City of Shreveport, Louisiana

Consent Decree Annual Report – Year 10

May 13, 2023 - May 12, 2024

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.

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

7/11/24
Date

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1.0 INTRODUCTION

1.1 Purpose and Scope

This Annual Report is submitted in accordance with Section VIII *Reporting Requirements*, Paragraph 60, of the Consent Decree and reflects the status of program implementation that occurred between May 13, 2023 to May 12, 2024. A summary of activities planned for the Year 11 reporting period (May 13, 2024 to May 12, 2025) is also provided.

1.2 Consent Decree Overview

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

- Analyze the 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).

2.0 PROGRAM ADMINISTRATION DURING YEAR 10

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 10 reporting period.

2.1 Organizational Changes

A summary of organizational changes or challenges experienced by the City of Shreveport during the Year 10 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 2019-2023 but has averaged approximately 20% 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 and has not managed the Clean Water Shreveport program since the end of 2022.

2.2 Regulatory Coordination

Significant coordination with federal and state regulatory agencies occurred throughout Year 10, 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 10 reporting period is provided below.

2.2.1 Determination of Stipulated Penalties

The City and the Agencies negotiated a payment amount for stipulated penalties during Year 10, stemming from the Agencies' May 27, 2022 stipulated penalty demand letter, which originally

demanded $4,428,200 in stipulated penalties. The City paid the Agencies a total of $1.5 million to settle the negotiations of this demand.

2.2.2 Consent Decree Modification Negotiations

Over the period of time between June 14, 2023 and May 1, 2024, eight (8) meetings with USDOJ, EPA, and LDEQ to negotiate modifications to the existing Consent Decree have occurred. The following list summarizes these meetings and any requested additional documents by USDOJ, EPA, and LDEQ over the Year 10 dates:

- On June 14, 2023, a meeting was held during which the City answered questions from the agencies related to the financial plan and budget.
- On September 29, 2023, a meeting was held to discuss the agencies' counterproposal. Following the meeting, the City provided information in response to agency requests.
- On November 13, 2023, a meeting was held to discuss the City's financial plan and financial model, as well as other items related to the City's cost estimates and proposed technical approach. Following the meeting, the City provided information in response to agency requests.
- On December 13, 2023, a meeting was held to discuss the costs required to address the work included in the agencies' counterproposal. Following the meeting, the City provided information in response to agency requests.
- On January 24, 2024, a meeting was held during which the City answered questions from the agencies regarding its cost estimate approach. Following the meeting, the City provided information in response to agency requests.
- On February 28, 2024, a meeting was held during which the City answered questions from the agencies regarding its cost estimate approach. Following the meeting, the City provided information in response to agency requests.
- On March 27, 2024, a meeting was held during which the City responded to agencies questions provided on March 26. Following the meeting, the City provided information in response to agency requests.
- On May 1, 2024, a meeting was held during which the agencies presented a verbal summary of their cost estimating approach and findings, as well as their financial modeling. Following the meeting, the City provided information in response to agency requests.

2.3 The City's Financial Capability and Program Funding

The City's ability to fund remaining Consent Decree obligations has been previously documented in submittals to the regulatory agencies. Funding remaining Consent Decree obligations continues to be a significant 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% in 2020, 2% in 2021, and 2% in 2022. Water rates increased 6% in 2020 and 4% in 2022. Our counsel advises that most other utilities did not have rate increases during the Covid 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% for both the water and the 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 City is unable to fund all remaining Consent Decree obligations without rate increases that would place an unconscionable financial burden on its ratepayers, especially its most vulnerable residents with low- and fixed-incomes. The City intends to utilize its available funding from previous bond sales to complete high-priority activities, initiatives, and critical projects using an Integrated Planning Approach over the next several years. These bond proceeds are likely all that the City will have available unless financial assistance is provided by federal and state agencies or

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

2.3.2 Funding Opportunities to Support Program Implementation

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

On March 8, 2024, the City submitted a letter to the Clean Water State Revolving Fund (CWSRF) as a pre-application for a loan to fund construction costs for the rehabilitation and replacement of deteriorated and aging sanitary lift stations, undersized sewer mains and manholes related to the Consent Decree. CWSRF informed the City that all available funding for the coming year grants, state match, and repayment dollars will be allocated based on the priority list until all dollars have been exhausted. The available funds from these programs have been affected by congressionally directed spending, while the majority of available funds has come from the Bipartisan Infrastructure Law funding.

In addition, the City has attempted to maximize opportunities for funding provided through the State of Louisiana. In late 2021 and late 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.

Lastly, the City has been focused on identifying additional local funds to address infrastructure needs. Consistent with the City's best efforts to stay on track 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, and bridges; water, and sewer; and

parks and recreation made up the proposal. Proposition #2 included $82 million for water and sewer improvements, including $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.

2.4 Integrated Planning for Wastewater and Drinking Water Needs

As demonstrated in previous submittals, all the City's compliance and utility obligations need to be considered for the City's Consent Decree program to be sustainable and successful, including the City's obligations to provide reliable water service. The importance of considering the City's water utility needs and obligations continues to be apparent. Extreme weather events, such as violent storms, strong winds, sustained high temperatures, 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 the LDH in late 2021.

The findings of the Sanitary Survey included 39 "Significant Deficiencies" for the City to address. The City was able to address 29 of those deficiencies within the first year; however, the deficiencies noted by LDH included improvements that will 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 requiring them to be removed from service. These projects are currently in either design or construction or awaiting funding.

Additionally, the City has kicked off its efforts to comply with the Revised Lead and Copper Rule requirements issued by EPA in 2021. The City's current focus is development of an initial Lead Service Line inventory, due October 16, 2024.

The City expects that completion of these items will affect its ability to make timely progress on Consent Decree obligations due to funds needing to be dedicated to water system needs, and that completion of water system projects may affect the timing of implementing wastewater activities, initiatives, and projects under the City's Consent Decree program.

3.0 SUMMARY OF ACTIVITIES IN YEAR 10

The following sections summarize activities completed in the Year 10 reporting period in the Sanitary Sewer Assessment (SSA); Capital Planning; Capacity Assessment; Remediation Measures Plans (RMP); Construction Specifications; Citizen Engagement & Constituent Issue Management; and CMOM categories. As discussed in Section 2.0, the City has been actively coordinating with the regulatory agencies. The activities reported in this section reflect the discussions, most specifically the evident need to shift the focus of the City's program through a formal Consent Decree modification.

3.1 Sanitary Sewer Assessment (SSA)

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

3.1.1 Sanitary Sewer Assessment (SSA) Overview

SSA field investigation and SSA reports for Phases 1-4 were completed prior to the Year 10 reporting period. Table 3-1 below provides a summary of the City's SSA Report submissions.

Table 3-1: SSA Report Submittals through Year 10

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 – 83% Complete

During the Year 10 reporting period, the City completed operation and maintenance SSA activities within its wastewater system focused on maintaining the City's infrastructure and mitigating SSOs as discussed below. SSA activities included in Phase 1 through Phase 4 are discussed below. SSA activities discussed in Phase 5 are discussed later as they were the primary focus of Year 10.

3.1.2 Phase 1 – 4 SSA: Activities Completed in Year 10

During the Year 10 reporting period, additional field investigations were completed within Phases 1 through 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 2022, the City initiated two (2) activities related to sewer cleaning and CCTV inspections: a "Hot Spot" Program and an Annual Program. The 2023 "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 2022 and the first quarter of calendar year 2023, as well as locations identified with wet weather SSOs recorded from calendar year 2017 to the first quarter of 2023. The length of work included through the "Hot Spot" Program during the Year 10 reporting period is shown in Table 3-2. A total of 175,138 linear feet of gravity sewer were cleaned and televised in Phases 1 through 4 as part of the "Hot Spot" Program.

The Annual Program focused on portions of the collection system in Phase 5 that were not previously investigated to fulfill Consent Decree obligations. Approximately 141,000 linear feet of gravity sewer were cleaned and televised in Year 10 as part of the Annual Program. This Annual Program also included cleaning and televising 759 linear feet of sewer in Phase 1.

Gravity sewers were cleaned and investigated as indicated Table 3-3 through the Annual Sewer Cleaning and CCTV Program during the Year 10 reporting period. Deficiencies identified through these Programs with the potential to cause SSOs were mitigated or scheduled for mitigation.

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	91	4,874	2,911	2,489
8	31,524	22,523	41,870	16,928
10	5,152	3,322	6,162	2,749
12	43,44	3,053	10,398	6,967
15	720	0	981	0
18	0	0	0	2,065
21	256	387	619	0
24	1,309	147	453	0
30	2,545	0	0	842
36	1,049	0	1,740	0
42	1,012	0	0	0
Total	**43,658**	**34,306**	**65,134**	**32,040**

Table 3-3: Annual Program Gravity Sewer Cleaning and CCTV Phase 1

Diameter (in)	Length in Phase 1 (ft)
6	0
8	0
10	659
12	0
15	0
18	0
21	0
24	100
30	0
36	0
Total	**759**

3.1.2.2 Lift Station Assessments

During the Year 10 reporting period, twenty-nine (29) lift stations in Phases 1 through 4 were assessed. Assessments were completed to progress the design of Critical Projects and mitigate condition related issues that could result in sanitary sewer overflows. In addition, 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 pump failure or force main break.

3.1.2.3 Aerial Crossing Inventory & Assessment

During the Year 10 Reporting Period, the City continued its inventory of major stream crossings. A total of 49 aerial crossings were inventoried in Year 9. 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 10

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 the inability to fund the Phase 5 projects. During the Year 10 reporting period, the City completed CCTV and manhole inspections in the SSA Phase 5 Area as part of the Annual Sewer Cleaning Program and the "Hot Spot" Cleaning Program. The City also developed a plan to complete additional SSA activities in the Phase 5 area during the Year 11 reporting period. These activities are discussed in Section 4.2.

3.1.3.1 Sewer Cleaning and CCTV Inspections

During the Year 10 reporting period, 191,353 linear feet of gravity sewer mains were cleaned and CCTV inspected within the SSA Phase 5 area. Gravity sewers located within SSA Phase 5 investigated as part of the "Hot Spot" and Annual Sewer Cleaning and CCTV 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	4,588
8	6,783	17,267
10	1,139	3,719
12	4,709	2,421
15	1,394	718
16	0	507
18	0	381
24	99	0
30	482	0

Diameter (in)	Length in Phase 5A (ft)	Length in Phase 5B (ft)
36	5,844	0
42	39	0
Total	**20,488**	**29,603**

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

Diameter (in)	Length in Phase 5B (ft)
6	2,906
8	69,478
10	27,982
12	21,373
15	6,737
16	22
18	8,507
24	1,312
30	0
36	2,965
Total	**141,262**

Including the work completed during the Year 10 reporting period, CCTV has been completed for 1,057,353 linear feet of the gravity sewers in the Phase 5 SSA Area. This represents 81 percent of sewers in the Phase 5 SSA area.

3.1.3.2 Manhole Inspections

During the Year 10 reporting period, the City completed visual inspections and gathered GPS coordinates for 1,106 manholes within the Phase 5 SSA Area as part of the Collection System Assessment Program. The City has completed inspections for approximately 3,506 (85%) 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 10 reporting period within the SSA Phase 5 Area. The City has completed smoke testing and dye flooding for approximately 39 percent (489,526 lineal feet) of the gravity sewer system within Phase 5.

3.1.3.4 Lift Station Assessments

During the Year 10 reporting period, eight (8) lift stations were assessed within the Phase 5 SSA Area. Assessments were completed to progress the design of Critical Projects and mitigate condition related issues that could result in sanitary sewer overflows.

3.2 Capacity Assessment

The City prepared and issued a revised Capacity Assessment report in July 2022. The Capacity Assessment Report Submittal 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 updated within the model to configure the network to reflect the changes to the collection system network for projects where construction has finished, and record drawings have become available. The hydraulic model was also upgraded from Innovyze ICM v9.5 to the latest Innovyze ICM 2023 version.

3.2.2 Additional Modeling Activity During the Year 10 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:

- Legardy Lift Station
- Hardy Lift Station
- Darien Lift Station
- Southern Hills Interceptor - SW-3 Linear Improvements
- Havanna Lift Station
- Querbes Lift Station

The hydraulic model was also used throughout the Year 10 reporting period for on-going review of new development permits by evaluating existing capacity through the City's wastewater collection system.

3.3 Remediation Measures Plans (RMP)

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

3.3.1 Remediation Measures Plans (RMP) Submittals

RMP Submittals were completed for Phases 1-4 prior to the start of Consent Decree Year 10. Phase 1-4 RMP Submittals were issued to the EPA and LDEQ and are available through the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. Table 3-6 below provides a summary of RMP submittals through the Year 10 reporting period.

