City of Shreveport, Louisiana

Consent Decree Annual Report – Year 6

May 13, 2019 - May 12, 2020

CITY OF SHREVEPORT

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SUBMITTAL CERTIFICATION

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.

David B. Smith, P.E.
Assistant City Engineer
City of Shreveport

Date 7/8/2020

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1.0 INTRODUCTION

The City of Shreveport (City) is implementing a significant Capital Improvement Program (CIP) to address the requirements of a Federal Consent Decree (Case No. 5:13-cv-3065). The Consent Decree became effective on May 13, 2014, and generally requires the following:

- Analyze the entire collection system and repair all sewer defects which cause or contribute to sewer overflows under 5 Phases of work in the first 9 Years of the 12-year Consent Decree Program

- Reassess the condition of sewers in Phases 1, 2, and 3 in Years 8-12 and repair all defects which cause or contribute to sewer overflows

- Develop a computerized hydraulic model of the sanitary sewer system

- Analyze the wastewater system and construct additional conveyance capacity improvements where necessary to address SSOs to an approved level of control and prevention of treatment plant overloading by conclusion of Year 12

- Implement Capacity Management Operations and Maintenance (CMOM) Programs, including a sewer overflow response program, a fats, oils, and grease (FOG) control program, a chemical root control program, a private lateral rehabilitation program, a gravity sewer preventative maintenance program, and a wastewater treatment plant operation and preventive Maintenance Program

- Submit annual reports to EPA and LDEQ

This Annual Report provides a comprehensive summary of activities completed during Consent Decree Year 6 between May 13, 2019 to May 12, 2020.

2.0 CONSENT DECREE OVERVIEW – YEAR 6

2.1 Annual Report Purpose and Scope

This Annual Report is submitted in accordance with Section VIII Reporting Requirements, Paragraph 60, of the Consent Decree and reflects the status of program implementation that occurred between May 13, 2019 to May 12, 2020.

2.2 Program Management Transition

The City of Shreveport changed Program Managers during Year 6 effective September 1, 2019. Burns & McDonell Engineering Company and its subconsultants Bonton Associates, Envision Media & Marketing, and Sustainable Design Solutions, took over program management responsibilities in place of CDM Smith. The Program Management Team (PMT) completed a review of the City's Consent Decree compliance, technical approach, and program affordability as part of this transition.

2.3 Consent Decree Program Funding

The City and PMT evaluated progress to-date and current available funding for Consent Decree Program delivery. Major findings of this effort concluded that the City of Shreveport had spent $415 million in the first five (5) years of what was supposed to be a $349 million program over twelve years. This incredible investment was made possible through (1) an extraordinary 166 percent sewer rate increase between 2013 and 2020 and (2) cross subsidization from water funds. Unfortunately, despite this incredible progress, based upon current funding information, remaining Consent Decree obligations are currently projected to cost approximately $927 million (2019 Dollars). Obviously, the City will be unable to raise another $1 billion above the original $349 million Consent Decree estimate.

The City currently has only approximately $158 million in loan funds available to spend on future water and wastewater capital improvements and Consent Decree compliance. With significantly higher total program cost forecast, the City's approved rate increases through 2022 are no longer sufficient to fully fund all Consent Decree obligations. Given this financial reality, the City must focus its available funds toward (1) maintaining a reliable wastewater utility, (2) addressing projects with a specific focus on mitigating pipe failures and current bypass operations, and (3) minimizing SSOs.

Upcoming Consent Decree obligations for Phase 3 sewer remediation construction projects, Phase 4 and 5 sewer remediation design and construction, and additional capacity remedial measures cannot all be completed without additional rate increases beyond the City's current approved rate increases scheduled through 2022. Preliminary financial planning indicates that additional rate increases totaling 155 percent beyond what was previously implemented, would be necessary to cover the total cost of remaining Consent Decree obligations within the current 12-year schedule. These rates are not feasible (even without factoring in COVID-19 impacts). The City's inability to fund its remaining Consent Decree obligations forced the City to reach out to USDOJ, EPA and LDEQ to discuss the need for a Consent Decree Modifications during the reporting period.

2.4 Regulatory Coordination

2.4.1 Force Majeure / Status of Phase 2 Remediation Measures

On September 9, 2019, Timothy W. Hardy with Breazeale, Sachse & Wilson, L.L.P, on behalf of the City of Shreveport, issued a formal claim of Force Majeure to Trial Attorney Ms. Elizabeth Kroop (USDOJ, Environmental Enforcement Section, Environment and Natural Resources Division) due to extremely high and unusually heavy rainfall events. The request included a formal extension of Phase 2 construction projects to be extended until December 31, 2019. The City has not received a response to this request.

2.4.2 September 2019 EPA Coordination Meeting

The City, along with Burns & McDonnell and Burk-Kleinpeter, met with EPA Region 6 officials in their office at 1201 Elm Street in Dallas, Texas on September 24, 2019. The meeting included general discussions about construction progress and completion of Phases 1 and 2 sewer rehabilitation, a delayed bidding schedule and extended construction duration for Phase 3 Remediation Measures Plan (RMP) improvements and general discussions around the Phase 4 RMP development. The City mentioned the potential need for a Consent Decree modification based on current available funding and that a formal request for a meeting with EPA and USDOJ to discuss further would be submitted once an updated financial capability assessment, underway at the time, was completed.

2.4.3 Request for Meeting with EPA

On February 18, 2020, Paul Calamita with AquaLaw acting on behalf of the City, informed Ms. Kroop with the USDOJ that AquaLaw has been retained as the City's outside counsel to support Consent Decree related matters moving forward. Mr. Calamita requested the opportunity for the City to meet with EPA to propose necessary changes to the Consent Decree. On February 22, 2020, Ms. Kropp (USDOJ) responded to the City's meeting request with a series of six (6) questions to be answered prior to coordinating the requested meeting. On May 4, 2020, Paul Calamita (AquaLaw), submitted the City's response to the six (6) questions asked by Ms. Kroop (USDOJ). The City's response included additional supplemental information consisting of a Consent Decree Compliance Summary and an updated Financial Capability Assessment (FCA). Major findings from the updated FCA demonstrated the City's Consent Decree capital plan, coupled with other wastewater utility infrastructure asset renewal capital projects, creates an excessively high burden on the City's utility customers. The FCA was completed without any consideration of COVID-19 pandemic impacts which are substantial, particularly with the closure of casinos and the related economic impacts that followed.

2.4.4 General Force Majeure Notification Due to COVID-19 Pandemic

On March 25, 2020, Mr. Patrick Furlong, City Engineer for the City of Shreveport, issued a general assertion of Force Majeure pursuant to Section X (Force Majeure) of the Consent Decree informing Ms. Kroop (USDOJ) the possibility of being delayed or prevented in complying with ongoing requirements of the Consent Decree due to impacts from COVID-19. On April 30, 2020, Ms. Kroop with the USDOJ responded to Mr. Furlong's General Force Majeure Notification due to COVID-19 acknowledging receipt by DOJ, EPA and LDEQ. Ms. Kroop provided a copy of the temporary policy "COVID-19 Implications for EPA's Enforcement and Compliance Assistance Program" that addressed EPA enforcement of environmental legal obligations. Ms. Kroop provided additional guidance related to Section X, Paragraph 77 of the Consent Decree regarding providing specific information on delays when information becomes available.

2.5 Sanitary Sewer Assessment (SSA)

The City is required to complete Sanitary Sewer Assessments per Consent Decree Part VI. Compliance Requirements, Paragraph A (SSAs) and Paragraph B (SSA Reports).

2.5.1 Sanitary Sewer Assessment (SSA) Overview

During Year 6, the Phase 4 SSA Report was issued to EPA on January 10, 2020.

2.5.2 Phase 4 SSA

The City's Phase 4 SSA Report has been posted to the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. The Phase 4 SSA Report summarizes the field investigation techniques used to illustrate compliance with Consent Decree Part VI (Compliance Requirements) paragraphs, 21, 22, 23, 24 and 25. A summary of the completed field investigations completed include:

- Of the City's total 3,413 manholes, the City completed inspection on 3,304 manholes. Manhole inspections were completed at 2,550 manholes using 3D inspections and at 754 using pole camera inspections. A total of 109 manholes were not inspected due to special conditions (i.e. – Surcharge, unable to open, abandoned manholes, etc.).

- Smoke Testing was completed along 3,965 sewer segments (1,068,215 lineal feet) of the total 4,072 sewer segments (1,068,215 lineal feet) within the Phase-4 SSA Area.

- The City attempted to perform CCTV inspections along all gravity sewers, exceeding the Consent Decree requirement of 30 percent of the total sewers, including 100 percent of all sewers 15-inches in diameter and greater, as defined in Consent Decree Part VI (Compliance Requirements) paragraph 22. CCTV was completed for 3,936 sewer segments (1,029,982 lineal feet) of the total 4,072 sewer segments (1,068,215 lineal feet) within the Phase-4 SSA Area.

- Lift Station Condition Assessments, Critical Response Times and Emergency Response Plans were completed at each of the fifty-seven (57) lift stations within the SSA Phase 4 Area.

- Forcemain Condition Assessments were completed by using a Spring 2012 rainfall event. Wastewater velocities in the forcemains were calculated using data from this event which was approximately a 1-year storm. Calculated velocities were compared against a

minimum of 2 feet per second (fps) and a maximum of 10 fps. Each of the forcemains associated with the lift stations were evaluated using this approach.

- Additional ancillary investigations, including 36 dye tests to evaluate possible private source cross-connections and 34 dye tests on public gravity sewers to evaluate potential cross-connections between storm and sanitary sewer systems were completed.

The Phase-4 SSA Report documents and summarizes the major field investigation findings including defects associated with each gravity sewer, manhole, lift station and forcemain evaluations throughout the Stoner, North Pierre Bayou, Bickham Bayou, Country Club and LSU subbasins. The complete report is available for viewing on the PDR.

2.5.3 Phase 5 SSA

The Phase 5 SSA includes sewer system investigations in the Princess Park, Texas Pierre, Boggy Bayou, Agurs, Highland, Springfield, Gilmer Bayou, Shorewood, Flournoy Bayou, Page Bayou, Cross Bayou, Lower Cross Lake, and Lakeview subbasins. Field activities for SSA Phase 5 continued through the reporting period. In March 2020, the City was compelled to suspend the remaining field investigations due to lack of funding for all of the Phase-5 projects. The remaining work to complete the Phase 5 SSA investigations is valued at approximately $11 million (2019 dollars). An overview of the completed field investigations through the reporting period is summarized as follows:

- A total of 1,850 manhole inspections were completed of the total 3,863 manholes, representing approximately 48 percent of the Phase-5 area through the Year 6 reporting period. During the reporting period 1,181 manholes were inspected - 866 using 3D inspections and 315 using Pole camera inspections.

- Smoke Testing was completed along 489,526 lineal feet of the total 1,259,303 lineal feet representing approximately 39 percent of the Phase 5 SSA Area. Table 2-1 below provides a further breakdown of the smoke testing completed by sewer pipe diameter during the reporting period.

Table 2-1: Phase 5 Area SSA Smoke Testing Summary Through Year 6

Diameter (inches)	Length (feet)
6	1,160
8	344,237
10	69,107
12	56,739
15	5,894
18	2,947
21	4,104
24	1,123
27	1,638
30	2,480
36	97
Total	**489,526**

- The City attempted to perform CCTV sewer inspections of all gravity sewers. During the reporting period a total of 430,046 lineal feet of gravity sewers were inspected. CCTV was completed for 670,404 lineal feet (53%) of the total 1,259,303 through Year 6 of the Program. Table 2-2 below provides a breakdown of gravity sewer cleaning and CCTV completed by sewer pipe diameter through the reporting period.

Table 2-2: Phase 5 Area SSA Gravity Sewer Main Cleaning & CCTV through Year 6

Diameter (inches)	Length (feet)
6	1,243
8	491,183
10	84,524
12	69,372
15	8,674
18	3,237
21	5,119
24	1,123
27	1,638
30	2,480
36	597
42	708
48	506
Total	**670,404**

- Additional field investigations including six (6) dye tests were completed to determine possible private source cross connections. Based on these investigations, a total of two (2) downspouts and one (1) area drain were confirmed as connected to the sanitary sewer. Property owners were issued Notice of Violation letters in March 2020. To date, one (1) drain has been removed, one (1) is being reviewed by the City's legal department because the property owner has requested an exemption, and one (1) letter was returned as not deliverable - the City is attempting redelivery/resolution.

2.6 Remediation Measures Plans (RMP)

The City is required to complete Sewer System Remediation Measure Plans per Consent Decree Section VI. Compliance Requirements, Part C, Paragraphs 30-34.

2.6.1 Remediation Measure Plan (RMP) Submittals

The City issued the Phase 4 RMP to the EPA and LDEQ on March 12, 2020 and the Plan has been posted to the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. At the close of the Year 6 reporting period, EPA has not acknowledged receipt and/or approval of the Phase 4 RMP

2.6.2 Remediation Measure Plan (RMP) Status Updates

2.6.2.1 Phase 1 RMP

There are 30 projects within SSA Phase 1. All Phase 1 projects reached Functional Completion by October 31, 2018. All Phase 1 projects are anticipated to reach Final Completion by October 1, 2020. Functional Completion is achieved when a project is completed to the point that the infrastructure improvement will function as intended. For these RMP projects, functional completion is achieved when sewer flows through the new or rehabilitated infrastructure. Following achievement of Functional Completion, site restoration, punch list items, and close-out paperwork is usually all that remains to be completed. Final Completion is achieved when all surface restoration and project closeout requirements are completed. Table 2-3 below provides a summary of the project status of each of the Phase 1 RMP Projects.

During Consent Decree Year 6, the City advanced a total of six (6) projects to final completion. The one (1) remaining project "175.177.178.179 – Jewella & Greenwood" is planned for final completion by October 1, 2020.

