City of Chattanooga

Mayor Andy Berke

February 28, 2019

VIA CERTIFIED MAIL

Ms. Sara Janovitz
Environmental Engineer
Clean Water Enforcement Branch
US EPA-Region 4
61 Forsyth Street, SW
Atlanta, GA 30303

Re: ***United States of America et. al. v. City of Chattanooga, No. 1:12-cv-0024***
Annual Report No. 6 – January 2018 to December 2018

Dear Ms. Janovitz:

On behalf of the City of Chattanooga, Tennessee ("City"), and in accordance with the Consent Decree entered by the United States District Court for the Eastern District of Tennessee (Southern Division), on April 24, 2013, in the case styled the United States of America et. al. v. City of Chattanooga, No. 1:12-cv-0024 ("Consent Decree"), we are submitting to both the Environmental Protection Agency ("EPA") and the Tennessee Department of Environment and Conservation ("TDEC") the fifth annual report required pursuant to paragraph 40 of the Consent Decree. This report is also being submitted in accordance with the letter from Denise Diaz, dated September 16, 2013, establishing the dates for reporting under the Consent Decree.

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

Please let me know if you have any questions regarding our submittal.

Sincerely,

Jeffrey A. Rose, P.E.
Director, Waste Resources Division

Enclosure

cc: Karl Fingerhood, Esq., US DOJ
Chief, Environmental Enforcement Section, US DOJ
Chief, Clean Water Enforcement Branch, US EPA Region 4
Bill Bush, Esq., US EPA
Sohnia Hong, Esq., Office of the Attorney General
Enforcement Coordinator, Water Pollution Control, TDEC
Shelby Ward, TN Clean Water Network
Adam Sowatzka, Esq., King & Spalding
Mike Marino, P.E., Jacobs Engineering

Annual Report No. 6

January 1 - December 31, 2018

Prepared for

Environmental Protection Agency and Tennessee Department of Environment and Conservation

City of Chattanooga
Waste Resources Division
Consent Decree Program
Case No. 1:12-cv-00245

Prepared by

City of Chattanooga

Waste Resources Division

Submitted by

Jacobs Engineering Group Inc.
Consent Decree Program Manager

Chattanooga, Tennessee

February 28, 2019

Table of Contents

Tables

Figures

Acronyms and Abbreviations

AOP	Additional Operational Plan
BOD	Biochemical Oxygen Demand
CAP	Capacity Assurance Program
CD	Consent Decree
CMOM	Capacity, Management, Maintenance and Operations
CSOTF	Combined Sewer Overflow Treatment Facility
DO	Dissolved Oxygen
EPA	Environmental Protection Agency
FOG	Fats, Oils, and Grease
FSE	Food Service Establishment
IJA	Inter-Jurisdictional Agreement
ISS	Interceptor Sewer System
KPI	Key Performance Indicator
MBWWTP	Moccasin Bend Wastewater Treatment Plant
MG	Million Gallons
MH	Manhole
N/A	Not Applicable
No.	Number
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
PCCMP	Post Construction Compliance Monitoring Program
PM	Preventive Maintenance
PS	Pump Station
SORP	Sewer Overflow Response Protocol
SSO	Sanitary Sewer Overflow

TDEC	Tennessee Department of Environment and Conservation
TSS	Total Suspended Solids
WQS	Water Quality Standards

1.0 Introduction

1.1 Purpose

On April 24, 2013, the City of Chattanooga ("City") entered into a Consent Decree with the United States and the State of Tennessee, in the case styled *United States of America et. al. v. City of Chattanooga, No. 1:12-cv-00245* ("CD"). Pursuant to Section IX of the CD, the City is required to submit annual reports on a yearly basis to the Environmental Protection Agency ("EPA") and Tennessee Department of Environment and Conservation ("TDEC"). Chattanooga has prepared this report to satisfy the reporting requirements found in Paragraph 40 of the CD, which covers the period from January 1, 2018 through December 31, 2018 ("Reporting Period"). This report is also being submitted in accordance with the letter from Denise Diaz, dated September 16, 2013, establishing the dates for the reporting under the CD.

1.2 Requirements

As detailed in Section IX of the CD, the City is required to report a summary of Capacity, Management, Operations and Management ("CMOM") Program as implemented or modified pursuant to the CD, including a comparison of actual performance with any performance measures that have been established. Additionally, the 1st five annual reports were to include a trends analysis of the number, volume, duration, and cause of Chattanooga's Sanitary Sewer Overflow ("SSO") events for a 24-month rolling period, updated to reflect the SSO events that occurred during the previous 12-month period. Beginning with the 6th annual report, this trends analysis will cover SSO events spanning a 5-year rolling period, which in this case, would be this Annual Report. The Annual Report also includes an update regarding the status of major Post Construction Compliance Monitoring Program ("PCCMP") activities, as applicable, relating to the Chattanooga Creek Combined Sewer Overflow Treatment Facilities ("CSOTFs").

