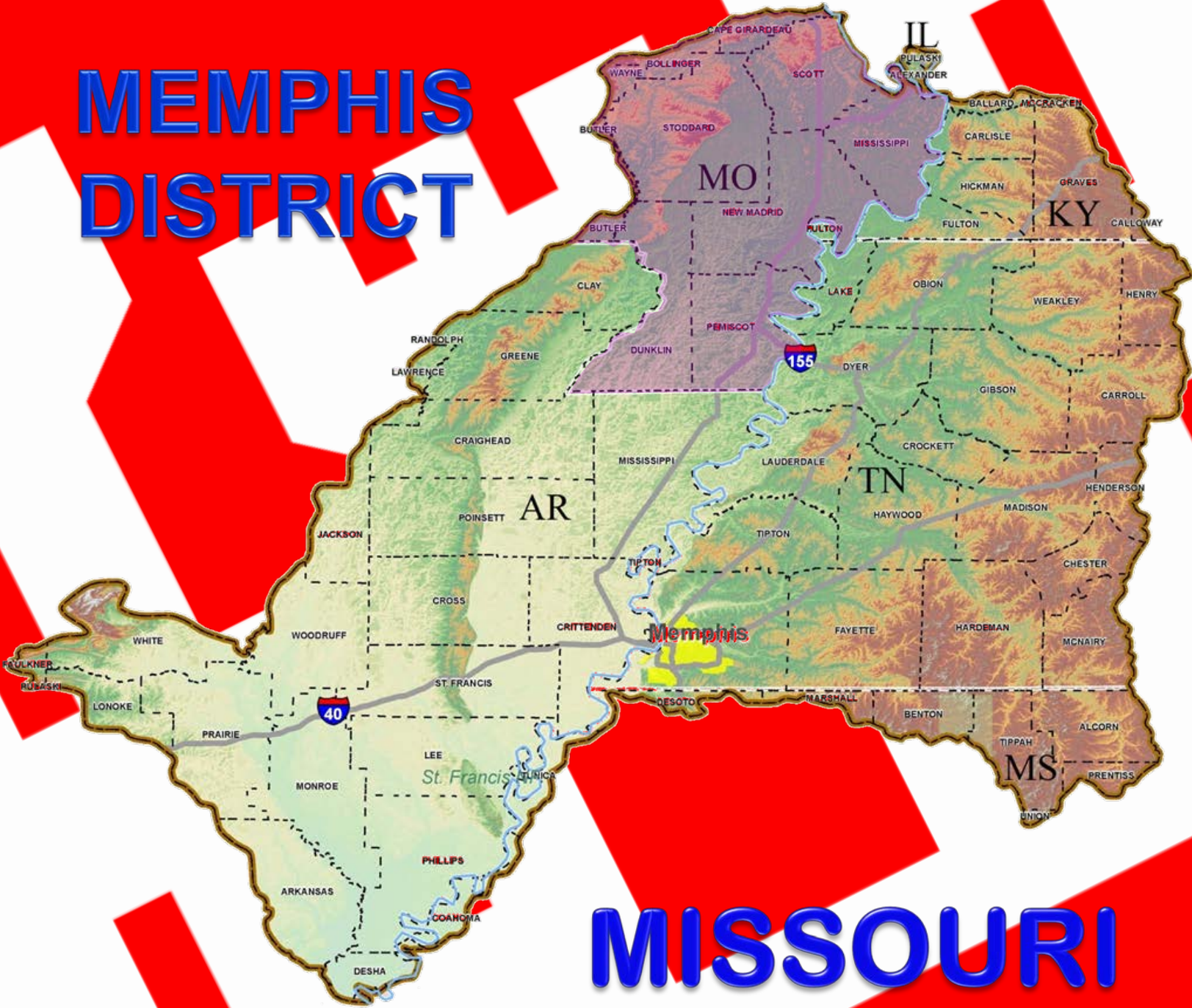




US Army Corps of Engineers
BUILDING STRONG®

MEMPHIS DISTRICT



MISSOURI PROJECTS



US Army Corps
of Engineers®
Memphis District

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BUILDING STRONG®

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US Army Corps
of Engineers®
Memphis District

MEMPHIS DISTRICT OVERVIEW

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The Memphis District was established in 1882, and is one of six districts in U.S. Army Corps of Engineers' Mississippi Valley Division. Encompassing almost 25,000 square miles, the Memphis District is responsible for federal civil works projects in portions of six states -- Arkansas, Kentucky, Illinois, Mississippi, Missouri and Tennessee.

Memphis District



District Employees

Commanded by Col. Jeffery A. Anderson, the district employs about 500 federal civil service workers. These professionals and craftsmen provide a broad range of technical capabilities to address the Mid-South region's water resource needs. The Memphis District team includes civil, electrical, structural and mechanical engineers, as well as biologists, economists, clerical workers and many skilled laborers.



Ensley Engineer Yard

In addition to our downtown Memphis headquarters located in the Clifford Davis/Odell Horton Federal Building, we also have river engineering and marine mooring facilities at Ensley Engineer Yard in south Memphis at McKellar Lake. Field offices are located in Wynne, Arkansas, and Caruthersville and East Prairie, Missouri.

The district has three major mission areas – flood risk management, navigation and environmental stewardship – with our total civil works program averaging more than \$100 million a year.



US Army Corps
of Engineers®
Memphis District

MEMPHIS DISTRICT OVERVIEW

(Continued)

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Dredging for Navigation

On the Mississippi River, the Memphis District maintains a minimum 9-foot-deep, 300-foot-wide navigation channel. The Mississippi River is the heart of a vast inland navigable waterway system that extends for 12,350 miles. Channel improvements and maintenance dredging are primary tools for keeping the Mississippi open. More than 250 million tons of river-borne commodities pass through the district's reach of the river each year.



Emergency Management

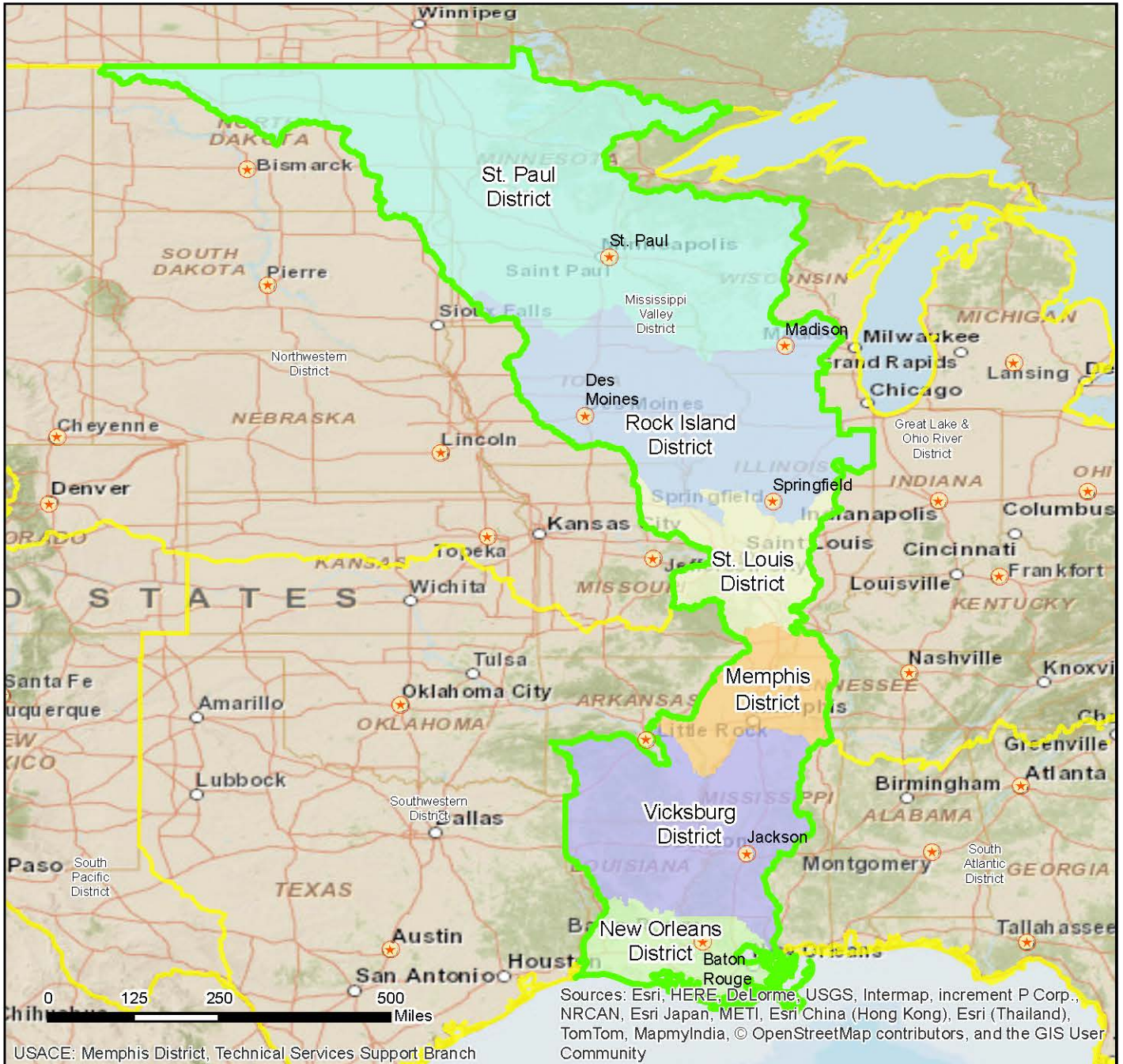
In addition to our main channel navigation and flood risk reduction work, we also provide Emergency Operations planning and response services through our Readiness Branch for natural disasters like floods, hurricanes, earthquakes, tornadoes, and man-made disasters.



