September 2015

Vicksburg District

Project Status

MISSISSIPPI

US Army Corps of Engineers®
Vicksburg District

Mississippi Project Status Book

for September 2015

This Project Status Book contains information on the latest progress of the Vicksburg District's projects in the State of Mississippi. You will find project maps with corresponding fact sheets for each project. Fact sheets cite authorization for the project and provide locations and project description information. Also provided are activities for the fiscal year 2015 District capabilities are included for additional funds that may become available. Additionally, important issues or impacts are supplied for a more detailed perspective of the project. The Vicksburg District publishes this book to provide valuable status information for ongoing projects. For your added convenience, a copy of this book in PDF format is provided on the disk attached inside the back cover . However, if you should find you still have questions or need additional information about projects contained in this book, please contact:

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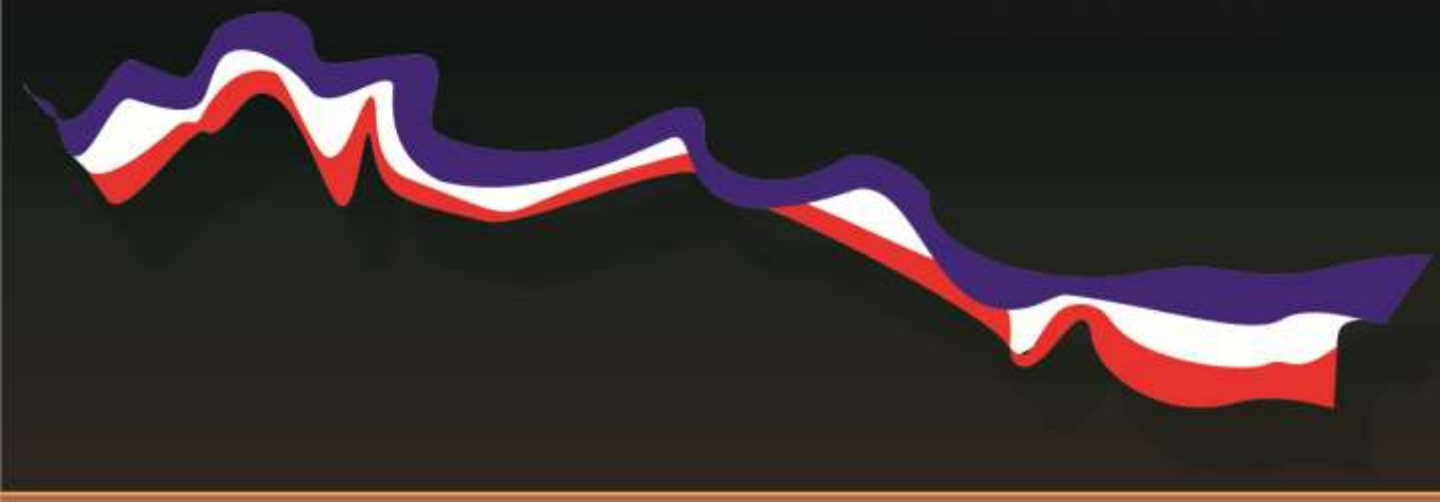

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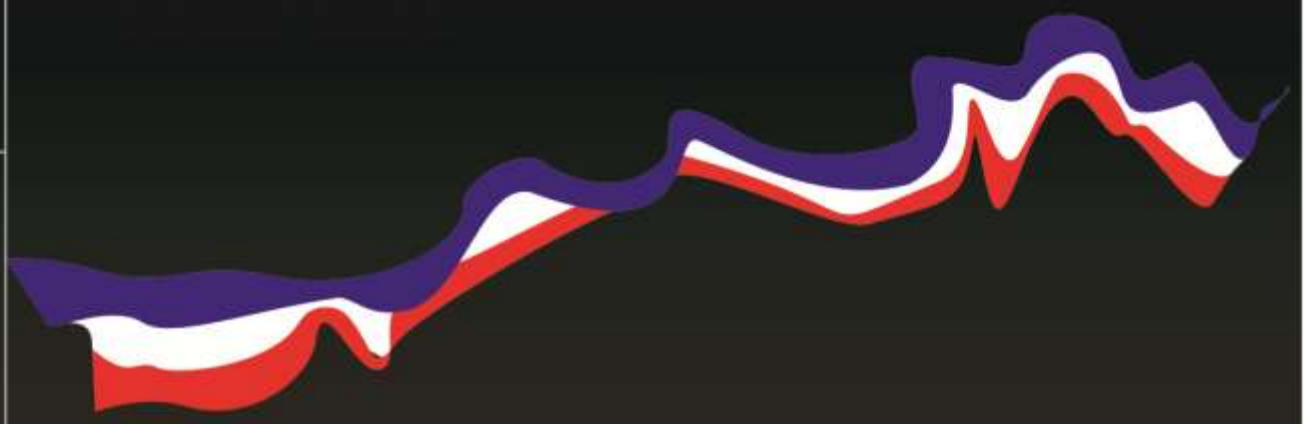

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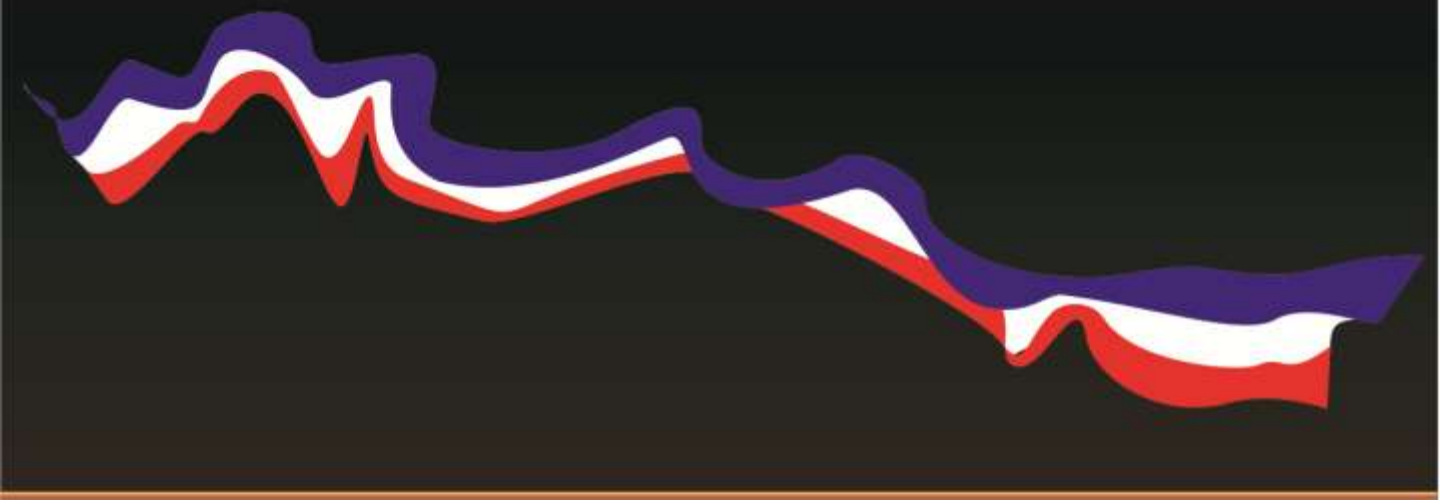

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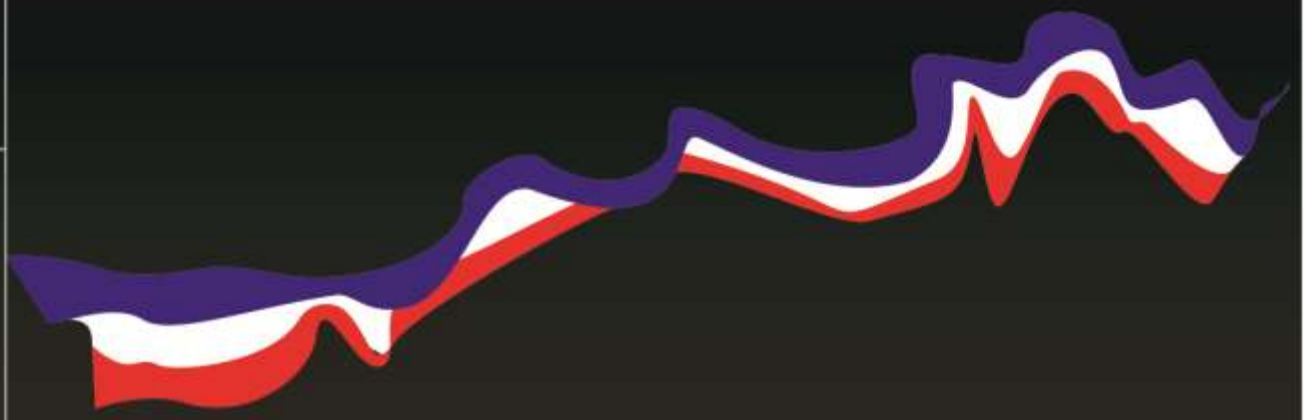
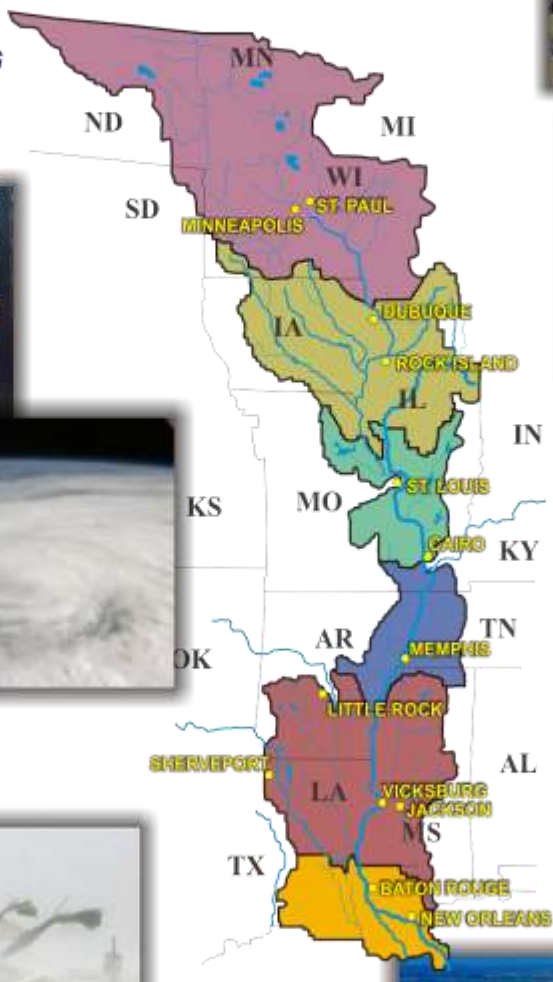


The Mississippi Valley Division

- We are 6 Interdependent Districts
- We have regional technical experts that bring expertise from the entire valley to work any water resource engineering challenge
- It is our pleasure to serve and provide the Nation's water resource engineering solutions
- We are...*BUILDING STRONG*



US Army Corps of Engineers
Vicksburg District

BIOGRAPHY

Colonel John W. Cross

Colonel John W. Cross is a native of Laurel, Mississippi and earned his Bachelor of Science Degree in geology in 1987 from the University of Southern Mississippi. He received a Masters of Business Administration in 1998 from the University of Central Texas and a Masters of Strategic Studies in 2010 from the US Army War College. His military education includes the Engineer Officer Basic and Advanced Courses, the Command and General Staff College at Fort Leavenworth, Kansas, and the US Army War College at Carlisle Barracks, Pennsylvania.

Colonel Cross began his career as an engineer platoon leader in Germany and later served as a company executive officer. After attending the Engineer Captain's Advanced Course, he moved to Fort Polk, Louisiana and deployed to Desert Storm serving as an assistant battalion operations officer. Following the war, he commanded an engineer company at Fort Polk, Louisiana and Fort Hood, Texas. He was selected for the Army's Training with Industry Program where he worked for the Environmental Protection Agency (EPA) in Denver, Colorado. His focus during this time included compliance with State and Federal regulations and environmental restoration at Superfund sites and Formerly Used Defense Sites (FUDS) in an eight state area. After working with the EPA in Denver, Colonel Cross was assigned to the Corps of Engineers Fort Worth District with duty at Fort Hood, Texas. At Fort Hood, he worked on various environmental contracts as well as military construction and FUD remediation in central Texas. As part of his tour with the District, he served as a project officer at Brooks Air Force Base in San Antonio, Texas supervising Military Construction for the Air Force.

He attended the Army's Command and General Staff College and served again at Fort Hood as a battalion operations officer and executive officer. After a tour in Stuttgart, Germany, he was selected for command of the Brigade Special Troops Battalion in 1st Brigade, 4th Infantry Division at Fort Hood. He deployed the battalion to Iraq in 2006 and operated north of Baghdad. After command, he was selected to lead the engineer training team at the Army's National Training Center at Fort Irwin, California where he trained battalions before they deployed to combat in Iraq and Afghanistan.

After graduating from the War College in 2010, he was assigned to Fort Bragg, North Carolina where he served as the XVIII Airborne Corps Engineer and deployed with the Corps to Iraq. In Iraq, he served as the Deputy Engineer to United States Forces Iraq and was responsible for the final disposition of over 80 bases and attendant infrastructure housing 50 thousand soldiers as well as the construction of facilities for the Department of State.

Colonel Cross is married and they have two sons.

Vicksburg District
Congressional Districts

Governors and U.S. Senators

ARKANSAS
Governor Asa Hutchinson
Senator John Boozman
Senator Tom Cotton

LOUISIANA
Governor Bobby Jindal
Senator David Vitter
Senator Bill Cassidy

MISSISSIPPI
Governor Phil Bryant
Senator Thad Cochran
Senator Roger Wicker

US Army Corps of Engineers
Vicksburg District

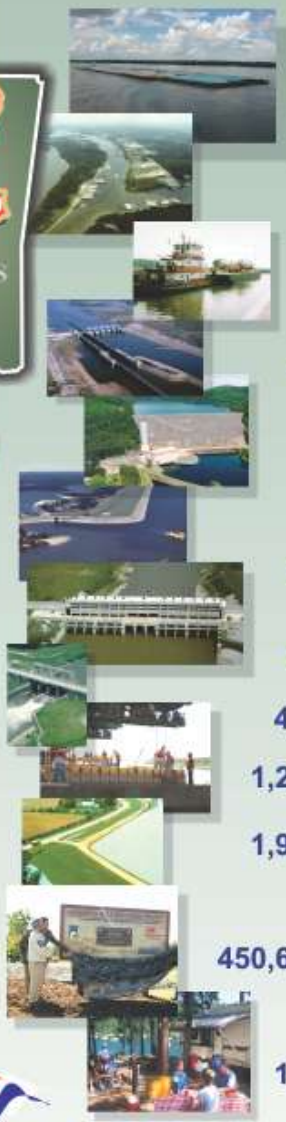
The Vicksburg District encompasses 68,000 square miles in Mississippi, Louisiana, and Arkansas. Seven major river basins fall into our jurisdiction including the mighty Mississippi, the Red, Ouachita, Pearl, and Yazoo Rivers. The District employs a diverse profile of professionals, over 1000 strong, divided between our Vicksburg, Mississippi headquarters and eleven field offices spread over all three states. Established in 1873, the District is a center of expertise for many engineering and environmental solutions and has been recognized as Vicksburg's second oldest business.

The Vicksburg District operates and maintains $2.3 billion in real property and projects, which in turn has generated both direct and indirect economic benefits for the nation.

These benefits are exclusive of the Regional MR&T projects like Mississippi River Levees and Mississippi River Channel Improvement. In Fy 13, Direct Annual Benefits to the economy from projects within the Vicksburg District contributed roughly $16 million for a total cumulative contribution of $302 million. Direct benefits include hydropower production, water supply, and collected fees.

The success of the MR&T projects has also led to substantial Indirect annual economic benefits contributing $827.7 million. Indirect benefits include flood damages prevented, transportation savings with our waterways, and recreation benefits. In FY 13, MR&T projects provided $655 million in flood damages prevented with cumulative benefits to date of $92.2 billion.

Vicksburg District Assets Include:



- **9** watersheds in Arkansas, Louisiana, and Mississippi including Bayou Meto, Big Black, Boeuf Tensas, Homochitto, Mississippi, Ouachita, Pearl, Red, and Yazoo
- **7** Mississippi River Ports handling over 8.5 million tons of cargo
- **5** Red River Ports handling over 1 million tons of cargo
- **12** locks and **9** dams on the Pearl, Red and Ouachita Rivers
- **3** Power plants capable of generating 168,500 kilowatts of electricity
- **10** Lakes with 1,673 miles of shoreline
- **21** Pumping plants
- **478** Flood control structures
- **1,252** Miles of navigable channel
- **1,910** Miles of levees, including 460 miles along the Mississippi River
- **450,603** Acres of project and mitigation lands are managed for forestry and wildlife enhancement
- **146** Recreation areas with 2,772 campsites and 1,529 picnic sites with estimated total visits of 8.1 million

Value to the Nation

Mississippi River

Benefits

Project	Average Annual Costs	Average Annual Benefits
Mississippi River and Tributaries	$210 Million	$1.46 Billion

Benefit-to-Cost Ratios

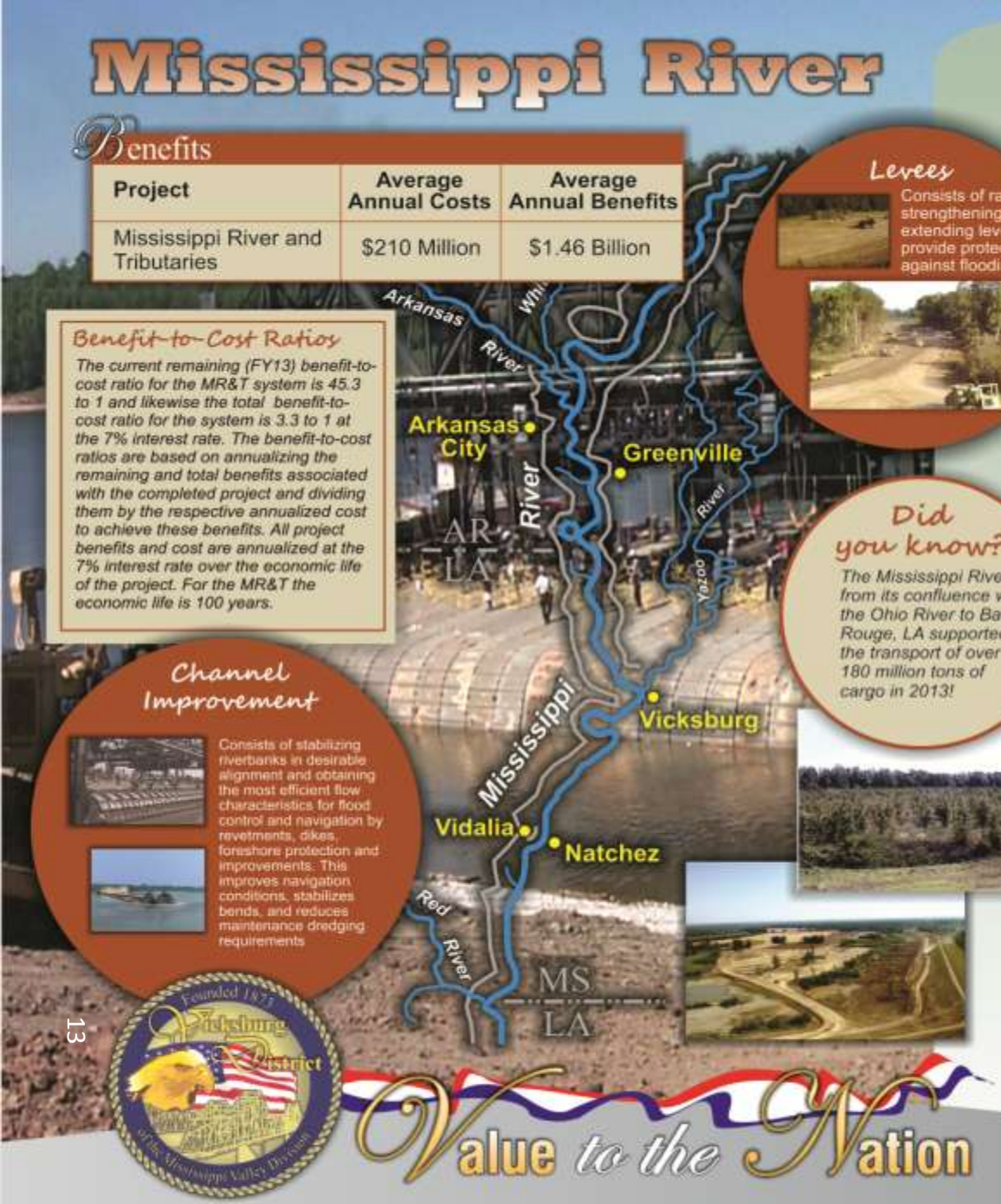
The current remaining (FY13) benefit-to-cost ratio for the MR&T system is 45.3 to 1 and likewise the total benefit-to-cost ratio for the system is 3.3 to 1 at the 7% interest rate. The benefit-to-cost ratios are based on annualizing the remaining and total benefits associated with the completed project and dividing them by the respective annualized cost to achieve these benefits. All project benefits and cost are annualized at the 7% interest rate over the economic life of the project. For the MR&T the economic life is 100 years.

Levees

Consists of raising, strengthening and extending levees to provide protection against flooding.

Channel Improvement

Consists of stabilizing riverbanks in desirable alignment and obtaining the most efficient flow characteristics for flood control and navigation by revetments, dikes, foreshore protection and improvements. This improves navigation conditions, stabilizes bends, and reduces maintenance dredging requirements



Did you know?

The Mississippi River from its confluence with the Ohio River to Baton Rouge, LA supported the transport of over 180 million tons of cargo in 2013!

Flood Risk Management

Flood risk management along the Mississippi River is provided through a coordinated system-wide water management program utilizing:

- Water storage reservoirs
- Levees
- Drainage Structures
- Channel Improvements
- Pumping Plants
- Weirs
- Sediment Reduction and Erosion Reduction Measures

Environmental Stewardship

The Corps has developed an environmentally sustainable project with the philosophy to avoid and minimize adverse environmental impacts. When impacts are unavoidable, compensation is made for the loss.

- The Corps has created over **6,700 acres of aquatic habitat** from borrow areas
- The Corps has **reforested at least 3,000 acres** of borrow areas
- The Corps has **reforested over 25,000 acres** of mitigation lands

Navigation

The Vicksburg District uses numerous tools to increase the safety and dependability of navigation on the Mississippi River.

- Dikes, revetments, and dredging are used to stabilize the navigation channel
- Channel Stabilization improves flow and reduces erosion
- The Vicksburg District supports two MR&T ports and five O&M ports

MR&T Ports

MR&T Port	2013 Commercial Tonnage	Jobs Sustained	Annual Payroll
Greenville, MS	3,474,197	540	$12,600,000
Vicksburg, MS	2,344,971	4,000	$80,000,000

O&M Ports

O&M Port	2013 Commercial Tonnage	Jobs Sustained
Rosedale, MS	1,340,001	325
Yellow Bend, AR	477,221	N/A
Lake Providence, LA	1,595,342	291
Madison Parish, LA	445,617	300
Claiborne Co., MS	N/A	N/A

Value to the Nation

MISSISSIPPI RIVER

Ports

Port of Rosedale (RM 585)

32 RM

2013 commercial tons - 1,340,001
Industries: esco Resource, Cives Steel, Jimmy Sanders Agricultural, Jantran Towing, APAC

Yellow Bend Port (RM 554)

17 RM

2013 commercial tons - 477,221
Industry: Bruce Oakley, Ark City Tank Storage, T.L. James, Producers Rice Mill

Port of Greenville (RM 537)

53 RM

2013 commercial tons - 3,474,197
Jobs sustained - 540
Major Industries: Entergy, ConAgra Fertilizer, APAC, Bunge, US Gypsum, Greenville Gravel, Scott Fertilizer, Superior Boat Works, Farmer Grain Terminal, Ergon, Greenville Shipbuilders, USCG - Patoka

Lake Providence Port (RM 484)

26.8 RM

2013 commercial tons - 1,595,342
Jobs Sustained - 291
Industries: Terral River Service, Bunge Corporation, Raley Transport

Madison Parish Port (RM 457.2)

20.2 RM

2013 commercial tons - 445,617
Jobs Sustained - 300
Industries: Mid Delta Terminal, Farm Chemical

Port of Vicksburg (RM 437)

2013 commercial tons - 2,344,971
Jobs sustained - 4,000
Designated Foreign Trade Zone, Port of Entry - maintains a U.S. Customs Service
Major Industries: Anderson-Tully Lumber , Big River Shipbuilders, Bunge-Ergon, Citgo, ConAgra Fertilizer, Petroleum, DTE Petcoke, Ergon Marine & Industrial Supply, Ergon Refining, Falco Lime, Falco Chemical, Gavilon Fertilizer, Graham Packaging, Kinder Morgan Bulk Terminals, Magnolia Marine Transport, Neill Gas, Shell Oil, Quaker State, Polyvulc USA, Power Transport Service, Smith Towing A, Specialty Process Fabricator, US Coast Guard, Vicksmetal Armco, Waring Oil

Value to the Nation

Red River Watershed
J. Bennett Johnston Waterway

Cargo

Port	Types of Cargo
Caddo-Bossier	Aggregate, Coal, Steel, Fertilizer, Petrochemicals, Project Lifts
Red River Parish	Aggregate, Coal, Steel, Fertilizer, Petrochemicals, Project Lifts
Natchitoches	Aggregate, Forest Products, Asphalt
Alexandria Regional	Fertilizer, Military Cargo, Citric Acid, Aggregate, Petrochemicals
Avoyelles Parish	N/A-Emerging Port

Commodity Movements

Commodity	CY 2010 Short Tons	CY 2013 Short Tons
Crude Petroleum	264,710	422,478
Gasoline	334,057	244,827
Distillate Fuel Oil	397,486	680,747
Residual Fuel Oil	266,798	476,308
Nitrogenous Fertilizer	132,277	147,134
Alcohols	226,917	65,903
Ammonia	65,935	62,549
Sodium Hydroxide	135,114	96,852
Limestone	1,698,290	1,147,596
Sand & Gravel	726,082	1,006,236
Lime	11,251	35,060
Grains	217,884	453,650
Oilseeds	185,710	294,215

Did you know?

- The $1.9 billion Red River Waterway Project was completed in 1994
- **Five lock and dam complexes** provide a total lift of 140 feet the equivalent of a 14-story building
- The navigation channel has a minimum depth of 9 feet and a minimum width of 200 feet
- The U.S. Army Corps of Engineers operates and maintains the locks and dams and supervises bank stabilization and other enhancements
- Over **1.7 million visitors annually** take advantage of facilities offered by 22 recreation areas in 8 parishes along the waterway
- **Over 8,400 acres of mitigation lands** have been purchased to offset losses caused by project construction

Navigation

Port	2014 Commercial Tonnage	Jobs Sustained
Caddo-Bossier	684,799	7,550
Red River Parish	81,358	N/A
Natchitoches	70,268	291
Alexandria Regional	121,021	2,009
System	**2013 Commercial Tonnage**	**Jobs Sustained**
JBJ Waterway	8,893,112	N/A

Project Benefits

Benefits	Basic Project	With Gaming
Total injection (spending)	$ 4,629,600,000	$ 16,410,800,000
Total Sales	8,471,300,000	25,804,700,000
Total Earnings	2,770,200,000	8,110,000,000
Total Taxes	58,200,000	170,300,000
Total Jobs (average)	2,107	6,862

Volunteer Partners

Organization	Service Provided
City of Shreveport	*Operation and Maintenance of the Shreveport Regional Visitor Center*
Red River Parish Police Jury	*Mow and clean areas of Lock 4 East and West Recreation Areas*
City of Natchitoches	*Operation and Maintenance of the Grand Ecore Visitor Center*

Vicksburg District, Mississippi Valley Division

Value to the Nation

Ouachita -Black Watershed

Commodity Movements

Commodity	CY 2010 Short Tons	CY 2011 Short Tons
Crude Petroleum	254,085	102,323
Gasoline	201,497	174,499
Distillate Fuel Oil	101,113	163,687
Nitrogenous Fertilizer	30,341	4,416
Ammonia	65,935	84,642
Sodium Hydroxide	106,250	82,146
Metallic Salts	36,997	11,390
Limestone	181,768	134,664
Grains	59,812	82,207
Oilseeds	78,161	95,521

Ouachita - Black Benefits

Benefit	Value
Transportation Savings	$1,100,000,000
Jobs Sustained	28,000
Annual Payroll	$325,000,000
Impact on Economy	$3,900,000,000
Taxes Paid	$180,000,000

Ports

Ports	Typical Cargo
Greater Ouachita	*Aggregates, oil, fuel, fabricated steel*
Columbia	*Cotton seed and grain*

Recreation

18 Corps recreational areas along the 4 pools of the Ouachita-Black Navigation Project with 700,000 visitors annually - facilities include:

- 18 boat ramps with 48 lanes
- 16 day-use areas
- 1 swimming beach
- Two Class A campgrounds outgranted to local governments

Environmental Stewardship

- Originally part of the project, the **65,000 acre** Felsenthal National Wildlife Refuge lies adjacent to the Ouachita River in Arkansas
- The **15,500 acre** D'Arbonne National Wildlife Refuge is located on Bayou D'Arbonne in Louisiana

Flood Risk Management

Watershed management is provided through a coordinated system-wide water management program utilizing:

- Water storage reservoirs with over 3.5 million acre-feet of capacity
- **Over 370 miles of levees** along the Ouachita River, and in the Tensas-Cocodrie, Larto Lake to Jonesville, Sicily Island and Below Red River areas
- **120 miles of channel** and tributary improvements along the Tensas River
- **5 pumping plants** of 300 cfs, 500 cfs, 750 cfs, 4,000 cfs, and 6,500 cfs

Navigation

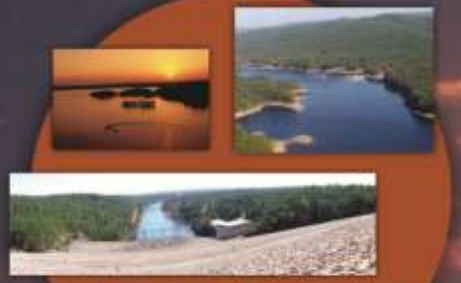
- **337-mile Ouachita-Black Navigation Project** provides for a 9-foot by 100-foot navigation channel from the mouth of the Black River to Camden, AR
- **4 Locks and Dams** to regulate pool height and pass navigation
- Project supports approximately **28,000 private sector jobs** with an annual **payroll of $325,000,000**

Water Supply

- Provides water supply for cities of Hot Springs, Malvern, Arkadelphia and Camden in Arkansas as well as Monroe, Louisiana
- Supplies water to nine major industries
- Provides water supply for crop irrigation

Value to the Nation

Arkansas Lakes



A Corps First!

DeGray Lake holds the distinction as the first "pump back capable" impoundment in the history of the Corps of Engineers. A re-regulation dam forms a 400-acre impoundment directly below the main lake that serves as a storage basin for pump back capable features. During designated times, i.e. drought, the 28,000 KW generator can be reversed pulling water out of the Lower Lake into the main lake to be utilized again for hydropower generation. The 400-acre Lower Lake also serves as an ideal waterfowl refuge.

Did you know?

- **Narrows Dam is the only "all concrete" dam in the Vicksburg District**
- **The 3 Arkansas Lakes support over 700 jobs and provide over $38,000,000 in economic benefits to local economies**

Blakely Mountain Dam - Lake Ouachita 1956

1,127,000 visits in 2012!

Located along the Ouachita River in central Arkansas and surrounded by the Ouachita National Forest, the dam is 1100 feet wide and 205 feet tall creating a lake 205 feet deep at the deepest level. The project includes 690 miles of shoreline, 40,000 acres of water and 20,000 acres of public land. Facilities include 18 recreation areas with 18 campgrounds, 7 day-use areas, 19 boat ramps and 10 swimming beaches.

DeGray Lake 1972

954,000 visits in 2012!

Located along the Caddo River in south central Arkansas, the mulit-purpose project includes 32,400 acres. DeGray Dam has a crest 3,400 feet wide and rises 243 feet above the river bed. The dam creates a lake 200 feet deep at its deepest level with 207 miles of shoreline. Facilities include 15 recreation areas with 8 campgrounds, 7 day use areas, 11 boat ramps and 8 swimming beaches.

Narrows Dam Lake Greeson 1950

366,000 visits in 2012!

Located along the Little Missouri River in southwest Arkansas, Narrows Dam is 941 feet wide and rises to a height of the mean valley. The lake created by the dam, Lake Greeson, stretches 2 miles in length and is 150 deep at its deepest level and has 134 miles of shoreline. The project contains over 16,000 acres with over 15,000 acres forested. Facilities include 17 recreation areas with 12 campgrounds, 7 day-use areas, 9 boat ramps and 6 swimming beaches.

Hydropower

Project	Generating Capacity
Blakely Mountain Dam - Lake Ouachita	75,000 megawatts
DeGray Lake	68,000 megawatts
Narrow Dam - Lake Greeson	25,500 megawatts

Economic Impacts

Project	Economic Impact
Lake Ouachita	$18,000,000
DeGray Lake	$14,000,000
Lake Greeson	$6,000,000

Value to the Nation

Yazoo River Watershed

Benefits

Project	Average Annual Costs	Average Annual Benefits
Upper Yazoo Projects	$17,373,000	$52,816,000
Delta Headwaters Project	$24,917,000	$24,917,000

Main Stem



Consists of new and enlarged levee improvements along the Yazoo, Tallahatchie, and Coldwater Rivers from Yazoo City to Prichard, MS; and channel clearing, cutoffs, and channel enlargement along the Yazoo, Tallahatchie and Coldwater Rivers.

Upper Yazoo Projects


Includes channel and levee features along the main channel of the Yazoo, Tallahatchie, and Coldwater Rivers from the vicinity of Yazoo City, MS to the vicinity of the confluence of Arkabutla Creek with the Coldwater River stabilization, and sediment / erosion control.

Delta Headwaters Project

Consists of 16 watersheds, ranging from 1 to 600 square miles, with features including bank stabilization; grade control structures; floodwater-retarding structures and channel modifications for flood risk management; bank stabilization; and sediment/erosion control.

Yazoo River Watershed

encompasses the delta area extending north from Vicksburg, MS to north of Clarksdale, MS and east from the Mississippi River to the hills east of Greenwood, MS. It consists of roughly 8,900 square miles including all or parts of 12 Mississippi counties. The watershed has an approximate length of 175 miles and an approximate width of 40 miles.

