**Office of the Mayor**
*Tony T. Yarber, Mayor*

219 South President Street
Post Office Box 17
Jackson, Mississippi 39205-0017
Telephone: 601-960-1084
Facsimile: 601-960-2193

March 30, 2015

Chief, Environmental Enforcement Section
Environment and National Resources Division
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611
Re: DOJ No. 90-5-1-1-09841

Brad Ammons
Environmental Engineer
Clean Water Enforcement Branch
Municipal & Industrial Enforcement Section
U.S. EPA Region 4
61 Forsyth St., SW
Atlanta, GA 30303

Karl Fingerhood
Environmental Enforcement Section
U.S. Department of Justice
Box 7611 Ben Franklin Station
Washington, D.C. 20044-7611

RE: City of Jackson, Mississippi, EPA Consent Decree
4th Semi-Annual Report, September 2014 through February 2015

Dear Gentlemen:

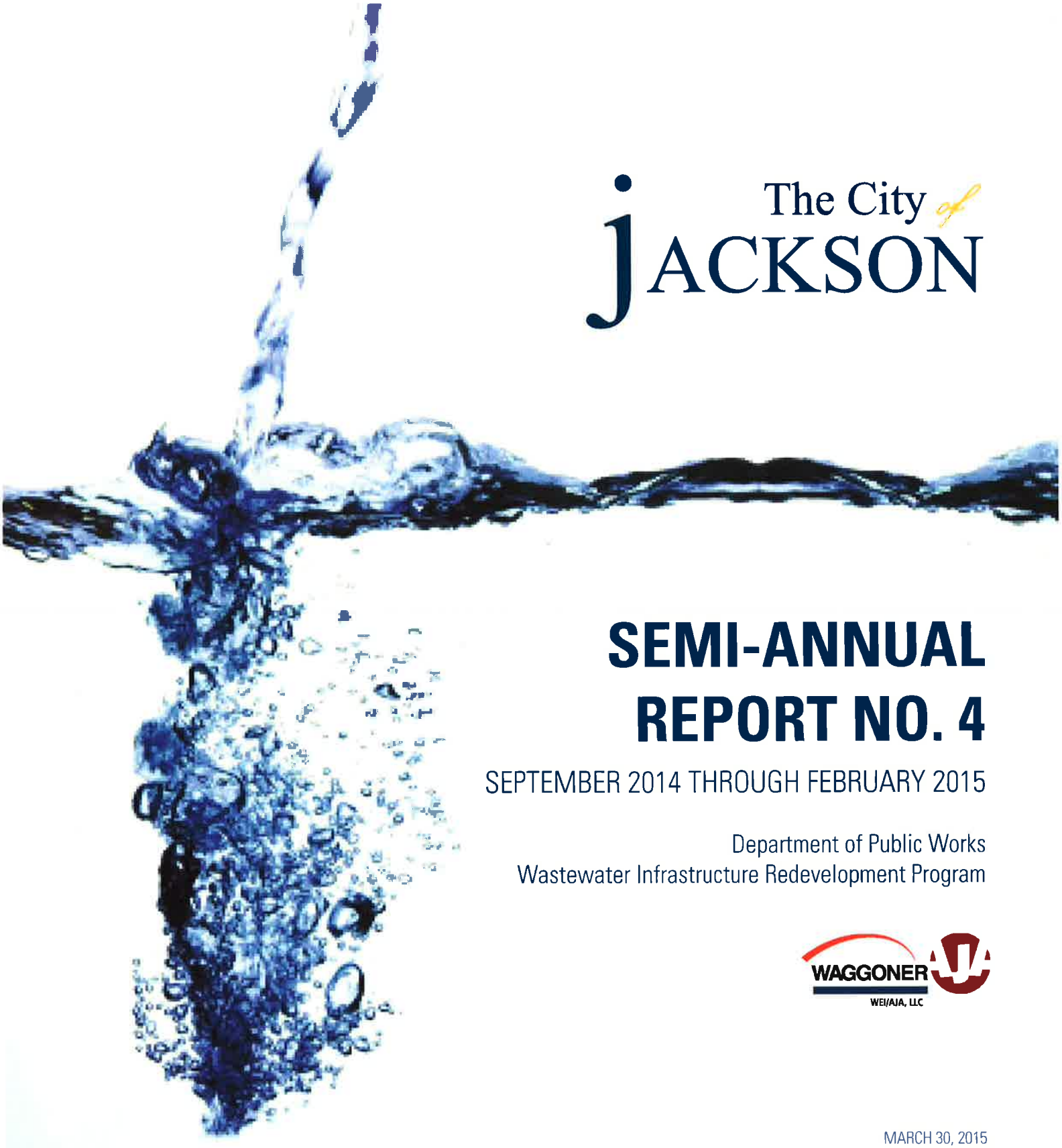
Attached please find the Semi-Annual Report for the period of September 2014 through February 2015. The report was developed and submitted by the City in accordance with the EPA Consent Decree dated March 1, 2013 and your correspondence of May 31, 2013.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

Tony T. Yarber
Mayor

cc: Les Herrington, P.E., Mississippi Department of Environmental Quality
Gus McCoy, Chief Administrative Officer
Monica Joiner, City Attorney
Kishia L. Powell, P.E., Director, Department of Public Works
Mary D. Carter, Deputy Director of Public Works
Terry Williamson, Consent Decree Manager
Public Depository, Eudora Welty Public Library



The City of JACKSON

# SEMI-ANNUAL REPORT NO. 4

## SEPTEMBER 2014 THROUGH FEBRUARY 2015

Department of Public Works
Wastewater Infrastructure Redevelopment Program

WAGGONER
WEI/AJA, LLC

MARCH 30, 2015

*City of Jackson*
*Wastewater Infrastructure Redevelopment Program*

# Semi-Annual Report No. 4
# September 2015 through February 2015

March 30, 2015

## Prepared for:

City of Jackson
Department of Public Works
P.O. Box 17
Jackson, MS 39205-0017

## Prepared by:

WEI/AJA LLC
143A LeFleurs Square
Jackson, MS 39211

# City of Jackson, Mississippi
# Semi-Annual Report No.4
# September 2014 through February 2015

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering such information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Tony T. Yarber
Mayor

