



US Army Corps of Engineers®

Mississippi Valley Division/
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(Note to Editors: The following provides background on the U.S. Army Corps of Engineers' navigation mission and current projects on the Mississippi River.)

Mississippi Valley Division Navigation Mission

Vicksburg, Miss., May 15, 2001 -- Navigation is one of the Mississippi Valley Division's missions most beneficial to the nation's economy and environment. More than one billion tons of domestic commerce moves each year on the 11,000 miles of fuel-taxed inland waterways. <http://www.mvd.usace.army.mil/Pam/Barge Compare 03.jpg> More than one-third of that total travels up and down the Mississippi River. Farm products make up more than half of the tons shipped, followed by sand and gravel, coal and petrochemicals. More than 60 percent of the corn exported from the United States passes down the Mississippi.

Commercial tows (a towboat pushing one to perhaps 40 barges) face a variety of navigation conditions on the Mississippi. North of St. Louis barges move through a system of 29 locks and dams, while below St. Louis the river is free flowing. From Baton Rouge, La., south, the Corps maintains a 45-foot-deep channel, to accommodate ocean-going vessels. A nine-foot channel is maintained above Baton Rouge for the length of the Mississippi River, and its principal harbors.

<http://www.mvd.usace.army.mil/Pam/LD Locations.ppt>
<http://www.mvd.usace.army.mil/Pam/Tows 02.jpg>

Because of the savings involved with barging bulk goods, a reliable commercial navigation channel in the river saves the nation over one billion dollars each year in transportation costs. The lower transportation costs also keep American products competitive in the world marketplace.

In addition to the economic savings of barge transportation, shipping bulk goods by barge reduces energy consumption and associated pollution. <http://www.mvr.usace.army.mil/navdata/tr-comp.htm> Barges are also a safer means of shipping, e.g., for each 600 million ton-miles moved (the movement of one ton of freight one mile), there is one barge accident and 38 truck accidents. (Source: Minnesota Department of Transportation)

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2-2-2 Navigation

To maintain an adequate channel depth and direct water flows, the Mississippi Valley Division utilizes channel control structures such as dikes, wing dams, closure dams and concrete revetments. The Mississippi Valley Division provides channel improvement structures that maintain a safe and reliable navigation channel in an environmentally sensitive manner by designing structures that work in harmony with the natural laws of the river. In many instances, design modifications of existing channel improvement structures have improved riverine habitat.

Mississippi Valley Division inland waterway system facts and figures:

- Commercial waterways within division boundaries (out of 11,000 miles nationwide): 4,267 miles
- Inland Waterway systems within division boundaries: 11
- Other waterway systems within division boundaries: 19
- The MVD boundaries encompass one-third of United States inland waterways
- Main commodities moved: food and farm products, petroleum and petroleum products, crude materials, chemicals and related products, primary manufactured goods, and coal.
- Number of locks: 67 (out of 237 Corps-wide):
 - 34 - *Mississippi River*
 - 8 - *Illinois River, Ill.*
 - 8 - *Gulf Intracoastal Waterway, La. and Texas*
 - 5 - *Red River, Ark., La., Texas and Okla.*
 - 4 - *Ouachita and Black Rivers, Ark. and La.*
 - 3 - *Pearl River, Miss. and La.*
 - 2 - *Bayou Teche, La.*
 - 1 - *Freshwater Bayou, La.*
 - 1 - *Kaskaskia River, Ill.*
 - 1 - *Old River, La.*
- Deep draft ports (14-foot draft and greater) within MVD: 7
- Shallow draft harbors (less than 14-foot draft) within MVD: 51
- Tonnage moving through deep-draft ports: 496.8 million tons
- Tonnage moving through shallow draft ports: 57.1 million tons

Some examples of Mississippi Valley Division's current or ongoing major studies, construction projects, and operation and maintenance items in the navigation arena include:

OLD RIVER CONTROL STRUCTURES

Since World War II, one of the Corps challenges has been building the Old River Control Structures to regulate the diversion of Mississippi River flows into the Atchafalaya Basin.

