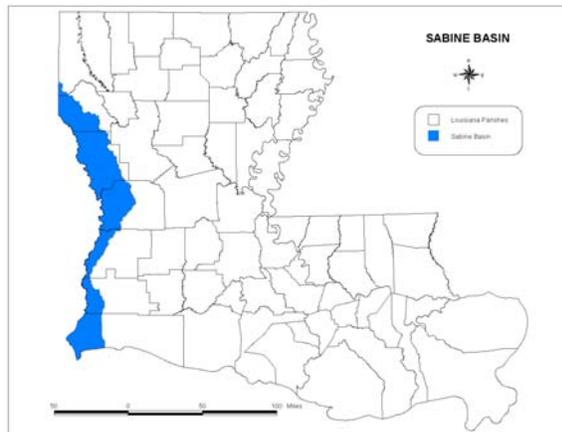


j. Sabine Basin

General Description:

The Sabine River arises in northern Hunt County and eastern Collin and Rockwall counties in north central Texas, and flows in an easterly direction to the Texas and Louisiana boundary near Logansport, Louisiana. The Sabine flows as boundary waters between the 2 states for some 270 river miles to the Gulf of Mexico. The Sabine River drains an area of approximately 9,700 square miles of which, 7,190 square miles are above the Toledo Bend Reservoir (A.I.D. Associates 1981). Roughly 2,510 square miles of drainage are situated below the dam which is located at river mile 200. The entire basin drains 3,257 square miles within the state. The Toledo Bend Reservoir was constructed in the 1960's and became operational in 1969. Operation of the hydroelectric plant has affected water flows on the lower portions of the river since that time. Sand and silt are the predominant substrates below the dam to the Gulf of Mexico.



The northern and central portions of the basin are primarily forested with scattered agriculture lands throughout. Most of the basin is pinelands with the majority of hardwoods located along principle drainages. Along the coastal zone almost all of the freshwater marsh was converted to intermediate and brackish marsh by the late 1970s as a result of saltwater intrusion and increased tidal influence (LaCoast 2005).

There are roughly 89 species of freshwater fishes (W. Kelso, personal communication), 33 species of mussels (Vidrine 1993), and 13 species of crawfish (J. Walls, personal communication) found within the Sabine Basin.

Water Quality:

The 2004 Water Quality Inventory Report (LDEQ 2004) indicated that 47% of the 19 water body subsegments within the basin were fully supporting their three primary designated uses. 68% of the subsegments were supporting their designated use for fish and wildlife propagation. The suspected causes for these water quality problems include: metals, fecal coliform, non-native aquatic plants, organic enrichment and low concentration of dissolved oxygen, and turbidity. The suspected sources of the water quality problems include: major industrial point sources, harvesting/reforestation, surface mining, agriculture, and urban runoff.

SABINE BASIN SPECIES OF CONSERVATION CONCERN (14)		
CRUSTACEANS	Suckermouth Minnow	Texas Heelsplitter
Calcasieu Painted Crawfish	Western Sand Darter	Southern Creekmussel
Kisatchie Painted Crawfish	Bigscale Logperch	
Twin Crawfish		REPTILES
FRESHWATER FISH	MUSSELS	Alligator Snapping Turtle
Paddlefish	Sandbank Pocketbook	Sabine Map Turtle
	Louisiana Pigtoe	Mississippi Diamond-backed Terrapin

Priority Species Research and Survey Needs:

Western Sand Darter and Suckermouth Minnow: Surveys are needed to assess their current distribution and abundance.



Mussels: Surveys are needed to update historic records and develop new baseline data on current species population distributions and abundance.

Crustaceans: Continue surveys to update historic locality records in order to update abundance and distribution data for inclusion in the LNHP database.

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. Western Sand Darter and Suckermouth Minnow: Develop partnerships with Texas Department of Parks and Wildlife to monitor populations of these species throughout the Sabine drainage basin.

Threats Affecting Basin:

The following table illustrates the threats identified for the Sabine 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	Change in Land- Use Practices	Habitat Destruction or Conversion	Habitat Disturbance	Loss of Genetic Diversity	Modification of Water Levels; Changes in Natural Flow Patterns	Salinity Alteration	Sedimentation	Toxins/ Contaminants
Channelization of rivers or streams	XXX	XXX						XXX		
Commercial/industrial development		XXX					XXX			
Construction of ditches, drainage or diversion systems							XXX	XXX		
Conversion to agriculture or other forest types			XXX	XXX	XXX				XXX	
Crop production practices			XXX		XXX					
Dam construction	XXX			XXX	XXX		XXX			
Development/maintenance of pipelines, roads or utilities					XXX					
Excessive groundwater withdrawal							XXX			
Incompatible forestry practices					XXX					
Industrial discharge										XXX
Invasive/alien species	XXX				XXX	XXX				
Operation of dams or reservoirs	XXX	XXX				XXX	XXX	XXX	XXX	
Operation of drainage or diversion systems							XXX			
Residential development			XXX	XXX	XXX		XXX			

Basin Conservation Strategies:

1. Support initiatives and programs that help reduce siltation and sedimentation throughout the basin.
2. Work with LANSTF to identify and address threats related to invasive species.
3. Develop partnerships with regulatory and other agencies to share data on habitat threats.
4. Develop an internal procedure to distribute information on proposed reservoirs to LDWF district biologists and incorporate their input into official LDWF comments.

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