Table 2-3: SSA Phase 1 – RMP Project Summary

Project Name	Functional Completion	Final Completion*
101.125.147.124 – Dowdell & Fairfield	8/3/2017	11/28/2017
102 – Wyngate & W 84th	9/2/2017	11/15/2017
103 – Garden Valley Unit 2	N/A	8/11/2017
104.119.142 – Union & Wallace	4/19/2017	12/20/2017
105.108 – Cedar Grove Trunk Main	N/A	9/28/2017
106.107.114 – Hollywood Ditch / W 70th	2/28/2018	9/20/2018
106.109.110.103 – W Canal & Valleyview Trunk	11/27/2017	2/23/2018
111 – Garden Valley	10/6/2017	5/15/2018
112 – Karen & Dollarway	N/A	7/7/2017
113.129.130.152.153.154 & 109.110.135 & 132 Sunset Acres & Cargill (Hickory Ridge LS)	3/27/2018	5/4/2018
114 – Joe Louis & Evers	8/10/2017	3/2/2018
115.120.127.128.151 – Wyngate & Wallace	9/1/2017	6/22/2018
116.117.118.139 – Hollywood & Kennedy	10/11/2017	12/22/2017
121.122.123.143.144.145.146 Linwood & Fairfield	4/7/2018	11/30/2018
126.148.149.150.166.167.168 Linwood & Line	1/12/2018	4/17/2019
131 – Standard Oil	N/A	12/1/2016 **
133 – Monkhouse & Interstate	N/A	11/7/2016 **
134 – Greenwood & Junior Place	N/A	12/1/2016 **
136.137.157 – Hollywood & Singletary	9/29/2017	5/7/2018
138.140.156.169 – Henry & Kennedy	10/31/2018	10/29/2019
158.159.160.170 – Jewella & Clarke	1/23/2018	7/16/2018
161.171.175.176.178.180.141 Hearne & Hollywood Trunkmain	2/19/2018	5/11/2018
162.163.164.165.172.173.174 – Mansfield Rd & Corbitt	1/5/2018	11/14/2018
175.177.178.179 – Jewella & Greenwood	12/30/2017	10/1/2020 *(Planned)*
201 CIPPL Package 1	12/8/2017	9/20/2019
202 CIPPL Package 2	4/11/2018	7/24/2019
203 CIPPL Package 3	12/7/2017	1/24/2020

Project Name	Functional Completion	Final Completion*
204 CIPPL Package 4	4/11/2018	11/10/2019
STO-03 – Meadow Parkway Lift Station Rehab	N/A	10/6/2017
STO-04 – Cedar Grove & Slack Lift Station Rehab	N/A	10/18/2017

*Some entries are marked "Not Applicable (N/A)". This is because the City and/or previous Program Manager did not recognize Functional Completion as a contract milestone until after some of the Phase 1 projects had been completed.

** A Final Completion letter was not issued by City. Indicates the date of the Partial Completion letter that is filed at the Courthouse.

Phase 1 Post-rehabilitation flow monitoring was completed between February 18 to April 30, 2018 and February 1 to April 12, 2019 after Functional Completion of the majority of Phase 1 projects. The City's hydraulic model was updated using this post-construction flow data. The model results indicate that the Phase 1 sewer remediation measures completed did not achieve the targeted infiltration/inflow (I/I) goals established in the Phase 1 Remediation Measures Plan. The model predicts that sanitary sewer overflows will continue to occur at a 2-year level of service.

From the new PMT's review of post-construction I/I reduction analysis, it became apparent that the City's current hydraulic model is not reasonably correlated to collected flow data. The City and PMT are presently evaluating the uncertainty at several locations within the model in the Phase 1 Area. For instance, there are some locations where the hydraulic model predicts overflows to occur, but no SSOs have been reported or observed in the last three (3) years at these locations. As a result of these uncertainties, the City is planning to collect additional flow monitoring data in select drainage basins throughout the collection system from November 2020 through February 2021 for use in recalibration and verification of the existing model.

The original total cost of the 80 collection system improvement projects identified in the Phase 1 RMP was estimated at approximately $131,427,000 (2016 Dollars). During design, these projects were consolidated into 30 bid packages for construction. Following the completion of all Phase 1 RMP projects, the actual costs spent on construction of the Phase 1 RMP projects was approximately $190,270,000. This is a 45% increase in the estimated costs of the Phase 1 RMP projects.

2.6.3 Phase 2 RMP

A total of 17 construction projects were developed based on the Phase 2 RMP. All but one (1) has achieved functional completion and six (6) have achieved final completions, More specifically, through Consent Decree Year 6 (May 12, 2020), a total of 14 projects have reached functional completion and six (6) projects have reached final completion. During Consent Decree Year 6, the City advanced 12 projects to Functional Completion and six (6) projects to Final Completion. Two (2) additional projects achieved functional completion in June 2020, after the end of Consent Decree Year 6 but prior to the due date of this report. Table 2-4 below provides a summary of the project status of each of the Phase 2 RMP Projects.

Table 2-4: SSA Phase 2 – RMP Project Summary

No.	Project Name	Actual Dates		Projected Dates	
		Functional Completion	Final Completion	Functional Completion	Final Completion
2-SH1	South Highlands East Rehab	--	--	9/1/2020	11/27/2020
2-SH2	South Highlands West CIPP	12/31/2019	--	--	10/27/2020
2-SH3	South Highlands Sewer Replacement	11/27/2019	--	--	9/25/2020
2-SH4	Mansfield & Claiborne Area Replacement	6/4/2019	7/31/2019	--	--
2-QR1	North Querbes CIPP	12/31/2019	--	--	10/27/2020
2-QR2	South Querbes CIPP	6/3/2020	--	--	12/28/2020
2-QR3	North Querbes Sewer Replacement	11/27/2019	--	--	9/25/2020
2-QR4	South Querbes Sewer Replacement	6/1/2020	--	--	12/28/2020
2-QB1	N Queensboro CIPP	12/15/2019	--	--	10/12/2020
2-QB2	S Queensboro Rehab	11/27/2019	--	--	9/25/2020
2-QB3	Choctaw Bayou & Queensboro Sewer Replacement	4/12/2019	1/24/2020	--	--
2-NH1	North Highlands Interceptor	3/19/2019	10/30/2019	--	--
2-NH2	N Highlands, Choctaw & Queensboro CIPP	12/30/2019	--	--	10/27/2020

No.	Project Name	Actual Dates		Projected Dates	
		Functional Completion	Final Completion	Functional Completion	Final Completion
2-NH3	North Highlands Sewer Replacement	Functional Completion Certificate Not Issued by CDM	10/30/2019	--	--
2-LS1	Lift Stations / Force Main Condition	4/30/2019	2/4/2020	--	--
2-WS1	Westside CIPP	11/27/2019	--	--	9/25/2020
2-WS3	Westside Sewer Replacement	4/3/2019	8/19/2019	--	--

As shown above, all Phase 2 projects are projected to be Functionally Complete by September 1, 2020 and to reach Final Completion by January 1, 2021.

Phase 2 RMP projects included approximately 645,000 lineal feet of Cured-in-Place Pipe (CIPP) lining and 131,000 lineal feet of sewer replacement. Each of the Phase 2 projects in the Capacity RMP were included in the Phase two (2) construction packages which included the upsizing of approximately 40,000 lineal feet of gravity sewers. Collectively, these improvements account for approximately 72 percent of the wastewater collection, retention, and transmission system (WCTS) in Phase 2 sub-basins.

Post-Construction flow monitoring of the Phase 2 area is planned for Fall 2020 through Spring 2021. Following the acquisition of the post-construction flow monitoring data, and update of the City's hydraulic model, the inflow and infiltration reduction goals will be evaluated to determine if the goals set forth within the Phase 2 RMP have been achieved. The level of service being provided in the Phase 2 area will also be reviewed.

The total cost of the 29 Phase 2 RMP collection system improvement projects was estimated at approximately $199,337,000 (2017 dollars). During design, these 29 projects were compiled and a collection of 17 bid packages for construction were created. Following the completion of all Phase 2 RMP projects, the actual costs spent on construction of the Phase 2 RMP projects is projected to be approximately $114,395,205.

2.6.4 Phase 3 RMP

A total of 14 projects were developed based on the Phase 3 RMP. Each of these projects have advanced through engineering design during the reporting period. One (1) project, "3-115 Wallace Interceptor Improvement" began construction and achieved functional completion on January 31, 2020. Bid solicitation and construction of all remaining Phase 3 projects have been placed on hold due to the City's limited financial resources and inability to fully fund all Phase 3 without additional rate increases. Table 2-5 provides a summary of the proposed improvements currently included within each of the current Phase-3 construction packages.

Table 2-5: SSA Phase 3 – RMP Project Summary

No.	Project Name	Design Status	Construction Status	Project Description
3-113	Wallace Interceptor	100%	Not Started	Sewer rehabilitation of 20,000 LF of 54-inch CIPP and replace 28 48-inch manholes.
3-115	Wallace Interceptor Sewer Rehab - 1	100%	Complete	Sewer rehabilitation of 6,000 LF of 42-inch to 54-inch CIPP and replace 20 manholes.
3-116	Southern Hills Interceptor (Segment-B)	90%	Not Started	Sewer replacement of 5,000 LF of gravity sewer main and install new manholes.
3-117	Southern Hills Interceptor Phase (Segment – A)	90%	Not Started	Sewer replacement of 6,300 LF of gravity sewer main and install new manholes.
3-LS1	Lift Station Condition Improvements	100%	Not Started	Improve or rehab 7 lift stations and 3 force mains. The stations are: • Cedar Creek • Dixie Garden • Elgin • Knight St • Mackey Lane • Shreve Island
3-NE1	Northeast Sewer Replacement	100%	Not Started	Sewer replacement of 15,000 LF of 4-inch to 36-inch gravity sewer main and install 380 manholes.
3-103, 104 3-NER1	Northeast Sewer Rehab 1	100%	Not Started	Sewer rehabilitation of 67,000 LF of 6-inch to 12-inch CIPP, replace 64 48-inch manholes.

No.	Project Name	Design Status	Construction Status	Project Description
3-105, 107 3-NER2	Northeast Sewer Rehab 2	100%	Not Started	Sewer rehabilitation of 72,000 LF of 6-inch to 15-inch CIPP and replace 155 48-inch manholes.
3-101, 102 3-NER3	Northeast Sewer Rehab 3	100%	Not Started	Sewer rehabilitation of 77,000 LF of 6-inch to 12-inch CIPP as well as replace 27 manholes.
3-106, 112, 113, 114 3-NS1	Pierremont Rd & Boggy Bayou Areas-Rehab	100%	Not Started	Sewer rehabilitation of 50,000 LF of 6-inch to 18-inch CIPP and replace 61 manholes.
3-110, 111 3-SW1	Southern Hills Sewer Rehab	100%	Not Started	Sewer rehabilitation of 120,000 LF of 6-inch to 10-inch CIPP and replace 47 manholes.
3-108, 109, 112 3-SW2	South West Sewer Replacement #2	100%	Not Started	Sewer replacement of 20,000 LF of 8-inch to 24-inch of gravity sewer main as well as 151 replacement manholes.
3-110, 111, 113, 114 3-SW3	South West Sewer Replacement #3	100%	Not Started	Sewer replacement of 13,000 LF of 8-inch to 42-inch of gravity sewer main as well as 101 replacement manholes.
3-108, 109, 112 3-SW4	South West Rehab #4	100%	Not Started	Sewer replacement of 100,000 LF of 8-inch to 15-inch of CIPP as well as 37 replacement manholes.

The total cost of the 17 Phase 3 RMP collection system improvement projects was estimated at approximately $167,890,000 considering bid dates in 2018 and 2019 and $1,992,000 for Lift Station improvements considering a bid date in 2019. Following the detailed design of the 14 Phase 3 RMP projects and considering contingency based on lessons learned during Phase 1 and Phase 2 construction, the current Opinion of Probable Construction costs (OPCC) is estimated at approximately $170,000,000. Due to the City's inability to fund all Phase 3 projects and of the City's desire to update the hydraulic model to better reflect flow monitoring data, no additional projects (with the exception of the 3-113 Wallace Interceptor rehabilitation project), were authorized to proceed into construction. The City expects partial revisions to the scope of these construction packages following the update to the hydraulic model and Capacity Assessment Report.

2.6.5 Phase 4 RMP

The City issued the Phase 4 RMP to the EPA and LDEQ on March 12, 2020 and has posted the document to the Public Document Repository (PDR) as required in Consent Decree Part V, Paragraph 9.

The Phase 4 RMP summarized the remedial measures required based on the findings presented within the Phase 4 SSA Report. The estimated total cost of the 14 Phase 4 RMP collection system improvements was approximately $93,500,000 and the estimated value of the 33 lift station improvement projects was approximately $9,440,000 considering bid dates in 2021. Design of Phase 4 remediation measures has not yet begun due to the City's inability to fund design and construction of Phase 4 improvements coupled with the City's need to update the hydraulic model to align with collected flow monitoring data more closely. As a result of these uncertainties, the Phase 4 RMP does not include a schedule for detailed design and construction activities. The schedule for detailed design and construction activities will be developed following the updating of the hydraulic model and the Capacity Assessment Report. The Phase 4 RMP may need to be re-issued following updates to the hydraulic model.

2.6.6 Phase 5 RMP

Preparation of the Phase 5 RMP will be delayed due to suspension of the Phase 5 SSA activities. SSA activities for Phase 5 are approximately 50 percent complete. Remaining Phase 5 SSA work, estimated to cost approximately $11 million (2019 Dollars), was suspended by the City in March 2020 due to inadequate funding for implementation of all Phase 5 projects.

2.6.7 Critical Infrastructure Priority Projects

The City selected 19 projects in Consent Decree Year 6 as Critical Infrastructure Priority Projects that are necessary to maintaining reliable water and wastewater utility services. utilizing available funding. The 19 projects were selected from a non-prioritized list of approximately 240 projects. The selected projects in Table 2-6 below illustrate the capital project type, project status, estimated project costs and a brief description of the proposed improvements.

