15**	0.19	**76,645**	0.75	**0.10**	1	Atlas	14,563	1
	1/10/2009 6:45	1/10/2009 8:15	**90**	0.43	**926,187**	0.98	**0.27**	3	Atlas	398,260	1
	1/28/2009 2:00	1/28/2009 7:45	**345**	1.74	**109,926**	1.76	**0.57**	24	Atlas	191,271	1
	1/28/2009 18:00	1/28/2009 18:00	**0**	Discharge						83	1
	2/10/2009 5:00	2/10/2009 5:30	**30**	0.94	**9,253**	0.28	**0.31**	48	Atlas	8,698	1
	2/10/2009 18:45	2/10/2009 19:15	**30**	0.94	**37,456**	0.72	**0.31**	48	Atlas	35,208	1
	2/11/2009 4:30	2/11/2009 5:00	**30**	0.94	**113,664**	0.94	**0.31**	48	Atlas	106,844	1
	2/11/2009 13:30	2/11/2009 14:15	**45**	0.19	**2,730,647**	1.11	**0.14**	1	Atlas	518,823	1
	3/25/2009 5:15	3/25/2009 7:45	**150**	0.38	**19,874**	0.69	**0.17**	12	Atlas	7,552	1
	3/28/2009 20:00	3/28/2009 21:00	**60**	0.72	**832,075**	1.27	**0.43**	1	Atlas	599,094	1
	4/2/2009 18:45	4/3/2009 2:30	**465**	1.03	**995,955**	1.79	**0.49**	6	Atlas	1,025,833	1
	4/5/2009 17:15	4/5/2009 19:00	**105**	0.33	**629,451**	1.41	**0.20**	3	Atlas	207,719	1
	4/10/2009 20:00	4/10/2009 20:45	**45**	0.4	**88,854**	0.77	**0.17**	12	Atlas	35,542	1
	4/13/2009 14:30	4/13/2009 22:00	**450**	0.85	**2,070,956**	1.27	**0.35**	12	Atlas	1,760,312	1
	4/19/2009 7:15	4/19/2009 15:15	**480**	1.39	**894,020**	2.09	**0.56**	12	Atlas	1,242,688	1
	4/19/2009 23:30	4/19/2009 23:45	**15**	1.39	**17,379**	2.19	**0.56**	12	Atlas	24,156	1
	4/28/2009 8:15	4/28/2009 9:15	**60**	0.33	**212,058**	0.32	**0.20**	3	Atlas	69,979	1
	4/30/2009 8:30	4/30/2009 8:45	**15**	0.11	**127,936**	0.43	**0.07**	3	Atlas	14,073	1
	5/1/2009 1:45	5/1/2009 1:45	**0**	0.04	**173,438**	0.49	**0.02**	6	Atlas	6,938	1
	5/1/2009 22:45	5/1/2009 23:15	**30**	Discharge						122,677	1
	5/6/2009 11:00	5/6/2009 12:00	**60**	Discharge						276,542	1
	5/8/2009 3:00	5/8/2009 4:00	**60**	Discharge						757,583	1
	5/8/2009 14:00	5/8/2009 17:30	**210**	Discharge						2,079,208	1
	5/14/2009 5:15	5/14/2009 6:30	**75**	Discharge						159,219	1
	5/16/2009 4:30	5/16/2009 5:15	**45**	Discharge						93,802	1
	5/27/2009 13:00	5/27/2009 13:00	**0**	Discharge						8,500	1
	6/26/2009 2:30	6/26/2009 5:30	**180**	2.13	**1,465,449**	3.63	**2.29**	3	Atlas	3,121,406	1
	6/26/2009 15:15	6/26/2009 15:45	**30**	0.14	**2,248,958**	3.78	**0.12**	1	Atlas	314,854	1
	7/12/2009 12:00	7/12/2009 12:30	**30**	Discharge						64,792	1
	7/15/2009 10:15	7/15/2009 11:15	**60**	0.43	**801,599**	0.45	**0.27**	3	Atlas	344,688	1
	7/17/2009 3:45	7/17/2009 4:00	**15**	0.32	**120,768**	0.7	**0.21**	3	Atlas	38,646	1
	7/22/2009 6:15	7/22/2009 12:15	**360**	1.56	**780,248**	2.28	**0.68**	12	Atlas	1,217,188	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**7/25/2009 14:45**	7/25/2009 21:45	**420**	1.12	**580,915**	2.68	**0.50**	1	Atlas	650,625	1
	7/29/2009 3:00	7/29/2009 6:30	**210**	1.07	**999,416**	3.5	**0.46**	6	Atlas	1,069,375	1
	7/30/2009 14:15	7/30/2009 23:00	**525**	1.56	**873,197**	3.6	**0.64**	12	Atlas	1,362,188	1
	8/3/2009 22:00	8/3/2009 22:30	**30**	Discharge						60,729	1
	8/4/2009 7:30	8/4/2009 14:45	**435**	6.5	**1,282,837**	8.9				8,338,438	1
	8/10/2009 18:30	8/10/2009 20:45	**135**	1.07	**1,642,621**	7.53	**0.69**	3	Atlas	1,757,604	1
	8/20/2009 8:30	8/20/2009 8:30	**0**	0.19	**6,031**	0.15	**0.13**	3	Atlas	1,146	1
	8/28/2009 23:00	8/28/2009 23:00	**0**	Discharge						402	1
	9/6/2009 8:30	9/6/2009 8:30	**0**	0.13	**2,572**	0.17	**0.07**	3	Atlas	334	1
	9/8/2009 0:15	9/13/2009 10:00	**7785**	0.33	**27,137**	0.51	**0.13**	24	Atlas	8,955	1
	9/14/2009 3:30	9/14/2009 9:15	**345**	Discharge						86	1
	9/20/2009 5:30	9/20/2009 22:00	**990**	4.38	**1,659,140**	4.18	**9.35**	24	Cloudburst	7,267,033	1
	9/22/2009 17:00	9/22/2009 23:00	**360**	0.34	**32,021**	4.67	**0.17**	6	Atlas	10,887	1
	9/26/2009 19:15	9/26/2009 19:45	**30**	Discharge						6,964	1
	1/20/2010 9:30	1/20/2010 12:15	**165**	1.22	**19,879**	0.67	**0.40**	48	Atlas	24,252	1
	1/20/2010 23:30	1/21/2010	**30**	1.22	**51,772**	0.78	**0.40**	48	Atlas	63,162	1
	1/21/2010 10:30	1/21/2010 18:45	**495**	1.22	**314,233**	1.41	**0.40**	48	Atlas	383,365	1
	1/24/2010 3:30	1/24/2010 5:00	**90**	0.97	**494,074**	1.82	**0.37**	24	Atlas	479,252	1
	1/24/2010 21:15	1/24/2010 21:45	**30**	0.97	**22,969**	2.17	**0.37**	24	Atlas	22,280	1
	2/5/2010 12:00	2/5/2010 17:00	**300**	1.19	**59,440**	0.75	**0.44**	12	Atlas	70,733	1
	3/12/2010 13:15	3/12/2010 14:15	**60**	0.25	**69,219**	0.24	**0.15**	3	Atlas	17,305	1
	3/21/2010 23:00	3/22/2010 1:15	**135**	0.62	**115,872**	0.62	**0.28**	12	Atlas	71,840	1
	3/25/2010 21:00	3/25/2010 21:15	**15**	0.27	**22,969**	0.88	**0.10**	24	Atlas	6,202	1
	4/7/2010 22:45	4/8/2010 5:45	**420**	1.42	**457,603**	1.48	**0.65**	12	Atlas	649,797	1
	4/24/2010 14:00	4/24/2010 20:00	**360**	1.6	**1,073,099**	1.81	**0.75**	6	Atlas	1,716,959	1
	5/1/2010 4:15	5/1/2010 8:30	**255**	4.05	**397,320**	3.05	**3.24**	48	Atlas	1,609,146	1
	5/2/2010 1:00	5/2/2010 15:45	**885**	4.05	**783,309**	4.49	**3.24**	48	Atlas	3,172,400	1
	5/7/2010 23:00	5/7/2010 23:15	**15**	0.24	**187,287**	4.32	**0.20**	1	Atlas	44,949	1
	5/12/2010 9:30	5/12/2010 10:15	**45**	0.59	**1,145,921**	0.91	**0.43**	1	Atlas	676,093	1
	5/13/2010 12:15	5/13/2010 12:30	**15**	0.23	**238,100**	1.15	**0.20**	1	Atlas	54,763	1
	5/17/2010 17:30	5/17/2010 19:45	**135**	0.38	**740,936**	1.79	**0.26**	1	Atlas	281,556	1
	5/21/2010 19:30	5/21/2010 20:15	**45**	1.25	**451,842**	2.14	**1.04**	1	Atlas	564,802	1
	5/30/2010 20:15	5/30/2010 20:30	**15**	0.43	**139,247**	0.47	**0.23**	6	Atlas	59,876	1
	6/8/2010 22:45	6/9/2010 12:15	**810**	Discharge						2,018,609	1
	6/12/2010 1:15	6/12/2010 1:45	**30**	0.18	**1,636,703**	2.2	**0.10**	6	Atlas	294,606	1
	6/13/2010 22:15	6/14/2010 6:15	**480**	0.59	**1,458,362**	2.78	**0.37**	1	Atlas	860,434	1
	6/19/2010 5:00	6/19/2010 8:00	**180**	0.96	**988,443**	2.22	**0.57**	3	Atlas	948,905	1
	6/28/2010 1:15	6/28/2010 2:30	**75**	0.32	**1,240,696**	0.3	**0.22**	1	Atlas	397,023	1
	7/3/2010 20:15	7/3/2010 20:15	**0**	Discharge						21	1
	7/4/2010 5:30	7/4/2010 7:00	**90**	Discharge						43	1
	7/7/2010 20:00	7/7/2010 20:45	**45**	Discharge						174	1
	7/8/2010 20:00	7/8/2010 23:00	**180**	0.34	**1,532**	0.12	**0.13**	24	Atlas	521	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**7/9/2010 8:15**	7/9/2010 8:45	**30**	0.34	**227,311**	0.28	**0.13**	24	Atlas	77,286	1
	7/9/2010 20:00	7/10/2010 7:00	**660**	0.34	**1,383**	0.34	**0.13**	24	Atlas	470	1
	7/10/2010 20:00	7/10/2010 20:00	**0**	Discharge						23	1
	7/11/2010 4:15	7/11/2010 7:00	**165**	Discharge						431	1
	7/12/2010 5:00	7/12/2010 7:00	**120**	Discharge						471	1
	7/12/2010 20:00	7/13/2010 9:15	**795**	Discharge						694,979	1
	7/13/2010 22:45	7/14/2010 6:45	**480**	Discharge						49	1
	7/14/2010 22:45	7/15/2010 6:45	**480**	Discharge						29	1
	7/16/2010 4:45	7/16/2010 7:00	**135**	0.01	**8,227**	1.69	**0.01**	1	Atlas	82	1
	7/17/2010 4:15	7/17/2010 7:00	**165**	0.05	**4,808**	1.61	**0.03**	3	Atlas	240	1
	7/17/2010 19:45	7/18/2010 7:00	**675**	Discharge						509	1
	7/18/2010 22:15	7/19/2010 6:15	**480**	0.02	**14,712**	1.72	**0.01**	3	Atlas	294	1
	7/19/2010 18:30	7/20/2010 5:45	**675**	0.13	**9,586,573**	2.38	**0.11**	1	Atlas	1,246,254	1
	7/21/2010 5:45	7/21/2010 6:15	**30**	0.53	**494,509**	1.47	**0.43**	1	Atlas	262,090	1
	7/23/2010 20:45	7/24/2010 7:00	**615**	Discharge						112	1
	7/24/2010 19:45	7/25/2010 7:00	**675**	Discharge						410	1
	7/25/2010 19:45	7/26/2010 6:45	**660**	Discharge						355	1
	7/27/2010 6:15	7/27/2010 7:00	**45**	Discharge						66	1
	7/27/2010 16:00	7/28/2010 7:00	**900**	0.49	**184,195**	1.16	**0.32**	1	Atlas	90,255	1
	7/28/2010 19:45	7/29/2010 7:00	**675**	0.12	**6,268**	0.74	**0.07**	6	Atlas	752	1
	7/31/2010 4:30	7/31/2010 6:15	**105**	0.43	**709,623**	1.04	**0.23**	3	Atlas	305,138	1
	8/1/2010 20:00	8/1/2010 20:00	**0**	Discharge						36	1
	8/2/2010 19:45	8/3/2010 7:00	**675**	Discharge						495	1
	8/3/2010 19:45	8/4/2010 7:00	**675**	Discharge						1,172	1
	8/4/2010 19:30	8/5/2010 9:15	**825**	Discharge						68,857	1
	8/5/2010 21:45	8/6/2010 6:15	**510**	Discharge						534	1
	8/6/2010 19:30	8/6/2010 21:00	**90**	Discharge						223	1
	8/7/2010 19:30	8/7/2010 23:00	**210**	Discharge						599	1
	8/9/2010 19:30	8/10/2010 7:00	**690**	Discharge						1,323	1
	8/10/2010 19:30	8/11/2010 7:00	**690**	0.01	**225,593**	0.28	**0.01**	1	Atlas	2,256	1
	8/11/2010 19:30	8/12/2010 7:00	**690**	0.14	**16,529**	0.42	**0.11**	1	Atlas	2,314	1
	8/12/2010 19:45	8/13/2010 7:00	**675**	0.03	**71,736**	0.18	**0.03**	1	Atlas	2,152	1
	8/14/2010 4:15	8/14/2010 7:00	**165**	Discharge						1,052	1
	8/14/2010 16:15	8/14/2010 16:45	**30**	0.71	**1,147,949**	0.95	**0.58**	1	Atlas	815,044	1
	8/15/2010 19:30	8/15/2010 21:30	**120**	Discharge						7	1
	8/20/2010 20:00	8/21/2010 8:30	**750**	Discharge						112,008	1
	8/21/2010 19:15	8/21/2010 23:00	**225**	Discharge						379	1
	8/28/2010 21:30	8/29/2010 7:00	**570**	Discharge						187	1
	8/29/2010 20:15	8/30/2010 7:00	**645**	Discharge						611	1
	8/30/2010 19:00	8/30/2010 23:00	**240**	Discharge						382	1
	8/31/2010 19:00	9/1/2010 7:00	**720**	Discharge						924	1
	9/1/2010 21:45	9/2/2010 7:00	**555**	Discharge						961	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**9/2/2010 19:00**	9/3/2010 7:00	**720**	Discharge						1,979	1
	9/7/2010 6:30	9/7/2010 7:00	**30**	Discharge						116	1
	9/7/2010 18:45	9/8/2010 7:00	**735**	0.01	**86,605**	0.05	**0.01**	1	Atlas	866	1
	9/8/2010 18:45	9/8/2010 22:45	**240**	Discharge						879	1
	9/11/2010 5:00	9/11/2010 7:15	**135**	0.07	**19,108**	0.15	**0.05**	3	Atlas	1,338	1
	9/11/2010 18:45	9/12/2010 4:15	**570**	Discharge						1,413	1
	9/13/2010 18:45	9/14/2010 7:00	**735**	Discharge						1,755	1
	9/14/2010 18:45	9/14/2010 22:45	**240**	Discharge						888	1
	9/15/2010 18:45	9/15/2010 21:45	**180**	Discharge						446	1
	9/16/2010 20:00	9/19/2010 10:30	**3750**	Discharge						3,761	1
	9/19/2010 20:00	9/21/2010 6:30	**2070**	Discharge						1,831	1
	9/21/2010 19:30	9/22/2010 7:00	**690**	Discharge						497	1
	9/22/2010 16:15	9/23/2010 6:45	**870**	Discharge						1,322	1
	9/23/2010 18:30	9/24/2010 7:00	**750**	Discharge						1,036	1
	9/24/2010 18:30	9/24/2010 19:45	**75**	0.04	**6,320**	0.04	**0.03**	1	Atlas	253	1
	9/25/2010 4:45	9/25/2010 7:00	**135**	Discharge						193	1
	10/13/2010 18:00	10/13/2010 22:45	**285**	0.58	**398,236**	0.58	**0.37**	3	Atlas	230,977	1
	10/26/2010 10:45	10/26/2010 14:30	**225**	0.6	**516,684**	0.54	**0.33**	6	Atlas	310,010	1
	11/16/2010 12:00	11/16/2010 17:45	**345**	0.86	**434,877**	0.82	**0.39**	12	Atlas	373,994	1
	11/23/2010 3:45	11/23/2010 4:15	**30**	0.37	**469,461**	1.26	**0.22**	3	Atlas	173,701	1
	11/24/2010 12:30	11/24/2010 21:00	**510**	0.79	**388,628**	1.23	**0.38**	3	Atlas	307,016	1
	11/25/2010 8:30	11/25/2010 23:00	**870**	2.45	**909,146**	3.47	**0.93**	24	Atlas	2,227,407	1
	11/29/2010 21:15	11/30/2010 4:00	**405**	1.96	**775,266**	5.09	**0.75**	24	Atlas	1,519,521	1
	12/12/2010 1:15	12/12/2010 5:00	**225**	0.36	**3,076**	0.4	**0.12**	12	Atlas	1,107	1
	12/30/2010 2:45	12/30/2010 7:45	**300**	0.54	**42,678**	0.6	**0.24**	12	Atlas	23,046	1
	1/1/2011 0:45	1/1/2011 6:15	**330**	0.66	**189,412**	1.13	**0.29**	12	Atlas	125,012	1
	2/1/2011 16:15	2/1/2011 19:45	**210**	0.83	**847,584**	0.72	**0.30**	6	Atlas	703,495	1
	2/21/2011 18:15	2/21/2011 18:15	**0**	0.19	**4,323**	0.19	**0.11**	3	Atlas	821	1
	2/24/2011 16:30	2/25/2011 1:45	**555**	2.5	**1,360,397**	2.72	**0.96**	24	Atlas	3,400,992	1
	2/28/2011 5:00	2/28/2011 11:30	**390**	1.12	**292,883**	4.26	**0.52**	6	Atlas	328,029	1
	3/5/2011 4:30	3/5/2011 8:00	**210**	0.9	**314,860**	2.36	**0.31**	24	Atlas	283,374	1
	3/8/2011 20:15	3/9/2011 17:00	**1245**	3.14	**937,195**	4.03	**2.04**	24	Cloudburst	2,942,792	1
	3/14/2011 4:15	3/14/2011 4:15	**0**	0.73	**3,631**	3.39	**0.25**	12	Atlas	2,651	1
	3/18/2011 21:15	3/18/2011 21:45	**30**	0.14	**51,643**	0.85	**0.08**	1	Atlas	7,230	1
	4/1/2011 20:45	4/1/2011 21:00	**15**	0.16	**23,541**	0.32	**0.10**	1	Atlas	3,766	1
	4/4/2011 13:30	4/4/2011 16:45	**195**	0.74	**529,270**	0.92	**0.38**	6	Atlas	391,660	1
	4/9/2011 10:30	4/9/2011 11:45	**75**	0.4	**574,348**	1.17	**0.26**	1	Atlas	229,739	1
	4/11/2011 12:00	4/12/2011 5:45	**1065**	3.16	**894,920**	4.25	**2.28**	24	Cloudburst	2,827,948	1
	4/15/2011 13:00	4/15/2011 13:15	**15**	0.16	**25,460**	3.72	**0.11**	3	Atlas	4,074	1
	4/20/2011 0:15	4/20/2011 4:45	**270**	0.81	**458,079**	1.23	**0.44**	6	Atlas	371,044	1
	4/22/2011 16:30	4/23/2011 18:45	**1575**	5	**1,037,119**	4.81	**4.41**	48	Atlas	5,185,595	1
	4/24/2011 8:00	4/24/2011 20:00	**720**	5	**69,777**	5.56	**4.41**	48	Atlas	348,886	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**4/25/2011 5:15**	4/26/2011	**1125**	5	**65,968**	5.91	**4.41**	48	Atlas	329,840	1
	4/27/2011 1:00	4/27/2011 18:30	**1050**	2.42	**1,665,142**	8.13	**0.93**	24	Atlas	4,029,644	1
	4/28/2011 18:45	4/28/2011 19:30	**45**	0.15	**1,318,482**	7.62	**0.10**	3	Atlas	197,772	1
	5/1/2011 4:15	5/1/2011 6:15	**120**	0.77	**465,993**	4.56				358,815	1
	5/1/2011 22:30	5/2/2011 5:30	**420**	2.98	**149,564**	4.5	**0.97**	48	Atlas	445,700	1
	5/2/2011 16:45	5/3/2011 9:00	**975**	2.98	**321,371**	6.37	**0.97**	48	Atlas	957,685	1
	5/8/2011 0:45	5/8/2011 1:45	**60**	0.28	**1,817,830**	3.96	**0.17**	1	Atlas	508,992	1
	5/14/2011 14:45	5/14/2011 15:30	**45**	0.29	**786,291**	0.59	**0.23**	1	Atlas	228,024	1
	5/21/2011 18:15	5/21/2011 19:15	**60**	0.37	**877,752**	0.76	**0.25**	3	Atlas	324,768	1
	5/23/2011 4:00	5/23/2011 4:45	**45**	0.55	**252,965**	1.05	**0.36**	1	Atlas	139,131	1
	5/23/2011 17:45	5/23/2011 19:15	**90**	0.86	**1,077,050**	1.79	**0.54**	3	Atlas	926,263	1
	5/25/2011 22:45	5/26/2011 1:30	**165**	1.31	**750,212**	2.71	**0.53**	3	Atlas	982,777	1
	5/26/2011 11:15	5/26/2011 11:30	**15**	1.31	**243,415**	2.91	**0.53**	3	Atlas	318,874	1
	6/11/2011 4:30	6/11/2011 4:45	**15**	0.23	**536,461**	0.27	**0.18**	1	Atlas	123,386	1
	6/15/2011 9:30	6/15/2011 10:15	**45**	0.98	**1,630,458**	1.28	**0.59**	3	Atlas	1,597,849	1
	6/18/2011 7:15	6/18/2011 8:15	**60**	0.63	**366,943**	1.68	**0.39**	3	Atlas	231,174	1
	6/19/2011 7:45	6/19/2011 8:30	**45**	0.51	**439,989**	2.12	**0.31**	3	Atlas	224,394	1
	6/20/2011 1:30	6/20/2011 1:45	**15**	0.64	**594,680**	2.81	**0.55**	1	Atlas	380,595	1
	6/22/2011 19:45	6/23/2011 2:30	**405**	3.51	**1,087,574**	5.58	**12.45**	3	Atlas	3,817,384	1
	7/12/2011 17:00	7/12/2011 17:00	**0**	0.23	**125,750**	0.95	**0.12**	6	Atlas	28,922	1
	7/19/2011 22:45	7/19/2011 23:45	**60**	1.5	**1,357,373**	1.5	**2.56**	1	Atlas	2,036,060	1
	8/7/2011 3:00	8/7/2011 5:00	**120**	1.54	**987,184**	1.26	**0.88**	3	Atlas	1,520,263	1
	8/8/2011 13:45	8/8/2011 15:00	**75**	0.41	**540,525**	1.97	**0.27**	3	Atlas	221,615	1
	8/13/2011 17:15	8/13/2011 17:15	**0**	0.83	**85,585**	2.81	**0.66**	1	Atlas	71,035	1
	9/4/2011 20:30	9/4/2011 20:30	**0**	0.19	**153,043**	0.18	**0.07**	12	Atlas	29,078	1
	9/19/2011 7:00	9/19/2011 7:30	**30**	0.8	**353,100**	0.65	**0.32**	12	Atlas	282,480	1
	9/23/2011 1:00	9/23/2011 7:15	**375**	0.72	**74,031**	1.61	**0.33**	12	Atlas	53,302	1
	9/25/2011 23:30	9/26/2011 5:00	**330**	3.97	**1,680,223**	5.69	**15.00**	12	Atlas	6,670,484	1
	10/13/2011 7:15	10/13/2011 8:00	**45**	0.47	**382,292**	0.28	**0.22**	3	Atlas	179,677	1
	10/18/2011 20:15	10/18/2011 20:30	**15**	0.16	**598,022**	0.62	**0.11**	1	Atlas	95,684	1
	10/27/2011	10/27/2011 1:15	**75**	0.97	**911,602**	1.06	**0.42**	3	Atlas	884,254	1
	11/3/2011 9:30	11/3/2011 9:30	**0**	0.53	**20,651**	0.34	**0.28**	3	Atlas	10,945	1
	11/14/2011 21:30	11/14/2011 22:00	**30**	1.92	**163,451**	0.26	**0.62**	48	Atlas	313,826	1
	11/16/2011 6:30	11/16/2011 6:45	**15**	1.92	**28,164**	1.68	**0.62**	48	Atlas	54,075	1
	11/20/2011 17:15	11/20/2011 17:30	**15**	0.71	**44,271**	2.33	**0.25**	24	Atlas	31,432	1
	11/21/2011 4:00	11/21/2011 4:30	**30**	0.71	**635,710**	2.53	**0.25**	24	Atlas	451,354	1
	11/22/2011 6:00	11/22/2011 8:30	**150**	1.04	**442,111**	2.96	**0.46**	6	Atlas	459,796	1
	11/27/2011 8:00	11/27/2011 8:30	**30**	2.98	**24,602**	2.29	**0.92**	48	Atlas	73,314	1
	11/28/2011 0:30	11/28/2011 0:30	**0**	2.98	**3,961**	2.54	**0.92**	48	Atlas	11,803	1
	11/28/2011 11:30	11/28/2011 23:15	**705**	2.98	**122,412**	3.89	**0.92**	48	Atlas	364,786	1
	12/4/2011 16:30	12/4/2011 17:15	**45**	3.36	**33,943**	2.92	**1.47**	48	Cloudburst	114,050	1
	12/5/2011 3:15	12/5/2011 17:30	**855**	3.36	**635,483**	5.03	**1.47**	48	Cloudburst	2,135,224	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**12/15/2011 3:45**	12/15/2011 7:30	**225**	0.48	**215,056**	0.42	**0.23**	6	Atlas	103,227	1
	12/21/2011 5:00	12/21/2011 6:45	**105**	0.76	**401,872**	1.26	**0.35**	12	Atlas	305,423	1
	12/22/2011 15:30	12/22/2011 15:30	**0**	0.53	**34,507**	1.19	**0.23**	12	Atlas	18,289	1
	1/11/2012 4:30	1/11/2012 7:00	**150**	0.74	**568,393**	0.42	**0.28**	24	Atlas	420,611	1
	1/17/2012 11:30	1/17/2012 12:00	**30**	0.37	**291,288**	1.21	**0.17**	12	Atlas	107,776	1
	1/23/2012 2:45	1/23/2012 4:30	**105**	0.57	**1,478,209**	0.97	**0.31**	3	Atlas	842,579	1
	1/26/2012 5:30	1/26/2012 6:30	**60**	1.72	**489,569**	1.31	**0.56**	48	Atlas	842,058	1
	1/26/2012 18:45	1/26/2012 22:00	**195**	1.72	**689,302**	2.18	**0.56**	48	Atlas	1,185,600	1
	2/4/2012 9:45	2/4/2012 9:45	**0**	0.35	**45,372**	0.31	**0.21**	3	Atlas	15,880	1
	2/22/2012 23:00	2/22/2012 23:00	**0**	0.2	**102,004**	0.54	**0.15**	1	Atlas	20,401	1
	2/29/2012 8:30	2/29/2012 9:00	**30**	0.65	**425,926**	0.82	**0.34**	1	Atlas	276,852	1
	3/8/2012 12:30	3/8/2012 13:30	**60**	0.75	**216,502**	1.06	**0.36**	6	Atlas	162,376	1
	3/15/2012 17:45	3/16/2012 3:00	**555**	0.91	**569,874**	1.14	**0.40**	12	Atlas	518,586	1
	3/17/2012 18:30	3/17/2012 21:00	**150**	0.54	**837,970**	1.54	**0.28**	3	Atlas	452,504	1
	3/23/2012 5:15	3/23/2012 22:45	**1050**	1.68	**1,042,182**	2.23	**0.60**	24	Atlas	1,750,866	1
	3/31/2012 0:15	3/31/2012 0:15	**0**	0.18	**372,052**	0.19	**0.11**	3	Atlas	66,969	1
	4/1/2012 8:30	4/1/2012 11:00	**150**	1.41	**1,412,905**	1.6	**0.77**	6	Atlas	1,992,196	1
	4/28/2012 19:15	4/29/2012 0:15	**300**	0.71	**1,789,232**	0.82	**0.52**	1	Atlas	1,270,354	1
	4/30/2012 18:00	4/30/2012 20:15	**135**	0.41	**1,350,737**	1.24	**0.27**	3	Atlas	553,802	1
	5/4/2012 23:30	5/5/2012 4:30	**300**	1.38	**1,355,064**	2.51	**0.74**	3	Atlas	1,869,988	1
	5/13/2012 2:00	5/13/2012 8:45	**405**	2.15	**912,913**	1.89	**0.83**	24	Atlas	1,962,763	1
	5/16/2012 17:45	5/16/2012 18:15	**30**	0.22	**1,400,906**	2.37	**0.19**	1	Atlas	308,199	1
	5/29/2012 6:30	5/29/2012 9:30	**180**	2.74	**1,644,496**	2.69	**11.84**	3	Atlas	4,505,920	1
