Department
of the Army
Office, Assistant Secretary
of the Army (Civil Works)

FISCAL YEAR 2015

Civil Works
Budget Details of the
U.S. Army Corps of Engineers
for
Construction
VOL. I: LRD - NWD

March 2014

GREAT LAKES AND OHIO RIVER DIVISION

CONSTRUCTION

Illinois

APPROPRIATION TITLE: Construction – Navigation

PROJECT: Calumet Harbor & River, IL & IN – Dredged Material Disposal Facility (New Phase)

LOCATION: The Calumet River & Harbor is a major deep draft navigation project located on the southwestern shore of Lake Michigan in Chicago, IL. The project consists of 2.2-miles of protective breakwater, a 4.4-mile harbor channel, a 6.7-mile river channel extending to the Illinois Waterway, and a 1.3-mile river channel extending to Lake Calumet, and the Chicago Area Confined Disposal Facility (CDF). The (CDF) has a nominal storage capacity of 1.3 Million cubic yards and is nearly full.

DESCRIPTION:

The 2015 funds will be used to design a new Dredged Material Disposal Facility will be operated to (1) dewater Calumet Harbor sediment prior to using it beneficially off-site, and (2) dewater and confine Calumet River sediment, providing adequate dewatering and / or storage capacity for approximately 50,000 cubic yards dredged annually from the Calumet Harbor and River, over a period of 20 years. Major project features include: dock areas for sediment delivery and dried sediment removal; access roads; graded and bermed cells to dewater and contain the sediment; sediment dewatering, runoff and leachate collection and filtration systems; and final cover.

AUTHORIZATION: Rivers and Harbors Acts of 1870, 1899, 1902, 1935, 1960, 1962, and 1965 (P.L. 89-209)

REMAINING BENEFIT-REMAINING COST RATIO: Not required for DMDF

TOTAL BENEFIT-COST RATIO: Not required for DMDF

INITIAL BENEFIT-COST RATIO: Not required for DMDF
BASIS OF BENEFIT-COST RATION/A

SUMMARIZED FINANCIAL DATA			STATUS (1 Jan 2014)	PHYSICAL PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 36,710,000	Entire Project	0	TBD
Estimated Non-Federal Cost		16,690,000			
Cash Contributions	3,340,000				
Other Costs	13,350,000				
Total Estimated Project Cost		$ 53,400,000			

Allocations to 30 September 2011		$ N/A		
Allocation for FY 2012		N/A		
Allocation for FY 2013		N/A		
Allocation for FY 2014	0			
Allocations through FY 2014		0	1/2/3/5/	0
Estimated Unobligated Carry-in Funds		0	4/	
President's Budget for FY 2015		200,000		1.0
Programmed Balance to Complete After FY 2015		36,510,000	6/	
Unprogrammed Balance to Complete after FY 2015		$ 0		

1/ $0 reprogrammed to (from) the project.
2/ $0 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated Unobligated "Carry-in" Funding: The actual unobligated balance from FY13 into FY14 (3011A report) is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
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.

PHYSICAL DATA:
Storage Capacity 700,000 Cubic Yards

JUSTIFICATION:
The existing CDF, constructed 30 years ago, has nearly reached capacity. If a new dredged material disposal facility is not constructed, existing sediment disposal capacity will be exhausted as of 2017 and maintenance of the channel would be deferred, resulting in a lack of sufficient channel depths for efficient transport. Delay in design would also postpone construction, negatively impacting commercial navigation once the existing CDF is filled.

Average annual benefits are as follows:

Annual Benefits	Amount	
Deep Draft Vessel Transportation Cost Savings	$ 8,988,000	in 2010 dollars at 7%
Total	$ 8,988,000	

FISCAL YEAR 2014: This project is unbudgeted in FY 2014.

FISCAL YEAR 2015: The budget amount will be applied as follows: Funds will be used to execute the cost-sharing agreement, and initiate design and P&S for the new sediment management facility to (1) dewater Calumet Harbor sediment prior to using it beneficially off-site, and (2) dewater and confine Calumet River sediment.

Initiate Planning, Engineering and Design	$200,000
Total	$200,000

NON-FEDERAL COST: Non-Federal cost share is: 25% of construction and 10% over a period not to exceed 30 years; LERRDS can be credited toward the 10%.

Requirements of Local Cooperation	Payment 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 areas.	$13,350,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	N/A	
Pay 25% of construction and 10% over a period not to exceed 30 years to bring the total non-Federal share of project costs to 35 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of dredged material disposal facilities. LERRDS can be credited toward the 10%.	3,340,000	TBD
Total Non-Federal Costs	$16,690,000	TBD

