

MISSISSIPPI RIVER AND TRIBUTARIES

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MISSISSIPPI RIVER AND TRIBUTARIES

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MISSISSIPPI RIVER AND TRIBUTARIES

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CONSTRUCTION ACTIVITIES

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APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT: Lower Mississippi River Main Stem, Commercial Navigation, AR, IL, KY, LA, MS, MO and TN – Construction (Continuing)

LOCATION: The Lower Mississippi River Main Stem (LMRMS) Project is located in the Lower Mississippi River and along its banks, from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, which is a distance of approximately 966 miles; and in an area of approximately 595,000 acres in the Atchafalaya River basin, bounded on the east and west by the East and West Atchafalaya Basin Levees, in southeast Louisiana.

Construction of one commercial navigation feature of the LMRMS project is ongoing:

(1) The Channel Improvement feature of the project is located in the Mississippi River and along its banks from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, which is a distance of approximately 966 miles.

DESCRIPTION: The Channel Improvement feature consists of stabilizing the banks of the river in a desirable alignment to maintain flow characteristics for commercial navigation by means of dikes and dredging in Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. All work is programmed.

AUTHORIZATION: Flood Control Acts of 1928, 1936, 1938, 1941, 1944, 1962, 1965, 1966, and 1970.

REMAINING BENEFIT-REMAINING COST RATIO: 1.3 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 10.5 to 1 at 7 percent. The benefit-cost ratio is based on all features which comprise the LMRMS project, including features that have completed construction.

INITIAL BENEFIT-COST RATIO: The LMRMS project was first authorized in 1928. The Congress authorized the current comprehensive plan for the LMRMS project in the Flood Control Act of 1965, based on an earlier Corps report. The Senate Committee on Public Works approved this plan on June 12, 1954. The House reprinted this report in House Document 308/88/2 (dated May 21, 1964). As updated to reflect 1965 conditions and price levels, this report provides a base estimate of the benefit-cost ratio for the LMRMS project. The benefit-cost ratio for the project computed under the assumptions of this 1965 base estimate was around 7.9 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the 2017 Economic update approved in April 2018 at 2017 price levels.

CHANNEL IMPROVEMENT (NAVIGATION) 1/
SUMMARIZED FINANCIAL DATA

			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2020) Entire Project	PCT CMPL 91	PHYSICAL COMPLETION SCHEDULE TBD
Estimated Federal Cost	\$4,277,000,000					
Estimated Non-Federal Cost	1,964,000					
Cash Contributions	1,864,000					
Other Costs	100,000					
Total Estimated Project Cost	\$4,278,964,000					
Allocations to 30 September 2017	3,273,748,000	1/				
Allocation for FY 2018	31,570,000	2/ 3/				
Allocation for FY 2019	5,714,000	4				
Allocation for FY 2020	16,000,000					
Allocations through FY 2020	3,327,032,000	1/ 2/ 3/ 4/ 5/ 6/	78			
Unobligated Carry-in Funds	335,000	7/				
President's Budget Amount for FY 2021	7,550,000		78			
Programmed Balance to Complete after FY 2021	TBD					
Un-programmed Balance to Complete after FY 2021	0					

1/ Total costs and allocations through FY 2015 include flood damage reduction funding of the channel improvement feature.

2/ Includes \$9,100,000 of Public Law 114-254 Supplemental funds.

3/ \$2,160,000 reprogrammed to (from) the project.

4/ \$500,000 reprogrammed to (from) the project.

5/ \$0 rescinded from the project.

6/ \$0 transferred to the Flood Control and Coastal Emergencies account.

7/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 into FY 2020 is \$335,000 for Navigation. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

PHYSICAL DATA: The physical data for the Channel Improvement feature consists of 19,135 acres of land and damages; 1,097 miles of revetments; 362 miles of dikes; and 1 pumping station.

JUSTIFICATION: The commercial navigation features of the LMRMS project support a high level of traffic. The major commodities shipped on the Lower Mississippi River are agricultural goods and bulk industrial materials.

FISCAL YEAR 2020: The TOTAL unobligated dollars are being applied as follows:

Dikes: The planned dike work consists of the following items:

Victoria Bend Dikes Phase 1		9,400,000
Division: Mississippi Valley	Memphis, Vicksburg, and New Orleans Districts	Lower Mississippi River Main Stem, Commercial Navigation AR, IL, KY, LA, MS, MO and TN

Randolph, TN dikes	3,500,000
Lands and Damages	70,000
Planning, Engineering, and Design	2,100,000
Construction Management	1,092,000
P.L. 114-254 Supplemental funds	173,000
Total	\$16,335,000

FISCAL YEAR 2021: The budget amount will be applied as follows:

Dikes: The planned dike work consists of the following items:

Tarpley Cutoff	
Tarpley Cutoff	4,450,000
Land and Damages	54,000
Engineering and Design	2,676,000
Construction Management	350,000
Cultural Resources	20,000
Total	\$7,550,000

NON-FEDERAL COST: In accordance with Section 4 of the Flood Control Act of 1944, as amended by Section 207 of the Flood Control Act of 1962, the Non-Federal sponsor must comply with the requirements listed below:

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Commercial
Navigation AR, IL, KY, LA, MS, MO and TN

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal area.	\$ 100,000	
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, and replacement of recreation facilities.	1,864,000	\$267,000
Total Non-Federal Costs	\$1,964,000	\$267,000

STATUS OF LOCAL COOPERATION: Assurances furnished by the Missouri Department of Conservation for the Dorena Recreation Facility were accepted 27 August 1971; assurances furnished by the Tennessee Department of Conservation for the Richardson Landing Recreation Facility were accepted 3 September 1976; and assurances furnished by the City of Memphis, Tennessee, for Volunteer Bicentennial Park were accepted 11 September 1975. Assurances furnished by the City of Osceola, Arkansas, for Lake Neark, Arkansas, are embodied in the contract for cost sharing approved on 19 September 1982. A Local Cooperation Agreement for the Ed Jones Boat Ramp with the State of Tennessee was signed 27 October 1988. A Local Cooperation Agreement for the Shelby Forest Boat Ramp with the State of Tennessee was signed 11 October 1990. A Local Cooperation Agreement for the Dyersburg, Tennessee, Boat Ramp with the State of Tennessee was signed 11 July 1994.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$4,227,000,000 is an increase of \$71,000,000 from the latest estimate (\$4,206,000,000) presented to Congress (FY 2020). This change includes the following items:

Price Escalation on Construction Features	\$80,499,000
Adjustment of PED Costs	(10,000,000)
Price Escalation on Real Estate	501,000
Total	\$71,000,000

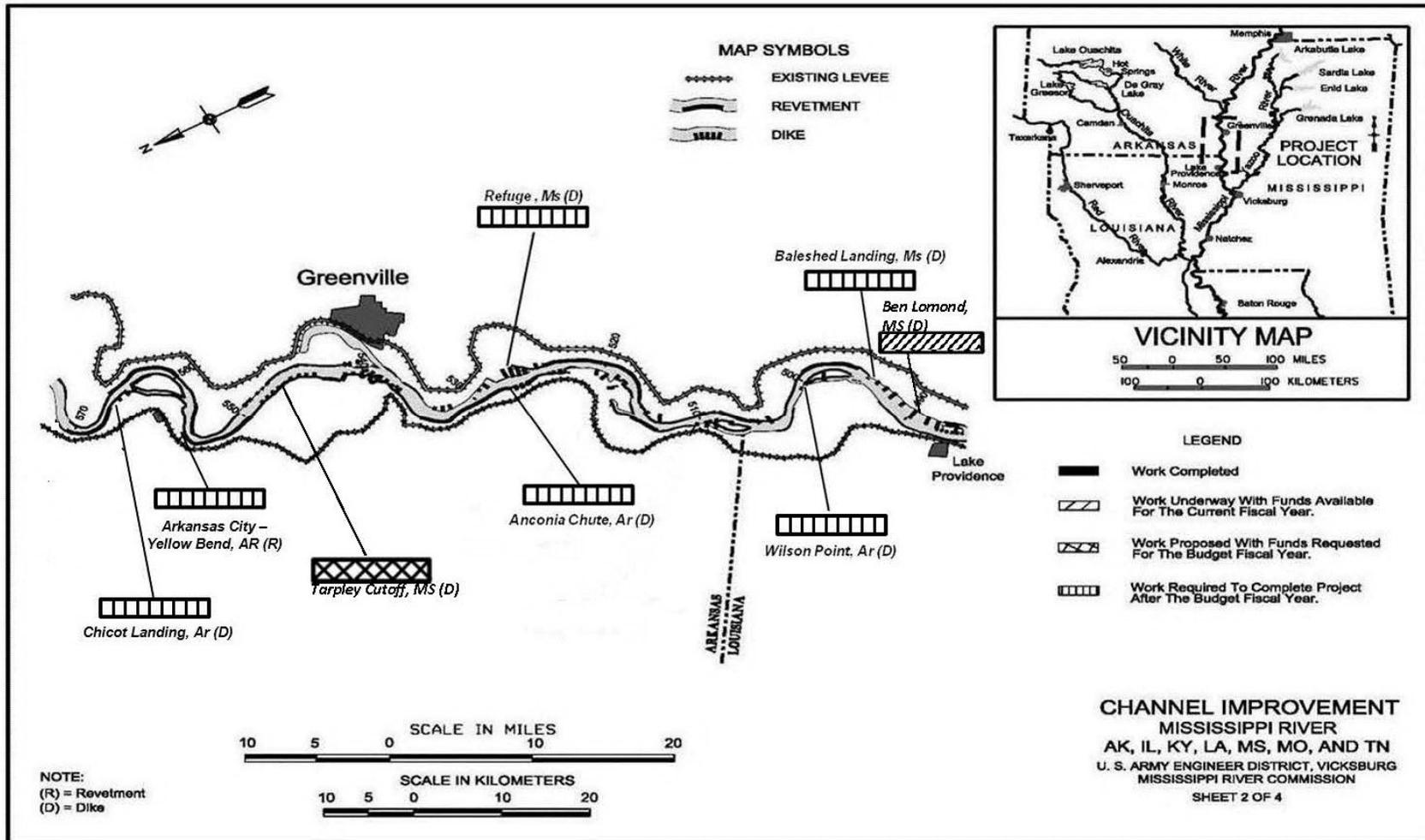
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with the Council on Environmental Quality on 16 April 1976.

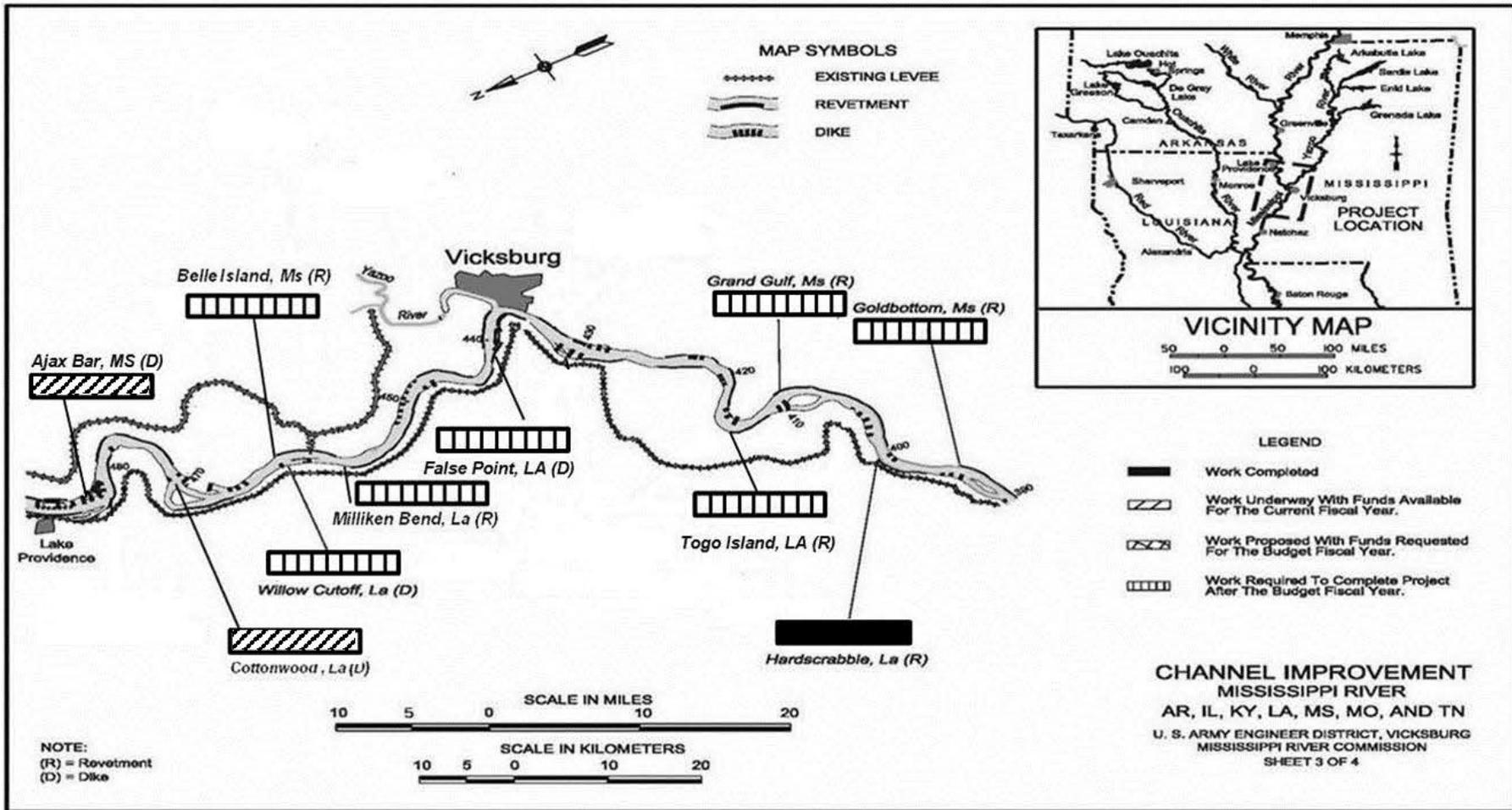
OTHER INFORMATION: Initial construction funds were appropriated in Fiscal Year 1928.