2.0 CMOM Programs

The City has completed the development of its CMOM program pursuant to Paragraph 20 of the CD. As of the end of the last Reporting Period, all nine (9) of the nine CMOM programs have been developed by Chattanooga, submitted to TDEC and EPA, and approved. Table 2-1 on the following page summarizes the status of the CMOM Programs, including updates and key performance indicators ("KPIs") related to implementation of those that have received EPA approval.

Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Sewer Overflow Response Protocol ("SORP")	Approved by EPA and TDEC 5/29/2014	Section VI, Paragraph 20(a)(ii)	Maintain records of all sanitary sewer overflow ("SSO") responses and response times	Reduce response times to respond to SSOs to reduce SSO impacts	Reduce SSO response time to within one hour after notification of event	Average SSO response time for 2018 was ~33 minutes
Sewer Overflow Response Protocol ("SORP")	Approved by EPA and TDEC 5/29/2014	Section VI, Paragraph 20(a)(ii)	Provide notice to TDEC as required by National Pollutant Discharge Elimination ("NPDES") Permit within 24 hours of being made aware of an SSO event	Improve timeliness of SSO reporting to TDEC	Notify TDEC of SSO events within 24 hours after being made aware of event	All 24-hour report were made to TDEC within the 24-hour time period
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Updated and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(d)	Annual Chemical Root Control Footage	Reduce the impacts of roots on system performance	Treat 50,000 feet/year	65,488 feet were treated in 2018
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(d)	Footage of Pipeline Hydraulically Cleaned During the Calendar Year	Improve the gravity system performance	1,000,000 feet/year	1,479,799.19 feet in 2018

Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(d)	Number of MACP Level 1 Manhole Inspections During the Calendar Year	Complete Level 1 inspections to improve system performance	1,000/year until 2017 and then 2,000/year	3,103 inspections in 2018
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(d)	Number of MACP Level 2 Manhole Inspections During the Calendar Year	Complete Level 2 inspections to improve system performance	900/year until 2017 and then 500/year	No inspections were able to be completed. We had a no responsive bidders for the work in 2018.
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(d)	The Number of SSOs caused by the build-up of debris, sediment, roots, and grease in the collection system	Measure effectiveness of gravity maintenance program	A reduction in maintenance-related SSOs	There were 21 SSOs associated with blockages in 2018 as compared to 29 in 2017

Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Gravity Line Preventive Maintenance Program	Approved by EPA and TDEC 12/3/2014 Revised and Revised by EPA 9/25/2017	Section VI, Paragraph 20(d)	Footage of pipelines and frequency that preventive maintenance hydraulic cleaning is performed	Complete gravity line maintenance to improve system performance	Preventive Hydraulic Line Cleaning Frequency Maximum ft. 2 months – 25,000 ft. 4 months – 50,000 ft. 6 months – 50,000 ft. 8 months – 50,000 ft. 12 months- 225,000 ft. 18 months- 250,000 ft. 36 months- 350,000 ft.	Preventive Hydraulic Line Cleaning Frequency Actual ft. 2 months- 0 ft. 4 months- 0 ft. 6 months- 50,312 ft. 8 months- 19,546 ft. 12 months- 274,248 ft. 18 months- 330,271 ft. 36 months- 529,848 ft.
Fats, Oils, and Grease (“FOG”) Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Number of FOG-related SSOs	Measure FOG program effectiveness	Yearly Reduction in FOG-related SSOs	There were 3 SSOs associated with grease blockages
Fats, Oils, and Grease (“FOG”) Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Number of annual inspections vs the total number of Food Service Establishments (“FSEs”)	Measure FOG program workload	100%	80%

Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Fats, Oils, and Grease ("FOG") Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Number of annual Noncompliance Notifications vs the total inspections	Evaluate the FOG Program effectiveness	Below 15%	6.2% of total inspections yielded a non-compliance notification
Fats, Oils, and Grease ("FOG") Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	FOG Hot Spots	Reduce the number of FOG hot spot areas	Reduce linear footage by 10%	6.7% reduction from previous year
Fats, Oils, and Grease ("FOG") Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Number of FSEs Added Annually	Measure FOG program effectiveness	Have every existing FSE included in Program so only new ones are added	42 FSEs were added during the reporting period
Fats, Oils, and Grease ("FOG") Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Annual FOG Management Program Update Completed on Time	Improve FOG program effectiveness	Complete Annually	Training was conducted and completed in August for calendar year 2018.
Fats, Oils, and Grease ("FOG") Management Program	Approved by EPA and TDEC 7/21/2015	Section VI, Paragraph 20(c)	Number of Pretreatment Program Employees Trained on FOG Management Program	Improve employee program knowledge through training	100%	100%

Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Pump Station Operations Program	Approved by EPA and TDEC 10/22/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(e)	Pump Station ("PS") Operational Checks	Improve pump station performance	95% adherence to PS/CSOTF visit schedule	99% completed on time
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Preventive Maintenance ("PM") Completion Schedule	Measure PM program effectiveness	95% adherence to PM schedule	98% completed on time
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Number of Preventable Work Orders	Measure work order program effectiveness	Less than 5 preventable work orders per month	Total of 40 and average of 3.3 preventable work orders per month, as compared to 6 per month in 2017
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Track Work Orders Found Via PM Activities	Evaluate effectiveness of the PM program	Track the number of CMs generated as a result of a PM	2.5% for 2018 overall (51 CMs and 2000 PMs).
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Track the Age of Work Orders	Improve work order process	No work orders older than 6 months	2018 total year average was 17 days.

