City of Shreveport, Louisiana

Consent Decree Annual Report – Year 12

May 13, 2025 - May 12, 2026

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 property 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.

Brandon R. Snead
Interim Director of Water & Sewerage
City of Shreveport

Date 7/9/26

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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, 2025 to May 12, 2026.

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 collection system and repair 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 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).

Note that the City is currently in negotiations with the EPA regarding an extension of the Consent Decree and modifications to specific components of the scope of work in the current Consent Decree. The City is continuing to perform various utility operational and management programs and CIP projects during the Consent Decree negotiations including the execution of critical capacity and condition projects, The City is conducting focused ongoing sewer inspection activities, and targeted wet weather and dry weather SSO mitigation as well. As stated above, this annual report presents the activities and findings of work completed in Consent Decree (CD) Year 12. It also includes a summary of activities planned for the period May 13, 2026 to May 12, 2027 which is referred to in this report as Consent Decree Year (CDY) 13.

2.0 PROGRAM ADMNISTRATION DURING YEAR 12

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 12 reporting period.

2.1 Organizational Changes

A summary of organizational changes or challenges experienced by the City of Shreveport during the Year 12 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 had a range of 320-350 budgeted positions from 2019-2027 but has averaged approximately 20-percent vacancies in those years. This has resulted in the City investing considerable time and energy in having sufficient personnel coverage for essential utility operations and maintenance functions.
- A major departmental restructuring was implemented to improve efficiencies by reorganizing the City's Department of Engineering & Environmental Services. This restructuring was completed in 2022. Primarily, the Environmental Services staff moved into the Department of Water & Sewerage and Engineering staff moved into the Department of Public Works. The Department of Water & Sewerage has managed the Clean Water Shreveport program since the end of 2022.
- In May 2025, the Director of Water and Sewerage resigned, and a new Interim Director was named to lead the Department.

2.2 Regulatory Coordination

Significant coordination with federal and state regulatory agencies continued throughout Year 12, 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 12 reporting period is provided below.

2.2.1 Determination of Stipulated Penalties

On August 16, 2024, the City received a stipulated penalty demand letter for $13,346,000 for the period from May 14, 2021 through May 13, 2024. The City provided additional information to the Agencies following receipt of the letter and is currently working to resolve the stipulated penalties with the Agencies. This issue is still unresolved.

2.2.2 Consent Decree Modification Negotiations

Over the period of time between May 15, 2025 and October 1, 2025, there had been several communications with USDOJ, EPA, and LDEQ to negotiate modifications to the existing Consent Decree; however, communications have stalled due to circumstances included below. The following list summarizes events and communications with USDOJ, EPA, and LDEQ over the Year 12 dates:

- On May 15, 2025, a meeting was held during which the City and the Agencies discussed financial terms of the negotiations.
- On July 30, 2025, USDOJ informed the City that they will have a new case attorney representing the EPA in this matter.
- On October 1, 2025, Congress failed to reach an agreement to extend funding for the federal government and a widespread shutdown took effect. The US government was reopened on November 13, 2025.
- On October 16, 2025, EPA requested information from the City GIS Specialist related to specific Consent Decree contracts, and related work orders from the Contract date.

2.3 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 challenge for the City's environmental justice and majority minority population – never mind the low- and fixed-income residents.

2.3.1 Financial Hardship and Capability Assessment

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 was 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 percent in 2020, 2 percent in 2021, and 2 percent in 2022. Water rates increased 6 percent in 2020 and 4 percent in 2022. Our counsel advises that most other utilities did not have rate increases during the COVID-19 pandemic years.

The City continues to address both its current and future financial needs. The City's 2019 and 2020 debt service coverage ratios were found to be non-compliant by LDEQ and its bond agencies. On July 26, 2022, the City requested financial consulting services to develop a rate study to regain compliance with their debt service coverage ratios, as well as develop a plan for meeting the funding needs for Consent Decree projects.

On April 26, 2024, the City Council approved a rate increase of 10 percent for both water and sewer utilities. This rate increase, along with a Rate Stabilization Fund, was instituted for the purposes of meeting compliance with the City's bond convenance and determined that this was sufficient for compliance with debt service coverage ratios.

The estimated cost remaining to comply with the current Consent Decree (including remaining Critical Projects and collection system repairs) likely exceeds $1 Billion, based on the anticipated scope of work remaining. The City is unable to fund all remaining Consent Decree obligations without rate increases placing an unconscionable financial burden on its ratepayers, especially its most vulnerable residents with low- and fixed-incomes. The City intends to utilize its available funding from 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 the City's only funding source unless financial assistance is provided by federal or state agencies, or other revenue sources become available. As discussed below, the City is doing its due diligence to pursue and obtain funding assistance.

It should be noted that the City has financial responsibilities for water supply, water treatment, water storage, water distribution, wastewater treatment and biosolids residuals management that are not included in the estimated cost to implement the remaining Consent Decree obligations. These costs include capital improvement and maintenance projects, as well as operational costs. These costs are significant and cannot be deferred until the Consent Decree work is completed. This places additional financial burden on the City. The City is pursuing funding assistance to implement the capital improvement and maintenance projects concurrently with the Consent Decree work.

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 developments regarding how these funds will be distributed to municipalities, 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 administered through the State Revolving Fund (SRF) loan programs. The City has been actively coordinating with the LDEQ and Louisianna Department of Health (LDH) regarding funding opportunities through the SRF program.

Clean Water State Revolving Fund (CWSRF): On March 26, 2024, the City submitted a pre-application letter to the CWSRF for a loan to fund construction costs for the rehabilitation and replacement of deteriorated and aging sanitary lift stations, and undersized sewer mains and manholes related to the Consent Decree. On November 1, 2024, the City received a letter from CWSRF informing it that the pre-application was approved. The City submitted the loan application and associated forms to LDEQ for their review and approval on October 28, 2025. As part of the State's review of the CWSRF loan application, a third-party rate study was initiated in Fall 2025 with that study anticipated to be completed in June 2026. The City is working with CWSRF to close the loan by October 30, 2026. Based on information provided by LDEQ, CWSRF loan funding, valued at $20 Million, could be available to the City as soon as Fall 2026. The City will continue to request loan funding from CWSRF as a source of revenue to assist in the completion of Consent Decree related work.

Water Sector Program: The City has attempted to maximize opportunities for funding provided through the State of Louisiana. In both 2021 and 2022, applications were submitted to Louisiana's Water Sector Program, including a request for $5 Million to fund a major sanitary sewer overflow mitigation project related to the Consent Decree. The Water Sector Program awarded the City a grant of $5.85 Million to fund improvements to its water tanks and a waterline to a neighborhood to consolidate its drinking water utility and mitigate water quality issues. In November 2025, the City submitted a request to the Water Sector Program for $2.24 Million for the consolidation of the same neighborhood's sewer utility into the City's collection system, which would allow for the decommissioning of a private wastewater treatment facility that is not in compliance with permit requirements. A response to the requested funds from the Water Sector Program is anticipated in Summer 2026 following the State's Legislative Sessions. The City will continue to request funding from the Water Sector Program to complete necessary wastewater and water infrastructure projects.

Overflow Sewer Grant Program: In June 2026, the City was informed of potential Overflow Sewer Grant Program funding, valued at approximately $1.7 Million, that is available through the CWSRF program. The City is in the process of preparing requested application documents associated with this available funding before submitting for LDEQ's review and approval. The City will continue to request loan funding from CWSRF programs as a source of revenue to assist in the completion of Consent Decree related work.

General Obligation Bonds: The City has been focused on identifying additional local funds to address infrastructure needs. Consistent with the City's best efforts to remain compliant with its Consent Decree obligations, citizens were asked on April 27, 2024 to vote on a general obligation bond proposal totaling $256 Million. Three (3) propositions encompassing streets, drainage, bridges, water, sewer, and parks and recreation made up the proposal. Proposition #2 included $82 Million for water and sewer improvements, including approximately $52 Million in sewer projects directly associated with the City's Consent Decree. After failed previous attempts to pass a general obligation bond, the citizens approved all three (3) propositions. As of June 2026, approximately $9.5 Million of the bond funds allocated for sewer projects has been bid and awarded, with the remaining sewer projects earmarked for bond funding planned to be bid and awarded prior to the end of calendar year 2027.

The City plans to continue to issue Utility Revenue Bond (URB) debt; approximately every two years throughout the duration of the negotiated Consent Decree to fund Consent Decree projects. The details of the bond issuances would be dependent on the duration and projected cost of work in the negotiated Consent Decree.

USEPA Water Infrastructure Finance and Innovation Act (WIFIA): Lastly, the City submitted a pre-application to the WIFIA Program requesting approximately $52 Million which included funding to support Consent Decree projects. Matching funds would include funding already allocated to infrastructure projects by the City and funding raised through the general obligation bonds approved on April 27, 2024. The City received notification from WIFIA that the pre-application was approved on May 23, 2025. The City is in the process of preparing the associated loan application for WIFIA funding and anticipates closing on this loan in 2027. The City anticipates that it will continue to request loan funding from WIFIA as a source of revenue to assist in the completion of Consent Decree related work.

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 paramount. Extreme weather events, such as violent storms, strong winds, sustained high and low temperatures, ice, snow, and heavy rains, and the aftermaths of these events, have 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 LDH in late 2021.

The findings of the Sanitary Survey included thirty-nine (39) "Significant Deficiencies" for the City to address. The City was able to address twenty-nine (29) of those deficiencies within the first year; however, the deficiencies noted by LDH included improvements that would require an investment of time, resources, and capital funding into the City's water utility, including the rehabilitation and repainting of all of the distribution system storage tanks which would require

them to be removed from service. As of June 2026, several of these projects have reached completion with the remaining projects anticipated to be completed in early 2027.

These needs were again reinforced by the grading system that has been developed by LDH, as part of Act 98 of the 2021 Louisiana Legislative Session (R.S. 40:5.9 and 5.9.1). This legislation requires LDH to "establish, adopt and implement a letter grade schedule to grade community water systems to provide an accountability process to support drinking water sustainability for the citizens of Louisiana." For the 2024 and 2025 grading years, the City received a letter grade of "F" from LDH using their scoring system (2024 was later amended to be a letter grade of "D"). Systems with a letter grade of "D" or "F" may be subject to new debt restricted to water system improvements only, among other enforcement actions under the code.

Additionally, the City completed an initial Lead Service Line inventory on October 16, 2024, as required in the Lead and Copper Rule Improvements regulations. Due to the City's LDH letter grade, the EPA "Get the Lead Out" team offered assistance with the physical inspection of more than 2,000 water service lines to identify their material type. This work was completed in 2025/2026, and the results will assist the City in quantifying the impact of the survey on its capital and financial planning.

The City expects that completion of the work required for compliance with LDH and the Lead and Copper Rule Revisions (LCRR) 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.

3.0 SUMMARY OF ACTIVITIES IN YEAR 12

The following sections summarize activities completed in the Year 12 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 outlined in Section **Error! Reference source not found.**, the City has been actively coordinating with federal and state regulatory agencies. The activities reported in this section reflect the 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 SSAs 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 12 reporting period. Table 3-1 below provides a summary of the City's SSA Report submissions.

Table 3-1 SSA Report Submittals through Year 12

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 – 88% Complete

During the Year 12 reporting period, the City completed operation and maintenance of SSA activities within its wastewater system focused on maintaining the City's infrastructure and mitigating SSOs as discussed below. SSA activities performed within Phases 1-4 are outlined below. SSA activities in Phase 5 are discussed later as they were the primary focus of Year 12.

3.1.2 Phase 1 – 4 SSA: Activities Completed in Year 12

During the Year 12 reporting period, additional field investigations were completed within Phases 1-4 to support ongoing program initiatives. Sewer assessments were completed through the "Hot Spot" and Annual Sewer Cleaning and Closed-Circuit Television Video (CCTV) Programs.

3.1.2.1 Sewer Cleaning and CCTV Inspections

In June 2025, the City initiated two (2) activities related to sewer cleaning and CCTV inspections: a "Hot Spot" Program and an Annual Program. The 2025 "Hot Spot" Program focused on, but was not limited to, sewer cleaning and CCTV investigations at locations identified with recorded dry weather SSOs that occurred in the calendar year 2024 and the first quarter of calendar year 2025. The length of sewer cleaned and televised through the "Hot Spot" Program during the Year 12 reporting period is shown in Table 3-2. A total of 79,991 linear feet of gravity sewer were cleaned and televised in Phases 1-4 as part of the Year 12 "Hot Spot" Program.

The Annual Program focused on post CCTV investigations of reported NASSCO Structural Grade 5 defects that were repaired or rehabilitated by the City or their On-Demand Maintenance Contractors. The length of sewer cleaned and televised through the Annual Program during the Year 12 reporting period is shown in Table 3-3. Approximately 80,460 linear feet of gravity sewer were cleaned and televised in Phases 1-4 as part of the Year 12 "Annual" Program.

Deficiencies identified through these Programs with the potential to cause SSOs were either mitigated, have been scheduled for mitigation, or will be prioritized for future capital improvement projects.

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	536	3,404	200	1,997
8	4,749	8,272	21,772	13,224
10	858.3	1,990	4,438	3,501
12	1,278	708	5,102	2,426
15	0	129	0	859
18	0	143	0	0
24	3,962	0	0	3,575
30	0	0	0	52
36	238	0	0	0
48	0	0	0	205
Total	**11,621**	**14,646**	**31,512**	**22,212**

Table 3-3 Annual 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	0	1,549	1,948	1,741
8	5,900	6,879	34,688	14,619
10	455	1,425	4,387	1,637
12	0	107	246	2,813
15	0	0	0	369
18	0	0	0	573
24	0	0	0	1,125
48	0	0	0	205
Total	**6,355**	**9,960**	**41,269**	**22,876**

3.1.2.2 Lift Station Assessments

During the Year 12 reporting period, seven (7) lift stations in Phases 1-4 were assessed through the City's On-Demand Contracts. These assessments were completed to mitigate condition related issues that could result in SSOs. These assessments resulted in the repair of electrical, mechanical, and/or structural components at the following lift stations: Country Club, Darien, Dilg League, Glen Ave, Hardy, Hidden Trace, and Port Station Lift Stations.

In addition, the City completed a detailed review and made update to its Emergency Lift Station Bypass Standard Operating Procedures which are intended to serve as a guide to assist operation and maintenance personnel in mitigating SSOs in the event of a lift station or force main failure. Through the Year 12 reporting period, Emergency Lift Station Bypass SOPs were completed for eighty-six (86) of the ninety-three (93) lift stations in Phases 1-4. Emergency Lift Station Bypass SOPs will be updated periodically, as necessary, in the future years as part of the City's CMOM program. Emergency Lift Station Bypass SOPs for the remaining seven (7) lift stations in Phases 1-4 are expected to be completed in Year 13.