Table 2-6: 2020 Critical Infrastructure Projects

Count	Capital Project Type	Project	Project Description	Current Status	Estimated Total Project Costs (2020 Dollars)
1	Wastewater	CWP-01 MSA 3 STO 2 Wallace Interceptor at Boggy Bayou (Wastewater)	This project involves the demolition/abandonment of approximately 1350 LF of 54" Sanitary Sewer Pipe to be replaced on an independent alignment with approximately 1,100 LF of 54" Gravity Sanitary Sewer. Construction includes the installation of 4 new sanitary sewer manholes and one rehabilitated manhole.	Detailed Design	$2,954,000
2	Wastewater	CWP-02 North Pierre Lift Station Roof Repair	Remove and replace existing roof and ceiling. Installing new lighting on the inside of the lift station as well.	Construction	$84,000
3	Wastewater	CWP-03 Stoner Emergency Repair	Emergency repair of existing 48" sanitary sewer main collapsed at influent line to the Stoner Lift Station.	Construction	$1,096,000
4	Water	CWP-04 Amis Ozone Improvements	Modifications to the three existing treatment plants and processes. Work will include Modifications to Ozone Equipment, Filter Equipment and Chemical Feed Systems along with Installation of High Service Pumps and CO2 System.	Detailed Design	$40,300,000
5	Wastewater	CWP-05 North Regional WWTP Levee Repair No. 2	Repair of approximately 2400 SF of levee side slope erosion that occurred because of a waterline penetration through the levee.	Preliminary Design	$173,000
6	Wastewater	CWP-06 Southern Trace Lift Station improvements	Remove and replacement of existing suction piping and bracing as well as the coating of the existing wet well. Constructing new redundant piping connection and replacing the existing gate valve.	Bid & Award	$169,000
7	Wastewater	CWP-07 North Regional WWTP Levee Repair No. 1	Repair of approximately 15,000 SF of levee side slope that occurred because of a waterline leak under the footprint of the levee. Project includes some drainage ditch regrading and pavement repair.	Bid & Award	$216,000
8	Wastewater	CWP-08 City Wide Point Repair	On Demand construction contract for repairing sanitary sewer gravity mains and force mains.	Preliminary Design	$15,000,000
9	Wastewater	CWP-09 Lucas & North Regional UV Design Project	Replacement of existing failing UV disinfection equipment at both the Lucas and North Regional WWTPs. Predesign Report to identify alternatives for UV equipment.	Scoping	$6,850,000

Count	Capital Project Type	Project	Project Description	Current Status	Estimated Total Project Costs (2020 Dollars)
10	Wastewater	CWP-10 Public Landing Lift Station Improvements	Removal of existing Dry Well Can and rehabilitation of existing wet well and replacement of both pumps. Also remove and replace concrete surrounding station and installing fencing around the outside.	Bid & Award	$640,000
11	Wastewater	CWP-11 Stratmore Lift Station Improvements	This project involves the replacement/relocation of an existing failed lift station along with the associated piping.	Preliminary Design	$643,000
12	Wastewater	CWP-14 Lift Station Rehabilitation	Rehabilitate lift stations that are on bypass or in danger of going on bypass. The lift stations in this project include: • Agurs • Cherokee • Forbing Glen • Glen Ave • Kennie Rd • Lakeside Boat • Land O' Trees • Long Timbers • Maywood • Pinecrest • Spring Lake • Woolworth	Scoping	$13,000,000
13	Wastewater	CWP-14 Sludge Farm Improvements	This project involves the installation of an additional 800,000 gallon sludge tank along with the associated piping and facility improvements. Project includes the rehabilitation of the existing sludge tank.	Preliminary Design	$3,703,000
14	Wastewater	CWP-15 Golf Links Improvements	Removal and replacement of existing sanitary sewer main with service reconnections.	Construction	$312,000

Count	Capital Project Type	Project	Project Description	Current Status	Estimated Total Project Costs (2020 Dollars)
15	Wastewater	CWP-16 719 Edwards Sewer improvements	Existing 6" and 10" gravity sewer mains have numerous defects and there is a suspected SSO in the alley between Edwards and Milam downtown. Design being developed for open cut sewer replacement.	Scoping	$650,000
16	Wastewater	CWP-17 Exposed Sewer Mains in Bayou Pierre	Existing 20" and 24" crossing of Bayou Pierre is exposed due to erosion of existing concrete encasement that is built within the flowline of concrete ditch. Survey and predesign study to determine proper method to remove conflict in grades between sewer mains and ditch flowlines.	Conceptual Design	$650,000
17	Water	CWP-35 McNeil Slope Stability Predesign Study	Existing slopes along 12 Mile Bayou failing due to installation of Museum observation deck. Predesign Study to develop alternatives for stabilizing banks along Museum and City clear well.	Scoping	$650,000
18	Wastewater	CWP-36 City Wide Inflow Preventors	City wide installation of manhole stainless steel inflow preventors in recurring SSO locations and areas where excessive I/I is occurring.	Basis of Design	$720,000
19	Wastewater	CWP-37 Caddo Bossier Port Sewer Point Repair and small pump package station	Gravity sewer main has failed and caused a sinkhole under existing Caddo Bossier Fuel Facility. Corrective action plan being discussed between Port and City.	Conceptual Design	$78,000

2.7 Hydraulic Model

During Consent Decree Year 6, the new Program Management Team reviewed the Phase 1 SSA Cedar Grove post-construction hydraulic model and monitoring data to review the current hydraulics of the Cedar Grove WCTS and to evaluate the impacts of completed improvement projects. During this review, it became apparent that the City's hydraulic model is not sufficiently correlated to actual flow data for use as a design tool – particularly considering the related tens/hundreds of millions of dollars in public infrastructure investments being driven by the model results. As a result, the City is undergoing a full review of the existing hydraulic model and additional flow monitoring to establish a recalibrated baseline model for use in evaluation and design of future projects.

In January 2020, The City directed an update to the hydraulic model to better reflect current WCTS conditions. The hydraulic model is being expanded to include:

- an extension of the modeled WCTS to include the majority of 10-inch gravity sewers,
- an extension of the modeled WCTS to connect to include additional historical SSO locations,
- an extension of the modeled WCTS lift stations to include those that have upstream SSO locations,
- incorporation of additional flow monitoring data to supplement the current model calibration and verification.

Additional flow monitoring will be performed between Fall of 2020 and Spring of 2021. This flow monitoring data will be used to refine the model calibration and verification based on current WCTS conditions. If drought-type conditions occur prior to and/or during the planned flow monitoring period, abnormal wet weather flows and antecedent conditions could necessitate the City to perform additional flow monitoring to recalibrate the existing hydraulic model. The revised hydraulic model is expected to be completed by October 2021.

Following the completion of the hydraulic model calibration and verification update, the Capacity Assessment, Capacity Assessment Remediation Measures Plan and the Phase 3 and 4 RMP Projects will be reevaluated. It is expected that some, if not all, of these reports will require revision followed by re-issuance of the revised reports to EPA and LDEQ.

2.8 Construction Specifications

The City of Shreveport, Louisiana Standard Specifications for Infrastructure Improvements 2015 Edition and Standard City Details relating to sanitary sewer construction and rehabilitation were reviewed and updated with more than 450 modifications to provide additional clarity and consistency throughout the documents with the intent of improving the overall ability of the City and PMT to execute projects and reduce conflicts during design and construction.

The 2020 Edition of the Standard Specifications for Infrastructure Improvements and 2020 Detail Standard Plans were developed in conjunction with City Engineering staff to improve the technical development of design and construction standards. A review of design special provisions, past design updates and technical improvements in construction methods were incorporated into the 2020 edition revisions. Both design documents were reviewed in accordance with industry standards for addressing minimum requirements per the Louisiana Department of Health and Hospitals latest Public Health Sanitary Code requirements. The Louisiana Department of Transportation Standard Specifications were also researched and utilized for minimum standards for permitting within Louisiana State right-of-ways. These revisions will be used for future Water and Sewer Improvement projects executed by the City.

The 2015 version of the Water and Wastewater Construction Specifications were previously issued as Appendix E in the Capacity, Management, Operations and Maintenance (CMOM) Plan. The current 2020 version of the Standard Specifications and 2020 Detail Standard Plans are located on the City's Engineering Division website at https://www.shreveportla.gov/251/Engineering-Services.

2.9 Citizen Engagement & Constituent Issue Management

The City's new Program Management Team put into place a new citizen engagement and constituent issue management system. This system facilitates answering of calls from the general public regarding construction activities, WCTS performance issues, other Consent Decree program related questions. The system was placed into service in August 2019 and continued through the reporting period. Since inception, approximately 650 issues have been reported and resolved.

2.10 Capacity, Management, Operations, and Maintenance [CMOM]

The following information is a general summary of activities conducted during the reporting period to demonstrate compliance with the Capacity, Management, Operation and Maintenance (CMOM)

program. This program aims at improving the ability of the utility to manage its separate sewer system, reduce the occurrence of sewer overflows, and maintain compliance.

2.10.1 Collection System Management

2.10.1.1 Legal Authorities

Legal Authorities are in place to effectively manage and operate the WCTS. These include several that are mandated as part of existing LPDES Permits for the North Regional and Lucas WWTPs and others that enhance the management and source control of Fats, Oils and Grease (FOG). The City's Sewer Use Ordinance (SUO) is embodied within the City's Code of Ordinances (COO), Part II, Chapter 94 Utilities. During the reporting period, no significant changes were made to the SUO. The City's COO included within the CMOM Plan in 2015 is still current. These ordinances generally provide the authority to do the following:

- Charge fees to all users of the sewer system, whether they reside within or outside the City limits
- Provide details for rate structures
- Enter into agreements with communities outside the City limits for wastewater services
- Maintain the approved pretreatment program pursuant to 40 C.F.R Part 403 and NPDES permits
- Define enforcement mechanisms for Pretreatment, FOG and Private I/I Programs
- Define prohibited discharges
- Define Public/Private responsibilities
- Provide guidance for new connections
- Define fees/penalties for failure to abide by the requirements

2.10.1.2 Organizational Structure

The Operation and Maintenance of the WCTS remains organized under the Department of Water and Sewerage. The Department continues to maintain five (5) divisions: Administration, Customer Service, Water Purification, Wastewater and Field Operations. No significant modifications were made to the organizational structure of the Department of Water and Sewerage during the reporting period.

2.10.1.3 Pre-treatment Program

The Pretreatment Program is mandated by USEPA through the City's LPDES permits issued for each wastewater treatment plant effluent discharge through LDEQ. The City operates a Pretreatment program in accordance with the requirements found in the Code of Federal Regulations (CFR) Title 40 Part 403 and the General Pretreatment Regulations from Louisiana Administrative Code (LAC) Title 33IX, Subpart 2, Chapter 61. The City's program was approved by USEPA on January 11, 1985 and incorporated into the City's Code of Ordinances (COO) Chapter 94. The FOG Program is administered by the Environmental Services Division within the Department of Engineering and Environmental Services. The City's Pretreatment program is developed to achieve the following objectives (COO 94-111):

- To prohibit the introduction of pollutants into the POTW that will interfere with the operation of the POTW or contaminate the resulting sludge
- To prohibit the introduction of pollutants into the POTW that will pass through the POTW, inadequately treated, into receiving waters, atmosphere, or otherwise be incompatible with the POTW
- To protect POTW personnel who manage wastewater and all individuals who work or come into contact with biosolid application
- To enable the City to comply with its NPDES and LPDES permit conditions, biosolids use and disposal requirements, and any other federal or state laws to which the POTW is subject
- To improve the opportunity to recycle and reclaim wastewater and biosolids from the system
- To monitor and regulate the generation, transportation, and disposal of industrial and hazardous waste
- To enforce applicable USEPA categorical standards
- To reduce the health and environmental risk of pollution caused by discharges.

The pretreatment program considers four (4) different users: Significant Categorical (CIU), Significant Non-Categorical (SIU), Non-Significant (NIU) or General (GIU). The City previously issued a Master List of Significant Industrial Users (Categorical and Non-Categorial) with the City's CMOM Plan Submittal. An update to the Master List of Industrial users is included as Attachment 1 and is issued as a formal revision.

During the reporting period a total of 40 permits were active under the City's Pretreatment Program. These permits define effluent limits, transferability, penalties, slug discharges, and BMPs. CIUs and SIUs are required to submit reports quarterly, NIU's twice per year, and GIUs annually. Reporting requirements were satisfied for each of the Industrial users during the Year 6 reporting period. A total of 10 Notice of Violations (NOVs) were issued by the City during the reporting period.

2.10.1.4 Fats, Oils, and Grease (FOG) Program

The FOG Program, through training, outreach, inspections, and enforcement encourages non-domestic sources to limit the discharge of fats, oils, and grease (FOG) into the sanitary sewer system. As Part of the overall LPDES-mandated pretreatment requirements, COO Sec. 94-119 limits discharge of FOG components to no more than 100 mg/L. All Food Service Establishments (FSE) must obtain a permit to discharge wastewater into the sanitary system. Complete program details are outlined in the City Policy for Grease Interceptors originally approved by EPA in 1995 and included in the CMOM Plan issued to EPA and LDEQ in 2015. The FOG Program is administered by the Environmental Services Division within the Department of Engineering and Environmental Services.

During the Year 6 reporting period there were a total of 554 permitted FSEs. A total of 570 compliance inspections were completed and resulted in a total of 110 Notice of Violations (NOVs) issued.

A total of 16 FOG Public Education events were hosted during the reporting period. Table 2-7 provides a summary of these activities.

