City of Shreveport, Louisiana

Consent Decree Annual Report – Year 7

May 13, 2020 - May 12, 2021

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

7/8/2021
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, 2020 to May 12, 2021. A summary of activities planned for the Year 8 reporting period (May 13, 2021 to May 12, 2022) is also provided.

1.2 Consent Decree Overview

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

- Analyze the entire collection system and repair all sewer defects which are sources of infiltration and inflow (I/I) and cause or contribute to overflows under 5 Phases of work in first 9 Years of a 12-year Consent Decree Program.
- Reassess the condition of sewers in Phases 1, 2, and 3 in Years 8-12 and repair all defects which cause or contribute to sewer overflows.
- Develop a computerized hydraulic model of the sanitary sewer system.
- Analyze the wastewater system and construct additional conveyance capacity improvements where necessary to address 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 EPA and LDEQ.

2.0 PROGRAM ADMINISTRATION DURING YEAR 7

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 7 reporting period.

2.1 Organizational Changes

The City of Shreveport had significant leadership changes during the Year 7 reporting period. A summary is provided below.

- Barbara Featherstone left the City after serving as the Director of the Department of Water & Sewerage for almost a decade, including during the early years of the City's Consent Decree program. In August 2020, William Daniel was hired as the new Director of the Department of Water & Sewerage.
- Brandon Snead was named Interim Deputy Director of the Department of Water & Sewerage.
- Mekisha Smith Creal resigned from her position as City Attorney in August 2020. Ron Lattier was hired as the new City Attorney shortly thereafter.

2.2 Regulatory Coordination

Significant coordination with federal and state regulatory agencies occurred throughout Year 7. This coordination began in February 2020 and continued through repeated requests fromthe City to meet with 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. After USDOJ and EPA requested written summaries (which the City responded to in May 2020 and July 2020), an initial meeting was held on November 5, 2020. A summary of major events and developments during the Year 7 reporting period is provided below.

2.2.1 Response to Request for Information (July 2020)

On June 22, 2020, USDOJ requested that the City provide information supporting items submitted previously by the City in May 2020 (during the Year 6 reporting period). The City provided the requested information in July 2020.

2.2.2 Mayor Perkins Letter to EPA (October 14, 2020)

On October 14, 2020, Mayor Adrian D. Perkins submitted a letter on behalf of the City of Shreveport urging EPA to adopt its proposed 2020 Financial Capability Assessment (FCA) guidance. The proposed guidance incorporates planning metrics the City considered during development of its FCA. While EPA has not adopted the guidance yet, the City continues to eagerly anticipate fruitful discussion with the agencies about how to implement its program without placing unbearable financial strain on its community. The City anticipates that adoption of the proposed guidance will enhance those discussions by more accurately revealing the fiscal stress City residents face – especially low and fixed income residents.

2.2.3 EPA / USDOJ Consent Decree Coordination Meeting (November 5, 2020)

After responding to several requests for information, USDOJ and EPA agreed to meet and discuss the status of the City's Consent Decree program and the need for modification of the City's Consent Decree. The initial meeting was held on November 5, 2020. Representatives from the City, the City's Program Management Consultant (PMC), and the City's outside legal counsel met with representatives from USDOJ, EPA, and LDEQ. The City provided a summary of the following items:

- Requirements in the current Consent Decree.
- Efforts completed to-date and major challenges encountered during program implementation in the first 6 years.
- The City's Financial Capability Assessment, including the affordability of the program considering the average sewer bill as a percentage of median household income.
- Major components needing to be addressed through a Consent Decree modification.

USDOJ and EPA requested additional information following the initial meeting. A subsequent meeting was held on December 3, 2020.

2.2.4 EPA / USDOJ Consent Decree Coordination Meeting (December 3, 2020)

Representatives from the City, the City's Program Management Consultant (PMC), and the City's outside legal counsel met with representatives from USDOJ, EPA, and LDEQ to discuss questions submitted by USDOJ and EPA regarding the status of the City's Consent Decree program.

Following this meeting the regulatory agencies requested an additional meeting to discuss the City's hydraulic model.

2.2.5 EPA / USDOJ Consent Decree Coordination Meeting (April 16, 2021)

A meeting to discuss the hydraulic model was initially scheduled for February 25, 2021 but was rescheduled due to the historic cold weather and winter storms that devastated the southern United States, including the City of Shreveport, in February 2021. The postponed meeting was held on April 16, 2021. Representatives from the City, the City's Program Management Consultant (PMC), and the City's outside legal counsel met with representatives from USDOJ, EPA, and LDEQ to discuss ongoing updates to the City's hydraulic model. Summaries of the concerns regarding calibration of the previous model were discussed along with the proposed updates to be completed moving forward. A proposed schedule for updates to the City's Capacity Assessment and Capacity Assessment Remedial Measures Plan was presented.

At the end of the meeting, USDOJ requested that proposed modifications to the Consent Decree and a list of current program activities be provided by the City and submitted to EPA and USDOJ. The City is currently preparing this information and will provide it in a future submittal.

2.2.6 General Force Majeure Notification Due to Winter Storm

On February 25, 2021, Mr. William Daniel, Director of Water & Sewerage for the City of Shreveport, issued a general assertion of Force Majeure pursuant to Section X (Force Majeure) of the Consent Decree informing Ms. Kroop (USDOJ, Environmental Enforcement Section, Environment and Natural Resources Division) of the delay of consent decree obligations due to the February 2021 winter storm. President Biden declared a state of emergency throughout the State of Louisiana and ordered federal assistance to supplement state and local response efforts due to the emergency conditions. The Force Majeure assertion followed up on an email issued by Paul Calamita, City's outside legal counsel, on February 22, 2021 regarding the ongoing impacts of the storm on the City's water infrastructure.

The historic polar vortex storm which began on February 11, 2021 significantly impacted the City's water system, specifically hospitals, dialysis centers, and other businesses and vulnerable populations throughout the City. The local power utility was forced to implement unprecedented rolling power outages, which along with the snow, ice, and subfreezing temperatures, interrupted

service at the City's booster pump stations. Over 100 water main breaks were repaired during a two-week period after the storm, and loss of water from these breaks led to low water pressure in most areas of the City. All water was lost from the City's elevated storage tanks and they were not able to be refilled due to the booster pump stations being offline. This caused most customers in the City to lose water service, and customers who still had service had low water pressure. A system-wide boil water order was issued as a precaution because of no and low pressure being experienced throughout the City.

The City worked tirelessly to restore water service to its customers in the most efficient manner possible. City employees and contractors worked around the clock under adverse conditions, supported by its Program Management Team, the Rural Water Association, National Guard, and the Louisiana Department of Health. Even with this all-hands-on-deck effort, portions of the City, including some of the City's most significant healthcare facilities, were without water service for almost ten (10) days. Significant resources and costs were incurred preparing for and responding to the storm.

2.3 The City's Financial Capability and Program Funding

The City's ability to fund remaining Consent Decree obligations has been presented to the regulatory agencies several times previously. Funding remaining Consent Decree obligations continues to be a dire concern of the City. This issue has become even more challenging to resolve considering lingering economic hardships associated with the COVID-19 pandemic.

2.3.1 Financial Hardship and Capability Assessment

It is critical to be mindful of the fact that the City spent approximately $450 million in the first five years of a proposed $350 million program over twelve years. This extraordinary investment has been made possible in part by a staggering **172 percent rate increase between 2013 and 2021.**

In late 2019 the City updated its financial capability assessment based on EPA's Combined Sewer Overflows – Guidance for Financial Capability Assessment and Schedule Development, referenced at EPA 832-B-97-004 and dated February of 1997, and EPA's Financial Capability Assessment Framework, dated November 24, 2014. Notsurprisingly, the FCA shows that the City is unable to fund remaining Consent Decree obligations without rate increases that would place an

unconscionable and perhaps immoral financial burden on its most vunerable residents. Of course, any further rate increases at this time have been infeasible anyway given economic impacts associated with the COVID-19 pandemic.

Since the FCA was developed, the City's financial situation has not improved. One reason for this is decreased utility revenues due to economic hardships experienced by its customers during the COVID-19 pandemic. This and other financial challenges have exposed the City's the inability to cover debt payments and meet utility debt service coverage ratio requirements without increased revenues.

2.3.2 Available Funding for the City's Wastewater and Water Needs

The City has approximately $212.5 million remaining from previous bond sales in its wastewater and water capital funds. 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. Of this total:

- Approximately $70.5 million is encumbered in current contracts and is not available for other items under the City's wastewater and water programs. Of this, approximately $35 million is encumbered in the Amiss Ozone Improvements contract, one of the Current Critical Projects.
- Approximately $12.8 million is not available for other items under the City's wastewater and water programs due to bond covenants that require the money be spent on operational facility improvements.
- Approximately $66.8 million is already obligated to future items under the City's wastewater and water programs, including the Current Critical Projects identified herein.
- Approximately $62.5 million is available to fund items under the City's wastewater and water programs.

After considering the items above, approximately $164.3 million is currently available to fund program activities, initiatives, and critical projects going forward. This includes the $35 million encumbered in the Amiss Ozone Improvements contract, $66.8 million already obligated to future items under the City's wastewater and water programs, and approximately $62.5 million available to fund items under the City's wastewater and water programs. The City intends to utilize its

available funding to complete high-priority activities, initiatives, and critical projects using an Integrated Planning Approach over the next several years.

2.4 Integrated Planning for Wastewater and Drinking Water Needs

Consistent with an Integrated Planning Approach[1] and the 2021 Financial Capability Assessment Guidance, 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 was apparent when Consent Decree modification discussions began in 2020 and is even more critical after the February 2021 winter storm, which 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.

2.4.1 Needed Wastewater System Improvements

The City's efforts to implement wastewater system improvements, and future needed improvements, are discussed at length in Section 3.0 and 4.0 of this report.

2.4.2 Needed Drinking Water System Improvements

Impacts from the winter storm demonstrated the need for the City to invest in its water system to provide reliable utility service. Since the City's Consent Decree was lodged in 2014, the City has spent $26 million at its water plant and $14 million on its water distribution system. During the same period, $36 million was spent on wastewater plants and $418 million was spent on the wastewater collection system. Only eight (8) percent of the City's capital spending has been invested into its water utility infrastructure since 2014. This is not sustainable, and the City cannot continue this trend.

Therefore, in Year 7, the City evaluated its water system considering the winter storm impacts and identified high-priority critical water system projects necessary to maintain regulatory compliance and reliable utility service, including the following categories.

- Standby power at booster pump stations
- Storage tank rehabilitation

[1] In accordance with the Water Infrastructure Improvement Act (Public Law 115—436—January 14, 2019).

- Water main replacement
- Pump station rehabilitation
- Water supply and treatment facility improvements
- Revised Lead and Copper Rule obligations

In summary, the City needs to complete water projects to maintain compliance obligations and reliable utility service. Completion of these projects may affect the timing of implementing wastewater activities, initiatives, and projects under the City's Consent Decree program. The City looks forward to productive discussion with the regulatory agencies about the prioritization of these items.

3.0 SUMMARY OF ACTIVITIES COMPLETED IN YEAR 7

The following sections summarize activities completed in the Year 7 reporting period in the Sanitary Sewer Assessment (SSA); Capital Planning; Capacity Assessment; Remediation Measures Plans (RMP); Construction Specifications; Citizen Engagement & Constituent Issue Management; and Capacity, Management, Operations, and Maintenance (CMOM) categories. As discussed in Section 2.0, the City has been actively coordinating with the regulatory agencies. The activities reported in this section reflect the spirit of those discussions, most specifically the evident need to shift the focus of the City's program through a formal Consent Decree modification.

3.1 Sanitary Sewer Assessment (SSA)

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

3.1.1 Sanitary Sewer Assessment (SSA) Overview

SSA field investigation and SSA reports for Phases 1-4 were completed prior to the Year 7 reporting period. Table 3-1 below provides a summary of the City's SSA Report submissions.

Table 3-1: SSA Report Submittals through Year 7

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	Not Submitted – 50% Complete

During the Year 7 reporting period, the City completed SSA activities within its wastewater system as discussed below. Activities completed in the Phase 1 through 4 areas of the City are summarized first, followed by activities completed in the Phase 5 area.

3.1.2 Phase 1 – 4 SSA

During the Year 7 reporting period, additional field investigations were completed within Phases 1 through 4 to support ongoing program initiatives including SSO mitigation, hydraulic model update and identification of critical projects. Sewer assessments were completed through the "Hot Spot" Sewer Cleaning and CCTV Program, Lift Station Assessments, and GPS manhole surveys.

3.1.2.1 CCTV Inspections

In March 2021, the City initiated a "Hot Spot" Sewer Cleaning and CCTV Program to accomplish sewer cleaning and CCTV investigations at locations identified with historical dry weather SSO records from 2017 to present. Gravity sewers located within SSA Phase 2 subbasins include North Highlands, Choctaw Bayou, and Queensboro. Gravity sewers located within SSA Phase 4 subbasins include Bickham Bayou and Country Club. Table 3-2 presents gravity sewers cleaned and investigated in SSA Phases 2 and 4 through the "Hot Spot" Sewer Cleaning and CCTV Program during the Year 7 reporting period.

Table 3-2: Gravity Sewer Cleaning and CCTV Phase 1-4

Diameter (in)	Length in Phase 2 (ft)	Length in Phase 4 (ft)
6	0	947
8	19,982	7,937
10	898	1,630
12	1,108	815
Total	**21,988**	**11,329**

3.1.2.2 Lift Station Assessment

During the Year 7 reporting period, forty-seven (47) lift stations in Phases 1 through 4 were assessed. Site assessments were completed to confirm station configurations and conditions and to identify stations for consideration for future Critical Projects, in addition to supporting configuration within the City's hydraulic model.

3.1.2.3 GPS Manhole Surveys

During the Year 7 reporting period, GPS coordinates were collected for 1,052 manholes to define the rim elevation and horizontal location of select manholes necessary to support the extension and refinement of the City's hydraulic model. In addition to GPS coordinates, invert elevations of incoming gravity sewer mains were collected at 514 manholes to refine and confirm the vertical

profile of the gravity sewer collection system to support network development of the City's hydraulic model.

3.1.2.4 Stormwater Inflow Potential Assessments

During the Year 7 reporting period, 2,534 manholes were inspected to evaluate the potential for significant surface water inflow. These manholes were identified through a geospatial selection of manholes within the 100-year flood plain and/or within 50-feet from a minor or major drainage way defined by United States Geological Survey (USGS) hydrography data. Data collected during these surface inspections will be evaluated to identify potential significant I/I contributors to support development of the City's wet weather overflow control strategy.

3.1.3 Phase 5 SSA

As reported in the Year 6 Consent Decree Annual Report, the City was forced to suspend Phase 5 SSA field investigations due to the inability to fund the Phase 5 Projects. The City did complete limited SSA field investigation activities in the Phase 5 area during the Year 7 reporting period, but completion of all Phase 5 SSA investigations, valued at approximately $11 million, remain on hold due to the City's limited financial resources and ongoing complications associated with the COVID-19 pandemic. During the Year 7 reporting period, portions of the outstanding Phase 5 SSA field investigation were completed through other initiatives including a "Hot Spot" Sewer Cleaning and CCTV Program, GIS and hydraulic model system connectivity field evaluations, and Lift Station Assessments. These activities also included assessments completed in other areas throughout the City.

3.1.3.1 CCTV Inspections

During the reporting period, 15,646 linear feet of gravity sewer mains were cleaned and CCTV inspected within the SSA Phase 5 area. Gravity sewers located within SSA Phase 5 investigated as part of the "Hot Spot" Sewer Cleaning and CCTV Program are summarized in Table 3-3 below.

Table 3-3: Year 7, Phase 5 SSA Gravity Sewer Cleaning and CCTV

Diameter (in)	Length in Phase 5A (ft)	Length in Phase 5B (ft)
8	6,656	5,029
10	613	2,937
12	0	411
Total	**7,269**	**8,377**

Including the work completed during the Year 7 reporting period, CCTV has been completed for 678,780 linear feet of the gravity sewers in the Phase 5 SSA Area. This represents a total of 54 percent of the Phase 5 SSA Area.

3.1.3.2 Smoke Testing & Dye Flooding

No additional Smoke Testing or dye flooding was completed during the Year 7 reporting period within the SSA Phase 5 Area. The City has completed smoke testing and dye flooding for approximately 39 percent (489,526 lineal feet) of the gravity sewer system within the SSA Phase 5 Area.

3.1.3.3 Manhole Inspections

During the Year 7 reporting period, the City completed 123 additional MACP compliant manhole inspections to support GIS and hydraulic model system connectivity updates. Inspections of approximately 51% of the manholes in Phase 5 have been completed.

3.1.3.4 Lift Station Assessment

During the Year 7 reporting period, twenty-one (21) lift stations were assessed within the Phase 5 SSA Area. Site assessments were completed to evaluate station conditions for consideration of future Critical projects and to support configuration into the City's hydraulic model.

3.2 Capital Planning

The City undertook significant efforts during the Year 7 reporting to identify new capital projects. A summary is provided below.

3.2.1 Gravity Sewer & Manhole Rehabilitation Planning / Risk Assessment

As an initial step in development of the Condition Remedial Measures Plan, gravity sewer and manhole rehabilitation planning commenced through the development of a gravity sewer and manhole risk assessment model. Risk assessment modeling began during Year 7 reporting period

is planned for completion during the Fall/Winter 2021. The Risk Assessment model includes a systemwide evaluation of the Likelihood of Failure (LoF) and Consequence of Failure (CoF) for gravity sewers and manholes. SSA data collected during SSA Phases 1-5 have been integrated and used as part of the LoF model. The CoF model is integrating a Triple Bottom Line approach considering economic, social and environmental impacts of asset failure. This risk assessment model will serve as a prioritization tool for developing the Condition Remedial Measures Plan which is focused on sewer and manhole rehabilitation of wastewater assets that are identified with the greatest risk of failure based on structural integrity of the asset. This positions the city to maximize the value of gravity sewer and manhole rehabilitation by addressing wastewater assets that present the City with the greatest risk of failure which therefore reduces the probability of occurrence of SSOs caused by pipe and manhole structural failures.