Table 3-6: RMP Report Submittals through Year 10

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

3.3.2 Remediation Measures Plans (RMP) Status

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

3.3.2.1 Phase 1

The City constructed 30 total projects within SSA Phase 1. All 30 projects have reached final completion. Table 3-7 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
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

Project Name	Functional Completion	Final Completion*
203 CIPPL Package 3	12/7/2017	1/24/2020
204 CIPPL Package 4	4/11/2018	11/10/2019
STO-03 – Meadow Parkway Lift Station Rehab	N/A	10/6/2017
STO-04 – Cedar Grove & Slack Lift Station Rehab	N/A	10/18/2017

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

** A Final Completion letter was not issued by City. Indicates the date of the Partial Completion letter that is filed at the Courthouse. As shown above, all Phase 1 projects reached Functional Completion by October 31, 2018. All Phase 1 projects reached Final Completion by June 12, 2020.

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

3.3.2.2 Phase 2

A total of 17 total construction projects were developed based on the Phase 2 RMP. All 17 projects have reached final completion. Table 3-8 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

No.	Project Name	Actual Dates	
		Functional Completion	Final Completion
2-QR2	South Querbes CIPP	6/3/2020	4/6/2021
2-QR3	North Querbes Replacement	11/27/2019	6/10/2020
2-QR4	South Querbes Replacement	6/1/2020	11/6/2020
2-QB1	North Queensboro CIPP	12/15/2019	5/3/2021
2-QB2	South Queensboro CIPP	11/27/2019	9/28/2020
2-QB3	Choctaw Bayou and Queensboro Sewer Replacement	4/12/2019	1/24/2020
2-NH1	North Highlands Interceptor	3/19/2019	10/30/2019
2-NH2	N Highlands, Choctaw & Queensboro CIPP	12/30/2019	12/2/2020
2-NH3	North Highlands Sewer Replacement	Unknown – Functional Completion Certificate Not Issued	10/30/2019
2-LS1	Lift Stations / Force Main Condition	4/30/2019	2/4/2020
2-WS1	Westside CIPP	11/27/2019	10/1/2020
2-WS3	Westside Sewer Replacement	4/3/2019	8/19/2019

The original value of the 29 Phase 2 RMP collection system improvement projects was estimated at approximately $200M (2017 Dollars). During design, these 29 projects were consolidated and a collection of 17 bid packages for construction were created. Following the completion of all Phase 2 RMP projects, the actual construction cost of the Phase 2 RMP projects was approximately $110M.

3.3.2.3 Phase 3

A total of 14 projects were developed based on the Phase 3 RMP. Each of these projects advanced into detailed design during the Year 6 Reporting Period. Bidding and construction of Phase 3 projects was placed on hold during Consent Decree Year 6 due to the City's limited financial resources, inability to fully fund all Phase 3 projects, and concerns about the hydraulic model used to develop the scopes of the Phase 3 projects. As described in Section 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more effective at mitigating SSOs than the approach used to identify and develop the Phase 3 and Phase 4 RMP projects.

The estimated construction cost of the Phase 3 RMP projects is approximately $172,930,000 when previously developed Opinion of Probable Construction Costs (OPCC) are updated to 2022 dollars. Table 3-9 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 replace 20 manholes.
3-116***	Southern Hills Interceptor (Segment B)	90%	Not Started	Sewer replacement of 5,000 LF of gravity sewer main and install new manholes.
3-117***	Southern Hills Interceptor Phase 2	90%	Not Started	Sewer replacement of 6,300 LF of gravity sewer main and install new manholes.
3-LS1***	Lift Station Condition Improvements	100%	(1) Completed (6) In Design	Improve or rehab 7 lift stations and 3 force mains. The stations are: Cedar Creek: Final Completion - 1/21/22 Dixie Garden Elgin Knight Street Mackey Lane Shreve Island Wallace
3-NE1***	Northeast Sewer Replacement	100%	Pierremont Park Area – Complete Brookemeade & 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 and replace 155 48-inch manholes.

No.	Project Name	Design Status	Construction Status	Project Description
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 10 Reporting Period to address known problems. Three (3) SSA Phase 3 projects were included in the City's Critical Project portfolio as follows:

- **3-LS1 Lift Station Condition Improvements:** Construction of the Cedar Creek Lift Station Improvements Project was completed in January 2022. Lift Stations in the 3-LS1 Project are included in Critical Wastewater Project CWP-12, CWP-80 and CWP-82. Construction of Phase 1 improvements consisting of mechanical, structural and electrical upgrades to the Wallace Lift Station, which is part of CWP-82, were initiated in Year 10. Key components of this work include repair/replacement of pumps, variable frequency drives, lighting, a jib crane and wet well rehabilitation. This work is expected to be completed in Year 11. 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)**: The initial RMP identified the replacement of the Southern Hills Interceptor,

including the 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 3-116 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 initiated in Year 10 and is expected to be completed in Year 11. The actual extent of replacement/rehabilitation for remainder of Project 3-117 and for Project 3-116 will be finalized during design. It is anticipated that construction of the remaining portion of Project 3-117 and of Project 3-116 will occur after 2024 depending upon available funding. 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 is being advanced as a wastewater critical project due to the recurrence of wet weather SSOs at the intersection of Brookmeade Drive and Querbes Drive and along Trinity Circle. This project was separated into two 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 14 Phase 4 RMP collection system improvements was approximately $93,500,000, in 2022 dollars. The estimated value of the 33 Phase 4 RMP lift station improvement projects was approximately $9,440,000, in 2023 dollars. Design of Phase 4 remediation measures has not yet begun due to the City's inability to fund construction of Phase 4 improvements coupled with a lack of confidence in the City's existing

hydraulic model as a design tool for Phase 4 projects. As described in Section 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more effective at mitigating SSOs than the approach used to identify and develop the Phase 3 and Phase 4 RMP projects. 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 3.6.2, the City's current approach of implementing targeted initiatives to address SSOs has been demonstrated to be more effective at mitigating SSOs than applying the previous approach used to identify projects that were constructed for Phase 1 and Phase 2 and identified in the RMP reports for Phase 3 and Phase 4. 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, 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 critical 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 10 reporting period; however, they are no longer included in the list of Critical Infrastructure Projects at the request of USEPA and LDEQ.

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**Error! Reference source not found.** 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 here even though they are not directly related to the City's Consent Decree program. Like many of the City's wastewater critical projects, funding is currently not available for full implementation of the water critical projects. Integrated Planning and a flexible approach using adaptive management principles will be essential to ensure that, as additional financial resources become available, they are applied to investments that will deliver the greatest overall public benefits.

3.3.3.3 Other Required Water Utility Initiatives

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

- **America's Water Infrastructure Act (AWIA) of 2018:** The City completed a Risk and Resilience Assessment (RRA) and Emergency Response Plan (ERP) to meet the legislative requirements of AWIA in 2020. Community water systems (CWSs) are required to certify

completion of updates to their risk and resilience assessment (RRA) and an emergency response plan (ERP) under Section 2013 of America's Water Infrastructure Act (AWIA)/Section 1433 of the Safe Drinking Water Act (SDWA) for the 2025-2026 compliance cycle. The RRA will include an assessment to evaluate the cybersecurity of the water system.

- **Revised Lead and Copper Rule (LCRR):** In December 2020, EPA announced an update to the Lead and Copper Rule. The LCRR includes a requirement for identifying the materials for all of the service lines throughout the drinking water system on both the system-side and the customer-side of the meter. The City has been combing through existing documents and records to determine these materials for their initial inventory. Additional efforts may include field verification of materials as necessary to update the inventory. Future updates to the LCRR have been made available for public comment and are anticipated to propose new regulations related to the identification and replacement of lead service lines.

- **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 design projects that will lead to significant construction projects valued at approximately $15M. Design is anticipated to be completed by the end of 2024. On August 8, 2023, LDH provided an additional 25 "Significant Deficiencies" and 6 "Deficiencies" for the City to address. The City is currently in the process of addressing these items.

Table 3-10: Wastewater Capacity and Critical Projects

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2024 Dollars)
WAL-A1	Gravity Sewer Capacity Improvements - Wallace Basin (WAL-A1)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Wallace Basin	Final Design	$428,020
WAL-B4	Capacity Improvements - Wallace Basin (WAL-B4)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Wallace Basin	Design	$3,645,000
LOU-A2	Capacity Improvements - Lucas Outfall Basin (LOU-A2)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas Outfall Basin	Design	$2,393,446
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	$19,197,000
LOU-A7	Capacity Improvements - Lucas Outfall Basin (LOU-A7)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas Outfall Basin.	Design	$671,407
LOU-B3	Capacity Improvements - Lucas Outfall Basin (LOU-B3)	Mitigate SSOs by improving hydraulic capacity in Lucas Outfall Basin.	Design	$2,822,447
LWW-A3	Capacity Improvements - Lucas WWTP Basin (LWW-A3)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas WWTP Basin.	Design	$6,237,000
LWW-B2	Capacity Improvements - Lucas WWTP Basin (LWW-B2)	Mitigate SSOs by improving gravity sewer hydraulic capacity in Lucas WWTP Basin.	Design	$4,131,000

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2024 Dollars)
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.	Construction	$10,852,345
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	$7,511,800
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.	Design Complete	$962,962
CWP-80A NRG-C16	LS Improvements - Havanna Lift Station (NRG-C16)	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	$1,739,145
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	$6,480,000
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	$54,598,964
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	$2,492,090

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2024 Dollars)
CWP-11	Stratmore Lift Station Rehabilitation	Construction to rehabilitate an existing lift station along with the associated piping.	Construction	$884,350
CWP-12B	LS Package 1a - Maywood LS Rehabilitation	Rehabilitate a lift station to address current mechanical, electrical, hydraulic, and operational issues.	Complete	$450,900
CWP-12F	LS Package 1b- Land O' Trees Lift Station Rehabilitation	Rehabilitate lift stations to address current mechanical, electrical, hydraulic, and operational issues.	Complete	$827,273
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	$1,536,400
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	$1,268,186
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	$1,341,555
CWP-17	Exposed Sewer Mains in Bayou Pierre	Study & Report, design, and construction for rehabilitation of existing 20-inch diameter and 24-inch diameter sewer crossing of Bayou Pierre exposed due to erosion of existing concrete encasement built within the flowline of concrete ditch.	Design	$1,831,800
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	$7,448,752

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2024 Dollars)
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.	Construction	$4,750,000
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	$5,099,248
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.	Design Complete	$2,137,200
CWP-80B	LS Improvements - Country Club, Fern, Cadillac, Risinger, Cross Creek, and Elgin 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.	Final Design	$4,063,427
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.	Final Design	$2,426,498
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	$8,647,800
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 - Construction Phase 2 - Design	$45,220,680

Project Number	Project	Project Description	Current Status	Estimated Total Project Cost (2024 Dollars)
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	$3,450,205
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	$4,501,171
CWP-83	Wallace Force Main Improvements	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 45,000 feet of 36-inch diameter ductile iron pipe (DIP) force main that is approximately 40 years old. The City intends to complete only Study & Report activities at this time.	Study & Report	$28,000,000
CWP-84	Cedar Grove Force Main Improvements	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 28,000 feet of 36-inch-diameter pre-stressed concrete force main that is approximately 45 years old. The City intends to complete only Study & Report activities at this time.	Planning	$48,317,660
CWP-85	Stoner Force Main Rehabilitation	Study & Report to evaluate alternatives for rehabilitation or replacement of select portions of approximately 46,000 feet of 36-inch diameter pre-stressed concrete force main that is approximately 45 years old. The City intends to complete only Study & Report activities at this time.	Study & Report	$25,000,000
CWP-102	Southern Hills Interceptor Improvements	Design of replacement of approximately 24,000 feet of 8- to 42-inch diameter concrete gravity sewer that is approximately 40 years old.	Phase 1 - Construction Phase 2 - Design	$34,947,441

Table 3-11: Other Wastewater Critical Projects

Project Number	Project	Project Description
CWP-09	Lucas and North Regional WWTP UV Disinfection Improvements 2024	Construction of new UV disinfection systems at the Lucas and North Regional WWTPs. Construction expected to be completed in 2024.
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 Upgrades – Phase 2	Design and construction of rehabilitation/replacement of existing sludge processing equipment at the City's sludge farm. Design and construction of improvements to follow Study & Report pending available funding.
WWT-143	Clarifier No. 5 Rehabilitation at Lucas WWTP	Complete rehabilitation of Clarifier No. 5 at the Lucas WWTPs. Construction expected to be completed in 2024.
	Lucas WWTP Clarifiers No. 1 through No. 4	Design for and construction of rehabilitation of clarifiers No.1 through No. 4 at the Lucas WWTP pending available funding.
	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.
	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

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.
CWP-49	Water Main Crossing at Twelve Mile Bayou	Rehabilitation or replacement of the existing 20-inch steel pipe across Twelve Mile Bayou.
CWP-50	Twelve Mile Bayou Pump Station Discharge Main Evaluation	Rehabilitation or replacement of existing large diameter raw water main from Twelve Mile Bayou Pump Station to the Amiss Water Treatment Plant.
CWP-51	Amiss WTP Intake Structure Rehabilitation	Rehabilitation of the existing WTP intake structure.
CWP-73	Citywide AMI Water Meter Replacement	System-wide program to replace water meters.
CWP-74	Amiss WTP Transmission Piping and Valve Replacement	Replacement of the transmission line from the WTP to the distribution system
CWP-75	West Shreveport Elevated Storage Tank, Linwood Elevated Storage Tank, and W 70th & Pines Ground Storage Tanks Rehabilitation	Rehabilitation of storage tank infrastructure to address condition issues.
CWP-76	70th and Pines BPS Rehabilitation	Rehabilitation of pump station and storage tank infrastructure to address condition issues.
CWP-91	Cross Lake Dam and Spillway Rehabilitation	Rehabilitation of the dam and spillway that controls the level in Cross Lake.
CWP-94	Ford Street Water Improvements	Relocation of existing 12-inch diameter water main under Ford Street.
CWP-96	St. Vincent Elevated Storage Tank Rehabilitation	Rehabilitation of storage tank infrastructure to address condition issues.