Table 2-7: Year 6 Public Education Events

Date	Location
May 2019	Festival Plaza
July 2019	Wyndham Gardens Hotel – Head Start Fair
July 2019	Cornerstone Apartments
August 2019	Mikado Apartments
August 2019	Villages of Williamsburg
September 2019	Pier Landing
September 2019	Summer Trace Apartments
October 2019	Willis Knighton Pierrmont

Date	Location
October 2019	Willis Knighton Pierrmont
December 2019	Country Club Apartments
December 2019	Jordan Square Senior Apartments
January 2020	The Towers at Cross Lake
February 2020	AM/PM Food Mart
March 2020	Cooper Investment Group
March 2020	Devonshires Apartments

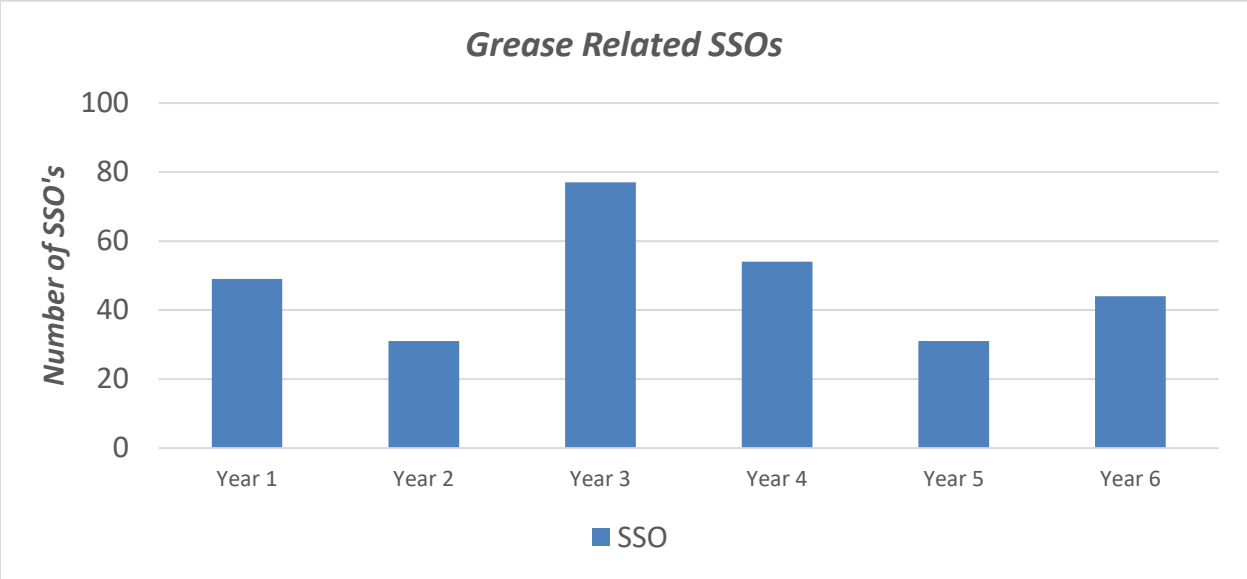
Additional FOG preventative maintenance activities completed by the City during the reporting period include the addition of the BioGon Enzyme and Liberator Block. Table 2-8 below provides a summary of the locations where these additional maintenance activities occurred. It should be noted that these locations are an update to the previously issued FOG Enzyme SOP issued with the CMOM Plan.

Table 2-8: FOG Enzyme Additive Locations

Quarter Section	Manhole number
Y-52	MH14
Y-54	MH33
Z-57	MH7
CC-57	MH7 and MH47
JJ-43	MH18, MH20, MH21, MH23
KK-47	MH09, MH21, MH24, MH25, MH26
V-55	MH08
S-52	MH04

Grease contributed to a total of 44 SSO occurrences during the reporting period. Figure 2-1 below provides a summary by of the grease related SSO occurrences since the beginning of the Consent Decree program. The five-year rolling average for years 1-5 was 48.4 grease related SSOs/year and the updated five-year rolling average for years 2-6 is 47.4 grease related SSOs/year.

Figure 2-1: Grease Related SSOs by Year



2.10.1.5 Private I/I Program

The City has in place a set of seven (7) legal ordinances (COO 94-5,9,11,17,117-118 and 168) that allow the City to enforce the resolution of private lateral defects. During the reporting period there were no modifications, additions, or omissions to these legal ordinances. When a private service lateral issue is identified through field investigations, service request and/or customer complaints, W&S field operations staff are notified, and an investigation is completed. If the crew confirms the presence of a lateral defect that is presenting a threat to public health, the Environmental Services Division is notified, and a 10-Day letter requiring resolution is issued. During the Year 6 reporting period a total of 44 letters were issued to private property owners due to lateral defects that were deemed a threat to public health. These letters resulted in lateral defect resolution including: six (6) private lateral replacements, 11 private lateral repairs, 17 private lateral cleanings and six (6) cleanout cap repairs. At the end of the reporting period, four (4) lateral defects remain unresolved – the City is still seeking resolution on these.

2.10.1.6 Information Management System (IMS)

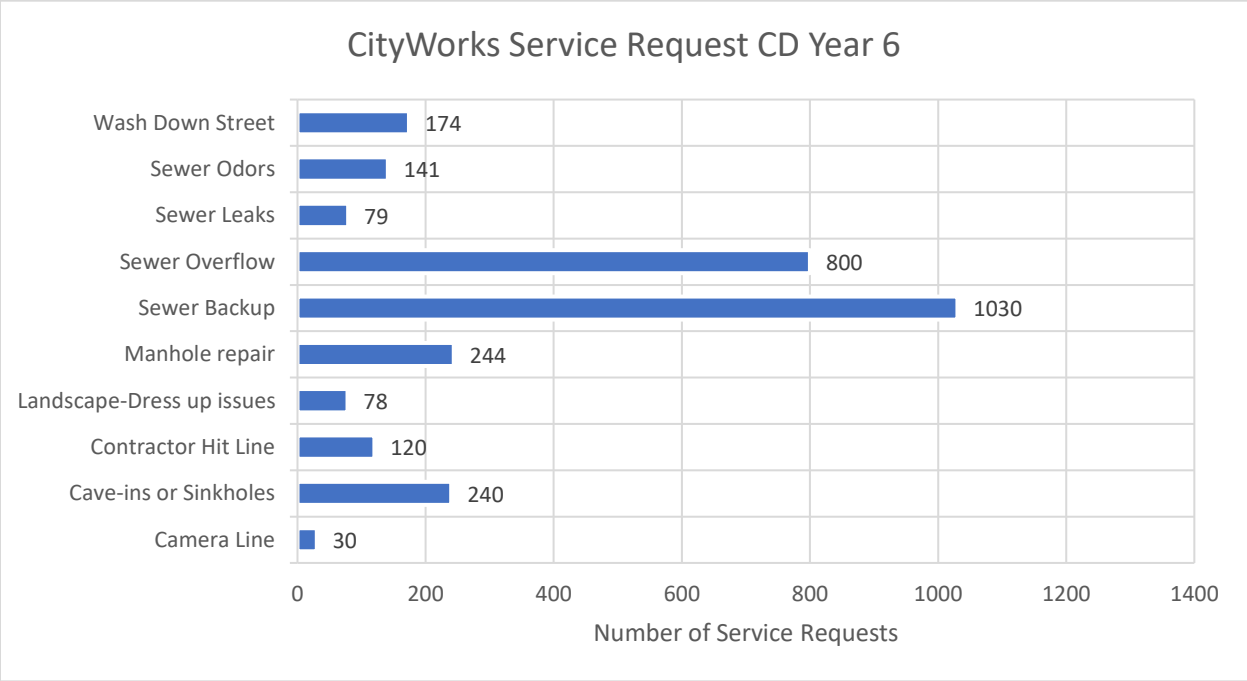
The City maintains several Information Management Systems (IMS) which provide tools for tracking the collection systems' performance, service requests, maintenance work orders and aids in tracking the effectiveness and efficiency of O&M activities. The City continues to enhance its computer-based tools to manage and track collection system data. Standard operating procedures are evaluated to validate accurate documentation of pertinent collection system data and staff members' appropriate use of the IMS tools. Collectively, IMS tools help staff members understand

how the collection system performs by monitoring, analyzing, and measuring their performance. The IMS tools help categorize and prioritize issues throughout the system so that staff members can make decisions regarding the allocation of resources and implement maintenance and rehabilitation activities. The following is a list of relevant systems maintained and used by the City during the Year 6 reporting period:

- GIS – ESRI ArcGIS
    - Data managed by Water & Sewerage and IT Departments
- CityWorks
    - Data Managed by Water & Sewerage Department
- Sanitary Sewer Overflow Database (MS Access)
    - Data Managed by Environmental Services Division
- FOG Compliance Database (MS Access)
    - Data Managed by Environmental Services Division
- Public Outreach Database (MS Access)
    - Data Managed by Environmental Services Division
- SCADA Systems
    - Data Managed by Water & Sewerage Department

CityWorks was implemented during 2016 and continues to serve as the service request and work order tracking system for the Water & Sewerage Department. When questions, complaints and/or concerns are received from within the City or from the public a service request is generated and evaluated within the software. During the Year 6 Reporting period, a total of 2,936 service requests were input, evaluated and responded to within CityWorks. Figure 2-2 summarizes the Service Requests by type during the Year 6 reporting period.

Figure 2-2: Year 6: CityWorks Service Request Summary



2.10.2 Collection System Operations

2.10.2.1 Sanitary Overflow Response Plan (SORP)

The City maintains a Sanitary Sewer Overflow Response Plan (SORP) Standard Operating Procedure (SOP). This SORP SOP was initially presented within the CMOM plan issued to EPA and LDEQ in 2015. No modifications to the SORP SOP occurred during the reporting period. The SORP SOP provides guidance to Water and Sewerage (W&S) staff on how to respond, store the data in an IMS system and document that its properly reported to the appropriate regulatory authorities. The initial SSO System Investigation data is stored within the CityWorks software. W&S staff are responsible for documenting the following:

- Building Back-up
- Backup caused by Public Sewer
- Cause of Backup
- Property Damage
- Action Taken
- Receiving Body of Water
- Gallons Recovered
- Gallons Lost

Following the completion of the SSO Investigation, the Environmental Services Division is notified within 24 hours and presented with the information identified above. The Environmental Services Division maintains a Microsoft Access database and reports to LDEQ monthly for SSO occurrences tributary to the Lucas WWTP and the North Regional WWTP. If lost volume exceeds 10,000 gallons, W&S has a Media Notification procedure that includes a press release notifying

the public of the occurrences. During the reporting period only four (4) SSO's exceeded the volume lost threshold and required Media Notifications.

2.10.2.2 Sanitary Sewer Overflow (SSO): Year 6 Overview

During the Year 6 reporting period a total of 275 SSOs occurred and were reported to LDEQ. Most of these overflows were smaller in volume with a total of 426,818 gallons released during the reporting period. A table providing a list of the Year 6 SSOs is included within Attachment 2. Of the total Year 6 SSOs, 52 or 19 percent were due to excessive wet weather flow with the remaining 223 or 81 percent occurring during dry weather conditions. Table 2-9 below provides a summary of the causes contributing to SSO occurrences during the Year 6 reporting period.

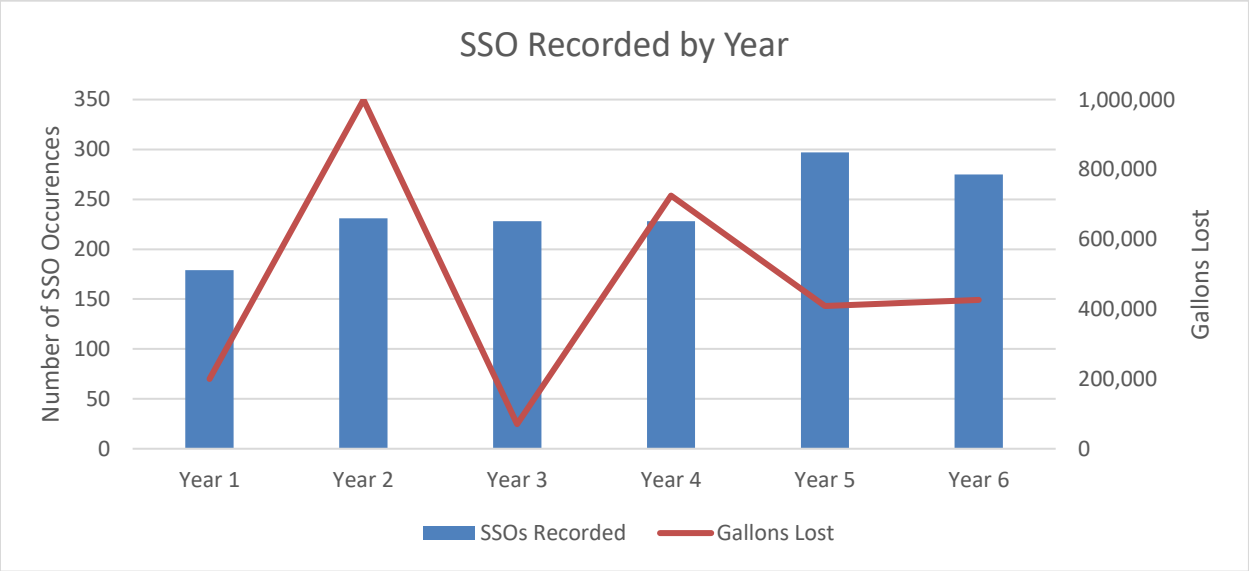
Table 2-9: Year 6 SSO Summary

Wet Weather SSOs	Dry Weather SSOs							
Excessive Flow	**Bypass Pump**	**Collapsed Pipe**	**Force Main/ARV**	**Grease**	**Lift Station**	**Other**	**Roots**	**Solids**
52	12	40	0	44	36	40	5	46

2.10.2.3 Sanitary Sewer Overflow (SSO): 5-Year Trends Analysis

Based on Consent Decree requirements defined in Part VIII. *Reporting Requirements,* paragraph 60 *Annual Report,* trends analysis considering number, volume, duration and cause of Shreveport's SSO must be completed considering a five (5)-year rolling period and updated annually considering the previous 12 month period. Figure 2-3 below illustrates the number of SSOs and Volume lost summarized for each reporting period of the Consent Decree.