3.2.2 Lift Station Assessment

A total of sixty-eight (68) lift stations in the City's wastewater system were reassessed, including the twenty-one (21) discussed in Section 3.1.3.4. Lift stations assessments were completed to evaluate station conditions for consideration of future Critical projects and to support configuration within the hydraulic model. General condition assessments were completed at the sixty-eight (68) stations and draw down testing was completed at twenty-four (24) stations. Based on the results of this assessments, each station was prioritized based on factors including structural, mechanical, electrical, communication, dry capacity, service area, SSO impact, redundancy, bypass capabilities, bypass status, and loss of power.

These lift station assessments and prioritizations will be used to identify projects for the City's Critical Projects Program or during development of the Condition Remedial Measures Plan.

3.2.3 Lucas and North Regional Wastewater Treatment Plant and Sludge Farm Assessments

The City's 2016/2017 Wastewater Master Plan (WMP) for the Lucas and North Regional Wastewater Treatment Plants (WWTPs) and Residual Sludge Farm, developed by Burk-Kleinpeter, Inc. and Black and Veatch, was reviewed during the Year 7 reporting period. Site assessments were performed following the review. Projects were identified to improve process and operational effectiveness at the WWTPs and Sludge Farm. As part of the assessment, it was

determined that the scope of several projects is dependent on the results the 2020/2021 Flow Monitoring Program, hydraulic model update, and Capacity Assessment. Projects identified include the following:

- Instrumentation, control, automation, and integration study and upgrades at the Lucas and North Regional WWTPs. The City is beginning an overall SCADA Master Plan for its wastewater and water utilities.
- Diffuser replacements in the aeration basins at the Lucas and North Regional WWTPs.
- Equalization basin rehabilitation and upgrades at the Lucas and North Regional WWTPs. The need for the extent of rehabilitation and upgrade at each plant is dependent on the results of the hydraulic model update.
- Additional assessment and potential replacement of screw pumps at the North Regional WWTP.
- Gate actuation and field instrument study and replacement at the North Regional WWTP.
- Emergency generators at the Lucas and North Regional WWTPs.
- Grit removal studies and upgrades at the Lucas and North Regional WWTPs.
- A high voltage study at the Lucas WWTP.
- Design and replacement of the Port Pump Station Force Main at the Residual Sludge Farm.
- Cleaning of the Sludge Lagoon and the existing Sludge Holding Tank at the Residual Sludge Farm.
- Replacement of a 24” storm water effluent pump at the North Regional WWTP.
- Clarifier equipment, pump, and structure rehabilitation at the Lucas and North Regional WWTPs.
- Odor control study and upgrade at the Lucas WWTP.
- Blower system electrical study and replacement at Lucas WWTP.
- Miscellaneous site work including drainage improvements at Lucas WWTP.
- Aeration basin and aerobic digester structural evaluation and rehabilitations at the Lucas WWTP.
- Filter Press Facility study and upgrade at the Residual Sludge Farm.

The projects identified above are potential projects the City is considering for inclusion in its long-term Operation and Maintenance (O&M) Program and Capital Improvement Plan (CIP).

3.3 Capacity Assessment

During the Year 7 reporting period, the City continued updating and recalibrating its hydraulic model to prepare for re-issuance of the Capacity Remedial Measures Plan. The following paragraphs provide a summary of activities that were completed to advance this effort.

3.3.1 Flow Monitoring Program and Flow Data Analysis

A 2020-2021 flow monitoring program was developed to collect additional flow and rainfall data at approximately 152 flow metering sites to support an update to the model calibration and provide a basis for support of the wet weather program development that will be integrated into the Capacity Remedial Measures Plan. The program was developed and required the use of telemetry at all metering locations where reliable cellular connections could be made. Requirements for meter up-time were established to maximize the benefits of data collection throughout the targeted 60-day metering program.

The 2020-2021 Flow monitoring program was broken up into two phases. The first phase included a Fall/Winter 2020 Metering period and the second phase included a Spring 2021 data collection period.

The Fall/Winter 2020 Program included 53 meters, focused on high priority wet weather SSO locations and Phase 3 SSA subbasins, including Wallace and Broadmoor. Meter installations began in November 2020 and following a 60-day period, data collection was completed in January 2021.

The Spring 2021 program included 99 meter locations which were planned to begin in February 2021 but were delayed due to the winter storm. Meter installations for the second group began in March 2021 and were complete by April 21, 2021. Data collection for the 60-day monitoring period is anticipated to be completed in June 2021. The Spring 2021 metering program includes post-construction monitoring of the SSA Phase 2 RMP Projects and additional meters throughout SSA Phases 1, 4, and 5. Depth only sensors were installed within the Phase 1 Cedar Grove basin

to further identify and isolate locations where significant wet weather flow is entering the system and to better calibrate the impacts of backwater from the Cedar Grove Lift Station.

Rainfall and flow metering analytics for the Fall 2020 Program begin during the Year 7 reporting period. This analysis includes characterizing dry weather characteristics including average daily dry weather flow (ADDF) and diurnal patters at each of metering locations and the wet weather analysis includes completing a regression analysis between rainfall depth and rainfall derived inflow and infiltration (RDII) volumes and RTK parameterization for each of the meters. This analysis will be used to support I/I characterization and prioritization. The collected metering data will also be imported into the hydraulic model to support the update to the model calibration. Rainfall and flow metering analytics is planned for completion in the Winter 2021. Flow and rainfall analysis will be completed within the EPA Sanitary Sewer Overflow Analysis and Planning (SSOAP) software.

3.3.2 Hydraulic Model Network Modifications

The limits of the hydraulic model have been extended to include the current inventory of known SSO locations. This required the addition of gravity sewers, manholes and lift stations. During the Year 7 reporting period, the model was updated to reflect these additions. Additional field investigations were completed to resolve system connectivity, horizontal and vertical profile discrepancies, and lift station configurations. Field investigations completed to support these efforts included 123 MACP manhole inspections; 1000+ GPS manhole surveys; lift station assessments at 68 stations to identify float and or pump configuration settings; and 24 lift station draw down tests. The model network modifications were completed during the Year 7 reporting period but additional investigations may occur during the Year 8 reporting period as model recalibration and validation continues.

3.3.3 Model Recalibration and Validation

Partial model recalibration and validation activities were completed at select locations during the Year 7 reporting period to support high-priority SSO mitigation projects that have been identified. These model calibration activities were completed for the following critical infrastructure projects include:

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

In addition to these areas, calibration for the wastewater collection system upstream of the Wallace Lift Station, including the Wallace, Boggy Bayou, Flournoy Bayou, Gilmer Bayou, Bickham Bayou, Shorewood, and Page Bayou subbasins, is ongoing.

3.4 Remediation Measures Plans (RMP)

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

3.4.1 Remediation Measure Plan (RMP) Submittals

RMP Submittals were completed for Phases 1-4 prior to the start of Consent Decree Year 7. Phase 1-4 RMP Submittals were issued to the EPA and LDEQ and are available through the Public Document Repository (PDR) as defined in Consent Decree Requirement Part V, Paragraph 9. Table 3-4 below provides a summary of RMP submittals through the Year 7 reporting period.

Table 3-4: RMP Report Submittals through Year 7

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	Not Yet Complete (See Discussion Below)

3.4.2 Remediation Measure Plan (RMP) Status

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

3.4.2.1 Phase 1

The City constructed 30 total projects within SSA Phase 1. All 30 projects have reached final completion. Table 3-5 below provides a summary of the project status of each of the Phase 1 RMP Project. During Consent Decree Year 7, the City advanced one (1) project to final completion, "175.177.178.179 – Jewella & Greenwood" on June 12, 2020.

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

Project Name	Functional Completion	Final Completion*
101.124.125.147 – Dowdell St. & Fairfield Ave.	8/3/2017	11/28/2017
102 – Wyngate Blvd. & W. 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 Trunkmain	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 **

Project Name	Functional Completion	Final Completion*
136.137.157 – Hollywood Ave. & Singletary Street	9/29/2017	5/7/2018
138.140.156.169 – Henry & Kennedy Street	10/31/2018	10/29/2019
141.161.171.175.176.178.180 Hearne & Hollywood Trunkmain	2/19/2018	2/24/2019
158.159.160.170 – Jewella Ave. & Clarke Blvd.	1/23/2018	7/16/2018
162.163.164.165.172.173.174 – Mansfield Rd. & Corbitt St.	1/5/2018	11/14/2018
175.177.178.179 – Jewella Ave. & Greenwood Rd.	12/30/2017	6/12/2020
201 CIPPL Package 1	12/8/2017	9/20/2019
202 CIPPL Package 2	4/11/2018	7/24/2019
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.

3.4.2.2 Phase 2

A total of 17 total construction projects were developed based on the Phase 2 RMP. All 17 projects have reached final completion. One (1) project (2-SH1) reached functional completion and 11

projects reached final completion during the Year 7 reporting period. Table 3-6 below provides a summary of the actual completion dates for each of the Phase 2 RMP Projects.

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

No.	Project Name	Actual Dates	
		Functional Completion	Final Completion
2-SH1	South Highlands East CIPP	4/12/2021	5/3/2021
2-SH2	South Highlands West CIPP	12/31/2019	9/10/2020
2-SH3	South Highlands Sewer Replacement	11/27/2019	6/12/2020
2-SH4	Mansfield & Claiborne Area Replacement	6/4/2019	7/31/2019
2-QR1	North Querbes CIPP	12/31/2019	4/5/2021
2-QR2	South Querbes CIPP	6/3/2020	4/6/2021
2-QR3	North Querbes Replacement	11/27/2019	6/10/2020
2-QR4	South Querbes Replacement	6/1/2020	11/6/2020
2-QB1	North Queensboro CIPP	12/15/2019	5/3/2021
2-QB2	South Queensboro CIPP	11/27/2019	9/28/2020
2-QB3	Choctaw Bayou and Queensboro Sewer Replacement	4/12/2019	1/24/2020
2-NH1	North Highlands Interceptor	3/19/2019	10/30/2019
2-NH2	N Highlands, Choctaw & Queensboro CIPP	12/30/2019	12/2/2020
2-NH3	North Highlands Sewer Replacement	Unknown – Functional Completion Certificate Not Issued	10/30/2019
2-LS1	Lift Stations / Force Main Condition	4/30/2019	2/4/2020
2-WS1	Westside CIPP	11/27/2019	10/1/2020
2-WS3	Westside Sewer Replacement	4/3/2019	8/19/2019

The original value of the 29 Phase 2 RMP collection system improvement projects was estimated at approximately $199,337,000 (2017 Dollars). During design, these 29 projects were consolidated and a collection of 17 bid packages for construction were created. Following the completion of all Phase 2 RMP projects, the actual construction cost of the Phase 2 RMP projects is forecast to be approximately $114,000,000.

3.4.2.3 Phase 3

A total of 14 projects were developed based on the Phase 3 RMP. Each of these projects have advanced into detail design during the Year 6 Reporting Period. One (1) project, "3-115 Wallace Interceptor Improvement" reached functional completion on January 31, 2020 and final completion on August 27, 2020. Bidding and construction of all remaining 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 without additional rate increases, and concerns about the hydraulic model used to develop the scopes of the Phase 3 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 2021 dollars. Table 3-7 provides a summary of the proposed improvements included within the Phase-3 construction packages.

Table 3-7: SSA Phase 3 – RMP Project Summary

No.	Project Name	Design Status	Construction Status	Project Description
3-113	Wallace Interceptor	100%	Not Started	Sewer rehabilitation of 20,000 LF of 54-inch CIPP and replace 28 48-inch manholes.
3-115	Wallace Interceptor Sewer Rehab 1	100%	Completed 8/27/2020	Sewer rehabilitation of 6,000 LF of 42-inch to 54-inch CIPP and replace 20 manholes.
3-116	Southern Hills Interceptor (Segment B)	90%	Not Started	Sewer replacement of 5,000 LF of gravity sewer main and install new manholes.
3-117	Southern Hills Interceptor Phase 2	90%	Not Started	Sewer replacement of 6,300 LF of gravity sewer main and install new manholes.
3-LS1	Lift Station Condition Improvements	100%	(1) Under Construction (6) Not Started	Improve or rehab 7 lift stations and 3 force mains. The stations are: • Cedar Creek – Under Construction • Dixie Garden • Elgin • Knight Street • Mackey Lane • Shreve Island • Wallace
3-NE1	Northeast Sewer Replacement	100%	Not Started	Sewer replacement of 15,000 LF of 4-inch to 36-inch gravity sewer main and install 380 manholes.

No.	Project Name	Design Status	Construction Status	Project Description
3-103, 104 3-NER1	Northeast Sewer Rehab 1	100%	Not Started	Sewer rehabilitation of 67,000 LF of 6-inch to 12-inch CIPP, replace 64 48-inch manholes.
3-105, 107 3-NER2	Northeast Sewer Rehab 2	100%	Not Started	Sewer rehabilitation of 72,000 LF of 6-inch to 15-inch CIPP and replace 155 48-inch manholes.
3-101, 102 3-NER3	Northeast Sewer Rehab 3	100%	Not Started	Sewer rehabilitation of 77,000 LF of 6-inch to 12-inch CIPP as well as replace 27 manholes.
3-106, 112, 113, 114 3-NS1	Pierremont Rd & Boggy Bayou Areas Rehab	100%	Not Started	Sewer rehabilitation of 50,000 LF of 6-inch to 18-inch CIPP and replace 61 manholes.
3-110, 111 3-SW1	Southern Hills Sewer Rehab	100%	Not Started	Sewer rehabilitation of 120,000 LF of 6-inch to 10-inch CIPP and replace 47 manholes.
3-108, 109, 112 3-SW2	South West Sewer Replacement 2	100%	Not Started	Sewer replacement of 20,000 LF of 8-inch to 24-inch of gravity sewer main as well as 151 replacement manholes.
3-110, 111, 113, 114 3-SW3	South West Sewer Replacement 3	100%	Not Started	Sewer replacement of 13,000 LF of 8-inch to 42-inch of gravity sewer main as well as 101 replacement manholes.
3-108, 109, 112 3-SW4	South West Rehab 4	100%	Not Started	Sewer replacement of 100,000 LF of 8-inch to 15-inch of CIPP as well as 37 replacement manholes.

Based on the City's approach to apply its available funding on mitigating SSO's, construction packages were developed and advanced during the Year 7 Reporting Period to address known problems. Three (3) Phase 3 projects were included in the City's Critical Project portfolio as follows:

- **3-LS1 Lift Station Condition Improvements:** Improvements to the Cedar Creek Lift Station were bid during the Year 7 reporting period under the Critical Infrastructure Project titled "CWP-12 Lift Station Rehabilitation". Construction is planned during the Year 8 reporting period.
- **3-116 / Southern Hills Interceptor (Segment B) / 3-117 Southern Hills Interceptor (Segment A):** Replacement of the Southern Hills Interceptor, including the 3-116 and 3-117 projects, have been identified as a wastewater critical project. The City is developing

design documents and anticipates that construction will occur after 2021 depending upon available funding.

- **3-NE1 Northeast Sewer Replacement:** The sanitary relief project west of the Broadmoor Lift station currently included within the 3-NE1 scope of work is being advanced as a wastewater critical project due to the recurrence of wet weather SSOs at the intersection of Brookmeade and Querbes and along Trinity Circle. This project will include approximately 9,000 LF of 10-inch to 30-inch sanitary sewers and has a construction value of approximately $12,075,000 (2021 Dollars). The City is developing design documents and anticipates that construction will occur after 2021 depending upon available funding.

3.4.2.4 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 considering bid dates in 2021 and 33 lift station improvement projects with an estimated value of $9,440,000 considering bid dates in 2021. Design of Phase 4 remediation measures has not yet begun due to the City's inability to fund 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.

3.4.2.5 Phase 5 RMP

Preparation of the Phase 5 RMP will be delayed due to suspension of the Phase 5 SSA activities. SSA activities for Phase 5 are approximately 50% complete. Remaining Phase 5 SSA work, valued at approximately $11 Million, was suspended by the City in March 2020 due to inadequate funding for implementation of Phase 5 projects and remains on hold due to ongoing considerations associated with the COVID-19 pandemic.

3.4.2.6 Critical Infrastructure Projects

A total of 19 Critical Infrastructure Projects were originally identified during the Year 6 Annual Report and have continued to be managed through the Year 7 reporting period. These projects vary

in scope and scale but are aimed at SSO mitigation and maintaining a reliable and viable wastewater and water utility services. The projects listed below in Table 3-8 illustrate the capital project type, project status, identified budget and a brief description of the proposed improvements.