Flood Risk Management

Flood risk management in the Yazoo River Basin is provided through a coordinated system-wide water management program utilizing:

- 4 water storage reservoirs
- 202 miles of levees
- 103 drainage structures
- 583 miles of channel
- 1 Pumping plant
- 8 Weirs
- Sediment reduction projects
- Erosion reduction measures

Flood Damages Prevented

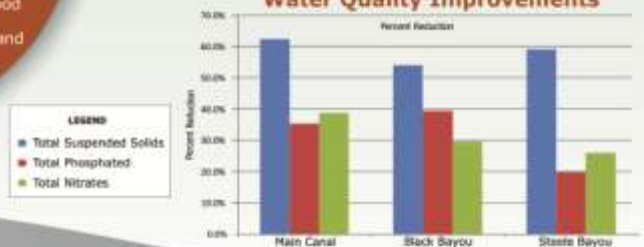
Area	FY 13 Flood Damage Prevented	Cumulative Flood Damage Prevented
Yazoo Backwater	$ 1,217,000	$ 99,311,000
Yazoo Headwaters	$13,093,000	$1,902,369,000
Mississippi Lakes	$ 9,034,000	$1,320,725,000
Big Sunflower River	$ 4,152,000	$ 417,369,000
Total Yazoo Basin	$27,496,000	$3,739,774,000

Environmental Stewardship

Since the early 1990s, the Vicksburg District has been involved with a flood control/sediment reduction project in the watershed which has dramatically improved water quality. Projects have included:

- Installation of low head weirs to maintain minimum water depths in channels
- Installation of 67 sediment control structures to prevent sediment from filling channels
- Water quality monitoring
- Large post-project reduction of in-stream suspended solids (TSS)

Water Quality Improvements



Founded 1873 Vicksburg District "The Mississippi Valley Division"

Value to the Nation

Mississippi Lakes

Benefits

Project	Average Annual Costs	Average Annual Benefits
Arkabutla Lake	$5,000,000	$33,000,000
Sardis Lake	$5,000,000	$34,000,000
Enid Lake	$5,000,000	$22,000,000
Grenada Lake	$5,000,000	$39,000,000

Economic Impacts

Project	Economic Impact	Jobs Supported
Arkabutla Lake	$14,400,000	224
Sardis Lake	$26,200,000	427
Enid Lake	$10,500,000	161
Grenada Lake	$49,930,000	742

Visitation

Project	2012 Visits
Arkabutla Lake	854,371
Sardis Lake	1,300,000
Enid Lake	569,395
Grenada Lake	1,821,815

Did you know?

- Over 4.5 million visits are made to the lakes' facilities each year.
- Visitor spending at the North Mississippi Lakes represents a sizable component of the economies of local communities surrounding the lakes.
- Visitors spend over $101 million annually with 52% being captured by local economies.
- Visitor spending supports the addition of over 1,500 jobs.

Arkabutla Lake – 1943

Located just 30 minutes from Memphis, TN and Tunica, MS, in Tate and DeSoto counties in north Mississippi, Arkabutla Lake covers over 11,000 acres and provides a variety of opportunities for all outdoor enthusiasts to enjoy. Facilities include picnic areas, campgrounds, biking, hiking and walking trails, boat trails, equestrian trails ADA fishing pier and playgrounds.

Sardis Lake – 1940

Sardis Lake stretches over 98,000 acres thru Panola, Lafayette and Marshal Counties in northwest Mississippi. Located approximately 1 hour from Memphis, TN and 30 minutes from the University of Mississippi, the lake is a popular destination for water-related recreation. Facilities include nine campgrounds, boat ramps, cabins, playgrounds and swimming beaches.

Enid Lake – 1952

Located approximately 1 mile off Interstate 55, 72 miles south of Memphis, TN, Enid Lake encompasses over 44,000 acres and is visited each year by more than 1.5 million visitors. Enid has been recognized as one of America's Top 10 Fishing Spots. Facilities include campgrounds, hiking trails, off-road vehicle trail, playgrounds, boat ramps and swimming beaches.

Grenada Lake – 1954

Located in the gently rolling hills of pine and hardwood at the entrance to the Mississippi Delta, The lake covers 36,000 acres and offers some of the best fishing opportunities in the southeastern United States, and most any kind of water activity imaginable. Facilities include campgrounds, boat ramps, fishing areas, shelters, playgrounds and swimming beaches.

Vicksburg District

Value to the Nation

Pearl River Watershed

Carthage

JACKSON

Levee Plan

Consists of raising, strengthening and extending levees to provide protection against flooding.

PEARL RIVER

Monticello

Columbia

Bogalusa

Picayune

The Pearl River originates in Neshoba County, MS and meanders approximately 444 miles to empty into Lake Borgne. The Pear River Watershed covers some 8,760 square miles and includes all or parts of 23 Mississippi Counties parts of 3 Louisiana Parishes.

Flood Risk Management

The Jackson (Fairgrounds) and East Jackson levees were completed in 1968 by the Corps. These protective works consist of two earthen levees, four gated outlets, and two pumping stations. Some 5.34 miles of river channel work was involved in constructing the plan. The Fairgrounds levee protects 420 acres in the fairgrounds area of Jackson on the west side of the river. The longer East Jackson levee protects 5,870 acres, including the town of Pearl and portions of Flowood and Richland. This project was sponsored by the Rankin-Hinds Pearl River Flood and Drainage Control District, which presently operates and maintains the levees. In 1984, an extension on the north end of the Fairgrounds levee was constructed to eliminate flanking of the levee.

Clearing of the floodway below the levee in Jackson was identified as an early action item to reduce Jackson flooding following the 1979 flood. The clearing plan, which was completed in 1984, extended from about 0.5 mile below the old Jackson sanitary landfill to Woodrow Wilson Bridge, a total of 3.3 river miles. The plan consisted of 237 acres of complete clearing, 20 acres of selective clearing, and 89 acres of partial clearing. To offset unavoidable impacts to fish and wildlife associated with the clearing plan, approximately 320 acres of bottomland hardwood were acquired as mitigation. The Pearl River Basin Development District isthe local sponsor

In 2012, the Rankin-Hinds Pearl River Flood and Drainage Control District initiated a Section 211 Flood Risk Management Study to evaluate additional flood risk management alternatives for the Jackson, MS area. The study is funded 100 percent with non-Federal funds.

Environmental Stewardship

In all aspects of natural and cultural resources management, the Corps promotes awareness of environmental values and adheres to sound environmental stewardship, protection, compliance and restoration practices. The Corps manages for long-term public access to, and use of, the natural resources in cooperation with other Federal, State, and local agencies as well as the private sector.

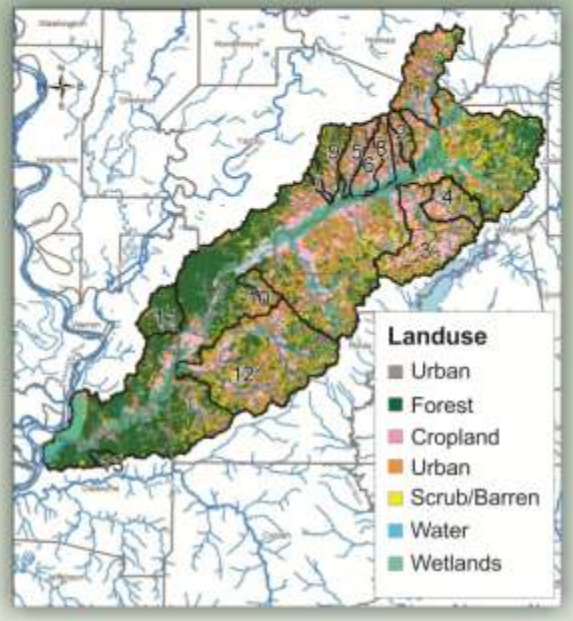
In late summer and early fall, virtually all of the Pearl River flow was captured by an area known as Wilson Slough. This left the main channel of the Pearl River in the vicinity of Walkiah bluff completely dry in some locations leaving property owners and local citizens with no opportunity to enjoy the benefits of the river. For more than 20 years, locals tried to get a project to restore flows in the vicinity of Walkiah Bluff. Using an authority established by Congress in 1990 which provided for environmental wetland restoration the Corps began the Pearl River, Walkiah Bluff Flow Distribution Project. The project was designed to restore flows in the Pearl River and once again make it a viable resource for both Mississippi and Louisiana.

Value to the Nation

Big Black River Watershed

Authority needed to combat flooding, erosion, and sedimentation problems which leads to streambank caving, loss of fish and wildlife resources, poor water quality and adds to problem of Gulf Hypoxia Zone.

Land Use in the Basin



Environmental Stewardship

Nonpoint loading of sediment in a water body results from the transport of the material into receiving waters by the processes of mass wasting, head cutting, gullying, and sheet and rill erosion. Sources of sediment include:

- Agriculture
- Silviculture
- Rangeland
- Construction sites
- Roads
- Urban areas
- Mass wasting areas
- Gullies
- Surface mining
- In-channel and instream sources
- Historical landuse activities and channel alterations

Value to the Nation

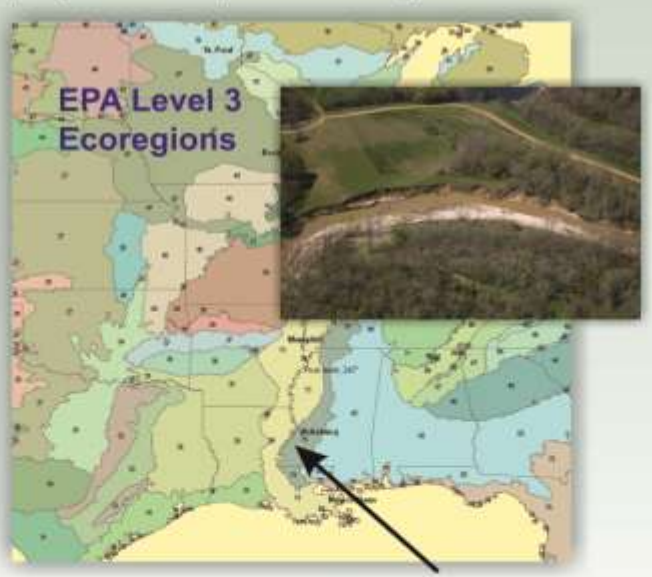
Southwest Tributaries

HINDS
Utica
Bayou
Pierre
Crystal Springs
55
Port Gibson
CLAIBORNE
Hazlehurst
JEFFERSON
COPIAH
Fayette
LINCOLN
61
Natchez
Roxie
FRANKLIN
ADAMS
Meadville
Mississippi
Homochitto
River
Crosby
Buffalo
River
WILKINSON
Woodville
Centreville

The basin comprises a drainage area of approximately 3,200 square miles. All or parts of nine counties in southwestern Mississippi are included – Adams, Amite, Claiborne, Copiah, Franklin, Hinds, Jefferson, Lincoln, and Wilkinson. The basin extends in a north-south direction approximately 60 miles from just north of Port Gibson, MS, t o the vicinity of the Mississippi-Louisiana state line on the south; it extends in an east-west direction approximately 55 miles from the Mississippi River on the west to Interstate 55 on the east. Three major streams---Buffalo River, Homochitto River, and Bayou Pierre drain most of the area and flow directly into the Mississippi River.

Environmental Stewardship

Seeking authority to combat flooding, erosion, and sedimentation problems which leads to streambank caving, loss of fish and wildlife resources, poor water quality and adds to problem of Gulf Hypoxia Zone.



Vicksburg District
Founded 1873
of the Mississippi Valley Division

Value to the Nation

Bayou Meto

The project area includes Lonoke, Jefferson, Prairie, Arkansas, and Pulaski Counties and involves the study of 1,350 square miles in a 433,166 acre Improvement Project Area (IPA) with 369,874 acres of irrigated cropland.

Jacksonville
Sherwood
Lonoke
40
70
PULASKI
LONOKE
PRAIRIE
Bayou Meto
Two Prairie Bayou
England
165
Stuttgart
Wabbaseka
79
ARKANSAS
JEFFERSON
Altheimer
Bayou Meto

Pump Station No. 1/Reservoir

A pump station that takes excess surface water from the Arkansas River, pumps it up into a reservoir to utilize gravity flow, and puts it into a delivery system for irrigation use.

Little Bayou Meto Pump Station

A pump station that evacuates water from the Bayou Meto Basin and reduces flood damage on farmland and stress to bottomland hardwood forests that benefit waterfowl.

Continuing Authorities Program Section 205

SMALL FLOOD CONTROL PROJECTS of the Flood Control Act of 1948

Provides for local protection from flooding by the construction or improvement of flood control works.

Flood Risk Management

The project includes a pump station to evacuate water from the Bayou Meto Basin and reduces flood damage on farmland and stress to bottomland hardwood forests that benefit waterfowl management.

Jacksonville and Sherwood, AR have requested participation in individual Section 205 projects designed to assist with small flood control projects which will improve Flood Risk Management potential for the communities.

Environmental Stewardship

The project area includes 10,000 acres of herbaceous wetland complexes, along with riparian buffers and improvements to the Bayou Meto Wildlife Management Area to provide environmental restoration and enhancement features.

Water Supply

The project has features which divert excess water from the Arkansas River via a delivery system that contains pump stations, incorporates a system of new canals, existing streams, and pipelines to deliver water to depleted areas.

Project Features:

107 Miles of New Canal

1,750 CFS Pump Station

Riparian Buffers

128 Miles of Channel Work

10,000 Acres of Herbaceous Wetland Complexes

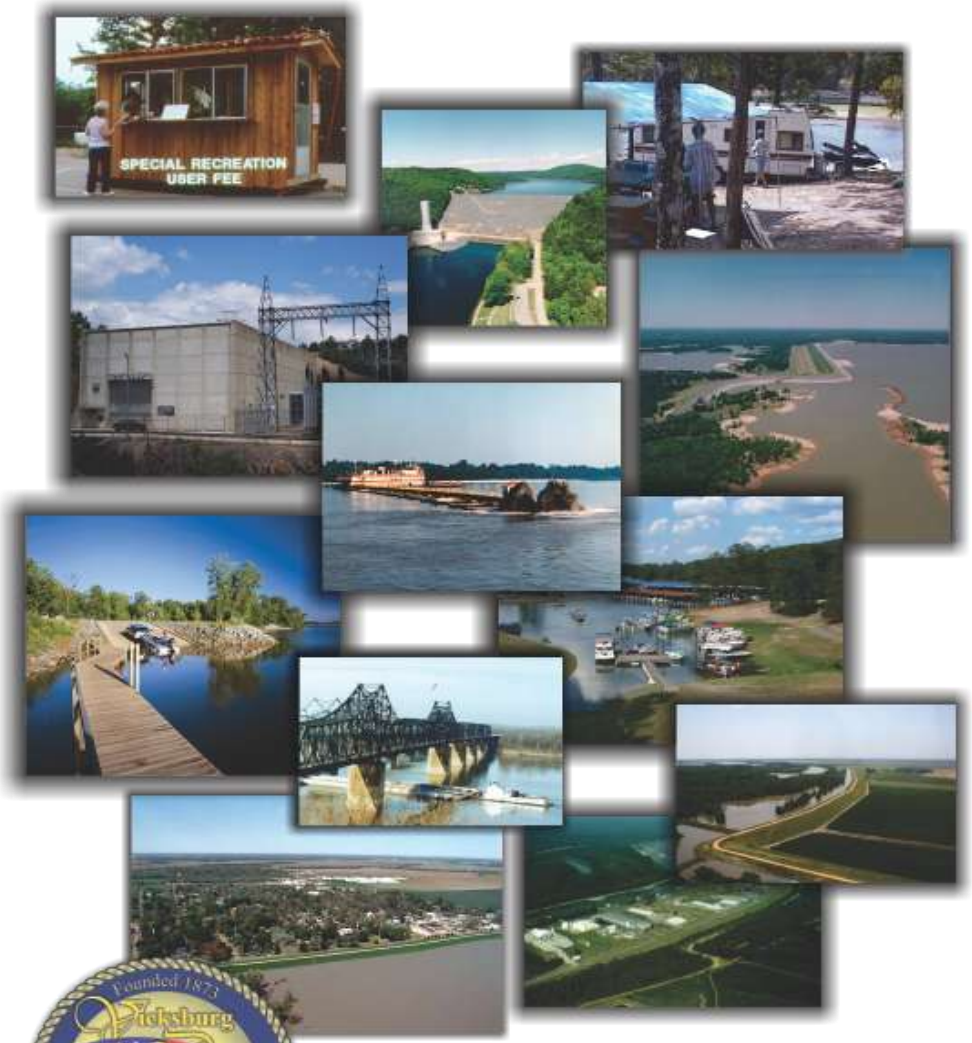
132 Miles of Ditch Enlargements

465 Miles of New Pipeline

Vicksburg District

Value to the Nation

Vicksburg District Economic Benefits



From a program of $150M, the Vicksburg District returns these economic benefits!

Annual Direct Economic Contributions

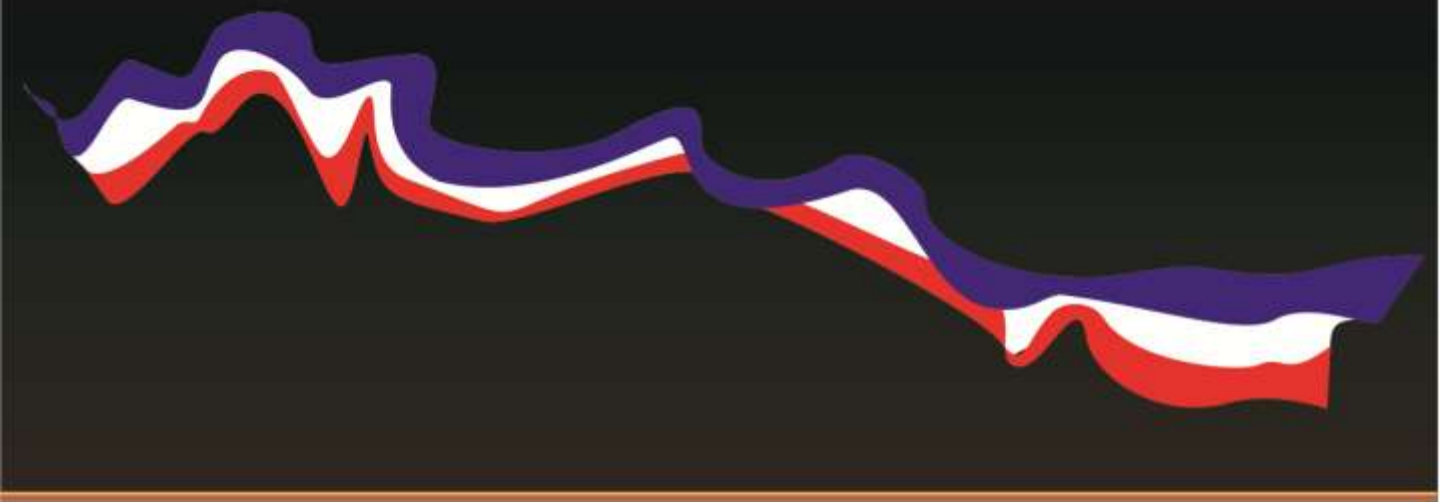
Fees Collected	$ 1,992,000
Agricultural	$ 576,000
General Leases and Concessions	$ 413,000
Water Supply Payments	$ 1,092,000
Hydropower	$ 12,000,000
Total Direct Contributions	**$ 16,073,000**

Indirect Economic Contributions

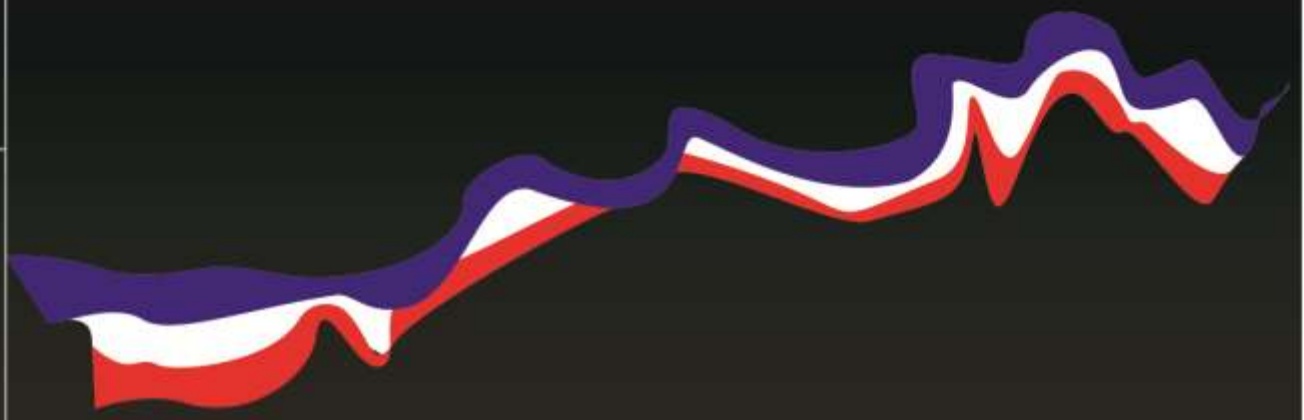
Flood Damages Prevented	$ 654,988,000
Recreation	$ 49,763,000
Water Supply Benefits	$ 115,792,000
Navigation Savings	$ 125,020,000
Total Indirect Contributions	**$ 945,563,000**

Value to the Nation

FUNDING INFO



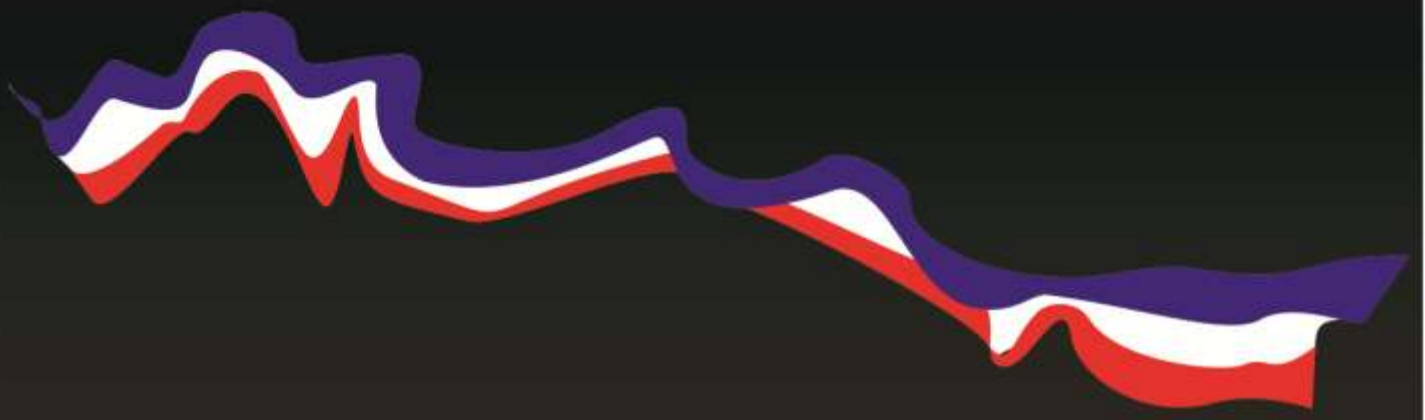
FUNDING INFO



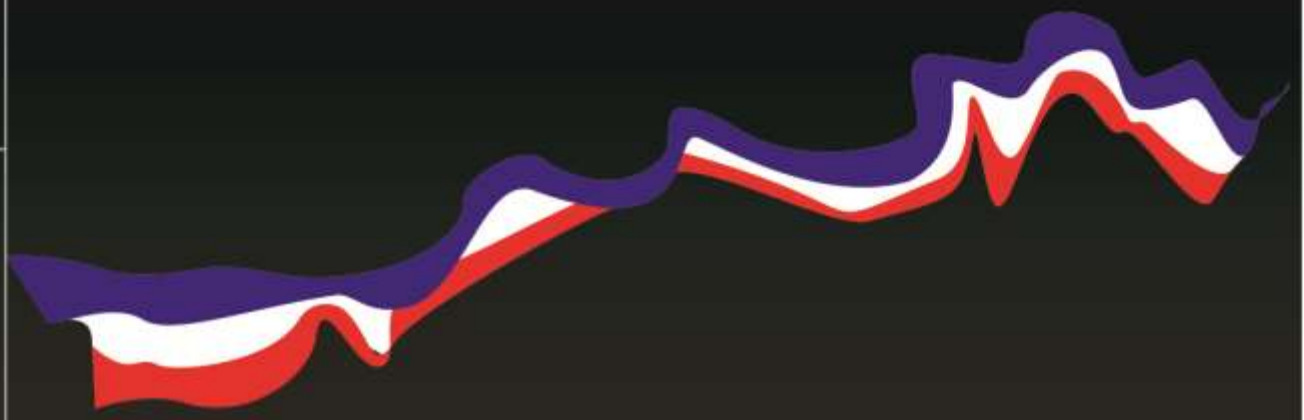
Cong Distr	Approp/Project	FY 15 Allocation	FY 16 President's Budget	Additional Capability Needs	FY 16 TOTAL CAPABILITY	FY 16 WORK WHICH COULD BE ACCOMPLISHED WITH ADDITIONAL FUNDS
Investigation						
LA-1,MS-4	Pearl River Navigation, LA and MS	0	0	**1,250,000**	**1,250,000**	Initiate feasibility to dispose
Total Investigation						
Construction						
MS-1,2,3,4	Section 592 Projects	4,350,000		9,990,000	**9,990,000**	S&A for on-going ($400.0); fund additional PPAs ($9,590.0)
Total Construction		**4,350,000**	**0**	**9,990,000**	**9,990,000**	
Operation and Maintenance						
MS-3	Claiborne County Port	990	1,000	99,000	**100,000**	Fully fund maintenance dredging
AR, LA, MS	Insp of Completed Works	506,880	512,000		**512,000**	
MS-2	Mouth of Yazoo River	889,300	34,000	276,000	**310,000**	Fully fund maintenance dredging
	NEPP	311,500	147,000	28,000	**175,000**	Fully fund NEPP activities
MS-4	Pearl River, LA and MS	148,500	150,000		**150,000**	
MS-2	Rosedale Harbor	1,150,600	9,000	1,190,000	**1,199,000**	Fully fund maintenance dredging
MS-2	Yazoo River, MS	20,790	21,000	131,000	**152,000**	Fully fund channel clearing and snagging to maintain the authorized channel at the confluence of the Yazoo River, Vicksburg Harbor and the Yazoo Canal ($131.0).
Total Operation and Maintenance		**3,028,560**	**874,000**	**1,724,000**	**2,598,000**	
Regulatory Functions		**3,877,400**	**3,803,000**	**0**	**3,803,000**	
Flood Control & Coastal Emergency		**405,000**	**504,100**	**0**	**504,100**	
	SUBTOTAL REGULAR APPROP	**11,661,960**	**5,181,100**	**11,714,000**	**16,895,100**	
MR&T Investigations						
AR, LA, MS	Collection & Study of Basic Data	9,280,000	9,334,000	2,600,000	**11,934,000**	Preservation of data, maps, and aerial photographs ($2.000); Aquatic/Water Quality Monitoring ($600.0)
Total MR&T Investigations		**9,280,000**	**9,334,000**	**2,600,000**	**11,934,000**	
MR&T Construction						
AR, LA, MS	Mississippi River Levees	25,588,100	5,070,000	18,125,000	**23,195,000**	Leland--Vaucluse, AR, Item 536-R Phase II ($9,000.0), Magna Vista--Brunswick, MS, EB Paving, Items 458-L/463-L ($4,750.0). Willow Point-Youngs Point, LA, Item 467-R Relief Wells ($1,875.0) and continued engineering design for future construction ($2,000.0). Supplemental Environmental Impact Statement Development ($500.0).
AR, LA, MS	Channel Improvement(Dikes Const.)	3,270,000	1,076,000	12,000,000	**13,076,000**	Fully fund dike construction at Anconia Chute, AR ($3,000.0), and Refuge, MS ($2,700.0); and Refuge Dike Turndowns ($6,300.0)
AR, LA, MS	Channel Improvement(Revt Const.)	13,330,000	17,070,000	11,720,000	**28,790,000**	Design a new Articulated Concrete Mat Sinking Unit ($5,000.0); Reinforcement sinking to maintain existing revetments ($6,720.0)
MS-1,2	Yazoo Basin, Upper Yazoo Projects	0		9,100,000	**9,100,000**	Fully fund construction of Item 7C phase a ($9,000.0) and Complete development of mitigation lands
MS-1,2	Yazoo Basin, Big Sunflower River	2,000,000		4,000,000	**4,000,000**	Fully fund construction of two sediment reduction structures ($4,000.0)
MS-1,2	Yazoo Basin, Backwater less Rocky	1,000,000		3,000,000	**3,000,000**	Purchase mitigation land and mitigation site development ($3,000.0)
MS-1,2	Yazoo Basin, Delta Headwaters Project	3,500,000		11,914,000	**11,914,000**	Fully fund three bank stabilization contracts ($7,331.0); two riser pipe contracts ($2,383.0); and bring two FWS in compliance ($2,200.0).
Total MR&T Construction		**48,688,100**	**23,216,000**	**69,859,000**	**93,075,000**	
MR&T Maintenance						
AR, LA, MS	Dredging Maint	4,518,000	5,023,000	0	**5,023,000**	
MS-2	Greenville Harbor, MS	824,000	24,000	976,000	**1,000,000**	Fully fund maintenance dredging
AR, LA, MS	Insp of Completed Works	671,000	371,000	483,000	**854,000**	Current Levee Safety requirements include more detailed inspections.; Includes 463 miles of levees, 516 miles of channels, 125 drainage structures, 1 pumping plant & 15 weirs ($308.0); 408 Permits ($60.0); Annual inspections for DHP ($75.0); Levee safety inspections MS ($50.0)
AR, LA, MS	Mapping	302,000	399,000	0	**399,000**	Additional mapping assistance for work in the CAD/GIS topographic,hydrographic or geospacial areas
AR, LA, MS	Mississippi River Levees	3,139,000	2,331,000	3,055,000	**5,386,000**	Repair of levee slides ($1,200.0); Operation of Lower Mississippi River Museum ($80.0); Operation and Maintenance of Mitigation Lands ($225.0); gravel levee surfacing ($650.0); Design and Replace Exhibits at JBLMRM ($600.0); Maintenance of JBLMRM ($100.0); Walkway covering between JBLMRM and MVIMS Exhibit ($300.0)
AR, LA, MS	Channel Improvement (Revetments & Dikes)	15,052,000	15,016,000	11,900,000	**26,916,000**	Fully fund stone repairs, stone bank paving, and additional revetment repairs. ($9,900.0); dike repair ($2,000.0)
MS-2	Vicksburg Harbor, MS	942,000	42,000	708,000	**750,000**	Fully fund maintenance dredging
MS-1	Yazoo Basin, Arkabutla Lake	7,303,400	5,483,000	5,094,000	**10,577,000**	Fully fund routine operations of dam and structures ($320.0); restore customer service levels to desirable standards for the visiting public ($874.0); plans and specs for repair of drop inlets on the face of dam ($75.0); replacement of excavator ($320.0); plans and specs to replace toe ditch and outfall structure ($100.0); repair of shoreline erosion at Kelley's Crossing ($560.0); repair of shoreline erosion at Hernando Point ($200.0); Repair toe ditch and outfall structure ($2,000.0); plans and specs for outlet channel shoreline protection ($100.0); environmental stewardship activities ($30.0); replace lift stations ($250.0); Comfort station-Hernando Point ($150.0); other backlog maintenance items $125.0)
MS-1,2	Yazoo Basin, Big Sunflower	285,000	185,000	100,000	**285,000**	Fully Fund O&M for Mitigation Lands in the Mississippi Delta ($100.0)

Cong Distr	Approp/Project	FY 15 Allocation	FY 16 President's Budget	Additional Capability Needs	FY 16 TOTAL CAPABILITY	FY 16 WORK WHICH COULD BE ACCOMPLISHED WITH ADDITIONAL FUNDS
Investigation						
MS 1,2	Yazoo Basin, Delta Headwaters	0	0	300,000	**300,000**	Maintenance of the DHP project FWRS with perpetual right of way. Includes grassing cutting, stump removing, and other maintenance ($300.0)
MS-1	Yazoo Basin, Enid Lake	7,199,000	4,924,000	5,786,000	**10,710,000**	Fully fund routine operations of dam and structures ($350.0); restore customer service levels to desirable standards for the visiting public ($870.0); replace flood damage reduction equipment, dozers & mini-excavator ($410.0); replace dam safety equipment, tractor and tool carrier ($500.0); blast and paint Intake Structure Bridge ($350.0); Replace north access bridge ($2,000.0); replace ADA accessible fishing pier ($450.0); Install sewage hook ups at 72 campsites ($225.0); replace 15 waste water lift stations ($500.0); and backlog maintenance items ($131.0)
MS-1,2	Yazoo Basin, Greenwood	807,000	807,000	500,000	**1,307,000**	Fully fund O&M contract for critical maintenance of levees, structures, pump stations, and other infrastructure ($400.0); install pipeliners ($100.0)
MS-1	Yazoo Basin, Grenada Lake	7,668,400	5,487,000	4,186,000	**9,673,000**	Fully fund routine operations of dam and structures ($350.0), plans and specs for replacement of riprap on the face of the dam ($500.0), restore customer service levels to desirable standards for the visiting public ($400.0); purchase dam safety equipment - dump truck ($185.0); replace front end loader and motor grader ($700.0); replace dam safety equipment lowboy truck and trailer ($250.0); construct ADA fishing pier at outlet channel with concrete structure ($450.0); and plans and specs for dredging at Yalobusha River ($500.0); spraying herbicide, pesticide, and fertilizer on dam ($115.0); North Abutment road rehab ($100.0); and backlog maintenance items ($656.0)
MS-1,2	Yazoo Basin, Main Stem	1,904,000	1,344,000	450,000	**1,794,000**	Operation and maintenance of mitigation lands ($450.0)
MS-1	Yazoo Basin, Sardis Lake	8,408,900	6,640,000	5,150,000	**11,790,000**	Fully fund routine operations of dam and structures ($358.0); restore customer service levels to desirable standards for the visiting public ($966.0); replace wood stave relief wells at outlet works ($400.0); replace outfall structure at downstream end of toe ditch ($300.0); environmental stewardship activities ($180.0); Plans and specs to relocate camp sites at Clear Creek Campground ($150.0); purchase dam safety equipment ($407.0); construct ADA fishing pier at the Outlet Channel ($450.0); Rehab 82 campsites at Oak Grove ($205.0); plans and specs to construct permanent dike below overflow spillway ($150.0); replace piezometers at outlet works ($250.0); plans and specs and construction of Paradise Point Beach and Pavilion parking ($900.0); and backlog maintenance items ($434.0)
MS-1,2	Yazoo Basin, Tributaries	967,000	967,000	580,000	**1,547,000**	McKinney Bayou Pump Rehabilitation ($250.0); pipe and levee slide repairs ($330.0)
MS-1,2	Yazoo Basin, Whittington Auxiliary Channel	384,000	384,000	500,000	**884,000**	Gravel surfacing for the levee ($500.0)
MS-1,2	Yazoo Basin, Yazoo Backwater Area	644,000	544,000	1,100,000	**1,644,000**	Operation and maintenance of mitigation lands ($100.0); Design gates at Steele Bayou ($200.0); critical gate replacement at Little Sunflower ($800.0)
MS-1,2	Yazoo Basin, Yazoo City	731,000	731,000	100,000	**831,000**	Rehab of 24 relief wells at the Yazoo City Pumping plant ($100.0)
Total MR&T Maintenance		**61,750,700**	**50,702,000**	**40,968,000**	**91,670,000**	
	SUBTOTAL MR&T APPROP	**119,718,800**	**83,252,000**	**113,427,000**	**196,679,000**	
TOTAL ALL APPROPRIATIONS		**131,380,760**	**88,433,100**	**125,141,000**	**213,574,100**	
	Investigations	9,280,000	9,334,000	2,600,000	**11,934,000**	
	Construction	53,038,100	23,216,000	79,849,000	**103,065,000**	
	Maintenance	64,779,260	51,576,000	42,692,000	**94,268,000**	
		127,097,360	84,126,000	125,141,000	**209,267,000**	

INVESTIGATIONS



INVESTIGATIONS



INVESTIGATIONS

The major objective of the Investigations program is to study projects that provide solutions to water resource problems. The Corps undertakes studies in response to directives (authorizations) from Congress. Congressional authorizations are contained in public law and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee.