Students in the STEM Program meet with Memphis District biologists

Overall, the Memphis District is a multi-talented public engineering agency that can solve a variety of civil works problems. We assist other government agencies with their engineering challenges through our "Support for Others Program," and we contribute volunteer community services to the people of the Mid-South. We are also active participants in the Science, Technology, Engineering and Math (STEM) program. The District is a valuable resource, and we will help the people of the six states we serve meet the civil works challenges they face.

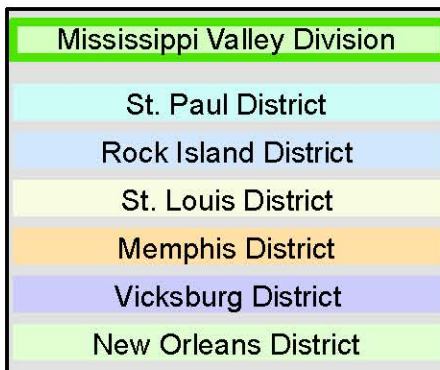
Public safety is the Corps' number one priority. Our pledge is to meet the public engineering needs of your constituents with dedication and professionalism.



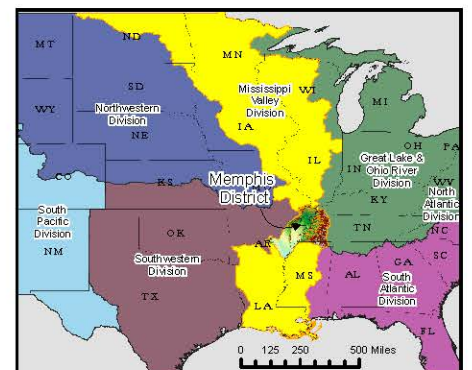
Vicinity Map



Legend



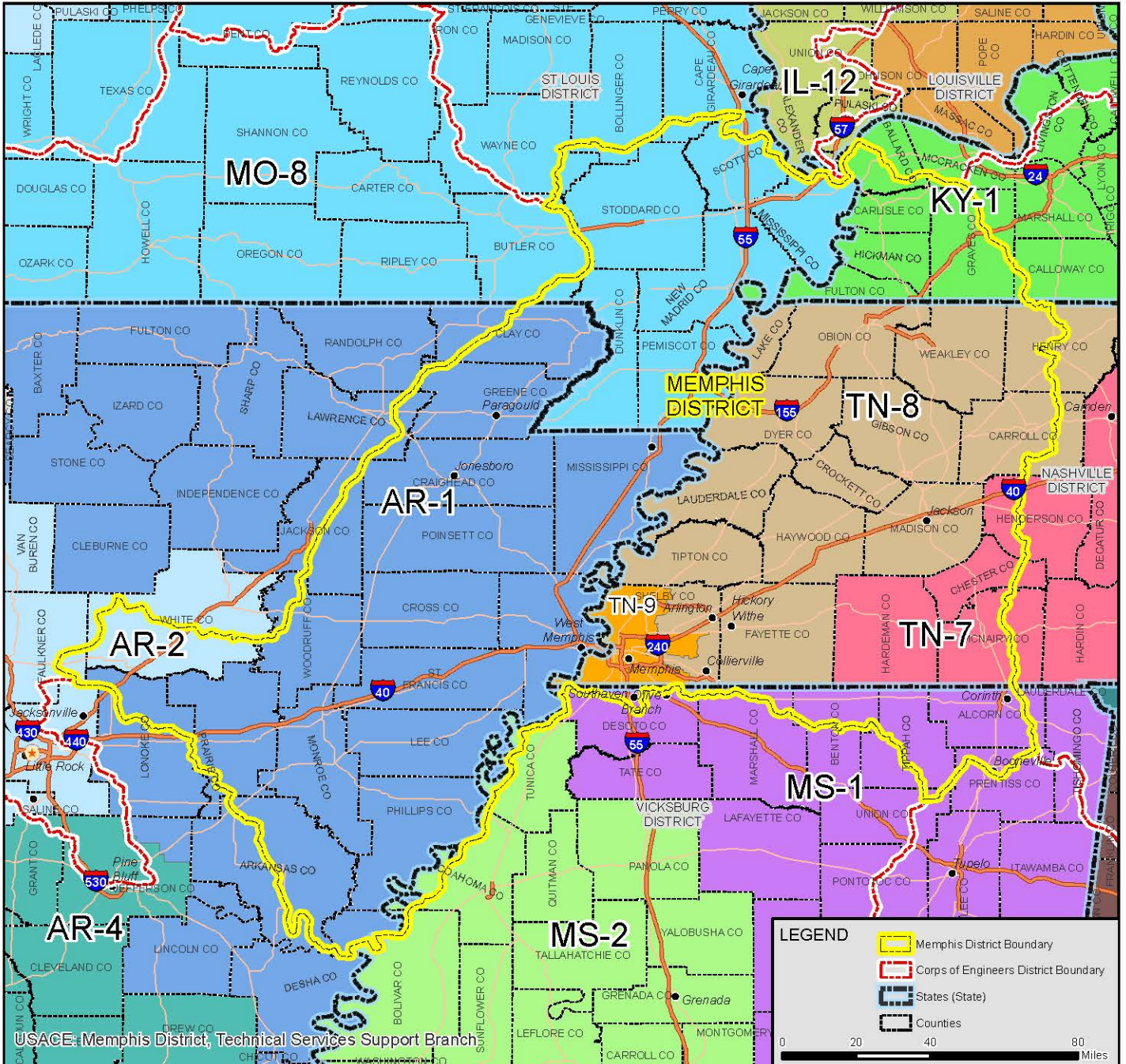
Location in the Division



CONGRESSIONAL DISTRICTS WITHIN MEMPHIS DISTRICT AREA OF RESPONSIBILITY



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USACE: Memphis District, Technical Services Support Branch

ARKANSAS

GOV. Mike Beebe (D)
SEN. Mark Pryor (D)
SEN. John Boozman (R)
REP. Rick Crawford (R AR - 1)
REP. Tim Griffin (R AR - 2)

ILLINOIS

GOV. Pat Quinn (D)
SEN. Richard J. Durbin (D)
SEN. Mark S. Kirk (R)
REP. William Enyart (D IL - 12)

KENTUCKY

GOV. Steven L. Beshear (D)
SEN. Mitch McConnell (R)
SEN. Randal Howard "Rand" Paul (R)
REP. Edward Whitfield (R KY - 1)

MISSISSIPPI

GOV. Phil Bryant (R)
SEN. Thad Cochran (R)
SEN. Roger Wicker (R)
REP. Alan Nunnelee (R MS - 1)
REP. Bennie Thompson (D MS - 2)

MISSOURI

GOV. Jay Nixon (D)
SEN. Claire McCaskill (D)
SEN. Roy Blunt (R)
REP. Jason Smith (R MO - 8)

TENNESSEE

GOV. Bill Haslam (R)
SEN. Lamar Alexander (R)
SEN. Bob Corker (R)
REP. Marsha Blackburn (R TN - 7)
REP. Stephen Fincher (R TN - 8)
REP. Steve Cohen (D TN - 9)



Caruthersville Harbor, MO

BUILDING STRONG®

Point of Contact

Vickie Watson, Project Manager,
Ph. (901) 544-3986
Vickie.L.Watson@usace.army.mil

Authority: River and Harbor Act of 1960, Section 107, as amended.