Table 3-8: Critical Infrastructure Projects

Count	Capital Project Type	Project	Project Description	Current Status	Estimated Total Project Costs (2021 Dollars)
1	Wastewater	CWP-01 MSA 3 STO 2 Wallace Interceptor at Boggy Bayou	Demolition/abandonment of approximately 1,350 linear feet of 54-inch diameter Sanitary Sewer Pipe to be replaced on an independent alignment with approximately 1,100 linear feet of 54-inch diameter Gravity Sanitary Sewer with 4 new sanitary sewer manholes and one rehabilitated manhole.	Detailed Design (Bid Solicitation pending property acquisition)	$3,000,000
2	Wastewater	CWP-02 North Pierre Lift Station Roof Repair	Remove and replace existing roof and ceiling. Install new lighting on the inside of the lift station as well.	Project Complete 9/22/2020	$84,000
3	Wastewater	CWP-03 Stoner Emergency Repair	Emergency repair of existing 48-inch diameter sanitary sewer main collapsed at influent line to the Stoner Lift Station.	Project Complete 10/19/2020	$1,096,000
4	Water	CWP-04 Amiss Ozone Improvements	Modifications to the three existing treatment plants and processes to repair/replace equipment and address finished water taste and odor issues. Work will include Modifications to Ozone Equipment, Filter Equipment and Chemical Feed Systems along with Installation of High Service Pumps and CO2 System.	Construction	$35,500,000
5	Wastewater	CWP-05 North Regional WWTP Levee Repair No. 2	Repair of approximately 2,400 square feet of levee side slope erosion that occurred because of a waterline penetration through the levee.	Bid & Award	$200,000
6	Wastewater	CWP-06 Southern Trace Lift Station Improvements	Remove and replacement of existing suction piping and bracing as well as the coating of the existing wet well. Constructing new redundant piping connection and replacing the existing gate valve.	Construction	$300,000
7	Wastewater	CWP-07 North Regional WWTP Levee Repair No. 1	Repair of approximately 15,000 square feet of levee side slope that occurred because of a waterline leak under the footprint of the levee. Project includes some drainage ditch regrading and pavement repair.	Project Complete 2/4/2021	$216,000

8	Water & Wastewater	CWP-08 City Wide Sewer Repair	One On-Demand contract was established in July 2020 to repair sanitary sewer gravity mains and force mains, specifically known locations of sewer pipe collapses, sink holes, SSOs, and force main and water main breaks. This contract has significantly enhanced the City's ability to address emergency issues in a timely and efficient manner. Over 200 work orders have been completed to-date at a total cost of over $5 million. The City is considering expanding the capacity of the current contract and implementing additional contracts to expand its ability to respond to emergency issues.	Construction – On Going	$5,000,000 Annually
9	Wastewater	CWP-09 Lucas & North Regional UV Disinfection Improvements	Replacement of UV disinfection equipment at both the Lucas and North Regional WWTPs. This project will support compliance with the City's LPDES permits.	Detailed Design	$14,500,000
10	Wastewater	CWP-10 Public Landing Lift Station Improvements	Removal of existing dry well and rehabilitation of existing wet well and replacement of both pumps. Also remove and replace concrete surrounding station and installing fencing around the outside.	Construction	$700,000
11	Wastewater	CWP-11 Stratmore Lift Station Improvements	Rehabilitation of an existing lift station along with the associated piping.	Preliminary Design	$700,000
12	Wastewater	CWP-12 (A-F) 11 Lift Station Rehabilitations	Fix or rehab lift stations that are on bypass or in danger of going on bypass. The lift stations in this project include and their status: • Agurs (Preliminary Design) • Cedar Creek (Construction) • Cherokee (Preliminary Design) • Forbing Glen (Preliminary Design) • Glen Ave (Preliminary Design) • Lakeside Boat (Preliminary Design) • Land O' Trees (Detailed Design) • Long Timbers (Preliminary Design) • Maywood (Detailed Design) • Pinecrest (Preliminary Design) • Woolworth Road No. 1 (Preliminary Design)	Varies from Preliminary Design to Detailed Design to Construction	$4,577,000
13	Wastewater	CWP-14 Sludge Farm Improvements	Installation of an additional 800,000-gallon sludge tank along with the associated piping and facility improvements, including rehabilitation of the existing sludge tank. This project will enable reliable utility service to continue and support compliance with the City's LPDES permits.	Bid & Award	$1,410,000

14	Wastewater	CWP-15 Golf Links Improvements	Removal and replacement of existing sanitary sewer main with service reconnections.	Construction Complete 9/25/2020	$312,000
15	Wastewater	CWP-16 719 Edwards Sewer Improvements	Existing 6" and 10" gravity sewer mains have numerous defects contributing to a recurring SSO in the alley between Edwards and Milam.	Construction Complete 10/22/2020	$650,000
16	Wastewater	CWP-17 Exposed Sewer Mains in Bayou Pierre	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.	Preliminary Design	$575,000
17	Water	CWP-35 McNeil Slope Stability Improvements	Rehabilitation of existing slopes along 12 Mile Bayou believed to be impaired after installation of Museum observation deck. Project placed on hold after predesign study indicated project has high cost compared to benefit.	Preliminary Design (On Hold)	$650,000
18	Wastewater	CWP-36 Manhole Rehabilitation and I/I Reduction	Rehabilitation of manholes to address structural condition and infiltration and inflow (I/I) issues.	Study and Report	$1,557,861
19	Wastewater	CWP-37 Caddo Bossier Port Sewer Repair	Repair of gravity sewer main that caused a sinkhole under existing Caddo Bossier Fuel Facility.	Construction Complete 10/19/2020	$78,000

3.5 Construction Specifications

The 2020 Edition of the Standard Specifications for Infrastructure Improvements and 2020 Detail Standard Plans are being reviewed by the City. These documents will be used for new Consent and Non-Consent Decree Projects.

The City is transitioning to Engineers Joint Contract Documents Committee (EJCDC) Engineering Agreements, General Conditions, and Construction Documents. The EJCDC documents are expected to provide improved consistency in executing projects. The EJCDC Engineering Agreement was recently adopted by the City and will be used for engineering contracts moving forward. It is anticipated that EJCDC construction documents will be available for use on future Consent and Non-Consent Decree Water and Sewer Projects beginning in January of 2022.

Detailed review is currently being performed and updates are being made to the City's 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 will improve the consistency and clarity of the specifications in addition to updating technical content. It is anticipated that the finalized Technical Specifications and Standard Plans will be completed in 2021. The documents will be used on Consent and Non-Consent Decree Projects once they are finalized.

The current edition of the Standard Specifications for Infrastructure Improvements and Detail Standard Plans will be available for viewing on the City's Engineering Division's website at https://www.shreveportla.gov/251/Engineering-Services.

3.6 Citizen Engagement & Constituent Issue Management

The City's citizen engagement and constituent issue management team continued public outreach, public involvement, and constituent issue resolution through the Year 7 reporting period. The software platform ZoHo continued to be used to track incoming calls and manage constituent issues from issue identification through resolution. During Consent Decree Year 7, a total of 263 issues were reported while 365 issues were resolved and closed.

Public education activites to inform the community about constent decree program activites proceeded. The main focus of these activities included social media outreach, web site

development and media coverage concerning ongoing construction projects and other program initiatives. Physical public outreach events were limited during the Year 7 reporting period due to COVID-19 pandemic social distancing restrictions. As a result, social media platforms like Facebook, Instagram, and LinkedIn were utilized to support the public education initiatives including Critical Infrastructure Project videos, highlighting the National Drinking Water Week with the American Water Works Association, creating "Meet the Program Team" advertisements on social media, hosting a groundbreaking ceremony for the T.L. Amiss Water Treatment Plant project, and creating the canitshreveport.com website to highlight the City's Fats, Oils, and Grease (FOG) program.

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

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

3.7.1 Collection System Management

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

3.7.1.1 Legal Authorities

Legal Authorities are in place to effectively manage and operate the WCTS. These include several that are mandated as part of existing 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.

3.7.1.2 Organizational Structure

Operation and Maintenance of the WCTS remains organized under the Department of Water and Sewerage. The Department continues to maintain five (5) divisions: Administration, Customer Service, Water Purification, Wastewater and Field Operations. No significant modifications were made to the organizational structure of the Department of Water and Sewerage during the Year 7 reporting period. However, the City did experience significant leadership changes, as discussed in Section 2.2. As a result, some utility management changes were contemplated but not realized during the reporting period.

3.7.1.3 Pre-Treatment Program

The Pretreatment Program is mandated by USEPA 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 USEPA on January 11, 1985 and incorporated into the City's Code of Ordinances (COO) Chapter 94. The FOG Program is administered by the Environmental Services 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 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 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 USEPA categorical standards.
- To reduce the health and environmental risk of pollution caused by discharges.

The pretreatment program considers four (4) different users: Significant Categorical (CIU), Significant Non-Categorical (SIU), Non-Significant (NIU) or General (GIU). The City previously issued a Master List of Significant Industrial Users (Categorical and Non-Categorial) with the City's CMOM Plan Submittal. An 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 7 reporting period. A total of 17 Notice of Violations (NOVs) were issued by the City during the reporting period.

3.7.1.4 Fats, Oils, and Grease (FOG) Program

The FOG Program, through training, outreach, inspections, and enforcement encourages non-domestic sources to limit the discharge of fats, oils, and grease (FOG) into the sanitary sewer system. As Part of the overall 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 Engineering and Environmental Services Department.

During the Year 7 reporting period there were a total of 548 permitted FSEs. A total of 843 compliance inspections were completed and resulted in a total of 153 Notice of Violations (NOVs) issued.

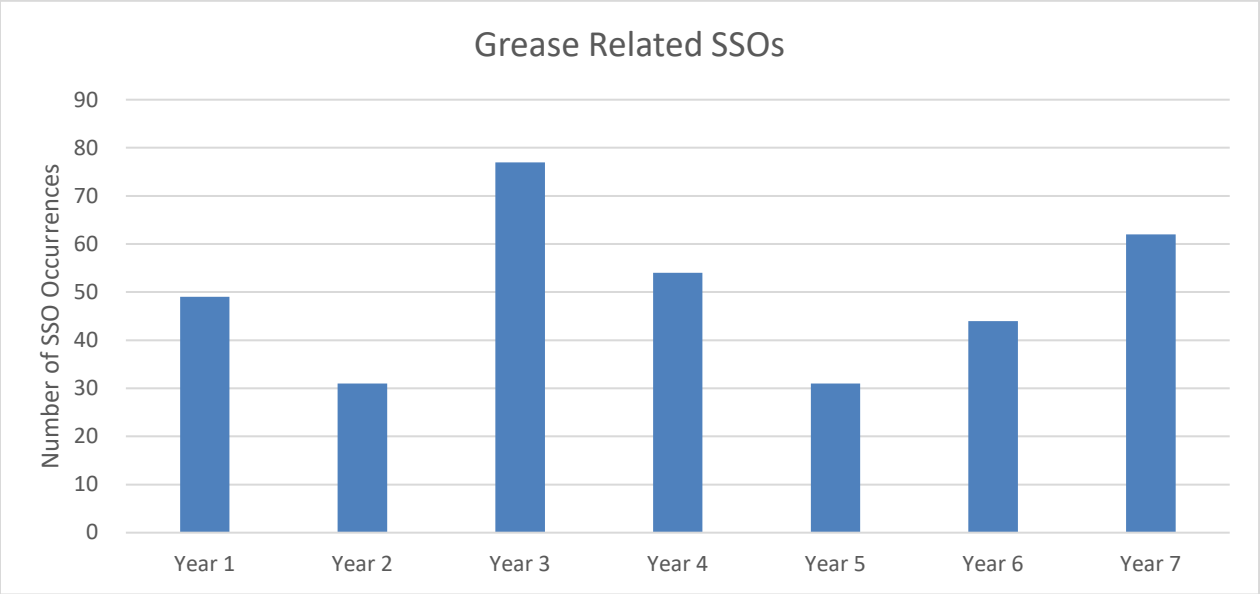
Additional FOG preventative maintenance activities completed by the City during the reporting periods includes the addition of the BioGon Enzyme and Liberator Block. Table 3-9 below provides a summary of the locations where these additional maintenance activities occurred.

Table 3-9: FOG Enzyme Additive Locations

Quarter Section	Manhole Number
Y-52	MH14
Y-54	MH33
Z-57	MH7
CC-57	MH7 and MH47
JJ-43	MH18, MH20, MH21, and MH23
KK-47	MH09, MH21, MH24, MH25, and MH26
V-55	MH08
S-52	MH04
Q-51	MH26
JJ-40	MH01

FOG contributed to a total of 62 SSO occurrences during the reporting period. Figure 3-1 below provides a summary by of the FOG related SSO occurrences since the beginning of the Consent Decree program. The five-year rolling average for years 1-5 was 48.4 grease related SSOs/year, 47.4 grease related SSOs/year for years 2-6 (which represents an approximate 2% reduction), and 53.6 grease related SSOs/year for years 3-7 (which represents an approximate 13% increase).

Figure 3-1: Grease Related SSOs by Year



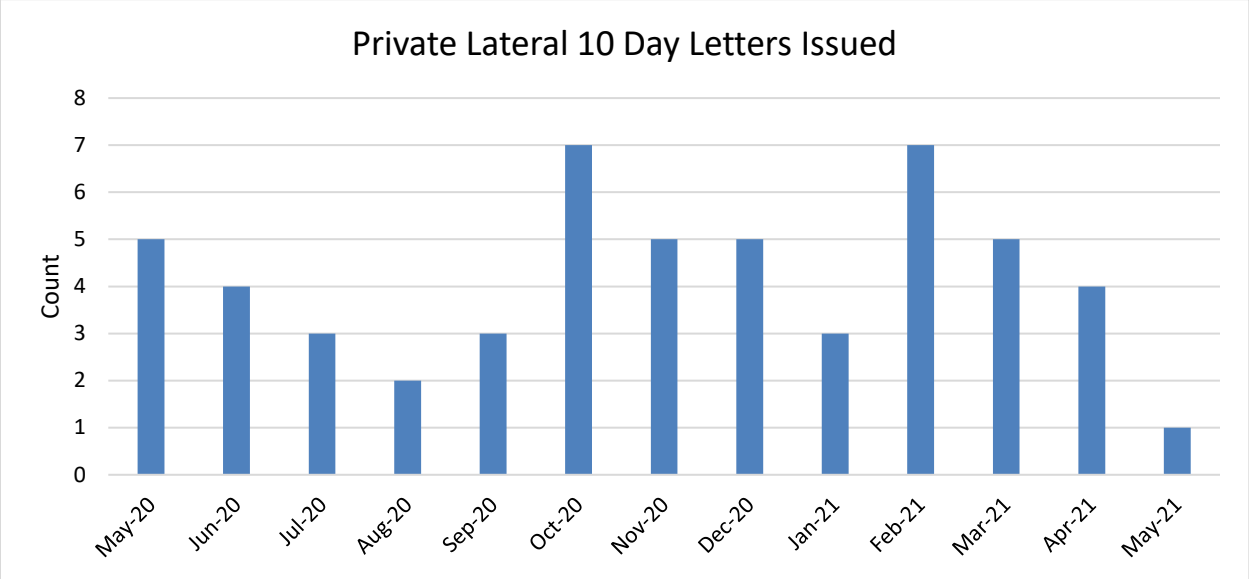
As part of Public Education and Outreach, the Can It Shreveport web page (www.canitshreveport.com) was developed during the Year 7 reporting period. This webpage was developed to provide education including what generates FOG, how FOG entry into the collection system causes problems with conveyance and the negative environmental impacts this type of activity causes due to SSOs. Additional public education included the City's FOG door hanger initiative which focuses on distribution to locations throughout the City where FOG related SSOs have occurred. Throughout the reporting period, a total of 87 locations throughout the City had door hangers distributed. Attachment 2 provides a summary of the locations where door hangers were distributed during the reporting period.

3.7.1.5 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 7 reporting period a total of 54 letters were issued to private property owners due

to lateral defects that were deemed a threat to public health. Figure 3-2 below provides a summary of the 10-day letters issued during the reporting period.

Figure 3-2: Private Lateral 10 Day Letters



In addition, the City began evaluating policy and legal issues that may need to be considered and addressed by the City to facilitate mitigation of lateral defects on private property during the Year 7 reporting period. This includes considering potential private property lateral program costs and funding considerations.

3.7.1.6 Information Management System (IMS)

The City continues to maintain an Information Management System (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:

- Geographic Information System (GIS)

- CityWorks – Service Request & Work Order Management System
- Sanitary Sewer Overflow Database (MS Access database through Environmental Services)
- FOG Compliance (Microsoft Access database through Environmental Services)
- SCADA (Various systems managed through Water & Sewerage)

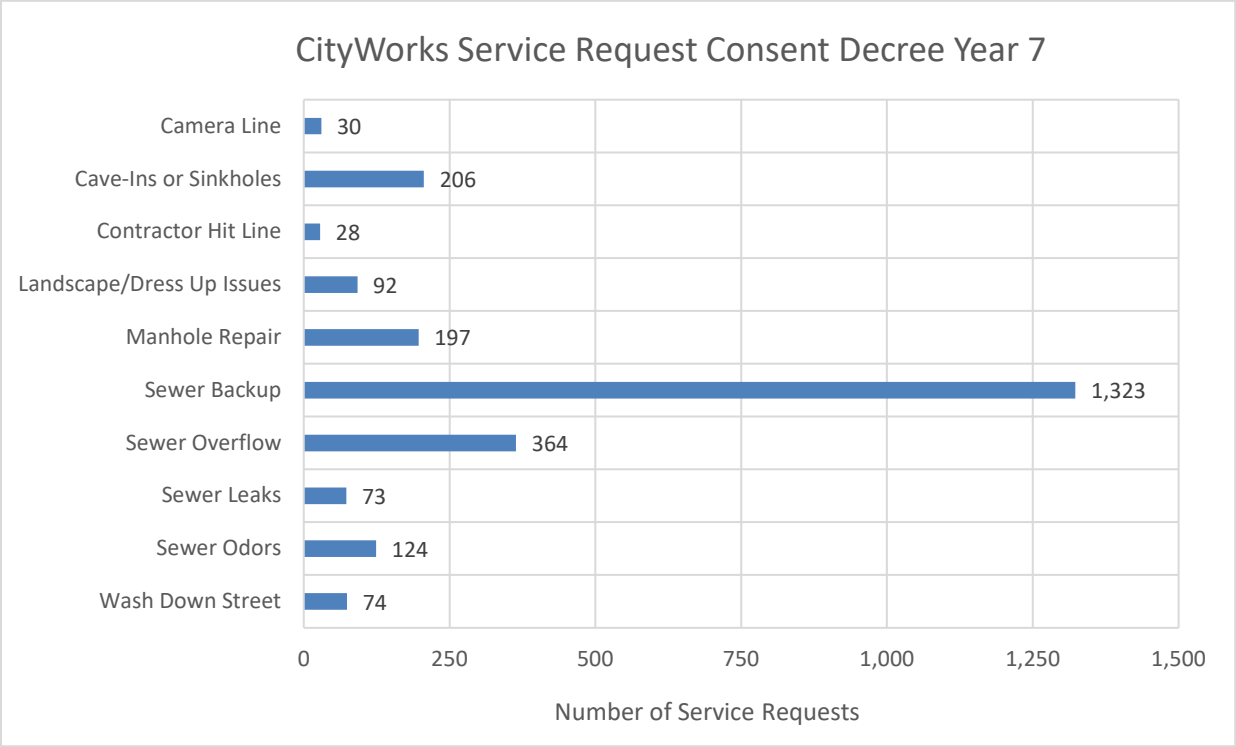
3.7.1.6.1 Geographic Information Systems (GIS)

The City's water, wastewater and stormwater GIS continued to be managed through the Department of Engineering & Environmental Services, while supported by the City's IT department. The City's GIS was updated significantly during the Year 7 reporting period to reflect post-construction records following Phase 1 and Phase 2 RMP projects. The City's sanitary sewer system GIS is comprised 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. All 30 Phase 1 RMP projects were updated to reflect completion of construction within the City's GIS. This included updates to over 875,000 lineal feet of gravity sewer and 3,500+ manholes which included adding new assets and reconciling the life cycle status of all assets either removed or abandoned as part of construction. GIS edits for eight (8) of the 17 Phase 2 RMP projects began during the Year 7 reporting period. Completion of these updates as well all remaining Phase 2 projects and other capital projects previously completed by the City are planned for the Year 8 reporting period. GIS updates were also completed to reflect system connectivity based on completed Phase 5 SSA activities.

