



City of Shreveport, Louisiana

Consent Decree Annual Report – Year 8

May 13, 2021 - May 12, 2022



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 gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed 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 knowing violations.

A handwritten signature in blue ink, appearing to read "William B. Daniel IV".

William B. Daniel IV, P.E.
Director of Water & Sewerage
City of Shreveport

7/7/22

Date

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1.0 INTRODUCTION

1.1 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, 2021 to May 12, 2022. A summary of activities planned for the Year 9 reporting period (May 13, 2022 to May 12, 2023) is also provided.

1.2 Consent Decree Overview

The City of Shreveport (City) is implementing various utility operational and management programs and 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 are sources of infiltration and inflow (I/I) and cause or contribute to overflows under 5 Phases of work in first 9 Years of a 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 Sanitary Sewer Overflows (SSOs) to an approved level of control and 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 specific periodic reports to United States Environmental Protection Agency (EPA) and Louisiana Department of Environmental Quality (LDEQ).

2.0 PROGRAM ADMINISTRATION DURING YEAR 8

The following sections summarize major events and developments related to the administration and implementation of the City's Consent Decree program that occurred during the Year 8 reporting period.

2.1 Organizational Changes

A summary of organizational changes or challenges experienced by the City of Shreveport during the Year 8 reporting period which affect implementation of its Consent Decree program is provided below.

- The City, like many water and wastewater utilities, continues to face challenges in recruiting, training, and retaining employees. The City's Department of Water & Sewerage has a total of approximately 351 budgeted positions but averaged approximately 20% vacancies in 2020 and 2021. This has resulted in the City investing significant time and energy to ensuring that essential utility operations and maintenance functions are covered.
- The City approved a 13% pay increase for all of its employees in January 2022, **the first increase of any amount since pay increases were frozen in 2010**. The pay increase was implemented to help address a major obstacle to recruiting and retaining municipal employees: their pay in comparison to private industry.
- A major departmental restructure was implemented to improve efficiencies by reorganizing the City's Department of Engineering & Environmental Services, with some staff moving into the Department of Water & Sewerage and other staff moving into the Department of Public Works. The City has been working through the logistics of this restructure throughout 2021 and 2022.

2.2 Regulatory Coordination

Significant coordination with federal and state regulatory agencies occurred throughout Year 8, including various correspondence from the City to United States Department of Justice (USDOJ), EPA, and LDEQ to discuss the status of the City's program and explain the need for modification of the City's Consent Decree. A summary of the correspondence and coordination during the Year 8 reporting period is provided below.

2.2.1 Description of Proposed Program Activities

In response to a request from USDOJ during a meeting on April 16, 2021, the City submitted a description of proposed program activities to EPA and USDOJ on August 10, 2021. The City has not received substantive feedback from the agencies regarding the document as of the date of this report.

2.2.2 Revised Consent Decree Language and Compliance Requirements

After submittal of the description of proposed program activities in August 2021, the City was requested to provide revised Consent Decree language even though, at that time, the regulatory agencies had not provided feedback on the description of proposed activities. At the request of the agencies, on or around October 15, 2021, the City submitted revised Consent Decree language to USDOJ. The USDOJ responded on October 21, 2021 with a request for a detailed document indicating the City's proposed modifications to the compliance provisions of the original Consent Decree. After some additional correspondence, on December 16, 2021, the City submitted a summary of the City's understanding of the status of ongoing discussions with the regulatory agencies regarding a modification of Shreveport's Consent Decree. USDOJ responded to this correspondence on January 28, 2022. Information regarding proposed compliance requirements had been provided in the City's description of proposed program activities submitted to the agencies in August 2021, and the City incorporated this information into a proposed Appendix B to the revised Consent Decree that was submitted on January 31, 2022. USDOJ responded to this submittal on May 27, 2022 (during Year 9).

2.2.3 Summary of Sewer Cleaning Programs and Collection System

Assessment Program

On January 31, 2022, the City submitted a summary of the City's Sewer Cleaning Programs and Collection System Assessment Program to EPA and LDEQ. The City has not received a response.

2.2.4 General Force Majeure Notification Due to COVID-19 Disruptions

On February 1, 2022, the City issued a general assertion of Force Majeure informing USDOJ of the impacts of the COVID-19 pandemic and subsequent economic disruptions on the City's ability to comply with requirements and/or deadlines in the Consent Decree. USDOJ responded on March 28, 2022.

2.2.5 General Force Majeure Notification Due to LDH Sanitary Survey

On February 1, 2022, the City issued a general assertion of Force Majeure to the USDOJ summarizing the findings of the Sanitary Survey completed by the Louisiana Department of Health (LDH). The LDH submitted to the City a list of “Significant Deficiencies” in a letter dated October 5, 2021. The Force Majeure letter informs USDOJ that the City must dedicate resources to address deficiencies in its drinking water system. The City has not received a response.

2.3 The City’s Financial Capability and Program Funding

The City’s ability to fund remaining Consent Decree obligations has been previously documented in submittals to the regulatory agencies. Funding remaining Consent Decree obligations continues to be a significant concern of the City. This issue continues to be challenging to resolve considering ongoing economic and supply chain disruptions and regulatory requirements associated with the drinking water system. These items are summarized below.

2.3.1 Financial Hardship and Capability Assessment

It is critical to be mindful of the fact that the City spent approximately \$450 million in the first five years of what was expected to be a \$350 million program over twelve years. This extraordinary investment has been made possible in part by a staggering **177 percent rate increase between 2013 and 2022** – and this cumulative increase is only for the City’s sewer utility rates. Water rates increased significantly as well. Despite many other economic pressures affecting its citizens, the City continued with rate increases through the years of the COVID-19 pandemic. This includes rate increases for the sewer utility of 6% in 2020, 2% in 2021, and 2% in 2022. Water rates increased 6% in 2020 and 4% in 2022.

As demonstrated in the City’s most current financial capability assessment, the City is unable to fund remaining Consent Decree obligations without rate increases that would place an unconscionable financial burden on its ratepayers, especially its most vulnerable residents with low and fixed incomes. Of course, any further rate increases at this time are infeasible anyway given ongoing economic impacts associated with the COVID-19 pandemic. The City intends to utilize its available funding from previous bond sales to complete high-priority activities, initiatives, and critical projects using an Integrated Planning Approach over the next several years. These bond proceeds are likely all that the City will have available unless financial assistance is provided by

federal and state agencies or other revenue sources become available. As discussed below, the City is doing its best to pursue and obtain funding assistance.

2.3.2 Funding Opportunities to Support Program Implementation

Providing federal dollars for the water industry via passage of the *Infrastructure Investment and Jobs Act* (IIJA) or *Bipartisan Infrastructure Law* (BIL) is significant and greatly needed. Like most municipalities, the City has been diligently monitoring every development regarding how these funds will be distributed, including channeling resources to stay abreast of the ever-evolving landscape and aligning initiatives to those items that are understood to be priority for funding opportunities under the IIJA or BIL. Most funding for water and wastewater projects is expected to be administered through the State Revolving Fund (SRF) loan programs. The City has been actively coordinating with the LDEQ and LDH regarding funding opportunities through the SRF program.

In addition, the City has attempted to maximize opportunities for funding provided through the state of Louisiana. In late 2021 two applications were submitted to Louisiana's Water Sector Program, including a request for \$5 million to fund a major sanitary sewer overflow mitigation project directly related to the Consent Decree. In January 2022 the City was greatly encouraged to learn that it was awarded funding for this project. The other application was to request funding for a drinking water project – it was not approved. The City is continuing to monitor this program to determine when the funds will be available, as this will obviously affect the timeline for advancing the project into construction.

In mid-May 2022, the City was notified by the LDEQ that a \$20 million loan through the Clean Water State Revolving Fund (CWSRF) had become available for the City. This funding opportunity is related to an application that the City filed in 2019. The City is coordinating with LDEQ to confirm its eligibility to receive the loan. This funding will support delivery of some wastewater projects identified in this report if the City is able to close on the loan.

Lastly, the City has been focused on identifying additional local funds to address infrastructure needs. While not optimal timing, consistent with the City's best efforts to stay on track with its Consent Decree obligations, citizens were asked in December 2021 to vote on a general obligation bond proposal totaling \$236 million. Five (5) propositions encompassing public safety;

technology; streets, bridges, and sidewalks; water, sewer, and drainage; and parks and recreation made up the proposal. Proposition #3 included \$36.5 million for water and sewer improvements, including \$29.5 million in sewer projects directly associated with the City's Consent Decree. Unfortunately, the citizens supported only one of the five propositions – public safety. The other four propositions were not approved. The defeat of Proposition #3 means that the availability of additional local funds for water and sewer improvements, beyond what is currently available, will be delayed.

2.4 Integrated Planning for Wastewater and Drinking Water Needs

As demonstrated in previous submittals, all the City's compliance and utility obligations need to be considered for the City's Consent Decree program to be sustainable and successful, including the City's obligations to provide reliable water service. The importance of considering the City's water utility needs and obligations continues to be apparent. The February 2021 winter storm exposed operational vulnerabilities of the utility to provide safe drinking water and demonstrated the need for the City to reinvest in its water system to provide reliable utility service. The need for additional drinking water utility investment was reinforced following the Sanitary Survey performed by the LDH in late 2021.

The findings of the Sanitary Survey and the commitments that LDH is seeking will require an investment of time, resources, and capital funding into the City's water utility. Additionally, the City has kicked off its efforts to comply with the Revised Lead and Copper Rule requirements issued by EPA in 2021. The City's current focus is development of an initial Lead Service Line inventory. The City expects that completion of these items will affect its ability to make timely progress on Consent Decree obligations due to funds needing to be dedicated to water system needs, and that completion of water system projects may affect the timing of implementing wastewater activities, initiatives, and projects under the City's Consent Decree program. The City looks forward to productive discussions with the regulatory agencies about the prioritization of these items.

3.0 SUMMARY OF ACTIVITIES IN YEAR 8

The following sections summarize activities completed in the Year 8 reporting period in the Sanitary Sewer Assessment (SSA); Capital Planning; Capacity Assessment; Remediation Measures Plans (RMP); Construction Specifications; Citizen Engagement & Constituent Issue Management; and CMOM categories. As discussed in Section 2.0, the City has been actively coordinating with the regulatory agencies. The activities reported in this section reflect the spirit of those discussions, most specifically the evident need to shift the focus of the City's program through a formal Consent Decree modification.

3.1 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).

3.1.1 Sanitary Sewer Assessment (SSA) Overview

SSA field investigation and SSA reports for Phases 1-4 were completed prior to the Year 8 reporting period. Table 3-1 below provides a summary of the City's SSA Report submissions.

Table 3-1: SSA Report Submittals through Year 8

Phase	Phase Description	Completion Deadline Per Consent Decree	Submittal Date
1	Cedar Grove	7/13/2015	7/8/2015
2	Southside, Queensboro, North Highlands, Westside, and Choctaw Bayou	1/13/2017	9/15/2016
3	Cooper Road, Wallace, and Broadmoor	7/13/2018	11/28/2017
4	Stoner, North Pierre Bayou, Bickham Bayou, Country Club, and LSU Basin	1/13/2020	1/10/2020
5	Princess Park, Texas Pierre, Boggy Bayou, Agurs, Highland, Springfield, Gilmer Bayou, Shorewood, Flournoy Bayou, Page Bayou, Cross Bayou, Lower Cross Lake, and Lakeview	7/13/2021	In Progress – 55% Complete

During the Year 8 reporting period, the City completed operation and maintenance SSA activities within its wastewater system focused on maintaining the City's infrastructure and mitigating SSOs as discussed below. Because the City previously completed activities in Phases 1 through 4,

activities completed in Year 8 in those areas of the City are summarized first. Activities completed in the Phase 5 area are presented separately.

3.1.2 Phase 1 – 4 SSA: Activities Completed in Year 8

During the Year 8 reporting period, additional field investigations were completed within Phases 1 through 4 to support ongoing program initiatives including SSO mitigation, hydraulic model update, and identification of critical projects. Sewer assessments were completed through the “Hot Spot” Sewer Cleaning and Closed Circuit Television Video (CCTV) Program, Lift Station Assessments, and manhole assessments.

3.1.2.1 Sewer Cleaning and CCTV Inspections

In March 2021, the City initiated a “Hot Spot” Sewer Cleaning and CCTV Program to accomplish sewer cleaning and CCTV investigations at locations identified with historical dry weather SSO records from 2017 through 2020. Gravity sewers were cleaned and investigated in the phases as indicated in Table 3-2 through the “Hot Spot” Sewer Cleaning and CCTV Program during the Year 8 reporting period. Deficiencies identified through the “Hot Spot” Sewer Cleaning and CCTV Program with the potential to cause SSOs were mitigated.

Table 3-2: “Hot Spot” Program Gravity Sewer Cleaning and CCTV Phase 1-4

Diameter (in)	Length in Phase 1 (ft)	Length in Phase 2 (ft)	Length in Phase 3 (ft)	Length in Phase 4 (ft)
6	288	11,670	284	4,491
8	29,418	57,216	33,896	15,272
10	3,291	8,845	4,058	2,729
12	2,139	2,787	4,593	2,989
15	709	3,035	1,655	658
18	525	66	533	0
20	0	0	0	0
30	0	0	100	55
36	0	0	23	0
Total	36,371	83,619	45,142	26,194

3.1.2.2 Lift Station Assessments

During the Year 8 reporting period, eleven (11) lift stations in Phases 1 through 4 were assessed. Assessments were completed to progress the design of Critical Projects, in addition to supporting

update and recalibration of the City’s hydraulic model. See Section 3.3.3 for discussion regarding the lift stations being rehabilitated through the Critical Infrastructure Projects Program.

3.1.2.3 Manhole Assessments to Identify Potential for Stormwater Inflow

During the Year 8 reporting period, the City completed assessment of 660 manholes to evaluate the potential for significant surface water inflow. This is in addition to the approximately 2,530 manholes assessed in Year 7. These manholes were identified through a geospatial selection of manholes within the 100-year flood plain and/or within 50-feet from a minor or major drainage way defined by United States Geological Survey (USGS) hydrography data. Data collected during these surface inspections will be evaluated to identify potential significant I/I contributors to support development of the City’s wet weather overflow control strategy.

3.1.3 Phase 5 SSA: Activities Completed in Year 8

As reported in the Year 7 Consent Decree Annual Report, the City was forced to suspend the full scope of Phase 5 SSA field investigations due to the inability to fund the Phase 5 projects. The City did complete some SSA field investigation activities in the Phase 5 area during the Year 8 reporting period through initiatives including its “Hot Spot” Sewer Cleaning and CCTV Program, GIS updates, flow monitoring, hydraulic modeling, and lift station assessments. These activities were also completed in other areas throughout the City in addition to the Phase 5 area, as discussed above.

The City also developed a plan to complete additional SSA activities in the Phase 5 area during the Year 8 reporting period. This information was submitted to the regulatory agencies in January 2022, and the City is moving forward with some SSA activities in the Phase 5 area as part of its “Hot Spot” Sewer Cleaning and CCTV and Annual Sewer Cleaning Programs. These activities are discussed in Section 4.2.

3.1.3.1 Sewer Cleaning and CCTV Inspections

During the Year 8 reporting period, 50,109 linear feet of gravity sewer mains were cleaned and CCTV inspected within the SSA Phase 5 area. Gravity sewers located within SSA Phase 5 investigated as part of the “Hot Spot” Sewer Cleaning and CCTV Program are summarized in Table 3-3 below.

Table 3-3: “Hot Spot” Program Gravity Sewer Cleaning and CCTV Phase 5

Diameter (in)	Length in Phase 5A (ft)	Length in Phase 5B (ft)
6	832	3,447
8	5,989	13,548
10	3,367	1,114
12	1,294	7,944
15	0	11,942
18	0	489
20	0	143
30	0	0
36	0	0
Total	11,482	38,627

Including the work completed during the Year 8 reporting period, CCTV has been completed for 717,407 linear feet of the gravity sewers in the Phase 5 SSA Area. This represents a total of 57 percent of all sewers in the Phase 5 SSA area.