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

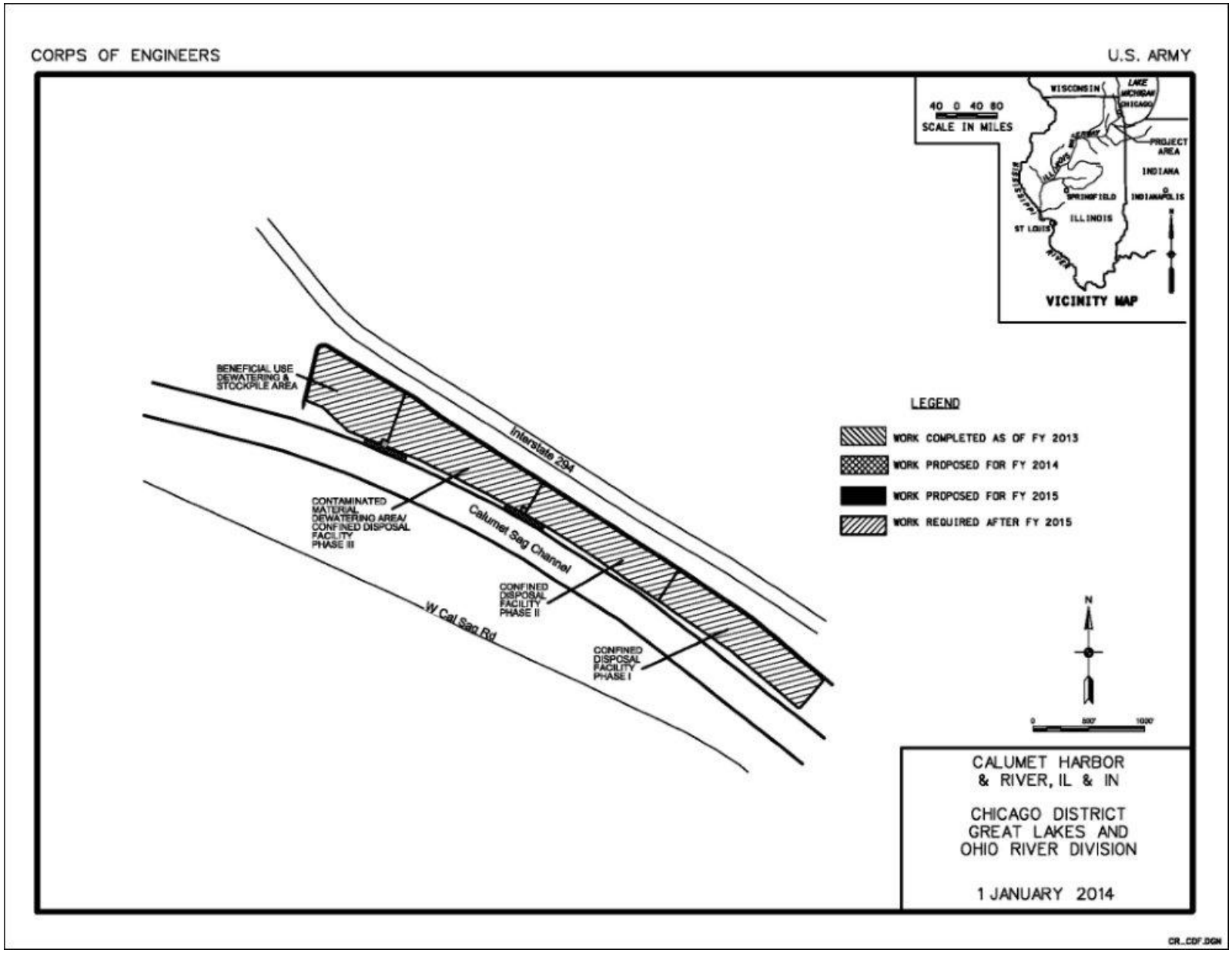
STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the Illinois International Port District (IIPD), who (along with the Chicago Park District) is one of the sponsors of the existing CDF. Having worked with the Corps for over 30 years, IIPD is familiar with sponsorship requirements. The Port is committed to providing the required non-Federal items of cooperation, and is working with other stakeholders such as the City and State, to ensure that the required cash and real estate will be available for the project.

The IIPD is a city-state agency who owns the port. IIPD announced in July 2013 their plans for a 62-year lease, expected to be finalized within a few months, to privatize port management. The contract will include an investment of up to $500 million over the next decade, beginning next year, to modernize its infrastructure and draw new business, and is expected to create 1,000 new jobs. The board appointed by the mayor and governor would continue to have port oversight.

The current schedule for executing the PPA is October 2014.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The final Environmental Assessment will be completed after the draft Dredged Material Management Plan is approved for release for public review, expected to be in FY 2014.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design are being requested for appropriation in FY 2015 This deep draft channel (28-ft maintained depth) connects the Great Lakes system to the Illinois Waterway Project through the Calumet-Sag Channel. This Federal harbor ranks 2nd in tonnage among Great Lakes harbors; about 60% is moved via deep draft vessels. In 2007, over 16 million tons were moved resulting in significant benefits to Chicagoland regions: revenue of $106 million, income of $48 million, 1,300 jobs. Calumet Harbor is the only major port within the City of Chicago and is connected to an extensive railroad network and numerous heavy truck routes. Annually, an average of 50,000 cubic yards of maintenance dredging is required to maintain channel depths.


CORPS OF ENGINEERS
U.S. ARMY
40 0 40 80
SCALE IN MILES
WISCONSIN
LAKE MICHIGAN
CHICAGO
PROJECT AREA
INDIANA
SPRINGFIELD
INDIANAPOLIS
ILLINOIS
ST LOUIS
VICINITY MAP
BENEFICIAL USE DEWATERING & STOCKPILE AREA
Interstate 294
CONTAMINATED MATERIAL DEWATERING AREA/ CONFINED DISPOSAL FACILITY PHASE III
Calumet Sag Channel
CONFINED DISPOSAL FACILITY PHASE II
W Cal Sag Rd
CONFINED DISPOSAL FACILITY PHASE I
LEGEND
WORK COMPLETED AS OF FY 2013
WORK PROPOSED FOR FY 2014
WORK PROPOSED FOR FY 2015
WORK REQUIRED AFTER FY 2015
N
CALUMET HARBOR
& RIVER, IL & IN
CHICAGO DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION
1 JANUARY 2014
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APPROPRIATION TITLE: Construction – Environmental

PROJECT: Chicago Sanitary and Ship Canal Dispersal Barriers, Illinois (Continuing)

LOCATION: The Dispersal Barriers are near River Mile 296.5 in Romeoville, IL in Cook County.