3/30/15
Date

Kishia L. Powell, Director
Department of Public Works

3.27.15
Date

# Semi-Annual Report No. 4
# September 2014 through February 2015

## Contents Page

# 1.0 Introduction

## 1.1 Overview

On March 1, 2013, the Consent Decree (CD) agreed to by the City of Jackson, Mississippi, U.S. Environmental Protection Agency (EPA), and the Mississippi Department of Environmental Quality (MDEQ) regarding the wastewater collection and treatment system was entered by the U.S. Court, Southern District of Mississippi. Over a 17½ year timeline, the Consent Decree requires the City to:

- Develop, submit, finalize, and implement plans for the continued improvement of the Wastewater Collection and Transportation System (WCTS) and Wastewater Treatment Plants (WWTPs);
- Eliminate Sanitary Sewer Overflows (SSOs), effluent limit violations (including any violations of the new effluent limits for nutrients), and reporting violations, and
- Minimize Prohibited Bypasses.

One of the ongoing requirements of the EPA Consent Decree is to submit periodic reports to demonstrate continuing compliance. The specific reporting requirements of the CD are described below.

## 1.2 Authority to Promulgate

The City of Jackson Public Works Department (JPWD) established the Wastewater Infrastructure Redevelopment Program in 2004. The Waggoner Engineering/AJA Management and Technical Services joint venture company, WEI/AJA LLC, was retained to assist the City in addressing the requirements of the Consent Decree under the existing Program Management contract for the Wastewater Infrastructure Redevelopment Program. Accordingly, the Program Management team prepared this Semi Annual Report with input from the City and its various contractors to fulfill the requirements of Section IX ¶ 57 (b) set forth in the CD.

## 1.3 Consent Decree Requirements for Semi Annual Report

As stated in the Consent Decree Section IX ¶ 57 (b), the Semi Annual Report be submitted beginning thirty (30) Days after the first full six (6)-month period following the Date of Entry of this Consent Decree, and thirty (30) Days after each subsequent six (6)-month period until termination of the Consent Decree and shall contain the following, at a minimum:

Semi-Annual Reports …the City shall submit to EPA for review and approval a Semi-Annual Report. Each Semi-Annual Report shall include, at a minimum:

(i) A *description of projects and activities completed and milestones achieved* during the previous applicable six (6)-month period pursuant to the requirements of this

Consent Decree, in Gantt chart or similar format, including a description of the status of compliance or non-compliance with the requirements of this Consent Decree and, if applicable, the reasons for non-compliance. If any non-compliance cannot be fully explained at the time the report is due, the City shall include a statement to that effect in the report. The City shall investigate to determine the cause of the non-compliance and then shall submit an amendment to the report, including a full explanation of the cause of the non-compliance, within thirty (30) Days after submission of the Semi-Annual Report.

(ii) A *summary of significant projects and activities anticipated to be performed, and milestones anticipated to be achieved,* in the successive applicable six (6)-month period to comply with the requirements of this Consent Decree, in Gantt chart or similar format.

(iii) Any additional information the City determines is appropriate to demonstrate that the City is implementing the remedial actions required under this Consent Decree in an adequate and timely manner.

## 1.4 Compliance Statement

For the reporting period of September 1, 2014 through February 28, 2015, the City of Jackson, to the best of its knowledge, is in compliance with the requirements of the Consent Decree entered on March 1, 2013.

# 2.0 Summary of Activities for the Reporting Period

## 2.1 Wastewater Collection and Transmission System

### 2.1.1 West Bank Interceptor Work Plan

The Consent Decree requires that within five (5) months after the Date of Entry of this Consent Decree, the City shall submit to EPA for review and approval a West Bank Interceptor Work Plan. Upon approval by EPA, the City shall implement the West Bank Interceptor Work Plan. The West Bank Interceptor Work Plan shall include, at a minimum, the following:

(a) The proposed locations selected, and proposed methodologies and criteria that the City will implement and use, to conduct sewage flow monitoring and inspection of the West Bank Interceptor to identify and analyze structural deficiencies in the West Bank Interceptor.

(b) The methodologies and procedures the City will implement for monitoring and determining the total dry weather and wet weather (peak) flow rate in the West Bank Interceptor in order to estimate the severity of I/I in the West Bank Interceptor.

(c) The methodologies and procedures the City will implement for evaluating and assessing the West Bank Interceptor to enable the City, in the West Bank Interceptor Rehabilitation Plan set forth below, to identify any deficiencies therein and a specific list of proposed remedial measures to correct such deficiencies. The proposed remedial measures shall be performed in two (2) phases. The first phase of such remedial measures shall include cleaning of debris accumulated in the West Bank Interceptor and repairs throughout the length of the West Bank Interceptor that have been evaluated as being necessary to prevent imminent structural failure or have been evaluated as necessary to correct a major structural defect, including sources of Excessive I/I. The first phase shall also include total rehabilitation of at least 20% of the total length of the West Bank Interceptor, or a lesser amount as approved by EPA based upon justification by the City in the West Bank Interceptor Work Plan. Examples of these repairs include, but are not limited to, point repairs, manhole repairs, and replacement of sections of sewer pipe or pipe lining of critical segments. The second phase of such remedial measures shall include rehabilitation of those segments throughout the length of the West Bank Interceptor that include long-term repairs necessary for proper “Asset Management” and/or addressing sources of non-Excessive I/I. Examples of these repairs include, but are not limited to, manhole repairs, sewer pipe lining, and replacement or construction of new gravity sewer pipe segments. Asset Management is a continuous process that guides the acquisition, use, and disposal of infrastructure assets to optimize service delivery and minimize costs over the asset’s entire life.

