

b. Barataria Basin

General Description:

The upper Barataria Basin was formed approximately 3,500-4,000 years ago as part of the Lafourche Delta complex. Encompassing approximately 300,000 acres, it is bordered on the north and east by the levees of the Mississippi River, which were constructed after the flood of 1927, on the west by Bayou Lafourche and on the south by the Gulf of Mexico. The basin is mainly comprised of the following 4 terrestrial habitat types: ag-crop-grasslands (primarily sugarcane), bottomland hardwood forests, cypress-tupelo swamps, and coastal marshes which range from fresh to salt water. Almost all freshwater input is from local precipitation with minor inflow from the Greater Intracoastal Waterway (LaCoast 2005). Wetland loss due to coastal erosion is a major environmental issue affecting the basin.



There are roughly 55 species of freshwater fishes (W. Kelso, personal communication) and 9 species of crawfish (J. Walls, personal communication) found within the Barataria Basin. The basin supports many commercial activities ranging from sugarcane production and aquaculture to commercial fishing, trapping, logging, and oil and gas production. Recreational activities include fishing, hunting, bird watching, swimming, and boating.

Water Quality:

The 2004 Water Quality Inventory Report (LDEQ 2004) indicated that 35% of the 26 water body subsegments within the basin were fully supporting their three primary designated uses. However, 65% of the subsegments were not supporting their designated use for fish and wildlife propagation. The suspected causes for these water quality problems include: metals, nutrients, oil and grease, fecal coliform, low concentration of dissolved oxygen, dissolved and suspended solids, and turbidity. The suspected sources of the water quality problems include: crop production, pastureland, urban runoff, septic tanks, spills, minor industrial point sources, petroleum activities, highway and maintenance runoff, hydromodification, and dredging.

BARATARIA BASIN SPECIES OF CONSERVATION CONCERN (4)	
FRESHWATER FISH	REPTILES
Paddlefish	Alligator Snapping Turtle
Gulf Pipefish	Mississippi Diamond-backed Terrapin

Priority Species Research and Survey Needs:

Fish: Taxonomic inventory of all fish species throughout the entire river basin are needed to determine their current population distributions and abundance.

Mississippi Diamondback Terrapin: The status of this species is unknown. Endangered Species Act candidate status is pending. Evaluate trawl data from LDWF Marine Fisheries trawl surveys for distribution estimates. Initiate surveys in vicinity of recent trawl captures to assess current population abundance.

Species Conservation Strategies:

1. Mississippi Diamondback Terrapin: Conservation of coastal dune habitat is paramount to terrapin reproduction. Continued removal of abandoned crab traps will drastically reduce incidental mortality.
2. Initiate long-term sampling to identify trends in the distribution and abundance of native and invasive species within the Barataria Basin.
3. Work with LCA, CWPPRA to incorporate strategies developed for aquatic species of conservation concern into future coastal restoration efforts.

Threats Affecting Basin:

The following table illustrates the threats identified for the Barataria Basin and the sources of these threats. This represents all threats and sources of threats identified for this basin.

Source of Threat	Threat						
	Altered Composition/Structure	Altered Water Quality	Habitat Disturbance	Modification of Water Levels; Changes in Natural Flow Patterns	Nutrient Loading	Salinity Alteration	Sedimentation
Channelization of rivers or streams	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Commercial/industrial development	XXX	XXX	XXX			XXX	XXX
Construction of ditches, drainage or diversion systems	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Construction of navigable waterways	XXX	XXX	XXX	XXX	XXX	XXX	XXX
Incompatible forestry practices	XXX	XXX	XXX		XXX		XXX
Invasive/alien species	XXX	XXX	XXX				
Levee or dike construction	XXX	XXX	XXX	XXX			
Mining practices	XXX	XXX	XXX	XXX	XXX		XXX
Oil or gas drilling	XXX	XXX	XXX	XXX	XXX	XXX	XXX

Basin Conservation Strategies:

1. Support efforts to construct fresh water diversion canals from the Mississippi River into the Barataria Basin.
2. Work with BTNEP to coordinate efforts to abate threats to this basin.

References:

LACOAST. 2005. Louisiana Coastal Restoration and Conservation Task Force Website. Barataria Basin: Summary of Basin Plan. <http://www.lacoast.gov/geography/ba/barsum.htm>.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY. 2004. Louisiana Water Quality Inventory: Integrated Report. Water Quality Assessment Division, Standards Assessment and Nonpoint Source Section. Baton Rouge, LA. 110 pp.