DESCRIPTION: The Chicago Sanitary and Ship Canal (CSSC) is a man-made waterway that connects the Chicago and Des Plaines Rivers, creating the only continuous waterway connection between the Great Lakes and Mississippi River basins. The dispersal barrier system was developed to deter the spread of invasive fish species between these watersheds. It includes the construction and operation of three electrical barriers, known as Barriers I, IIA, and IIB. Barrier I was constructed as a demonstration project and has been operating in the CSSC since 2002. A permanent electric barrier (Barrier II), with a design life of 20 years, was implemented in two independent stages (A & B). Barrier IIA has been operational since April 2009. Barrier IIB has been operational since April 2011. Barrier I and Barrier II were authorized as separate projects. Section 3061 of WRDA 2007 reauthorized the barriers as a single project at Federal expense. WRDA 2007 also authorized USACE to upgrade and make permanent Barrier I; complete Barrier II; operate and maintain both barriers as a system; conduct a study of a range of options and technologies for reducing impacts of hazards that may reduce the efficacy of the barriers (Efficacy Study); and provide to each state a credit in an amount equal to the amount of funds the state contributed toward Barrier II. Construction of a permanent Barrier I facility was initiated in FY 2013 and is scheduled for completion in FY 2016. Section 126 of the Energy & Water Appropriations Act of 2010 and Section 105 of the Consolidated Appropriations Act of 2012 provided authority for the implementation of recommendations from the Efficacy Study. Four Interim Efficacy Study reports have been completed. The Interim I report showed that during flood events, flows from the neighboring Des Plaines River and Illinois & Michigan Canal could provide fish a bypass route around the barriers. Construction of measures to reduce the risk of these bypasses was completed in October 2010 with funding from the Great Lakes Restoration Initiative. The Interim IIA report summarized laboratory research and safety tests completed to identify and recommend Barrier II's optimum operating parameters. These operating parameters were implemented in October 2011. The Interim III report recommended installation of screens on sluice gates at the O'Brien Lock & Dam. Installation of these screens were completed in January 2011. The Interim IIIA report recommended a demonstration acoustic bubble strobe dispersal barrier (ABS) as another possible tool for preventing Asian carp from establishing in the Great Lakes. No action has been taken on an ABS Barrier. Efficacy Interim Report IV, summarizing actions completed to date and documenting results of analyses completed on pathways within the Chicago Area Waterways System, is scheduled for completion in Fiscal Year 2014.

AUTHORIZATION: Section 105, Consolidated Appropriations Act of 2012 (P.L. 112-74), Section 126, Energy & Water Development Appropriations Act of 2010 (P.L. 111-85), Section 3061, Water Resources Development Act 2007 (P.L. 110-114). Barrier I: Section 1202, Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990 (P.L. 101-646), as amended, Section 2309, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery 2006 (P.L. 109-234). Barrier II: Section 1135, Water Resources Development Act 1986 (P.L. 99-662), as amended, (Continuing Authority Program), Section 345, FY 2005 DC Appropriations Act (P.L. 108-335).

REMAINING BENEFIT - REMAINING COST RATIO:
The remaining benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT - COST RATIO:
The total benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT - COST RATIO:
The initial benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT - COST RATIO:
The benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA	Demo Barrier I	Other Barriers [1/]
Estimated Federal Cost	$5,808,000	$234,617,000
Estimated Non-Federal Cost	0	0
Cash Contributions		2,275,000 [2/]
Other Costs		0
Project Cost Subtotals	$5,808,000	236,892,000
Total Estimated Project Cost		$242,700,000

STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Barrier II	100	February 2011
Permanent Barrier I	2	FY 2016

[1/] Includes Barrier II, Permanent Barrier I, and risk reduction measures recommended in the Efficacy Study.
[2/] Non-federal cash contributions for which a credit is to be provided.

	Demo Barrier I	Barrier II & Perm. Barrier I	Total	ACCUM. PCT. OF EST. FED.COST
Allocations to 30 September 2011	$5,808,000	$56,295,000 [6/]	$62,103,000 [6/]	
Allocation for FY 2012	0	24,065,000	24,065,000	
Allocation for FY 2013	0	24,451,000	24,451,000	
Great Lakes Restoration Initiative Allocations through FY 2013	0	16,208,000 [7/]	16,208,000 [7/]	
Allocation for FY 2014	0	36,000,000	36,000,000	
Allocations through FY 2014	5,808,000 [3/4/5/9/]	157,019,000 [3/4/5/9/]	162,827,000 [3/4/5/9/]	67
Estimated Unobligated Carry-in Funds	0 [8/]	0 [8/]	0 [8/]	
President's Budget for FY 2015	0	29,000,000	29,000,000	79
Programmed Balance to Complete after FY 2015	0	50,873,000 [10/]	50,873,000 [10/]	
Un-programmed Balance to Complete after FY 2015	$ 0	$ 0	$ 0	

[3/] $0 reprogrammed to (from) the project.
[4/] $0 rescinded from the project.
[5/] $0 transferred to the Flood Control and Coastal Emergencies account.
[6/] Does not include CAP Section 1135 allocations of $3,702,000.
[7/] Includes $9,000,000 in FY 2010, $391,000 in FY 2011, $5,958,000 in FY 2012 and $859,000 in FY 2013 Great Lakes Restoration Initiative funding.
[8/] Estimated Unobligated "Carry-in" Funding: The actual unobligated balance from FY13 into FY14 (3011A report) for this project is $527,254. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
[9/] PED costs of $0 are included in this amount.
[10/] For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA:
Demo Barrier I: 12 160-ft steel cable electrodes over 54 ft of the CSSC + control building.
Barrier II: 64 155-ft steel billet electrodes over 480 ft of the CSSC + 2 control buildings.
Permanent Barrier I: 36 156-ft steel billet electrodes over 150 ft of the CSSC + control building