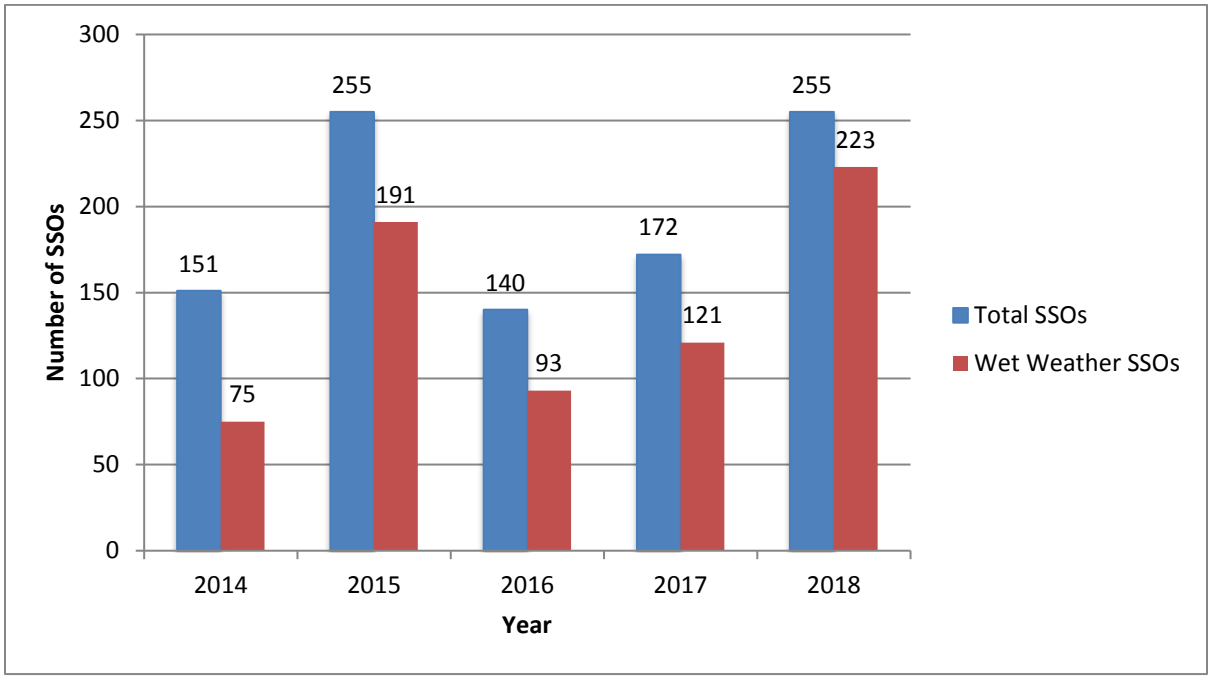
Table 2-1
CMOM Program Summary

January 1, 2018 - December 31, 2018						
CMOM Program	**CMOM Program Status**	**CD Reference**	**CMOM Program KPI**	**CMOM KPI Purpose**	**Established Performance Measure**	**Actual Measured Performance**
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Percentage of Emergency Work Orders	Track the reliability of the City's assets	Less than 10% of the work orders are emergencies	Emergency work orders were 0% of total work orders written
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Work Orders Awaiting Parts	Improve work order program	No Work Orders Older than 30 days Awaiting Parts	77 requests with an average delivery time of 12 days
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Work Backlog	Measure work order program effectiveness	Not more than 6 weeks of work	73.4% of work orders were closed for 2018 (1329 written and 976 were closed).
Pump Station Preventive Maintenance Program	Approved by EPA and TDEC 3/17/2015 Revised and reapproved by EPA 9/25/2017	Section VI, Paragraph 20(f)	Overtime as a Percent of Total Hours Worked	Improve pump station program by measuring overall overtime usage	Less than 5%	9.56% OT
Capacity Assurance Program ("CAP")	Approved by EPA and TDEC 10/13/2016	Section VI, Paragraph 20(h)	Applicable CD components to be identified during program implementation	N/A	N/A	N/A

3.0 SSO Trends Analysis

The City conducted a trends analysis of the cause, duration, and volume of SSO events for the 60-month period spanning January 1, 2014 through December 31, 2018. Rainfall data collected during the same period was included in the analysis to illustrate the effects of heavy, sustained rainfall on the occurrence, duration, and volume of the recorded SSO events. Figure 3-1 below provides a summary of SSO events by year for the reporting period:

Figure 3-1
SSO Events by Year



As illustrated in Figure 3-1, there was an upward trend in SSO events from 2014 to 2018. However, there was also a corresponding upward trend in rainfall as described further in this section below. The majority of SSO events during the reporting period were wet-weather related. However, there has been a decrease year over year of non-wet weather SSOs of approximately 54%. This reduction is attributed to the continued implementation of the CMOM program. Based on data from rain gages installed throughout Chattanooga, the observed rainfall in 2018 was 26% higher than normal rainfall and 13% higher than 2017. These above normal conditions produced three storm events in 2018 that had total rainfall beyond the 2-year 24-hour design storm event of 3.67 inches as defined in the Consent Decree.

The first event began on February 28, 2018 and resulted in a rainfall total of 4.02 inches. There were 36 SSOs associated with this event. The second event began on April 22, 2018 and resulted in a rainfall total of 4.42 inches. There were 27 SSOs associated with this event. The third event began on September 24, 2018 and resulted in a rainfall total of 6.97 inches. There were 34 SSOs associated with this event. This event was also associated with Hurricane Florence which partially affected the Chattanooga area from August 31 to September 19. These three rain events which equal 5% of the 60 total rain events, resulted in 97 SSOs or 43% of the total wet weather SSOs in 2018. This is significant because per the CD, Chattanooga is developing its wastewater infrastructure to a 2 year 24-hour design storm event, and all three of these events exceed that standard.

In addition to higher than normal rainfall, the plant capacity was reduced during certain time periods of the year due to unavoidable construction and mechanical failures. Pursuant to Paragraph 1.3.5.2 of the City's NPDES permit TN0024210, the City notified TDEC regarding unavoidable construction on MBWWTP. Detritors #1 and #2 were taken offline from September 25, 2017 until May 3, 2018, in order to perform the associated rehabilitation work. Through analysis of the rainfall events during this period, there were 2 SSOs that the data shows can be likely attributed to this construction effort. These SSOs are shown in Table 3-1.

Table 3-1
SSOs Attributed to Unavoidable Construction

Start Date	Start Time	Location	Source	Estimated Duration (hrs)	Estimated Volume (gal)	SSO Destination	Cause
10-Feb-18	7:10 AM	122 Rowland Gap Rd (West Bank)	West Bank	40.83	14,833,000	Tennessee River	Wet Weather
15-Apr-18	10:45 AM	122 Rowland Gap Rd (West Bank)	West Bank	20.25	6,381,000	Tennessee River	Wet Weather

There was also a mechanical failure at the influent screens that reduced the plant capacity on November 6, 2018. Through analysis of the rainfall event during this period, there was 1 SSO that the data shows can be likely attributed to this construction effort. This SSO is shown in Table 3-2.

Table 3-2
SSOs Attributed to Mechanical Failure

Start Date	Start Time	Location	Source	Estimated Duration (hrs)	Estimated Volume (gal)	SSO Destination	Cause
06-Nov-18	5:30 AM	122 Rowland Gap Rd (West Bank)	West Bank	36.33	22,312,000	Tennessee River	Wet Weather