Figure 2-3: SSO Recorded vs Gallons of Sewer Lost



The 5-year rolling average for number of SSO occurrences was 233 SSOs/year in Years 1-5. For Years 2-6 the number increased by 8.3 percent to 252 SSOs/year. The 5-year rolling average for volume loss was 481,302 gallons/year in Years1-5 and increased by 9.4 percent to 526,612 gallons/year in Years 2-6.

Dry weather and wet weather SSO occurrences were evaluated as part of the 5-year trends analysis. Table 2-10 below provides a summary of Dry weather versus wet weather SSO occurrences by year and includes 5-year rolling averages.

Table 2-10: 5-Year Trends Analysis: Wet Weather vs. Dry Weather SSO Occurrences

Consent Decree Year	Wet Weather SSO Occurrences	Dry Weather SSO Occurrences	Total Annual SSO Occurrences
Year 1	25	154	179
Year 2	128	103	231
Year 3	10	218	228
Year 4	33	195	228
Year 5	103	194	297
Year 6	52	223	275
Rolling Average: Years 1-5	**59.8**	**172.8**	**232.6**
Rolling Average: Years 2-6	**65.2**	**186.6**	**251.8**

Dry weather SSO occurrences increased from approximately 173 to 187 (8 % increase) and wet weather SSOs increased from approximately 60 to 65 (9% increase) considering the 5-year rolling averages.

SSO occurrences by type were also evaluated as part of the 5-year Trends Analysis. Three (3) SSO categories, which include Force Main/ARV, Grease, and Roots, showed a decline in the number of occurrences considering a five (5)-year trend. The remaining SSO occurrences including bypass pumps, collapsed pipe, excessive flow, lift station, solids and other all showed an increase in occurrence considering the 5-year Trend Analysis. Table 2-11 below provides a summary of each type of SSO occurrence as well as a trends analysis.

Following the completion of sewer cleaning activities with the on-going SSA investigations, the City has continued to struggle with collapsed pipes and sediment washing into the system. This has caused numerous by-pass pumping operations to be put into place to maintain reliable utility service. As a result, during the reporting period the City selected Critical Infrastructure Priority Projects discussed previously, many of which are aimed at eliminating by-pass pumping operations and mitigating pipe collapses. These projects were selected in January 2020. Project activities to facilitate design and construction delivery of these projects are currently underway.

Table 2-11: 5- Year Trends Analysis: SSO occurrences by Type

Consent Decree Year	Bypass Pump	Collapsed Pipe	Excessive Flow	Force Main/ARV	Grease	Lift Station	Other*	Roots	Solids
Year 1	4	18	25	6	49	13	17	19	28
Year 2	2	15	128	7	31	9	8	5	26
Year 3	1	33	10	5	77	15	18	4	65
Year 4	1	49	33	1	54	10	12	8	60
Year 5	3	53	103	1	31	14	12	9	71
Year 6	12	40	52	0	44	36	40	5	46
Rolling Average: Years 1-5	**2.2**	**33.6**	**59.8**	**4.0**	**48.4**	**12.2**	**13.4**	**9.0**	**50**
Rolling Average: Years 2-6	**3.8**	**38**	**65.2**	**2.8**	**47.4**	**16.8**	**18.0**	**6.2**	**53.6**
Difference in 5-Year Rolling Average	**1.6**	**4.4**	**5.4**	**-1.2**	**-1.0**	**4.6**	**4.6**	**-2.8**	**3.6**
Rolling Average (% Increase/Decrease)	**73%**	**13%**	**9%**	**-30%**	**-2%**	**38%**	**34%**	**-31%**	**7%**

* Note : The SSO Occurrence type “Other” includes all other types of SSO occurrences not accounted for in the categories listed. While there are a variety of reasons, these generally include unknown causes of occurrence and/or disconnected sewer services.

2.10.3 Collection System Maintenance

The City's collection system maintenance consists of gravity sewer cleaning, Chemical Root Control (CRC), force main and air release valve inspections, and wastewater treatment plant operation and maintenance.

2.10.3.1 Gravity Sewer Cleaning

The City's Gravity Sewer Preventative Maintenance Program includes routine cleaning and cleaning required per the Consent Decree Sanitary Sewer Assessments (SSA). According to Consent Decree requirements, the City is responsible for cleaning a minimum of 15 percent of the City's WCTS annually and 100 percent of the system no later than 84 months following the Effective Date of the Consent Decree. As part of the SSA investigations, the City has attempted to clean 100% of the pipes, rather than just the sewers with diameters of 15-inches and greater as required as part of the SSA investigations. Table 2-12 provides a summary of the cleaning activities since the Effective Date of the Consent Decree and includes both SSA cleaning and City's maintenance activities.

Table 2-12: Sewer Cleaning Activities

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
SSA Phase 1	885,851					
SSA Phase 2		481,042				
SSA Phase 3		206,434	646,833	14,705		
SSA Phase 4				685,818	360,839	
SSA Phase 5					245,936	430,046
City Maintenance	39,499	298,953	303,714	285,674	319,366	235,237
Total	**925,350**	**986,429**	**950,547**	**986,197**	**926,141**	**665,283**
%	**17.8%**	**19.0%**	**18.3%**	**19.0%**	**17.8%**	**12.8%**

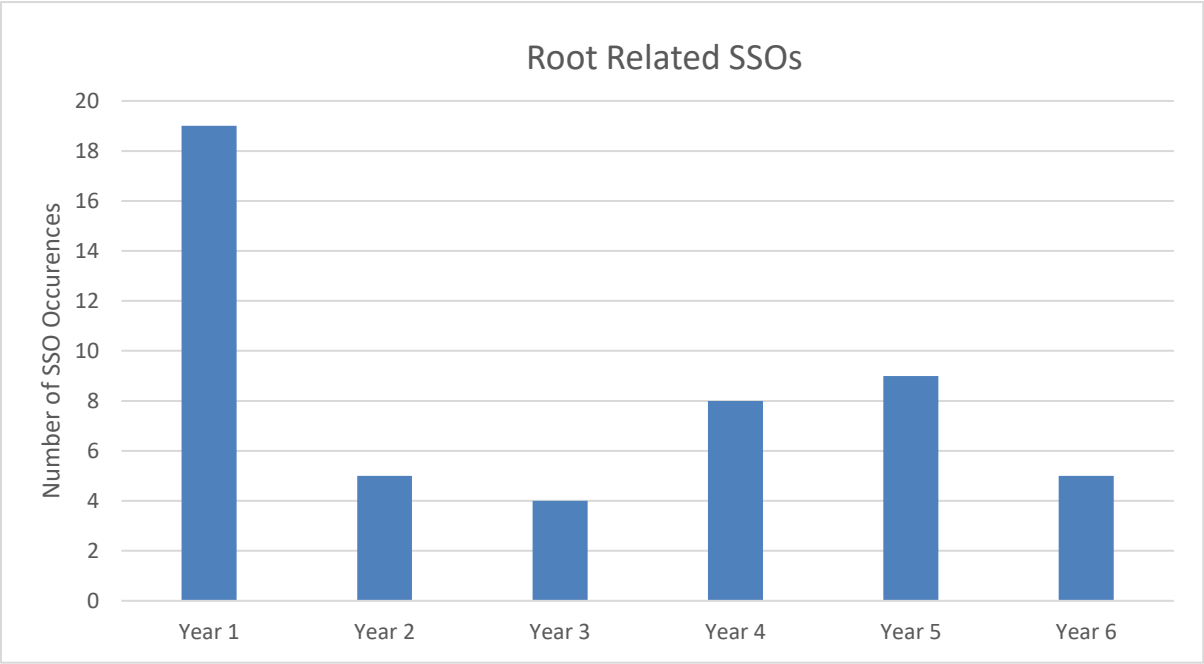
As mentioned previously, approximately 47 percent of the Phase 5 area remains to be cleaned and CCTV inspected. This work was suspended in January 2020 due to the City's lack of funding for Phase 5 projects.

2.10.3.2 Chemical Root Control (CRC) Program

The Consent Decree requires a root control program that included short term mitigation and routine maintenance of root intrusion and rehabilitation of areas in which root intrusion has caused recurring blockages. The City's Chemical Root Control (CRC) program was reinstituted in 2012.

The City continues to perform chemical root control on an annual basis as a preventative maintenance measure to reduce root related SSOs. Chemical treatment is typically applied in the Fall season each year. During the reporting period a total of 445 gravity sewers (143,836 lineal feet) were treated. During the reporting period, a total of five (5) root related SSOs occurred representing less than 2 percent of the total SSOs reported for the period. Figure 2-4 below provides an illustration of root related SSO occurrences during each of the Consent Decree reporting periods.

Figure 2-4: Root Related SSOs by Reporting Period



2.10.3.3 Forcemain / ARV Inspection Program

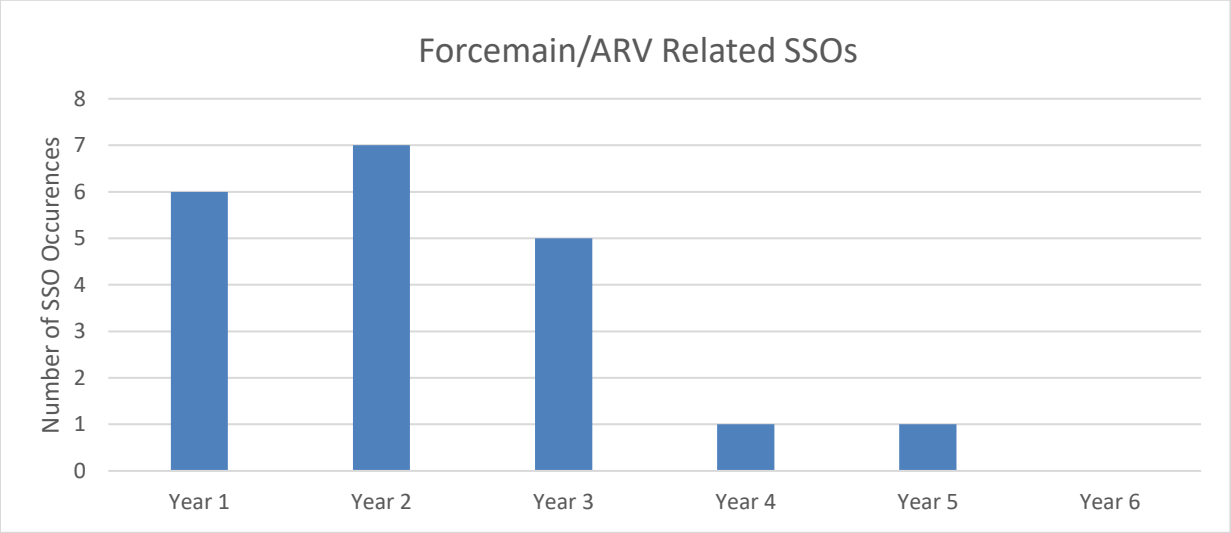
The City's Forcemain and Air Release Valve (ARV) inspection program was placed into service as part of the Consent Decree requirements and issued with the original CMOM plan in 2015. This program generally includes:

- Annual inspection of the forcemains which includes walking the full length of the forcemain and evaluating signs of SSOs or other indications of potential failures, exposed pipe and noting any right-of-way or access issues
- Performing backflushing of the Air Release Valves (ARVs) to remove internal debris; and replacement of defective ARVs
- Tracking maintenance activities for Forcemain and ARV inspections

During the reporting period, each of the City's forcemains were inspected and ARV's were backflushed. Based on these investigations, three (3) ARVs were replaced during the reporting period.

During the reporting period there were zero (0) recorded forcemain/ARV related SSO occurrences. Figure 2-5 below provides an illustration of Forcemain and ARV related occurrences that have occurred during each of the Consent Decree reporting periods.

Figure 2-5: Forcemain/ARV related SSO Occurrences



2.10.3.4 Wastewater Treatment Plant Operations & Maintenance Program

The City issued the Wastewater Treatment Plant (WWTP) Operations & Maintenance (O&M) Program with the initial CMOM Plan submittal in 2015. The WWTP O&M includes approximately 50 SOPs. Through the reporting period there have not been any significant modifications to SOPs included within the WWTP O&M program. The SOPs generally include coverage of the following:

- Administrative Responsibilities
- Operations Duties & Responsibilities
- Operations Record Keeping
- Laboratory Duty Responsibilities
- Plant Control Testing & Sampling Requirements
- Process Equipment Start-up/Shut Down
- Grit Removal O&M
- Mixing & Feeding O&M
- Safety
- Sewer Lift Station O&M
- Sludge Farm Start-up and Shut-down
- Sludge Farm O&M

More than 240 safety trainings were completed during the reporting period considering staff from the North Regional, Lucas and Lift Station Operations & Maintenance Divisions. These trainings covered a variety of safety topics and included multiple trainings related to chemical/electrical hazards, fire prevention and safety, safe driving, ethics, hand and eye protection, severe weather, fall protection and biological hazards.

During the Year 6 reporting period, Discharge Monitoring Reports (DMRs) were issued monthly and Toxicity Reports were issued quarterly to LDEQ to meet permit requirements for both the Lucas (Permit # LA0041394) and North Regional (Permit # LA0042188) WWTPs.

3.0 CONCENT DECREE - YEAR 7 FORECAST

The major objectives that are anticipated to be completed during the next reporting period (Year 7: May 13, 2020 and May 12, 2021) are discussed below. This list of objectives should not be interpreted as an explanation of all activities but rather a summary of the major objectives anticipated to be completed.

3.1 Major Objectives

3.1.1 Regulatory Coordination

The City will continue to seek a Consent Decree Modification working cooperatively and collaboratively with USDOJ, EPA and LDEQ to establish an affordable Consent Decree program of its utility customers.

3.1.2 Hydraulic Model Update

The Program Management Team will update the calibration and verification of the City's hydraulic model. The update is not expected to be fully completed during the next reporting period, but significant progress will be made as additional flow monitoring data is incorporated into the model. The hydraulic model update is expected to be complete by October 2021 followed by a comprehensive update to the Capacity Assessment Report (CAR) and the Capacity Assessment Remediation Measures Plan (CARMP) to be completed during Consent Decree Year 8.