Project Number	Project	Project Description
CWP-98	Jordan Street Water Main Replacement	Replacement of existing 12-inch and 6-inch diameter water mains along Jordan Street.
CWP-100	Jewella/Fair/Magnum Water Main Replacements	Replacement of existing 6-inch diameter water mains along Jewella Avenue, Fair Street and Magnum Street.
CWP-101	Huron Street Water Main Replacement	Replacement of existing 8-inch diameter water mains along Huron Street.
CWP-107	BPS Standby Generator Installation (Permanent)	Installation of permanent backup power units at three (3) booster pump stations.
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.

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 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 the I/I reduction needed is dependent 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-A, LWW-A2 and NRG-B3) will be further assessed in Year 11.

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	Design
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	Design
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	Design
A	2	NRG-A4	Darien Lift Station Improvements	Design
B	3	WAL-B4	Linear Capacity Improvement	Design
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	Design
B	2	NRG-B2	Pine Hill Lift Station Improvements	Design
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 Improvement	Design

In addition to the capacity projects listed, the City has continued to monitor approximately 43 areas of interest for SSOs. These areas will continue to be monitored in Year 11 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 revolving 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.

3.5 Construction Standards and Specifications

The 2021 Edition of the Standard Specifications for Infrastructure Improvements and 2021 Detail Standard Plans were used for projects that are being designed in Year 10. These documents will be used in Year 11 for new Consent and Non-Consent Decree projects and will continue to be updated as part of the City's efforts associated with continued improvement.

During the Year 8 reporting period, the City transitioned to Engineers Joint Contract Documents Committee (EJCDC) Engineering Agreements and is utilizing them for new agreements. The City is continuing to transition toward utilization of the EJCDC General Conditions and Construction Documents. The EJCDC documents are expected to provide improved consistency in executing projects. The City used many of the EJCDC Construction Documents on Consent Decree and Non-

Consent Decree Projects that are in construction or were bid in Year 10. It is the City's intent to continue to use these Construction Documents in Year 11 and future years going forward. It is anticipated that EJCDC General Conditions will be available for use on future projects beginning in 2025.

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

A website has been developed on the City's Water and Sewerage Division's website and will make these specifications available in the Year 11 reporting period.

3.6 Capacity, Management, Operations, and Maintenance

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

3.6.1 Collection System Management

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

3.6.1.1 Legal Authorities

Legal Authorities are in place to effectively manage and operate the Wastewater Collection and Transmission System (WCTS). These include several that are mandated as part of existing National Pollutant Discharge Elimination System (NPDES) Permits for the North Regional and Lucas WWTPs and others that enhance the management and source control of FOG. The City's Sewer Use Ordinance (SUO) is embodied within the City's Code of Ordinances (COO), Part II, Chapter 94 Utilities. These ordinances generally provide the authority to do the following:

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

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

During the reporting period, no significant changes were made to the SUO. The City's COO included within the CMOM Plan in 2015 is still current.

3.6.1.2 Organizational Structure

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

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

- To prohibit the introduction of pollutants into the Publicly Owned Treatment Works (POTW) that will interfere with the operation of the POTW or contaminate the resulting sludge.

- To prohibit the introduction of pollutants into the POTW that will pass through the POTW, inadequately treated, into receiving waters, atmosphere, or otherwise be incompatible with the POTW.
- To protect both POTW personnel who may be affected by wastewater and sludge in the course of their employment and the general public.
- To enable the City to comply with its NPDES and Louisiana Pollution Discharge Elimination System (LPDES) permit conditions, sludge use and disposal requirements, and any other federal or state laws to which the POTW is subject.
- To improve the opportunity to recycle and reclaim wastewater and sludges from the system.
- To monitor and regulate the generation, transportation, and disposal of industrial and hazardous waste.
- To enforce applicable EPA categorical standards.
- To reduce the health and environmental risk of pollution caused by discharges.

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

During the reporting period a total of 39 permits were active under the City's Pretreatment Program. These permits define effluent limits, transferability, penalties, slug discharges, and BMPs. CIUs and SIUs are required to submit reports quarterly, NIU's twice per year, and GIUs annually. Reporting requirements were satisfied for each of the Industrial users during the Year 10 reporting period. A total of 27 Notice of Violations (NOVs) were issued by the City during the reporting period.

3.6.1.4 FOG Program

The FOG Program, through training, outreach, inspections, and enforcement encourages non-domestic sources to limit the discharge of FOG into the sanitary sewer system. As Part of the overall NPDES-mandated pretreatment requirements, COO Sec. 94-119 limits discharge of FOG components to no more than 100 mg/L. All Food Service Establishments (FSE) must obtain a

permit to discharge wastewater into the sanitary system. Complete program details are outlined in the City Policy for Grease Interceptors originally approved by EPA in 1995 and included in the CMOM Plan issued to EPA and LDEQ in 2015. The FOG Program is administered by the Environmental Services Division within the Department of Water & Sewerage.

During the Year 10 reporting period there were a total of 550 permitted FSEs. A total of 974 compliance inspections were completed and resulted in a total of 174 NOVs issued.

Additional FOG preventative maintenance activities completed by the City during the Year 10 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 9.

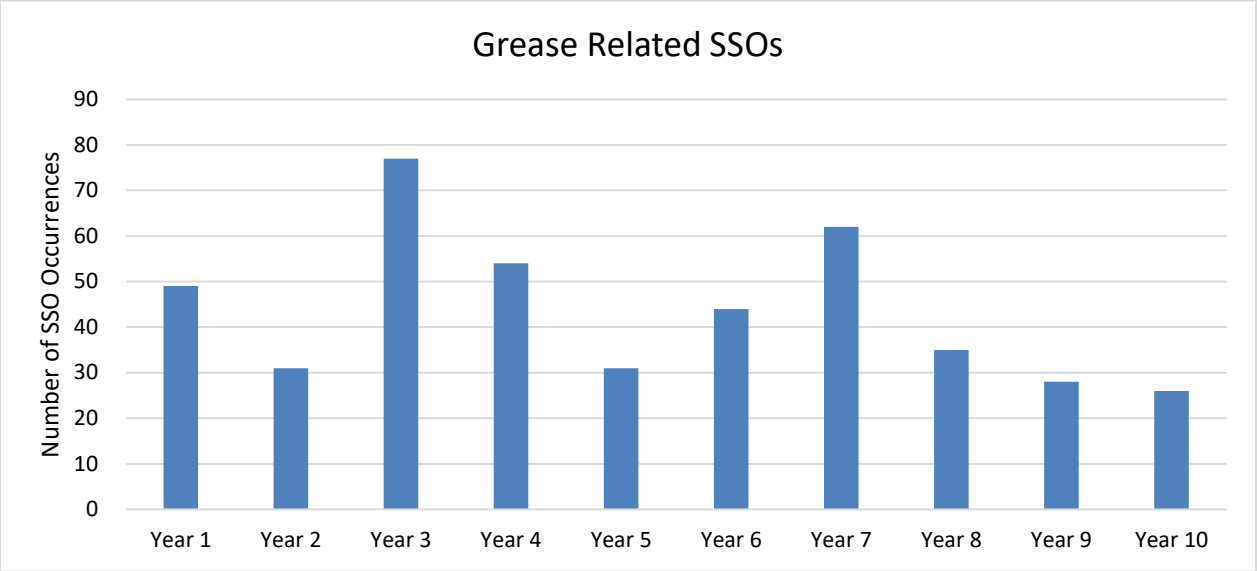
Table 3-15: FOG Enzyme Additive Locations

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 26 SSO occurrences during the Year 10 reporting period. This was the lowest recorded total of grease related SSOs since the beginning of the Consent Decree program. Figure 3-1 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 6-10 was 39 grease-related SSOs which represents a 20% reduction when 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 10, as well. 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 is notified, and an investigation is completed. If the crew

confirms the presence of lateral defect that is presenting a threat to public health, the Environmental Services Department is notified, and a 10-Day letter requiring resolution is issued. During the Year 10 reporting period a total of 101 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)

3.6.1.6.1 Geographic Information Systems (GIS)

The City's sanitary sewer system GIS is comprised of multiple feature classes (gravity sewers, manholes, lift station, force mains, valves, lateral lines, etc.) to reflect the current inventory of wastewater system components. Each of these requires review and updates, where necessary, to reflect the changed condition following completion of a construction project. The City continued updating its GIS during the Year 10 reporting period to reflect post-construction records following

Phase 2 RMP projects, Critical Projects, and updates from the City's "Hot Spot" Sewer Cleaning and CCTV Program. During the Year 10 reporting period, a total of 42 CCTV PACP databases and 9 MACP databases were updated and six (6) Phase 2 RMP projects were completed.

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

3.6.1.6.2 Cityworks

Cityworks was implemented during 2016 and continues to serve as the CMMS for the Department of Water & Sewerage. When questions, complaints, and/or concerns are received from within the City or from the public, a service request is generated and evaluated within the software. During the Year 10 Reporting period, a total of 5,138 service requests and 7,376 work orders were input, evaluated and responded to within Cityworks.

During the Year 10 reporting period, the City rolled out an updated Cityworks training program with the goal of helping staff across Water & Sewerage and on 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 begun developing revised reports to streamline reporting of activities from Cityworks, 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 Trimble Cityworks. Field staff will be using the Cityworks Respond platform for more informed decision-making and management of service requests and work orders.

3.6.1.6.3 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 10 reporting period, the following CCTV data sets were incorporated into Pioneer: SSA Phase 5, Hot Spot Cleaning Program, Annual Sewer Cleaning Program and City Field Operations. In Year 11, the City will continue to incorporate data from the Hot Spot Cleaning Program, Annual Sewer Cleaning Program, City Field Operations, and any post-construction CCTV records.

3.6.2 Collection System Operations

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

3.6.2.1 Sanitary Overflow Response Plan (SORP)

The City maintains a Sanitary Sewer Overflow Response Plan (SORP) Standard Operating Procedure (SOP). This SORP SOP was initially presented within the CMOM plan issued to EPA and LDEQ in 2015. The SORP SOP provides guidance to Department of Water & Sewerage staff on how to respond, document and confirm that SSOs are properly reported to the appropriate regulatory authorities. W&S staff are responsible for documenting the following:

Building Back-up	Action Taken
Backup caused by Public Sewer	Receiving Body of Water

Building Back-up	Action Taken
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 10, 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 pump failure or force main break. Reviews and updates were made to 102 out of 132 lift stations in the City.

3.6.2.3 Sanitary Sewer Overflow (SSO): Year 10 Overview

During the Year 10 reporting period, a total of 207 SSOs were reported to LDEQ. This is an approximate increase of 8% in reported SSOs when compared to the 191 SSOs reported in Year 9. However, this represents a 1% reduction compared to the 5-year rolling average for Consent Decree Years 5-9.

The primary reason that the number of SSOs reported in Year 10 was similar compared to the number reported in Year 9 was due to a similar amount of rainfall that occurred in Year 10 (55.65 inches) when compared to Year 9 (63.81 inches). Year 10 was the fourth wettest year of the Consent Decree with several events exceeding the 2-year recurrence level of control for SSOs being implemented by the City. Of the total Year 10 SSOs, 67 (32-percent) were due to wet

weather as compared to the 83 SSOs (43-percent) of the total Year 9 reported SSOs that were due to wet weather. It is important to note that construction of capacity improvement projects directly related to mitigating wet weather SSOs began in Year 9 and continued throughout Year 10, with several of these projects having reached completion in Year 10. Additional capacity related projects directly related to mitigating wet weather SSOs are in design and are being prioritized for completion as funding becomes available.

