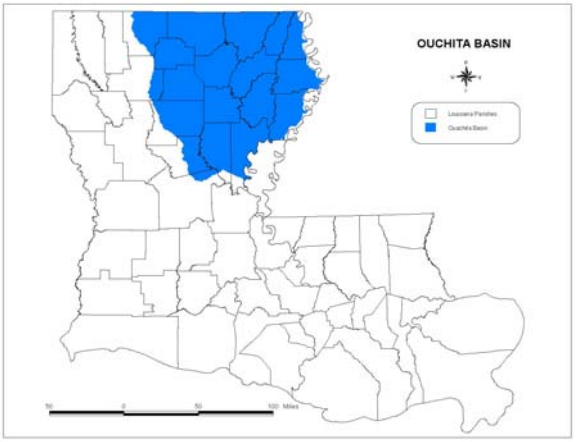
f. Ouachita Basin

General Description:



The Ouachita River system is the principal drainage for south Arkansas and northeast Louisiana, draining an approximate area of 26,000 square miles. The source of the river is found in the Ouachita Mountains of west-central Arkansas near the Oklahoma border. The river flows south through northeast Louisiana and joins with the Tensas River north of the town of Jonesville to form the Black River, which empties into the Red River. The total length of the river is 542 miles. In Louisiana, the Ouachita Basin covers 10,000 square miles of drainage area (LDEQ 1993) which mostly consists of rich alluvial plains cultivated in soybeans, cotton, and corn. The northwest corner of the basin is forested in pine, much of which is commercially harvested. Bayou Bartholomew and Bayou D'Arbonne are the major tributaries of the Ouachita.

There are two lock and dams on the Ouachita in Louisiana. The Jonesville and Columbia lock and dams were constructed by the COE and opened to navigation in 1972. Each structure impounds a slack-water pool approximately 100 miles long. Benefits to fish and wildlife of the Ouachita-Black navigation project in Louisiana include the Catahoula Diversion Channel and Control Structure and the Little River Closure Dam. The diversion channel and structure and closure dams are located in the Jonesville Lock and Dam pool southwest of Jonesville. The diversion channel diverts flows from Catahoula Lake into Black River, downstream from the lock and dam. The control structure is used to regulate the flow entering the diversion channel from the lake. The closure dam is located on Little River. These features allow for regulation of stages in the lake to permit its continued use as a resting and feeding area for migratory waterfowl (COE 1998).

There are roughly 118 species of freshwater fishes (W. Kelso, personal communication), 49 species of mussels (Vidrine 1993), and 19 species of crawfish (J. Walls, personal communication) found within the Ouachita Basin.

Water Quality:

The 2004 Water Quality Inventory Report (LDEQ 2004) indicated that 22% of the 61 water body subsegments within the basin were fully supporting their three primary designated uses. However, 76% 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, organic enrichment and

low concentration of dissolved oxygen, oil and grease, non-native aquatic plants, sedimentation/siltation, and turbidity. The suspected sources of the water quality problems include: home sewage systems, agriculture, silviculture, urban storm water runoff, surface mining, and dredging.

OUACHITA BASIN SPECIES OF CONSERVATION CONCERN (24)			
CRUSTACEANS	Bluehead Shiner	Pink Mucket	Rabbitsfoot
Vernal Crawfish		Fatmucket	Monkeyface
Elegant Crawfish	**MUSSELS**	White Heelsplitter	Squawfoot
	Mucket	Black Sandshell	
FRESHWATER FISH	Western Fanshell	Hickorynut	**REPTILES**
Paddlefish	Butterfly	Pyramid Pigtoe	Alligator Snapping Turtle
Bigeye Shiner	Spike	Fat Pocketbook	Ouachita Map Turtle
Steelcolor Shiner	Ebonyshell	Ouachita Kidneyshell	

Priority Species Research and Survey Needs:


Alligator Snapping Turtle

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

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

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.

Species Conservation Strategies:

1. Develop a comprehensive survey methodology to determine long term trends in freshwater fish population abundances of the entire Ouachita Basin.
2. Mussels: Implement conservation and management strategies from SWG project T10 upon completion.

Threats Affecting Basin:

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

	Threat									
Source of Threat	Altered Composition/ Structure	Altered Water Quality	Competition for Resources	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	
Construction of ditches, drainage or diversion systems				XXX	XXX	XXX	XXX		XXX	
Construction of navigable waterways				XXX	XXX		XXX		XXX	
Conversion to agriculture or other forest types				XXX			XXX	XXX	XXX	
Crop production practices		XXX	XXX	XXX	XXX		XXX	XXX		XXX
Dam construction	XXX			XXX	XXX		XXX		XXX	
Development/maintenance of pipelines, roads or utilities				XXX	XXX	XXX	XXX		XXX	
Incompatible forestry practices				XXX	XXX				XXX	XXX
Industrial discharge		XXX								XXX
Invasive/alien species			XXX							
Levee or dike construction				XXX	XXX		XXX		XXX	
Livestock production practices		XXX			XXX			XXX	XXX	
Oil or gas drilling					XXX	XXX				
Operation of dams or reservoirs					XXX		XXX		XXX	
Operation of drainage or diversion systems					XXX		XXX		XXX	
Mining practices				XXX	XXX				XXX	XXX
Residential development		XXX		XXX	XXX	XXX		XXX		
Wetland fill					XXX				XXX	

Basin Conservation Strategies:

1. Improve partnerships with LDEQ, NRCS, TNC, LSU CoOp Extension Service and others to share data on threats to this watershed and participate in the development of future strategies to abate these identified threats.
2. Work with LANSTF to identify and address threats related to invasive species.
3. Prepare educational material on potential impacts of invasive species to the Ouachita River and its tributaries.
4. Continue LDWF involvement in the environmental review process of all river related projects. Identify potential impacts and recommend appropriate mitigation.
5. Develop education and outreach programs with NRCS to reduce sediments and nutrient loading within the Ouachita Basin.
6. Work with LMRCC on important river issues.

References:

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY. 1993. Nonpoint Source Pollution Assessment Report. Website. http://nonpoint.deq.state.la.us/assess39.html.

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VIDRINE, M. F. 1993. The historical distribution of freshwater mussels in Louisiana. Gail Q. Vidrine Collectables. Eunice, LA. 225 pp.