Appropriation: Energy and Water Development, Operation & Maintenance

Local Interest/Project Sponsor: Pemiscot County Port Authority.

Location: This harbor is located on the Mississippi River (Mile 853.0) at Caruthersville, in Pemiscot County, MO.

Description: The project provides for maintenance of the navigation channel for year-round access to barge transportation for the existing facilities. The approved channel dimensions are 9 feet deep by 150 feet wide by 3,500 feet long with a 300-foot radius turning basin at the up-end.

Importance: This is a slack-water harbor used primarily for the export of agricultural goods.

Status: Funds appropriated in Fiscal Year 2014 are being used to collect survey data and to dredge the harbor. The harbor dredging contract was awarded in June 2014 and limited dredging activities were performed in August 2014.

Issues and Other Information: Maintenance and funding requirements vary from year to year depending on current harbor conditions and current prices for dredging services, respectively. Impacts of not dredging this harbor could vary, from requiring barges to be light-loaded, to complete harbor closure. In addition, restoration of the harbor limits will be more costly in the future, as the sedimentation will continue to accumulate. Maintenance of low-use harbors is not an Administration budget priority.

Project Financial Data:

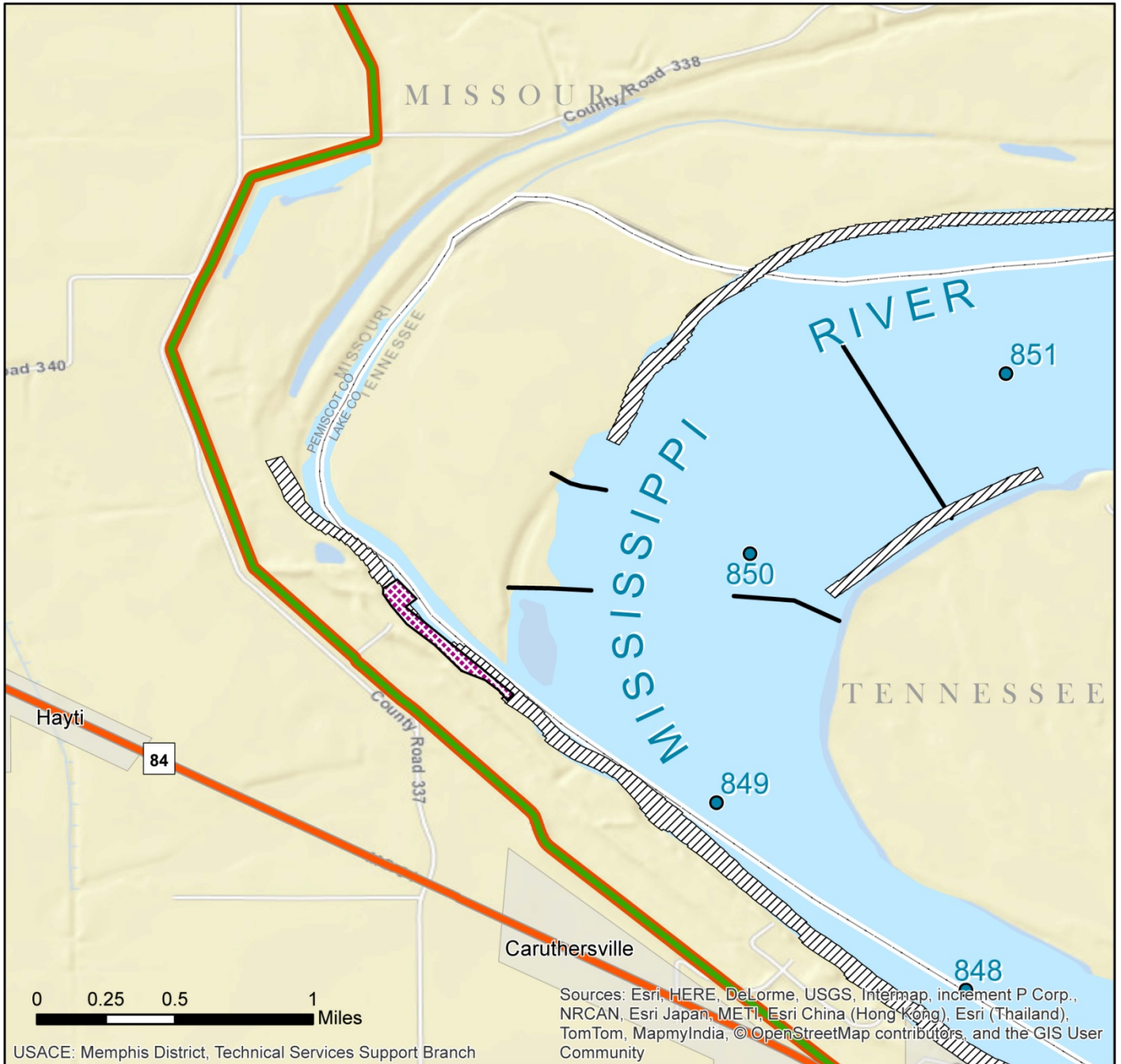
Allocation for FY 2013:	\$ 0
Allocation for FY 2014:	787,000
President's Budget Request for FY 2015:	\$ 12,000
House Report, FY 2015	12,000

Disaster Relief Act Funding:

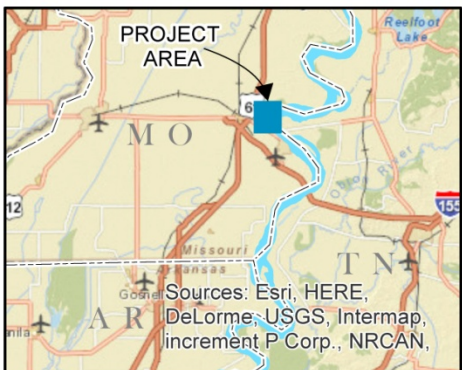
Allocation thru FY 2013:	\$ 850,000
Allocation for FY 2014:	\$ 0



Caruthersville Harbor, MO



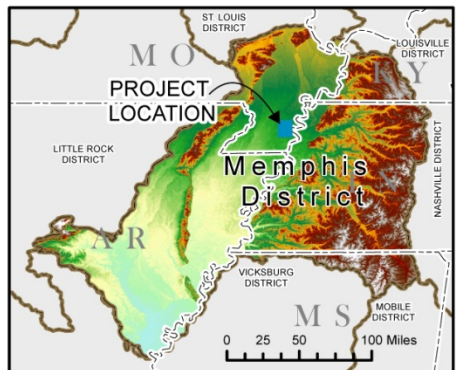
Vicinity Map



Legend



Location in District





New Madrid County Harbor, MO

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Point of Contact

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Ph. (901) 544-3986
Vickie.L.Watson@usace.army.mil

Authority: 1992, Sec. 102(n) includes language directing the Secretary of the Army to maintain the New Madrid County Harbor in lieu of maintaining the federally-constructed New Madrid Harbor.

Appropriation: Energy and Water Development, Operation & Maintenance

Local Interest/Project Sponsor: New Madrid County Port Authority

Location: This locally-constructed harbor is located on the Mississippi River (Mile 885.0), south of the city of New Madrid, in New Madrid County, Missouri.

Description: The project provides for maintenance of the navigation channel for year-round access to barge transportation for the existing facilities. The approved channel dimensions are 9 feet deep by 150 feet wide by 1,500 feet long.

Importance: This is a slack-water harbor used primarily for the export of agricultural goods. Impacts of not dredging this harbor could vary from requiring barges to be light-loaded to complete harbor closure. In addition, restoration of the harbor limits will be more costly in the future, as the sedimentation will continue to accumulate.

Status: Funds appropriated in Fiscal Year 2014 are being used to collect survey data and provide limited dredging of the harbor. The harbor dredging contract was awarded in June 2014 and limited dredging activities were performed in August 2014. The President's Budget for Fiscal Year 2015 includes \$23,000 for the collection of survey data.

Issues and Other Information: Maintenance and funding requirements vary from year to year depending on current harbor conditions and current prices for dredging services, respectively. Maintenance of low-use harbors is not an Administration budget priority.

