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Memphis District

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NOTICE OF AVAILABILITY

Draft Assessment of the Natural Resource Habitat Needs
of the
Lower Mississippi River Resource Assessment

REPLY TO:
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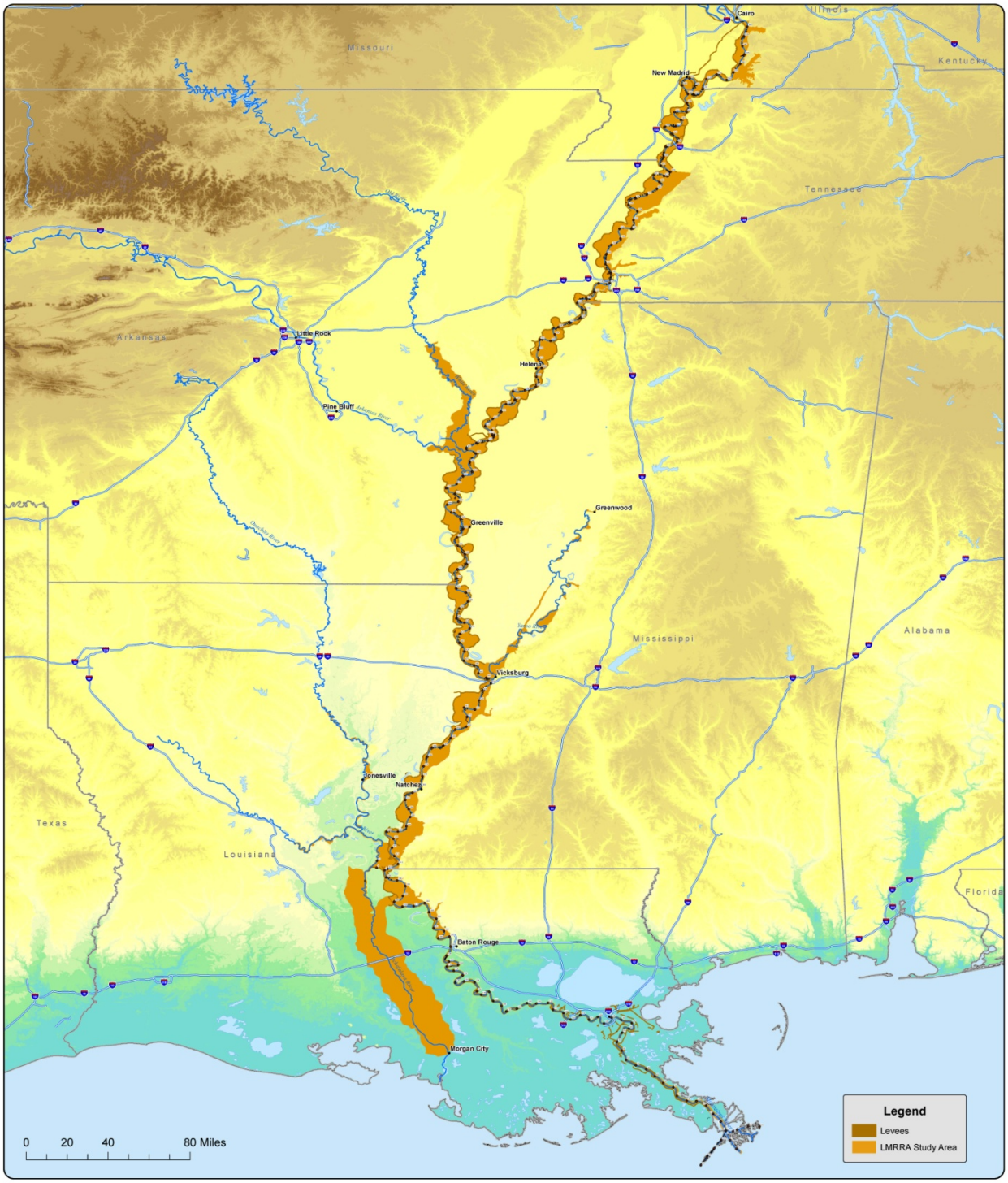
TITLE: Draft Assessment of Natural Resource Habitat Needs of the Lower Mississippi River Resource Assessment
http://www.mvm.usace.army.mil/Missions/Projects/LMMRA.aspx

AUTHORITY: The Lower Mississippi River Resource Assessment is authorized by Section 402 of the Water Resources Development Act of 2000, Public Law 106-541.