3.7.1.6.2 CityWorks

CityWorks was implemented during 2016 and continues to serve as the service request and work order tracking system 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 7 Reporting period, a total of 2,557 service requests were input, evaluated and responded to within CityWorks. Figure 3-3 summarizes the Service Requests by type during the Year 7 reporting period.

Figure 3-3: Year 7 CityWorks Service Request Summary



*Service requests related to the sewer backup and sewer overflow category include private, public, and miscellaneous sewer system related issues identified and reported into the CityWorks system. However, these service requests typically result in work orders being issued to complete system investigation. These service requests, in many instances, do not correlate to actual sanitary sewer overflow activity. The City will continue to review and identify where improvements can be made to properly report and track issues within the City's IMS systems.

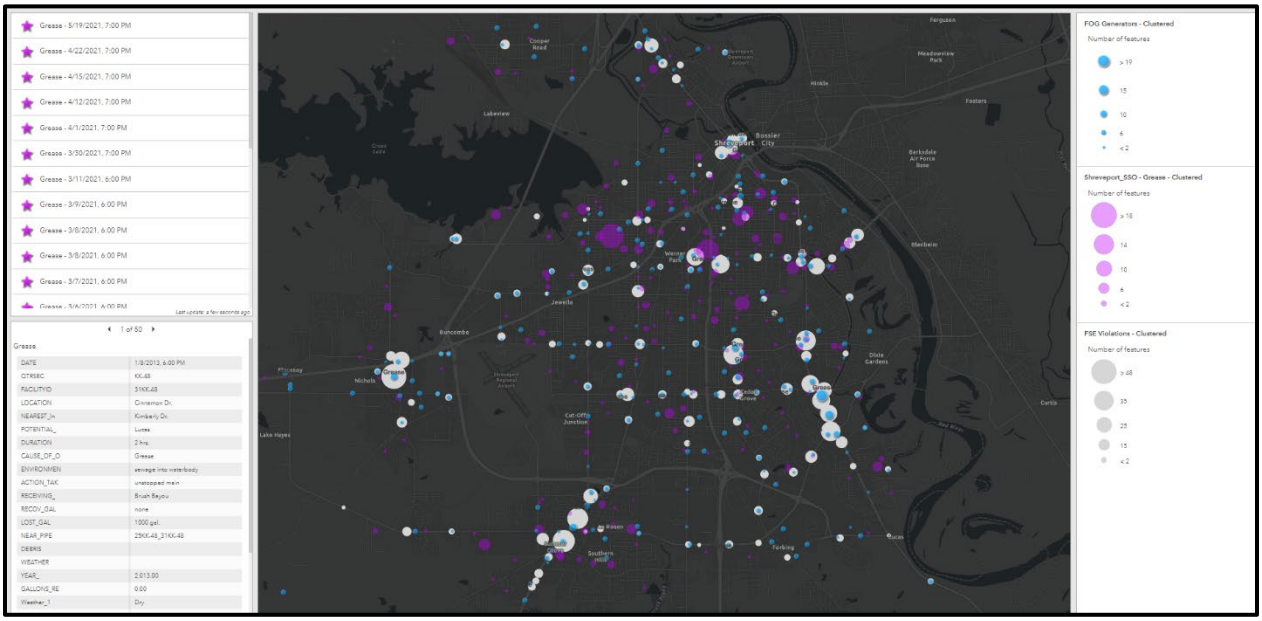
3.7.1.6.3 Fats, Oils and Grease (FOG) Database

The current MS Access FOG database managed by the Division of Environmental Services remained in service through the reporting period. The City began evaluating options for upgrade to a cloud-based technology for tracking of the FOG program which would further enhance the capabilities and allow greater integration with other City systems. Further evaluation and decision on this upgrade is expected to be made during the Year 8 reporting period.

An ArcGIS FOG dashboard was developed during the Year 7 reporting period to better define the relationships between FOG generators, Notice of Violations (NOVs) and FOG-related SSO occurrences. Figure 3-4 below provides a summary of the Dashboard developed during the Year 7 reporting period. The dashboard was used to begin evaluating opportunities to further focus

public outreach and education events, support development of the Hot Spot Cleaning Program, and identify/evaluate effectiveness of FOG Enzyme additive locations to support the goal of mitigating FOG-related SSOs.

Figure 3-4: Fats, Oils and Grease Dashboard



3.7.2 Collection System Operations

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

3.7.2.1 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 and Sewerage (W&S) staff on how to respond, store the data in an IMS system and ensure that its properly reported to the appropriate regulatory authorities. The initial SSO System Investigations data is stored within the CityWorks software. W&S staff are responsible for documenting the following:

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

Following the completion of the SSO Investigation, the Environmental Services Department is notified within 24 hours and presented with the information identified above. The Environmental Services Department 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, W&S has a Media Notification procedure that includes a press release notifying the general public of the occurrences.

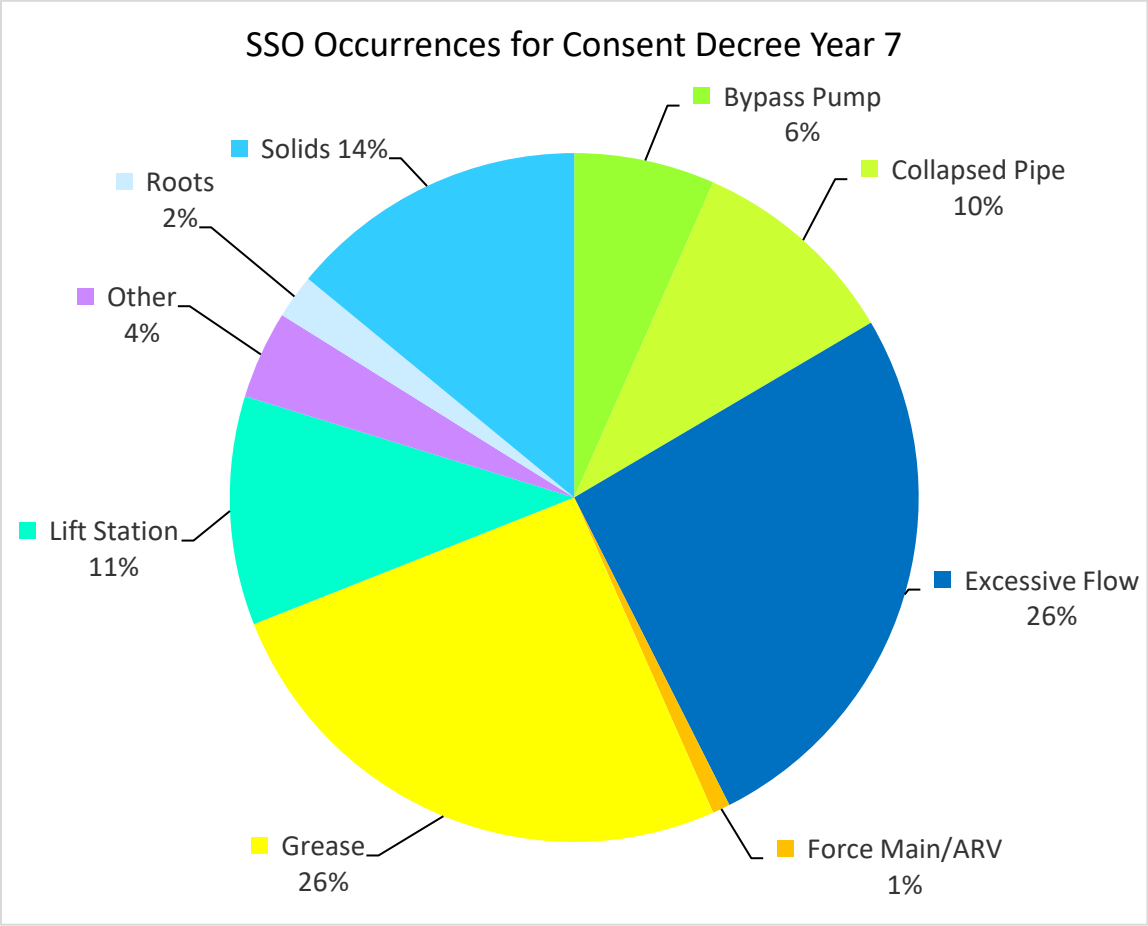
3.7.2.2 Sanitary Sewer Overflow (SSO): Year 7 Overview

During the Year 7 reporting period, a total of 242 SSOs were reported to LDEQ. Of the total Year 7 SSOs, 63 or 26 percent were due to excessive wet weather flow with the remaining 179 or 74 precent occurring during dry weather. This breakdown is consistent with previous years. Table 3-10 and Figure 3-5 provide a summary of the causes contributing to SSO occurrences during the Year 7 reporting period. An itemized list of Year 7 SSOs is included in Attachment 3.

Table 3-10: Year 7 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	63	13	23	1	62	29	13	5	33
% of Year 7 SSOs	26.03%	5.37%	9.50%	0.41%	25.62%	11.98%	5.37%	2.07%	13.64%

Figure 3-5: SSOs Occurrences for Consent Decree Year 7



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

Based on Consent Decree requirements defined in Part VIII. *Reporting Requirements,* paragraph 60 *Annual Report,* trends analysis considering number, volume, duration, and cause of Shreveport's SSO must be completed considering a five (5)-year rolling period and updated annually considering the previous twelve (12) month period.

Table 3-11 provides a summary of SSO occurrences by year with 5-year rolling averages. The 5-year rolling average for the number of SSO occurrences was 251.8 SSOs per year in Years 2-6 and increased to 254.2 SSOs per year considering Years 3-7. The 5-year rolling average for volume lost was 531,613 gallons per year in Years 2-6 and decreased by 6.6 percent to 496,779 gallons per year considering Years 3-7. The trend of dry weather SSO occurrences in Years 3-7 increased

compared to the previous 5-year rolling average for Years 2-6. Wet weather SSO occurrences in Years 3-7 decreased compared to the previous 5-year rolling average for Years 2-6.

Table 3-11: 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
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**

As summarized in Section 4.2.7, the City plans to review its Sewer Overflow Response Plan (SORP) during the Year 8 reporting period to identify opportunities to improve its sewer overflow reporting procedures.

SSO occurrences by type were also evaluated as part of the 5-year Trends Analysis. Table 3-12 provides a summary of each type of SSO and associated trends analysis. The following is a brief discussion of trends associated with the type of SSO occurrences. Actions the City is taking to mitigate SSOs according to type are highlighted.

- **Bypass Pump:** The City has observed an increase in the number of SSO occurrences associated with bypass pumps in Years 6 and 7 due to malfunction with bypass pumps used during sewer main repair/rehabilitation work or to keep lift stations in poor condition operational. The City has been focused on fixing its lift stations to prevent malfunctions requiring them to be placed on bypass. In Year 6 the City began delivery of the Critical Infrastruture Projects discussed in Section 3.4.2.6. In addition, during the Year 7 reporting period the City completed Lift Station Assessments discussed in Sections 3.1.2.2 and 3.1.3.4 to confirm the condition of other lift stations. Future Critical Infrastructure Projects have been identified to limit the potential need for the bypass pumping at lift stations, as

discussed in Section 4.3. These initiatives have been developed to mitigate SSO occurrences associated with bypass pumping.

- **Collapsed Pipe:** During the Year 7 reporting period, the number of SSO occurrences associated with collapsed pipes was the lowest within the last five (5) years and SSO occurrences associated with collapsed pipes has consistently decreased. This can be partially attributed to completion of Phase 1 and 2 RMP projects. However, the City has achieved significant reduction of SSOs associated with collapsed pipe through implementation of an On-Demand contract early in the Year 7 reporting period. This contract has enabled the City to respond to pipe collapses and other emergencies in an efficient manner. The City plans to continue addressing pipe collapses through its On-Demand contract. Additional On-Demand contracts may be employed to expand the capacity of this program.
- **Force Main / ARV:** Over the last four years of the Consent Decree, only 4 SSOs associated with force main or ARV related issues have occured. That is significantly less than the 18 SSOs that occurred in the first three years of the City's Consent Decree. Future Critical Infrastructure Projects have been identified to replace or rehabilitate three (3) of the City's largest and oldest force mains, as discussed in Section 4.3. These projects have been identified to limit the potential for future force main collapses and the associated SSO occurrences.
- **Grease and Solids:** The City recognized the increasing trend of grease and solids related SSO occurrences during the Year 7 reporting period and began developing the "Hot Spot" Sewer Cleaning & CCTV program as a targeted effort to mitigate maintenance-related dry weather SSOs (see Section 3.7.3.2 and 4.2.3). The City has also intends to review other CMOM programs related to the control of Fats, Oils, and Grease (FOG), as discussed in Section 4.2.
- **Lift Station:** The City has observed an increase in the number of SSO occurrences associated with lift stations in Years 6 and 7 due to equipment malfunction at certain lift stations. The City has been focused on fixing its lift stations to prevent malfunctions. In Year 6 the City began delivery of the Critical Infrastruture Projects discussed in Section 3.4.2.6. In addition, during the Year 7 reporting period the City completed Lift Station Assessments discussed in Sections 3.1.2.2 and 3.1.3.4 to confirm the condition of other lift

stations. Future Critical Infrastructure Projects have been identified to limit the potential need for the bypass pumping at lift stations, as discussed in Section 4.3. These initiatives have been developed to mitigate SSO occurrences associated with bypass pumping.

- **Other:** A 75% reduction in SSO occurrences in the "Other" category occurred during the Year 7 reporting period. The "other" category represents SSOs caused by miscellaneous sewer related issues not described by the other categories. A significant number of these issues in recent years have been determined to be associated with construction defects in sewer service laterals. The City began performing CCTV inspections during project correction periods during the Year 7 reporting period, as discussed in Section 3.7.3.4. This program will support the City's effort to identify issues with the potential to result in SSOs proactively.
- **Roots:** Root related SSO occurrences accounted for less than two (2) percent of the total SSO occurrences in the Year 7 reporting period. The City continues to implement its root control program as summarized in Section 3.7.3.3.
- **Wet Weather:** During the Year 7 reporting period, sixty-three (63) wet weather SSO occurrences were reported. A total of nineteen (19) wet weather SSOs, approximately thirty (30%) percent of the total, are associated with the areas planned to be addressed by the Dilg League and the Brookmeade & Querbes SSO Mitigation Projects discussed in Section 4.3. The City is continuing to develop its Capacity Assessment Program to plan improvements to mitigate remaining wet weather SSOs, as discussed in Section 4.4.

Table 3-12: 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
Rolling Average: Years 1-5	**2.2**	**33.6**	**4.0**	**48.4**	**12.2**	**13.4**	**9.0**	**49.8**	**59.8**
Rolling Average: Years 2-6	**3.8**	**38.0**	**2.8**	**47.4**	**16.8**	**18.0**	**6.2**	**53.6**	**65.2**
Rolling Average: Years 3-7	**6.6**	**39.8**	**1.8**	**53.6**	**20.2**	**18.4**	**6.2**	**55.4**	**52.2**
Difference in Rolling Average From Years 2-6 to 3-7	**2.8**	**1.8**	**-1.0**	**6.2**	**3.4**	**0.4**	**0.0**	**1.8**	**-13.0**
Rolling Average (% Increase/Decrease) From Years 2-6 to 3-7	**74%**	**5%**	**-36%**	**13%**	**20%**	**2%**	**0%**	**3%**	**-20%**

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.

3.7.3 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.

3.7.3.1 Gravity Sewer Cleaning

The Gravity Sewer Preventative Maintenance Program includes routine cleaning and cleaning required per the Consent Decree SSA activities. 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. The City has attempted to clean 100% of the pipes, rather than just the 15-inch diameter and greater as part of the SSA investigations.