3.1.2.3 Aerial Crossing Inventory & Assessment

During the Year 12 Reporting Period, the City continued its monitoring of major stream crossings. A total of forty-nine (49) aerial crossings were inventoried in Year 9. One (1) aerial crossing identified in Year 12, located at South Lakeshore Bridge, is currently undergoing repairs. The repair involves the rehabilitation of aerial crossing support connections due to observed deterioration and potential structural failure. The City is monitoring these crossings on a periodic basis as part of its ongoing CMOM with the intent of implementing preventative maintenance measures at these locations.

3.1.3 Phase 5 SSA: Activities Completed in Year 12

As reported in the Year 9 Consent Decree Annual Report, the City was forced to extend the timing for completion of the full scope of Phase 5 SSA field investigations due to its inability to fund the Phase 5 projects. During the Year 12 reporting period, the City completed CCTV and manhole inspections in the SSA Phase 5 Area as part of the Annual and "Hot Spot" Cleaning and CCTV Programs. The City also developed a plan to complete additional SSA activities in the Phase 5 area during the Year 13 reporting period. These activities are outlined in Section 4.2.

3.1.3.1 Sewer Cleaning and CCTV Inspections

During the Year 12 reporting period, 45,822 linear feet of gravity sewer was cleaned and CCTV inspected within the SSA Phase 5 area. Gravity sewer investigated as part of the "Hot Spot" and Annual Programs are summarized in Table 3-4 and Table 3-5 below.

Table 3-4 "Hot Spot" Program Gravity Sewer Cleaning and CCTV Phase 5

Diameter (in)	Length in Phase 5A (ft)	Length in Phase 5B (ft)
6	0	729
8	2,876	14,565
10	3,175	3,826
12	313	4,346
15	0	2498
20	0	1137
21	0	566
36	862	0
Total	**7,226**	**27,667**

Table 3-5 Annual Program Gravity Sewer Cleaning and CCTV Phase 5

Diameter (in)	Length in Phase 5A (ft)	Length in Phase 5B (ft)
6	0	1,367
8	713	6,333
10	0	2,011
12	0	140
15	0	365
Total	**713**	**10,216**

Including the work completed during the Year 12 reporting period, CCTV inspections have been completed for 1,165,486 linear feet out of 1,327,908 linear feet of gravity sewer in the Phase 5 SSA Area. Through the Year 12 reporting period, CCTV inspections have been completed for 88 percent of the gravity sewer in the Phase 5 SSA Area.

3.1.3.2 Manhole Inspections

During the Year 12 reporting period, the City completed visual inspections and gathered GPS coordinates for sixty-three (63) manholes within the Phase 5 SSA Area as part of the Collection System Assessment Program. The City has completed inspections for approximately 3,599 (87 percent) of the 4,125 manholes within the SSA Phase 5 Area.

3.1.3.3 Smoke Testing and Dye Flooding

No additional smoke testing or dye flooding was completed during the Year 12 reporting period within the SSA Phase 5 Area. It is important to note that smoke testing and dye flooding are used

for targeted investigation of areas with excessive I/I. The City has completed smoke testing and dye flooding for approximately 39 percent (489,526 linear feet) of the gravity sewer system within Phase 5.

3.1.3.4 Lift Station Assessments

During the Year 12 reporting period, three (3) lift stations were assessed within the Phase 5 SSA Area through the City's On-Demand Contracts. Assessments were completed to progress the design of Critical Projects and mitigate condition related issues that could result in SSOs. These assessments resulted in the repair of electrical, mechanical, and/or structural components at the following lift stations: Bethlehem, Legardy, and Woolworth Lift Stations.

Through the Year 12 reporting period, Emergency Lift Station Bypass SOPs were completed for thirty-eight (38) of the forty (40) lift stations in Phase 5. Emergency Lift Station Bypass SOPs will be updated periodically, as necessary, in the future years as part of the City's CMOM program. Emergency Lift Station Bypass SOPs for the remaining two (2) lift stations in Phases 5 are expected to be completed in Year 13.

3.2 Capacity Assessment

The City prepared and issued a revised Capacity Assessment report in July 2022. The Capacity Assessment Report was issued to the EPA and LDEQ and is available through the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9.

3.2.1 Hydraulic Model

Recalibration of the City's hydraulic model was completed in January 2022. Since completion of the model calibration, continued maintenance of the current condition model has been ongoing. Maintenance has consisted of asset naming updates of manholes and pipes to coincide with the City's GIS and CMMS systems. Post construction updates continue to be incorporated into the model for configuring the network to reflect changes to the collection system network for completed projects where Conforming to Construction drawings have become available. The hydraulic model was also upgraded from Innovyze ICM v9.5 to the Innovyze ICM 2023 version.

In the Year 12 reporting period, the City completed additional flow monitoring in the Phase 3 area upstream of the Querbes Sanitary Lift Station. Eight (8) flow meters were installed for a period of

approximately two (2) months. The flow data was analyzed and incorporated into the City's hydraulic model to provide additional calibration of areas tributary to the Querbes Sanitary Lift Station. The design of condition and capacity improvements in this area is currently being performed as part of the LOU-A3 Capacity Improvements – Querbes Lift Station Lucas Outfall Basin Project.

3.2.2 Additional Modeling Activity During the Year 12 Reporting Period

The current condition 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:

- CWP-80A/NRG-C16 Havanna Lift Station Abandonment and Legardy Lift Station Rehabilitation
- CWP-79A/NRG A2 & NRG A3 – Darien and Hardy Lift Stations
- CWP-102 Southern Hills Interceptor
- Wastewater Capacity Projects
  - WAL-B4 Capacity Improvements – Wallace Basin
  - LOU-A2 Capacity Improvements – Lucas Outfall Basin
  - LOU-A3 Capacity Improvements – Querbes Lift Station Lucas Outfall Basin
  - LOU-A7 Capacity Improvements – Lucas Outfall Basin
  - LOU-B3 Capacity Improvements – Lucas Outfall Basin
- CWP-61 Gravity Sewer Main Improvements Package 1 - Lines Under Homes (Broadmoor and Querbes Area)

The hydraulic model was also used throughout the Year 12 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 1-5 prior to the start of Consent Decree Year 12. Phase 1-5 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 3-6 below provides a summary of RMP submittals through the Year 12 reporting period.

Table 3-6 RMP Report Submittals through Year 11

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	January 2023

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 thirty (30) total projects within SSA Phase 1. All 30 projects have reached final completion. Table 3-7 below provides a summary of the project status of each of the Phase 1 RMP Project.

Table 3-7 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. 84th 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

Project Name	Functional Completion	Final Completion*
104.119.142 – Union & Wallace Ave.	4/19/2017	12/20/2017
105.108 – Cedar Grove Trunk main	N/A	9/28/2017
106.107.114 – Hollywood Ditch & W. 70th 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 Trunk main	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
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 construction estimate for the eighty (80) collection system improvement projects was approximately $131,427,000 (2016 Dollars). During design, these 80 projects were consolidated into a collection of thirty (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 were approximately $190,270,000. This is a 45-percent increase in the initial estimated costs of the Phase 1 RMP projects.

3.3.2.2 Phase 2

A total of seventeen (17) total construction projects were developed based on Phase 2 RMP. All 17 projects have reached final completion. Table 3-8 below provides a summary of the actual completion dates for each of the Phase 2 RMP projects.

Table 3-8 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
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

No.	Project Name	Actual Dates	
		Functional Completion	Final Completion
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 construction cost estimate for the twenty-nine (29) Phase 2 RMP collection system improvement projects was approximately $200M (2017 Dollars). During design, these 29 projects were consolidated, and a collection of seventeen (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 $110M.

As stated in Section 2.3.1, 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 is a 29- percent increase in what the City expected to spend on the entire program with only 2 of the 5 phases being completed.

3.3.2.3 Phase 3

A total of fourteen (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 3.3.3, 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 was approximately $172,930,000 when previously developed Opinion of Probable Construction Costs (OPCC) are updated to 2022 dollars. Table 3-9 provides a summary of the proposed improvements included within the Phase 3 construction packages.

Table 3-9 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 rehabilitation of 20 manholes.
3-116***	Southern Hills Interceptor (Segment B)	90%	In Design	Sewer replacement of 5,000 LF of gravity sewer main and install new manholes.
3-117***	Southern Hills Interceptor Phase 2	100%	Completed 10/10/2024	Sewer replacement of 6,300 LF of gravity sewer main and install new manholes.
3-LS1***	Lift Station Condition Improvements	100%	(2) Completed (5) In Design	Improve or rehab 7 lift stations and 3 force mains. The stations are: Cedar Creek: Final Completion - 1/21/22 Dixie Garden Elgin Knight Street Mackey Lane Shreve Island Wallace: Final Completion – 10/31/25
3-NE1***	Northeast Sewer Replacement	100%	Pierremont Park Area – Complete Brookmeade & Querbes Area – Complete Other Misc. Segments – 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

No.	Project Name	Design Status	Construction Status	Project Description
				and replace 155 48-inch manholes.
3-101, 102 3-NER3	Northeast Sewer Rehab 3	100%	Not Started	Sewer rehabilitation of 77,000 LF of 6-inch to 12-inch CIPP as well as replace 27 manholes.
3-106, 112, 113, 114 3-NS1	Pierremont Rd & Boggy Bayou Areas Rehab	100%	Not Started	Sewer rehabilitation of 50,000 LF of 6-inch to 18-inch CIPP and replace 61 manholes.
3-110, 111 3-SW1	Southern Hills Sewer Rehab	100%	Not Started	Sewer rehabilitation of 120,000 LF of 6-inch to 10-inch CIPP and replace 47 manholes.
3-108, 109, 112 3-SW2	Southwest 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***	Southwest 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	Southwest 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 applying its available funding to directly mitigate SSOs, construction packages were developed and advanced during the Year 12 Reporting Period. Four (4) SSA Phase 3 projects were included in the City's Critical Project portfolio as follows:

- **3-LS1 Lift Station Condition Improvements:** Construction of lift station improvements were completed at the Cedar Creek Lift Station in January 2022. The initial phase of improvements, consisting of mechanical, structural, and electrical upgrades, were completed at the Wallace Lift Station in Year 12 - October 2025**.** Key components of the work completed at Wallace Lift Station included the repair/replacement of pumps, variable frequency drives, lighting, a jib crane, and wet well rehabilitation. Additional electrical, mechanical and instrumentation work is currently in design with construction work anticipated to be completed by 2029. Lift Stations in the 3-LS1 Project are included in Critical Wastewater Project CWP-12, CWP-80 and CWP-82. Additional discussion of Projects CWP-12, CWP-80 and CWP-82 is presented in Section 3.3.3 - Critical Infrastructure Projects.

- **3-116 Southern Hills Interceptor (Segment B) / 3-117 Southern Hills Interceptor (Segment A) / 3-114 of 3-SW3 Southern Hills Interceptor (Segment C)**: The initial RMP identified the replacement of the Southern Hills Interceptor, including the 3-114, 3-116, and 3-117 projects, as a wastewater critical project. Based on the results of the revised calibrated hydraulic model, the extent of the replacement/rehabilitation of the Southern Hills Interceptor will be significantly less than what was included in the 3-114, 3-116, and 3-117 projects due to a reduction in the length of capacity restrictions identified in the Southern Hills Interceptor. Rehabilitation of a significant portion of Project 3-117 was completed in Year 11. The design of actual extent of replacement/rehabilitation required for Project 3-116 will begin in 2026 with construction anticipated to occur after 2026. The construction of Project 3-114 that required replacement work is anticipated to be completed in Fall 2026. These projects are included as part of the CWP-102 Southern Hills Interceptor Project. Additional discussion on Project CWP-102 is included in Section 3.3.3 - Critical Infrastructure Projects.
- **3-NE1 Northeast Sewer Replacement:** The sanitary relief project west of the Broadmoor Lift Station currently included within the 3-NE1 scope of work has been completed. This project was separated into two (2) projects referred to as the CWP-63 Brookmeade & Querbes Gravity Sewer SSO Mitigation Project and the CWP-117 Pierremont Park Sewer Improvements Project. Construction of these projects was completed in Year 10. Additional discussion on projects CWP-63 and CWP-117 is included in Section 3.3.3.

The City is proceeding with the revision and development of projects in Phase 3 based on the revised Condition and Capacity Assessment Remedial Measures Plans.

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 fourteen (14) Phase 4 RMP collection system improvements was approximately $93,500,000, in 2022 dollars. The estimated value of the thirty-three (33) Phase 4 RMP lift station improvement projects was approximately $9,440,000, in 2023 dollars. As described in Section 3.3.3, 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 City is proceeding with the development of projects in Phase 4 based on the revised Condition and Capacity Assessment Remedial Measures Plans.

3.3.2.5 Phase 5 RMP

The Capacity Assessment Remedial Measures Plan for Phase 5 was submitted to EPA on January 29, 2022. As described in Section 3.3.3, 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. The City is proceeding with the development of projects in Phase 5 based on the revised Condition and Capacity Assessment Remedial Measures Plans.

3.3.3 Critical Infrastructure Projects

In early 2020, nineteen (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.

During Consent Decree negotiations for modification, USEPA and LDEQ identified wastewater treatment and force main projects that they considered Asset Management activities for the City and are not part of the Consent Decree. The City continued to advance delivery of these projects through the Consent Decree Year 12 reporting period; however, they are no longer included in the Consent Decree list of Critical Infrastructure Projects at the request of USEPA and LDEQ. These projects are necessary to maintain the reliability and sustainability of the collection system for compliance with permits and prevention of SSOs related to aging infrastructure.

A summary of the status of the Wastewater Capacity and Critical Projects based on current Consent Decree negotiations is presented below.

3.3.3.1 Wastewater Capacity and Critical Projects

The wastewater projects listed in Table 3-10 describe the project status, identified budget and a brief description of the Capacity and Critical Wastewater Projects included in current Consent Decree Negotiations with USEPA and LDEQ. It is important to note that full implementation (e.g., completion of construction) of some projects is dependent upon the availability of funding. The City has also identified additional projects for implementation and plans to use an Integrated Planning Approach to select projects presented in Table 3-11 or others identified through subsequent planning efforts 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 Section 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 3-12. These projects are presented herein although they are not directly related to the City's Consent Decree program. Like many of the City's wastewater critical projects, funding is currently unavailable for full implementation of the water critical projects. Integrated Planning, and a flexible approach using adaptive management principles, will be essential to apply funding to investments that will deliver the greatest overall public health as additional financial resources become available.

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 related to the City's Consent Decree program, they are important to understand as they demonstrate 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:

- **Lead and Copper Rule Improvements (LCRI):** In October 2024, EPA announced an update to the Revised Lead and Copper Rule (LCRR). The LCRI added additional regulations to the LCRR and now requires drinking water systems to identify the materials of all of their service lines within seven (7) years of promulgation and replace any lead service lines or galvanized

service lines that are downstream of lead services within ten (10) years of promulgation. The identification is required for the service line on both the system-side and the customer-side of the City water meter. The City only gets credit for a replacement if the service line on both sides of the meter are replaced; however, the City is not financially responsible for providing replacement of the service line on the customer-side meter. The City has been working with an EPA program ("Get the Lead Out") to provide identification of service line materials by manually excavating the service lines around water meters to expose them for identification.