LOCATION: The study area extends from River Mile 953 of the main-stem Mississippi River channel south of Cairo, Illinois, downstream to River Mile 0 (Head of Passes) in Louisiana (see map on page 2). The area encompasses the main river channel and the area between the Mississippi River and Tributaries project levees or natural high ground (batture), including the mouths of all tributaries between the levees. The study boundary extends up the following rivers and canals that have existing commercial navigation (i.e., commercial barge traffic) to the point of direct influence between each channel and the main-stem Mississippi River: the White River upstream to Clarendon, Arkansas; the Arkansas Post Canal upstream to Norrell Lock and Dam, Arkansas; the Yazoo River upstream to Greenwood, Mississippi; the Red River upstream to Lock and Dam No. 2 in Louisiana; the Ouachita/Black River upstream to Columbia Lock and Dam in Louisiana; and the Old River from the Old River Lock to its confluence with the Red and Atchafalaya Rivers in Louisiana. The Atchafalaya Basin floodway system in Louisiana is included in the study area.

US Army Corps of Engineers

LOWER MISSISSIPPI RIVER RESOURCE ASSESSMENT STUDY - OVERVIEW



TO WHOM IT MAY CONCERN: The U.S. Army Corps of Engineers, Memphis District, is issuing this notice of the availability of a draft Assessment of Natural Resource Habitat Needs for the Lower Mississippi River.

PURPOSE: The Lower Mississippi River Resource Assessment will produce three separate assessments and one comprehensive plan combining those three assessments. This report is the Assessment of Natural Resource Habitat Needs. It examines the known and anticipated habitat needs based on current and foreseeable plans and operations.

The other reports are the Assessment of Information Needed for River-Related Management completed in 2013 and the Assessment of River-related Recreation and Access completed in 2014. The comprehensive plan will be available for public review in early 2015.

Executive Summary

This report assesses the natural resource habitat needs for the Lower Mississippi River from its confluence with the Ohio River at Cairo, Illinois, to the Head of Passes in Louisiana. The investigation was authorized in the Water Resources Development Act of 2000. The Nature Conservancy – Great Rivers Partnership is the lead study sponsor. This is the third report completed under the Lower Mississippi River Resource Assessment authority.
The Mississippi River and the land between the levees are a dynamic ecosystem that changes markedly in response to the river's annual hydrologic regime. The nearly 3 million-acre floodplain is interspersed with abandoned channels, meander scars, and large expanses of forested wetlands. These areas provide a diverse array of aquatic and terrestrial habitat types.

The Mississippi Flyway hosts the world's largest bird migration, connecting life from the Arctic to South America. Over 300 species of migrating birds and approximately 70% of the Nation's migratory waterfowl use the flyway. The river also supports over 90 freshwater fish. This assessment found nine areas of fish and wildlife habitat needs on the Lower River and identifies several plans that have already been developed to answer some of these needs.

The Mississippi River receives water from 31 states. The water contains many contaminants and nutrients. Water quality is not a major limiting factor in the river ecosystem, but there is very little information about localized water quality effects, especially in backwaters, and side channels. There is a need to better understand water quality in secondary and tertiary habitats that are important for some life stages of fish and mussels.

The need to restore bottomland hardwoods in the Lower Mississippi River Valley has long been recognized and is a priority for many entities, but other vegetation types have also declined. There is a need for research to examine current hydrology, soils and historic vegetation within the batture and develop tools to direct restoration species selection. This information would increase the success of restoration efforts. There is also a need to control or eliminate invasive plant species where they threaten restoration or preservation efforts.