Project Financial Data:

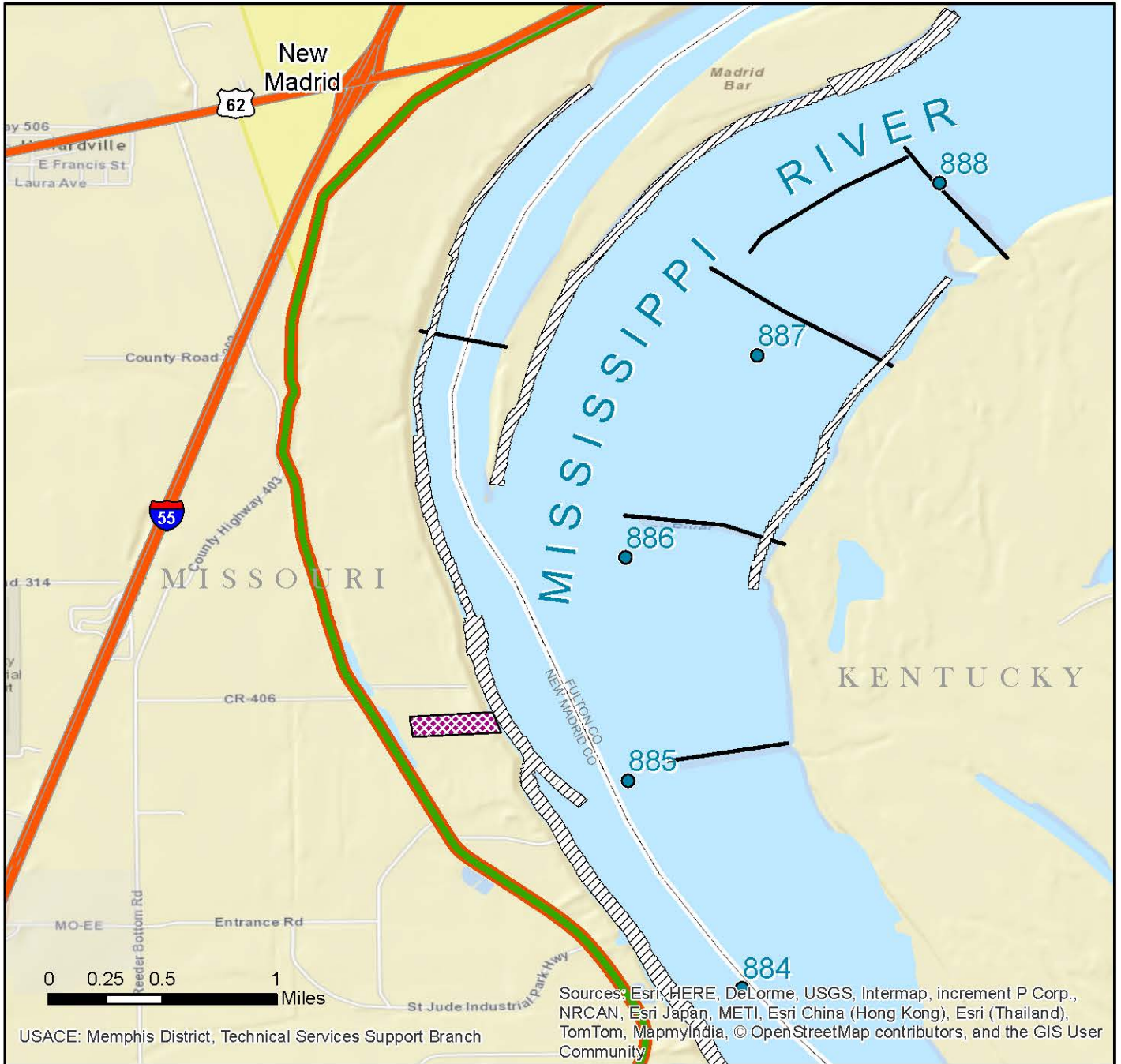
Allocation for FY 2013:	\$ 0
Allocation for FY 2014:	327,000
President's Budget Request for FY 2015:	23,000
House Report, FY 2015	23,000

Disaster Relief Act Funding:

Allocation thru FY 2013:	\$ 550,000
Allocation for FY 2014:	0



New Madrid County Harbor



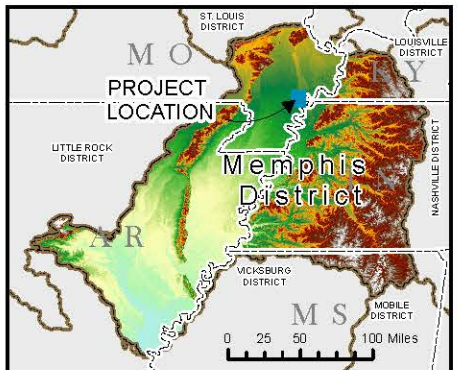
Vicinity Map



Legend



Location in District





New Madrid Harbor, Mile 889, MO

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Point of Contact

Vickie Watson, Project Manager,
Ph. (901) 544-3986
Vickie.L.Watson@usace.army.mil

Authority: **Water Resources Development Act** (WRDA) 1996, Sec. 509 (resumption of Federal maintenance). The Assistant Secretary of the Army for Civil Works approved the report recommending resumption of Federal maintenance on 14 December 2007.

Appropriation: Energy and Water Development, Operation & Maintenance

Local Interest/Project Sponsor: The City of New Madrid, Missouri

Location: The New Madrid Harbor is located at Mississippi River mile 889 adjacent to the city of New Madrid in New Madrid County, Missouri.

Description: The Corps constructed this fast water harbor in 1970 under Section 107 of the Rivers and Harbors Act of 1960. The approved channel dimensions are 9 feet deep by 150 feet wide by 9,400 feet long with a 250-foot radius turning basin at the lower end.

Importance: Although the Federally built New Madrid Harbor does not require maintenance dredging every year, it does require periodic dredging to keep the harbor open to commerce.

Status: No future dredging is scheduled due to lack of funding.

Issues and Other Information: This harbor was last dredged in September 2012 using Disaster Relief Act funding. Maintenance and funding requirements vary from year to year depending on current harbor conditions and current prices for dredging services, respectively. Maintenance of low-use harbors is not an Administration budget priority.

Project Financial Data:

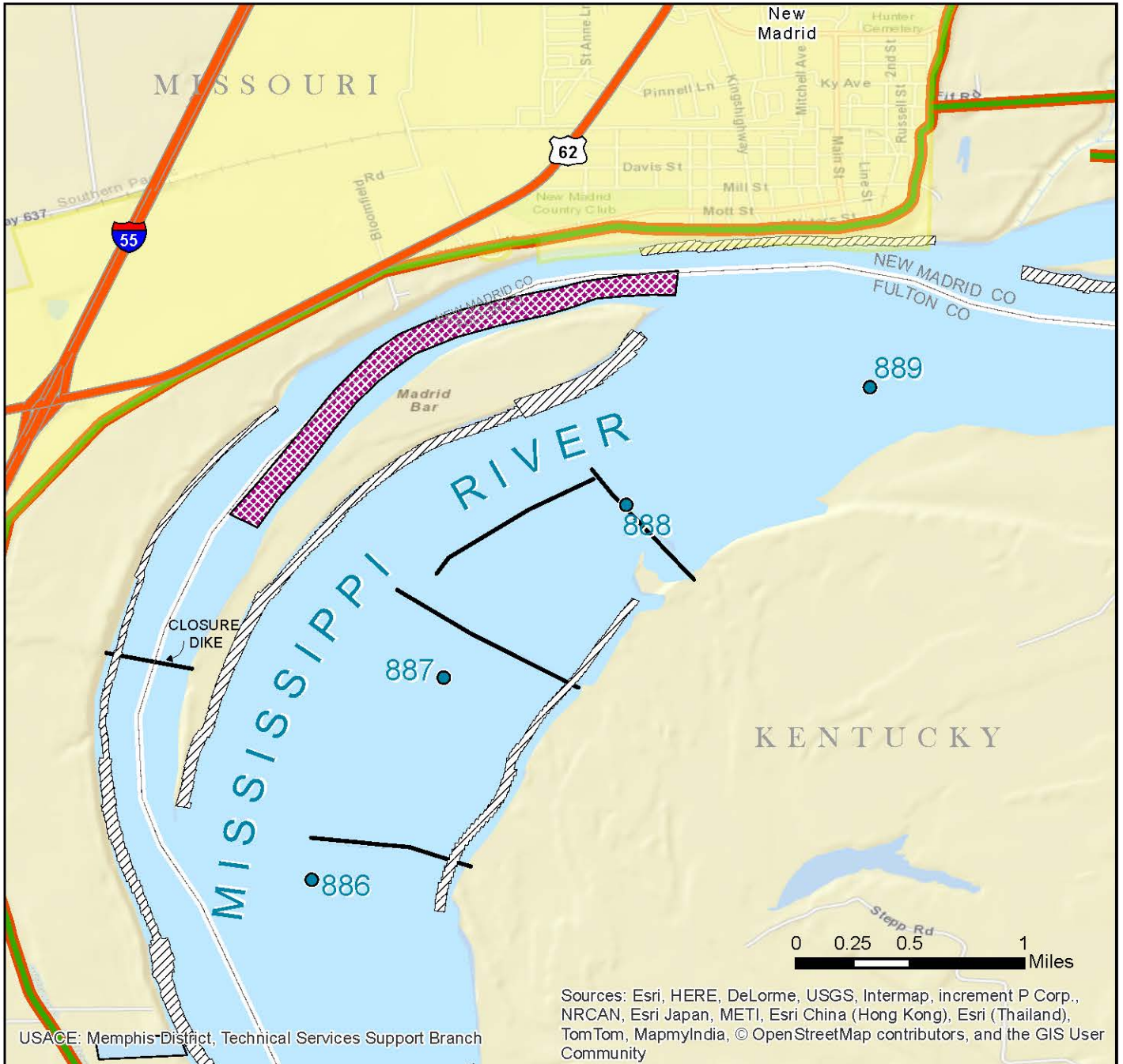
Allocation for FY 2013:	\$	0
Allocation for FY 2014:		0
President's Budget Request for FY 2015:		0

