

Water Quality Concerns

Many of the bayous that flow through the Vermilion-Teche River Basin are not fully meeting their recreational uses of swimming or fishing because of nonpoint source pollution from agriculture, forestry, individual home sewage systems, road and highway construction and urban areas in the basin. The impaired water bodies have been placed on the state's 303(d) list, which required that total maximum daily loads (TMDLs) be developed for them. The TMDL placed limits on the amount of pollution that can be discharged into the water bodies. For the water bodies in the Vermilion-Teche River Basin, the pollutant load reductions ranged from 17-68%.



Success through Partnerships

Restoring water quality in the Vermilion-Teche River Basin will depend on the success of new and existing partnerships that exist between the federal, state and local agencies and the people that reside within the basin.

- The Louisiana Department of Environmental Quality (LDEQ)
- The Louisiana Department of Agriculture and Forestry (LDAF)
- Local Soil and Water Conservation Districts
- University of Louisiana at Lafayette (UL),
- U.S. Department of Agriculture
- The LSU AgCenter

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.

Vermilion-Teche River Basin



The Vermilion River and Bayou Teche flow through the Vermilion-Teche River Basin, along agricultural fields, forests and the communities of south-central Louisiana, and then on south to Vermilion Bay. The Vermilion River begins at Bayou Fusilier, receiving water from Bayou Teche, then flows south through Lafayette and Vermilion parish and on to Vermilion Bay and the Gulf of Mexico. These bayous have provided a source of food, water, and transportation for the Attakapas Indians and the Spanish, African Americans, then to the French and Cajun people, who settled in southwestern Louisiana. Bayou Teche was once an early path of the Mississippi River to the Gulf of Mexico, before it switched toward a more easterly path. When the Atchafalaya River was levied in the 1930's, fresh water inputs were cut off to the Bayou Teche until pumps were built at Krotz Springs to reintroduce fresh water back into the Teche, from the Atchafalaya River through Bayou Courtableu.

The Vermilion-Teche River Basin has extensive agricultural production with rice, sugarcane, soybeans, crawfish and pastures for beef cattle. These crops provide the economic base for many people that live within this part of the state and much of the food for which southwestern Louisiana is known. As these bayous flow through this basin, they receive sediment, nutrients and organic loads from agricultural fields, forests, wetlands and urban communities when it rains or when the rice and crawfish fields are drained. Whereas these bayous probably always carried heavy loads of organics and sediments, current loads prevent the water bodies from complying with water quality standards and designated uses for recreational waters.

Restoring the Water Quality

The water bodies within the Vermilion-Teche River Basin can be restored if best management practices (BMPs) are applied to both urban and rural areas. The types of BMPs that need to be implemented include:

- **AGRICULTURE** – sediment and erosion control practices such as conservation tillage, residue management, nutrient and pesticide management, protection of riparian areas and stream banks;
- **INDIVIDUAL HOME SEWAGE SYSTEMS** – maintenance of existing systems and repair or replacement of old and failing systems;
- **FORESTRY** – protection of streamside management zones, erosion control on forest roads and harvested sites, selective harvesting, pesticide and fertilizer management;
- **ROAD AND HIGHWAY CONSTRUCTION** – erosion and sediment control practices, protection of water bodies at bridges and stream crossings;
- **HYDROMODIFICATION** – protection of riparian habitats, wetlands and stream banks and natural channel design.

Protecting and Restoring Native Habitats

In addition to the water quality benefits that best management practices (BMPs) provide, they also protect special habitats where native plants and animals reside. Some of these habitats and species are now considered rare, threatened or endangered but can be protected and restored. Some of these habitats include native coastal prairies, cypress-tupelo swamps, riparian forests, bottomland hardwood forests, coastal live-oak hackberry forests, freshwater and brackish marshes, live-oak natural levee forests and small stream forests. Some of the native plants and animals that depend on these habitats include Louisiana black bear, migratory songbirds, prothonotary warbler, brown pelican, piping plover, paddlefish, alligator snapping turtle, Bachman's sparrow, the sand hill crane, Louisiana pearlshell mussel and the diamondback terrapin. Some of the stressors to these habitats and species include residential, commercial and industrial development, soil erosion, fertilizer and pesticide runoff into streams, dredging and channelization of streams and wetlands, construction of roads, pipelines and utilities, herbicide spraying of drainage ditches and roadways, overgrazing which damages understory vegetation and inhibits natural stand regeneration (The Natural Heritage Program).