	5/31/2012 18:30	6/1/2012 1:45	**435**	1.17	**976,542**	3.74	**0.51**	12	Atlas	1,142,554	1
	6/17/2012 11:30	6/17/2012 12:00	**30**	0.2	**1,788,142**	0.22	**0.16**	1	Atlas	357,628	1
	7/1/2012 19:45	7/1/2012 20:15	**30**	0.32	**557,231**	0.25	**0.21**	1	Atlas	178,314	1
	7/8/2012 13:00	7/8/2012 13:45	**45**	0.25	**3,461,468**	0.67	**0.18**	1	Atlas	865,367	1
	7/14/2012 14:00	7/14/2012 14:30	**30**	0.61	**804,407**	0.86	**0.38**	3	Atlas	490,688	1
	7/18/2012 17:00	7/18/2012 17:30	**30**	Discharge						885,175	1
	7/19/2012 18:15	7/19/2012 19:00	**45**	0.97	**1,540,297**	1.57	**0.77**	1	Atlas	1,494,088	1
	7/24/2012 20:00	7/24/2012 20:15	**15**	0.46	**1,287,185**	1.5	**0.38**	1	Atlas	592,105	1
	7/27/2012 19:45	7/27/2012 21:00	**75**	0.72	**1,768,574**	1.26	**0.49**	1	Atlas	1,273,373	1
	8/16/2012 20:00	8/16/2012 22:15	**135**	0.63	**359,558**	0.63	**0.37**	3	Atlas	226,521	1
	8/21/2012 13:30	8/21/2012 14:00	**30**	0.16	**3,753,572**	0.81	**0.14**	1	Atlas	600,572	1
	9/1/2012 15:00	9/1/2012 17:30	**150**	0.37	**958,785**	0.4	**0.24**	1	Atlas	354,751	1
	9/2/2012 12:45	9/2/2012 20:15	**450**	0.61	**279,840**	0.97	**0.24**	12	Atlas	170,702	1
	9/5/2012 15:15	9/5/2012 16:15	**60**	0.8	**1,691,001**	1.86	**0.60**	1	Atlas	1,352,801	1
	9/7/2012 23:15	9/8/2012 6:30	**435**	1.44	**1,084,326**	3.25	**0.81**	3	Atlas	1,561,430	1
	9/25/2012 23:30	9/26/2012 5:30	**360**	0.45	**1,759,825**	0.76	**0.21**	12	Atlas	791,921	1
	9/26/2012 19:45	9/26/2012 23:45	**240**	1.61	**2,175,597**	2.4	**0.86**	6	Atlas	3,502,711	1
	10/1/2012 15:00	10/1/2012 18:45	**225**	0.61	**167,692**	3	**0.25**	12	Atlas	102,292	1
	10/6/2012	10/6/2012	**0**	0.16	**78,150**	0.73	**0.08**	6	Atlas	12,504	1
	10/14/2012 16:00	10/14/2012 16:15	**15**	0.1	**162,621**	0.08	**0.06**	1	Atlas	16,262	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**12/2/2012 11:00**	12/2/2012 11:15	**15**	0.27	**271,651**	0.3	**0.16**	3	Atlas	73,346	1
	12/4/2012 15:00	12/4/2012 18:15	**195**	0.72	**611,316**	0.99	**0.47**	3	Atlas	440,148	1
	12/7/2012 5:15	12/7/2012 17:15	**720**	1.08	**152,640**	2.07	**0.43**	12	Atlas	164,852	1
	12/8/2012 5:30	12/8/2012 6:00	**30**	0.33	**171,961**	2.33	**0.19**	3	Atlas	56,747	1
	12/9/2012 21:30	12/9/2012 23:15	**105**	1.08	**1,968,633**	3	**0.52**	3	Atlas	2,126,123	1
	12/20/2012 6:45	12/20/2012 12:00	**315**	0.7	**623,660**	1.24	**0.37**	6	Atlas	436,562	1
	12/26/2012 4:45	12/26/2012 6:00	**75**	0.72	**425,147**	1.26	**0.28**	12	Atlas	306,106	1
	1/11/2013 5:15	1/11/2013 6:45	**90**	0.67	**1,004,576**	0.81	**0.37**	3	Atlas	673,066	1
	1/13/2013 3:00	1/13/2013 18:45	**945**	2.22	**1,249,153**	3.04	**0.85**	24	Atlas	2,773,119	1
	1/30/2013 4:45	1/30/2013 6:15	**90**	0.86	**1,433,571**	0.87	**0.43**	6	Atlas	1,232,871	1
	2/22/2013 1:00	2/22/2013 1:00	**0**	0.43	**97,209**	0.73	**0.20**	12	Atlas	41,800	1
	2/26/2013 13:45	2/26/2013 14:00	**15**	0.57	**71,656**	0.78	**0.22**	24	Atlas	40,844	1
	3/5/2013 17:15	3/5/2013 17:15	**0**	0.45	**33,813**	0.49	**0.17**	24	Atlas	15,216	1
	3/11/2013 4:00	3/11/2013 11:00	**420**	1.05	**453,633**	1.51	**0.42**	12	Atlas	476,315	1
	3/17/2013 14:00	3/17/2013 15:00	**60**	1.8	**161,572**	1.71	**0.58**	48	Atlas	290,829	1
	3/18/2013 4:00	3/18/2013 6:00	**120**	1.8	**458,718**	2.06	**0.58**	48	Atlas	825,693	1
	3/24/2013 7:45	3/24/2013 7:45	**0**	0.54	**73,394**	1.73	**0.20**	24	Atlas	39,633	1
	3/24/2013 16:00	3/24/2013 16:15	**15**	0.54	**70,913**	1.56	**0.20**	24	Atlas	38,293	1
	4/11/2013 6:15	4/11/2013 7:15	**60**	1.27	**510,902**	0.53	**0.49**	24	Atlas	648,845	1
	4/11/2013 22:45	4/11/2013 22:45	**0**	1.27	**11,417**	1.26	**0.49**	24	Atlas	14,500	1
	4/16/2013 20:00	4/16/2013 20:30	**30**	0.57	**1,985,875**	1.8	**0.45**	1	Atlas	1,131,949	1
	4/19/2013 1:45	4/19/2013 4:15	**150**	0.92	**1,490,526**	1.51	**0.50**	6	Atlas	1,371,284	1
	4/24/2013 6:15	4/24/2013 9:15	**180**	0.66	**797,232**	1.6	**0.39**	3	Atlas	526,173	1
	5/5/2013 5:00	5/5/2013 8:00	**180**	1.54	**61,320**	1.33	**0.47**	24	Atlas	94,433	1
	5/10/2013 9:30	5/10/2013 12:30	**180**	0.9	**398,497**	2.17	**0.40**	6	Atlas	358,647	1
	5/10/2013 23:30	5/10/2013 23:30	**0**	0.9	**51,407**	2.44	**0.40**	6	Atlas	46,266	1
	5/16/2013 10:00	5/16/2013 10:15	**15**	0.18	**1,482,778**	1.1	**0.15**	1	Atlas	266,900	1
	6/9/2013 23:30	6/10/2013 0:30	**60**	0.36	**1,182,886**	0.27	**0.15**	6	Atlas	425,839	1
	6/16/2013 16:30	6/16/2013 17:15	**45**	0.4	**2,802,315**	0.72	**0.29**	1	Atlas	1,120,926	1
	6/17/2013 19:00	6/17/2013 21:00	**120**	0.51	**574,533**	0.84	**0.25**	6	Atlas	293,012	1
	6/26/2013 3:15	6/26/2013 4:45	**90**	0.65	**1,833,168**	1.01	**0.49**	1	Atlas	1,191,559	1
	6/26/2013 16:00	6/26/2013 21:30	**330**	2.21	**1,702,250**	3.08	**1.67**	6	Cloudburst	3,761,973	1
	6/29/2013 20:00	6/29/2013 21:30	**90**	0.58	**5,148**	3.5	**0.33**	3	Atlas	2,986	1
	7/1/2013 18:30	7/1/2013 19:00	**30**	0.26	**89,300**	3.67	**0.13**	3	Atlas	23,218	1
	7/2/2013 13:00	7/2/2013 13:30	**30**	0.05	**9,876,300**	3.78	**0.04**	1	Atlas	493,815	1
	7/4/2013 6:45	7/4/2013 6:45	**0**	0.51	**13,284**	1.14	**0.22**	12	Atlas	6,775	1
	7/6/2013 1:15	7/6/2013 5:15	**240**	0.56	**132,461**	1.97	**0.24**	12	Atlas	74,178	1
	7/10/2013 13:45	7/10/2013 14:30	**45**	0.68	**1,194,657**	1.84	**0.44**	3	Atlas	812,367	1
	7/14/2013 19:30	7/14/2013 19:45	**15**	0.06	**1,683,900**	0.78	**0.05**	1	Atlas	101,034	1
	7/18/2013 15:30	7/18/2013 16:30	**60**	0.34	**4,388,947**	0.47	**0.26**	1	Atlas	1,492,242	1
	7/21/2013 20:30	7/21/2013 21:45	**75**	1.85	**56,263**	1.41	**0.71**	24	Atlas	104,086	1
	7/22/2013 7:00	7/22/2013 13:45	**405**	1.85	**907,596**	2.23	**0.71**	24	Atlas	1,679,052	1
	10/30/2013 1:15	10/30/2013 6:00	**285**	1.27	**804,035**	1.22	**0.61**	6	Atlas	1,021,125	1
	10/31/2013 19:00	10/31/2013 20:00	**60**	0.8	**800,974**	2.02	**0.34**	1	Atlas	640,779	1
	11/17/2013 4:30	11/17/2013 19:15	**885**	2.95	**1,388,721**	3.09	**2.00**	6	Cloudburst	4,096,727	1
	12/5/2013 5:30	12/5/2013 8:15	**165**	0.79	**441,553**	0.2	**0.26**	48	Atlas	348,827	1
	12/14/2013 9:00	12/14/2013 11:15	**135**	0.67	**110,675**	1.05	**0.27**	12	Atlas	74,152	1
	12/21/2013 2:00	12/21/2013 12:45	**645**	3.11	**226,621**	1.73	**1.82**	24	Cloudburst	704,791	1
	12/21/2013 21:15	12/22/2013 1:45	**270**	3.11	**978,922**	3.06	**1.82**	24	Cloudburst	3,044,447	1
	1/5/2014 15:15	1/5/2014 19:00	**225**	0.52	**134,186**	0.66	**0.27**	3	Atlas	69,777	1
	1/11/2014 0:15	1/11/2014 4:45	**270**	0.77	**813,067**	1.26	**0.41**	6	Atlas	626,061	1
	2/2/2014 5:00	2/2/2014 5:45	**45**	0.52	**72,254**	0.16	**0.20**	24	Atlas	37,572	1
	2/4/2014 19:15	2/5/2014 0:30	**315**	0.62	**1,612,789**	1.13	**0.30**	6	Atlas	999,929	1
	2/17/2014 16:00	2/17/2014 18:15	**135**	0.52	**1,175,162**	0.85	**0.31**	3	Atlas	611,084	1
	2/20/2014 23:00	2/20/2014 23:30	**30**	0.18	**712,749**	1.02	**0.09**	6	Atlas	128,295	1
	3/2/2014 10:30	3/2/2014 11:30	**60**	0.45	**102,428**	0.22	**0.17**	24	Atlas	46,093	1
	3/12/2014 7:15	3/12/2014 7:30	**15**	0.1	**71,686**	0.08	**0.04**	1	Atlas	7,169	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**3/28/2014 4:15**	3/28/2014 5:15	**60**	0.34	**201,470**	0.4	**0.17**	6	Atlas	68,500	1
	3/29/2014 6:15	3/29/2014 12:15	**360**	0.82	**321,096**	1.14	**0.38**	12	Atlas	263,299	1
	4/3/2014 5:30	4/4/2014 7:45	**1575**	3.33	**931,040**	4.62	**1.88**	24	Cloudburst	3,100,364	1
	4/7/2014 10:30	4/7/2014 12:30	**120**	0.89	**1,943,001**	4.32	**0.55**	1	Atlas	1,729,271	1
	4/14/2014 3:15	4/14/2014 3:45	**30**	1.15	**8,152**	1.16	**0.44**	24	Atlas	9,375	1
	4/14/2014 20:00	4/15/2014 1:00	**300**	1.15	**242,711**	1.14	**0.44**	24	Atlas	279,118	1
	4/28/2014 4:00	4/28/2014 8:30	**270**	1.9	**1,237,949**	1.55	**0.77**	3	Atlas	2,352,103	1
	4/28/2014 16:45	4/28/2014 18:45	**120**	1.9	**51,922**	1.97	**0.77**	3	Atlas	98,651	1
	5/9/2014 19:15	5/10/2014 15:45	**1230**	1.49	**1,454,461**	1.56	**0.58**	1	Atlas	2,167,147	1
	5/14/2014 7:15	5/14/2014 9:30	**135**	0.74	**22,083**	1.82	**0.28**	24	Atlas	16,341	1
	5/14/2014 18:00	5/14/2014 23:30	**330**	0.74	**215,277**	2.36	**0.28**	24	Atlas	159,305	1
	5/16/2014 3:45	5/16/2014 4:00	**15**	0.12	**73,246**	2.46	**0.08**	1	Atlas	8,790	1
	5/21/2014 21:00	5/22/2014 3:45	**405**	0.65	**635,003**	0.84	**0.30**	12	Atlas	412,752	1
	5/28/2014 20:15	5/28/2014 21:00	**45**	0.65	**1,153,321**	1.3	**0.55**	1	Atlas	749,658	1
	6/1/2014 16:00	6/1/2014 16:15	**15**	0.12	**328,466**	0.7	**0.06**	12	Atlas	39,416	1
	6/10/2014 16:15	6/10/2014 17:30	**75**	0.09	**4,462**	0.18	**0.06**	3	Atlas	402	1
	6/11/2014 14:00	6/11/2014 19:00	**300**	0.15	**3,221,846**	0.33	**0.12**	1	Atlas	483,277	1
	5/16/2015 11:30	5/16/2015 13:30	**120**	0.7	**1,034,299**	0.76	**0.41**	3	Atlas	724,009	1
	5/17/2015 14:15	5/17/2015 14:15	**0**	0.09	**32,122**	0.91	**0.04**	12	Atlas	2,891	1
	5/25/2015 8:15	5/25/2015 8:30	**15**	0.3	**47,863**	0.27	**0.14**	12	Atlas	14,359	1
	5/26/2015 13:45	5/26/2015 14:15	**30**	0.17	**926,024**	0.43	**0.10**	1	Atlas	157,424	1
	6/17/2015 4:45	6/17/2015 6:15	**90**	0.67	**757,625**	0.66	**0.37**	3	Atlas	507,609	1
	6/18/2015 17:15	6/18/2015 18:00	**45**	0.76	**799,499**	1.27	**0.43**	1	Atlas	607,619	1
	6/20/2015 1:30	6/20/2015 8:15	**405**	1.04	**842,759**	2.53	**0.41**	12	Atlas	876,469	1
	6/22/2015 6:00	6/22/2015 6:15	**15**	0.23	**1,204**	2.72	**0.11**	3	Atlas	277	1
	6/25/2015 23:45	6/26/2015 1:15	**90**	0.61	**138,685**	1.78	**0.33**	6	Atlas	84,598	1
	6/27/2015	6/27/2015 0:15	**15**	1.04	**130,992**	2.73	**0.55**	1	Atlas	136,232	1
	6/29/2015 13:45	6/29/2015 14:00	**15**	0.22	**480,305**	1.87	**0.12**	1	Atlas	105,667	1
	7/2/2015	7/2/2015 21:15	**1275**	2.42	**1,084,755**	4.38	**0.94**	1	Atlas	2,625,106	1
	7/3/2015 14:45	7/3/2015 18:30	**225**	0.57	**515,370**	4.33	**0.47**	1	Atlas	293,761	1
	7/7/2015 11:30	7/7/2015 13:00	**90**	1.07	**447,897**	3.85	**0.51**	3	Atlas	479,250	1
	7/8/2015 12:00	7/8/2015 12:30	**30**	1.07	**15,167**	4.13	**0.51**	3	Atlas	16,229	1
	7/9/2015 6:00	7/9/2015 13:30	**450**	0.34	**546,700**	3.49	**0.16**	12	Atlas	185,878	1
	7/10/2015 10:00	7/10/2015 16:15	**375**	0.5	**157,792**	2.5	**0.26**	6	Atlas	78,896	1
	7/12/2015 5:45	7/12/2015 7:30	**105**	1.07	**1,341,979**	3	**0.82**	1	Atlas	1,435,917	1
	7/13/2015 14:30	7/13/2015 15:15	**45**	0.46	**725,033**	3.47	**0.40**	1	Atlas	333,515	1
	7/14/2015 3:45	7/14/2015 4:45	**60**	0.84	**934,048**	4.28	**0.66**	1	Atlas	784,600	1
	7/17/2015 22:00	7/18/2015 1:30	**210**	1.58	**2,420,412**	3.99	**1.27**	3	Atlas	3,824,251	1
	7/29/2015 17:15	7/29/2015 17:30	**15**	0.12	**744,617**	0.17	**0.10**	1	Atlas	89,354	1
	8/4/2015 18:45	8/4/2015 19:15	**30**	0.52	**1,481,615**	0.63	**0.44**	1	Atlas	770,440	1
	8/5/2015 14:45	8/5/2015 15:30	**45**	1.13	**416,198**	1.29	**0.57**	1	Atlas	470,304	1
	8/6/2015 2:15	8/6/2015 8:45	**390**	1.13	**150,787**	1.6	**0.57**	1	Atlas	170,389	1
	8/10/2015 20:30	8/10/2015 20:30	**0**	0.06	**24,800**	1.72	**0.05**	1	Atlas	1,488	1
	8/15/2015 16:30	8/15/2015 16:45	**15**	0.02	**1,405,950**	0.09	**0.02**	1	Atlas	28,119	1
	8/19/2015 7:15	8/19/2015 17:15	**600**	0.76	**182,517**	0.75	**0.33**	12	Atlas	138,713	1
	9/5/2015 17:30	9/5/2015 18:00	**30**	0.31	**1,401,523**	0.28	**0.24**	1	Atlas	434,472	1
	9/9/2015 4:15	9/9/2015 11:45	**450**	Discharge						370,571	1
	9/11/2015 18:00	9/11/2015 19:15	**75**	0.27	**15,730**	1.03	**0.15**	6	Atlas	4,247	1
	10/2/2015 17:30	10/2/2015 19:30	**120**	0.54	**56,202**	1.33	**0.26**	6	Atlas	30,349	1
	10/12/2015 17:45	10/12/2015 19:15	**90**	0.35	**75,663**	0.38	**0.26**	1	Atlas	26,482	1
	10/24/2015 16:45	10/24/2015 17:00	**15**	0.31	**329**	0.22	**0.15**	6	Atlas	102	1
	10/27/2015 14:15	10/28/2015 8:15	**1080**	2.99	**793,335**	3.19	**0.97**	24	Atlas	2,372,072	1
	10/28/2015 17:45	10/28/2015 17:45	**0**	2.99	**1**	3.22	**0.97**	24	Atlas	2	1
	11/6/2015 3:00	11/6/2015 4:45	**105**	0.8	**1,494,816**	0.89	**0.49**	3	Atlas	1,195,853	1
	11/9/2015 19:00	11/9/2015 20:45	**105**	0.63	**51,897**	1.38	**0.28**	12	Atlas	32,695	1
	11/11/2015 23:45	11/12/2015 1:00	**75**	0.31	**564,255**	1.72	**0.18**	3	Atlas	174,919	1
	11/18/2015 8:30	11/18/2015 17:45	**555**	1.37	**1,413,042**	1.86	**0.68**	6	Atlas	1,935,867	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO190	**11/28/2015 13:45**	11/28/2015 13:45	**0**	0.66	**50**	0.48	**0.27**	12	Atlas	33	1
	11/30/2015 23:15	12/1/2015 4:15	**300**	0.63	**406,754**	1.49	**0.28**	12	Atlas	256,255	1
	12/21/2015 10:45	12/21/2015 11:15	**30**	0.57	**8,316**	0.24	**0.22**	24	Atlas	4,740	1
	12/21/2015 23:45	12/22/2015 3:45	**240**	0.57	**290,267**	0.59	**0.22**	24	Atlas	165,452	1
	12/23/2015 19:15	12/23/2015 20:30	**75**	0.84	**2,164,348**	1.42	**0.56**	1	Atlas	1,818,052	1
	12/26/2015 12:00	12/26/2015 17:45	**345**	0.66	**403,908**	2.2	**0.31**	3	Atlas	266,579	1
	12/27/2015 9:45	12/27/2015 16:30	**405**	2.49	**1,069,024**	3.69	**0.81**	48	Atlas	2,661,869	1
	12/28/2015 5:45	12/28/2015 6:00	**15**	2.49	**3,063**	3.96	**0.81**	48	Atlas	7,628	1
	12/28/2015 16:00	12/28/2015 20:15	**255**	2.49	**59,184**	4.45	**0.81**	48	Atlas	147,368	1
	2/2/2016 14:45	2/3/2016 1:00	**615**	1.5	**1,389,358**	1.49	**0.71**	6	Atlas	2,084,037	1
	2/21/2016 4:00	2/21/2016 10:45	**405**	0.83	**599,991**	1.01	**0.38**	12	Atlas	497,992	1
	2/23/2016 22:30	2/24/2016 7:45	**555**	1.82	**1,167,124**	2.27	**0.69**	24	Atlas	2,124,166	1
	3/1/2016 8:45	3/1/2016 14:00	**315**	0.48	**235,878**	2.31	**0.25**	6	Atlas	113,221	1
	3/9/2016 15:45	3/9/2016 16:45	**60**	1.34	**2,851**	0.32	**0.44**	12	Atlas	3,821	1
	3/10/2016 13:30	3/10/2016 19:15	**345**	1.34	**271,207**	1.34	**0.44**	12	Atlas	363,418	1
	3/12/2016 20:15	3/12/2016 23:30	**195**	0.65	**1,178,151**	1.85	**0.27**	6	Atlas	765,798	1
	3/13/2016 9:00	3/13/2016 10:45	**105**	0.65	**261,624**	2.03	**0.27**	6	Atlas	170,056	1
	3/24/2016 17:00	3/24/2016 17:45	**45**	0.33	**856,893**	0.36	**0.21**	1	Atlas	282,775	1
	3/27/2016 21:00	3/27/2016 22:15	**75**	0.88	**987,223**	1.2	**0.59**	3	Atlas	868,756	1
	3/31/2016 4:00	4/1/2016	**1200**	1.38	**293,467**	2.59	**0.52**	24	Atlas	404,985	1
	4/11/2016 13:15	4/11/2016 18:45	**330**	1.11	**586,787**	1.16	**0.52**	6	Atlas	651,333	1
	4/26/2016 21:00	4/26/2016 21:30	**30**	0.31	**46,044**	0.66	**0.20**	1	Atlas	14,274	1
	4/27/2016 13:30	4/27/2016 22:00	**510**	0.88	**637,853**	1.5	**0.41**	1	Atlas	561,311	1
	4/30/2016 10:45	4/30/2016 13:00	**135**	0.87	**420,667**	1.74	**0.33**	24	Atlas	365,981	1
	5/1/2016 3:15	5/1/2016 3:15	**0**	0.87	**31**	2.01	**0.33**	24	Atlas	27	1
	5/1/2016 14:30	5/1/2016 14:45	**15**	0.33	**50,872**	2.2	**0.22**	3	Atlas	16,788	1
	5/7/2016 16:15	5/7/2016 22:00	**345**	0.8	**99,204**	1.63	**0.42**	6	Atlas	79,363	1
	5/10/2016 14:00	5/10/2016 22:00	**480**	0.83	**555,878**	1.88	**0.32**	12	Atlas	461,379	1
	5/11/2016 21:30	5/11/2016 22:00	**30**	0.23	**41,439**	1.86	**0.12**	3	Atlas	9,531	1
	5/17/2016 20:00	5/17/2016 20:30	**30**	0.33	**14,288**	1.09	**0.16**	6	Atlas	4,715	1
	5/20/2016 13:30	5/20/2016 15:45	**135**	0.55	**908,936**	1.28	**0.30**	6	Atlas	499,915	1
	5/25/2016 17:45	5/25/2016 18:00	**15**	0.03	**1,560,135**	0.68	**0.03**	1	Atlas	46,804	1
	5/26/2016 14:45	5/26/2016 15:00	**15**	0.37	**8,005**	1.01	**0.25**	3	Atlas	2,962	1
	6/2/2016 15:15	6/2/2016 16:15	**60**	1.12	**1,079,576**	1.26	**0.91**	1	Atlas	1,209,126	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.33	**189,674**	1.48	**0.16**	3	Atlas	62,593	1
	6/14/2016 16:30	6/14/2016 18:30	**120**	1.14	**1,643,521**	1.13	**0.72**	3	Atlas	1,873,613	1
	6/22/2016 8:00	6/22/2016 8:15	**15**	0.34	**359,768**	0.17	**0.21**	3	Atlas	122,321	1
	6/23/2016 15:45	6/23/2016 21:15	**330**	2.12	**1,221,105**	2.46	**1.81**	6	Cloudburst	2,588,743	1
Grand Total										**312,662,973**	**531**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**3/20/2006 21:45**	3/21/2006 21:30	**1425**	Discharge						2,410,839	1
	3/27/2006 15:00	3/27/2006 17:00	**120**	Discharge						1,117,146	1
	3/30/2006 15:00	3/30/2006 15:30	**30**	Discharge						28,456	1
	3/31/2006 12:15	4/2/2006 1:30	**2235**	Discharge						5,415,108	1
	4/2/2006 13:30	4/4/2006 22:45	**3435**	Discharge						6,032,572	1
	4/5/2006 15:15	4/5/2006 15:15	**0**	Discharge						9,485	1
	4/6/2006 17:15	4/6/2006 18:15	**60**	Discharge						40,920	1
	4/7/2006 10:15	4/7/2006 10:15	**0**	Discharge						40	1
	4/7/2006 19:30	4/8/2006 11:00	**930**	Discharge						1,319,431	1
	4/16/2006 23:00	4/17/2006 0:45	**105**	Discharge						1,893,493	1
	4/19/2006 4:15	4/19/2006 20:30	**975**	Discharge						2,236,894	1
	4/20/2006 14:00	4/21/2006 0:15	**615**	Discharge						948,268	1
	4/21/2006 12:30	4/22/2006 1:30	**780**	Discharge						3,103,011	1
	4/22/2006 9:45	4/22/2006 9:45	**0**	Discharge						207	1
	4/23/2006 23:45	4/23/2006 23:45	**0**	Discharge						114	1
	4/25/2006 16:30	4/25/2006 19:15	**165**	Discharge						473	1
	5/18/2006 0:30	5/18/2006 0:30	**0**	Discharge						189	1
	5/24/2006 23:45	5/25/2006 4:30	**285**	Discharge						1,067,365	1
	5/25/2006 19:00	5/25/2006 22:15	**195**	Discharge						1,564,846	1
	5/28/2006 19:15	5/28/2006 19:15	**0**	Discharge						58,215	1
	5/29/2006 21:00	6/1/2006 20:00	**4260**	Discharge						13,542,459	1
	6/2/2006 7:00	6/2/2006 17:00	**600**	Discharge						5,054,354	1
	6/7/2006 21:00	6/7/2006 21:15	**15**	Discharge						151,075	1
	6/8/2006 6:30	6/8/2006 6:30	**0**	Discharge						128	1
	6/17/2006 20:15	6/17/2006 20:15	**0**	Discharge						9,444	1
	6/19/2006 18:00	6/20/2006 13:30	**1170**	Discharge						2,184,816	1
	6/23/2006 17:45	6/23/2006 19:15	**90**	Discharge						908,122	1
	7/4/2006 14:30	7/4/2006 19:15	**285**	Discharge						561,531	1
	7/5/2006 8:30	7/5/2006 9:15	**45**	Discharge						191,052	1
	7/11/2006 18:15	7/11/2006 23:15	**300**	Discharge						1,110,304	1
	7/12/2006 12:45	7/12/2006 17:30	**285**	Discharge						358,973	1
	7/13/2006 2:30	7/13/2006 8:45	**375**	Discharge						270,713	1
	7/14/2006 19:15	7/15/2006 14:45	**1170**	Discharge						3,506,919	1
	7/17/2006 14:45	7/17/2006 14:45	**0**	Discharge						151	1
	7/21/2006 18:15	7/22/2006 3:45	**570**	Discharge						314,359	1
	8/9/2006 11:45	8/9/2006 12:45	**60**	Discharge						538,503	1
	8/10/2006 20:15	8/10/2006 20:45	**30**	Discharge						42,936	1
	8/14/2006 23:15	8/15/2006 0:15	**60**	Discharge						801,627	1
	8/19/2006 11:15	8/19/2006 13:15	**120**	Discharge						989,931	1
	8/20/2006 5:45	8/20/2006 7:30	**105**	Discharge						1,087,343	1
	8/28/2006 2:45	8/29/2006 8:45	**1800**	Discharge						6,948,345	1
	9/10/2006 17:45	9/13/2006 17:45	**4320**	Discharge						4,978,389	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**9/22/2006 7:00**	9/23/2006 14:45	**1905**	Discharge						37,475,811	1
	9/25/2006 10:30	9/27/2006 0:30	**2280**	Discharge						35,736,474	1