3.1.2.1 Flow Monitoring

The City intends to complete additional flow monitoring in the fall/winter of 2020 and winter/spring of 2021. Major objectives of the additional flow metering will include:

- Additional post-construction meter refinement within SSA Phase 1,
- Post-construction monitoring in SSA Phase 2, and
- Additional metering refinement in SSA Phases 3, 4 and 5 to support hydraulic model calibration and verification.

3.1.3 Critical Infrastructure Priority Projects

The City will continue to deliver the Critical Infrastructure Priority Projects as presented in Section 2.6.7. These projects are planned to advance through design and begin construction during the next reporting period.

3.1.4 Future Capital Project Planning

The City will continue identifying, defining, and selecting new projects focused on supporting the City's obligations to provide reliable wastewater and water utility services, addressing SSOs as well as significant structural defects that could otherwise compromise system integrity in the near future. SSA data from Phases 3, 4 and the completed portion of Phase 5 will be re-evaluated, and projects will be identified based on available information. The Phase 3 RMP projects will also be further evaluated to prioritize reducing SSOs within the SSA Phase 3 area. The City will identify, define, and select a prioritized list of capital projects that the City can execute utilizing available funding.

3.1.5 Private I/I Program Review

The City will review the status, efficiency and effectiveness of the current Private I/I Program. This review will focus on identifying opportunities for more efficient and cost-effective strategies for reducing the wet weather impacts of private I/I sources in the WCTS.

3.1.6 Data Management Improvement

The City will continue to review current data management strategies and look for opportunities for improvements. The overarching goal will be to identify opportunities to better leverage the data the City has been able to capture historically and use that information to better refine CMOM program strategies aimed at minimizing SSOs.

ATTACHMENT 1 - UPDATED LIST OF SIGNIFICANT INDUSTRIAL USERS (SIU)

	Categorical		**gpd (units)**
1	Alfasigma (Claiborne)	Pharmaceutical	700
2	Benteler Steel	Iron & Steel Manufacturer	180,000
3	CB&I	Metal Finishing	15,000
4	Dr. Reddy's Pharmaceuticals	Pharmaceutical	68,000
5	Frymaster	Metal Finishing	29,000
6	Pratt Paper	Pulp, Paper, Paperboard	380,000
7	Prolec G.E. USA LLC	Metal Finishing	15,000
8	QualaWash	Transportation Equipment Cleaning	185,000
9	Ternium	Coil Coating	31,000

	Significant Non-categorical		
1	ALSCO	Commercial Laundry	87,000
2	Calumet	Petroleum Refinery (no cat. Stream)	20,000
3	Certainteed	Roofing shingles	24,000
4	KCS	Railyard	18,000
5	Libbey Glass	Glass Manufacturer	15,000
6	Liquid Environmental	Waste Grease Disposal	13,000
7	Schlumberger	Vehicle & Equipment Washing	7,000
8	Woolworth Landfill	Leachate	87,000
9	WSP Chemicals	Chemical Manufacturer	15,000

ATTACHMENT 2 - YEAR 6 - SANITARY SEWER OVERFLOWS

Sanitary Sewer Overflows (SSOs)
Year 6 Summary

Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
1	5/20/2019	15V-54	725 Austin Place	3.18 hrs	Solids	sewage was not contained	unstopped by wash truck	Cross Bayou	0	10
2	6/1/2019	69X-55	2420 Highland Avenue	1.57 hrs	Solids	sewage partially contained	unstopped by wash truck	Bayou Pierre	50	150
3	6/5/2019	07CC-57	336 Southfield Road	20.0 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Bayou Pierre	0	10,800
4	6/5/2019	15Y-57	611 East Washington Street	2.80 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Red River	0	55
5	6/8/2019	NA	3521 Madison Park Boulevard	6.18 hrs	Lift Station	sewage was not contained	washed sewer main	Bayou Pierre	0	70,000
6	6/8/2019	NA	East Flournoy Lucas Road & Hwy 1	24.00 hrs	Collapsed Pipe	sewage partially contained	reestablished connection	Sand Beach Bayou	7,200	200,000
7	6/9/2019	NA	East Preston Avenue and Knight Street	unknown hrs	Lift Station	sewage was not contained	diverted sewage to Red River	Red River	0	0
8	6/9/2019	NA	10177 Trailridge Drive	0.62 hrs	Lift Station	sewage was not contained	vac truck provided relief	Bayou Pierre	0	0
9	6/10/2019	NA	533 Dowling Street	344.32 hrs	Other	sewage was not contained	notified contractor	Cross Bayou	0	20
10	6/12/2019	NA	3215 Knight Street	1.00 hrs	Lift Station	sewage was not contained	vac truck provided relief	Red River	0	250
11	6/13/2019	11CC-49	6308 Quilen Boulevard	1.67 hrs	Solids	sewage was not contained	washed sewer main	Brush Bayou	0	5
12	6/13/2019	NA	3215 Knight Street	0.82 hrs	Lift Station	sewage was not contained	vac truck provided relief	Red River	0	100
13	6/14/2019	40Z-54	McCormick Street & Fairfield Avenue	2.52 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	0
14	6/17/2019	NA	2550 Clyde Fant Parkway Service Road	0.28 hrs	Lift Station	sewage was not contained	vac truck provided relief	Red River	0	2,000
15	6/18/2019	NA	West of River Oaks Drive	unknown hrs	Lift Station	sewage was not contained	increased quantity of bypass lines at lift station	Red River	0	0
16	6/18/2019	47Y-57	3508 Beverly Place	unknown hrs	Lift Station	sewage partially contained	increased quantity of bypass lines at lift station	Bayou Pierre	11,040	21,000
17	6/20/2019	14EE-52	500 West 75th Street	1.93 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	20
18	6/20/2019	40Y-55	Atkings Avenune & Gilbert Drive	1.55 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	0
19	6/24/2019	28GG-52	613 Sugarleaf Trail	0.43 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Brush Bayou	0	800
20	6/24/2019	12GG-52	8636 Coyth Lane	0.87 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Brush Bayou	0	0
21	6/24/2019	NA	601 Kingstowne Place	unknown hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Brush Bayou	0	0
22	6/24/2019	NA	4300 Norht Market Street	2.18 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	McCain Creek	0	0
23	6/24/2019	NA	1600 Dilg League Drive	0.55 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Cross Lake	0	50
24	6/24/2019	NA	1123 Kimberly Drive	1.32 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Brush Bayou	0	0
25	6/28/2019	NA	3722 Youree Drive	3.95 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	10
26	6/30/2019	45X-53	Samford Avenue & Wilkinson Street	1.00 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	15
27	7/1/2019	21GG-52	558 Lynbrook Boulevard	0.38 hrs	Excessive Flow	sewage was not contained	wait for rain to recede	Brush Bayou	0	15
28	7/3/2019	05CC-59	109 Southfiled Road	1.02 hrs	Grease	sewage was not contained	unstopped by wash truck	Old River	0	20
29	7/5/2019	64V-53	1700 Snow Street	1.52 hrs	Solids	sewage partially contained	unstopped by wash truck	Cross Bayou	10	5
30	7/6/2019	NA	3215 Knight Steet	0.87 hrs	Lift Station	sewage was not contained	contacted lift station personnel	Red River	0	50
31	7/7/2019	NA	448 Grand Oaks Drive	1.20 hrs	Lift Station	sewage was not contained	lift station back in service	Unknown	0	5
32	7/8/2019	07GG-46	8491 Meadow Parkway Drive	2.87 hrs	Solids	sewage was not contained	unstopped by wash truck	Brush Bayou	0	50

Sanitary Sewer Overflows (SSOs)
Year 6 Summary

Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
33	7/8/2019	42X-50	2818 Kentucky Avenue	1.28 hrs	Solids	sewage was not contained	unstopped by wash truck	Cross Lake	0	300
34	7/8/2019	NA	Knight Street & Clyde Fant Memorial Parkway	0.95 hrs	Lift Station	sewage was not contained	set up bypass pump	Red River	0	20
35	7/9/2019	41AA-55	526 Oneonta Street	1.60 hrs	Roots	sewage was not contained	washed sewer main	Bayou Pierre	0	30
36	7/10/2019	NA	6521 North Lakeshore Drive	3.08 hrs	Lift Station	sewage was not contained	contacted lift station personnel	Cross Lake	0	175
37	7/10/2019	NA	Reily Lane & Captain Shreve Drive	1.50 hrs	Bypass Pump	sewage was not contained	bypass pump replaced	Old River	0	0
38	7/13/2019	NA	Reily Lane & Captain Shreve Drive		Bypass Pump	sewage was not contained	resecured bypass hoe to manhole	Old River	0	700
39	7/17/2019	45X-53	Wilkinson Street & Samford Avenue	0.77 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	700
40	7/21/2019	01AA-55	Cecile Place & Creswell Avenue	1.45 hrs	Roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	700
41	7/24/2019	49X-55	2509 Pinehurst Boulevard	0.72 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	150
42	7/24/2019	13Y-40	6400 Oak Valley Drive	1.10 hrs	Lift Station	sewage was not contained	contacted lift station personnel	Cross Lake	0	20
43	7/26/2019	01AA-55	3828 Creswell Avenue	1.93 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	500
44	8/4/2019	28GG-52	8841 Coyth Ln	0.88 hrs	Lift Station	sewage was not contained	lift station back online, wash down area and put out drip	Brush Bayou	0	1,000
45	8/7/2019	44X-50	2800 Hearne Ave	1.15 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	700
46	8/12/2019		3353 Alexander Ave	2.88 hrs	Lift Station	sewage was not contained	lift station back in service	Bayou Pierre	0	5,000
47	8/12/2019		Capt Shreve Dr & Reily Ln	1.27 hrs	Lift Station	sewage partially contained	lift station back in service	Old River	100	200
48	8/16/2019		2700 Hearne Ave	2.55 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	700
49	8/17/2019	20Q-52	2000 Grimmett Dr	0.92 hrs	Solids	sewage was not contained	unstopped by wash truck	Red River	0	100
50	8/19/2019	16Y-53	2940 Samford Ave	1.08 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	25
51	8/19/2019	43X-50	2000 Hearne Ave	4.38 hrs	Collapsed Pipe	sewage was not contained	set up bypass pump	Cross Lake	0	2,100
52	8/19/2019		1510 Corporate Dr	3.23 hrs	Lift Station	sewage partially contained	lift station back in service	12 Mile Bayou	100	400
53	8/22/2019	03X-54	2205 Fairfield Ave	29.13 hrs	Collapsed Pipe	sewage was not contained	vacuum MH down and returned to system, a repair work order has been made WO# 277949	Bayou Pierre	0	2
54	8/23/2019		4131 Baltimore Ave	2.63 hrs	Grease	sweage was not contained	unstopped by wash truck	Bayou Pierre	0	1,000
55	8/27/2019		9500 Overlook Dr	3.43 hrs	Collapsed Pipe	sewage spill confined to land	pump was set up at this location until repairs are made	None	100,000	0
56	8/29/2019	03Y-52	2917 Linwood Ave	1.52 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	50
57	9/1/2019		Reily Ln & Captain Shreve Dr	2.13 hrs	Bypass Pump	sewage was not contained	United Rental called out to check pump	Old River	0	3,000
58	9/2/2019	05CC-59	109 Southfield Rd	5.52 hrs	Grease	sewage was not contained	unstopped by wash truck	Old River	0	250
59	9/4/2019	04AA-57	232 Albert Ave	2.18 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	20
60	9/4/2019	22SS-58	360 Gallier Pl	1.15 hrs	Solids	sewage was not contained	washed sewer main	Brush Bayou	0	50
61	9/6/2019	74X-49	3435 Frederick St	1.63 hrs	Lift Station	sewage was not contained	lift station back in service	Cross Lake	0	1,000
62	9/6/2019	19II-45	3555 Cedar Creek Dr	0.90 hrs	Lift Station	sewage was not contained	sewer lift personnel was called out to location	Gilmer Bayou	0	1,800
63	9/7/2019		9073 Mitcham St	1.23 hrs	Lift Station	sewage was not contained	lift station back in service	Brush Bayou	0	500
64	9/11/2019	15Y-56	2940 Samford Ave	2.55 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	10
65	9/23/2019		801 E Preston Ave	0.98 hrs	Lift Station	sewage was not contained	lift station back in service	Red River	0	1,000
66	9/24/2019		1402 Audubon Pl	0.65 hrs	Other	sewage partially contained	reestablished connection	Old River	100	600
67	9/25/2019		2310 North Cross Dr	13.87 hrs	Collapsed Pipe	sewage was not contained	reestablished connection	Cross Lake	0	100
68	9/26/2019	55Y-53	Samford Ave & St Vincent Ave	1.30 hrs	Solids	sewage partially contained	unstopped by wash truck	Bayou Pierre	1,000	50
69	10/2/2019	74Y-53	3215 Samford Ave	0.21 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	150
70	10/2/2019	35AAA-55	622 Unadilla St	1.09 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	75
71	10/3/2019		510 N Allen Ave	5.30 hrs	Collapsed Pipe	sewage was not contained	reestablished connection	Cross Bayou	0	3,000
72	10/4/2019	11DD-56	6345 Querbes Dr	Unknown	Excessive Flow	sewage was not contained	washed sewer main	Bayou Pierre	0	0
73	10/6/2019	03Z-50	Hearne Ave	1.20 hrs	Other	sewage was not contained	set up bypass pump	Cross Lake	0	100
74	10/8/2019	12Y-54	820 Columbia St	2.16 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	25
75	10/8/2019	13HH-60	189 India Dr	4.51 hrs	Solids	sewage was not contained	unstopped by wash truck	Red River	0	300
76	10/9/2019	04Y-52	2917 Linwood Ave	0.48 hrs	Lift Station	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	150
77	10/9/2019		3255 Knight St	1.45 hrs	Bypass Pump	sewage was not contained	reestablished connection	Red River	0	100
78	10/14/2019	10F-48	7325 Jewella Ave	2.17 hrs	Grease	sewage partially contained	unstopped by wash truck	Brush Bayou	15	250
79	10/14/2019	16Y-53	2940 Samford Ave	2.30 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	50
80	10/14/2019		1811 E Bert Kouns Industrial Loop	1.13 hrs	Collapsed Pipe	sewage was not contained	unstopped by wash truck	Red River	0	5,000
81	10/16/2019		930 Captain Shreve Dr	0.26 hrs	Bypass Pump	sewage was not contained	reestablished connection	Anderson Bayou	0	35