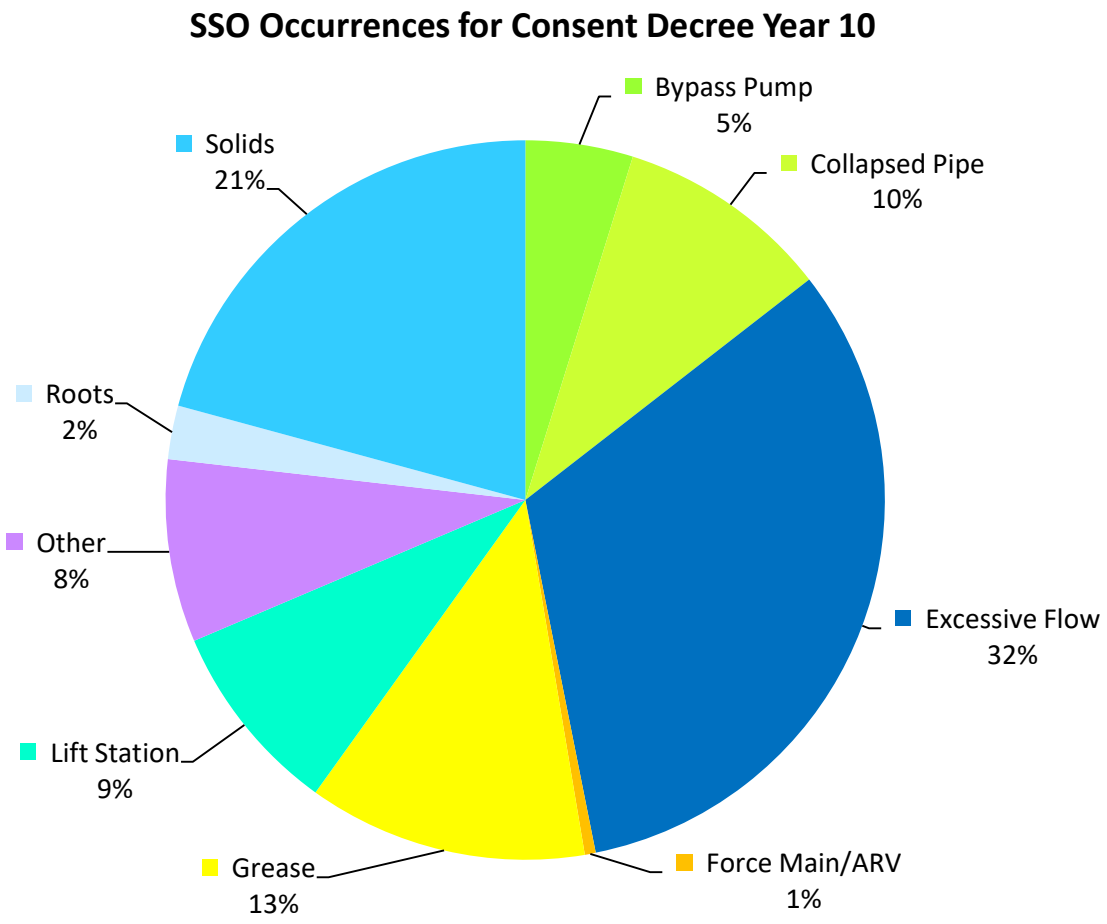
One hundred forty (68-percent) of the SSOs that occurred in Year 10 were dry weather SSOs. The 5-year rolling average continues to show an overall reduction in dry weather SSOs. It is evident that the City continues to see a positive impact through targeted SSO mitigation initiatives such as the "Hot Spot" Cleaning and CCTV Program.

Table 3-16 and Figure 3-2 provide a summary of the causes contributing to SSO occurrences during the Year 10 reporting period. An itemized list of Year 10 SSOs is included in Attachment 3.

Table 3-16: Year 10 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	67	10	20	1	26	18	17	5	43
% of Year 10 SSOs	32%	5%	10%	1%	13%	9%	8%	2%	21%

Figure 3-2: SSOs Occurrences for Consent Decree Year 10



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, and decreased to 226.8 SSOs per year in Years 5-9. The 5-year rolling average further decreased to 209.2 SSOs per year in Years 6-10.

The 5-year rolling average for volume lost was 400,315 gallons per year for Years 5-9. The 5-year rolling average increased to 789,150 gallons per year in Years 6-10. This large increase in gallons lost was caused by a major (36") force main rupture contributing approximately 55% of the estimated volume lost for Year 10 during a single overflow occurrence.

The 5-year average trend for both dry and wet weather SSO occurrences in Years 6-10 decreased compared to the previous 5-year rolling average for Years 5-9.

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
Rolling Average: Years 1-5	**59.8**	**172.6**	**232.4**	**486,521**
Rolling Average: Years 2-6	**65.2**	**186.6**	**251.8**	**531,613**
Rolling Average: Years 3-7	**52.2**	**202.0**	**254.2**	**496,779**
Rolling Average: Years 4-8	**55.0**	**179.2**	**234.2**	**493,120**
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**

The Year 10 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
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 Ave: Years 6-10	**11.4**	**21.2**	**1.2**	**39.0**	**20.8**	**16.4**	**5.0**	**36.2**	**58.0**
Difference in Rolling Average From Years 5-9 to 6-10	**1.4**	**-6.6**	**0.0**	**-1.0**	**0.8**	**1.0**	**-0.8**	**-5.4**	**-7.0**
Rolling Average (% Increase/Decrease) From Years 5-9 to 6-10	**14%**	**-24%**	**0%**	**-3%**	**4%**	**6%**	**-14%**	**-13%**	**-11%**

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 decrease in the number of SSO occurrences associated with bypass pumps when comparing Year to 10 to Year 9. These SSOs were typically caused due to malfunction of bypass pumps used during sewer main or lift station repair/rehabilitation work. The City has been focused on rehabilitating, replacing and maintaining its lift stations to reduce the risks associated with bypass pumping.
- **Collapsed Pipe:** During the Year 10 reporting period, the number of SSO occurrences associated with collapsed pipes increased when compared to Year 9. However, the 5-year rolling average continues to decrease. The implementation of the "Hot Spot" Cleaning and CCTV Program and the continuation of the On-Demand Water and Sewer Rehabilitation contracts throughout Year 10 has helped reduce the amount of SSOs caused by collapsed pipes.
- **Force Main / ARV:** Over the last five years of the Consent Decree, only 6 SSOs associated with force main or ARV related issues have occurred. That is significantly less than the 18 SSOs that occurred in the first three years of the City's Consent Decree. The City has replaced significant portions of one of the largest and oldest force mains (Stoner Force Main) to limit the potential for future force main collapses and the associated SSO occurrences. Two other force main projects (Wallace and Cedar Grove force mains) are planned for future rehabilitation.
- **Grease and Solids:** During the Year 10 reporting period, the number of SSO occurrences associated with grease and solids increased compared to Year 9. However, the 5-year rolling average continued to decrease. This is evidence that the "Hot Spot" Sewer Cleaning and CCTV program is having a positive impact. The City continued to address grease and solids during the Year 10 reporting period through its "Hot Spot" Sewer Cleaning & CCTV program as a targeted effort to mitigate maintenance-related dry weather SSOs. In addition, the City implemented an Annual Sewer Cleaning Program in Year 9 which continued throughout Year 10. The City also intends to review other CMOM programs related to the control of FOG, as discussed in Section 4.2.
- **Lift Station:** The City observed an increase in the number of SSO occurrences associated with lift stations from Year 9 to Year 10 due to equipment malfunction at certain lift stations. The Year 10 amount is still approximately half of the amount reported in Years 6 and 7.
- **Other:** The number of SSO occurrences in the "Other" category for Year 10 increased compared to Year 9. The "other" category represents SSOs caused by miscellaneous sewer

related issues not described by the other categories. A considerable number of these issues in recent years have been determined to be associated with construction defects in sewer service laterals.

- **Roots:** Root related SSO occurrences increased as compared to Year 9, but the 5-year rolling average continued 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**.**
- **Wet Weather:** During the Year 10 reporting period, sixty-seven (67) wet weather SSO occurrences were reported. This is a decrease of 11% when compared to the 5-year rolling average in Years 5-9. The City expects to see a further reduction in Year 11 with the completion of CWP-63 Brookmeade & Querbes SSO Mitigation and CWP-117 Pierremont Park Phase 2 Sewer Improvements projects. In Year 12, the City expects to complete the CWP-56 Dilg League Drive SSO Mitigation project. Together, the areas mitigated by these three projects have historically accounted for approximately 20% of the wet weather SSOs in the City.

3.6.2.5 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 are providing 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 City staff. According to Consent Decree requirements, the City is responsible for cleaning greater than 15 percent of the City's WCTS annually and 100 percent of the system no later than 84 months

following the Effective Date of the Consent Decree. During the first five years of the Consent Decree program, the City attempted to clean 100% of the pipes, rather than just the 15-inch diameter and greater as part of the SSA investigations. In addition to the "Hot Spot" Sewer Cleaning and CCTV Program discussed below, the City began implementing an Annual Sewer Cleaning and CCTV Program during Year 9. The City continued implementing both Annual Sewer Cleaning and CCTV Program and "Hot Spot" Sewer Cleaning and CCTV Program in Year 10.

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 in addition to CCTV investigation. 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 include approximately 374,000 linear feet of gravity sewer cleaning in addition to CCTV investigation which began in May 2023 (Year 10). The Year 10 Programs represented approximately 7 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 10 "Hot Spot" and "Annual" cleaning through the reporting period.

Table 3-19: Summary of Gravity Sewer Cleaning Activities

	Year 1-5	Year 6	Year 7	Year 8	Year 9	Year 10
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
Hot Spot Cleaning[1]			49,969	241,393	111,941	231,212

[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."

Annual Cleaning[1]					167,999	142,041
Total	**4,774,664**	**665,283**	**284,232**	**656,843**	**508,853**	**576,500**
% of the Total Collection System	**88.2%**	**12.3%**	**5.3%**	**12.1%**	**9.4%**	**10.6%**

[1] The length shown for Hot Spot and Annual Cleaning in Year 10 includes sections of sewer in Phases 1, 2, 3, 4, and 5. Refer to Table 3-2, Table 3-3, Table 3-4, and Table 3-5 for a breakdown of segment lengths and diameters cleaned during Year 9 through the Hot Spot and Annual Sewer Cleaning and CCTV Programs.

3.6.3.3 Manhole Rehabilitation and Inflow & Infiltration Reduction Program

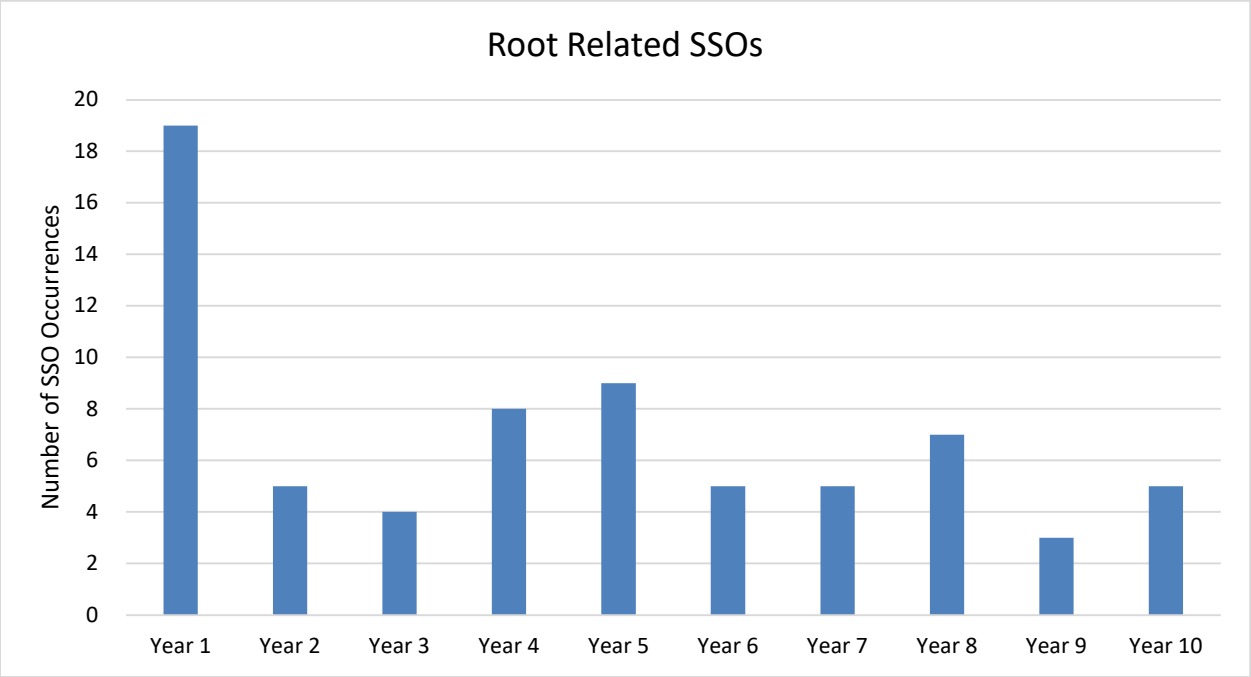
The City's Manhole Rehabilitation and Inflow & Infiltration Reduction program began in Year 8 to rehabilitate manholes in poor condition and address inflow & infiltration issues. The program continued in Year 9 with a total of 48 manholes selected for rehabilitation with Triplex Fiberglass Manhole Liners. 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. 27 of the 48 manholes identified for rehabilitation with Triplex Liners were completed during Year 9.