In the past, studies were conducted in two phases - reconnaissance and feasibility. WRDA 2014 revised the implementation for studies to: feasibility phase; cost no more than $3 million (Federal and non-Federal) and have 3 levels of vertical coordination.

The report results in recommendations to Congress for or against Federal participation in solutions to the water resource problem and opportunities identified in the study. A recommendation for Federal participation identifies a recommended plan/project, generally for construction authorization and funding.

The Preconstruction, Engineering and Design Studies (PED) phase of project development encompasses all planning and engineering necessary for project construction, after release of the report and Division Engineer's public notice on a favorable study. Preparation of design memorandums and plans and specifications will be cost shared in accordance with the cost sharing required for project construction.

West Pearl River Navigation, LA and MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
West Pearl River Navigation, LA and MS
Section 216, FCA 1970

Investigations (NAV)

Location and Description: The West Pearl River Navigation project is located in southeast Louisiana and south Mississippi. The project was authorized by the Rivers and Harbor Act of 1935. The project, which began in 1938 and was completed in 1956, was designed to provide a minimum depth of 7 feet for navigation from the mouth of the West Pearl River to the vicinity of Bogalusa, LA, a distance of approximately 58 river miles. The project is divided into two open river sections and an approximate 20-mile canal section that includes three locks. Sills across the Bogue Chitto River, the Pearl River, and an unnamed creek maintain navigable depths in the canal section. This study is directed at deauthorization and disposal of the project.

Issues: The Pearl River Navigation project has exceeded its 50-year project life and has no commercial traffic. Efforts to reopen the waterway by the Vicksburg District in the mid-1980s to early 1990s by performing needed maintenance dredging were opposed by noncommercial groups. Maintenance dredging was last performed in 1988 and 1989. The last recorded barge movements occurred in 1991. In 1995, environmental litigation seeking declaratory and injunctive relief was filed, and the Corps was enjoined from dredging. In 1995, Congress officially placed the project in "caretaker" status by directing the limited project funds be used for maintenance of caretaker status. The project is in an unmanned caretaker status at this time. An Initial Appraisal Report was prepared recommending deauthorization of the project. The Louisiana Department of Wildlife and Fisheries have shown interest in taking over the project.

Importance: Due to the condition of the lock walls it is important that a feasibility study to deauthorization and disposal of the project be completed.

Risk: Recent engineering assessments completed for the lock facilities indicated that the sheet pile lock walls are rapidly corroding.

Consequence: Locks are deteriorating and are potentially unsafe.

Amount That Could Be Used in FY 16: Funds in the amount of $1,250,000 could be used to prepare a feasibility study directed at deauthorization and disposal of the project.

Project Sponsor/Customer: N/A

Congressional Interest: Senate: Cassidy (LA), Vitter (LA) and Cochran (MS); House: Palazzo (MS-04).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 15	FY 16 Budget	FY 16 Total Capability
Feasibility	$1,250,000	$0	$0	$1,250,000

FPMS – FPMP
Mississippi Valley State University

US Army Corps of Engineers
Vicksburg District

Information Paper

FPMS-FPMP Mississippi Valley State University

FLOODPLAIN MANAGEMENT SERVICES (FPMS) MANAGEMENT PLAN

Contact

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scott.d.whitney@usace.army.mil

OVERVIEW

DISTRICT:	Vicksburg
SPONSOR:	NA
TYPE:	FPMP
RISK CLASS:	TBD
RISK:	TBD
PRODUCTS:	Hydrologic and Hydraulic Models, FPMP
FEDERAL INVESTMENT:	Estimated to be $50k for FY15
LEVERAGED INVESTMENT:	TBD

Project Description

The Vicksburg District has received numerous requests over the years from the University to assist in a study to document the level of flooding on the campus and development of structural and non structural alternatives to reduce the risk of flooding.

Risk and Consequence

Development in the area has increased the runoff and drainage system needs modeling to determine constraints. Currently experiencing flooding in University buildings and other facilities.

Products or Services

Document will produce viable alternatives with estimated costs to enable the university to make informed decisions on alternatives to implement.

Figure 1: Mississippi Valley State University

Risk Reduction Actions

Completion of the FPM plan will enable the University to plan development in the floodplain wisely and recommend alternatives to alleviate the current flood risk.

Delivery Milestone Schedule

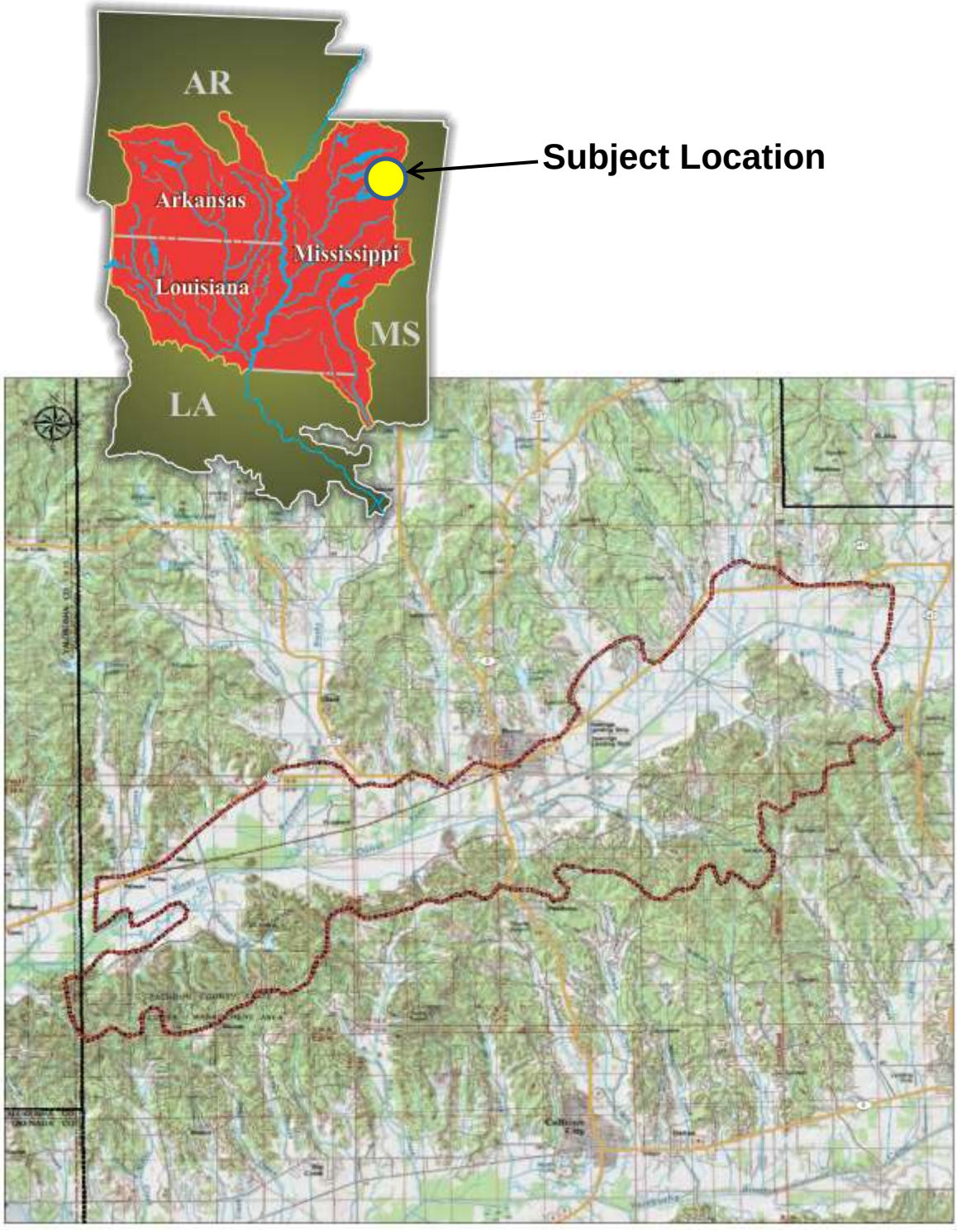
March 2015-Initiate Hydrologic Model
March 2015 – Initiate FPMP
May 2015 – Complete Hydrologic Model
July 2015 – Complete FPMP

Acquisition Strategy

N/A – all USACE labor, vehicles, etc.

Funding History and Remaining Need

- N/A



FPMS – FPMP
Calhoun County, Mississippi
(Skuna River)

US Army Corps of Engineers
Vicksburg District

Information Paper

FPMS-FPMP Calhoun County, MS (Skuna River)

FLOODPLAIN MANAGEMENT SERVICES (FPMS) MANAGEMENT PLAN

Contact

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scott.d.whitney@usace.army.mil

OVERVIEW

DISTRICT:	Vicksburg
SPONSOR:	NA
TYPE:	FPMP
RISK CLASS:	TBD
RISK:	TBD
PRODUCTS:	Hydrologic and Hydraulic Models, FPMP
FEDERAL INVESTMENT:	Estimated to be $75k for FY15
LEVERAGED INVESTMENT:	TBD

Project Description

Skuna River Watershed Floodplain Management Plan – a study to document floodplain impacts in the watershed due to increased erosion and land loss during flash flood events.

Risk and Consequence

This watershed carries sediment downstream to Grenada Lake, a Corps flood control lake. This increased sediment reduces capacity and volume resulting in increased maintenance, changes to operation plans for the lake and increased flows downstream, directly into the Yazoo Basin.

Products or Services

Document will produce viable alternatives with cost estimates for the flood plain manager to implement.

Figure 1: Skuna River

Risk Reduction Actions

Completion of the FPM plan will enable the proposed NFS to plan development in the floodplain wisely and recommend alternatives to alleviate the current flood risk.

Delivery Milestone Schedule

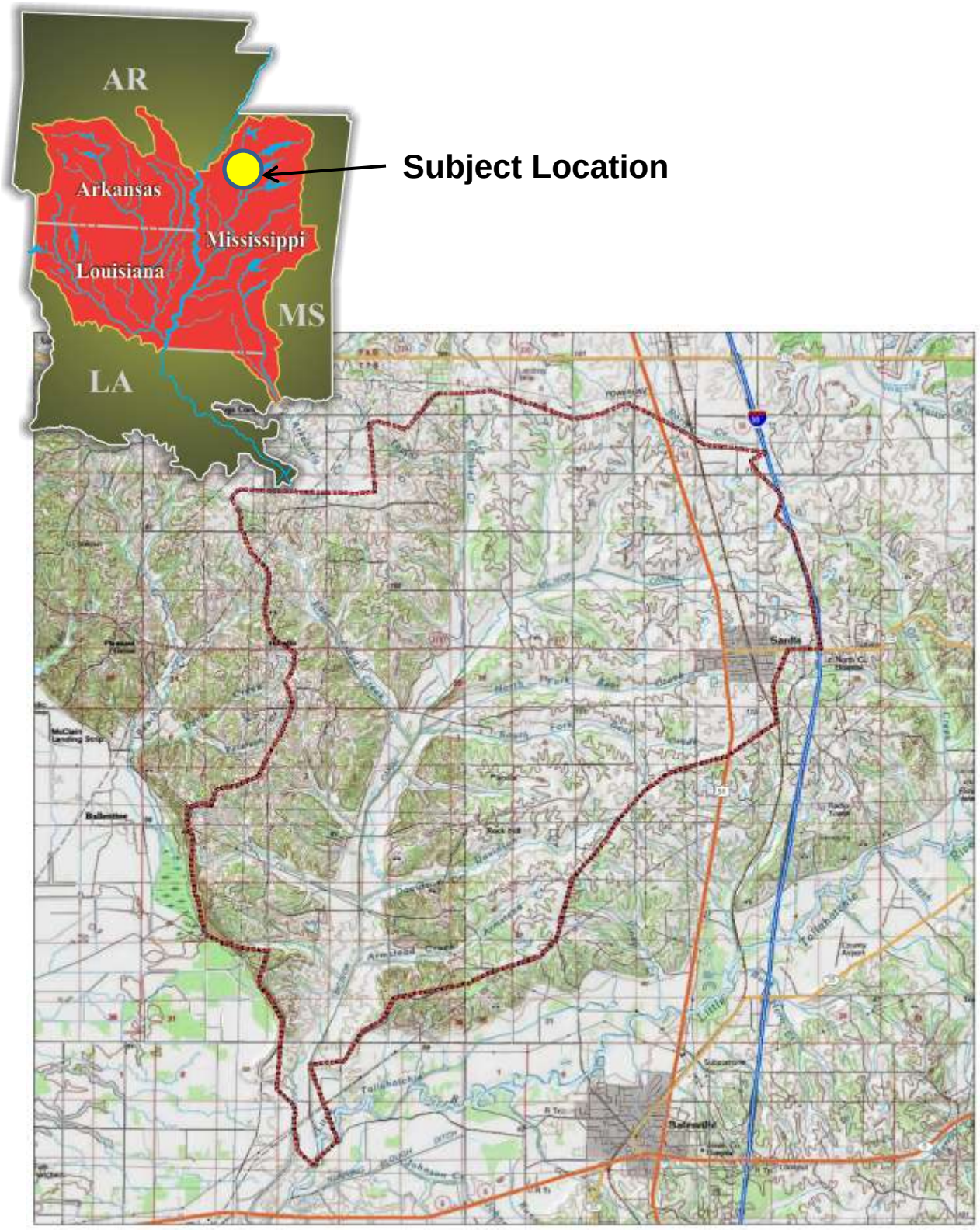
March 2015-Initiate Hydrologic Model
March 2015 – Initiate FPMP
May 2015 – Complete Hydrologic Model
July 2015 – Complete FPMP

Acquisition Strategy

N/A – all USACE labor, vehicles, etc.

Funding History and Remaining Need

- N/A



FPMS – FPMP
Panola County, Mississippi
(McIvor Creek)

US Army Corps of Engineers
Vicksburg District

Information Paper

FPMS-FPMP Panola County, MS (McIvor Creek)

FLOODPLAIN MANAGEMENT SERVICES (FPMS) MANAGEMENT PLAN

Contact

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scott.d.whitney@usace.army.mil

OVERVIEW

DISTRICT:	Vicksburg
SPONSOR:	NA
TYPE:	FPMP
RISK CLASS:	TBD
RISK:	TBD
PRODUCTS:	Hydrologic and Hydraulic Models, FPMP
FEDERAL INVESTMENT:	Estimated to be $75k for FY15
LEVERAGED INVESTMENT:	TBD

Project Description

McIvor Creek Watershed Floodplain Management Plan – a study to document flood plain impacts due to increased erosion from flash flood events. Streams within the watershed are highly incised and the steep slopes increase velocity removing the bottoms of the creeks throughout the watershed.

Risk and Consequence

The destabilization of stream beds and resulting bank erosion causes the loss of roads, bridges, and agricultural lands. Private landowner's maintenance activities are not at a scale to handle the conditions in the watershed and further analysis is required to address the problems.

Products or Services

Document will produce viable alternatives with cost estimates for the flood plain manager to implement.

Figure 1: McIvor Creek

Risk Reduction Actions

Completion of the FPM plan will enable the proposed NFS to plan development in the floodplain wisely and recommend alternatives to alleviate the current flood risk.

Delivery Milestone Schedule

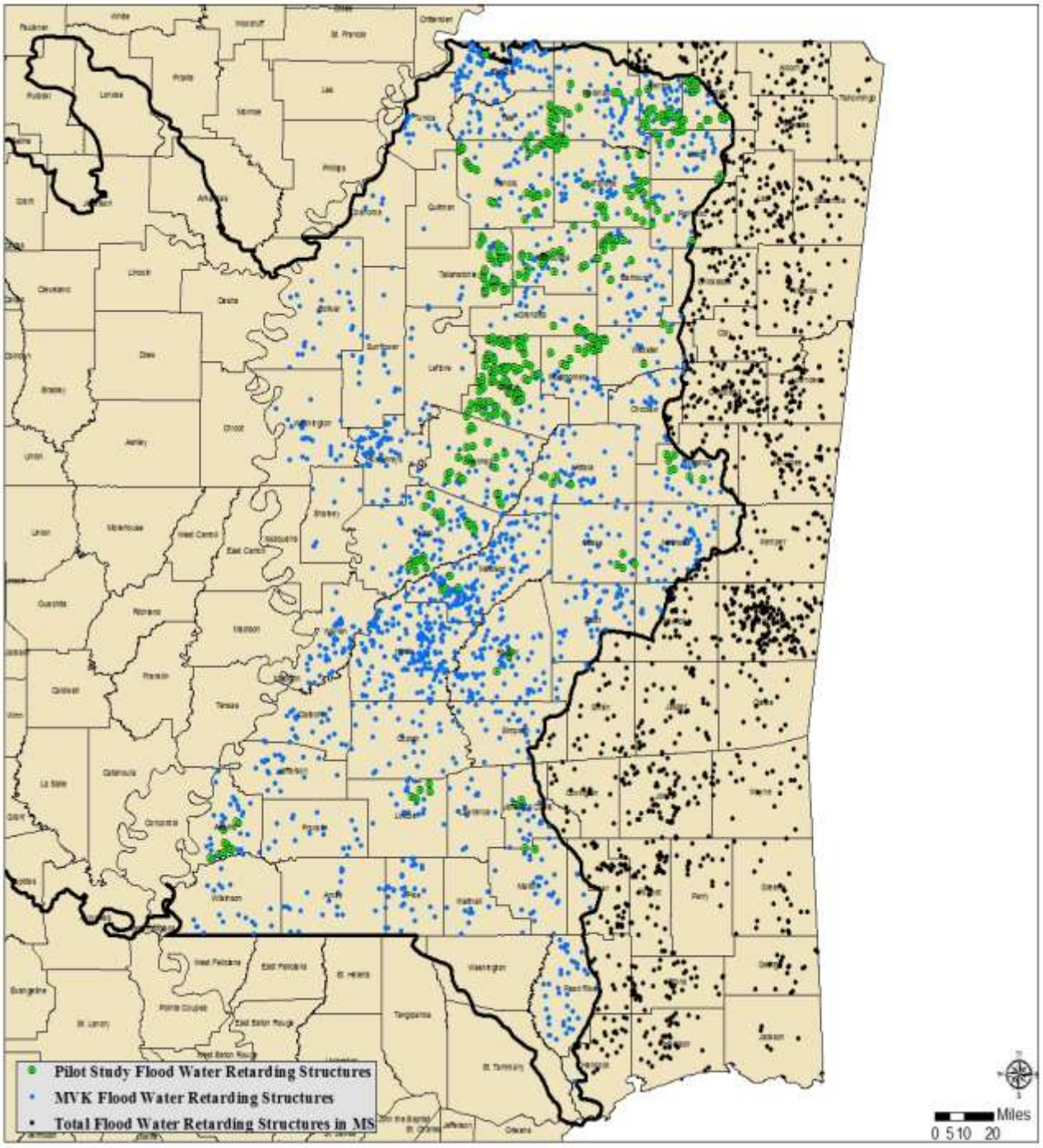
March 2015-Initiate Hydrologic Model
March 2015 – Initiate FPMP
May 2015 – Complete Hydrologic Model
July 2015 – Complete FPMP

Acquisition Strategy

N/A – all USACE labor, vehicles, etc.

Funding History and Remaining Need

- N/A



FPMS – MSWCC
Structure Assess

US Army Corps of Engineers
Vicksburg District

Information Paper

FPMS-MSWCC Structure Assessment

FLOODPLAIN MANAGEMENT SERVICES (FPMS) MANAGEMENT PLAN

Contact

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Scott D. Whitney, MVD Regional Flood Risk Manager
Ph. (309) 794-5386 fax (309) 794-5710
scott.d.whitney@usace.army.mil

OVERVIEW

DISTRICT:	Vicksburg
SPONSOR:	NA
TYPE:	FPMP
RISK CLASS:	TBD
RISK:	TBD
PRODUCTS:	Hydrologic and Hydraulic Models, FPMP
FEDERAL INVESTMENT:	Estimated to be $100k for FY15
LEVERAGED INVESTMENT:	TBD

Project Description

An assessment of all (maybe all within a single county) the existing floodwater retarding structures constructed by the Natural Resources Conservation Service.

Risk and Consequence

Many of the existing structures are in excess of 50 years old. Most are not functioning at design level due to lack of maintenance and some are in danger of failing. Although the impact to the floodplain from a single structure is small, due to the large number of these structures, the cumulative impacts are significant.

Products or Services

This assessment will identify the status of the existing structures, quantify their flood damage reduction benefit, and develop alternatives for repairing or improving these structures.

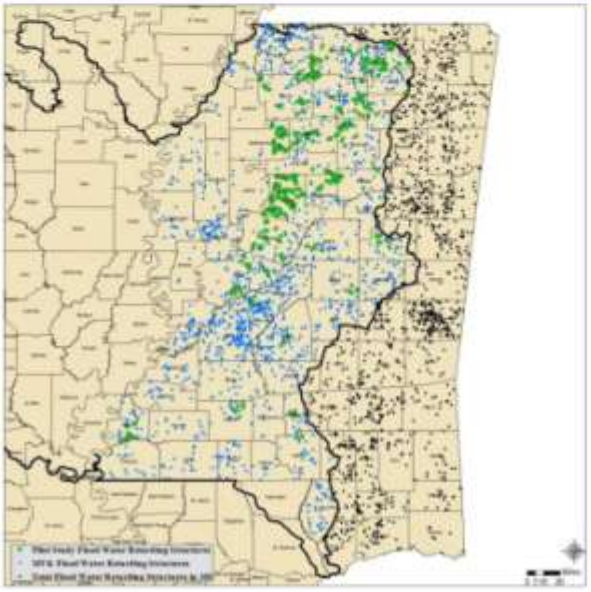


Figure 1: MSWCC Structure Map

Risk Reduction Actions

Completion of the structure assessment will enable the MSWCC to determine the risk associated with each structure and the cumulative impacts the structures have on the floodplain.

Delivery Milestone Schedule

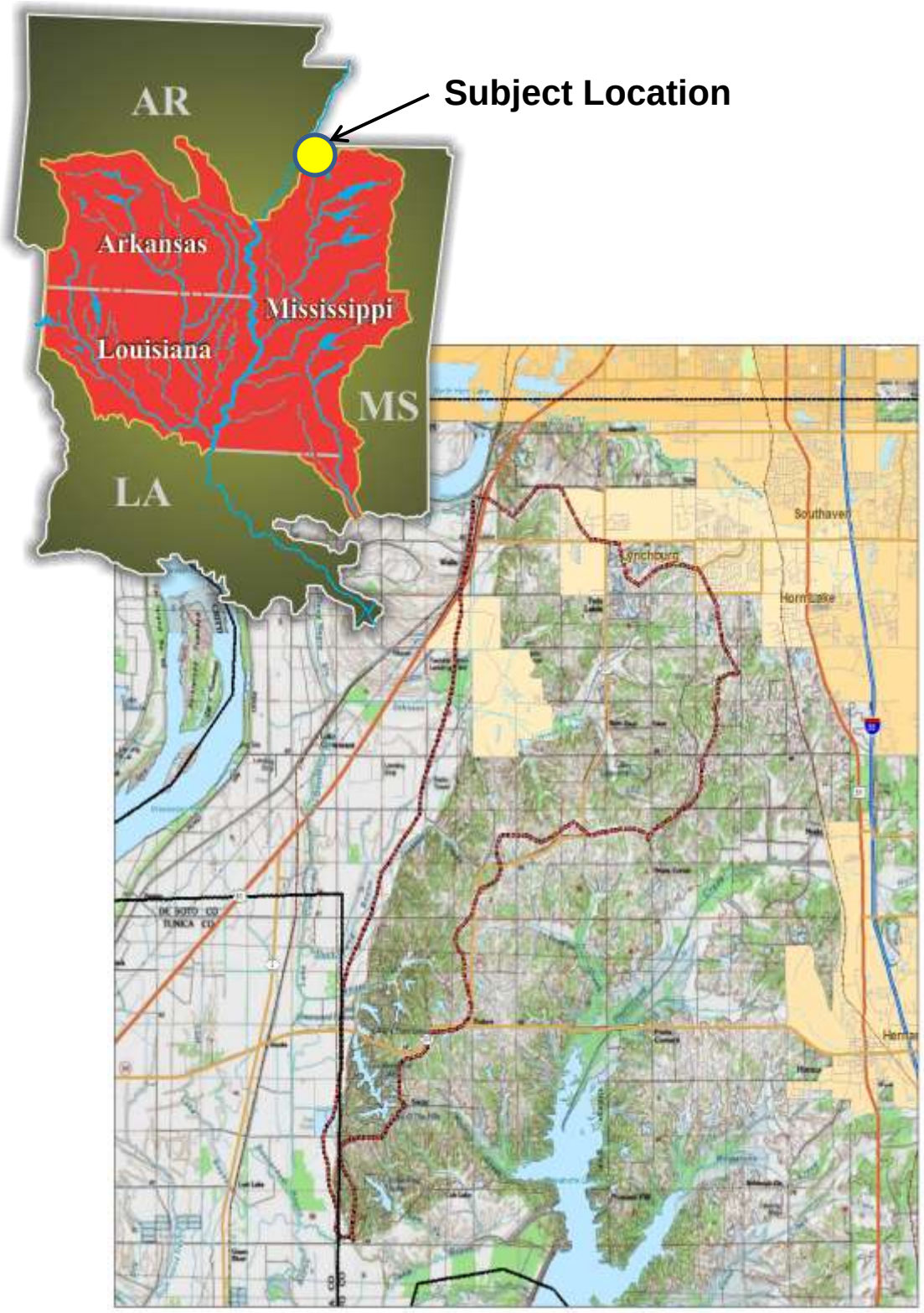
March 2015-Initiate Hydrologic Model
March 2015 – Initiate FPMP
May 2015 – Complete Hydrologic Model
July 2015 – Complete FPMP

Acquisition Strategy

N/A – all USACE labor, vehicles, etc.

Funding History and Remaining Need

- N/A



FPMS – FPMP
DeSoto County, Mississippi
(Johnson Creek)

US Army Corps of Engineers
Vicksburg District

Information Paper

FPMS-FPMP Desoto County, MS (Johnson Creek)

FLOODPLAIN MANAGEMENT SERVICES (FPMS) MANAGEMENT PLAN

Contact

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OVERVIEW

DISTRICT:	Vicksburg
SPONSOR:	NA
TYPE:	Special Study
RISK CLASS:	TBD
RISK:	TBD
PRODUCTS:	Hydrologic and Hydraulic Models, FPMP
FEDERAL INVESTMENT:	Estimated to be $50k for FY15
LEVERAGED INVESTMENT:	TBD

Project Description

Johnson Creek Floodplain Management Plan, Desoto County, MS - study to document impacts to the Johnson Creek floodplain from recent activity in the surrounding area involving increased land clearing and urban development. Desoto County, Mississippi is one of the fastest growing counties in Mississippi as a result of growth from the Memphis, Tennessee area.

Risk and Consequence

Channel capacity in the watershed has been exceeded due to increased flow in the floodplain resulting in public and private flood damage.

Products or Services

The product delivered will be a floodplain management study that covers the Johnson Creek watershed, including hydrologic and hydraulic models and FPM plan.

Figure 1: Johnson Creek

Risk Reduction Actions

Completion of the FPM plan will enable the potential NFS to plan development in the floodplain wisely and recommend alternatives to alleviate the current flood risk.

Delivery Milestone Schedule

March 2015-Initiate Hydrologic Model
March 2015 – Initiate FPMP
May 2015 – Complete Hydrologic Model
July 2015 – Complete FPMP

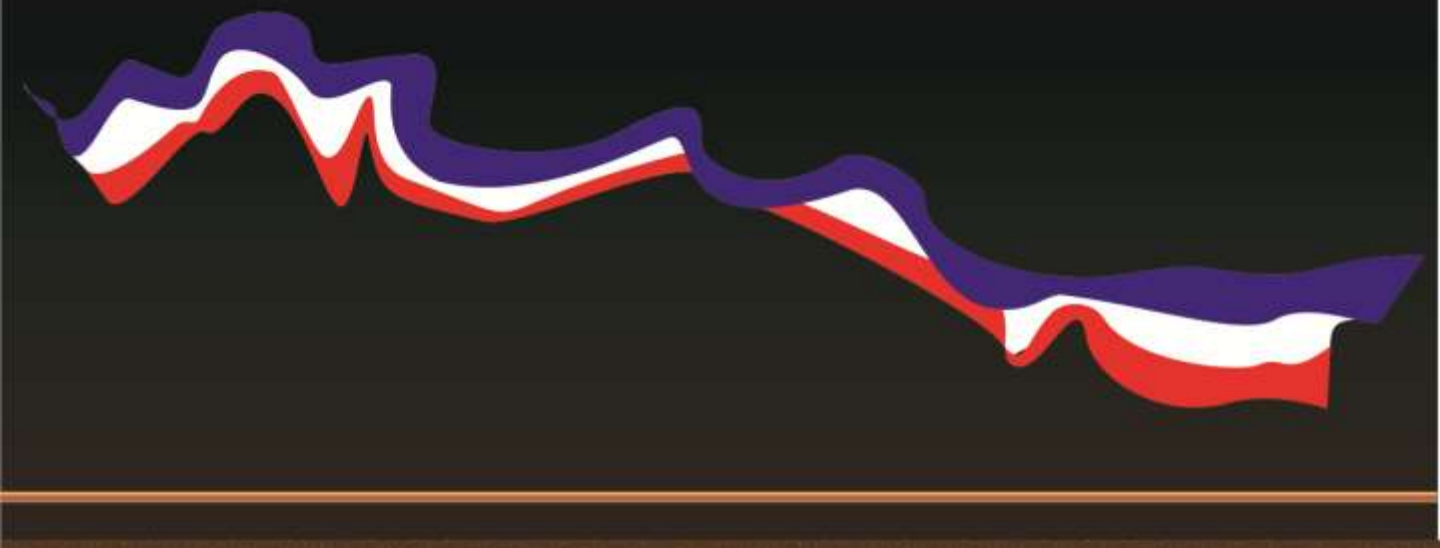
Acquisition Strategy

N/A – all USACE labor, vehicles, etc.

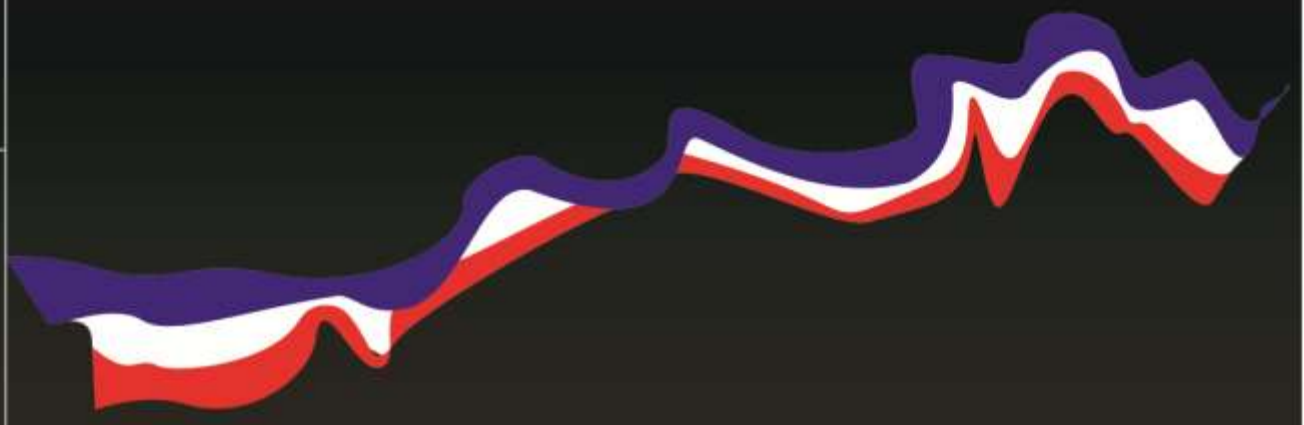
Funding History and Remaining Need

- N/A

CONSTRUCTION



CONSTRUCTION



CONSTRUCTION

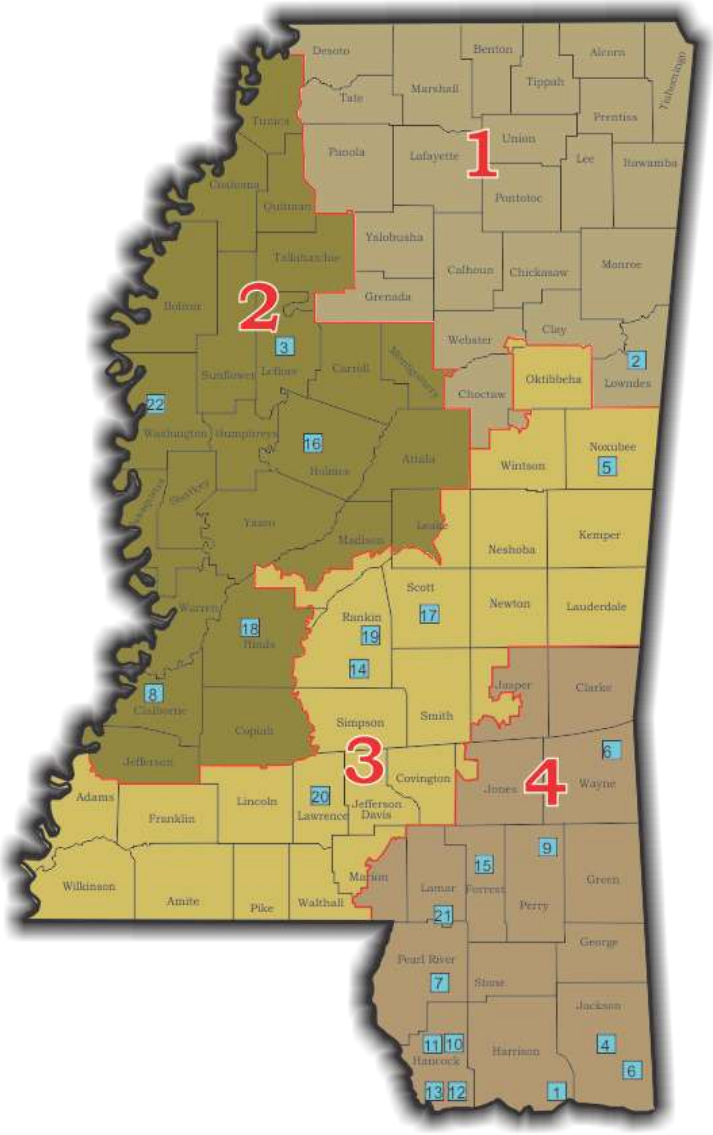
The main objective of a construction program is to complete authorized and appropriated projects as economically and quickly as practicable within program constraints and consistent with national priorities.