- **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.
- **Louisiana Department of Health (LDH) Sanitary Survey:** In October 2021, the City received the determinations by LDH on its most recent Sanitary Survey. These determinations included several "Significant Deficiencies" that elevate these deficiencies to requirements by LDH to address. To address the areas listed in the Sanitary Survey, the City is in the process of completing construction projects totaling approximately $15M. On August 8, 2023, LDH provided an additional twenty-five (25) "Significant Deficiencies" and six (6) "Deficiencies" for the City to address. The City is currently in the process of addressing these items.
- **Louisiana Department of Health (LDH) Sanitary Survey Administrative Order:** In February 2025, the City received an Administrative Order to take remedial actions for projects related to the October 2021 Sanitary Survey. Within various deadlines, the City must complete a series of projects to comply with the Administrative Order. Should the City not meet the deadlines mandated in the Order, the City may be assessed a penalty up to a maximum of three thousand dollars ($3,000) per each noncompliant day. A civil penalty of up to three thousand dollars ($3,000) per day may be imposed on the City as well. The City is in the process of completing these projects.

Table 3-10 Wastewater Capacity and Critical Consent Decree Projects

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
WAL-A1	Gravity Sewer Capacity Improvements - Wallace Basin (WAL- A1)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Wallace Basin. This scope of work is the same as Segment C of CWP-102 Southern Hills Interceptor Improvement.	In Construction	$1,500,000
WAL-B4	Capacity Improvements - Wallace Basin (WAL-B4)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Wallace Basin. During design it was determined that the slopes of the sewers in the WAL-B4 area were greater than those used in the hydraulic model. WAL-B4 was remodeled with the actual design slopes and the resulting capacity was greater than that needed for the 2-year, 6-hour design storm. There were no recorded wet weather SSOs in the area: only model predicted SSOs.	Complete	$100,000
LOU-A2	Capacity Improvements - Lucas Outfall Basin (LOU-A2)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas Outfall Basin	Design	$3,200,0000
LOU-A3	Capacity Improvements - Querbes Lift Station Lucas Outfall Basin (LOU-A3)	Mitigate SSOs by improving hydraulic capacity of Querbes Sanitary Lift Station and gravity sewer in Lucas Outfall Basin.	Design	$19,000,000
LOU-A7	Capacity Improvements - Lucas Outfall Basin (LOU-A7)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas Outfall Basin. During design, it was determined that the slopes of the sewers in the LOU-A7 area were greater than those used in the hydraulic model. LOU-A7 was remodeled with the actual design slopes and the resulting capacity was greater than that needed for the 2-year, 6-hour design storm. There were no recorded wet weather SSOs in the area; only model predicted SSOs.	Complete	$15,000
LOU-B3	Capacity Improvements - Lucas Outfall Basin (LOU-B3)	Mitigate SSOs by improving hydraulic capacity in Lucas Outfall Basin.	Design	$3,100,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
LWW-A3	Capacity Improvements - Lucas WWTP Basin (LWW-A3)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas WWTP Basin.	Design	$5,000,000
LWW-B2	Capacity Improvements - Lucas WWTP Basin (LWW-B2)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas WWTP Basin.	Design	$2,100,000
CGR-A2	Capacity Improvements - Cedar Grove Basin (CGR-A2)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Cedar Grove Basin.	Complete	$387,180
CWP-56 NRG - A2	Dilg League SSO Mitigation (NRG-A2)	Construction of improvements to address reoccurring SSOs at Dilg League Drive area.	Complete	$9,386,727
CWP-79A NRG-A2 NRG - A4	LS Improvements - Darien, and Hardy Lift Stations (NRG-A2 and NRG A-4)	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.	Design Complete	$9,100,000
CWP - 79B NRG-B1 NRG-B2	LS Improvements - Marjorie, and Pinehill Estates Lift Stations (NRG-B1 and NRG-B2)	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.	Construction	$975,000
CWP-80 NRG-C16	LS Improvements - Havanna Lift Station Abandonment (NRG-C16) and Legardy Lift Station Rehabilitation	Design of the abandonment of the Havanna Lift Station, re-route of sewer, and rehabilitation of the Legardy Lift Station 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.	Final Design	$3,000,000
CWP-81C WAL-C2	LS Improvements - Bickham Bayou Lift Station (WAL-C2)	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.	Design	$5,000,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
CWP-124, CRG A-1	Cedar Grove Lift Station Improvements (CRG-A1)	Study & Report and Design of rehabilitation of lift station 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.	Planning	$47,900,000
CWP-01	Wallace Interceptor at Boggy Bayou	Demolition/abandonment and relocation of approximately 1,350 linear feet of 54-inch diameter gravity sewer main from the crossing of Boggy Bayou.	Complete	$2,567,337
CWP-11	Stratmore Lift Station Rehabilitation	Construction to rehabilitate an existing lift station along with the associated piping.	Complete	$863,760
CWP-12B	LS Package 1a - Maywood LS Rehabilitation	Rehabilitate a lift station to address current mechanical, electrical, hydraulic, and operational issues.	Complete	$472,696
CWP-12F	LS Package 1b- Land O' Trees Lift Station Rehabilitation	Rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Complete	$821,794
CWP-12C	LS Package 2 - Cherokee, Forbing Glen, and Long Timbers Lift Station Rehabilitation	Rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues. **Construction was completed in 2025.**	Complete	$1,314,647
CWP-12D	LS Package 3 - Agurs and Glen Avenue Lift Station Rehabilitation	Rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues. **Construction was completed in 2025.**	Complete	$1,291,507

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
CWP-12E	LS Package 4 -Lakeside Boat, Pinecrest, and Woolworth No.1 Lift Station Rehabilitation	Rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Complete	$1,452,623
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.	Planning	$1,815,000
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.	Design	$7,450,000
CWP-63	Brookmeade & Querbes SSO Mitigation	Construction of improvements to address reoccurring SSOs in the Brookmeade & Querbes area. Approximately 6,000 feet of 10- to 30-inch-diameter gravity sewer is anticipated to be installed.	Complete	$4,894,241
CWP-117	Pierremont Park Phase II Sewer Improvements	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 Brookmeade & Querbes SSO Mitigation project.	Complete	$5,525,892
CWP -79C	LS Improvements - Meadow Parkway, Patzman Park, Alabama, Pinehill Road, North Caddo, and Hawkins Lift Stations	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.	In Construction	$2,650,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
CWP-80B	LS Improvements - Country Club, Fern, Cadillac, Risinger, Cross Creek, and Elgin Lift Stations	Design and construction 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.	Cadillac Lift Station is In Construction Design Complete for Other Lift Stations	$4,100,000
CWP-81A	LS Improvements - Azalea Gardens, and Attaway Lift Stations	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.	In Construction	$1,940,000
CWP-81B	LS Improvements - North Pierre, Fannin, and Linear Lift Stations	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.	Design	$6,100,000
CWP-82A	LS Improvements - Wallace Lift Station	Design and Construction of rehabilitation of lift station 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.	Phase 1 - Complete Phase 2 – Design	$8,500,000
CWP-82B	LS Improvements - Dixie Garden, and Mackey Lane Lift Stations	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.	Design	$2,400,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2026 Dollars)
CWP-82C	LS Improvements - Shreve Island, and Knight Street Lift Stations	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.	Design	$3,775,000
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 Cedar Grove Force Main is a capacity project and is affiliated with CWP-124 – Cedar Grove Lift Station. Costs are separated for each project in this table.	Planning	$42,500,000
CWP-102	Southern Hills Interceptor Improvements	Design of replacement of approximately 24,000 feet of 8- to 42-inch diameter concrete gravity sewer that is approximately 40 years old.	Segment A - Complete Segment B – Design Segment C – In Construction	$23,000,000

Table 3-11 Other Wastewater Critical Projects

Project Number	Project	Project Description
CWP-09	Lucas and North Regional WWTP Improvements (UV Disinfection)	Construction of new UV disinfection systems at the Lucas and North Regional WWTPs. **Construction was completed in 2025.**
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.
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.
CWP-88	WWTP Sludge Farm Phase 2 Upgrades	Design and construction of rehabilitation/replacement of existing sludge processing equipment at the City's sludge farm. Study & Report completed in 2025, Design began in 2026, and Construction anticipated to occur after 2026.
WWT-143	Lucas WWTP Clarifier No. 5 Rehabilitation	Complete rehabilitation of Clarifier No. 5 at the Lucas WWTPs. **Construction was completed in 2026.**
WWT-151	Lucas WWTP Clarifiers No. 1 through No. 4	Design Complete for the rehabilitation of Clarifiers No. 1 through No. 4 at the Lucas WWTP began in 2025. Construction will proceed pending available funding.
WWT-152	North Regional WWTP Clarifiers No. 1 and No. 2	Design for and construction of rehabilitation of clarifiers No. 1 and No. 2 at the North Regional WWTP pending available funding.
	Blower Control Panels and Actuators Replacement at Lucas WWTP	Design for and construction of the replacement of blower control panels and actuators at the Lucas WWTP pending available funding.
	Blower Control Panels and Actuators Replacement at North Regional WWTP	Design for and construction of the replacement of blower control panels and actuators at the North Regional WWTP pending available funding.
WWT-155	Aeration System Replacement at the Lucas WWTP	Design for and construction of the replacement of the aeration system at the Lucas WWTP pending available funding.
	Aeration System Replacement at the North Regional WWTP	Design for and construction of the replacement of the aeration system at the North Regional WWTP pending available funding.
CWP-42	SCADA – Master Plan & Implementation	Development of a SCADA Master Plan to identify needed improvements to wastewater facilities. Development was initiated in Year 9; **Development and implementation is ongoing.**
WWT-156	Influent Screw Pumps at North Regional WWTP Replacement	Design of replacement of influent screw pumps (six total) at the North Regional WWTP completed in 2026. Construction anticipated to occur in 2027 due to lead time for equipment.

Project Number	Project	Project Description
	Effluent Pumps at North Regional WWTP Replacement	Design and construction of the replacement of effluent pumps at the North Regional WWTP pending available funding.

Table 3-12 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. This project was completed in Year 10.
CWP-42	SCADA – Master Plan & Implementation	Development of a SCADA Master Plan to identify needed improvements to water facilities. Development was initiated in Year 9; **Development and implementation is ongoing.**
WTR-49	Water Main Crossing at Twelve Mile Bayou	Rehabilitation or replacement of the existing 20-inch steel pipe across Twelve Mile Bayou. Design was completed in Year 10.
WTP-50	Twelve-Mile Bayou Pump Station Discharge Main Evaluation	Field evaluation and testing of existing large diameter raw water main from Twelve-Mile Bayou Pump Station to the Amiss Water Treatment Plant to determine potential rehabilitation or replacement required.
WTP-51	Amiss WTP Intake Structure Rehabilitation	Rehabilitation of the existing Amiss Water Treatment Plant raw water intake structure in Cross Lake. Design began in 2025.
CWP-73	Citywide AMI Water Meter Replacement	System-wide program to replace water meters. **Replacement of meters is ongoing.**
WTP-74	Amiss WTP Transmission Main Replacement	Replacement of portions of the existing transmission mains at the WTP. Design complete and **Construction anticipated to begin in 2026.**
WTR-75	West Shreveport Elevated Storage Tank, Linwood Elevated Storage Tank, and 70th & Pines Ground Storage Tanks Rehabilitation	Rehabilitation of water storage tank facilities to address conditional and operational issues. **Construction was completed in 2026.**
WTR-76	70th and Pines BPS Rehabilitation	Rehabilitation of pump station to address conditional issues.
WTP-91	Cross Lake Dam and Spillway Rehabilitation	Rehabilitation of the dam and spillway infrastructure that controls the level in Cross Lake, the City's source of drinking water. Design began in 2026.
WTR-94	Ford Street Water Improvements	Relocation of existing 12-inch diameter water main under Ford Street. **Construction was completed in 2025.**

Project Number	Project	Project Description
WTR-96	St. Vincent Elevated Storage Tank Rehabilitation	Rehabilitation of water storage tank facility to address conditional and operational issues. **Construction is anticipated to be completed in 2027.**
WTR-98	Jordan Street Water Main Replacement	Replacement of existing 12-inch and 6-inch diameter water mains along Jordan Street.
WTR-99	West 70th Water Improvements	Replacement of existing 10-inch, 12-inch, and 16-inch diameter water mains along West 70th Street.
WTR-100	Jewella/Fair/Magnum Water Main Replacements	Replacement of existing 6-inch diameter water mains along Jewella Avenue, Fair Street and Magnum Street.
WTR-101	Huron Street Water Main Replacement	Replacement of existing 8-inch diameter water mains along Huron Street.
WTR-107	BPS Standby Generator Installation (Permanent)	Installation of permanent backup power units at three (3) booster pump stations. **Construction is anticipated to be completed in 2027.**
WTP-126	Amiss WTP2 Filter Gallery Pipe Replacement	Design for and construction of replacement filter gallery piping at Amiss WTP2 pending available funding.
WTR-127	Mayo Road Water Main Extension	Water main extension to consolidate an existing development water system into the City distribution system to remove the existing well system with drinking water violations. Project was completed in Year 11.
WTR-144	Caddo-Bossier Port Elevated Storage Tank Rehabilitation	Rehabilitation and reactivation of water storage tank facility. **Construction was completed in 2026.**
WTP-145	Amiss WTP Valve Replacement Program	Design and construction of the replacement of transmission valves at the Amiss WTP. Construction anticipated to occur in 2027.
WTP-146	Amiss WTP Hi / Lo Building Rehabilitation	Rehabilitation of Hi / Lo Building located at Amiss WTP.
WTR-150	New Elevated Storage Tank – Southeast PZ	Installation of a new elevated water storage tank facility to provide additional elevated storage and support pressures in the City's southeast pressure zone.

3.4 Capacity Assessment Remedial Measures Plan

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 3-13 provides a timeline with corresponding completion dates for all the major steps which led to

a resubmittal of the Capacity Assessment Remedial Measures plan in January 2023 during the Year 9 Reporting period.

Table 3-13 Timeline of Wet Weather Conveyance 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) - Complete
Evaluate Alternative Wet Weather Control Measures to Identify Those that are Both Affordable and Cost-Effective to Reduce SSOs	September 2022 (Year 9) - Complete
Update and Revise the City's Capacity Assessment Remedial Measures Plan	January 2023 (Year 9) - Complete

3.4.1 Capacity Assessment Report

Following completion of the model update and recalibration, a Return Period Analysis was performed and completed in April 2022. The City submitted the Capacity Assessment Report to EPA and LDEQ in July 2022.