3.1.3.2 Smoke Testing and Dye Flooding

No additional smoke testing or dye flooding was completed during the Year 8 reporting period within the SSA Phase 5 Area. The City has completed smoke testing and dye flooding for approximately 39 percent (489,526 lineal feet) of the gravity sewer system within the SSA Phase 5 Area.

3.1.3.3 Lift Station Assessments

During the Year 8 reporting period, twenty-one (21) lift stations were assessed within the Phase 5 SSA Area. Assessments were completed to progress the design of Critical Projects, in addition to supporting update and recalibration of the City’s hydraulic model.

3.2 Capacity Assessment

During the Year 8 reporting period, the City continued updating and recalibrating its hydraulic model, completed a Return Period Analysis, and began updating the Capacity Assessment Report. This report, and the Capacity Assessment Remedial Measures Plan (CARMP), are planned to be finalized in Year 9. The following paragraphs provide a brief summary of activities that were completed in support of the Capacity Assessment Report and Capacity Assessment Remedial

Measures Plan (CARMP) during Year 8. Activities planned to occur during Year 9 are discussed in Section 4.4.

3.2.1 Flow Monitoring Program and Flow Data Analysis

Phase 1 of the City's flow monitoring program to support update of the City's hydraulic model commenced during the Year 7 reporting period (Fall/Winter 2020) and included approximately 50 temporary metering locations. Phase 2 of the City's flow monitoring programs began in Spring 2021 with temporary meter installations at approximately 100 locations, with installations occurring March through April 2021 and ending in June 2021. The Spring 2021 metering program included post-construction monitoring of the SSA Phase 2 RMP Projects as well as additional meters throughout SSA Phases 1, 4, and 5. Depth only sensors were installed within the Phase 1 Cedar Grove subbasin to further identify and isolate locations where significant wet weather flow is entering the system and to better inform the model calibration regarding the impacts of backwater from the Cedar Grove Lift Station.

Rainfall and flow metering analysis for the Fall 2020 and the Spring 2021 meter programs was completed during the Year 8 reporting period. This analysis included defining dry weather characteristics including average daily dry weather flow (ADDF) and diurnal patterns at each of metering locations followed by characterizing wet weather which included a regression analysis considering rainfall depth and rainfall derived inflow and infiltration (RDII) volumes and RTK parameterization for each of the meter catchment areas. This analysis will be further used to support I/I characterization and prioritization. The collected metering data will also be imported into the hydraulic model to support the update to the model calibration.

The City has prepared a draft of the Flow Monitoring and Analysis Report summarizing key highlights from the 2020/2021 metering program.

3.2.2 Hydraulic Model Update and Network Modifications

Most of the major improvements to the asset inventory within the City's hydraulic model were completed during the Year 7 reporting period. However, the model network was maintained during the Year 8 reporting period, specifically during the model calibration process as well as confirming record drawing updates based on SSA Phase 2 RMP improvements. Records from other critical projects were incorporated into the model as appropriate.

3.2.3 Model Recalibration and Validation

Recalibration of the City's hydraulic model was completed during the Year 8 reporting period. The model recalibration was completed in January 2022 and a draft version of the Hydraulic Model Report was prepared summarizing the key highlights of the model calibration and validation efforts.

3.2.4 Current Conditions Model

Following completion of the hydraulic model calibration update and model validation activities, the current condition model was updated while including known collection system and facility updates that have changed since the model calibration. This included restoring and eliminating by-pass pump operations that were in place during calibration but removed afterwards, 'cleaning the system' by removing sediment, and finalizing the model for Return Period Analysis simulations.

3.2.5 Return Period Analysis

Rainfall assessment events considering 3-month, 6-month, 1-year, 2-year, and 5-year frequencies were developed using NOAA Atlas 14. These rainfall assessment events were incorporated into the model to support a Return Period Analysis which included running the 'Current Conditions Model' considering all five (5) rainfall events. Modeling results were exported and an evaluation was started to support the Capacity Assessment Report which is currently planned to be submitted in July 2022 (Year 9).

3.2.6 Additional Model Activity During the Year 8 Reporting Period

The hydraulic model was used to support project development and evaluations for several of the City's critical projects aimed at mitigating wet weather SSOs. These projects include:

- Dilg League SSO Mitigation
- Pierremont Park SSO Mitigation
- Brookmeade & Querbes SSO Mitigation

The hydraulic model was also used throughout the Year 8 reporting period for on-going review of new development permits by evaluating existing capacity through the City's wastewater collection system.

3.3 Remediation Measures Plans (RMP)

The City is required to complete Sewer System Remediation Measures Plans per Consent Decree Section VI. Compliance Requirements, Part C, Paragraphs 30-34. The following paragraphs summarize the status of these activities.

3.3.1 Remediation Measures Plans (RMP) Submittals

RMP Submittals were completed for Phases 1-4 prior to the start of Consent Decree Year 8. Phase 1-4 RMP Submittals were issued to the EPA and LDEQ and are available through the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. Table 3-4 below provides a summary of RMP submittals through the Year 8 reporting period.

Table 3-4: RMP Report Submittals through Year 8

Phase	Phase Description	Completion Deadline Per Consent Decree	Submittal Date
1	Cedar Grove	9/13/2015	9/9/2015
2	Southside, Queensboro, North Highlands, Westside, and Choctaw Bayou	3/13/2017	9/20/2016
3	Cooper Road, Wallace, and Broadmoor	9/13/2018	12/5/2017
4	Stoner, North Pierre Bayou, Bickham Bayou, Country Club, and LSU Basin	3/13/2020	3/12/2020
5	Princess Park, Texas Pierre, Boggy Bayou, Agurs, Highland, Springfield, Gilmer Bayou, Shorewood, Flournoy Bayou, Page Bayou, Cross Bayou, Lower Cross Lake, and Lakeview	9/13/2021	In Progress (See Discussion Below)

3.3.2 Remediation Measures Plans (RMP) Status

The status of activities and projects within each Phase is provided below.

3.3.2.1 Phase 1

The City constructed 30 total projects within SSA Phase 1. All 30 projects have reached final completion. Table 3-5 below provides a summary of the project status of each of the Phase 1 RMP Project.

Table 3-5: SSA Phase 1 – RMP Project Summary

Project Name	Functional Completion	Final Completion*
101.124.125.147 – Dowdell St. & Fairfield Ave.	8/3/2017	11/28/2017
102 – Wyngate Blvd. & W. 84 th Street	9/2/2017	11/15/2017
103 – Garden Valley Subdivision Unit 2 Valley View Dr. & Timberview Rd.	N/A	8/11/2017
103.106.109.110 – West Canal & Valley View	11/27/2017	2/23/2018
104.119.142 – Union & Wallace Ave.	4/19/2017	12/20/2017
105.108 – Cedar Grove Trunkmain	N/A	9/28/2017
106.107.114 – Hollywood Ditch & W. 70 th Street	2/28/2018	9/20/2018
109.110.113.129.130.132.135.152.153.154 Sunset Acres & Cargill Park Area (Hickory Ridge LS)	3/27/2018	5/4/2018
111 – Garden Valley Unit 1 Louise St. & W. Canal Blvd.	10/6/2017	5/15/2018
112 – Karen & Dollarway Street	N/A	7/7/2017
114 – Joe Louis & Evers Drive	8/10/2017	3/2/2018
115.120.127.128.151 – Wyngate Blvd. & Wallace Ave.	9/1/2017	6/22/2018
116.117.118.139 – Hollywood & Kennedy Ave.	10/11/2017	12/22/2017
121.122.123.143.144.145.146 Linwood & Fairfield Ave.	4/7/2018	11/30/2018
126.148.149.150.166.167.168 Linwood & Line Ave.	1/12/2018	4/17/2019
131 – Standard Oil & Wisteria St.	N/A	12/1/2016 **
133 – Monkhouse & Interstate Drive	N/A	11/7/2016 **
134 – Greenwood Rd. & Junior Place	N/A	12/1/2016 **
136.137.157 – Hollywood Ave. & Singletary Street	9/29/2017	5/7/2018
138.140.156.169 – Henry & Kennedy Street	10/31/2018	10/29/2019
141.161.171.175.176.178.180 Hearne & Hollywood Trunkmain	2/19/2018	2/24/2019
158.159.160.170 – Jewella Ave. & Clarke Blvd.	1/23/2018	7/16/2018
162.163.164.165.172.173.174 – Mansfield Rd. & Corbitt St.	1/5/2018	11/14/2018
175.177.178.179 – Jewella Ave. & Greenwood Rd.	12/30/2017	6/12/2020
201 CIPPL Package 1	12/8/2017	9/20/2019
202 CIPPL Package 2	4/11/2018	7/24/2019

Project Name	Functional Completion	Final Completion*
203 CIPPL Package 3	12/7/2017	1/24/2020
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. As shown above, all Phase 1 projects reached Functional Completion by October 31, 2018. All Phase 1 projects reached Final Completion by June 12, 2020.

The original value of the 80 collection system improvement projects was estimated at approximately \$131,427,000 (2016 Dollars). During design, these 80 projects were consolidated into a collection of 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.

3.3.2.2 Phase 2

A total of 17 total construction projects were developed based on the Phase 2 RMP. All 17 projects have reached final completion. Table 3-6 below provides a summary of the actual completion dates for each of the Phase 2 RMP projects.

Table 3-6: SSA Phase 2 – RMP Project Summary

No.	Project Name	Actual Dates	
		Functional Completion	Final Completion
2-SH1	South Highlands East CIPP	4/12/2021	5/3/2021
2-SH2	South Highlands West CIPP	12/31/2019	9/10/2020
2-SH3	South Highlands Sewer Replacement	11/27/2019	6/12/2020
2-SH4	Mansfield & Claiborne Area Replacement	6/4/2019	7/31/2019

No.	Project Name	Actual Dates	
		Functional Completion	Final Completion
2-QR1	North Querbes CIPP	12/31/2019	4/5/2021
2-QR2	South Querbes CIPP	6/3/2020	4/6/2021
2-QR3	North Querbes Replacement	11/27/2019	6/10/2020
2-QR4	South Querbes Replacement	6/1/2020	11/6/2020
2-QB1	North Queensboro CIPP	12/15/2019	5/3/2021
2-QB2	South Queensboro CIPP	11/27/2019	9/28/2020
2-QB3	Choctaw Bayou and 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	12/2/2020
2-NH3	North Highlands Sewer Replacement	Unknown – Functional Completion Certificate Not Issued	10/30/2019
2-LS1	Lift Stations / Force Main Condition	4/30/2019	2/4/2020
2-WS1	Westside CIPP	11/27/2019	10/1/2020
2-WS3	Westside Sewer Replacement	4/3/2019	8/19/2019

The original value 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 consolidated and a collection of 17 bid packages for construction were created. Following the completion of all Phase 2 RMP projects, the actual construction cost of the Phase 2 RMP projects was approximately \$110,000,000.

3.3.2.3 Phase 3

A total of 14 projects were developed based on the Phase 3 RMP. Each of these projects advanced into detailed design during the Year 6 Reporting Period. Bidding and construction of Phase 3 projects was placed on hold during Consent Decree Year 6 due to the City's limited financial resources, inability to fully fund all Phase 3 projects, and concerns about the hydraulic model used to develop the scopes of the Phase 3 projects. As described in Section 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more

effective at mitigating SSOs than the approach used to identify and develop the Phase 3 and Phase 4 RMP projects.

The estimated construction cost of the Phase 3 RMP projects is approximately \$172,930,000 when previously developed Opinion of Probable Construction Costs (OPCC) are updated to 2022 dollars. Table 3-7 provides a summary of the proposed improvements included within the Phase-3 construction packages.

Table 3-7: 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%	Completed 8/27/2020	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 2	90%	Not Started	Sewer replacement of 6,300 LF of gravity sewer main and install new manholes.
3-LS1	Lift Station Condition Improvements	100%	(1) Completed (6) In Design	Improve or rehab 7 lift stations and 3 force mains. The stations are: <ul style="list-style-type: none"> • Cedar Creek: Final Completion - 1/21/22 • Dixie Garden • Elgin • Knight Street • Mackey Lane • Shreve Island • Wallace
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.
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.

No.	Project Name	Design Status	Construction Status	Project Description
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.

Based on the City's approach to apply its available funding to directly mitigate SSOs, construction packages were developed and advanced during the Year 8 Reporting Period to address known problems. Three (3) Phase 3 projects were included in the City's Critical Project portfolio as follows:

- 3-LS1 Lift Station Condition Improvements:** Construction of improvements to the Cedar Creek Lift Station was completed during the Year 8 reporting period on January 21, 2022. Design for the remaining six (6) lift stations included in 3-LS1 began in March 2022.
- 3-116 / Southern Hills Interceptor (Segment B) / 3-117 Southern Hills Interceptor (Segment A):** Replacement of the Southern Hills Interceptor, including the 3-116 and 3-117 projects, have been identified as a wastewater critical project. Completion of design is pending completion of the City's Capacity Assessment Report and the City's available funding. It is anticipated that construction will occur after 2022 depending upon available funding.
- 3-NE1 Northeast Sewer Replacement:** The sanitary relief project west of the Broadmoor Lift station currently included within the 3-NE1 scope of work is being advanced as a wastewater critical project due to the recurrence of wet weather SSOs at the intersection of Brookmeade and Querbes and along Trinity Circle. This project will include approximately 9,000 LF of 10-inch to 30-inch sanitary sewers and has a construction value of

approximately \$12,075,000 (2021 Dollars). The City has completed design documents and anticipates that construction will begin in 2022 and completed by the end of 2023.

3.3.2.4 Phase 4 RMP

The City issued the Phase 4 RMP to the EPA and LDEQ on March 12, 2020 and has posted the report 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 value of the 14 Phase 4 RMP collection system improvements was approximately \$93,500,000, in 2022 dollars. The estimated value of the 33 Phase 4 RMP lift station improvement projects was approximately \$9,440,000, in 2022 dollars. Design of Phase 4 remediation measures has not yet begun due to the City's inability to fund construction of Phase 4 improvements coupled with a lack of confidence in the City's existing hydraulic model as a design tool for Phase 4 projects. As described in Section 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more effective at mitigating SSOs than the approach used to identify and develop the Phase 3 and Phase 4 RMP projects.

3.3.2.5 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 55% complete. Remaining Phase 5 SSA work, valued at approximately \$12 million, was suspended by the City in March 2020 due to inadequate funding for implementation of Phase 5 projects. As described in Section 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more effective at mitigating SSOs than applying the previous approach used to identify projects that were constructed for Phase 1 and Phase 2 and identified in the RMP reports for Phase 3 and Phase 4.

3.3.3 Critical Infrastructure Projects

In early 2020, 19 projects were selected to mitigate SSOs, address regulatory compliance, and maintain reliable utility service within the City's wastewater and water utilities. In early 2021, the City identified other Critical Projects for delivery from 2021 to 2024, with their completion pending the availability of funding. The projects identified in 2021, described in the Year 7 Annual

Report, were selected to address the same goals as the projects selected in 2020: mitigate SSOs, address regulatory compliance, and maintain reliable utility service.

The City continued to advance delivery of these projects through the Consent Decree Year 8 reporting period. A summary of the current status is provided below.

3.3.3.1 Wastewater Critical Projects

The wastewater projects listed in Table 3-8 describe the project status, identified budget and a brief description of the improvements. It is important to note that full implementation (e.g., completion of construction) of some projects is dependent upon the availability of funding – in these cases, the project description includes identifies the project delivery activities planned for completion at this time. Additional project delivery activities will be completed if funding becomes available. The City has also identified additional projects for implementation, and plans to use an Integrated Planning Approach to select projects presented in

Table 3-9, or others identified through subsequent planning efforts, to be implemented that will provide the maximum benefit to public health using the City's available funding.