The City rehabilitated 21 manholes with Triplex Liners in Year 10. These were manholes identified for Triplex lining in Year 9 that were not completed. The City also rehabilitated 125 manholes using a Type-2 Cementitious Liner through one of the City's On-Demand Water and Sewer contracts. Overall, the City rehabilitated 146 manholes that were not part of gravity sewer projects in Year 10.

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 436 gravity sewers (146,297 linear feet) were treated and a total of five (5) root-related SSOs occurred representing approximately two (2) percent of the total SSOs reported for the period. Figure 3-3 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



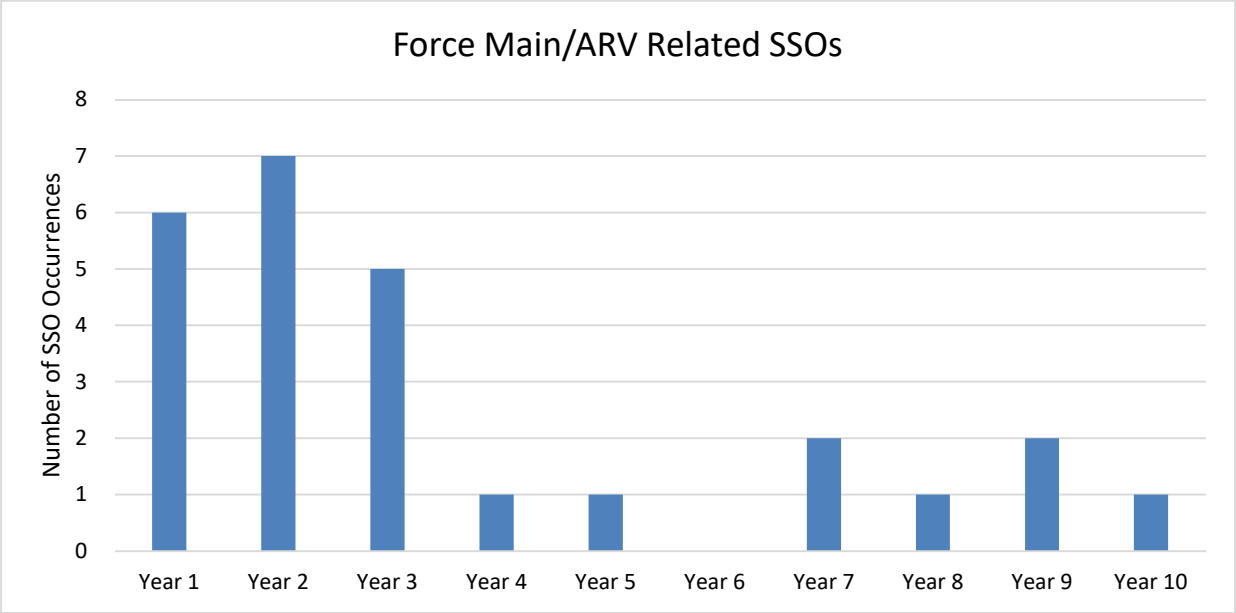
3.6.3.5 Force Main / ARV Inspection Program

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.

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

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



3.6.3.6 On-Demand Sewer Rehabilitation Services

The City rehabilitated approximately 48,400 linear feet of sanitary gravity sewer and eight (8) sanitary lift stations using its On-Demand Water and Sewer Rehabilitation Contracts in Year 10. The City intends to continue its utilization of On-Demand Contracts during Year 11.

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 10 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 10 reporting period. The City is in the process of implementing web-based software, QAlert, that will allow the City to track, manage, and resolve customer requests. The software also integrates with the City's Cityworks software, allowing the Water and Sewerage Department to dispatch personnel to customer requested services.

As part of the promotion of the General Obligation bond that was approved by the citizens of Shreveport, Mayor Tom Arceneaux attended more than twenty (20) community events over a six-week period in March and April of 2024 to educate the public on the propositions included in the bon, as well as the financial status of the sewer utility. The Mayor described the sewer improvements included in the 2024 Bond Proposition: lift station improvements, lift station upgrades, lift station generators, and an interceptor replacement.

The main focus of most public outreach activities during Year 10 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.

Notable outreach days 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. Other outreach events that occurred during Year 10 include the groundbreaking of major critical projects such as Dilg League SSO Mitigation project.

4.0 CONSENT DECREE – YEAR ELEVEN (11)

The major objectives to be completed during the next reporting period (Year 11: May 13, 2024 to May 12, 2025) are discussed below. This list of objectives should not be interpreted as an explanation of all activities but rather a summary of the major objectives anticipated to be completed. In addition, it is important to note that the planned activities have been developed to align with and support the overriding goal and objective of the Consent Decree to mitigate sewer overflows. Activities necessary for the City to operate and maintain reliable wastewater and water utilities have also been prioritized. The activities relate directly to many specific Consent Decree requirements even though a shift away from the defined "find and fix" method of addressing all defects in the collection system through a phase-by-phase approach is required.

4.1 Regulatory Coordination

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

4.2 Sanitary Sewer Assessment - Phase 5

The City will complete additional SSA activities in Phase 5 during the Year 11 reporting period. These activities will include NASSCO MACP manhole inspections and NASSCO PACP CCTV and sewer cleaning of select gravity mains throughout the Phase 5 SSA Area. During the Year 11 reporting period, approximately 47,000 linear feet of gravity sewer CCTV inspections are planned to be completed. This work will be completed through the City's Annual Sewer Cleaning Program which is further discussed in Section 4.3.2 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 11 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 investigations performed through SSA

activities and construction record information associated with Phase 2 RMP projects, the Critical Projects Program and updates identified through the various City cleaning programs. Updates to the wastewater GIS layers as well as the dashboards used to track and provide access to inspection inventories will be maintained through Year 11.

4.3.2 "Hot Spot" Cleaning and CCTV Program

The City will continue implementation of the "Hot Spot" Cleaning and CCTV Program. In total, approximately 116,000 linear feet of gravity sewers are included in the 2024-2025 "Hot Spot" Cleaning and CCTV Program. Cleaning and CCTV activities began during the Year 11 reporting period in May 2024.

4.3.3 Annual Cleaning and CCTV Program

The City is developing the 2024-2025 Annual Cleaning and CCTV Program for the WCTS based on pipe materials, age, diameter, sewer system maintenance records, and remaining Consent Decree obligations. Approximately 47,000 linear feet of gravity sewers will be included in the 2024-2025 Annual Cleaning and CCTV Program, representing approximately 1.0% of the collection system. This is in addition to the sewers that are part of the 2024-2025 "Hot Spot" Cleaning and CCTV program. Cleaning and CCTV activities began during the Year 11 reporting period in May 2023.

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 complete the conversion to the Cityworks Respond platform.

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 10. The City will continue to develop this dashboard and procedure to continue evaluating program activities in Year 11. 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 review of its existing SORP SOP to identify where improvements might be needed and opportunities for correlating reporting of SSOs with hydraulic model results. The SORP SOP was written prior to the acquisition of Cityworks as the CMMS for the City and process efficiencies may be obtained through an update to the SOP.

4.3.7 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 3.3.3, that were selected to mitigate SSOs and maintain reliable utility service by addressing known facility and operational issues within the City's wastewater and water utilities. However, 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 2.3, the City is currently exploring funding opportunities that could supplement its currently available funding and enable these projects to be completed. If additional funding becomes available, the City plans to use an Integrated Planning Approach to select projects for further implementation and construction. The approach will allow the City to consider all of its compliance and utility obligations, including the City's obligations to provide reliable water service. As stated previously, detailed design and construction of the City's project identified in this report, as well as others that may be identified in future years, will be dependent upon financial

assistance from federal and state agencies, and the lack of such assistance is expected to delay program implementation.

4.5 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 listed in Table 3-10 and 3-14 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 11 reporting period.

4.6 Condition Assessment Program

The City plans to continue assessing its wastewater system during the Year 11 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 risk and rehabilitation program is anticipated to be developed by December 2024 and can be configured to be maintained and once completed, if needed.

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. In Year 10 the City rehabilitated thirty-seven (37) of these manholes. In Year 11 the City continue to focus on prioritizing rehabilitation of the remaining 681 manholes identified in Phases 3 through 5 with NASSC Structural 4 and 5 defects.

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 risk and rehabilitation program is anticipated to be developed by December 2024 and can be configured to be maintained and once completed, if needed.

The City has been discussing the rehabilitation/replacement of approximately 120 miles of gravity sewer with NASSCO Structural 4 and5 defects 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 continue to focus on prioritizing rehabilitation/replacement of the remaining 681 manholes identified in Phases 3 through 5 with NASSCO Structural 5 defects.

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 review and updates to the remaining 30 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 10 Summary

Count	Facility Name	Address	City	State	Zip code
1	Alfasigma USA, Inc. Claiborne	2008 Claiborne Avenue	Shreveport	LA	71103
2	Alloy Piping Products	740 North Market	Shreveport	LA	71107
3	ALSCO	5000 Hollywood Ave	Shreveport	LA	71109
4	Benteler Steel/Tube Manufacturing Corp.	11650 Hwy. 1	Shreveport	LA	71115
5	Calumet Lubricants & Waxes, L.L.C.	3333 Midway	Shreveport	LA	71133
6	Certainteed	620 Aero Drive	Shreveport	LA	71107
7	Christus Schumpert Highland	1453 E. Bert Kouns	Shreveport	LA	71105
8	Crown Health Care Laundry Services	3305 Mansfield Road	Shreveport	LA	71103
9	Dr. Reddy's Laboratory	8800 Line Avenue	Shreveport	LA	71106
10	Energy Solutions (US) LLC	5677 North Industry Road	Shreveport	LA	71107
11	Frost Industries	5320 Greenwood Road	Shreveport	LA	71109
12	Frymaster	8700 Line Avenue	Shreveport	LA	71106
13	Hollywood Mini Mart	3655 Hollywood Ave.	Shreveport	LA	71109
14	Integrated Power Services	1245 North Hearne Avenue	Shreveport	LA	71107
15	International Paper	1212 Tolmak Road	Shreveport	LA	71107
16	Jones Environmental, Inc. Monkhouse	5112 Monkhouse Dr.	Shreveport	LA	71109
17	Jones Environmental, Inc. W. Bert Kouns	6910 West Bert Kouns	Shreveport	LA	71129
18	KCS	4601 Shreveport-Blanchard Hwy	Shreveport	LA	71107
19	Liberty Energy	2675 Valley View Dr.	Shreveport	LA	71108
20	Liquid Environmental Solutions	437 Fortson	Shreveport	LA	71107
21	Oil States Energy Services	5030 Flournoy Lucas Road	Shreveport	LA	71129
22	Omni Specialty Packaging	10399 Hwy 1 South	Shreveport	LA	71115
23	Overton Brooks VA Medical Center	510 East Stoner Avenue	Shreveport	LA	71101
24	Pel State Oil	3102 Jewella	Shreveport	LA	71109
25	Penske Truck Leasing	6890 Bert Kouns Industrial Loop	Shreveport	LA	71129
26	Pratt Paper (LA), LLC	10429 Richard Pratt Drive	Shreveport	LA	71115
27	Prolec GE USA	7000 W. Bert Kouns Industrial Loop	Shreveport	LA	71129
28	Purina Mills	223 West 63rd Street	Shreveport	LA	71136
29	Republic Services	6896 Industrial Loop	Shreveport	LA	71129
30	Ryder Truck Rental	2510 Lakeshore Drive	Shreveport	LA	71103
31	Safety-Kleen Systems, Inc.	2760 Valley View Drive	Shreveport	LA	71108
32	Ternium	2500 Ron Bean Blvd	Shreveport	LA	71115
33	Twin States Trucking	7690 West 70th	Shreveport	LA	71107
34	Union Pacific-Jewella	6215 E. Jewella	Shreveport	LA	71108
35	University Health - Kings Hwy	1541 Kings Highway	Shreveport	LA	71103
36	University Health One St. Mary Place	One Saint Mary Place	Shreveport	LA	71101
37	Willis-Knighton Medical Center	2600 Greenwood Road	Shreveport	LA	71103
38	Willis-Knighton Pierremont	8100 Youree Drive	Shreveport	LA	71115
39	Willis-Knighton South	2500 Bert Kouns Industrial Loop	Shreveport	LA	71118
40	Woolworth Landfill	10581 Woolworth Road	Keithville	LA	71047