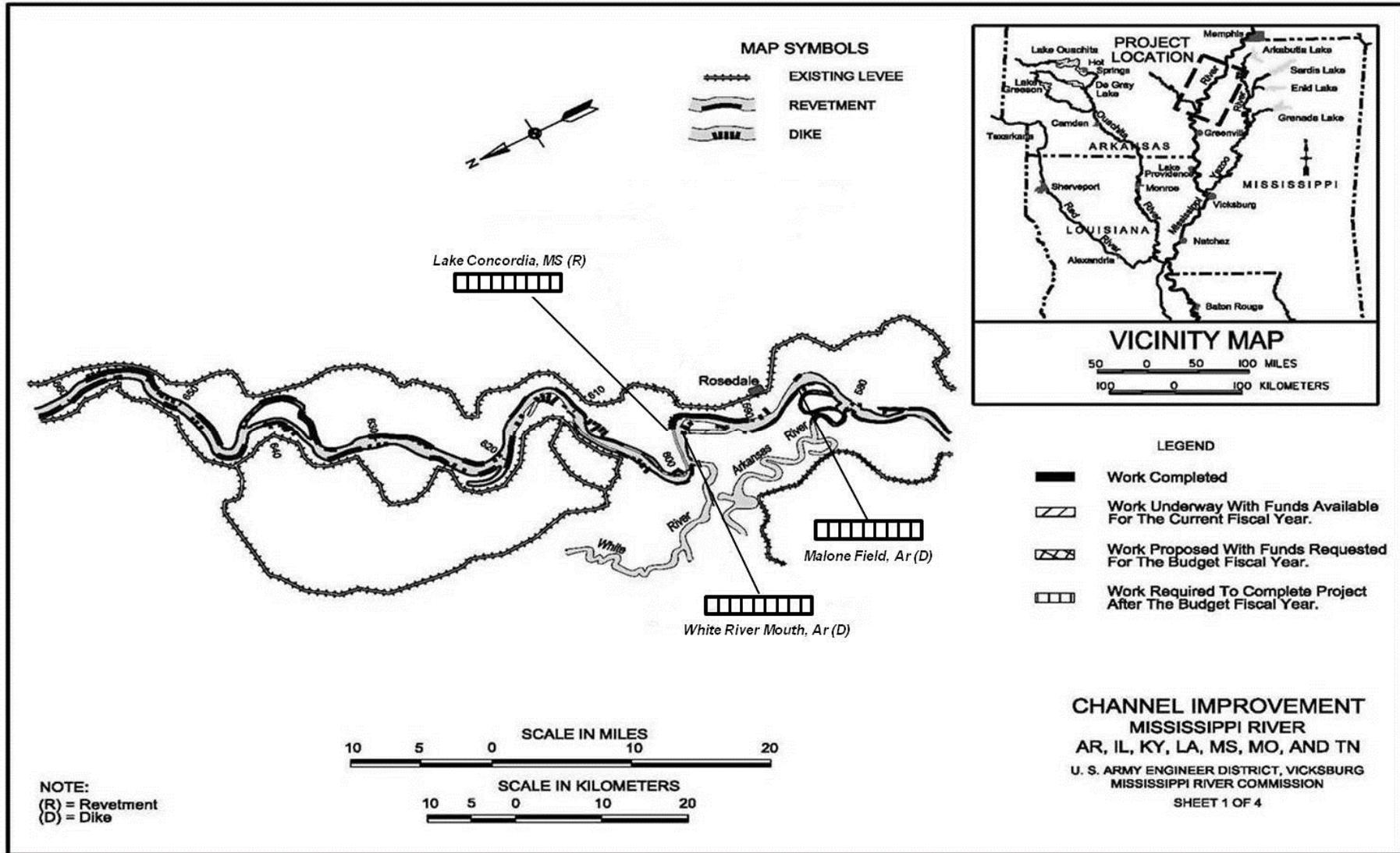
Division: Mississippi Valley

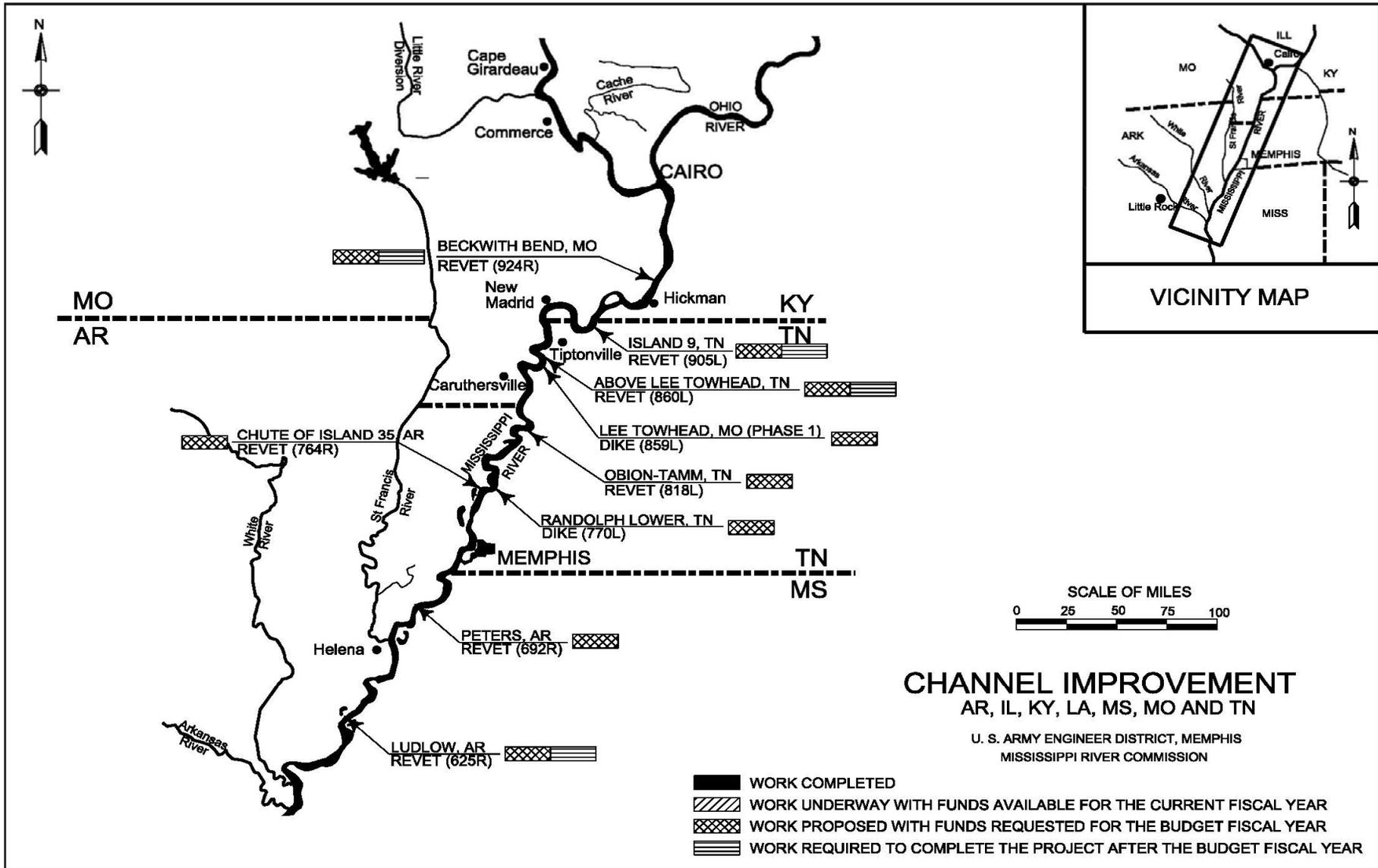
Memphis, Vicksburg, and
New Orleans Districts

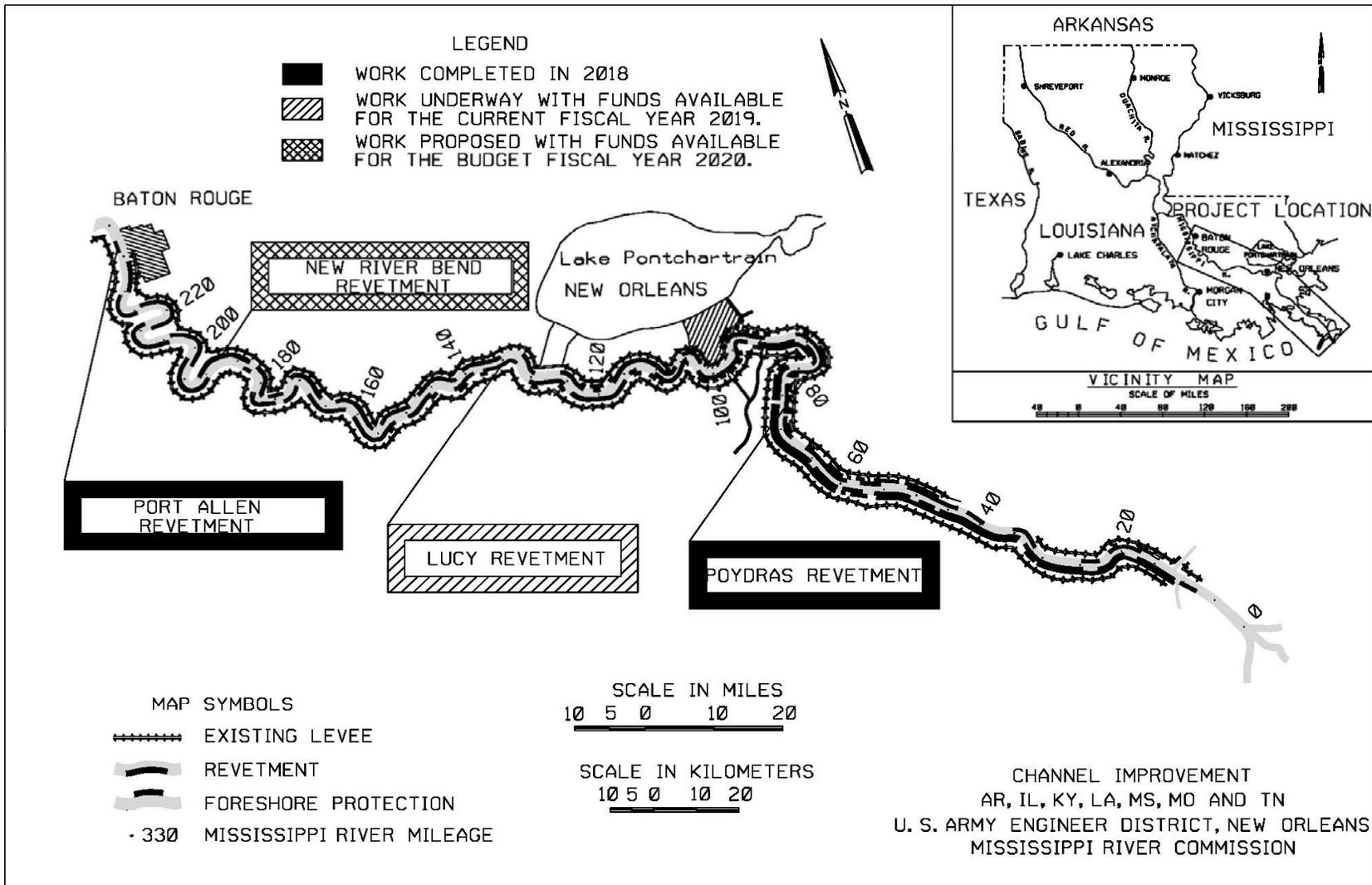
Lower Mississippi River Main Stem, Commercial
Navigation AR, IL, KY, LA, MS, MO and TN











SHEET 1 OF 1

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APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT: Lower Mississippi River Main Stem, Flood Damage Reduction, AR, IL, KY, LA, MS, MO and TN – Construction (Continuing)

LOCATION: The Lower Mississippi River Main Stem (LMRMS) Project is located in the Lower Mississippi River and along its banks, from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, which is a distance of approximately 966 miles; and in an area of approximately 595,000 acres in the Atchafalaya River basin, bounded on the east and west by the East and West Atchafalaya Basin Levees, in southeast Louisiana.

Construction of four flood damage reduction features of the LMRMS project is ongoing:

(1) The Mississippi River Levees (MRL) feature of the LMRMS project is located along both banks of the Lower Mississippi River, from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, which is a distance of approximately 966 miles, except where interrupted by hills or tributary streams. On the west bank of the Lower Mississippi River, the MRL feature extends from Allenville, Missouri, on the Little River Diversion Channel generally southward to the vicinity of Venice, Louisiana. On the east bank of the Lower Mississippi River, it extends from Hickman, Kentucky, to opposite Venice, Louisiana. Included in this feature are the levees which reduce the risk of flood damage in Mounds, Mound City, and Cairo, Illinois, and the New Madrid Levee and Floodway.

(2) The Channel Improvement feature of the LMRMS project is located in the Mississippi River and along its banks from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, which is a distance of approximately 966 miles.

(3) The Atchafalaya Basin feature of the LMRMS project is roughly 15 miles wide and 110 miles long, and extends generally from the latitude of Old River to the Gulf of Mexico. It is located in south-central Louisiana and is west of and generally parallel to the Mississippi River. The Atchafalaya River flows through the middle of this basin. This feature of the project includes the West Atchafalaya Floodway, the Morganza Floodway, and the Lower Atchafalaya Basin Floodway.

(4) The Atchafalaya Basin Floodway (ABF) feature of the LMRMS project is located in south-central Louisiana and encompasses approximately 595,000 acres in an area bounded on the north by south right-of-way line of the Union Pacific Railroad (just south of US Hwy 190 passing through Krotz Springs, Louisiana); on the south by Morgan City; and on the east and west by the East and West Atchafalaya Basin Levees.

DESCRIPTION: Construction of these four interrelated flood damage reduction features of the LMRMS project is ongoing. They are four integrated elements of a single project, which operate together (along with other, completed features) as a single system:

(1) Construction of the MRL feature consists of raising, strengthening, and in some cases, extending existing levees to reduce the risk of flood damage in the project flood in portions of Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. This feature includes 1,595 miles of levees and 14.8 miles of floodwall totaling 1,609.8 miles. All work is programmed.

(2) Construction of the Channel Improvement feature consists of stabilizing the banks of the Lower Mississippi River by means of revetments and foreshore protection in Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee. All work is programmed.

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Flood Damage
Reduction AR, IL, KY, LA, MS, MO and TN

(3) Construction of the Atchafalaya Basin feature consists of construction work on the levied floodways of this basin. The Morganza Floodway, which is to the east of the Atchafalaya River, has a capacity of 600,000 cubic feet per second (cfs), which can be introduced into the floodway by a gated control structure. The West Atchafalaya Basin Floodway, which is to the west of the Atchafalaya River, is placed into operation when the fuse plug sections are overtopped bringing flows from the river that will introduce 900,000 cfs into the lower basin. After passing through the floodways, the flood waters enter the Gulf of Mexico through the Lower Atchafalaya River at Morgan City and the Wax Lake Outlet channel constructed west of Patterson, Louisiana. All work is programmed.

(4) Construction of the ABF feature consists of acquisition of real estate interest, excluding minerals, in the Lower Atchafalaya Floodway for flood damage reduction, environmental stewardship and restoration, developmental control, public access, and recreation. It also has involved the construction of two pilot water management units, along with miscellaneous canal closures and water circulation improvements, and may involve implementation of future units at the discretion of the Chief of Engineers. All work is programmed.

AUTHORIZATION: Flood Control Acts of 1928, 1934, 1936, 1938, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1966, 1968, and 1970, River Basin Monetary Authorization Act of 1971, Supplemental Appropriations Act, 1985; Water Resources Development Act (WRDA), 1986; Energy and Water Development Appropriations Act, 1988; Energy and Water Development Appropriations Act, 1991; WRDA 1992; Energy and Water Development Appropriations Act, 1997; WRDA, 2000, and Water Resources Development Act of 2007.

REMAINING BENEFIT-REMAINING COST RATIO: 1.3

TOTAL BENEFIT-COST RATIO: 10.5 to 1 at 7 percent. The benefit-cost ratio is based on all of the features that comprise the LMRMS project, including features that have completed construction.

INITIAL BENEFIT-COST RATIO: The LMRMS project was first authorized in 1928. The Congress authorized the current comprehensive plan for the LMRMS project in the Flood Control Act of 1965, based on an earlier Corps report. The Senate Committee on Public Works approved this plan on June 12, 1954. The House reprinted this report in House Document 308/88/2 (dated May 21, 1964). As updated to reflect 1965 conditions and price levels, this report provides a base estimate of the benefit-cost ratio for the LMRMS project. The benefit-cost ratio for the project computed under the assumptions of this 1965 base estimate was around 7.9 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the 2017 Economic update approved in April 2018 at 2017 price levels.

LMRMS PROJECT (FLOOD DAMAGE REDUCTION) <u>1/</u> SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (01 Jan 2020)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 11,059,581,000		Channel Improvement	97	TBD
Estimated Non-Federal Cost	207,499,000				
Cash Contributions	76,327,000		MRL	94	TBD
Other Costs	130,498,000				
Reimbursements	674,000		Atchafalaya Basin	96	TBD
Recreation Facilities	674,000				
Total Estimated Project Cost	\$ 11,267,080,000				
Authorized Cost (plus inflation)	N/A				
Maximum Cost Limit (Section 902)	N/A		ABF	35	TBD
Allocations to 30 September 2017	6,271,158,000				
Allocation for FY 2018	261,503,000				
Allocation for FY 2019	164,900,000				
Allocation for FY 2020	102,634,000				
Allocations through FY 2020	6,800,195,000	<u>1/ 2/ 3/ 4/ 5/ 8/</u>			61
Unobligated Carry-in Funds	62,879,000	<u>6/</u>			
President's Budget Amount for FY 2021	37,675,000				61
Programmed Balance to Complete After FY 2021	4,142,230,000	<u>7/ 9/</u>			
Un-programmed Balance to Complete After FY 2021	0				

1/ Total costs and allocation through FY 2015 includes commercial navigation funding of the channel improvement feature.

2/ Includes \$138,103,000 of P.L. 115-123 supplemental funds and \$100,000 of P.L. 114-254 supplemental funds.

3/ \$88,183,000 reprogrammed to (from) the project.

4/ \$0 rescinded from the project.

5/ \$0 transferred to the Flood Control and Coastal Emergencies account.

6/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2019 into FY 2020 for this project was \$62,880,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2021 from prior appropriations for use on this effort is \$0.

7/The balance to complete includes both flood damage reduction and navigation costs and allocations of the entire channel improvement feature.

8/ PED cost of \$0 are included in this amount.

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Flood Damage
Reduction AR, IL, KY, LA, MS, MO and TN

9/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

MISSISSIPPI RIVER LEVEES – FLOOD DAMAGE REDUCTION SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (01 Jan 2020)	PCT Cmpl	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement	\$ 2,866,750,000		Entire Project	94	TBD
Future Non-Federal Reimbursement	674,000				
Estimated Federal Cost (Ultimate)	2,866,750,000				
Estimated Non-Federal Cost	82,124,000				
Cash Contributions	\$3,639,000				
Other Costs	105,753,000				
Reimbursement	674,000				
Recreation Facilities	674,000				
Total Estimated Project Cost	\$2,947,200,000				
Allocations to 30 September 2017	\$1,650,153,000				
Allocation for FY 2018	86,626,000				
Allocation for FY 2019	86,038,000	<u>1/</u>			
Allocation for FY 2020	35,000,000				
Allocations through FY 2020	1,857,817,000	<u>1/ 2/ 3/ 4/ 6/</u>		65	
Unobligated Carry-in Funds	43,468,000	<u>5/</u>			
President's Budget for FY 2021	21,950,000			66	
Programmed Balance to Complete After FY 2021	\$986,983,000	<u>7/</u>			
Un-programmed Balance to Complete After FY 2021	0				

1/ Includes \$44,853,000 of P.L.115-123 supplemental funds.

2/ \$22,543,000 reprogrammed to (from) the project.

3/ \$0 rescinded from the project.

4/ \$0 transferred to the Flood Control and Coastal Emergencies account.

5/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 into FY 2020 was \$43,468,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2021 from prior appropriations for use on this effort are \$0. This amount will be used to perform work on the project as follows: N/A

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Flood Damage
Reduction AR, IL, KY, LA, MS, MO and TN

6/ PED costs of \$0 are included in this amount.

7/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

CHANNEL IMPROVEMENT – FLOOD DAMAGE
REDUCTION
SUMMARIZED FINANCIAL DATA

		ACCUM PCT OF EST FED COST	STATUS (01 Jan 2020)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$4,277,000,000		Entire Project	97	TBD
Estimated Non-Federal Cost	1,964,000				
Cash Contributions	1,864,000				
Other Costs	100,000				
Total Estimated Project Cost	\$4,278,964,000				
Allocations to 30 September 2017	3,359,210,000				
Allocation for FY 2018	156,501,000	<u>2/</u>			
Allocation for FY 2019	70,633,000				
Allocation for FY 2020	42,149,000				
Allocations through FY 2020	3,628,493,000	<u>1/ 2/ 3/ 4/ 5/ 8/</u>	87		
Unobligated Carry-In Funds	16,644,000	<u>6/</u>			
President's Budget for FY 2021	15,425,000		87		
Programmed Balance to Complete After FY 2021	553,601,000	<u>7/ 9/</u>			
Unprogrammed Balance to Complete After FY 2021	0				

1/ Total costs and allocation through FY 2015 include commercial navigation funding of the channel improvement feature.

2/ Includes \$91,000,000 of P.L.115-123 supplemental funds.

3/ \$45,499,000 reprogrammed to (from) the project.