Under the provisions of a cost-shared project, prior to initiation of construction, the non-Federal sponsor and the government enter into a Project Partnership Agreement (PPA). The PPA describes all of the requirements and responsibilities relating to construction of the project including items of local cooperation required from the non-Federal

592
Ongoing Projects

* Indicates ARRA funding

1. Biloxi*
2. Columbus*
3. Greenwood*
4. Jackson County*
5. Macon*
6. Moss Point*
7. Pearl River County*
8. Port Gibson*
9. Richton*
10. Waveland East*
11. Waveland West*
12. Waveland Gulfside*
13. Waveland Connector*
14. West Rankin*
15. Brooklyn
16. Cruger
17. Forest
18. Bolton
19. Pelahatchie
20. Monticello
21. Lumberton
22. Greenville



Mississippi Environmental Infrastructure, MS
(Section 592)

Last Update: 1 September 2015

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Mississippi Environmental Infrastructure, MS (Section 592)

Sec 592, WRDA 99; Sec 120, E&WDAA 2004; Sec 101, CAA 2005; Sec 5097, WRDA 07; Sec 110, E&WDAA 2010

Construction (EI)

Location: Projects are located in multiple towns, cities, and municipalities throughout the State of Mississippi.

Description: The Mississippi (Section 592) project provides environmental infrastructure assistance to communities throughout the State of Mississippi. This includes project design and construction assistance for wastewater treatment and related facilities, combined sewer overflows, water supply and storage and related facilities, environmental restoration, and surface water resource protection and development.

Issues: The Section 592 program provides communities, associations, and municipalities in the State of Mississippi with the much needed funding to upgrade and replace environmental infrastructure systems listed under the above program description.

Importance: The 592 program is a 75/25 cost share, reimbursed to the sponsor. As part of the program, the Vicksburg District provides limited design review, National Environmental Policy Act compliance, construction inspection, and invoice processing for reimbursements. These costs, while a part of the total project costs, are not covered in the obligated amounts for construction.

Risk: Without the assistance of the Section 592 program the majority of the towns, cities, and municipalities will remain noncompliant and in violation of both state and Federal laws concerning environmental infrastructure.

Consequence: A future without the Section 592 program jeopardizes the safety and health of Mississippi's fragile clean water supply, storage, wastewater treatment, and other environmental issues.

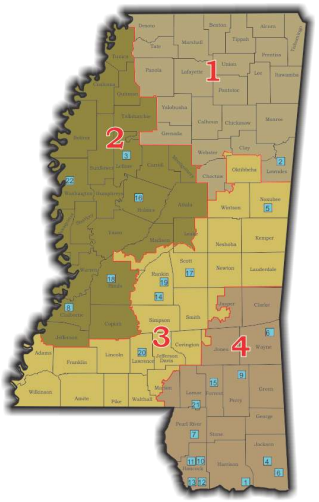
Activities for FY 15: Funds are being used for management in support of ongoing projects and execute new PPA's in Mississippi.

Acquisition Strategy: None.

592
Ongoing Projects

* Indicates ARRA funding

1. Biloxi*
2. Columbus*
3. Greenwood*
4. Jackson County*
5. Macon*
6. Moss Point*
7. Pearl River County*
8. Port Gibson*
9. Richton*
10. Waveland East*
11. Waveland West*
12. Waveland Gulfside*
13. Waveland Connector*
14. West Rankin*
15. Brooklyn
16. Cruger
17. Forest
18. Bolton
19. Pelahatchie
20. Monticello
21. Lumberton
22. Greenville



Amount That Could Be Used in FY 16: There are no funds are in the FY16 President's Budget. Funds in the amount of $9,990,000 could be used for supervision and administration of ongoing funded environmental infrastructure projects and initiate six projects for environmental infrastructure and resource protection and development projects, such as sewer systems, wastewater treatment, and water supply systems for various communities.

Project Sponsor/Customer: Multiple

Congressional Interest: Senate: Wicker and Cochran (MS); House: Kelly (MS-1), Thompson (MS-2), Harper (MS-3), Palazzo (MS-4).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$200,000,000	$121,170,000	$4,350,000	$0	$9,990,000

The 8 Authorities of the CONTINUING AUTHORITIES PROGRAM or "CAP"

Section 14

Emergency Streambank & Shoreline Protection - Flood Control Act of 1946 as amended by WRDA 1996

This authority is to prevent erosion damages to highways, bridge approaches, public works, and other nonprofit public facilities by the emergency construction or repair of streambank and shoreline erosion protection. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $5 million per project and a national program limit of $20 million.

Section 107

Small Navigation Projects - River and Harbor Act of 1960

This authority provides improvement to navigation including dredging of channels, widening of turning basins, and construction of navigation aids. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 80% Federal and 20% non-Federal with a Federal funding limit of $10 million per project and a national program limit of $50 million.

Section 205

Small Flood Control Projects - Flood Control Act of 1948 as amended by WRDA 1999

This authority for local protection from flooding by the construction or improvement of flood control works such as levees, channels, and dams. Nonstructural alternatives are also considered. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $10 million per project and a national program limit of $55 million.

Section 206

Aquatic Ecosystem Restoration - Water Resources Development Act of 1996, as amended by WRDA 1996

This authority provides for restoration of degraded aquatic ecosystems. A restoration project is adopted for construction only after investigation shows that the restoration will improve the environment , and/or elements and features of an estuary is in the public interest, and is cost effective. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $10 million per project.

Section 1135

Project Modification for Improvements to the Environment - Water Resources Development Act of 1986 as amended by WRDA 1996 and WRDA 1999

This authority provides for ecosystem restoration through modification to Corps structures or operation of Corps structures or implementation of restoration features when the construction of Corps projects has contributed to degradation of the quality of the environment. These are two-phase projects: Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 75% Federal and 25% non-Federal with a Federal funding limit of $10 million per project and a national program limit of $40 million.

Section 208

Snagging and Clearing for Flood Control- Flood Control Act of 1954

This authority provides improvements for flood control by removing accumulated snags and other debris, and clearing and straightening of the channels in streams in the interest of flood control. Study cost for the first $100,000 is 100% Federal with any amount over $100,000 cost-shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a $500,000 Federal limit. This Federal cost limitation includes all project-related costs for feasibility studies, planning, engineering, construction, supervision, and administration.

Section 204

Ecosystem Restoration Projects in Connection with Dredging

Water Resources Development Act of 1992, as amended

This authority provides for protection, restoration, and creation of aquatic and wetland habitats in connection with construction and maintenance dredging of an authorized project. Study cost for the first $100,000 are 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 75% Federal and 25% non-Federal with a Federal funding limit of $10 million per project and a national program limit of $50 million.

Section 111

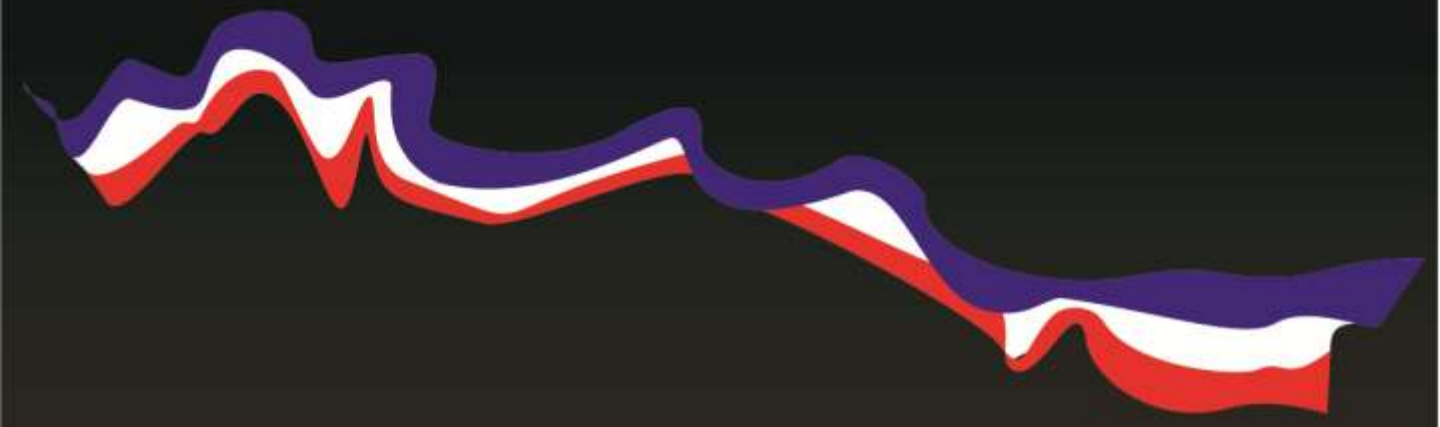
Mitigation of Shore Damages- Water Resources Development Act of 1968, as amended

This authority provides for the prevention or mitigation of erosion damages to public or privately owned shores along the coastline of the United States when these damages are a result of a Federal navigation project. This authority cannot be used for shore damages caused by river bank erosion or vessel-generated wave wash.

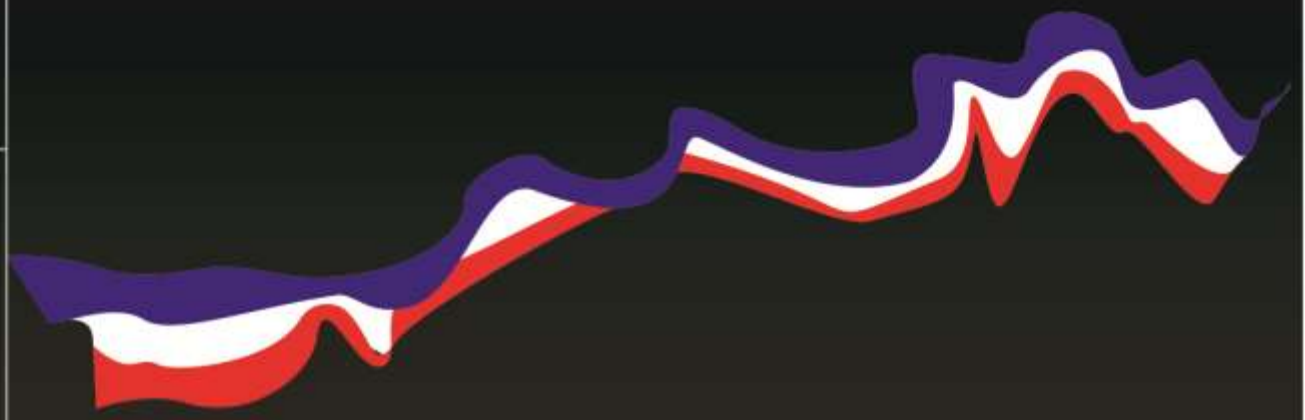
It is not intended to restore shorelines to historic dimensions, but only to reduce erosion to the level that would have existed without the construction of a Federal navigation project. Cost sharing may not be required for this program. If the Federal cost limitation is exceeded, specific Congressional authorization is required.

Study cost for first $100,000 is 100% Federal with any amount over $100,000 cost shared 50% Federal and 50% non-Federal. Implementation costs are cost-shared 65% Federal and 35% non-Federal with a Federal funding limit of $10 million per project.

O&M



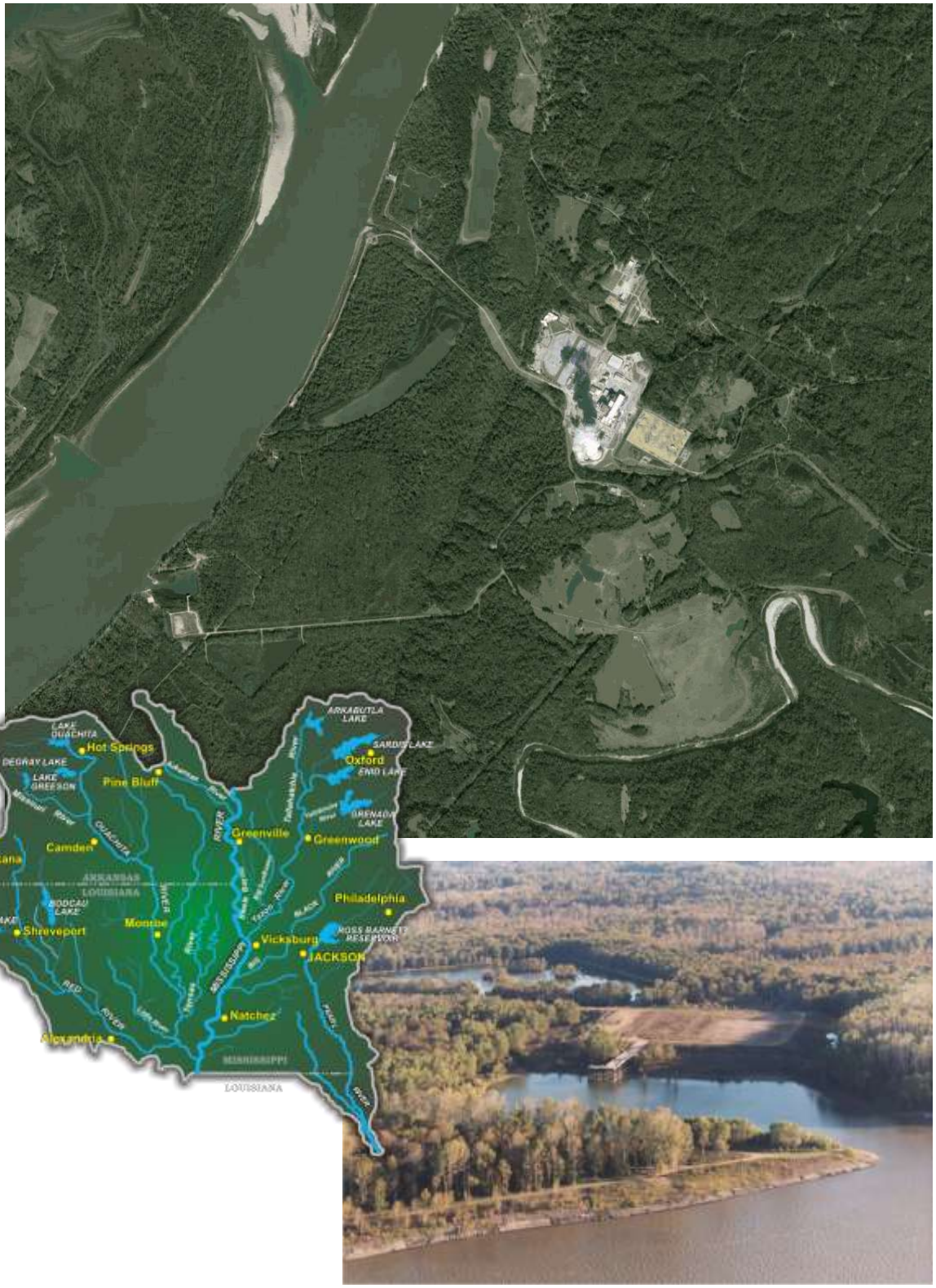
O&M



OPERATION & MAINTENANCE

OR O&M

The Operation and Maintenance program focuses on the need to preserve the existing Civil Works Infrastructure such as locks, dams, navigation channels, recreation facilities and provide adequate levels of service.



Claiborne County Port, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Claiborne County Port, MS

River and Harbor Act of 1960, Section 107

Operation and Maintenance (NAV)

Location: Claiborne County Port, located in Claiborne County, MS, is a slack-water, shallow draft port located along the Mississippi River.

Description: The entrance channel is 800 feet long by 150 feet wide and maintained to a minimum depth of 9 feet. The turning basin is 800 feet by 400 feet and maintained to a minimum depth of 9 feet.

Issues: Depending on river stages, the port experiences low-water conditions starting in July and lasting through November of each year. Maintenance dredging allows this port to continue shipping during these stages.

Importance: The port provides a transportation need for water-oriented industries in Claiborne County, MS.

Risk: If dredging is not performed, this port will first begin to "light load" barges, in which barges will not be loaded to full capacity resulting in less efficient and costly transportation. As the river continues to fall, there will not be enough water for the towboats to carry these barges to the river and the port will be required to close. Without maintenance dredging funds, this port will lose project dimensions during the busiest time of the year when crops are harvested and shipped.

Consequence: The loss of a dependable, reliable and safe port will have significant adverse impacts on the region due to the increased shipping costs by rail and trucks. Many small communities and farmers will be forced to seek other more costly means to move their products. Port employees along with the business located in the harbor would be laid off.

Claiborne County Port

Activities for FY 15: Funds are being used for surveys.

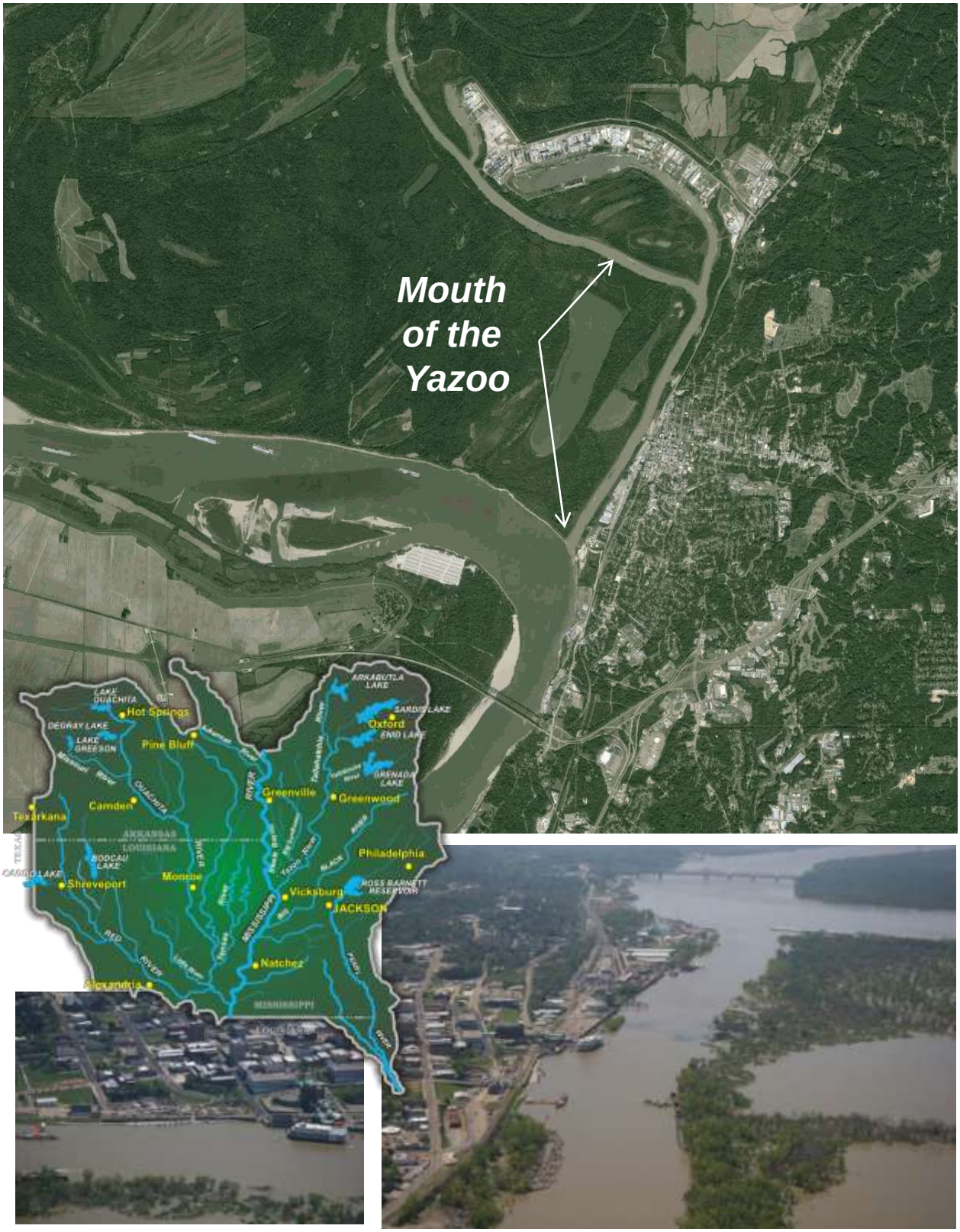
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $1,000 will be used for surveys. Additional funds in the amount of $99,000 could be used to fund rehabilitation and maintenance dredging.

Project Sponsor/Customer: Claiborne County Port Commission

Congressional Interest: Senate: Wicker and Cochran; House: Thompson (MS-2)

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
O&M	$1,000	$1,000	$100,000



Mouth of the Yazoo, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Mouth of Yazoo River, MS

River and Harbor Act of 1960, Section 107

Operation and Maintenance (NAV)

Location: Mouth of Yazoo River starts at the Mississippi River and continues for 9.3 miles to the junction of Old Mississippi River and Yazoo River at Vicksburg, Mississippi.

Description: The channel is 150 feet wide, and a minimum operating depth of 9 feet below the lowest water of record is maintained in the channel.

Issues: Without maintenance dredging, this entrance channel will lose project dimensions requiring the Yazoo River and the Vicksburg Harbor to be shut down during the busiest time of the year when crops are harvested and shipped.

Importance: The project's purpose is to provide access to the Yazoo River, upper Vicksburg Harbor, and the Vicksburg Harbor.

Risk: Loss of project depths will have significant adverse impacts on the region due to increased shipping costs by rail and trucks. The Mat Sinking Unit and the dredge *Jadwin* anchor in the Vicksburg Harbor and their access to the Mississippi River during low-water stages could be impeded.

Consequence: There are 24 businesses and industries located in the harbors dependent on this project. Approximately 2,000 employees with payrolls over $80 million could be affected if dredging is not performed. The economic impact to the area is approximately $564.8 million.

Activities for FY 15: Funds are being used for surveys and maintenance dredging.

Acquisition Strategy: A contract was awarded for harbor and port dredging.

Amount That Could Be Used in FY 16: Budgeted funds of $34,000 will be used for surveys. Additional funds in the amount of $276,000 could be used to fund maintenance dredging.

Project Sponsor/Customer: Vicksburg Port Commission

Congressional Interest: Senate: Cochran and Wicker; House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
O&M	$889,300	$34,000	310,000

Pearl River, LA and MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Pearl River, LA and MS

River and Harbor Act of 1935, as modified by River and Harbor Act of 1966

Operation and Maintenance (NAV)

Location: The Pearl River Navigation project is a navigation channel on the Pearl River that originally extended 58 miles from the mouth of the Pearl River to the mouth of Bogalusa Creek at Bogalusa, LA.

Description: The project consisted of three locks and three weirs that provided a channel with minimum depth of 7 feet and a minimum bottom width of 100 feet. The project was placed in a caretaker status in 1995 and has been maintained only for maintenance and safety needs.

Issues: The Pearl River Navigation project has exceeded its 50-year project life and has no commercial traffic. Efforts to reopen the waterway by the Vicksburg District in the mid-1980s to early 1990s by performing needed maintenance dredging were opposed by noncommercial groups. Maintenance dredging was last performed in 1988 and 1989. The last recorded barge movements occurred in 1991. In 1995, environmental litigation seeking declaratory and injunctive relief was filed, and the Corps was enjoined from dredging. In 1995, Congress officially placed the project in "caretaker" status by directing the limited project funds be used for maintenance of caretaker status. The project is in an unmanned caretaker status at this time. Remote gages were installed at all three Locks after Hurricane Issac to allow the Vicksburg District to monitor the water levels in each lock chamber at all times. An Initial Appraisal Report was prepared in 2003 recommending deauthorization of the project

Importance: Deauthorization and disposal of the project is needed as the locks are deteriorating.

Risk: Recent engineering assessments completed for the lock facilities indicated that the sheet pile lock walls are rapidly corroding.

Consequence: Locks are deteriorating and are potentially unsafe.

Lock 3

Activities for FY 15: Funds are being used to maintain the project in a caretaker status.

Acquisition Strategy: N/A

Amount That Could Be Used in FY 16: Budgeted funds of $150,000 will be used to maintain project in a caretaker status.

Congressional Interest: Senate: Cassidy and Vitter (LA); House: Palazzo (MS-4).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
O&M	$150,000	$150,000	$150,000

Port of Rosedale, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Rosedale Harbor, MS

River and Harbor Act of 1960, Section 107

Operation and Maintenance (NAV)

Location: Rosedale Harbor is a slack-water, shallow draft harbor located along the Mississippi River in Bolivar County, MS.

Description: The harbor channel is 2.7 miles long by 150 feet wide and the turning basin is 1,000 feet long and 400 feet wide. Both the harbor channel and turning basin have a maintained minimum depth of 9 feet.

Issues: Depending on river stages, the harbor experiences low-water conditions starting in July and lasting through November of each year. Maintenance dredging allows this port to continue shipping during these stages.

Importance: The harbor provides a transportation need for water-oriented industries in Bolivar County, MS. It sustains approximately 325 jobs. FY13 commercial tonnage was 1,304,001

Risk: If dredging is not performed, this harbor will first begin to "light load" barges, in which barges will not be loaded to full capacity resulting in less efficient and more costly transportation. As the river continues to fall, there will not be enough water for the towboats to carry these barges to the river and the harbor will be required to close. Without maintenance dredging funds, this harbor will lose project dimensions during the busiest time of the year when crops are harvested and shipped.

Consequence: The loss of a dependable, reliable and safe harbor will have significant adverse impacts on the region due to the increased shipping costs by rail and trucks. Many small communities and farmers will be forced to seek other more costly means to move their products. Harbor employees along with the business located in the harbor would be laid off.

Rosedale Harbor

Activities for FY 15: Funds are being used for surveys and maintenance dredging of the harbor.

Acquisition Strategy: A contract was awarded for harbor and port dredging.

Amount That Could Be Used in FY 16: Budgeted funds of $9,000 will be used for surveys and dredging. Additional funds in the amount of $1,190,000 could be used to fund maintenance dredging.

Project Sponsor/Customer: Rosedale-Bolivar County Port Commission

Congressional Interest: Senate: Cochran and Wicker; House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
O&M	$1,150,600	$9,000	$1,199,000

Yazoo River, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo River, MS

Water Resources Development Act of 1986

Operation and Maintenance (NAV)

Location: The Yazoo River provides navigation from Mouth of the Yazoo River, Vicksburg, MS, to Greenwood, MS.

Description: Clearing and snagging of the channel provides a clear channel to Yazoo City, MS. The project depth of 9 feet is authorized but not dredged, to Greenwood, a distance of over 158 miles. All work is done at or near the Vicksburg Harbor just above the Mouth of the Yazoo River.

Issues: Without maintenance funds, the project would become hazardous to navigation due to log jams and snags.

Importance: The project meets a transportation need of water-oriented industry from Greenwood to Vicksburg.

Risk: The River services many small communities and farmers in the Mississippi Delta.

Consequence: Approximately 3,855 employees with payrolls over $80 million could be affected if dredging is not performed. There are 24 businesses and industries located on the Mississippi River harbors.

Yazoo River

Activities and Current Status for FY 15: Funds are being used for surveys.

Acquisition Strategy: None.

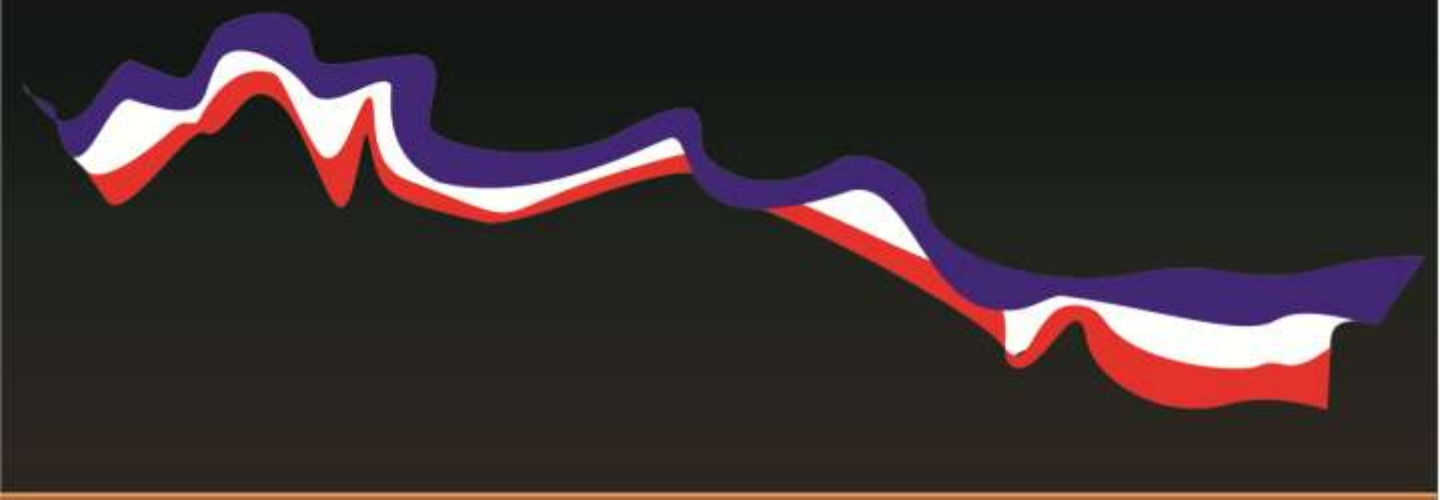
Amount That Could Be Used in FY 16: Budgeted funds of $21,000 will be used to perform minimum channel survey, clearing and snagging to maintain the authorized channel. Additional funds in the amount of $131,000 could be used to fully fund clearing and snagging to maintain the authorized channel.

Project Sponsor/Customer: Vicksburg Port

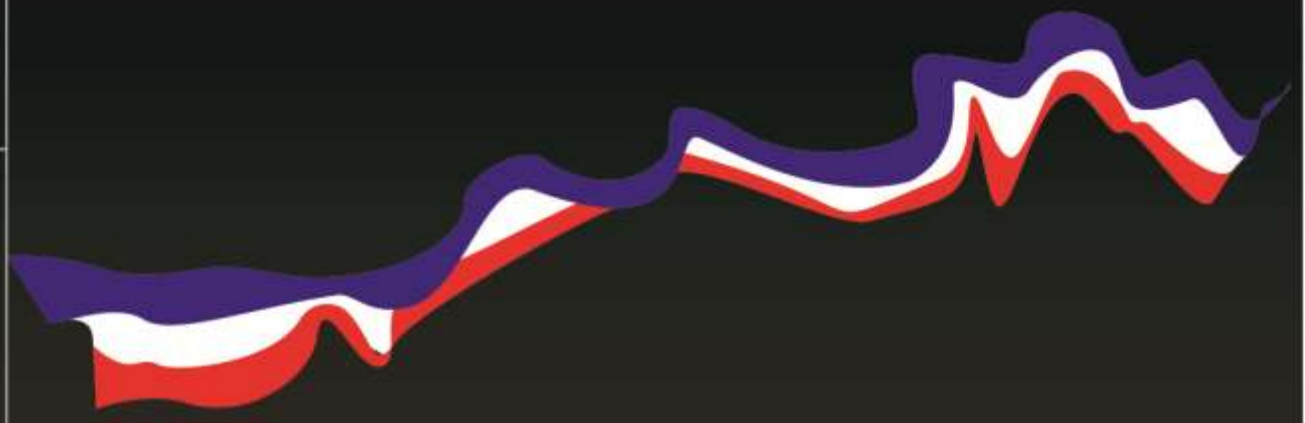
Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
O&M	$21,000	$21,000	$152,000

MR&T INVESTIGATIONS



MR&T INVESTIGATIONS



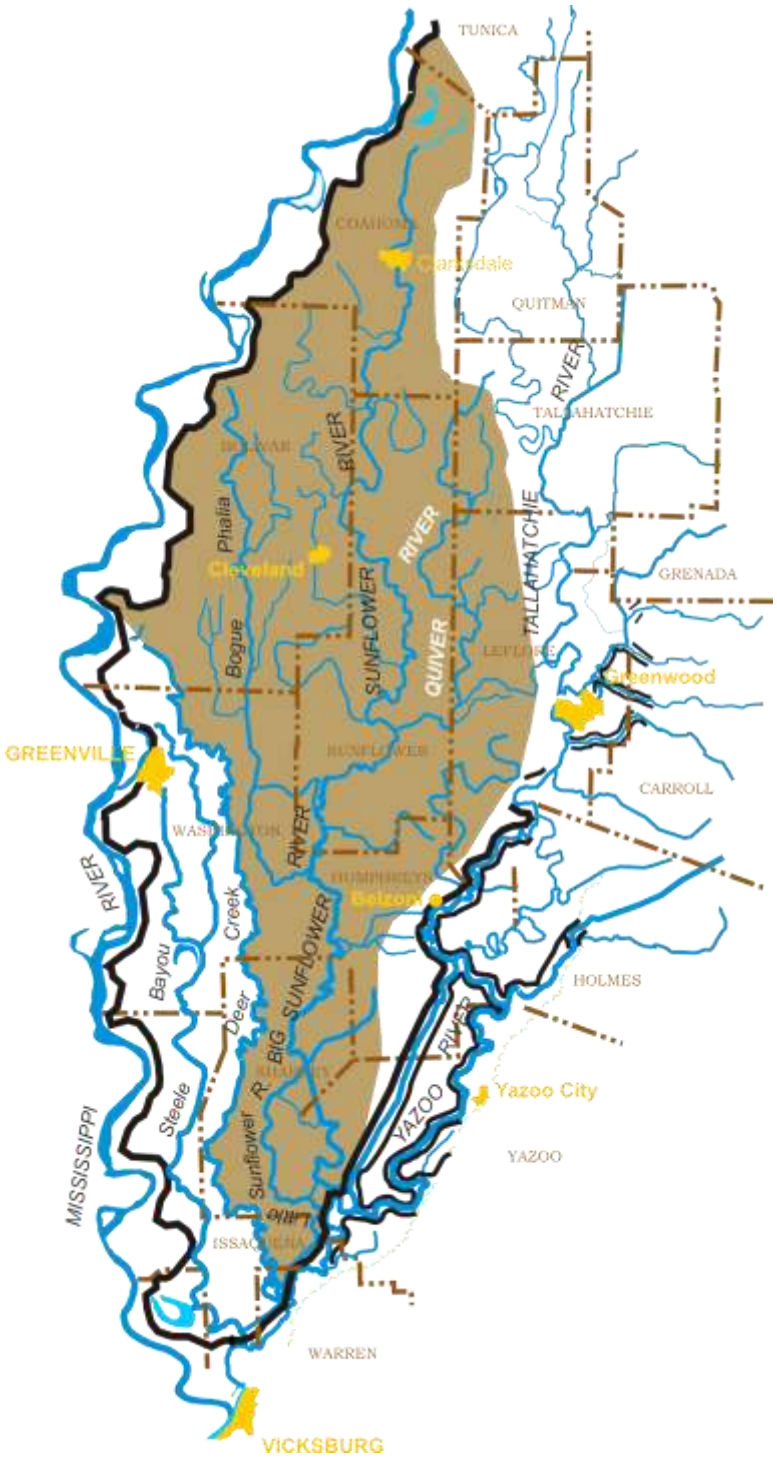
MR&T INVESTIGATIONS

The major objective of the MR&T Investigations program is to study projects that provide solutions to water resource problems for the area within the MR&T authorized project, generally from the area along the Mississippi River from Cairo, IL, to the Gulf of Mexico. The Corps undertakes studies in response to directives (authorizations) from Congress. Congressional authorizations are contained in public law and in resolutions of either the House Public Works and Transportation Committee or the Senate Environment and Public Works Committee.