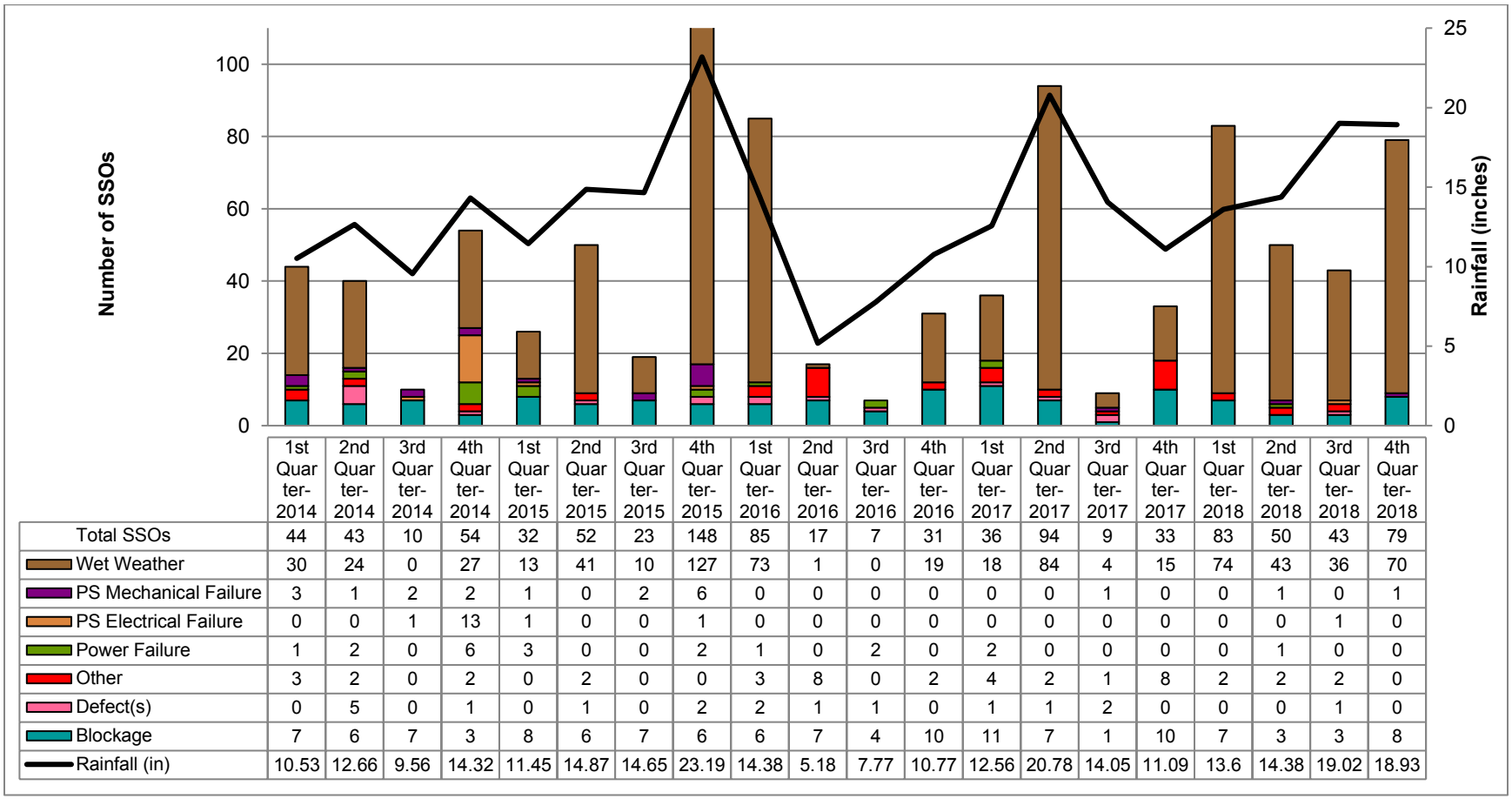
Figure 3-2 depicts SSO events by cause per quarter for the reporting period. Wet weather was the leading cause of SSOs, followed by blockages. The downward trend in dry weather SSOs continued in 2018, which is indicative of adherence to a well-defined and implemented CMOM program. Wet Weather SSOs continued to overall trend parallel to rain accumulation and intensity.

Figure 3-3 depicts total SSOs and rainfall accumulation per quarter. Looking at the overall, five-year, quarterly trend, there has been a 36% increase in the number of SSOs since 2014. This is largely due to wet weather SSOs. There has also been a 37% increase in rainfall since 2014 which generates the rain derived inflow and infiltration causing the SSOs. Also observed is the rainfall trend increasing higher than the SSO trend. This is one of the main goals of the CD program for the City and is indicative of improvements to the wastewater system under the CD. This increasing trend is significantly impacted by the above average number of SSOs reported in the three storm events in 2018 that had total rainfall beyond the 2-year 24-hour design storm event of 3.67 inches as defined in the Consent Decree. In these events which occurred in February, April and September 2018, there were 13, 5, and 9 SSO locations, respectively, that only occurred during these three storm events and once in other storms. In the City's assessment, these are outliers and not indictive of true system performance.

Figure 3-4 depicts cumulative SSO duration and rainfall accumulation per quarter or the sum of the durations of each SSO event that was recorded per quarter during the reporting period. There is an increasing trend in cumulative SSO duration in the 5-year span. This trend is also significantly inflated by the three extreme storm events in February, April, and September 2018. In addition, the reported SSO duration has been impacted by the development of the SORP under the CD. The response team had shortened their response time and recorded longer SSO durations.

Figure 3-5 depicts cumulative SSO volume and rainfall accumulation per quarter or the sum of the volumes of each SSO event that was recorded per quarter during the reporting period. Looking at the overall, five-year, quarterly trend, there has been an increase in rainfall by 37% and a decrease in total SSO volume of 15%. The decreasing trend also indicates improvements to the wastewater system under the CD. This coupled with the CMOM Program is continuing to have a positive effect on the City's goal of reducing SSOs.