ATTACHMENT 2 – FOG PROGRAM PUBLIC OUTREACH

Public Outreach for FOG Program
Year 10 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
1	5/25/2023	Residential		7505 Pines Rd	Went out to Walmart, Klug Pines, Cracker Barrel, and Nicky's and checked all the grease traps.
2	6/15/2023	FSE	Griffs of America	2910 Linwood Ave	Inspected the grease trap and sample port. Both full of water and paper goods, trap had some oil/grease inside. Advised manager to call hauler (LES) to have them pump again. Per manager, they had been out on 6/13/23. Issued a 24-hr NOV.
3	7/20/2023	FSE	Cypress by the Revenir	6104 Line Ave	We conducted a site visit because grease trap over flowed. I talked with manager Jessicah; she had the trap pumped on 7/19/23. Manager also stated that she will have employee clean up around grease trap. Will follow up to insure area was clean.
4	8/14/2023	FSE	Ernest Resturant	1601 Spring St. South	I went out to inspect the grease trap. The trap failed inspection. I gave the FSE a NOV. Owner stated that he has the trap cleaned every two weeks. He also stated that he will have someone come out to pump the trap right away.
5	9/12/2023	Residential	Eastwood on the Bayou	3415 Stonebrooke Shreveport, LA 71105	Left door hangers on the homes in this area.
6	10/2/2023	Residential	2937 Hoyte Dr Shreveport, LA, 71118	2937 Hoyte Dr	Grease backed up at 2937 Hoyte Drive. Went out to investigate near by facilities Southwood High School and also left door hangers at Southwood Apartments to give to residents.
7	10/2/2023	Residential	Southwood Village	9005 Walker Rd. Shreveport, LA 71118	Grease related issue near Hoyte Road. Talked with manager from Southwood Village Apartments, gave out pamphlets to Asia (manager). She stated that the main property manager was not in today. She was familiar with our public outreach.
8	10/3/2023	Proactive Measure for Grease Control	9226 Blue Spruce Drive (National Night Out)		La Shauna Chambers informed residents concerning kitchen habits to prevent grease issues. Outreach material was distributed (plastic lids, plastic scrapers, kids activity books, and rack cards).
9	10/20/2023	Residential	Wellington Square Senior Apartments	1812 Jewella Avenue Shreveport, LA 71109	Spoke with Lori A Phills (Property Manager), she called about the grease related issue. I handed out rack cards to the residents. I also took a business card to set up a day so that we could do a presentation for the residents.
10	10/20/2023	Residential	Casa Cove	6900 Casa Cove Shreveport, LA 71118	Grease related issue, passed out door hangers to the residents.
11	11/7/2023	Residential	The Creole (Southport Apartments)	9371 Mansfield Road Shreveport, LA 71118	Grease related issue near Normandie Drive and Birch Drive. After located the direction of flow at manhole 13KK-47, I determined it flowed near the direction of The Creole Apartments (formerly known as Southport Apartments).
12	11/17/2023	Residential	Southern Hills Residental	2038 Kirkwood	Residental grease backed up near 2038 Kirkwood; gave out pamphlets in area.
13	11/22/2023	FSE	Triple J and Roma Italian	Mansfield Rd	Both FSEs passed inspection and both were recently pumped by hauler, look in MGO for documentation and pictures.
14	11/22/2023	Residential	Residental Area	2584 Crape Myrtle	Did public outreach; gave out pamphlets in residental area.
15	11/27/2023	Residential	Near Centenary Blvd	2500 Centenary Blvd	Sewer coming from clean out in alley/breezeway near townhouse #5. We did public outreach in this townhouse/apartment area. There was no local office.
16	12/19/2023	Residential	Residental Area Creswell Road, Shreveport, LA 71106	7108 Creswell Road Shreveport, LA 71106	Handed out pamphlets in residental area (townhomes).
17	12/19/2023	Residential	Wilkinson Street Residental Area	400 Wilkinson Street Shreveport, LA 71104	Handed out pamphlets and door tags in the residental area.
18	1/19/2024	Residential	Residental Neighborhood off of Creswell and Unadilla St.	664 Unadilla St. Shreveport, LA 71106	Constantly backed up clean out behind 640 Unadilla St., 71106 that's getting worse. This has been an ongoing and reoccurring issue. Placed door tags about grease awareness on residental homes.
19	1/31/2024	Residential	Bellaire Avenue	3406 Bellaire Av	Did public outreach at 3406 Bellaire Ave Shreveport La.
20	2/5/2024	Residential	Copper Road Plaza INC Apartments	2929 Peach Street Shreveport, LA	Grease related back up on the grounds of the apartments on 2929 Peach Street, 71107. Talk with apartment manager and gave out outreach material to resident at the apartments.
21	2/8/2024	Residential	Residental Area	4382 Thurgood Cir	In response to reported sewage overflow in residental neighborhood in Cityworks, we passed out hanging door tags in affected neighborhood.
22	2/8/2024	Residential	3229 Lancaster Street	3229 Lancaster Street	
23	2/8/2024	Residential	4382 Thurgood Circle	4382 Thurgood Cir Shreveport, LA 71109	
24	2/8/2024	Residential	Residental Area	3229 Lancaster Street Shreveport, LA	In response to sewage overflow reported in Cityworks, we passed out hanging door tags in the affected residental area to provide education about healthy kitchen practices.

Public Outreach for FOG Program
Year 10 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
25	2/14/2024	Residential	Linwood Avenue area and Cox Street	4313 Linwood and Cox Street	Passed out door hangers in the Cox Street neighborhood as the gravity main running through this neighborhood was indicated as the problem area in Cityworks.
26	2/14/2024	Residential	Residental Area	9489 Boxwood Drive Shreveport, LA	1. Residental Public Outreach placing door tag in response to sewage overflow in Cityworks.
27	2/14/2024	Residential	Residental Area	1861 Jamison St	1. Residental Public Outreach placing door tag in response to sewage overflow in Cityworks.
28	2/14/2024	Residential	Blom Boulevard and Boxwood Drive neighborhoods	9465 Boxwood Drive and 9467 Blom Boulevard gravity mains	Checked the grease trap at nearby school (Forest Hill Elementary located at 2005 Francais) and determined that grease issue must have originated in the surrounding neighborhood, not from the nearby school.
29	2/14/2024	Residential	Jamison Street neighborhood	1861 Jamison Street and gravity main	Passed out door hangers to homes lining Jamison Street.
30	2/17/2024	Residential	Residental Area	4313 Linwood Ave	Residental Public Outreach placing door tag in response to sewage overflow in Cityworks.
31	2/23/2024	Residential	Simmons Place neighborhood	9235 Simmons Place	Completed an SSO related grease trap inspection at the McDonald's on the corner of Walker Road/Bert Kouns (3100 Bert Kouns Ind.) as their sewage ran in the same direction as the Simmons Place neighborhood. Determined that grease issue originated in the residental area.
32	2/23/2024	Residential	Simmons Pl Neighborhood	9235 Simmons Pl	Hung door tags on houses located on Simmons Pl.
33	2/26/2024	Residential	5915 Dillingham Avenue	5922 Dillingham Avenue	Completed an SSO related inspection at nearby Pierremont Healthcare Center, found to not be an issue. Passed out door hangers in the 5900 block of Dillingham Avenue.
34	2/27/2024	Residential	Bedford Park Apartments 9310 Baird Rd	9310 Baird Rd Shreveport, LA	Dropped off door flyers to leasing office to give to residents. Offered to come back and give a presentation about FOG. Left contact info with leasing manager who seemed interested, and she said she would contact us soon. Put door tags on houses covering a 2-block radius from Baird Rd to Cynthia Ln, and Baird Rd to Urban Dale Rd, in response to reported SSO in Cityworks.
35	2/29/2024	Residential	Trailwood Terrace / Santa Monica Drive	6330 Trailwood Terrace	Passed out door hangers in the Trailwood Terrace and Santa Monica Drive neighborhood.
36	2/29/2024	Residential	Residental Area	1022 Willow Dr	Passed out door tags in residental area in response to reported SSO in Cityworks.
37	2/29/2024	FSE	Liquor Shop and Grocery	7902 Line Ave	Inspected under Sinkl Interceptor which was installed on exterior of building. Filled to the top with solid grease.
38	3/1/2024	Proactive Measure for Grease Control	Nelson & Corporate, Cambridge Court II Apartments	3101 Kitty Lane	Grease issues suspected to have orginated from Cambridge Court II, dropped off door hangers at leasing office to be distributed to tenants. Left a note saying that we would be willing to return for a presentation if needed.
39	3/6/2024	Residential	Magnolia / Herndon, Wyandotte / Magnolia neighborhood	437/437 Jordan Street	Passed out door hangers in this neighborhood due to a grease related issue.
40	3/12/2024	Proactive Measure for Grease Control	Shreveport Convention Center	400 Caddo St. Shreveport, LA 71101	The Pretreatment Supervisor spoke for an hour in a wastewater technical class in the Byo-Tech Services Course General Program at the Convention Center. Discussion was about the FOG Pretreatment Program. Issued grease cans and educated public about issues FOG cause and how to prevent those problems with simple kitchen practices.
41	3/13/2024	Residential	Alma Street	1501 Alma Street	Passed out door hangers in surrounding neighborhood.
42	4/30/2024	Residential	Neighborhood of 6535 Burke Street	6535 Burke Street	In response to SSO that appeared in Cityworks, we put door tags on house in the above neighborhood.