The West Bank Interceptor Work Plan was completed and submitted to EPA on July 30, 2013 in compliance with the requirements of the Consent Decree. The City received approval on June 17, 2014. The West Bank Rehabilitation Plan is due to EPA 22 months after approval of the Work Plan; however the required submittal date in the approved work plan is August 31, 2015 since completion of the Phase 1 rehabilitation is a fixed date based on the Date of Entry of March 1, 2013.

#### 2.1.1.1 West Bank Interceptor Flow Monitoring

As indicated in the West Bank Interceptor Work Plan, the first activity required is to conduct sewage flow monitoring in order to determine the severity of I/I in various segments along the length of West Bank Interceptor. The flow metering is needed for the completion of the West Bank Interceptor Rehabilitation Plan.

**Significant milestones reached this period for the flow monitoring project are:**

- **The flow monitoring contractor, CSL Services, installed 29 meters in the WBI together with 4 rain gauges. Flow meters became operational in April and May and have collected flow data continuously, including several good rain events. No significant problems have occurred thus far**
- **I/I Analysis for the initial 6 months of data was received. Data was analyzed using FlowWorks data interpretation software**

**Significant milestones anticipated to be completed during the next reporting period:**

- **Continue Long Term Flow monitoring**

#### 2.1.1.2 West Bank Interceptor Condition Assessment

As indicated in the West Bank Interceptor Work Plan, the next activity required is to conduct a condition assessment of the West Bank Interceptor. The objective of the WBI condition assessment is to quantify the structural condition, performance, and/or progression of deterioration (i.e. remaining service life) of the system. The condition assessment is necessary for the completion of the West Bank Interceptor Rehabilitation Plan. As part of the condition assessment activities, it is also planned to inspect the entire West Bank Interceptor easement for any potential problem areas that can be identified from the surface.

**Significant milestones reached this period for the flow monitoring project are:**

- **The condition assessment work performed by Hibbard Inshore LLC commenced September 2014**
- **Accessible manholes were evaluated by a subcontractor, R&R Visual, using a 3D scanning camera. Twelve (12) inaccessible manholes were**

**not inspected during this period and will be rescheduled prior to project completion**

- **The pipeline assessment using a remotely operated inspection platform with CCTV, laser, and sonar instruments commenced in October 2014**

- **This work was interrupted due to technical difficulties experienced by Hibbard Inshore LLC and wet weather conditions; high river stages on the Pearl River continued to delay completion of the condition assessment of the line itself, but at this time the City does not anticipate that this will cause delay with completing the West Bank Interceptor Rehabilitation Plan**

**Significant milestones anticipated to begin during the next reporting period:**

- **WBI Condition Assessment is anticipated to be completed during April 2015**

- **Development of the WBI Rehabilitation Plan will commence upon completion of the condition assessment. WBI flow and condition data will be analyzed and used to evaluate I/I and determine rehabilitation needs**

The West Bank Interceptor Rehabilitation Plan is required to be submitted to EPA within twenty-two (22) months after EPA approval of the West Bank Interceptor Work Plan. The West Bank Interceptor Work Plan was approved by EPA on **June 17, 2014**. Therefore, in accordance with the Consent Decree, the West Bank Interceptor Rehabilitation Plan would be due on **April 17, 2016**. The goal for submission of the West Bank Interceptor Rehabilitation Plan is **August 31, 2015**.

### 2.1.2 Sewershed Prioritization Work Plan

The Consent Decree requires that within seven (7) months after the Date of Entry of this Consent Decree, the City shall submit to EPA for review and approval a Prioritization Work Plan which shall set forth the proposed locations selected, and proposed methodologies and criteria that the City will implement and use, to identify the severity of I/I within the WCTS, to map the Sewer System, to assess the capacity of WCTS, and to establish Sewershed priorities for further evaluation and rehabilitation of the WCTS pursuant to the Sewershed Evaluation Plan and Evaluation Report/Rehabilitation Plan. Upon approval by EPA, the City shall implement the Prioritization Work Plan. The Prioritization Work Plan shall include, at a minimum, the following:

(a) The methodologies and procedures the City will implement to estimate the severity of I/I within each Sewershed.
(b) The methodologies and procedures the City will implement for the development of a computerized digital mapping system for each Sewershed that shall include, and have the ability to display, the West Bank Interceptor, all Gravity Sewer Lines, Force Mains, Pump Stations, manholes, inverts, siphons, WWTP locations,

diversion valves, outfall locations, and all other appurtenances relating to the City's Sewer System. The mapping system does not need to include Private Laterals. The mapping system shall have the capability to store, update, and display information in a manner that will aid City personnel in the development and implementation of a Hydraulic Model, the Sanitary Sewer Evaluation Survey and the proper operation and maintenance of the Sewer System.

(c) The methodologies and procedures the City will implement for assessing the capacity of the WCTS including the West Bank Interceptor, all Pump Stations, all Major Sewer Gravity Lines, all Force Mains and siphons and their respective related appurtenances, all known SSO locations, and any other portions of each Sewershed. The capacity assessment shall include the WCTS that must be assessed so as to allow a technically-sound evaluation of the causes of SSOs and Prohibited Bypasses at the WWTPs. The capacity assessment shall specifically identify, at a minimum, the hydraulic capacities of the WCTS, and compare those capacities to existing and future projected average and peak flows in dry and wet weather. This assessment shall identify those portions of the WCTS that are expected to cause or contribute to SSOs and/or Prohibited Bypasses at the WWTPs under existing and future projected average and peak flows in dry and wet weather, and the degree to which those portions experience or cause, under current or projected future conditions, SSOs and/or Prohibited Bypasses at the WWTPs. As part of the capacity assessment, the City shall use the information it is required to develop pursuant to Section VI.B to assess existing and future projected capacity of the WCTS and the ability of the WCTS to transmit peak flows experienced by and predicted for the WCTS.

(d) The methodologies and procedures the City will implement to develop a computerized Hydraulic Model of the WCTS within each Sewershed using a hydraulic modeling software package. The City shall use the Hydraulic Model in the assessment of the hydraulic capacity of the WCTS in that Sewershed and in the identification of appropriate rehabilitative and corrective actions to address all capacity and condition limitations identified in that Sewershed's WCTS. The City shall develop the Hydraulic Model to provide a detailed understanding of the response of the WCTS to wet weather events and an evaluation of the impacts of proposed remedial measures and removal of I/I flow.