3.7.3.2 "Hot Spot" Sewer Cleaning and CCTV Program

The City initiated a "Hot Spot" Sewer Cleaning and CCTV program in March 2021 to mitigate[2] dry weather SSOs. The program includes approximately 300,000 lineal feet of gravity sewer cleaning in addition to CCTV investigations. Reaches for this program were identified based on historical dry weather SSO activities tracked through the City's IMS system, CityWorks. The program began in March 2021 and is expected to be completed by the end of year of calendar year 2021. This program is in addition to sewer cleaning related to the City's ongoing Sewer Cleaning Program and cleaning SSA activities. The 2022 Hot Spot Cleaning program will be developed and is planned to begin in early 2022. The 2021 program represents approximately 5 percent of the collection system.

Table 3-13 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 2021 Hot Spot cleaning through the reporting period.

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

Table 3-13: Summary of Gravity Sewer Cleaning Activities

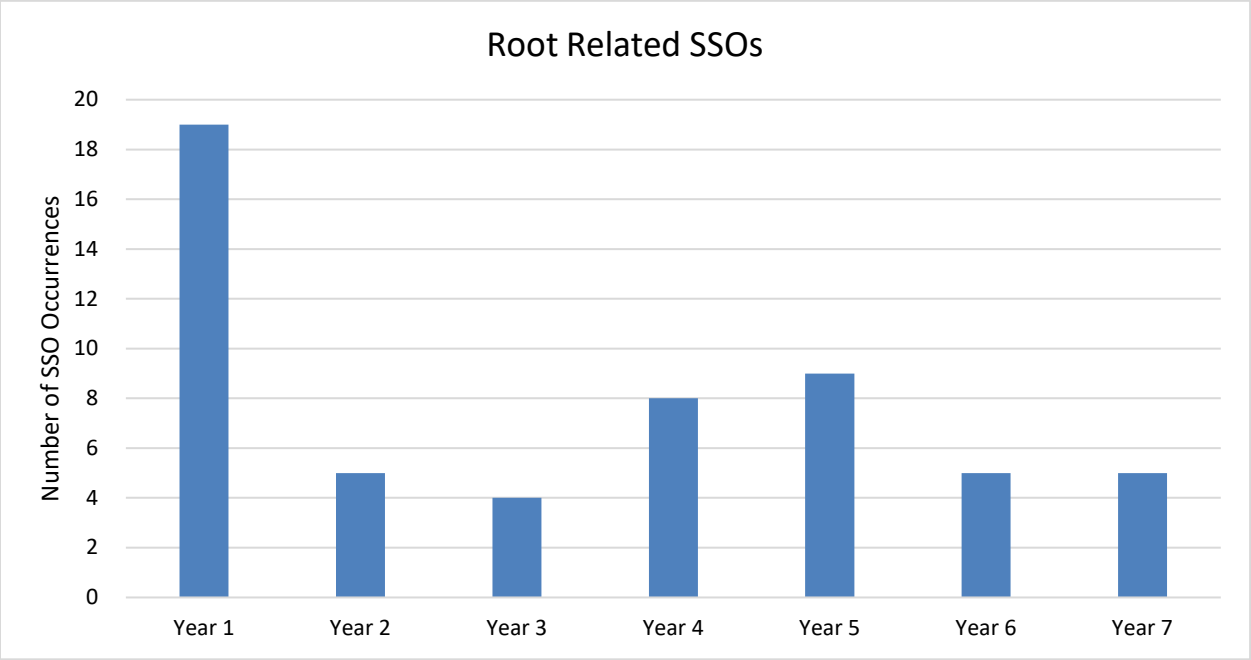
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7
SSA Phase 1	885,851						
SSA Phase 2		481,042					
SSA Phase 3		206,434	646,833	14,705			
SSA Phase 4				685,818	360,839		
SSA Phase 5					245,936	430,046	
City Preventative Maintenance	39,499	298,953	303,714	285,674	319,366	235,237	235,269
Hot Spot Cleaning[1]							48,963
Total	**925,350**	**986,429**	**950,547**	**986,197**	**926,141**	**665,283**	**284,232**
% of the Total Collection System	**17.1%**	**18.3%**	**17.6%**	**18.3%**	**17.1%**	**12.3%**	**5.3%**

[1] The length shown for Hot Spot Cleaning in Year 7 includes sections of sewer in Phases 2, 4, and 5. Refer to Table 3-2 in Section 3.1.2.1 and Table 3-3 in Section 3.1.3.1 for a breakdown of segment lengths and diameters cleaned during Year 7 through the "Hot Spot" Sewer Cleaning and CCTV Program.

3.7.3.3 Chemical Root Control (CRC) Program

The Consent Decree requires a root control program that included short term mitigation and routine maintenance of root intrusion and rehabilitation of areas in which root intrusion has caused recurring blockages. The City's Chemical Root Control (CRC) program was reinstituted in 2012. The City continues to perform chemical root control on an annual basis as a preventative maintenance measure to reduce root related SSOs. Chemical treatment is typically applied in the Fall season each year. During the reporting period, a total of 461 gravity sewers (147,536 linear feet) were treated and a total of five (5) root related SSOs occurred representing less than two (2) percent of the total SSOs reported for the period. Figure 3-6 below provides an illustration of root related SSO occurrences each of the Consent Decree reporting periods.

Figure 3-6: Root Related SSOs by Reporting Period



3.7.3.4 Correction Period Inspection Program

The City's construction contracts require a two (2)-year correction period during which the contractor is required to address workmanship and material defects identified after final completion. The City has been performing surface inspections of completed work through its Correction Period Inspection Program for several years. In early 2021, the City began completing internal warranty CCTV inspection of completed projects, beginning with Phase 1 projects in which the correction period was still active. Select portions of three (3) Phase 1 projects (1-201, 1-202, 1-203) and six (6) Phase 2 projects (2-NH1, 2-NH3, 2-QB3, 2-SH3, 2-SH4, 2-WS3) were evaluated by the City by completing CCTV inspections.

3.7.3.5 Force Main / ARV Inspection Program

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

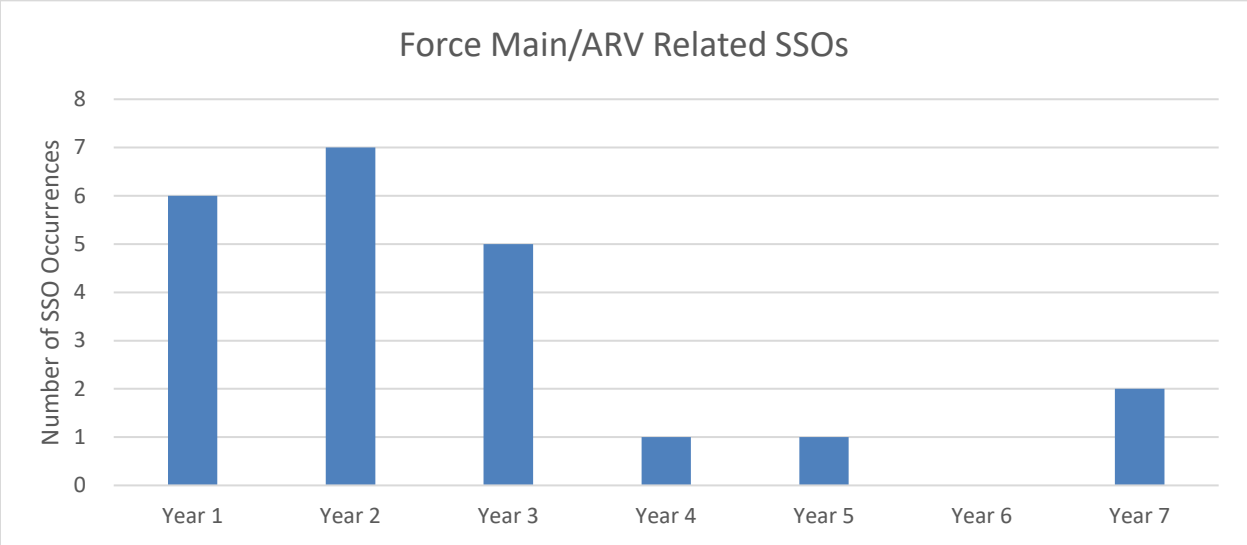
- Annual inspection of the force mains which includes walking the full length of the force main and evaluating signs of SSOs or other indications of potential failures, exposed pipe and noting any right-of-way or access issues.

- Performing backflushing of the Air Release Valves (ARVs) to remove internal debris; and replace of defective ARVs.
- Tracking maintenance activities for force main and ARV inspections.

During the reporting period, each of the City's force mains were inspected and ARV's were backflushed. Based on these investigations, five (5) ARVs were replaced during the reporting period.

During the reporting period there were two (2) recorded SSO occurrences caused by force main failures representing less than one (1) percent of the total during the reporting period. Figure 3-7 provides an illustration of Force main and ARV related occurrences that have occurred during each of the Consent Decree reporting periods.

Figure 3-7: Force Main/ARV Related SSO Occurrences



3.7.3.6 Wastewater Treatment Plant Operations & Maintenance Program

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

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

During the Year 7 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.

In addition, the City completed assessments of its wastewater treatment and sludge processing facilities during the Year 7 reporting period, as summarized in Section 3.2.3.

4.0 CONSENT DECREE - YEAR EIGHT (8)

The major objectives to be completed during the next reporting period (Year 8: May 13, 2021 and May 12, 2022) are discussed below. This list of objectives should not be interpreted as an explanation of all activities but rather a summary of the major objectives anticipated to be completed. In addition, it is important to note that the planned activities have been developed to align with and support the overriding goal and objective of the Consent Decree to mitigate sewer overflows. Activities necessary for the City to operate and maintain reliable wastewater and water utilities have also been prioritized. The activities relate directly to many specific Consent Decree requirements even though a shift away from the defined "find and fix" method of addressing all defects in the collection system through a phase-by-phase approach is required.

4.1 Regulatory Coordination

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

4.2 CMOM Programs

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

4.2.1 Update of Geographical Information Systems (GIS)

The City plans to update its GIS to reflect field investigations performed through Sanitary Sewer Assessment (SSA) activities and construction record information associated with the Phase 1 and 2 RMP projects required under the Consent Decree. Continued improvements will be completed during the Year 8 reporting period including the remaining Phase 2 RMP projects and other capital projects previously completed by the City.

4.2.2 Correction Period Inspection Program

The City plans to continue completing CCTV inspection of completed Phase 2 projects and Critical Projects prior to expiration of the correction period. The CCTV inspections for all Phase 1 and Phase 2 projects are expected to be ongoing through mid-2023 based on final

completion dates of the projects.

4.2.3 "Hot Spot" Cleaning Program and CCTV Program

The City will continue the integration and implementation of the "Hot Spot" Cleaning and CCTV program that was initiated during the Year 7 reporting period. The 2022 "Hot Spot" Cleaning and CCTV Program is planned for development and issuance to EPA in January 2022 and planned to be initiated during the Year 8 reporting period.

4.2.4 Annual Cleaning Program

The City plans to develop an "Annual Cleaning Program" to establish cleaning schedules for the Collection System based on pipe materials, age, diameter, and sewer system maintenance records following the completion and evaluation of data associated with the Hot Spot Cleaning and CCTV Program. A description of the proposed "Annual Cleaning Program" is planned for issuance to EPA in January 2022.

4.2.5 Updates to City's Work Order and Data Management Systems

The City plans to develop workflows in its CMMS to track capital project activities and CCTV inspections during the correction period. In addition, the City plans to develop 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.

4.2.6 Review of Fats, Oils, and Grease (FOG) Program

The City will continue to evaluate the effectiveness of existing FOG related program activities including software, staffing and existing SOPs during the Year 8 reporting period. The City will continue to evaluate and integrate program activities using the FOG dashboard developed during Year 7. The effectiveness of public outreach and education initiatives, FOG enzyme procedures and key performance indicators will be assessed.

4.2.7 Review of Sewer Overflow Response Plan (SORP)

The City intends to review the existing Sewer Overflow Response Plan (SORP) to identify where improvements might be needed and opportunities for correlating reporting of SSOs with

hydraulic model results.

4.2.8 Review of Private I/I Program

The City plans to review its current private lateral program to evaluate its effectiveness and limitations in removing excessive I/I sources on private property. In addition, the City plans to continue evaluating policy and legal issues that may need to be considered and addressed by the City to facilitate mitigation of lateral defects on private property. This includes considering potential private property lateral program costs and funding considerations.

4.3 Critical Project Program

The City will continue deliver the current portfolio of Critical Projects, as presented in Section 3.4.2.6, 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.

4.3.1 Identification and Delivery of Other Critical Projects

The City plans to continue scoping and developing new Critical Projects through continued capital planning activities which will focus projects on SSO mitigation, compliance, and maintaining reliable wastewater and water utility systems. Table 4-1 and Table 4-2 below provides a summary of the other identified wastewater and water critical projects that are currently being developed, respectively.

Table 4-1: Other Identified Wastewater Critical Projects

Project Number	Project	Project Description	Current Status
1	Dilg League SSO Mitigation	System improvements to address reoccurring SSOs at Dilg League Drive area.	Study and Report
2	Brookmeade & Querbes SSO Mitigation	System improvements to address reoccurring SSOs in the Brookmeade & Querbes area. Approximately 9,000 feet of 10- to 30-inch-diameter gravity sewer is anticipated to be installed.	Detailed Design
3	Lift Station Rehabilitation Package	Rehabilitation of approximately fifteen (15) 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.	Study and Report
4	Gravity Sewer Main Improvements Package	System-wide improvements to address high-priority condition issues based on NASSCO PACP ratings and known SSO locations.	Study and Report

Project Number	Project	Project Description	Current Status
5	Wallace Force Main Improvements	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.	Study and Report
6	Stoner Force Main Improvements	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.	Study and Report
7	Cedar Grove Force Main Improvements	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.	Study and Report
8	Southern Hills Interceptor	Replacement of approximately 24,300 feet of 8- to 42-inch diameter concrete gravity sewer that is approximately 40 years old.	Detailed Design

Table 4-2: Other Identified Water Critical Projects

Project Number	Project	Description	Status
1	Fire Protection / Flow Rating and Property Insurance Association of Louisiana (PIAL) Requirements	Compliance with PIAL requirements for annual and bi-annual system operation and maintenance.	Planning
2	Revised Lead and Copper Rule Obligations	Compliance with Revised Lead and Copper Rule obligations. Confirmation of the City's lead service line (LSL) inventory and potential development and implementation of an LSL Replacement Plan.	Planning
3	Cross Lake Dam and Spillway Rehabilitation	Rehabilitation of the dam and spillway that controls the level in Cross Lake, the City's drinking water supply. Condition issues were noted in recent inspection completed by the Louisiana Department of Transportation and Development (LADOTD), including replacement of braces for the spillway tainter gates, grouting abandoned outfall piping presenting a risk of undermining the dam, and general rehabilitation.	Study and Report
4	Amiss Water Treatment Plant Transmission Piping and Valve Replacement	Replacement of the transmission main that conveys drinking water from the water plant to the distribution system to ensure reliable water utility service. The current piping is in poor condition with an active leak.	Study and Report
5	Water Pump Station Standby Generator Installation	Installation of backup power units to support reliable water service during loss of power and emergency situations at three (3) water booster pump stations.	Detailed Design

Project Number	Project	Description	Status
6	Review & Update Water System Risk & Resiliency Assessment and Emergency Response Plan	Review and update of planning documents previously developed as required by USEPA.	Planning and Study
7	Twelve Mile Bayou Pump Station Discharge Main Evaluation and Testing	Rehabilitation or replacement of existing large diameter water transmission main which conveys water from the City's backup water supply (Twelve Mile Bayou Pump Station) to the Amiss drinking water plant.	Study
8	Citywide Smart Water Meter Replacement	System-wide program to replace approximately 70,000 water meters near the end of their useful life. The City is considering implementation of advanced metering infrastructure (AMI) technology.	Planning
9	70th & Pines Booster Pump Station Rehabilitation	Rehabilitation of pump station and storage tank infrastructure to address condition issues identified during recent water master plan.	Study and Report
10	St. Vincent Elevated Storage Tank Rehabilitation	Rehabilitation of storage tank infrastructure, including structural repairs and coating improvements, to address condition issues identified during recent water master plan.	Detailed Design
11	West Shreveport Elevated Storage Tank Rehabilitation	Rehabilitation of storage tank infrastructure, including structural repairs and coating improvements, to address condition issues identified during recent water master plan.	Study and Report
12	Water System Winterization and Resiliency Improvements	System improvements for resiliency to mitigate exposure during freezing weather to support reliable water service.	Study and Report
13	Water Main Renewal and Replacement Program	Development of a prioritized maintenance program to proactively maintain water distribution system assets through renewal and replacement. Annual design and construction program to be implemented after initial study is completed to identify asset renewal strategies considering remaining service life, likelihood of failure, consequence of failure, and available funding.	Planning
14	Water SCADA Master Plan and Implementation	Development of a SCADA Master Plan to identify needed improvements with costs and a timeline associated with implementing upgrades. Implementation of improvements to follow pending available funding.	Planning

The City plans to use an Integrated Planning Approach to select projects for 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 always, detailed

design and construction of these projects, as well as others that may be identified in future years, will be dependent upon financial assistance from federal and state agencies, and the lack of such assistance is expected to delay program implementation.

4.4 Capacity Assessment Program

A description of the City's ongoing and planned activities to develop a system-wide wet weather overflow strategy is below. This is reflective of discussions with the regulatory agencies during the December 3, 2020 and April 16, 2021 meetings.

4.4.1 Flow Monitoring Program and Flow Data Analysis

The City will continue the 2020 and 2021 flow monitoring program including data collection and rainfall and flow data analysis in support of the hydraulic model updates and development of the wet weather overflow control strategy.