JUSTIFICATION: The Chicago Sanitary and Ship Canal is the only continuous waterway link between the Great Lakes and Mississippi River watersheds. Therefore, it is the primary potential hydraulic corridor for transfer of aquatic nuisance species between these two major basins. The adverse economic and ecological effects of invasive species can be highly significant, as evidenced by the zebra mussel and sea lamprey infestations of the Great Lakes. Asian carp are currently believed to be the primary invasive species threatening the Great Lakes, and are present downstream of the barriers. Studies indicate electric barriers are the most effective deterrent to fish movement, not including physical barriers.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation plus unobligated carry-in of will be used for both construction and operation and maintenance of the barrier system, and will be applied as follows:

Operation of Barriers	$ 7,000,000
Maintenance of Barriers	5,000,000
Continue Construction of Permanent Barrier I	21,000,000
Real Estate Acquisition	3,000,000
Total	$36,000,000

FISCAL YEAR 2015: The requested amount of $29,000,000, which includes both construction and operation and maintenance of the barrier system, will be applied as follows:

Operation of Barriers	$ 7,000,000
Maintenance of Barriers	5,000,000
Continue Construction of Permanent Barrier I	17,000,000
Total	$29,000,000

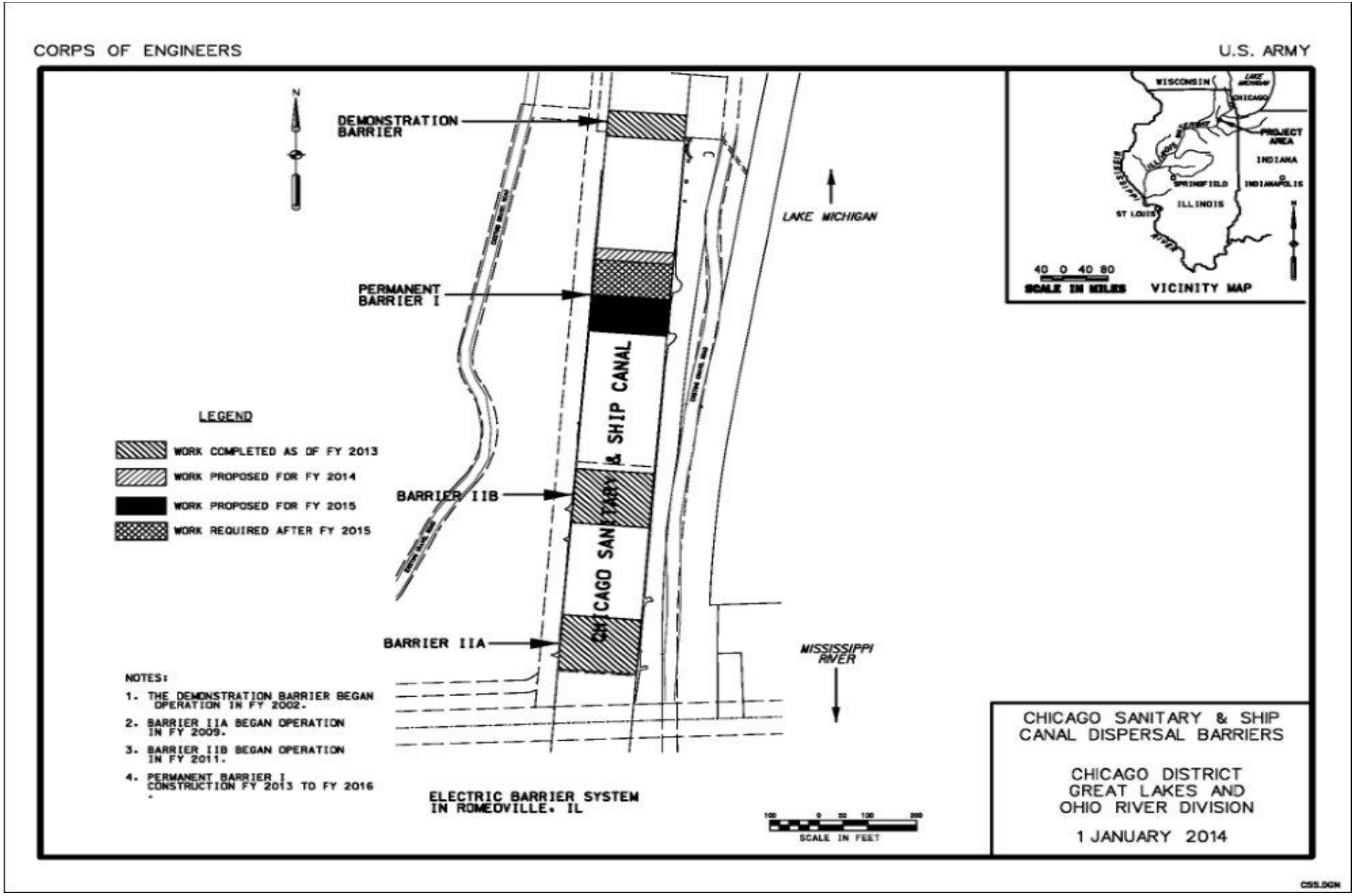
NON-FEDERAL COST: The non-Federal contribution to the project through FY07 was $2,275,000. WRDA 2007 made the remainder of the project, including future operation and maintenance, a full Federal responsibility and authorized a credit to each state in the amount the state contributed toward Barrier II.