Figure 3-2
SSO Events by Cause



	1st Quarter-2014	2nd Quarter-2014	3rd Quarter-2014	4th Quarter-2014	1st Quarter-2015	2nd Quarter-2015	3rd Quarter-2015	4th Quarter-2015	1st Quarter-2016	2nd Quarter-2016	3rd Quarter-2016	4th Quarter-2016	1st Quarter-2017	2nd Quarter-2017	3rd Quarter-2017	4th Quarter-2017	1st Quarter-2018	2nd Quarter-2018	3rd Quarter-2018	4th Quarter-2018
Total SSOs	44	43	10	54	32	52	23	148	85	17	7	31	36	94	9	33	83	50	43	79
Wet Weather	30	24	0	27	13	41	10	127	73	1	0	19	18	84	4	15	74	43	36	70
PS Mechanical Failure	3	1	2	2	1	0	2	6	0	0	0	0	0	0	1	0	0	1	0	1
PS Electrical Failure	0	0	1	13	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
Power Failure	1	2	0	6	3	0	0	2	1	0	2	0	2	0	0	0	0	1	0	0
Other	3	2	0	2	0	2	0	0	3	8	0	2	4	2	1	8	2	2	2	0
Defect(s)	0	5	0	1	0	1	0	2	2	1	1	0	1	1	2	0	0	0	1	0
Blockage	7	6	7	3	8	6	7	6	6	7	4	10	11	7	1	10	7	3	3	8
Rainfall (in)	10.53	12.66	9.56	14.32	11.45	14.87	14.65	23.19	14.38	5.18	7.77	10.77	12.56	20.78	14.05	11.09	13.6	14.38	19.02	18.93