4/ \$0 rescinded from the project.

5/ \$0 transferred to the Flood Control and Coastal Emergencies account.

6/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 into FY 2020 was \$16,644,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2021 from prior appropriations for use on this effort is \$0.

7/ The balance to complete includes both flood damage reduction and navigation costs and allocations of the entire channel improvement feature.

8/ PED costs of \$0 are included in this amount.

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Flood Damage
Reduction AR, IL, KY, LA, MS, MO and TN

9/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

ATCHAFALAYA BASIN SUMMARIZED FINANCIAL DATA	ACCUM PCT OF EST FED COST	STATUS (01 Jan 2020)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$3,599,805,000			
Estimated Non-Federal Cost	\$ 26,195,000			
Cash Contribution: \$ 2,500,000				
Other Costs 23,695,000				
Total Estimated Project Cost	\$3,626,000,000			
Allocations to 30 September 2017	\$1,107,890,000			
Allocation for FY 2018	17,500,000			
Allocation for FY 2019	5,805,000			
Allocation for FY 2020	20,485,000			
Allocations through FY 2020	\$1,151,680,000			
Unobligated Carry-In Funds	2,179,000	<u>1/</u> <u>2/</u> <u>3/</u> <u>5/</u>		32
President's Budget for FY 2021	0			32
Programmed Balance to Complete after FY 2021	\$2,448,125,000	<u>6/</u>		
Un-programmed Balance to Complete after FY 2021	0			

1/ \$4,338,000 reprogrammed to (from) the project.

2/ \$0 rescinded from the project.

3/ \$0 transferred to the Flood Control and Coastal Emergencies account.

4/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 into FY 2020 was \$2,179,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2021 from prior appropriations for use on this effort is \$0.

5/ PED costs of \$0 are included in this amount.

6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

Division: Mississippi Valley

Memphis, Vicksburg, and
New Orleans Districts

Lower Mississippi River Main Stem, Flood Damage
Reduction AR, IL, KY, LA, MS, MO and TN

ATCHAFALAYA BASIN FLOODWAY SYSTEM
SUMMARIZED FINANCIAL DATA

		ACCUM PCT OF EST FED COST	STATUS (01 Jan 2020)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$316,026,000		Entire Project	35	TBD
Estimated Non-Federal Cost	\$69,274,000				
Cash Contribution	\$68,324,000				
Other Costs	\$950,000				
 Total Estimated Project Cost	 \$385,300,000				
 Allocations thru 30 September 2017	 153,905,000				
Allocations for FY 2018	876,000	<u>1/</u>			
Allocations for FY 2019	2,424,000	<u>2/</u>			
Allocations for FY 2020	5,000,000				
Allocations through FY 2020	\$162,205,000	<u>1/</u> <u>2/</u> <u>3/</u> <u>4/</u> <u>5/</u> <u>7/</u>			51
Unobligated Carry-In Funds	588,000	<u>6/</u>			
President's Budget for FY 2021	300,000				51
Programmed Balance to Complete after FY 2021	153,521,000	<u>8/</u>			
Un-programmed Balance to Complete after FY 2021	0				

1/ Includes \$100,000 of P.L. 114 -254 supplemental funds and \$126,000 of P.L. 115-123 supplemental funds.

2/ Includes \$2,124,000 of P.L. 115-123 supplemental funds.

3/ \$15,803,000 reprogrammed to (from) the project.

4/ \$0 rescinded from the project.

5/ \$0 transferred to the Flood Control and Coastal Emergencies account.

6/ Unobligated Carry-In Funding: The actual unobligated carry-in from FY 2019 into FY 2020 was \$588,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2021 from prior appropriations for use on this project is \$0.

7/ PED costs of \$0 are included in this amount.

8/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA:

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The MRL feature of the project includes 1,595 miles of levees (ranging from 20 feet to 35 feet in height); 14.8 miles of floodwall (ranging from 14 feet to 23 feet in height); 654.8 miles of berm; 541.6 miles of levee road; 72 miles of channels and canals; and 5 pumping stations.

The Channel Improvement feature includes 19,135 acres of land and damages; 1,097 miles of revetments; 362 miles of dikes; and 1 pumping station.

The Atchafalaya Basin feature includes 449 miles of levees at an average height of 20 feet; 20 miles of railroad relocations and 15 miles of road relocations; 9 drainage structures [Point Coupe (2 gates, 10.5 by 15 feet), Melville (2 - 72-inch corrugated metal pipe with vertical lift gate), Darbonne (10-foot by 10-foot barrel with vertical lift gate), Bayou des Glaises (72-inch corrugated metal pipe with flap gate), Bayou Courtableau (2 weirs, 503 feet long), Brushy Bayou (5-foot by 6-foot barrel with vertical lift gate), Bayou Courtableau (5-barrel, each 10 feet by 15 feet with vertical lift gate), Wax Lake East (25 pipes, 5 feet in diameter with slide gates, Wax Lake West (15 pipes, 5 feet in diameter with slide gates)]; 289,212 acres of lands and damages; 15 pumping stations with a minimum capacity of 50 cfs, a Maximum capacity of 1,500 cfs, and an average capacity of 400 cfs; 58 miles of bank stabilization; 3 floodgates [Charenton - Sector-gates, 45 feet wide, East Calumet - sector-gates, 45 feet wide, and West Calumet - sector-gates, 45 feet wide]; 147.1 miles of channels; 3 locks [Bayou Boeuf, 75 feet by 1,156 feet, earth chamber, Bayou Sorrel, 56 feet by 797 feet, earth chamber, and Berwick, 45 feet by 300 feet, concrete chamber]; 10.1 miles of channel river navigation; and 2 planned freshwater control structures [Sherburne - dual 10-foot by 10-foot reinforced concrete box culverts with gates and Henderson - dual 10-foot by 10-foot reinforced concrete box culverts with gates].

The ABF feature includes 388,000 acres managed for recreation with the following facilities: 3 campgrounds; 7 primitive campgrounds; 15 two-lane boat launching ramps; one visitor center and numerous trails.

JUSTIFICATION:

The LMRMS project is designed to safely convey a Project Design Flood (PDF) from Cairo, IL to the Gulf of Mexico via the main river channels, floodways, and backwater areas. At the latitude of the Old River Control Complex (ORCC), Louisiana, the PDF flows total 3,030,000 cfs. From the ORCC to the Morganza Floodway, the Corps has designed the LMRMS project to convey up to 2,100,000 cfs in the PDF in the Mississippi River. Below the Morganza Floodway, the LMRMS Project would carry up to 1,500,000 cfs in the PDF within the Mississippi River without threatening the integrity of the levees along its banks, which reduce the flood risk to a large area that is densely populated, and has highly developed agricultural lands and industries, until it reaches the Bonnet Carre Spillway (about 30 miles upstream of New Orleans). At Bonnet Carre, the Corps would divert 250,000 cfs in the PDF to Lake Pontchartrain, with the remaining flows passing via the Mississippi River to the Gulf of Mexico including passing the City of New Orleans. With respect to the Atchafalaya Floodway, the LMRMS Project is designed to pass up to 1,500,000 cfs which includes the Red/Ouachita/Black watershed flows and diverted flows via the ORCC (620,000 cfs) and the Morganza Floodway (600,000 cfs) for the PDF. In order to prevent diverted waters from spreading over the rich and highly developed agricultural lands within the Atchafalaya Basin, these rivers and floodways have been leveed to confine the diverted flow.

The Mississippi River, with a drainage area of about 1,245,000 square miles, has a wide range of flow, increasing from an approximate minimum of 90,000 cubic feet per second (675,000 gallons per second) to a maximum of 2,345,000 cubic feet per second (17,587,000 gallons per second) which occurred in 1927 at the latitude of Red River Landing. The project flood is 3,030,000 cubic feet per second (22,500,000 gallons per second). Part of the tremendous energy of this volume of flowing water is directed toward a relentless attack on the banks of the river, causing the unprotected banks to cave into the river. As these caving progresses, the attack becomes more direct, the bendway moves in toward the levee, and more sediment is placed in the river and deposited downstream in the form of a sandbar. This bar gradually builds out into the channel and deflects the river's attack to the opposite bank. As the cycle is repeated the river tends to meander and lengthen. Revetment is placed against the banks of the river at locations where mainline

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levees are being threatened with destruction or where unsatisfactory alignment and channel conditions are developing. Revetment serves a three-fold purpose in that the river is prevented from encroaching on the Main Stem levees, excess material is kept out of the stream, and a favorable channel alignment and depth are maintained. An objective of the plan is to preserve favorable alignments and efficient cross-sectional areas and to prevent the river from creating new meander patterns. In wide reaches of the river, dikes are used to contract the channel width so as to produce an efficient channel for navigation and to insure the flood carrying capacity of the river. Chutes and secondary channels are controlled for the same purpose. Dredging is employed to assist the river in removing natural obstructions which deflect the current into undesirable patterns of flow and to assist in developing an efficient channel. Foreshore protection is utilized to preserve the integrity of the Mississippi River Levees from attack by erosion of the batture. Erosion of the batture leads to steep slopes which, when undermined, result in considerable loss of batture and possible failure of the levee.

The area subject to flooding in the project flood assuming no flood damage reduction works is 22,700,000 acres. The area for which the completed project would reduce the flood risk is 15,100,000 acres. This consists of 226,000 residential acres which include the City of New Orleans, 45,000 acres of commercial lands, 10,600,000 acres of agricultural lands, and 6,500,000 acres of woodland and marshland. The estimated value of these lands and improvements is \$542.4 billion in 2016 dollars.

The LMRMS project was authorized by the Flood Control Act of 1928 after the 1927 flood which overflowed about 26,000 square miles, caused the deaths of 214 people, rendered 637,000 people temporarily homeless, and caused property damages of \$347,000,000. This would be equivalent to \$17,600,000,000 in damages in 2016 prices.

The next flood of magnitude was the 1973 flood, which overflowed 16,875 square miles (10,800,000 acres), caused the death of 28 people, and displaced approximately 45,300 persons.

The 2011 flood set a new flood of record based on a comparison of peak flows measured at representative locations in the lower Mississippi Valley versus previous flood records. In addition, this flood experienced greater stages than the 1927 flood, but since the levees did not crevasse or overtop flooding was reduced by 62 percent. Total damages with existing projects in operation were \$2,800,000,000 (2011 price levels). In addition, \$1,500,000,000 in damages were incurred by Federal flood protection works within the watershed of the Lower Mississippi River and its tributaries.

The LMRMS project reduces the flood risk to 35,000 square miles and, to a lesser extent, to an additional 3,780 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 area as do several major transcontinental communication routes. In addition to highly developed agricultural areas, the LMRMS project benefits urban areas and many industries. Since its construction began, farms and industries have developed in the adjacent areas. Therefore, overtopping or crevassing of the levees would cause far more damage than anticipated at the start of project construction. The main stem levees in the lower reaches include levees that are deficient because of consolidation of the soft underlying soils, especially those below the latitude of Krotz Springs, LA. Construction of these levees to the approved grade would reduce the risk of flood damage and provide a more reliable means of access for the movement of manpower and equipment to any spot in that area threatened by floods.

The Atchafalaya Basin and Floodway features resulted from a comprehensive study with a view to developing a plan for the enhancement, management, and preservation of the water quality and related land resources of the Atchafalaya River Basin, Louisiana, which would include provisions for reductions of siltation, improvement of water quality, and possible improvements of the area for commercial and sport fishing. The Atchafalaya Basin Floodway feature, which is an integral part of the overall flood damage reduction plan of the LMRMS, includes real estate acquisition of lands, flowage easements,

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and developmental control easements in the floodway south of Krotz Springs, Louisiana, to ensure unhampered use of the floodway during major floods; and environmental protection easements to protect the basin's environmental resources. Provision of additional public access and several campgrounds, boat launching ramps, visitors' center, and other recreational facilities are also authorized. The water management units' feature involves making use of distinct and unique hydrologic units within the floodway to improve historical (where practical) overflow conditions and thereby enhance aquatic ecosystem productivity. The benefits of the Atchafalaya Basin Floodway are derived from the way in which they operate together with all other features of the LMRMS project when the Mississippi River floods, the benefit-cost ratio is a composite one that covers the entire plan. This floodway feature is, for all practical purposes, a part of the main river system, in as much as the integrity of the main river system depends upon its utilization.

FISCAL YEAR 2020: The TOTAL unobligated dollars are being applied as follows:

MRL FEATURE

Initiate and complete:

Item 414-R, Bayou Vidal	\$9,000,000
Point Pleasant Phase 3	5,300,000
Point Pleasant 4	6,000,000

Continue:

Planning, Engineering, and Design:

Perform engineering and design work for upcoming MRL work packages	9,245,000
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Construction Management:

Perform Supervision and administration of prior year contracts	9,750,000
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P.L. 112-77 Supplemental funds	111,000
P.L. 114-254 Supplemental funds	2,780,000
P.L. 115-123 Supplemental funds	36,282,000

Total	\$78,468,000
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CHANNEL IMPROVEMENT FEATURE

Revetments	\$42,727,000
P.L. 115-123 Supplemental funds	16,066,000

Total	\$58,793,000
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The items of revetment work are:

Revetments: The planned revetment work consists of the following items of work for which funds are being as follows:

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Continue:	
Lands and Damages	\$170,000
Construction of revetments	26,222,000
Cultural resources	75,000
Automated mattress casting	5,000,000
Planning, engineering, and design	8,770,000
Construction management	2,490,000
P.L. 115-123 Supplemental funds	16,066,000
Total Revetment	\$58,793,000

ATCHAFALAYA BASIN FEATURE

Planning, engineering, and design	\$3,679,000
Total	\$3,679,000

ATCHAFALYA BASIN FLOODWAY FEATURE

Initiate:	
Design plans and specifications for 2 nd Pilot WMU	\$200,000
Continue:	
Monitoring of the Buffalo Cove WMU Pilot Project	\$300,000
Real Estate acquisition	26,000
Construction of first WMU Element 10	4,500,000
P.L. 115-123 Supplemental funds	562,000
Total	\$5,588,000

FISCALYEAR 2021: The budget amount funds will be applied as follows:

MISSISSIPPI RIVER LEVEES FEATURE

Initiate:	
Complete Design for MS River Levee Item 525-R, above Lake-Hardwood, AR	\$ 2,750,000
Design for Nash, MO Slope Flattening	800,00
Award contract for MRL 401-R, Yucatan-Lake Bruin, LA	10,500,000

Division: Mississippi Valley	Memphis, Vicksburg, and New Orleans Districts	Lower Mississippi River Main Stem, Flood Damage Reduction AR, IL, KY, LA, MS, MO and TN
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CHANNEL IMPROVEMENT FEATURE

Revetments		\$15,425,000
Total		\$15,425,000
Construction of Revetment	10,425,000	
Planning, Engineering, and Design	4,085,000	
Construction Management	800,000	
Lands and Damages	75,000	
Cultural Resources	40,000	
Total Revetment	\$15,425,000	
Upper 5 th Contract A		7,000,000
Continue:		
Planning, Engineering, and Design for upcoming work		900,000
Supervision and Administration		
Total		\$21,950,000

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ATCHAFALAYA BASIN FEATURE

\$0

Total

\$0

ATCHAFALAYA BASIN FLOODWAY SYSTEM FEATURE:

Monitoring of the Buffalo Cove Water Management Unit pilot project.

\$300,000

Total

\$300,000

NON-FEDERAL COST: In accordance with the Flood Control Acts of 1928, 1936, 1938, 1941, 1944, 1946, 1950, 1954, 1962, 1965, 1968 and WRDA 1986. The Non-Federal sponsor must comply with the requirements listed below:

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Requirements of Local Cooperation		

Mississippi River Levees:

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Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	\$105,753,000	
Minor maintenance of all flood control works after their completion, except controlling a regulating spillway structures, including special relief levees; maintenance includes normally such matters as cutting grass, removal of weeds, local drainage and minor repairs to mainline river levees.		\$983,000
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	3,064,000	0
Other (levee and revetment construction)	1,249,000	
Total Mississippi River Levees Non-Federal Costs	\$110,066,000	\$983,000
<u>Channel Improvement:</u>		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal area.	100,000	
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, and replacement of recreation facilities.	1,864,000	\$281,000
Total Channel Improvement Non-Federal Costs	\$ 1,964,000	\$281,000

Atchafalaya Basin:

Bear the administrative costs for furnishing rights-of-way for levee and levee drainage construction; purchase maintenance equipment; and perform miscellaneous levee work.	\$ 322,000	
Agree to accept lands under the provision of Section 4 of the Flood Control Act of 15 May 1928, and as provided in the Flood Control Act of 18 August 1941.		0
Bear costs for and maintain all flood control works after their completion, except controlling and regulating spillway structures, including special levees; maintenance includes normally such matters as cutting grass, removal of weeds, local drainage and minor repairs to the levees.		0
For the Upper Point Coupee Loop Area, provide an interior drainage system and comply with the applicable provisions of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970, and comply with the provision of Section 221 of the Flood Control Act of 1970.	23,373,000	\$3,700,000

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The State of Louisiana, through the Department of Transportation and Development as the local sponsor, will provide a voluntary 25 percent cost share for the planning, design, and construction of the interim protection for floodproofing of riverfront businesses in Morgan City and Berwick.

2,500,000

Total Atchafalaya Basin Non-Federal Costs

\$26,195,000

\$3,700,000

Atchafalaya Basin Floodway System:

Pay one half of the separable cost allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.

\$38,408,000

\$1,361,000

Provide lands, easements, right-of-way, and dredged material disposal areas for recreation.

950,000

Pay 25 percent of construction, operation, and maintenance of Water Management Units.