4.4.2 Update and Recalibration of the Hydraulic Model

As discussed during the December 3, 2020 and April 16, 2021 regulatory meetings and Section 3.3 herein, the City has updated the hydraulic model network and is recalibrating the model to incorporate flow and rainfall data collected in 2020 and 2021. The City plans to complete the hydraulic model update and recalibration during the Year 8 reporting period.

4.4.3 Capacity Assessment Report

Following completion of the model update and recalibration, a Return Period Analysis will be performed. After completing the Return Period Analysis, the City plans to reissue the Capacity Assessment Report to EPA and LDEQ in July 2022. The Capacity Assessment Report will summarize the findings of the Return Period Analysis which will serve as the basis for redevelopment of the Capacity Assessment Remedial Measures Plan.

4.4.4 Capacity Assessment Remedial Measures Plan

During the Year 8 reporting period the city will continue its course to develop an updated wet weather overflow control strategy which will be reflected in an updated Capacity Assessment Remedial Measures Plan. Table 4-3 below provides a timeline for major activities associated with this initiative.

Table 4-3: Timeline of Wet Weather Control Strategy

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

The activities above are major activities associated with developing a system-wide wet weather overflow control strategy. During the period indicated above, the City plans to complete interim activities related to developing its wet weather overflow control strategy, as described below.

- Evaluation of alternatives to mitigate specific known wet weather overflow locations within the collection system.
- Review of previously collected SSA data (smoke testing, dye flooding, PACP, and MACP records) and flow monitoring data to identify potential opportunities to address high-priority and cost-effective reduction of direct sources of public and/or private Infiltration and Inflow (I/I). If financially feasible, some opportunities may be identified for accelerated implementation prior to revision of the Capacity Assessment Remedial Measures Plan.
- Evaluating strategic considerations for wet weather overflow control, including but not limited to, reducing public and/or private sources of Infiltration and Inflow (I/I), implementing improvements to convey and/or treat wet weather flows at treatment facilities, and/or providing wet weather storage within the system.
- Identifying potential project sequencing strategies for effectively implementing I/I reduction projects, performing post-construction flow monitoring, and assessing I/I reduction performance prior to executing capacity improvement projects.
- 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.

4.5 Condition Assessment Program

The City plans to continue assessing its wastewater system during the Year 8 reporting period. Condition assessments will be completed through ongoing activities in the following four (4) programs.

4.5.1 Collection System Assessment Program

The City intends to develop a system-wide sewer inspection and assessment program (including completing remaining SSA activities in Phase 5) to evaluate available SSA data to revise the scope and timeline for completing further sewer rehabilitation projects which will be identified in the future Condition Remedial Measures Program planned for issuance to EPA and LDEQ in January 2023.

4.5.2 Lift Station Assessment Program

As discussed in Section 3.1, the City assessed 68 of the City's Lift Stations during the Year 7 reporting period. This has resulted in identification of 15 stations needing rehabilitation to maintain reliable utility service. The city intends to continue this program to assess other City Lift Stations and characterize the needs into the Critical Projects Program, Capacity Assessment Remedial Measures Plan or the Condition Assessment Remedial Measures Plan.

4.5.3 Force Main Assessment Program

As discussed in Section 3.1, the City completed assessments of its force mains during the Year 7 reporting period. Additional force mains will be reassessed to determine if inclusion is required in the Critical Projects program and or the Condition Assessment Remedial Measures Program.

4.5.4 Wastewater Treatment Plant (WWTP) Assessment Program

The City plans to routinely assess its wastewater treatment and residuals facilities to determine if/when other projects are needed to maintain reliable operations and compliance with the City's LPDES effluent limitations. The City will also develop a Supervisory Control and Data Acquisition (SCADA) Master Plan to identify needed improvements along with costs and a timeline associated with implementing SCADA upgrades. Additional WWTP projects will begin to be identified in the Condition Remedial Measures Plan.

ATTACHMENT 1 – INDUSTRIAL USERS OF THE PRE-TREATMENT PROGRAM

Industrial Users of the Pre-Treatment Program
Year 7 Summary

Count	Facility Name	Address	City	State	Zip code
1	Alfasigma USA, Inc. Claiborne	2008 Claiborne Avenue	Shreveport	LA	71103
2	ALSCO	5000 Hollywood Avenue	Shreveport	LA	71109
3	Benteler Steel/Tube Manufacturing Corp.	11650 Highway 1	Shreveport	LA	71115
4	Calumet Lubricants & Waxes, L.L.C.	3333 Midway Street	Shreveport	LA	71133
5	CB&I	740 North Market Street	Shreveport	LA	71107
6	Certainteed	620 Aero Drive	Shreveport	LA	71107
7	Christus Schumpert Highland	1453 East Bert Kouns Industrial Loop	Shreveport	LA	71105
8	Circle K Stores	5112 Monkhouse Drive	Shreveport	LA	71109
9	Crown Health Care Laundry Services	3305 Mansfield Road	Shreveport	LA	71103
10	Dr. Reddy's Laboratory	8800 Line Avenue	Shreveport	LA	71106
11	Frost Industries	5320 Greenwood Road	Shreveport	LA	71109
12	Frymaster	8700 Line Avenue	Shreveport	LA	71106
13	Integrated Power Services	1245 North Hearne Avenue	Shreveport	LA	71107
14	International Paper	1212 Tolmak Road	Shreveport	LA	71107
15	KCS	4601 Shreveport-Blanchard Highway	Shreveport	LA	71107
16	Libbey Glass	4302 Jewella Avenue	Shreveport	LA	71109
17	Liberty Oilfield Services	2675 Valley View Drive	Shreveport	LA	71108
18	Liquid Environmental Solutions	437 Fortson Street	Shreveport	LA	71107
19	Oil States Energy Services	5030 Flournoy Lucas Road	Shreveport	LA	71129
20	Omni Specialty Packaging	10399 Highway 1 South	Shreveport	LA	71115
21	Overton Brooks VA Medical Center	510 East Stoner Avenue	Shreveport	LA	71101
22	Pel State Oil	3102 Jewella Avenue	Shreveport	LA	71109
23	Penske Truck Leasing	6890 Bert Kouns Industrial Loop	Shreveport	LA	71129
24	Pratt Paper (LA), LLC	10429 Richard Pratt Drive	Shreveport	LA	71115
25	Prolec GE USA	7000 West Bert Kouns Industrial Loop	Shreveport	LA	71129
26	Purina Mills	223 West 63rd Street	Shreveport	LA	71136
27	QualaWash	6960 West Bert Kouns Industrial Loop	Shreveport	LA	71129
28	Republic Services	6896 West Bert Kouns Industrial Loop	Shreveport	LA	71129
29	Ryder Truck Rental	2510 Lakeshore Drive	Shreveport	LA	71103
30	Safety-Kleen Systems, Inc.	2760 Valley View Drive	Shreveport	LA	71108
31	Ternium	2500 Ron Bean Boulevard	Shreveport	LA	71115
32	Twin States Trucking	7690 West 70th Street	Shreveport	LA	71107
33	Union Pacific-Jewella	6215 East Jewella Avenue	Shreveport	La.	71108
34	University Health	1541 Kings Highway	Shreveport	LA	71103
35	Willis-Knighton Medical Center	2600 Greenwood Road	Shreveport	LA	71103
36	Willis-Knighton Pierremont	8100 Youree Drive	Shreveport	LA	71115
37	Willis-Knighton South	2500 Bert Kouns Industrial Loop	Shreveport	LA	71118
38	Woolworth Landfill	10581 Woolworth Road	Keithville	LA	71047
39	WSP Chemicals & Technologies, LLC	5677 North Industry Road	Shreveport	LA	71107

ATTACHMENT 2 – FOG PROGRAM PUBLIC OUTREACH

Public Outreach for FOG Program
Year 7 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
1	05/14/2020	Residential	Millbrook Apartments	611 E Washington St.	Talked with Ms. Whitaker, said back up is coming from outside the apartment complex manhole. It is stopped up with rags, wipes and feminine products. Left rack cards, lids, scrappers and funnels, approximately 50 of each.
2	05/14/2020	Residential	N/A	6300 East Ridge Dr.	Put door hangers out approximately 10 hanger, a very small block and 3 houses were vacant.
3	05/18/2020	Residential	Mikado Apartments	2940 Samford Ave.	Left rack cards, posters, and funnels.
4	06/03/2020	Residential	Mikado Apartments	2940 Samford Ave.	Unable to leave any information, went by facility twice.
5	06/03/2020	Residential	N/A	9200 Sandman Cir.	Placed door hangers in the 9200 block of Sandman Circle.
6	06/03/2020	Residential	N/A	3127 Milton St.	Placed door hangers in the 3100 block of Milton Street.
7	06/09/2020	Residential	Mikado Apartments	2940 Samford Ave.	Spoke with maintenace (CJ), left 50 rack cards, funnels, lids and 4 posters.
8	06/29/2020	FSE	Shreveport Barksdale Shopping Center	1125 Shreveport Barksdale Hwy.	Went to Walmart (Tasha) left leaflets (25); Dollar Tree (Gail) left leaflets (25); Baseball and Softball Academy (Bobby) 25 ; Citi Trends (Renita) 25; Burlington (Allen) 25; Vet Center (Mitchell) 25; Sewing Shop (Holly) 25; California Nails (Tina) 25; Goodwill (Tiffany) 25; Big Lots (Allen) 25. Southpoint Drive, unable to enter VOA, left leaflets with an employee outside the building. All the other buildings were empty and locked.
9	07/06/2020	Residential	Southport Apartments	9371 Mansfield Rd.	Spoke with Lashunda George, apt. manager, left 50 rack cards, 50 leaflets and 4 posters.
10	07/14/2020	Residential	Riverside Oaks	109 Southfield Rd.	Spoke with assistant manager, left 3 posters, and 20 rack cards.
11	07/29/2020	Residential	Northside Villa Apartments	4585 North Market St.	We spoke with the manager, she is aware of the problems with the residents, has had to call plumber on a regular basis. Said she will post the posters and pass out the leaflets to residents as they come in.
12	08/19/2020	Residential	Mikado Apartments	2940 Samford Ave.	Went out to the property, was not able to leave any information, not able to locate maintence man.
13	08/25/2020	Residential	Mikado Apartments	2940 Samford Ave.	Went to inspect overflow, grease had been cleaned up, unable to leave information, unable to locate maintenance man. This is a reoccurring problem.
14	09/10/2020	Residential	Lee Harware Apartment	301 Crockett St.	Went to address on Crockett, was not able to enter the apartment complex; tried the numbers on the door with no response, was not able to locate the source of the overflow.
15	09/17/2020	Residential	Lee Harware Apartment	301 Crockett St. & 719 Edwards St.	Went back to 301 Crockett and 719 Edwards, ran into the maintenance man. He showed where the spill had occurred on property. Manager was not in, but was able to leave rackcards and posters. Was told 12 residents lived in the apartments.
16	10/02/2020	Residential	Mikado Apartments	2940 Samford Ave.	Went out to inspect soil, had been cleaned up, unable to leave information.
17	10/05/2020	Residential	Lee Hardware Apartments	719 Edwards St.	Unable to access gate, tried the numbers, no answer.
18	11/11/2020	Residential	N/A	3424 Judson St.	Passed out door hangers in the 3400 block of Judson Street.
19	11/11/2020	Residential	N/A	4111 Pines Rd.	Gated community, unable to access gate.
20	11/11/2020	Residential	Berkshire Apartment	2120 N Hearne Ave.	Attempted to leave posters and rack cards, no one anwsered the door at office, locked. Tried both Berkshire and Devonshire Apartments.
21	11/12/2020	Residential	N/A	115 Olive St.	Put door hangers in the 100 block of Olive Street up to Centenary Blvd. (10) only houses on 1 side of the street.
22	11/12/2020	Residential	N/A	2805 Lynda St.	Put door hangers out about 20.
23	11/12/2020	Residential	N/A	1040 Erie St.	Handed out door hangers about 20.
24	11/12/2020	Residential	N/A	Thornhill Ave. & Pierremont Rd.	Handed out 15 door hangers, houses on 1 side of the street.
25	11/12/2020	Residential	N/A	Ockely Dr. and Line Ave.	Handed out about 50 door hangers, all duplexes.
26	11/12/2020	Residential	N/A	Ockley Dr. and Line Ave.	Handed out about 50 door hangers, all duplexes.
27	11/16/2020	Residential	N/A	5921 Dillingham Ave.	Put door hanger in mail boxes up and down the 5900 block of Dillingham Avenue, about 20 hangers.
28	11/16/2020	Residential	N/A	1203 Gilbert Dr.	Only 2 houses on the block of Gilbert Dr., 2 door hangers left.
29	11/23/2020	Residential	N/A	721 Damaka Dr.	Left approximately 15 door hangers in the 700 block of Damaka Drive, it is only one block.
30	12/10/2020	Residential	Western Hills Neigborhood	Francis St. and Dixie Blvd. (off of Financial Plaza)	Put door hangers in the mail boxes on both streets, about 30, also left rack cards and posters at the hotel.
31	12/15/2020	Residential	Southern Hills Neighborhood	Ardis Taylor Dr. and Teche Way (off of Mansfield Rd.)	Told by my supervisor of a grease overflow issue in this area. Looked at grease traps across Mansfield Rd., McDonalds, KNJ, and Dairy Queen, all traps in good condition. Also looked at WalMart trap, also in good conditon.
32	01/05/2021	Residential	Galilee City Apartments	1600 Walnut St.	Went to Galilee Baptist Church, spoke with mantenance, said he thought it came from Galilee City Apartment. Spoke with the manager at apartment complex, left posters and rack cards for residents.
33	01/05/2021	Residential	N/A	1000 Bert Kouns Industrial Loop	Spoke with employee left posters and rack cards.

Public Outreach for FOG Program
Year 7 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
34	01/05/2021	Residential	N/A	1988 Downing St.	Left about 50 rack cards at the office, also put about 10 door hangers.
35	01/05/2021	Residential	Bayou Oaks Apartments	2100 Grimmett Dr.	Spoke with manager, left posters and rack cards for residents.
36	01/05/2021	FSE	Ramada Inn by Hilton	5555 Financial Plaza	Spoke with D. Kirkendoll, owner of Perfect Catch, restaurant in the hotel. Was told they pour their grease into the rendered grease container.
37	01/08/2021	Residential	N/A	Line Ave. & Unadilla St.	Door hangers 13.
38	01/08/2021	Residential	South Pointe Apartment	8150 Jewella Ave.	100 Rack Cards, 2 posters left with manager.
39	01/08/2021	Residential	N/A	2601 Devaughn St.	10 Door Hangers.
40	01/08/2021	Residential	Tower Apartments	5638 South Lakeshore Dr.	100 Rack cards, 3 poster left with manager.
41	01/12/2021		Virgina Place and Crossroads Place II	1135 & 1131 Busby St.	Left 50 rack cards, 2 posters and 10 funnels.
42	01/12/2021	Residential	N/A	Gilbert Dr. & Marshall St.	Looked at the site, still under construction.
43	01/12/2021	FSE	WK Hospital	2600 Greenwood Rd.	Left 50 rack cards with administrative office.
44	01/26/2021	Residential	N/A	3508 Beverly Pl.	Left approximatley 25 door hangers.
45	01/29/2021	Residential	New Horizon and New Zion Apartments	4242 Illinois Ave.	Left 50 rack cards and 3 posters with the manager.
46	01/29/2021	FSE	Summer Grove Elementary	2955 Bert Kouns Industrial Loop	Left 4 posters and 20 rack cards in the office.
47	01/29/2021	Residential	N/A	2728 Rosemont St.	Left about 30 door hangers.
48	02/01/2021	FSE	Mikado Apartments	2940 Samford Ave.	Left message via phone with manager that I left 5 posters, 50 rack cards, and 50 funnels.
49	02/02/2021	FSE	N/A	1402 Buenea Vista St.	Left 7 door hangers at homes.
50	02/02/2021	Residential	Forest Oaks Apt./King Manor Apt. # 2	1674 David Raines Rd.	Left 100 rack cards and 3 poster at the office.
51	02/02/2021	Residential	N/A	Grover Pl. & Chelsea Dr.	Left 25 door hangers at individual homes.
52	02/02/2021	Residential	N/A	3310 Linwood Ave.	Left 20 rack and 20 door hangers at individual homes.
53	02/09/2021	Proactive Measure for Grease Control	Centenary Gold Dorm	Centenary Maintenance Department	Public outreach performed on 2/9/2021. Made contact with maintenance secretary. Left 50 Rack Cards.
54	03/03/2021	FSE	N/A	617 Texas St.	Left 3 posters at Robinson Theater and 15 rack cards.
55	03/03/2021	Residential	N/A	6418 Fairfield Ave.	Left 10 door hangers in residential area.
56	03/03/2021	Residential	N/A	2558 Lindholm St.	Left 20 rack cards at various houses in the residential area.
57	03/03/2021	Residential	N/A	430 Prospect St.	Left 10 door hangers at residential property.
58	03/03/2021	Residential	N/A	828 Drexel Dr.	Visted 10 homes and left door hangers.
59	03/03/2021	Residential	N/A	2908 Paradise Dr.	Visted 12 homes and left door hangers.
60	03/03/2021	Residential	N/A	3121 Idledays Dr.	Left 10 door hangers at residential property.
61	03/03/2021	Residential	N/A	6002 Bobtail Dr.	Left 5 Rack Cards at various residential properties.
62	03/03/2021	Residential	N/A	1812 Ridgecrest Dr.	Left 5 door hangers at various residential properties.
63	03/03/2021	Residential	N/A	6707 Quillen Rd.	Left 5 door hangers at various residential properties.
64	03/03/2021	Residential	N/A	3753 W. College St.	Left 10 door hangers at various residential properties.
65	03/03/2021	Residential	N/A	1600 Abbies St.	Not properities at 1600 Abbies St. Unable to do public outreach in the area.
66	03/08/2021	Residential	N/A	2831 Poland St.	Covered the entire 2800 block of Poland Street and 2800 block of Milam Street. Two corner residents on Missouri Avenue. Left 22 door hangers.
67	03/08/2021	Residential	N/A	7220 Louise St.	Covered entire 7200 block from Lilac Lane to Ivy Lane 25 door hangers issued.
68	03/08/2021	Residential	N/A	137 E Wyandotte St.	Issued a total of 35 door hangers with inclusion of Herndon Street because the way the sewer line was running.
69	03/08/2021	Residential	N/A	452 Stoner Ave.	According to the GIS we covered the Virgina Apt., Crossroad Apt., Teen Challenge which was the actual address of the SSO. We also covered C & S Transmission. 50 Rack, 2 Posters.
70	03/08/2021	Residential	Briarwood Apartments	4110 Greenwood Rd.	With this public outreach, the city workers had just left this WO location. Golf Link Street from 403 - 409 was covered, Briarwood Apt. 50 Rack cards 2 posters, Also Rack card for the Transmission shop and the Corner store.
71	03/18/2021	Residential	N/A	3520 Lillian St.	Left 30 Door hangers . Covered 3500 block of Lakeshore Drive, San Jacinto Street and 3500 block of Lillian Street.
72	03/18/2021	Residential	N/A	1400 Buena Vista St.	Covered 1428 and 1430 Ford Street and the entire block of Buena Vista Steet, left to right.
73	03/18/2021	Residential	Riverside Apartments	109 South Field Rd.	50 Rack cards left with Manager at Riverside Apartments. Covered 100 block of Southfield Road. Residential area as well. 2 posters