	9/27/2006 20:45	9/28/2006 22:00	**1515**	Discharge						2,674,899	1
	10/5/2006 14:30	10/5/2006 18:15	**225**	Discharge						1,617,767	1
	10/16/2006 17:00	10/17/2006 11:00	**1080**	Discharge						5,024,389	1
	10/19/2006 22:30	10/19/2006 23:45	**75**	Discharge						270,594	1
	10/27/2006 10:30	10/28/2006 6:45	**1215**	Discharge						5,130,723	1
	11/7/2006 3:15	11/7/2006 9:30	**375**	Discharge						902,988	1
	11/15/2006 13:00	11/15/2006 17:00	**240**	Discharge						1,209,926	1
	11/16/2006 3:30	11/16/2006 6:00	**150**	Discharge						643,320	1
	12/1/2006 0:45	12/1/2006 7:15	**390**	Discharge						1,410,218	1
	12/25/2006 13:45	12/26/2006 1:45	**720**	Discharge						1,347,672	1
	12/31/2006 16:30	12/31/2006 18:00	**90**	Discharge						250,000	1
	1/7/2007 13:45	1/7/2007 23:15	**570**	Discharge						637,283	1
	2/6/2007 10:00	2/6/2007 10:00	**0**	Discharge						27	1
	2/9/2007 19:00	2/9/2007 19:00	**0**	Discharge						9,485	1
	2/10/2007 6:00	2/10/2007 6:00	**0**	Discharge						9,485	1
	2/11/2007 13:30	2/11/2007 13:30	**0**	Discharge						9,485	1
	2/12/2007 7:30	2/12/2007 7:30	**0**	Discharge						9,485	1
	2/12/2007 22:30	2/14/2007 2:30	**1680**	Discharge						3,242,379	1
	2/17/2007 3:45	2/17/2007 4:45	**60**	Discharge						18,971	1
	2/19/2007 7:15	2/19/2007 8:45	**90**	Discharge						18,971	1
	2/20/2007 9:45	2/20/2007 9:45	**0**	Discharge						9,485	1
	2/22/2007 17:00	2/22/2007 17:00	**0**	Discharge						11	1
	2/24/2007 19:45	2/25/2007 10:00	**855**	Discharge						3,151,046	1
	2/25/2007 20:45	2/25/2007 20:45	**0**	Discharge						547	1
	3/14/2007 16:15	3/14/2007 19:15	**180**	Discharge						392,901	1
	3/15/2007 6:30	3/15/2007 13:15	**405**	Discharge						63,715	1
	4/3/2007 18:00	4/3/2007 23:00	**300**	Discharge						1,198,859	1
	4/11/2007 9:45	4/11/2007 19:15	**570**	Discharge						712,999	1
	4/14/2007 5:15	4/15/2007 2:30	**1275**	Discharge						4,346,779	1
	4/16/2007 5:45	4/16/2007 5:45	**0**	Discharge						58	1
	4/26/2007 8:45	4/26/2007 17:45	**540**	Discharge						214,865	1
	5/3/2007 12:00	5/3/2007 15:45	**225**	Discharge						488,869	1
	5/4/2007 10:15	5/5/2007 3:15	**1020**	Discharge						1,948,268	1
	5/5/2007 12:45	5/5/2007 13:15	**30**	Discharge						32,153	1
	6/23/2007 19:45	6/23/2007 19:45	**0**	Discharge						9,741	1
	7/5/2007 5:15	7/5/2007 6:00	**45**	Discharge						113,175	1
	7/19/2007 17:15	7/19/2007 23:30	**375**	Discharge						1,689,344	1
	8/16/2007 17:30	8/16/2007 17:30	**0**	Discharge						41,239	1
	8/17/2007 21:45	8/17/2007 21:45	**0**	Discharge						9,485	1
	8/20/2007 5:30	8/20/2007 5:30	**0**	Discharge						9,485	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**8/21/2007 9:00**	8/21/2007 11:00	**120**	Discharge						1,294,212	1
	8/24/2007 5:15	8/24/2007 5:15	**0**	Discharge						103	1
	8/27/2007 13:45	8/27/2007 13:45	**0**	Discharge						41	1
	8/28/2007 12:00	8/28/2007 12:00	**0**	Discharge						9,485	1
	9/5/2007 5:15	9/5/2007 5:15	**0**	Discharge						9,485	1
	9/10/2007 6:30	9/10/2007 6:30	**0**	Discharge						9,485	1
	9/27/2007 5:30	9/27/2007 13:30	**480**	Discharge						2,592,490	1
	10/18/2007 7:00	10/18/2007 8:15	**75**	Discharge						296,275	1
	10/18/2007 23:00	10/19/2007 2:30	**210**	Discharge						925,140	1
	10/22/2007 5:30	10/24/2007 13:45	**3375**	Discharge						26,251,913	1
	10/29/2007 5:45	10/29/2007 5:45	**0**	Discharge						9,485	1
	11/25/2007 18:00	11/25/2007 18:00	**0**	Discharge						1,129	1
	11/26/2007 6:30	11/26/2007 6:30	**0**	Discharge						1,788	1
	11/26/2007 15:00	11/26/2007 16:45	**105**	Discharge						346,391	1
	12/2/2007 17:45	12/3/2007 6:30	**765**	Discharge						1,572,699	1
	12/9/2007 14:30	12/10/2007 12:45	**1335**	Discharge						2,104,815	1
	12/13/2007 5:30	12/15/2007 21:30	**3840**	Discharge						20,643,890	1
	12/16/2007 12:15	12/18/2007 20:45	**3390**	Discharge						22,273,492	1
	12/20/2007 11:00	12/21/2007	**780**	Discharge						755,355	1
	12/21/2007 11:15	12/21/2007 15:45	**270**	Discharge						31,418	1
	12/23/2007 5:00	12/23/2007 6:45	**105**	Discharge						146,361	1
	1/2/2008 6:15	1/2/2008 6:15	**0**	Discharge						339	1
	1/7/2008 6:30	1/7/2008 6:30	**0**	Discharge						214	1
	1/8/2008 21:00	1/9/2008 0:15	**195**	Discharge						609,013	1
	1/10/2008 15:15	1/11/2008 21:15	**1800**	Discharge						3,032,603	1
	1/22/2008 6:45	1/22/2008 6:45	**0**	Discharge						217	1
	1/29/2008 21:00	1/29/2008 22:30	**90**	Discharge						202,327	1
	2/5/2008 9:45	2/15/2008 21:45	**15120**	Discharge						389,627,398	1
	2/21/2008 4:15	2/21/2008 4:15	**0**	Discharge						699	1
	2/22/2008 7:30	2/22/2008 19:30	**720**	Discharge						949,382	1
	3/3/2008 22:30	3/17/2008 8:00	**19290**	Discharge						594,262,163	1
	3/18/2008 9:15	4/1/2008 23:00	**20985**	Discharge						629,872,696	1
	4/3/2008 12:30	4/10/2008 4:30	**9600**	Discharge						269,194,043	1
	4/11/2008 4:30	4/11/2008 18:45	**855**	Discharge						2,137,667	1
	4/12/2008 15:30	4/12/2008 16:00	**30**	Discharge						29,413	1
	4/26/2008 15:45	4/26/2008 15:45	**0**	Discharge						20,257	1
	5/2/2008 15:15	5/3/2008 18:00	**1605**	Discharge						7,388,668	1
	5/5/2008 10:45	5/5/2008 10:45	**0**	Discharge						9,837	1
	5/14/2008 8:00	5/14/2008 12:15	**255**	Discharge						864,405	1
	5/15/2008 17:15	5/19/2008 4:15	**4980**	Discharge						138,846,755	1
	6/3/2008 8:15	6/3/2008 8:45	**30**	Discharge						341,441	1
	7/28/2008 9:30	7/28/2008 10:30	**60**	0.26	**1,292,765**	0.31	**0.21**	1	Atlas	336,119	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**7/30/2008 10:30**	7/30/2008 11:15	**45**	1.06	**196,492**	0.63	**0.41**	24	Atlas	208,282	1
	7/31/2008 1:45	7/31/2008 6:15	**270**	1.06	**1,569,686**	1.33	**0.41**	24	Atlas	1,663,867	1
	10/8/2008 4:15	10/8/2008 4:30	**15**	1.43	**139,167**	1.41	**0.55**	24	Atlas	199,009	1
	10/24/2008 5:15	10/24/2008 17:00	**705**	1.4	**1,029,449**	1.41	**0.64**	12	Atlas	1,441,228	1
	11/5/2008 9:30	11/5/2008 11:15	**105**	Discharge						116,475	1
	12/1/2008 7:45	12/1/2008 8:00	**15**	0.2	**107,540**	0.34	**0.06**	48	Atlas	21,508	1
	12/3/2008 11:30	12/3/2008 12:30	**60**	Discharge						47,328	1
	12/4/2008 6:30	12/4/2008 7:00	**30**	0.34	**65,600**	0.59	**0.17**	1	Atlas	22,304	1
	12/5/2008 2:30	12/5/2008 3:15	**45**	Discharge						40,531	1
	12/6/2008 2:45	12/6/2008 3:45	**60**	Discharge						50,664	1
	12/6/2008 18:00	12/6/2008 20:00	**120**	Discharge						30,399	1
	12/9/2008 14:15	12/9/2008 19:45	**330**	1.19	**1,171,488**	1.48	**0.57**	6	Atlas	1,394,071	1
	12/19/2008 10:00	12/19/2008 11:15	**75**	0.48	**745,340**	0.89	**0.27**	3	Atlas	357,763	1
	12/24/2008 3:30	12/25/2008 4:15	**1485**	2.19	**3,165,302**	2.8	**0.75**	24	Atlas	6,932,011	1
	12/28/2008 2:15	12/28/2008 5:15	**180**	0.62	**1,189,071**	2.82	**0.41**	3	Atlas	737,224	1
	12/31/2008 8:45	12/31/2008 8:45	**0**	Discharge						77,744	1
	1/28/2009 3:15	1/28/2009 19:00	**945**	1.43	**1,216,324**	1.53	**0.47**	24	Atlas	1,739,343	1
	2/1/2009 17:00	2/1/2009 22:00	**300**	Discharge						447,739	1
	2/11/2009 5:30	2/11/2009 23:30	**1080**	0.85	**1,979,689**	1.01	**0.28**	48	Atlas	1,682,736	1
	2/12/2009 12:30	2/12/2009 13:15	**45**	Discharge						34,069	1
	2/27/2009 4:00	2/27/2009 12:30	**510**	0.91	**2,834,608**	1.46	**0.51**	3	Atlas	2,579,493	1
	4/2/2009 21:15	4/3/2009 7:00	**585**	1.07	**2,011,764**	1.81	**0.49**	3	Atlas	2,152,588	1
	4/13/2009 21:30	4/14/2009 0:15	**165**	0.8	**1,168,359**	1.33	**0.32**	12	Atlas	934,687	1
	4/19/2009 12:45	4/20/2009 6:45	**1080**	1.52	**1,912,061**	2.3	**0.60**	12	Atlas	2,906,332	1
	5/6/2009 12:45	5/6/2009 14:45	**120**	Discharge						291,329	1
	5/8/2009 5:30	5/9/2009 9:15	**1665**	Discharge						32,321,381	1
	6/3/2009 4:30	6/3/2009 7:00	**150**	0.06	**1,857,683**	0.09	**0.04**	1	Atlas	111,461	1
	6/4/2009 7:00	6/4/2009 7:00	**0**	0.22	**46,059**	0.14	**0.10**	12	Atlas	10,133	1
	6/10/2009 12:15	6/10/2009 14:00	**105**	1.1	**827,788**	1.41	**0.61**	3	Atlas	910,567	1
	6/11/2009 3:15	6/11/2009 6:00	**165**	1.59	**731,606**	2	**0.61**	24	Atlas	1,163,254	1
	6/11/2009 17:30	6/12/2009 0:45	**435**	1.59	**2,430,833**	2.76	**0.61**	24	Atlas	3,865,024	1
	6/15/2009 16:45	6/15/2009 19:00	**135**	0.27	**1,726,233**	3.18	**0.20**	1	Atlas	466,083	1
	6/18/2009 10:15	6/19/2009 22:00	**2145**	0.69	**24,364,458**	2.9	**0.43**	3	Atlas	16,811,476	1
	6/22/2009 10:15	6/22/2009 18:00	**465**	0.59	**2,976,329**	2.6	**0.35**	3	Atlas	1,756,034	1
	6/26/2009 3:15	6/26/2009 11:00	**465**	1.79	**2,673,839**	2.69	**0.95**	3	Atlas	4,786,172	1
	7/17/2009 5:15	7/17/2009 5:30	**15**	0.59	**79,385**	1.23	**0.39**	3	Atlas	46,837	1
	7/22/2009 9:45	7/22/2009 16:30	**405**	1.88	**717,986**	2.99	**0.82**	12	Atlas	1,349,814	1
	7/29/2009 4:45	7/29/2009 11:30	**405**	1.2	**4,993,576**	3.18	**0.51**	12	Atlas	5,992,291	1
	7/29/2009 19:45	7/29/2009 20:45	**60**	1.2	**185,808**	1.75	**0.51**	12	Atlas	222,969	1
	8/4/2009 8:15	8/5/2009 11:00	**1605**	5.76	**3,248,990**	7.79				18,714,184	1
	8/10/2009 19:45	8/10/2009 20:30	**45**	0.83	**787,125**	6.54	**0.52**	3	Atlas	653,314	1
	9/20/2009 9:00	9/21/2009 14:45	**1785**	2.82	**3,962,491**	2.83	**1.47**	24	Cloudburst	11,174,226	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**9/24/2009 22:15**	9/25/2009 1:30	**195**	0.92	**464,102**	3.93	**0.31**	24	Atlas	426,974	1
	9/26/2009 21:30	9/26/2009 22:15	**45**	0.36	**843,642**	4.43	**0.30**	1	Atlas	303,711	1
	10/2/2009 5:15	10/2/2009 7:45	**150**	0.86	**881,163**	1.34	**0.55**	3	Atlas	757,800	1
	10/5/2009 6:15	10/5/2009 7:00	**45**	Discharge						40,531	1
	10/8/2009 18:45	10/9/2009 13:45	**1140**	2	**2,399,831**	2.82	**0.66**	24	Atlas	4,799,662	1
	10/9/2009 22:15	10/9/2009 23:30	**75**	2	**78,885**	2.1	**0.66**	24	Atlas	157,770	1
	10/14/2009 7:30	10/14/2009 8:00	**30**	0.61	**354,533**	2.61	**0.40**	3	Atlas	216,265	1
	10/27/2009 22:00	10/28/2009 2:30	**270**	1.14	**1,597,589**	1.81	**0.51**	12	Atlas	1,821,251	1
	10/30/2009 22:15	10/31/2009 9:45	**690**	1.03	**2,048,368**	2.19	**0.46**	12	Atlas	2,109,819	1
	11/6/2009 7:45	11/6/2009 12:45	**300**	Discharge						212,790	1
	12/8/2009 19:00	12/9/2009 1:15	**375**	2.11	**1,118,671**	2.24	**0.85**	12	Atlas	2,360,395	1
	1/20/2010 15:45	1/20/2010 15:45	**0**	0.39	**23,933**	0.62	**0.20**	6	Atlas	9,334	1
	1/21/2010 15:00	1/22/2010 3:45	**765**	1.02	**2,216,105**	1.64	**0.39**	24	Atlas	2,260,427	1
	1/24/2010 5:45	1/25/2010 2:45	**1260**	0.87	**2,181,448**	2.47	**0.33**	24	Atlas	1,897,860	1
	2/5/2010 14:00	2/6/2010 2:45	**765**	1.18	**1,698,127**	1.33	**0.43**	24	Atlas	2,003,790	1
	4/8/2010 4:00	4/8/2010 7:15	**195**	1.26	**782,854**	1.39	**0.61**	6	Atlas	986,396	1
	4/24/2010 15:00	4/24/2010 22:30	**450**	1.54	**2,385,472**	1.76	**0.73**	6	Atlas	3,673,627	1
	5/1/2010 5:30	5/3/2010 10:45	**3195**	4.43	**7,439,685**	6.42	**4.55**	48	Atlas	32,957,805	1
	5/12/2010 9:45	5/12/2010 10:45	**60**	0.84	**1,071,123**	1.21	**0.61**	1	Atlas	899,743	1
	5/14/2010 14:15	5/14/2010 14:15	**0**	Discharge						10,020	1
	5/21/2010 20:15	5/22/2010 9:15	**780**	0.78	**2,910,579**	1.3	**0.61**	1	Atlas	2,270,252	1
	6/9/2010 5:15	6/9/2010 17:00	**705**	1.55	**2,844,835**	1.73	**0.73**	3	Atlas	4,409,495	1
	6/19/2010 6:30	6/19/2010 8:15	**105**	0.55	**495,767**	1.4	**0.32**	3	Atlas	272,672	1
	7/13/2010 6:15	7/13/2010 11:00	**285**	1.5	**1,372,121**	1.94	**0.80**	3	Atlas	2,058,181	1
	7/20/2010 5:15	7/20/2010 6:15	**60**	0.63	**2,489,449**	1.37	**0.38**	1	Atlas	1,568,353	1
	7/31/2010 5:00	7/31/2010 6:15	**75**	0.66	**1,116,192**	0.77	**0.37**	3	Atlas	736,687	1
	8/14/2010 17:15	8/14/2010 18:15	**60**	0.3	**1,049,360**	0.41	**0.24**	1	Atlas	314,808	1
	11/16/2010 16:15	11/16/2010 20:00	**225**	0.82	**501,571**	0.89	**0.37**	12	Atlas	411,288	1
	11/24/2010 14:30	11/24/2010 15:45	**75**	0.65	**255,380**	1.03	**0.31**	3	Atlas	165,997	1
	11/25/2010 11:15	11/26/2010 2:00	**885**	2.43	**2,300,937**	3.36	**0.92**	24	Atlas	5,591,277	1
	11/30/2010 2:00	11/30/2010 15:00	**780**	1.92	**1,162,143**	5.17	**0.74**	24	Atlas	2,231,314	1
	1/1/2011 9:30	1/1/2011 10:15	**45**	0.64	**90,802**	1.18	**0.28**	12	Atlas	58,113	1
	2/1/2011 19:30	2/1/2011 20:15	**45**	0.94	**688,123**	0.84	**0.34**	6	Atlas	646,836	1
	2/24/2011 21:00	2/25/2011 23:30	**1590**	2.48	**5,878,177**	2.67	**0.98**	12	Atlas	14,577,880	1
	2/28/2011 5:45	3/1/2011 6:30	**1485**	1.04	**22,282,900**	3.68	**0.42**	6	Atlas	23,174,216	1
	3/5/2011 12:15	3/6/2011 7:30	**1155**	0.9	**1,218,234**	1.94	**0.31**	24	Atlas	1,096,411	1
	3/9/2011 0:30	3/11/2011 14:00	**3690**	2.96	**6,967,082**	3.88	**1.74**	12	Cloudburst	20,622,563	1
	3/14/2011 14:45	3/15/2011 19:45	**1740**	0.75	**1,883,941**	3.73	**0.25**	12	Atlas	1,412,956	1
	4/4/2011 16:15	4/4/2011 17:30	**75**	0.63	**613,878**	0.76	**0.32**	6	Atlas	386,743	1
	4/9/2011 11:30	4/9/2011 17:15	**345**	0.43	**6,378,849**	1.11	**0.29**	3	Atlas	2,742,905	1
	4/11/2011 16:45	4/13/2011 19:15	**3030**	3.12	**5,266,670**	3.6	**2.12**	24	Cloudburst	16,432,009	1
	4/14/2011 4:00	4/14/2011 14:45	**645**	Discharge						350,454	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**4/20/2011 3:45**	4/20/2011 7:00	**195**	0.76	**1,120,075**	1.1	**0.42**	6	Atlas	851,257	1
	4/23/2011 1:00	4/28/2011 7:30	**7590**	4.67	**14,409,857**	7.6	**2.33**	48	Cloudburst	67,294,030	1
	4/28/2011 16:00	4/29/2011 3:00	**660**	Discharge						1,797,254	1
	4/30/2011 6:45	4/30/2011 19:30	**765**	Discharge						464,558	1
	5/1/2011 6:00	5/6/2011 5:45	**7185**	3.3	**15,786,195**	6.69				52,094,445	1
	5/21/2011 19:00	5/21/2011 22:00	**180**	0.61	**1,958,838**	0.88	**0.43**	1	Atlas	1,194,891	1
	5/23/2011 18:00	5/24/2011 6:00	**720**	0.78	**4,949,541**	1.92	**0.49**	3	Atlas	3,860,642	1
	5/25/2011 23:30	5/27/2011 4:15	**1725**	1.33	**4,583,630**	3.24	**0.63**	3	Atlas	6,096,228	1
	6/15/2011 9:45	6/15/2011 10:45	**60**	0.9	**758,984**	1.11	**0.55**	3	Atlas	683,086	1
	6/18/2011 6:30	6/18/2011 10:00	**210**	0.78	**1,554,305**	1.72	**0.47**	3	Atlas	1,212,358	1
	6/19/2011 8:30	6/19/2011 10:15	**105**	0.77	**613,877**	2.47	**0.48**	3	Atlas	472,685	1
	6/20/2011 2:15	6/20/2011 4:30	**135**	0.67	**1,639,509**	3.14	**0.57**	1	Atlas	1,098,471	1
	6/22/2011 21:00	6/23/2011 14:00	**1020**	3.08	**2,642,848**	5.58	**9.44**	3	Atlas	8,139,973	1
	7/12/2011 17:45	7/12/2011 17:45	**0**	0.29	**69,979**	0.99	**0.15**	6	Atlas	20,294	1
	7/19/2011 23:15	7/20/2011 0:30	**75**	1.19	**1,376,964**	1.2	**1.00**	1	Atlas	1,638,587	1
	8/7/2011 3:30	8/7/2011 6:15	**165**	1.33	**1,792,189**	1.34	**0.75**	3	Atlas	2,383,611	1
	8/13/2011 17:15	8/13/2011 18:15	**60**	0.77	**579,236**	2.47	**0.56**	1	Atlas	446,012	1
	9/23/2011 8:30	9/23/2011 9:00	**30**	0.75	**103,177**	1.48	**0.34**	12	Atlas	77,383	1
	9/26/2011	9/26/2011 10:30	**630**	3.68	**2,563,384**	5.21	**9.52**	12	Cloudburst	9,433,253	1
	10/27/2011 0:30	10/27/2011 14:15	**825**	1.01	**2,146,523**	1.35	**0.42**	12	Atlas	2,167,988	1
	11/14/2011 23:15	11/14/2011 23:45	**30**	1.88	**67,909**	0.44	**0.61**	48	Atlas	127,669	1
	11/15/2011 9:45	11/15/2011 16:15	**390**	1.88	**414,219**	1.44	**0.61**	48	Atlas	778,731	1
	11/16/2011 6:15	11/16/2011 13:00	**405**	1.88	**530,285**	1.9	**0.61**	48	Atlas	996,935	1
	11/22/2011 6:45	11/22/2011 16:30	**585**	1.72	**1,440,283**	2.98	**0.50**	48	Atlas	2,477,287	1
	11/27/2011 22:00	11/30/2011 5:15	**3315**	2.93	**3,984,495**	4.27	**0.91**	48	Atlas	11,674,570	1
	12/4/2011 19:15	12/7/2011 2:45	**3330**	3.12	**5,798,221**	5.38	**1.07**	48	Cloudburst	18,090,451	1
	12/21/2011 7:30	12/21/2011 8:15	**45**	0.67	**401,336**	1.27	**0.31**	12	Atlas	268,895	1
	12/22/2011 16:45	12/22/2011 18:45	**120**	0.51	**849,655**	1.17	**0.23**	12	Atlas	433,324	1
	12/27/2011 10:15	12/27/2011 17:15	**420**	0.63	**1,337,541**	1.82	**0.25**	12	Atlas	842,651	1
	1/11/2012 7:15	1/11/2012 12:00	**285**	0.9	**490,039**	0.79	**0.36**	12	Atlas	441,035	1
	1/17/2012 12:45	1/17/2012 13:45	**60**	0.45	**785,313**	1.47	**0.21**	12	Atlas	353,391	1
	1/23/2012 4:30	1/23/2012 5:45	**75**	0.66	**839,748**	1.13	**0.37**	3	Atlas	554,234	1
	1/26/2012 6:45	1/27/2012 23:30	**2445**	1.71	**3,530,093**	2.4	**0.57**	24	Atlas	6,036,459	1
	3/8/2012 14:00	3/8/2012 21:15	**435**	0.72	**1,606,643**	1.01	**0.34**	6	Atlas	1,156,783	1
	3/16/2012 0:15	3/16/2012 5:30	**315**	1.07	**1,538,997**	1.25	**0.48**	12	Atlas	1,646,727	1
	3/17/2012 21:15	3/18/2012 7:15	**600**	0.62	**3,310,934**	1.87	**0.33**	3	Atlas	2,052,779	1
	3/19/2012	3/19/2012 1:00	**60**	Discharge						52,722	1
	3/23/2012 12:00	3/24/2012 5:15	**1035**	1.51	**3,613,568**	2.13	**0.57**	24	Atlas	5,456,487	1
	4/1/2012 10:00	4/1/2012 17:45	**465**	1.11	**2,480,037**	1.24	**0.66**	3	Atlas	2,752,841	1
	4/28/2012 19:30	4/28/2012 20:45	**75**	0.68	**695,531**	0.74	**0.50**	1	Atlas	472,961	1
	5/5/2012 1:30	5/5/2012 6:45	**315**	1.32	**2,699,724**	2.46	**0.68**	6	Atlas	3,563,636	1
	5/13/2012 2:45	5/13/2012 18:30	**945**	2.01	**2,725,291**	2.06	**0.81**	3	Atlas	5,477,835	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**5/29/2012 7:00**	5/30/2012 0:30	**1050**	3.38	**1,714,578**	3.38	**38.46**	3	Cloudburst	5,795,274	1
	5/31/2012 18:45	6/1/2012 7:00	**735**	1.2	**1,856,996**	4.58	**0.52**	12	Atlas	2,228,395	1
	7/14/2012 14:00	7/14/2012 16:30	**150**	0.8	**2,500,258**	1.02	**0.47**	3	Atlas	2,000,206	1
	7/19/2012 17:45	7/20/2012 2:15	**510**	1.02	**2,979,477**	1.94	**0.77**	1	Atlas	3,039,067	1
	7/20/2012 16:00	7/20/2012 16:15	**15**	0.13	**1,872,462**	2.07	**0.11**	1	Atlas	243,420	1
	7/27/2012 20:30	7/27/2012 21:45	**75**	0.54	**657,785**	0.78	**0.43**	1	Atlas	355,204	1
	8/16/2012 22:45	8/17/2012 0:30	**105**	0.63	**546,506**	0.76	**0.35**	3	Atlas	344,299	1
	9/1/2012 15:15	9/1/2012 18:15	**180**	0.32	**1,822,750**	0.38	**0.17**	6	Atlas	583,280	1
	9/2/2012 14:45	9/2/2012 15:30	**45**	0.51	**308,194**	0.87	**0.24**	1	Atlas	157,179	1
	9/5/2012 15:30	9/5/2012 18:45	**195**	0.75	**2,618,583**	1.65	**0.57**	1	Atlas	1,963,937	1
	9/8/2012 0:15	9/8/2012 7:30	**435**	1.92	**764,845**	3.54	**1.67**	3	Atlas	1,468,503	1
	9/26/2012 23:00	9/27/2012 1:30	**150**	1.12	**1,638,996**	1.98	**0.61**	3	Atlas	1,835,675	1
	10/1/2012 19:00	10/1/2012 19:45	**45**	0.64	**461,188**	2.6	**0.25**	6	Atlas	295,160	1
	10/23/2012 8:45	10/23/2012 10:00	**75**	Discharge						60,065	1
	12/7/2012 6:00	12/9/2012 9:30	**3090**	0.92	**4,477,566**	2.1	**0.44**	6	Atlas	4,119,361	1
	12/9/2012 22:30	12/10/2012 8:30	**600**	1.28	**2,992,002**	3.06	**0.63**	3	Atlas	3,829,762	1
	12/20/2012 10:45	12/20/2012 13:15	**150**	0.68	**1,012,454**	0.9	**0.33**	6	Atlas	688,469	1
	12/26/2012 6:30	12/26/2012 15:45	**555**	0.88	**1,528,777**	1.61	**0.34**	24	Atlas	1,345,324	1
	1/11/2013 8:00	1/11/2013 11:00	**180**	0.58	**221,595**	0.8	**0.31**	3	Atlas	128,525	1