3.4.2 Capacity Assessment Remedial Measures Plan (CARMP)

During the Year 9 reporting period, the City prepared and issued a revised Capacity Assessment Remedial Measures Plan Report (CARMP) in January 2023. The CARMP was issued to the EPA and LDEQ and is available through the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. The CARMP replaces the previously issued report from 2015 in its entirety. The revised CARMP includes a total of twenty-three (23) capacity-related projects which are outlined in Table 3-14 below. Sixteen (16) of the 23 projects listed in Table 3-14 include linear capacity and/or sanitary lift station capacity improvements. These projects are included in Table 3-10. Six (6) of the projects listed in Table 3-14 include limited I/I reduction programs. The amount of the I/I reduction needed depends on the extent and capacity of the related linear and/or lift station improvements for two (2) of the six (6) projects. The level of I/I removal for the four (4) remaining projects (LOU-A5, LWW-A1, LWW-A2 and NRG-B3) will be further assessed in Year 13.

Table 3-14 Capacity RMP Projects

Project Category	SSA Phase	Project Area	Project Description	Project Status
A	3	WAL-A1	I/I Reduction Program	Planning
			Linear Capacity Improvement	Construction
A	2	LOU-A2	Linear Capacity Improvement	Design
A	2	LOU-A3	Querbes Lift Station and Linear Capacity Improvements	Design
A	3	LOU-A5	I/I Reduction Program	Planning
A	2	LOU-A7	Linear Capacity Improvement	Complete
A	5	LWW-A1	I/I Reduction Program	Planning
A	2,4	LWW-A2	I/I Reduction Program	Planning
A	4	LWW-A3	Linear Capacity Improvement	Design
A	1	CGR-A1	Cedar Grove Area Improvements - Includes Cedar Grove Lift Station	Planning
A	1	CRG-A2	Linear Capacity Improvement	Complete
A	2	NRG-A2	Hardy Lift Station Improvement and Wet Weather Storage Facility	Hardy LS - Design WWSF (CWP-56) - Complete
A	2	NRG-A4	Darien Lift Station Improvements	Design
B	3	WAL-B4	Linear Capacity Improvement	Complete
B	2	LOU-B3	Linear Capacity Improvement	Design
B	4	LWW-B2	Linear Capacity Improvement	Design
			I/I Reduction Program	Planning
B	5	NRG-B1	Marjorie Lift Station Improvements	Construction
B	2	NRG-B2	Pinehill Estates Lift Station Improvements	Construction
B	5	NRG-B3	I/I Reduction Program	Planning
C	3	WAL-C2	Bickham Bayou Lift Station Improvement	Design
C	1	CGR-C2	Included in analysis for CGR-A1	Planning
C	1	CGR-C4	Included in analysis for CGR-A1	Planning
C	2	LOU-C6	Included in analysis for LOU-A3	Planning
C	5	NRG-C16	Havanna Lift Station Abandonment	Design

In addition to the capacity projects listed, the City has continued to monitor forty-three (43) areas of interest for SSOs. These areas will continue to be monitored in Year 13 with recommendations developed for these areas. Many of these additional SSO monitoring areas are impacted by adjacent capacity projects, areas which have also exhibited dry weather conveyance issues resulting from FOG

and or debris related SSO occurrences, or other historical data has been identified that merits additional monitoring to confirm the presence of wet weather-related issues.

Based on monitoring during Year 12, a wet weather SSO occurred in one (1) of the forty-three (43) areas. This was the LOU-B2 area. A brief discussion of this area is below:

LOU-B2 Area: One (1) wet weather SSO occurred in the LOU-B2 project area in Year 12. This SSO was considered a force majeure SSO, and reported to EPA, as it resulted from a rainfall event greater than the 2-year, 6-hour design storm. This SSO is expected to be mitigated by addressing condition defects identified through the "Hot Spot" CCTV and Cleaning Program.

3.5 Construction Standards and Specifications

The 2021 Editions of the Standard Specifications and Plans for Infrastructure Improvements were used for projects that are being designed in Year 12. These documents will be used in Year 13 for new Consent Decree 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. The City used many of the EJCDC Construction Documents on Consent Decree and Non-Consent Decree Projects that were bid, are in construction, or were completed in Year 12. It is the City's intent to continue to use these Construction Documents in Year 13 and future years going forward. It is anticipated that EJCDC General Conditions will be available for use on future projects beginning in 2026.

After a detailed review was completed in Year 8, the City is currently utilizing updated Standard Specifications and Plans for Infrastructure Improvements. 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 Plans current and to consider proposed modifications.

A website has been developed on the City's Water and Sewerage Division's website and will make these Standard Specifications & Plans available in the Year 13 reporting period.

3.6 Capacity, Management, Operations, and Maintenance

The following information is a summary of activities conducted during the Year 12 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 Year 12 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 Pretreatment 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 Division within the Department of Water and Sewerage. 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 to 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-Categorial) with the City's CMOM Plan Submittal. An updated Master List of Industrial users is provided in Attachment 1.

During the Year 12 reporting period, a total of thirty-nine (39) permits were active under the City's Pretreatment Program. These permits define effluent limits, transferability, penalties, sludge 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 12 reporting period. A total of forty-five (45) Notice of Violations (NOVs) were issued by the City during the Year 12 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 12 reporting period there were a total of 530 permitted FSEs. A total of 1,672 compliance inspections were completed and resulted in a total of 82 NOVs issued.

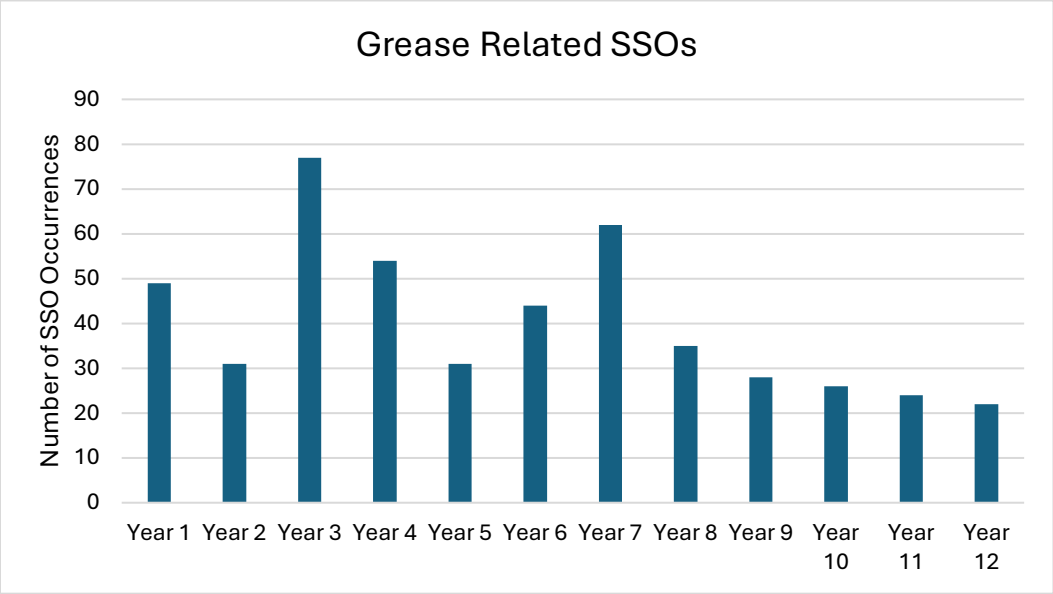
Additional FOG preventative maintenance activities completed by the City during the Year 12 reporting period includes the addition of the BioGon Enzyme and Liberator Block. Table 3-15 provides a summary of the locations where BioGon Enzyme and Liberator Block were introduced into the sanitary sewer system. These locations are the same as reported during Year 11.

Table 3-15 FOG Enzyme Additive Locations

Quarter Section	Manhole Number
Y-52	MH14
Z-57	MH7
CC-57	MH7 and MH47
KK-47	MH09, MH21, MH24, MH25, and MH26
V-55	MH08
S-52	MH04
Q-51	MH26
JJ-40	MH01
DD-40	MH20
Y-47	MH41
Z-56	MH04
W-54	MH08
W-55	MH39

FOG contributed to a total of twenty-two (22) SSO occurrences during the Year 12 reporting period. For the third year in a row, the City recorded the lowest total of grease related SSOs since the beginning of the Consent Decree program. **Error! Reference source not found.** provides a summary of the FOG related SSO occurrences since the beginning of the Consent Decree program. The five-year average for years 1-5 was 48.4 grease related SSOs/year. The five-year average for years 8-12 was 27.0 grease-related SSOs, which represents a 44 percent reduction compared to years 1-5.

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 significant outreach and education efforts were made through social media in Year 12 (see Attachment 2). Information related to FOG generation and how to address it is also posted on the Clean Water Shreveport social media outlets.

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 are 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 Division is notified, and a 10-Day letter requiring resolution is issued. During the Year 12 reporting period, a total of thirty-five (35) 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. 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)

3.6.1.7 Geographic Information System (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 12 reporting period to incorporate Conforming-to-Construction drawings and updates from the City's "Hot Spot" and Annual Sewer Cleaning and CCTV Programs. During the Year 12 reporting period, a total of twenty (20) CCTV PACP databases and twenty (20) MACP databases were updated, along with the updates of seven (7), previously completed linear Consent Decree projects.

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 Experience
    - SSO Dashboard
    - SSO/Subbasin Dashboard
    - SSO/CARMP Dashboard
- Smoke Testing Dashboard
- FOG Dashboard
- Sewer Inspections – Pipeline Assessment and Certification Program (PACP) Dashboard
- Manhole Inspections – Manhole Assessment and Certification Program (MACP) Dashboard
- Lift Station One-Pump and Active Bypass Dashboard
- Sewer Cleaning Dashboard
- Risk Assessment Dashboards
    - Gravity Sewer Risk Dashboard
    - Manhole Risk Dashboard
    - Force Main Risk Dashboard

3.6.1.8 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 12 reporting period, a total of 5,009 service requests and approximately 67,500 work orders were input, evaluated and responded to within Cityworks.

During the Year 12 reporting period, the City rolled out an updated Cityworks training program with the goal of helping staff across the Water & Sewerage Department and the Clean Water Shreveport Program improve the usage of the Cityworks platform. The Water & Sewerage Department began leveraging project management functionality in Cityworks to track work activities completed on projects and in response to storm events. The City has continued developing revised reports to

streamline reporting of activities from Cityworks, and an early focus area has been on updating the way pavement repairs are tracked and reported on within the City.

Additionally, the Water & Sewerage Department is updating their usage of Cityworks. Field Operations Division will be using the Cityworks Respond platform for more informed decision-making and management of service requests and work orders.

3.6.1.9 Sewer AI – Pioneer

During the Year 9 reporting period, the City deployed Sewer AI Pioneer CCTV database management system. Pioneer will serve as the specific location to host all CCTV video files for the City of Shreveport. During the Year 9 reporting period, the City was able to deploy and train staff on the typical use of the software and how it can be used to view existing CCTV videos in addition to the NASSCO PACP assessments. During the Year 12 reporting period, the following types of CCTV data sets were incorporated into Pioneer: SSA Phase 5, "Hot Spot" and Annual Cleaning & CCTV Programs, post-construction CCTV inspections, and City Field Operations Division CCTV inspection. In Year 13, the City will continue to incorporate data from the "Hot Spot" and Annual Cleaning CCTV Programs, Field Operations Division, and post-construction inspections.

3.6.2 Collection System Operations

A summary of items related to operation of the collection system is provided in this section.

3.6.2.1 Sewer Overflow Response Plan (SORP)

The City maintains a 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 confirm that SSOs are properly reported to the appropriate regulatory authorities. W&S staff are responsible for documenting the following:

Building Backup	Action Taken
Backup Caused by Public Sewer	Receiving Body of Water
Cause of Backup	Gallons Recovered
Property Damage	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.

The SORP SOP is currently in the process of being updated to better reflect the reposit of data into Cityworks. The new process will guide W&S staff on the procedures to respond, evaluate, coordinate, address, and document these activities using the Cityworks CMMS.

3.6.2.2 Emergency Lift Station Bypass Standard Operating Procedures

In Year 12, the City initiated detailed review and updates to its Emergency Lift Station Bypass Standard Operating Procedures which are intended to serve as a guide to assist operations and maintenance personnel in mitigating SSOs in the event of a lift station or force main failures. Through Year 12, reviews and updates have been made to 124 out of 133 lift stations in the City.

3.6.2.3 Sanitary Sewer Overflow (SSO): Year 12 Overview

During the Year 12 reporting period, a total of 131 SSOs were reported to LDEQ. This is an approximate decrease of 34.5 percent in reported SSOs when compared to the 200 total SSOs reported in Year 11.

Between Consent Decree Years 8-12, an average of 117.8 dry weather SSOs have been reported annually, which is an approximate 35-percent decrease in dry weather SSOs reported annually between Consent Decree Years 1-7 (180.85 SSOs). The 5-year rolling average continues to show an overall reduction in dry weather SSOs. It is evident that the City continues to see a positive impact through targeted SSO mitigation initiatives such as the “Hot Spot” Cleaning and CCTV Program.

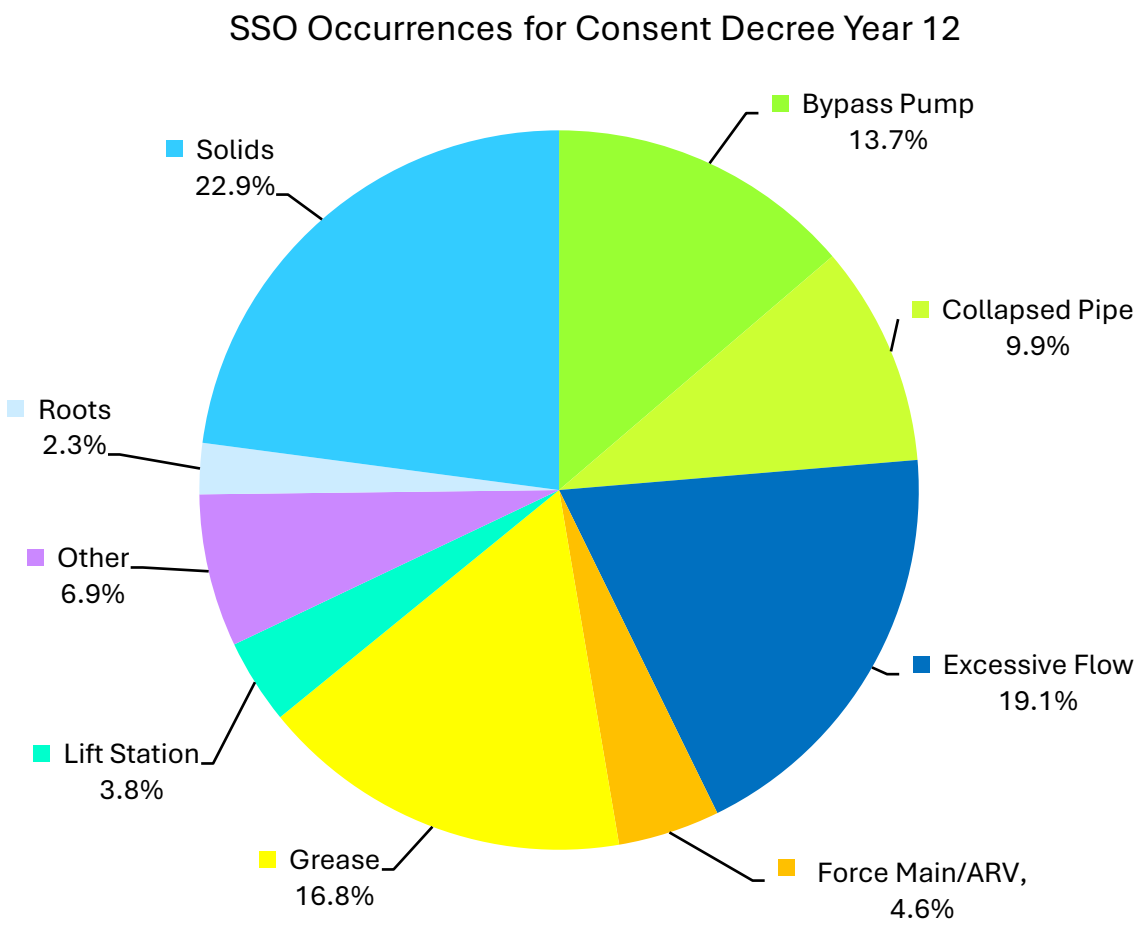
Between Consent Decree Years 8-12, an average of 53.8 wet weather SSOs have been reported annually, which is an approximate 9-percent decrease in wet weather SSOs reported annually between Consent Decree Years 1-7 (59.29 SSOs). Additional capacity related projects directly related to mitigating wet weather SSOs are in design and are being prioritized for completion as funding becomes available.

