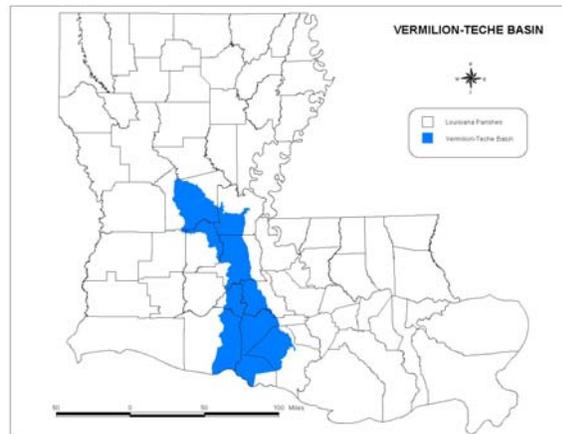


I. Vermilion-Teche Basin

General Description:

The Vermilion-Teche basin's drainage area covers approximately 4,047 square miles. Habitats within the basin range from the upland pine forests, northwest of Alexandria, to agriculture lands consisting primarily of corn and soybeans, in its northern portion, and rice and sugarcane in its central and southern portion. The coastal zone is mostly freshwater marsh from Bayou Cypremort east to LA Hwy 317. Intermediate and brackish marsh occupy all of the coastal zone west of Bayou Cypremort with small areas of salt marsh on Marsh Island WMA and Paul J. Rainey Wildlife Sanctuary.



Water from the Atchafalaya River is diverted into the Vermilion-Teche River Basin through the Bayou Teche water project. Authorized by the Flood Control Act of 1966, this structure allows the diversion of supplemental fresh water from the Atchafalaya River upstream of Krotz Springs to the head of Bayou Teche at Port Barre. The supplemental fresh water is distributed among Bayou Teche, the Vermilion River, and the west side borrow pit along the Atchafalaya basin protection levee for municipal, industrial, irrigation, and water-quality control uses (COE 1998).

There are roughly 59 species of freshwater fishes (W. Kelso, personal communication), 30 species of mussels (Vidrine 1993), and 17 species of crawfish (J. Walls, personal communication) found within the Vermilion-Teche Basin.

Water Quality:

The 2004 Water Quality Inventory Report (LDEQ 2004) indicated that 7% of the 44 water body subsegments within the basin were fully supporting their three primary designated uses. However, 91% of the subsegments were not supporting their designated use for fish and wildlife propagation. The suspected causes for these water quality problems include: metals, pesticides, nutrients, fecal coliform, non-native aquatic plants, organic enrichment and low concentration of dissolved oxygen, dissolved and suspended solids, sedimentation/siltation, and turbidity. The suspected sources of the water quality problems include: crop production, aquaculture, urban runoff, petroleum activities, hydromodification, surface mining, construction, and dredging.

VERMILION-TECHE BASIN SPECIES OF CONSERVATION CONCERN (8)		
CRUSTACEANS	FRESHWATER FISH	REPTILES
Teche Painted Crawfish	Paddlefish	Alligator Snapping Turtle
Kisatchie Painted Crawfish		Mississippi Diamond-backed Terrapin
Javelin Crawfish	MUSSELS	
Old Prairie Crawfish	Louisiana Pearlshell	

Priority Species Research and Survey Needs:

Paddlefish: Continue with stock assessment surveys.

Alligator Snapping Turtle: Baseline mark-release data were obtained during the late 1990s. New surveys are needed to obtain population trend data for this species.

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.



Kisatchie Painted Crawfish

Species Conservation Strategies:

1. Develop database containing baseline data on current composition and abundance of all species with a focus on species of conservation concern.
2. Sampling is needed to identify trends in range and abundance of native and invasive species throughout the Vermilion-Teche Basin.

Threats Affecting Basin:

The following table illustrates the threats identified for the Vermilion-Teche 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	Change in Land Use Practices	Habitat Destruction or Conversion	Habitat Disturbance	Habitat Fragmentation	Modification of Water Levels; Changes in Natural Flow Patterns	Nutrient Loading	Sedimentation	Toxins/ Contaminants
Channelization of rivers or streams	XXX		XXX		XXX	XXX	XXX	XXX	
Commercial/industrial development	XXX		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	
Conversion to agriculture or other forest types		XXX						XXX	
Crop production practices	XXX		XXX	XXX	XXX		XXX	XXX	XXX
Grazing practices							XXX		XXX
Incompatible forestry practices			XXX	XXX				XXX	
Industrial discharge			XXX				XXX		XXX
Invasive/alien species	XXX		XXX	XXX			XXX		
Levee or dike construction	XXX		XXX		XXX	XXX		XXX	
Oil or gas drilling					XXX	XXX			
Operation of dams or reservoirs	XXX		XXX			XXX	XXX		
Residential septic systems			XXX				XXX	XXX	XXX
Shoreline stabilization	XXX					XXX		XXX	

Basin Conservation Strategies:

1. Develop a comprehensive survey methodology for the Vermillion-Teche Basin.
2. Conduct a detailed inventory of the Vermillion-Teche Basin that focuses on habitats and species of conservation concern.
3. Promote methods to restore historical flow regimes within the Vermillion-Teche Basin.
4. Develop education material on BMPs for land-use practices within the Vermillion-Teche Basin.
5. Develop partnerships with regulatory and other agencies to share data on habitat threats.
6. Work with LANSTF to identify and address threats related to invasive species.
7. Prepare educational material on the potential impacts of invasive species to the Vermillion-Teche Basin.

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