3.3.3.2 Water Critical Projects

As discussed in Sections 2.2.5 and 2.4, the City has a significant need to invest in its drinking water utility. In response to this need, the City is delivering critical drinking water projects, which are presented in Table 3-10. These projects are presented here even though they are not directly related to the City's Consent Decree program. Like many of the City's wastewater critical projects, funding is currently not available for full implementation of the water critical projects. Integrated Planning and a flexible approach using adaptive management principles will be essential to ensure that, as additional financial resources become available, they are applied to investments that will deliver the greatest overall public benefits.

3.3.3.3 Other Required Water Utility Initiatives

In addition to the water critical projects described above, the City is implementing various initiatives to address regulatory compliance or other required items associated with its drinking water utility. Even though these items are not directly related to the City's Consent Decree program, they are important to understand because they demonstrate that the City's compliance obligations extend to items beyond the Consent Decree. Addressing these items requires financial and managerial resources that limit the City's ability to make investments in its Consent Decree program. These initiatives are summarized below:

- **America's Water Infrastructure Act (AWIA) of 2018:** The City completed a Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) to meet the legislative requirements of AWIA. The City strives to routinely review its RRA in an effort to protect its drinking water system from natural and malevolent hazards. This includes an annual tabletop review of the RRA and ERP, with an update every 5 years, as required by the AWIA legislation. Capital investments are occasionally required to maintain compliance with AWIA.
- **Property Insurance Association of Louisiana (PIAL):** The Property Insurance Association of Louisiana (PIAL) is a private, non-profit association composed of all

insurance companies licensed to write fire and certain coverages within the State of Louisiana. PIAL evaluates the fire protection capabilities of municipalities and fire districts to determine a Protection Classification for the City. The results of this evaluation can affect property insurance ratings in the City. Capital investments are occasionally required to maintain the City's insurance rating.

Table 3-8: Wastewater Critical Projects

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-01	Wallace Interceptor at Boggy Bayou	Design and construction of demolition/abandonment and relocation of approximately 1,350 linear feet of 54-inch diameter gravity sewer main from the crossing of Boggy Bayou.	Construction	\$3,000,000
CWP-02	North Pierre Lift Station Roof Repair	Design and construction to remove and replace existing roof and ceiling. Install new lighting on the inside of the lift station as well.	Completed	\$84,000
CWP-03	Stoner Emergency Repair	Design and construction of repairs of existing 48-inch diameter sanitary sewer main collapsed at influent line to the Stoner Lift Station.	Completed	\$1,096,000
CWP-05	North Regional WWTP - Levee Repair #2	Design and construction of repairs for failing slopes along the levee next to Twelve Mile Bayou.	Completed	\$200,000
CWP-06	Southern Trace Lift Station Improvements	Design and construction of repairs and improvements to existing Southern Trace Lift Station.	Construction	\$300,000
CWP-07	North Regional WWTP Levee Repair #1	Design and construction of repairs to the North Regional WWTP levees due to failing slopes.	Completed	\$216,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-08	City Wide Sewer Repair	One On-Demand contract was established in July 2020 to repair sanitary sewer gravity mains and force mains, specifically known locations of sewer pipe collapses, sink holes, SSOs, and force main and water main breaks. This contract has significantly enhanced the City’s ability to address emergency issues in a timely and efficient manner. Over 200 work orders have been completed to-date at a total cost of over \$5 million. The City is expanding the capacity of the current contract and implementing additional contracts to expand its ability to respond to emergency issues.	Construction (Ongoing)	\$5,000,000 Annually
CWP-09	Lucas and North Regional WWTP Improvements (UV Disinfection)	Design and construction of replacement of UV disinfection equipment at both the Lucas and North Regional WWTPs.	Design	\$14,000,000
CWP-10	Public Landing Lift Station Improvements	Design and construction of repairs and improvements to existing Public Landing Lift Station.	Completed	\$700,000
CWP-11	Stratmore Lift Station Improvements	Design and construction to rehabilitate an existing lift station along with the associated piping.	Design	\$700,000
CWP-12	Lift Station Package 1a – Maywood LS Rehabilitation	Design and construction to rehabilitate a lift station to address current mechanical, electrical, hydraulic, and operational issues.	Design	\$4,577,000 (Total for all CWP-12 projects)
CWP-12	Lift Station Package 1b – Land O’ Trees Lift Station Rehabilitation	Design and construction to rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Design	See Item 12

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-12	Lift Station Package 2 – Cherokee, Forbing Glen, and Long Timbers Lift Station Rehabilitation	Design and construction to rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Design	See Item 12
CWP-12	Lift Station Package 3 – Agurs and Glen Avenue Lift Station Rehabilitation	Design and construction to rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Design	See Item 12
CWP-12	Lift Station Package 4 - Lakeside Boat, Pinecrest, and Woolworth No.1 Lift Station Rehabilitation	Design and construction to rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Design	See Item 12
CWP-12A	Cedar Creek Lift Station Improvements	Design and construction of repairs and improvements to existing Cedar Creek Lift Station.	Completed	362,000
CWP-14	Wastewater Tank Installation & Rehabilitation - Sludge Processing Facility	Design and construction of a new sludge storage tank and rehabilitation of an existing storage tank.	Completed	\$1,410,000
CWP-15	Golf Link Drive Sewer	Design and construction of installation of new 8” PVC sewer main to replace aging sewer main infrastructure.	Completed	\$312,000
CWP-16	Edwards Sewer Improvements	Existing 6” and 10” gravity sewer mains have numerous defects contributing to a recurring SSO in the alley between Edwards and Milam.	Completed	\$650,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-17	Exposed Sewer Mains in Bayou Pierre	Study & Report, design and construction for rehabilitation of existing 20-inch diameter and 24-inch diameter sewer crossing of Bayou Pierre exposed due to erosion of existing concrete encasement built within the flowline of concrete ditch.	Design	\$575,000
CWP-36	Manhole Rehabilitation & I/I Reduction - 2022	System-wide manhole rehabilitations to address high-priority condition issues.	Completed	\$550,000
CWP-37	Caddo Bossier Port Sewer Repair	Construction of repairs of gravity sewer main that caused a sinkhole under existing Caddo Bossier Fuel Facility.	Completed	\$78,000
CWP-56	Dilg League SSO Mitigation (Permanent)	Study & Report, design and construction of improvements to address reoccurring SSOs at Dilg League Drive area.	Design	\$16,500,000
CWP-63	Brookemeade & Querbes SSO Mitigation	Design and construction of improvements to address reoccurring SSOs in the Brookemeade & Querbes area. Approximately 9,000 feet of 10- to 30-inch-diameter gravity sewer is anticipated to be installed.	Design	\$12,000,000
CWP-117	Pierremont Park Sewer Improvements	Design and construction of improvements to replace existing 24-inch diameter gravity sewer with a larger new 30-inch. Note: this is a subproject originally part of the CWP-63 Brookemeade & Querbes SSO Mitigation project. The City has expedited this project to construction.	Construction	\$8,000,000
CWP-64	Gravity Sewer Main Improvements 2023	Study & Report of improvements to address high-priority condition issues based on NASSCO PACP ratings, known SSO locations, and work order records. The City intends to complete only Study & Report activities at this time.	Planning	\$5,000,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-79	Lift Station Improvements - Darien, Hardy, Meadow Parkway, Patzman Park, Alabama, Pinehill Road, North Caddo, Marjorie, Hawkins, and Pinehill Estates Lift Stations	Study & Report and design of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues contributing to observed SSOs or reliability issues that, if not addressed, have a high likelihood of causing future SSOs. The City intends to complete only Study & Report and Design activities at this time.	Design	\$4,000,000
CWP-80	Lift Station Improvements - Havanna, Country Club, Fern, Cadillac, Risinger, Cross Creek, and Elgin Lift Stations	Study & Report and Design of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues contributing to observed SSOs or reliability issues that, if not addressed, have a high likelihood of causing future SSOs. The City intends to complete only Study & Report and Design activities at this time.	Design	\$4,000,000
CWP-81	Lift Station Improvements - Azalea Gardens, Attaway, Fannin, Bickham Bayou, North Hearne, North Pierre, and Linear Lift Stations	Study & Report and Design of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues contributing to observed SSOs or reliability issues that, if not addressed, have a high likelihood of causing future SSOs. The City intends to complete only Study & Report and Design activities at this time.	Design	\$4,000,000
CWP-82	Lift Station Improvements - Wallace, Dixie Garden, Shreve Island, Knight Street, and Mackey Lane Lift Stations	Study & Report and Design of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues contributing to observed SSOs or reliability issues that, if not addressed, have a high likelihood of causing future SSOs. The City intends to complete only Study & Report and Design activities at this time.	Design	\$4,000,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-83	Wallace Force Main Improvements	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 45,000 feet of 36-inch diameter ductile iron pipe (DIP) force main that is approximately 40 years old. The City intends to complete only Study & Report activities at this time.	Study & Report	\$28,000,000
CWP-84	Cedar Grove Force Main Improvements	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 28,000 feet of 36-inch-diameter pre-stressed concrete force main that is approximately 45 years old. The City intends to complete only Study & Report activities at this time.	Study & Report	\$26,000,000
CWP-85	Stoner Force Main Improvements – Additional Scope	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 46,000 feet of 36-inch diameter pre-stressed concrete force main that is approximately 45 years old. The City intends to complete only Study & Report activities at this time.	Study & Report	\$25,000,000
CWP-102	Southern Hills Interceptor	Design of replacement of approximately 24,000 feet of 8- to 42-inch diameter concrete gravity sewer that is approximately 40 years old. The City intends to complete only Design activities at this time.	Design	\$20,000,000
CWP-60	Stoner Force Main Improvements – Original Scope	Installation of 36-inch diameter force main and construction of new Champion Lake Lift Station.	Construction	\$2,200,000

Table 3-9: Other Wastewater Critical Projects

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-42	SCADA Master Plan and Implementation	Design, construction, and/or implementation of improvements identified in an upcoming SCADA Master Plan. Completion of these activities is pending available funding.	Planning	\$12,565,000
CWP-61	Gravity Sewer Main Improvements Package 1: Lines Under Homes (Broadmoor and Querbes Area)	Design and construction of improvements to reroute residential sanitary sewer laterals from under homes in the Broadmoor and Querbes neighborhoods. Further implementation of project to follow Study & Report pending available funding.	Study & Report	\$5,000,000
CWP-64	Gravity Sewer Main Improvements 2023	Design and construction of high-priority condition improvements. Further project activities to follow pending available funding.	Planning	\$5,000,000
CWP-79	Lift Station Improvements - Darien, Hardy, Meadow Parkway, Patzman Park, Alabama, Pinehill Road, North Caddo, Marjorie, Hawkins, and Pinehill Estates Lift Stations	Construction of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues. Construction of improvements to follow design pending available funding.	Design	\$4,000,000
CWP-80	Lift Station Improvements - Havanna, Country Club, Fern, Cadillac, Risinger, Cross Creek, and Elgin Lift Stations	Construction of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues. Construction of improvements to follow design pending available funding.	Design	\$4,000,000
CWP-81	Lift Station Improvements - Azalea Gardens, Attaway, Fannin, Bickham Bayou, North Hearne, North Pierre, and Linear Lift Stations	Construction of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues. Construction of improvements to follow design pending available funding.	Design	\$4,000,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2022 Dollars)
CWP-82	Lift Station Improvements - Wallace, Dixie Garden, Shreve Island, Knight Street, and Mackey Lane Lift Stations	Construction of rehabilitation of lift stations to address current mechanical, electrical, hydraulic, and operational issues. Construction of improvements to follow design pending available funding.	Design	\$4,000,000
CWP-83	Wallace Force Main Improvements	Design and construction of rehabilitation or replacement of portions of 36-inch diameter ductile iron pipe (DIP) force main. Design and construction of improvements to follow Study & Report pending available funding.	Study & Report	\$28,000,000
CWP-84	Cedar Grove Force Main Improvements	Design and construction of rehabilitation or replacement of portions of 36-inch diameter ductile iron pipe (DIP) force main. Design and construction of improvements to follow Study & Report pending available funding.	Study & Report	\$26,000,000
CWP-85	Stoner Force Main Improvements	Design and construction of rehabilitation or replacement of portions of 36-inch diameter force main. Design and construction of improvements to follow Study & Report pending available funding.	Study & Report	\$25,000,000
CWP-88	Sludge Farm Facility Improvements	Study & Report, design, and construction of improvements necessary to address regulatory compliance or maintain reliable utility service. Completion of these activities is pending available funding.	Planning	\$3,500,000
CWP-102	Southern Hills Interceptor	Construction of replacement of 8- to 42-inch diameter concrete gravity sewer. Construction of improvements to follow Design pending available funding.	Design	\$20,000,000
	Lucas and North Regional WWTP Improvements	Study & Report, design, and construction of improvements necessary to address regulatory compliance or maintain reliable utility service. Completion of these activities is pending available funding.	Planning	TBD

Table 3-10: Water Critical Projects

Project Number	Project	Project Description
CWP-04	Amiss Ozone Improvements	Design and construction of modifications to the three existing treatment plants and processes to repair/replace equipment and address finished water taste and odor issues.
CWP-35	McNeil Slope Stability Improvements	Rehabilitation of existing slopes along 12 Mile Bayou believed to be impaired after installation of Museum observation deck. Project placed on hold after predesign study indicated project has a high cost compared to benefit.
CWP-42	SCADA - Master Plan & Implementation	Development of a SCADA Master Plan to identify needed improvements.
CWP-49	Water Main Crossing at Twelve Mile Bayou	Rehabilitation or replacement of the existing 20-inch steel pipe across Twelve Mile Bayou.
CWP-50	Twelve Mile Bayou Pump Station Discharge Main Evaluation	Rehabilitation or replacement of existing large diameter raw water main from Twelve Mile Bayou Pump Station to the Amiss Water Treatment Plant.
CWP-51	Amiss WTP Intake Structure Rehabilitation	Rehabilitation of the existing WTP intake structure.
CWP-73	Citywide AMI Water Meter Replacement	System-wide program to replace water meters.
CWP-74	Amiss WTP Transmission Piping and Valve Replacement	Replacement of the transmission line from the WTP to the distribution system
CWP-75	West Shreveport Elevated Storage Tank Rehabilitation	Rehabilitation of storage tank infrastructure to address condition issues.
CWP-76	70th and Pines BPS Rehabilitation	Rehabilitation of pump station and storage tank infrastructure to address condition issues.
CWP-77	Water System Winterization and Resiliency Improvements	System improvements for resiliency to mitigate exposure during freezing weather.
CWP-91	Cross Lake Dam and Spillway Rehabilitation	Rehabilitation of the dam and spillway that controls the level in Cross Lake.
CWP-94	Ford Street Water Improvements	Relocation of existing 12-inch diameter water main under Ford Street.

Project Number	Project	Project Description
CWP-96	St. Vincent Elevated Storage Tank Rehabilitation	Rehabilitation of storage tank infrastructure to address condition issues.
CWP-98	Jordan Street Water Main Replacement	Replacement of existing 12-inch and 6-inch diameter water mains along Jordan Street.
CWP-100	Jewella/Fair/Magnum Water Main Replacements	Replacement of existing 6-inch diameter water mains along Jewella Avenue, Fair Street and Magnum Street.
CWP-101	Huron Street Water Main Replacement	Replacement of existing 8-inch diameter water mains along Huron Street.
CWP-107	BPS Standby Generator Installation (Permanent)	Installation of permanent backup power units at three (3) booster pump stations.

3.4 Construction Standards and Specifications

The 2020 Edition of the Standard Specifications for Infrastructure Improvements and 2020 Detail Standard Plans are being used in delivering projects that are being designed in Year 8. These documents will be used for new Consent and Non-Consent Decree projects and will continue to be updated as part of the City's efforts associated with continued improvement.

