The Mermentau River Basin lies in southwestern Louisiana and encompasses the prairie region of the state. Rice, crawfish, soybean and sugarcane fields comprise the current landscape of the Mermentau Basin. The word "Mermentau" originated from the name Nementou of an Attakapas Indian Chief, who lived in a village on the river in the 1700's. When the French settled in the area, they altered the name to Mermentau since the word "mer" meant open sea (in French). The major bayous that flow through the Mermentau basin include: Bayou des Cannes, Bayou Nezpique, Bayou Plaquemine Brule, Bayou Queue de Tortue and Bayou Lacassine.

The Mermentau basin has a rich cultural history of the French and Cajun people, many of whom have lived along these bayous for more than 250 years. The native prairie ecosystem was also as diverse as its people with a wide range of prairie wildflowers, wildlife and forests. Most of the bayous have been highly altered for navigation and flood control during 1915-30's. These alterations combined with land-use changes from native prairie to agricultural production have led to water quality problems and loss of habitat for many native species of plants and animals.

Success through Partnerships

Success in restoring water quality and habitat in the Mermentau River Basin relies upon the partnerships, many of which already exist and many more that need to be formed.

- The Louisiana Department of Environmental Quality (LDEQ)
- Louisiana Department of Agriculture and Forestry (LDAF)
- U.S. Department of Agriculture (USDA)
- LSU Ag Center
- Louisiana Nature Conservancy
- Local Soil and Water Conservation Districts
- University of Louisiana at Lafayette (UL)
- U. S. Fish and Wildlife Service
- Rural Conservation and Development Districts

This list includes a few of the partnerships already working to assist local landowners and farmers in implementing BMPs and monitoring the waters to see if water quality is improving. However, it will take more partnerships with the people who live within the Mermentau Basin if the water quality goals of restoring water quality, fisheries and wildlife habitat are to be achieved. If you wish to learn more about protecting water quality and habitats in the Mermentau River Basin, contact these agencies or organizations to find out more that you can do.

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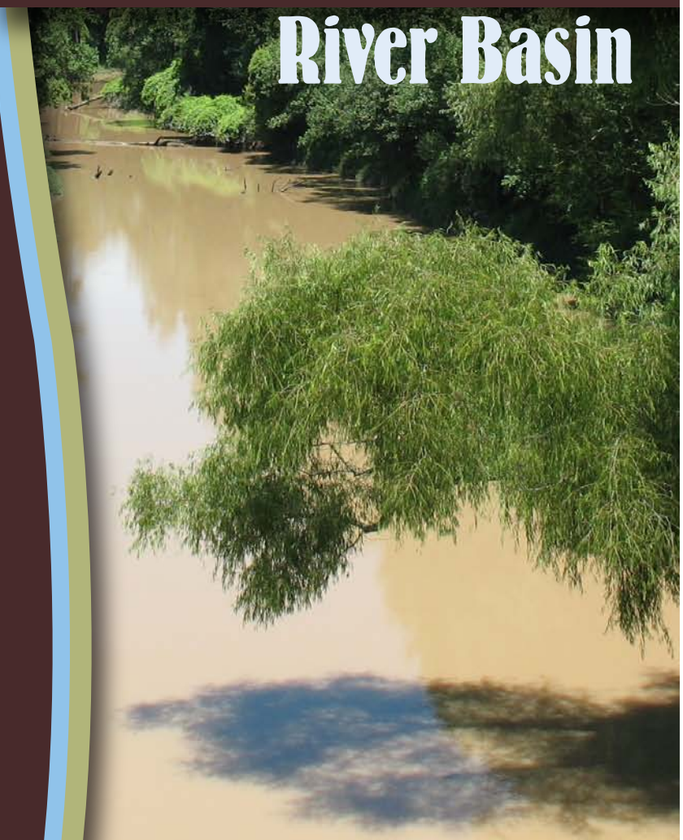
Mermentau River Basin



Water Quality Concerns

The bayous in the Mermentau River Basin are slow moving water bodies that transport large amounts of sediment and organic materials to the Mermentau River, White Lake, Grand Lake and Mud Lake. During the winter and early spring when rice fields are prepared for planting, water is often discharged after rice seedlings are planted. Water from the crawfish ponds is also released after crawfish season, contributing sediment, nutrients and organic materials to the bayous as they flow south toward the Gulf of Mexico. During the summer and fall months when the temperatures are hot and the flow of the bayous is low to non-existent, it is difficult for them to meet their water quality standards for dissolved oxygen (DO). Most of the water bodies in the Mermentau Basin are currently included on the state's 303(d) list of impaired waters. This means that total maximum daily loads (TMDLs) have been developed to set limits on the amount of oxygen demanding substances that can be discharged into the bayous. These TMDLs indicate that there needs to be a 30-95% reduction in sediments and nutrients from agricultural sources entering the bayous.

Restoring the Water Quality

The water quality in the Mermentau River Basin can be restored through the use of best management practices (BMPs) on agricultural fields, crawfish ponds and in the communities and small cities that comprise the major land-use in the basin.

- **AGRICULTURE** – erosion and sediment control through water management in rice and crawfish ponds, conservation tillage and residue management on row crops, fertilizer and pesticide management, rotational grazing and fencing for pastures, protection of stream banks and riparian habitats;
- **FORESTRY** – protection of streamside management zones, selective harvesting, erosion and sediment control on forest roads, pesticide and fertilizer management;
- **SEPTIC SYSTEMS** – maintenance of existing systems and repair or replacement of failing systems;
- **URBAN STORM WATER** – smart growth and green infrastructure such as rain gardens, natural and man-made wetlands, urban forests, porous pavement, vegetative swales, protection and restoration of urban streams;
- **ROAD AND HIGHWAY CONSTRUCTION** – sediment and erosion control practices, stream protection at bridges and stream crossings, wetland, stream bank and riparian areas;
- **HYDROMODIFICATION** – stream bank and riparian habitat protection, natural channel design and protection of wetlands

Protecting and Restoring Native Habitats

Many of the management practices that can be implemented to improve water quality have the added benefit of protecting and restoring habitats that are host to native plants and animals in the Mermentau River Basin. Native coastal prairies, coastal live oak-hackberry forests, mixed pine/hardwood forest, brackish and fresh marshes and riparian forests are a few of the habitats that comprise the landscape of southwestern Louisiana. Some of the species that rely on these types of habitats include prairie grasses and wildflowers, American chaffseed, brown pelican, paddlefish, alligator snapping turtle, diamond back terrapin, prothonotary warbler, sand hill crane and the Bachman's sparrow. The types of stressors to these native species include: residential development, roads, pipelines and utility construction, overgrazing, herbicide spraying of ditches and stream banks, and hydrological alterations such as channelization of streams (Louisiana Natural Heritage Program).









Mermentau River Basin