	1/13/2013 4:15	1/14/2013 15:15	**2100**	2.24	**5,191,130**	3.03	**0.86**	24	Atlas	11,628,131	1
	1/22/2013 20:15	1/22/2013 20:15	**0**	Discharge						101,933	1
	1/28/2013 8:30	1/28/2013 8:30	**0**	0.22	**46,059**	0.24	**0.10**	6	Atlas	10,133	1
	1/30/2013 5:00	1/30/2013 14:00	**540**	0.9	**1,138,772**	1.16	**0.45**	6	Atlas	1,024,895	1
	3/11/2013 6:00	3/11/2013 14:15	**495**	1.03	**2,392,965**	1.55	**0.41**	12	Atlas	2,464,754	1
	3/17/2013 14:45	3/18/2013 18:00	**1635**	1.78	**3,655,502**	2.82	**0.58**	48	Atlas	6,506,793	1
	3/19/2013 10:15	3/19/2013 11:45	**90**	Discharge						64,288	1
	4/11/2013 8:00	4/11/2013 8:30	**30**	1.17	**155,736**	0.43	**0.45**	24	Atlas	182,211	1
	4/11/2013 17:30	4/12/2013 2:45	**555**	1.17	**595,235**	1.17	**0.45**	24	Atlas	696,425	1
	4/16/2013 22:15	4/16/2013 22:45	**30**	0.45	**167,604**	1.58	**0.35**	1	Atlas	75,422	1
	4/19/2013 3:00	4/19/2013 6:00	**180**	0.87	**2,715,585**	1.33	**0.48**	6	Atlas	2,362,559	1
	4/24/2013 9:15	4/24/2013 11:00	**105**	0.7	**1,156,504**	1.66	**0.39**	3	Atlas	809,553	1
	5/4/2013 15:30	5/5/2013 10:00	**1110**	1.66	**1,280,003**	1.66	**0.53**	24	Atlas	2,124,805	1
	5/10/2013 15:00	5/11/2013 1:45	**645**	1.02	**1,435,551**	2.83	**0.45**	6	Atlas	1,464,262	1
	6/17/2013 23:00	6/18/2013 0:45	**105**	0.34	**284,091**	0.66	**0.18**	3	Atlas	96,591	1
	6/26/2013 17:00	6/27/2013 1:00	**480**	1.6	**5,179,077**	2.19	**0.84**	1	Atlas	8,286,523	1
	6/28/2013 11:45	6/28/2013 12:45	**60**	Discharge						47,426	1
	6/29/2013 22:30	6/29/2013 22:45	**15**	0.59	**168,231**	2.77	**0.33**	3	Atlas	99,256	1
	7/1/2013 20:00	7/1/2013 20:15	**15**	0.27	**263,748**	2.9	**0.11**	12	Atlas	71,212	1
	7/6/2013 4:45	7/6/2013 9:45	**300**	0.46	**1,243,730**	1.94	**0.20**	12	Atlas	572,116	1
	7/10/2013 15:00	7/10/2013 16:00	**60**	0.46	**149,324**	1.54	**0.36**	1	Atlas	68,689	1
	7/21/2013 20:45	7/21/2013 22:00	**75**	2.65	**97,231**	1.9	**1.93**	3	Atlas	257,662	1
	7/22/2013 8:00	7/22/2013 16:15	**495**	2.65	**1,600,593**	2.8	**1.93**	3	Atlas	4,241,571	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**8/9/2013 17:45**	8/9/2013 18:45	**60**	0.11	**4,415,664**	0.15	**0.06**	1	Atlas	485,723	1
	8/12/2013 15:15	8/12/2013 16:15	**60**	1.12	**650,053**	1.15	**0.63**	1	Atlas	728,059	1
	8/13/2013 4:30	8/13/2013 5:00	**30**	1.12	**135,352**	1.36	**0.63**	1	Atlas	151,594	1
	8/26/2013 12:45	8/26/2013 14:00	**75**	Discharge						50,664	1
	8/31/2013 21:30	9/1/2013 4:30	**420**	1.14	**193,529**	1.13	**0.52**	12	Atlas	220,623	1
	9/2/2013 15:15	9/2/2013 16:00	**45**	0.68	**296,690**	1.82	**0.59**	1	Atlas	201,749	1
	9/10/2013 11:30	9/10/2013 12:00	**30**	Discharge						82,398	1
	9/20/2013 20:15	9/21/2013 6:15	**600**	2.06	**1,073,722**	2.07	**0.86**	12	Atlas	2,211,868	1
	10/4/2013 19:15	10/4/2013 20:15	**60**	0.2	**492,005**	0.26	**0.17**	1	Atlas	98,401	1
	10/5/2013 13:00	10/6/2013 19:30	**1830**	4.54	**7,409,273**	4.8	**10.13**	24	Cloudburst	33,638,100	1
	10/30/2013 5:15	10/30/2013 10:15	**300**	1.32	**1,995,824**	1.33	**0.67**	6	Atlas	2,634,488	1
	10/31/2013 22:15	11/1/2013	**105**	0.88	**252,208**	2.2	**0.36**	12	Atlas	221,943	1
	11/17/2013 7:00	11/17/2013 20:15	**795**	2.65	**5,270,387**	2.87	**2.12**	6	Cloudburst	13,966,526	1
	11/26/2013 8:30	11/26/2013 12:30	**240**	0.05	**3,225,000**	0.17	**0.02**	12	Atlas	161,250	1
	12/14/2013 12:00	12/14/2013 14:15	**135**	0.78	**328,417**	1.27	**0.32**	6	Atlas	256,165	1
	12/21/2013 9:00	12/22/2013 16:15	**1875**	1.37	**9,312,149**	3.27	**0.63**	12	Atlas	12,757,644	1
	1/5/2014 19:15	1/5/2014 21:00	**105**	0.48	**1,024,900**	0.75	**0.24**	3	Atlas	491,952	1
	1/11/2014 2:15	1/11/2014 7:00	**285**	0.85	**2,113,531**	1.35	**0.45**	6	Atlas	1,796,501	1
	2/4/2014 21:00	2/5/2014 9:30	**750**	0.67	**6,033,451**	1.29	**0.33**	6	Atlas	4,042,412	1
	2/17/2014 17:00	2/17/2014 22:15	**315**	0.62	**2,009,069**	0.89	**0.39**	3	Atlas	1,245,623	1
	3/2/2014 12:00	3/2/2014 12:30	**30**	0.51	**325,435**	0.28	**0.19**	24	Atlas	165,972	1
	3/29/2014 8:15	3/29/2014 14:00	**345**	0.89	**1,027,708**	1.22	**0.41**	12	Atlas	914,660	1
	4/3/2014 13:30	4/5/2014 3:00	**2250**	2.77	**5,984,665**	3.99	**0.95**	24	Atlas	16,577,522	1
	4/7/2014 11:45	4/7/2014 21:00	**555**	1.11	**2,504,350**	3.95	**0.76**	1	Atlas	2,779,829	1
	4/14/2014 22:30	4/15/2014 3:00	**270**	0.61	**621,682**	1.12	**0.29**	6	Atlas	379,226	1
	4/23/2014 10:00	4/23/2014 13:15	**195**	Discharge						132,847	1
	4/28/2014 5:15	4/28/2014 21:00	**945**	1.81	**2,409,402**	1.96	**0.73**	3	Atlas	4,361,018	1
	5/9/2014 20:00	5/10/2014 17:15	**1275**	2.04	**1,282,705**	2.11	**0.78**	24	Atlas	2,616,718	1
	5/14/2014 19:30	5/15/2014 2:15	**405**	1.13	**1,007,494**	3.28	**0.42**	24	Atlas	1,138,468	1
	5/22/2014 4:00	5/22/2014 5:00	**60**	0.36	**1,964,850**	0.47	**0.23**	1	Atlas	707,346	1
	5/28/2014 20:00	5/28/2014 22:30	**150**	0.28	**3,154,011**	0.64	**0.23**	1	Atlas	883,123	1
	5/29/2014 21:30	5/29/2014 21:45	**15**	0.27	**403,619**	0.55	**0.23**	1	Atlas	108,977	1
	7/13/2014 23:15	7/14/2014 1:00	**105**	0.75	**1,316,689**	0.88	**0.44**	1	Atlas	987,517	1
	7/26/2014 22:00	7/27/2014 10:00	**720**	1.1	**1,968,215**	1.13	**0.50**	12	Atlas	2,165,037	1
	8/8/2014 6:00	8/8/2014 9:00	**180**	0.77	**5,314,188**	0.63	**0.38**	6	Atlas	4,091,925	1
	8/11/2014 19:15	8/11/2014 20:00	**45**	0.32	**1,555,075**	1.81	**0.17**	6	Atlas	497,624	1
	8/23/2014 20:15	8/23/2014 22:30	**135**	0.85	**1,689,792**	1.77	**0.41**	6	Atlas	1,436,323	1
	8/25/2014 9:00	8/25/2014 11:00	**120**	Discharge						80,415	1
	8/30/2014 15:15	8/30/2014 16:45	**90**	0.71	**220,255**	1.76	**0.42**	1	Atlas	156,381	1
	9/11/2014 1:30	9/11/2014 10:30	**540**	1.71	**5,115,776**	1.72	**0.95**	3	Atlas	8,747,977	1
	9/18/2014 7:30	9/18/2014 9:45	**135**	Discharge						94,853	1
	10/10/2014 3:30	10/10/2014 4:00	**30**	0.92	**237,464**	1.35	**0.36**	3	Atlas	218,467	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**10/13/2014 7:30**	10/13/2014 8:15	**45**	0.56	**146,080**	1.98	**0.36**	3	Atlas	81,805	1
	10/14/2014 0:30	10/14/2014 11:45	**675**	1.55	**1,256,066**	3.24	**0.68**	12	Atlas	1,946,903	1
	11/23/2014 19:00	11/23/2014 21:15	**135**	0.96	**1,399,995**	1.23	**0.41**	6	Atlas	1,343,995	1
	11/24/2014 6:00	11/24/2014 8:00	**120**	0.96	**94,991**	1.02	**0.41**	6	Atlas	91,191	1
	12/6/2014 0:45	12/6/2014 12:15	**690**	1.92	**2,280,932**	2.8	**0.62**	48	Atlas	4,379,389	1
	3/4/2015 0:30	3/6/2015 1:15	**2925**	1.66	**11,387,705**	1.83	**0.54**	48	Atlas	18,903,591	1
	3/10/2015 9:45	3/11/2015 8:45	**1380**	1.12	**31,351,211**	2.78	**0.50**	12	Atlas	35,113,356	1
	3/13/2015 15:00	3/15/2015 1:15	**2055**	1.85	**26,622,884**	2.97	**0.70**	24	Atlas	49,252,335	1
	3/15/2015 15:15	3/15/2015 16:30	**75**	Discharge						204,553	1
	3/26/2015 6:45	3/26/2015 7:15	**30**	0.67	**151,770**	0.82	**0.34**	3	Atlas	101,686	1
	4/2/2015 12:30	4/4/2015 22:45	**3495**	6.2	**4,652,816**	6.32	**36.46**	6	Cloudburst	28,847,460	1
	4/7/2015 12:30	4/8/2015 4:15	**945**	0.88	**7,809,093**	7.09	**0.39**	1	Atlas	6,872,002	1
	4/8/2015 19:00	4/10/2015 5:30	**2070**	0.08	**208,133,700**	7.51	**0.04**	6	Atlas	16,650,696	1
	4/14/2015 12:15	4/14/2015 19:30	**435**	0.47	**659,164**	1.36	**0.18**	24	Atlas	309,807	1
	4/19/2015 14:45	4/20/2015 5:00	**855**	0.85	**2,113,633**	1.49	**0.36**	12	Atlas	1,796,588	1
	6/17/2015 5:15	6/17/2015 8:45	**210**	0.67	**2,450,006**	0.68	**0.36**	3	Atlas	1,641,504	1
	6/18/2015 17:00	6/18/2015 21:00	**240**	0.6	**5,074,943**	1.34	**0.28**	3	Atlas	3,044,966	1
	6/20/2015 4:45	6/20/2015 10:30	**345**	1.09	**2,195,907**	2.53	**0.43**	12	Atlas	2,393,539	1
	6/26/2015 0:15	6/26/2015 3:45	**210**	0.9	**2,406,848**	2.34	**0.49**	6	Atlas	2,166,163	1
	6/26/2015 17:15	6/27/2015 2:45	**570**	1.12	**1,845,720**	3.37	**0.60**	1	Atlas	2,067,206	1
	7/2/2015 2:30	7/2/2015 9:00	**390**	0.82	**667,572**	3.11	**0.48**	3	Atlas	547,409	1
	7/2/2015 22:00	7/2/2015 22:45	**45**	0.82	**42,633**	3.13	**0.48**	3	Atlas	34,959	1
	7/3/2015 15:30	7/3/2015 18:15	**165**	1.04	**591,751**	3.26	**0.85**	1	Atlas	615,421	1
	7/7/2015 13:00	7/7/2015 18:15	**315**	0.94	**857,473**	2.86	**0.50**	6	Atlas	806,025	1
	7/10/2015 11:15	7/10/2015 18:45	**450**	0.52	**1,324,946**	2.95	**0.26**	6	Atlas	688,972	1
	7/12/2015 6:45	7/12/2015 9:45	**180**	0.67	**1,937,197**	2.58	**0.47**	1	Atlas	1,297,922	1
	7/13/2015 15:15	7/15/2015 2:45	**2130**	0.54	**54,162,930**	3.58	**0.46**	1	Atlas	29,247,982	1
	7/18/2015 0:15	7/18/2015 14:30	**855**	0.72	**35,466,474**	2.39	**0.48**	3	Atlas	25,535,861	1
	8/4/2015 20:15	8/5/2015	**225**	0.25	**39,312,232**	0.42	**0.21**	1	Atlas	9,828,058	1
	8/6/2015 15:00	8/6/2015 18:30	**210**	0.8	**12,316,810**	1.05	**0.30**	1	Atlas	9,853,448	1
	9/29/2015 16:30	9/30/2015 3:15	**645**	0.5	**37,575,944**	0.58	**0.19**	24	Atlas	18,787,972	1
	10/2/2015 17:00	10/5/2015 7:45	**3765**	0.47	**6,432,387**	1.19	**0.22**	12	Atlas	3,023,222	1
	10/6/2015 14:45	10/6/2015 19:15	**270**	Discharge						180,221	1
	10/7/2015 10:00	10/7/2015 14:00	**240**	Discharge						123,309	1
	10/8/2015 7:45	10/8/2015 12:30	**285**	Discharge						189,706	1
	10/9/2015 7:00	10/9/2015 10:00	**180**	Discharge						123,309	1
	10/9/2015 18:30	10/9/2015 20:00	**90**	0.11	**603,609**	0.29	**0.05**	6	Atlas	66,397	1
	10/13/2015 7:45	10/13/2015 8:15	**30**	Discharge						28,456	1
	10/15/2015 10:00	10/15/2015 11:15	**75**	Discharge						56,912	1
	10/20/2015 8:45	10/20/2015 9:00	**15**	Discharge						18,971	1
	10/21/2015 11:45	10/21/2015 12:15	**30**	Discharge						28,456	1
	10/27/2015 18:00	10/28/2015 12:45	**1125**	3.43	**1,692,209**	3.81	**1.75**	24	Cloudburst	5,804,276	1
	11/6/2015 4:00	11/6/2015 10:30	**390**	1.01	**1,917,648**	1.18	**0.64**	3	Atlas	1,936,824	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO191	**11/12/2015 1:30**	11/12/2015 2:15	**45**	0.35	**583,260**	1.94	**0.21**	3	Atlas	204,141	1
	11/14/2015 5:00	11/15/2015 11:30	**1830**	Discharge						1,166,691	1
	11/18/2015 10:00	11/19/2015 1:45	**945**	1.83	**3,663,201**	2.4	**0.92**	6	Atlas	6,703,658	1
	11/28/2015 18:15	11/28/2015 22:45	**270**	0.91	**602,178**	0.88	**0.30**	48	Atlas	547,982	1
	11/30/2015 23:00	12/1/2015 7:45	**525**	0.65	**2,780,251**	1.62	**0.29**	12	Atlas	1,807,163	1
	12/22/2015 2:00	12/22/2015 6:15	**255**	0.65	**1,610,918**	0.67	**0.25**	24	Atlas	1,047,097	1
	12/23/2015 19:30	12/24/2015 9:45	**855**	0.91	**3,983,835**	1.58	**0.63**	1	Atlas	3,625,290	1
	12/26/2015 14:15	12/26/2015 21:15	**420**	0.6	**327,697**	2.27	**0.27**	12	Atlas	196,618	1
	12/27/2015 10:45	12/27/2015 20:30	**585**	2.8	**3,121,121**	3.89	**0.91**	48	Atlas	8,739,139	1
	12/28/2015 17:15	12/29/2015 2:45	**570**	2.8	**191,199**	4.85	**0.91**	48	Atlas	535,358	1
	4/1/2016 0:15	4/1/2016 1:45	**90**	1.33	**5,363,742**	2.08	**0.51**	24	Atlas	7,133,777	1
	4/11/2016 17:15	4/11/2016 18:00	**45**	0.96	**59,436**	1.01	**0.43**	12	Atlas	57,059	1
	4/27/2016 20:45	4/27/2016 21:45	**60**	1.18	**130,101**	1.78	**0.54**	3	Atlas	153,519	1
	4/30/2016 11:00	4/30/2016 11:15	**15**	0.83	**59,381**	1.86	**0.31**	24	Atlas	49,286	1
	5/1/2016 14:45	5/1/2016 14:45	**0**	0.36	**93,975**	2.33	**0.24**	1	Atlas	33,831	1
	5/10/2016 14:15	5/10/2016 21:45	**450**	0.85	**257,316**	1.49	**0.32**	24	Atlas	218,719	1
	5/11/2016 20:30	5/11/2016 20:30	**0**	0.38	**14,742**	1.51	**0.17**	6	Atlas	5,602	1
	5/20/2016 14:45	5/20/2016 15:30	**45**	0.79	**173,523**	1.54	**0.45**	3	Atlas	137,083	1
	5/26/2016 13:45	5/26/2016 13:45	**0**	0.54	**30,307**	1.27	**0.36**	3	Atlas	16,366	1
	6/2/2016 15:30	6/2/2016 16:00	**30**	0.87	**611,706**	1.14	**0.69**	1	Atlas	532,184	1
	6/4/2016 16:45	6/4/2016 16:45	**0**	0.41	**49,490**	1.25	**0.19**	3	Atlas	20,291	1
	6/12/2016 18:15	6/12/2016 18:15	**0**	0.74	**55,099**	0.85	**0.63**	1	Atlas	40,773	1
	6/14/2016 16:30	6/14/2016 18:00	**90**	1.08	**1,197,370**	1.77	**0.59**	6	Atlas	1,293,160	1
	6/23/2016 16:00	6/23/2016 23:15	**435**	2.15	**721,436**	2.19	**0.99**	12	Atlas	1,551,088	1
Grand Total										**3,333,192,684**	**403**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**7/4/2009 16:30**	7/4/2009 17:15	**45**	0.24	**97,352**	0.21	**0.11**	6	Atlas	23,365	1
	7/5/2009 10:30	7/5/2009 10:45	**15**	0.14	**86,682**	0.32	**0.06**	12	Atlas	12,135	1
	7/8/2009 0:30	7/8/2009 7:45	**435**	Discharge						18,667	1
	7/15/2009 11:30	7/15/2009 12:45	**75**	0.31	**469,758**	0.35	**0.20**	3	Atlas	145,625	1
	7/17/2009 4:30	7/17/2009 6:00	**90**	0.41	**343,725**	0.74	**0.27**	3	Atlas	140,927	1
	7/22/2009 3:00	7/22/2009 20:30	**1050**	1.44	**520,783**	2.16	**0.63**	12	Atlas	749,927	1
	7/25/2009 7:00	7/25/2009 8:15	**75**	0.55	**157,822**	1.64	**0.21**	24	Atlas	86,802	1
	7/25/2009 22:30	7/25/2009 22:45	**15**	0.55	**2,992**	1.99	**0.21**	24	Atlas	1,646	1
	7/28/2009 14:15	7/28/2009 15:45	**90**	2.45	**38,588**	2.19	**1.89**	6	Cloudburst	94,542	1
	7/29/2009 0:30	7/29/2009 10:45	**615**	2.45	**1,226,994**	4.39	**1.89**	6	Cloudburst	3,006,135	1
	7/30/2009 20:30	7/31/2009 4:15	**465**	0.96	**208,301**	3.97	**0.41**	12	Atlas	199,969	1
	8/4/2009 8:30	8/5/2009 7:45	**1395**	5.31	**3,981,195**	8.75	**365.35**	3	Cloudburst	21,140,146	1
	8/10/2009 19:45	8/10/2009 21:30	**105**	1.05	**1,497,252**	6.31	**0.68**	1	Atlas	1,572,115	1
	8/20/2009 9:45	8/20/2009 10:45	**60**	0.26	**108,534**	0.32	**0.18**	1	Atlas	28,219	1
	8/29/2009 1:30	8/29/2009 1:30	**0**	0.09	**1,042**	0.15	**0.07**	1	Atlas	94	1
	9/6/2009 1:45	9/6/2009 3:15	**90**	0.26	**261,979**	0.25	**0.16**	3	Atlas	68,115	1
	9/7/2009 2:45	9/7/2009 3:00	**15**	0.27	**129,167**	0.49	**0.12**	6	Atlas	34,875	1
	9/7/2009 18:15	9/7/2009 18:45	**30**	0.05	**1,063,542**	0.58	**0.03**	1	Atlas	53,177	1
	10/2/2009 4:30	10/2/2009 8:15	**225**	0.89	**247,250**	1.29	**0.51**	3	Atlas	220,052	1
	10/6/2009 11:30	10/6/2009 12:30	**60**	0.09	**940,741**	0.97	**0.06**	1	Atlas	84,667	1
	10/8/2009 13:45	10/9/2009 23:30	**2025**	1.82	**430,277**	2.8	**0.59**	24	Atlas	783,104	1
	10/14/2009 6:15	10/14/2009 8:30	**135**	0.69	**192,361**	2.51	**0.45**	3	Atlas	132,729	1
	10/15/2009 5:00	10/15/2009 6:45	**105**	0.14	**726,116**	2.6	**0.09**	3	Atlas	101,656	1
	10/23/2009 3:15	10/23/2009 11:30	**495**	0.63	**282,573**	0.66	**0.27**	12	Atlas	178,021	1
	10/27/2009 16:15	10/28/2009 0:15	**480**	1.1	**282,282**	1.74	**0.50**	12	Atlas	310,510	1
	10/29/2009 9:15	10/29/2009 9:15	**0**	Discharge						177	1
	10/30/2009 20:15	10/31/2009 6:30	**615**	1.03	**656,007**	2.15	**0.46**	12	Atlas	675,688	1
	11/17/2009 7:30	11/17/2009 22:30	**900**	1.01	**607,158**	1.01	**0.39**	24	Atlas	613,229	1
	11/30/2009 4:15	11/30/2009 4:45	**30**	0.21	**17,262**	0.23	**0.10**	12	Atlas	3,625	1
	12/2/2009 17:00	12/2/2009 20:15	**195**	0.28	**128,757**	0.5	**0.13**	12	Atlas	36,052	1
	12/8/2009 13:45	12/9/2009 0:30	**645**	1.42	**525,616**	1.66	**0.61**	12	Atlas	746,375	1
	12/13/2009 7:30	12/13/2009 8:30	**60**	0.28	**218,304**	1.75	**0.17**	3	Atlas	61,125	1
	12/19/2009 1:30	12/19/2009 4:45	**195**	0.4	**251,901**	0.43	**0.13**	24	Atlas	100,760	1
	12/25/2009 2:30	12/25/2009 12:15	**585**	0.27	**276,968**	0.68	**0.10**	24	Atlas	74,781	1
	12/31/2009 0:45	12/31/2009 2:30	**105**	0.06	**577,257**	0.48	**0.04**	3	Atlas	34,635	1
	1/17/2010 9:30	1/17/2010 14:00	**270**	0.32	**59,961**	0.33	**0.14**	12	Atlas	19,188	1
	1/20/2010 9:45	1/20/2010 13:45	**240**	0.6	**567,378**	0.76	**0.23**	24	Atlas	340,427	1
	1/21/2010 1:00	1/21/2010 1:30	**30**	0.6	**73,507**	0.93	**0.23**	24	Atlas	44,104	1
	1/21/2010 10:45	1/21/2010 21:15	**630**	0.99	**689,173**	1.92	**0.45**	12	Atlas	682,281	1
	1/24/2010 4:30	1/24/2010 13:45	**555**	1.03	**325,243**	2.53	**0.40**	24	Atlas	335,000	1
	1/24/2010 22:00	1/25/2010 0:45	**165**	1.03	**190,180**	2.62	**0.40**	24	Atlas	195,885	1
	2/5/2010 6:15	2/5/2010 21:30	**915**	1.25	**658,850**	1.36	**0.45**	24	Atlas	823,563	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**3/12/2010 14:00**	3/12/2010 15:30	**90**	0.24	**374,783**	0.26	**0.15**	3	Atlas	89,948	1
	3/21/2010 19:45	3/22/2010 2:30	**405**	0.5	**580,250**	0.5	**0.22**	12	Atlas	290,125	1
	3/25/2010 14:30	3/26/2010 2:30	**720**	0.43	**477,108**	0.95	**0.17**	1	Atlas	205,156	1
	3/28/2010 17:00	3/28/2010 22:15	**315**	0.19	**81,798**	1.02	**0.07**	24	Atlas	15,542	1
	3/30/2010 15:30	3/30/2010 20:45	**315**	Discharge						1,302	1
	4/20/2010 9:15	4/20/2010 10:15	**60**	Discharge						823	1
	4/23/2010 5:45	4/23/2010 14:00	**495**	0.23	**331,975**	0.42	**0.11**	6	Atlas	76,354	1
	4/24/2010 3:45	5/10/2010 8:00	**23295**	1.71	**4,053,009**	7	**0.80**	6	Atlas	6,930,646	1
	5/12/2010 10:30	5/14/2010 12:00	**2970**	0.85	**557,966**	1.28	**0.63**	1	Atlas	474,271	1
	5/16/2010 9:30	5/26/2010 23:15	**15225**	0.56	**6,422,768**	3.46	**0.25**	12	Atlas	3,596,750	1
	5/30/2010 17:00	5/30/2010 17:30	**30**	0.36	**97,020**	0.37	**0.25**	1	Atlas	34,927	1
	5/31/2010 18:30	5/31/2010 18:45	**15**	0.03	**313,194**	0.46	**0.03**	1	Atlas	9,396	1
	6/3/2010 4:00	6/3/2010 4:15	**15**	0.06	**5,556**	0.52	**0.03**	6	Atlas	333	1
	6/9/2010 4:00	6/11/2010 9:30	**3210**	2.13	**725,915**	2.26	**1.50**	3	Atlas	1,546,198	1
	6/11/2010 22:30	6/12/2010 4:45	**375**	0.26	**410,938**	2.4	**0.16**	1	Atlas	106,844	1
	6/13/2010 23:30	6/14/2010 11:30	**720**	0.4	**417,188**	2.79	**0.23**	1	Atlas	166,875	1
	6/15/2010 21:15	6/15/2010 22:00	**45**	0.54	**224,865**	3.36	**0.40**	1	Atlas	121,427	1
	6/19/2010 6:30	6/19/2010 23:15	**1005**	0.83	**181,714**	1.81	**0.48**	3	Atlas	150,823	1
	1/1/2011 4:00	1/1/2011 9:45	**345**	0.66	**984,280**	1.21	**0.29**	6	Atlas	649,625	1
	1/15/2011 7:30	1/15/2011 10:15	**165**	Discharge						438,831	1
	1/17/2011 10:15	1/17/2011 13:00	**165**	Discharge						204,535	1
	1/18/2011 4:00	1/18/2011 14:45	**645**	0.36	**2,053,233**	0.4	**0.12**	12	Atlas	739,164	1
	1/31/2011 16:45	1/31/2011 17:00	**15**	Discharge						18,300	1
	2/1/2011 6:00	2/1/2011 21:00	**900**	0.91	**1,046,383**	0.83	**0.36**	6	Atlas	952,208	1
	2/5/2011 3:45	2/5/2011 7:45	**240**	0.23	**1,010,279**	1.08	**0.10**	12	Atlas	232,364	1
	2/7/2011 11:15	2/7/2011 19:15	**480**	0.26	**3,808,271**	1.4	**0.10**	12	Atlas	990,150	1
	2/21/2011 18:15	2/21/2011 19:30	**75**	0.18	**1,132,486**	0.21	**0.11**	3	Atlas	203,847	1
	2/24/2011 7:45	2/25/2011 4:45	**1260**	2.31	**1,215,775**	2.53	**0.89**	24	Atlas	2,808,441	1
	2/27/2011 17:45	2/27/2011 18:15	**30**	0.15	**808,549**	2.64	**0.09**	3	Atlas	121,282	1
	2/28/2011 5:00	2/28/2011 12:30	**450**	1.25	**858,063**	3.88	**0.60**	6	Atlas	1,072,579	1
	3/5/2011 4:15	3/5/2011 19:15	**900**	0.92	**1,100,492**	2.31	**0.30**	24	Atlas	1,012,452	1
	3/8/2011 10:30	3/10/2011 5:45	**2595**	2.79	**1,931,378**	3.71	**1.31**	24	Cloudburst	5,388,545	1