During the Year 8 reporting period the City transitioned to Engineers Joint Contract Documents Committee (EJCDC) Engineering Agreements and is utilizing them for new agreements. The City is continuing to transition toward utilization of the EJCDC General Conditions and Construction Documents. The EJCDC documents are expected to provide improved consistency in executing projects. It is anticipated that EJCDC construction documents will be available for use on future projects beginning in 2023.

After a detailed review was completed in Year 8, the City is currently utilizing updated Standard Specifications for Infrastructure Improvements and Detail Standard Plans. The Technical Specifications are being converted to Construction Specification Institute (CSI) format as part of the updates. This has improved the consistency and clarity of the specifications in addition to updating technical content. The City implemented a Standards and Specifications Committee to continue the process of keeping its Standard Specifications and Details current and to consider proposed modifications.

The current edition of the Standard Specifications for Infrastructure Improvements are available for viewing on the City's Engineering Division's website at <https://www.shreveportla.gov/DocumentCenter/View/20083/2021-Standard-Specifications>.

3.5 Citizen Engagement & Constituent Issue Management

The City continued public outreach and constituent issue resolution through the Year 8 reporting period. The software platform ZoHo was discontinued as incoming calls for constituent issues have decreased significantly. The City implemented the software SeeClickFix as a method to manage remaining and new constituent issues. The City also began integrating the SeeClickFix platform with Cityworks software to track service requests and work orders for constituent issues.

The main focus of most public outreach activities during Year 8 included social media outreach, web site development and media coverage concerning ongoing construction projects and other program initiatives. The continued use of social media platforms like Facebook, Instagram, and LinkedIn supported public outreach initiatives including Critical Infrastructure Project videos, highlighting World Water Day, announcing speaking engagements for City staff and program team members, hosting a tour of the T.L. Amiss Water Treatment Plant project, and attending a networking event with participants of the City's Fair Share program.

3.6 Capacity, Management, Operations, and Maintenance

The following information is a summary of activities conducted during the reporting period to demonstrate compliance with the CMOM program. This program aims at improving the ability of the utility to manage its separate sewer system and ultimately reduce the occurrence of sewer overflows and maintain reliable wastewater service.

3.6.1 Collection System Management

A summary of items related to management of the collection system is provided below.

3.6.1.1 Legal Authorities

Legal Authorities are in place to effectively manage and operate the Wastewater Collection and Transmission System (WCTS). These include several that are mandated as part of existing National Pollutant Discharge Elimination System (NPDES) Permits for the North Regional and Lucas WWTPs and others that enhance the management and source control of FOG. The City's

Sewer Use Ordinance (SUO) is embodied within the City's Code of Ordinances (COO), Part II, Chapter 94 Utilities. These ordinances generally provide the authority to do the following:

- Charge fees to all users of the sewer system, whether they reside within 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.

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.

3.6.1.2 Organizational Structure

Operation and Maintenance of the WCTS remains organized under the Department of Water & Sewerage. With the reorganization of the City Engineering & Environmental Services Department mentioned in Section 2.1, the Department of Water and Sewerage is now organized into six (6) divisions: Administration, Customer Service, Environmental Services, Water Purification, Wastewater, and Field Operations.

3.6.1.3 Pre-treatment Program

The Pretreatment Program is mandated by EPA through the NPDES permits issued to WWTPs. 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 EPA 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 Office within the

Engineering and Environmental Services Department. The City's Pretreatment program is developed to achieve the following objectives (COO 94-111):

- To prohibit the introduction of pollutants into the Publicly Owned Treatment Works (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 both POTW personnel who may be affected by wastewater and sludge in the course of their employment and the general public.
- To enable the City to comply with its NPDES and Louisiana Pollution Discharge Elimination System (LPDES) permit conditions, sludge 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 sludges from the system.
- To monitor and regulate the generation, transportation, and disposal of industrial and hazardous waste.
- To enforce applicable EPA 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-Categorical) with the City's CMOM Plan Submittal. An updated Master List of Industrial users is provided in Attachment 1.

During the reporting period a total of 38 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 8

reporting period. A total of 11 Notice of Violations (NOVs) were issued by the City during the reporting period.

3.6.1.4 FOG Program

The FOG Program, through training, outreach, inspections, and enforcement encourages non-domestic sources to limit the discharge of FOG into the sanitary sewer system. As Part of the overall NPDES-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 Water & Sewerage.

During the Year 8 reporting period there were a total of 551 permitted FSEs. A total of 1,439 compliance inspections were completed and resulted in a total of 130 NOVs issued.

Additional FOG preventative maintenance activities completed by the City during the Year 8 reporting period includes the addition of the BioGon Enzyme and Liberator Block. Table 3-11 provides a summary of the locations where BioGon Enzyme and Liberator Block were introduced into the sanitary sewer system. These locations are the same as reported during Year 7.

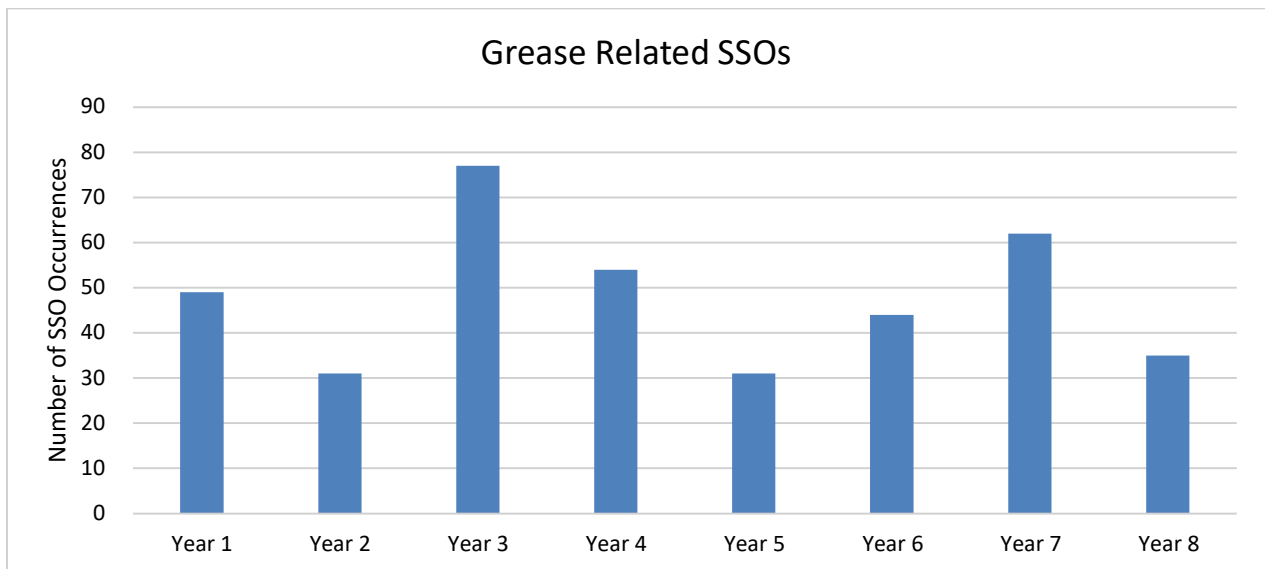
Table 3-11: FOG Enzyme Additive Locations

Quarter Section	Manhole Number
Y-52	MH14
Y-54	MH33
Z-57	MH7
CC-57	MH7 and MH47
JJ-43	MH18, MH20, MH21, and MH23
KK-47	MH09, MH21, MH24, MH25, and MH26
V-55	MH08
S-52	MH04
Q-51	MH26

Quarter Section	Manhole Number
JJ-40	MH01

FOG contributed to a total of 35 SSO occurrences during the reporting period. Figure 3-1 provides a summary by of the FOG 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, 47.4 grease related SSOs/year for years 2-6 (which represents an approximate 2% reduction), 53.6 grease related SSOs/year for years 3-7 (which represents an approximate 13% increase), and 45.2 grease related SSOs/year for years 4-8 (which represents an approximate 16% reduction).

Figure 3-1: Grease Related SSOs by Consent Decree Year



As part of Public Education and Outreach, the Can It Shreveport web page (www.canitshreveport.com) was linked to the Clean Water Shreveport website. This webpage was developed to provide education including what generates FOG, how FOG entry into the collection system causes problems with conveyance, and the negative environmental impacts this type of activity causes due to SSOs. Additional materials were distributed for outreach, and outreach was increased through social media in Year 8, as well.

3.6.1.5 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 is notified, and an investigation is completed. If the crew confirms the presence of lateral defect that is presenting a threat to public health, the Environmental Services Department is notified, and a 10-Day letter requiring resolution is issued. During the Year 8 reporting period a total of 40 letters were issued to private property owners due to lateral defects that were deemed a threat to public health.

In addition, the City is evaluating policy and legal issues that may need to be considered and addressed by the City to facilitate mitigation of lateral defects on private property during the Year 8 reporting period. This includes considering potential private property lateral program costs and funding considerations.

3.6.1.6 Information Management Systems (IMS)

The City continues to maintain Information Management Systems (IMS) which provides tools for tracking collection systems' performance, service requests, 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 ensure accurate documentation of pertinent collection system data and staff members' appropriate use of the IMS tools. Collectively, IMS tools give staff members a well-defined, detailed understanding of how the collection system performs by monitoring, analyzing, and measuring their performance. The City continued to maintain the following IMS systems during the reporting period:

- ArcGIS – Geographic Information System (GIS)
- CityWorks – Computerized Maintenance Management System (CMMS)
- Sanitary Sewer Overflow Database (MS Access database through Environmental Services)
- FOG Compliance (MS Access database through Environmental Services; however, the City is currently transitioning to a MyGovernmentOnline application)

- SCADA (Various systems managed through Water & Sewerage)

3.6.1.6.1 Geographic Information Systems (GIS)

The City's sanitary sewer system GIS is comprised of multiple feature classes (gravity sewers, manholes, lift station, force mains, valves, lateral lines, etc.) to reflect the current inventory of wastewater system components. Each of these requires review and updates, where necessary, to reflect the changed condition following completion of a construction project. The City continued updating its GIS during the Year 8 reporting period to reflect post-construction records following Phase 2 RMP projects, Critical Projects, and updates from the City's "Hot Spot" Sewer Cleaning and CCTV Program. During the Year 8 reporting period, a total of 23 cleaning databases, four (4) miscellaneous project updates and a six (6) Phase 2 RMP projects were completed and the remaining are expected to be completed during the Year 9 reporting period.

The City has continued to advance the use of GIS through the development of a variety of maps, viewers, and ArcGIS Online (AGOL) dashboards to expand access to key data sources such as SSA data and SSO tracking. AGOL Dashboards including the following are now available:

- SSO Dashboard
- Smoke Testing Dashboard
- FOG Dashboard
- Sewer Inspections – Pipeline Assessment and Certification Program (PACP) Dashboard
- Manhole Inspections – MACP Dashboard

3.6.1.6.2 CityWorks

CityWorks was implemented during 2016 and continues to serve as the CMMS for the Department of Water & Sewerage. 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 8 Reporting period, a total of 2,239 service requests were input, evaluated and responded to within CityWorks.

During the Year 8 reporting period, the City evaluated and updated the service request / work order categories to identify opportunities to more accurately reflect the types of requests received.

3.6.2 Collection System Operations

A summary of items related to operation of the collection system is provided below.

3.6.2.1 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. The SORP SOP provides guidance to Department of Water & Sewerage staff on how to respond, document and ensure that its properly reported to the appropriate regulatory authorities. 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 and able to access 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 or greater, the City has a media notification procedure that includes a press release notifying the general public of the occurrences.

During the evaluation Cityworks service requests that was completed in Year 8, it became evident that the SORP SOP needed to be updated to better reflect the reposit of data into Cityworks. The City is currently updating this process to guide W&S staff on the procedures to respond, evaluate, coordinate, address and document these activities using the Cityworks CMMS.

3.6.2.2 Sanitary Sewer Overflow (SSO): Year 8 Overview

During the Year 8 reporting period, a total of 129 SSOs were reported to LDEQ. This is a reduction of 47% in reported SSOs when compared to the 242 SSOs reported in Year 7. It also represents a 49% reduction compared to the 5-year rolling average for Consent Decree Years 3-7. It is evident

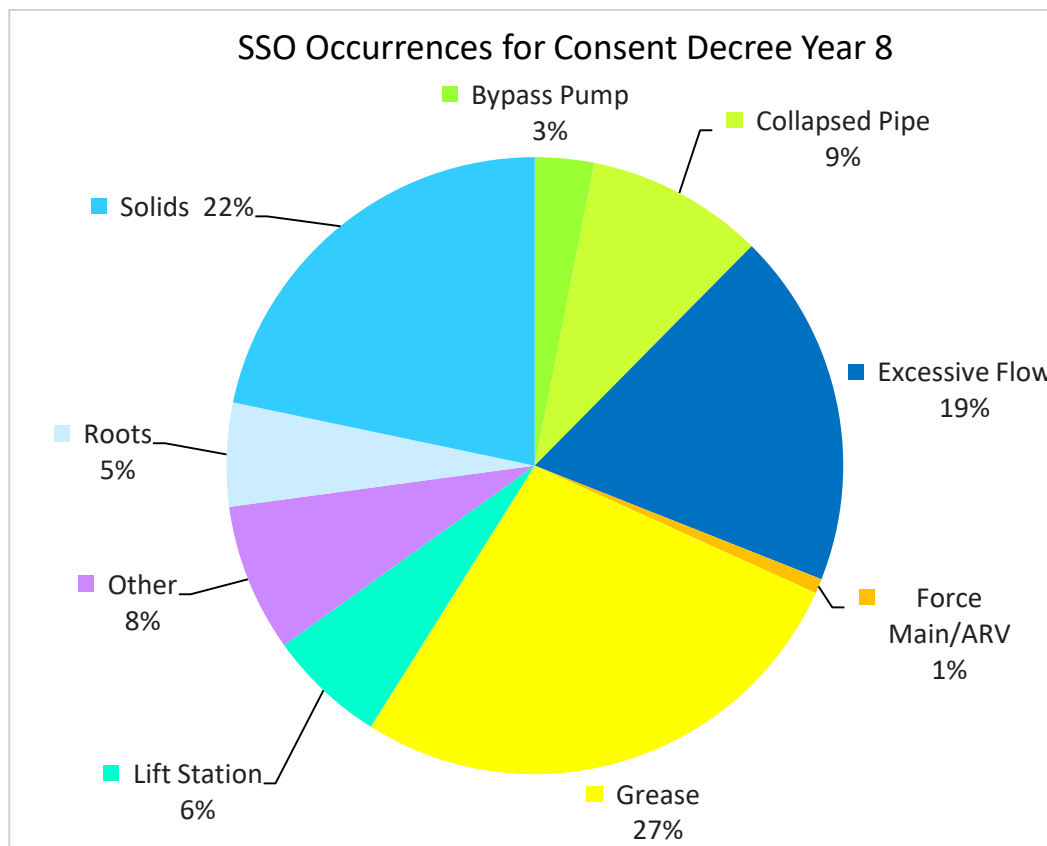
that the City’s efforts to address SSOs through targeted initiatives such as Critical Projects and the “Hot Spot” Cleaning and CCTV Program are having a positive impact on SSO occurrences.

Of the total Year 8 SSOs, 24 or 19 percent were due to excessive wet weather flow with the remaining 105 or 81 percent occurring during dry weather. This is consistent with previous years. Table 3-12 and Figure 3-2 provide a summary of the causes contributing to SSO occurrences during the Year 8 reporting period. An itemized list of Year 8 SSOs is included in Attachment 3.

Table 3-12: Year 8 SSO Summary

Weather Type	Wet Weather	Dry Weather							
SSO Type	Excessive Flow	Bypass Pump	Collapsed Pipe	Force Main/ARV	Grease	Lift Station	Other	Roots	Solids
Total	24	4	12	1	35	8	10	7	28
% of Year 8 SSOs	19%	3%	9%	1%	27%	6%	8%	5%	22%

Figure 3-2: SSOs Occurrences for Consent Decree Year 8



3.6.2.3 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 twelve (12) month period.