Public Outreach for FOG Program
Year 7 Summary

Count	Date Public Outreach Performed	Grease Source	Apartment or Area Name	Address	Notes
74	03/12/2021	Residential	N/A	3132 Country Club Dr.	Covered the entire block of Country Club Drive and the 4000 block of Golf Link Blvd. Also the apartments and Jim's Grocery.
75	03/18/2021	Residential	N/A	Country Club Dr. and Golf Links Blvd.	Covered the entire block of Country Club Drive and the 4000 block of Golf Link Blvd. Also the apartments and Jim's Grocery.
76	03/22/2021	Residential	N/A	2606 Kemp Ln.	Left 16 door hangers.
77	03/22/2021	Residential	N/A	4120 Inwood Ln.	Left 12 door hangers.
78	03/22/2021	Residential	N/A	7108 Creswell St.	Left 20 door hangers from corner of W. 70th Street and Creswell Street. Total 7100 block.
79	03/22/2021	Residential	N/A	1748 Fulton St.	Left 25 door hangers covering the 1600 and 1700 block of Fulton Street.
80	03/22/2021	Residential	N/A	1812 Cook St.	Left 12 door hangers.
81	03/26/2021	Proactive Measure for Grease Control	South Pointe Apartments	2601 Silver Pines Rd.	Apartment manager contacted the pretreatment office requesting more door hangers and rack cards. Left 100 Rack cards and 100 door hangers.
82	03/30/2021	FSE	Southfield Grill	317 Southfield Rd.	N/A
83	04/07/2021	Residential	N/A	2908 Line Ave. and Rutherford St.	Left 15 door hangers on both sides of Rutherford St.
84	04/23/2021	Residential	Holy Cross Villas West	9400 Normandie Dr. and 2900 Birch Dr.	30 door hangers on the blocks of Normandie Drive and Birch Drive; left 3 posters and 30 rack cards at Holy Cross Villas West at 9333 Normandie Dr.
85	05/06/2021	FSE	Brookshires	5828 Line Ave.	Per supervisor.
86	05/06/2021	FSE	Jason Deli	5810 Line Ave.	Per supervisor.
87	05/06/2021	FSE	Popeyes Fried Chicken	3565 Greenwood Rd.	Per supervisor, trap overflowing with grease and debris, gave NOV to have cleaned up by 5/7/21, 5pm.

ATTACHMENT 3 – YEAR 7 SANITARY SEWER OVERFLOWS

Sanitary Sewer Overflows (SSOs)
Year 7 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	5/14/2020	08Y-57	611 E. Washington Street	1.83 hrs	Lift station down	sewage was not contained	vacuum manhole	Red River	2400 gal	unknown
2	5/15/2020	06Y-58	611 E. Washington Street	3.15 hrs	Lift station down	sewage partially contained	vacuum manhole	Red River	27000 gal	unknown
3	5/17/2020	21T-55	100 Milam Street	2 hrs	rain event	sewage was not contained	vacuum manhole	Red River	6200 gal	unknown
4	5/18/2020	16Y-53	2940 Samford Ave	1.03 hrs	grease	sewage was not contained	unstop main with wash truck	Bayou Pierre	0 gal	25 gal
5	5/19/2020	11Z-59	800 Sweetbriar Street	1.77 hrs	bypass pump malfunction	sewage completely contained	contained	Old River	1000 gal	1000 gal
6	5/23/2020	11DD-56	Brookmeade Drive	0.13 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	500 gal
7	5/23/2020	35AA-54	3901 Line Ave	1.53 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	150 gal
8	5/28/2020	02JJ-40	8808 McGoldrick Drive	1.92 hrs	main break	sewage was not contained	N/A	Gilmer Bayou	0 gal	100 gal
9	5/29/2020	25LL-46	9660 Mansfield Road	1.52 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	700 gal
10	5/20/2020	02R-51	1522 Corporate	1.95 hrs	Lift Station Down	sewage was not contained	Lift Station Back in Service	12 Mile Bayou	0 gal	1000 gal
11	5/22/2020	46X-50	3123 Milton St	0.87 hrs	Debris	sewage was not contained	Unstopped by wash truck	Cross Bayou	0 gal	700 gal
12	5/28/2020	34Q-52	1461 Hawn Ave	1.5 hrs	Lift Station Down	sewage was not contained	Lift Station Back in Service	Red River	0 gal	25 gal
13	6/1/2020	21Z-59	Reily Lane	0.58 hrs	bypass pump malfunction	sewage was not contained	sewer lift personel	Old River	0 gal	20 gal
14	6/2/2020	02JJ-40	6171 Bert Kouns	0.68 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	55 gal
15	6/4/2020	41W-55	641 Wichita Street	7 hrs	main break	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	1000 gal
16	6/4/2020	37Z-50	2709 Midway Street	1.57 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	5 gal
17	6/5/2020	60Y-57	502 E. Washington Street	1.75 hrs	lift station down	sewage was not contained	N/A	Bayou Pierre	0 gal	5 gal
18	6/9/2020	32Y-56	3508 Beverly Pl	1.75 hrs	lift station down	sewage was not contained	N/A	Bayou Pierre	0 gal	1000 gal
19	6/19/2020	08Y-59	1106 Shreveport Barksdale Hwy	N/A	lift station down	sewage was not contained	sewer lift personel	Red River	0 gal	1400 gal
20	6/19/2020	30X-59	1106 Shreveport Barksdale Hwy	94.33 hrs	lift station down	sewage was not contained	set up pump	Knight St. Storm Drain	0 gal	1400 gal
21	6/22/2020	05MM-46	3009 New Moon Drive	1.75 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	unknown
22	6/25/2020	14PP-58	2043 Princewood Lane	3.5 hrs	lift station down	sewage was not contained	lift station back in service	Boggy Bayou	0 gal	2400 gal
23	6/25/2020	21T-55	100 Milam Street	2 hrs	rain event	sewage partially contained	vacuum manhole	Red River	74000 gal	8 gal
24	6/28/2020	15Y-40	3519 Pines Road	1.67 hrs	main break	sewage was not contained	N/A	Cross Lake	0 gal	40000 gal
25	7/1/2020	11Z-59	938 Captain Shreve Dr	1 hr	bypass pump malfunction	sewage partially contained	reestablished connection	Bayou Pierre	25 gal	50 gal
26	7/2/2020	13Z-61	801 E Preston	7.4 hrs	debris	N/A	sewer lift personel	Bayou Pierre	0 gal	0 gal
27	7/2/2020	10KK-47	9371 Mansfield Rd	1.95 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	25 gal
28	7/6/2020	09V-54	622 Euclid Street	6.95 hrs	debris	sewage was not contained	unstopped by wash truck	Red River	0 gal	1000 gal
29	7/8/2020	18PP-60	2981 N Pointe Drive	1.08 hrs	lift station down	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	350 gal
30	7/8/2020	21T-55	100 Milam St	2 hrs	rain event	sewage partially contained	vacuum manhole	Red River	5400 gal	8 gal
31	7/8/2020	39W-49	3537 Greenbriar Dr	1 hrs	disconnected sewer service	sewage was not contained	washed sewer main	Cross Lake	0 gal	20 gal
32	7/9/2020	21T-55	100 Milam Dr	2 hrs	main break	sewage completely contained	vacuum manhole	Red River	4200 gal	50 gal
33	7/10/2020	21T-55	100 Milam Dr	1.5 hrs	N/A	sewage partially contained	vacuum manhole	Red River	7400 gal	5 gal
34	7/13/2020	21T-55	100 Milam Street	1.67 hrs	N/A	sewage partially contained	vacuum manhole	Red River	7200 gal	8 gal
35	7/13/2020	06CC-59	109 Southfield Road	1.05 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
36	7/13/2020	40KK-47	9371 Mansfield Rd	1.08 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	50 gal
37	7/14/2020	12Z-59	Reily Lane	2.5 hrs	main break	sewage partially contained	vacuum manhole	Bayou Pierre	2400 gal	3000 gal
38	7/15/2020	21T-55	100 Milam Street	1 hrs	N/A	sewage partially contained	vacuum manhole	Red River	7300 gal	10 gal
39	7/16/2020	21T-55	100 Milam Street	2 hrs	main break	sewage partially contained	vacuum manhole	Red River	4800 gal	8 gal
40	7/31/2020	26X-51	2320 Stonewall street	1 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
41	8/5/2020	21T-55	100 Milam st	2 hrs	main break	sewage partially contained	vacuum manhole	Red River	4800 gal	40 gal
42	8/5/2020	21T-55	100 Milam st	2 hrs	main break	sewage partially contained	vacuum manhole	Red River	7200 gal	7 gal
43	8/10/2020	21T-55	100 Milam st	1.42 hrs	main break	sewage partially contained	vacuum manhole	Red River	4800 gal	6 gal
44	8/11/2020	21T-55	100 Milam st	1.17 hrs	main break	sewage partially contained	vacuum manhole	Red River	4800 gal	4 gal
45	8/12/2020	12X-56	157 Merrick st	2.5 hrs	N/A	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	50 gal
46	8/18/2020		801 E Preston Ave	1.13 hrs	lift station down	sewage was not contained	N/A	Champion Lake	0 gal	20000 gal
47	8/19/2020	16Y-53	2940 Samford Ave	1 hr	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	20 gal
48	8/25/2020	15Y-53	2940 Samford Ave	1.5 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
49	8/27/2020	10BB-54	1040 Erie st	1 hr	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
50	8/27/2020	11DD-56	300 Brookmeade Dr	0.33 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	1000 gal
51	9/3/2020	30X-49	3424 Judson Street	1.2 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	500 gal
52	9/2/2020	02Y-42	5819 Dianne Street	0.8 hrs	lift station down	sewage was not contained	lift station back in service	Bickham Bayou	0 gal	150 gal
53	9/3/2020	35W-55	649 Wyandotte Street	1.27 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	15 gal
54	9/4/2020	L.14.	1910 Southern Loop	0.33 hrs	lift station down	sewage was not contained	sewer lift personnel	Bayou Pierre	0 gal	500 gal
55	9/7/2020	14CC-55	5921 Dillingham Avenue	1.17 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
56	9/8/2020	27EE-53	367 W. 73rd Street	8.62 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
57	9/9/2020	16DD-54	6418 Fairfield Avenue	0.6 hrs	main break	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	10 gal
58	9/10/2020	47U-54	301 Crockett Street	2.15 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	300 gal

Sanitary Sewer Overflows (SSOs)
Year 7 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
59	9/11/2020	48BB-50	2713 Hollywood Ave	0.5 hrs	disconnection of service	sewage was not contained	customer service disconnected	Brush Bayou	500 gal	0 gal
60	9/17/2020	87U-54	301 Crockett Street	1.25 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	50 gal
61	9/22/2020	18U-53	122 N. Western Ave.	1.17 hrs	debris	sewage partially contained	unstopped by wash truck	Cross Bayou	25 gal	150 gal
62	9/23/2020	08Y-59	3003 Knight Street	1.25 hrs	bypass pump malfunction	sewage was not contained	re-established connection	Red River	0 gal	700 gal
63	9/25/2020	23V-56	Gilbert Drive	1.5 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
64	9/26/2020	25LL-46	9527 Teche Way Drive	0.97 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	100 gal
65	9/28/2020	41V-50	2724 Metal Street	1 hrs	customer lateral blockage	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	50 gal
66	9/29/2020	N/AW-56	234 Olive Street	1.2 hrs	disconnection of service	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	10 gal
67	10/2/2020	16Y-53	2940 Samford Avenue	0.67 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
68	10/4/2020	47U-54	719 Edwards Street	0.63 hrs	grease	sewage partially contained	unstopped by wash truck	Red River	400 gal	100 gal
69	10/5/2020	38DD-55	6924 Oak Hill Circle	2.5 hrs	main break	sewage partially contained	contained	Bayou Pierre	10 gal	5000 gal
70	10/12/2020	47V-54	Sam Feritta	6.25 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	1000 gal
71	10/12/2020	25Z-59	804 Captain Shreve Drive	1.5 hrs	main break	sewage partially contained	set up pump	Bayou Pierre	96000 gal	10000 gal
72	10/12/2020	58W-55	Ockley Drive	1.8 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
73	10/19/2020	Querbes LS	314 Boulevard St.	0.6 hrs	lift station down	sewage was not contained	lift station back in service	Brush Bayou	0 gal	100 gal
74	10/20/2020	14AA-54	Line Avenue	0.48 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
75	10/22/2020	16X-57	2900 Youree Drive	4 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	2100 gal
76	10/25/2020	Legardy LS	2254 Jones Marbry Road	1.13 hrs	lift station down	sewage was not contained	sewer lift personel	McCain Creek	0 gal	2000 gal
77	10/26/2020	34CC-50	6202 Canal Blvd	1 hrs	debris	sewage was not contained	washed sewer main	Brush Bayou	0 gal	10 gal
78	10/26/2020	08R-51	2120 N. Hearne	2.5 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	500 gal
79	10/27/2020	15CC-54	Pierremont Road	1.98 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
80	11/2/2020	41W-56	254 E. LISTER STREET	2 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
81	11/2/2020	35I-48	2805 LYNDA LANE	2.15 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
82	11/3/2020	05X-56	115 OLIVE STREET	1.28 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
83	11/4/2020	08DD-55	6305 CRESWELL AVENUE	1.67 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	25 gal
84	11/5/2020	46V-55	MARSHALL STREET & GILBERT DR	1.88 hrs	grease	sewage partially contained	unstopped by wash truck	Red River	1000 gal	500 gal
85	11/6/2020	17AA-41	4111 PINES ROAD	2.17 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	100 gal
86	11/12/2020	LS.0000010	9255 ELLERBE ROAD	0.52 hrs	lift station down	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	20 gal
87	11/13/2020	19X-56	102 DALZELL STREET	1.53 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	250 gal
88	11/14/2020	47V-55	1203 GILBERT DRIVE	0.72 hrs	grease	sewage partially contained	unstopped by wash truck	Bayou Pierre	150 gal	50 gal
89	11/14/2020	16Z-49	4012 WALKER STREET	1.38 hrs	main break	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
90	11/14/2020	L.6.7.	2800 CARGILL DRIVE	2.08 hrs	lift station down	sewage was not contained	lift station back in service	Brush Bayou	0 gal	100 gal
91	11/16/2020	01O-50	2980 NORTH MARKET STREET	1.18 hrs	debris	sewage was not contained	unstopped by wash truck	12 Mile Bayou	0 gal	50 gal
92	11/18/2020	34AA-54	LINE AVENUE AND UNADILLA STREET	1 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
93	11/18/2020	44X-50	2600 GREENWOOD ROAD	2.5 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	500 gal
94	11/19/2020	16EE-52	721 DAMAKA DRIVE	2.93 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
95	11/23/2020	14AAA-51	2601 DEVAUGHN STREET	1.42 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	25 gal
96	12/2/2020	29W-51	1402 Harvard Avenue	1.82 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	50 gal
97	12/3/2020	25LL-46	9527 Teche Way	1 hrs	bypass pump failed	sewage was not contained	bypass pump repaired	Boggy Bayou	0 gal	800 gal
98	12/4/2020	26X-51	2402 Stonewall Street	7.63 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	300 gal
99	12/6/2020	N/A	9000 Toplecot Drive	0.65 hrs	lift station down	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	20 gal
100	12/7/2020	04JJ-50	1000 Bert Kouns Industrial Loop	1.45 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	60 gal
101	12/9/2020	N/A	10580 Woolworth Road	unknown	lift station down	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	unknown
102	12/9/2020	07P-52	2100 Grimmett Drive	3.3 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	300 gal
103	12/10/2020	03U-53	Caddo Street	12.68 hrs	lift station down	sewage was not contained	lift station back in service	Red River	0 gal	500 gal
104	12/10/2020	25LL-46	Ardis Taylor	2.5 hrs	bypass pump malfunction	sewage was not contained	set up bypass pump	Gilmer Bayou	0 gal	5000 gal
105	12/11/2020	25LL-46	Ardis Taylor	0.42 hrs	bypass pump malfunction	sewage was not contained	reestablished connection	Gilmer Bayou	0 gal	100 gal
106	12/11/2020	N/A	Ockley & Fern Ave	55 hrs	force main break	sewage partially contained	returned sewage to system	Bayou Pierre	7000 gal	400000 gal
107	12/12/2020	51YY-55	Stephenson Street	2.98 hrs	N/A	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
108	12/12/2020	N/A	313 Ardis Taylor	4.82 hrs	rain event	sewage partially contained	contained	Gilmer Bayou	100 gal	300 gal
109	12/13/2020	39PP-44	3055 Gordonia	0.58 hrs	lift station down	sewage was not contained	lift station back in service	12 Mile Bayou	0 gal	300 gal
110	12/13/2020	02W-56	230 E. Egan Street	1.35 hrs	rain event	sewage was not contained	contained	Bayou Pierre	0 gal	100 gal
111	12/14/2020	26II-49	8963 Hawthrone Drive	1.43 hrs	roots	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	15 gal
112	12/14/2020	N/A	3418 Stonewall Street	3.02 hrs	rain event	sewage was not contained	reestablished connection	Bayou Pierre	0 gal	100 gal
113	12/16/2020	06JJ-50	1003 Bert Kouns Industrial Loop	1.25 hrs	debris	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
114	12/19/2020	11DD-56	Querbes Drive	1.25 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	1000 gal
115	12/19/2020	03U-53	Caddo Street	1.03 hrs	lift station down	sewage was not contained	sewer lift personnel	Red River	0 gal	1000 gal
116	12/19/2020	21BB-56	4418 Akard Ave	1.45 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	15 gal