Figure 3-3
Quarterly SSO Quantities

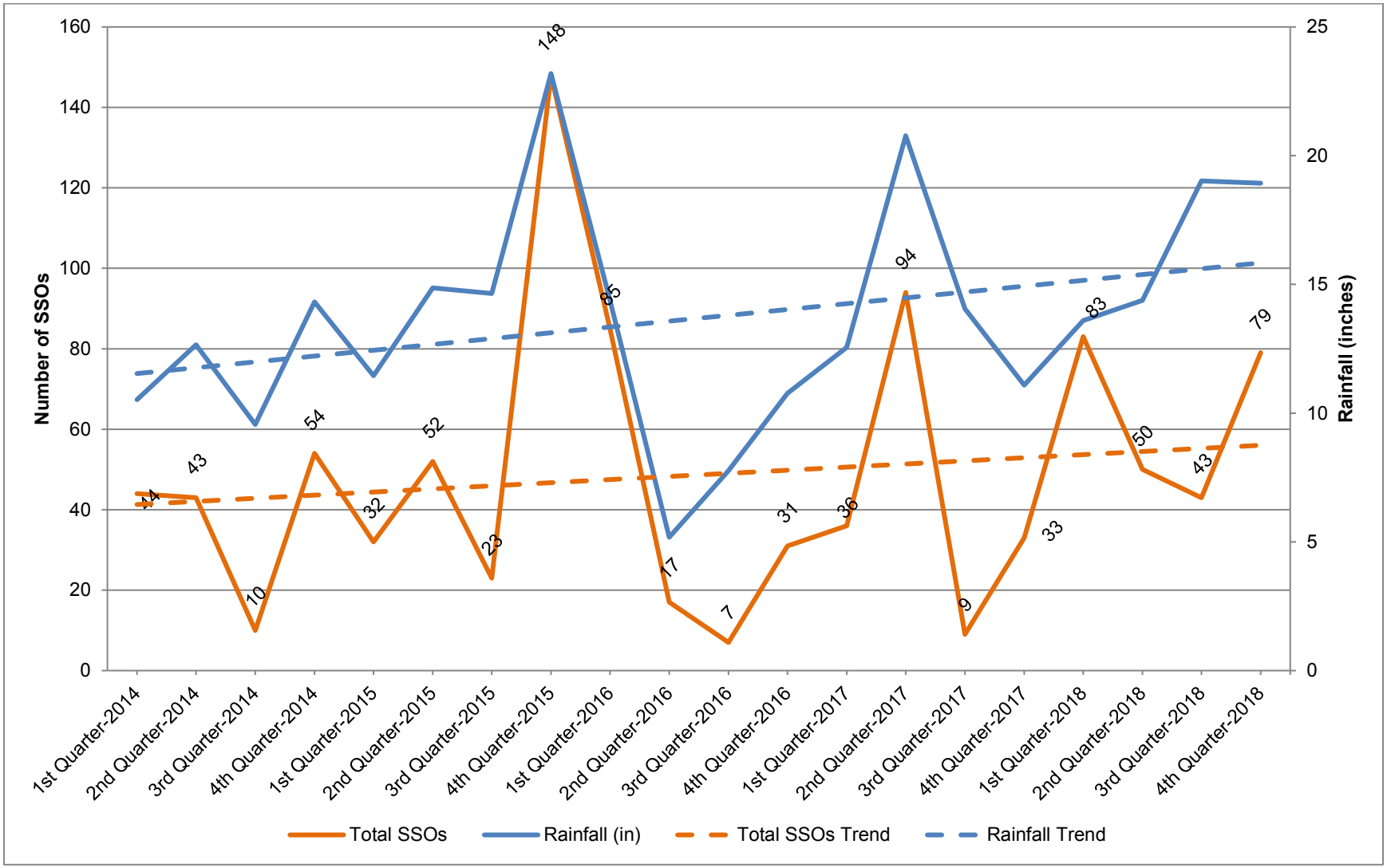


Figure 3-4
Quarterly SSO Durations

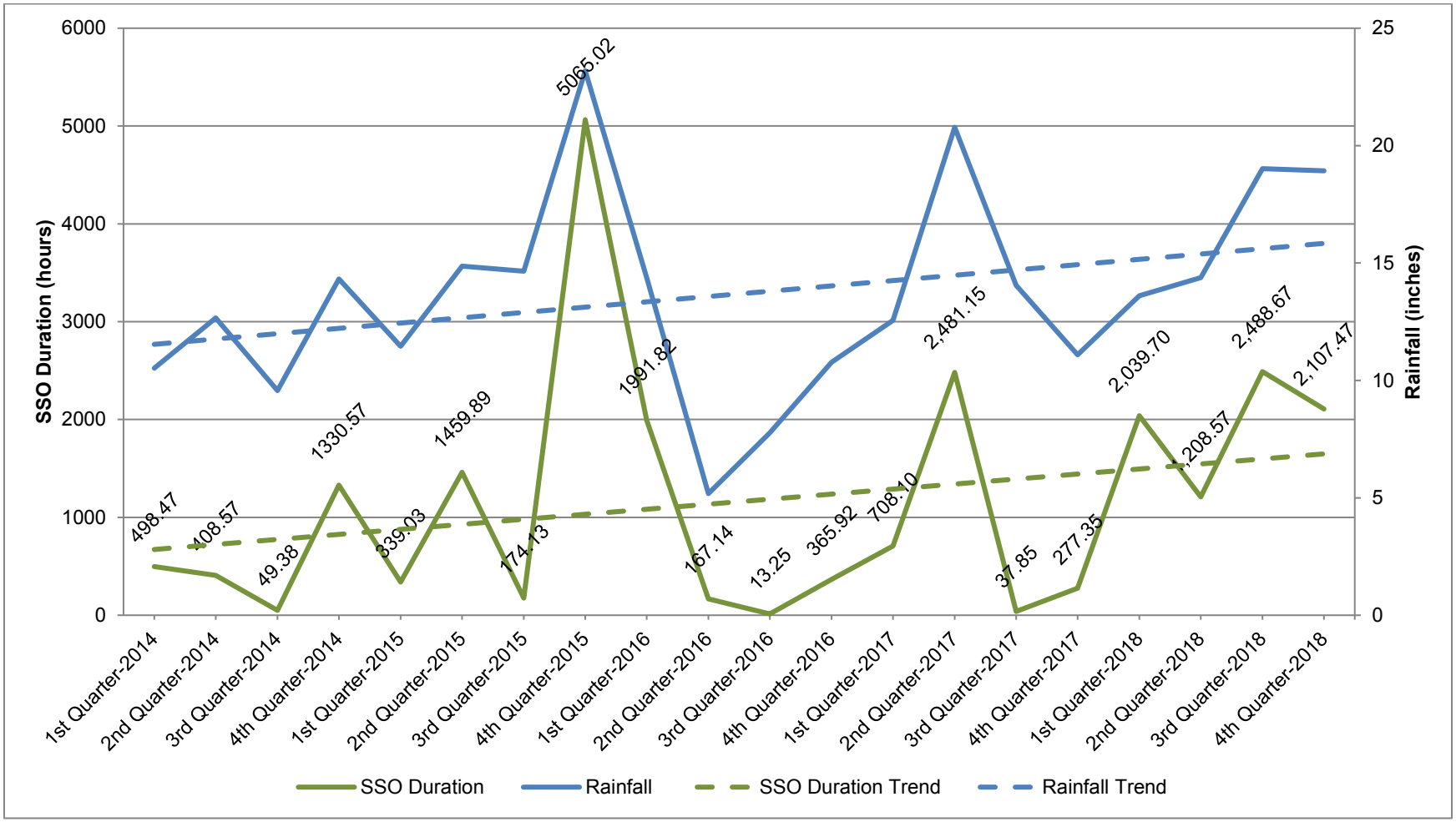
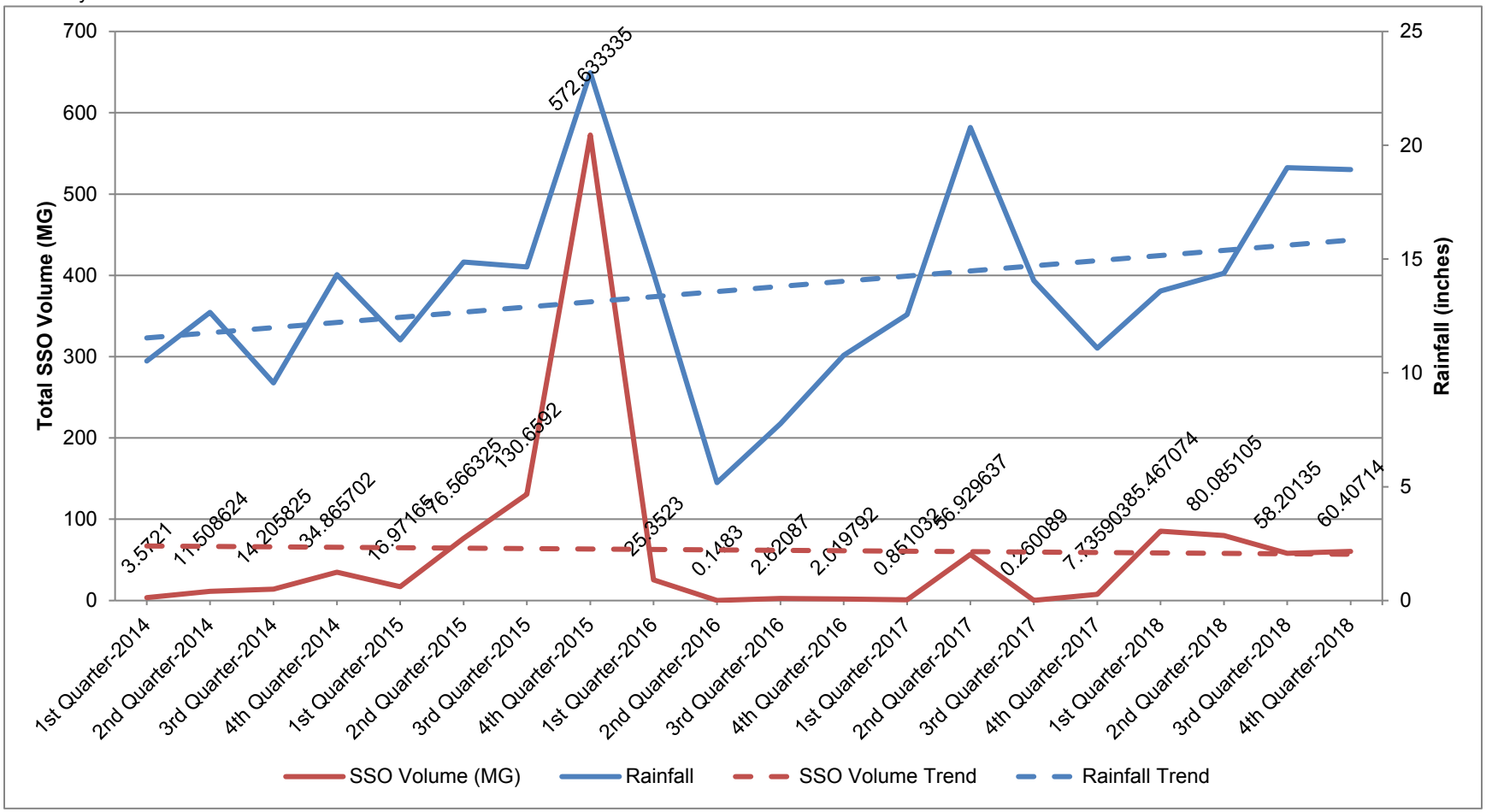