The City shall configure the Hydraulic Model to accurately represent the City's WCTS, in accordance with currently accepted engineering practice. The City may model its WCTS in different levels of detail, as necessary to identify the causes of all known SSOs and to assess proposed remedial measures with the goal of eliminating those SSOs. The City's Hydraulic Model shall include at a minimum the West Bank Interceptor, all Major Gravity Lines and associated manholes, and all Pump Stations and associated Force Mains.

The City shall configure the Hydraulic Model using adequate, accurate, and sufficiently current physical data (e.g., invert and ground elevations, pipe

diameters, slopes, pipe run lengths, Manning roughness factors, manhole sizes and configurations, Pump Station performance factors) for its WCTS. In particular, the City shall field verify the physical data to allow calibration and verification of the model.

The City shall calibrate and verify the Hydraulic Model using appropriate rainfall data, actual hydrographs, and WCTS flow data. The City shall use at least three (3) separate data sets each for calibration and verification. As part of the calibration process, the City shall either use existing sensitivity analyses for the selected model, or carry out its own sensitivity analyses, such that calibration effectiveness is maximized.

The Hydraulic Model shall, at a minimum, include:

(i) a description of the Hydraulic Model that includes the criteria set forth above;
(ii) specific attributes, characteristics, and limitations of the Hydraulic Model;
(iii) identification of all input parameters, constants, assumed values, and expected outputs;
(iv) digitized map(s) and schematics that identify and characterize the portions (including the specific Gravity Sewer Lines) of the WCTS that shall be included in the Hydraulic Model;
(v) identification of input data to be used;
(vi) configuration of the Hydraulic Model;
(vii) procedures and protocols for performance of sensitivity analyses (*i.e.*, how the Hydraulic Model responds to changes in input parameters and variables including the use of various design storms of varying durations and intensities);
(viii) procedures for calibrating the Hydraulic Model to account for values representative of the WCTS and WWTPs using actual system and WWTP data (*e.g.*, flow data); and
(ix) procedures to verify the Hydraulic Model's performance using additional, independent actual Sewer System data (*e.g.*, flow data).

(e) The methodology and criteria for prioritizing Sewersheds or groups of Sewersheds in order to conduct the phased evaluation and rehabilitation of the WCTS in each Sewershed as required by this Consent Decree. The criteria for prioritizing Sewersheds shall include, at a minimum, the following:

(i) the severity of the estimated I/I in the Sewersheds;
(ii) the frequency, volume and location of SSOs in the Sewersheds;
(iii) the relative potential impact of SSOs in the Sewersheds to human health and the environment;

(iv) the average age of Gravity Sewer Lines within each Sewershed;
(v) the pipe material used within each Sewershed; and
(vi) any ongoing rehabilitation or corrective action work in the Sewersheds including detailed information on the current status and completion dates for such work.

(f) The methodologies, procedures and criteria for developing proposed schedules for implementing and completing the evaluation and rehabilitation of the WCTS in each Sewershed or groups of Sewersheds as required by this Consent Decree.

The Sewershed Prioritization Report, as required in Paragraph 25 of the Consent Decree, shall be submitted within thirty-two (32) months after EPA approval of the Prioritization Work Plan. The Prioritization Work Plan was approved by EPA on **June 17, 2014** therefor the Sewershed Prioritization Report is due on or before **February 16, 2017**.

**Significant milestones reached this period for the prioritization plan are:**

- **ADS Environmental Services, flow monitoring contractor, installed 46 meters and 4 additional rain gauges in various sewersheds throughout the City.**
- **Monitoring period began on September 10, 2014**
- **Initial 90 day monitoring period was extended through January 24, 2015 to collect additional wet weather events**
- **Continued work on WCTS computerized mapping system using ESRI ArcMap 9.3.1**

**Significant milestones anticipated to be continued during the next reporting period:**

- **Analyze temporary flow monitoring and rainfall data**
- **Prioritize the sewersheds for more detailed investigation in accordance with the approved Sewershed Prioritization Work Plan and Sewershed Evaluation Plan.**
- **Continue work on WCTS computerized mapping system**
- **Continue development of Hydraulic model**
- **Continue to research available records to determine pipe segment age and material**
- **Continue Pump Station assessments in conjunction with Sewershed Evaluation Plan requirements**

### 2.1.3 Sewershed Evaluation Plan

The Consent Decree requires that within twelve (12) months after the Date of Entry of this Consent Decree, the City shall submit to EPA for review and approval a Sewershed Evaluation Plan that the

City will implement for the Sewersheds in Sewer Groups 1 and 2 pursuant to the schedule set forth in the approved Prioritization Report. The Sewershed Evaluation Plan shall provide for the City to evaluate the WCTS within the Sewersheds in order to support the development of the Evaluation Report/Rehabilitation Plan for the Sewershed, as provided in Paragraph 27 and the identification of rehabilitative and corrective actions to meet the objectives of this Consent Decree. The City's evaluation of the Sewersheds shall include (and the Sewershed Evaluation Plan shall describe) at minimum the following requirements:

(a) Sanitary Sewer Evaluation Survey. The Sewershed Evaluation Plan shall provide for the City to characterize and address the structural integrity of the WCTS and to identify means to improve WCTS capacity and eliminate SSOs and Prohibited Bypasses at the WWTPs, including the identification and reduction of I/I, by conducting a Sanitary Sewer Evaluation Survey for the Sewershed. The Sanitary Sewer Evaluation Survey component of the Sewershed Evaluation Plan shall include, at a minimum, the following:

(i) the criteria that the City will use for establishing the location of flow and rainfall monitoring equipment installation for the Sewershed evaluations, and for determining whether the City will install the flow and rainfall monitoring equipment either permanently or temporarily, in order to adequately characterize flow in the Sewershed