	3/14/2011 3:30	3/14/2011 21:00	**1050**	0.83	**633,509**	3.45	**0.27**	48	Atlas	525,812	1
	3/15/2011 7:30	3/15/2011 13:15	**345**	0.83	**342,545**	3.62	**0.27**	48	Atlas	284,312	1
	3/18/2011 16:15	3/18/2011 22:15	**360**	0.23	**993,547**	1.05	**0.11**	6	Atlas	228,516	1
	4/1/2011 20:30	4/1/2011 21:30	**60**	0.11	**2,273,802**	0.28	**0.07**	1	Atlas	250,118	1
	4/4/2011 13:15	4/4/2011 17:15	**240**	0.98	**762,740**	1.12	**0.50**	6	Atlas	747,485	1
	4/9/2011 10:45	4/9/2011 12:15	**90**	0.67	**401,680**	1.7	**0.48**	1	Atlas	269,125	1
	4/11/2011 10:15	4/13/2011 0:15	**2280**	3.55	**968,382**	5.2	**3.84**	24	Cloudburst	3,437,755	1
	4/15/2011 12:30	4/15/2011 14:00	**90**	0.47	**272,634**	4.43	**0.18**	24	Atlas	128,138	1
	4/15/2011 22:45	4/16/2011 8:30	**585**	0.47	**278,600**	4.69	**0.18**	24	Atlas	130,942	1
	4/20/2011 0:15	4/20/2011 5:15	**300**	0.68	**1,150,395**	1.21	**0.37**	6	Atlas	782,269	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**4/22/2011 16:30**	4/25/2011 8:00	**3810**	4.8	**805,304**	5.75	**2.66**	48	Cloudburst	3,865,460	1
	4/25/2011 17:00	4/26/2011 1:00	**480**	4.8	**57,191**	5.56	**2.66**	48	Cloudburst	274,515	1
	4/26/2011 10:00	4/26/2011 11:00	**60**	0.06	**1,166,451**	5.59	**0.03**	3	Atlas	69,987	1
	4/27/2011 1:00	4/28/2011 0:30	**1410**	2.98	**1,977,899**	8.38	**1.76**	24	Cloudburst	5,894,140	1
	4/28/2011 10:00	4/28/2011 20:45	**645**	Discharge						221,152	1
	5/1/2011 4:00	5/1/2011 7:00	**180**	0.71	**421,036**	5.21				298,936	1
	5/1/2011 19:00	5/2/2011 8:15	**795**	2.74	**357,733**	5.24	**0.89**	48	Atlas	980,189	1
	5/2/2011 16:45	5/4/2011 21:00	**3135**	2.74	**1,147,208**	6.71	**0.89**	48	Atlas	3,143,350	1
	5/8/2011 0:45	5/8/2011 2:15	**90**	0.21	**1,140,354**	3.59	**0.12**	3	Atlas	239,474	1
	5/23/2011 3:45	5/23/2011 5:00	**75**	0.3	**692,570**	0.95	**0.23**	1	Atlas	207,771	1
	5/23/2011 17:30	5/23/2011 21:30	**240**	0.8	**653,191**	1.76	**0.51**	3	Atlas	522,553	1
	5/25/2011 22:45	5/26/2011 12:30	**825**	1.24	**736,991**	2.92	**0.57**	3	Atlas	913,869	1
	6/11/2011 4:30	6/11/2011 5:15	**45**	0.43	**184,145**	0.44	**0.36**	1	Atlas	79,183	1
	6/15/2011 7:45	6/15/2011 10:45	**180**	1	**668,556**	1.46	**0.59**	3	Atlas	668,556	1
	6/18/2011 6:15	6/18/2011 8:45	**150**	0.9	**462,032**	1.95	**0.56**	3	Atlas	415,829	1
	6/19/2011 7:30	6/19/2011 10:00	**150**	0.45	**713,679**	2.38	**0.27**	3	Atlas	321,155	1
	6/20/2011 1:30	6/20/2011 2:30	**60**	0.65	**307,957**	3.02	**0.56**	1	Atlas	200,172	1
	6/21/2011 14:00	6/21/2011 17:00	**180**	0.43	**2,779,533**	3.41	**0.26**	3	Atlas	1,195,199	1
	6/22/2011 19:15	6/23/2011 5:15	**600**	3.64	**1,414,243**	6.07	**19.80**	3	Atlas	5,147,843	1
	6/26/2011 2:15	6/26/2011 5:15	**180**	0.33	**654,067**	5.44	**0.17**	6	Atlas	215,842	1
	7/3/2011 20:30	7/3/2011 20:45	**15**	0.1	**487,303**	0.12	**0.07**	1	Atlas	48,730	1
	7/8/2011 3:00	7/8/2011 5:15	**135**	0.49	**565,722**	0.66	**0.26**	3	Atlas	277,204	1
	7/12/2011 16:45	7/12/2011 21:30	**285**	0.46	**655,545**	1.03	**0.24**	6	Atlas	301,551	1
	7/19/2011 19:15	7/19/2011 23:45	**270**	1.53	**1,750,184**	1.88	**0.91**	1	Atlas	2,677,782	1
	7/20/2011 15:45	7/20/2011 16:00	**15**	0.18	**176,665**	1.87	**0.16**	1	Atlas	31,800	1
	7/24/2011 17:00	7/24/2011 17:30	**30**	0.71	**109,499**	2.57	**0.53**	1	Atlas	77,744	1
	7/29/2011 0:15	7/29/2011 14:45	**870**	Discharge						197,462	1
	7/30/2011 20:15	7/30/2011 21:45	**90**	0.91	**1,383,608**	1.64	**0.70**	1	Atlas	1,259,083	1
	8/7/2011 3:00	8/7/2011 6:45	**225**	1.85	**551,535**	1.89	**1.57**	3	Atlas	1,020,340	1
	8/8/2011 15:00	8/8/2011 15:15	**15**	0.18	**119,590**	2.08	**0.12**	3	Atlas	21,526	1
	8/10/2011 2:45	8/10/2011 5:15	**150**	0.12	**581,081**	2.19	**0.07**	3	Atlas	69,730	1
	8/13/2011 17:00	8/13/2011 18:00	**60**	0.7	**586,430**	2.8	**0.55**	1	Atlas	410,501	1
	8/18/2011 8:00	8/18/2011 8:45	**45**	0.36	**620,131**	1.06	**0.30**	1	Atlas	223,247	1
	9/4/2011 21:00	9/4/2011 21:15	**15**	0.12	**283,107**	0.07	**0.05**	12	Atlas	33,973	1
	9/6/2011 3:15	9/6/2011 3:30	**15**	0.28	**58,867**	0.32	**0.11**	12	Atlas	16,483	1
	9/8/2011 16:30	9/8/2011 16:30	**0**	Discharge						6,114	1
	9/10/2011 20:00	9/10/2011 20:30	**30**	0.08	**1,181,880**	0.47	**0.05**	3	Atlas	94,550	1
	9/11/2011 20:00	9/11/2011 22:15	**135**	0.22	**850,722**	0.68	**0.14**	3	Atlas	187,159	1
	9/19/2011 7:00	9/19/2011 23:15	**975**	0.74	**428,595**	0.97	**0.30**	12	Atlas	317,161	1
	9/23/2011 0:15	9/23/2011 8:30	**495**	0.81	**1,016,484**	1.57	**0.37**	12	Atlas	823,352	1
	9/25/2011 19:45	9/26/2011 5:45	**600**	3.18	**1,436,315**	4.86	**4.76**	12	Cloudburst	4,567,483	1
	10/13/2011 7:00	10/13/2011 8:45	**105**	0.43	**596,765**	0.32	**0.23**	3	Atlas	256,609	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**10/18/2011 20:15**	10/18/2011 20:15	**0**	0.12	**26,050**	0.55	**0.07**	3	Atlas	3,126	1
	10/20/2011 1:00	10/20/2011 7:30	**390**	0.42	**594,242**	0.94	**0.17**	12	Atlas	249,582	1
	10/26/2011 13:30	10/27/2011 5:30	**960**	1.01	**1,072,084**	1.46	**0.42**	12	Atlas	1,082,805	1
	11/3/2011 9:15	11/4/2011 0:30	**915**	0.66	**783,432**	0.73	**0.30**	3	Atlas	517,065	1
	11/14/2011 21:30	11/15/2011 15:45	**1095**	2.27	**949,776**	1.64	**0.74**	48	Atlas	2,155,991	1
	11/16/2011 5:00	11/16/2011 12:00	**420**	2.27	**460,335**	2.28	**0.74**	48	Atlas	1,044,959	1
	11/20/2011 4:15	11/21/2011 11:15	**1860**	2.32	**625,258**	3.29	**0.69**	48	Atlas	1,450,597	1
	11/22/2011	11/22/2011 20:15	**1215**	2.32	**698,307**	4.21	**0.69**	48	Atlas	1,620,072	1
	11/27/2011 3:15	11/30/2011 13:15	**4920**	3.33	**1,995,093**	5.72	**1.22**	48	Cloudburst	6,643,659	1
	12/4/2011 16:00	12/6/2011 7:00	**2340**	3.06	**1,466,288**	5.79	**0.99**	48	Atlas	4,486,840	1
	12/15/2011 4:00	12/15/2011 9:15	**315**	0.48	**941,572**	0.49	**0.26**	6	Atlas	451,955	1
	12/20/2011 23:15	12/21/2011 7:15	**480**	0.59	**1,144,872**	1.1	**0.27**	12	Atlas	675,474	1
	12/22/2011 11:45	12/22/2011 17:45	**360**	0.66	**1,160,433**	1.22	**0.29**	12	Atlas	765,886	1
	12/27/2011 1:30	12/27/2011 13:45	**735**	0.91	**1,084,784**	2.13	**0.36**	12	Atlas	987,153	1
	1/11/2012 4:45	1/11/2012 11:30	**405**	0.81	**1,205,186**	0.68	**0.31**	24	Atlas	976,201	1
	1/11/2012 20:00	1/11/2012 21:30	**90**	0.81	**181,626**	0.83	**0.31**	24	Atlas	147,117	1
	1/17/2012 2:45	1/17/2012 12:45	**600**	0.37	**1,194,624**	1.28	**0.17**	12	Atlas	442,011	1
	1/22/2012 22:30	1/23/2012 5:00	**390**	0.61	**1,120,452**	0.98	**0.33**	3	Atlas	683,476	1
	1/25/2012 15:30	1/25/2012 19:30	**240**	1.84	**157,803**	0.88	**0.60**	24	Atlas	290,357	1
	1/26/2012 5:00	1/27/2012 1:00	**1200**	1.84	**944,541**	2.45	**0.60**	24	Atlas	1,737,956	1
	2/4/2012 8:30	2/4/2012 12:15	**225**	0.37	**1,075,400**	0.41	**0.20**	6	Atlas	397,898	1
	2/15/2012 23:45	2/16/2012 7:45	**480**	0.28	**1,291,527**	0.49	**0.11**	12	Atlas	361,628	1
	2/21/2012 6:15	2/21/2012 6:15	**0**	0.08	**54,907**	0.35	**0.05**	1	Atlas	4,393	1
	2/22/2012 23:00	2/22/2012 23:30	**30**	0.12	**1,098,274**	0.34	**0.08**	1	Atlas	131,793	1
	2/29/2012 2:00	2/29/2012 9:15	**435**	0.59	**612,377**	0.69	**0.27**	12	Atlas	361,303	1
	3/2/2012 11:45	3/2/2012 12:15	**30**	0.16	**579,131**	0.71	**0.07**	12	Atlas	92,661	1
	3/4/2012 23:15	3/5/2012 5:30	**375**	0.22	**419,209**	0.98	**0.11**	6	Atlas	92,226	1
	3/8/2012 9:45	3/8/2012 17:45	**480**	0.8	**1,365,092**	1.15	**0.37**	6	Atlas	1,092,074	1
	3/12/2012 7:45	3/12/2012 12:15	**270**	0.18	**156,082**	0.98	**0.08**	12	Atlas	28,095	1
	3/15/2012 18:00	3/16/2012 3:30	**570**	0.98	**1,411,363**	1.21	**0.44**	12	Atlas	1,383,135	1
	3/17/2012 18:15	3/17/2012 21:30	**195**	1.35	**165,249**	2.42	**0.84**	1	Atlas	223,086	1
	3/23/2012 4:45	3/23/2012 22:45	**1080**	1.62	**1,040,814**	2.98	**0.62**	24	Atlas	1,686,118	1
	3/31/2012	3/31/2012 0:15	**15**	0.12	**355,626**	0.21	**0.07**	3	Atlas	42,675	1
	4/1/2012 8:15	4/1/2012 11:15	**180**	1.42	**2,135,661**	1.62	**0.77**	6	Atlas	3,032,638	1
	4/4/2012 6:15	4/4/2012 6:45	**30**	0.04	**1,878,433**	1.68	**0.03**	3	Atlas	75,137	1
	4/4/2012 17:30	4/4/2012 17:30	**0**	0.21	**10,912**	1.65	**0.09**	12	Atlas	2,292	1
	4/14/2012 8:45	4/14/2012 10:30	**105**	0.22	**550,134**	0.16	**0.12**	1	Atlas	121,029	1
	4/16/2012 6:45	4/16/2012 7:15	**30**	0.14	**494,970**	0.31	**0.09**	3	Atlas	69,296	1
	4/20/2012 23:30	4/21/2012 4:45	**315**	0.29	**639,359**	0.62	**0.13**	12	Atlas	185,414	1
	4/26/2012 5:00	4/26/2012 5:00	**0**	0.07	**287,122**	0.43	**0.05**	1	Atlas	20,099	1
	5/4/2012 16:15	5/5/2012 5:00	**765**	1.37	**848,497**	2.45	**0.73**	3	Atlas	1,162,441	1
	5/12/2012 23:30	5/13/2012 15:00	**930**	2.31	**736,860**	2.35	**0.93**	12	Atlas	1,702,146	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**5/29/2012 6:30**	5/29/2012 13:00	**390**	3.21	**486,042**	3.21	**25.00**	3	Atlas	1,560,195	1
	5/31/2012 20:00	6/1/2012 1:00	**300**	1.23	**61,980**	4.22	**0.53**	12	Atlas	76,235	1
	6/4/2012 16:30	6/4/2012 17:30	**60**	0.21	**29,223**	4.61	**0.10**	12	Atlas	6,137	1
	6/11/2012 3:45	6/11/2012 3:45	**0**	0.04	**96,894**	0.23	**0.02**	6	Atlas	3,876	1
	6/17/2012 12:00	6/17/2012 12:00	**0**	0.18	**26,145**	0.28	**0.11**	3	Atlas	4,706	1
	7/1/2012 19:45	7/1/2012 20:15	**30**	0.53	**183,862**	0.46	**0.40**	1	Atlas	97,447	1
	7/2/2012 20:30	7/2/2012 20:45	**15**	0.04	**545,964**	0.57	**0.03**	1	Atlas	21,839	1
	7/8/2012 13:15	7/8/2012 13:15	**0**	0.09	**12,751**	0.64	**0.06**	1	Atlas	1,148	1
	7/14/2012 14:30	7/14/2012 14:45	**15**	0.74	**65,003**	0.85	**0.48**	3	Atlas	48,102	1
	7/18/2012 16:15	7/18/2012 16:15	**0**	Discharge						7,789	1
	7/24/2012 20:15	7/24/2012 20:30	**15**	0.13	**345,464**	0.91	**0.10**	1	Atlas	44,910	1
	7/27/2012 3:30	7/27/2012 3:45	**15**	0.2	**304,851**	0.37	**0.09**	12	Atlas	60,970	1
	7/27/2012 19:45	7/27/2012 21:00	**75**	0.59	**1,168,031**	0.92	**0.38**	3	Atlas	689,139	1
	8/3/2012 9:30	8/3/2012 10:45	**75**	0.26	**528,354**	0.85	**0.12**	12	Atlas	137,372	1
	8/16/2012 20:15	8/16/2012 23:30	**195**	0.57	**1,242,108**	0.69	**0.32**	3	Atlas	708,002	1
	8/21/2012 14:15	8/21/2012 14:30	**15**	0.16	**299,932**	0.74	**0.14**	1	Atlas	47,989	1
	8/27/2012 15:30	8/27/2012 15:30	**0**	0.01	**3,261,721**	0.17	**0.01**	1	Atlas	32,617	1
	8/31/2012 22:00	8/31/2012 23:00	**60**	0.01	**13,839,276**	0.03	**0.01**	1	Atlas	138,393	1
	9/1/2012 15:15	9/1/2012 16:30	**75**	0.57	**473,755**	0.45	**0.35**	3	Atlas	270,040	1
	9/2/2012 12:00	9/2/2012 22:45	**645**	0.95	**629,451**	1.55	**0.37**	24	Atlas	597,978	1
	10/18/2012 1:00	10/18/2012 2:45	**105**	0.24	**1,012,629**	0.34	**0.15**	3	Atlas	243,031	1
	10/26/2012 10:45	10/26/2012 23:45	**780**	0.75	**921,341**	0.79	**0.36**	6	Atlas	691,005	1
	11/3/2012 11:00	11/3/2012 17:00	**360**	0.16	**1,151,425**	0.18	**0.07**	12	Atlas	184,228	1
	11/12/2012 5:30	11/12/2012 10:30	**300**	0.56	**618,920**	0.56	**0.26**	12	Atlas	346,595	1
	12/2/2012 11:30	12/2/2012 12:45	**75**	0.18	**228,493**	0.26	**0.11**	3	Atlas	41,129	1
	12/4/2012 15:45	12/4/2012 19:00	**195**	0.52	**1,088,706**	0.7	**0.34**	3	Atlas	566,127	1
	12/7/2012 2:15	12/7/2012 18:45	**990**	1.43	**1,333,070**	2.13	**0.61**	12	Atlas	1,906,291	1
	12/8/2012 5:00	12/8/2012 10:30	**330**	0.5	**1,387,925**	2.63	**0.27**	6	Atlas	693,962	1
	12/9/2012 8:45	12/9/2012 9:45	**60**	1.2	**141,141**	2.73	**0.54**	3	Atlas	169,369	1
	12/9/2012 21:00	12/10/2012 3:45	**405**	1.2	**833,078**	3.59	**0.54**	3	Atlas	999,694	1
	12/15/2012 11:30	12/15/2012 12:30	**60**	0.16	**1,077,309**	1.37	**0.09**	3	Atlas	172,369	1
	12/16/2012 23:45	12/17/2012 1:00	**75**	0.02	**6,224,116**	0.43	**0.01**	6	Atlas	124,482	1
	12/17/2012 14:45	12/17/2012 17:45	**180**	0.23	**677,610**	0.43	**0.14**	3	Atlas	155,850	1
	12/20/2012 6:45	12/20/2012 12:30	**345**	0.6	**1,476,619**	1.01	**0.33**	6	Atlas	885,971	1
	12/26/2012 1:15	12/26/2012 14:30	**795**	0.9	**1,193,975**	1.57	**0.36**	12	Atlas	1,074,577	1
	12/31/2012 23:30	1/1/2013 0:30	**60**	0.11	**692,714**	1.05	**0.04**	24	Atlas	76,199	1
	1/10/2013 12:45	1/10/2013 15:00	**135**	0.16	**651,288**	0.17	**0.08**	6	Atlas	104,206	1
	1/11/2013 2:15	1/11/2013 8:15	**360**	0.67	**973,180**	0.84	**0.35**	6	Atlas	652,031	1
	1/13/2013 3:15	1/13/2013 20:00	**1005**	2.26	**1,415,756**	3.09	**0.87**	24	Atlas	3,199,609	1
	1/15/2013 20:15	1/15/2013 20:15	**0**	0.26	**34,404**	3.21	**0.10**	24	Atlas	8,945	1
	1/27/2013 12:00	1/27/2013 20:45	**525**	Discharge						379,972	1
	1/28/2013 10:45	1/28/2013 17:30	**405**	0.3	**666,385**	0.33	**0.11**	24	Atlas	199,915	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO206	**1/30/2013 4:45**	1/30/2013 9:15	**270**	0.84	**1,418,248**	1.11	**0.44**	6	Atlas	1,191,328	1
	1/30/2013 17:45	1/30/2013 18:15	**30**	0.84	**50,533**	1.17	**0.44**	6	Atlas	42,448	1
	2/4/2013 17:30	2/4/2013 18:45	**75**	0.13	**940,876**	1.06	**0.08**	3	Atlas	122,314	1
	2/10/2013 15:30	2/10/2013 16:45	**75**	0.14	**1,101,750**	0.37	**0.07**	3	Atlas	154,245	1
	2/18/2013 23:45	2/19/2013 5:00	**315**	0.29	**1,476,563**	0.35	**0.13**	12	Atlas	428,203	1
	2/21/2013 21:30	2/22/2013 4:00	**390**	0.38	**966,797**	0.67	**0.17**	12	Atlas	367,383	1
	2/26/2013 5:30	2/26/2013 19:45	**855**	0.7	**1,566,430**	1.05	**0.27**	12	Atlas	1,096,501	1
	3/1/2013 10:30	3/1/2013 23:45	**795**	0.07	**4,468,208**	0.79	**0.03**	24	Atlas	312,775	1
	3/5/2013 14:30	3/5/2013 19:15	**285**	0.46	**1,141,853**	0.78	**0.17**	6	Atlas	525,253	1
	3/10/2013 23:00	3/11/2013 13:00	**840**	1.1	**1,460,489**	1.59	**0.44**	12	Atlas	1,606,538	1
	3/17/2013 4:30	3/18/2013 9:30	**1740**	1.63	**1,447,223**	2.69	**0.53**	48	Atlas	2,358,973	1
	3/24/2013 6:15	3/24/2013 17:15	**660**	0.48	**805,536**	1.81	**0.18**	24	Atlas	386,657	1
	3/26/2013	3/26/2013 6:30	**390**	Discharge						56,731	1
	4/11/2013 5:30	4/12/2013 2:15	**1245**	1.16	**1,316,653**	1.17	**0.45**	24	Atlas	1,527,318	1
	4/16/2013 20:45	4/16/2013 20:45	**0**	0.69	**42,293**	1.83	**0.57**	1	Atlas	29,182	1
	4/19/2013 1:15	4/19/2013 4:30	**195**	0.97	**1,058,357**	1.67	**0.53**	6	Atlas	1,026,607	1
	4/24/2013 6:30	4/24/2013 10:15	**225**	0.62	**863,060**	1.64	**0.34**	3	Atlas	535,097	1
	4/27/2013 21:15	4/27/2013 21:15	**0**	0.09	**41,221**	0.68	**0.04**	6	Atlas	3,710	1
	4/28/2013 8:45	4/28/2013 9:15	**30**	0.09	**1,081,622**	0.74	**0.04**	6	Atlas	97,346	1
	5/3/2013 18:30	5/3/2013 19:15	**45**	0.12	**564,033**	0.22	**0.09**	1	Atlas	67,684	1
	5/4/2013 11:15	5/5/2013 9:00	**1305**	1.42	**1,087,266**	1.32	**0.42**	24	Atlas	1,543,918	1
	5/10/2013 10:00	5/11/2013 1:00	**900**	0.96	**973,906**	2.51	**0.44**	6	Atlas	934,950	1
	5/16/2013 10:15	5/16/2013 10:45	**30**	0.33	**684,517**	1.32	**0.27**	1	Atlas	225,891	1
	5/22/2013 16:00	5/22/2013 17:45	**105**	0.29	**194,047**	0.63	**0.19**	3	Atlas	56,274	1
	5/31/2013 11:45	5/31/2013 18:30	**405**	0.21	**912,825**	0.27	**0.10**	12	Atlas	191,693	1
	6/9/2013 23:00	6/10/2013 3:45	**285**	0.36	**917,631**	0.46	**0.17**	6	Atlas	330,347	1
	6/16/2013 17:15	6/16/2013 18:00	**45**	0.3	**156,811**	0.64	**0.21**	1	Atlas	47,043	1
	6/17/2013 19:15	6/17/2013 22:00	**165**	1.7	**344,255**	1.94	**0.99**	1	Atlas	585,233	1
	6/21/2013 18:45	6/21/2013 20:00	**75**	0.62	**947,761**	2.64	**0.40**	3	Atlas	587,612	1
	6/23/2013 13:30	6/23/2013 13:30	**0**	0.36	**34,399**	2.96	**0.24**	1	Atlas	12,384	1
	6/24/2013 8:15	6/24/2013 9:30	**75**	0.13	**1,359,976**	2.8	**0.08**	3	Atlas	176,797	1
	6/26/2013 3:15	6/26/2013 5:00	**105**	0.7	**550,625**	1.81	**0.47**	3	Atlas	385,437	1
	7/2/2013 6:15	7/2/2013 6:15	**0**	Discharge						286,615	1
	7/3/2013 17:30	7/3/2013 18:30	**60**	0.1	**523,631**	2.03	**0.07**	3	Atlas	52,363	1
	7/4/2013 6:30	7/4/2013 7:30	**60**	0.63	**172,059**	1.17	**0.27**	12	Atlas	108,397	1
	7/6/2013 0:30	7/6/2013 8:00	**450**	0.68	**897,983**	2.32	**0.29**	12	Atlas	610,628	1
	12/5/2013 7:00	12/6/2013 14:15	**1875**	0.71	**1,171,400**	0.46	**0.23**	48	Atlas	831,694	1
Grand Total										**182,217,278**	**247**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**3/26/2009 8:30**	3/26/2009 16:00	**450**	0.16	**3,594,563**	0.59	**0.09**	6	Atlas	575,130	1
	3/28/2009 20:00	3/29/2009 1:30	**330**	0.63	**765,898**	1.18	**0.32**	1	Atlas	482,516	1
	4/2/2009 18:45	4/3/2009 8:15	**810**	1.04	**1,622,705**	1.78	**0.48**	12	Atlas	1,687,613	1
	4/5/2009 17:15	4/5/2009 23:00	**345**	0.37	**1,267,857**	1.49	**0.23**	3	Atlas	469,107	1
	4/10/2009 13:45	4/11/2009 0:30	**645**	0.59	**925,112**	0.99	**0.24**	12	Atlas	545,816	1
	4/13/2009 14:15	4/14/2009 3:00	**765**	0.78	**1,502,732**	1.37	**0.31**	12	Atlas	1,172,131	1
	4/19/2009 7:30	4/19/2009 20:45	**795**	1.6	**1,054,224**	2.2	**0.64**	12	Atlas	1,686,759	1
	4/28/2009 8:15	4/28/2009 16:15	**480**	0.32	**780,303**	0.37	**0.20**	3	Atlas	249,697	1
	5/1/2009 2:45	5/1/2009 4:15	**90**	0.05	**647,280**	0.53	**0.03**	6	Atlas	32,364	1
	5/1/2009 22:45	5/2/2009 2:00	**195**	Discharge						82,283	1
	5/6/2009 11:00	5/6/2009 16:00	**300**	Discharge						391,533	1
	5/8/2009 3:00	5/8/2009 23:45	**1245**	Discharge						3,847,660	1
	5/14/2009 5:30	5/14/2009 10:15	**285**	Discharge						370,204	1
	5/16/2009 5:00	5/16/2009 11:00	**360**	Discharge						250,521	1
	5/27/2009 12:45	5/27/2009 14:45	**120**	Discharge						93,436	1
	6/10/2009 9:30	6/10/2009 17:00	**450**	1.01	**565,062**	1.39	**0.52**	3	Atlas	570,713	1
	6/11/2009 2:30	6/12/2009 4:15	**1545**	1.35	**1,205,395**	2.72	**0.52**	24	Atlas	1,627,283	1
	6/15/2009 15:30	6/15/2009 18:30	**180**	0.37	**707,557**	3.02	**0.30**	1	Atlas	261,796	1
	6/16/2009 8:45	6/16/2009 19:45	**660**	0.77	**953,116**	3.78	**0.47**	1	Atlas	733,899	1
	6/18/2009 9:30	6/20/2009 4:15	**2565**	0.8	**22,801,511**	2.97	**0.49**	3	Atlas	18,241,209	1
	6/21/2009 10:45	6/21/2009 11:30	**45**	0.19	**217,232**	2.28	**0.12**	3	Atlas	41,274	1
	6/22/2009 8:45	6/22/2009 16:00	**435**	0.52	**1,708,610**	2.71	**0.31**	3	Atlas	888,477	1
	6/26/2009 2:30	6/26/2009 17:30	**900**	1.54	**3,142,406**	2.39	**0.87**	3	Atlas	4,839,306	1
	7/8/2009 5:45	7/8/2009 6:30	**45**	0.21	**264,281**	0.58	**0.18**	1	Atlas	55,499	1
	7/15/2009 10:00	7/15/2009 15:30	**330**	0.61	**872,974**	0.64	**0.39**	3	Atlas	532,514	1
	7/17/2009 2:15	7/17/2009 7:45	**330**	0.58	**866,014**	1.21	**0.39**	3	Atlas	502,288	1
	7/22/2009 2:15	7/22/2009 22:15	**1200**	1.82	**1,059,349**	3.01				1,928,016	1
	7/25/2009 14:15	7/25/2009 23:15	**540**	0.71	**210,637**	2.53	**0.27**	24	Atlas	149,552	1
	7/29/2009 2:15	7/29/2009 11:30	**555**	1.08	**1,178,697**	3.42	**0.46**	12	Atlas	1,272,993	1
	7/30/2009 17:45	7/31/2009 4:15	**630**	0.83	**1,224,400**	2.62	**0.35**	12	Atlas	1,016,252	1
	8/4/2009 7:30	8/5/2009 0:30	**1020**	5.45	**4,560,008**	7.37				24,852,044	1
	8/10/2009 18:30	8/11/2009 1:30	**420**	0.88	**1,029,583**	6.33	**0.55**	3	Atlas	906,033	1