Disaster Relief Act Funding:

Allocation thru FY 2013:	\$	400,000
Allocation for FY 2014:		0



New Madrid Harbor, Mile 889



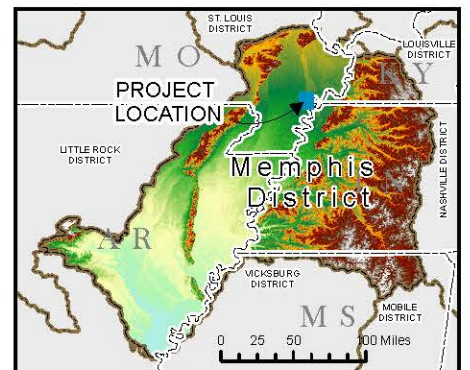
Vicinity Map



Legend



Location in District





St. Francis Basin, AR & MO Construction

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Point of Contact

Dewey Powell, Project Manager,
Ph. (901) 544- 3940
dewey.l.powell@usace.army.mil

Authority: Flood Control Acts of 1928, 1936, 1938, 1941, 1944, 1946, 1950, 1958, 1965, and 1968; Water Resources Development Act (WRDA) 1974, Consolidated Appropriations Act of 2001, and WRDA 2007, Sec's. 2036, 3011, and 3182.

Appropriation: Energy and Water Development, Mississippi River and Tributaries, Construction

Local Interest/Project Sponsor: 24 levee and drainage districts provide project sponsorship.

Location: The project is located in southeastern Missouri and northeastern Arkansas.

Description: The authorized project provides for protection against headwater floods by means of a detention reservoir at Wappapello, Missouri, improvement of the flood-carrying capacities of the St. Francis and Little Rivers and their principal tributaries by means of levees, channel improvements, new channels, auxiliary channels, and floodways, including the main ditches in the Little River Basin. Protection against backwater flooding of the Mississippi River is provided by realignment of the St. Francis River channel supplemented with auxiliary channels, levee construction, and a pumping plant and floodgate.

Importance: This flood control project is a component of the Mississippi River and Tributaries flood control system. The project is designed to provide protection from headwater floods to an area of approximately 1,436,855 acres of agricultural lands including numerous small towns, several major railroads, highways, and utilities in Missouri and Arkansas. In addition, relief from flooding by backwaters of the Mississippi River is afforded to approximately 532,000 acres in the Lower St. Francis Basin. Flooding has occurred every year with few exceptions. It is estimated that the recurrence of the 1937 flood, under present conditions of development in the floodplain, would cause damages of over \$111,426,000 (2012 price levels) if the flood occurred during the crop growing season, without this project. Completion of this project is needed to prevent recurring flood losses. Project benefits will result from prevented flood damages, increased utilization of land, and fish and wildlife enhancement.

Status: In Arkansas, activities include continuing design work for channel enlargement work on 15-Mile Bayou; prepared draft Memorandum of Agreement with federally-recognized tribes for Ditch 15 Diversion and 10-Mile Bayou channel enlargement; continuing the process to transfer 12,647 acres of mitigation land to the state of Arkansas as authorized in WRDA 2007 and scheduled for completion December 2014. In Missouri, activities include work to acquire mitigation lands.

Issues and Other Information: A Memorandum of Agreement was signed with the State of Arkansas for the transfer of mitigation land in Arkansas on 30 March 2013. The Levee System Evaluation Report for the National Flood Insurance Program (NFIP) for System 11, which provides protection to counties in Craighead and Poinsett, Arkansas and Dunklin, Missouri, was completed in 2010 and a "Negative" finding was determined. Potential solutions are being investigated. The construction on the lower Fifteen Mile Bayou area has shortened the length of time that high water impacts the area.

Project Financial Data¹:

Estimated Federal Cost	\$ 519,000,000
Estimated Non-Federal Cost	1,978,000
Estimated Total Cost:	\$ 520,978,000

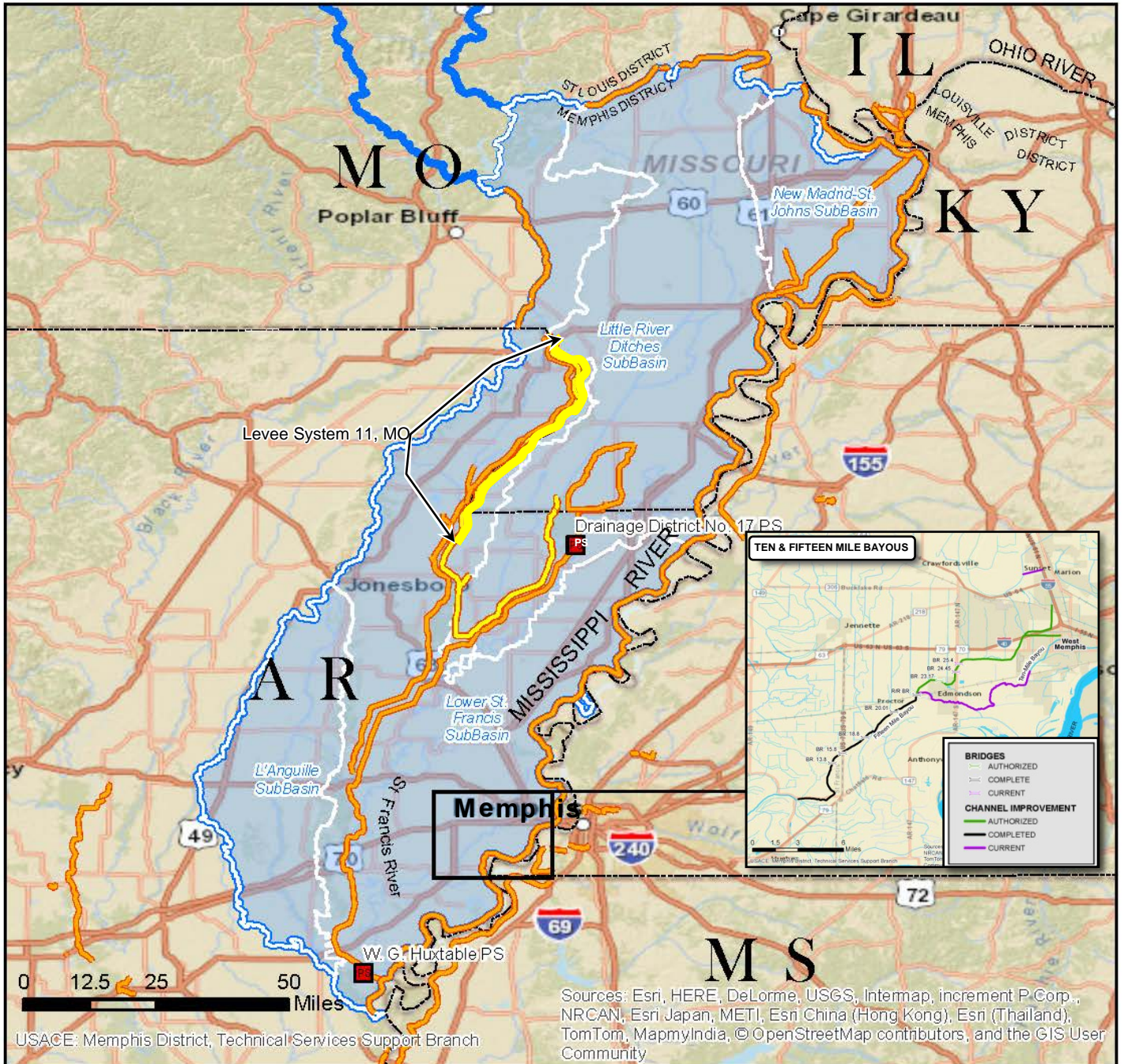
Federal Funding Information:

Allocations thru FY 2013	\$ 438,504,400
Allocation for FY 2014	25,000
President's Budget, FY 2015	0

¹Estimated cost at 1 Oct 10 price levels.



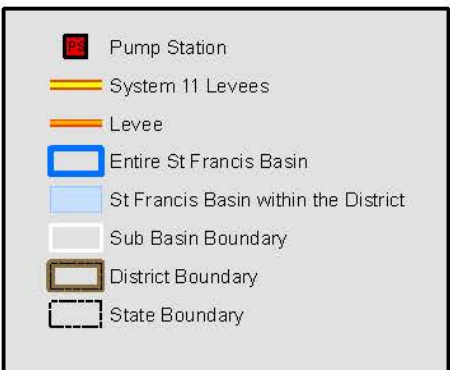
Completed bridge over 15 Mile Bayou on Hwy 147.



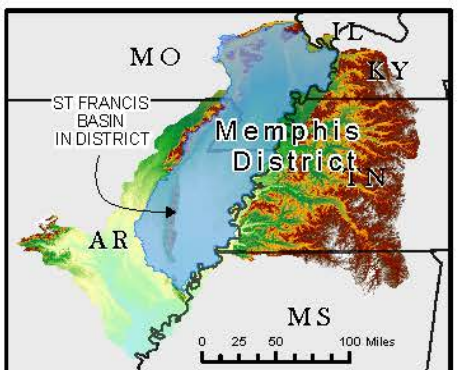
Vicinity Map



Legend



Location in District





St. Francis River & Tributaries, AR & MO Maintenance

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Point of Contact

Marco Goodman, Project Manager
Ph. (901) 544-0727
marco.d.goodman@usace.army.mil

Authority: Flood Control Act, 15 May 1928, as amended by the Acts of 15 June 1936, 18 August 1941, 24 July 1946, 17 May 1950, 27 October 1965 and 13 August 1968. Local cooperation requirements were modified by the Flood Control Act of 24 July 1946, and limited local responsibility to ordinary maintenance as defined by Section 3 of the Flood Control Act of 15 May 1928.

Appropriation: Energy and Water Development, Mississippi River and Tributaries, Maintenance

Local Interest/Project Sponsor: Local interests are responsible for minor maintenance and rights-of-entry.

Location: This project extends from the hills southwest of Cape Girardeau, Missouri, to the confluence of the St. Francis and Mississippi Rivers – approximately 10 miles north of Helena, Arkansas.

Description: The project provides for a certain level of Federal maintenance of authorized facilities – levees and channels – to provide the authorized level of flood protection. Structures include levees, channels and two pumping stations.

Importance: The operation and maintenance of this project assures the project provides flood risk reduction benefits to an area of approximately 14,000,000 acres of agricultural lands including numerous small towns, several major railroads, highways, and utilities, located in Missouri and Arkansas. It is estimated that the recurrence of the 1937 flood, under present conditions of development in the floodplain, would cause damages of over \$111,426,000 (2012 price levels) if the flood occurred during the crop growing season, without this project.

Status: Funds appropriated in Fiscal Year 2014 are being used to continue operation and maintenance of two pumping plants and to perform maintenance activities such as repairing levees and replacing culverts. Disaster Relief Act funds are being used to complete repairs and restore the project from damages incurred during the 2011 Flood. Repairs include channel and levee restoration and culvert and structure repairs/replacement.

Issues and Other Information: Repairs being performed with Disaster Relief Act funding will restore levees, channels, and other flood protection measures to their original design and re-establish the authorized level of protection. These repairs will significantly reduce the flood risk from post 2011 Flood conditions allowing the system to be ready for future flood events.

Project Financial Data:

Allocation for FY 2013	\$ 6,058,000
Allocation for FY 2014	5,900,000
President’s Budget, FY 2015	5,900,000

Disaster Relief Act Funding:

Allocation thru FY 2013	\$29,400,000
Allocation for FY 2014	16,054,000



W.G. Huxtable Pumping Plant

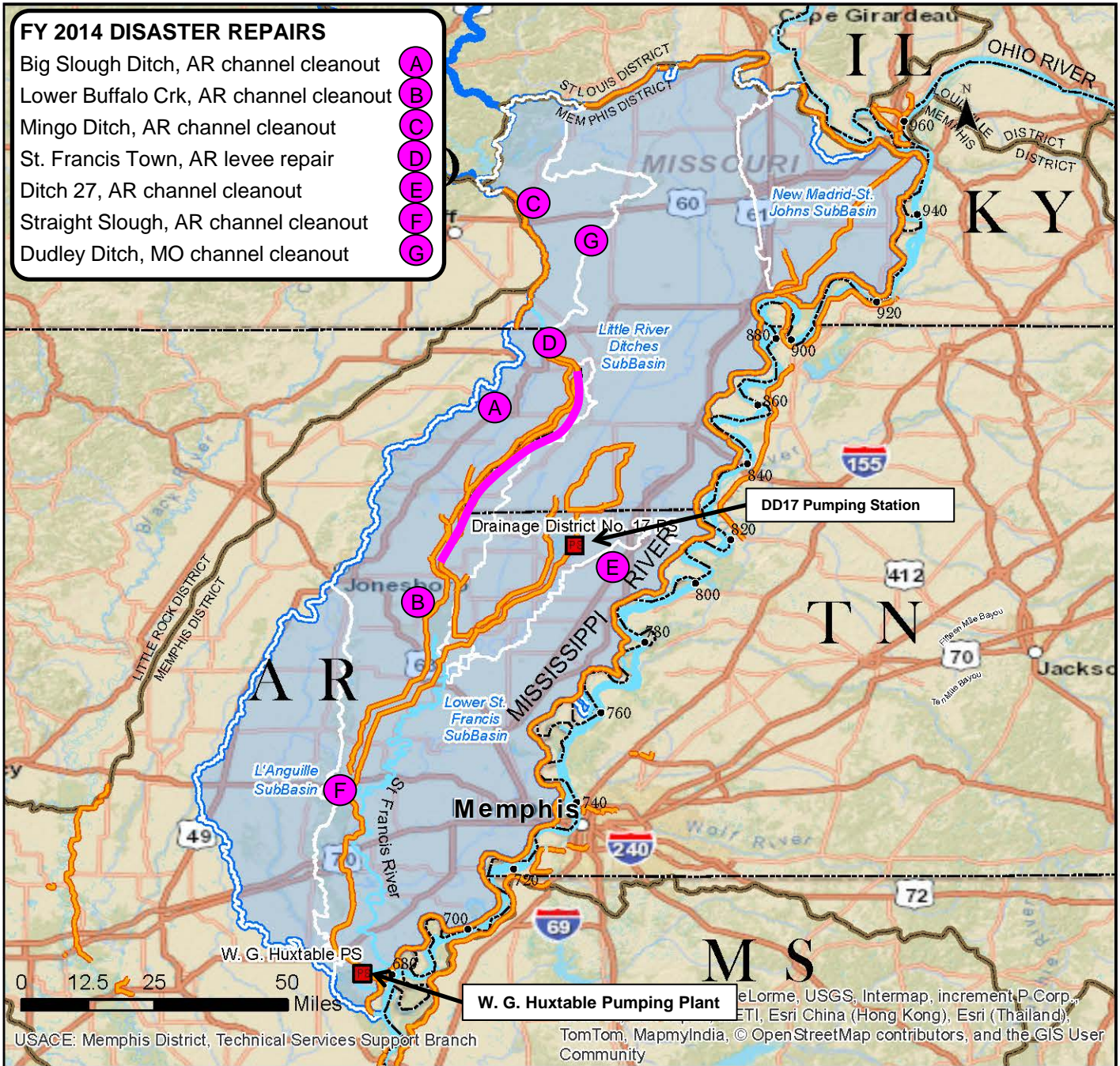
ST. FRANCIS BASIN, AR & MO

MAINTENANCE
BUILDING STRONG®



FY 2014 DISASTER REPAIRS

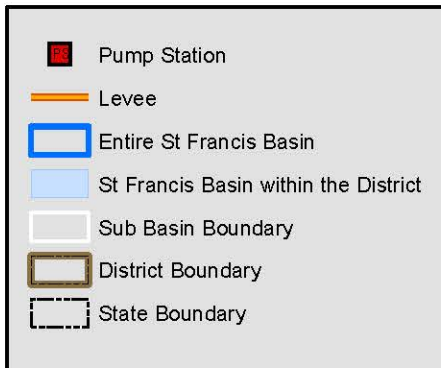
- Big Slough Ditch, AR channel cleanout (A)
- Lower Buffalo Crk, AR channel cleanout (B)
- Mingo Ditch, AR channel cleanout (C)
- St. Francis Town, AR levee repair (D)
- Ditch 27, AR channel cleanout (E)
- Straight Slough, AR channel cleanout (F)
- Dudley Ditch, MO channel cleanout (G)



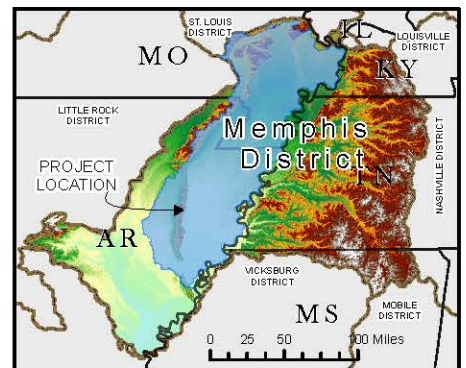
Vicinity Map



Legend



Location in District





St. Johns Bayou & New Madrid Floodway, MO

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Point of Contact

Daniel Ward, Project Manager,
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daniel.d.ward@usace.army.mil

Authority: **Water Resources Development Act** (WRDA) 1986 (PL 99-662), Sec. 401, as amended; WRDA 2007, Sec. 2019 (Ability to Pay)

Appropriation: Energy and Water Development, Mississippi River and Tributaries, Construction

Local Interest/Project Sponsor: St. John Levee and Drainage District.

Location: Bootheel of Missouri

Description: This flood risk management project covers two drainage basins adjacent to the Mississippi River: the St. Johns Bayou Basin (450 sq mi) and the New Madrid Floodway (180 sq mi). The First Phase of the authorized project includes 24 miles of channel improvements, pumping stations, all seasonal ponding easements, and appropriate mitigation.

Status: Prior year funds are being used to continue the National Environmental Policy Act (NEPA) process. Once responses to public comments are completed, a “working final Environmental Impact Statement (EIS)” will be submitted for the final phase of Independent External Peer Review.

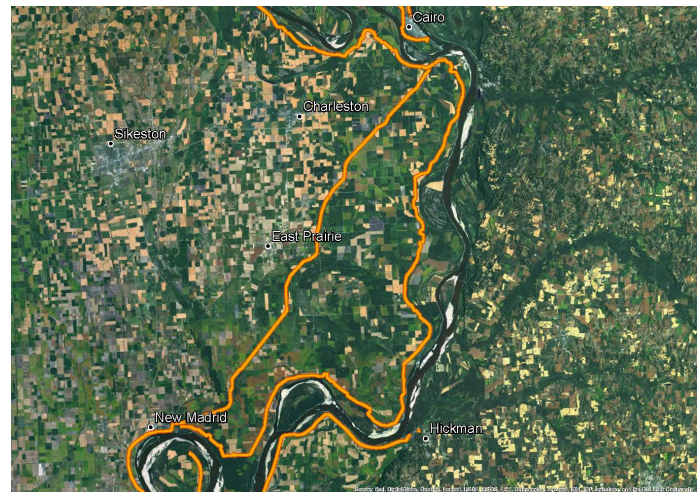
Issues and Other Information: The U.S. Environmental Protection Agency (EPA) has rated the EIS as “Environmentally Unsatisfactory – Insufficient Information” based on their conclusion that the proposed project may significantly degrade unique, rare, and valuable wetland resources in one of the last remaining areas of the Mississippi River floodplain where connectivity regularly occurs. The U.S. Fish and Wildlife Service remains concerned with proposed project impacts to wetlands, fish spawning and rearing habitat, shorebird habitat, and waterfowl habitat. The Service is of the opinion that the project would essentially eliminate a unique landscape and ecological feature in southeast Missouri and result in the loss of thousands of acres of wetlands and their connection to the Mississippi River. The Service does not believe that the impacts associated with the project can be adequately mitigated. The Service urges the Corps to pursue the St. Johns Bayou Basin only alternative as a technically and economically feasible alternative that would meet the project purpose while avoiding losses to nationally significant fish and wildlife resources. The Missouri Department of Conservation urges that the two drainage basins be

evaluated independently, advocates not to construct the New Madrid Floodway due to significant impacts that cannot be addressed through mitigation, opposes any proposal that utilizes land held in public trust as mitigation, and states that the St. Johns Bayou Basin only alternative provides the best balance of outcomes. The Missouri Department of Natural Resources has concerns related to impacts to project area ditches, supports an adaptive management mitigation approach, and emphasizes the importance of Big Oak Tree State Park.

Project Financial Data:	St. Johns-New Madrid Construction¹	MRL Portion Construction²
Estimated Federal Cost	\$ 70,500,000	\$ 86,000,000
Estimated Non-Federal Cost	23,500,000	0
Estimated Total Cost	\$ 94,000,000	\$ 86,000,000

Federal Funding Information:		
Allocations thru FY 2013	\$ 16,913,500	\$ 23,900,000
Allocation for FY 2014	0	620,000
President’s Budget, FY 2015	0	0