29,916,000

7,253,000

Total Atchafalaya Basin Floodway System Non-Federal Costs

\$69,274,000

\$8,614,000

TOTAL NON-FEDERAL COSTS

\$207,499,000

\$13,578,000

STATUS OF LOCAL COOPERATION:

Mississippi River Levees: It is estimated that local interests had spent approximately \$292 million for flood protection prior to the Act of 15 May 1928. After passage of the Act, the 37 levee districts along the Mississippi River adopted resolutions assuring the United States that the requirements of local cooperation will be met. These local interests have acquired all rights-of-way for work completed and underway and are responsible for providing the rights-of-way for work scheduled for the current and future fiscal years. Supplemental assurances covering the requirements of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970 have been accepted for Main Stem Mississippi River Levees in Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee.

Assurances of local cooperation for the recreation facilities at Warfield Point, Mississippi, were accepted on 14 October 1969. Supplemental assurances covering the River and Harbor Act of 1970 and Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970 were accepted 7 August 1972. Assurances have not as yet been requested for the recreation facilities at Mississippi River State Park, Arkansas.

Channel Improvement: Assurances furnished by the Missouri Department of Conservation for the Dorena Recreation Facility were accepted 27 August 1971; assurances furnished by the Tennessee Department of Conservation for the Richardson Landing Recreation Facility were accepted 3 September 1976; and assurances furnished by the City of Memphis, Tennessee, for Volunteer Bicentennial Park were accepted 11 September 1975. Assurances furnished by the City of Osceola, Arkansas, for Lake Neark, Arkansas, are embodied in the contract for cost sharing approved on 19 September 1982. A Local Cooperation Agreement for the Ed Jones Boat Ramp with the State of Tennessee was signed 27 October 1988. A Local Cooperation Agreement for the Shelby Forest Boat Ramp with the State of Tennessee was signed 11 October 1990. A Local Cooperation Agreement for the Dyersburg, Tennessee, Boat Ramp with the State of Tennessee was signed 11 July 1994.

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Atchafalaya Basin: Necessary assurances for maintaining the feature have been furnished by the Atchafalaya Basin Levee District; Red River, Atchafalaya and Bayou Boeuf Levee District; St. Mary Parish Government; Pointe Coupee Parish Police Jury; and the towns of Berwick and Morgan City, Louisiana. These agencies are furnishing all requirements of local cooperation necessary for meeting present schedules. Newly formed St. Mary Parish Levee District has expressed interest in serving as the local sponsor for portions of the feature in St. Mary Parish.

Atchafalaya Basin Floodway System: The Avoyelles Parish Police Jury is the non-Federal sponsor for the Simmesport Boat Ramp and the PPA was executed on 18 April 2001. The State of Louisiana has provided a letter of intent supporting the recreation feature and agrees to its cost sharing requirements. The State designated the Department of Natural Resources to be the lead State agency to represent the State in the implementation. An additional sponsor, St. Mary Parish, serves as local sponsor for Myette Point Boat Landing, and the PPA was executed on 18 May 2004. The State of Louisiana, Department of Natural Resources, is also serving as the sponsor for the management units. The PPA for the Buffalo Cove management unit was executed on 16 May 2005.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$11,059,581,000 is an increase of \$438,687,000 from the latest estimate (\$10,620,894,000) presented to Congress (FY 2020). This change includes the following items:

MISSISSIPPI RIVER LEVEES:	
Price Escalation on Construction Features	\$10,601,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	37,173,000
Price Escalation on Real Estate	8,288,000
Price Escalation on Design Cost	8,500,000
Price Escalation on Construction Management Cost	\$5,500,000
Total	\$63,356,000
CHANNEL IMPROVEMENT:	
Price Escalation on Construction Features	\$80,499,000
Price Escalation on Real Estate	501,000
Adjustment of PED Costs	(10,000,000)
Total	\$71,000,000
ATCHAFALAYA BASIN:	
Price Escalation on Construction Features	(\$69,000,000)
Total	(\$69,000,000)
ATCHAFALAYA BASIN FLOODWAY STUDY:	
Price Escalation on Construction Features	\$36,526,000
Total	\$36,526,000

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STATUS OF ENVIRONMENTAL IMPACT STATEMENT:

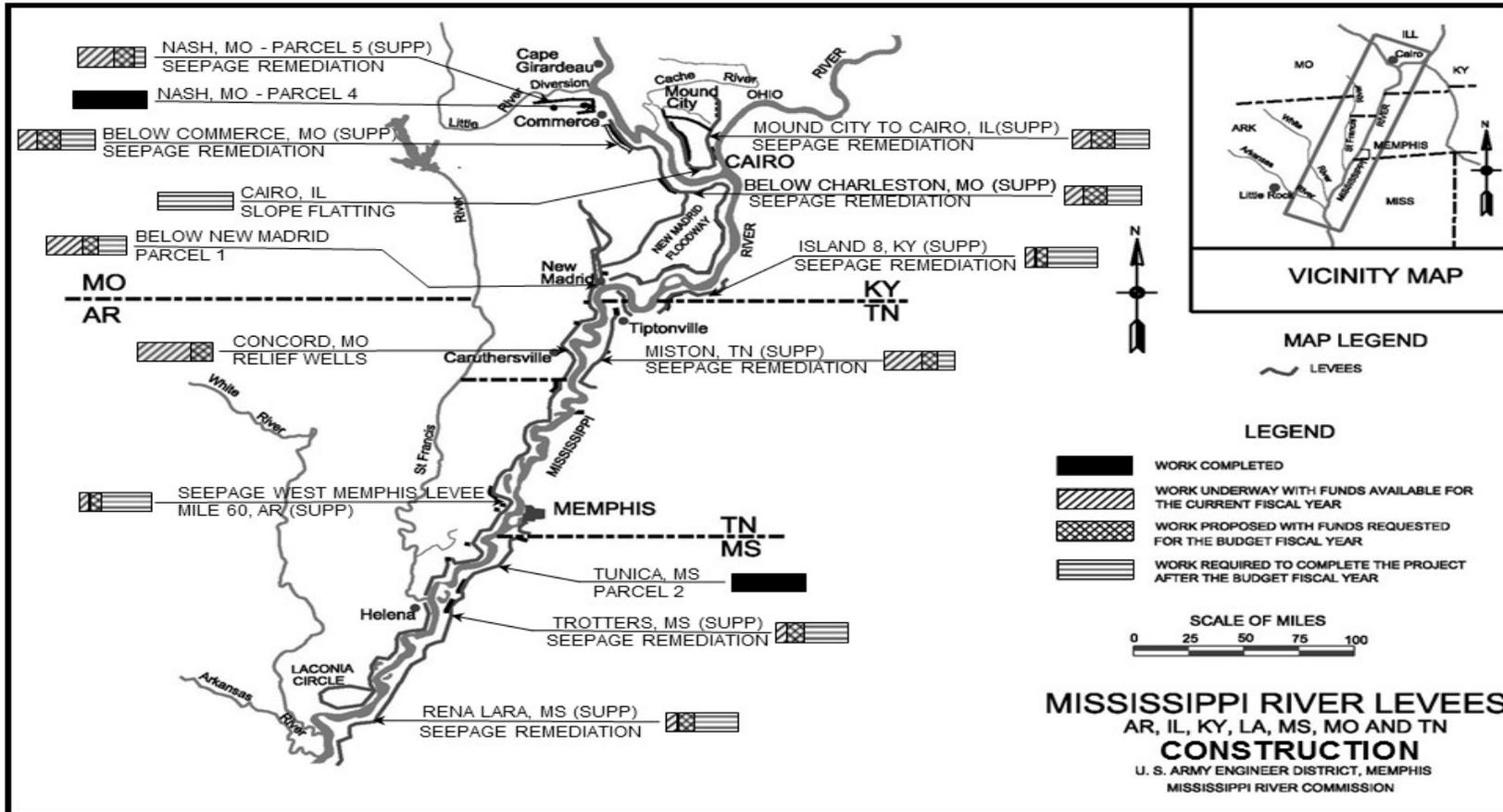
MISSISSIPPI RIVER LEVEES: The Final Environmental Impact Statement was filed with the Council on Environmental Quality on 16 April 1976. A Supplemental Environmental Impact Statement for the feature was completed and the Record of Decision was signed on 5 October 1998. The adequacy of the Supplemental Environmental Impact Statement was challenged but upheld by the United States District Court for the Eastern District of Louisiana. The Fifth Circuit Court of Appeals on October 23, 2000, affirmed the district court's grant of summary judgment to the Government.

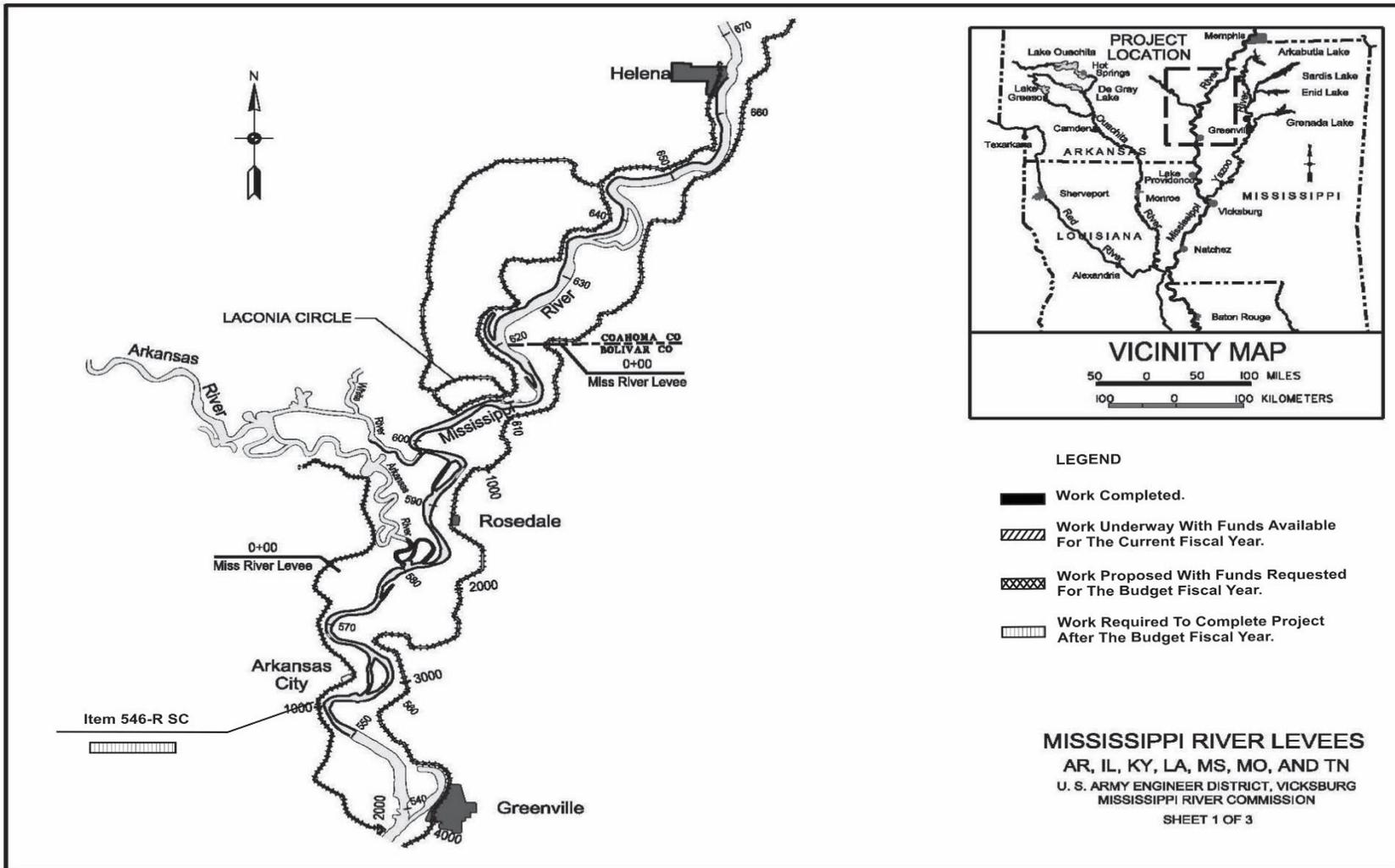
CHANNEL IMPROVEMENT: The Final Environmental Impact Statement was filed with the Council on Environmental Quality on 16 April 1976.

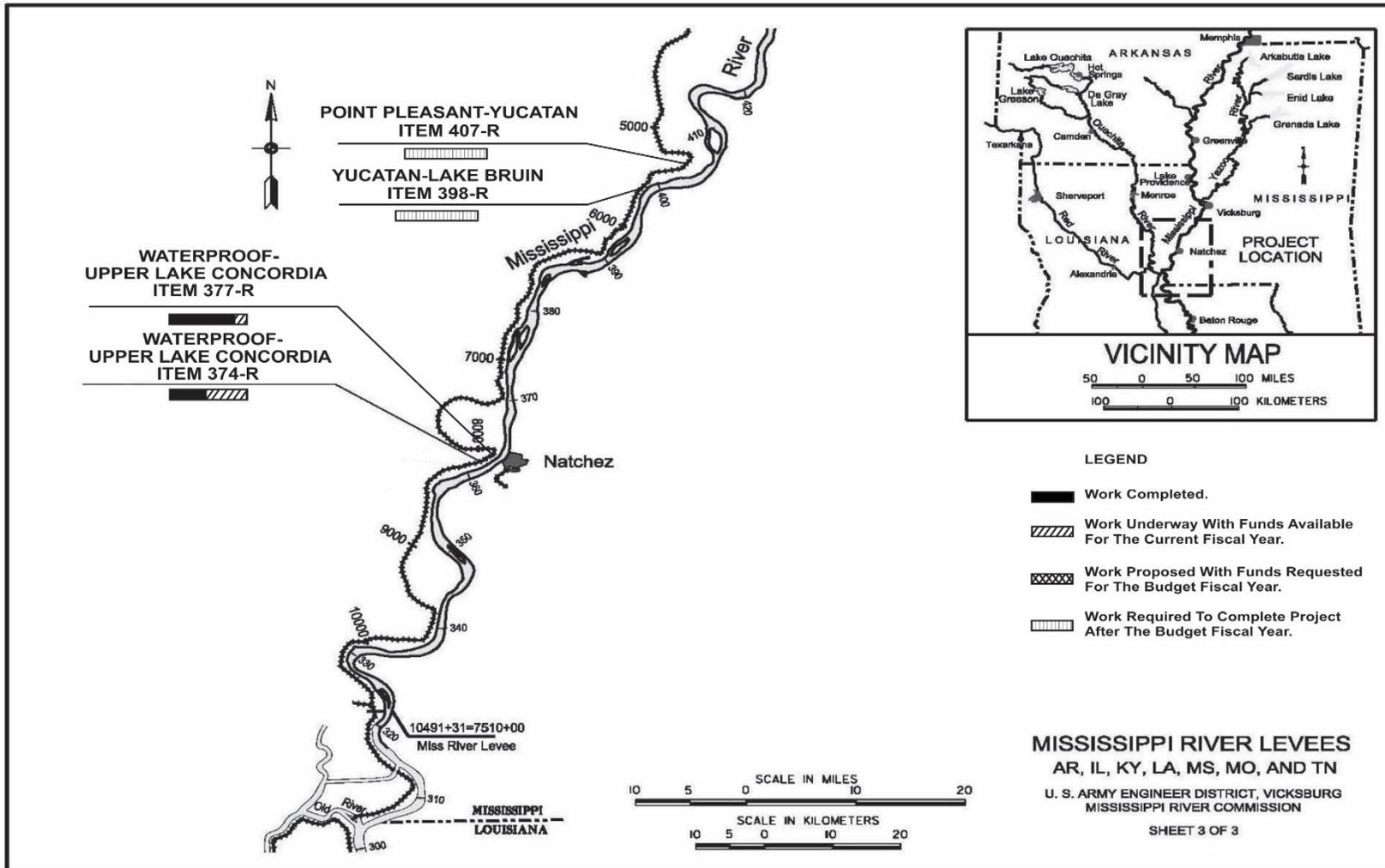
ATCHAFALAYA BASIN: The final Environmental Impact Statement was filed with the Environmental Protection Agency on 20 August 1982. The final Environmental Impact Statement for the Upper Pointe Coupee Loop Area was filed with the Council on Environment Quality on 11 June 1976.

ATCHAFALAYA BASIN FLOODWAY SYSTEM: The final EIS was filed with the Environmental Protection Agency on 20 August 1982. A Supplemental Environmental Impact Statement (SEIS) for Henderson Lake Management Unit and Recreation Feature (combined) was initiated in FY 2008 with anticipated completion and approval in FY 2014. A SEIS for Buffalo Cove, Flat Lake, Beau Bayou, and Cocodrie Swamp has also been initiated with completion paralleling the 5-year monitoring program for Buffalo Cove.