	8/28/2009 23:45	8/29/2009 0:15	**30**	0.11	**244,236**	0.15	**0.08**	1	Atlas	26,866	1
	9/6/2009 19:00	9/6/2009 20:00	**60**	0.47	**119,196**	0.41	**0.18**	24	Atlas	56,022	1
	9/7/2009 17:30	9/7/2009 18:15	**45**	0.47	**61,934**	0.67	**0.18**	24	Atlas	29,109	1
	9/20/2009 5:00	9/21/2009 2:15	**1275**	2.89	**2,123,003**	2.9	**1.61**	24	Cloudburst	6,135,479	1
	9/22/2009 18:00	9/23/2009 1:15	**435**	0.31	**1,060,555**	3.21	**0.14**	12	Atlas	328,772	1
	9/24/2009 6:30	9/25/2009 3:00	**1230**	1	**863,841**	4.14	**0.35**	24	Atlas	863,841	1
	9/26/2009 19:45	9/27/2009 3:00	**435**	0.38	**1,685,647**	4.63	**0.31**	1	Atlas	640,546	1
	10/2/2009 3:00	10/2/2009 12:30	**570**	0.74	**1,105,500**	1.25	**0.47**	3	Atlas	818,070	1
	10/6/2009 10:00	10/6/2009 14:15	**255**	0.09	**2,477,922**	0.83	**0.06**	1	Atlas	223,013	1
	10/8/2009 13:30	10/10/2009 1:30	**2160**	2.17	**1,122,246**	3	**0.72**	24	Atlas	2,435,274	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**10/14/2009 5:00**	10/14/2009 12:45	**465**	0.62	**1,294,776**	2.79	**0.41**	3	Atlas	802,761	1
	10/15/2009 3:45	10/15/2009 8:30	**285**	0.14	**1,994,493**	2.86	**0.09**	1	Atlas	279,229	1
	10/23/2009 1:45	10/23/2009 14:00	**735**	0.68	**1,107,028**	0.7	**0.29**	12	Atlas	752,779	1
	10/27/2009 16:30	10/28/2009 5:15	**765**	1.14	**1,035,382**	1.82	**0.51**	12	Atlas	1,180,336	1
	10/30/2009 18:45	10/31/2009 9:45	**900**	1	**1,747,960**	2.15	**0.45**	12	Atlas	1,747,960	1
	11/11/2009 10:30	11/12/2009 1:15	**885**	Discharge						1,150,891	1
	11/12/2009 10:30	11/12/2009 11:00	**30**	Discharge						18,545	1
	11/17/2009 8:00	11/18/2009 2:45	**1125**	0.61	**1,687,533**	0.61	**0.23**	24	Atlas	1,029,395	1
	12/2/2009 16:00	12/2/2009 19:00	**180**	0.3	**255,307**	0.48	**0.14**	12	Atlas	76,592	1
	12/8/2009 15:15	12/9/2009 5:45	**870**	2.21	**907,664**	2.51	**0.89**	12	Atlas	2,005,938	1
	12/13/2009 6:15	12/13/2009 11:30	**315**	0.27	**1,522,770**	2.56	**0.17**	3	Atlas	411,148	1
	12/31/2009 0:30	12/31/2009 0:45	**15**	0.1	**89,990**	0.54	**0.06**	3	Atlas	8,999	1
	1/20/2010 9:00	1/22/2010 0:15	**2355**	1.5	**1,669,620**	1.73	**0.49**	48	Atlas	2,504,430	1
	1/24/2010 3:30	1/25/2010 12:15	**1965**	0.88	**2,731,431**	2.69	**0.34**	24	Atlas	2,403,659	1
	2/5/2010 6:30	2/6/2010 10:30	**1680**	1.2	**2,563,535**	1.4	**0.44**	24	Atlas	3,076,242	1
	3/12/2010 13:00	3/12/2010 17:00	**240**	0.28	**976,171**	0.3	**0.17**	3	Atlas	273,328	1
	3/21/2010 19:15	3/22/2010 4:45	**570**	0.76	**888,130**	0.76	**0.34**	12	Atlas	674,979	1
	3/25/2010 20:45	3/25/2010 23:15	**150**	0.31	**271,987**	1.04	**0.12**	24	Atlas	84,316	1
	4/7/2010 23:00	4/8/2010 9:45	**645**	1.24	**1,121,941**	1.36	**0.58**	6	Atlas	1,391,207	1
	4/16/2010 18:00	4/16/2010 18:15	**15**	0.16	**62,444**	0.07	**0.10**	3	Atlas	9,991	1
	4/24/2010 13:45	4/24/2010 23:30	**585**	1.37	**703,200**	1.58	**0.64**	6	Atlas	963,384	1
	4/27/2010 7:45	4/27/2010 12:30	**285**	0.37	**754,159**	2.13	**0.19**	6	Atlas	279,039	1
	5/1/2010 4:15	5/1/2010 13:00	**525**	4.12	**289,973**	2.95	**3.48**	48	Atlas	1,194,689	1
	5/2/2010 0:45	5/2/2010 23:45	**1380**	4.12	**1,441,072**	4.67	**3.48**	48	Atlas	5,937,218	1
	5/7/2010 23:00	5/7/2010 23:15	**15**	0.13	**194,762**	4.29	**0.11**	1	Atlas	25,319	1
	5/12/2010 9:30	5/12/2010 14:45	**315**	0.72	**680,963**	0.91	**0.54**	1	Atlas	490,293	1
	5/13/2010 12:30	5/13/2010 14:00	**90**	0.21	**490,857**	1.12	**0.18**	1	Atlas	103,080	1
	5/16/2010 9:30	5/16/2010 12:00	**150**	0.34	**116,059**	1.21	**0.16**	12	Atlas	39,460	1
	5/17/2010 17:15	5/17/2010 22:15	**300**	0.27	**1,440,756**	1.6	**0.18**	3	Atlas	389,004	1
	5/21/2010 19:30	5/22/2010 0:30	**300**	0.74	**871,368**	1.36	**0.60**	1	Atlas	644,812	1
	5/30/2010 22:15	5/30/2010 23:15	**60**	0.04	**1,819,150**	0.17	**0.03**	1	Atlas	72,766	1
	6/9/2010 3:00	6/9/2010 17:00	**840**	1.69	**1,997,925**	1.86	**0.80**	3	Atlas	3,376,493	1
	6/14/2010 1:15	6/14/2010 1:15	**0**	0.46	**11,715**	2.07	**0.25**	1	Atlas	5,389	1
	6/19/2010 6:00	6/19/2010 10:15	**255**	0.64	**201,742**	1.47	**0.38**	3	Atlas	129,115	1
	6/28/2010 5:30	6/28/2010 5:30	**0**	0.38	**26,034**	0.38	**0.25**	1	Atlas	9,893	1
	7/13/2010 6:00	7/13/2010 6:45	**45**	1.4	**61,468**	1.58	**0.75**	3	Atlas	86,055	1
	7/20/2010 5:15	7/20/2010 8:45	**210**	0.55	**423,115**	1.34	**0.32**	1	Atlas	232,713	1
	7/21/2010 8:30	7/21/2010 8:30	**0**	0.37	**26,419**	1.19	**0.29**	1	Atlas	9,775	1
	7/31/2010 4:45	7/31/2010 7:15	**150**	0.61	**173,820**	0.74	**0.35**	3	Atlas	106,030	1
	8/21/2010 8:45	8/21/2010 13:15	**270**	0.45	**250,533**	0.81	**0.28**	3	Atlas	112,740	1
	10/26/2010 13:45	10/26/2010 15:45	**120**	0.54	**87,511**	0.58	**0.30**	6	Atlas	47,256	1
	11/16/2010 13:15	11/16/2010 21:15	**480**	0.81	**239,931**	0.9	**0.36**	12	Atlas	194,344	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**11/24/2010 14:00**	11/24/2010 16:15	**135**	0.64	**94,364**	0.99	**0.31**	3	Atlas	60,393	1
	11/25/2010 10:15	11/26/2010 2:15	**960**	2.42	**318,455**	3.35	**0.92**	24	Atlas	770,661	1
	11/30/2010	11/30/2010 13:30	**810**	1.76	**296,687**	5.07	**0.68**	24	Atlas	522,169	1
	1/1/2011 5:45	1/1/2011 10:15	**270**	0.64	**312,461**	1.19	**0.29**	12	Atlas	199,975	1
	2/1/2011 19:15	2/1/2011 23:15	**240**	0.93	**181,896**	0.83	**0.34**	6	Atlas	169,163	1
	2/24/2011 20:00	2/25/2011 6:00	**600**	2.6	**723,739**	2.78	**1.14**	12	Cloudburst	1,881,722	1
	2/28/2011 6:15	2/28/2011 14:00	**465**	0.84	**793,120**	3.8	**0.39**	6	Atlas	666,221	1
	3/3/2011 10:15	3/3/2011 18:45	**510**	Discharge						660,461	1
	3/5/2011 7:30	3/5/2011 10:45	**195**	0.87	**203,457**	1.85	**0.30**	24	Atlas	177,008	1
	3/8/2011 23:15	3/9/2011 20:30	**1275**	3.01	**1,254,581**	3.91	**1.86**	12	Cloudburst	3,776,288	1
	4/4/2011 14:30	4/4/2011 20:45	**375**	0.65	**287,842**	0.78	**0.33**	6	Atlas	187,097	1
	4/9/2011 11:30	4/9/2011 13:15	**105**	0.46	**161,287**	1.15	**0.30**	3	Atlas	74,192	1
	4/11/2011 16:45	4/12/2011 7:15	**870**	2.99	**564,764**	3.49	**1.80**	24	Cloudburst	1,688,644	1
	4/20/2011 2:15	4/20/2011 7:15	**300**	0.77	**386,594**	1.14	**0.42**	6	Atlas	297,677	1
	4/23/2011 0:15	4/23/2011 22:00	**1305**	4.74	**502,953**	4.35	**2.83**	48	Atlas	2,383,998	1
	4/24/2011 8:15	4/24/2011 22:30	**855**	4.74	**85,921**	5.11	**2.83**	48	Atlas	407,266	1
	4/27/2011 1:00	4/27/2011 10:15	**555**	2.1	**1,764,561**	6.89	**0.78**	24	Atlas	3,705,579	1
	5/1/2011 5:45	5/1/2011 7:30	**105**	0.7	**156,476**	4.24				109,533	1
	5/2/2011 5:15	5/2/2011 7:15	**120**	2.6	**68,540**	4.17	**0.84**	48	Atlas	178,203	1
	5/2/2011 23:30	5/3/2011 8:45	**555**	2.6	**276,801**	5.55	**0.84**	48	Atlas	719,683	1
	5/8/2011 1:30	5/8/2011 3:45	**135**	0.28	**698,343**	3.51	**0.18**	1	Atlas	195,536	1
	5/14/2011 15:30	5/14/2011 17:00	**90**	0.29	**187,241**	0.6	**0.18**	1	Atlas	54,300	1
	5/21/2011 18:30	5/21/2011 22:15	**225**	0.62	**147,837**	0.95	**0.43**	1	Atlas	91,659	1
	5/23/2011 5:00	5/23/2011 7:15	**135**	0.43	**114,351**	1.2	**0.27**	3	Atlas	49,171	1
	5/23/2011 17:45	5/24/2011	**375**	0.92	**313,508**	2.11	**0.58**	3	Atlas	288,427	1
	5/25/2011 22:30	5/26/2011 14:00	**930**	1.43	**402,767**	3.32	**0.66**	3	Atlas	575,957	1
	5/29/2011 13:45	5/29/2011 17:15	**210**	Discharge						3,498	1
	5/30/2011 11:30	5/30/2011 18:30	**420**	Discharge						10,988	1
	5/31/2011 11:15	5/31/2011 18:00	**405**	Discharge						10,818	1
	6/1/2011 11:00	6/1/2011 18:45	**465**	Discharge						13,847	1
	6/2/2011 13:45	6/2/2011 14:45	**60**	Discharge						947	1
	6/3/2011 13:30	6/3/2011 18:00	**270**	Discharge						4,771	1
	6/4/2011 12:00	6/4/2011 18:30	**390**	Discharge						9,869	1
	6/5/2011 12:00	6/5/2011 12:00	**0**	Discharge						316	1
	6/6/2011 11:45	6/6/2011 18:30	**405**	Discharge						8,270	1
	6/7/2011 11:45	6/7/2011 18:45	**420**	Discharge						8,590	1
	6/8/2011 11:45	6/8/2011 18:15	**390**	Discharge						8,591	1
	6/9/2011 11:15	6/9/2011 18:15	**420**	Discharge						10,025	1
	6/10/2011 11:45	6/10/2011 17:30	**345**	Discharge						7,811	1
	6/11/2011 15:30	6/11/2011 17:15	**105**	0.2	**11,140**	0.27	**0.15**	1	Atlas	2,228	1
	6/12/2011 13:45	6/12/2011 16:15	**150**	Discharge						2,217	1
	6/13/2011 15:15	6/13/2011 15:15	**0**	Discharge						318	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**6/15/2011 9:15**	6/15/2011 11:45	**150**	1.03	**819,235**	1.29	**0.63**	3	Atlas	843,812	1
	6/17/2011 14:15	6/17/2011 16:30	**135**	Discharge						2,223	1
	6/18/2011 7:15	6/18/2011 11:00	**225**	0.74	**129,877**	1.82	**0.45**	3	Atlas	96,109	1
	6/19/2011 7:45	6/19/2011 12:30	**285**	0.8	**200,311**	2.6	**0.51**	3	Atlas	160,249	1
	6/20/2011 1:45	6/20/2011 5:15	**210**	0.67	**189,769**	3.27	**0.57**	1	Atlas	127,145	1
	6/20/2011 14:15	6/20/2011 17:45	**210**	Discharge						4,774	1
	6/21/2011 17:45	6/21/2011 19:00	**75**	0.26	**56,296**	3.51	**0.15**	3	Atlas	14,637	1
	6/22/2011 20:15	6/23/2011 13:15	**1020**	3.18	**889,225**	5.66	**10.00**	3	Atlas	2,827,735	1
	6/25/2011 14:15	6/25/2011 16:15	**120**	Discharge						1,586	1
	6/28/2011 11:30	6/28/2011 17:45	**375**	Discharge						6,843	1
	6/29/2011 13:45	6/29/2011 18:30	**285**	Discharge						4,774	1
	6/30/2011 13:30	6/30/2011 18:15	**285**	Discharge						6,363	1
	7/1/2011 11:30	7/1/2011 17:45	**375**	Discharge						7,954	1
	7/2/2011 13:30	7/2/2011 16:45	**195**	Discharge						4,135	1
	7/3/2011 10:45	7/3/2011 18:00	**435**	Discharge						8,269	1
	7/4/2011 15:00	7/4/2011 17:30	**150**	0.04	**63,650**	0.04	**0.02**	1	Atlas	2,546	1
	7/5/2011 12:00	7/5/2011 18:15	**375**	Discharge						9,389	1
	7/6/2011 11:30	7/6/2011 18:45	**435**	Discharge						10,511	1
	7/7/2011 11:45	7/7/2011 18:00	**375**	Discharge						9,545	1
	7/9/2011 12:30	7/9/2011 19:00	**390**	Discharge						11,298	1
	7/10/2011 11:15	7/10/2011 19:00	**465**	Discharge						13,834	1
	7/11/2011 11:30	7/11/2011 18:45	**435**	Discharge						12,094	1
	7/12/2011 10:30	7/12/2011 22:15	**705**	Discharge						37,873	1
	7/13/2011 11:30	7/13/2011 17:45	**375**	Discharge						10,028	1
	7/14/2011 12:30	7/14/2011 18:00	**330**	Discharge						7,320	1
	7/15/2011 11:45	7/15/2011 18:45	**420**	Discharge						10,341	1
	7/16/2011 14:30	7/16/2011 17:45	**195**	Discharge						3,819	1
	7/17/2011 13:45	7/17/2011 17:45	**240**	Discharge						6,522	1
	7/18/2011 11:30	7/18/2011 19:00	**450**	Discharge						11,938	1
	7/19/2011 12:30	7/20/2011 16:45	**1695**	Discharge						1,599,338	1
	7/21/2011 10:45	7/21/2011 18:45	**480**	Discharge						13,844	1
	7/22/2011 11:00	7/22/2011 19:00	**480**	Discharge						14,004	1
	7/23/2011 11:15	7/23/2011 19:15	**480**	Discharge						13,041	1
	7/24/2011 10:30	7/24/2011 17:00	**390**	Discharge						11,927	1
	7/25/2011 11:00	7/25/2011 19:00	**480**	Discharge						13,844	1
	7/26/2011 10:45	7/26/2011 19:15	**510**	Discharge						15,910	1
	7/27/2011 11:15	7/27/2011 18:45	**450**	Discharge						13,046	1
	7/28/2011 11:00	7/28/2011 19:15	**495**	Discharge						15,436	1
	7/29/2011 11:30	7/29/2011 18:30	**420**	Discharge						12,412	1
	7/30/2011 12:15	7/30/2011 19:15	**420**	Discharge						11,776	1
	7/31/2011 11:00	7/31/2011 19:30	**510**	Discharge						18,621	1
	8/1/2011 11:15	8/1/2011 19:30	**495**	Discharge						15,595	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**8/2/2011 10:45**	8/2/2011 18:30	**465**	Discharge						13,364	1
	8/3/2011 13:30	8/3/2011 16:15	**165**	0.02	**191,100**	0.03	**0.02**	1	Atlas	3,822	1
	8/4/2011 11:45	8/4/2011 19:15	**450**	Discharge						12,731	1
	8/5/2011 13:45	8/5/2011 14:15	**30**	0.01	**63,400**	0.03	**0.01**	1	Atlas	634	1
	8/7/2011 2:45	8/7/2011 18:00	**915**	1.42	**687,427**	1.45	**0.82**	3	Atlas	976,147	1
	8/8/2011 11:00	8/8/2011 16:45	**345**	Discharge						6,522	1
	8/9/2011 12:30	8/9/2011 18:00	**330**	Discharge						9,556	1
	8/10/2011 12:00	8/10/2011 18:30	**390**	0.22	**52,114**	1.92	**0.15**	3	Atlas	11,465	1
	8/11/2011 12:45	8/11/2011 18:45	**360**	Discharge						7,479	1
	8/12/2011 12:30	8/12/2011 18:15	**345**	Discharge						6,999	1
	8/13/2011 12:15	8/13/2011 19:45	**450**	Discharge						25,143	1
	8/14/2011 13:45	8/14/2011 16:45	**180**	Discharge						2,863	1
	8/15/2011 15:30	8/15/2011 17:15	**105**	Discharge						2,546	1
	8/16/2011 13:00	8/16/2011 17:30	**270**	Discharge						5,092	1
	8/17/2011 12:15	8/17/2011 18:30	**375**	Discharge						10,025	1
	8/18/2011 12:15	8/18/2011 17:30	**315**	0.15	**62,593**	0.83	**0.13**	1	Atlas	9,389	1
	8/20/2011 12:00	8/20/2011 17:45	**345**	Discharge						9,065	1
	8/21/2011 12:00	8/21/2011 18:30	**390**	0.01	**1,066,200**	0.17	**0.01**	1	Atlas	10,662	1
	8/22/2011 11:45	8/22/2011 18:45	**420**	Discharge						10,503	1
	8/23/2011 11:30	8/23/2011 17:30	**360**	Discharge						8,108	1
	8/24/2011 12:45	8/24/2011 18:00	**315**	Discharge						9,216	1
	8/25/2011 11:00	8/25/2011 19:00	**480**	Discharge						13,834	1
	8/26/2011 10:45	8/26/2011 19:00	**495**	Discharge						15,250	1
	8/27/2011 10:45	8/27/2011 19:00	**495**	Discharge						14,470	1
	8/28/2011 11:00	8/28/2011 18:30	**450**	Discharge						11,786	1
	8/29/2011 11:30	8/29/2011 18:45	**435**	Discharge						10,662	1
	8/30/2011 11:45	8/30/2011 18:30	**405**	Discharge						10,338	1
	8/31/2011 13:00	8/31/2011 16:30	**210**	Discharge						5,257	1
	9/1/2011 11:00	9/1/2011 18:45	**465**	Discharge						14,144	1
	9/2/2011 10:45	9/2/2011 19:00	**495**	Discharge						17,828	1
	9/3/2011 10:45	9/3/2011 19:00	**495**	Discharge						18,613	1
	9/12/2011 12:30	9/12/2011 17:30	**300**	Discharge						6,683	1
	9/13/2011 12:30	9/13/2011 13:30	**60**	Discharge						1,591	1
	9/19/2011 8:15	9/19/2011 16:45	**510**	0.71	**85,406**	0.93	**0.27**	24	Atlas	60,638	1
	9/23/2011 3:15	9/23/2011 10:00	**405**	0.73	**333,592**	1.48	**0.33**	12	Atlas	243,522	1
	9/25/2011 23:45	9/26/2011 11:30	**705**	3.61	**1,573,067**	5.16	**8.75**	12	Cloudburst	5,678,771	1
	10/7/2011 15:45	10/7/2011 15:45	**0**	Discharge						318	1
	10/13/2011 9:45	10/13/2011 10:15	**30**	0.47	**15,898**	0.33	**0.21**	12	Atlas	7,472	1
	10/27/2011	10/27/2011 3:30	**210**	0.99	**148,879**	1.22	**0.41**	3	Atlas	147,390	1
	11/14/2011 21:30	11/15/2011 18:00	**1230**	1.88	**249,974**	1.47	**0.61**	48	Atlas	469,951	1
	11/16/2011 6:45	11/16/2011 13:15	**390**	1.88	**107,250**	1.9	**0.61**	48	Atlas	201,630	1
	11/20/2011 18:15	11/20/2011 22:30	**255**	1.63	**61,434**	2.35	**0.51**	48	Atlas	100,138	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**11/22/2011 1:30**	11/22/2011 15:00	**810**	1.63	**412,554**	3.1	**0.51**	48	Atlas	672,463	1
	11/27/2011 7:30	11/27/2011 12:00	**270**	2.98	**65,464**	2.27	**0.92**	48	Atlas	195,082	1
	11/27/2011 23:15	11/29/2011 6:15	**1860**	2.98	**961,218**	4.21	**0.92**	48	Atlas	2,864,430	1
	12/4/2011 16:45	12/6/2011 1:15	**1950**	3.26	**839,448**	5.61	**1.30**	48	Cloudburst	2,736,599	1
	12/15/2011 7:15	12/15/2011 11:15	**240**	0.51	**234,310**	0.52	**0.23**	6	Atlas	119,498	1
	12/21/2011 6:30	12/21/2011 10:30	**240**	0.71	**206,561**	1.25	**0.33**	12	Atlas	146,658	1
	12/22/2011 15:00	12/22/2011 22:00	**420**	0.49	**555,078**	1.23	**0.22**	12	Atlas	271,988	1
	12/27/2011 4:15	12/27/2011 17:00	**765**	0.64	**636,214**	1.84	**0.25**	12	Atlas	407,177	1
	1/11/2012 5:45	1/11/2012 14:30	**525**	0.91	**338,976**	0.8	**0.36**	12	Atlas	308,468	1
	1/17/2012 12:45	1/17/2012 14:15	**90**	0.34	**111,391**	1.38	**0.16**	12	Atlas	37,873	1
	1/23/2012 3:45	1/23/2012 7:15	**210**	0.6	**340,852**	0.96	**0.31**	3	Atlas	204,511	1
	1/26/2012 5:30	1/27/2012 2:45	**1275**	1.74	**644,994**	2.35	**0.58**	24	Atlas	1,122,290	1
	2/4/2012 10:45	2/4/2012 12:15	**90**	0.34	**118,424**	0.38	**0.20**	3	Atlas	40,264	1
	2/29/2012 8:30	2/29/2012 10:45	**135**	0.55	**55,569**	0.68	**0.28**	1	Atlas	30,563	1
	3/8/2012 12:30	3/8/2012 17:15	**285**	0.71	**312,939**	0.88	**0.33**	6	Atlas	222,187	1
	3/16/2012 1:45	3/16/2012 5:15	**210**	1	**266,008**	1.19	**0.45**	12	Atlas	266,008	1
	3/17/2012 20:30	3/18/2012	**210**	0.54	**283,478**	1.71	**0.29**	3	Atlas	153,078	1
	3/23/2012 13:45	3/24/2012 7:30	**1065**	1.56	**524,093**	2.1	**0.59**	24	Atlas	817,585	1
	4/1/2012 9:30	4/1/2012 14:00	**270**	1.3	**320,700**	1.46	**0.73**	3	Atlas	416,910	1
	4/28/2012 19:00	4/28/2012 22:45	**225**	0.74	**206,915**	0.8	**0.54**	1	Atlas	153,117	1
	4/30/2012 20:15	4/30/2012 21:15	**60**	0.39	**79,618**	1.28	**0.26**	3	Atlas	31,051	1
	5/4/2012 23:45	5/5/2012 17:30	**1065**	1.48	**570,002**	2.64	**0.77**	6	Atlas	843,603	1
	5/6/2012 13:30	5/6/2012 13:30	**0**	Discharge						3	1
	5/13/2012 2:45	5/13/2012 18:30	**945**	2.08	**388,800**	2.15	**0.80**	12	Atlas	808,704	1
	5/19/2012 13:45	5/19/2012 18:00	**255**	Discharge						2,231	1
	5/20/2012 12:15	5/20/2012 15:15	**180**	Discharge						1,753	1
	5/26/2012 12:45	5/26/2012 16:45	**240**	Discharge						1,897	1
	5/27/2012 13:00	5/27/2012 17:00	**240**	Discharge						1,915	1
	5/28/2012 13:30	5/28/2012 15:45	**135**	Discharge						952	1
	5/29/2012 6:15	5/29/2012 15:15	**540**	3.17	**1,522,539**	3.17	**25.64**	3	Cloudburst	4,826,450	1
	5/31/2012 18:15	6/1/2012 5:15	**660**	1.24	**235,473**	4.34	**0.54**	12	Atlas	291,987	1
	6/9/2012 16:15	6/9/2012 16:15	**0**	Discharge						159	1
	6/12/2012 14:30	6/12/2012 14:30	**0**	Discharge						3	1
	6/15/2012 13:15	6/15/2012 17:30	**255**	Discharge						2,706	1
	6/16/2012 15:45	6/16/2012 16:45	**60**	Discharge						637	1
	6/19/2012 14:15	6/19/2012 15:15	**60**	Discharge						164	1
	6/20/2012 12:45	6/20/2012 15:45	**180**	Discharge						1,286	1
	6/21/2012 13:00	6/21/2012 16:45	**225**	Discharge						1,112	1
	6/22/2012 12:45	6/22/2012 16:15	**210**	Discharge						950	1
	6/23/2012 12:15	6/23/2012 18:15	**360**	Discharge						3,966	1
	6/24/2012 12:00	6/24/2012 18:00	**360**	Discharge						3,507	1
	6/25/2012 12:30	6/25/2012 17:45	**315**	Discharge						2,859	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**6/26/2012 16:15**	6/26/2012 16:15	**0**	Discharge						156	1
	6/27/2012 15:30	6/27/2012 16:30	**60**	Discharge						5	1
	6/28/2012 13:15	6/28/2012 18:15	**300**	Discharge						3,008	1
	6/29/2012 12:00	6/29/2012 19:00	**420**	Discharge						6,210	1
	6/30/2012 12:45	6/30/2012 19:15	**390**	Discharge						6,843	1
	7/1/2012 12:45	7/1/2012 17:45	**300**	Discharge						3,976	1
	7/2/2012 12:30	7/2/2012 18:45	**375**	Discharge						4,141	1
	7/3/2012 14:45	7/3/2012 17:45	**180**	Discharge						1,435	1
	7/4/2012 12:00	7/4/2012 17:15	**315**	Discharge						4,302	1
	7/5/2012 11:30	7/5/2012 18:00	**390**	Discharge						6,844	1
	7/6/2012 11:30	7/6/2012 19:00	**450**	Discharge						7,807	1
	7/7/2012 11:00	7/7/2012 19:00	**480**	Discharge						8,594	1
	7/8/2012 11:45	7/8/2012 11:45	**0**	Discharge						159	1
	7/10/2012 12:45	7/10/2012 17:30	**285**	Discharge						3,181	1
	7/11/2012 12:45	7/11/2012 18:00	**315**	Discharge						3,501	1
