

Mermentau Basin Louisiana

Bayou Grand Marais
HUC #080802020103

Background

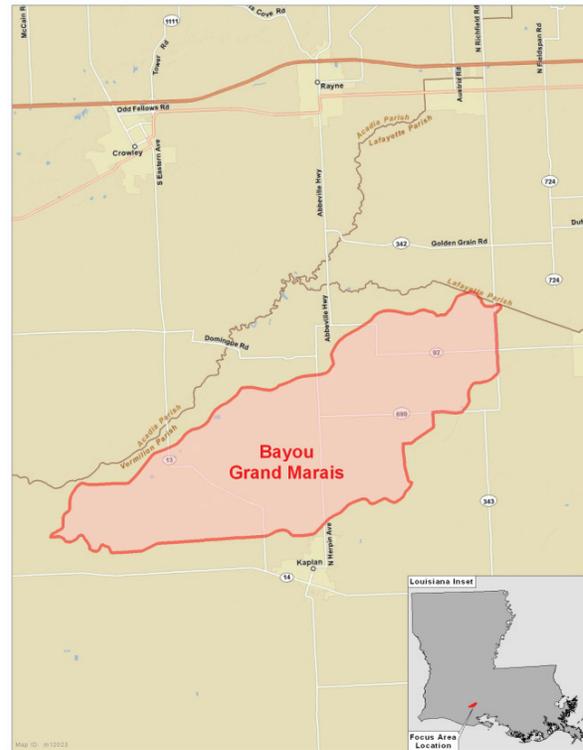
South Louisiana is known throughout the United States for its abundant production of seafood along the Gulf Coast. This area contains some of the most productive fisheries in the United States. It is also known for its ability to produce rice, sugarcane, and productive grazing lands because of its mild winters and fertile soils.

Bayou Grand Marais Watershed is located in the north-central portion of Vermilion Parish. A majority of the land use in the watershed is irrigated cropland, predominately rice grown in rotation with crawfish production. Other crops grown in the watershed include soybeans and sugarcane, which are typically not irrigated. Livestock production comprises approximately 10 percent of the area. The watershed consists of 30,975 acres of cropland; 3,777 acres of pasture; 1,332 acres of forestland; and 1,133 acres of urban land.

Ecosystem health is threatened by erosion, pollutants, and high nutrient loads from urban and agricultural sources. Runoff from rice fields, sugarcane, and pasturelands adds nutrient-rich sediments to surface water, affecting water quality of the watersheds, basins, and the Gulf of Mexico. Sheet and rill erosion from agricultural sources deposits excessive sediment in waterways, resulting in increased turbidity, phosphorus loading, and, eventually, eutrophication. Excess sediment in surface water also degrades animal and plant life populations and diversity by changing the depth and turbidity of the water, ultimately impacting fragile coastal estuaries.

Goals / Objectives

Through this initiative, NRCS and its partners will help producers voluntarily implement a combination of core and supporting practices that: reduce the amount of agriculture-related nitrogen, phosphorus, and sediment leaving the field; reduce agricultural impacts on water quantity; and enhance or maintain wildlife habitat.



Resource Concern	Total Acres Needing Treatment
Water Quality – Excessive Suspended Sediment and Turbidity in Surface Water and Excessive Nutrients and Organics in Surface Water	10,000
Water Quantity – Reduced Storage of Water Bodies by Sediment Accumulation and Reduced Capacity of Conveyances by Sediment Deposition	10,000
Soil Erosion – Classic Gully and Ephemeral Gully	5,000
Soil Condition – OM Depletion	4,000
Wildlife – Food and Cover	10,000

State Proposal - Louisiana (2 of 2)



United States Department of Agriculture
Natural Resources Conservation Service

GoMI

Actions

This initiative will focus on reducing soil erosion and improving water quality on rice fields, sugarcane fields, and pastureland by:

- Improving drainage water management on irrigated rice cropland by developing an irrigation water recirculation and filtering system
- Eliminating the old split ditch system on sugarcane fields
- Reducing or eliminating tillage on field borders, roads, and turnrows by establishing a cut-off date for cultivation
- Planting a cover crop during the sugarcane rotation
- Installing field borders
- Implementing precision agriculture and applying nutrients according to a nutrient management plan
- Improving sediment and nutrient filtering and wildlife habitat by designing a constructed wetland
- Promoting energy conservation by eliminating the need for annual mechanical removal of sediment from split ditches
- Implementing grazing management
- Installing heavy-use area protection pads

Outcomes and Impacts

Anticipated long-term outcomes of this initiative are: a significant decrease in sediment deposited into the Gulf of Mexico, resulting in decreased turbidity, decreased levels of adsorbed nutrients, and improved dissolved oxygen content; increased water quantity; improved fish and wildlife habitat; and increased community awareness about resources and best management practices to support conservation and renewal of our natural resources.



Water from rice fields can contain nutrients and sediment which impacts water quality



Mechanically cleaned drainage ditches (split ditches) increase erosion

Partners

The Louisiana Department of Agriculture and Forestry Office of Soil and Water Conservation (LDAF/OSWC) will provide technical assistance to program participants with the Office of Soil and Water Conservation field staff and local Soil and Water Conservation District technicians.

The Louisiana Department of Environmental Quality will continue to monitor water courses in the project area for nutrients, suspended sediments, and pathogens.

The Vermilion Soil and Water Conservation District and the Louisiana Cooperative Extension Service will promote, through producer meetings, wider adoption of precision agriculture, field borders, and alternative methods to handling sugarcane crop residue.