(ii) a map showing the location of each permanent and temporary flow and rainfall monitoring site established in the WCTS;

(iii) a description of the data management system that will organize, analyze, and report flow and rainfall data collected from the WCTS;

(iv) a description of the quality assurance and quality control program the City will follow to ensure the accuracy and reliability of flow and rainfall data collected from the WCTS;

(v) procedures to identify and evaluate I/I in the Sewersheds (including, without limitation, Private Laterals);

(vi) dry weather monitoring to characterize base flows and wet weather monitoring following events of sufficient duration and intensity to characterize peak flows;

(vii) techniques for reducing Infiltration;

(viii) a program to eliminate sources of Inflow (including legal mechanisms and enforcement programs);

(ix) a program to identify and eliminate cross connections between the WCTS and the City's municipal separate storm sewer system;

(x) methodologies to evaluate the success of items (v) through (ix) above;

(xi) a review of the legal authority in the current sewer use ordinance to require that the owner of an illegal stormwater connection to the WCTS take all appropriate steps necessary to eliminate the connection;

(xii) if the review of the legal authority indicates a need to amend the legal authority in order to assume better control over illegal stormwater connections to the WCTS, the Plan shall include the proposed revisions to the ordinance with a schedule for proposing the draft ordinance to the City Council for adoption;

(xiii) decision-making criteria, procedures, and protocols for prioritization of the evaluation and rehabilitation of Gravity Sewer Lines and associated manholes;

(xiv) decision-making criteria, procedures, and protocols to determine the need for, and the conduct of, internal condition inspection of Gravity Sewer Lines and associated manholes;

(xv) decision-making criteria, procedures, and protocols to determine the need for, and the conduct of, grouting in Gravity Sewer Lines and associated manholes (e.g., leakage rate for application of grout);

(xvi) decision-making criteria, procedures, and protocols used to determine the need for, and the conduct of, smoke testing;

(xvii) decision-making criteria, procedures, and protocols used to determine the need for, and the conduct of, dye testing;

(xviii) decision-making criteria, procedures, and protocols used to determine the need for, and the conduct of, point repair(s), slip lining or line replacement;

(xix) decision-making criteria, procedures, and protocols to determine whether I/I from a Private Lateral is excessive and needs to be addressed;

(xx) decision-making criteria, procedures, and protocols to determine the need for, and the conduct of, flow isolation of Gravity Sewer Lines and associated manholes;

(xxi) guidelines for conducting a cost-effectiveness analysis to consider the rehabilitation costs for I/I sources and rainfall-induced I/I source eliminations versus the costs of transportation, storage, and treatment; and

(xxii) documentation of the basis and criteria for rehabilitation, transportation, storage, and treatment costs.

(b) Pump Station Evaluations. The Sewershed Evaluation Plan shall provide for the City to evaluate the design capacity, current effective capacity, equipment condition, and operational redundancy in its Pump Stations in the Sewersheds. This evaluation shall include, at a minimum, the following criteria:

(i) adequacy of station capacity;

(ii) critical response time, defined as the time interval between activation of the high wet well level alarm and the first SSO, under peak flow conditions;

(iii) adequacy of station condition, based upon both physical inspection and any available operating and mechanical failure history during at least the past five (5) years preceding the lodging date of the Consent Decree;

(iv) adequacy of station design and equipment, including redundancy of pumps and electrical power supply (including whether emergency or back-up power is available on a portable or fixed basis), and other equipment installed, based upon the most current edition of MDEQ's *Guidance for the Design of Publicly Owned Wastewater Facilities*; and

(v) the ability of maintenance personnel to take corrective action within the critical response time calculated for each Pump Station.

**Significant milestones reached this period for the Sewershed Evaluation Plan are:**

- **No milestone activities were required by the approved Sewershed Evaluation Plan during this period**
- **Began preliminary work on Pump Station Evaluations**

## Significant milestones anticipated to be continued during the next reporting period:

- **No milestone activities are required by the approved Sewershed Evaluation Plan during this period**
- **Continue work on Pump Station Evaluations in conjunction with Prioritization Work Plan**

The Sewershed Prioritization Report is due to EPA 32 months or **February 16, 2017**afterapproval. This report will determine which sewersheds will be grouped into Sewer Group 1. After approval of the Sewershed Prioritization Report, the City will begin implementation of the approved Sewershed Evaluation Plan which is currently projected to be on or about **May 16, 2017**.

## 2.2 Wastewater Treatment Facilities

### 2.2.1 Savanna WWTP Comprehensive Performance Evaluation

The Consent Decree requires that within fifteen (15) months after the Date of Entry of this Consent Decree, the City shall submit to EPA for review and approval a CPE for the Savanna Street WWTP. The CPE shall be consistent with the EPA publications *Improving POTW Performance Using the Composite Correction Approach,* EPA CERI, October 1984, and *Retrofitting POTWs,* EPA CERI, July 1989, and the most current edition of MDEQ's *Guidance for the Design of Publicly Owned Wastewater Facilities*. The purpose of the CPE is to identify flow and/or loading rate restricted treatment process unit(s) at the Savanna Street WWTP. Upon approval by EPA, the City shall implement the CPE in accordance with the schedule contained therein. The CPE shall include, at a minimum, the following:

(a) An in-depth diagnostic evaluation of the capacity and operation of the Savanna Street WWTP and its ability to provide Secondary Treatment to all dry and wet weather flow and otherwise meet all terms of the NPDES Permit.

(b) An evaluation of the major individual unit processes, identification of all performance-limiting factors, prioritization of performance-limiting factors, and a comprehensive assessment of the ability to improve performance with a CCP.

(c) Identification of whether the design requirements for the Savanna Street WWTP are consistent with the most current edition of MDEQ's *Guidance for the Design of Publicly Owned Wastewater Facilities*.

(d) Identification of design flow capacity requirements for the Savanna Street WWTP to adequately treat 100% of the peak annual dry weather flow, including providing Secondary Treatment without experiencing a Prohibited Bypass.