Sanitary Sewer Overflows (SSOs)
Year 6 Summary

Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
82	10/17/2019		3809 Hearne Ave	1.11 hrs	Bypass Pump	sewage was not contained	reestablished connection	Cross Lake	0	25
83	10/17/2019	50Q-44	1672 David Raines Rd	0.55 hrs	Solids	sewage was not contained	washed sewer main	Cross Lake	0	10
84	10/18/2019	02Y-41	3213 Gorton Rd	Unknown	Other	sewage was not contained	washed sewer main	Cross Lake	0	10
85	10/18/2019	18FF-59	1811 E Bert Kouns Industrial Loop	4.07 hrs	Solids	sewage partially contained	set up bypass pump	Red River	4,000	1,000
86	10/22/2019	23X-55	524 Boulevard St	1.49 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	15
87	10/23/2019	29W-59	661 Herndon St	1.38 hrs	Grease	sewage partially contained	unstopped by wash truck	Red River	0	100
88	10/23/2019	47U-54	719 Edwards St	2.09 hrs	Solids	sewage was not contained	unstopped by wash truck	Red River	0	55
89	10/24/2019	44X-50	2800 Hearne Ave	0.56 hrs	Bypass Pump	sewage partially contained	reestablished connection	Cross Lake	30	100
90	10/25/2019		414 Spring Lake Dr	2.36 hrs	Collapsed Pipe	sewage was not contained	reestablished connection	Bayou Pierre	0	25
91	10/25/2019	06Z-47	3100 Country Club Dr	3.33 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	150
92	10/25/2019	99V-55	4th St	1.25 hrs	Grease	sewage was not contained	unstopped by wash truck	Red River	0	200
93	10/31/2019	12EE-55	7030 Bethany St	0.48 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	4
94	11/1/2019	55Y-53	Samford Ave & Woodrow St	0.13 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	50
95	11/5/2019	17X-53	1431 Dalzell St	2.25 hrs	Other	sewage partially contained	washed sewer main	Bayou Pierre	0	50
96	11/5/2019	37AA-54	1051 Lawhon St	1.18 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	10
97	11/5/2019	22Z-52	1619 Desoto St	0.82 hrs	Other	sewage was not contained	NA	Brush Bayou	0	200
98	11/5/2019	47AA-56	417 Albany Ave	20.23 hrs	Roots	sewage was not contained	washed sewer main	Bayou Pierre	0	2
99	11/6/2019	10BB-54	1040 Erie St	1.57 hrs	Roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	15
100	11/7/2019	15Y-53	2940 Samford Ave	0.67 hrs	Solids	sewage partially contained	unstopped by wash truck	Bayou Pierre	0	200
101	11/7/2019	21-AZ-59	Captain Shreve Dr & Reily Ln	2.82 hrs	Bypass Pump	sewage was not contained	lift station back in service	Old River	0	1,000
102	11/7/2019	03RR-59	400 Grand Ave	0.93 hrs	Lift Station	sewage was not contained	set up bypass pump	Cross Bayou	0	500
103	11/7/2019	05KK-43	9403 Green Forest Rd	2.77 hrs	Collapsed Pipe	sewage partially contained	reestablished connection	Gilmer Bayou	3,600	3,600
104	11/8/2019	11KK-47	9371 Mansfield Rd	3.42 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	200
105	11/9/2019	07PP-60	2831 Long Lake Dr	5.20 hrs	Solids	sewage was not contained	unstopped by wash truck	Long Lake	0	50
106	11/11/2019	29HH-61	10129 Saratoga Dr	3.58 hrs	Lift Station	sewage was not contained	lift station back in service	Red River	0	10
107	11/11/2019	24HH-61	10106 Lomita Dr	0.95 hrs	Lift Station	sewage was not contained	NA	Red River	0	200
108	11/12/2019	01O-50	2980 N Market St	2.22 hrs	Solids	sewage was not contained	unstopped by wash truck	McCain Creek	0	25
109	11/12/2019	34AL-49	3907 Eddy Pl	1.62 hrs	Other	sewage was not contained	washed sewer main	12 Mile Bayou	0	5
110	11/13/2019	04BB-47	5006 Francis St	0.68 hrs	Other	sewage partially contained	washed sewer main	Bickham Bayou	0	10
111	11/13/2019	15V-51	2058 Looney St	0.45 hrs	Other	sewage was not contained	washed sewer main	Cross Bayou	0	15
112	11/13/2019	44DD-55	815 E St	0.85 hrs	Other	sewage partially contained	washed sewer main	Bayou Pierre	0	2
113	11/14/2019	22Z-59	4200 Reily Ln	0.63 hrs	Lift Station	sewage partially contained	lift station back in service	Old River	50	500
114	11/17/2019	33KK-50	9424 Kroetz Dr	0.32 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	25
115	11/18/2019	22DD-49	6716 Burke St	0.18 hrs	Other	sewage was not contained	washed sewer main	Brush Bayou	0	35
116	11/18/2019	26BB-56	4432 Orchid St	1.65 hrs	Solids	sewage was not contained	washed sewer main	Bayou Pierre	0	5
117	11/18/2019	07KK-45	9330 Dean Rd	0.12 hrs	Grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0	225
118	11/19/2019	03R-44	David Raines Rd & Round Grove Ln	1.07 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	150
119	11/20/2019	40Y-51	2333 Queens Hwy	1.03 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	55
120	11/21/2019	20JJ-48	2544 Bert Kouns Industrial Loop	0.87 hrs	Other	sewage was not contained	washed sewer main	Brush Bayou	0	200
121	11/21/2019	05AA-42	6024 Land-O-Trees Dr	2.72 hrs	Lift Station	sewage was not contained	sewer lift personnel was called out to location	Gilmer Bayou	0	25
122	11/21/2019	65WW-55	1919 Highland Ave	21.8 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	30
123	11/22/2019	06BB-50	5322 Prentiss Ave	0.15 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	10
124	11/22/2019	28AA-58	208 Leo Ave	0.05 hrs	Solids	sewage partially contained	unstopped by wash truck	Old River	20	10
125	11/22/2019	09V-57	1219 Crofton Ave	1.92 hrs	Other	sewage was not contained	NA	Red River	0	25
126	11/25/2019	04BB-47	5006 Francis St	0.12 hrs	Solids	sewage partially contained	unstopped by wash truck	Bickham Bayou	5	10
127	11/26/2019	21BB-56	376 Arthur Ave	0.13 hrs	Collapsed Pipe	sewage was not contained	washed sewer main	Bayou Pierre	0	5
128	11/27/2019	17X-54	1021 College St	0.23 hrs	Collapsed Pipe	sewage was not contained	washed sewer main	Bayou Pierre	0	150
129	12/1/2019	06BB-49	3302 Clark Blvd	2.67 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	200
130	12/3/2019	01Z-58	841 S Gate Rd	1.02 hrs	Bypass Pump	sewage was completely contained	set up bypass pump	Anderson Bayou	0	0
131	12/3/2019	30HH-56	9000 W Wilderness Way	0.1 hrs	Grease	sewage was completely contained	unstopped by wash truck	Bayou Pierre	0	0
132	12/4/2019	09AA-51	2602 Devaughn St	0.03 hrs	Solids	sewage was not contained	unstopped by wash truck	Brush Bayou	0	250
133	12/4/2019	18BB-56	Fern Ave & Pennsylvania Ave	1.27 hrs	Solids	sewage was completely contained	unstopped by wash truck	Bayou Pierre	0	0
134	12/4/2019	30X-41	3208 Gorton Rd (in front of property)	14.43 hrs	Other	sewage was not contained	customer service disconnected	Cross Lake	0	55
135	12/6/2019	18EE-52	548 W 76 St	1.47 hrs	Other	sewage was not contained	washed sewer main	Brush Bayou	0	10
136	12/6/2019	16Y-53	2940 Samford Ave	0.3 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	10
137	12/9/2019	17Q-53	414 Mayfair Dr	1.17 hrs	Collapsed Pipe	sewage partially contained	washed sewer main	Red River	0	2

Sanitary Sewer Overflows (SSOs)
Year 6 Summary

Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
138	12/10/2019	13X-52	2346 Levy St 71101	0.45 hrs	Solids	sewage was not contained	washed sewer main	Bayou Pierre	0	100
139	12/11/2019	29W-55	657 Herndon St 71101	0.17 hrs	Collapsed Pipe	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	200
140	12/12/2019	04Z-53	1133 St Vincent Ave	1.95 hrs	Grease	sewage was not contained	washed sewer main	Bayou Pierre	0	250
141	12/17/2019	04DD-47	6500 Kennedy Dr	0.73 hrs	Grease	sewage was not contained	washed sewer main	Cross Lake	0	1
142	12/17/2019	22Y-57	2916 Elm St	0.37 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	15
143	12/17/2019	04S-53	437 Fortson St	0.43 hrs	Solids	sewage was not contained	washed sewer main	12 Mile Bayou	0	5
144	12/19/2019	35AAA-55	608 Unadilla St	0.92 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	100
145	12/19/2019	46X-58	River Oaks Dr		Other	sewage was not contained	hydrant turned on, sandbags placed around manhole	Anderson Bayou	0	0
146	12/20/2019	50X-48	Hearne Ave and Bessie St 71109	0.15 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	300
147	12/20/2019	46Y-99	2824 Alabama Ave	0.92 hrs	Other	sewage was not contained	washed sewer main	Cross Lake	0	10
148	12/26/2019	32CC-50	6308 W Canal Blvd	0.15 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	10
149	12/26/2019	33AA-52	4128 Wallace Ave	0.25 hrs	Roots	sewage was not contained	washed sewer main	Brush Bayou	0	25
150	12/27/2019	53Y-15	2940 Samford Ave	0.53 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	15
151	12/30/2019	59X-59	1219 Shreveport Backsdale Hwy 71105	0.67 hrs	Grease	sewage was not contained	unstopped by wash truck	Red River	0	700
152	1/6/2020	16BB-55	740 Huron St	1.92 hrs	Collapsed Pipe	sewage was not contained	reestablished connection	Bayou Pierre	0	2
153	1/6/2020	04EE-55	7106 Crewell Rd	1.07 hrs	Solids	sewage was not contained	unstopped by wash truck	Old River	0	100
154	1/6/2020	37W-56	234 Olive St	1.33 hrs	Collapsed Pipe	sewage was not contained	washed sewer main	Bayou Pierre	0	200
155	1/7/2020	28KK-49	2109 Francais Dr	0.05 hrs	Grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0	700
156	1/8/2020	18W-45	5638 Lakeshore Dr	0.48 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Lake	0	500
157	1/9/2020	02EE-59	2100 E Bert Kouns Industrial Loop	0.38 hrs	Lift Station	sewage partially contained	returned sewage to system	Red River	0	3,000
158	1/11/2020		1628 Bild League	Unknown	Excessive Flow	sewage was not contained	allow flows to return to normal	Unknown	0	0
159	1/13/2020	03BB-60	1902 Captain Shreve Dr	43.65 hrs	Solids	sewage was not contained	vacuum manhole	Old River	0	10
160	1/14/2020	31GG-51	601 Kingstowne Pl 71108	0.25 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	300
161	1/14/2020	22GG-52	534 Lynbrook Blvd 71106	0.75 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	2,000
162	1/14/2020	04BB-54	919 Monrovia St	2.17 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	30
163	1/14/2020	13W-56	160 E Jordan St	0.6 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	100
164	1/15/2020	13DD-43	5557 Financial Plaza	0.22 hrs	Lift Station	sewage partially contained	unstopped by wash truck	Gilmer Bayou	0	100
165	1/16/2020	33GG-51	601 Kingstowne Pl, 71108	0.5 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	0
166	1/16/2020	15AFF-51	809 Browning St 71106	0.25 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	2,000
167	1/16/2020	64FF-52	8135 Fork Bayou, 71106	0.5 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	700
168	1/16/2020	12GG-52	Coyth Ln, 71106	1.5 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	0
169	1/16/2020	22GG-52	534 Lynbrook Blvd 71106	0.5 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	0
170	1/16/2020	05X-47	1634 Dilg League Dr 71109	0.52 hrs	Excessive Flow	sewage was not contained	NA	Cross Lake	0	0
171	1/16/2020	11DD-56	6711 Querbes Dr	0.67 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	500
172	1/16/2020	28DD-56	Brookmeade Dr & Querbes Dr 71106	0.25 hrs	Excessive Flow	sewage was not contained	NA	Brush Bayou	0	2,000
173	1/16/2020	04DD-55	412 Dru Circle	0.53 hrs	Excessive Flow	sewage was not contained	NA	Bayou Pierre	0	1
174	1/16/2020		dead end of River Oaks	Unknown	Excessive Flow	sewage was not contained	allow flows to return to normal	Unknown	0	0
175	1/16/2020	08Y-57	611 E Washington St	3.82 hrs	Excessive Flow	sewage was not contained	sewer lift personnel was called out to location	Red River	0	3,500
176	1/16/2020	47Y-57	3508 Beverly Pl	1.0 hrs	Excessive Flow	sewage was not contained	NA	Bayou Pierre	0	0
177	1/16/2020	12X-53	2102 Southern Ave 71104	0.5 hrs	Excessive Flow	sewage was not contained	NA	Bayou Pierre	0	0
178	1/16/2020	55X-53	1200 Dalzell St 71104	0.5 hrs	Excessive Flow	sewage was not contained	NA	Bayou Pierre	0	0
179	1/21/2020	04EE-56	7106 Creswell	1.07 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	15
180	1/21/2020	21LL-54	9041 Mitcham St	0.18 hrs	Collapsed Pipe	sewage was not contained	reestablished connection	Brush Bayou	0	700
181	1/22/2020	17Q-53	414 Mayfair Dr	0.5 hrs	Solids	sewage was not contained	set up bypass pump	Red River	0	5
182	1/23/2020	21T-55	100 Milam St	3.0 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	7,200	200
183	1/24/2020	17Q-53	1134 Fenwick Dr	3.87 hrs	Other	sewage was not contained	unstopped by wash truck	Red River	0	10
184	1/25/2020	17Q-53	414 Mayfair Dr	0.25 hrs	Collapsed Pipe	sewage was not contained	set up bypass pump	Red River	0	5
185	1/27/2020	17Q-53	414 Mayfair Dr	1.17 hrs	Collapsed Pipe	sewage was not contained	set up bypass pump	Red River	0	0
186	1/27/2020	21T-55	100 Milam St	3.0 hrs	Collapsed Pipe	sewage completely contained	vacuum manhole	Red River	7,200	35
187	1/28/2020		Reily Ln & Sweet Briar	Unknown	Bypass Pump	sewage was not contained	bypass reinstated	Unknown	0	0
188	1/29/2020	39Y-55	425 Atkins Ave	0.12 hrs	Other	sewage was not contained	washed sewer main	Anderson Bayou	0	25
189	1/31/2020	01Y-59	1215 Shreveport Barksdale Hwy	0.47 hrs	Grease	sewage was not contained	unstopped by wash truck	Red River	0	700
190	2/3/2020	21DD-55	6726 Gilbert Dr.	1.45 hrs	Solids	sewage partially contained	unstopped by wash truck	Bayou Pierre	50	10
191	2/4/2020	44Y-57	502 Kings Hgwy	2.2 hrs	Grease	sewage partially contained	unstopped by wash truck	Red River	25	5
192	2/10/2020	31KK-48	1123 Kimberly Dr.	1.68 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	1,500