Table 3-13 provides a summary of SSO occurrences by year with 5-year rolling averages. The 5-year rolling average for the number of SSO occurrences was 251.8 SSOs per year in Years 2-6 and increased to 254.2 SSOs per year considering Years 3-7. The 5-year rolling average in Years 4-8 decreased to 234.2 SSOs per year.. The 5-year rolling average for volume lost was 496,779 gallons per year considering Years 3-7 and an approximate reduction of 0.7% to 493,120 gallons per year considering Years 4-8. The trend of dry weather SSO occurrences in Years 4-8 decreased compared to the previous 5-year rolling average for Years 3-7. Wet weather SSO occurrences in Years 4-8 increased compared to the previous 5-year rolling average for Years 3-7.

Table 3-13: 5-Year Trends Analysis: Wet Weather vs. Dry Weather SSO Occurrences

Consent Decree Year	Wet Weather SSO Occurrences	Dry Weather SSO Occurrences	Total SSO Occurrences	Total Volume Lost (gal)
Year 1	26	154	180	201,368
Year 2	128	102	230	1,000,530
Year 3	10	219	229	70,944
Year 4	33	195	228	736,363
Year 5	102	193	295	423,402
Year 6	53	224	277	426,828
Year 7	63	179	242	826,357
Year 8	24	105	129	52,649
Rolling Average: Years 1-5	59.8	172.6	232.4	486,521
Rolling Average: Years 2-6	65.2	186.6	251.8	531,613
Rolling Average: Years 3-7	52.2	202.0	254.2	496,779
Rolling Average: Years 4-8	55.0	179.2	234.2	493,120

The Year 8 SSO results shown in Table 3-11 strongly support the City's approach to strategically focusing its efforts on understanding the causes of SSOs in its system and implementing capital and maintenance programs designed to specifically mitigate those causes.

SSO occurrences by type were also evaluated as part of the 5-year Trends Analysis. Table 3-14 provides a summary of each type of SSO and associated trends analysis. The following is a brief discussion of trends associated with the type of SSO occurrences. Actions the City is taking to mitigate SSOs according to type are highlighted.

Table 3-14: 5-Year Trends Analysis: SSO Occurrences by Type

Consent Decree Year	Dry Weather SSOs								Wet Weather SSOs
	Bypass Pump	Collapsed Pipe	Force Main/ARV	Grease	Lift Station	Other	Roots	Solids	Excessive Flow
Year 1	4	18	6	49	13	17	19	28	26
Year 2	2	15	7	31	9	8	5	25	128
Year 3	1	33	5	77	15	18	4	66	10
Year 4	1	49	1	54	10	12	8	60	33
Year 5	3	53	1	31	14	12	9	70	102
Year 6	12	40	0	44	36	40	5	47	53
Year 7	16	24	2	62	26	10	5	34	63
Year 8	4	12	1	35	8	10	7	28	24
Rolling Average: Years 1-5	2.2	33.6	4.0	48.4	12.2	13.4	9.0	49.8	59.8
Rolling Average: Years 2-6	3.8	38.0	2.8	47.4	16.8	18.0	6.2	53.6	65.2
Rolling Average: Years 3-7	6.6	39.8	1.8	53.6	20.2	18.4	6.2	55.4	52.2
Rolling Average: Years 4-8	7.2	35.6	1.0	45.2	18.8	16.8	6.8	47.8	55.0
Difference in Rolling Average From Years 3-7 to 4-8	0.6	-4.2	-0.8	-8.4	-1.4	-1.6	0.6	-7.6	2.8
Rolling Average (% Increase/Decrease) From Years 3-7 to 4-8	9%	-11%	-44%	-16%	-7%	-9%	10%	-14%	5%

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.

- **Bypass Pump:** The City had observed an increase in the number of SSO occurrences associated with bypass pumps in Years 6 and 7 due to malfunction of bypass pumps used during sewer main repair/rehabilitation work or to keep lift stations in poor condition operational. The City has been focused on fixing its lift stations to prevent malfunctions requiring them to be placed on bypass. In Year 6, the City began delivery of the Critical Infrastructure Projects. In addition, during the Year 7 reporting period the City completed Lift Station Assessments to confirm the condition of other lift stations. The City has continued to assess the condition and performance of its lift stations; and design and construct lift station improvements in Year 8 to reduce the number of bypasses. This has been successful as the number of SSO occurrences related to bypass pumps decreased during Year 8.
- **Collapsed Pipe:** During the Year 8 reporting period, the number of SSO occurrences associated with collapsed pipes was the lowest within the last five (5) years and SSO occurrences associated with collapsed pipes has consistently decreased since Year 5. This can be partially attributed to completion of Phase 1 and 2 RMP projects. The implementation of the “Hot Spot” Cleaning and CCTV Program and the continuation of the On-Demand Water and Sewer Rehabilitation contract throughout Year 8 has also had a significant reduction of SSOs. Additional On-Demand contracts were awarded in the Year 8 reporting period and will add to the effort of reducing SSO occurrences.
- **Force Main / ARV:** Over the last five years of the Consent Decree, only 4 SSOs associated with force main or ARV related issues have occurred. That is significantly less than the 18 SSOs that occurred in the first three years of the City’s Consent Decree. The City has replaced significant portions of one of the largest and oldest force mains (Stoner Force Main) to limit the potential for future force main collapses and the associated SSO occurrences. Two other force main projects (Wallace and Cedar Grove force mains) are planned for future rehabilitation.
- **Grease and Solids:** During the Year 8 reporting period, the number of SSO occurrences associated with grease and solids was greatly reduced compared to previous years. This is evidence that the “Hot Spot” Sewer Cleaning and CCTV program is having a positive impact. The City continued to address grease and solids during the Year 8 reporting period through its “Hot Spot” Sewer Cleaning & CCTV program as a targeted effort to mitigate

maintenance-related dry weather SSOs. In addition, the City is implementing an Annual Sewer Cleaning Program. The City also intends to review other CMOM programs related to the control of FOG, as discussed in Section 4.2.

- **Lift Station:** The City had observed an increase in the number of SSO occurrences associated with lift stations in Years 6 and 7 due to equipment malfunction at certain lift stations. As a result, the City began delivering Critical Projects in Year 6 to address lift station deficiencies. Year 7 indicated this was a good course of action, and during Year 8, the number of SSO occurrences related to lift stations drastically decreased. This is evidence that the City's Critical Projects are making an impact on SSO occurrences. The City intends to continue making improvements to its lift stations. During the Year 8 reporting period, design projects were initiated for the rehabilitation of forty-one (41) lift stations to address current mechanical, electrical, hydraulic, and operational issues contributing to observed SSOs or reliability issues that, if not addressed, have a high likelihood of causing future SSOs.
- **Other:** The number of SSO occurrences in the "Other" category remained the same during the Year 8 as in Year 7. This is a reduction of 75% when compared to Year 6. The "other" category represents SSOs caused by miscellaneous sewer related issues not described by the other categories. A significant number of these issues in recent years have been determined to be associated with construction defects in sewer service laterals.
- **Roots:** Root related SSO occurrences increased from five (5) occurrences in Year 7 to seven (7) occurrences during the Year 8 reporting period. While this is a slight increase, it is not statistically significant. The City continues to implement its root control program as summarized in Section 3.6.3.
- **Wet Weather:** During the Year 8 reporting period, twenty-four (24) wet weather SSO occurrences were reported. This is a reduction of 62% when compared to the sixty-three (63) SSOs in Year 7. It is likely that reduced precipitation in Year 8 contributed to this. It is also likely that the "Hot Spot" Cleaning and CCTV Program is supporting wet weather overflow reduction by maintaining the capacity of the existing collection system.
The City has been working to mitigate some of the wet weather SSO locations which activate more regularly. A total of six (6) of the twenty-four (24) wet weather SSOs, approximately twenty-five (25%) percent of the total, are associated with the areas planned

to be addressed by the Dilg League and the Brookmeade & Querbes SSO Mitigation Projects discussed in Section 4.3. For other wet weather SSO locations, the City is continuing to develop its Capacity Assessment Program to plan improvements to mitigate wet weather SSOs, as discussed in Section 4.4.

3.6.3 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. A summary of these items is provided below.

3.6.3.1 Gravity Sewer Cleaning

The Gravity Sewer Preventative Maintenance Program includes routine cleaning and cleaning required per the Consent Decree SSA activities. This cleaning is completed by City staff. According to Consent Decree requirements, the City is responsible for cleaning greater than 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. During the first five years of the Consent Decree program, the City attempted to clean 100% of the pipes, rather than just the 15-inch diameter and greater as part of the SSA investigations. In addition to the "Hot Spot" Sewer Cleaning and CCTV program discussed below, the City is implementing an Annual Sewer Cleaning and CCTV program in 2022.

3.6.3.2 "Hot Spot" Sewer Cleaning and CCTV Program

The City initiated a "Hot Spot" Sewer Cleaning and CCTV program in March 2021 to mitigate¹ dry weather SSOs. The Year 8 program included approximately 292,000 linear feet of gravity sewer cleaning in addition to CCTV investigation. Reaches for this program were identified based on historical dry weather SSO activities tracked through the City's CMMS system, CityWorks. The program began in March 2021 and concluded in April 2022. The Year 8 program represented approximately 6 percent of the collection system. This program is in addition to sewer cleaning related to the City's ongoing Sewer Cleaning Program and cleaning SSA activities. The Year 9

¹ The term "mitigate", as used throughout this document when discussing sanitary sewer overflows (SSOs), should be understood to mean "reduce the frequency or severity of".

Hot Spot Cleaning program was developed during Year 8 and includes approximately 125,000 linear feet of gravity sewer cleaning which began in May 2022 (Year 9).

Table 3-15 provides a summary of sewer cleaning activities since the Effective Date of the Consent Decree and includes SSA cleaning, the City’s maintenance activities and the Year 8 “Hot Spot” cleaning through the reporting period.

Table 3-15: Summary of Gravity Sewer Cleaning Activities

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8
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 Preventative Maintenance	39,499	298,953	303,714	285,674	319,366	235,237	235,269	415,450
Hot Spot Cleaning ¹							49,969	241,393
Total	925,350	986,429	950,547	986,197	926,141	665,283	284,232	656,843
% of the Total Collection System	17.1%	18.3%	17.6%	18.3%	17.1%	12.3%	5.3%	12.1%

¹ The length shown for Hot Spot Cleaning in Year 8 includes sections of sewer in Phases 1, 2, 3, 4, and 5. Refer to Table 3-2 and Table 3-3 for a breakdown of segment lengths and diameters cleaned during Year 8 through the “Hot Spot” Sewer Cleaning and CCTV Program.

It is important to note that the total length of sewers cleaned in Year 7 was less than previous years due to the time required to develop and implement the “Hot Spot” Sewer Cleaning and CCTV program, especially during the COVID-19 pandemic. As discussed in Section 3.6.2.3, that program is having a positive impact on SSO occurrences within the City.

3.6.3.3 Manhole Rehabilitation and Inflow & Infiltration Reduction Program

The City’s Manhole Rehabilitation and Inflow & Infiltration Reduction program began in Year 8 to rehabilitate manholes in poor condition and address inflow & infiltration issues. A total of 8 manholes were selected for a pilot project to install Triplex Fiberglass Manhole Liners. These manholes were located in areas difficult to perform traditional excavations, such as high traffic areas, or were in close proximity to other structures or utilities. The City has identified 16

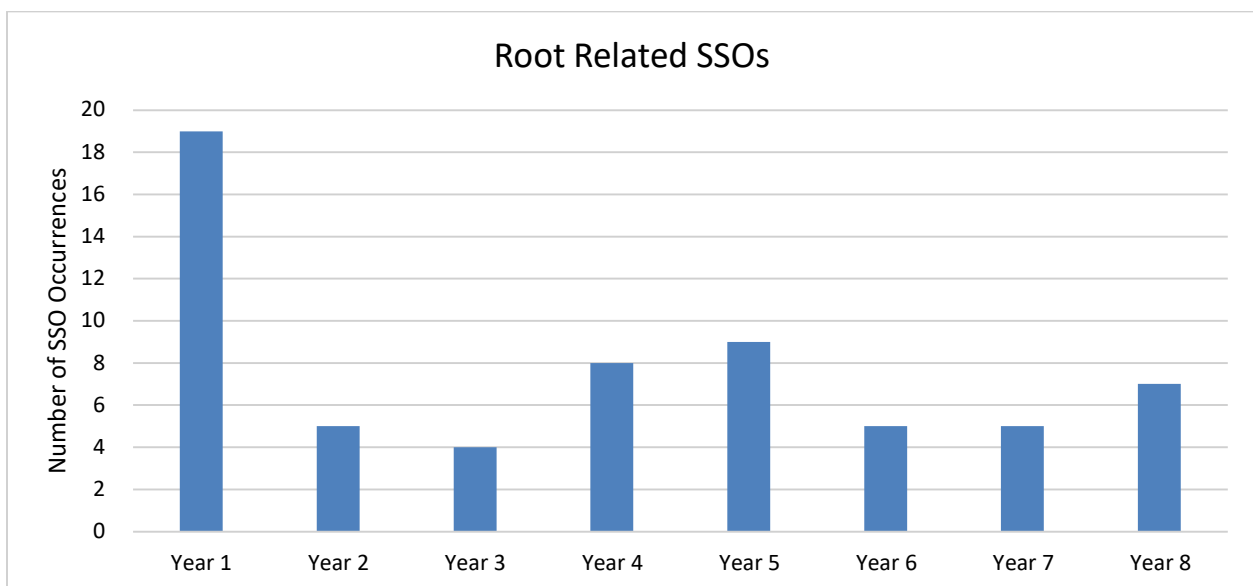
additional critical manholes for future rehabilitation. It is expected that these manholes will be rehabilitated in Year 9.

Additionally, the City began installing a “Sewer Sentry” device in some existing manholes at locations where venting is necessary to limit infiltration and inflow and reduce the potential for SSOs. Approximately 150 manhole covers have been fitted with a device to prevent rainwater from entering thru the existing manhole cover pick-hole. The City also modified its standard manhole details to include a “Sewer Sentry” device on all new manhole installations that are required to be vented.

3.6.3.4 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 CRC program was reinstated 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 381 gravity sewers (139,333 linear feet) were treated and a total of seven (7) root-related SSOs occurred representing approximately five (5) percent of the total SSOs reported for the period. Figure 3-3 below provides an illustration of root related SSO occurrences each of the Consent Decree reporting periods.