STATUS OF LOCAL COOPERATION: The State of Illinois was the local sponsor for the Barrier II project. The Project Cooperation Agreement was executed on 21 November 2003 and amended on 14 July 2005. Illinois received contributions from other states to complete their required cost share amount. As a result of WRDA 2007, the barrier project is now 100% Federally funded.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $242,700,000 is an increase of $33,700,000 from the latest estimate ($209,000,000) presented to Congress (FY 2014). The cost increase is due to the requirement to provide an independent and redundant power source to each pulsers and an independent cooling system for each array at the Permanent Barrier I to ensure safety and reliability of the Barrier. A separate independent power line to the building is located further from the site and the Permanent Barrier I power requirement is double that of Barrier IIB which require larger generators for the backup system added to the increase cost. The additional increase will also cover the cost to install the specialized electrical equipment at Permanent Barrier I. Due to the Contractor's proposal, prior year funding was inadequate to award the installation of the specialized electrical equipment that will generate the barriers pulsing electrical field and only the purchase of the equipment was awarded.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment (EA) for the Demonstration Barrier and Barrier II was issued for public comment in August 1999 and a Finding of No Significant Impact (FONSI) was signed 28 December 1999. An EA for Permanent Barrier I was issued for public comment in April 2013 and a FONSI was signed on 17 June 2013.

OTHER INFORMATION: Funds to initiate construction for Barrier I were first appropriated in FY 1998. Barrier II was initiated under Section 1135, WRDA 1986. After Section 345 of the FY 2005 DC Appropriation Act was enacted, funds specifically for Barrier II were appropriated in FY 2005. Authorization to implement temporary solutions to the potential bypasses was contained in Section 126 of the FY 2010 Energy & Water Appropriations Act and in Section 105 of the FY 2012 Consolidated Appropriations Act.



Division: Great Lakes and Ohio River District: Chicago Chicago Sanitary and Ship Canal Dispersal Barriers, IL

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: McCook and Thornton Reservoirs, Illinois (Continuing)

LOCATION: The project area covers 341 square miles of the combined sewer area in Chicago and 50 adjacent suburban communities in Cook County.

DESCRIPTION: The authorized project consists of constructing two reservoirs from stone quarries located in McCook and Thornton, Cook County, Illinois, with floodwater storage capacities of 21,500 acre-feet (7 billion gallons) and 14,600 acre-feet (4.8 billion gallons), respectively. The Thornton Reservoir project authorization was modified to evaluate inclusion of the storage associated with the National Resource Conservation Service's Thorn Creek Reservoir. The composite reservoir at Thornton, determined feasible in a 2003 Limited Re-evaluation Report, has a combined capacity of 24,200 acre-feet (7.8 billion gallons). Both McCook and Thornton will serve as the termini of the Metropolitan Water Reclamation District of Greater Chicago's Tunnel and Reservoir Plan (TARP) tunnels. TARP was developed by federal, state, and local governments as a regional plan for reducing flood damages and improving water quality in area waterways. The two reservoirs will capture and store combined sewer overflows (CSO) from the tunnel systems for treatment after storm events. Currently, when the tunnels reach their capacity, CSO water backs up through the sewer system into basements of homes and businesses and onto roadways and is discharged directly into area waterways. When storm events are severe, to avoid downtown flooding the navigation locks and controlling works on the Chicago River must be opened to release the CSO into Lake Michigan – the source of drinking water for millions of people. Reservoir features include pumps, a grout curtain and overburden cutoff wall, main and distribution tunnels, gates and valves, hydraulic structures, wall stabilization, and an aeration system. The Thornton Reservoir is being constructed solely by the non-Federal sponsor.

AUTHORIZATION: Water Resources Development Act of 1988, (P. L. No. 100-676, Section 3, 102 Stat. 4013); Water Resources Development Act of 1996; Water Resources Development Act of 1999, (P. L. No. 106-53, Section 501, 113 Stat. 334); Water Resources Development Act of 2007, (P. L. No. 110-114, Section 5157, 121 Stat. 1257).

REMAINING BENEFIT – REMAINING COST RATIO: 4.68 to 1 at 7 percent (McCook and Thornton combined).
8.50 to 1 at 7 percent (McCook only).

TOTAL BENEFIT – COST RATIO: 1.98 to 1 at 7 percent (McCook and Thornton combined).
2.96 to 1 at 7 percent (McCook only).

INITIAL BENEFIT – COST RATIO: 2.0 to 1 at 8 percent.

BASIS OF BENEFIT – COST RATIO: McCook Reservoir benefits are based on the Final Special Reevaluation Report dated February 1999 at October 1997 price levels. Thornton Reservoir benefits are based on the economic evaluation completed for the Limited Reevaluation Report dated July 2003 at October 2001 price levels. McCook and Thornton benefits and costs were re-evaluated in an economic update performed in 2011.