ATTACHMENT 3 – YEAR 10 SANITARY SEWER OVERFLOWS

Sanitary Sewer Overflows (SSOs)
Year 10 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	5/16/2023	16II-49	8919 Hawthorne Drive	2.08 hrs	main break	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	700 gal
2	5/22/2023	19V-55	Market Street	1.15 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	25 gal
3	5/24/2023	20DD-40	7505 Pines Road	20.27 hrs	grease	sewage partially contained	unstopped by wash truck	Gilmer Bayou	4600 gal	75000 gal
4	6/2/2023	11Y-58	2900 Cavett Drive	7.78 hrs	debris	sewage was not contained	unstopped by wash truck	Red River	2500 gal	3500 gal
5	6/4/2023	05X-47	1600 Dilg League	1.67 hrs	rain event	sewage was not contained	N/A	Cross Lake	0 gal	50 gal
6	6/5/2023	04AA-55	425 Dudley	1.17 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	1500 gal
7	6/6/2023	10BB-55	724 Delaware Street	0.77 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	10 gal
8	6/13/2023	34II-48	2805 Lynda Lane	3.83 hrs	roots	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1 gal
9	6/15/2023	39W-55	729 Witchita Street	2.0 hrs	main break	sewage was not contained	set up bypass pump	Bayou Pierre	0 gal	500 gal
10	6/17/2023	02Y-42	5808 Dianne Street	3.17 hrs	Lift station down	sewage was not contained	set up pump	Bickham Bayou	0 gal	700 gal
11	6/20/2023	19X-49	3435 Fredrick Street	3.73 hrs	Lift station down	sewage partially contained	lift station back in service	Cross Bayou	4600 gal	5000 gal
12	6/21/2023	33AR-45	2877 Rosenwald Steet	0.22 hrs	Lift station down	sewage was not contained	Sewer lift personnel	Cross Bayou	0 gal	400 gal
13	6/22/2023	38Y-51	1935 Claiborne Avenue	1.10 hrs	Lift station down	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	10 gal
14	6/22/2023	06NN-68	5000 Doug Attaway Blvd	1.83 hrs	N/A	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	12000 gal
15	6/23/2023	N/A	4200 Lakeshore Drive	N/A	Lift station down	N/A	N/A	Cross Bayou	N/A	N/A
16	6/26/2023	N/A	3700 Highland	0.77 hrs	Lift station down	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	80 gal
17	6/26/2023	08II-47	8979 Walker Road	1.50 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	100 gal
18	6/29/2023	04JJ-60	11108 Woodmere Drive	7.77 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
19	7/8/2023	34II-48	2805 Lynda Lane	6.57 hrs	roots	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	25 gal
20	7/13/2023	N/A	6740 Rockwell Place	N/A	circuit breaker tripped, reset controls	sewage was not contained	N/A	Bayou Pierre	0 gal	100 gal
21	7/18/2023	36X-53	Linwood Avenue	4.92 hrs	disconnected sewer service	sewage completely contained	customer service disconnected	Bayou Pierre	500 gal	0 gal
22	7/21/2023	42W-53	1600 Southern Avenue	4.57 hrs	main break	sewage was not contained	N/A	Bayou Pierre	0 gal	1500 gal
23	7/24/2023	N/A	Riding Club Lane	N/A	bypass pump broken down	N/A	Bypass pump repaired	Private Pond	N/A	N/A
24	7/24/2023	33P-44	3049 Dr. Martin Luther King Drive	11.82 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	McCain Creek	0 gal	200 gal
25	7/25/2023	99AA-40	6224 Trailwood	1.10 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
26	7/26/2023	42W-53	Southern Avenue	3.03 hrs	main break	sewage partially contained	vacuum manhole	Bayou Pierre	13200 gal	500 gal
27	7/27/2023	34KK-47	9436 Mansfield Road	2.0 hrs	debris	sewage was not contained	unstopped by wash truck	Boggy Bayou	0 gal	200 gal
28	7/27/2023	03T-54	161 Levee Street	1.65 hrs	main break	sewage was not contained	N/A	12 Mile Bayou	0 gal	1000 gal
29	7/29/2023	29X-49	3160 Catherine Street	15.00 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	2 gal
30	8/23/2023	42W-53	Southern Avenue	1.90 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	350 gal
31	8/27/2023	N/A	Highland	17.25 hrs	electrical outage	sewage was not contained	install a 6" diesel bypass pump to pump station down	Bayou Pierre	unknown	unknown
32	8/27/2023	N/A	5546 S. Lakeshore Drive	N/A	bypass pump broken down	sewage was not contained	repaired bypass pump	Cross Lake	unknown	unknown
33	8/28/2023	N/A	3052 Gordonia Drive	1.20 hrs	lift station down	sewage was not contained	Sewer lift personnel	12 Mile Bayou	0 gal	550 gal
34	9/5/2023	N/A	500 Overton Brooks	1.25 hrs	main break	sewage was not contained	reestablished connection	Bayou Pierre	0 gal	50 gal
35	9/7/2023	13II-48	9025 Jewella Avenue	1.07 hrs	bypass pump malfunction	sewage was not contained	Bypass pump repaired	Gilmer Bayou	0 gal	100 gal
36	9/8/2023	N/A	7710 King Hwy	1.70 hrs	main break	sewage was not contained	N/A	Bayou Pierre	0 gal	1300 gal
37	9/15/2023	42BB-46	4913 Dandridge Pl	2.50 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1000 gal
38	9/25/2023	27GG-52	Darinda Lane	0.25 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	50 gal
39	10/2/2023	59II-47	2937 Hoyte Drive	1.65 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	200 gal
40	10/3/2023	N/A	6211 Yarbrough Road	1.21 hrs	main break	sewage was not contained	re-established connection	Cross Lake	0 gal	100 gal
41	10/4/2023	20DD-40	7000 Bobtail Drive	1.0 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	2100 gal
42	10/5/2023	04S-52	451 Fortson Street	2.92 hrs	debris	sewage was not contained	unstopped by wash truck	12 Mile Bayou	0 gal	5 gal
43	10/12/2023	37EE-57	7304 Fern Avenue	4.62 hrs	Lift station down	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	100 gal
44	10/17/2023	N/A	9025 Jewella Avenue	2.38 hrs	bypass pump malfunction	sewage was not contained	Sewer lift personel	Gilmer Bayou	0 gal	200 gal
45	10/27/2023	16GG-52	Coyth Lane	0.17 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	700 gal
46	10/27/2023	27GG-52	8809 Darinda Lane	0.25 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	200 gal
47	10/30/2023	13GG-52	Coyth Lane	0.73 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	2000 gal
48	10/30/2023	08X-55	424 Washington Street	0.92 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
49	11/1/2023	13KK-47	Normandie Drive	0.67 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1500 gal
50	11/2/2023	31X-52	2307 Texas Ave	1.03 hrs	debris	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	200 gal
51	11/3/2023	20DD-40	7001 Beaufort Way	4.0 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	7500 gal
52	11/4/2023	01Z-49	3701 Hudson Ave	2.70 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
53	11/7/2023	53V-52	Park Avenue	0.92 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	300 gal
54	11/10/2023	05A-44	2077 Havana Street	1.32 hrs	debris	sewage was not contained	washed sewer main	12 Mile Bayou	0 gal	100 gal
55	11/12/2023	100O-48	3328 Tower Drive	1.63 hrs	debris	sewage was not contained	unstop main with wash truck	McCain Creek	0 gal	100 gal
56	11/14/2023	N/A	8080 Broadacres Street	N/A	vandalism	sewage was not contained	install new bolts in valve	Gilmer Bayou	N/A	N/A
57	11/14/2023	N/A	Darinda Lane	3.0 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	25 gal
58	11/14/2023	12BB-48	4000 Jewella Avenue	4.07 hrs	debris	sewage partially contained	vacuum manhole	Gilmer Bayou	1800 gal	500 gal
59	11/15/2023	01X-53	2135 McClellan Street	2.05 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
60	11/15/2023	45LL-49	2038 S Kirkwood Drive	2.87 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	950 gal
61	11/17/2023	01OO-68	5000 Doug Attaway	1.32 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1500 gal
62	11/20/2023	10AA-55	3801 Creswell Avenue	1.92 hrs	rain event	sewage partially contained	lift station back in service	Bayou Pierre	350 gal	750 gal
63	11/21/2023	25HH-49	2584 Crape Myrtle	1.43 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
64	11/26/2023	27X-56	2500 Centenary Blvd	0.95 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
65	12/13/2023	13X-57	300 Boulevard Street	3.28 hrs	debris	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	5000 gal
66	12/13/2023	16GG-41	8003 Arcadian Shores Drive	2.57 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	5000 gal
67	12/14/2023	20W-55	Gilbert Drive	4.43 hrs	main break	sewage partially contained	vaccum manhole	Bayou Pierre	400 gal	5000 gal
68	12/16/2023	08X-55	400 Wilkinson Street	1.10 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
69	12/16/2023	04EE-56	7108 Creswell Road	1.07 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
70	12/19/2023	06T-54	161 Levee Street	1.90 hrs	main break	sewage was not contained	N/A	12 Mile Bayou	0 gal	5000 gal
71	12/22/2023	03AA-47	4203 Pro Street	1.13 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
72	12/30/2023	53V-52	1700 Murphy Street	0.88 hrs	debris	sewage was not contained	Further Investigation Needed	Cross Bayou	0 gal	3000 gal

Sanitary Sewer Overflows (SSOs)
Year 10 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
73	1/5/2024	05X-47	1636 Dilg League Drive	0.50 hrs	rain event	sewage was not contained	N/A	Cross Lake	0 gal	1000 gal
74	1/5/2024	11Q-44	3052 Gordonia Drive	0.75 hrs	Lift station down	sewage was not contained	N/A	12 Mile Bayou	0 gal	1200+ gal
75	1/5/2024	14II-48	Mackey Lane	0.45 hrs	rain event	sewage was not contained	N/A	Gilmer Bayou	0 gal	400 gal
76	1/5/2024	08X-55	Wilkinson Street	1.50 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
77	1/7/2024	13AA-55	700 Cecile Pl	1.83 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1500 gal
78	1/12/2024	40AA-55	622 Unadilla Street	1.58 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
79	1/21/2024	21Y-58	745 Shreveport Barksdale Hwy	2.07 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2000 gal
80	1/22/2024	03P-47	2300 Jones Mabry Road	0.83 hrs	main break	sewage was not contained	N/A	McCain Creek	0 gal	5000 gal
81	1/22/2024	20GG-52	8742 Coyth Lane	0.50 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	5000 gal
82	1/22/2024	27GG-52	8809 Coyth Lane	0.25 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	3500 gal
83	1/23/2024	64FF-52	8139 Fork Bayou Ln	1.0 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	4000 gal
84	1/23/2024	1014W-49	3406 Bellaire Ave	0.67 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	20 gal
85	1/23/2024	13GG-52	Coyth Lane	0.50 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	5000 gal
86	1/24/2024	16Z-48	3704 Greenwood Road	1.58 hrs	grease	sewage was not contained	washed sewer main	Brush Bayou	0 gal	6000 gal
87	1/24/2024	41X-54	902 Robinson Pl	1.03 hrs	rain event	N/A	N/A	Bayou Pierre	0 gal	0 gal
88	1/24/2024	12GG-52	8710 Coyth Lane	0.67 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	200 gal
89	1/25/2024	03R-51	Corporate Drive	1.92 hrs	rain event	sewage was not contained	N/A	Red River	0 gal	5000 gal
90	1/26/2024	01DD-55	413 Trinity Circle	1.18 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	4000 gal
91	1/26/2024	02FF-51	7718 Woodfield Drive	1.43 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	N/A
92	1/27/2024	13W-48	3854 Michigan Blvd	1.90 hrs	N/A	sewage partially contained	lift station back in service	Cross Lake	1400 gal	10000 gal
93	1/27/2024	49LL-49	2052 Kirkwood Drive	3.12 hrs	rain event	sewage partially contained	N/A	Bayou Pierre	1800 gal	15000 gal
94	1/28/2024	1000FF-52	609 W. 84th	1.38 hrs	N/A	sewage partially contained	N/A	Brush Bayou	500 gal	1800 gal
95	1/29/2024	05X-47	1700 Dilg League	6.48 hrs	rain event	sewage was not contained	lift station back in service	Cross Lake	0 gal	2400 gal
96	2/2/2024	35AAA-55	622 Unadilla Street	2.23 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50000 gal
97	2/5/2024	03R-51	1101 Forum Drive	3.02 hrs	debris	sewage partially contained	vacuum manhole	Red River	200 gal	5000 gal
98	2/5/2024	87U-54	719 Edwards Street	0.93 hrs	debris	sewage was not contained	washed sewer main	Red River	0 gal	3000 gal
99	2/6/2024	05X-47	Dilg League	1.50 hrs	debris	sewage was not contained	washed sewer main	Cross Lake	0 gal	5000 gal
100	2/6/2024	04Y-41	6525 Dianne Street	1.63 hrs	customer lateral blockage	sewage partially contained	unstopped by wash truck	Bickham Bayou	200 gal	500 gal
101	2/7/2024	22AA-46	4382 Thurgood Cir	2.33 hrs	grease	sewage partially contained	unstopped by wash truck	Bayou Pierre	350 gal	650 gal
102	2/8/2024	29V-55	655 Buckelew Street	1.05 hrs	debris	sewage was not contained	N/A	Bayou Pierre	0 gal	3000 gal
103	2/10/2024	27GG-52	600 Darinda Lane	0.25 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	100000 gal
104	2/10/2024	29GG-52	600 Sugarleaf Tr	0.50 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	5000 gal
105	2/11/2024	05X-47	1700 Dilg League	1.0 hrs	rain event	sewage was not contained	N/A	Cross Lake	0 gal	100000 gal
106	2/11/2024	45Z-55	Highland Avenue	1.87 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	100000 gal
107	2/11/2024	N/A	8200 St. Vincent Avenue	1.0 hrs	lift station down	sewage was not contained	N/A	Bayou Pierre	13800 gal	unknown
108	2/12/2024	08Z-47	3110 Country Club Drive	1.22 hrs	debris	sewage partially contained	unstopped by wash truck	Brush Bayou	50 gal	200 gal
109	2/13/2024	45LL-49	2052 Kirkwood Drive	0.67 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	100 gal
110	2/13/2024	N/A	8200 St. Vincent	2.0 hrs	bypass pump malfunction	sewage was not contained	reestablished connection	Bayou Pierre	0 gal	1500 gal
111	2/13/2024	12GG-52	8636 Coyth Lane	2.63 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	unknown
112	2/13/2024	06BB-52	4313 Linwood Avenue	2.22 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	30000 gal
113	2/16/2024	12AZ-50	3006 Dupont Street	2.42 hrs	main break	sewage was not contained	reestablished connection	Brush Bayou	none	unknown
114	2/20/2024	08Y-42	5801 Dianne Street	1.05 hrs	rain event	sewage was not contained	N/A	Bickham Bayou	0 gal	50 gal
115	2/22/2024	30GG-51	8825 Westbrook Pl	1.58 hrs	debris	sewage was not contained	N/A	Brush Bayou	0 gal	unknown
116	2/22/2024	01COO-68	5000 Doug Attaway Blvd	1.65 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	3500 gal
117	2/22/2024	22JJ-47	9235 Simmons Pl	2.42 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	1 gal	3 gal
118	2/23/2024	14CC-55	5915 Dillingham Avenue	5.92 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	3000 gal
119	2/24/2024	N/A	3311 Newman Street	Unknown	bypass pump broken down	sewage partially contained	lift station back in service	Bickham Bayou	3500+ gal	unknown
120	2/24/2024	19X-57	300 E Dalzell Street	5.50 hrs	main break	sewage was not contained	set up pump	Bayou Pierre	0 gal	5000 gal
121	2/25/2024	22X-49	3655 Stonewall Street	2.95 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
122	2/25/2024	12KK-49	9310 Baird Road	2.25 hrs	grease	sewage was not contained	washed sewer main	Gilmer Bayou	0 gal	3500 gal
123	2/27/2024	08II-50	1806 Ridgecrest Drive	1.83 hrs	N/A	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	1000 gal
124	2/27/2024	17LL-50	1022 Willow Drive	2.35 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	3000 gal
125	2/28/2024	20AA-40	6330 Trailwood Ter	2.08 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
126	2/28/2024	08BFF-54	7902 Line Ave	1.53 hrs	grease	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	4 gal
127	2/28/2024	22AA-46	4382 Thurgood Circle	1.02 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000+ gal
128	2/28/2024	01V-46	1838 Hunter Circle	5.57 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	1500 gal
129	3/4/2024	N/A	Clyde Fant Memorial Pkwy	22.0 hrs	force main break	sewage was not contained	main repaired	Red River	0 gal	1300000 gal
130	3/4/2024	03R-51	Forum Drive	0.30 hrs	lift station was down	sewage was not contained	lift station back in service	Red River	0 gal	200+ gal
131	3/4/2024	22X-59	1139 Carolina St	0.43 hrs	customer lateral blockage	sewage was not contained	N/A	Red River	0 gal	200+ gal
132	3/4/2024	20JJ-49	9320 Baird Rd	2.0 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	350 gal
133	3/5/2024	22W-55	437 Jordan St	1.30 hrs	debris	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	3500+ gal
134	3/8/2024	44Z-55	3700 Highland Ave	0.30 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	1200 gal
135	3/8/2024	35Z-55	3800 Highland Ave	0.37 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	1500 gal
136	3/8/2024	12Q-44	3052 Gordonia Dr	2.06 hrs	lift station down	sewage was not contained	sewer lift personel	12 Mile Bayou	0 gal	500 gal
137	3/9/2024	16GG-52	Coyth Ln & Sally Ann Dr	9.22 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	3500+ gal
138	3/9/2024	12GG-52	Lynbrook Blvd & Linwood Ave	20.37 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	200 gal
139	3/12/2024	13AA-53	1501 Alma St	1.21 hrs	grease	sewage was not contained	unstopped by wash truck	Ockley Ditch System	0 gal	30 gal
140	3/14/2024	26W-57	231 E. Wyandotte St	24.5 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
141	3/15/2024	44Z-55	3700 Highland Ave	0.42 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	25000 gal
142	3/15/2024	19BB-56	471 Arthur Ave	0.95 hrs	main break	sewage was not contained	N/A	Bayou Pierre	0 gal	7 gal
143	3/15/2024	02Y-42	3200 Parkwood Dr	Unknown	rain event	sewage was not contained	N/A	Bickham Bayou	0 gal	20000 gal
144	3/15/2024	25GG-52	425 Lynbrook Ave	13.23 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	10000 gal