Figure 3-3: Root Related SSOs by Reporting Period



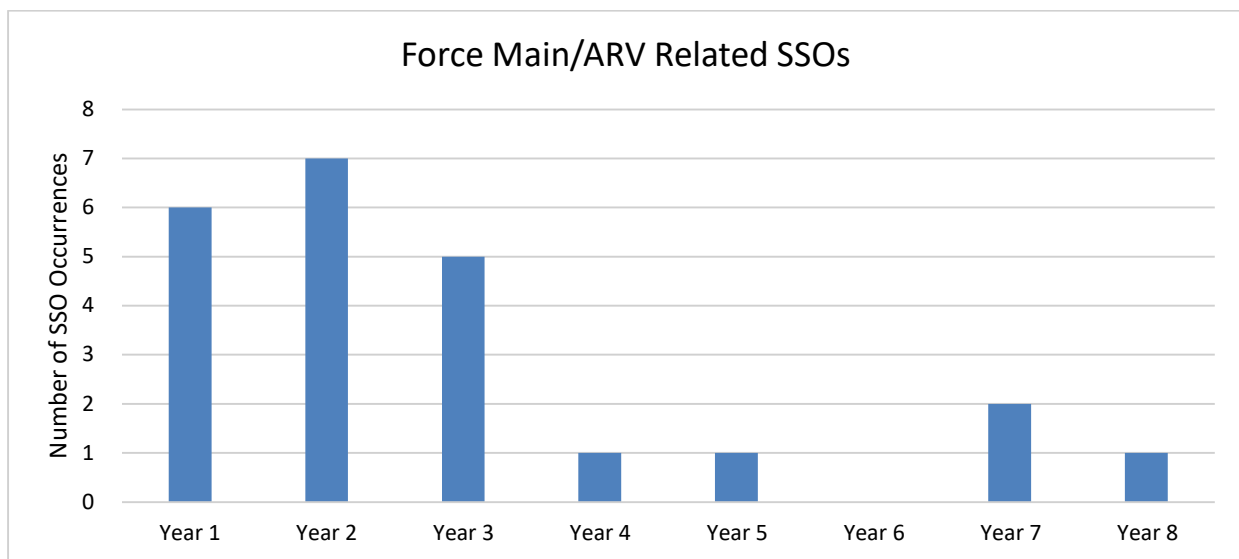
3.6.3.5 Force Main / ARV Inspection Program

The City’s Force Main and Air Release Valve (ARV) inspection program implemented as part of the Consent Decree requirements and issued with the original CMOM plan in 2015. This program generally includes:

- Annual inspection of the force mains which includes walking the full length of the force main 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 ARVs to remove internal debris; and replace of defective ARVs.
- Tracking maintenance activities for force main and ARV inspections.

During the reporting period, each of the City’s force mains and ARVs were inspected. There was one (1) recorded SSO occurrence caused by force main failures representing less than one (1) percent of the total during the reporting period. Figure 3-4 illustrates force main and ARV related SSO occurrences that have occurred during each of the Consent Decree reporting periods.

Figure 3-4: Force Main/ARV Related SSO Occurrences



3.6.3.6 On-Demand Water and Sewer Rehabilitation Services

The City continues to utilize its On Demand Water and Sewer Rehabilitation Contracts to maintain its sanitary sewer collection system. Approximately 350 work orders were issued to On Demand

contractors in Year 8 with approximately 320 of these work orders completed. Work orders ranged from repairs to existing manholes and sewer mains to installation of approximately 500 linear feet of new 36" diameter gravity sewer utilizing directional drilling methods. The City authorized approximately \$5 million worth of work to On Demand contractors in Year 8. The City intends to continue its utilization of On Demand Contracts during Year 9.

3.6.3.7 Wastewater Treatment Plant Operations & Maintenance Program

The City implemented the Wastewater Treatment Plant (WWTP) Operations & Maintenance (O&M) Program with the initial CMOM Plan submittal in 2015. The WWTP O&M includes a total of 50 SOPs. Through the reporting period there have not been 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

During the Year 8 reporting period, Discharge Monitoring Reports (DMRs) were issued monthly and Toxicity Reports were issued quarterly to LDEQ to meet LDPES permit requirements for both the Lucas (Permit # LA0041394) and North Regional (Permit # LA0042188) WWTPs.

4.0 CONSENT DECREE – YEAR NINE (9)

The major objectives to be completed during the next reporting period (Year 9: May 13, 2022 to May 12, 2023) 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. In addition, it is important to note that the planned activities have been developed to align with and support the overriding goal and objective of the Consent Decree to mitigate sewer overflows. Activities necessary for the City to operate and maintain reliable wastewater and water utilities have also been prioritized. The activities relate directly to many specific Consent Decree requirements even though a shift away from the defined “find and fix” method of addressing all defects in the collection system through a phase-by-phase approach is required.

4.1 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 for its utility customers.

4.2 CMOM Programs

The City will continue to evaluate opportunities to further achieve the goal of SSO reduction through implementation of its CMOM programs. Planned activities during the Year 8 reporting period are summarized below.

4.2.1 Update of Geographical Information Systems (GIS)

The City will continue to update its GIS to reflect field investigations performed through SSA activities and construction record information associated with Phase 2 RMP projects, the Critical Infrastructure Projects Program and updates identified through the various City cleaning programs. Updates to the wastewater GIS layers as well as the dashboards used to track and provide access to inspection inventories will be maintained through Year 9.

4.2.2 “Hot Spot” Cleaning and CCTV Program

The City will continue implementation of the “Hot Spot” Cleaning and CCTV Program. A description of the Year 9 “Hot Spot” Cleaning and CCTV Program was submitted to EPA in January 2022. In total, approximately 124,000 linear feet of gravity sewers are included in the

2022 “Hot Spot” Cleaning and CCTV Program. Cleaning and CCTV activities began during the Year 9 reporting period in May 2022.

4.2.3 Annual Cleaning and CCTV Program

The City developed an “Annual” Cleaning and CCTV Program for the WCTS based on pipe materials, age, diameter, and sewer system maintenance records in Year 8. A description of the Year 9 “Annual” Cleaning and CCTV Program was submitted to EPA in January 2022. The approximately 260,000 linear feet of gravity sewers included in the 2022 Annual Cleaning and CCTV Program represent approximately 4.8% of the collection system. This is in addition to the sewers that are part of the “Hot Spot” Cleaning and CCTV program. Cleaning and CCTV activities began during the Year 9 reporting period in May 2022.

4.2.4 Updates to City’s Work Order and Data Management Systems

The City plans to continue to develop workflows in its CMMS to track capital project activities, cleaning activities, and CCTV inspections. In addition, the City plans to continue developing interactive dashboards to integrate data collected through field investigation activities to support strategic data-driven decisions by management staff. This and other operational data will be displayed through management reports on demand and used to plan and prioritize utility operational and program activities. The City also plans to implement regular Cityworks training sessions for its utility staff.

4.2.5 Review of FOG Program

The City will continue to evaluate the effectiveness of existing FOG related program activities including software, staffing and existing SOPs during Year 9. The City will continue to evaluate program activities using the FOG dashboard developed during Year 7. The effectiveness of public outreach and education initiatives, FOG enzyme procedures and key performance indicators will continue to be assessed.

4.2.6 Review of Sewer Overflow Response Plan (SORP)

The City intends to continue review of its existing SORP SOP to identify where improvements might be needed and opportunities for correlating reporting of SSOs with hydraulic model results. The SORP SOP was written prior to the acquisition of Cityworks as the CMMS for the City and process efficiencies may be obtained through an update to the SOP.

4.2.7 Review of Private I/I Program

The City plans to continue evaluating policy and legal issues that may need to be considered and addressed by the City to facilitate mitigation of lateral defects on private property. This includes considering potential private property lateral program costs and funding considerations.

4.3 Critical Infrastructure Projects Program

The City will continue to deliver the current portfolio of Critical Projects, as presented in Section 3.3.3, that were selected to mitigate SSOs and maintain reliable utility service by addressing known facility and operational issues within the City's wastewater and water utilities. However, but it is likely that rampant inflation associated with the current economic climate will drive project costs up. In addition, the City may continue scoping and developing additional Critical Projects through continued capital planning activities which will focus projects on SSO mitigation, compliance, and maintaining reliable wastewater and water utility systems.

The City estimates that implementation of all the Critical Projects will cost approximately \$415 million. As discussed in Section 2.3, the City is currently exploring funding opportunities that could supplement its currently available funding and enable these projects to be completed. If additional funding becomes available, the City plans to use an Integrated Planning Approach to select projects for further implementation and construction. The approach will allow the City to consider all of its compliance and utility obligations, including the City's obligations to provide reliable water service. As stated previously, detailed design and construction of all of the City's project identified in this report, as well as others that may be identified in future years, will be dependent upon financial assistance from federal and state agencies, and the lack of such assistance is expected to delay program implementation.

4.4 Capacity Assessment Program

A description of the City's ongoing and planned activities to develop a system-wide wet weather overflow strategy is below. This is reflective of discussions with the regulatory agencies during the December 3, 2020 and April 16, 2021 meetings, as well as submittals made subsequent to these meetings. Table 4-1 provides a timeline for major activities associated with this initiative.

Table 4-1: Timeline of Wet Weather Control Strategy

Activity	Anticipated Completion Date
Update and Recalibrate the City's Hydraulic Model	January 2022 (Year 8) - Complete
Complete a Return Period Analysis	April 2022 (Year 8) - Complete
Update and Revise the City's Capacity Assessment Report	July 2022 (Year 9)
Evaluate Alternative Wet Weather Control Measures to Identify Those that are Both Affordable and Cost-Effective to Reduce SSOs to the Targeted Level of Service	September 2022 (Year 9)
Update and Revise the City's Capacity Assessment Remedial Measures Plan	January 2023 (Year 9)

4.4.1 Update and Recalibration of the Hydraulic Model

The City has completed the update to the the hydraulic model network and recalibration of the model to incorporate flow and rainfall data collected in 2020 and 2021. The City completed the hydraulic model update and recalibration in January 2022 during the Year 8 reporting period. During the Year 9 reporting period, the hydraulic model will be maintained to incorporate new information as it becomes available through other program activities and assessments.

4.4.2 Capacity Assessment Report

Following completion of the model update and recalibration, a Return Period Analysis was performed and completed in April 2022. The City plans to submit an updated Capacity Assessment Report to EPA and LDEQ in July 2022. The Capacity Assessment Report will summarize the major findings of the Return Period Analysis and capacity assessment and will serve as the basis for update of the Capacity Assessment Remedial Measures Plan.

4.4.3 Capacity Assessment Remedial Measures Plan

The City will update and revise its Capacity Assessment Remedial Measures Plan in Year 9. The report is expected to include an assessment to support evaluation of alternative wet weather control measures, identification of capacity projects, and determination of an affordable Level of Service for the collection system. Alternative control measures will be evaluated to identify those improvements that are both affordable and cost-effective to reduce SSOs to the targeted Level of Service. Such alternatives will include, but may not be limited to, public sewer I/I reduction, wet

weather storage basins, relief sewers, lift station improvements, treatment plant improvements, CMOM program implementation, etc.

4.5 Condition Assessment Program

The City plans to continue assessing its wastewater system during the Year 9 reporting period as described below. Condition assessments will be completed through ongoing activities in the following four (4) programs. The most practical and cost effective solutions for resolving significant defects and the timetable for implementing these solutions considering the long-term performance and consequence of failure of each asset will be identified in a Condition Remedial Measures Plan to be submitted to EPA in January 2023.

4.5.1 Collection System Assessment Program

The City developed a prioritized approach for inspection and assessment of its gravity sewer mains and manholes in 2022 and beyond. A summary was submitted to EPA in January 2022. In Year 9, the City plans to collect GPS coordinates and complete visual inspections of manholes within the Highland, Princess Park, and Texas Pierre subbasins. In total, approximately 840 manholes are anticipated to be inspected and GPS-located. Upon completion of this work, the City will have conducted GPS locates and inspections of approximately 13,150 out of the approximately 14,300 manholes in its collection system since 2014. This represents 92% of the total number of manholes in the City's collection system.

4.5.2 Lift Station Assessment Program

The City will continue to routinely assess its lift stations to determine if other remedial actions are required. Additional lift station rehabilitation projects will be identified in the Condition Remedial Measures Plan.

4.5.3 Force Main Assessment Program

The City will continue to routinely assess its force mains to determine if other remedial actions are required by developing and maintaining a database of information regarding force main pipe condition data. Additional force main rehabilitation projects will be identified in the Condition Remedial Measures Plan.

4.5.4 Wastewater Treatment Plant (WWTP) Assessment Program

The City will continue to routinely assess its wastewater treatment and residuals facilities to determine if previously identified projects, or others identified in subsequent assessments, require action to maintain reliable operations or compliance with the City's LPDES permits. The City will also continue development of a Supervisory Control and Data Acquisition (SCADA) Master Plan to identify needed improvements along with costs and a timeline associated with implementing SCADA upgrades. Additional WWTP and sludge processing projects will be identified in the Condition Remedial Measures Plan.

ATTACHMENT 1 – INDUSTRIAL USERS OF THE PRE-TREATMENT PROGRAM

Industrial Users of the Pre-Treatment Program
Year 8 Summary

Count	Facility Name	Address	City	State	Zip code
1	Alfasigma USA, Inc. Claiborne	2008 Claiborne Avenue	Shreveport	LA	71103
2	ALSCO	5000 Hollywood Avenue	Shreveport	LA	71109
3	Benteler Steel/Tube Manufacturing Corp.	11650 Highway 1	Shreveport	LA	71115
4	Calumet Lubricants & Waxes, L.L.C.	3333 Midway Street	Shreveport	LA	71133
5	CB&I	740 North Market Street	Shreveport	LA	71107
6	Certainfeed	620 Aero Drive	Shreveport	LA	71107
7	Christus Schumpert Highland	1453 East Bert Kouns Industrial Loop	Shreveport	LA	71105
8	Circle K Stores	5112 Monkhouse Drive	Shreveport	LA	71109
9	Crown Health Care Laundry Services	3305 Mansfield Road	Shreveport	LA	71103
10	Dr. Reddy's Laboratory	8800 Line Avenue	Shreveport	LA	71106
11	Frost Industries	5320 Greenwood Road	Shreveport	LA	71109
12	Frymaster	8700 Line Avenue	Shreveport	LA	71106
13	Integrated Power Services	1245 North Hearne Avenue	Shreveport	LA	71107
14	International Paper	1212 Tolmak Road	Shreveport	LA	71107
15	KCS	4601 Shreveport-Blanchard Highway	Shreveport	LA	71107
16	Libbey Glass	4302 Jewella Avenue	Shreveport	LA	71109
17	Liberty Oilfield Services	2675 Valley View Drive	Shreveport	LA	71108
18	Liquid Environmental Solutions	437 Fortson Street	Shreveport	LA	71107
19	Omni Specialty Packaging	10399 Highway 1 South	Shreveport	LA	71115
20	Overton Brooks VA Medical Center	510 East Stoner Avenue	Shreveport	LA	71101
21	Pel State Oil	3102 Jewella Avenue	Shreveport	LA	71109
22	Penske Truck Leasing	6890 Bert Kouns Industrial Loop	Shreveport	LA	71129
23	Pratt Paper (LA), LLC	10429 Richard Pratt Drive	Shreveport	LA	71115
24	Prolec GE USA	7000 West Bert Kouns Industrial Loop	Shreveport	LA	71129
25	Purina Mills	223 West 63rd Street	Shreveport	LA	71136
26	Republic Services	6896 West Bert Kouns Industrial Loop	Shreveport	LA	71129
27	Ryder Truck Rental	2510 Lakeshore Drive	Shreveport	LA	71103
28	Safety-Kleen Systems, Inc.	2760 Valley View Drive	Shreveport	LA	71108
29	Ternium	2500 Ron Bean Boulevard	Shreveport	LA	71115
30	Twin States Trucking	7690 West 70th Street	Shreveport	LA	71107
31	Union Pacific-Jewella	6215 East Jewella Avenue	Shreveport	La.	71108
32	University Health	1541 Kings Highway	Shreveport	LA	71103
33	Willis-Knighton Medical Center	2600 Greenwood Road	Shreveport	LA	71103
34	Willis-Knighton Pierremont	8100 Youree Drive	Shreveport	LA	71115
35	Willis-Knighton South	2500 Bert Kouns Industrial Loop	Shreveport	LA	71118
36	Woolworth Landfill	10581 Woolworth Road	Keithville	LA	71047
37	WSP Chemicals & Technologies, LLC	5677 North Industry Road	Shreveport	LA	71107