(e) Identification of design capacity requirements to adequately treat 100% of the peak wet weather flow, including providing Secondary Treatment for all flows without experiencing a Prohibited Bypass. The CPE may include estimated wet weather flow anticipated after performance of I/I reduction efforts identified in the Rehabilitation Plans for the WCTS and after sludge/solids removal at the Savanna Street WWTP.

(f) Identification of design requirements necessary to treat sewage to the level established by the most current MDEQ effluent permit requirements, including to the extent feasible any planned TMDLs to be implemented by MDEQ.

(g) A schedule and procedures that the City will use to prepare a Composite Correction Plan ("CCP"), as set forth below, based on the results of the CPE.

(h) Use of flow modeling and other appropriate techniques to evaluate Savanna Street WWTP capacity and operation, taking into account the net (cumulative) increase or decrease to the existing volume of wastewater introduced to the Savanna Street WWTP as a result of the City's actual and anticipated increases in flow from the authorization of new sewer service connections and/or from existing sewer service connections pursuant to Paragraph 33 of the Consent Decree, and the reduction of I/I into the WCTS as a result of any remedial measures taken pursuant to Section VI.B of the Consent Decree.

(i) A schedule for submission of the CCP; provided, however, that for submission of the CCP, such schedule shall not exceed twelve (12) months after EPA's approval of the CPE.

**Significant milestones reached this period for this activity:**

- **Submitted responses to review comments on September 28, 2014**

**Significant milestones anticipated to be completed during the next reporting period:**

- **Receive approval of CPE from EPA**
- **Begin work on Composite Correction Program**

### 2.2.2 Savanna WWTP Storm Cell Renovation and Sludge Removal

The Consent Decree requires that as set forth in Section 2.D of the MDEQ Agreed Order I, the City has agreed to implement a Sludge and Solids Removal Plan that provides for the removal and proper disposal of excess, accumulated sludge/solids from the Savanna Street WWTP storm diversion cells. The Parties agree that the City shall implement the Sludge and Solids Removal Plan as an enforceable obligation under this Consent Decree. Section 2.D of the Agreed Order as amended September 29, 2011 states

*"…In any event, Respondent , in accordance with the implementation schedule, shall remove all sludge not later than April 30, 2014 and shall dispose of all removed sludge no later than December 31, 2017"*.

**Significant milestones reached this period for this activity:**

- **Completed Project closeout**

### 2.2.3 Savanna WWTP Storm Cell Sludge Disposal

**Significant milestones reached this period for this activity:**

- **Developed a Request for Proposals (RFP) for sludge disposal services for removal of the approximately 305,000 wet tons of sludge currently stored in the geotubes.**
- **Advertised Request for Proposal February 26,2015**

**Significant milestones anticipated during the next reporting period:**

- **Receive Request for Proposals on April 7, 2015**
- **Completion of the proposal assessment period/Section of winning proposal on April 21, 2015**
- **Execute contract with selected Contractor by May 28, 2015**
- **Issue Notice to Proceed and begin work June 2015**

### 2.2.4 Presidential Hills Wastewater Treatment Plant Project

The Consent Decree requires that as set forth in Sections 2.B., C. and D. of the MDEQ Order II, the City has agreed to implement certain remedial measures to address NPDES permit effluent limitation violations at the Presidential Hills WWTP. To comply with the Order, the City agreed to construct a new 750,000 gallon per day Sequencing Batch Reactor treatment facility, influent pumping station and other related appurtenances as recommended in the Engineering Report required in Section 2.B of the Order.

**Significant milestones reached this period for this activity:**

- **Final Transfer of O & M responsibility to Contract Operator on November 13, 2014**
- **Demolished old Facility**
- **Completed project close out**
- **New Facility meeting Permit limits**

## 2.3 Capacity, Management, Operations and Maintenance Programs

The Consent Decree Section VI, D ¶ 31 through 43 requires the City to implement various programs in order to properly manage, operate and maintain sanitary wastewater collection, transmission and treatment systems, investigate capacity-constrained areas of these systems, and respond to SSO events. One of the reporting requirements of the Annual Report as outlined in the Consent

Decree Section IX, D ¶ 57 (i) requires "*A summary of the CMOM Programs implemented or modified pursuant to this Consent Decree, including a comparison of actual performance with any performance measures that have been established."* therefore the status of development and implementation of the required CMOM programs for the period September 2014 through February 2015 will be reported as required in the Annual Report covering the period from March 2014 through February 2015 due April 30, 2015.

## 2.4 Supplemental Environmental Project

The purpose of the Supplemental Environmental Project ("SEP") is to reduce extraneous flows entering the Wastewater Collection and Transmission System (WCTS) through defective residential Private Laterals and through illicit connections from residential properties of eligible property owners. For purposes of this SEP, an illicit connection is any residential connection to the WCTS that discharges any substance or solution that is not intended to be transferred via the WCTS, such as stormwater, surface water runoff and roof runoff. The WCTS becomes a conduit for stormwater when defective Private Laterals or illicit connections allow rain or groundwater to enter the WCTS. Certain components of the WCTS Evaluation Plan required by Section VIII of the Consent Decree will assist the Cityin identifying defective Private Laterals in need of repair or replacement and illicit connections to the WCTS.

**Significant milestones reached this period for this activity:**

- **Developed scope of work, forms, fee schedule, and contracts for repair of defective laterals by local plumbing contractors.**
- **Developed list of licensed plumbers capable of completing the required lateral repairs.**
- **Developed the application for financial hardship qualifications for low to moderate income residential property owners.**
- **Developed an initial list of eligible addresses based on smoke testing results from a prior city-wide SSES study.**
- **Developed an RFP that will be issued to plumbing contractors for participation in the SEP program.**
- **Submitted Semi Annual Report #4**
- **Advertised the Request for Qualifications (RFQ) from contractors to begin private service lateral replacement**

**Significant milestones anticipated during the next reporting period:**

- **Receive Request for Qualifications (RFQ) on March 10, 2015**
- **Select Contractor and begin work**
- **Submit Semi Annual Report #5**

# 3.0 Other Significant Activities

## 3.1 West Bank Interceptor Rehabilitation Projects

**The West Bank Interceptor Sewer Rehabilitation, Phase 3, City Project No. 20505701, Contract II**, extends north from MH IT-0067 approximately 6,600 L.F. to Eubanks Creek. The work generally consists of Clear and grub the existing easement to allow the work to be done, provide temporary bypass pumps and piping necessary to complete the work, clean pipe and perform closed circuit television inspection prior to rehabilitation of approximately 6,600 L.F. of 60" pipe and 16 manholes, furnish and install approximately 6,600 linear feet of slip lining pipe and rehabilitate and/or replace 16 existing manholes.