SUMMARIZED FINANCIAL DATA			STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 702,312,000	McCook Reservoir	55	TBD
Estimated Non-Federal Cost	234,104,000		Thornton Reservoir	60	TBD
Cash Contributions	149,523,000		Entire Project	57	TBD
Other Costs	84,581,000				
Total Estimated Project Cost		$ 936,416,000			

	McCook		Thornton	ACCUM PCT OF EST FED COST
Allocations to 30 September 2011	$ 318,436,000		6,278,000	
Allocation for FY 2012	11,760,000		0	
Allocation for FY 2013	35,528,000		0	
Allocation for FY 2014	30,500,000		0	
Allocations through FY 2014	396,224,000	1/2/3/5/	6,278,000	86(M);3(T)
Estimated Unobligated Carry-in Funds	0	4/	0	
President's Budget for FY 2015	18,500,000		0	90(M);3(T)
Programmed Balance to Complete After FY 2015	48,588,000	6/	237,722,000	
Unprogrammed Balance to Complete after FY 2015	$ 0		0	

1/ $0 reprogrammed to (from) the project.
2/ $0 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated Unobligated "Carry-in" Funding: The actual unobligated balance from FY13 into FY14 (3011A report) for this project is $2,751. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
5/ PED costs of $9,374,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA:

McCook Reservoir Storage Capacity	21,500 acre-feet
Thornton Reservoir Storage Capacity	24,200 acre-feet

JUSTIFICATION: The McCook and Thornton Reservoirs will serve 341 square miles of combined sewer service area in Chicago and multiple suburban communities. Within this region, nearly 1,200,000 structures suffer flooding attributable to combined storm sewer outfall submergence caused by the inadequate capacity of area waterways. The McCook Reservoir is the Federal component of the project that will provide flood damage reduction benefits to Chicago and 37 suburban communities where 146,000 homes and businesses flood annually. The Thornton Reservoir will provide flood damage reduction to Chicago and 13 surburban communities where nearly 200,000 homes and businesses flood annually. The project will also improve water quality in area waterways, reduce untreated sewage backflow into Lake Michigan, and reduce beach closures related to those sewage backflows. The project benefits over 3 million people. The sponsor, the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), executed a consent decree with the Department of Justice in conjunction with the USEPA in 2014. The Corps is not party to the agreement but the consent decree includes a deadline for Stage 1 of the McCook Reservoir to be on line and functioning by 2017 One of the intended purposes of this project is to reduce sewage backflow to Lake Michigan which not only impacts the primary drinking water source for the Chicago metropolitan area, but also damages the aquatic ecosystem, including fish tainting, contaminant uptake by aquatic organisms, and degradation of spawning areas. The elimination of backflows of raw sewage to Lake Michigan is a priority issue of the Great Lakes Governors and Mayors organization and the Great Lakes Restoration Initiative. Historically, the storm of 1987 flooded 10,000 basements, flooded streets and viaducts, and caused 4 deaths due to electrocution. In July 2010, areas of Cook County were ravaged by floods that caused substantial damage and presented major health and safety issues for residents. Additionally, significant residential and commercial structure flood damages were sustained by the communities of Stone Park, Melrose Park, Maywood, Hillside, Bellwood, Berwyn, Cicero, Westchester, Broadview, Forest Park and Maine Township. News media reported that this storm caused impacts to Interstate 290 and other primary traffic routes resulting in $750,000,000 in damages. In this very large metropolitan area, the risks associated with overland flooding, basement backup flooding and combined sewer overflow pose a significant threat to residents' health and life safety. Flooding in April 2013 filled the entire 1 billion gallon tunnel system within the first hours of the storm. McCook reservoir would have greatly increased floodwater storage. Overnight rainfall totals approaching 5 inches caused significant flooding throughout the Chicago area, and forced a number of expressway and other street closures. Flood stage levels on the Des Plaines River forced residents to evacuate their homes and caused delays on commuter trains and other disruption of transportation. Basements flooded by combined sewer overflows pose not only a safety threat (from electrocution), but also a major public health threat due to the presence of water-borne illnesses in the untreated waters.

Average annual benefits for McCook and Thornton Reservoirs are as follows:

Annual Benefits	Amount
Flood Damage Prevention	$ 89,848,000
Water Quality	15,560,000
Water Supply	10,110,000
Recreation	1,088,000
Total	$ 116,606,000

FISCAL YEAR 2014: The requested amount will be applied as follows:

Continue construction of Main Tunnel – McCook Reservoir	$ 23,450,000
Construct Slope Stabilization – McCook Reservoir	5,000,000
Engineering and Design – McCook Reservoir	825,000
Construction Management - McCook Reservoir	1,225,000
Total	$ 30,500,000

FISCAL YEAR 2015: The allocated amount will be applied as follows:

Continue construction of Main Tunnel – McCook Reservoir	$ 16,650,000
Engineering and Design – McCook Reservoir	500,000
Construction Management – McCook Reservoir	1,350,000
Total	$ 18,500,000
Reimbursement for Thornton Reservoir	$ 0

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Maintenance, Repair, Rehabilitation, and Replacement Costs
McCook Reservoir:		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 5,920,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	14,588,000	
Pay 17 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	132,596,000	$4,300,000
Total McCook Reservoir	$153,104,000	$4,300,000

The Thornton Reservoir is a separable element that is being completely constructed by the non-Federal sponsor:

	Payment during Construction and Reimbursements	Maintenance, Repair, Rehabilitation, and Replacement Costs
Thornton Reservoir:		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	$ 26,617,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary, for the construction of the project, and less credits allowed for prior work per Section 501 of Water Resources Development Act.	37,456,000	
Pay approximately 5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	16,927,000	$ 2,800,000
Total Thornton Reservoir	81,000,000	2,800,000
Total Non-Federal	$ 234,104,000	$ 7,100,000

	Payment during	Maintenance, Repair,
Total Thornton Reservoir	81,000,000	2,800,000
Total Non-Federal	$ 234,104,000	$ 7,100,000

STATUS OF LOCAL COOPERATION: The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) is the local sponsor for the project. The Project Cooperation Agreement for McCook Reservoir was executed on 10 May 1999, and amended on 10 July 2003. The Project Cooperation Agreement for Thornton Reservoir was executed on 18 September 2003 and amended on 30 July 2009. The non-Federal sponsor is expected to make all required payments concurrently with project construction. The current non-Federal cost estimate for the McCook Reservoir is $153,104,000, which includes a cash contribution of $132,596,000 and is an increase of $24,054,000 from the non-Federal cost estimate of $129,050,000 noted in the Project Cooperation Agreement, which cited a cash contribution of $99,978,000. The current non-Federal cost estimate for the Thornton Reservoir is $81,000,000. WRDA 2007, Section 5157 authorized reimbursement to the sponsor for Thornton Reservoir. The sponsor has already completed design, awarded three major reservoir construction contracts and is continuing construction. A fourth contract for installation of an aeration system is currently being designed.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $702,312,000 is an increase of $312,000 from the latest estimate ($702,000,000) presented to Congress (FY 2014).