ATTACHMENT 2 – FOG PROGRAM PUBLIC OUTREACH

Public Outreach for FOG Program
Year 8 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
1	05/24/2021	FSE	3077 N. Market	Checkers	Left 2 posters, 10 rack cards
2	05/24/2021	FSE	Pierremont Rd and Thornhill	FSE	Left 8 poster and 40 rack cards at Dillas Quesdillas, Oyster Bar, Superior steak house, Another Broken Egg.
3	05/24/2021	Residential	Normandie Drive & Birch	2900 block of Birch and 9300 block of Normandie drive	Left 20 door hangers, 20 rack cards and three poster at Holy Cross Villas West and the adjacent resident on the 9300 block of normandie drive.
4	05/24/2021	Residential	9041 mansfield rd	Cambridge Court Apartments	Left 3 posters at the facility and 100 rack cards with the apartment manager.
5	05/24/2021	Residential	5553 S. Lakeshore Drive		Left at 15 homes door hangers and 50 at the Towers apartments.
6	05/24/2021	FSE	Crawdaddy's	9370 Mansfield	Let 2 posters and 20 rack cards.
7	05/24/2021	Residential	5843 Second St		20 doorhangers
8	05/26/2021	Residential		2457 Midway	10 door hangers
9	05/26/2021			17 Lake Forest Hills	Unable to access gated community
10	06/02/2021	FSE	5900 Dillingham avenue	Pierremont Health Care Center	Left 10 door hangers at the 5900 block and 6000 block of Dillingham. 2 Posters and 10 rack cards at Pierremont Health care. On last week we covered an sso and left adjacent FSE varlous rack cards and poster related to the previous sso and this sso.
11	06/02/2021	FSE	2702 Catherine	Queensboro Elementary School	Left 6 poster for the varous bathrooms at the school, Covered Willis Knighton North, Neuro Surgery Office, Loud Family Denistry, and the 2600 block of Fredrick; also the 2700 block of Missouri.
12	06/17/2021	Residential		9371 Mansfield Rd	left door hangers on Birch Ave, townhouses right behind the apartment complex, 3 posters and rack cards at Southport Apartment complex
13	07/09/2021	Proactive Measure for Grease Control	Kingston Village	9045 Kingston rd	left rackcards, funnels and scrapers
14	07/09/2021	Proactive Measure for Grease Control	Foxborough Cove	8200 Pines rd	Left posters, funnels, lids and rackcards.
15	07/09/2021	Residential		9213 Cade Dr	22 door hangers
16	07/09/2021	Proactive Measure for Grease Control	Oak Meadows Apts	1901 Centenary Blvd	50 funnels, 50 rack cards, 50 door hangers, 50 scrapers, 50 lids
17	07/09/2021	Proactive Measure for Grease Control	Old Salem Village	6725 Buncombe Rd	50 funnels, 50 rack cards, 50 door hangers, 50 scrapers, 50 lids
18	07/12/2021	Residential		2639 Lindholm	15 door hangers
19	07/12/2021	Proactive Measure for Grease Control	Fairmont Towers	726 Cotton St	funnels, rack cards, scrapers and lids, posters
20	07/12/2021	Proactive Measure for Grease Control	The Villages of Westlake	5610 Buncombe Rd	posters, lids, scrapers and rack cards, funnels
21	07/13/2021	Proactive Measure for Grease Control	Fox Trail	7000 Fox Trail	rack cards, lids, scrapers and posters, funnels
22	07/13/2021	Proactive Measure for Grease Control	Riverdale Apartments	6800 Raspberry Lane	posters, lids, scrapers and lids
23	07/12/2021	Proactive Measure for Grease Control	Westwood Village	6777 Raspberry Lane	posters, rack cards, lids and scrapers and funnels
24	07/13/2021	Proactive Measure for Grease Control	Riverdale Apartments	6800 Raspberry Lane	funnels, rack cards, scrapers and lids, posters
25	07/14/2021	Proactive Measure for Grease Control	Towers at Crosslake	5638 S. Lakeshore	lids, scrapers, funnels, rack cards, posters
26	07/14/2021	Proactive Measure for Grease Control	LIVE Apartments	4223 Lakeshore Dr	rack cards, funnels, lids, scrapers and posters
27	07/14/2021	Proactive Measure for Grease Control	Haystack Apartments	7000 Fern Ave	funnels, rack cards, posters, lids and scrapers
28	07/14/2021	Proactive Measure for Grease Control	Kingwood Forest Apartments	8200 Wild Briar Dr	rack cards, scrapers, lids, posters
29	07/14/2021	Proactive Measure for Grease Control	Fair Park Terrance Apartments	3401 Mertis St	rack cards, lids, scrapers, posters

Public Outreach for FOG Program
Year 8 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
30	07/14/2021	Proactive Measure for Grease Control	Fair Park Manor	3401 Mertis Ave	rack cards, lids, scrappers, and posters
31	07/15/2021	Proactive Measure for Grease Control	Bayou Oaks	2100 Grimmetts	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
32	07/15/2021	Proactive Measure for Grease Control	Forest Oak Apartments	1674 David Raines	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
33	07/15/2021	Proactive Measure for Grease Control	Prince Village	2488 David Raines	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
34	07/15/2021	Proactive Measure for Grease Control	Galilee Arms	1525 Sycamore	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
35	07/15/2021	Proactive Measure for Grease Control	Galilee City	1600 Park Avenue	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
36	07/15/2021	Proactive Measure for Grease Control	Greenwood Terrance	4619 Luciana	Left 100 Lids, 100 Scrappers, 6 Posters, 150 Doorhangers and rackcards.
37	07/16/2021	Proactive Measure for Grease Control	Jordan Street Senior Apt	623 Jordan street	Left coloring books, scrappers, lids, and posters with 100 rack cards
38	07/16/2021	Proactive Measure for Grease Control	Southwood Garden	8550 Cedar Creek	Left coloring books, scrappers, lids, and posters with 100 rack cards
39	07/16/2021	Proactive Measure for Grease Control	Southwood Square	9085 Dean Rd, Shreveport, 71118	9085 Dean Rd, Shreveport, 71118
40	07/16/2021	Proactive Measure for Grease Control	Villa Del Lago	3500 Miliam	9085 Dean Rd, Shreveport, 71118
41	07/16/2021	Proactive Measure for Grease Control	Country Club Crossing	6220 Greenwood Rd	9085 Dean Rd, Shreveport, 71118
42	07/16/2021	Proactive Measure for Grease Control	Stone Canyon	8911 Greenwood Rd	9085 Dean Rd, Shreveport, 71118
43	07/16/2021	Proactive Measure for Grease Control	Canebrake	8891 Sugarland drive	9085 Dean Rd, Shreveport, 71118
44	08/12/2021	Residential		9141 Walker Rd	Southwood Village Apartments Valero, corner of Bert Kouns & Walker Rd Johnston Chiropractor Caddo Acupuncture 9200 block of Walker left door hangers, posters and rack cards
45	08/19/2021	Residential		633 Pickwick	Issued approximately 30 door hangers on the 600 block of Pickwick and Meadowdale Pl,
46	08/27/2021	Residential		101 E. Mc Cormick St	left approximately 30 door hangers on McCormick and E. Ratcliff
47	08/30/2021	Residential	Intensive Speciality Hospital	1800 Irving Place	Spoke with kitchen manager, left 5 posters and 20 rack cards
48	09/16/2021	Residential		160 E. Jordan St	Placed door hangers on E. Jordan and E. Egan St (approximately 20 door hangers)
49	10/04/2021	Residential	Fox Trail Apartments	7000 Red Fox Trail	Left 100 rack cards, 4 posters
50	10/14/2021	Residential	525 W. 77th street	MH-24 EE-52_MH-23 EE-52	Grease related SSO public outreach performed on 20 homes on W. 77th and W. 76th. Resident received door hangers.
51	10/25/2021	Residential		5700 Bert Kouns	15 door hangers
52	10/27/2021	Proactive Measure for Grease Control	The Louisiana State Fair		40 rack cards were passed out
53	11/23/2021	Residential		639 Kingstowne pl, Shreveport, LA 71108	Public Outreach performed on 26 Residential homes, by way of doorhangers.
54	11/23/2021	Residential	9021 Hilton Drive	9021 Hilton Drive	Public Outreach performed on 26 Residential homes, by way of doorhangers.
55	11/29/2021	Residential		456 Boulevard st	Public Outreach aided 26 homes with door hangers starting at the 400 block of Boulevard and the 400 block of College st. This main lined the residential back yards.

Public Outreach for FOG Program
Year 8 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
56	11/29/2021	Residential	Lakeville Townhomes	3610 Beckham st	Outreach performed on residential townhome apartments at 3602-3614 Beckham drive. 16 Doorhanger issue to the residents.
57	11/30/2021	Residential	The Towers	5638 S Lakeshore Dr	left 5 posters and 100 rack cards
58	12/06/2021	Residential		4025 Jewella avenue	Issued 10 door hangers, cover Thompson street, Whataburger, Tire Shop, Smoke Shop, Diesel Driving academy building off Grove and Fair st.
59	12/10/2021	Residential		5810 Creswell Ave	10 door hangers
60	12/21/2021	Residential		515 Boulevard	Outreached 17 door hangers-500 block of Boulevard and 500 block of College street
61	12/30/2021	Residential	209 Merrick st	209 Merrick st	24 residents receive door hangers
62	02/07/2022	Residential		802 Brushy Lane	left 10 door hangers, several houses empty
63	02/28/2022	FSE	Bayou Thunder Saloon	1910 Market St	business looked closed, no one around
64	07/08/2021	Proactive Measure for Grease Control	Magnolia Apartments	3201 Knight St	funnels, rack cards, lids, scrappers posters
65	07/08/2021	Proactive Measure for Grease Control	Champion Lake Apartments	3501 Champion Lake Blvd	funnels, lids, scrappers, rack cards
66	07/08/2021	Proactive Measure for Grease Control	River Walk	1000 River Walk	rack cards, lids, funnels, scrappers
67	07/08/2021	Proactive Measure for Grease Control	Riverside Oaks	109 Southfield Rd	rack cards,funnels, lids and scrappers
68	07/08/2021	Proactive Measure for Grease Control	Summit of Shreveport	6051 Roma Drive	rack cards, scrappers, funnels, lids
69	07/08/2021	Proactive Measure for Grease Control	Canaan Towers	400 N. Dale St	funnels, lids, scrappers, rack cards
70	07/08/2021	Proactive Measure for Grease Control	Canaan Village Apt	1915 Patzman	rack cards, funnels, scrappers, lids
71	07/08/2021	Proactive Measure for Grease Control	Barton Drive Manor	1625 Barton Dr	rack cards, funnels, scrapers
72	10/08/2021	Proactive Measure for Grease Control	Seasons Apartments	9100 Walker Road	Left flyers, grease lids, scrapers, and funnels for residents
73	07/09/2021	Proactive Measure for Grease Control	Ashton Apt	6000 West 70th street	Left Scrappers, posters, rackcards.
74	07/09/2021	Proactive Measure for Grease Control	Aspen Apartments	9730 Baird Rd	Left scrappers, Lids, rackcards, and 2 posters.
75	10/08/2021	Proactive Measure for Grease Control	Southfield Village Apartments	9005 Walker Road	Placed flyers, funnels, scrapers, and grease can tops in the office for residents
76	07/09/2021	Proactive Measure for Grease Control	Barton Drive Apartments	904 Barlet Drive	Left scrappers, lids, rackcards and posters.
77	07/09/2021	Proactive Measure for Grease Control	Castlewood Apr	2045 Bert Kouns	Left rackcards, lids and funnels, and scrappers.
78	07/09/2021	Proactive Measure for Grease Control	Cannan Village Apt	1915 Patzman st	Left kids, rackcards, funnels, and posters.
79	10/09/2021	Proactive Measure for Grease Control	The Boulders on Fern	8455 Fern Avenue	Placed flyers along with for prevention supplies in the leasing office.
80	07/09/2021	Proactive Measure for Grease Control	Chimney Hills Apt	2750 Waggoner Avenue	Left lids, funnels, rackcards and posters
81	07/09/2021	Proactive Measure for Grease Control	Oak Meadows Apts	1901 Centenary Blvd	50 funnels, 50 door hangers, 50 rack cards, 50 lids
82	07/09/2021	Proactive Measure for Grease Control	Old Salem Village	6725 Buncombe Rd	50 funnels, 50 door hangers, 50 rack cards, 50 lids
83	07/09/2021	Proactive Measure for Grease Control	Colonial Plaza	215 Sand Beach	Left lids, posters, rackcards, scrappers

Public Outreach for FOG Program
Year 8 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
84	07/09/2021	Proactive Measure for Grease Control	Park place manor	3231 Mertis Ave	50 funnels, 50 door hangers, 50 rack cards, 50 lids
85	07/09/2021	Proactive Measure for Grease Control	Country Club Crossing	6260 Greenwood rd	Left rackcards, funnels, lids, and scrappers, with posters
86	06/18/2021	Proactive Measure for Grease Control	Let The Good Time Roll Festival	101 Crockett	Passed out about 20 rack cards
87	07/02/2021	Proactive Measure for Grease Control	Millicent Crossing Apartments	8700 Millicent Way	100 funnels, 100 rack cards, 100 scrapers, 100 lids given to office manager
88	07/02/2021	Proactive Measure for Grease Control	Willow Trace Apartments	8100 Pines Rd	left flyers, funnels and grease can covers for 100 residents
89	07/02/2021	Proactive Measure for Grease Control	Willow Trace Apartments	8100 Pines Rd	left flyers, funnels and grease can covers for 100 residents
90	07/02/2021	Proactive Measure for Grease Control	The Village @ Westlake	5610 Buncombe Rd	left flyers, funnels and grease can covers for 100 residents
91	07/06/2021	Proactive Measure for Grease Control	Ultris Island Park	1105 Island Park Blvd	100 racks cards, 100 scrapers, 100 doorhangers, 100 funnels, 100 lids
92	07/06/2021	Proactive Measure for Grease Control	Stone Vista Apartments	541 Stoner Ave	5 posters, 100 rack cards, funnels and scrapers
93	07/06/2021	Proactive Measure for Grease Control	River Scape Apartments	1535 River Pkwy Blvd	Issued posters, rack card, funnels and scrapers
94	07/06/2021	Proactive Measure for Grease Control	Colony Square Apartment	3020 Colquitt Rd	Posters, rack cards, funnels and scrapers
95	07/06/2021	Residential	Cambridge Court Apartments	9041 Mansfield Rd	Posters, rack cards, funnels and scrapers
96	07/06/2021	Proactive Measure for Grease Control	Country club crossing	6260 Greenwood rd	50 lids, 50 rack cards, 50 funnels, 5 posters
97	07/06/2021	Proactive Measure for Grease Control	Village Square Apartments	4210 Greenwood Lane	left poster, flyers, funnels and grease can covers for 50 residents
98	07/06/2021	Proactive Measure for Grease Control	Tiffany Square Apartments	7200 Jewella Ave.	left flyers, funnels and grease can covers for 50 residents
99	07/06/2021	Proactive Measure for Grease Control	The Willow @ Wright Island	1333 Coates Bluff	left 2 posters, and flyers, funnels and grease can covers for 50 residents
100	07/07/2021	Residential	Cambridge Court	9041 Mansfield Rd	rack cards, scrapers, posters
101	07/07/2021	Residential	Colonial Plaza	215 Sand Beach	
102	07/07/2021	Residential	Reflection of Island Park	2600 Celebration CV	rack cards, scrapers, funnels, posters
103	07/07/2021	Proactive Measure for Grease Control	Briarwood	4025 Golfink Blvd	Rack cards, funnels, scrapers
104	07/07/2021	Proactive Measure for Grease Control	Riverscape Apt Homes	1535 River Parkway Blvd	Posters, rack cards, scrapers, posters
105	07/07/2021	Residential		3015 Samford Ave	Only 2 houses on block, 2 door hangers
106	02/28/2022	Residential		Redfos and Foxchase	20 door hangers
107	03/15/2022	Residential		Wilkinson & Dillard ST	9 door hangers, some abandoned houses
108	03/29/2022	Residential	Forest Estates Mobile Homes	6201 Bert Kouns	Left approximately 150 rack cards and door hangers, coloring books
109	05/09/2022	Proactive Measure for Grease Control	Hillside Apartments		left 50 funnels, scrapers, pamphlets, and posters
110	05/10/2022	Residential		542 Sally Ann Drive	handed out 20 pamphlets
111	05/11/2022	Residential	Southwood Gardens	9085 Dean Rd	5 posters, 30 lids, pamphlets