Table 3-16 and Figure 3-2 provide a summary of the causes contributing to SSO occurrences during the Year 12 reporting period. An itemized list of Year 12 SSOs is included in Attachment 3.

Table 3-16 Year 12 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	25	18	13	6	22	5	9	3	30
% of Year 12 SSOs	19.1%	13.7%	9.9%	4.6%	16.8%	3.8%	6.9%	2.3%	22.9%

Figure 3-2 SSOs Occurrences for Consent Decree Year 12



3.6.2.4 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 3-17 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, increased to 254.2 SSOs per year in Years 3-7, decreased to 234.2 SSOs per year in Years 4-8, decreased to 226.8 SSOs per year in Years 5-9, decreased to 209.2 SSOs per year in Years 6-10, and decreased to 193.8 SSOs per year in Years 7-11. The 5-year rolling average further decreased to 171.6 SSOs per year in Years 8-12.

The 5-year rolling average for volume lost was 1,160,215 gallons per year (GPY) for Years 7-11. The 5-year rolling average increased to 1,207,971 GPY in Years 8-12.

The 5-year average trend for both dry weather and wet weather SSO occurrences in Years 8-12 decreased compared to the previous 5-year rolling average for Years 7-11.

Table 3-17 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
Year 9	83	108	191	272,338
Year 10	67	140	207	2,367,577
Year 11	70	130	200	2,282,155
Year 12	25	106	131	1,065,135
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**

Consent Decree Year	Wet Weather SSO Occurrences	Dry Weather SSO Occurrences	Total SSO Occurrences	Total Volume Lost (gal)
Rolling Average: Years 4-8	**55.0**	**179.2**	**234.2**	**493,120**
Rolling Average: Years 5-9	**65.0**	**161.8**	**226.8**	**400,315**
Rolling Average: Years 6-10	**58.0**	**151.2**	**209.2**	**789,150**
Rolling Average: Years 7-11	**61.4**	**132.4**	**193.8**	**1,160,215**
Rolling Average: Years 8-12	**53.6**	**118.0**	**171.6**	**1,207,971**

The Year 12 SSO results shown in Table 3-17 continue to support the City's approach to strategically focus 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 3-18 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.

Table 3-18 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
Year 9	15	10	2	28	16	5	3	29	83
Year 10	10	20	1	26	18	17	5	43	67
Year 11	9	22	10	24	15	13	1	36	70
Year 12	18	13	6	22	5	9	3	30	25
Rolling Avg: Years 1-5	**2.2**	**33.6**	**4.0**	**48.4**	**12.2**	**13.4**	**9.0**	**49.8**	**59.8**
Rolling Avg: Years 2-6	**3.8**	**38.0**	**2.8**	**47.4**	**16.8**	**18.0**	**6.2**	**53.6**	**65.2**
Rolling Avg: Years 3-7	**6.6**	**39.8**	**1.8**	**53.6**	**20.2**	**18.4**	**6.2**	**55.4**	**52.2**
Rolling Avg: Years 4-8	**7.2**	**35.6**	**1.0**	**45.2**	**18.8**	**16.8**	**6.8**	**47.8**	**55.0**
Rolling Avg: Years 5-9	**10.0**	**27.8**	**1.2**	**40.0**	**20.0**	**15.4**	**5.8**	**41.6**	**65.0**
Rolling Avg: Years 6-10	**11.4**	**21.2**	**1.2**	**39.0**	**20.8**	**16.4**	**5.0**	**36.2**	**58.0**
Rolling Avg: Years 7-11	**10.8**	**17.6**	**3.2**	**35.0**	**16.6**	**11.0**	**4.2**	**34.0**	**61.4**
Rolling Avg: Years 8-12	**11.2**	**15.4**	**4.0**	**27.0**	**12.4**	**10.8**	**3.8**	**33.2**	**53.8**
Difference in Rolling Average From Years 7-11 to 8-12	**0.4**	**-2.2**	**0.8**	**-8.0**	**-4.2**	**-0.2**	**-0.4**	**-0.8**	**-7.6**
Rolling Average (% Increase/Decrease) From Years 7-11 to 8-12	**4%**	**-13%**	**25%**	**-23%**	**-25%**	**-2%**	**-10%**	**-2%**	**-12%**

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 observed a large increase in the number of SSO occurrences associated with bypass pumps in Year 12 when compared to Year 11. These SSOs were typically caused due to the malfunction of bypass pumps used during the repair or rehabilitation of gravity sewer mains or lift stations. The City has been focused on rehabilitating, replacing, and maintaining its lift stations to reduce the risks associated with temporary bypass pumping.
- **Collapsed Pipe:** During the Year 12 reporting period, the number of SSO occurrences associated with collapsed pipes decreased by 41% when compared to Year 11. The implementation of the "Hot Spot" Cleaning and CCTV Program and the continuation of the On-Demand Maintenance contracts throughout Year 12 have helped reduce the amount of SSOs caused by collapsed pipes.
- **Force Main / ARV:** During the Year 12 reporting period, the City observed a 40% decrease in the number of SSO occurrences associated with force main / ARV issues when compared to Year 11. The City plans to continue rehabilitation work on force mains and ARVs that are associated with SSO occurrences.
- **Grease and Solids:** During the Year 12 reporting period, the number of SSO occurrences associated with grease and solids decreased compared to Year 11. Additionally, the 5-year rolling average continued to decrease. This is evidence that the "Hot Spot" Sewer Cleaning and CCTV program, which targets maintenance-related dry weather SSOs, continues to have a positive impact. In addition, the City continues to implement an Annual Sewer Cleaning and CCTV Program that also contributes to the observed reductions in grease and solids related SSOs. The City intends to review other CMOM programs related to the control of FOG, as discussed in Section 4.3.5.
- **Lift Station:** The City observed a large decrease in the number of SSO occurrences associated with lift stations from Year 11 to Year 12 due to equipment malfunction or operational issues at certain lift stations. The City plans to continue planned lift station rehabilitation and improvement work to mitigate future SSO occurrences.
- **Other:** The number of SSO occurrences in the "Other" category for Year 12 decreased compared to Year 11. The "other" category represents SSOs caused by miscellaneous sewer related issues not described by another listed SSO category. A considerable number of these issues in recent years have been determined to be associated with construction defects in sewer service lateral connections to the collection system.
- **Roots:** Root related SSO occurrences increased in Year 12 as compared to Year 11. However, the 5-year rolling average continues to decrease. The City continues to implement its root control program

as summarized in Section 3.6.3. This is also evidence that the "Hot Spot" Sewer Cleaning and CCTV program is having a positive impact on mitigating root related issues**.**

3.6.2.5 Wet Weather

During the Year 12 reporting period, twenty five (25) wet weather SSO occurrences were reported. Only seven (7) of the wet weather SSOs occurred during storm events below the Consent Decree performance level (2-year, 6-hour storm event). The City has identified and developed capacity improvement projects in areas of the collection system where wet weather SSOs occur that should provide a level of performance equal to or greater than the Consent Decree level of performance. During the Year 12 reporting period, the City recorded 43.99 inches of rainfall, which is a 32% decrease in the amount of rainfall compared to Year 11 (65.10 inches), however, the wet weather SSO occurrences decreased by 64% compared to Year 11 (70 SSOs). This indicates that the City's collection system performed better in Year 12 than in Year 11, even though the amount of rainfall recorded in Year 12 was considerably less than compared to Year 11. In Year 12, the City completed CWP-56 Dilg League Drive SSO Mitigation project. With the completion of this project, an area that has historically accounted for approximately 20percent of the wet weather SSOs reported by the City was addressed. Other notable wet weather SSO mitigation projects recently completed include CWP-63 Brookmeade & Querbes SSO Mitigation and CWP-117 Pierremont Park Phase II Sewer Improvements projects.

3.6.2.6 Rain Gauge Installation

The City procured and installed five (5) rain gauges to collect more detailed and accurate data on rainfall intensity and totals throughout its service area. These gauges provide the City with improved visibility into the recurrence interval and duration of storm events causing wet weather issues and will allow for more focused and efficient response measures to mitigate wet weather related SSOs.

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 the City, via Field Operations

Division and On Demand Contractor ("Hot Spot" & Annual Programs). 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-percent 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 began implementing an Annual Sewer Cleaning and CCTV Program during Year 9. The City continued implementing both Annual and "Hot Spot" Sewer Cleaning and CCTV Programs in Year 12.

3.6.3.2 "Hot Spot" and Annual Sewer Cleaning and CCTV Programs

The City initiated a "Hot Spot" Sewer Cleaning and CCTV Program in Year 8 to mitigate[1] dry weather SSOs. In Year 9, the City initiated both a "Hot Spot" and Annual Program which combined included approximately 280,000 linear feet of gravity sewer cleaning and CCTV inspection. The Year 9 Programs represented approximately 5 percent of the collection system. These Programs are in addition to sewer cleaning related to the City's ongoing Sewer Cleaning Program. The Year 10 "Hot Spot" and Annual Programs were developed during Year 9 and combined included approximately 374,000 linear feet of gravity sewer cleaning and CCTV inspection which began in May 2023 (Year 10). The Year 10 Programs represented approximately 7 percent of the collection system. The Year 11 "Hot Spot" and Annual Programs were developed during Year 10 and combined included approximately 139,000 linear feet of gravity sewer cleaning and CCTV inspection. The Year 12 "Hot Spot" and Annual Programs were developed during Year 11 and combined included approximately 206,000 linear feet of gravity sewer cleaning and CCTV inspection. The Year 12 Programs represented approximately 4 percent of the collection system.

Table 3-19 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 12 "Hot Spot" and Annual Sewer Cleaning through the reporting period.

[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."

Table 3-19 Summary of Gravity Sewer Cleaning Activities

	Year 1-5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12
SSA Phase 1	885,851							
SSA Phase 2	481,042							
SSA Phase 3	867,972							
SSA Phase 4	1,046,657							
SSA Phase 5	245,936	430,046						
City Preventative Maintenance	1,247,206	235,237	235,269	415,450	228,913	203,297	581,278	241,761
Hot Spot Cleaning[1]			49,969	241,393	111,941	231,212	125,056	114,883
Annual Cleaning[1]					167,999	142,041	13,804	91,390
Total	**4,774,664**	**665,283**	**284,232**	**656,843**	**508,853**	**576,500**	**720,138**	**448,034**
% of the Total Collection System	**88.2%**	**12.3%**	**5.3%**	**12.1%**	**9.4%**	**10.6%**	**13.2%**	**8.2%**

[1] The length shown for Hot Spot and Annual Cleaning in Year 12 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 12 through the Hot Spot and Annual Sewer Cleaning and CCTV Programs.

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 I/I issues. The program continued in Year 9 with a total of forty-eight (48) manholes selected for rehabilitation with 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. Twenty-seven (27) of the forty-eight (48) manholes identified for rehabilitation with Triplex Liners were completed during Year 9.

The City rehabilitated twenty-one (21) manholes with Triplex Liners in Year 10. The City also rehabilitated 125 manholes using a Type-2 Cementitious Liner through one of the City's On-Demand Maintenance contracts. Overall, the City rehabilitated 146 manholes that were not part of identified Consent Decree projects in Year 10.

In Year 11, the City rehabilitated eleven (11) manholes with Triplex Liners. The City also rehabilitated forty-six (46) manholes using a Type-2 Cementitious Liner through one of the City's On-Demand

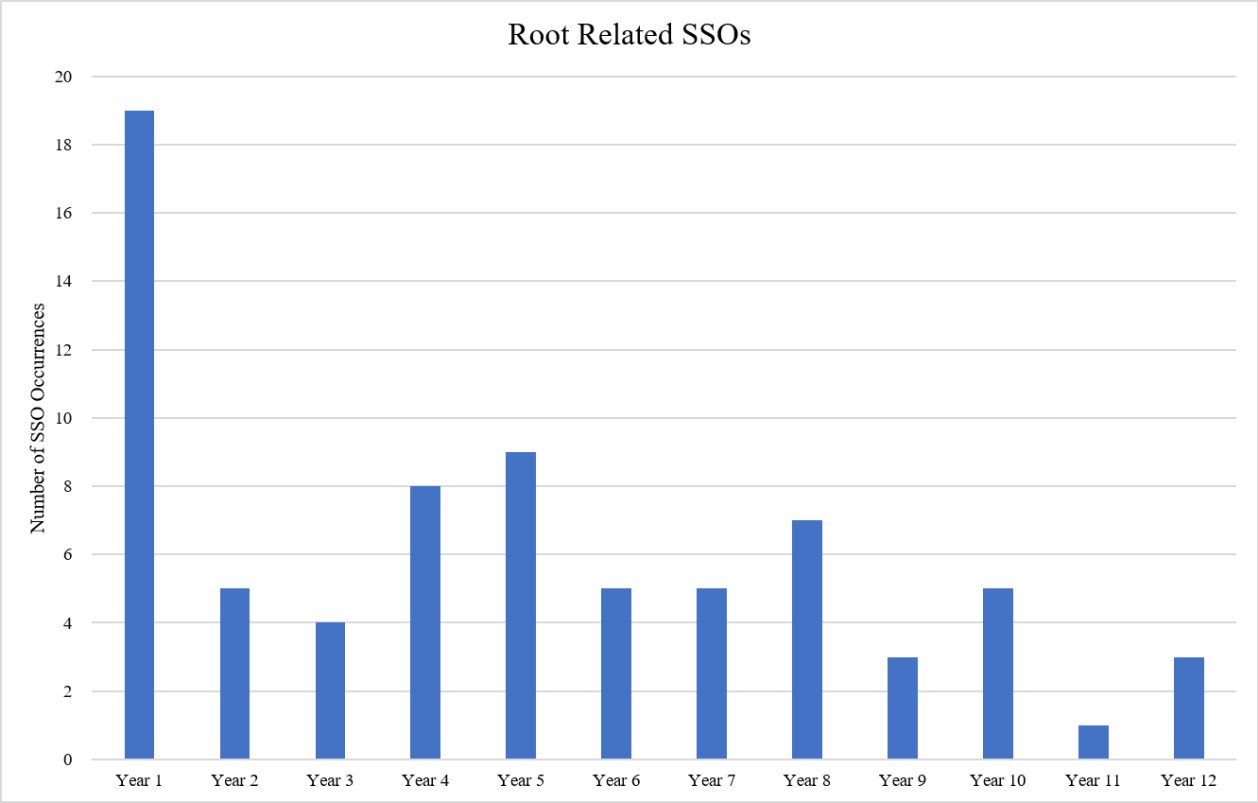
Maintenance contracts. Overall, the City rehabilitated fifty-seven (57) manholes that were not part of identified Consent Decree projects in Year 11.

