

ALABAMA STATE EXPENDITURE PLAN (SEP)

Project #10: Bayou La Batre Collection System/Lift Station Upgrades

Project Description/Summary

- a) This project proposes the planning, engineering and design, and construction required to rehabilitate the collection system and to replace 16 major pump stations in Bayou La Batre, Alabama. Implementation of this project will result in fewer overflows and an overall reduction of contaminants into local soils and waters.

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:** The collection system consists of approximately fifteen (15) miles of vitrified clay (V.C.) sewer pipe ranging in size from eight (8") to fifteen (15"). The V.C. pipes installed in the early seventies were four (4) feet in length with PVC joint connections. Over time, many of the joints have partly slipped, and in many cases, have completely opened up and are leaking. The partial and complete slippage of the joints have allowed for high infiltration and inflow (I & I) into the system. During rainfall events and/or above-average high tide, these rates can reach as high as 800,000 gallons per day (GPD). The collection system needs rehabilitation as follows: TV and cleaning line; smoke testing lines; removing obstructions within the main line; point repairs followed by slip lining entire pipes; lining or replacing each service lateral as required; installation of cleanouts; and cleaning and lining manholes. The collection system also includes over sixteen (16) major pump stations. Each station needs upgrading of the structures, pumps, pump rails, floats, valves, piping, and control, and installation of auxiliary backup pumps in lieu of generators. The rehabilitation of the collection system and upgrade of the pump stations will eliminate sanitary sewer overflows to sensitive waterways in the Bayou La Batre Utilities Board sewer service area. If this project is not implemented, the areas that are no longer intact will continue to leak and introduce unwanted nutrients to ground water, wetlands, and local waterways.

Purpose: The purpose of the project is to replace old, leaking sewer pipes with newer materials to prevent leakage of raw sewage into the ground and area waters. It is also designed to make necessary upgrades to 16 existing lift stations.

Objectives: The primary objectives of this project are to:

- Complete needed engineering and design;
- Replace 15 miles of outdated and leaking sewer pipes with new, reliable materials to prevent sewage leaks; and
- Upgrade 16 major pump stations in the Bayou La Batre area.

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- b. This project is located in the Gulf Coast region and will be implemented in south Mobile County, Alabama, within the Bayou La Batre Utilities Board Sewer Service Area.
 - c. This project is expected to begin 7/1/2019 and end 12/31/2020 (18 months).
 - d. The proposed project will be implemented by Mobile County.
- b) This project will assist in the economic recovery of Bayou La Batre by preventing sewage overflows and inflow and infiltration, thus improving water quality in nearby waterways. 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; Category #6 - Infrastructure projects benefiting the economy or ecological resources, including port infrastructure; and Category #10 - Promotion of tourism in the Gulf Coast Region, including recreational fishing.

Comprehensive Plan Goals and Objectives

This project is consistent with the following Comprehensive Plan goals:

- 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 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: Complete procurement for E&D
- b) Milestone 2: Update engineering documents
- c) Milestone 3: Apply for all permits
- d) Milestone 4: Complete bid process

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- e) Milestone 5: Award contracts
- f) Milestone 6: Construction

Success Criteria/Metrics/Outcomes

The anticipated outcome of the Collection System/Lift Station Upgrades project will be:

- Replace 15 miles of outdated and leaking sewer pipe and upgrade 16 major pump stations.

Table 11. Proposed Projects Success Criteria/Metrics/Outcomes

Activity	Anticipated Project Success Criteria/Metrics	Short-term Outcomes	Long-term Outcomes
Replace outdated sewer lines and upgrade pump stations	Completed Engineering and Design Plans Repair/replacement of 15 miles of sewer line Upgrade of 16 major pump stations Develop monitoring plan to assess water quality improvements	Reduction of SSO incidents Pollutant source repaired	Improved water quality Enhance tourism opportunities

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

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Best Available Science

The Bayou La Batre Watershed covers over 19,500 acres in south Mobile County and flows southwesterly into Portersville Bay and Mississippi Sound. The City of Bayou La Batre, which is located within the watershed, is the source of the urban component of the watershed.

The Alabama Department of Environmental Management's (ADEM) water use classification for Bayou La Batre is Fish & Wildlife. Bayou La Batre was originally placed on the State's 303(d) list for pathogens in 1998 with a total maximum daily load (TMDL) developed in 2009. According to a sub-estuary monitoring report by ADEM based on the National Coastal Assessment water quality index, the lower half of the Bayou la Batre sub-estuary is rated "Fair" while the upper half is rated "Poor". There are no National Pollutant Discharge Elimination System (NPDES) discharges within the watershed, and nonpoint sources appear to be a significant source of pathogen contamination, with the TMDL indicating sanitary sewer overflows and agriculture runoff being the probable sources.

It is known SSOs and inflow and infiltration from aging sewer infrastructure contribute to the degradation of water quality which, in turn, results in shellfish closures in Portersville Bay and Mississippi Sound.

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 [website](#) and the Bayou La Batre Watershed Management Plan, also available on the MBNEP [website](#).

Budget/Funding

- a) Estimated cost of the project and amount to be requested from Spill Impact Component Funds: \$13,189,150 (5%-15% - Planning, 95%-85% - Implementation). While it is noted that 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.

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Other

Not applicable at this time.



Figure 10. The Bayou La Batre Collection System/Lift Station Upgrades will be implemented in the Bayou La Batre Utilities Board Sewer Service Area in the City of Bayou La Batre, Alabama.