**Significant milestones reached this period for this activity:**

- Contractor re-mobilized in October 2014
- Contractor completed slip lining process in December 2014
- Contractor completed all manhole rehabilitation in February 2015

**Significant milestones anticipated to be completed during the next reporting period:**

- Complete site dress-up and grassing
- Contract time ends March 30, 2015

**The West Bank Interceptor Sewer Rehabilitation, Phase 4 and 5, City Project No. 20505704.** The City applied for and received a WPCRLF loan offer from MDEQ for $19,000,000 on September 26, 2014. This project includes rehabilitation of approximately 14,000 LF of 54" interceptor, including manhole rehabilitation, from Eubanks Creek to near Meadowbrook Road, as well as an allowance for manhole rehabilitation/replacement along the reach of the West Bank Interceptor.

**Significant milestones reached this period for this activity:**

- Completed all field surveys for design phase services
- Completed all review and information gathering related to property and existing easements
- Began development of plans and specifications

**Significant milestones anticipated to be completed during the next reporting period:**

- Submit plans and specifications to MDEQ for approval by May 28, 2015
- Secure approval of plans, specifications and contract documents on each construction contract from MDEQ by August 26, 2015

## 3.2 Collection System Replacement Projects

The City of Jackson has entered into a Performance Contracting Agreement with Siemens Industry, Inc., Building Technologies Division (Siemens) for Water Infrastructure Improvements. As part of that contract, SIEMENS will provide sewer collection line repairs at the below locations. This includes labor and material for a complete line repair as described. Asphalt repairs, erosion control, bypass pumping; select fill, traffic control, and fence removal/replacement are included on an as-needed basis.

- Wilshire Avenue
  - Remove and replace 600 linear feet of twenty-one inch (21") sewer line;
  - Remove and replace 400 linear feet of eighteen inch (18") sewer line;
  - Includes three (3) manholes;
  - Includes one (1) stream crossing;

- 300 Block of Rollingwood Drive
  - Remove and replace 1,140 linear feet of eight inch (8") and ten inch (10") sewer line;
  - Includes four (4) manholes;
  - Includes one (1) stream crossing;

- 2704 Quail Run at Eastover
  - Remove and replace 320 linear feet of twelve inch (12") sewer line;

- 2115 Robin Drive
  - Remove and replace 1,125 linear feet of twelve inch (12") sewer line;
  - Includes six (6) manholes;

- 220 Dixon Road to 1-220
  - Remove and replace 1,200 linear feet of twelve inch (12") sewer line;
  - Includes three (3) manholes;

- East Northside Drive
  - Relocate 500 linear feet of sewer line from side of street to middle of street from Eastwood Road to Culleywood Drive;
  - Includes two (2) manholes;

- Pearl Street
  - Remove and replace 260 linear feet of eight inch (8") sewer line;
  - Includes two (2) manholes;

- 2234 West Highway 80
  - Repair of thirty inch (30") sewer line from Lynch Creek interceptor at Hattiesburg Street going west to the north turn of line;

- McClure Road at Meadow Lane
  - Replace 2,250 linear feet of fifteen inch (15") sewer line;
  - Replace ten inch (10") sewer line with a fifteen inch (15") sewer line from intersection of Meadow Lane and Wildwood Terrace to South Sunset Terrace;

- 3838 Eastover Drive to 3900 Eastover Drive
  - Replace six inch (6") sewer line with eight inch (8") sewer line;
  - Includes five (5) manholes;
- Beasley Road to Meadow Road
  - Repair of thirty inch (30") sewer line;
  - Includes two (2) stream crossings and lining of pipe;

- 2212 Heritage Hill Drive
  - Remove and replace 400 linear feet of eight inch (8") sewer line;
  - Includes one (1) manhole;

- 5044 Wayneland Drive
  - Removal of 700 linear feet of six inch (6") sewer line;
  - Replace six inch (6") sewer line with eight inch (8") sewer line;
  - Includes two (2) manholes;

- South Drive/ Galvez Street to Jayne Avenue
  - Remove and replace 2,300 linear feet of twenty-one inch (21")sewer line;
  - Includes six (6) manholes;
  - Includes two (2) stream crossings;

- Liberty Street to Coleman Avenue
  - Remove and replace 60 linear feet of fifteen inch (15") sewer line;
  - Includes one (1) stream crossing.

- 1500 Block of Sheffield Drive
  - Repair 8" Sewer Line Collapse

Additional Projects added to Scope of Siemens contract since last report:

- Pleasant Avenue (from Glendale Street to Hull Street intersection)
  - Install approx. 200 linear feet of twelve inch (12") sewer line;
  - Includes three (3) new manholes;
  - Abandon and grout existing sewer and fill manhole with sand

- Beatty Street (from Zhender Street to Allen Street intersection)
  - Replace approx. 250 linear feet of eight inch (8") sewer line;
  - Includes one (1) new manhole

**The following project were completed during the reporting period:**

**Location**

- **2115 Robin Drive**

**The following projects are currently scheduled to be completed during the next reporting period:**

**Location**

- **Pearl Street**
- **5044 Wayneland Drive**

## 3.3 Savanna WWTP Influent Pump Station

The Savanna Influent Pump station has a total of four raw sewage pumps. Three 30 MGD pumps, which pump to the headworks of the mechanical plant and one 100 MGD pump that is used during high flow conditions to divert the excess flow to the storm cells for storage and then later returned to the pump station for treatment in the mechanical plant. In February 2013, the 100 MGD Pump # 4 failed. Eleven temporary diesel bypass pump with a nominal capacity of 10 MGD each were installed to divert excess flows to the storm cells. Repair as well as replacement options were evaluated.