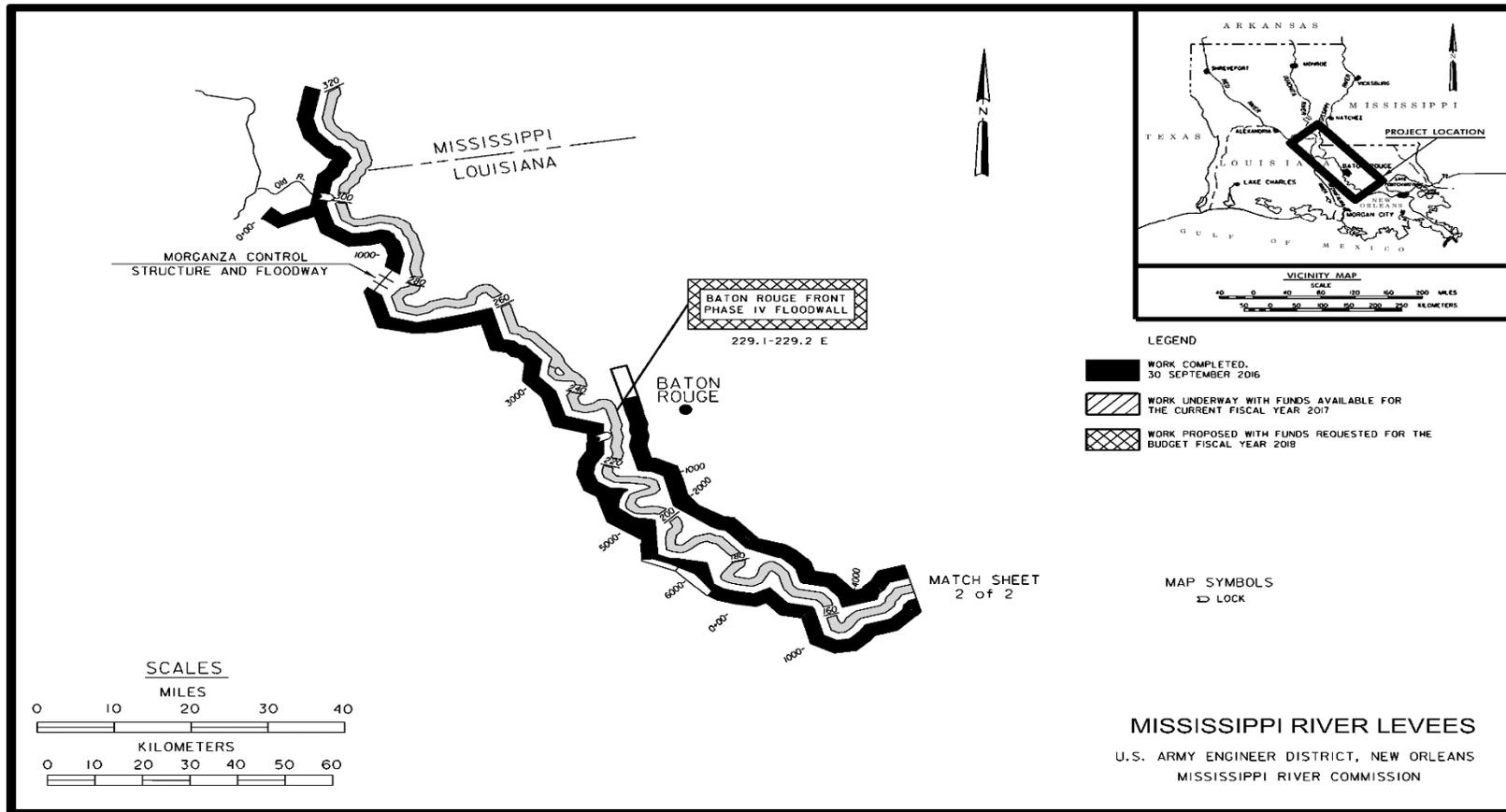
OTHER INFORMATION: Initial construction funds were appropriated in 1928 for the Mississippi River Levees, Channel Improvement, and Atchafalaya Basin features of the LMRMS project; and in 1985 for Atchafalaya Basin Floodway System feature.



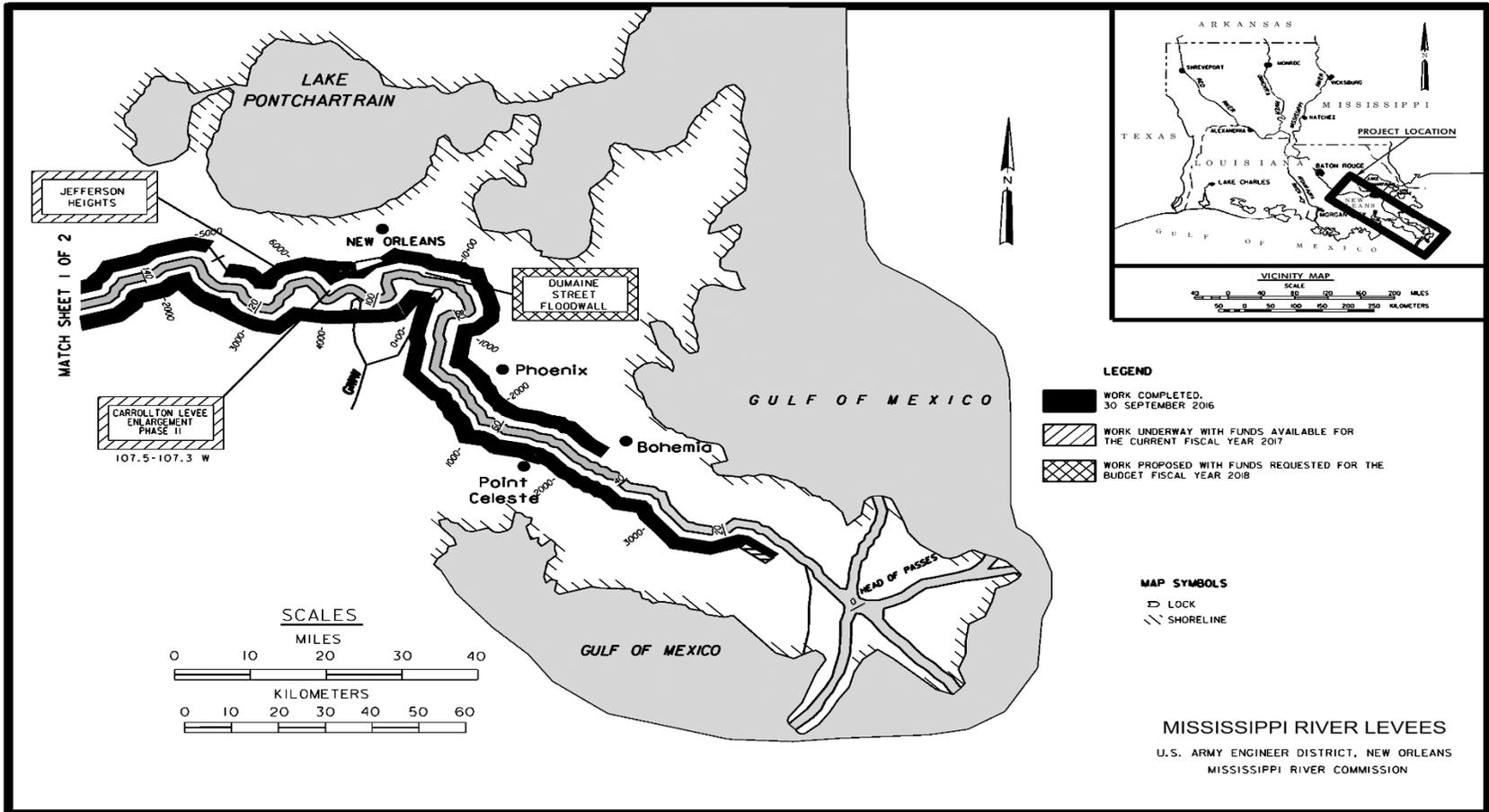




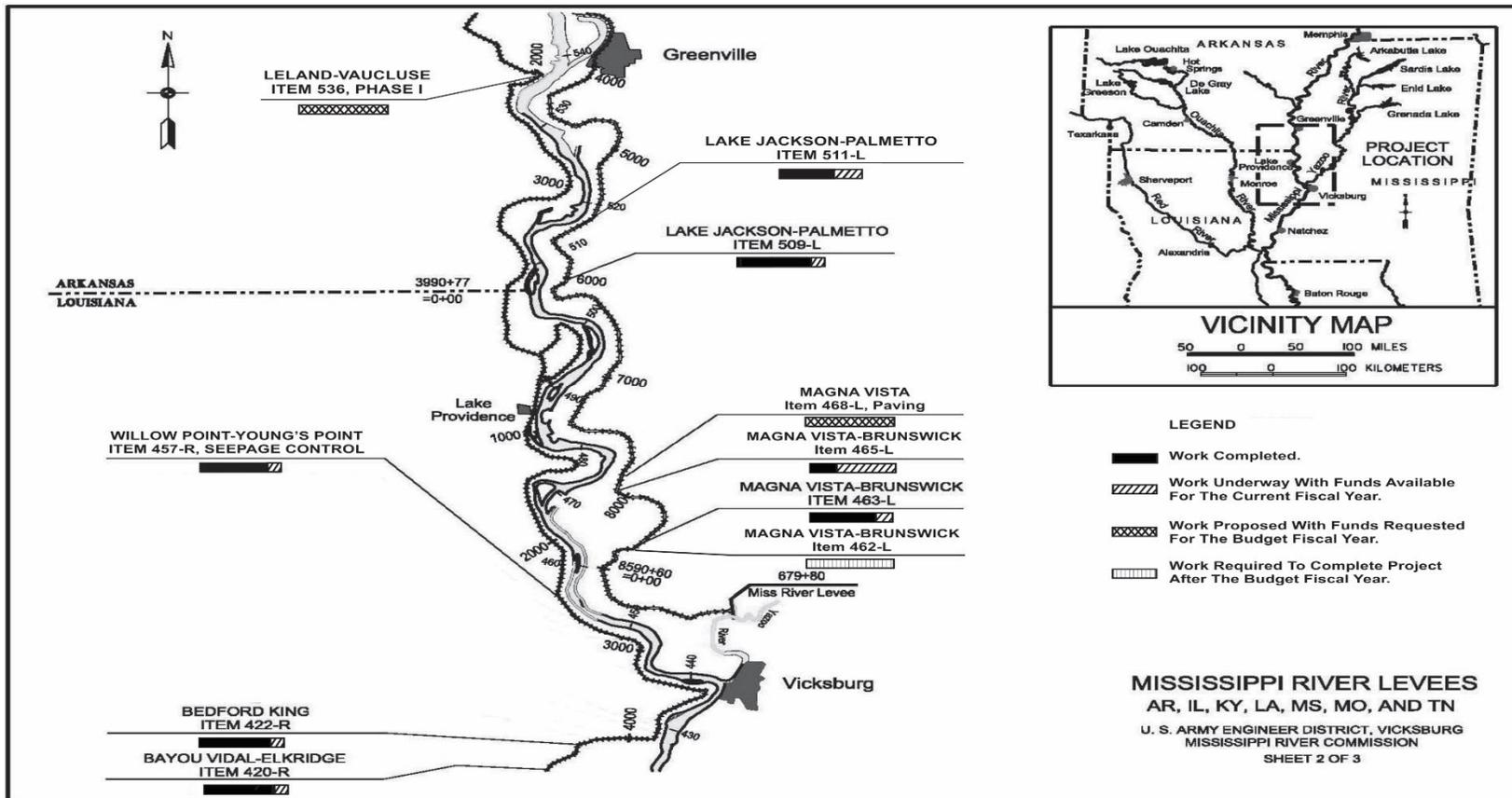
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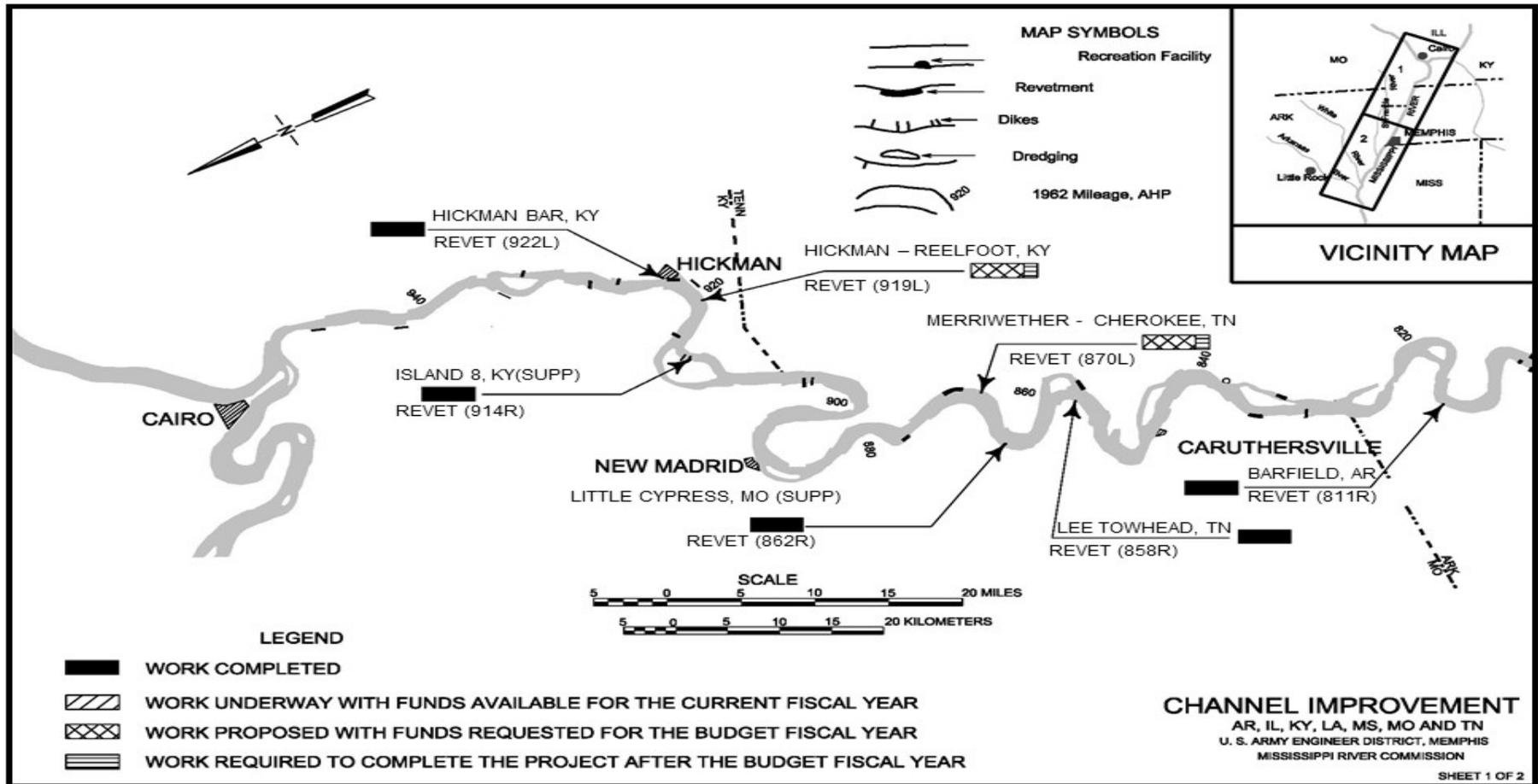


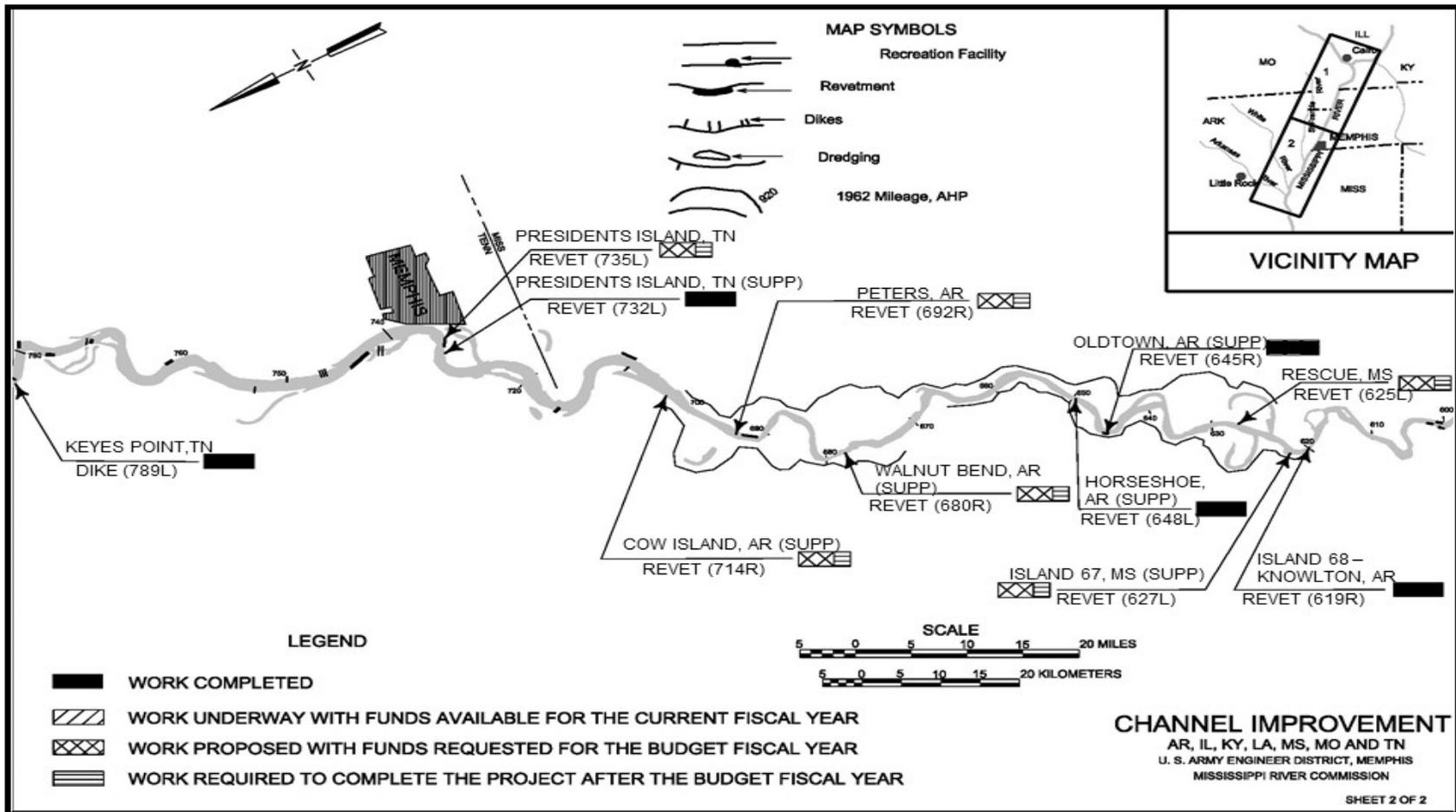
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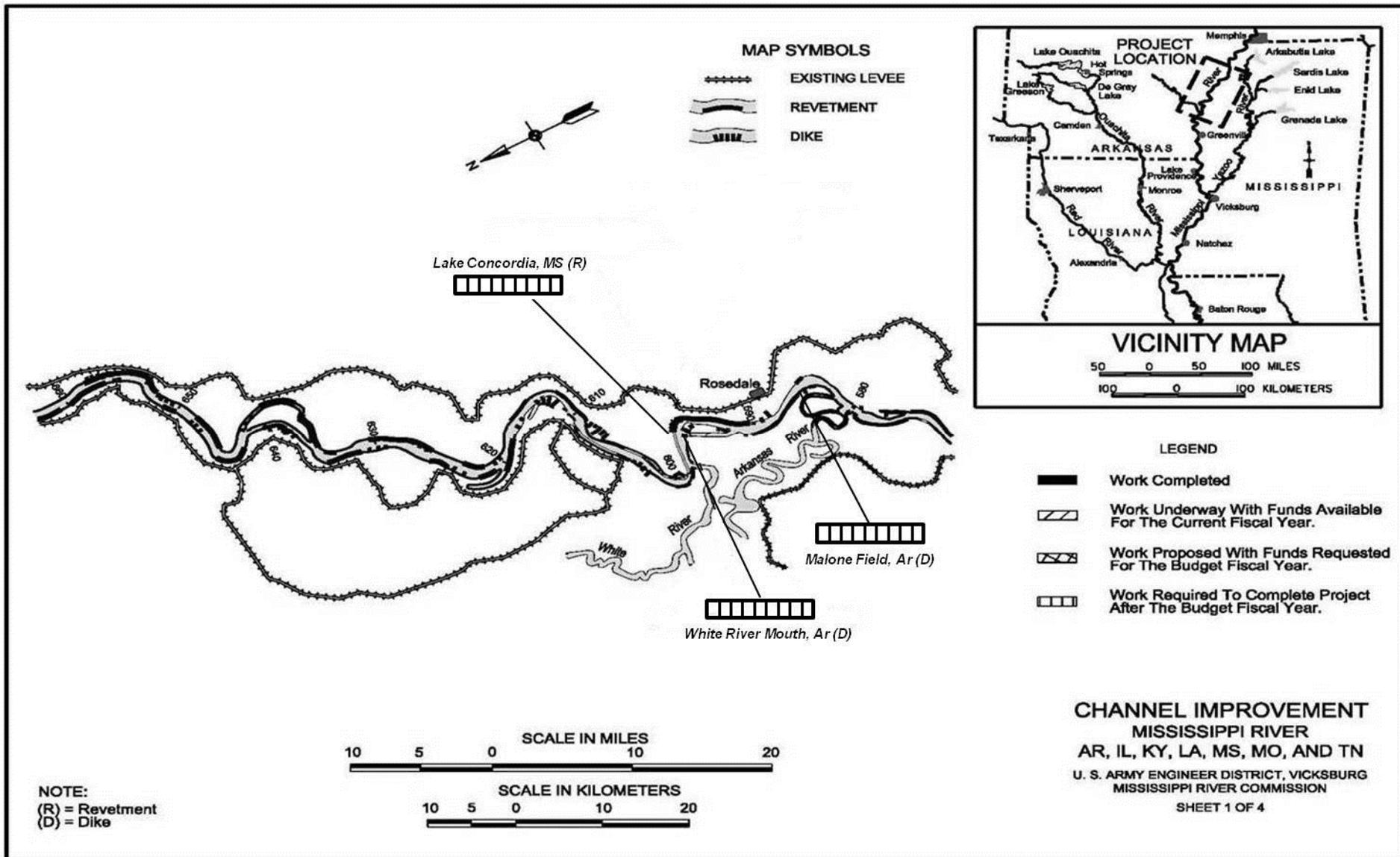