In the past, studies were conducted in two phases - reconnaissance and feasibility. WRDA 2014 revised the implementation for studies to: feasibility phase; cost no more than $3 million (Federal and non-Federal) and have 3 levels of vertical coordination.

The report results in recommendations to Congress for or against Federal participation in solutions to the water resource problem and opportunities identified in the study. A recommendation for Federal participation identifies a recommended plan/project, generally for construction authorization and funding.

The Preconstruction, Engineering and Design Studies (PED) phase of project development encompasses all planning and engineering necessary for project construction, after release of the report and Division Engineer's public notice on a favorable study. Preparation of design memorandums and plans and specifications will be cost shared in accordance with the cost sharing required for project construction.



Big Sunflower River Watershed Study, MS
(Quiver River)

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Big Sunflower River Watershed Study, MS (Quiver River)

SR, 29 June 1973

Mississippi River and Tributaries, Investigations (FRM)

Location: The study area is part of the Big Sunflower River and Yazoo River Watersheds, in the Mississippi Delta.

Description: The Quiver River originates in Tallahatchie County and meanders more than 60 miles south before its confluence with the Big Sunflower River, just north of U.S. Highway 82 in Sunflower County. Major streams in the study area include the Tallahatchie River, Quiver River, Sandy Bayou, Black Bayou, and Parks Bayou. The predominant emphasis of the study is the restoration of the degraded aquatic ecosystems in the study area.

Issues: This Mississippi River Delta has lost over 80% of its bottomland hardwood wetlands and riverine systems have been severely degraded as a result of our anthropogenic process. The Quiver River system was historically a part of an interconnected watershed providing unity throughout the basin. Beginning in early 1950's channelization and channel realignments for the purposes of flood control and water supply highly degraded the natural system into its current state. The streams in the area are prone to extremely low-water levels and little or no flow during drought and low-water periods.

Importance: The project offers unique opportunities for making improvements to aquatic, riparian, and terrestrial resources in the region by restoring the natural hydrologic flow through inter-basin transfer. The overall health of the streams is viewed by the public as having a substantial impact on the wetland, aquatic, and terrestrial ecosystems in the vicinity. There is an opportunity to restore populations of America eel, paddle fish, and blue sucker, all of which utilize the Quiver River and are listed as vulnerable by the American Fisheries Society. Additionally, there are 44 species of freshwater mussels in the Yazoo Basin with 28 species identified from the Quiver River. Of the 44 species documented in the Yazoo Basin, 7 are listed as special concern, threatened, or endangered. Of those 7, the pyramid pigtoe mussel is documented specifically in the Quiver River and given the number of listed mussels in the Yazoo Basin, flow augmentation in the Quiver River has the potential of benefitting numerous species of regional and national importance.

Degraded stream conditions in the Big Sunflower Watershed

Risk: Poor water quality directly affects the ecosystem's ability to support aquatic habitat, including numerous vulnerable, special concern, or endangered species. Decreased food supplies and poor water quality could adversely impact other wildlife as well.

Consequence: Degradation of the environment and aquatic habitat will continue without properly established solutions.

Activities for FY 15: Funds are being used to continue the feasibility study.

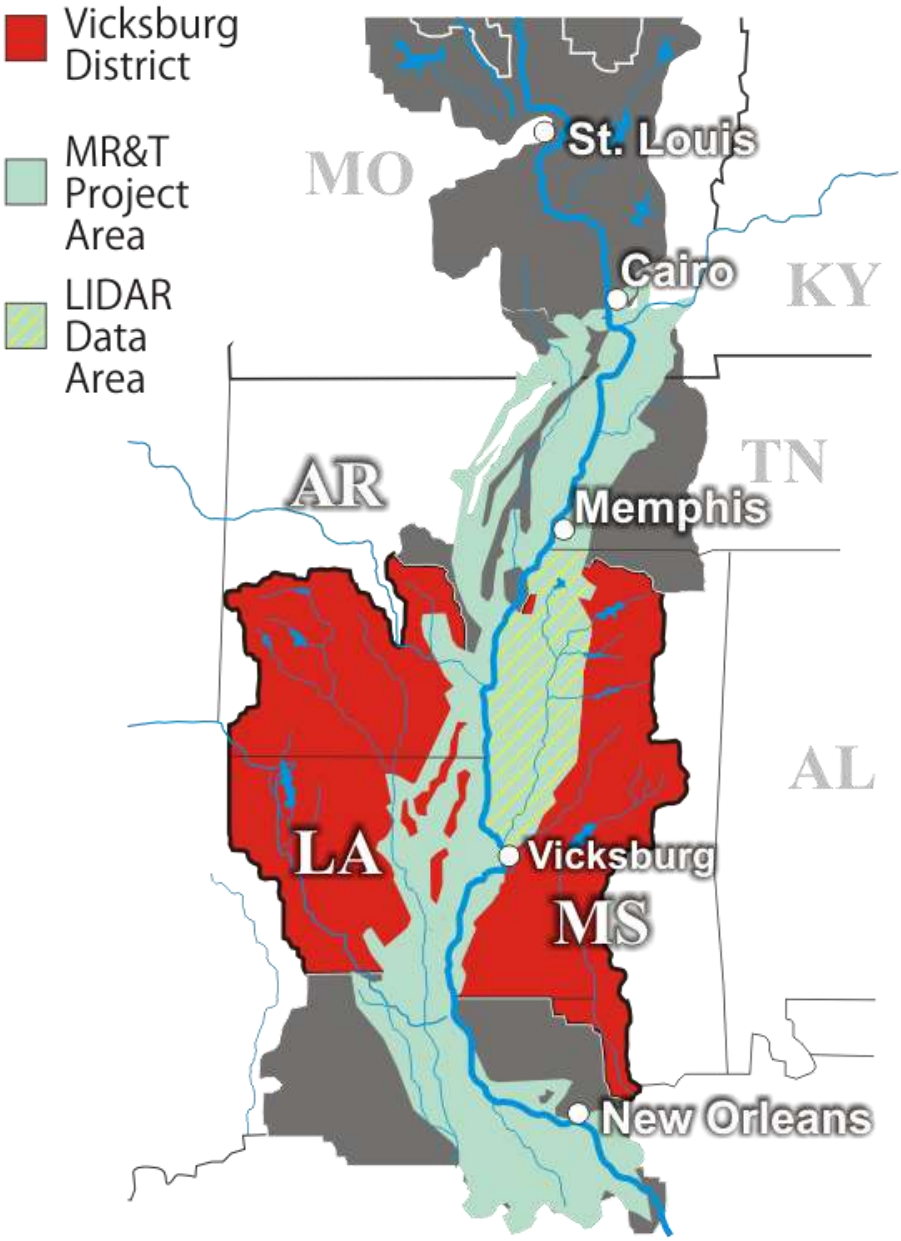
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Carryover funds will be used to complete the study.

Project Sponsor/Customer: Yazoo-Mississippi Delta (YMD) Joint Water Management District

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Feasibility	$1,315,000	$ $1,315,000	$0	$0	$0



Collection and Study of Basic Data, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Collection and Study of Basic Data, AR, LA, MS, IL, TN, MO, KY

Flood Control Acts of 1928, Sections 1, 2, 3, and 10

Mississippi River and Tributaries, Investigations (FRM)

Location: The Collection and Study of Basic Data project is located throughout the Mississippi Valley Division.

Description: Data collected consist of information on stream flow, sediments and nutrients, rainfall, floods, water quality and quantity, aquatic resource monitoring and other items of related hydrologic nature. Regional investigations of flowline issues along with geomorphic and potamology (G&P) issues that arose from 2011 flood must be reviewed.

Issues: Data collected under this activity are for authorized flood control projects for which funds have been appropriated in the Memphis, Vicksburg, and New Orleans Districts. Data are used by numerous agencies and the public to determine when flooding will occur and to plan for any evacuations. In addition, the Environmental Protection Agency and state environmental quality agencies are now recognizing water quality and quantity as critical elements in environmental protection planning and construction. Aquatic resources are a good indication of the water quality and quantity of a particular stream. These data are vital to show projects are in conformance with state and Federal laws.

Importance: Data collection is essential in the planning, design, construction, and operation and maintenance of authorized flood control projects, especially significant after the Flood of 2011. The hydraulic and hydrologic data are being reviewed for how the MR&T system performed during the 2011 flood, evaluate any needed changes in the flowline/water management of the system, and identify areas/reaches in which the current 1976 Refined Project Flood Flowline may need revision. G&P issues are directly related to the flowline and future operation of the system.

Risk: Without adequate funding, the Mississippi River Commission would lose the ability to make accurate flood predictions and to determine whether the project flowline is correct to provide Project Design Flood protection to the Valley as directed by Congress. G&P studies must continue due to changes observed during the 2011 Flood and for utilization in long term management.

Consequence: If essential hydraulic and hydrologic and water quality data could not be collected and therefore data would not be available to accurately predict future flood and drought conditions on major rivers within the Lower Mississippi Valley.

Activities for FY 15: Funds are being used to collect essential basic data used in planning and design of authorized flood control projects. Funds are also being used for aquatic and water quality and quantity monitoring, conduct regional review of numerous Hydraulic and Hydrologic data, flowline, sedimentation and G&P related issues and/or concerns that were discovered during the 2011 flood.

Acquisition Strategy: No construction contracts are scheduled to be awarded in FY 15.

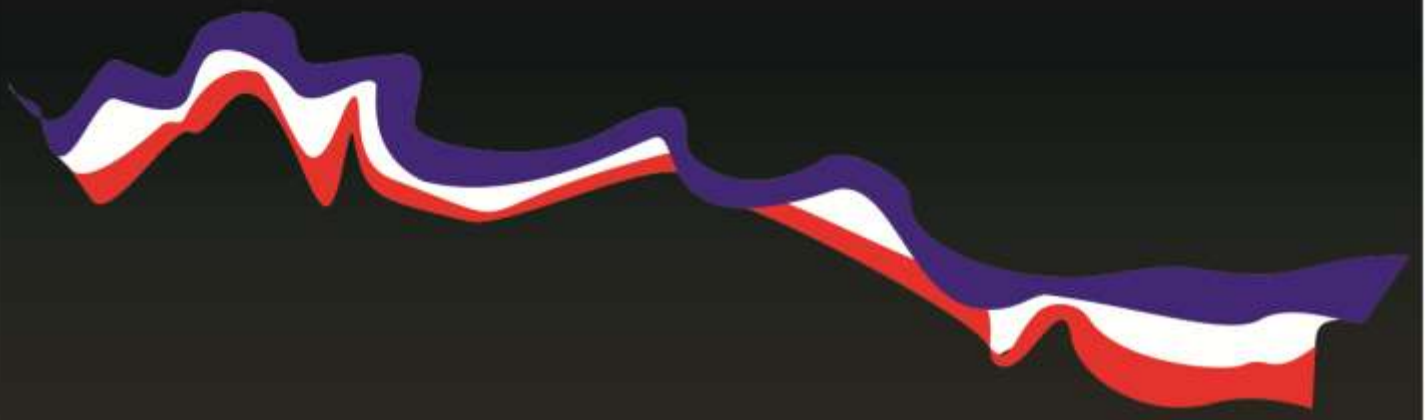
Amount That Could Be Used in FY 16: Budget funds of $9,334,000 will utilized to continue the Regional flowline ($5,000,000) and G&P studies ($4,034,000), and $300,000 will be used to collect basic steam flow data. Additional funds of $2,600,000 could be utilized for stream flow data, measurements and archive existing data ($2,000,000) water quality and quantity and aquatic monitoring ($600,000).

Project Sponsor/Customer: Levee boards along the Mississippi River from Cape Girardeau, Missouri to Head of Passes, Louisiana.

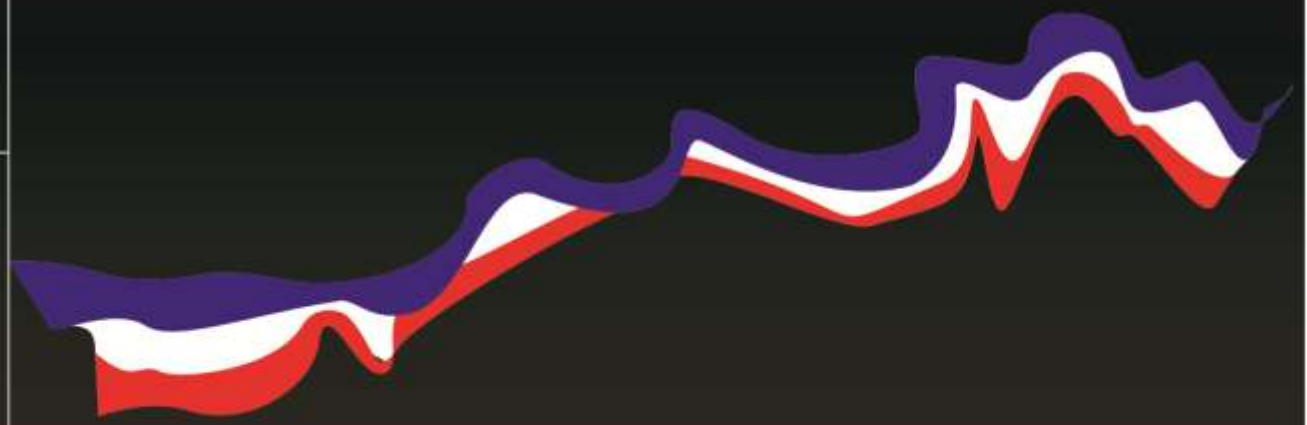
Congressional Interest: Senate: Boozman and Cotton (AR), Cassidy and Vitter (LA), Cochran and Wicker (MS), Alexander and Corker (TN), McConnell and Rand (KY), Blunt and McCaskill (MO), and Durbin and Kirk (IL); House: Crawford (AR-1), Westerman (AR-4), Scalise (LA-1), Fleming (LA-4), Abraham (LA-5), TBD (MS-1), Thompson (MS-2), Fincher (TN-8), Cohen (TN-9), Whitfield (KY-11), Smith (MO-8), and Bost (IL-12).

Phase	Estimated Federal Cost of Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Feasibility	N/A	$9,280,000	$9,334,000	$11,934,000

MR&T CONSTRUCTION

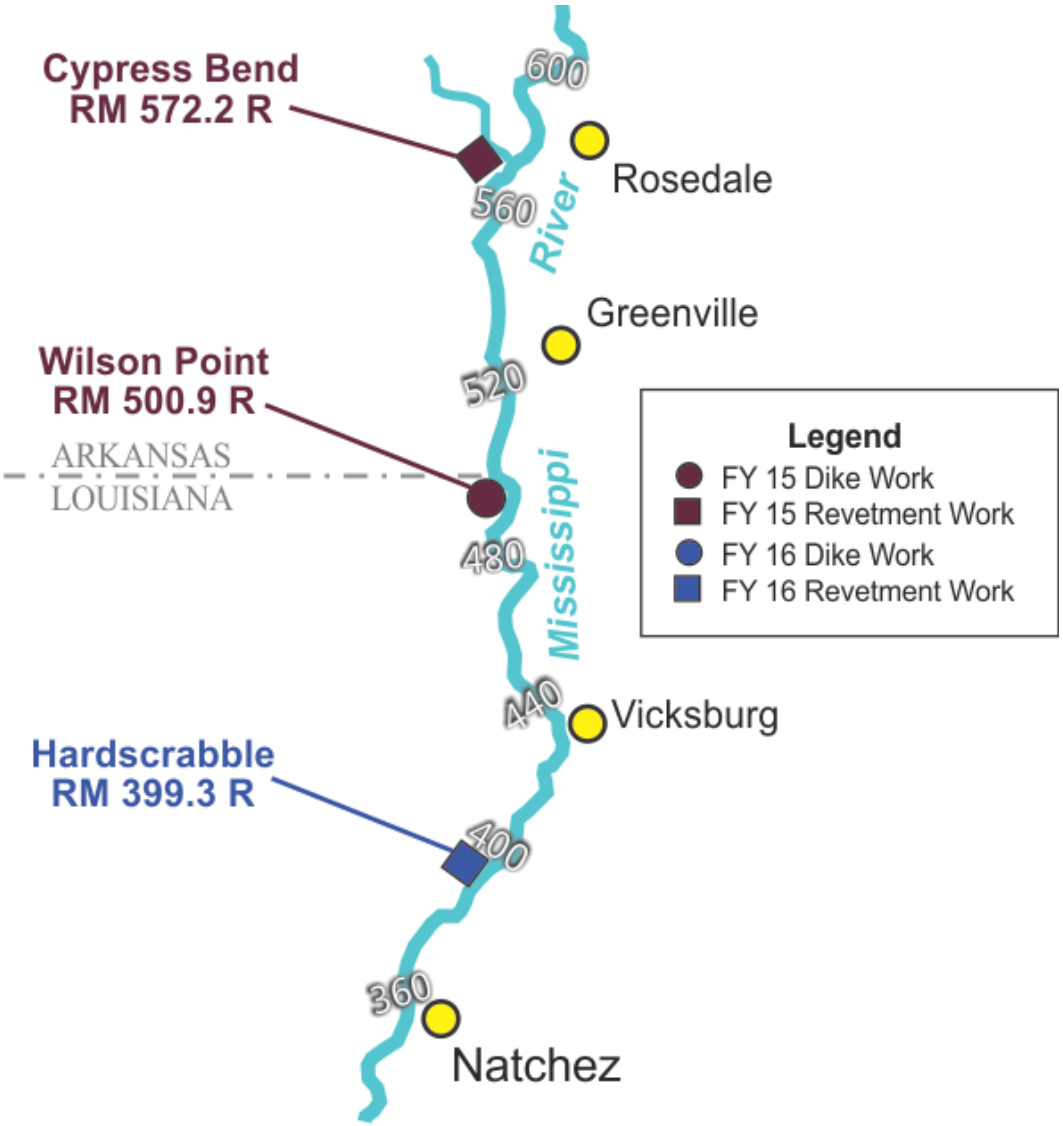


MR&T CONSTRUCTION



MR&T CONSTRUCTION

The objective of the MR&T construction program is to construct and complete authorized and appropriated MR&T projects as economically and quickly as practicable within program constraints and consistent with current national priorities.



Mississippi River Channel Improvement

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Mississippi River Channel Improvement, AR, LA, & MS

Flood Control Acts of 1928 (Section 1); 1936 (Section 1); 1938 (Section 4); 1941 (Section 3); 1944 (Section 10); 1962 (Section 203); 1965 (Section 201, 204); 1966 (Section 202, 203); and 1970 (Section 207)

Mississippi River and Tributaries, Construction (FRM, NAV)

Location: The project is located in the Mississippi River and along its banks from the vicinity of Cessions Towhead at River Mile 616 AHP, to Union Point at River Mile 326 AHP, a distance of approximately 290 miles.

Description: The plan of improvement consists of stabilization of the Mississippi River main channel in a desirable alignment for purposes of flood control and navigation by means of revetments, river training structures (dikes, chevrons, and bendway weirs), and improvement dredging.

Issues: The Mississippi River channel improvement construction project is not complete. The remaining planned revetments and dikes are required to provide a complete system capable of providing protection for the flood risk management levees and providing an efficient channel for commercial navigation. The plant used for sinking is at the end of its useful life and requires $5 million per year in maintenance alone.

Importance: River training structures improve navigation conditions, stabilize bends, and reduce required maintenance dredging requirements. Revetment construction maintains channel alignment and protects the banks from erosion.

Risk: Catastrophic damage to the navigation channel, river banks, and adjacent mainline levee is likely to occur if the system is not fully constructed as authorized.

Consequence: Failure to adequately fund will result in channel deterioration which would adversely impact the navigation industry in economically and efficiently transporting commodities on the Mississippi River. Continued erosion of banks and/or failure of revetments would adversely impact channel alignment and threaten the integrity of the mainline levee system.

Stone Dike Construction

Revetment Construction – Articulated Concrete Mat (ACM)

Activities for FY 15: Funds are being used for dike construction at Wilson Point, LA, and for revetment construction at Cypress Bend, AR. Funds are also being used to fund stone bank paving associated with revetment construction.

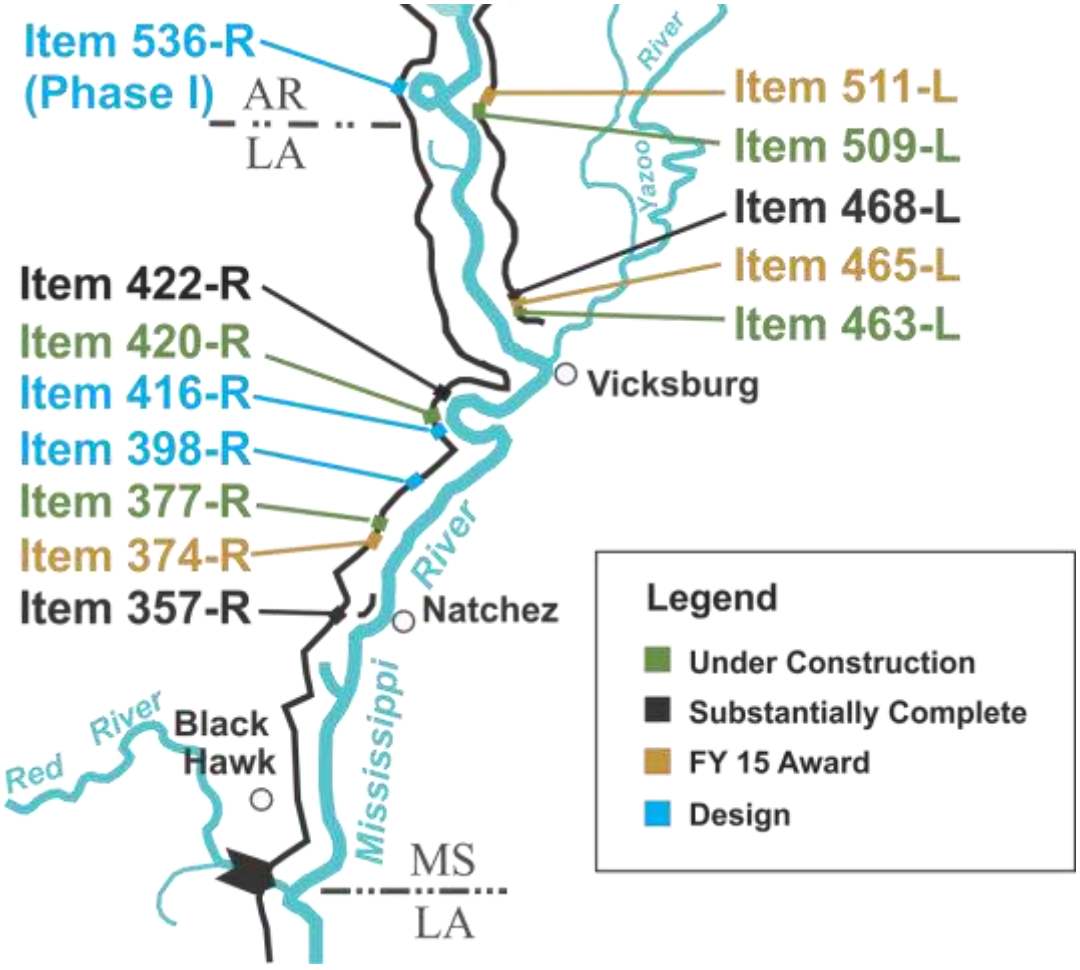
Acquisition Strategy Two contracts were awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $18,146,000 will be used continue design, construction and construction management of dikes, stone bank paving and revetments. Additional funds in the amount of $20,036,000 could be used to fully fund dike construction at Anconia Chute, AR, Refuge Dikes Turndowns, and Refuge MS and to continue revetment sinking reinforcement at Goldbottom 2, design a new articulated concrete Mat Sinking Unit and reinforcement sinking to maintain existing revetment .

Project Sponsor/Customer: Navigation industry, environmental community, and Mississippi Levee, 5th Louisiana Levee, and Southeast Arkansas Levee Boards.

Congressional Interest: Senate: Boozman and Cotton (AR), Cassidy and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Westerman (AR-4), Abraham (LA-5), Thompson (MS-2), and Harper (MS-3).

Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
$1,251,000,000	$1,023,458,000	$16,600,000	$18,146,000	38,182,000



Mississippi River Levees - Construction

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Mississippi River Levees, AR, LA & MS

Flood Control Acts of 1928, 1936, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1968, River Basin Monetary Authorization Act of 1971, WRDA 1992, Sec 103, WRDA 2000, Section 508

Mississippi River and Tributaries, Construction (FRM)

Location: The Mississippi River levee system on the west bank extends from Allenville, Missouri, on the Little River Diversion Channel generally southward to Venice, Louisiana, and on the east bank from Hickman, Kentucky, to opposite Venice, Louisiana, except where interrupted by hills and tributary streams. Included in the system are the levees, which protect Mounds, Mound City and Cairo, Illinois, and the New Madrid Levee and Floodway.

Description: Improvement provides for raising, strengthening, and in some cases, extending existing levees to provide protection against the project design flood.

Issues: There are currently 110 miles remaining of deficient levees within the Vicksburg District.

Importance: The Mississippi River Levees are designed to protect people, property, infrastructure, and the environment in the alluvial valley against the project design flood by confining flow to the channel between the levees and natural hill lines, except where it enters natural backwater areas or is diverted purposely into floodway areas.

Risk: Catastrophic damage is likely to occur if the system is below authorized level of protection.

Consequence: A breach in the levee could result in over 1 million acres inundated, towns and cities flooded, and lives lost. Commercial impacts include roads, agricultural and timber production. Farmland is at risk of flooding, resulting in devastation of primary economic engine of the region. Environmental losses of terrestrial habitat and wildlife would be significant.

Activities for FY 15:
Funds are being used to award Item 511L, Lake Jackson-Palmetto, MS; Item 465L, Magna Vista-Brunswick, MS and Item 374-R, Waterproof Upper Lake Concordia; for relocation of utilities; engineering and design of future items of construction; complete construction on 420R, Bayou Vidal to Elkridge, LA and 422R, Reid Bedford to King, LA; and continue construction on Item 509L, Lake Jackson-Palmetto, MS; Item 463L, Magna Vista-Brunswick, MS and Item 377R, Waterproof – Upper Lake Concordia, LA.

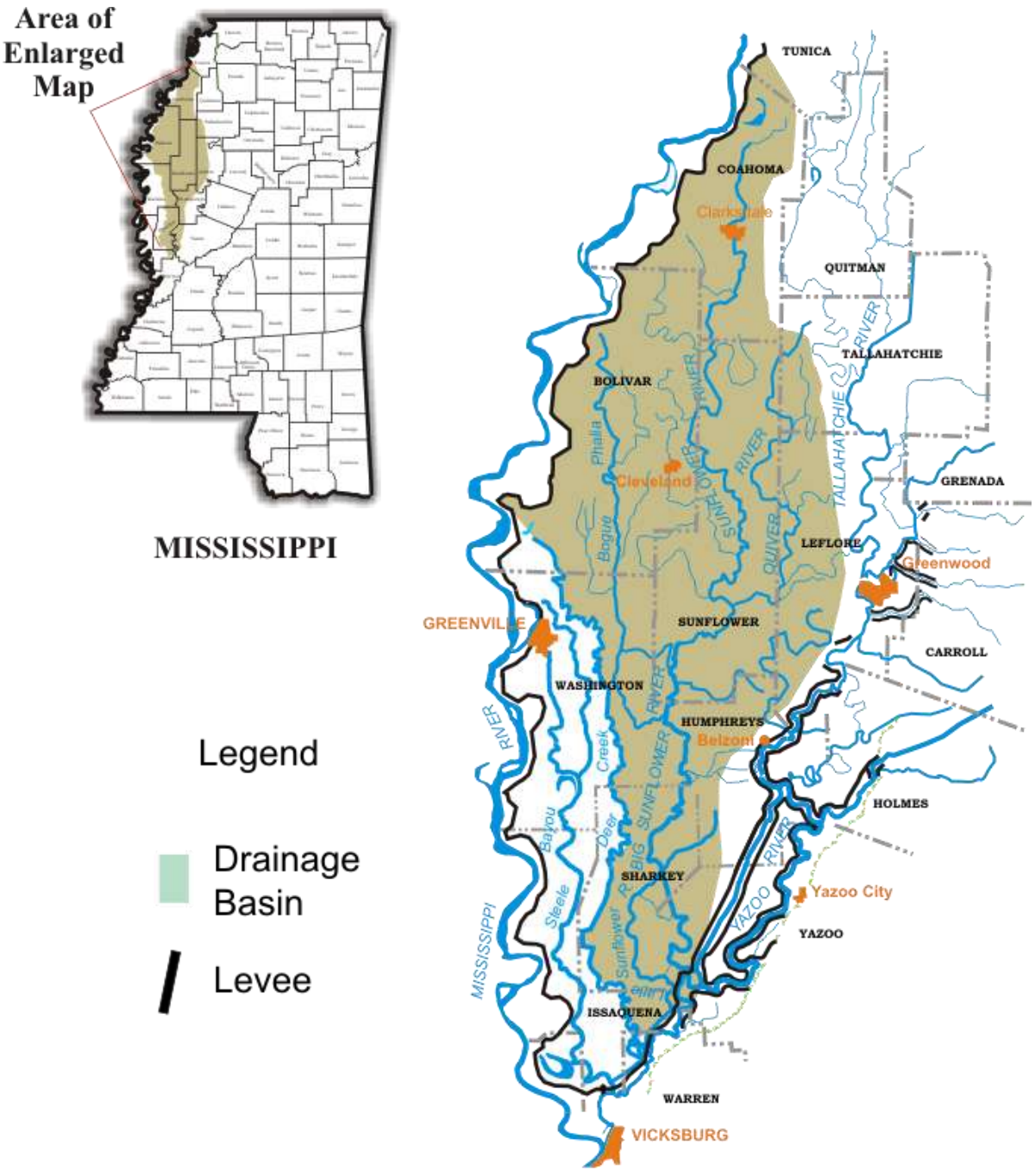
Acquisition Strategy: Three contracts were awarded in FY15.

Amount That Could Be Used in FY 16:
Budgeted funds of $5,070,000 will be used to complete construction of ongoing contracts, economic evaluation and engineering design on a future item of construction. Additional funds in the amount of $18,125,000 could be used to construct Leland–Vaucluse, AR, Item 536-R Phase I ($9,000,000), Magna Vista–Brunswick, MS, EB Paving, Items 468-L/463-L ($4,750,000), Willow Point-Youngs Point, LA, Item 457-R Relief Wells ($1,875,000), Supplemental EIS ($500,000) and continued engineering design for future construction ($2,000,000).

Project Sponsor/Customer: Mississippi Levee Board, Fifth Louisiana Levee Board, and Southeast Arkansas Levee District.

Congressional Interest: Senate: Boozman and Cotton (AR), Cassidy and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Westerman (AR-4), Scalise (LA-01), Abraham (LA-5), Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$1,161,000,000	$703,667,302	$25,588,000	$5,070,000	$23,195,000



Yazoo Basin,
Big Sunflower River

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Big Sunflower River, MS

Flood Control Act of 1944, 1950, 1962 and 1965

Mississippi River and Tributaries, Construction (FRM)

Location: The Steele Bayou Basin lies within the Delta region of west-central Mississippi. Its 752-square-mile drainage area runs from north of Greenville to its confluence with the Yazoo River just north of Vicksburg.

Description: The project consists of 739 miles of channel, 9 miles of levees and will protect 195,000 acres against the design flood. An additional 395,000 acres will be benefited because of improved drainage conditions. The project will provide flood protection and environmental enhancements for this region.

Issues: The Environmental Protection Agency and Mississippi Department of Environmental Quality have recognized in recent years the impacts of sediment and nutrients on environmental resources in the Big Sunflower River Basin. The installation of sediment reduction structures will improve the water quality in the basin.

Importance: Between the years 1990-2009 the sediment reduction structures have reduced approximately 686,000 tons of sediment that would have naturally been deposited in delta streams. Keeping sediment out of the streams improves channel flow capacity during times of flooding and reduces dredging frequency.

These structures also benefit the environment by keeping agricultural fertilizers and pesticides out of the streams, thereby contributing to another one of the Corps' major missions of ecosystem restoration. The monitoring of water quality over a number of years will allow documentation of these long-term benefits and the development of Total Maximum Daily Load targets.

Risk: Impacts could include increased sediment and nutrient loads. Diminished channel capacity would increase the frequency, duration, and effects of flooding in this area.

Consequence: Without additional funding, all work will be suspended. No further monitoring and documentation of long-term benefits will occur and work addressing sedimentation and erosion control will come to a halt.