	7/14/2012 14:15	7/14/2012 15:45	**90**	0.7	**214,914**	0.9	**0.39**	3	Atlas	150,440	1
	7/16/2012 15:15	7/16/2012 17:30	**135**	0.02	**47,500**	0.78	**0.02**	1	Atlas	950	1
	7/17/2012 12:45	7/17/2012 17:15	**270**	Discharge						1,432	1
	7/18/2012 12:00	7/18/2012 16:15	**255**	Discharge						2,387	1
	7/19/2012 15:15	7/19/2012 22:30	**435**	1.19	**1,518,757**	1.83	**0.77**	1	Atlas	1,807,321	1
	7/21/2012 14:30	7/21/2012 18:00	**210**	Discharge						1,753	1
	7/22/2012 12:30	7/22/2012 18:30	**360**	Discharge						3,501	1
	7/23/2012 14:00	7/23/2012 18:00	**240**	Discharge						1,432	1
	7/24/2012 12:45	7/24/2012 17:45	**300**	0.04	**127,250**	1.25	**0.03**	3	Atlas	5,090	1
	7/25/2012 12:30	7/25/2012 18:45	**375**	Discharge						3,979	1
	7/26/2012 12:30	7/26/2012 16:15	**225**	Discharge						1,591	1
	7/27/2012 20:45	7/28/2012 0:15	**210**	0.56	**122,770**	0.87	**0.44**	1	Atlas	68,751	1
	7/28/2012 12:45	7/28/2012 17:30	**285**	Discharge						2,546	1
	7/29/2012 13:15	7/29/2012 18:00	**285**	Discharge						3,024	1
	7/30/2012 12:30	7/30/2012 17:15	**285**	Discharge						806	1
	7/31/2012 11:45	7/31/2012 17:30	**345**	Discharge						5,735	1
	8/1/2012 11:45	8/1/2012 18:30	**405**	Discharge						7,318	1
	8/2/2012 11:45	8/2/2012 18:30	**405**	Discharge						6,040	1
	8/6/2012 13:45	8/6/2012 18:45	**300**	Discharge						3,340	1
	8/7/2012 11:30	8/7/2012 18:30	**420**	Discharge						4,616	1
	8/8/2012 12:00	8/8/2012 17:30	**330**	Discharge						3,035	1
	8/12/2012 15:00	8/12/2012 16:45	**105**	Discharge						796	1
	8/15/2012 12:30	8/15/2012 15:45	**195**	Discharge						1,440	1
	8/16/2012 20:00	8/17/2012 2:00	**360**	0.59	**286,664**	0.72	**0.33**	3	Atlas	169,132	1
	8/18/2012 15:00	8/18/2012 15:30	**30**	Discharge						316	1
	8/19/2012 14:45	8/19/2012 16:15	**90**	Discharge						629	1
	8/21/2012 13:45	8/21/2012 15:00	**75**	0.14	**83,414**	0.74	**0.12**	1	Atlas	11,678	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**8/22/2012 14:30**	8/22/2012 16:30	**120**	Discharge						796	1
	8/23/2012 13:15	8/23/2012 17:45	**270**	Discharge						2,231	1
	8/24/2012 12:30	8/24/2012 17:45	**315**	Discharge						3,820	1
	8/25/2012 12:45	8/25/2012 18:00	**315**	Discharge						3,337	1
	8/26/2012 13:15	8/26/2012 15:00	**105**	Discharge						636	1
	8/28/2012 13:00	8/28/2012 18:30	**330**	Discharge						4,133	1
	8/29/2012 12:45	8/29/2012 18:15	**330**	Discharge						3,499	1
	8/30/2012 12:30	8/30/2012 17:15	**285**	Discharge						3,502	1
	9/2/2012 13:45	9/2/2012 17:45	**240**	0.53	**96,440**	0.86	**0.27**	1	Atlas	51,113	1
	9/4/2012 14:30	9/4/2012 17:30	**180**	Discharge						1,905	1
	9/5/2012 11:45	9/5/2012 20:15	**510**	Discharge						694,541	1
	9/6/2012 12:45	9/6/2012 17:15	**270**	Discharge						2,867	1
	9/7/2012 12:30	9/8/2012 8:45	**1215**	Discharge						311,779	1
	9/10/2012 14:45	9/10/2012 15:45	**60**	Discharge						477	1
	9/26/2012 1:15	9/26/2012 10:30	**555**	0.54	**325,369**	0.84	**0.27**	6	Atlas	175,699	1
	9/26/2012 20:30	9/27/2012 3:30	**420**	1.33	**814,316**	2.17	**0.71**	6	Atlas	1,083,040	1
	10/1/2012 18:00	10/1/2012 22:00	**240**	0.66	**113,968**	2.87	**0.27**	12	Atlas	75,219	1
	10/26/2012 15:00	10/26/2012 20:15	**315**	0.63	**200,643**	0.6	**0.31**	6	Atlas	126,405	1
	12/4/2012 16:45	12/4/2012 22:30	**345**	0.57	**184,563**	0.81	**0.35**	3	Atlas	105,201	1
	12/7/2012 5:45	12/8/2012 13:30	**1905**	0.94	**663,406**	2.06	**0.42**	6	Atlas	623,602	1
	12/9/2012 22:15	12/10/2012 8:00	**585**	1.19	**736,516**	2.97	**0.58**	3	Atlas	876,454	1
	12/20/2012 8:00	12/20/2012 17:15	**555**	0.66	**514,617**	0.95	**0.32**	6	Atlas	339,647	1
	12/26/2012 5:30	12/26/2012 19:30	**840**	0.94	**564,497**	1.66	**0.36**	12	Atlas	530,627	1
	1/11/2013 6:00	1/11/2013 11:15	**315**	0.62	**351,085**	0.83	**0.33**	6	Atlas	217,673	1
	1/13/2013 3:15	1/13/2013 23:00	**1185**	2.25	**791,904**	3.07	**0.86**	24	Atlas	1,781,783	1
	1/30/2013 5:15	1/30/2013 10:45	**330**	0.89	**416,664**	1.15	**0.44**	6	Atlas	370,831	1
	2/5/2013 13:45	2/5/2013 18:45	**300**	Discharge						40,589	1
	2/22/2013 1:45	2/22/2013 2:15	**30**	0.42	**11,748**	0.76	**0.19**	12	Atlas	4,934	1
	2/26/2013 14:30	2/26/2013 18:30	**240**	0.68	**196,603**	1.04	**0.26**	24	Atlas	133,690	1
	3/5/2013 18:00	3/5/2013 19:00	**60**	0.48	**30,815**	0.58	**0.18**	24	Atlas	14,791	1
	3/11/2013 4:45	3/11/2013 14:00	**555**	1.03	**485,066**	1.52	**0.41**	12	Atlas	499,618	1
	3/17/2013 13:30	3/18/2013 13:00	**1410**	1.82	**391,331**	2.84	**0.59**	48	Atlas	712,223	1
	3/24/2013 9:15	3/24/2013 9:45	**30**	0.59	**7,814**	1.8	**0.22**	24	Atlas	4,610	1
	4/11/2013 7:15	4/11/2013 9:45	**150**	1.23	**44,279**	0.51	**0.47**	24	Atlas	54,463	1
	4/11/2013 18:00	4/11/2013 20:30	**150**	1.23	**74,832**	1.21	**0.47**	24	Atlas	92,043	1
	4/16/2013 20:30	4/16/2013 23:15	**165**	0.49	**124,896**	1.72	**0.41**	1	Atlas	61,199	1
	4/19/2013 2:00	4/19/2013 7:15	**315**	0.89	**289,349**	1.41	**0.49**	6	Atlas	257,521	1
	4/24/2013 8:15	4/24/2013 12:15	**240**	0.67	**193,352**	1.64	**0.39**	3	Atlas	129,546	1
	5/1/2013 14:30	5/1/2013 15:30	**60**	Discharge						637	1
	5/4/2013 14:00	5/4/2013 17:45	**225**	1.68	**32,436**	0.84	**0.53**	24	Atlas	54,492	1
	5/5/2013 5:15	5/5/2013 11:30	**375**	1.68	**235,511**	1.62	**0.53**	24	Atlas	395,658	1
	5/10/2013 9:30	5/11/2013 2:15	**1005**	0.9	**258,517**	2.74	**0.39**	6	Atlas	232,665	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**6/10/2013 2:15**	6/10/2013 2:15	**0**	0.39	**11,841**	0.35	**0.15**	24	Atlas	4,618	1
	6/12/2013 13:15	6/12/2013 14:45	**90**	Discharge						477	1
	6/17/2013 13:45	6/17/2013 22:15	**510**	Discharge						23,714	1
	6/20/2013 16:15	6/20/2013 16:30	**15**	Discharge						318	1
	6/21/2013 15:45	6/21/2013 17:45	**120**	Discharge						1,114	1
	6/26/2013 3:30	6/26/2013 7:00	**210**	0.5	**125,324**	0.6	**0.36**	1	Atlas	62,662	1
	6/26/2013 16:15	6/27/2013 0:15	**480**	1.79	**823,939**	2.39	**0.99**	1	Atlas	1,474,851	1
	6/27/2013 14:45	6/27/2013 15:15	**30**	Discharge						318	1
	6/28/2013 14:15	6/28/2013 16:30	**135**	Discharge						637	1
	6/29/2013 21:15	6/29/2013 22:45	**90**	0.65	**38,686**	3.02	**0.37**	3	Atlas	25,146	1
	7/6/2013 4:15	7/6/2013 7:30	**195**	0.48	**235,748**	1.99	**0.21**	12	Atlas	113,159	1
	7/7/2013 14:45	7/7/2013 15:45	**60**	Discharge						637	1
	7/9/2013 15:00	7/9/2013 15:30	**30**	Discharge						318	1
	7/10/2013 14:15	7/10/2013 16:45	**150**	0.63	**237,524**	1.73	**0.50**	1	Atlas	149,640	1
	7/14/2013 13:15	7/14/2013 15:30	**135**	Discharge						1,106	1
	7/15/2013 15:15	7/15/2013 15:30	**15**	Discharge						159	1
	7/16/2013 11:45	7/16/2013 16:30	**285**	Discharge						2,878	1
	7/17/2013 11:15	7/17/2013 18:30	**435**	Discharge						6,003	1
	7/18/2013 12:15	7/18/2013 16:00	**225**	Discharge						2,226	1
	7/19/2013 13:30	7/19/2013 16:45	**195**	Discharge						1,117	1
	7/20/2013 14:30	7/20/2013 15:15	**45**	Discharge						318	1
	7/21/2013 14:45	7/21/2013 23:45	**540**	Discharge						159,097	1
	7/22/2013 8:00	7/22/2013 17:00	**540**	2.85	**204,251**	3	**3.14**	3	Atlas	582,116	1
	8/11/2013 12:15	8/11/2013 17:30	**315**	Discharge						3,024	1
	8/12/2013 15:00	8/12/2013 17:30	**150**	1.33	**52,164**	1.38	**0.82**	1	Atlas	69,378	1
	8/13/2013 4:00	8/13/2013 5:15	**75**	1.33	**15,082**	1.56	**0.82**	1	Atlas	20,059	1
	8/16/2013 14:45	8/16/2013 17:00	**135**	Discharge						477	1
	8/17/2013 14:30	8/17/2013 16:30	**120**	Discharge						955	1
	8/18/2013 16:30	8/18/2013 16:30	**0**	Discharge						159	1
	8/19/2013 12:45	8/19/2013 18:00	**315**	Discharge						3,820	1
	8/20/2013 12:15	8/20/2013 14:45	**150**	Discharge						1,273	1
	8/21/2013 13:30	8/21/2013 17:00	**210**	Discharge						2,387	1
	8/22/2013 12:45	8/22/2013 17:45	**300**	Discharge						3,183	1
	8/23/2013 12:30	8/23/2013 17:30	**300**	Discharge						3,501	1
	8/24/2013 12:30	8/24/2013 17:45	**315**	Discharge						3,501	1
	8/25/2013 13:30	8/25/2013 18:15	**285**	Discharge						3,501	1
	8/27/2013 14:15	8/27/2013 16:30	**135**	Discharge						1,114	1
	8/28/2013 11:45	8/28/2013 18:45	**420**	Discharge						4,456	1
	8/29/2013 12:00	8/29/2013 18:00	**360**	Discharge						4,297	1
	8/30/2013 11:30	8/30/2013 18:15	**405**	Discharge						5,889	1
	8/31/2013 12:00	9/1/2013 4:45	**1005**	Discharge						197,352	1
	9/1/2013 14:15	9/1/2013 15:30	**75**	Discharge						955	1
	9/2/2013 13:00	9/2/2013 16:45	**225**	Discharge						55,864	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**9/3/2013 13:45**	9/3/2013 16:00	**135**	Discharge						1,432	1
	9/4/2013 14:00	9/4/2013 16:45	**165**	Discharge						1,592	1
	9/5/2013 13:30	9/5/2013 16:15	**165**	Discharge						1,432	1
	9/6/2013 13:15	9/6/2013 17:15	**240**	Discharge						2,865	1
	9/7/2013 13:15	9/7/2013 16:30	**195**	Discharge						955	1
	9/8/2013 11:45	9/8/2013 16:45	**300**	0.04	**83,550**	0.6	**0.03**	3	Atlas	3,342	1
	9/9/2013 11:45	9/9/2013 16:45	**300**	Discharge						3,024	1
	9/10/2013 12:30	9/10/2013 16:30	**240**	Discharge						2,706	1
	9/11/2013 14:00	9/11/2013 17:45	**225**	0.01	**254,600**	0.05	**0.01**	1	Atlas	2,546	1
	9/14/2013 15:15	9/14/2013 16:00	**45**	Discharge						637	1
	9/20/2013 18:15	9/21/2013 7:30	**795**	1.82	**260,329**	1.84	**0.76**	12	Atlas	473,799	1
	9/22/2013 14:30	9/22/2013 16:30	**120**	Discharge						477	1
	9/23/2013 14:30	9/23/2013 15:45	**75**	Discharge						477	1
	9/24/2013 14:15	9/24/2013 15:15	**60**	Discharge						477	1
	9/26/2013 13:15	9/26/2013 17:00	**225**	Discharge						2,546	1
	9/27/2013 13:00	9/27/2013 17:00	**240**	Discharge						2,706	1
	10/5/2013 13:45	10/6/2013 12:15	**1350**	4.5	**634,446**	4.73	**9.84**	24	Cloudburst	2,855,005	1
	10/9/2013 14:00	10/9/2013 16:45	**165**	Discharge						1,748	1
	10/10/2013 13:00	10/10/2013 17:00	**240**	Discharge						2,536	1
	10/11/2013 13:45	10/11/2013 16:30	**165**	Discharge						1,910	1
	10/12/2013 12:45	10/12/2013 15:15	**150**	Discharge						1,435	1
	10/13/2013 14:30	10/13/2013 16:30	**120**	Discharge						1,114	1
	10/14/2013 13:00	10/14/2013 14:45	**105**	Discharge						1,114	1
	10/30/2013 2:45	10/30/2013 9:00	**375**	1.47	**748,854**	1.47	**0.74**	6	Atlas	1,100,816	1
	10/31/2013 19:00	10/31/2013 23:15	**255**	0.95	**158,153**	2.42	**0.38**	12	Atlas	150,245	1
	11/17/2013 6:30	11/17/2013 22:15	**945**	2.84	**810,409**	3.01				2,301,561	1
	12/5/2013 7:30	12/5/2013 10:15	**165**	0.81	**85,852**	0.25	**0.26**	48	Atlas	69,540	1
	12/14/2013 10:15	12/14/2013 13:30	**195**	0.74	**173,780**	1.19	**0.31**	12	Atlas	128,597	1
	12/21/2013 7:00	12/22/2013 6:30	**1410**	3.19	**567,920**	3.55	**1.90**	24	Cloudburst	1,811,664	1
	1/5/2014 17:30	1/5/2014 19:15	**105**	0.46	**46,346**	0.62	**0.23**	3	Atlas	21,319	1
	1/11/2014 1:00	1/11/2014 6:30	**330**	0.97	**497,653**	1.44	**0.51**	6	Atlas	482,723	1
	2/2/2014 5:45	2/2/2014 7:15	**90**	0.62	**44,410**	0.25	**0.23**	24	Atlas	27,534	1
	2/4/2014 20:00	2/4/2014 20:45	**45**	0.62	**90,615**	1	**0.30**	6	Atlas	56,181	1
	2/17/2014 16:15	2/17/2014 20:45	**270**	0.57	**480,704**	0.84	**0.35**	3	Atlas	274,001	1
	3/2/2014 11:15	3/2/2014 13:15	**120**	0.49	**60,414**	0.28	**0.18**	24	Atlas	29,603	1
	3/29/2014 7:15	3/29/2014 14:45	**450**	0.96	**275,536**	1.3	**0.45**	6	Atlas	264,515	1
	4/3/2014 12:00	4/4/2014 11:30	**1410**	2.56	**570,408**	3.86	**0.87**	24	Atlas	1,460,244	1
	4/7/2014 10:30	4/7/2014 16:00	**330**	1.09	**488,983**	3.72	**0.69**	1	Atlas	532,992	1
	4/14/2014 21:00	4/15/2014 3:15	**375**	1.02	**99,854**	1.08	**0.38**	24	Atlas	101,851	1
	4/20/2014 14:15	4/20/2014 16:15	**120**	Discharge						485	1
	4/28/2014 4:45	4/28/2014 21:15	**990**	1.8	**728,868**	1.97	**0.73**	3	Atlas	1,311,962	1
	5/6/2014 14:45	5/6/2014 16:15	**90**	Discharge						480	1
	5/9/2014 19:15	5/9/2014 21:30	**135**	1.64	**3,494**	0.35	**0.63**	24	Atlas	5,730	1
	5/10/2014 6:00	5/10/2014 18:00	**720**	1.64	**204,223**	1.71	**0.63**	24	Atlas	334,925	1
	5/14/2014 9:15	5/15/2014 1:30	**975**	1.07	**185,333**	2.84	**0.41**	24	Atlas	198,306	1
	5/22/2014 3:30	5/22/2014 6:00	**150**	0.41	**202,244**	0.54	**0.27**	1	Atlas	82,920	1
	5/28/2014 20:15	5/28/2014 22:45	**150**	0.39	**79,169**	0.8	**0.32**	1	Atlas	30,876	1
	5/29/2014 21:30	5/29/2014 22:15	**45**	0.11	**227,145**	0.51	**0.09**	1	Atlas	24,986	1
	6/6/2014 16:30	6/6/2014 16:30	**0**	Discharge						159	1
	6/17/2014 14:15	6/17/2014 17:15	**180**	Discharge						949	1
	6/18/2014 13:15	6/18/2014 17:30	**255**	Discharge						1,910	1
	6/19/2014 12:15	6/19/2014 18:00	**345**	Discharge						3,820	1
	6/20/2014 13:45	6/20/2014 13:45	**0**	Discharge						159	1
	6/21/2014 12:00	6/21/2014 16:15	**255**	Discharge						2,069	1
	6/22/2014 14:00	6/22/2014 17:45	**225**	Discharge						636	1
	6/26/2014 13:30	6/26/2014 17:15	**225**	Discharge						3,016	1
	6/27/2014 12:30	6/27/2014 17:15	**285**	Discharge						316	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**7/1/2014 12:45**	7/1/2014 19:45	**420**	Discharge						3,841	1
	7/7/2014 19:15	7/7/2014 19:30	**15**	0.24	**271,571**	0.89	**0.21**	1	Atlas	65,177	1
	7/10/2014 13:15	7/10/2014 14:00	**45**	Discharge						626	1
	7/11/2014 13:45	7/11/2014 17:00	**195**	Discharge						1,114	1
	7/13/2014 12:45	7/14/2014 1:15	**750**	Discharge						35,214	1
	7/21/2014 14:45	7/21/2014 17:00	**135**	Discharge						1,438	1
	7/22/2014 11:45	7/22/2014 17:45	**360**	Discharge						2,549	1
	7/23/2014 15:00	7/23/2014 16:30	**90**	0.05	**9,540**	0.05	**0.03**	3	Atlas	477	1
	7/26/2014 16:00	7/27/2014	**480**	Discharge						180,334	1
	7/27/2014 9:15	7/27/2014 9:15	**0**	1.02	**10,923**	1.07	**0.47**	12	Atlas	11,141	1
	7/31/2014 14:15	7/31/2014 16:15	**120**	Discharge						637	1
	8/1/2014 13:30	8/1/2014 17:30	**240**	Discharge						1,910	1
	8/2/2014 14:45	8/2/2014 15:45	**60**	0.01	**47,700**	1.2	**0.01**	1	Atlas	477	1
	8/3/2014 12:45	8/3/2014 13:45	**60**	Discharge						796	1
	8/4/2014 13:00	8/4/2014 17:00	**240**	Discharge						3,024	1
	8/6/2014 14:15	8/6/2014 15:00	**45**	Discharge						477	1
	8/8/2014 6:45	8/8/2014 10:15	**210**	0.75	**109,499**	0.78	**0.36**	6	Atlas	82,124	1
	8/10/2014 3:15	8/10/2014 16:30	**795**	0.72	**27,663**	1.64	**0.63**	1	Atlas	19,917	1
	8/11/2014 16:15	8/11/2014 18:00	**105**	0.2	**162,340**	1.77	**0.11**	6	Atlas	32,468	1
	8/15/2014 15:00	8/15/2014 15:00	**0**	Discharge						159	1
	8/17/2014 10:45	8/17/2014 12:00	**75**	0.5	**37,560**	1	**0.26**	3	Atlas	18,780	1
	8/19/2014 13:00	8/19/2014 17:45	**285**	Discharge						1,910	1
	8/20/2014 11:30	8/20/2014 15:00	**210**	Discharge						2,387	1
	8/21/2014 16:15	8/21/2014 18:15	**120**	Discharge						796	1
	8/22/2014 13:30	8/22/2014 17:15	**225**	Discharge						1,910	1
	8/23/2014 11:45	8/24/2014 0:30	**765**	Discharge						340,924	1
	8/24/2014 11:45	8/24/2014 17:45	**360**	Discharge						3,342	1
	8/25/2014 11:00	8/25/2014 18:45	**465**	Discharge						5,729	1
	8/26/2014 11:15	8/26/2014 18:00	**405**	Discharge						6,048	1
	8/27/2014 11:30	8/27/2014 17:00	**330**	Discharge						5,891	1
	8/28/2014 11:15	8/28/2014 17:45	**390**	Discharge						6,369	1
	8/29/2014 11:30	8/29/2014 16:00	**270**	Discharge						2,398	1
	8/30/2014 15:15	8/30/2014 19:00	**225**	0.96	**135,022**	2.26	**0.57**	3	Atlas	129,621	1
	9/2/2014 9:30	9/2/2014 10:45	**75**	0.34	**52,918**	1.66	**0.21**	3	Atlas	17,992	1
	9/3/2014 13:30	9/3/2014 17:45	**255**	Discharge						3,178	1
	9/4/2014 11:30	9/4/2014 18:15	**405**	Discharge						4,610	1
	9/5/2014 11:15	9/5/2014 18:00	**405**	Discharge						4,143	1
	9/6/2014 12:15	9/6/2014 15:30	**195**	Discharge						1,117	1
	9/7/2014 13:15	9/7/2014 17:00	**225**	Discharge						1,751	1
	9/8/2014 13:15	9/8/2014 18:00	**285**	Discharge						4,138	1
	9/9/2014 13:45	9/9/2014 14:30	**45**	Discharge						321	1
	9/11/2014 1:15	9/11/2014 8:45	**450**	2.11	**391,061**	2.11	**2.29**	3	Atlas	825,138	1
	9/14/2014 14:15	9/14/2014 16:15	**120**	Discharge						955	1
	9/18/2014 15:15	9/18/2014 16:00	**45**	Discharge						477	1
	9/19/2014 13:15	9/19/2014 16:15	**180**	Discharge						1,751	1
	9/21/2014 15:00	9/21/2014 16:00	**60**	Discharge						477	1
	9/22/2014 15:30	9/22/2014 15:30	**0**	Discharge						159	1
	9/23/2014 13:45	9/23/2014 16:15	**150**	Discharge						1,432	1
	9/24/2014 13:30	9/24/2014 16:15	**165**	Discharge						1,910	1
	9/25/2014 12:45	9/25/2014 17:15	**270**	Discharge						3,024	1
	9/26/2014 12:00	9/26/2014 17:15	**315**	Discharge						4,615	1
	9/27/2014 12:30	9/27/2014 16:00	**210**	Discharge						1,910	1
	9/28/2014 13:00	9/28/2014 16:45	**225**	Discharge						1,432	1
	9/29/2014 12:00	9/29/2014 17:30	**330**	Discharge						5,889	1
	9/30/2014 13:30	9/30/2014 15:45	**135**	Discharge						1,910	1
	10/1/2014 12:45	10/1/2014 17:00	**255**	Discharge						3,348	1
	10/6/2014 11:00	10/6/2014 12:15	**75**	0.46	**32,870**	0.67	**0.25**	3	Atlas	15,120	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**10/10/2014 2:00**	10/10/2014 6:00	**240**	0.86	**115,109**	1.45	**0.37**	3	Atlas	98,994	1
	10/13/2014 4:30	10/13/2014 9:15	**285**	0.49	**248,473**	2	**0.32**	3	Atlas	121,752	1
	10/13/2014 23:30	10/14/2014 12:45	**795**	1.44	**403,632**	2.99	**0.64**	12	Atlas	581,230	1
	10/26/2014 15:15	10/26/2014 15:15	**0**	Discharge						3	1
	11/23/2014 18:30	11/23/2014 21:45	**195**	0.92	**122,465**	1.24	**0.42**	6	Atlas	112,668	1
	12/1/2014 5:00	12/1/2014 8:00	**180**	0.87	**76,092**	0.52				66,200	1
	12/6/2014	12/6/2014 10:00	**600**	1.91	**287,939**	2.77	**0.62**	48	Atlas	549,964	1
	12/21/2014 7:00	12/21/2014 8:30	**90**	Discharge						108,384	1
	12/28/2014 3:00	12/28/2014 3:00	**0**	0.36	**442**	0.84	**0.14**	24	Atlas	159	1
	2/21/2015 15:45	2/21/2015 18:00	**135**	1.34	**32,184**	1.61	**0.52**	12	Atlas	43,126	1
	3/4/2015	3/4/2015 18:15	**1095**	1.71	**834,119**	1.46	**0.55**	48	Atlas	1,426,343	1
	3/7/2015 17:00	3/7/2015 17:15	**15**	Discharge						2,069	1
	3/10/2015 9:30	3/10/2015 17:45	**495**	1.09	**914,617**	2.8	**0.49**	12	Atlas	996,932	1
	3/13/2015 11:30	3/14/2015 7:00	**1170**	1.84	**603,199**	2.9	**0.70**	24	Atlas	1,109,887	1
	3/26/2015 5:30	3/26/2015 8:00	**150**	0.52	**164,052**	0.66	**0.23**	3	Atlas	85,307	1
	4/2/2015 11:15	4/3/2015 19:45	**1950**	5.44	**1,829,301**	5.57	**18.39**	6	Cloudburst	9,951,397	1
	4/7/2015 9:00	4/7/2015 20:00	**660**	0.89	**490,240**	6.34	**0.37**	12	Atlas	436,314	1
	4/9/2015 10:45	4/9/2015 13:15	**150**	Discharge						34,955	1
	4/10/2015 2:15	4/10/2015 8:15	**360**	0.32	**1,519,428**	3.73	**0.22**	1	Atlas	486,217	1
	4/13/2015 20:45	4/14/2015 0:15	**210**	0.55	**112,407**	1.62	**0.21**	24	Atlas	61,824	1
	4/14/2015 8:45	4/14/2015 16:15	**450**	0.55	**264,487**	1.78	**0.21**	24	Atlas	145,468	1
	4/19/2015 8:45	4/19/2015 23:30	**885**	0.81	**278,747**	1.43	**0.33**	12	Atlas	225,785	1