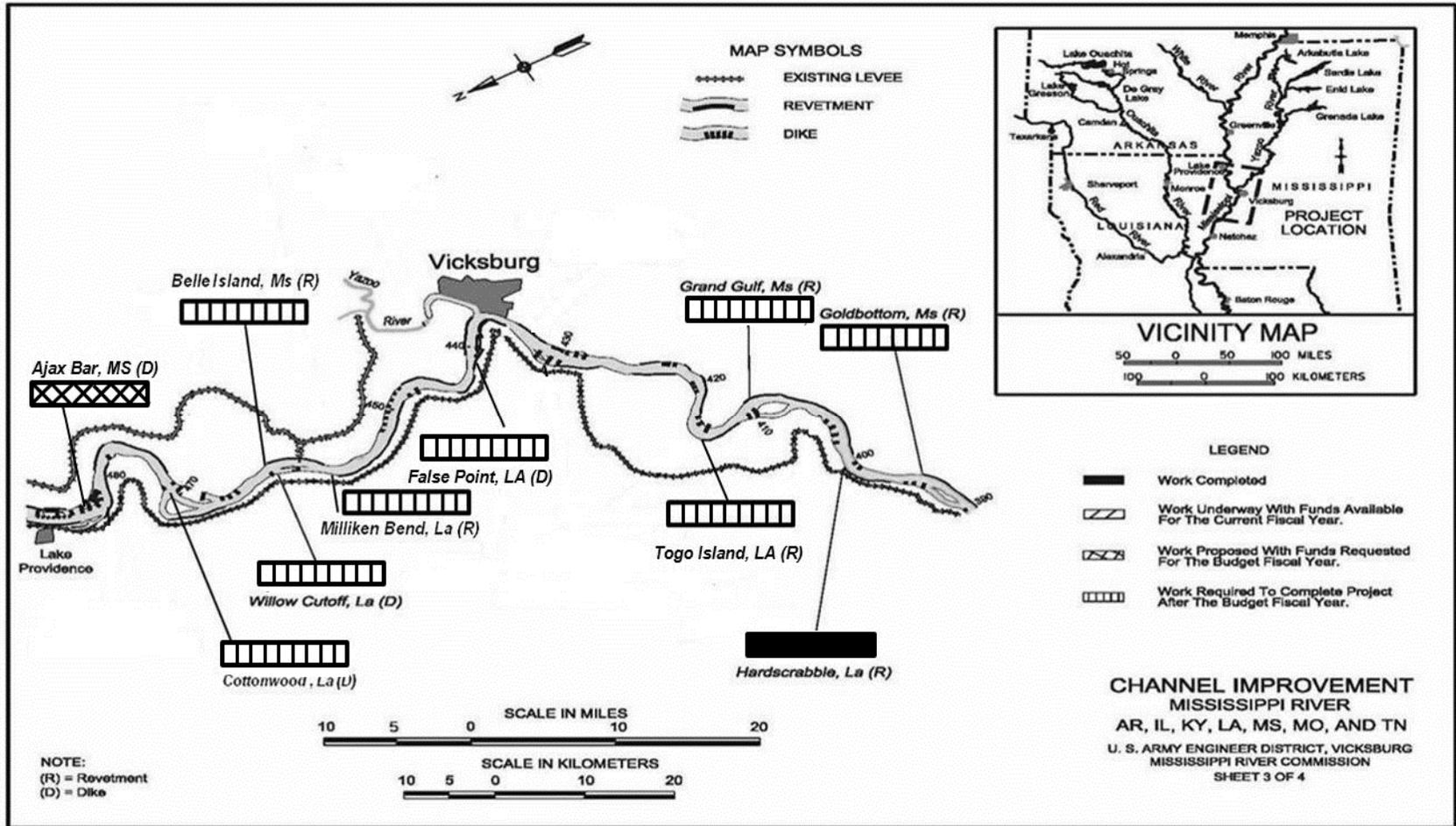
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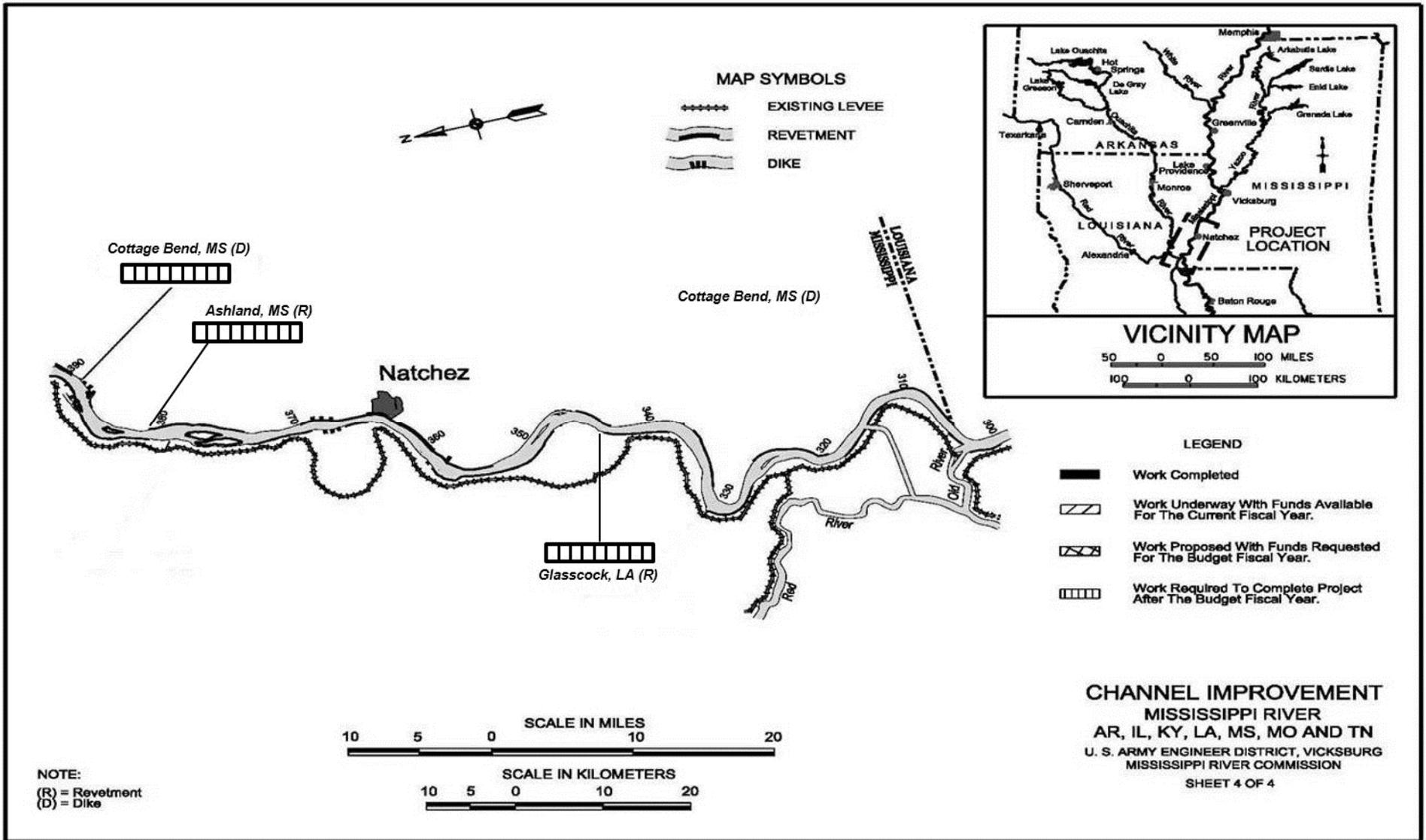