Sediment Reduction Structure

Activities for FY 15: Funds are being used for site identification, plans and specs, and award of a construction contract for Steele Bayou.

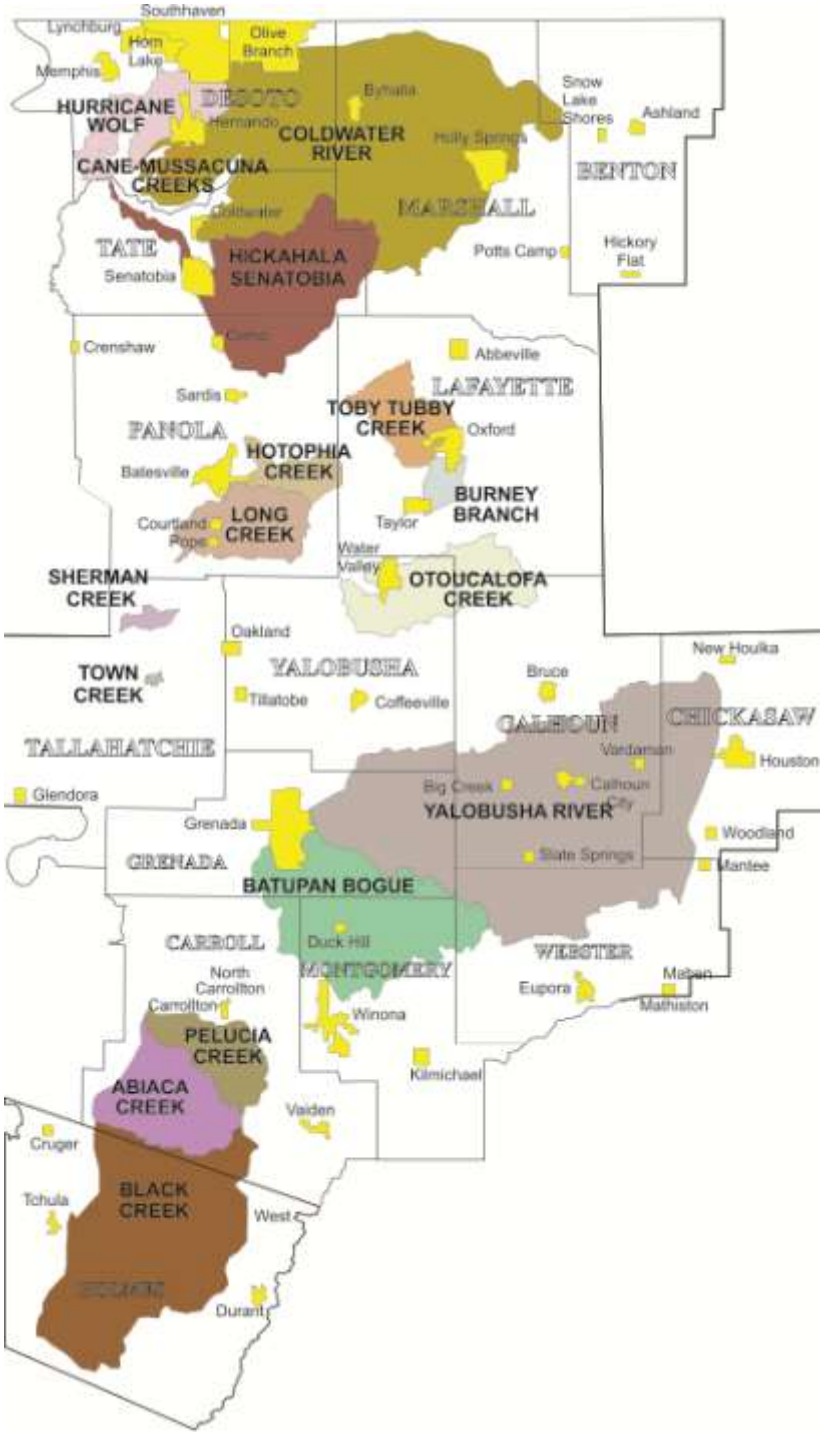
Acquisition Strategy: One contract was awarded in FY15.

Amount That Could Be Used in FY 16: No funds are in the FY16 President's Budget. Funds in the amount of $4,000,000 could be used award two construction contract for Big Sunflower Sediment Reduction Structures.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$136,000,000	$129,339,000	$2,000,000	$0	$4,000,000



Yazoo Basin
Delta Headwaters Project

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Delta Headwaters Project

Emergency Jobs Appropriations Act of 1982; WRDA 1986, Section 103e

Mississippi River and Tributaries, Construction (FRM)

Location: The project is located in the eastern (hill) section of the Yazoo River Basin, MS.

Description: The project consists of 16 watersheds, ranging in size from 1 square mile (Town Creek) to over 600 square miles (Coldwater River), with features that include bank stabilization, grade control structures, floodwater-retarding structures, and channel modifications for flood damage reduction, bank stabilization and sedimentation/erosion control.

Issues: The program is vital to the ongoing erosion prevention in the 16 authorized watersheds. By completing the needed work, the Vicksburg District will reduce the risk of flooding in the Yazoo Basin. This will also reduce the sediment deposited in downstream reservoirs and streams, reduce the need for maintenance dredging, and improve degradation of wildlife habitat in and along the streams.

Importance: The project provides important flood control, environmental, water quality, and sediment reduction benefits, in addition to economic stimulus benefits to the basin. It is the only program of its kind in the Mississippi River Valley and has proven to be a valuable model that can be used throughout the entire Mississippi River Valley.

Erosion from agricultural land frequently carries agricultural chemicals and fertilizers adding to the Gulf Hypoxia. Consequently, reducing erosion improves water quality. Once stabilized, stream systems provide improved wildlife habitat both in and along the streams.

Risk: The program is not within the Administration's policy; therefore, no long-term program planning can occur.

Consequence: Without funding, all work will be suspended, resulting in no further work to stop sedimentation, control erosion, or improve water quality. Land will continue to erode, towns and farms will continue to flood, and existing structures will fall into disrepair.

Yazoo Basin, MS
Mississippi Delta Headwaters Project

Activities for FY 15: Funds are being used to complete the design of a bank stabilization and riser pipe project as well as award two construction contracts

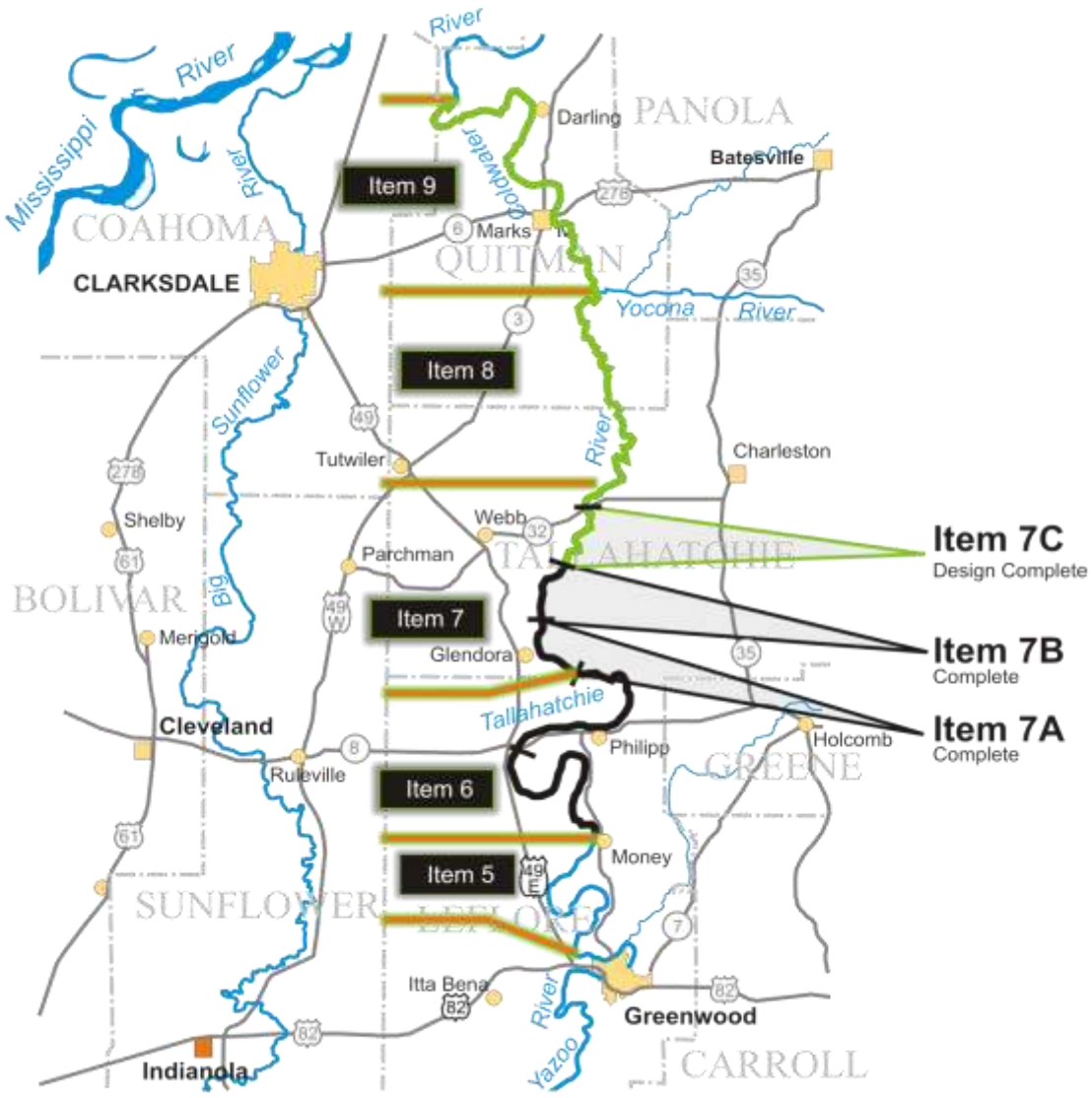
Acquisition Strategy: Two construction contracts were awarded in FY15.

Additional Amount That Could Be Used in FY 16: No funds are in the FY16 President's Budget. Funds in the amount of $11,914,000 could be used to fully fund three bank stabilization contract ($7,331,000), two riser pipe contracts ($2,383,000); bring Flood Water Retarding Structures in compliance ($2,200,000),

Project Sponsor/Customer: Multiple

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$444,352,000	$440,852,000	$3,500,000	$0	$11,914,000



Upper Yazoo Projects (UYP), MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Upper Yazoo Projects, MS

Flood Control Acts of 1936, Sec. 4 and 8a; 1941, Sec. 3b and 3g; 1946, Sec. 3, 10f, and 10q; and 1965, Sec. 2045

Mississippi River and Tributaries, Construction (FRM)

Location: The Upper Yazoo Projects (UYP) includes channel and levee features along the main channel of the Yazoo, Tallahatchie, and Coldwater Rivers from the vicinity of Yazoo City, MS, to the vicinity of the confluence of Arkabutla Creek with the Coldwater River.

Description: The project provides much needed flood risk reduction for this region by decreasing flood stages up to 3 feet in most areas. The project began in 1976 near Yazoo City and had advanced to near Sidon, MS before the project was reformulated in 1994. Reformulation resulted in approximately 130.3 miles of channel enlargement in nine segments from Sidon to Darling, MS. The project focuses on cleaning out and restoring channel capacity to the Yazoo River and its tributaries. Before initiating construction on the UYP, about 1.1 million acres were subject to the 100-year flood. Damages totaled more than $18,600,000 annually, including $3,000,000 in urban damages and 700,000 acres of agricultural land subject to inundation. To date, 12,400 acres of mitigation lands have been acquired. A total of 16,250 acres of mitigation land is required for this project.

Issues: Absence of funding will delay remaining flood control and economic benefits to the area by not allowing the initiation of any new construction items. Currently there are 29,000 people protected in the 100-year flood plain. In the past five years there has been significant bank caving in these channels which greatly diminishes the conveyance and increases the flooding in the area.

Importance: The project provides flood protection for 8,900 square miles in this region through reduction of flood stages up to 3 feet in most areas. Approximately 26 million cubic yards of material will be excavated at the project's completion providing an average conveyance increase of approximately 50 percent over current channel capacity. Existing flooding damages would be reduced by 55 percent. To date, we have invested $297,000,000 that allowed protection to almost 90,000 acres of urban and agricultural land. There is still over 47,000 acres that remain unprotected. Due to the highly erodible soils of the Mississippi Delta, it is imperative that this project is completed to increase conveyance and stabilize banks along the Yazoo River. This project also allows us to operate the four North MS Reservoirs more efficiently to provide flood protection to the entire Yazoo Basin, allowing us to store water in the Spring and release during the crop season and not carry floodwaters over from one flood season to another.

Risk: Impacts include loss of life, isolation of homes and numerous rural communities and months of flooding.

Consequence: Commercial impacts include roads, agricultural and timber production. Farmland is at risk of flooding, resulting in devastation of the primary economic engine of the region. Environmental losses of terrestrial habitat and wildlife would be significant.

Construction along the bank of the Tallahatchie River Item 6B near Phillip, MS

Activities for FY 15: None.

Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: There are no funds in the FY16 President's Budget. Funds in the amount of $9,100,000 could be used to complete development of mitigation lands ($100,000); construct Item 7C Phase 2 ($9,000,000).

Project Sponsor/Customer: The Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$454,000,000	$297,266,000	$0	$0	$9,100,000

Yazoo Basin,
Yazoo Backwater Area (less Rock Bayou)

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Yazoo Backwater Less Rocky Bayou, MS

Flood Control Acts of 1941 and 1944

Mississippi River and Tributaries, Construction (FRM)

Location: The Yazoo Backwater Project lies in the southern part of the Delta in west-central Mississippi. It extends from just north of Vicksburg approximately 60 miles to the vicinity of Hollandale and Belzoni, MS

Description: The Yazoo Backwater Project is situated between the mainline Mississippi River levee and the escarpment which forms the eastern boundary of the Delta and is subject to backwater flooding from the Mississippi River. It comprises about 2,000 square miles. Four greentree reservoirs and associated pump stations were constructed by the Corps of Engineers for the Yazoo Backwater mitigation. In addition, 8,800 acres of agricultural lands were purchased and reforested to offset terrestrial environmental losses from the construction of the Yazoo Backwater and Satartia area levees, completed in 1978.

The 8,800 acres were purchased in 1990 and reforestation was completed in 1997. The U.S. Fish and Wildlife Service disagreed with the Vicksburg District's mitigation analysis because it didn't include the time lag between construction completion (1978) and mitigation implementation (1990). The Service's position was that the losses were continuing between 1978 and 1990, and therefore more mitigation was required. The Vicksburg District concurred with the Service and incorporated an updated mitigation analysis in the 2007 Yazoo Backwater Area Reformulation Report and Environmental Impact Statement (EIS). The Yazoo Backwater Area Reformulated project was not implemented and there still remains an unfulfilled mitigation requirement for the project.

Issues: No funds for acquisition and development of mitigation features. An additional acquisition of 4,000 acres is needed to fulfill the terrestrial mitigation requirements for the Yazoo Backwater and Satartia Area Levees.

Importance: Yazoo Backwater mitigation features are needed to fulfill project commitments to offset unavoidable environmental losses.

Waterfowl - Yazoo Backwater Area

Risk: The environmental losses will continue to occur unless they are mitigated. By not purchasing the additional mitigation lands now, the amount required to fully offset the environmental losses increases every year.

Consequence: There is a net loss of ecological value to the nation as a result of this project, which is not consistent with current policy law and guidance.

Activities for FY 15: Funds are being used to update project mitigation analysis, acquisition and development of mitigation features. Acquiring 265.4 acres.

Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

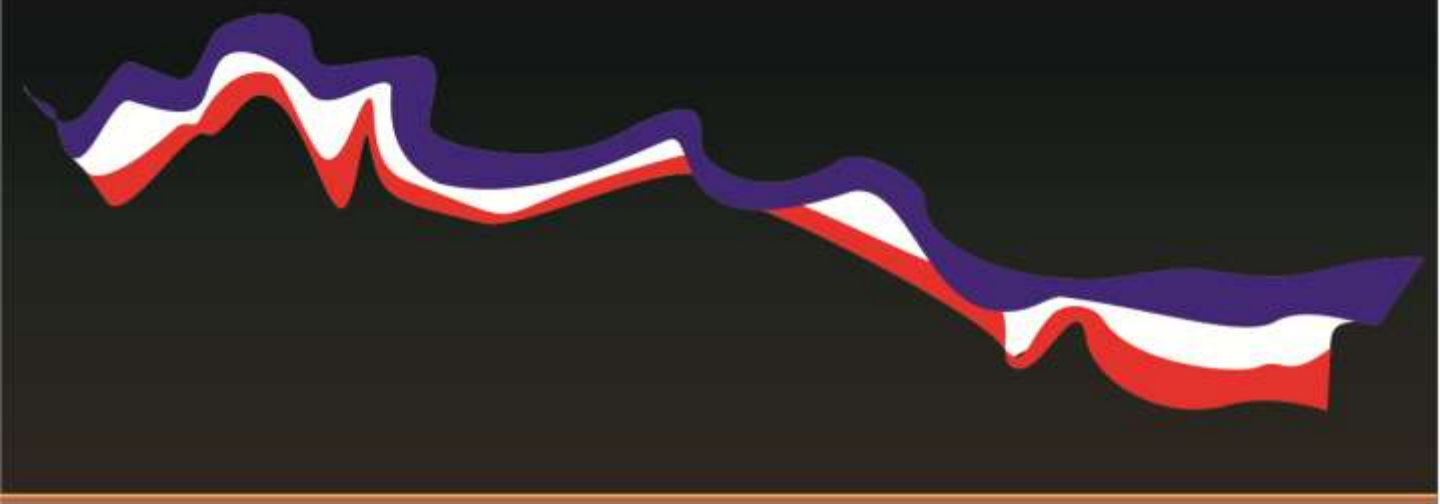
Amount That Could Be Used in FY 16: There are no funds in the FY16 President's Budget. Funds in the amount of $3,000,000 could be used to continue acquisition and development of mitigation lands.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board and Mississippi Levee Board

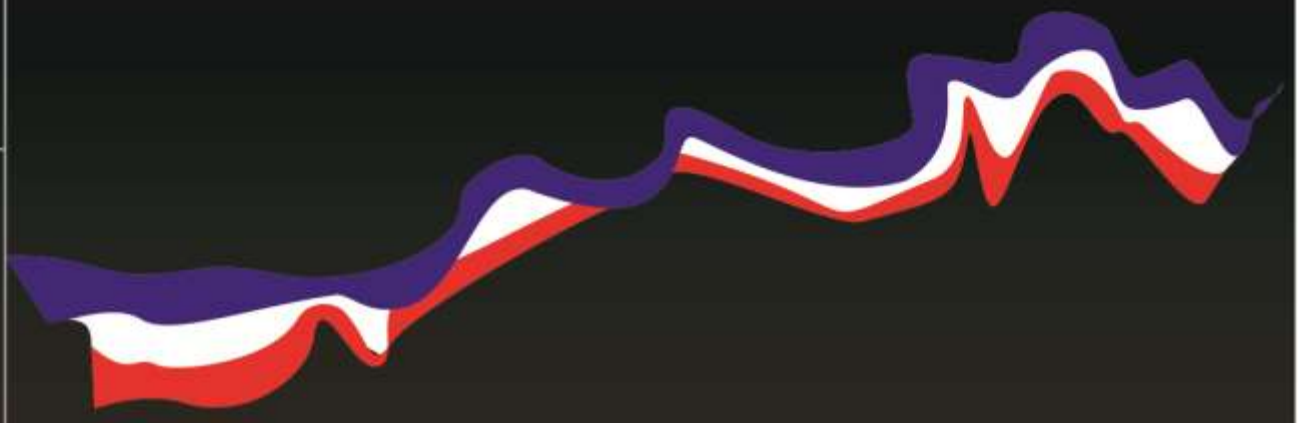
Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	Estimated Federal Cost of Phase	Federal Funding Thru FY 14	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Construction	$524,000,000	$62,058,000	$1,000,000	$0	$3,000,000

MR&T Maintenance

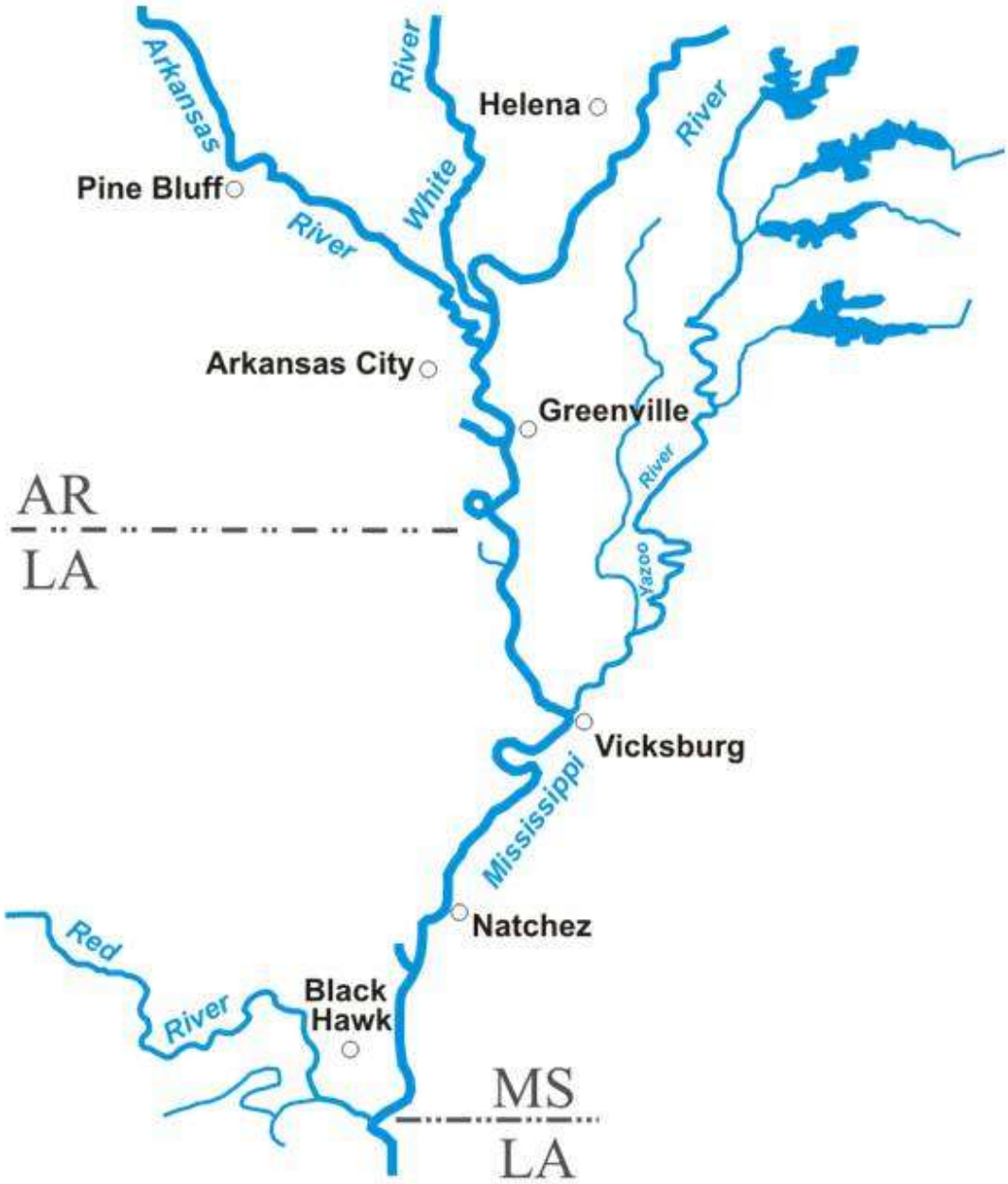


MR&T MAINTENANCE



MR&T MAINTENANCE

The MR&T Maintenance program focuses on the need to preserve the existing infrastructure and provide justified levels of service at the least cost.



Vicksburg District
Mississippi River Channel Improvement, Revetment

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Mississippi River Channel Improvement, AR, LA, & MS

FCA 1928, Sec 1; 1936, Sec 1; 1938, Sec 4; 1941, Sec 3; 1944, Sec 10; 1962, Sec 203; 1965, Sec 201, 204; 1966, Sec 202, 203; and 1970, Sec 207

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Mississippi River and along its banks from the vicinity of Cessions Towhead at River Mile 616 AHP to Union Point at River Mile 326 AHP, a distance of approximately 290 miles.

Description: The plan of improvement consists of stabilization of the Mississippi River main channel banks by way of maintaining existing revetments to prevent erosion that would threaten the integrity of the mainline levees.

Issues: The Lower Mississippi River experienced the flood of record at many locations during 2011. As a result of this flood, many channel improvement revetments and dikes were damaged. The revetment flood damage to revetments has been repaired. However, other revetments have been damaged and many revetments are nearing or have exceeded their expected design life.

Importance: Revetment maintenance insures that desirable channel alignment can continue to be provided and the mainline levee can be protected from channel migration due to bankline erosion as revetments fail.

Risk: Catastrophic damage to the existing revetments, river banks and adjacent mainline levee is likely to occur if the system is not maintained as constructed.

Consequence: Failure to adequately fund will result in channel deterioration and continued damage to and/or failure of existing revetments which would adversely impact channel alignment and threaten the integrity of the mainline levee system.

Revetment – Articulated Concrete Mat

Activities for FY 15: Funds are being used to complete damage repairs at priority sites Milliken Bend, LA – RM 453R and Lake Karnac, MS/LA – RM 419L. Funds are also being used for stone bank paving at Milliken Bend and for stone repairs to both revetments and dikes. Funds are being used to purchase articulated concrete mat in advance of scheduled sinking.

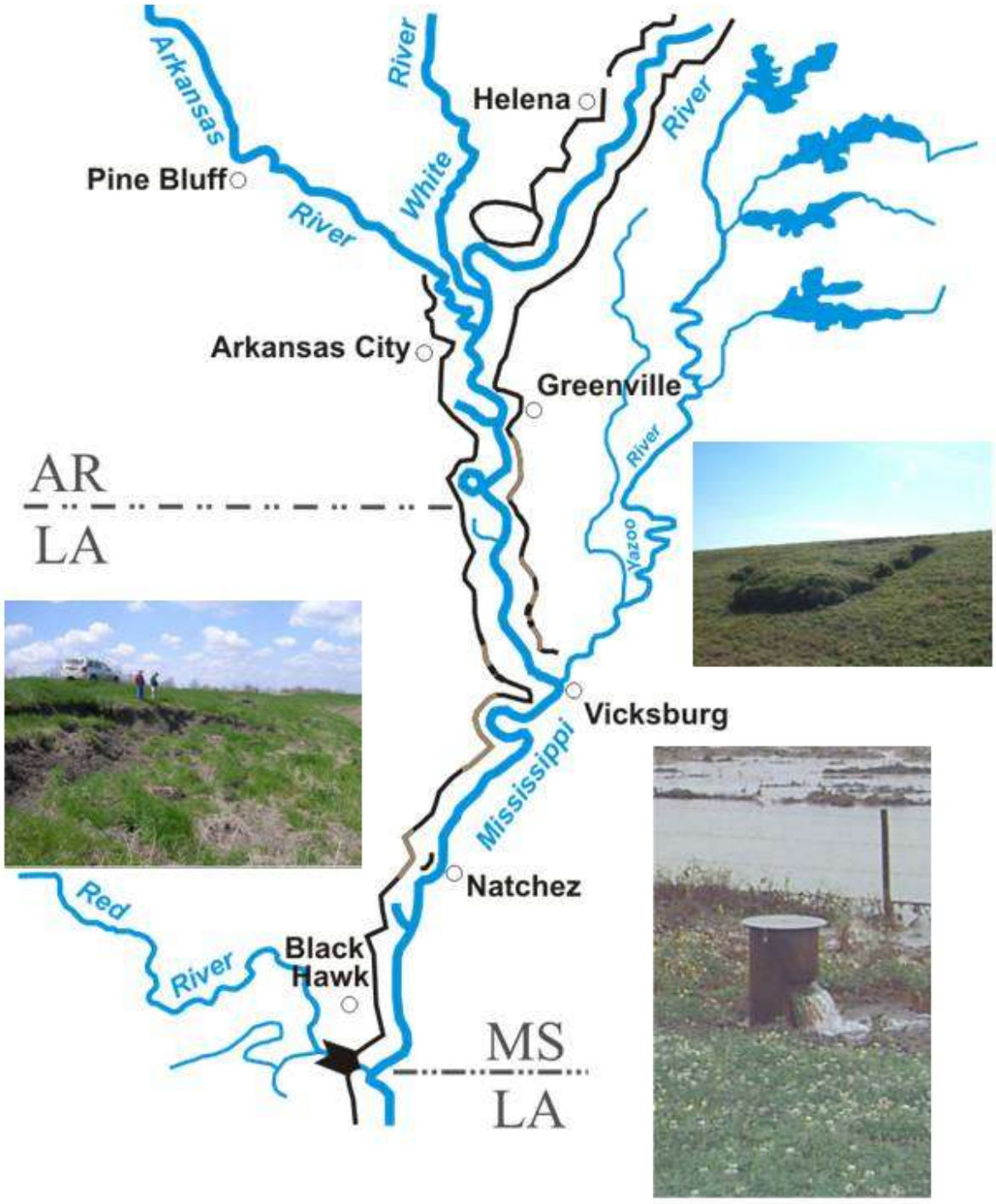
Acquisition Strategy: ACM Revetment repairs are conducted by hired labor. Two contracts were awarded during FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $15,016,000 will be used to perform routine maintenance on existing revetments. Specific sites will be determined by detailed site surveys. Additional funds of $11,900,000 could be used to fully fund stone repairs, stone bank paving, additional revetment repairs and dike repair

Project Sponsor/Customer: Mississippi Levee Board, 5th Louisiana Levee Board, and Southeast Arkansas Levee Board

Congressional Interest: Senate: Boozman and Cotton (AR), Vitter and Cassidy (LA), Cochran and Wicker (MS), House: Crawford (AR-1), Westerman (AR-4), Scalise (LA-01), Abraham (LA-5), Fleming (LA-04), Thompson (MS-2), and Harper (MS-3).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$15,052,000	$15,016,000	$26,916,000



Vicksburg District
Mississippi River Levees

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Mississippi River Levees, AR, LA & MS

FCA's 1928, 1936, 1938, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1968, River Basin Monetary Authorization Act of 1971, WRDA 92, WRDA 00

Mississippi River and Tributaries, Maintenance (FRM)

Location: The Mississippi River Levee system on the west bank extends from Allenville, MO, southward to Venice, LA, and on the east bank from Hickman, KY, to opposite Venice, LA, except where interrupted by hills and tributary streams.

Description: The Mississippi River Levee System provides flood risk reduction to over 23 thousand square miles in the alluvial valley subject to flooding by the project flood. The alluvial valley is over 650 miles long and varies in width from 20 to 90 miles. Numerous railroads, highways, and airfields connecting the major transportation centers lie within the protected area as do several major transcontinental communication routes. In addition to highly developed agricultural areas, the levees afford protection to urban areas and many industries.

Issues: Levee slides are beginning to appear along the Mississippi River levee system on the East and West bank as a result of normal river fluctuations. Subsequent dry weather results in cracking of the levee surface and when rains soak the levee, a superficial slide occurs that requires repair to prevent further deterioration of the levee.

Importance: Although levee slides are an expected occurrence in any levee system, the repair of levee slides is of prime importance in maintaining a robust levee system capable of performing its design function during all flood events up to and including the project design flood.

Risk: Leaving slides in disrepair may lead to levee safety issues, levee certification issues, reduced levels of flood protection, and increased risk of flood damage.

Consequence: Failure to operate and maintain the levees appropriately jeopardizes project integrity, and places the safety of the public at increased risk.

(Typical MRL Levee Slide)

Activities for FY 15: Funds are being used to perform routine operation and maintenance activities, repair levee slides, mitigation management and resurface levees.

Acquisition Strategy: No contracts are scheduled to be awarded in FY15.

Amount That Could Be Used in FY 16: Budgeted funds of $2,331,000 will be used to perform routine operation and maintenance activities. Additional funds in the amount of $3,055,000 could be used for repair of levee slides ($1,200,000), gravel surfacing ($650,000), repair damages to mitigation areas such as reforestation and roads ($175,000), and operation and maintenance of the museum ($980,000).

Project Sponsor/Customer: 5th LA Levee District, Southeast Arkansas Levee District, & the Board of Mississippi Levee Commissioners

Congressional Interest: Senate: Boozman and Cotton (AR), Cassidy and Vitter (LA), Cochran and Wicker (MS); House: Crawford (AR-1), Westerman (AR-4), Scalise (LA-1), Fleming (LA-4), Abraham (LA-5), Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$3,139,000	$2,331,000	$5,386,000

Greenville Harbor, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Greenville Harbor, MS

Flood Control Act (FCA) of 1928, as amended by FCAs 1946, 1954, and WRDA 1986

Mississippi River and Tributaries, Maintenance (NAV)

Location: The Greenville Harbor, located at Greenville, MS, provides access to the Mississippi River by way of a 250-foot-wide by 9-foot-deep channel. The harbor is located in an old bendway of the Mississippi River on Lake Ferguson, just southwest of the city of Greenville.

Description: The harbor and turning basin are 500 feet wide and 10,000 feet long, with a maintained depth of 9 feet at the lowest river stages. The harbor is connected to the Mississippi River by a channel 250 feet wide with a maintained depth of 9 feet at the lowest river stages. The project's purpose is to provide local businesses, industries and vessels navigating the Mississippi River access to the harbor facilities at Greenville.

Issues: Without maintenance dredging funds, this harbor will lose project dimensions during the busiest time of the year when crops are harvested and shipped via various ports and harbors along the Mississippi River.

Importance: This harbor provides a means for farmers, as well as other industries, in a large area of the Mississippi Delta a less costly means to ship commodities. In FY13 tonnage of 3,474,197 was moved out of the harbor.

Risk: The loss of a dependable, reliable, and safe harbor will have significant adverse impacts on the region due to the increased shipping costs by rail and trucks.

Consequence: The many small communities and farmers served by this harbor will be forced to seek other, more costly means to move their products. Also, approximately 540 jobs could be lost, with an annual payroll of $12.6 million.

Greenville Harbor

Activities and Current Status for FY 15: Funds are being used for surveys and maintenance dredging of the harbor.

Acquisition Strategy: A contract was awarded for harbor and port dredging.

Amount That Could Be Used in FY 16: Budgeted funds of $24,000 will be used for surveys. Additional funds in the amount of $976,000 could be used for maintenance dredging.