	5/16/2015 12:15	5/16/2015 16:15	**240**	0.95	**88,716**	1.08	**0.58**	3	Atlas	84,280	1
	6/17/2015 6:15	6/17/2015 15:30	**555**	0.63	**100,230**	0.65	**0.34**	3	Atlas	63,145	1
	6/18/2015 14:15	6/18/2015 21:00	**405**	Discharge						355,740	1
	6/20/2015 3:15	6/20/2015 11:15	**480**	1.19	**271,931**	2.59	**0.49**	12	Atlas	323,598	1
	6/26/2015 0:45	6/26/2015 3:30	**165**	0.77	**388,309**	2.33	**0.42**	6	Atlas	298,998	1
	6/26/2015 17:00	6/27/2015 2:30	**570**	0.99	**783,302**	3.28	**0.55**	1	Atlas	775,469	1
	6/29/2015 13:30	6/29/2015 15:45	**135**	0.35	**54,614**	2.11	**0.26**	1	Atlas	19,115	1
	7/2/2015 1:15	7/2/2015 5:15	**240**	0.84	**646,117**	2.98	**0.47**	3	Atlas	542,738	1
	7/7/2015 11:45	7/7/2015 17:30	**345**	0.91	**1,264,543**	3.3	**0.48**	6	Atlas	1,150,734	1
	7/10/2015 15:00	7/10/2015 18:45	**225**	0.46	**721,017**	1.8	**0.24**	6	Atlas	331,668	1
	7/12/2015 5:45	7/13/2015 18:15	**2190**	0.73	**4,511,175**	3.01				3,293,158	1
	7/14/2015 4:30	7/14/2015 8:00	**210**	0.3	**715,577**	3.31	**0.23**	1	Atlas	214,673	1
	7/17/2015 23:30	7/18/2015 7:45	**495**	0.83	**730,546**	2.53	**0.55**	3	Atlas	606,353	1
	8/5/2015 14:45	8/5/2015 14:45	**0**	0.78	**195,746**	0.55	**0.30**	1	Atlas	152,682	1
	8/6/2015 8:45	8/6/2015 11:15	**150**	0.78	**202,872**	0.86	**0.30**	1	Atlas	158,240	1
	8/15/2015 17:00	8/15/2015 17:00	**0**	0.21	**789,457**	0.41	**0.18**	1	Atlas	165,786	1
	10/2/2015 19:15	10/2/2015 21:30	**135**	0.46	**78,539**	1.16	**0.21**	12	Atlas	36,128	1
	10/27/2015 15:30	10/28/2015 11:15	**1185**	3.44	**261,756**	3.82	**1.84**	24	Cloudburst	900,441	1
	11/6/2015 3:15	11/6/2015 9:15	**360**	1.05	**395,052**	1.22	**0.65**	3	Atlas	414,805	1
	11/9/2015 20:15	11/10/2015 1:00	**285**	0.6	**176,348**	1.65	**0.28**	12	Atlas	105,809	1
	11/12/2015 1:15	11/12/2015 3:45	**150**	0.3	**112,630**	1.95	**0.17**	3	Atlas	33,789	1
	11/18/2015 10:00	11/18/2015 21:15	**675**	1.76	**640,712**	2.27	**0.89**	6	Atlas	1,127,653	1
	11/28/2015 15:15	11/28/2015 22:45	**450**	0.87	**143,697**	0.83	**0.28**	48	Atlas	125,016	1
	11/30/2015 22:00	12/1/2015 7:15	**555**	0.56	**424,182**	1.49	**0.25**	12	Atlas	237,542	1
	12/14/2015 8:15	12/14/2015 9:15	**60**	0.28	**69,914**	0.27	**0.15**	6	Atlas	19,576	1
	12/22/2015 1:00	12/22/2015 6:15	**315**	0.7	**112,181**	0.73	**0.27**	24	Atlas	78,527	1
	12/23/2015 19:15	12/24/2015 1:00	**345**	1.01	**1,782,468**	1.73	**0.67**	1	Atlas	1,800,293	1
	12/26/2015 14:15	12/26/2015 20:00	**345**	0.58	**197,772**	2.4	**0.26**	12	Atlas	114,708	1
	12/27/2015 10:45	12/29/2015 0:15	**2250**	2.53	**1,203,267**	4.93	**0.82**	48	Atlas	3,044,266	1
	2/2/2016 19:45	2/3/2016 13:45	**1080**	1.51	**959,356**	1.58	**0.75**	6	Atlas	1,448,627	1
	2/21/2016 6:30	2/21/2016 14:15	**465**	1.07	**42,339**	1.26	**0.49**	12	Atlas	45,303	1
	2/24/2016 0:30	2/24/2016 17:00	**990**	2.24	**624,727**	3.16	**0.86**	12	Atlas	1,399,388	1
	3/1/2016 13:00	3/1/2016 18:00	**300**	0.65	**85,743**	2.93	**0.34**	6	Atlas	55,733	1
	3/10/2016 14:30	3/11/2016 1:45	**675**	1.31	**27,693**	1.36	**0.43**	48	Atlas	36,278	1
	3/12/2016 23:15	3/13/2016 12:00	**765**	0.5	**111,696**	1.85	**0.19**	24	Atlas	55,848	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO210	**3/24/2016 17:30**	3/24/2016 19:30	**120**	0.31	**35,365**	0.39	**0.21**	1	Atlas	10,963	1
	3/27/2016 22:00	3/28/2016 1:00	**180**	0.77	**91,769**	1.08	**0.53**	1	Atlas	70,662	1
	3/31/2016 5:30	3/31/2016 10:00	**270**	1.34	**32,149**	1.9	**0.51**	24	Atlas	43,080	1
	3/31/2016 22:45	3/31/2016 22:45	**0**	1.34	**1,781**	2.01	**0.51**	24	Atlas	2,387	1
	4/1/2016 0:15	4/1/2016 2:45	**150**	1.34	**29,802**	2.11	**0.51**	24	Atlas	39,935	1
	4/11/2016 18:00	4/12/2016 2:15	**495**	0.97	**53,795**	1.12	**0.44**	6	Atlas	52,181	1
	4/27/2016	4/27/2016 1:15	**75**	0.24	**17,905**	0.7	**0.14**	3	Atlas	4,297	1
	4/27/2016 17:15	4/28/2016 2:30	**555**	1.03	**46,383**	1.72	**0.49**	3	Atlas	47,775	1
	4/30/2016 11:45	4/30/2016 16:45	**300**	0.79	**29,323**	1.8	**0.30**	24	Atlas	23,165	1
	5/1/2016 17:00	5/1/2016 19:15	**135**	0.32	**55,066**	2.37	**0.21**	3	Atlas	17,621	1
	5/7/2016 22:30	5/8/2016 1:15	**165**	0.37	**57,253**	1.14	**0.19**	3	Atlas	21,183	1
	5/10/2016 15:15	5/11/2016 3:45	**750**	0.85	**112,872**	1.52	**0.32**	24	Atlas	95,941	1
	5/11/2016 23:00	5/12/2016 3:15	**255**	0.36	**108,549**	1.71	**0.17**	12	Atlas	39,078	1
	5/12/2016 23:00	5/13/2016	**60**	0.16	**21,237**	1.83	**0.10**	3	Atlas	3,398	1
	5/17/2016 23:15	5/18/2016 0:30	**75**	0.67	**11,303**	1.28	**0.22**	24	Atlas	7,573	1
	5/20/2016 15:30	5/20/2016 21:45	**375**	0.73	**101,614**	1.42	**0.43**	3	Atlas	74,178	1
	5/26/2016 14:45	5/26/2016 17:30	**165**	0.42	**46,003**	1.26	**0.28**	3	Atlas	19,321	1
	6/2/2016 15:45	6/2/2016 22:30	**405**	0.9	**136,509**	1.24	**0.73**	1	Atlas	122,858	1
	6/4/2016 19:15	6/4/2016 22:30	**195**	0.3	**33,426**	1.23	**0.13**	12	Atlas	10,028	1
	6/12/2016 19:15	6/12/2016 20:30	**75**	0.9	**6,897**	0.96	**0.77**	1	Atlas	6,207	1
	6/14/2016 16:45	6/15/2016 0:45	**480**	1.41	**192,215**	2.31	**0.77**	6	Atlas	271,023	1
	6/23/2016 16:45	6/24/2016 2:15	**570**	2.03	**261,822**	2.08	**0.93**	12	Atlas	531,499	1
Grand Total										**237,739,026**	**572**

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO211	**1/11/2012 6:15**	1/11/2012 12:15	**360**	0.91	**6,795,483**	0.79	**0.36**	12	Atlas	6,183,889	1
	1/17/2012 12:45	1/17/2012 13:30	**45**	0.34	**1,774,337**	1.38	**0.16**	12	Atlas	603,275	1
	1/23/2012 3:45	1/23/2012 6:00	**135**	0.6	**5,981,735**	0.96	**0.31**	3	Atlas	3,589,041	1
	1/26/2012 6:00	1/26/2012 7:45	**105**	1.74	**2,694,316**	1.27	**0.58**	24	Atlas	4,688,110	1
	1/26/2012 19:30	1/27/2012 0:45	**315**	1.74	**9,892,864**	2.34	**0.58**	24	Atlas	17,213,583	1
	2/29/2012 9:45	2/29/2012 10:00	**15**	0.55	**225,169**	0.65	**0.28**	1	Atlas	123,843	1
	3/8/2012 13:30	3/8/2012 16:00	**150**	0.71	**3,364,674**	0.85	**0.33**	6	Atlas	2,388,918	1
	3/16/2012 2:15	3/16/2012 4:15	**120**	1	**1,591,569**	1.19	**0.45**	12	Atlas	1,591,569	1
	3/17/2012 22:15	3/17/2012 23:00	**45**	0.54	**1,036,261**	1.71	**0.29**	3	Atlas	559,581	1
	3/23/2012 13:30	3/24/2012 0:15	**645**	1.56	**17,934,851**	2.1	**0.59**	24	Atlas	27,978,367	1
	4/1/2012 9:15	4/1/2012 12:30	**195**	1.3	**18,569,863**	1.46	**0.73**	3	Atlas	24,140,822	1
	4/28/2012 19:30	4/28/2012 21:30	**120**	0.74	**29,491,079**	0.78	**0.54**	1	Atlas	21,823,398	1
	5/5/2012 0:30	5/5/2012 5:45	**315**	1.48	**5,311,459**	2.64	**0.77**	6	Atlas	7,860,960	1
	5/13/2012 2:30	5/13/2012 12:15	**585**	2.08	**16,833,948**	2.03	**0.80**	12	Atlas	35,014,612	1
	5/29/2012 6:45	5/29/2012 13:00	**375**	3.17	**10,563,683**	3.17	**25.64**	3	Cloudburst	33,486,874	1
	5/31/2012 19:30	6/1/2012 2:30	**420**	1.24	**5,930,890**	4.27	**0.54**	12	Atlas	7,354,304	1
	7/1/2012 21:00	7/1/2012 21:00	**0**	0.19	**231,437**	0.15	**0.12**	1	Atlas	43,973	1
	7/8/2012 13:15	7/8/2012 14:30	**75**	0.15	**20,161,999**	0.53	**0.08**	1	Atlas	3,024,300	1
	7/14/2012 14:00	7/14/2012 16:00	**120**	0.7	**17,911,159**	0.9	**0.39**	3	Atlas	12,537,812	1
	7/19/2012 18:00	7/19/2012 21:15	**195**	1.19	**29,939,437**	1.78	**0.77**	1	Atlas	35,627,930	1
	7/27/2012 20:30	7/27/2012 22:45	**135**	0.56	**23,395,841**	0.87	**0.44**	1	Atlas	13,101,671	1
	8/16/2012 21:45	8/17/2012 0:15	**150**	0.59	**5,726,453**	0.72	**0.33**	3	Atlas	3,378,607	1
	8/21/2012 14:30	8/21/2012 18:00	**210**	0.14	**51,673,565**	0.74	**0.12**	1	Atlas	7,234,299	1
	9/1/2012 15:45	9/1/2012 18:45	**180**	0.32	**16,297,346**	0.36	**0.17**	6	Atlas	5,215,151	1
	9/2/2012 14:15	9/2/2012 15:45	**90**	0.53	**799,621**	0.86	**0.27**	1	Atlas	423,799	1
	9/5/2012 15:15	9/5/2012 18:00	**165**	0.72	**43,092,359**	1.63	**0.56**	1	Atlas	31,026,498	1
	9/7/2012 23:15	9/8/2012 3:15	**240**	1.53	**13,480,164**	3.06	**0.88**	3	Atlas	20,624,651	1
	9/26/2012 2:30	9/26/2012 3:30	**60**	0.54	**1,363,897**	0.69	**0.27**	6	Atlas	736,504	1
	9/26/2012 21:00	9/27/2012 1:30	**270**	1.33	**7,804,229**	2.15	**0.71**	6	Atlas	10,379,624	1
	10/1/2012 18:15	10/1/2012 20:00	**105**	0.66	**5,646,951**	2.81	**0.27**	12	Atlas	3,726,988	1
	12/4/2012 17:30	12/4/2012 19:15	**105**	0.57	**3,683,363**	0.81	**0.35**	3	Atlas	2,099,517	1
	12/7/2012 5:45	12/7/2012 19:30	**825**	0.94	**13,979,907**	1.75	**0.42**	6	Atlas	13,141,113	1
	12/8/2012 9:15	12/8/2012 11:00	**105**	0.31	**1,564,151**	2.06	**0.17**	3	Atlas	484,887	1
	12/9/2012 22:00	12/10/2012 2:15	**255**	1.19	**19,024,559**	2.94	**0.58**	3	Atlas	22,639,226	1
	12/20/2012 8:45	12/20/2012 13:15	**270**	0.66	**22,274,728**	0.93	**0.32**	6	Atlas	14,701,320	1
	12/26/2012 5:45	12/26/2012 13:15	**450**	0.94	**13,166,410**	1.63	**0.36**	12	Atlas	12,376,426	1
	1/11/2013 6:15	1/11/2013 9:00	**165**	0.62	**11,106,923**	0.83	**0.33**	6	Atlas	6,886,292	1
	1/13/2013 3:30	1/13/2013 20:00	**990**	2.25	**12,803,165**	3.07	**0.86**	24	Atlas	28,807,122	1
	1/30/2013 5:00	1/30/2013 10:30	**330**	0.89	**24,780,101**	1.14	**0.44**	6	Atlas	22,054,290	1
	3/11/2013 5:15	3/11/2013 12:30	**435**	1.03	**10,665,942**	1.52	**0.41**	12	Atlas	10,985,920	1
	3/17/2013 14:15	3/17/2013 16:00	**105**	1.82	**3,060,265**	1.76	**0.59**	48	Atlas	5,569,682	1
	3/18/2013 4:45	3/18/2013 8:45	**240**	1.82	**8,444,459**	2.19	**0.59**	48	Atlas	15,368,915	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO211	**4/11/2013 7:00**	4/11/2013 8:45	**105**	1.23	**4,885,155**	0.49	**0.47**	24	Atlas	6,008,740	1
	4/16/2013 20:15	4/16/2013 21:30	**75**	0.49	**8,551,512**	1.72	**0.41**	1	Atlas	4,190,241	1
	4/19/2013 2:30	4/19/2013 5:15	**165**	0.89	**11,030,437**	1.41	**0.49**	6	Atlas	9,817,089	1
	4/24/2013 8:45	4/24/2013 10:30	**105**	0.67	**10,954,553**	1.64	**0.39**	3	Atlas	7,339,551	1
	5/4/2013 15:00	5/4/2013 16:15	**75**	1.68	**409,905**	0.84	**0.53**	24	Atlas	688,640	1
	5/5/2013 6:00	5/5/2013 9:15	**195**	1.68	**4,609,682**	1.55	**0.53**	24	Atlas	7,744,265	1
	5/10/2013 14:15	5/10/2013 16:15	**120**	0.9	**1,241,635**	2.58	**0.39**	6	Atlas	1,117,471	1
	6/10/2013 0:45	6/10/2013 1:30	**45**	0.39	**2,396,005**	0.34	**0.15**	24	Atlas	934,442	1
	6/26/2013 4:30	6/26/2013 5:45	**75**	0.5	**9,142,291**	0.6	**0.36**	1	Atlas	4,571,145	1
	6/26/2013 16:30	6/26/2013 20:30	**240**	1.79	**14,557,287**	2.21	**0.99**	1	Atlas	26,057,544	1
	6/29/2013 21:00	6/29/2013 21:15	**15**	0.65	**210,569**	3.01				136,870	1
	7/2/2013 14:00	7/2/2013 14:15	**15**	0.02	**17,011,560**	3.23	**0.02**	1	Atlas	340,231	1
	7/6/2013 6:00	7/6/2013 6:00	**0**	0.48	**61,108**	1.92	**0.21**	12	Atlas	29,332	1
	7/10/2013 14:15	7/10/2013 16:00	**105**	0.63	**27,603,276**	1.73	**0.50**	1	Atlas	17,390,064	1
	7/21/2013 20:30	7/21/2013 22:00	**90**	2.85	**2,526,175**	2.11	**3.14**	3	Atlas	7,199,599	1
	7/22/2013 7:45	7/22/2013 15:30	**465**	2.85	**13,135,281**	2.99	**3.14**	3	Atlas	37,435,551	1
	8/12/2013 14:45	8/12/2013 16:30	**105**	1.33	**7,567,424**	1.35	**0.82**	1	Atlas	10,064,674	1
	8/13/2013 4:00	8/13/2013 4:30	**30**	1.33	**459,699**	1.56	**0.82**	1	Atlas	611,399	1
	8/31/2013 21:00	9/1/2013	**180**	1.49	**555,392**	1.15	**0.68**	12	Atlas	827,534	1
	10/5/2013 13:15	10/6/2013 11:30	**1335**	4.5	**13,289,022**	4.73	**9.84**	24	Cloudburst	59,800,600	1
	10/30/2013 4:00	10/30/2013 7:45	**225**	1.47	**26,641,867**	1.47	**0.74**	6	Atlas	39,163,544	1
	10/31/2013 19:30	10/31/2013 21:45	**135**	0.95	**2,393,978**	2.38	**0.38**	12	Atlas	2,274,279	1
	11/17/2013 6:00	11/17/2013 20:30	**870**	2.84	**17,785,942**	3.01				50,512,074	1
	12/5/2013 8:15	12/5/2013 8:45	**30**	0.81	**583,795**	0.2	**0.26**	48	Atlas	472,874	1
	12/14/2013 10:00	12/14/2013 11:15	**75**	0.74	**5,979,545**	1.19	**0.31**	12	Atlas	4,424,863	1
	12/21/2013 8:15	12/21/2013 13:15	**300**	3.19	**3,563,096**	1.5	**1.90**	24	Cloudburst	11,366,277	1
	12/21/2013 21:45	12/22/2013 4:00	**375**	3.19	**8,289,609**	3.3	**1.90**	24	Cloudburst	26,443,852	1
	2/4/2014 20:00	2/4/2014 20:45	**45**	0.62	**2,674**	1	**0.30**	6	Atlas	1,658	1
	2/17/2014 17:00	2/17/2014 19:00	**120**	0.57	**40,281**	0.84	**0.35**	3	Atlas	22,960	1
	3/2/2014 11:45	3/2/2014 12:15	**30**	0.49	**3,302**	0.28	**0.18**	24	Atlas	1,618	1
	4/3/2014 13:00	4/4/2014 8:45	**1185**	2.56	**8,553,392**	3.86	**0.87**	24	Atlas	21,896,684	1
	4/7/2014 11:00	4/7/2014 12:15	**75**	1.09	**8,293,892**	3.72	**0.69**	1	Atlas	9,040,342	1
	4/28/2014 4:45	4/28/2014 8:45	**240**	1.8	**4,426,689**	1.54	**0.73**	3	Atlas	7,968,040	1
	5/9/2014 20:15	5/9/2014 20:30	**15**	1.64	**115,617**	0.31	**0.63**	24	Atlas	189,612	1
	5/10/2014 6:15	5/10/2014 16:30	**615**	1.64	**5,803,275**	1.71	**0.63**	24	Atlas	9,517,370	1
	5/14/2014 20:30	5/14/2014 21:30	**60**	1.07	**190,490**	2.78	**0.41**	24	Atlas	203,824	1
	5/22/2014 3:45	5/22/2014 5:00	**75**	0.41	**1,862,358**	0.54	**0.27**	1	Atlas	763,567	1
	5/28/2014 20:15	5/28/2014 21:30	**75**	0.39	**7,280,246**	0.8	**0.32**	1	Atlas	2,839,296	1
	5/29/2014 21:30	5/29/2014 23:30	**120**	0.11	**101,346,983**	0.51	**0.09**	1	Atlas	11,148,168	1
	7/13/2014 23:00	7/14/2014 0:30	**90**	0.69	**9,674,166**	0.79	**0.35**	1	Atlas	6,675,175	1
	7/26/2014 22:00	7/26/2014 23:45	**105**	1.02	**9,602,646**	0.54	**0.47**	12	Atlas	9,794,699	1
	7/27/2014 8:00	7/27/2014 10:15	**135**	1.02	**707,009**	1.07	**0.47**	12	Atlas	721,150	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO211	**8/8/2014 6:30**	8/8/2014 9:15	**165**	0.75	**31,629,487**	0.62	**0.36**	6	Atlas	23,722,115	1
	8/10/2014 4:30	8/10/2014 6:00	**90**	0.72	**10,056,600**	1.64	**0.63**	1	Atlas	7,240,752	1
	8/11/2014 15:45	8/11/2014 17:00	**75**	0.2	**25,110,396**	1.75	**0.11**	6	Atlas	5,022,079	1
	8/23/2014 17:00	8/24/2014	**420**	1.01	**9,883,743**	2.04	**0.49**	6	Atlas	9,982,580	1
	8/27/2014 18:15	8/27/2014 18:30	**15**	0.23	**365,422**	1.52	**0.19**	1	Atlas	84,047	1
	8/30/2014 15:15	8/30/2014 18:00	**165**	0.96	**13,600,371**	2.24	**0.57**	3	Atlas	13,056,357	1
	9/2/2014 10:15	9/2/2014 10:15	**0**	0.34	**1,280**	1.66	**0.21**	3	Atlas	435	1
	9/11/2014 0:45	9/11/2014 7:30	**405**	2.11	**18,847,745**	2.09	**2.29**	3	Atlas	39,768,743	1
	10/10/2014 2:30	10/10/2014 4:45	**135**	0.86	**15,445,804**	1.43	**0.37**	3	Atlas	13,283,391	1
	10/13/2014 5:30	10/13/2014 7:45	**135**	0.49	**1,690,109**	2	**0.32**	3	Atlas	828,153	1
	10/14/2014	10/14/2014 11:15	**675**	1.44	**6,416,129**	2.99	**0.64**	12	Atlas	9,239,225	1
	11/23/2014 17:45	11/23/2014 22:15	**270**	0.92	**1,002,244**	1.26	**0.42**	6	Atlas	922,064	1
	12/6/2014	12/6/2014 8:15	**495**	1.91	**2,461,834**	2.77	**0.62**	48	Atlas	4,702,103	1
	3/4/2015	3/4/2015 16:00	**960**	1.71	**2,155,287**	1.37	**0.55**	48	Atlas	3,685,541	1
	3/10/2015 10:45	3/10/2015 16:30	**345**	1.09	**7,522,627**	2.79	**0.49**	12	Atlas	8,199,664	1
	3/13/2015 13:15	3/14/2015 6:30	**1035**	1.84	**3,512,902**	2.9	**0.70**	24	Atlas	6,463,739	1
	3/26/2015 6:00	3/26/2015 6:30	**30**	0.52	**43,893**	0.64	**0.23**	3	Atlas	22,825	1
	4/2/2015 11:15	4/3/2015 14:00	**1605**	5.44	**15,431,516**	5.2	**18.39**	6	Cloudburst	83,947,448	1
	4/7/2015 9:30	4/7/2015 11:30	**120**	0.89	**5,824,231**	6.02	**0.37**	12	Atlas	5,183,566	1
	4/8/2015 19:15	4/8/2015 19:45	**30**	0.12	**719,939**	6.46	**0.09**	1	Atlas	86,393	1
	4/9/2015 11:00	4/10/2015 12:45	**1545**	0.08	**236,591,542**	6.49	**0.06**	1	Atlas	18,927,323	1
	4/19/2015 17:00	4/19/2015 20:45	**225**	0.81	**36,942**	1.43	**0.33**	12	Atlas	29,923	1
	5/16/2015 12:00	5/16/2015 14:45	**165**	0.95	**37,071**	1.07	**0.58**	3	Atlas	35,217	1
	6/17/2015 8:00	6/17/2015 8:00	**0**	0.63	**21,492**	0.65	**0.34**	3	Atlas	13,540	1
	6/18/2015 17:45	6/18/2015 19:00	**75**	0.62	**21,115,518**	1.26	**0.36**	1	Atlas	13,091,621	1
	6/20/2015 5:30	6/20/2015 8:45	**195**	1.19	**4,354,779**	2.58	**0.49**	12	Atlas	5,182,188	1
	6/26/2015 17:45	6/27/2015 2:15	**510**	0.99	**4,482,301**	3.17	**0.55**	1	Atlas	4,437,478	1
	7/2/2015 1:30	7/2/2015 1:30	**0**	0.84	**1,709**	2.84	**0.47**	3	Atlas	1,435	1
	7/3/2015 16:45	7/3/2015 16:45	**0**	1.48	**10,664**	3.62	**2.47**	1	Atlas	15,783	1
	7/7/2015 14:45	7/7/2015 15:00	**15**	0.91	**13,659**	3.23	**0.48**	6	Atlas	12,429	1
	7/9/2015 7:30	7/9/2015 9:45	**135**	0.28	**16,900**	2.77	**0.17**	1	Atlas	4,732	1
	7/10/2015 15:00	7/10/2015 18:00	**180**	0.46	**61,327**	1.8	**0.24**	6	Atlas	28,210	1
	7/12/2015 6:30	7/12/2015 14:00	**450**	0.73	**1,357,543**	2.5	**0.50**	1	Atlas	991,006	1
	7/13/2015 15:15	7/13/2015 17:45	**150**	0.51	**5,465,731**	3.01				2,787,523	1
	7/14/2015 5:00	7/14/2015 5:15	**15**	0.3	**15,695,497**	3.31	**0.23**	1	Atlas	4,708,649	1
	7/14/2015 20:00	7/14/2015 20:15	**15**	0.16	**128,816**	2.56	**0.14**	1	Atlas	20,611	1
	7/18/2015	7/18/2015 1:45	**105**	0.83	**35,672,493**	2.53	**0.55**	3	Atlas	29,608,169	1
	10/27/2015 16:00	10/27/2015 20:45	**285**	3.44	**751,994**	2.61	**1.84**	24	Cloudburst	2,586,860	1
	10/28/2015 6:00	10/28/2015 12:15	**375**	3.44	**643,558**	3.82	**1.84**	24	Cloudburst	2,213,841	1
	11/6/2015 4:15	11/6/2015 4:15	**0**	1.05	**517,644**	1.1	**0.65**	3	Atlas	543,526	1
	11/18/2015 10:45	11/18/2015 14:45	**240**	1.76	**15,906,457**	2.19	**0.89**	6	Atlas	27,995,365	1
	12/23/2015 19:45	12/23/2015 20:45	**60**	1.01	**3,750,414**	1.73	**0.67**	1	Atlas	3,787,918	1

CSO	Start Date-Time	End Date-Time	Duration (Minutes)	Rain Total (Inch)	Discharge Volume per Rainfall (Gallons per Inch)	Antecedent Rain	Frequency	Period	Standard	Sum of Total Volume (Gal)	Events
CSO211	**12/27/2015 11:00**	12/27/2015 23:30	**750**	2.53	**8,309,287**	3.85	**0.82**	48	Atlas	21,022,497	1
	12/28/2015 19:45	12/28/2015 19:45	**0**	2.53	**3,047**	4.68	**0.82**	48	Atlas	7,710	1
	2/2/2016 20:00	2/3/2016 2:00	**360**	1.51	**13,110,492**	1.58	**0.75**	6	Atlas	19,796,844	1
	2/21/2016 11:00	2/21/2016 11:00	**0**	1.07	**275,053**	1.23	**0.49**	12	Atlas	294,307	1
	2/24/2016 1:15	2/24/2016 6:00	**285**	2.24	**6,874,009**	2.65	**0.86**	12	Atlas	15,397,781	1
	3/10/2016 16:45	3/10/2016 16:45	**0**	1.31	**202,508**	1.12	**0.43**	48	Atlas	265,286	1
	3/27/2016 22:00	3/27/2016 22:00	**0**	0.77	**676,600**	1.07	**0.53**	1	Atlas	520,982	1
	4/27/2016 22:45	4/27/2016 22:45	**0**	1.03	**265,644**	1.67	**0.49**	3	Atlas	273,614	1
	4/30/2016 14:30	4/30/2016 15:45	**75**	0.79	**207,031**	1.8	**0.30**	24	Atlas	163,554	1
	5/10/2016 18:45	5/10/2016 18:45	**0**	0.85	**376,501**	1.43	**0.32**	24	Atlas	320,025	1
	5/20/2016 16:30	5/20/2016 16:30	**0**	0.73	**492,940**	1.42	**0.43**	3	Atlas	359,846	1
	6/14/2016 17:00	6/14/2016 17:45	**45**	1.41	**15,832,729**	2.21	**0.77**	6	Atlas	22,324,148	1
	6/23/2016 16:45	6/23/2016 23:00	**375**	2.03	**11,796,085**	2.08	**0.93**	12	Atlas	23,946,052	1
Grand Total										**1,371,701,788**	**139**

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