Price Escalation on Construction Features	$ 312,000
Total	$312,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Public and Agency review of final Environmental Impact Statement and the Special Reevaluation Report (EIS / SRR) for the McCook Reservoir project was completed in December 1998 and the Record of Decision (ROD) was signed on May 5, 1999. The Thornton Reservoir Environmental Assessment and Finding of No Significant Impact were signed in June 2001 and December 2001 respectively. The Thornton Reservoir Limited Reevaluation Report was completed in July 2003.

OTHER INFORMATION: Funds to initiate PED were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1994.

SEPARABLE ELEMENT: McCook Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$ 458,312,000
Non-Federal Cost		153,104,000
Cash Contributions	132,596,000	
Other Costs	20,508,000	
Total Estimated Project Cost		$ 611,416,000

REMAINING BENEFIT – REMAINING COST RATIO: 8.50 to 1 at 7 percent

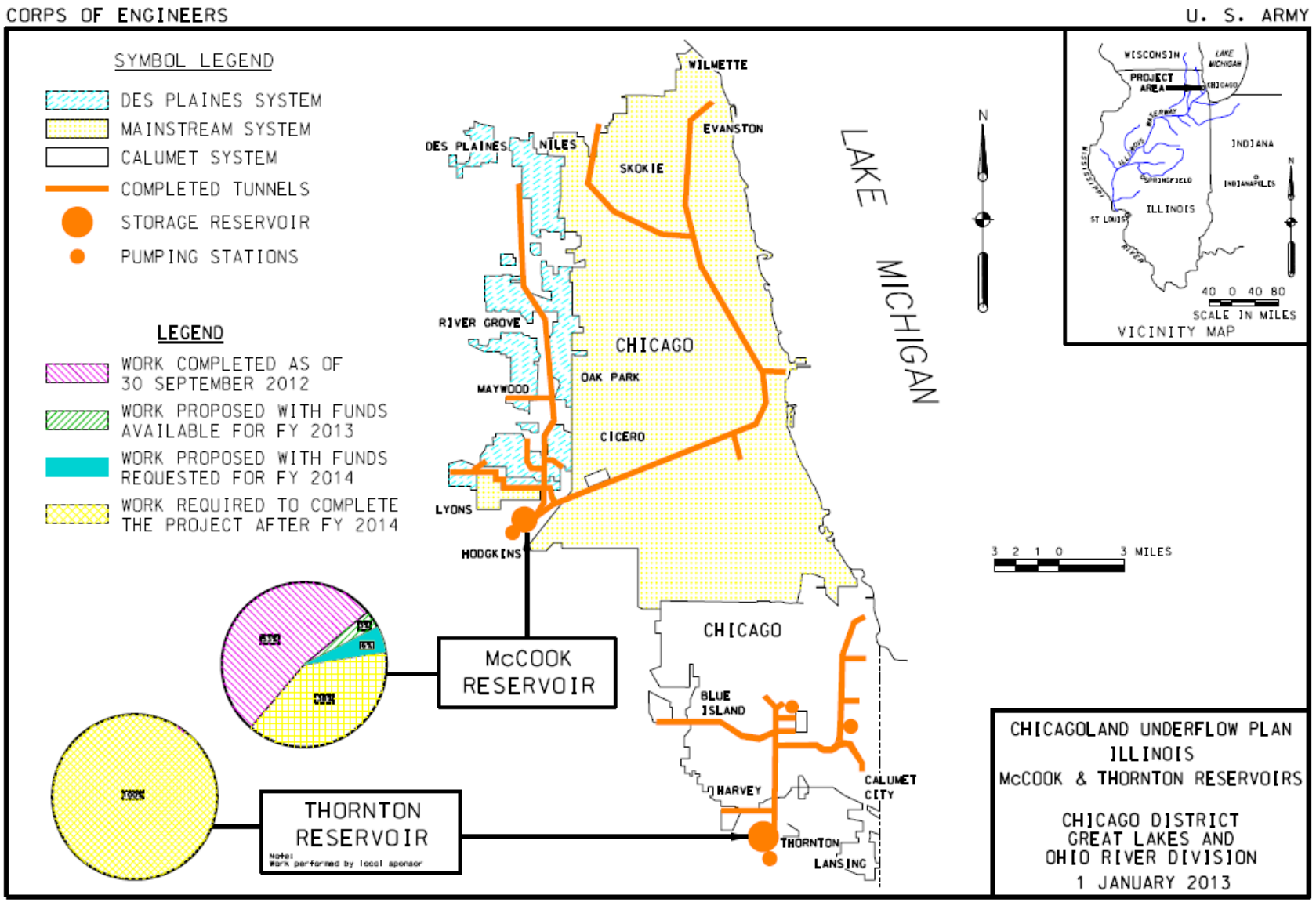
TOTAL BENEFIT – COST RATIO: 2.96 to 1 at 7 percent