**Significant events during the reporting period:**

- 100% Complete Final Plans and Specifications
- Project advertised for Bids February 5th and 12th

**Significant milestones anticipated/events during the next reporting period:**

- Receive Bids March 17th
- Award Bid to successful Contractor April 21st
- Issue Notice to Proceed to Contractor May 8th
- Complete Construction on August 6th

# 4.0 Consent Decree Progress Schedule

A Gantt chart indicating the overall progress of Consent Decree required activities and major milestones is shown on the following page.

# City of Jackson, MS

## Consent Decree Schedule 2013-2015

| | ear 2014 | Fiscal Year 2015 | | | | | | | | | | | | Fiscal Year 2016 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
| **Program Management Support** | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 |
| Supplemental Environmental Project (SEP) | Develop Plan | | | | | | | Implementation | | | | | | | | |
| **West Bank Interceptor** | | | | | | | | | | | | | | | | |
| West Bank Interceptor Work Plan | | | | | | | | | | | | | | | | |
| Flow Monitoring | Flow Moni | | | | | | | | | | | | | | | |
| Inspection and Structural Evaluation of West Bank Interceptor | CCTV / Physical Inspection | | | | | | | | | | | | | | | |
| Flow Data and Structural Evaluation Analysis | Data and Structural Evaluation Analysis | | | | | | | | | | | | | | | |
| West Bank Interceptor Evaluation Report and Rehabilitation Plan | | | | | | | | | Prepare Plan | | | | | | | |
| West Bank Interceptor Design and Construction - Phase 1 | | | | | | | | | | | | | | | | |
| West Bank Interceptor Activity Report - Phase 1 | | | | | | | | | | | | | | | | |
| West Bank Interceptor Design and Construction - Phase 2 | | | | | | | | | | | | | | | | |
| West Bank Interceptor Activity Report - Phase 2 | | | | | | | | | | | | | | | | |
| **Wastewater Collection & Transportation System** | | | | | | | | | | | | | | | | |
| Sewershed Prioritization Work Plan | | | | | | | | | | | | | | | | |
| Flow Monitoring | | | | | | | | | | | | | | | | |
| Sewershed Characterization | | | | | | | | | | | | | | | | |
| WCTS Mapping | rification/M | | | | | | | | | | | | | | | |
| WCTS Capacity Assessment (Pump Stations, Lines, Etc.) | | | | | | | | | | | | | | | | |
| Hydraulic Modeling | odel Select | Model Development | | | | | | | | | | | | | | |
| Sewershed Prioritization Activities and Report | | | | | | | | | | | | | | | | |
| Sewershed Evaluation Plan | | | | | | | | | | | | | | | | |
| WCTS Evaluation - Flow Monitoring, SSES, Etc. - Sewershed Group 1 | | | | | | | | | | | | | | | | |
| WCTS Evaluation Report Group 1 | | | | | | | | | | | | | | | | |
| WCTS Rehabilitation Design and Construction Group 1 | | | | | | | | | | | | | | | | |
| WCTS Rehabilitation Activity Report (Group 1) | | | | | | | | | | | | | | | | |
| WCTS Evaluation - Flow Monitoring, SSES, Etc. - Sewershed Group 2 | | | | | | | | | | | | | | | | |
| WCTS Evaluation Report Group 2 | | | | | | | | | | | | | | | | |
| WCTS Rehabilitation Design and Construction Group 2 | | | | | | | | | | | | | | | | |
| WCTS Rehabilitation Activity Report (Group 2) | | | | | | | | | | | | | | | | |
| **Savanna WWTF, PH, Trahon** | | | | | | | | | | | | | | | | |
| Comprehensive Performance Evaluation (CPE) of SSWWTF | Document Review/Approval | | | | | | | | | | | | | | | |
| Composite Correction Plan (CCP) of SSWWTF | | | | | | | | Prepare Composite Correction Program for Savanna WWTF | | | | | | | | |
| Short Term Corrective Actions | | | | | | | | | | | | | | | | |
| Long Term Corrective Actions | | | | | | | | | | | | | | | | |
| SSWWTF - Remove Sludge From Storm Cells | | | | | | | | | | | | | | | | |
| SSWWTF - Dispose of Sludge Removed From Storm Cells | Contract Development | | | | | | | Contract Award | | Begin Disposal | | | | | | |
| Presidential Hills NPDES Compliance | Achieve Compliance | | | | | | | | | | | | | | | |
| **CMOM Activities** | | | | | | | | | | | | | | | | |
| Training Program | Implementation | | | | | | | | | | | | | | | |
| Capacity Assurance Program (CAP) | | | | | | | | | | | | | | | | |
| Sewer Overflow Response Plan (SORP) | cking, analy | Training, tracking, analysis, reporting | | | | | | | | | | | | | | |
| Interjurisdictional Agreement Program | Program Development | | | | | | Program Review/Approval | | | | | | | | | |
| Private Lateral Program | Program Development | | | | | | Program Review/Approval | | | Implementation | | | | | | |
| Water Quality Monitoring Program | Program Development | | | | | | Program Review/Approval | | | Implementation | | | | | | |
| Pump Station Operations Program | Implementation | | | | | | | | | | | | | | | |
| Fats, Oils and Grease (FOG) Program | Program Development | | | | | | Program Review/Approval | | | Implementation | | | | | | |
| Pump Station Maintenance Program | Implementation | | | | | | | | | | | | | | | |
| Gravity Line Preventative Maintenance Program | Program Review/Approval | | | | | | | Implementation | | | | | | | | |
| WWTF Operation and Maintenance Program | Program Review/Approval | | | | | | | Implementation | | | | | | | | |
| Financing & Cost Analysis Program | Program Review/Approval | | | | | | | | | | | | | | | |