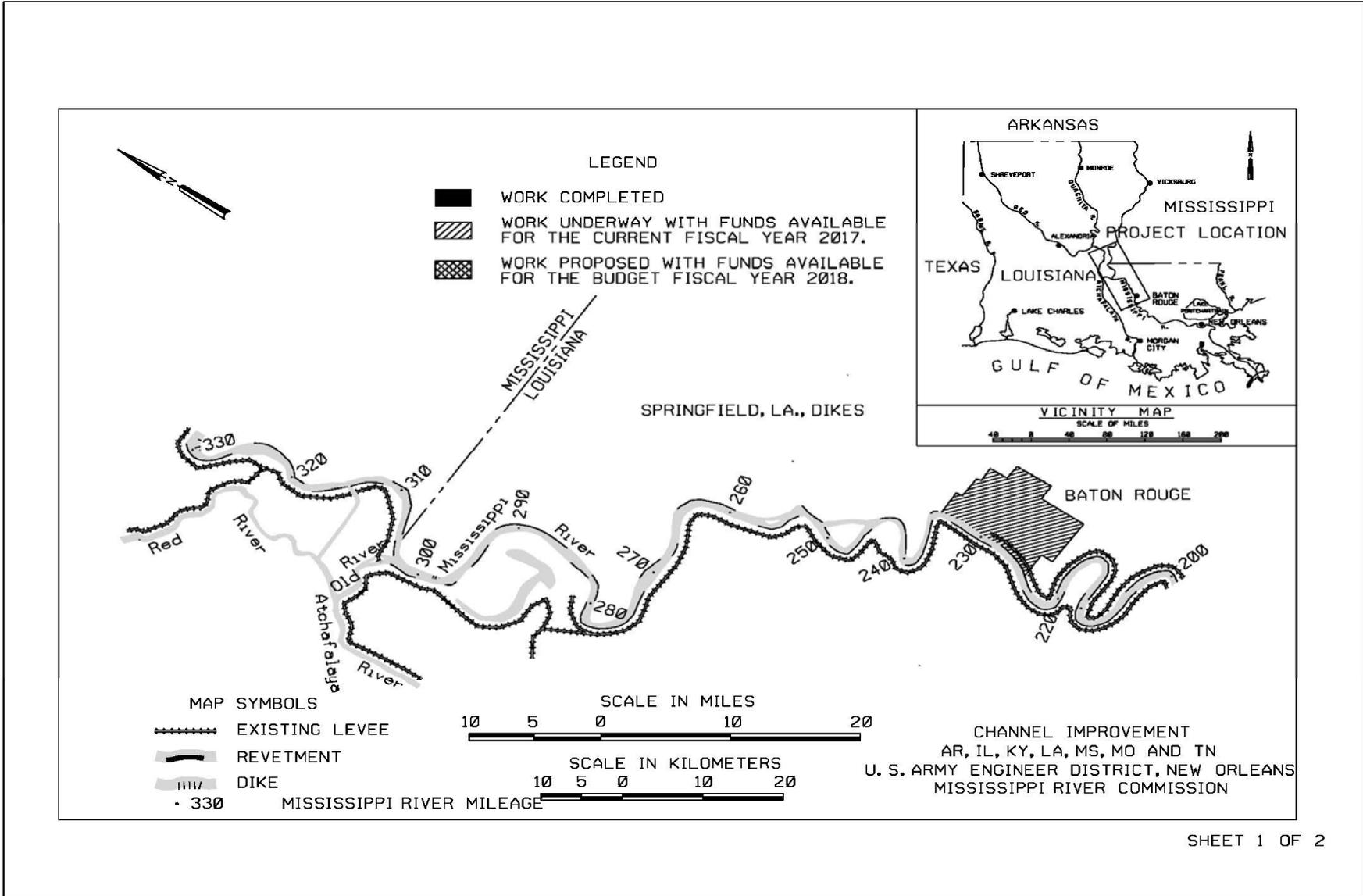


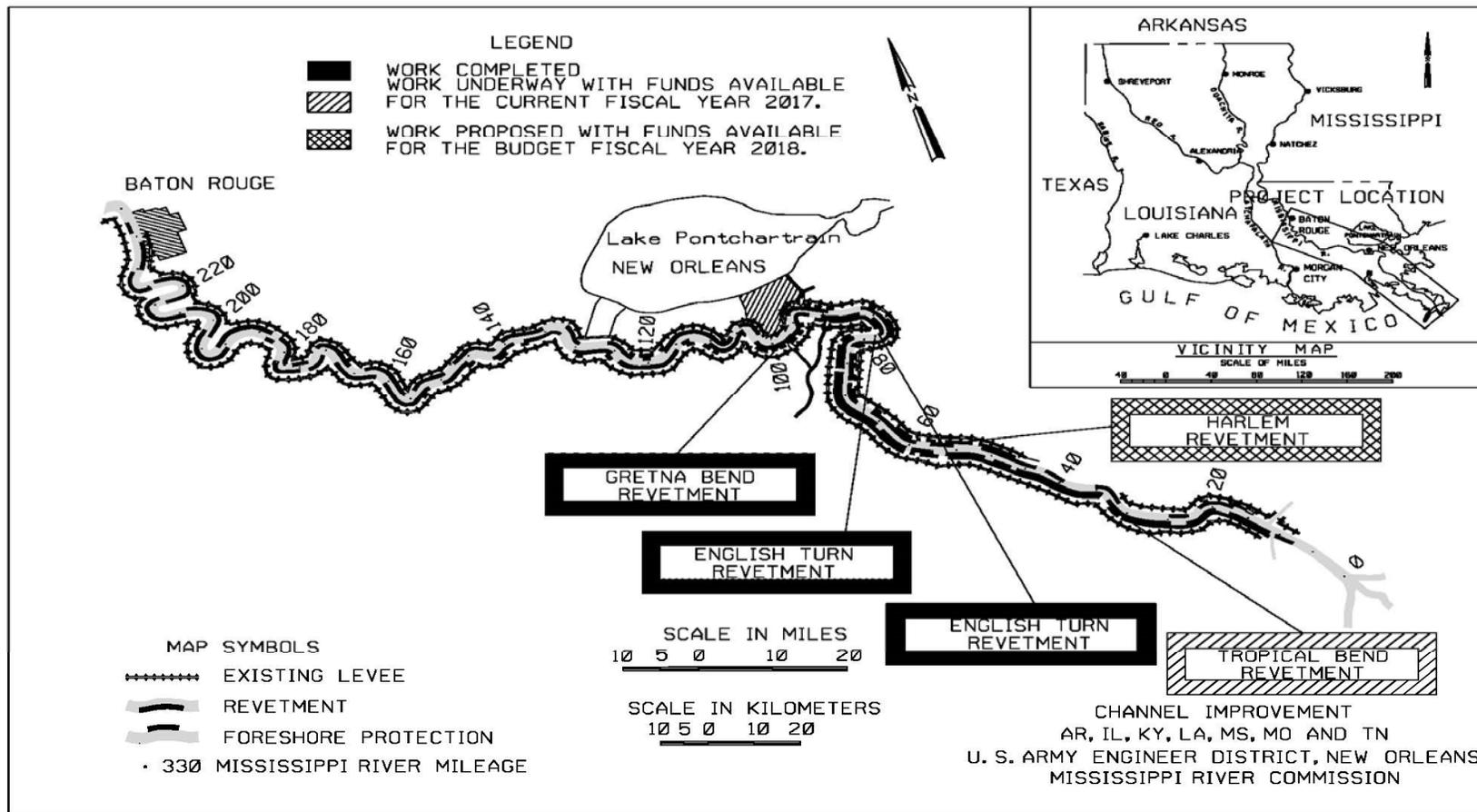




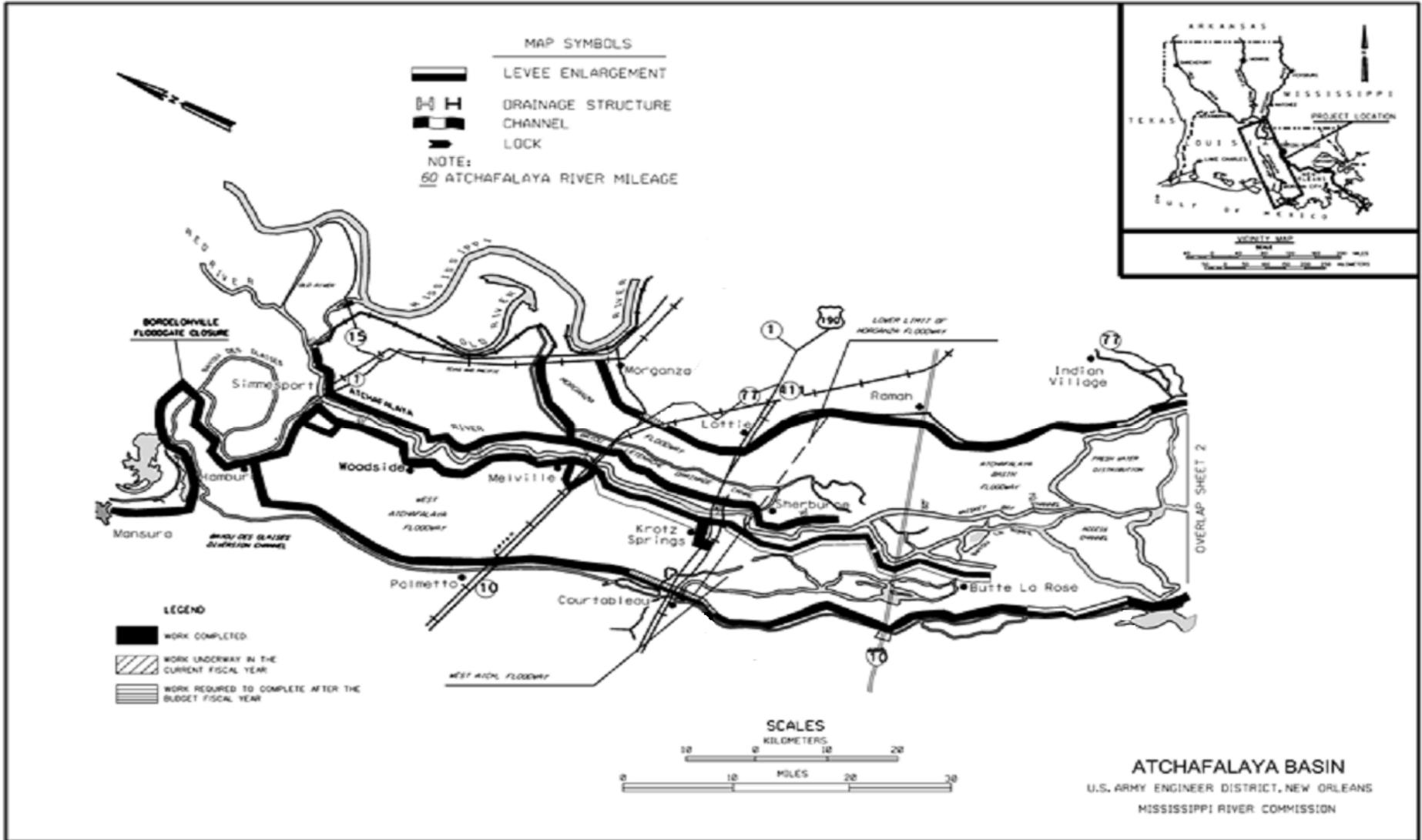








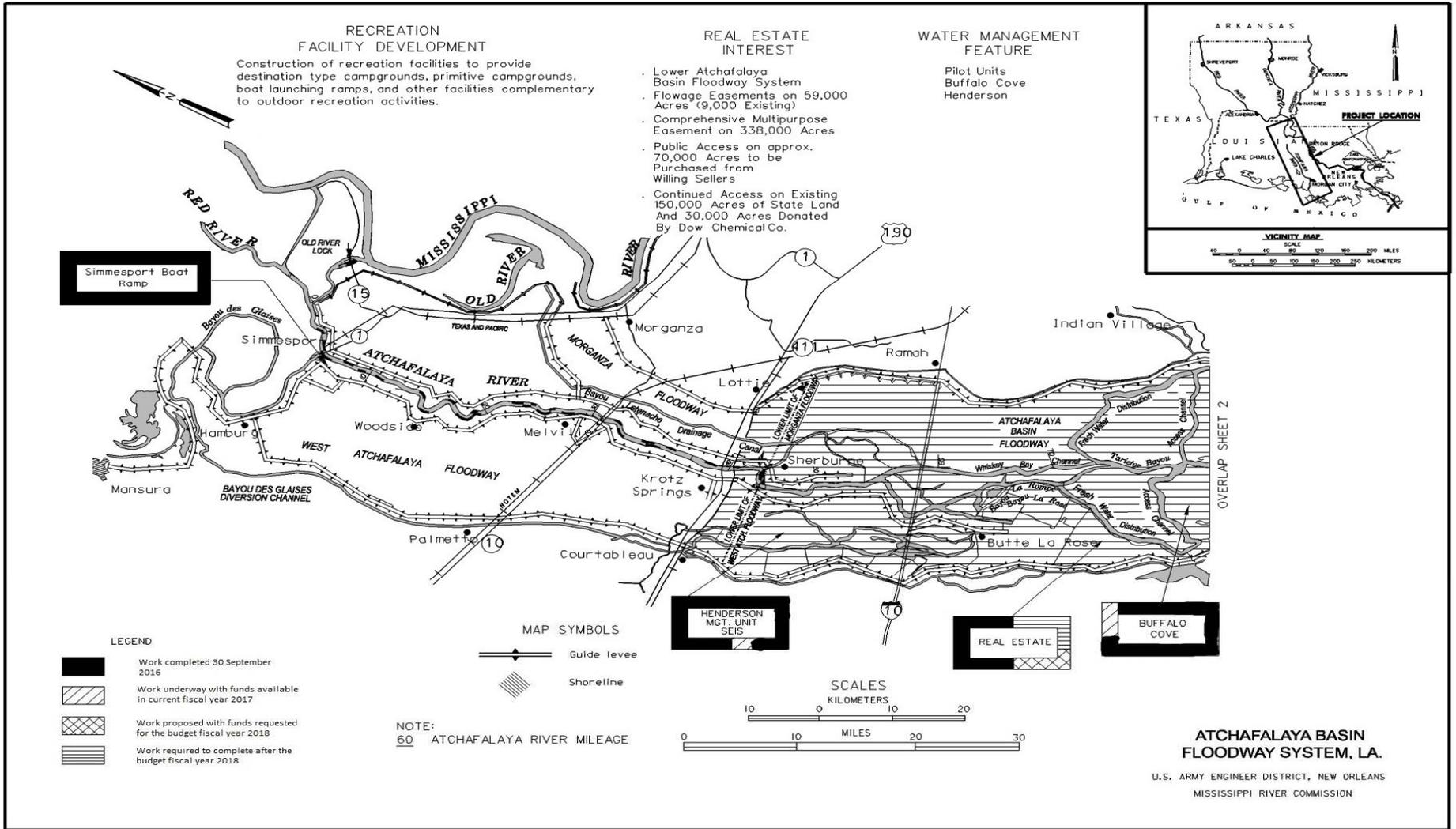
SHEET 2 OF 2



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OPERATION AND MAINTENANCE ACTIVITIES

KEY TO ABBREVIATIONS:

N = NAVIGATION

FRM = FLOOD RISK MANAGEMENT

RC = RECREATION

H = HYDROPOWER

EN = ENVIRONMENT

WS = WATER SUPPLY

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APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Lower Arkansas River, North Bank, AR – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1946 (P.L. 79-526), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: This project is located in southeast Arkansas. The north bank levee reduces the risk of flooding into the alluvial valley of the Arkansas River below Pine Bluff, Arkansas.

FISCAL YEAR 2019 ALLOCATION: \$304,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$1,532,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$184,000 O: \$41,000 T: \$225,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$225,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$280,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Lower Arkansas River, South Bank, AR – Operation and Maintenance

AUTHORIZATION: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391), and the Flood Control Acts of 1936 (P.L. 74-738), 1946 (P.L. 79-526), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: This project is located in southeast Arkansas. The South Bank levee reduces the risk of flooding from overflow from the lower Arkansas River into the alluvial valley of the Tensas Basin below Pine Bluff, Arkansas. The South Bank levee works in conjunction with the west bank Mississippi River levee to reduce the flood risk in this part of the Tensas Basin.

FISCAL YEAR 2019 ALLOCATION: \$187,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$148,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$176,000 **O:** \$122,000 **T:** \$298,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$298,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$80,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Lower Mississippi River Main Stem, Commercial Navigation, AR, IL, KY, LA, MS, MO and TN – Operation and Maintenance

AUTHORIZATION: The operation and maintenance of the Lower Mississippi River Main Stem (LMRMS) project involves three interrelated commercial navigation features: Atchafalaya Basin, Channel Improvement, and Old River.

- Atchafalaya Basin authorization: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391) and as amended by the Flood Control Act of 1954 (Title II of P.L. 83-780)
- Channel Improvement authorization: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391), the Flood Control Acts of 1936 (P.L. 74-738), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), 1962 (Title II of P.L. 87-874), 1966 (Title II of P.L. 89-789), and 1970 (Title II of P.L. 91-611)
- Old River authorization: Flood Control Act of 1954 (Title II of P.L. 83-780)

LOCATION AND DESCRIPTION: The LMRMS project stretches from the vicinity of Cairo, Illinois to the Gulf of Mexico. The project consists of an interrelated series of levees, revetments, dikes, foreshore protection, and related works, plus maintenance dredging, to help manage the flow of the main stem of the Lower Mississippi River for flood risk management and commercial navigation.

FISCAL YEAR 2019 ALLOCATION: \$60,792,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work as follows:

- Atchafalaya Basin - Operate and maintain navigation features and dredging (\$7,200,000);
- Channel Improvement (Dredging & Dikes) - Perform maintenance dredging and dike maintenance of the main stem of the Lower Mississippi River including bank preparation and placement of articulated concrete mattress and foreshore protection (\$14,855,000);
- Old River – Operate and maintain navigation features; dredging; replace the Old River Lock gantry crane; and fabricate two miter gates (\$38,737,000).

FISCAL YEAR 2020 ALLOCATION: \$43,849,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work as follows:

- Atchafalaya Basin - Operate and maintain navigation features; maintenance dredging; replace the southwest guide wall; repair bridge beams; repair sink holes; repair/replace gate machinery; and repair wall armoring (\$17,105,000);
- Channel Improvement (Dikes and Dredging) - Perform maintenance dredging and dike maintenance of the Mississippi River including bank preparation and placement of articulated concrete mattress and foreshore protection (\$16,394,000);
- Old River – Operate and maintain navigation features; maintenance dredging; refurbish the tainter valves; replace the Old River Lock gantry crane and rails; and perform lighting improvements (\$10,350,000).

BUDGETED AMOUNT FOR FY 2021: M: \$11,180,000 O: \$17,065,000 T: \$28,245,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: \$28,245,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including maintenance dredging and stone repairs.

Division: Mississippi Valley

Districts: Memphis, Vicksburg,
New Orleans

Lower Mississippi River Main Stem,
Commercial Navigation,
AR, IL, KY, LA, MO AND TN

FRM: N/A

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Channel improvements are authorized to support a 9-foot deep by 300-foot wide navigation channel on the main stem of the Lower Mississippi River from Cairo, IL to the Gulf of Mexico.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$4,947,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Lower Mississippi River Main Stem, Flood Damage Reduction, AR, IL, KY, LA, MS, MO and TN – Operation and Maintenance

AUTHORIZATION: The operation and maintenance (O&M) of the Lower Mississippi River Main Stem project involves six interrelated flood damage reduction features: the Atchafalaya Basin, Atchafalaya Basin Floodway System, Bonnet Carre, Channel Improvement, Mississippi River Levees, and Old River.

- Atchafalaya Basin authorization: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391) and as amended by the Flood Control Act of 1954 (Title II of P.L. 83-780)
- Atchafalaya Basin Floodway System authorization: Supplemental Appropriations Act of 1985 (P.L. 99-88), Water Resources Development Act, of 1986 (P.L. 99-662), Energy and Water Development Appropriations Act of 1988 (P.L. 100-202), Energy and Water Development Appropriations Act of 1991 (P.L. 101-514), Energy and Water Development Appropriations Act of 1997 (P.L. 104-206), and Water Resources Development Act of 2000 (P.L. 106-541), and Water Resources Development Act of 2007 (P.L. 110-114)
- Bonnet Carre and Old River authorization: Flood Control Act of 1954 (Title II of P.L. 83-780)
- Channel Improvement authorization: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391), the Flood Control Acts of 1936 (P.L. 74-738), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), 1962 (Title II of P.L. 87-874), 1966 (Title II of P.L. 89-789), and 1970 (Title II of P.L. 91-611)
- Mississippi River Levees authorization: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391), Flood Control Act of 1936 (P.L. 74-738), Flood Control Acts of 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1946 (P.L. 79-526), 1950 (Title II of P.L. 81-516), 1954 (Title II of P.L. 83-780), 1962 (Title II of P.L. 87-874), and 1965 (Title II of P.L. 89-298), 1968 (Title II of P.L. 90-483), River Basin Monetary Authorization Act of 1971 (P.L. 92-222), the Water Resources Development Act of 1992 (P.L. 102-580), 2000 (P.L. 106-541), and 2014 (P.L. 113-121)

LOCATION AND DESCRIPTION: The flood damage reduction features of the LMRMS project stretch from the vicinity of Allenville, Missouri to the Gulf of Mexico. The project consists of an interrelated series of levees, revetments, dikes, foreshore protection, and related works, plus maintenance dredging, to help manage the flow of the main stem of the Lower Mississippi River for flood damage reduction and commercial navigation.

FISCAL YEAR 2019 ALLOCATION: \$79,388,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities as follows:

- Atchafalaya Basin - operate and maintain this project feature to maintain the integrity and reliability of the existing structures and facilities (\$3,860,000);
- Atchafalaya Basin Floodway System - operate and maintain 28,500 acres of fee-owned property, including janitorial and mowing maintenance and visitor assistance; water safety patrols; inspect levees and easements; operate recreation features; and protect natural resources (\$2,140,000);
- Bonnet Carre, LA - operate and maintain this project feature; manage and maintain natural resources including bottomland hard and swamp reforestation; and renovate ranger office with energy efficient lighting (\$4,168,000);
- Channel Improvement (Revetments) - perform bank stabilization maintenance activities associated with Mississippi River channel revetment including bank preparation and placement of articulated concrete mattress and foreshore protection (\$49,476,000);
- Mississippi River Levees - conduct levee maintenance including slide repairs, relief wells, water control data systems; operate and maintain the Jesse Brent Lower Mississippi River Museum; and maintain mitigation lands (\$15,119,000);

Division: Mississippi Valley

District: Memphis, Vicksburg,
New Orleans

Lower Mississippi River Main
Stem, Flood Damage Reduction,
AR, IL, KY, LA, MS, MO and TN

- Old River LA - operate and maintain the project features to maintain the integrity and reliability of the existing structures and facilities; perform reconnaissance surveys, real estate management, instrumentation and data gathering; operate and maintain recreation functions and provide natural resource management; develop project interpretive trail plan; and management of wildlife and critical habitat on fee-owned lands (\$4,625,000).

FISCAL YEAR 2020 ALLOCATION: \$108,533,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities as follows:

- Atchafalaya Basin - operate and maintain this project feature to maintain the integrity and reliability of the existing structures and facilities; and repairs to the Pointe Coupee Pumping Station (\$7,870,000);
- Atchafalaya Basin Floodway System – operate and maintain 28,500 acres of fee-owned property, including janitorial and mowing maintenance and visitor assistance; water safety patrols; inspect levees and easements; operate recreation features; protect natural resources; improve parking lots; construct a ranger office; and complete the environmental compliance documentation for the master plan (\$5,652,000);
- Bonnet Carre, LA - operate and maintain this project feature and manage and maintain natural resources including bottomland hard and swamp reforestation; rebuild the spillway crane; and sandblast and paint the gate bays and rail supports (\$5,530,000);
- Channel Improvement (Revetments) - perform bank stabilization maintenance activities associated with Mississippi River channel revetment including bank preparation and placement of articulated concrete mattress and foreshore protection (\$56,647,000);
- Mississippi River Levees - conduct levee maintenance including slide repairs, relief wells, water control data systems; and maintain mitigation lands (\$22,097,000);
- Old River LA – operate and maintain this project feature to maintain the integrity and reliability of the existing structures and facilities; install a vault restroom; replace lighting; upgrade the security system; and rehabilitate the Low Sill gantry crane (\$10,737,000).