Sanitary Sewer Overflows (SSOs)
Year 7 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
117	12/20/2020	N/A	3408 Stonewall	1.18 hrs	lift station down	sewage was not contained	sewer lift personnel	Bayou Pierre	0 gal	10000 gal
118	12/22/2020	22W-45	5638 S Lakeshore Drive	1.02 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	100 gal
119	12/22/2020	13CC-43	5557 Financial Plaza	1.42 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	1000 gal
120	12/24/2020	50P-43	1988 Downing Street	0.88 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	100 gal
121	12/28/2020	06Z-53	3601 Southern Ave	2.55 hrs	debris	sewage partially contained	unstopped by wash truck	Bayou Pierre	25 gal	100 gal
122	12/29/2020	26W-52	1600 Walnut Street	2.67 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	500 gal
123	12/31/2020	05X-47	1634 Dilg League	12 hrs	rain event	sewage was not contained	allow flows to return to normal	Cross Lake	0 gal	7200 gal
124	12/31/2020	15AFF-51	809 Browning	12 hrs	excessive rain	sewage was not contained	allow flows to return to normal	Brush Bayou	0 gal	10000 gal
125	12/31/2020	11DD-56	Querbes	12 hrs	excessive rain	sewage was not contained	allow flows to return to normal	Bayou Pierre	0 gal	2000 gal
126	12/31/2020	33GG-51	601 Kingston Place	12 hrs	excessive rain	sewage was not contained	allow flows to return to normal	Brush Bayou	0 gal	7000 gal
127	12/31/2020	15Y-42	5808 Dianne Street	1.15 hrs	rain event	sewage was not contained	N/A	Bickham Bayou	0 gal	200 gal
128	1/4/2021	15W-45	5539 S. Lakeshore Drive	2.07 hrs	debris	sewage partially contained	unstopped by wash truck	Cross Bayou	55 gal	100 gal
129	1/4/2021	62P-43	1988 Drowning Street	1.02 hrs	lift station down	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	300 gal
130	1/4/2021	25X-51	2400 Stonewall Street	1.42 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
131	1/5/2021	17GG-48	8150 Jewella Avenue	2.2 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	100 gal
132	1/6/2021	N/A	1628 Dilg League Drive	unknown	rain event	sewage was not contained	N/A	Cross Bayou	0 gal	unknown
133	1/7/2021	46X-55	652 Robinson Place	3.1 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1 gal
134	1/7/2021	50P-43	1986 Drowning Street	1.18 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	200 gal
135	1/7/2021	50P-43	1986 Drowning Street	1 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	200 gal
136	1/8/2021	N/A	4323 Steere Drive	3 hrs	main break	sewage partially contained	set up pump	Bayou Pierre	16800 gal	1000 gal
137	1/12/2021	48X-53	2614 Samford Avenue	2 hrs	rain event	sewage was not contained	N/A	Bayou Pierre	0 gal	1000 gal
138	1/12/2021	03W-57	1422 Acron Street	2.23 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	25 gal
139	1/13/2021	14AA-54	803 Ockley Drive	0.38 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
140	1/13/2021	52Y-57	3508 Beverly Place	1.33 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
141	1/13/2021	23BB-47	4242 Illinois Avenue	1.68 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	0 gal
142	1/14/2021	29DD-50	2728 Rosemont Street	6.18 hrs	grease	sewage was not contained	unstopped by wash truck	Red River	0 gal	10 gal
143	1/14/2021	N/A	156 Waters Edge Drive	5.92 hrs	lift station down	sewage was not contained	sewer lift personnel	Bayou Pierre	0 gal	500 gal
144	1/19/2021	N/A	629 Olive Street	0.85 hrs	disconnected sewer service	sewage was not contained	N/A	Bayou Pierre	0 gal	15 gal
145	1/19/2021	19JJ-47	2955 Bert Kouns Industrial Loop	1.2 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	25 gal
146	1/20/2021	07DD-56	334 Berkshire Place	0.62 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	5 gal
147	1/21/2021	08DD-54	6300 Line Avenue	0.9 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	20 gal
148	1/22/2021	12AA-57	348 Ockley Drive	2.28 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	100 gal
149	1/23/2021	03CC-58	Chelsea Drive	1.13 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
150	1/25/2021	08DD-54	6300 Line Avenue	2.42 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	30 gal
151	1/25/2021	18U-53	1402 Buean Vista Street	5.27 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	100 gal
152	1/26/2021	N/A	2981 North Pointe Drive	1.52 hrs	lift station down	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	50 gal
153	1/26/2021	21W-55	419 Jordan Street	1.72 hrs	main break	sewage was not contained	set up pump	Bayou Pierre	0 gal	25 gal
154	1/28/2021	16Y-52	3310 Linwood Avenue	0.73 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	10 gal
155	1/29/2021	22AA-51	2558 Lindholm Street	0.92 hrs	grease	sewage was not contained	washed sewer main	Brush Bayou	0 gal	10 gal
156	2/5/2021	N/A	2222 Bert Kouns Industrial Loop	N/A	force main	sewage was not contained	main repaired by contractor	Sand Beach Bayou	0 gal	N/A
157	2/5/2021	N/A	2100 E Bert Kouns Industrial Loop	0.7 hrs	main break	sewage was not contained	contained	Red River	0 gal	3000 gal
158	2/7/2021	09EE-41	6002 Bobtail Drive	0.8 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	15 gal
159	2/9/2021	14V-52	1600 Abbie Street	1.3 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	150 gal
160	2/19/2021	50CC-54	828 Drexel Drive	2.92 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	10 gal
161	2/21/2021	31BB-58	221 Charles Avenue	2.25 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
162	2/22/2021	17X-54	1117 College Street	1.18 hrs	main break	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	3000 gal
163	2/25/2021	64V-53	1700 Snow Street	1.35 hrs	N/A	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	25 gal
164	2/27/2021	57BB-33	4609 Steere Drive	2.48 hrs	bypass pump malfunction	sewage was not contained	reestablished connection	Bayou Pierre	0 gal	75 gal
165	3/1/2021	5X-47	1628 Dilg League Drive	0.50 hrs	rain event	sewage was not contained	lift station back in service	Cross Bayou	0 gal	3000 gal
166	3/1/2021	12X-53	2102 Southern Ave.	0.95 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	N/A
167	3/1/2021	11DD-56	Querbes Drive	0.42 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	N/A
168	3/1/2021	N/A	Greenwood Road	1.25 hrs	main break	sewage was not contained	set up pump	Brush Bayou	0 gal	600 gal
169	3/2/2021	N/A	9606 Debra Joy Street	1.67 hrs	lift station down	sewage was not contained	lift station back in service	Brush Bayou	0 gal	100 gal
170	3/2/2021	5P-47	3365 Jones Mabry Road	1.1 hrs	rain event	sewage was not contained	lift station back in service	McCain Creek	0 gal	3000 gal
171	3/2/2021	48BB-46	Kennedy Drive	2.78 hrs	debris	sewage partially contained	unstopped by wash truck	Brush Bayou	100 gal	2000 gal
172	3/3/2021	23X-56	102 Dalzell Street	26 hrs	main break	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	900 gal
173	3/4/2021	45V-55	452 Stoner Ave	1.7 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
174	3/7/2021	18U-53	1400 Buena Vista Street	1.87 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	100 gal

Sanitary Sewer Overflows (SSOs)
Year 7 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
175	3/8/2021	6CC-59	109 Southfield Road	1.73 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
176	3/9/2021	N/A	Pines Road	N/A	main break	N/A	unstopped by wash truck	Gilmer Bayou	N/A	N/A
177	3/9/2021	25AA-40	4120 Inwood Road	1.03 hrs	grease	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	15 gal
178	3/9/2021	11Z-47	Country Club	2.12 hrs	grease	sewage was not contained	washed sewer main	Cross Lake	0 gal	100 gal
179	3/10/2021	4EE-56	7108 Creswell Road	1.77 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	500 gal
180	3/11/2021	13X-52	2531 Levy Street	1.88 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
181	3/12/2021	11Z-47	3132 Country Club Drive	1.62 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	50 gal
182	3/23/2021	N/A	602 Darinda Ln.	1.4 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	700 gal
183	3/23/2021	20GG-52	578 Lynbrook Blvd	0.33 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	700 gal
184	3/23/2021	1DD-55	412 Trinity Circle	0.50 hrs	rain event	sewage was not contained	washed down street; put out drip	Bayou Pierre	0 gal	25 gal
185	3/23/2021	N/A	2263 Jones Mabry Road	2.72 hrs	lift station down	sewage was not contained	sewer lift personnel	McCain Creek	0 gal	1000 gal
186	3/23/2021	15CC-55	5530 Bumcombe Road	0.97 hrs	disconnected sewer service	sewage was not contained	customer service disconnected	Brush Bayou	0 gal	10 gal
187	3/28/2021	5X-56	156 Dalzell Street	2.42 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	1000 gal
188	3/29/2021	37P-43	1900 Michoud Street	0.48 hrs	rain event	sewage was not contained	washed sewer main	Cross Bayou	0 gal	5 gal
189	3/29/2021	N/A	602 Darinda Lane	0.77 hrs	rain event	sewage was not contained	dispatched for cleanup	Brush Bayou	0 gal	10 gal
190	3/31/2021	5CC-59	5703 Anniston Ave	0.78 hrs	grease	sewage was not contained	unstopped by wash truck	Old River	0 gal	150 gal
191	4/2/2021	21Y-54	2908 Line Ave.	0.95 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	5 gal
192	4/6/2021	39V-54	1124 Sam R Fertitta Dr.	2.7 hrs	main break	sewage was not contained	set up pump	Red River	0 gal	100 gal
193	4/7/2021	5X-47	1636 Dilg League Dr.	2.52 hrs	rain event	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	60 gal
194	4/7/2021	5Z-50	3701 Hearne Ave.	0.53 hrs	rain event	sewage was not contained	unstopped by wash truck	Red River	0 gal	350 gal
195	4/8/2021	1DD-55	412 Trinity Circle	0.65 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	100 gal
196	4/8/2021	12GG-52	8636 Coyth Ln.	1.38 hrs	roots	sewage was not contained	lift station back in service	Brush Bayou	0 gal	200 gal
197	4/8/2021	3BB-54	602 Darinda Ln.	1.05 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	50 gal
198	4/9/2021	31CC-55	6203 Creswell Ave.	1.35 hrs	main break	sewage was not contained	N/A	Brush Bayou	0 gal	10000 gal
199	4/13/2021	24CC-50	2647 Meadow Ave.	1.35 hrs	grease	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	10 gal
200	4/15/2021	1X-53	2127 McClellan St.	19.63 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	50 gal
201	4/16/2021	11DD-56	Querbes Drive	1 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	1500 gal
202	4/16/2021	3U-53	Common Street	1.15 hrs	rain event	sewage was not contained	lift station back in service	Red River	0 gal	700 gal
203	4/16/2021	24KK-47	2914 Birch Drive	65.5 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	700 gal
204	4/16/2021	24KK-47	2914 Birch Drive	1.17 hrs	rain event	sewage was not contained	lift station back in service	Gilmer Bayou	0 gal	700 gal
205	4/16/2021	45Z-55	Dudley Dr.	0.17 hrs	rain event	sewage was not contained	lift station back in service	Bayou Pierre	0 gal	700 gal
206	4/16/2021	20GG-52	8742 Coyth Lane	0.25 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	700 gal
207	4/16/2021	5X-47	1636 Dilg League Dr.	0.42 hrs	rain event	sewage was not contained	lift station back in service	Cross Bayou	0 gal	300 gal
208	4/17/2021	12GG-52	578 Janet Ln.	0.83 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	300 gal
209	4/20/2021	9V-55	622 Euclid Street	3.17 hrs	debris	sewage partially contained	unstopped by wash truck	Red River	50 gal	150 gal
210	4/20/2021	N/A	3854 Michigan Blvd	1.0 hrs	rain event	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	5 gal
211	4/21/2021	6Z-47	3102 Country Club Dr.	0.63 hrs	rain event	sewage was not contained	unstopped by wash truck	Cross Lake	0 gal	5 gal
212	4/23/2021	13W-45	5553 S Lakeshore Drive	1.07 hrs	grease	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	1000 gal
213	4/24/2021	12GG-52	578 Janet Lane	0.83 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	200 gal
214	4/24/2021	20GG-52	582 Lynbrook Blvd	0.08 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	300 gal
215	4/24/2021	29GG-52	8817 Potomac Dr.	0.08 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	350 gal
216	4/24/2021	11DD-56	Querbes Drive	0.17 hrs	rain event	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	400 gal
217	4/26/2021	22V-53	1249 Oakland Street	1.0 hrs	debris	sewage was not contained	unstopped by wash truck	Cross Bayou	0 gal	15 gal
218	4/26/2021	5BB-49	3310 Clarke Blvd	0.85 hrs	disconnected sewer service	sewage was not contained	washed sewer main	Brush Bayou	0 gal	10 gal
219	4/27/2021	N/A	606 Darinda Lane	0.85 hrs	rain event	sewage was not contained	unstopped by wash truck	Brush Bayou	0 gal	15 gal
220	4/28/2021	45VV-55	452 Stoner Ave.	0.93 hrs	debris	sewage partially contained	unstopped by wash truck	Bayou Pierre	100 gal	500 gal
221	5/4/2021	31Y-57	3048 Lufkin Street	1.82 hrs	debris	sewage was not contained	unstopped by wash truck	Anderson Bayou	0 gal	200 gal
222	5/4/2021	22II-49	9041 Mansfield Road	1.4 hrs	debris	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	300 gal
223	5/4/2021	21KK-47	Normandie Drive	1.22 hrs	grease	sewage was not contained	unstopped by wash truck	Gilmer Bayou	0 gal	100 gal
224	5/5/2021	16CC-54	Pierremont Road	1.1 hrs	grease	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
225	5/6/2021	3BB-54	812 Ontario Street	2.5 hrs	roots	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	100 gal
226	5/11/2021	N/A	420 Joanna Drive	10.52 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	15 gal
227	5/11/2021	37KK-49	9436 Garfield	1.15 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	5 gal
228	5/11/2021	N/A	606 Darinda Lane	1.73 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	2500 gal
229	5/11/2021	22GG-52	534 Lynbrook Blvd	1.53 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	2000 gal
230	5/11/2021	5X-47	1636 Dilg League Drive	0.92 hrs	rain event	sewage was not contained	lift station back in service	Cross Bayou	0 gal	1000 gal
231	5/11/2021	33GG-51	601 Kingstown Place	0.42 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	3000 gal
232	5/11/2021	15AFF-51	809 Browning Street	0.25 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	1000 gal

Sanitary Sewer Overflows (SSOs)
Year 7 Summary

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233	5/11/2021	25AA-52	1814 Vivan Street	1.27 hrs	rain event	sewage was not contained	washed sewer main	Brush Bayou	0 gal	10 gal
234	5/11/2021	64FF-52	8139 Fork Bayou Lane	0.9 hrs	rain event	sewage was not contained	lift station back in service	Brush Bayou	0 gal	1000 gal
235	5/11/2021	N/A	901 Ockley Drive	0.88 hrs	lift station down	sewage was not contained	set up pump	Bayou Pierre	0 gal	200000 gal
236	5/11/2021	N/A	8433 Donna Lane	0.17 hrs	rain event	sewage was not contained	unstop sewer main with wash truck	Brush Bayou	0 gal	20 gal
237	5/11/2021	11DD-56	Brookmeade	0.58 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	2500 gal
238	5/11/2021	01DD-55	412 Trinity Circle	0.25 hrs	rain event	sewage was not contained	washed sewer main	Bayou Pierre	0 gal	15 gal
239	5/11/2021	35Z-55	Highland Avenue	0.42 hrs	rain event	sewage was not contained	manhole unstopped	Bayou Pierre	0 gal	5000 gal
240	5/12/2021	25X-51	2324 Stonewall Steet	0.83 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	200 gal
241	5/12/2021	1DD-55	413 Trinity Circle	0.83 hrs	rain event	sewage partially contained	lift station back in service	Bayou Pierre	50 gal	100 gal
242	5/12/2021	25X-51	2316 Stonewall Street	2.33 hrs	debris	sewage was not contained	unstopped by wash truck	Bayou Pierre	0 gal	300 gal