ATTACHMENT 3 – YEAR 8 SANITARY SEWER OVERFLOWS

Sanitary Sewer Overflows (SSOs)
Year 8 Summary

Count	Date	Facility ID	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	5/13/2021	45Z-54	855 McCormick	1.37 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	40 gal
2	5/18/2021	4KK-47	9370 Mansfield Road	1.47 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	250 gal
3	5/21/2021	38BB-52	5843 Second Street	0.92 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
4	5/21/2021	11DD-56	Querbes Drive	0.18 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	200 gal
5	5/26/2021	12GG-52	8700 Coyth Lane	0.5 hrs	rain event	sewage partially contained	vacuum manhole	Brush Bayou	300 gal	400 gal
6	5/26/2021	16GG-52	8600 Coyth Lane	0.5 hrs	rain event	sewage partially contained	vacuum manhole	Brush Bayou	300 gal	400 gal
7	5/26/2021	20GG-52	8700 Coyth Lane	0.5 hrs	rain event	sewage partially contained	vacuum manhole	Brush Bayou	200 gal	400 gal
8	5/26/2021	29GG-52	606 Darinda Lane	0.5 hrs	rain event	sewage partially contained	vacuum manhole	Brush Bayou	50 gal	100 gal
9	5/26/2021	30X-54	1124 Dalzell Street	0.67 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	35 gal
10	5/28/2021	13Y-56	2911 Centenary Blvd	2.25 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
11	5/30/2021	14CC-55	5900 Dillingham Ave	1.47 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2 gal
12	6/1/2021	11DD-58	Querbes Drive	0.67 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1500 gal
13	6/3/2021	33R-45	2800 Rosenwald Street	1.37 hrs	lift station down	sewage was not contained	lift station back in service	Cross Lake	0 gal	200 gal
14	6/5/2021	21EE-51	720 W. 72nd Street	0.62 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	25 gal
15	6/5/2021	23BB-57	276 Arthur Ave.	0.52 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	300 gal
16	6/7/2021	45Z-55	Highland Ave	3.08 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	2400 gal
17	6/7/2021	32Z-56	101 E. McCormick Street	0.55 hrs	roots	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	25 gal
18	6/9/2021	29X-54	1068 Dalzell	5.55 hrs	disconnected sewer service	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	10 gal
19	6/9/2021	N/A	5863 Fairfield Ave	0.33 hrs	customer lateral blockage	sewage completely contained	vacuum manhole	Bayou Pierre	5 gal	5 gal
20	6/10/2021	12GG-52	8636 Coyth Lane	0.55 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	15 gal
21	6/12/2021	03MM-46	3302 New Moon Drive	1.03 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	700 gal
22	6/15/2021	11KK-47	9371 Mansfield Road	1.23 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	50 gal
23	6/17/2021	15AA-56	4214 Barbara Avenue	1.07 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
24	6/21/2021	09CC-54	Fairfield Avenue	6.17 hrs	customer lateral blockage	sewage partially contained	contained	Bayou Pierre	0 gal	200 gal
25	6/27/2021	46Y-51	3701 Hearne Ave	3.18 hrs	main break	sewage was not contained	washed sewer main	Brush Bayou	0 gal	5 gal
26	6/29/2021	11Z-50	3809 Hearne Ave	1.0 hrs	main break	sewage was not contained	set up pump	Brush Bayou	0 gal	5 gal
27	7/6/2021	69Y-53	3015 Samford Avenue	1.08 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2 gal
28	7/7/2021	15HH-53	9213 Cade Street	1.68 hrs	grease	sewage partially contained	unstopped by wash truck	Brush Bayou	100 gal	500 gal
29	7/9/2021	06PP-67	10889 Hwy 1	1.83 hrs	lift station down	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	300 gal
30	7/11/2021	N/A	2639 Lindholm Street	1.17 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	5 gal
31	7/12/2021	42Y-51	3809 Hearne Ave	1.87 hrs	bypass pump malfunction	sewage was not contained	lift station back in service	Brush Bayou	0 gal	20 gal
32	7/16/2021	N/A	3825 Hearne Avenue	0.40 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Brush Bayou	0 gal	200 gal
33	7/19/2021	12X-53	Southern Avenue	1.5 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1500 gal
34	7/20/2021	19Z-52	1842 Desoto Street	1.55 hrs	customer lateral blockage	sewage was not contained	contacted contractor to make repairs	Brush Bayou	0 gal	10 gal
35	7/20/2021	N/A	3700 Hearne Ave	1.97 hrs	bypass pump malfunction	sewage partially contained	set up bypass pump	Brush Bayou	300 gal	1000 gal
36	7/21/2021	28AI-50	8930 Brookwood Drive	1.12 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	400 gal
37	7/21/2021	31X-53	2501 Southern Ave	1.07 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
38	7/22/2021	02TT-57	11250 Magnolia Glen	1.20 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
39	7/23/2021	11DD-56	6336 Querbes Drive	1.0 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	300 gal
40	7/26/2021	21SS-57	11060 Seville Quarters	3.90 hrs	roots	sewage was not contained	set up pump	Brush Bayou	0 gal	1000 gal
41	7/27/2021	06X-57	335 E. Dalzell Street	1.67 hrs	main break	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	2100 gal
42	7/28/2021	55Y-53	Samford Ave	2.92 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	300 gal
43	8/3/2021	E35AAA-55	622 Unadilla Street	1.15 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
44	8/5/2021	N/A	9255 Ellerbe Road	0.70 hrs	lift station down	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	200 gal
45	8/9/2021	N/A	North Common	3.17 hrs	lift station down	sewage was not contained	sewer lift personnel	Red River	0 gal	1200 gal
46	8/10/2021	43CC-54	6118 Fairfield Ave	1 hrs	customer lateral blockage	sewage was not contained	washed sewer main	Brush Bayou	0 gal	15 gal
47	8/11/2021	18JJ-46	9141 Walker Road	1.42 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	13 gal
48	8/15/2021	N/A	1959 Michoud Street	0.83 hrs	main break	sewage was not contained	reestablished connection	Cross Bayou	0 gal	300 gal
49	8/17/2021	15GG-51	633 Pinkwick Pl	1 hrs	grease	sewage was not contained	unstop main with wash truck	Brush Bayou	0 gal	40 gal
50	8/19/2021	13R-45	2825 East West Ave	1.20 hrs	grease	sewage was not contained	vacuum manhole	Brush Bayou	0 gal	10 gal
51	8/25/2021	06U-53	1460 Clay Street	1.13 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	2 gal
52	8/26/2021	28Z-56	101 E McCormick Street	2.43 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
53	8/26/2021	02Y-47	4424 Fairway Drive	3.08 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	2400 gal
54	8/27/2021	50W-55	1800 Irving Pl	4.80 hrs	grease	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	500 gal
55	9/3/2021	28Z-58	101 E. McCormick Street	0.73 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2 gal
56	9/9/2021	N/A	6000 St. Vincent Ave.	1 hrs	disconnected sewer service	sewage completely contained	customer service disconnected	Bayou Pierre	20 gal	20 gal
57	9/15/2021	12W-56	160 E. Jordan Street	1.50 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	10 gal	0 gal
58	9/15/2021	04EE-38	6801 W. 70th Street	1.88 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	2500 gal	0 gal
59	9/20/2021	08DD-55	6305 Creswell Ave.	1.75 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2 gal
60	9/30/2021	12X-52	2300 Levy Street	0.92 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal

Sanitary Sewer Overflows (SSOs)
Year 8 Summary

Count	Date	Facility ID	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
61	10/3/2021	02EE-41	Red Fox Trail	3.83 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	1000 gal
62	10/4/2021	02EE-41	Red Fox Trail	1.67 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	300 gal
63	10/8/2021	15EE-52	521 W. 75th Street	1.75 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	500 gal
64	10/11/2021	11KK-47	9371 Mansfield Road	1.83 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	100 gal
65	10/13/2021	24EE-52	525 W 77th	1.25 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	80 gal
66	10/20/2021	05JJ-46	3152 Bert Kouns Industrial Loop	0.75 hrs	N/A	sewage was not contained	washed sewer main	Gilmer Bayou	0 gal	5 gal
67	10/21/2021	N/A	11315 Hertiage Oaks	2.50 hrs	lift station down	sewage was not contained	sewer lift personnel	Brush Bayou	0 gal	750 gal
68	10/22/2021	01X-53	2127 McClellan Street	1.15 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
69	10/24/2021	40JJ-42	5700 Bert Kouns Industrial Loop	3.50 hrs	grease	sewage partially contained	unstopped by wash truck	Gilmer Bayou	3600 gal	1800 gal
70	10/25/2021	16X-57	314 E Boulevard St.	1.33 hrs	main break	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	10 gal
71	11/3/2021	13Y-58	W. Cavett Drive	1 hr	N/A	sewage was not contained	unstopped by wash truck	Anderson Bayou	0 gal	10 gal
72	11/18/2021	17AA-41	4111 Pines Road	3.25 hrs	roots	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	5000 gal
73	11/19/2021	37GG-51	639 Kingstowne Place	1.87 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
74	11/20/2021	27II-47	9021 Hilton Drive	1.90 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1500 gal
75	11/22/2021	21AA-41	4111 Pines Road	6.08 hrs	roots	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	1000 gal
76	11/24/2021	64X-55	456 Boulevard Street	1 hr	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
77	11/29/2021	17XX-44	5638 S. Lakeshore Drive	2.07 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	1000 gal
78	12/3/2021	29Z-48	4025 Jewella Ave.	1 hr	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1500 gal
79	12/6/2021	09W-55	Egan Street	3.05 hrs	debris	sewage partially contained	unstopped by wash truck	Bayou Pierre	50 gal	100 gal
80	12/9/2021	N/A	5810 Creswell Ave.	1.30 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
81	12/19/2021	66X-55	515 Boulevard Street	1.32 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
82	12/28/2021	21X-55	209 Merrick Street	1.17 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
83	1/4/2022	12EE-41	7000 Red Fox Tr	3.28 hrs	debris	sewage was not contained	washed sewer main	Gilmer Bayou	0 gal	1000 gal
84	1/4/2022	12EE-41	7000 Red Fox Tr	3.28 hrs	debris	sewage was not contained	washed sewer main	Gilmer Bayou	0 gal	1000 gal
85	1/6/2022	19X-49	3435 Fredrick Street	3.02 hrs	lift station down	sewage was not contained	lift station back in service	Cross Bayou	0 gal	2000 gal
86	1/7/2022	23BB-47	4242 Illinois Avenue	4.13 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	300 gal
87	1/7/2022	99X-55	2700 Gilbert Drive	2.82 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
88	1/7/2022	99X-55	2700 Gilbert Drive	7.82 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
89	1/16/2022	15HH-53	9213 Cade Drive	1.38 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
90	1/18/2022	05JJ-46	3152 Bert Kouns Industrial Loop	3.43 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	500 gal
91	1/18/2022	05JJ-46	3200 Green Terrace Road	2.65 hrs	main break	sewage was not contained	set up bypass pump	Bayou Pierre	0 gal	3000 gal
92	1/19/2022	48V-54	Southern Avenue & Sam R Fertitta Drive	3 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2000 gal
93	1/27/2022	13X-52	2350 Levy Street	0.63 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
94	2/1/2022	38Y-55	459 Atkins Ave.	1.0 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	75 gal
95	2/5/2022	28EE-51	802 Brushy Lane	1.0 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
96	2/6/2022	08EE-49	1505 Old River Circle	1.25 hrs	lift station down	sewage was not contained	sewer lift personnel	Old River	0 gal	50 gal
97	2/10/2022	07S-54	232 Island Street	5.0 hrs	main break	sewage partially contained	vaccum manhole	12 Mile Bayou	250 gal	300 gal
98	2/11/2022	18BB-54	831 Erie Street	0.67 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
99	2/13/2022	10FF-51	2201 Amelia Avenue	0.75 hrs	disconnected sewer service	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	20 gal
100	2/14/2022	12DD-37	6800 Westport Avenue	16.75 hrs	debris	sewage partially contained	unstopped by wash truck	Gilmer Bayou	1800 gal	700 gal
101	2/17/2022	38Y-55	247 Herndon Street	0.75 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
102	2/20/2022	12EE-41	Redfox	2.0 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	20 gal
103	2/22/2022	17V-56	1910 Market Street	4 hrs	grease	sewage was not contained	vaccum manhole	Red River	0 gal	400 gal
104	3/1/2022	N/A	465 71st Street	2.82 hrs	rain event	sewage was not contained	vaccum manhole	Bayou Pierre	300 gal	N/A
105	3/3/2022	02EE-41	7000 Red Fox Trl	1.83 hrs	grease	sewage was not contained	washed sewer main	Gilmer Bayou	0 gal	10 gal
106	3/9/2022	08X-55	Wilkinson Street	2.10 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	300 gal
107	3/22/2022	15AFF-51	809 Browning Street	0.33 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	700 gal
108	3/22/2022	N/A	611 E. Washington Street	0.58 hrs	rain event	sewage was not contained	N/A	Red River	0 gal	N/A
109	3/22/2022	22GG-52	534 Lynbrook Blvd	0.17 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1000 gal
110	3/22/2022	05X-47	1628 Dilg League	0.33 hrs	rain event	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	N/A
111	3/27/2022	07AA-57	3767 Greenway Place	2.45 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
112	3/28/2022	23V-50	2733 Milliam	9.02 hrs	debris	sewage partially contained	washed sewer main	Red River	50 gal	65 gal
113	3/28/2022	02EE-41	7000 Red Fox Trl	2.35 hrs	main break	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	350 gal
114	3/28/2022	03JJ-40	6201 Bert Kouns	1.53 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
115	3/28/2022	13X-51	2219 Virginia Avenue	2.65 hrs	debris	sewage was not contained	unstop main with wash truck	Cross Lake	0 gal	150 gal
116	4/5/2022	N/A	1628 Dilg League	N/A	heavy rain and flooding	N/A	N/A	Cross Lake	N/A	N/A
117	4/9/2022	N/A	3450 Pines Road	3.25 hrs	main break	sewage was not contained	reestablished connection	Cross Lake	0 gal	200 gal
118	4/11/2022	18NN-58	420 Braemar Road	0.83 hrs	customer lateral blockage	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
119	4/12/2022	15Y-53	2940 Samford Avenue	0.85 hrs	grease	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	6 gal
120	4/25/2022	19JJ-46	9143 Walker Road	1.02 hrs	debris	sewage partially contained	unstopped by wash truck	Gilmer Bayou	100 gal	200 gal

Sanitary Sewer Overflows (SSOs)
Year 8 Summary

Count	Date	Facility ID	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
121	4/25/2022	08Z-45	4708 Greenwood Road	3.47 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
122	4/29/2022	13EE-53	329 72nd Street	1.97 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
123	5/6/2022	13DD-56	6706 Querbes Drive	23.75 hrs	rain event	sewage partially contained	N/A	Bayou Pierre	16000 gal	unknown
124	5/6/2022	12GG-52	Janet Lane	1.33 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	200 gal
125	5/6/2022	01DD-55	412 Trinity Circle	0.37 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	5 gal
126	5/6/2022	S14GG-53	8717 St. Vincent Ave.	0.42 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	15 gal
127	5/7/2022	17GG-52	542 Sally Ann Drive	1 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	25 gal
128	5/9/2022	N/A	10230 Westwind Drive	17.93 hrs	lift station down	sewage partially contained	lift station back in service	Long Lake	100 gal	200 gal
129	5/10/2022	33GG-51	601 Kingstowne Pl	0.72 hrs	rain event	sewage was not contained	N/A	Gilmer Bayou	0 gal	25 gal