Due to budget constraints, the City rehabilitated six (6) manholes that were not part of identified Consent Decree projects in Year 12. However, manhole rehabilitation work is anticipated to increase in Year 13 once funding becomes available.

3.6.3.4 Chemical Root Control (CRC) Program

The Consent Decree requires a root control program that includes 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 reinstituted in 2012. The City continues to perform chemical root control on an annual basis as a preventative maintenance measure to reduce root-related SSOs. Chemical treatment is typically applied in the Fall season each year. During the reporting period, a total of 310 gravity sewers (99,615 linear feet) were treated. Three (3) root-related SSOs occurred in CDY 12 representing approximately one (1) percent of the total SSOs reported for the period. **Error! Reference source not found.** below provides an illustration of root related SSO occurrences for each of the Consent Decree reporting periods.

Figure 3-3 Root Related SSOs by Reporting Period



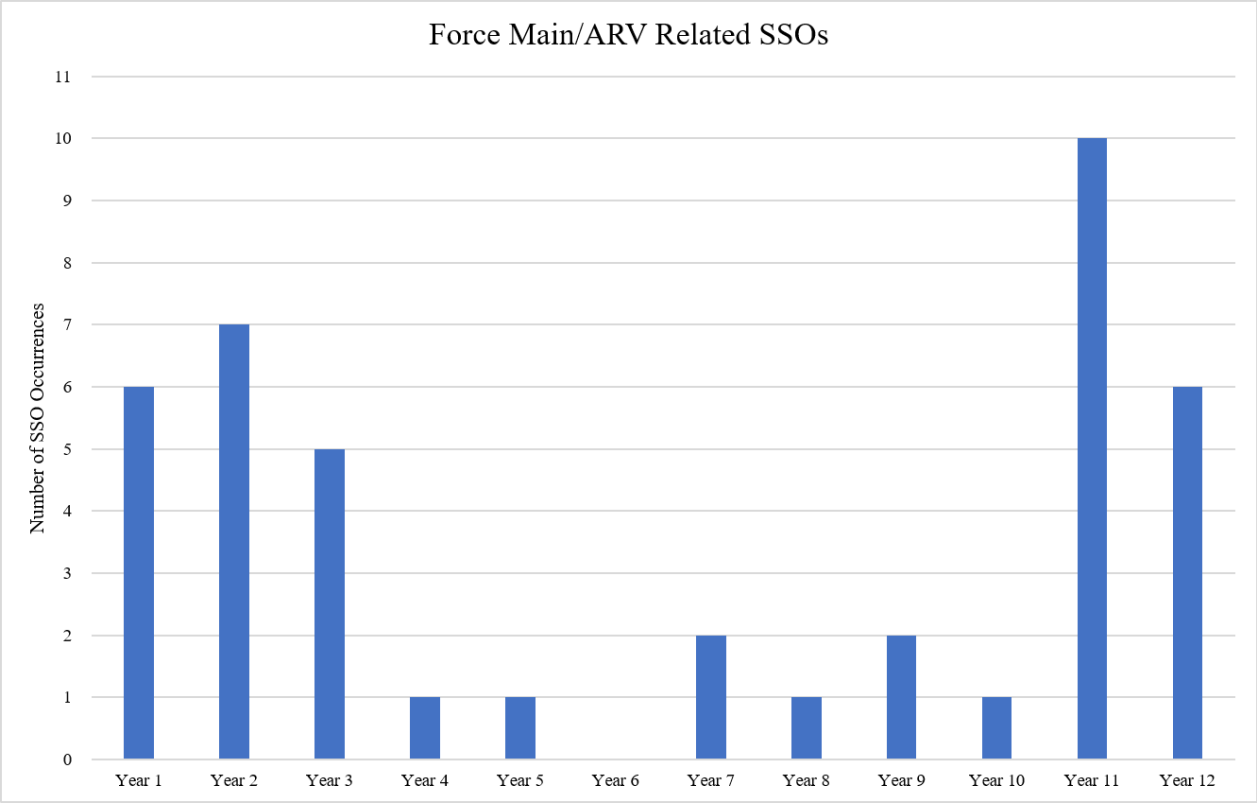
3.6.3.5 Force Main / ARV Inspection Program

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 defective ARVs.
- Tracking maintenance activities for force main and ARV inspections.

There were six (6) recorded SSO occurrences caused by force main failures representing five (5) percent of the total during the reporting period. **Error! Reference source not found.** 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 and Other Sewer Rehabilitation Services

The City rehabilitated approximately 1,632 linear feet of sanitary gravity sewer and nine (9) sanitary lift stations using its On-Demand Maintenance Contracts in Year 12. The City intends to continue its utilization of On-Demand Contracts during Year 13.

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 Shutdown
- Sludge Farm O&M

During the Year 12 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.

3.7 Citizen Engagement & Constituent Issue Management

The City continued public outreach and constituent issue resolution through the Year 12 reporting period. The City uses web-based software, QAlert, to track, manage, and resolve customer requests. The software also integrates with the City's software for computerized maintenance management, Cityworks, allows the Water and Sewerage Department to dispatch personnel to customer requested services. Citizens can now report maintenance issues to the City using multiple methods, including phone, City website, and mobile phone application. The City is also converting Cityworks to a cloud-based system for better reliability and updating security and functionality.

The main focus of most public outreach activities during Year 12 included social media outreach, website development, public outreach meetings, semi-annual reports, public 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 Project Updates, educational content on the City's wastewater infrastructure and how to reduce Sanitary Sewer Overflows by providing information on fats, oils, and grease.

The City also advertised a contest to provide artwork for the rehabilitation and repainting effort of three (3) of its elevated water towers. This outreach effort provided a platform for the Mayor of Shreveport,

Tom Arceneaux, to educate the citizens in the efforts for the City to repair its infrastructure with the newly passed 2024 General Obligation Bond and promote excitement throughout the City for the beautification of aging infrastructure.

Other notable outreach efforts include World Water Day and Water Week where the PMC and the City of Shreveport visited local schools to educate students on the water cycle, saving water and fats, oils, and grease awareness.

4.0 CONSENT DECREE – YEAR THIRTEEN (13)

The major objectives to be completed during the next reporting period (Year 13: May 13, 2026 to May 12, 2027) 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 SSOs. 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 Sanitary Sewer Assessment – Phase 5

The City will complete additional SSA activities in Phase 5 during the Year 13 reporting period. These activities will include CCTV inspections of sewer main that were repaired in Year 12 (post-construction inspections) and sewer cleaning of previously uninspected gravity sewer mains throughout the Phase 5 SSA Area. An approximate 28,000 linear feet of gravity sewer CCTV inspections are planned to be completed. This work will be completed through the City's Annual Sewer Cleaning and CCTV Program, which is further discussed in Section 4.3.3 below. The City will begin development of the Phase 5 SSA Report for all City Subbasin areas that have been completed.

4.3 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 13 reporting period are summarized below.

4.3.1 Update of Geographical Information Systems (GIS)

The City will continue to update its GIS to reflect field inspections performed through SSA activities and Conforming to Construction drawings associated with RMP projects, the Critical Projects Program, and updates identified through the various City CCTV 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 13.

4.3.2 "Hot Spot" Sewer Cleaning and CCTV Program

The City will continue implementation of the "Hot Spot" Sewer Cleaning and CCTV Program. In total, approximately 64,000 linear feet of gravity sewers are planned to be completed in the 2026-2027 "Hot Spot" Sewer Cleaning and CCTV Program.

4.3.3 Annual Sewer Cleaning and CCTV Program

The City is developing the 2026-2027 Annual Sewer Cleaning and CCTV Program for the WCTS based on pipe materials, age, diameter, sewer system maintenance records, and remaining Consent Decree obligations. Approximately 28,000 linear feet of gravity sewers are expected to be included in the 2026-2027 Annual Sewer Cleaning and CCTV Program, representing approximately 1-percent of the collection system. This is in addition to the gravity sewer work scoped for the 2026-2027 "Hot Spot" Sewer Cleaning and CCTV program.

4.3.4 Updates to City's Computerized Maintenance Management Systems (CMMS)

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 continue to update and customize the Cityworks platform to meet the specific needs of its Water and Sewerage Department.

4.3.5 Review of FOG Program

The City evaluated the effectiveness of existing FOG-related program activities including software, staffing, and existing SOPs and began the development of a new dashboard and data compilation procedure during Year 11. The City continued to develop this dashboard and procedure to continue evaluating program activities in Year 12 and will continue to do so in Year 13. The effectiveness of

public outreach and education initiatives, FOG enzyme procedures and key performance indicators will continue to be assessed.

4.3.6 Review of Sewer Overflow Response Plan (SORP)

The City intends to continue its review of the existing SORP SOP to identify where improvements might be needed and opportunities for correlating reported 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.

4.3.7 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.

4.4 Critical Infrastructure Projects Program

The City will continue to deliver the current portfolio of Critical Projects, as presented in Section 10345021.03.3.3, 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, 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.

As discussed in Section 2.02.3, 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. This 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 the City's projects 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.

4.5 Capacity Projects Program

The City will continue planning, design and construction of the portfolio of capacity related projects and initiatives that were identified by the CARMP and are listed in Table 3-11 and 3-13 above. These projects focus on areas that were shown to have capacity restrictions that are related to wet weather related SSO occurrences and predicted by the hydraulic model to degrade level of service during a 2-year recurrence interval, 6-hour duration rainfall event. The additional areas identified as potential areas of concern will be monitored for SSO activity during both dry and wet weather conditions during the Year 13 reporting period.

4.6 Condition Assessment Program

The City plans to continue assessing its wastewater system during the Year 13 reporting period as described below. Condition assessments will be completed through ongoing activities in the following five (5) programs.

4.6.1 Manhole Risk and Rehabilitation Program

The City will continue to develop and deploy a Manhole Risk and Rehabilitation Program. The Risk and Rehabilitation Program will be available to support development and prioritization of condition remedial measures to address the highest ranked assets at risk of structural failure. The City has been discussing the rehabilitation of 718 manholes with NASSCO Structural 4 and 5 defects as part of ongoing Consent Decree modification discussions with USEPA and LDEQ. The City rehabilitated thirty-seven (37) of these manholes in Year 10, thirty-three (33) manholes in Year 11, and six (6) manholes in Year 12. In Year 13, the City will continue to focus on prioritizing rehabilitation of the remaining 642 manholes identified in Phases 3 through 5 with NASSCO Structural 4 and 5 defects once funding becomes available.

4.6.2 Sewer Risk and Rehabilitation Program

The City will continue to develop and deploy a Sewer Risk and Rehabilitation Program. The Risk and Rehabilitation Program will be available to support development and prioritization of condition remedial measures to address the highest ranked assets at risk of structural failure. The City has been discussing the rehabilitation/replacement of approximately 120 miles of gravity sewer with NASSCO Structural 5 defects in Phases 3, 4, and 5 as part of ongoing Consent Decree discussions with USEPA and LDEQ. In Year 10 the City rehabilitated approximately fourteen (14) miles of these sewers. In Year 11 the City rehabilitated approximately four (4) miles of these sewers and began developing construction bid

packages for rehabilitation of these sewers. In Year 12, the City rehabilitated approximately 2.1 miles of these sewers. In Year 13, the City will focus on prioritizing sewer rehabilitation/replacement projects that are targeted to mitigate SSOs.

In CD Year 8 (May 13, 2021 through May 12, 2022) the City implemented a "Hot Spot" Sewer Cleaning and CCTV Program which focused on areas of known and recurring SSOs. The City believes that this approach is the reason for the significant ongoing reduction in dry weather SSOs as shown in the Dry Weather SSO Table 4-1 below.

Table 4-1 5 Year Trend Analysis

5 Year Trend Analysis
Year To Date (YTD) Dry Weather SSO Occurrences By SSO Types

Year Trend Analysis: Dry Weather SSO Occurrences By SSO Types									
Consent Decree Year	SSO Type								Total Dry Weather SSO Occurrences
	Bypass Pump	Collapsed Pipe	Force Main/ARV	Grease	Lift Station	Other	Roots	Solids	
Year 7	15	26	2	62	26	10	5	33	179
Year 8	4	12	1	35	8	10	7	28	105
Year 9	15	10	2	28	16	5	3	29	108
Year 10	10	20	1	26	18	17	5	43	140
Year 11	9	22	10	24	16	13	1	36	131
Year 12	18	13	6	22	5	9	3	30	106
Total SSO Occurrences	**71**	**103**	**22**	**197**	**89**	**64**	**24**	**199**	**769**
Rolling 5-Year Trend (Average)	10.6	18.0	3.2	35.0	16.8	11.0	4.2	33.8	132.6

In Year 13, the City intends to continue the "Hot Spot" Program to focus on a further reduction of dry weather SSOs due to its success. As part of its focused approach, the City has identified and is currently developing eight (8) sewer rehabilitation projects specifically focused on mitigating SSOs caused by collapsed pipes and other pipe/manhole defects that cause the accumulation of grease and solids. Implementation of these projects, which were identified through the "Hot Spot" Program, are expected to eliminate 32 (22%) of the 147 dry weather SSOs caused by collapsed pipe, grease, and solids in CDY 11 and 12.

4.6.3 Lift Station Assessment Program

The City will continue to routinely assess its lift stations to determine if other remedial actions are required. Additionally, the City intends to complete the review and updates to the remaining eight (8) lift

stations for their Emergency Lift Station Bypass Standard Operating Procedures and initiate field verification for these sites.