Sanitary Sewer Overflows (SSOs)
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Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
193	2/11/2020	69X-55	2420 Highland Ave	1.57 hrs	Excessive Flow	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	3,000
194	2/11/2020	21T-55	100 Milam St.	2.83 hrs	Excessive Flow	sewage partially contained	vacuum manhole	Red River	7,200	50
195	2/14/2020	25X-51	2500 Marion St.	2.25 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Bayou	1,400	1,400
196	2/14/2020	36RR-58	317 Ascension Circ.	1.38 hrs	Lift Station	sewage was not contained	sewer lift personel	Wallace Lake	0	55
197	2/16/2020	25AA-40	6228 Trailwood Ter	0.58 hrs	Grease	sewage was not contained	washed sewer main	Bickam Bayou	1	300
198	2/17/2020	26BB-57	225 Roma Drive	3.25 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	2	5,000
199	2/18/2020	35AAA-55	4048 Creswell Ave	20.05 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	3	200
200	2/19/2020	16Y-53	2940 Samford Ave	1.27 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	4	25
201	2/20/2020	21T-55	100 Milam	3.0 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	5	50
202	2/22/2020	21T-55	100 Milam	3.0 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	0	60
203	2/25/2020	21T-55	100 Milam	3.0 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	0	50
204	3/2/2020	33AA-55	608 Unadila Street	0.32 hrs	Solids	sewage was not contained	unstop sewer main with wash triuck	Bayou Pierre	0	200
205	3/2/2020	16X-57	314 Boulevard Street	1.48 hrs	Other	sewage was not contained	wash sewer main with truck to unstop	Red River	0	10
206	3/2/2020	16X-57	314 Boulevard Street	1.48 hrs	Other	sewage was not contained	washed sewer main	Bayou Pierre	0	10
207	3/3/2020	05CC-55	700 Southfield Road	1.12 hrs	Collapsed Pipe	sewage was not contained	unstopped by wash truck	Sand Beach Bayou	0	500
208	3/4/2020	33GG-51	601 Kingstowne Pl	0.97 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	5,000
209	3/4/2020	11DD-56	Querbes Dr. & Brookmeade Dr.	1 hr	Excessive Flow	sewage was not contained	N/A	Bayou Pierre	0	1,000
210	3/4/2020	21T-55	100 Milam Street	3 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,600	400
211	3/4/2020	21T-55	100 Milam	2.08 hrs	Collapsed Pipe	sewage was not contained	vacuum manhole	Red River	4,800	700
212	3/4/2020	21T-55	100 Milam	1.35 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	4,800	500
213	3/5/2020	25X-59	1020 Shreveport Barksdale Hwy	1.67 hrs	Excessive Flow	sewage was not contained	washed sewer main	Red River	0	50
214	3/5/2020	21T-55	100 Milam Street	2.17 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	4,800	400
215	3/5/2020	21T-55	100 Milam	3 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,600	300
216	3/5/2020	21T-55	Commerce Street & Milam Street	2 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	5,400	100
217	3/7/2020	36JJ-58	Shenandoah Dr. & Shenandoah Cir.	0.75 hrs	Lift Station	sewage was not contained	N/A	Bayou Pierre	0	50
218	3/10/2020	21T-55	100 Milam Street	3 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,600	40
219	3/11/2020	13BB-58	237 Pennsylvania Ave	1.47 hrs	Collapsed Pipe	sewage completely contained	unstopped by wash truck	Bayou Pierre	100	0
220	3/12/2020	50V-53	Ashton Street & Zeigler Street	2.42 hrs	Solids	sewage was not contained	unstopped by wash truck	Cross Bayou	0	200
221	3/17/2020	17Q-53	Dunbriar & Mayfair Dr.	1.25 Hrs	Bypass Pump	Sewage was not contained	Set up pump	Old 12 Mile Bayou	0	5
222	3/17/2020	35W-55	649 Wyandotte Street	1.05 hrs	Collapsed Pipe	sewage was not contained	washed sewer main	Bayou Pierre	0	5
223	3/19/2020	32Z-50	2709 Midway Street	1.95 hrs	Grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0	10
224	3/19/2020	44P-43	4715 Hilary Huckaby III Rd	1.8 Hrs	Grease	Sewage was not contained	Unstopped by wash truck	Cross Bayou	0	100
225	3/20/2020	14V-49	3157 Looney St	0.98 Hrs	Other	Sewage was not contained	Unstopped by wash truck	Cross Bayou	0	700
226	3/20/2020	11DD-56	Querbes Street & Brookmeade Street	1 hr	Excessive Flow	sewage was not contained	N/A	Bayou Pierre	0	500
227	3/20/2020	38Q-44	Hattie St & Davis Rains Rd	0.55 Hrs	Excessive Flow	Sewage was not contained	N/A	12 Mile Bayou	0	1,000
228	3/22/2020	49Y-55	Creswell Ave & Stephenson Street	2.6 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	3,500
229	3/22/2020	24HH-61	10079 Stratmore Cir.	1.03 hrs	Lift Station	sewage was not contained	sewer lift personel	Bayou Pierre	0	4,000
230	3/22/2020	21T-55	Commerce Street & Milam Street	3 hrs	Excessive Flow	sewage partially contained	vacuum manhole	Red River	4,800	1,500
231	3/22/2020	21T-55	Commerce Street & Milam Street	3 hrs	Excessive Flow	sewage completely contained	vacuum manhole	Red River	2,400	1,500
232	3/23/2020	27GG-52	8809 Coyth Lane	0.72 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	2,400
233	3/23/2020	11DD-56	Querbes Dr. & Brookmeade Dr.	0.5 hrs	Excessive Flow	sewage was not contained	N/A	Bayou Pierre	0	500
234	3/23/2020	21T-55	100 Milam Street	2 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	4,800	40
235	3/24/2020	21T-55	100 Milam Street	3 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,200	40
236	3/26/2020	04W-57	266 E. Jordan Street	2.08 hrs	Grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	25
237	3/26/2020	21T-55	Commerce Street & Milam Street	2 hrs	Collapsed Pipe	sewage completely contained	vacuum manhole	Red River	7,200	1,100
238	3/27/2020	47Y-57	3353 Alexander Ave	2.83 hrs	Other	sewage was not contained	N/A	Bayou Pierre	0	2,400
239	3/27/2020	21T-55	100 Milam Street	2 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,600	30
240	3/28/2020	67Y-57	3353 Alexander Ave	3.25 hrs	Other	sewage was not contained	N/A	Bayou Pierre	0	10,000
241	3/31/2020	04W-57	266 E. Jordan Street	0.58 hrs	Other	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	20
242	4/2/2020	30KK-47	9449 Wood crest Drive	2.7 hrs	Other	sewage was not contained	unstopped by wash truck	Bayou Pierre	300	100
243	4/2/2020	38Q-52	Hawn Ave. & Freestate Blvd.	0.92 hrs	Bypass Pump	sewage partially contained	reestablished connection	Cross Lake	0	2
244	4/4/2020	51Y-55	Creswell Ave. & Stephenson Street	22.9 hrs	Collapsed Pipe	sewage completely contained	unstopped by wash truck	Bayou Pierre	0	2,400
245	4/5/2020	21T-55	Commerce Street & Miliam Street	2 hrs	Other	sewage partially contained	vacuum manhole	Red River	4,800	1,100
246	4/13/2020	N/A	Old Carriage Trail	N/A	Lift Station	N/A	vactruck provided relief	Private pond	0	0
247	4/13/2020	N/A	near 2910 Long Lake	N/A	Lift Station	N/A	power restored	Long Lake	0	0

Sanitary Sewer Overflows (SSOs)
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Count	DATE	FACILITYID	LOCATION	Duration of Overflow	Cause of Overflow	Observed Environmental Impact	Action Taken to Address SSO	Receiving Body of Water	Gallons Returned to System_	Gallons Lost
248	4/14/2020	22AAA-53	4018 Richmond Avenue	2.3 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	500
249	4/16/2020	31AA-54	3957 Richmond Avenue	N/A	Lift Station	N/A	repaired lift station	Bayou Pierre	0	500
250	4/16/2020	16JJ-44	9200 Sandman Circle	1.23 hrs	Grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0	200
251	4/19/2020	21T-55	Commerce Street	3 hrs	Excessive Flow	sewage partially contained	vacuum manhole	Red River	7,200	1,200
252	4/19/2020	21T-55	Commerce Street	2 hrs	Excessive Flow	sewage partially contained	vacuum manhole	Red River	4,800	1,100
253	4/23/2020	12GG-52	8636 Coyth Lane	0.95 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	250
254	4/23/2020	13W-48	3854 Michigan Blvd	1.78 hrs	Excessive Flow	sewage was not contained	N/A	Cross Lake	0	10
255	4/23/2020	22AAA-53	4018 Richmond Avenue	1.6 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	55
256	4/23/2020	08Y-57	611 E. Washington Street	6.23 hrs	Excessive Flow	sewage was not contained	Sewer lift personel	Red River	0	150
257	4/23/2020	08V-57	310 E. Stoner Ave	1.3 hrs	Excessive Flow	sewage was not contained	washed sewer main	Bayou Pierre	0	25
258	4/24/2020	14AA-46	4253 Lamar Ave	1.3 hrs	Other	sewage was not contained	washed sewer main	Brush Bayou	0	5
259	4/24/2020	34X-49	Catherine St & Mertis Ave	1.05 hrs	Other	sewage was not contained	unstopped by wash truck	Cross Lake	0	10
260	4/25/2020	2Y-42	3200 Parkwood Drive	2.5 hrs	Excessive Flow	sewage was not contained	N/A	Bickham Bayou	0	0
261	4/25/2020	PP-60	2908 Long Lake	2.5 hrs	Lift Station	N/A	power restored	Long Lake	10,000	0
262	4/26/2020	42Y-55	3302 Gilbert Dr	1 hrs	Other	sewage was not contained	N/A	Bayou Pierre	0	10
263	4/27/2020	21II-49	9030 Avalon Dr	0.6 hrs	Other	sewage was not contained	washed sewer main	Gilmer Bayou	0	10
264	4/29/2020	10W-49	3520 Elon St	0.73 hrs	Other	sewage was not contained	N/A	Cross Lake	0	20
265	4/29/2020	21T-55	100 Miliam	0.85 hrs	Collapsed Pipe	sewage partially contained	vacuum manhole	Red River	3,600	40
266	5/1/2020	15Y-53	2940 Samford Avenue	0.87 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Piere	0	25
267	5/1/2020	24II-45	9133 Bernadette Lane	1.73 hrs	Collapsed Pipe	sewage was not contained	washed sewer main	Brush Bayou	0	50
268	5/5/2020	61W-55	702 Prospect Street	2 hrs	Solids	sewage was not contained	unstopped by wash truck	Bayou Pierre	0	500
269	5/8/2020	27GG-52	8809 Coyth Lane	0.67 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	0
270	5/8/2020	12GG-52	578 Janet Lane	0.67 hrs	Excessive Flow	sewage was not contained	N/A	Bayou Pierre	0	0
271	5/8/2020	22GG-52	534 Lynbrook Blvd	0.83 hrs	Excessive Flow	sewage was not contained	N/A	Brush Bayou	0	0
272	5/8/2020	20X-48	1700 Dilg League	2 hrs	Excessive Flow	sewage was not contained	NA	Cross Bayou	0	0
273	5/8/2020	07AA-56	200 E. Gregg Street	1.38 hrs	Excessive Flow	sewage was not contained	N/A	Bayou Pierre	0	1,400
274	5/8/2020	17Q-53	369 Mayfair	5.28 hrs	Other	sewage was not contained	unstop main with wash truck	Red River	0	2
275	5/8/2020	21T-55	100 Milam Street	2 hrs	Excessive Flow	sewage partially contained	vacuum manhole	Red River	7,200	3

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