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3-3-3 Navigation

Over time, the smaller Atchafalaya River was diverting an ever-increasing share of the Mississippi's flow. In 1954, Congress authorized construction of the Old River Control Structures in order to control the flow at Old River and prevent the Mississippi from being captured by the Atchafalaya River and changing course.

The initial features of the project, the low-sill and overbank structures, were completed in 1963. A third facility, the auxiliary structure, was added in 1986 to provide greater control and flexibility of operations.

<http://www.mvn.usace.army.mil/pao/oldriver/oldriver.htm>

UPPER MISSISSIPPI RIVER - ILLINOIS WATERWAY SYSTEM NAVIGATION STUDY

The study, which began in 1993, is assessing the need for navigation improvements on the Upper Mississippi River and the Illinois Waterway System. The study area includes 854 miles of the Upper Mississippi River between Minneapolis - St. Paul and the mouth of the Ohio River, with 29 locks and dams; and 348 miles of the Illinois Waterway, with eight locks and dams. The Illinois Waterway connects the city of Chicago and the Great Lakes with the Mississippi River just upstream of the Melvin Price Lock and Dam at Alton, Ill. The study area lies within portions of Illinois, Iowa, Minnesota, Missouri and Wisconsin. The system's principle problem is delays to commercial navigation traffic due to limited lockage capacity and increasing traffic.

The reconnaissance studies completed in 1990 and 1991 for the Upper Mississippi River and Illinois Waterway identified several locks in the study area with some of the highest average delays to commercial tows in the country.

The Upper Mississippi River System has been designated by Congress "as a nationally significant ecosystem and a nationally significant commercial navigation system." The Corps is committed to providing the public and Congress with the best available information for making a decision that will ultimately impact the Upper Mississippi River System for the next 50 years.

<http://www.mvr.usace.army.mil/PublicAffairsOffice/NavStudy/NASReview.htm>

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REGULATING WORKS

The Regulating Works project focuses on the Middle Mississippi River from the mouth of the Ohio River, at Cairo, Ill., to the mouth of the Missouri River. The purpose of the project is to maintain a 9-foot-deep/300-foot-wide channel below the northern boundary of St. Louis and a 200-foot-wide channel from that point to the mouth of the Missouri River. Typical projects include revetment, dikes, dredging and rock removal.

<http://www.mvs.usace.army.mil/engr/river/EnvironEng/en01.htm>

MAJOR LOCK AND DAM REHABILITATIONS

The majority of the 29 lock and dam systems on the Mississippi were built in the 1930's, and have performed very well over the past 60-plus years. However, reliability and operational problems were occurring, or were about to occur, at some of the facilities, which would significantly impact the commercial navigation users of the upper Mississippi River.

The Army Corps of Engineers is addressing these reliability problems through rehabilitation and maintenance programs, which ensure the lock and dam system continues to operate satisfactorily for current levels of traffic. Locks and dams 2 through 10 had exceeded their design life and needed major structural, mechanical and electrical rehabilitation to ensure reliable operation for 50 years into the next century.

The Mississippi Valley Division has major lock and dam rehabilitation efforts underway on the Mississippi River at locks and dams 3, 12, 14 and 24 using Construction, General, funding and at locks and dams 3, 5A, 6, 7, 8 & 9 using Operations and Maintenance, General, funding.

The major rehabilitation project at Lock and Dam 3 is currently being reevaluated to determine the feasibility of combining a navigation safety project with the embankment repair project. A construction schedule has yet to be determined.

Current ongoing work in the Operation and Maintenance program includes the installation of crane carriers and bulkhead hoists at several sites, replacement of the control building at Lock and Dam 7 and the engineering and design for the control building replacement at Lock and Dam 9. The contract for the replacement of the control building at Lock and Dam 8 has been awarded and work is scheduled to begin later this spring.

http://www.mvp.usace.army.mil/navigation/locks_and_dams/major_rehab/

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HOUMA NAVIGATION CANAL LOCK

Partnering with the Louisiana Department of Transportation and Development, the Corps awarded a contract December 7, 2000, for the design of a new Houma Navigation Canal Lock. The \$2 million contract went to URS Corporation. The lock would be located approximately 15 miles south of Houma, La.