4.6.4 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.

4.6.5 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.

ATTACHMENT 1 – INDUSTRIAL USERS OF THE PRE-TREATMENT PROGRAM

Industrial Users of the Pre-Treatment Program
Year 12 Summary

Count	Facility Name	Address	City	State	Zip code
1	2BGreen Holdings LLC	1111 Burt Street	Shreveport	LA	71107
2	ALSCO Incorporated	5000 Hollywood Avenue	Shreveport	LA	71109
3	Akston Biosciences Corporation	2001 Kings Highway	Shreveport	LA	71103
4	Alfasigma USA, Inc.	2008 Claiborne Avenue	Shreveport	LA	71133
5	Alloy Piping Products, LLC	740 North Market	Shreveport	LA	71107
6	Benteler Steel/Tube Manufacturing Corp.	11650 Hwy 1	Shreveport	LA	71115
7	Calumet Shreveport Refinery	3333 Midway Avenue	Shreveport	LA	71109
8	CertainTeed, Inc	620 Aero Drive	Shreveport	LA	71107
9	Christus Schumpert Highland	1453 East Bert Kouns	Shreveport	LA	71105
10	City of Shreveport - Woolworth Landfill	10581 Woolworth Road	Keithville	LA	71047
11	Crown Health Care Laundry Services, LLC	3305 Mansfield Road	Shreveport	LA	71103
12	Energy Solutions (US) LLC	5677 North Industry Road	Shreveport	LA	71107
13	Frymaster	8700 Line Avenue	Shreveport	LA	71106
14	Hollywood Mini Mart	3655 Hollywood Avenue	Shreveport	LA	71109
15	Integrated Power Services LLC	1245 North Hearne Avenue	Shreveport	LA	71107
16	International Paper	1212 Tolmak Road	Shreveport	LA	71107
17	Jones Environmental, Inc.	6910 West Bert Kouns	Shreveport	LA	71129
18	Jones Environmental, Inc.	5112 Monkhouse Drive	Shreveport	LA	71109
19	Kansas City Southern Railway Company	4601 Shreveport-Blanchard Highway	Shreveport	LA	71107
20	Liberty Energy	2675 Valley View Drive	Shreveport	LA	71108
21	Liquid Environmental Solutions	437 Fortson Street	Shreveport	LA	71107
22	Ochsner LSU Health St. Mary Medical Center	1 Saint Mary Place	Shreveport	LA	71101
23	Omni Specialty Packaging	10399 Highway 1 South	Shreveport	LA	71115
24	Overton Brooks Medical Center	510 East Stoner Avenue	Shreveport	LA	71101
25	Pel State Oil, Co.	3102 Jewella Avenue	Shreveport	LA	71109
26	Pratt Paper (LA), LLC	10429 Richard Pratt Drive	Shreveport	LA	71115
27	Prolec GE USA LLC	7000 W Bert Kouns Industrial Loop	Shreveport	LA	71129
28	Purina Animal Nutrition	223 W 63rd Street	Shreveport	LA	71106
29	Republic Services	6896 Industrial Loop	Shreveport	LA	71129
30	Ryder Transportation Inc	2510 Lakeshore	Shreveport	LA	71103
31	Safety-Kleen Systems, Inc.	2760 Valley View	Shreveport	LA	71108
32	Ternium USA, Inc.	2500 Ron Bean Blvd.	Shreveport	LA	71115
33	The ARC of Caddo-Bossier dba Frost Industries	5320 Greenwood Road	Shreveport	LA	71109
34	Twin State Trucks, Inc. dba Pliler International	7690 West 70th	Shreveport	LA	71129
35	Union Pacific Railroad	6215 E Jewella	Shreveport	LA	71108
36	University Health Shreveport LLC DBA Ochsner LSU Health Shreveport	1541 Kings Highway	Shreveport	LA	71103
37	Willis Knighton Health System	2600 Greenwood Road	Shreveport	LA	71103
38	Willis Knighton Pierremont Medical Center	8001 Youree Drive	Shreveport	LA	71105
39	Willis Knighton South Medical Center	2510 Bert Kouns Industrial Loop	Shreveport	LA	71118

ATTACHMENT 2 – FOG PROGRAM

Public Outreach for FOG Program
Year 12 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
1	5/27/2025	Residential	Snell's Limbs and Braces	1833 Line Ave.	In response to a reported SSO that appeared in City Works on 5/23/25, we did a site visit at nearby FSE, Intensive Specialty Hospital, located at 1800 Irving Place, that's on the same sewer line as the reported SSO and put hanging door tags on houses in the nearby area that are on the same sewer line.
2	5/29/2025	Residential	Highland Residential Area	422 Wilkinson St. & 2627 Dillard St.	In response to a reported SSO that appeared in City Works on 5/28/25, we put hanging door tags on houses in the nearby neighborhood. No contributing FSE near by.
3	6/18/2025	Residential	Southern Hills Subdivision	9645 Blom Blvd.	In response to a SSO that appeared in City Works on 6/15/2025, it is determined that the SSO is not related to any nearby FSE, and the cause is residential. We put hanging door tags on houses in the neighborhood that were on the same sewer line as the address listed above.
4	6/20/2025	Residential	Snell's Orthotics and Prosthetics	1833 Line Ave.	In response to a SSO that appeared in City Works on 6/17/2025, it is determined that the SSO is not related to any nearby FSE, and the cause is residential. We put hanging door tags on houses in the neighborhood that were on the same sewer line as the address listed above.
5	7/3/2025	FSE	Country Club Hills Subdivision	3001 Curtis Ln.	In response to a reported SSO that appeared in City Works on 06/30/2025, we put hanging door tags on houses in the nearby vicinity.
6	7/16/2025	Residential	Lakeside Residential Area	3406 Bellaire Ave.	In response to a reported SSO that appeared in City Works on 07/13/2025, put hanging door tags on homes corresponding with the flow of sewer in the vicinity of the listed address. No FSE in the area that could contribute to the SSO.
7	7/22/2025	Residential	Cambridge Court III Apartments	3800 Kitty Ln.	In response to a reported SSO that appeared in City Works on 07/16/2025, took hanging door tags to the leasing office and gave them to Leasing Consultant to distribute to the tenants. No FSE in the area that could contribute to the SSO.
8	9/19/2025	FSE	2600 Greenwood Avenue	2600 Greenwood Ave.	Checked Willis Knighton Progressive Care at 2715 Albert L. Bicknell Drive. Entry in City Works says that the manhole was overflowing on the Hearne Avenue side of the hospital, but I saw no other FSEs on the same sewer line, so it is likely that SSO is coming from the hospital itself.
9	9/19/2025	Residential	652 Robinson Place	652 Robinson Pl.	Passed out door hangers in the 600 block of Robinson Place.
10	10/15/2025	FSE	Raising Cane's	1040 Kings Hwy.	Copied from MGO: Came out to do a visual inspection based off a SSO notice on City Works at 1046 Kings Highway. The grease trap and sample port is overflowing into the parking lot. SP contents appear to be rising like yeast out of the port. Will be forwarding notice over to stormwater department. Wrote a NOV and gave manager 24-48 hours to have a plumber come out to check the lateral for a blockage as City Works states that there was no issue on the city's side and that it is a "private grease trap" issue. Manager says that plumbers and City have been giving them the run around; a plumber was called out the day prior and noted that there was a build up of paper towels in the line and advised them to have a hauler pump the trap down; I corroborated this advice and left my email as well as a list of haulers in case LES was not available. Will return in 48 hours to check progress. Verified this course of action with L. Chambers via phone call.
11	10/14/2025	Residential	Hudson Street		City Works noted SSO occurred near Fair Grounds / Hirsch Coliseum. No houses or FSE in the area on the same sewer line.
12	11/17/2025		Line Avenue & Evangeline Place	Line Ave. & Evangeline Pl.	Checked FSE within the surrounding area (Superior Grill, Athena Greek and Lebanese, and Koi Asian Fusion) and all of them were in compliance. Unsure of the source of the grease.
13	11/25/2025	FSE	1601 Market Street	1601 Market St.	Went out to meet with M. Morgan from Field Ops and inspect the grease trap upon request from W. Wyche. The clean outs traced back to this FSE are overflowing with grease, however the grease trap on the property passed inspection (0 in FOG, 0 in S, 22 in WH, 0%, no SP, RGC in good condition, they are pumped sometimes twice a month). This FSE has repeatedly had problems; the next course of action is a ten-day letter and interceptor replacement letter as it is too small/old for a restaurant of this size. M. Morgan stated that other businesses in the area (non-FSE) have been complaining about the odor from the sewage overflow in the area and informed me that the city has been trying to be patient with this FSE, but repeat issues have made it difficult to fix the root cause.
14	12/18/2025	Residential	Kingstowne Place Neighborhood	639 Kingstowne Pl.	Passed out door hangers in the area.
15	3/19/2026	Residential	Cooper Road Plaza Apartments	2929 Peach St., Shreveport, LA 71107	Apartment complex was experiencing sewage back up and called a plumber. The plumber found the issue to be grease and toiletries. Pretreatment conducted a mini presentation to staff and tenants concerning grease management and unflushable items. Pretreatment staff distributed grease cans, rack cards, and info regarding unflushable items.

Public Outreach for FOG Program
Year 12 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
16	5/4/2026	FSE	437 Fortson St.	437 Fortson St.	In response to a SSO that appeared in City Works on 5/1/26, we visited businesses in the area and inquired about their grease disposal methods, if applicable, and provided education about proper grease disposal.
17	5/4/2026	Residential	3100 Country Club Dr.	3100 Country Club Dr.	In response to a SSO that appeared in City Works on 5/1/26, we put hanging door tags on homes in the nearby vicinity.

