

Red River Basin

The Red River, named for its reddish color, flows for 1360 miles from its headwaters in the Texas panhandle to where it joins with the Black and the Mississippi Rivers, forming the Atchafalaya River. The Atchafalaya River then flows south toward Morgan City as the remaining two-thirds of the Mississippi River flows southeast toward Baton Rouge and New Orleans.

The earliest settlers within the Red River Basin were the Caddo Indians, whose range extended from the Sabine River to the Ouachita River. When the Europeans came to Louisiana from Spain and France, they realized that they would need the rich alluvial floodplains of the Red River for agricultural production and the main stem of the river for transportation. Natchitoches was the first settlement in Louisiana along the Red River and was established as a trading post with the Indians and the Spanish. As more trade developed, the river was opened further for navigation, after the clearing of the great raft by Captain Shreve in 1839, all the way to Shreveport. Of course today, the Red River still functions as a major transportation route for goods and services between Alexandria and Shreveport.



Success through Partnerships

The water quality goals of restoring water quality and reducing nonpoint source pollution can be met through partnerships of the local, state and federal agencies working with private and non-profit organizations and the local people on watershed protection and restoration. Some of the partnerships that already exist within the Red River Basin include:

- Louisiana Department of Environmental Quality
- Louisiana Department of Agriculture and Forestry
- Louisiana Department of Wildlife and Fisheries
- LSU AgCenter
- LSU Shreveport
- USDA Natural Resource Conservation Service
- Local Soil and Water Conservation Districts
- City of Shreveport
- City of Natchitoches
- Red River Research Station
- The Louisiana Nature Conservancy
- U.S. Fish and Wildlife Service

These partners are working on watershed projects to protect public drinking water supplies, to demonstrate best management practices (BMPs) on agricultural lands, implement home sewage maintenance and replacement programs and offer cost-share and technical assistance for implementation of best management practices in priority watersheds. As watershed groups are formed to work on restoring water quality within the Red River Basin, there will be opportunity for more partnerships so if you want to become involved in these programs, contact the Louisiana Department of Environmental Quality or other organizations working on watershed restoration.



Water Quality Concerns

Currently the Red River is fully meeting all of its designated uses between U.S. Highway 165 to the Old River Control Structure, but is only meeting the contact recreational uses from the Arkansas State line to U.S. highway 165. The fish and wildlife propagation use along this upper stretch of the Red River is not met because of sulfates which may be from natural sources or sources outside of the state's jurisdiction. Basically, the water quality in the Red River is good, but many of the other water bodies in the Red River basin are not fully meeting the fish and wildlife propagation use because of low dissolved oxygen (DO), sulfates, turbidity, mercury or non-native aquatic plants. With the exception of three large cities, Bossier City and Shreveport to the north and Alexandria to the south, the land-use in the Red River basin is primarily forests, pastures or agricultural lands.

Restoring the Water Quality

In order to restore water quality to the bayous, lakes and rivers that comprise the Red River basin, there will need to be more work done on implementing best management practices (BMPs) on agricultural lands, in forested areas, on pasturelands and in both rural and urban areas. Nonpoint source pollution continues to be the largest remaining water quality problem that the country faces, so Louisiana will need to do its part to reduce these impacts to the water bodies from nonpoint source pollution.

There has already been a lot of work done along the Flat River, Red Chute Bayou, Wallace Lake, Cross Lake, Caddo Lake and other water bodies in the Red River Basin to improve water quality through implementation of BMPs. Those efforts will need to continue and focus on the following types of lands:

- **AGRICULTURE** – erosion control practices such as conservation tillage, grassed waterways, pesticide and nutrient management, rotational grazing on pastures, fencing cattle out of the streams and protection of forested buffers along waterways;
- **FORESTRY** – selective harvesting, protection of streamside management zones along water bodies, water bars on forest roads;
- **HOME SEWAGE SYSTEMS** – maintenance of existing systems and replacement of aging and malfunctioning systems;
- **URBAN STORM WATER RUNOFF** – smart growth designs for development and redevelopment, rain gardens, porous pavements, protection of wetlands and urban forests;
- **ROAD AND HIGHWAY CONSTRUCTION** – erosion control practices along streets and highways, native grasses and wildflowers in highway corridors;
- **HYDROMODIFICATION** – protection and restoration of forested stream banks and natural channel design to protect in-stream, wetland and stream bank habitats.

Protecting and Restoring Native Habitats

There are many special habitats within the Red River Basin that are home to native plants and animals. Many of the management practices that protect water quality also protect these habitats and the rare or threatened species that live there. Some of these special habitats include bottomland hardwood forests, cypress-tupelo forests, small stream forests, and shortleaf pine/oak-hickory forests and saline prairies. These natural communities provide homes for species such as the tiny earthfruit, alligator snapping turtle, Louisiana pine snake, Louisiana pearlshell mussel, pallid sturgeon, Louisiana black bear, red-cockaded woodpecker, Henslow's sparrow, interior least tern, and the three-lobed coneflower. Some of the stressors to these habitats and species include construction of roads, pipelines and utilities, oil and gas drilling, chemicals such as pesticides and herbicides, residential, commercial and industrial development.



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