The proposed lock measures 200 feet wide by 1,200 feet long, with a -15 NGVD (national geodetic vertical datum or sea level) depth; the current authorized depth of the Houma Canal. Various structures will be considered during detailed design to optimize operation, such as a 200-foot-wide floodgate with an adjacent smaller lock in lieu of a single 200-foot-wide lock. The structures located in the Houma Navigation Canal will act as integral features of the Morganza to the Gulf Hurricane Protection Project.

The Morganza to the Gulf Hurricane Protection project, consisting of 72 miles of earthen levee, 12 flood control structures and numerous environmental features, is designed to protect against hurricane tidal surges in Terrebonne and Lafourche parishes. It will also reduce coastal wetland loss and preserve the ecosystem from damaging saltwater intrusion.

The project will tie into the Larose to Golden Meadow hurricane protection levee to the east and Highway 90 along Bayou Black Ridge to the west near Minors Canal.

The federal government and state are sharing the costs of the project on a 65 percent/35 percent basis. The contract, to be administered by the Vicksburg District, will be performed in three phases: preliminary design; detailed design report; and plans and specifications. Design is scheduled for completion in 2003.

DEEP-WATER PORTS

In the New Orleans District, the Corps of Engineers keeps open the largest port complex in the world, based on total waterborne commerce tonnage. This is comprised of four ports, shoulder-to-shoulder on the Mississippi River's last 250 miles to the sea: Port of South Louisiana, based in LaPlace, is America's No. 1 port in tonnage; New Orleans, the No. 4 port; Baton Rouge, No. 7; and Plaquemines, below New Orleans, No.

9. And on the Calcasieu River in western Louisiana, Lake Charles is the nation's 13th largest port.

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SUMMARY

The Mississippi River system contains a rich variety of environmental, recreation, navigation and flood control features. It is the only river system in the United States formally recognized by Congress both as a significant ecosystem and a commercial navigation system.

The Corps' missions have changed over the years, as have the ways of accomplishing them. The people of the nation want both economic growth and environmental quality.

Meeting these competing goals will require balancing the needs of flood control, navigation, hydropower, environmental protection and restoration and the management of natural resources.

The U.S. Army Corps of Engineers, Mississippi Valley Division, includes portions of 12 states and encompasses 370,000 square miles. The district offices that conduct the programs and activities overseen by the Mississippi Valley Division are located in St. Paul, Minn.; Rock Island, Ill.; St. Louis, Mo.; Memphis, Tenn.; Vicksburg, Miss.; and New Orleans, La. http://www.mvd.usace.army.mil/Pam/MVD_map.jpg

The division's navigation function includes locks and dams, salt water control structures, reservoirs, spillways, outlet works, waterways, channels, harbors, dredging, dredge material disposal facilities, removal of sunken vessels, drift/rock/debris removal, channel patrol/ reconnaissance, channel controlling works in support on navigation (dikes, revetments, weirs, breakwaters, foreshore protection, jetties, seawalls, piers, erosion control structures and levees), project-associated buildings, grounds, utilities, access roads, walkways, bridges, project overlooks and permanent operating equipment and instrumentation for the navigation infrastructure features.

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See the following web sites for more information:

Mississippi Valley Division:	http://www.mvd.usace.army.mil/
St. Paul District:	http://www.mvp.usace.army.mil/
Rock Island District:	http://www.mvr.usace.army.mil/
St. Louis District:	http://www.mvs.usace.army.mil/
Memphis District:	http://www.mvm.usace.army.mil/
Vicksburg District:	http://www.mvk.usace.army.mil/
New Orleans District:	http://www.mvn.usace.army.mil/
Headquarters Navigation Site:	http://www.wrsc.usace.army.mil/iwr/pdf/navigate.pdf