Figure 3-5
Quarterly SSO Volume



4.0 PCCMP Activities

4.1 Purpose

As detailed in Section 2.4.1.5 of the PCCMP, the Annual Report also includes an update regarding major PCCMP activities, as applicable, relating to the Chattanooga Creek CSOTFs.

This project included developing a set of procedures and analysis from EPA guidance documents into the Long Term Control Plan-Post Construction Compliance Monitoring Program document. The purpose of this document is to determine a plan of operations for sampling and analyzing the Central Avenue and William Street CSO Outfalls to verify compliance of the discharges with State water quality standards ("WQS") and protection of designated uses as well as to ascertain the effectiveness of CSO controls.

The full analysis of the data was included in the Additional Operational Plan ("AOP"). The AOP was submitted to TDEC on October 16, 2017. The impact of the CSO Outfall discharges on Chattanooga Creek was assessed and this analysis is detailed in the AOP.

4.2 Requirements

As detailed in Section 2.4.1.5 of the PCCMP, the City is required to report the status of the following major PCCMP activities, as applicable, relating to the Chattanooga Creek CSOTFs:

- CSOTF effluent and Chattanooga Creek monitoring data;
- Performance monitoring data;
- Outfall activation: number of discharge events, discharge volume as estimated from outfall flow data, and any relevant comments;
- Rainfall data: map of gauge locations and summary of results, including annual rainfall total depth, annual average intensity, annual average event duration, total number of events, event distribution by depth and the maximum event depth; and
- Flow monitoring: map of gauge sites and summary of results.

The PCCMP has been completed and the Chattanooga Creek monitor was removed in May 2018. CSOTF Effluent and Chattanooga Creek data was compiled by parameter and is shown by month in Table 4-3 through Table 4-8b in the AOP, submitted October 16, 2017. Performance monitoring data can also be referenced in previous annual reports.