Project #6: City of Chickasaw Sewer Rehabilitation Project

Project Description/Summary

a) The proposed project will include the engineering and design, installation of Cured-In-

Place-Pipe (CIPP), and the replacement of infrastructure to reduce the wet weather flow volume requiring treatment at the Wastewater Treatment Facility (WWTF) located on Chickasaw Creek adjacent to the Mobile River. This proposed project will support the restoration and protection of water quality of the Gulf Coast Region's fresh, estuarine, and marine water resources by reducing or treating nutrient and pollutant loading and improving the management of discharges to Chickasaw Creek, and ultimately, Mobile Bay.

Activities also include the comprehensive administration of this grant, including, but not limited to, project development and oversight, contracting, and sub-recipient monitoring.

a. **Need:** Untreated wastewater is a significant source of pollutants to the Chickasaw Creek, Mobile River, and Mobile Bay Estuary system. Many of the City's sewer lines are in a deteriorated condition due to age, shifting soils, and root intrusion, which results in excessive inflow and infiltration during wet weather events. The City has prioritized several areas where the sewer collection lines are failing, and the City of Chickasaw Sewer Rehabilitation Project would address the most critical of these.

Purpose: The purpose of the City of Chickasaw Sewer Rehabilitation project is to restore and protect water quality by rehabilitating aged and deteriorated gravity sewers to reduce inflow and infiltration resulting from wet weather events.

Objective: The primary objective of this project is to:

- Complete design for Gravity Sewer Rehabilitation; and
- Complete construction for Gravity Sewer Rehabilitation to restore, improve, and protect water resources.
- b. This project is located in the City of Chickasaw in Mobile County, Alabama.
- c. This project is expected to begin 7/1/2019 and end 6/30/2024 (5 years).
- d. The proposed project will be implemented by the City of Chickasaw.
- b) This project will improve water quality in Chickasaw Creek which eventually flows into Mobile Bay, the fourth largest estuary in the United States. Improved water quality leads to enhanced ecosystem health and recreational opportunities resulting in the restoration of the Gulf economy.

Eligibility and Statutory Requirements

This activity is located in the Gulf Coast Region and is eligible for Spill Impact Component funding under Category #1 - Restoration and protection of the natural resources, ecosystems, fisheries, marine and wildlife habitats, beaches, and coastal wetlands of the Gulf Coast region (primary). Secondary activities include Category #3 - Implementation of a federally approved marine, coastal, or comprehensive conservation management plan, including fisheries monitoring.

Comprehensive Plan Goals and Objectives

This project is consistent with the following Comprehensive Plan goals:

- Goal 1: Restore and Conserve Habitat Restore and conserve the health, diversity, and resilience of key coastal, estuarine, and marine habitats;
- Goal 2: Restore Water Quality and Quantity Restore and protect water quality of the Gulf Coast region's fresh, estuarine, and marine waters; and
- Goal 5: Restore and Revitalize the Gulf Economy Enhance the sustainability and resiliency of the Gulf economy.

This project complies with the following Comprehensive Plan objectives:

- Objective 1: Restore, Enhance, and Protect Habitats Restore, enhance, and protect the extent, functionality, resiliency, and sustainability of coastal, freshwater, estuarine, wildlife, and marine habitats. These include barrier islands, beaches, dunes, coastal wetlands, coastal forests, pine savannahs, coastal prairies, submerged aquatic vegetation, oyster reefs, and shallow and deepwater corals; and
- Objective 2: Restore, Improve, and Protect Water Resources Restore, improve, and protect the Gulf Coast region's fresh, estuarine, and marine water resources by reducing or treating nutrient and pollutant loading; and improving the management of freshwater flows, discharges to, and withdrawal from critical systems.

Major Milestones

- a) Milestone 1: Engineering and design to support permit applications.
- b) Milestone 2: Construction contract awarded
- c) Milestone 3: Complete construction
- d) Milestone 4: Monitor water quality improvements consistent with the Observational Data and Management Plans

Success Criteria/Metrics/Outcomes

The anticipated outcome of Chickasaw Sewer Rehabilitation Project will be:

• Rehabilitation of aged and deteriorated sewer infrastructure

Activity	Anticipated Project Success Criteria/Metrics	Short-term outcome	Long-term outcome
	Completed plans for engineering and design		
Implementation of Gravity Sewer	Repair of 15,900 linear feet of pipe	Reduction of SSO incidents	Improved water quality
Rehabilitation project	Replace 8 manholes	Pollutant source repaired	Enhanced tourism opportunities
	Develop monitoring plan to assess water quality improvements		

 Table 7. Proposed Projects Success Criteria/Metrics/Outcomes

Additional success criteria capturing the ecological benefits of this project will be selected at the grant application stage.

Monitoring and Evaluation

- a) Submission of final E&D to ADCNR for review and approval
- b) Provide evidence to ADCNR that all required permits were obtained (including SHPO)
- c) Submit results of bid process to ADCNR prior to awarding contracts
- d) ADCNR will conduct periodic onsite reviews
- e) Submission of quarterly and final reports
- f) Post construction monitoring as required

Best Available Science

The confluence of the Mobile, Spanish, Tensaw, Apalachee, and Blakely Rivers (Mobile Tensaw River Delta) make up the headwaters of Mobile Bay, the fourth largest estuary in the United States. Chickasaw Creek flows into the Mobile River, therefore, the pollutants entering Chickasaw Creek as a result of sanitary sewer overflows (SSOs) and through inflow and infiltration ultimately end up in Mobile Bay and the Gulf of Mexico. It is known SSOs and infiltration from aging sewer infrastructure contribute to the degradation of water quality in our streams, rivers, and bays.

The Tensaw River Delta system represents one of the most ecologically, culturally, and economically significant wetlands in the nation and includes priority habitats identified by the Mobile Bay National Estuary Program (MBNEP). The estuarine habitats within the watershed support numerous recreationally and commercially important species of finfish and shellfish, as well as waterfowl. USFWS has documented the following Threatened and Endangered (T&E) Species: Florida manatee (*Trichechus manatus latirostris*), Alabama red-bellied turtle (*Pseudemys alabamensis*), Gulf sturgeon (*Acipenser oxyrinchus desotoi*) and American bald eagle (*Haliaeetus leucocephalus*).

This project is consistent with the values and recommendations set forth in the MBNEP's Comprehensive Conservation and Management Plan 2013-2018, available on the MBNEP <u>website</u>:

Budget/Funding

- a) Estimated cost of the project and amount to be requested from Oil Spill Impact Component Funds: \$1,339,000 (5%-15% - Planning, 95%-85% - Implementation). While it is noted funding available under a grant award cannot exceed the amount described in the SEP for this project, the percentages listed in this section are estimated and will be more clearly cultivated in the grant application.
- b) No other funding sources are anticipated at this time.

Partnerships/Collaboration (if applicable)

Not applicable at this time.

Leveraged Resources (if applicable)

Not applicable at this time.

Funds Used As Non-Federal Match (if applicable)

Not applicable at this time.

Other

Not applicable at this time.



Figure 6. The City of Chickasaw Sewer Rehabilitation Project will be undertaken in Chickasaw, Alabama.