Project Sponsor/Customer: Greenville Port Commission

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$824,000	$24,000	$1,000,000

Jesse Brent

Lower Mississippi River Museum

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Mississippi River Levees, Jesse Brent Lower MS River Museum

WRDA 1992, WRDA 2000, and E&W Development Appropriations Act 2006

Mississippi River and Tributaries, Maintenance (FRM)

Location: The Jesse Brent Lower MS River Museum is located at 901 Washington St., Vicksburg, Mississippi 39180.

Description: The museum which opened in August 2012 provides visitors with a better understanding of the risks and benefits of living along the Lower Mississippi River and the collaborative effort for risk management. The museum features interior museum displays, an outdoor Mississippi River model, and displays onboard the MV MISSISSIPPI IV.

Issues: Funding for Operation and Maintenance (O&M) of the facility.

Importance: Through a variety of interactive and engaging displays. The museum has received excellent public support and it has already made a positive impact to the downtown area. The Jesse Brent Lower MS River Museum is one of the only Federal facilities that assist the Corps of Engineers in interpreting flood risk management to the general public. Visitors learn the importance of the MR&T system, comparing historic floods to future forecasts, river dynamics, and Corps history

Risk: Future funding for museum operation and maintenance is unsecured and subject to District prioritization. Funding is provided under the MR&T Mississippi River Levees Maintenance feature.

Consequence: The museum will close if funds to operate and maintain is not received. The city of Vicksburg and the public would lose a center that educates individuals on the risk of flooding. The MV MISSISSIPPI IV, property, and items belonging to the Federal government would fall into disrepair.

Activities for FY 15: The museum is being operated through a Federal Term appointment employee, volunteers, and one part-time contract maintenance worker funded by the City of Vicksburg.

Acquisition Strategy: None.

Amount That Could Be Used in FY 16: No funds are in the FY16 President's Budget. Funds in the amount of Operation of Lower Mississippi River Museum ($80.0); Design and Replace Exhibits at JBLMRM ($500.0); Maintenance of JBLMRM ($100.0); Walkway covering between JBLMRM and MV/MS Exhibit ($300.0)

Project Sponsor/Customer: None.

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$0	$0	$980,000

Vicksburg Harbor, Mississippi

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Vicksburg Harbor, MS

Flood Control Act (FCA) of 1928, as amended by FCAs 1946, 1954, and WRDA 1986

Mississippi River and Tributaries, Maintenance (NAV)

Location: The Vicksburg Harbor is located in west-central Mississippi at Vicksburg, MS, with access to the Mississippi River by way of the Yazoo River Diversion Canal.

Description: The harbor channel is 500 feet wide and 12,000 feet long with a 500-foot-wide, 15,000-foot-long channel on the Yazoo River Diversion Canal from the Mississippi River to the harbor entrance. The Upper Harbor channel is 150 feet wide. A minimum depth of 9 feet at the lowest Mississippi River stage is maintained. The project's purpose is to provide local businesses, industries and vessels navigating the Mississippi River access to the harbor facilities at Vicksburg. Riverside development within the project area has occurred along the east banks of the Mississippi River and the Yazoo Diversion Canal and extends upstream from the vicinity of Interstate 20 Highway Bridge for a distance of approximately 8 miles.

Issues: Local commerce and vessels navigating the Mississippi River use the harbor facilities at Vicksburg. The Vicksburg District's Mat Sinking Unit and Dredge *Jadwin* are moored at the Vicksburg Harbor during the off-season as well.

Without maintenance dredging funds, this harbor will lose project dimensions during the busiest time of the year when crops are harvested and shipped via various ports and harbors along the Mississippi River.

Importance: This harbor serves as a shipping point for a wide range of industries and is a major contributor to the local economy. FY 13 commercial tonnage for the harbor is 2,344,971.

Risk: The loss of a dependable, reliable, and safe harbor will have significant adverse impacts on the region due to the increased shipping costs by rail and trucks.

Consequence: The many small communities and farmers served by this harbor will be forced to seek other, more costly means to move their products. Approximately 2,000 jobs could be affected with an annual payroll of $80 million. The economic impact to the area is approximately $564.8 million.


Vicksburg Harbor

Activities for FY 15: Funds are being used for surveys and maintenance dredging of the harbor.

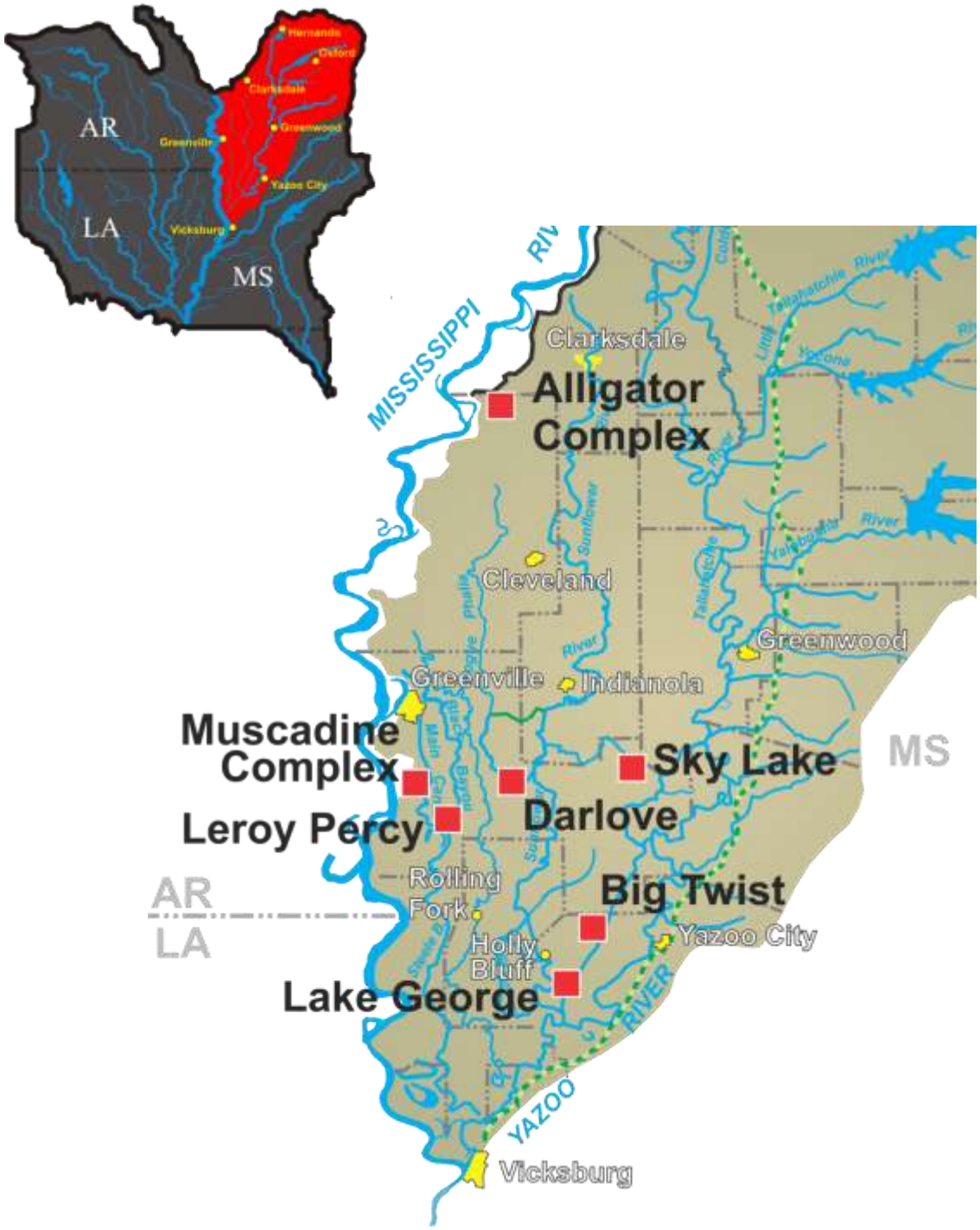
Acquisition Strategy: A contract was awarded for all harbor and port dredging.

Amount That Could Be Used in FY 16: Budgeted funds of $42,000 will be used for surveys. Additional funds in the amount of $708,000 could be used for maintenance dredging.

Project Sponsor/Customer: Vicksburg/Warren County Port Commission

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$942,000	$42,000	$750,000



Yazoo Basin Mitigation Areas

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Mitigation

Flood Control Acts of 1941 and 1944

Mississippi River and Tributaries, Maintenance (FRM)

Location: The Yazoo Basin

Description: A total of 29,000 acres were purchased in fee title and reforested between 1990 and 2011 for 5 MR&T projects (Upper Yazoo Project, Upper Steele Bayou, Mississippi River Levees, Big Sunflower, and Yazoo Backwater). The acquisition, development and operation and maintenance are Federal responsibility (100%). Of the total land purchased, approximately 22,000 acres are managed and 7,000 acres are unmanaged. The District reimburses $420,000 annually to the Mississippi Departnebt of Wildlife Fisheries and Parks (MDWFP) to manage 14,910 acres at Lake George, Muscadine and Sky Lake. The District reimburses $110,000 annually to the US Fish and Wildlife Service (USFWS) to manage 7,073 acres at Big Twist. Funding received for FY 15 will allow management of the properties through FY 15, but without definite funding availability for future years MDWFP management is uncertain. USFWS would continue management but at a reduced level of service. In addition to land and reforestation costs, there is a big investment in road and other infrastructure development as well as equipment to operate the areas. Without funding to operate and maintain, much of this development would be lost or vandalized.

Issues: Due to the uncertainty of future funding, management by MDWFP is not guaranteed. USFWS would continue to manage Big Twist but at a reduced level of service. In addition, approximately 7,000 acres have never been under management and MDWFP will not enter into a management agreement that would require hiring personnel with the future uncertainty of funding.

Waterfowl - Yazoo Backwater Area

Risk: Tree mortality, theft, and/or vandalism of project infrastructure. Loss of mitigation credits.

Consequence: Public utilizing lands without restrictions would significantly increase risk of vandalism and theft of project infrastructure. Without proper maintenance of fire lanes and ditches, there would be an increased risk of tree mortality from fire and flooding. Nuisance animals can cause damage if not properly controlled. Without proper management, the mitigation requirements set forth under the terms of the Corps of Engineers' plans would not be met.

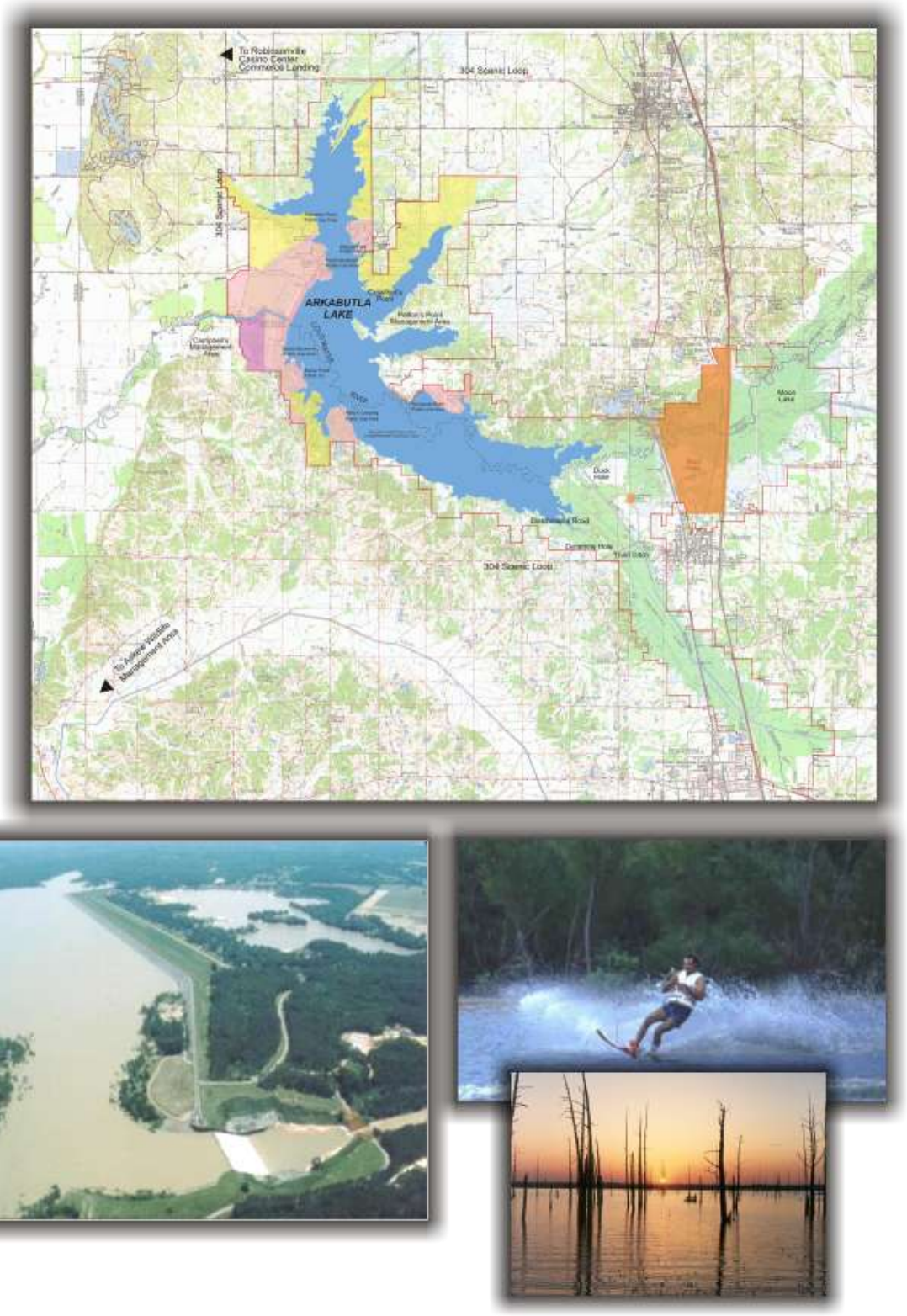
Activities for FY 15: Funds are being used to manage the mitigation areas.

Acquisition Strategy: None.

Amount That Could Be Used in FY 16: Funds in the amount of $268,000 will be used for management at a reduced level. An additional $825,000 could be used to continue management of mitigation land.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board and Mississippi Levee Board

Congressional Interest: Senate: Cochran and Wicker (MS); House: Thompson (MS-2).



Yazoo Basin, MS,
Arkabutla Lake

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, MS, Arkabutla Lake

Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance, FRM, REC, ENS

Location: Arkabutla Lake is located in northwest Mississippi, north of Arkabutla, Mississippi. Arkabutla Dam is located in Tate and DeSoto Counties, and the lake encompasses portions of both counties.

Description: Arkabutla Lake is a 57,250-acre multi-purpose project located on the Coldwater River and stores floodwater to provide for flood damage reduction in the Yazoo Basin. Outdoor recreation and tourism associated with the lake contribute significant support to the regional economy.

Issues: Due to the age of this project, continued emphasis on critical routine and non-routine maintenance activities is required to ensure the integrity of the project and its flood control structures, in order to protect people and property from downstream flooding.

Importance: Arkabutla Dam, completed in 1943 as a part of the comprehensive flood control plan for the Mississippi River and Tributaries Project, is operated in coordination with Sardis, Enid, and Grenada Dams to reduce flood damages in the Yazoo Basin of the Mississippi Delta, one of the most significant agricultural production areas in the Nation. Through FY 14, these four projects have prevented over $1.3 billion in flood damages within the Yazoo Basin. Following construction of Arkabutla Dam, land-and water-based recreation became a popular pastime for project visitors. In FY 13, over 862,024 visitors utilized the project and its 13 developed recreation areas operated by the Corps. With multiplier effects, visitor spending resulted in $14.7 million total sales, $5.3 million in total personal income, and supported 237 jobs in the local communities. Environmental stewardship activities are conducted to protect and enhance the project's vegetative, wildlife, fisheries, and cultural resources.

Risk: Failure to adequately fund this project jeopardizes the flood risk management capabilities for which the project was designed and has performed in an excellent manner for over 70 years. Funding is required to adequately operate and maintain project recreational facilities and continue mandated environmental stewardship activities.

Consequence: Failure to adequately operate and maintain the project and its facilities would jeopardize project integrity and potentially lead to an increase in the risk of damages from flooding. Reductions in recreational service levels will potentially lead to reduced facility availability, decreased public safety, and lower levels of recreational visitor satisfaction. Reduction in environmental stewardship services may result in inability to monitor and control such things as cultural resource sites, endangered species, invasive species, and forestry resources.

Arkabutla Dam

Activities for FY 15: Funds are being used to continue routine operation and maintenance at a reduced level of service in all authorized mission areas and to construct Spillway Bridge road, Complete Construction of Pratt Road, P&S for replacing/modernizing Hernando Pt boat ramp, Cultural Resource Surveys, Upgrade Master Plan, Environmental Stewardship, and Recreation activities.

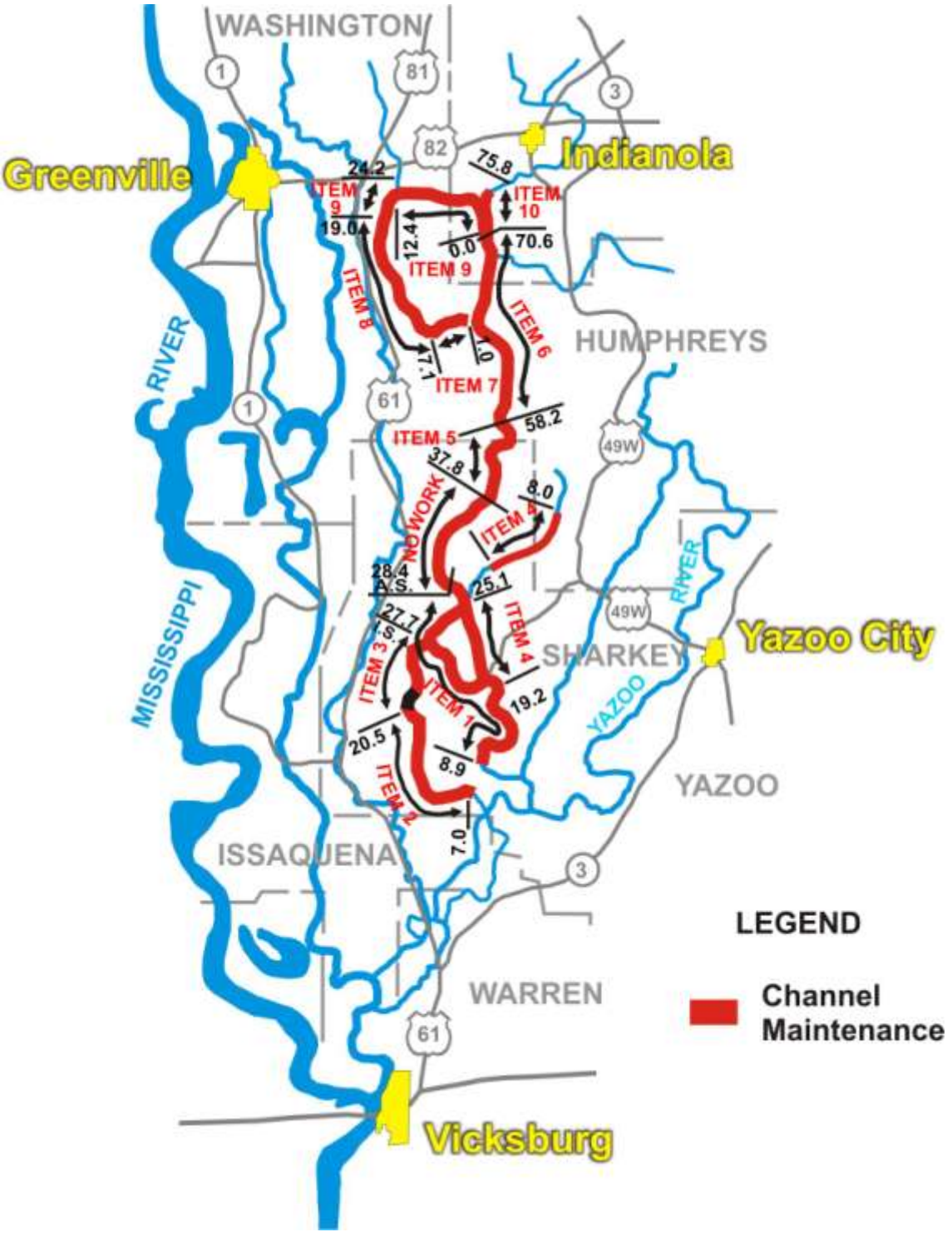
Acquisition Strategy: None.

Amount That Could Be Used in FY 16: Budgeted funds of $5,483,000 will be used to continue operation and maintenance at a reduced level of service in all authorized mission areas. Additional funds of $5,094,000 could be used fully fund routine operations of dam and structures ($320,000); restore customer service levels to desirable standards for the visiting public ($874,000); plans and specs for repair of drop inlets on the face of dam ($75,000), replacement of excavator ($320,000), plans and specs to replace toe ditch and outfall structure ($100,000), repair of shoreline erosion at Kelley's Crossing ($550,000); repair of shoreline erosion at Hernando Point ($200,000); Repair toe ditch and outfall structure ($2,000,000); plans and specs for outlet channel shoreline protection ($100,000); environmental stewardship activities ($30,000); replace lift stations ($250,000); Comfort station-Hernando Point ($150,000); other backlog maintenance items $125,000).

Project Sponsor: N/A.

Congressional Interest: Senate: Wicker and Cochran (MS); House: Kelly (MS-1).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$7,303,400	$5,483,000	$10,577,000



Big Sunflower River, MS
(Including Bogue Phalia)

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Big Sunflower River (Including Bogue Phalia), MS

Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, 1946, 1962 and 1965

Mississippi River and Tributaries, Maintenance (FRM)

Location: The Big Sunflower River Basin comprises an area of approximately 4,200 square miles in northwest Mississippi.

Description: The project was designed to provide flood protection via improvements to drainage channels that channel storm water runoff in the west central Yazoo Basin areas west of Highway 61 in the vicinity of Greenville, MS.

Issues: The existing flood control project is not currently functioning as originally constructed due to the loss of channel design capacity both from vegetative growth and sediment accumulation. The current project will restore the channels to original design capacities. Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This work consists of repairs to weirs constructed in the Bogue Phalia to maintain vegetation control and regulate storm water runoff.

Importance: The purpose of the remaining work in this project is to provide channel improvement that will reduce the flooding in Greenville from Main Canal and will protect 195,000 acres against the design flood and substantially benefit an additional 395,000 acres. Project mitigation for terrestrial and wetland losses will require acquisition of approximately 5,250 cleared acres of frequently flooded agricultural lands for reformulation.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.

Big Sunflower River

Activities for FY 15: Funds are being used for operation and maintenance of the project.

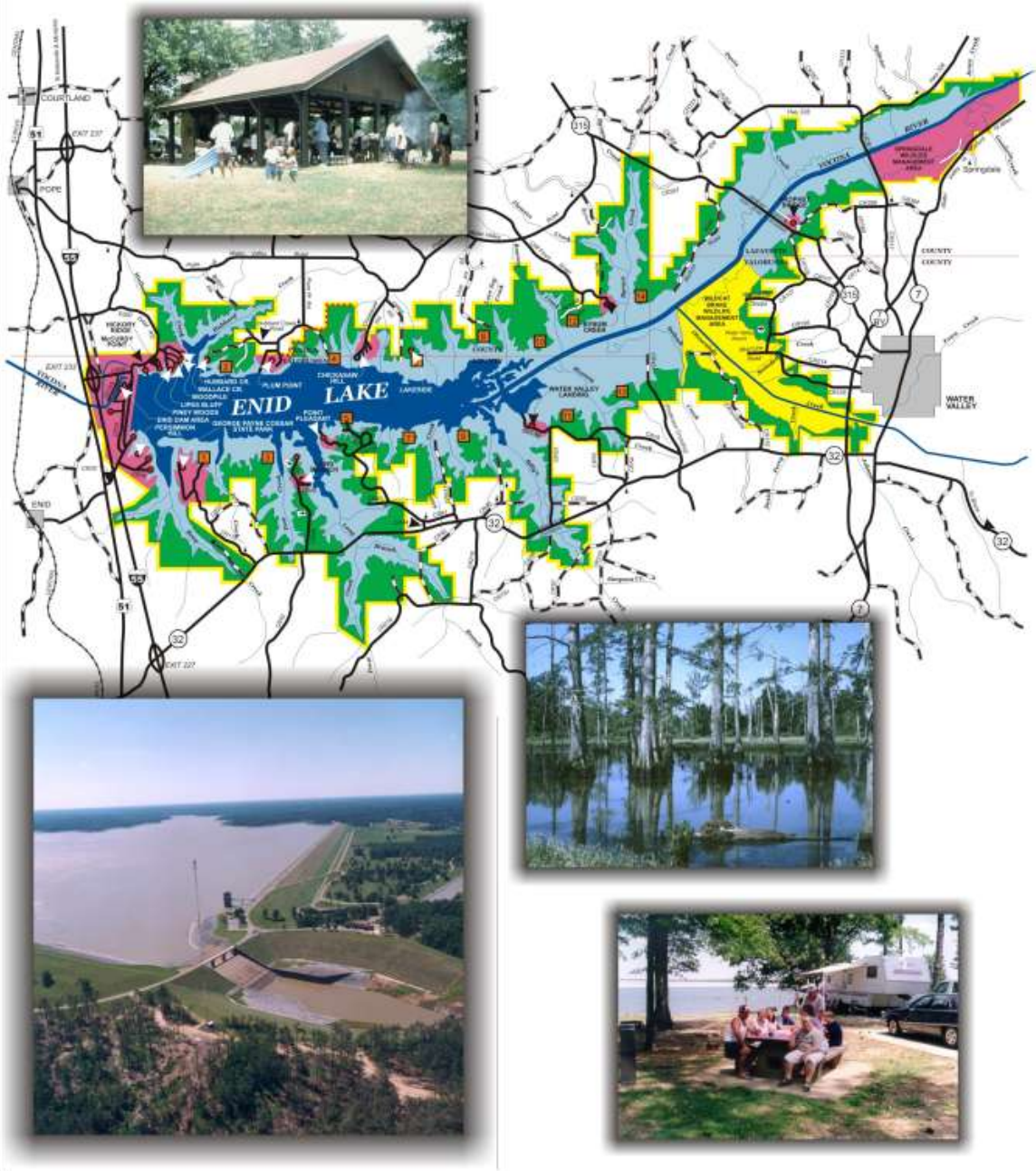
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $185,000 will be used for routine operation and maintenance including critical work needed to ensure the integrity of the project to protect people & property from flooding; water control analysis & data gathering, operation of gated flood controls and mitigation property. Additional funds in the amount of $100,000 could be used to fully fund operation and maintenance for mitigation lands in the Mississippi Delta.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$285,000	$185,000	$285,000



Yazoo Basin, MS,
Enid Lake

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, MS, Enid Lake
Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance (FRM, REC, ENS)

Location: Enid Lake is located in north-central Mississippi southeast of Batesville, Mississippi. Enid Dam is located in Yalobusha County, and the lake encompasses portions of Panola, Yalobusha, and Lafayette Counties.

Description: Enid Lake is a 44,036-acre multi-purpose project located on the Yocona River and stores floodwater to provide for flood damage reduction in the Yazoo Basin. Outdoor recreation and tourism associated with the lake contribute significant support to the regional economy.

Issues: Due to the age of this project, continued emphasis on critical routine and non-routine maintenance activities is required to ensure the integrity of the project and its flood control structures, in order to protect people and property from downstream flooding.

Importance: Enid Dam, completed in 1952 as a part of the comprehensive flood control plan for the Mississippi River and Tributaries Project, is operated in coordination with Arkabutla, Grenada, and Sardis Dams to reduce flood damages in the Yazoo Basin of the Mississippi Delta, one of the most significant agricultural production areas in the Nation. Through FY 14, these four projects have prevented over $1.3 billion in flood damages within the Yazoo Basin. Following construction of Enid Dam, land-and water-based recreation became a popular pastime for project visitors. In FY 13, over 620,000 visitors utilized the project and its 15 developed recreation areas operated by the Corps. With multiplier effects visitor spending resulted in $11.9 million total sales, $4.3 million in total personal income, and supported 190 jobs in the local communities. Environmental stewardship activities are conducted to protect and enhance the project's vegetative, wildlife, fisheries, and cultural resources.

Risk: Failure to adequately fund this project jeopardizes the flood risk management capabilities for which the project was designed and has performed in an excellent manner for over 61 years. Funding is required to adequately operate and maintain project recreational facilities and continue mandated environmental stewardship activities.

Consequence: Failure to adequately operate and maintain the project and its facilities would jeopardize project integrity and potentially lead to an increase in the risk of damages from flooding. Reductions in recreational service levels will potentially lead to reduced facility availability, decreased public safety, and lower levels of recreational visitor satisfaction. Reduction in environmental stewardship services may result in inability to monitor and control such things as cultural resource sites, endangered species, invasive species, and forestry resources.

Enid Dam

Activities for FY 15: Funds are being used to continue routine operation and maintenance at a reduced level of service in all authorized mission areas, plans and specs for water well at Persimmon Hill, Enid Bridge North Access, and ADA Accessible Fishing Pier, replace concrete tables at 8 recreation sites, restroom/shower house renovations at Water Valley Landing and Riverview, and replace comfort station at Overlook Recreation area to ADA compliance.

Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $4,924,000 will be used to continue operation and maintenance at a reduced level of service in all authorized mission areas. Additional funds of $5,786,000 could be used to fully fund routine operations of dam and structures ($350,000); restore customer service levels to desirable standards for the visiting public ($870,000); replace flood damage reduction equipment, dozers & mini-excavator ($410,000); replace dam safety equipment, tractor and tool carrier ($500,000); blast and paint Intake Structure Bridge ($350,000); Replace north access bridge ($2,000,000); replace ADA accessible fishing pier ($450,000); Install sewage hook ups at 72 campsites ($225,000); replace 15 waste water lift stations ($500,000); and backlog maintenance items ($131,000).

Project Sponsor: N/A.

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2), Kelly (MS-1).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$7,199,000	$4,924,000	$10,710,000

Greenwood, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Greenwood, MS
Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Yazoo Basin, Mississippi.

Description: The project includes the operation and maintenance of the city of Greenwood Protection Works and includes 55 miles of levees and 14 miles of channels, 2 miles of ditch, 59 drainage structures, 4 pumping plants and 7 weirs.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This work consists of providing adequate levels of funding for the removal of vegetation, encroachments and utility penetrations of the levees in the Greenwood Protection Works and to operate the drainage structures and pump stations on an as needed basis

Importance: Greenwood is a major center of transportation and commerce for the portion of the State of Mississippi known as the Mississippi Delta. The project protects the city of Greenwood from flooding by the Tallahatchie, Yalobusha and Yazoo Rivers.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.

Item 184 –View of recent work towards removing trees from the levee slopes. Stumps are scheduled for removal in the near future.

Activities for FY 15: Funds are being used to continue minimal operation and maintenance.

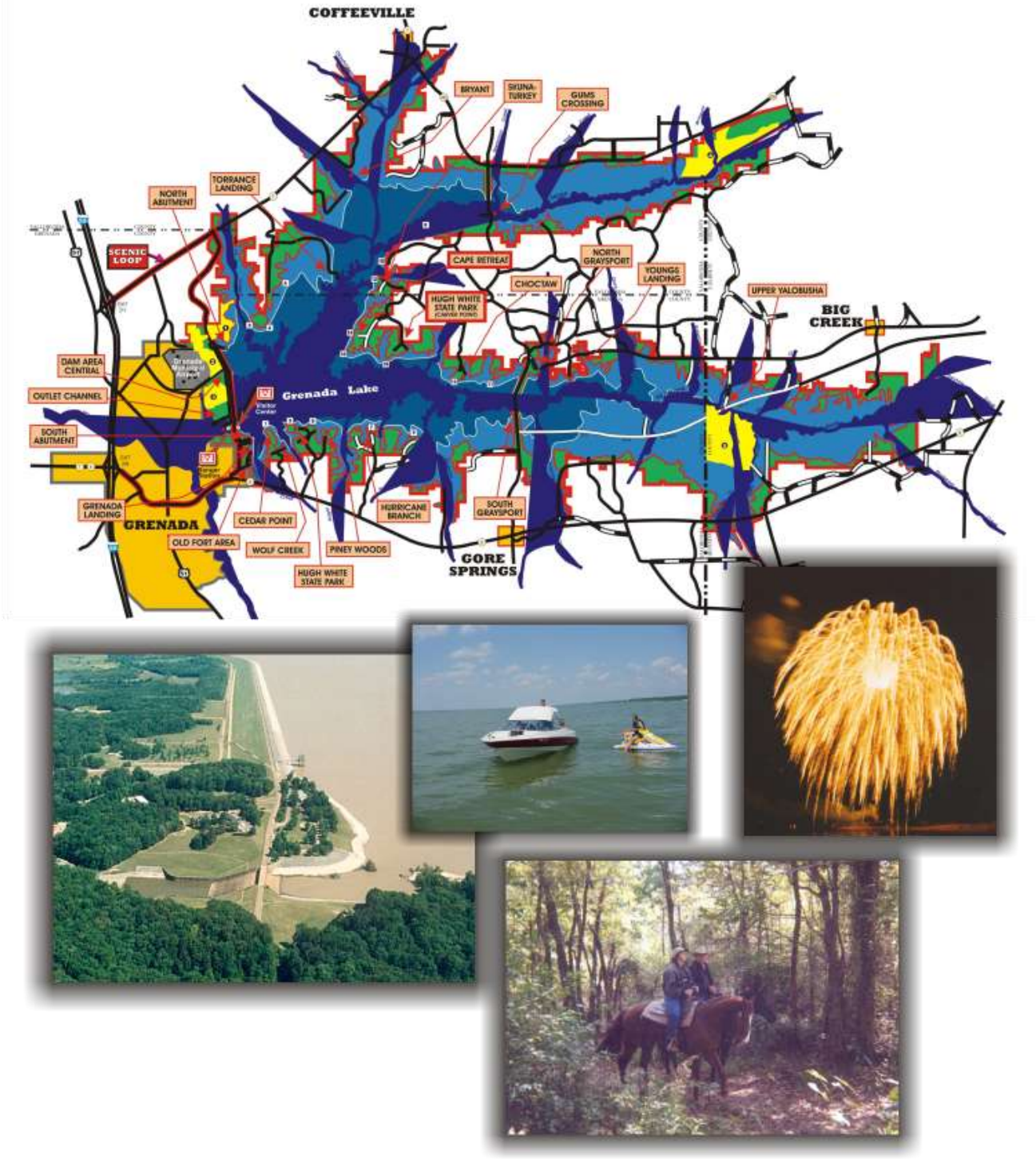
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $807,000 will be used for routine operation and maintenance, data gathering and periodic inspections; critical work needed to ensure the integrity of the project to protect people & property from flooding. Additional funds in the amount of $500,000 could be used for critical maintenance of levees, structures, pump stations, and other infrastructure and install pipeliners ($100,000)

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$807,000	$807,000	$1,307,000



Yazoo Basin, MS,
Grenada Lake

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, MS, Grenada Lake
Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance (FRM, REC, ENS)

Location: Grenada Lake is located in north-central Mississippi northeast of Grenada, Mississippi. Grenada Dam is located in Grenada County, and the lake encompasses portions of Grenada, Yalobusha, and Calhoun Counties.