BUDGETED AMOUNT FOR FY 2021: M: \$68,470,000 O: \$13,775,000 T: \$82,245,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$79,455,000 – Funds will be used for commonly performed O&M work.

RC: \$1,858,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$932,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$52,941,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

Division: Mississippi Valley

District: Memphis, Vicksburg,
New Orleans

Lower Mississippi River Main
Stem, Flood Damage Reduction,
AR, IL, KY, LA, MS, MO and TN

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: St. Francis Basin, AR & MO – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-678), 1941 (P.L. 77-228), 1946 (P.L. 79-526), 1950 (Title II of P.L. 81-516), 1965 (Title II of P.L. 89-298) and 1968 (Title II of 90-483). Local cooperation requirements were modified by the Flood Control Act of 1946 (P.L. 79-526), which limited local responsibility to ordinary maintenance as defined by Section 3 of the Flood Control Act of 1928 (P.L. 70-391).

LOCATION AND DESCRIPTION: The project extends from southwest of Cape Girardeau, MO to the confluence of the St. Francis and Mississippi Rivers, ten miles north of Helena, AR. The project features include 400 miles of levees and 800 miles of ditches. It reduces the flood risk to an area of 14,000,000 acres, with agricultural lands, numerous small towns, several major railroads, highways, and utilities.

FISCAL YEAR 2019 ALLOCATION: \$25,800,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M). Funds were also used for specific work activities including supervision and administration of contracts like for the Elk Chute Setback Levee and for West Basin scour repairs.

FISCAL YEAR 2020 ALLOCATION: \$11,950,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including the Iron Mines ditch cleanout and the Stateline Ditch Levee renovation.

BUDGETED AMOUNT FOR FY 2021: M: \$8,971,000 O: \$2,090,000 T: \$11,061,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$11,061,000 – Funds will be used for commonly performed O&M work. Funds will also be used for specific work activities including ditch cleaning and clearing of blockages.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$2,289,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Tensas Basin, Boeuf and Tensas River, AR & LA – Operation and Maintenance

AUTHORIZATION: Flood Control Acts of 1944 (P.L. 78-534), 1946 (P.L. 79-526), 1950 (Title II of P.L. 81-516), 1958 (Title II of P.L. 85-500), 1962 (Title II of P.L. 86-645), 1965 (Title II of P.L. 89-298), 1968 (Title II of P.L. 90-483), and the Water Resources Development Act of 1986 (P.L. 99-662)

LOCATION AND DESCRIPTION: This project is located in central and northeast Louisiana and southeast Arkansas, and includes the Lake Chicot pumping plant. It reduces the flood risk and provides drainage for an area of 5,300 square miles in southeast Arkansas and northeast Louisiana.

FISCAL YEAR 2019 ALLOCATION: \$4,450,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$2,087,000

DESCRIPTIONS OF WORK FOR FY 2021: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including upgrading the Lake Chicot Pumping Plant gantry crane.

BUDGETED AMOUNT FOR FY 2021: M: \$0 O: \$1,291,000 T: \$1,291,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$1,291,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$215,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: White River Backwater, AR – Operation and Maintenance

AUTHORIZATION: Flood Control on the Mississippi River Act of 1928 (P.L. 70-391), as amended. Local cooperation requirements, as modified by the Flood Control Act of 1951, were limited to ordinary maintenance as defined by Section 3 of the Flood Control on the Mississippi River Act of 1928.

LOCATION AND DESCRIPTION: The project is located 20 miles south of Helena, near Elaine, AR in Phillips and Desha Counties. It consists of 40.2 miles of levees, a pumping station, outlet structures, and culverts. The White River Backwater levee, together with the Mississippi River Levee between Old Town and Laconia Circle, reduces crests on the White River by admitting drainage into an enclosed area and restoring the White River Backwater Pool.

FISCAL YEAR 2019 ALLOCATION: \$1,199,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work on the White River Backwater levee system and the Graham Burke Pumping Station.

FISCAL YEAR 2020 ALLOCATION: \$1,000,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work on the White River Backwater levee system and at the Graham Burke Pumping Station.

BUDGETED AMOUNT FOR FY 2021: M: \$0 O: \$1,100,000 T: \$1,100,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$1,100,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$12,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Bayou Cocodrie and Tributaries, LA – Operation and Maintenance

AUTHORIZATION: The Flood Control Act of 1941 (P.L. 77-228) and the Water Resources Development Act of 1974 (P.L. 93-251)

LOCATION AND DESCRIPTION: The project is located in central Louisiana, west of Natchez, Mississippi, and reduces the flood risk in Rapides, Avoyelles, Evangeline and St. Landry Parishes, from the Bayou Cocodrie tributaries south to lower Bayou Courtableau.

FISCAL YEAR 2019 ALLOCATION: \$48,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$48,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$0 O: \$48,000 T: \$48,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$48,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$0. As of the date of this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Lower Red River, South Bank Levees, LA – Operation and Maintenance

AUTHORIZATION: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391)

LOCATION AND DESCRIPTION: The levee system extends from river-mile 67 on the Red River at Moncla, LA in Avoyelles Parish to river-mile 126 at Hot Wells, LA in Rapides Parish. It reduces the flood risk to 1,739-square miles of urban, agricultural, and wooded lands from the headwaters of the Red and Black Rivers, and from backwater flows of the Mississippi River.

FISCAL YEAR 2019 ALLOCATION: \$423,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$486,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$395,000 O: \$75,000 T: \$470,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$470,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$10,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Mississippi Delta Region, LA – Operation and Maintenance

AUTHORIZATION: The Flood Control Act of 1965 (Title II of P.L. 89-298) and the Water Resources Development Acts of 1974 (P.L. 93-251), 1986 (P.L. 99-1013), and 1996 (P.L. 104-303)

LOCATION AND DESCRIPTION: The Mississippi Delta Region project is located in the lower Mississippi River delta region of Louisiana. The project has two features – the Caernarvon and the Davis Pond freshwater diversion structures. The Caernarvon structure is located in Plaquemines Parish on the east bank of the Mississippi River in the vicinity of Caernarvon. The Davis Pond structure is located in St. Charles Parish on the west bank of the Mississippi River just downstream of Luling. These structures divert freshwater, nutrients, and some sediment from the Mississippi River to the bays and marshes of Breton Sound and Barataria Basins for fish and wildlife enhancement. This helps to restore ecological conditions, for example, since the freshwater that these structures divert from the Mississippi River to these bays and their marshes reduces their salinity.

FISCAL YEAR 2019 ALLOCATION: \$490,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$2,400,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$0 O: \$500,000 T: \$500,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$500,000 – Funds will be used for commonly performed O&M work

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: Plaquemines Parish operates the Caernarvon structure. St. Charles Parish operates the Davis Pond structure. They do so under contract with the local sponsor, the Louisiana Office of Coastal Protection and Restoration. Funding for routine O&M is cost-shared at 75-percent Federal and 25-percent by the State.

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$15,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Tensas Basin, Red River Backwater Area, LA – Operation and Maintenance

AUTHORIZATION: Flood Control Acts of 1941 (P.L. 77-228), 1944 (P.L. 78-534), 1946 (P.L. 79-526), 1950 (Title II of P.L. 81-516), 1958 (Title II of P.L. 85-500), 1962 (Title II of P.L. 87-874), 1965 (Title II of P.L. 89-298), 1968 (Title II of P.L. 90-483), and the Water Resources Development Act of 1986 (P.L. 99-662)

LOCATION AND DESCRIPTION: This project reduces the flood risk in portions of central and northeast Louisiana. Its features include levees, drainage structures, and the Tensas-Cocodrie pumping plant.

FISCAL YEAR 2019 ALLOCATION: \$4,950,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$4,394,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including repairing levee slides and a hydraulic gate cylinder.

BUDGETED AMOUNT FOR FY 2021: M: \$1,853,000 O: \$515,000 T: \$2,368,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$2,368,000 – Funds will be used for commonly performed O&M work

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$336,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Arkabutla Lake, MS – Operation and Maintenance

AUTHORIZATION: Flood Control of the Mississippi River Act of 1928 (P.L. 70-391), The Flood Control Act of 1936 (P.L. 74-738), the 1937 Flood Control Act of 1936 amendments (P.L. 75-406), and the Flood Control Acts of 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: Arkabutla Lake is in Tate and DeSoto Counties in north Mississippi, four miles north of Arkabutla, Mississippi and 30 miles south of Memphis, Tennessee. The reservoir is on the Coldwater River in the Yazoo Basin. It has a drainage area of 1,000-square miles and a flood pool of 33.4 surface acres.

FISCAL YEAR 2019 ALLOCATION: \$6,136,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$7,186,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including purchasing a compact track loader and attachments.

BUDGETED AMOUNT FOR FY 2021: M: \$1,245,000 O: \$4,081,000 T: \$5,326,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$2,966,000 – Funds will be used for commonly performed O&M work.

RC: \$1,705,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$655,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$2,505,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Big Sunflower River, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1944 (P.L. 78-534), 1946 (P.L. 79-526), 1950 (Title II of P.L. 81-516), 1962 (Title II of P.L. 87-874), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: The Big Sunflower River Basin comprises an area of 4,200-square miles in northwest Mississippi.

FISCAL YEAR 2019 ALLOCATION: \$168,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$188,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$20,000 O: \$126,000 T: \$146,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$146,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Enid Lake, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-678), 1937 (P.L. 75-406), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: Enid Lake is located in Yalobusha, Panola, and Lafayette Counties in north-central Mississippi, east of Enid and south of Batesville. Enid Lake is on the Yocona River in the Yazoo Basin. Enid Lake has a drainage area of 560 square-miles and a flood pool storage of 602,400 acre-feet.

FISCAL YEAR 2019 ALLOCATION: \$5,341,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$5,318,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds will also be used for specific work activities including electrical repairs.

BUDGETED AMOUNT FOR FY 2021: M: \$1,946,000 O: \$3,167,000 T: \$5,113,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$2,511,000 – Funds will be used for commonly performed O&M work.

RC: \$2,090,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$512,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$147,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2020 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Greenwood, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1937 (75-406), 1938 (75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: The project is located in the Yazoo Basin of Mississippi, and includes 28.4 miles of levees, 2.9 miles of channels, 62 drainage structures, and three pumping plants. This project reduces the flood risk in the City of Greenwood from flooding by the Yazoo, Tallahatchie, and Yalobusha Rivers.

FISCAL YEAR 2019 ALLOCATION: \$799,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$751,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$300,000 **O:** \$680,000 **T:** \$980,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$980,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$55,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Grenada Lake, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1937 (P.L. 75-406), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: Grenada Lake is in Grenada County in north-central Mississippi northeast of Grenada. The lake encompasses portions of Grenada, Yalobusha, and Calhoun Counties. Grenada Dam is on the Yalobusha River in the Yazoo Basin. Grenada Lake has a drainage area of 1,320 square miles and a flood storage pool of 1,251,700 acre-feet.

FISCAL YEAR 2019 ALLOCATION: \$5,412,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$6,151,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to replace three stairwells and to design the repair of the gabion baskets for the spillway outlet channel stilling basin.

BUDGETED AMOUNT FOR FY 2021: M: \$1,205,000 O: \$4,121,000 T: \$5,326,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$2,675,000 – Funds will be used for commonly performed O&M work.

RC: \$2,101,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$550,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Main Stem, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1941 (P.L. 77-228), 1944 (P.L. 78-534), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: The project is located in the Yazoo Basin in Mississippi and includes 156.1 miles of levees, 288.3 miles of channels, and 74 drainage structures. The project area includes the Yazoo River, Tallahatchie River, and the Coldwater River. This project supplements the flood damage reduction provided by the Yazoo Basin Tributaries project.

FISCAL YEAR 2019 ALLOCATION: \$1,201,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$1,695,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$280,000 O: \$613,000 T: \$893,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$893,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$122,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Sardis Lake, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1937 (P.L. 75-406), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: Sardis Lake is located in north-central Mississippi southeast of Sardis, in Panola County. The lake encompasses portions of Panola, Lafayette, and Marshall Counties. Sardis Dam is on the Little Tallahatchie River in the Yazoo Basin. The project is authorized for flood damage reduction, environmental stewardship, and recreation. Sardis Lake has a drainage area of 1,545-square miles and has a flood pool of 58,500 surface acres.

FISCAL YEAR 2019 ALLOCATION: \$6,228,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$6,116,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$2,134,000 O: \$4,104,000 T: \$6,238,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$3,075,000 – Funds will be used for commonly performed O&M work.

RC: \$2,495,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$668,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$31,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Tributaries, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1941 (P.L. 77-228), 1944 (P.L. 78-534), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: The project is located on certain tributaries of the Yazoo River in Mississippi. These tributaries include: Yalobusha River, Little Tallahatchie River, Cassidy Bayou, Pelucia Creek, Ascalmore-Tippo Creek, Potacocowa Creek, Tillatoba Creek, Teoc Creek, Abiaca Creek, Big Sand Creek, Chicopa Creek, and Hillside Floodway. The project area includes 147.8 miles of levee, 442.6 miles of channel, 16.2 miles of ditch, 26 drainage structures, four pumping stations, and 19 weirs. This project supplements the flood damage reduction provided by the Yazoo Basin Main Stem Project.

FISCAL YEAR 2019 ALLOCATION: \$967,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR FY 2020 ALLOCATION: \$1,418,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$165,000 **O:** \$256,000 **T:** \$421,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$421,000 - Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$227,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Will M. Whittington Auxiliary Channel, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1937 (P.L. 75-406), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 78-534), 1946 (P.L. 79-526), 1962 (Title II of P.L. 87-874), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: The project is located in the headwater area of the Yazoo River in Mississippi. The project splits the flow of the Yazoo River and reduces flood stages on this river. It includes levees, a floodway, and drainage ditches from the vicinity of Silver City to the mouth of Big Sunflower River.

FISCAL YEAR 2019 ALLOCATION: \$357,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$380,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$159,000 O: \$119,000 T: \$ 278,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$278,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2018 to FY 2019 was \$2,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

Division: Mississippi Valley

District: Vicksburg Yazoo Basin, Will M. Whittington Auxiliary Channel, MS

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Yazoo Backwater Area, MS – Operation and Maintenance

AUTHORIZATION: The Flood Control Acts of 1941 (P.L. 77-228), 1944 (P.L. 78-534), and 1965 (Title II of P.L. 89-298)

LOCATION AND DESCRIPTION: The project is located in west-central Mississippi, immediately north of Vicksburg, Mississippi. The Yazoo Backwater area contains 1,074,000 acres and is the area that has historically been subject to flooding from backwater by the Mississippi River. The area is also subject to headwater flooding from the Yazoo River, Sunflower River, and Steele Bayou. The project includes the operation and maintenance (O&M) of seven drainage structures.

FISCAL YEAR 2019 ALLOCATION: \$588,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work.

FISCAL YEAR 2020 ALLOCATION: \$1,204,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including to acquire and manage mitigation lands.

BUDGETED AMOUNT FOR FY 2021: M: \$0 **O:** \$425,000 **T:** \$425,000 ^{1/}

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$425,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$24,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Yazoo Basin, Yazoo City, MS – Operation and Maintenance

AUTHORIZATION: Flood Control Acts of 1928 (P.L. 70-391), 1936 (P.L. 74-738), 1937 (P.L. 75-406), 1938 (P.L. 75-761), 1941 (P.L. 77-228), 1944 (P.L. 77-534), and 1946 (P.L. 79-526)

LOCATION AND DESCRIPTION: The project is located in the Yazoo Basin in the vicinity of Yazoo City, Mississippi. The project includes levees, channels, drainage structures, pumping plants, and weirs. These features help to reduce the flood risk in Yazoo City from flooding by the Yazoo River.

FISCAL YEAR 2019 ALLOCATION: \$737,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work. Funds also were used to perform specific work activities including inspection and relief well maintenance of the Yazoo City Pumping Station.

FISCAL YEAR 2020 ALLOCATION: \$559,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work.

BUDGETED AMOUNT FOR FY 2021: M: \$304,000 O: \$60,000 T: \$364,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$364,000 – Funds will be used for commonly performed O&M work.

RC: N/A

H: N/A

EN: N/A

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$11,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.

APPROPRIATION TITLE: Mississippi River and Tributaries, Fiscal Year 2021

PROJECT NAME: Wappapello Lake, MO – Operation and Maintenance

AUTHORIZATION: Overton Act of 1936 and the Flood Control Act 1944 (P.L. 78-534)

LOCATION AND DESCRIPTION: The dam site lies 22 miles southeast of Greenville, 16 miles northeast of Poplar Bluff, and one mile southwest of Wappapello, Missouri. It is located on the St. Francis River at river-mile 309 in the Ozark uplands of Wayne County and authorized for flood control, recreation, water quality, and conservation of fish and wildlife. Wappapello Lake consists of 44,000 acres of land and 8,400 acres of water.

FISCAL YEAR 2019 ALLOCATION: \$6,043,000

DESCRIPTIONS OF WORK FOR FY 2019: Funds were used for commonly performed operation and maintenance (O&M) work. Funds were also used for specific work activities including gatehouse repairs and to rehabilitate the visitor center.

FISCAL YEAR 2020 ALLOCATION: \$9,069,000

DESCRIPTIONS OF WORK FOR FY 2020: Funds are being used for commonly performed O&M work. Funds are also being used for specific work activities including recreation improvements and repairs to multi-use trails.

BUDGETED AMOUNT FOR FY2021: M: \$1,072,000 O: \$3,433,000 T: \$4,505,000 1/

DESCRIPTIONS OF WORK AND JUSTIFICATIONS FOR FY 2021:

N: N/A

FRM: \$2,293,000 – Funds will be used for commonly performed O&M work.

RC: \$1,677,000 – Funds will be used for commonly performed O&M work.

H: N/A

EN: \$535,000 – Funds will be used for commonly performed O&M work.

WS: N/A

OTHER INFORMATION: N/A

1/ Unobligated Carry-in Funding: The actual unobligated carry-in from FY 2019 to FY 2020 was \$155,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2021 from prior appropriations for use on this effort is \$0.