Sanitary Sewer Overflows (SSOs)
Year 10 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
145	3/16/2024	05X-47	1636 Dilg League Dr	0.2 hrs	rain event	sewage was not contained	re-established connection	Cross Lake	0 gal	100 gal
146	3/17/2024	45Z-55	Dudley Dr	0.11 hrs	rain event	sewage was not contained	N/A	Ockley Ditch System	0 gal	5000 gal
147	3/18/2024	12GG-52	Coyth Ln	7.28 hrs	rain event	sewage was not contained	N/A	Brush Bayou	0 gal	50000+ gal
148	3/18/2024	20GG-52	Coyth Ln & Lynbrook Blvd	1.09 hrs	rain event	sewage was not contained	washed down street from previous rain event	Brush Bayou	0 gal	100 gal
149	3/18/2024	09AA-55	514 Ockley Drive	1.00 hrs	rain event	sewage was not contained	N/A	Ockley Ditch System	0 gal	200+ gal
150	3/18/2024	09W-57	267 E. Lister St	2.33 hrs	main break	sewage was not contained	N/A	Bayou Pierre	0 gal	10 gal
151	3/18/2024	03R-51	1101 Forum Dr	20.12 hrs	lift station down	sewage was not contained	sewer lift personel	12 Mile Bayou	0 gal	10000+ gal
152	3/19/2024	08X-40	3340 Pines Rd	0.52 hrs	main break	sewage was not contained	re-established connection	Cross Lake	0 gal	20 gal
153	3/20/2024	03R-51	1500 Corporate Dr	0.46 hrs	lift station down	sewage was not contained	lift station back in service	12 Mile Bayou	0 gal	50000+ gal
154	3/21/2024	02Y-42	3200 N Parkwood Dr	1.35 hrs	debris	sewage was not contained	lift station back in service	Bickham Bayou	0 gal	3500+ gal
155	3/28/2024	28X-56	121-123 Prospect St	1.15 hrs	rain event	sewage partially contained	N/A	Bayou Pierre	0 gal	250 gal
156	3/29/2024	03W-46	1748 Willow Point Dr	1.25 hrs	bypass pump malfunction	sewage was not contained	additional bypass pump set up	Cross Lake	0 gal	0 gal
157	3/29/2024	10AU-52	1710 Alston St	1.30 hrs	N/A	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	5 gal
158	4/1/2024	02BB-55	705 Ontario St.	1.48 hrs	debris	sewage was not contained or returned	washed sewer main	Ockley Ditch System	0 gal	50 gal
159	4/1/2024	14BB-49	3438 Pleasant Dr	12.42 hrs	debris	sewage was not contained or returned	washed sewer main	Brush Bayou	0 gal	20 gal
160	4/2/2024	1005W-52	1627 Gary St.	1.02 hrs	customer lateral blockage	sewage was not contained or returned	washed sewer main	Cross Bayou	0 gal	30 gal
161	4/2/2024	06NN-50	10439 Kingston Road	2.15 hrs	bypass pump malfunction	sewage was not contained or returned	N/A	Boggy Bayou	0 gal	7000+ gal
162	4/3/2024	25BDD-49	6915 Quilen Rd	0.45 hrs	debris	sewage was not contained or returned	unstopped by wash truck	Brush Bayou	0 gal	3500+ gal
163	4/4/2024	1009Y-53	3015 Samford Ave	1.30 hrs	debris	sewage completely contained	unstopped by wash truck	Ockley Ditch System	0 gal	50 gal
164	4/8/2024	1005W-52	1627 Gary St.	0.55 hrs	debris	sewage was not contained or returned	washed sewer main	Cross Bayou	0 gal	50 gal
165	4/8/2024	43EE-55	7421 Line Ave	0.47 hrs	customer lateral blockage	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	50 gal
166	4/8/2024	09KK-47	9370 Mansfield Rd	3.15 hrs	main break	sewage was not contained or returned	washed sewer main	Brush Bayou	0 gal	50000 gal
167	4/9/2024	02HH-52	9105 Linwood Ave	0.59 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	3500+ gal
168	4/9/2024	16GG-52	8714 Coyth Ln, 71106	0.02 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	50000+ gal
169	4/9/2024	20EE-52	801 Wyngate Cir	1.06 hrs	rain event	sewage was not contained or returned	returned to system	Brush Bayou	0 gal	2000 gal
170	4/9/2024	06AA-54	933 Ockley Dr	0.32 hrs	rain event	sewage was not contained or returned	N/A	Ockley Ditch System	0 gal	100 gal
171	4/9/2024	1013X-54	2515 Line Ave.	0.43 hrs	N/A	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	500+ gal
172	4/9/2024	27X-55	711 Boulevard St	1.03 hrs	customer lateral blockage	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	350+ gal
173	4/9/2024	30GG-51	8829 Westbrook Pl	0.05 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	40000+ gal
174	4/9/2024	07CC-57	5700 Glen Cove St	1.09 hrs	rain event	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	10000 gal
175	4/10/2024	1012P-46	2700 Willie Mays St	0.30 hrs	rain event	sewage was not contained or returned	N/A	McCain Creek	0 gal	3500+ gal
176	4/10/2024	72Q-47	1900 Boykin Blvd	0.15 hrs	rain event	sewage was not contained or returned	N/A	McCain Creek	0 gal	3500+ gal
177	4/10/2024	08JJ-46	3132 W Bert Kouns Industrial Loop	2.17 hrs	debris	sewage was not contained or returned	unstopped by wash truck	Boggy Bayou	0 gal	10 gal
178	4/10/2024	45Z-55	Dudley Dr and Highland Ave	0.3 hrs	rain event	sewage was not contained or returned	N/A	Ockley Ditch System	0 gal	10000 gal
179	4/10/2024	09X-53	2102 Southern Av, 71104	0.3 hrs	rain event	sewage was not contained or returned	N/A	Ockley Ditch System	0 gal	10000 gal
180	4/11/2024	1012GG-52	518 Lynbrook Blvd	0.52 hrs	rain event	sewage was not contained or returned	returned to system	Brush Bayou	0 gal	50 gal
181	4/11/2024	02FF-51	7718 Woodfield Dr	0.46 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	50 gal
182	4/11/2024	38JJ-46	2543 Summer Grove Dr	2.54 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	unknown
183	4/11/2024	09FF-55	601 Hendrix Pl.	1.41 hrs	debris	sewage was not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
184	4/11/2024	13GG-52	577 Janet Ln	0.41 hrs	rain event	sewage was not contained or returned	returned to system	Brush Bayou	0 gal	2500 gal
185	4/12/2024	25GG-46	Meadow Parkway Dr & Meriwether Rd	1.41 hrs	lift station down	sewage was not contained or returned	lift station back in service	Gilmer Bayou	0 gal	3500+ gal
186	4/12/2024	09MM-65	10301 Hwy 1 - Shreveport - 71115	1.50 hrs	lift station down	sewage was not contained or returned	N/A	Red River	0 gal	300+ gal
187	4/16/2024	17X-43	3200 Parkwood Dr	3.26 hrs	rain event	sewage partially contained and returned	N/A	Bickham Bayou	5400 gal	9000+ gal
188	4/17/2024	26AA-41	4122 Honda Dr	1.10 hrs	debris	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	5 gal
189	4/17/2024	N/A	2537 Hollywood Ave	44.45 hrs	N/A	sewage was not contained or returned	vacuum manhole	Brush Bayou	0 gal	50 gal
190	4/19/2024	02S-53	210 Fortson St	3.18 hrs	N/A	sewage was not contained or returned	N/A	Cross Bayou	0 gal	10 gal
191	4/21/2024	12GG-52	8636 Coyth Ln	0.40 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	10 gal
192	4/21/2024	05X-47	1636 Dilg League Dr	0.30 hrs	rain event	N/A	N/A	Cross Lake Sourtheast	0 gal	5 gal
193	4/23/2024	15HH-53	9200 Cade Dr	0.56 hrs	debris	sewage was not contained or returned	washed sewer main	Brush Bayou	0 gal	300 gal
194	4/24/2024	45LL-49	2052 Kirkwood Dr	0.52 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	300+ gal
195	4/24/2024	09II-45	8938 Brandon Dr	0.43 hrs	customer lateral blockage	sewage was not contained or returned	N/A	Gilmer Bayou	0 gal	5 gal
196	4/26/2024	04FF-55	741 Bernard Blvd	0.26 hrs	roots	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	50 gal
197	4/29/2024	03DD-49	6535 Burke St	1.29 hrs	grease	sewage partially contained and returned	unstopped by wash truck	Brush Bayou	0 gal	300 gal
198	5/2/2024	05X-47	1636 Dilg League Dr	0.35 hrs	rain event	sewage was not contained or returned	N/A	Cross Lake Southeast	0 gal	100 gal
199	5/2/2024	12GG-52	8700 Coyth Ln	0.40 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	10000+ gal
200	5/2/2024	35Z-55	3800 Highland Ave	0.15 hrs	rain event	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	3500+ gal
201	5/2/2024	36U-55	1010 Marshall St	1.04 hrs	rain event	sewage was not contained or returned	N/A	Red River	0 gal	4500+ gal
202	5/3/2024	38JJ-48	2543 Summer Grove Dr	1.05 hrs	rain event	sewage was not contained or returned	N/A	Brush Bayou	0 gal	200 gal
203	5/3/2024	45GG-52	518 Lynbrook Blvd	0.56 hrs	rain event	sewage was not contained or returned	returned to system	Brush Bayou	0 gal	50 gal
204	5/7/2024	24W-57	267 E. Lister St	3.00 hrs	roots	sewage was not contained or returned	unstopped by wash truck	Bayou Pierre	0 gal	3600 gal
205	5/9/2024	W07AA-52	1800 Rainwater St	1.02 hrs	main break	sewage was not contained or returned	unstopped by wash truck	Ockley Ditch System	0 gal	100 gal
206	5/9/2024	49W-55	649 Topeka St	1.51 hrs	customer lateral blockage	sewage was not contained or returned	N/A	Bayou Pierre	0 gal	10 gal
207	5/11/2024	01W-46	1748 Willow Point Dr	0.24 hrs	bypass pump malfunction	sewage was not contained or returned	washed sewer main	Cross Lake Southeast	0 gal	40 gal