There is a need to reconnect backwaters, side channels and floodplain lakes with the main channel at normal water levels. The Restoring America's Greatest River Initiative identifies specific opportunities for restoring some of this habitat. The federally listed interior least tern, pallid sturgeon, fat pocketbook mussel, and many other species in the Lower Mississippi River would benefit.

Most of the species native to the Lower Mississippi River are still present and their populations are viable, but the species abundance of many has declined. Habitat changes along the main stem and up the tributaries have caused most of the changes for mammals and birds, but the main factor driving aquatic population changes has been the introduction of exotic aquatic species such as carp and zebra mussel. There is a need for comprehensive studies of tributaries to understand their habitat value to the overall Lower Mississippi River system, and there is also a need to control invasive species especially where they threaten native species.

Dynamic river forces form, enlarge, erode, move, and destroy sandbars and gravel bars. On established sandbars, high water removes existing vegetation and deposits new sand. Sandbars are the primary habitat component used for interior least tern nesting. Gravel bar habitats are important as spawning substrate for pallid sturgeon and other fish species. There is a need to protect and restore gravel and sand bars. The *Conservation Plan for the Interior Least Tern, Pallid Sturgeon, and Fat Pocketbook Mussel* addresses management and restoration of these features and the Restoring America's Greatest River initiative also identifies the need to conserve and restore them.

The Mississippi River floodplain is now 80% smaller than it was historically. The loss in area impacts water quality, habitat and species. The floodplains of tributary rivers may have become more important since the Mississippi River floodplain has been reduced. Cities, farms, highways, factories and other developments have moved into the historic floodplain. There is a need to assess tributary rivers to determine how their floodplains can be better managed to compensate for some of the loss of floodplain area. On the main stem Mississippi River, there is a need to restore the quality of habitat within the batture.

Many Mississippi River islands have been lost or altered. Islands offer important edge habitat. Since the islands are isolated from the bank, they afford many species safe places for sensitive life cycle events such as nesting. There is a need for an ecological inventory of islands in the Lower River to determine their value for habitat and potential for restoration.

Preserving and rebuilding coastal wetlands is a recognized need, and projects and programs are in place to address the problems. Louisiana's Comprehensive Master Plan for a Sustainable Coast sets forth a long term plan to address coastal needs.

Habitat in the Mississippi River main channel was once very diverse and provided a variety of substrates and flow conditions. Habitat complexity in the main stem has been reduced. Fish species, such as pallid sturgeon, primarily use the main channel of the river and rely on the diverse habitats for their various life stages. There is a need to restore some of the diversity in the main channel of the Mississippi River in areas where it does not interfere with navigation.

The Mississippi River ecosystem is a dynamic system with interactions between the terrestrial and aquatic systems, main channel and side channel areas, mudflats, backwaters, tributaries and islands. There is a need to examine and manage the Mississippi River and batture at a practical scale. There are some priority reaches of the river where there are opportunities to enhance a broad spectrum of features, i.e. restorable side channels, backwaters, and oxbows, a wide floodplain, large islands, populations of threatened and endangered species and sand bars. These areas should be examined holistically to develop plans for restoring all of the vital ecological elements.

PUBLIC INTEREST REVIEW: The purpose of this public notice is to solicit comments and information to improve this report. This habitat assessment does not propose any action.

The Corps of Engineers is soliciting comments from the public; federal, state and local agencies and officials; Indian Tribes; and other interested parties. Any comments received will be considered by the Corps of Engineers to improve the quality of this report and to determine the overall public interest in the assessment. **The draft report will be circulated to agencies and any other parties that respond to this notice requesting copies. Copies of these documents have been placed on the District's website at:**

http://www.mvm.usace.army.mil/Missions/Projects/LMMRA.aspx

COMMENTS OR REQUEST FOR ADDITIONAL INFORMATION: If you need additional information or want to submit comments, contact Marsha Raus (901/544-3455 at the U.S. Army Corps of Engineers, Planning Branch, 167 North Main Street, Room B-202, Memphis, TN 38103-1894. **Comments should be sent to this office by 12 December 2014.**

Sincerely,

Edward P. Lambert

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Chief, Planning and Environmental Division South