ATTACHMENT 3 – YEAR 12 SANITARY SEWER OVERFLOWS

Sanitary Sewer Overflows (SSOs)
Year 12 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	5/22/2025	10DD-56	6336 Querbes Drive	0.5 hours	rain event	not contained or returned	N/A	Bayou Pierre	0 gal	100 gal
2	5/23/2025	50W-55	1833 Line Avenue	1 hour	grease	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	525 gal
3	5/24/2025	28BB-58	216 Stuart Avenue	1.5 hours	debris	not contained or returned	unstopped by wash truck	Sand Beach Bayou	0 gal	2,000 gal
4	5/26/2025	44Z-55	458 Slattery Boulevard	0.5 hour	rain event	not contained or returned	N/A	Bayou Pierre	0 gal	>10,000 gal
5	5/26/2025	45Z-55	Dudley Drive	0.5 hour	rain event	not contained or returned	N/A	Ockley Ditch	0 gal	>10,000 gal
6	5/26/2025	09LL-52	9606 Debra Joy Lane	0.5 hour	rain event	not contained or returned	N/A	Brush Bayou	0 gal	200 gal
7	5/26/2025	05X-47	1636 Dilg League Drive	0.5 hour	rain event	not contained or returned	N/A	Cross Lake	0 gal	5,000 gal
8	5/26/2025	02Y-42	5804 Dianne Street	0.5 hour	rain event	not contained or returned	N/A	Bickham Bayou	0 gal	>10,000 gal
9	5/26/2025	07CC-57	Glen Cove Street	1 hour	rain event	not contained or returned	N/A	Bayou Pierre	0 gal	50,000 gal
10	5/26/2025	08X-55	2631 Dillard Street	1 hour	rain event	not contained or returned	N/A	Bayou Pierre	0 gal	10,000 gal
11	5/26/2025	12GG-52	578 Janet Lane	0.5 hour	rain event	not contained or returned	N/A	Brush Bayou	0 gal	100,000 gal
12	5/27/2025	29MM-49	East Chase Circle	2 hours	main break	not contained or returned	set up pump	Brush Bayou	0 gal	20,000 gal
13	5/27/2025	05X-47	1600 Dilg League Drive	0.5 hour	rain event	not contained or returned	N/A	Cross Lake	0 gal	100 gal
14	5/27/2025	07CC-57	300 Glen Cove Street	1 hour	rain event	not contained or returned	N/A	Bayou Pierre	0 gal	50,000 gal
15	5/28/2025	31MM-50	9950 Kingston Road	0.5 hour	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	500 gal
16	5/28/2025	08X-55	2631 Dillard Street	1 hour	debris	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	40,000 gal
17	5/28/2025	17LL-49	2041 Pitch Pine Drive	0.5 hour	main break	not contained or returned	N/A	Brush Bayou	0 gal	300 gal
18	5/29/2025	05FF-36	7340 Julie Frances Drive	5.5 hours	debris	not contained or returned	set up pump	Gilmer Bayou	0 gal	1,500 gal
19	6/1/2025	02Y-42	5804 Dianne Street	1.75 hours	lift station down due to power outage	not contained or returned	sewer lift personnel	Bickham Bayou	0 gal	10,000 gal
20	6/4/2025	09CC-58	186 Carroll Street	0.5 hour	rain event	not contained or returned	N/A	Sand Beach Bayou	0 gal	500 gal
21	6/4/2025	N/A	148 Airport Drive	1.5 hours	force main ARV issue	not contained or returned	replaced force main ARV	12 Mile Bayou	0 gal	>2,500 gal
22	6/4/2025	37Y-55	3210 Highland Avenue	1 hour	debris	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	>1,700 gal
23	6/5/2025	31MM-550	9898 Kingston Road	1 hour	bypass pump malfunction	partially contained and returned	set up pump	N/A	2,400 gal	50 gal
24	6/5/2025	18Z-55	536 Elmwood Street	2.5 hours	debris	not contained or returned	washed sewer main	N/A	0 gal	50 gal
25	6/6/2025	08X-55	3404 Gilbert Drive	2 hours	debris	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	40 gal
26	6/10/2025	13W-55	442 Jordan Street	2.5 hours	main break	not contained or returned	main repaired	N/A	0 gal	10 gal
27	6/11/2025	63LL-49	9645 Blom Blvd	0.75 hours	rain event	not contained or returned	N/A	Brush Bayou	0 gal	50 gal
28	6/11/2025	45LL-49	2052 Kirkwood Drive	0.75 hours	rain event	not contained or returned	N/A	Brush Bayou	0 gal	100 gal
29	6/11/2025	22MM-50	Kingston Road	1 hour	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	>2,500 gal
30	6/12/2025	05X-47	1636 Dilg League	1 hour	rain event	not contained or returned	N/A	Cross Lake	0 gal	50 gal
31	6/12/2025	17LL-49	2041 Pitch Pine Drive	0.75 hours	rain event	not contained or returned	N/A	Brush Bayou	0 gal	70 gal
32	6/12/2025	08X-55	2631 Dillard Street	0.5 hour	debris	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
33	6/15/2025	63LL-49	9645 Blom Blvd	5.75 hours	grease	not contained or returned	unstopped by wash truck	Brush Bayou	0 gal	1,000 gal
34	6/20/2025	05MM-49	Kingston Road	2 hours	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	1,500 gal
35	6/21/2025	45LL-49	2052 South Kirkwood	2 hours	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	200 gal
36	6/21/2025	05MM-49	1501 Williamson Way	2.5 hours	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	75,000 gal
37	6/23/2025	32MM-50	Kingston Road	2.5 hours	bypass pump malfunction	not contained or returned	re-established connection	Brush Bayou	0 gal	4,800 gal
38	6/24/2025	48U-54	720 Edwards Street	1 hour	debris	not contained or returned	unstopped by wash truck	Red River	0 gal	150 gal
39	6/30/2025	12Y-47	3001 Curtis Lane	2 hours	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	70 gal
40	7/10/2025	12DD-37	6900 Westport Avenue	4.5 hours	debris	partially contained and returned	vacuum manhole	Gilmer Bayou	4,800 gal	5,000+ gal
41	7/13/2025	1014W-49	3406 Bellaire Avenue	1 hour	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	150 gal
42	7/22/2025	1029Y-53	2940 Samford Avenue	0.5 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	50 gal
43	7/22/2025	31KK-48	1125 Kimberly Drive	0.5 hours	rain event	not contained or returned	N/A	N/A	0 gal	20 gal
44	7/23/2025	32CC-54	855 Pierremont Road	1 hour	grease	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
45	7/26/2025	26AAA-41	4114 Honda Drive	1 hour	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	50 gal
46	8/4/2025	08X-55	400 Wilkinson Street	1 hour	grease	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
47	8/7/2025	18AKK-54	230 Flournoy Lucas Road	1 hour	damaged manhole	not contained or returned	unstopped by wash truck	N/A	0 gal	150 gal
48	8/12/2025	33X-49	3435 Frederick Street	0.5 hours	lift station down	not contained or returned	lift station reparied	Cross Lake	0 gal	>100 gal
49	8/14/2025	1011Y-53	2940 Samford Avenue	1 hour	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	50 gal
50	8/18/2025	34W-48	1812 Jewella Avenue	1.5 hours	debris	not contained or returned	unstopped by wash truck	Cross Lake	0 gal	75 gal
51	8/29/2025	12GG-52	578 Janet Lane	0.5 hours	rain event	not contained or returned	N/A	Brush Bayou	0 gal	>500 gal
52	8/29/2025	59MM-49	2028 Meadow Bend	0.75 hours	rain event	not contained or returned	set up pump	Brush Bayou	0 gal	2,000 gal
53	8/29/2025	45LL-49	2052 South Kirkwood Drive	0.5 hours	rain event	not contained or returned	N/A	Brush Bayou	0 gal	50 gal
54	8/30/2025	08EE-49	7036 Elsie Street	0.75 hours	disconnected sewer service	not contained or returned	washed sewer main	Brush Bayou	0 gal	15 gal
55	9/4/2025	1028X-55	652 Robinson Place	2.5 hours	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	300 gal
56	9/7/2025	08LL-49	9480 Clausen Court	1.5 hours	debris	not contained or returned	unstopped by wash truck	Brush Bayou	0 gal	>5,000 gal
57	9/14/2025	34KK-51	9425 Aspen Circle	1.5 hours	roots	partially contained and returned	unstopped by wash truck	N/A	20 gal	100 gal
58	9/15/2025	1029Y-53	2940 Samford Avenue	1 hour	grease	not contained or returned	washed sewer main	N/A	0 gal	30 gal
59	9/18/2025	01Y-51	2600 Greenwood Road	1.5 hours	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	30 gal
60	9/24/2025	11Q-44	3052 Gordonia Drive	1 hour	rain event	not contained or returned	lift station back in service	N/A	0 gal	750 gal
61	9/30/2025	31HH-56	410 Ashley Ridge Boulevard	1 hour	disconnected sewer service	not contained or returned	repair ticket created	Bayou Pierre	0 gal	>500 gal
62	9/30/2025	12FF-51	8100 Wyngate Boulevard	1 hour	bypass pump malfunction	not contained or returned	set up pump	Brush Bayou	0 gal	10,000 gal
63	10/2/2025	14FF-51	8000 Wyngate Boulevard	1 hour	bypass pump malfunction	not contained or returned	set up pump	Brush Bayou	0 gal	1,000 gal
64	10/3/2025	1003Z-49	3700 Hudson Avenue	1 hour	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	700 gal
65	10/4/2025	45LL-49	2052 South Kirkwood Drive	1 hour	bypass pump malfunction	not contained or returned	set up pump	Brush Bayou	0 gal	300 gal
66	10/5/2025	04T-54	160 Leeve Street	1 hour	force main/ARV issue	not contained or returned	set up pump	12 Mile Bayou	0 gal	10 gal
67	10/6/2025	31X-41	6121 Yarbrough Road	4 hours	main break	not contained or returned	set up pump	N/A	0 gal	15 gal
68	10/7/2025	41V-53	1500 Looney Street	0.5 hours	disconnected sewer service	not contained or returned	repair ticket created	Cross Bayou	0 gal	>500 gal
69	10/17/2025	37Y-41	5800 Jefferson Paige Road	2 hours	force main/ARV issue	not contained or returned	repaired sewer force main	Bickham Bayou	0 gal	>3500 gal
70	10/23/2025	18Y-42	5923 Dianne Street	1 hour	bypass pump malfunction	not contained or returned	set up pump	Bickham Bayou	0 gal	100 gal
71	10/28/2025	13V-49	3500 Milam Street	1.25 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	200 gal
72	10/29/2025	31MM-50	9898 Kingston Road	1 hour	bypass pump malfunction	not contained or returned	set up pump	N/A	0 gal	>1000 gal
73	11/9/2025	45CC-54	Evangeline Place	1 hour	main break	partially contained and returned	repair ticket created	Bayou Pierre	100 gal	300 gal
74	11/10/2025	N/A	3800 Hardy Street	1 hour	bypass pump malfunction	not contained or returned	repaired bypass pump	Cross Lake	0 gal	63,450 gal

Sanitary Sewer Overflows (SSOs)
Year 12 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
75	11/12/2025	19X-49	3418 Stonewall Street	1 hour	lift station down	not contained or returned	lift station back in service	N/A	0 gal	>200 gal
76	11/13/2025	23HH-52	409 Watts Road	3 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	200 gal
77	11/13/2025	02Y-42	5802 Dianne Street	3.5 hours	lift station down	not contained or returned	sewer lift personnel	Bickham Bayou	0 gal	750 gal
78	11/16/2025	1003Z-49	3701 Hudson Street	1 hour	grease	partially contained and returned	unstopped by wash truck	Brush Bayou	100 gal	150 gal
79	11/17/2025	23HH-52	409 Watts Road	2.5 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	>1250 gal
80	11/18/2025	50U-54	601 Milam Street	1.5 hours	grease	not contained or returned	washed sewer main	Red River	0 gal	50 gal
81	11/22/2025	15GG-51	Wyngate Boulevard	1 hour	bypass pump malfunction	not contained or returned	repaired bypass pump	Brush Bayou	0 gal	>100 gal
82	11/22/2025	14X-46	4481 Lakeshore Drive	0.5 hours	bypass pump malfunction	not contained or returned	repaired bypass pump	Cross Lake	0 gal	>100 gal
83	11/24/2025	N/A	11301 East Kings Highway	1 hour	power surge	not contained or returned	opened bypass gate to stop overflow	N/A	0 gal	unknown
84	11/24/2025	51AA-54	901 Ockley Drive	6 hours	power surge	not contained or returned	installed diesel bypass pump	Ockley Ditch	0 gal	unknown
85	11/25/2025	45GG-52	518 Lynbrook Boulevard	1 hour	rain event	not contained or returned	washed sewer main	N/A	0 gal	10 gal
86	12/2/2025	N/A	2924 Knight Street	2.43 hours	debris	not contained or returned	washed sewer main	Quad Creek Pond	0 gal	100 gal
87	12/4/2025	08X-55	400 Wilkinson Street	1.37 hours	debris	not contained or returned	unstopped by wash truck	Ockley Ditch	0 gal	300 gal
88	12/9/2025	N/A	403 East Flournoy Lucas Road	1.88 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	25 gal
89	12/10/2025	18DD-57	7060 Youree Drive	1.58 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	5 gal
90	12/14/2025	38GG-51	639 Kingstowne Place	1.55 hours	grease	not contained or returned	washed sewer main	Brush Bayou	0 gal	>350 gal
91	12/22/2025	39W-55	722 Wichita Street	41.01 hours	main break	not contained or returned	bypass pump set up until repairs made	Ockley Ditch System	0 gal	>4,000 gal
92	12/24/2025	17GG-52	554 Sally Ann Drive	12.68 hours	grease	not contained or returned	unstopped by wash truck	Brush Bayou	0 gal	150 gal
93	12/26/2025	14Y-53	1454 Glen Oak Place	2.23 hours	debris	not contained or returned	unstopped by wash truck	Brush Bayou System	0 gal	>300 gal
94	1/8/2026	29AW-57	200 East Wichita Street	1.16 hours	main break	not contained or returned	unstopped by wash truck	Ockley Ditch System	0 gal	>1,000 gal
95	1/9/2026	39W-55	723 Wichita Street	26.97 hours	defective manhole	not contained or returned	manhole rehab ticket created	Ockley Ditch System	0 gal	>7,000 gal
96	1/10/2026	45LL-49	2052 South Kirkwood Drive	1.35 hours	bypass pump malfunction	not contained or returned	bypass pump back online	Brush Bayou System	0 gal	20 gal
97	1/13/2026	N/A	719 Edwards Street	1.52 hours	grease	not contained or returned	washed sewer main	Red River System	0 gal	>300 gal
98	1/13/2026	04Y-59	Alleyway S. of 1219 S'port Barksdale Hwy	1.12 hours	grease	not contained or returned	unstopped by wash truck	Quail Creek Pond	0 gal	470 gal
99	1/21/2026	19X-49	3418 Stonewall Street	0.7 hours	rain event	not contained or returned	N/A	Cross Lake System	0 gal	>500 gal
100	1/22/2026	N/A	442 College Street	2.28 hours	grease	not contained or returned	washed sewer main	N/A	0 gal	5 gal
101	1/25/2026	N/A	200 Gregg Avenue	3 hours	loss of electricity	not contained or returned	backup bypass pump brought online	Ockley Drive	0 gal	unknown
102	1/25/2026	N/A	10177 Trail Ridge Drive	3 hours	loss of electricity	not contained or returned	electricity restored	Wallace Lake System	0 gal	unknown
103	1/27/2026	N/A	237 Carrollton Avenue	46.42 hours	main break	not contained or returned	repair ticket created	Sand Beach Bayou System	0 gal	30 gal
104	1/31/2026	19X-49	3418 Stonewall Street	18.85 hours	excessive flow at lift station	not contained or returned	bypass pump set up at lift station	Cross Lake System	0 gal	20,000 gal
105	2/2/2026	18AKK-54	260 Flournoy Lucas Road	1 hour	bypass pump malfunction	not contained or returned	N/A	N/A	0 gal	5 gal
106	2/9/2026	19X-49	3418 Stonewall Street	1.75 hours	lift station down	not contained or returned	lift station back in service	N/A	0 gal	10,000 gal
107	2/9/2026	1047Z-54	1103 Dudley Dr	2.5 hours	main break	not contained or returned	unstopped by wash truck	N/A	0 gal	15 gal
108	2/11/2026	20DD-40	6200 W. 70th Street	3.5 hours	grease	not contained or returned	unstopped by wash truck	Gilmer Bayou	0 gal	>400,000 gal
109	2/24/2026	04T-54	140 Airport Drive	1.5 hours	force main/ARV issue	not contained or returned	repair ticket created	12 Mile Bayou	0 gal	12,000 gal
110	2/25/2026	03Y-58	802 E. Washington Street	26.50 hours	blockage in main	not contained or returned	unstopped by wash truck	Anderson Bayou	0 gal	5 gal
111	3/9/2026	1021AA-55	622 Unadilla Street	1.5 hours	debris	not contained or returned	unstopped by wash truck	Ockley Ditch System	0 gal	465 gal
112	3/11/2026	18EE-41	7206 Bobtail Circle	3.25 hours	rain event	not contained or returned	N/A	N/A	0 gal	100 gal
113	3/15/2026	03X-40	3236 Pines Road	1 hour	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	<200 gal
114	3/19/2026	18EE-41	7206 Bobtail Circle	1.5 hours	debris	not contained or returned	washed sewer main	N/A	0 gal	35 gal
115	3/20/2026	18AKK-54	230 Flournoy Lucas Road	1.25 hours	bypass pump malfunction	not contained or returned	re-established connection	N/A	0 gal	100 gal
116	3/21/2026	48Y-57	3436 Beverly Place	0.5 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	50 gal
117	3/25/2026	50P-43	1986 Downing Street	1.25 hours	debris	not contained or returned	unstopped by wash truck	Cross Lake	0 gal	<1000 gal
118	3/27/2026	1030Y-53	1454 Glen Oak Place	1 hour	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	<100 gal
119	3/27/2026	34W-55	400 Wyandotte Street	1 hour	main break	not contained or returned	repair ticket created	N/A	0 gal	350 gal
120	4/1/2026	44Y-57	3412 Beverly Place	0.5 hours	N/A	not contained or returned	washed sewer main	N/A	0 gal	5 gal
121	4/1/2026	48Y-57	3320 Beverly Place	1 hour	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	40 gal
122	4/2/2026	06T-54	150 Levee Street	8 hours	force main/ARV issue	not contained or returned	set up pump	12 Mile Bayou	0 gal	>10,000 gal
123	4/15/2026	1029Y-53	2940 Samford Avenue	0.75 hours	debris	not contained or returned	unstopped by wash truck	Ockley Ditch	0 gal	100 gal
124	4/15/2026	08R-51	2130 North Hearne Avenue	1.25 hours	grease	not contained or returned	washed sewer main	12 Mile Bayou	0 gal	>500 gal
125	4/17/2026	26LL-58	303 Pecan Drive	0.75 hours	roots	not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	15 gal
126	4/28/2026	28JJ-47	3009 Nona Circle	1 hour	debris	not contained or returned	washed sewer main	Brush Bayou	0 gal	300 gal
127	5/1/2026	05OO-50	10415 Kingston Road	2.5 hours	force main/ARV issue	minimal impact to downstream body of water	set up pump	Boggy Bayou	5,000,000 gal	80,000 gal
128	5/1/2026	04S-53	437 Fortson Street	1.75 hours	grease	not contained or returned	unstopped by wash truck	N/A	0 gal	>500 gal
129	5/4/2026	02HH-42	8300 Pines Road	3 hours	main break	not contained or returned	main repaired	N/A	0 gal	5,000 gal
130	5/11/2026	1029Y-53	2940 Samford Avenue	0.75 hours	debris	not contained or returned	unstopped by wash truck	N/A	0 gal	75 gal
131	5/11/2026	40AA-55	715 Unadilla Street	4.5 hours	roots	not contained or returned	unstopped by wash truck	unknown	0 gal	unknown