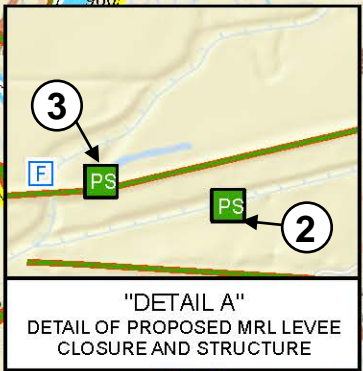
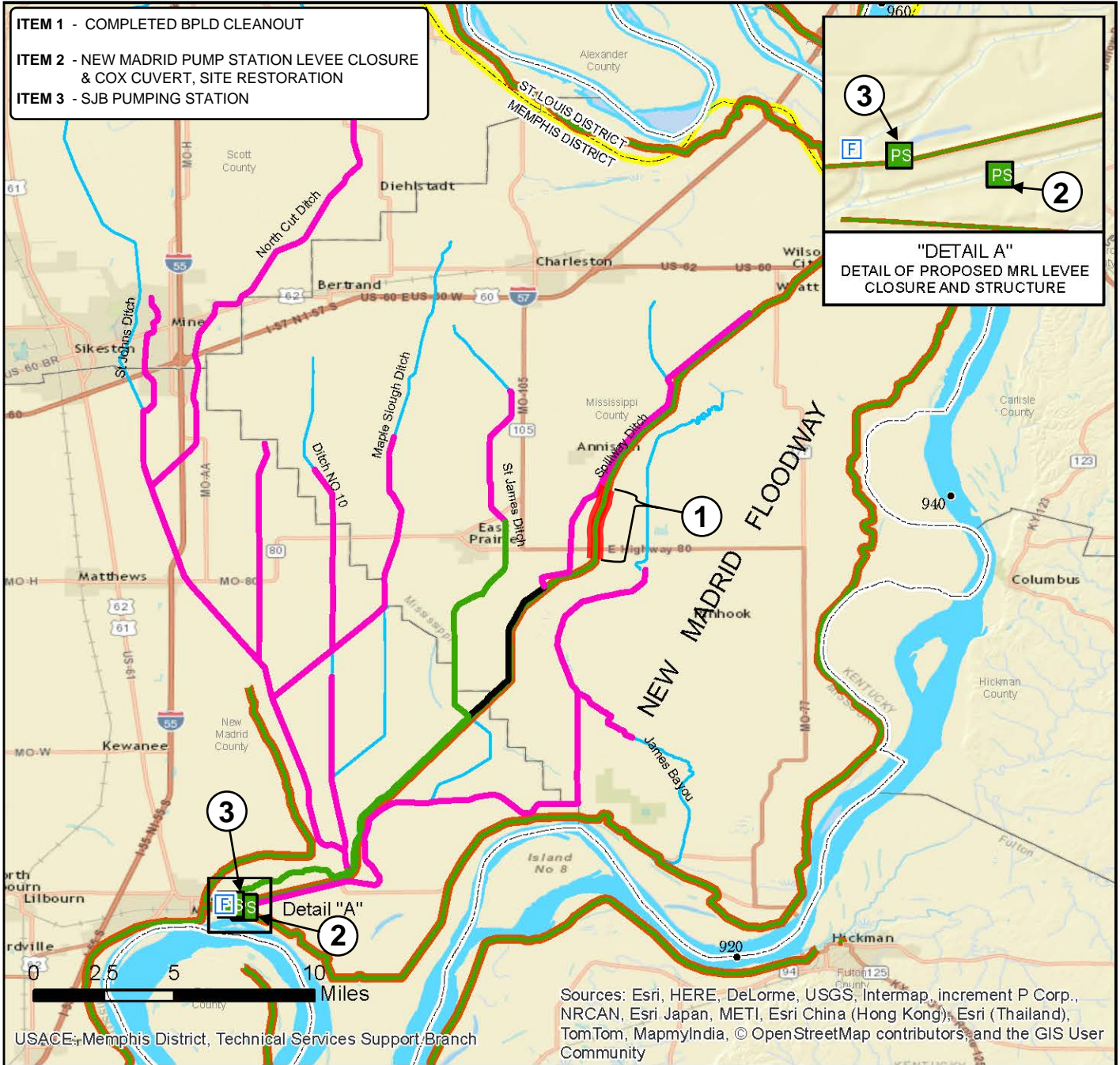
¹Phase 1 Costs only, at 1 Oct 2013 price level.
²Closure of the New Madrid Floodway, mitigation land acquisition and NEPA studies are features of the Mississippi River Levees project.



Aerial Photo of the Project Area, Highlighting the Levees.



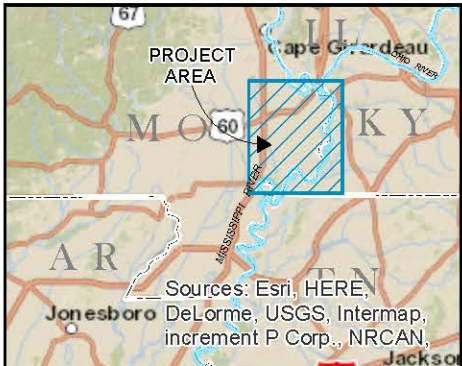
- ITEM 1 - COMPLETED BPLD CLEANOUT
- ITEM 2 - NEW MADRID PUMP STATION LEVEE CLOSURE & COX CUVERT, SITE RESTORATION
- ITEM 3 - SJB PUMPING STATION



Sources: Esri, HERE, DeLorme, USGS, Intermap, increment P Corp., NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

USACE, Memphis District, Technical Services Support Branch

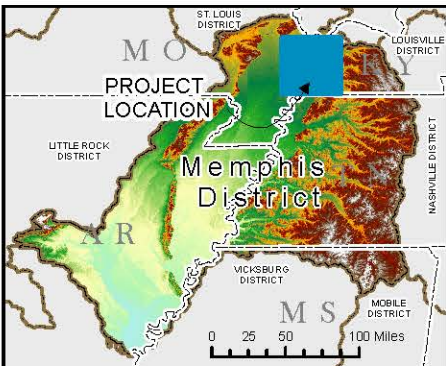
Vicinity Map



Legend

- FloodGates
- Proposed Pumping Stations
- Authorized Project Features
- Completed First Phase Work
- First Phase Features
- Levees
- Memphis District Boundary
- State Boundary

Location in District





White River Basin Comprehensive, AR & MO

BUILDING STRONG®

Point of Contact

Clyde Hunt, Project Manager,

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Authority: Water Resources Development Act (WRDA) 86, Section 729; WRDA 2000, Section 202 established the cost sharing of Section 729 studies at 50 percent Federal, 50 percent non-Federal, half of which can be in-kind services and increased the authorization ceiling from \$5,000,000 to \$15,000,000. WRDA 2007, Section 2010 modified the cost sharing to 75 percent Federal, 25 percent non-Federal, 100 percent of which can be in-kind services.

Appropriation: Energy and Water Development, Investigations

Local Interest/Project Sponsor: Cost-sharing sponsors include the Arkansas Natural Resources Commission, Arkansas Game and Fish Commission, Arkansas Natural Heritage Commission, Arkansas Waterways Commission, Missouri Department of Conservation, Missouri Department of Natural Resources, and The Nature Conservancy.

Location: The White River Basin comprises approximately 28,000 square miles in northeastern Arkansas and southern Missouri.

Description: The basin contains five large multi-purpose reservoirs and one reservoir primarily for flood control; over 150 miles of flood control levees along the White River and its tributaries; 2 major national wildlife refuges; and the largest remaining concentration of seasonally flooded bottomland hardwoods in the Mississippi Valley. The study will identify water resources needs and opportunities. A component of the White River Basin Comprehensive (WRBC), the Cache River Watershed Management Plan under the WRBC effort studies a 2,018 square mile sub-basin within the White River basin. This study offers several opportunities to support and intersect, in a collaborative multi-agency environment, with President Obama's America's Great Outdoors (AGO) Initiative. The Cache River sub-basin, is identified in support of the AGO as a near term plan. The WRBC, building on AGO efforts, investigates water resource problems such as ecosystem restoration, water quality, flood risk management, recreation, navigation, hydropower and water supply.

Importance: The area is a significant migratory waterfowl wintering area. The southern portion of the watershed is a Wetland of International Importance per the 1986 Ramsar Convention. It includes the Cache National Wildlife Refuge, several state Wildlife Management Areas, State Parks and Natural Areas.

The basin provides habitat for several threatened or endangered species including fat pocketbook, pink mucket, scaleshell, curtis pearly, and speckled pocketbook mussels; pallid sturgeon; gray and Indiana bats; alligator gar, red-cockaded woodpeckers; and piping plover.

Status: Appropriated funds are being used to prepare the Cache River Basin Restoration/Watershed Management Plan and continue on-going research of the White River Basin. The President's Budget for Fiscal Year 2015 includes funds to complete the Cache River Basin Watershed Management Plan. The draft plan is scheduled to be completed in 2015.

Issues and Other Information: The current Federal cost estimate is \$6,610,000; however, it does not reflect a possible change in the scope of the study. The change in scope would delete all remaining study activities included in the approved study plan and the existing Feasibility Cost Share Agreement that are not directly associated with the Cache River sub-basin. The Cache River is the focus of an AGO initiative. The study items that are currently in the Federal cost estimate are needed to develop a comprehensive approach to the watershed.

Study Financial Data:

Estimated Federal Cost:	\$ 6,610,000
Estimated Non-Federal Cost:	\$ 2,150,000
Estimated Total Cost ¹ :	\$ 8,760,000

Federal Funding Information:

Allocations thru FY2013	\$ 3,385,200
Allocation for FY 2014	660,000
President's Budget, FY2015	150,000

¹ Includes \$3,073,000 unprogrammed (\$2,425,000 Fed; \$808,000 N/F)



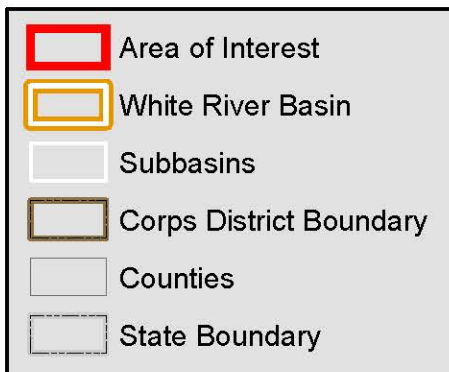
Cache River South of the Black Swamp in the Cache River National Wildlife Refuge.



Vicinity Map



Legend



Location in District