Description: Grenada Lake is a 90,379-acre multi-purpose project located on the Yalobusha River and stores floodwater to provide for flood damage reduction in the Yazoo Basin. Outdoor recreation and tourism associated with the lake contribute significant support to the regional economy.

Issues: Due to the age of this project, continued emphasis on critical routine and non-routine maintenance activities is required to ensure the integrity of the project and its flood control structures, in order to protect people and property from downstream flooding.

Importance: Grenada Dam, completed in 1954 as a part of the comprehensive flood control plan for the Mississippi River and Tributaries Project, is operated in coordination with Arkabutla, Enid, and Sardis Dams to reduce flood damages in the Yazoo Basin of the Mississippi Delta, one of the most significant agricultural production areas in the Nation. Through FY 14, these four projects have prevented over $1.3 billion in flood damages within the Yazoo Basin. Following construction of Grenada Dam, land-and water-based recreation became a popular pastime for project visitors. In FY 13, over 1.8 million visitors utilized the project and its 26 developed recreation areas operated by the Corps. With multiplier effects visitor spending resulted in $39.9 million total sales, $14.2 million in total personal income, and supported 742 jobs in the local communities. Environmental stewardship activities are conducted to protect and enhance the project's vegetative, wildlife, fisheries, and cultural resources.

Risk: Failure to adequately fund this project jeopardizes the flood risk management capabilities for which the project was designed and has performed in an excellent manner for over 59 years. Funding is required to adequately operate and maintain project recreational facilities and continue mandated environmental stewardship activities.

Consequence: Failure to adequately operate and maintain the project and its facilities would jeopardize project integrity and potentially lead to an increase in the risk of damages from flooding. Reductions in recreational service levels will potentially lead to reduced facility availability, decreased public safety, and lower levels of recreational visitor satisfaction. Reduction in environmental stewardship services may result in inability to monitor and control such things as cultural resource sites, endangered species, invasive species, and forestry resources.

Grenada Dam

Activities for FY 15: Funds are being used to continue routine operation and maintenance at a reduced level of service in all authorized mission areas, plans and specs to construct ADA accessible fishing pier at outlet channel.

Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $5,487,000 will be used to continue operation and maintenance at a reduced level of service in all authorized mission areas. Additional funds of $4,589,000 could be used to fully fund routine operations of dam and structures ($350,0000), plans and specs for replacement of riprap on the face of the dam ($500,000), restore customer service levels to desirable standards for the visiting public ($400,000), purchase dam safety equipment - dump truck ($165,000), replace front end loader and motor grader ($700,000), replace dam safety equipment lowboy truck and trailer ($250,000), construct ADA fishing pier at outlet channel with concrete structure ($450,000); and plans and specs for dredging at Yalobusha River ($500,000); spraying herbicide, pesticide, and fertilizer on dam ($115,000); North Abutment road rehab ($100,000); and backlog maintenance items ($656,000) .

Project Sponsor: N/A.

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2), Kelly (MS-1).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$7,669,400	$5,487,000	$9,673,000

Yazoo Basin, Main Stem, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Main Stem, MS
Flood Control Acts of 1941, 1944, and 1965

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Yazoo Basin, MS.

Description: The project includes the operation and maintenance of 136 miles of levees, 287 miles of channels, and 74 drainage structures.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This critical work consists of rebuilding the riverside face of 3.1 miles of the West Bank, Coldwater River Levee to required standards with impervious material and remove unwanted vegetation from within 15 feet of both levee toes.

Importance: The project provides flood protection to the Yazoo Basin along the Tallahatchie, Coldwater River below the spillway of Arkabutla Dam and the Yazoo River. Flood damage reduction measures include authorized levees, channels and appurtenant drainage structures. The incorporation of a spoil bank into 3.1 miles of the West Bank, Coldwater levee system resulted in this reach being decertified in 2010. The 2011 flood emphasized the need to complete this bank stabilization to preserve the integrity of the levees.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits. Plans and specifications are complete for the rehab of this reach of levee to provide flood protection and enable this reach to be recertified.

West Levee Sta. 681+00 – In this reach, existing spoil was shaped for the roadway and levee and the riverside slopes are heavily wooded. The Coldwater levee system contains numerous reaches similar to this.

Activities Status for FY 15: Funds are being used to continue minimal operation and maintenance.

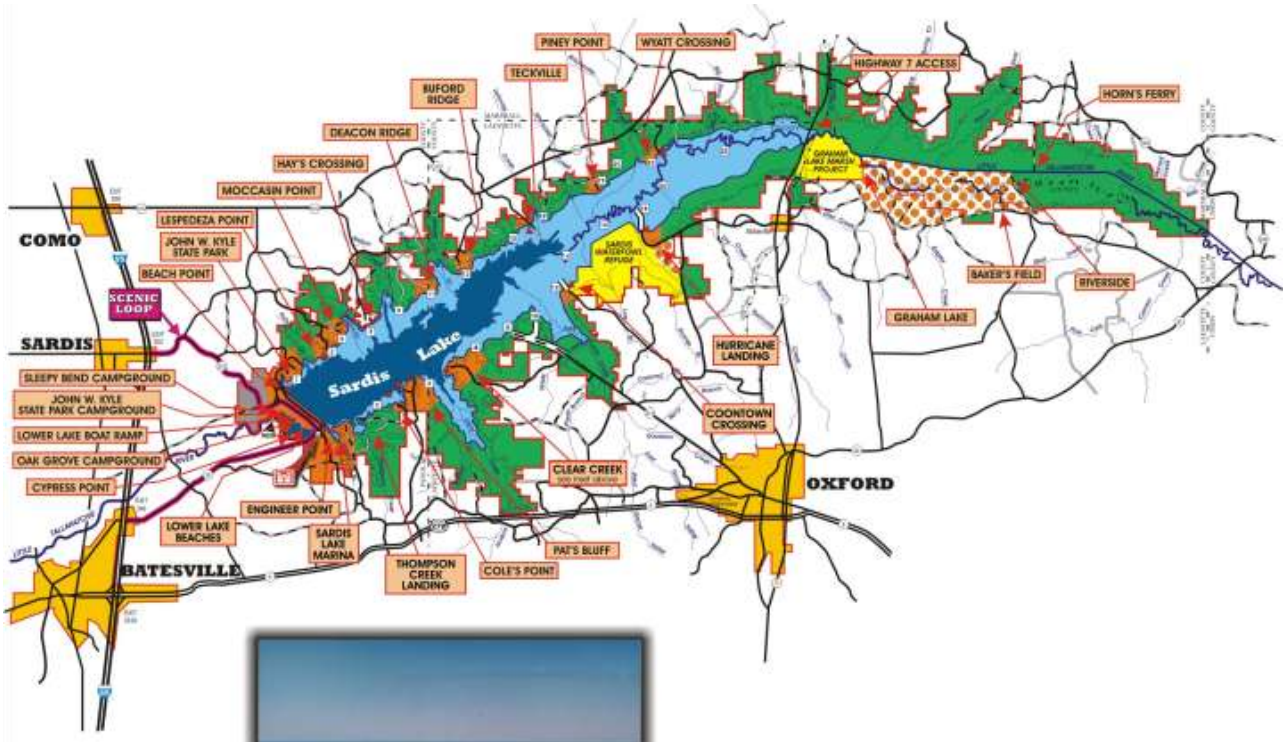
Acquisition Strategy: No contract will be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $1,344,000 will be used for routine operation and maintenance, data gathering and periodic inspections, partial funding of mitigation lands, and critical work needed to ensure the integrity of the project to protect people and property from flooding. Additional funds in the amount of $450,000 could be for operation and maintenance of mitigation lands.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 15 Supplemental	FY 16 Budget	FY 16 Total Capability
Maintenance	$1,904,000	$0	$1,344,000	$1,794,000



Yazoo Basin, MS,
Sardis Lake

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, MS, Sardis Lake
Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance (FRM, REC, ENS)

Location: Sardis Lake is located in north-central Mississippi southeast of Sardis, Mississippi. Sardis Dam is located in Panola County, and the lake encompasses portions of Panola, Lafayette, and Marshall Counties.

Description: Sardis Lake is a 98,357-acre multi-purpose project located on the Little Tallahatchie River and stores floodwater to provide for flood damage reduction in the Yazoo Basin. Outdoor recreation and tourism associated with the lake contribute significant support to the economy.

Issues: Due to the age of this project, continued emphasis on critical routine and non-routine maintenance activities is required to ensure the integrity of the project and its flood control structures, in order to protect people and property from downstream flooding.

Importance: Sardis Dam, completed in 1940 as a part of the comprehensive flood control plan for the Mississippi River and Tributaries Project, is operated in coordination with Arkabutla, Enid, and Grenada Dams to reduce flood damages in the Yazoo Basin of the Mississippi Delta, one of the most significant agricultural production areas in the Nation. Through FY 14, these four projects have prevented over $1.3 billion in flood damages within the Yazoo Basin. Following construction of Sardis Dam, land- and water-based recreation became a popular pastime for project visitors. In FY 13, over 1.3 million visitors utilized the project and its 20 developed recreation areas operated by the Corps. With multiplier effects visitor spending resulted in $25.5 million total sales, $9.1 million in total personal income, and supported 464 jobs in the local communities. Environmental stewardship activities are conducted to protect and enhance the project's vegetative, wildlife, fisheries, and cultural resources.

Risk: Failure to adequately fund this project jeopardizes the flood risk management capabilities for which the project was designed and has performed in an excellent manner for over 70 years. Funding is required to adequately operate and maintain project recreational facilities and continue mandated environmental stewardship activities.

Consequence: Failure to adequately operate and maintain the project and its facilities would jeopardize project integrity and potentially lead to an increase in the risk of damages from flooding. Reductions in recreational service levels will potentially lead to reduced facility availability, decreased public safety, and lower levels of recreational visitor satisfaction. Reduction in environmental stewardship services may result in inability to monitor and control such things as cultural resource sites, endangered species, invasive species, and forestry resources.


Sardis Lake Dam and Lower Lake

Activities for FY 15: Funds are being used to continue routine operation and maintenance at a reduced level of service in all authorized mission areas, plans and specs to construct ADA accessible fishing pier, realign parking at Paradise Point, and replace joint material in dam collection ditches, and make efficiency improvements.

Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $6,640,000 will be used to continue operation and maintenance at a reduced level of service in all authorized mission areas. Additional funds of $5,150,000 could be used Fully fund routine operations of dam and structures ($358,000); restore customer service levels to desirable standards for the visiting public ($966,000); replace wood stave relief wells at outlet works ($400,000); replace outfall structure at downstream end of toe ditch ($300,000), environmental stewardship activities ($180,000), plans and specs to relocate camp sites at Clear Creek Campground ($150,000); purchase dam safety equipment ($407,000); construct ADA fishing pier at the Outlet Channel ($450,000); Rehab 82 campsites at Oak Grove ($205,000); plans and specs to construct permanent dike below overflow spillway ($150,000); replace piezometers at outlet works ($250,000); plans and specs and construction of Paradise Point Beach and Pavillion parking ($900,000); and backlog maintenance items ($434,000)

Project Sponsor: N/A.

Congressional Interest: Senate: Wicker and Cochran (MS); House: TBD (MS-1), Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$8408,900	$6,640,000	$11,790,000

Yazoo Basin,
Tributaries, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Tributaries, MS
Flood Control Acts of 1941, 1944, and 1965

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Yazoo Basin, MS.

Description: The project includes the operation and maintenance of 136 miles of levees, 287 miles of channels, and 74 drainage structures.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This work consists of providing adequate levels of funding for the removal of vegetation and encroachments and to operate the drainage structures on an as-needed basis.

Importance: The project provides flood protection to the Yazoo Basin along the Little Tallahatchie, Yalobusha, and Yocona Rivers from the spillways of Sardis, Enid, and Grenada Dams to the main stem of the Yazoo River and various smaller tributary streams that empty directly into the Yazoo River. Flood damage reduction measures include authorized levees, channels and appurtenant drainage.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.


Ascalmore-Tippo Sta. 335+00 – North Levee

Activities for FY 15: Funds are being used to continue operation and maintenance at a reduced level of service. Supplemental funds are being used to complete levee system repairs.

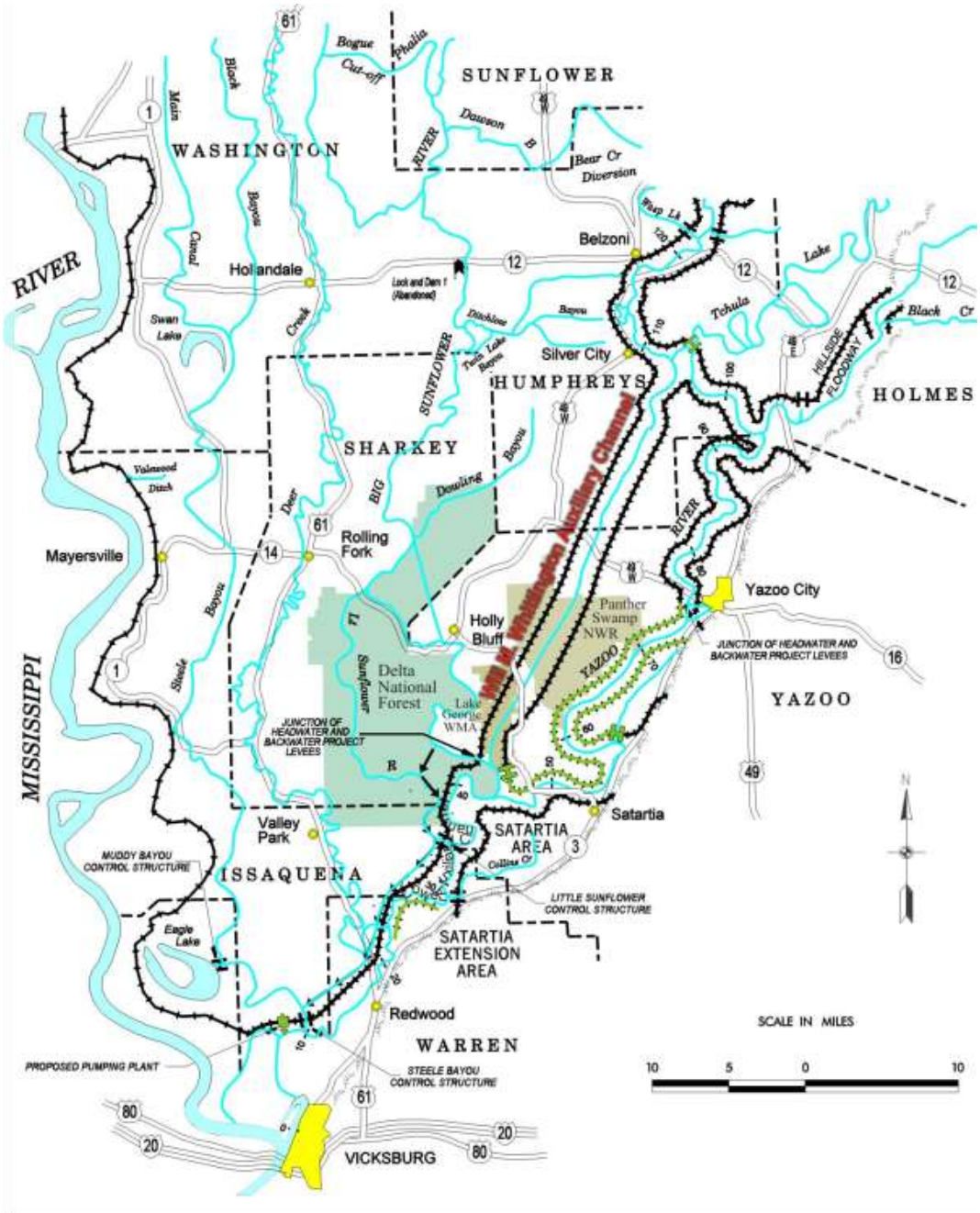
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $967,000 will be used for routine operation and maintenance, data gathering and periodic inspections; critical work needed to ensure the integrity of the project to protect people & property from flooding. Additional funds of 580,000 could be used for McKinney Bayou Pump Rehabilitation (250,000) and pipe and levee slide repairs (330,000).

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 15 Supplemental	FY 16 Budget	FY 16 Total Capability
Maintenance	$967,000	$0	$967,000	$1,547,000



Yazoo Basin,
Will M. Whittington Auxiliary Channel, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Will M. Whittington Auxiliary Channel, MS

Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, 1946, 1962 and 1965

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in west Mississippi in portions of Yazoo and Humphreys Counties and is a part of the Yazoo Basin Headwater Area.

Description: The project includes a leveed floodway and landside drainage ditches from the vicinity of Silver City on the Yazoo River to near the mouth of Big Sunflower River.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This work consists of providing adequate levels of funding for the removal of vegetation and encroachments and place granular surface material on the levees as needed to provide all-weather access.

Importance: This flood control feature in the Yazoo Basin headwater area is a leveed floodway that splits the flows of the Yazoo River and reduces flood stages on the Yazoo River. The levee provides major flood protection to areas between the Will Whittington Levee and the Mississippi River east bank levee.

Risk: Leaving the project in disrepair may lead to levee safety issues, levee certification issues and reduced levels of flood protection and higher risks.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.

Will M. Whittington Levee

Activities for FY 15: Funds are being used to continue operation and maintenance of project features.

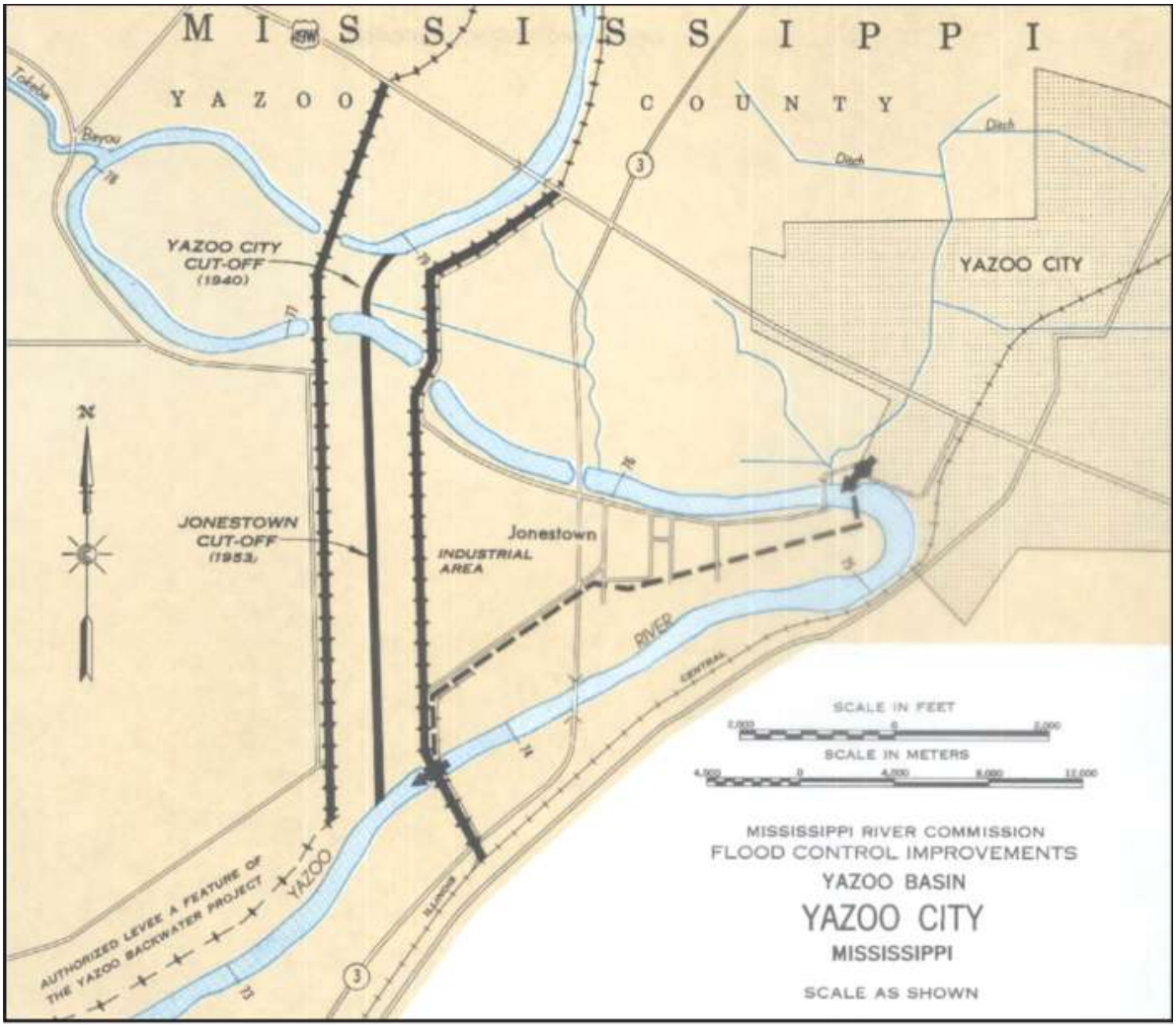
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $384,000 will be used for routine operation and maintenance, data gathering and periodic inspections; critical work needed to ensure the integrity of the project to protect people & property from flooding. Additional funds in the amount of $500,000 could be used for gravel surfacing for the levee.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 15 Supplemental Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$384,000	$0	$384,000	$884,000



Yazoo Basin,
Yazoo City, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet

Yazoo Basin, Yazoo City, MS

Flood Control Acts of 1928, 1936, 1937, 1938, 1941, 1944, and 1946

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Yazoo Basin.

Description: The project includes the operation and maintenance of Yazoo City Protection Works and includes levees, channels, drainage structures, pumping plants and weirs.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. This work consists of providing adequate levels of funding to operate the drainage structures and pump station on an as-needed basis.

Importance: The city of Yazoo City was established on a bendway of the Yazoo River. Yazoo City is a major center of transportation and commerce where the uplands of Mississippi meets that portion of the state of Mississippi known as the Mississippi Delta. These flood damage reduction measures protect Yazoo City from flooding from the Yazoo River.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.

Yazoo City Protection Works - East Levee - Station 44+00

Activities for FY 15: Funds are being used to continue operation and maintenance of project features, rehabilitate pipe structures, and evaluate levee seepage concerns.

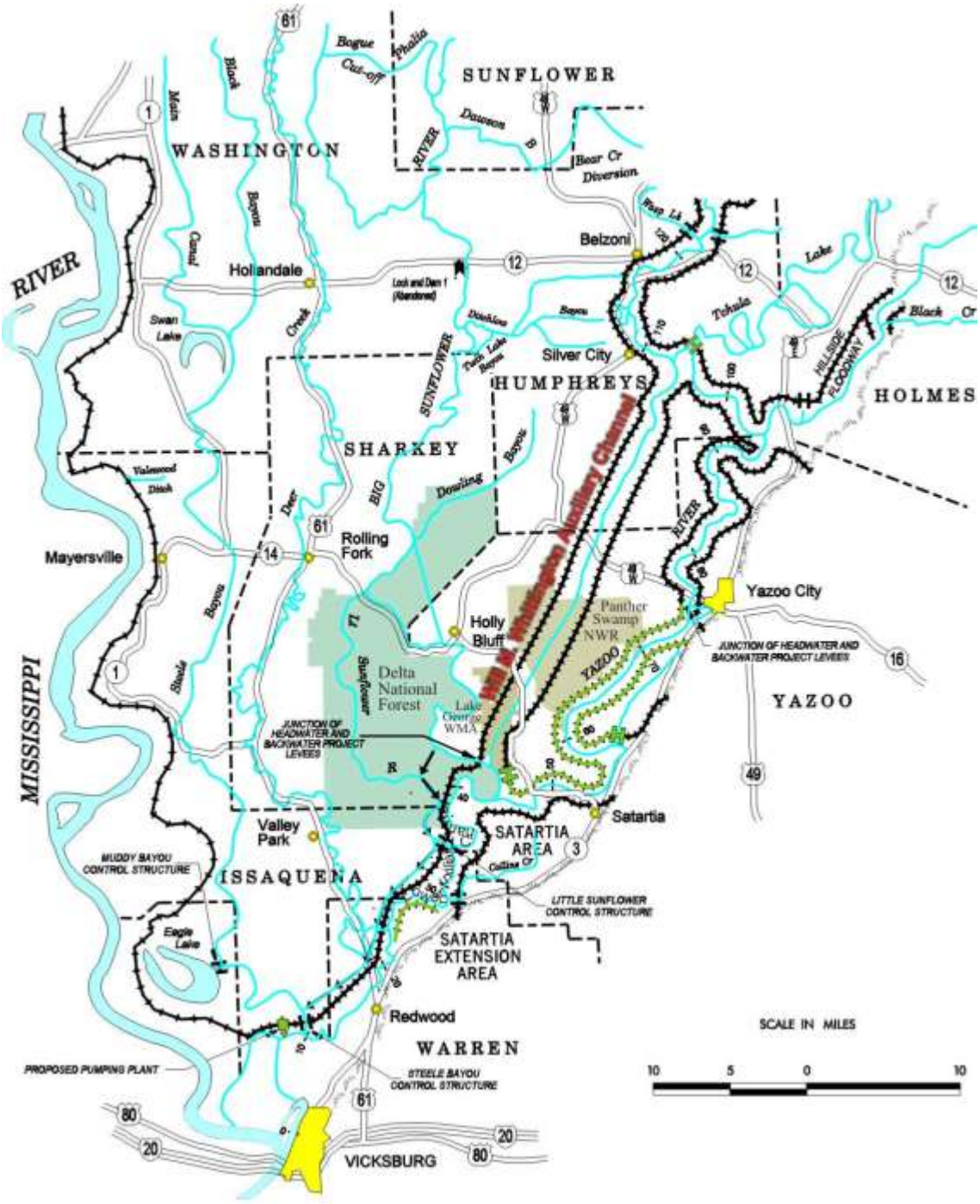
Acquisition Strategy: No contracts are scheduled to be awarded in FY 15.

Amount That Could Be Used in FY 16: Budgeted funds of $731,000 will be used for routine operation and maintenance, data gathering and periodic inspections; critical work needed to ensure the integrity of the project to protect people and property from flooding. Additional funds in the amount of $100,000 could be used for rehab of 24 relief wells at the Yazoo City Pumping plant.

Project Sponsor/Customer: Yazoo-Mississippi Delta Levee Board

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 16 Budget	FY 16 Total Capability
Maintenance	$731,000	$731,000	$831,000



Yazoo Backwater, MS

US Army Corps of Engineers
Vicksburg District

Project Fact Sheet
Yazoo Basin, Yazoo Backwater, MS
Flood Control Acts of 1941, 1944, 1965

Mississippi River and Tributaries, Maintenance (FRM)

Location: The project is located in the Yazoo Basin, MS.

Description: The project includes the operation and maintenance of seven drainage structures.

Issues: Critical work is needed to ensure the integrity of the project to protect people and property from flooding. The Great Flood of 2011 demonstrated the requirement that the Steele Bayou, Little Sunflower and Muddy Bayou Structures be 100 percent reliable. To continue to provide this reliability, it is necessary that stoplogs that meet current Corps hydraulic steel structure standards be fabricated for the Steele Bayou Structure. These stoplogs will be used to provide access to the structure gates for inspection and repair, when necessary.

Importance: The flood control feature protects a large agricultural area and many small communities in the lower Yazoo Delta from backwater flooding of the Mississippi River.

Risk: Leaving the project in disrepair may lead to flooding issues and reduced levels of flood protection in the project area.

Consequence: Failure to operate and maintain the project would jeopardize the project integrity and benefits.


Steele Bayou Drainage Structure on the Yazoo Backwater Levee

Activities for FY 15: Funds are being used to continue operation of project features, mitigation, and for the fabrication of Steele Bayou Structure Stop logs.

Acquisition Strategy: No contracts to be awarded.

Amount That Could Be Used in FY 16: Budgeted funds of $544,000 will be used for routine operation and maintenance, data gathering and periodic inspections; critical work needed to ensure the integrity of the project to protect people & property from flooding. Additional funds in the amount of $1,100, 000 could be used for operation and maintenance of mitigation lands ($100,000), critical design of new gates for the Steele Bayou Structure ($200,000) and critical gate replacement at Little Sunflower ($800,000).

Project Sponsor/Customer: Board of Mississippi Levee Commissioners and Yazoo Mississippi Delta Levee Board.

Congressional Interest: Senate: Wicker and Cochran (MS); House: Thompson (MS-2).

Phase	FY 15 Allocation	FY 15 Supplemental	FY 16 Budget	FY 16 Total Capability
Maintenance	$644,000	$0	$544,000	$1,644,000

Risk associated with FWR Structures: Based upon the most recent risk assessment of the FWR Structures,USACE considers these dams to be a low risk dam among its more than 700 dams because of the risk associated with erodibility of the spillway and embankment under unusual and extreme events. USACE manages this risk by conducting routine monitoring and evaluation. Most DHP projects, such as riser pipes and bank stabilization sites, are turned over to the owner of the land after completion. The FWR structures are much larger than your typical project and property owners do not have the resources to inspect and maintain these structures. Though there is no life loss due to these structures, they do have a higher population at risk and damages.

	Location	Loading (fail)	Elevation (NAVD 88)	Structures	Damages $	Day PAR	Night PAR
FWRS 30	10 miles Northeast of Lexington	Max High	277	64	8.8 M	64	98
		Top of Active Storage	271.5	38	4.1 M	38	59
		Normal Pool	263.9	17	620 K	17	23
FWRS 38	1 mile Southast of Lexington	Max High	247.5	217	8.3M	340	470
		Top of Active Storage	236	21	1.5M	36	45
		Normal Pool	223.9	5	112K	8	10
FWRS 52	10 miles Southwest of Lexington	Max High	249.4	20	655K	17	30
		Top of Active Storage	242.2	13	219K	13	24
		Normal Pool	227.7	6	43K	9	13
FWRS 47	3 miles Southwest of Lexington	Max High	253.0	Minimal damages, impact to structures, and PAR since the impacted area is agricultural land.			
		Top of Active Storage	246.4				
		Normal Pool	235.7				

Damages - damages inlcude property damages to structures, contents, and vehicles. Cost were generated from the 2006 HAZUS database updated to 2014 price level using an ENR construction cost index of 1.250

Definitions of PAR (population at risk) - The population at risk is comprised of those people within the inundated area for a given scenario.

Estimated Cost for Repair: The estimated cost to correct deficiencies per FWRS (4) is approximately $2,000,000. The estimated cost for annual inspections, Periodic Inspections and operation and maintenance (5) is $130,000.

Additional Amount That Could Be Used in FY 16: No funds are in the FY16 President's Budget. Funds in the amount of $300,000 could be used to for the maintenance of the FWRS with perpetual right of way. Includes grass cutting, stump removal and other maintenance items.

USACE Dam Safety
Facts for FWR Structures

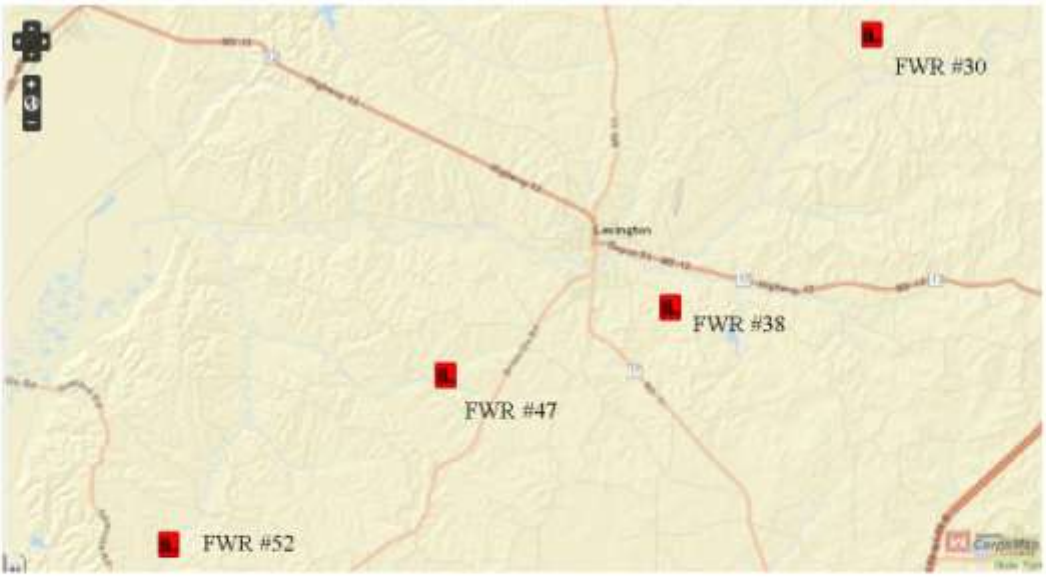
Build as part of the Delta Headwaters Progbram

U.S. ARMY CORPS OF ENGINEERS **BUILDING STRONG®**

Project Location and Description: Flood Water Retarding (FWR) Structures were designed and built by the U.S. Army Corps of Engineers (USACE) and completed in between 1995 and 2012. There are four flood water retarding structures, FWR 30, 38, 47 and 52. USACE operates these structures for erosion control.

All structures are designed similarly. The main components of the project are an earthen embankment section, which serves as the main water barrier composed of compacted earth, gates that allow controlled water flow out of the dam, and an additional ungated spillway (emergency spillway). The em a segment of the structure used to provide additional release of water from the dam during major flood events.

Benefits associated with FWR Structures: The Delta Headwater Program (DHP), which started out as the Demonstration Erosion Control Program, has proven that with a combination of techniques that it is possible to significantly reduce the erosion in the Yazoo Basin, which in turn reduces the sediment deposited in downstream reservoirs and streams, reducing the need for maintenance dredging and improves degradation of wildlife habitat in and along the streams. These Flood Water Retarding Structures have proven to be one of the most effective form of sediment reduction. Erosion from agricultural land frequently carries agricultural chemicals and fertilizers adding to the Gulf Hypoxia. Consequently, reducing erosion improves water quality. Once stabilized, stream systems provide improved wildlife habitat both in and along the streams.



[1] *Mean Sea Level is the same as North American Vertical Datum 1988 (or NAVD88)*

Value to the Nation