SEPARABLE ELEMENT: Thornton Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		$ 244,000,000
Non-Federal Cost		81,000,000
Cash Contributions	16,927,000	
Other Costs	64,073,000	
Total Estimated Project Cost		$ 325,000,000

REMAINING BENEFIT – REMAINING COST RATIO: 2.39 to 1 at 7 percent
TOTAL BENEFIT – COST RATIO: 1.01 to 1 at 7 percent



Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

28 March 2014

LRD-19

APPROPRIATION TITLE: Construction – Locks and Dams (Navigation)

PROJECT: Olmsted Locks and Dam, Illinois and Kentucky (Continuing)

LOCATION: The project is located in Pulaski County, Illinois, and Ballard County, Kentucky, on the Ohio River near Olmsted, Illinois, approximately 964 miles downstream from Pittsburgh, Pennsylvania.

DESCRIPTION: The project will replace Ohio River Locks and Dams 52 and 53. The new structure will consist of two 110' by 1200' locks adjacent to the Illinois shore and a dam comprised of tainter gates, navigable pass, and a fixed weir. All work is programmed.

AUTHORIZATION: Section 3(a) (6) of WRDA 1988 (P.L. 100-676) and H.R.2775 - Continuing Appropriations Act, 2014

REMAINING BENEFIT – REMAINING COST RATIO: 8.0 to 1 at 7 percent.

TOTAL BENEFIT – COST RATIO: 3.3 to 1 at 7 percent.

INITIAL BENEFIT – COST RATIO: 2.8 at 8 3/4 percent (FY 1991).

BASIS OF BENEFIT – COST RATIO: Benefits are based on the Olmsted Locks and Dam Post Authorization Change Report, dated Nov 2011 and revised April 2013.

SUMMARIZED FINANCIAL DATA			STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$3,082,777,000	Entire Project	54	TBD
General Appropriations	$1,556,146,000				
Inland Waterways Trust Fund	$1,526,631,000				
Estimated Non – Federal Cost		0			
Total Estimated Project Cost		$3,082,777,000			

SUMMARIZED FINANCIAL DATA (Continued):

	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED COST
Allocations to 30 September 2011	702,748,000	673,233,000	
Allocations for 2012	74,644,000	74,644,000	
Allocations for 2013	71,856,000	71,856,000	
Allocation for FY 2014	122,250,000	40,750,000	6/
Allocations through FY 2014	971,498,000	860,483,000	1/ 2/ 3/ 5/
Estimated Unobligated Carry-in Funds	0	0	4/
President's Budget for FY 2015	80,000,000	80,000,000	
Programmed Balance to Complete after FY 2015	504,648,000	586,148,000	7/
Unprogrammed Balance to Complete after FY 2015	0	0	

1/ $0 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 balance from FY13 into FY14 (3011A report) for this project is $1,270,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
5/ PED costs of $13,023,000 are included in this amount.
6/ P.L. 113-76, Consolidated Appropriations Act, 2014, provided that 25 percent of proposed funding will be derived from the Inland Waterways Trust Fund.
7/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA:

Lock – 110 by 1,200 foot Chambers	2
Dam – Navigable Pass	1,400 feet
Fixed Weir	561 feet
Tainter Gates	744 feet
Acres – Dam	123 acres
Road	21 acres
Disposal Area	114 acres

JUSTIFICATION: The project is in a strategic location on the inland waterway system. Virtually all waterway traffic moving between the Ohio River and tributaries and the Mississippi River and tributaries passes through the project area. Olmsted Locks and Dam will replace existing Ohio River Locks and Dams 52 and 53, which are over 83 years old. Both projects have temporary lock chambers that are inefficient and neither project conforms to current design criteria for structural stability. Commercial navigation in 2011 was 91 million tons through Lock 52 and 81 million tons through Lock 53. Over the last five years, tonnage has been relatively constant, with the 5 year average of 88 million tons through Lock 52 and 77 million tons through Lock 53. The long term (2010-2030) average annual growth rate is projected to be between 0.9 and 1.1 percent. Coal comprises approximately 39% of the total tonnage, petroleum 4%, crude materials 31%, farm products 13%, chemicals 10% and 3% others/misc. The projected increases in waterway traffic demands in combination with the limited capacity of the existing locks will result in increased lockage delays. The Net Annual Project Benefits are $640 million.

The following counties qualify as areas of "substantial and persistent" unemployment: Illinois – Alexander, Johnson, Massac, Pope, Pulaski, and Union; Kentucky – Ballard, Carlisle, Graves, Livingston, and Marshall.

Net annual benefits at 7 percent in 2012 price levels are as follows:

Annual Benefits	Amount
Navigation	$640,036,000
Total	$640,036,000

FISCAL YEAR 2014: The fiscal year 2014 appropriations, plus unobligated carry-in, will be applied as follows:

Continue Dam Construction Contract	$154,240,000
Mussel Monitoring	430,000
Planning, Engineering, and Design	1,800,000
Construction Management	6,400,000
Lock O&M during Construction (Hired Labor)	1,400,000
Total	$164,270,000

FISCAL YEAR 2015: The allocated amount will be applied as follows:

Continue Dam Construction Contract	$149,020,000
Mussel Monitoring	430,000
Planning, Engineering, and Design	2,430,000
Construction Management	6,620,000
Lock O&M during Construction (Hired Labor)	1,500,000
Total	$160,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act (WRDA) of 1986, 50% of the total cost of construction will be derived from the Inland Waterways Trust Fund (IWTF) except in FY14 when the IWTF cost share was set at 25% by the Consolidated Appropriations Act, 2014 Funds allocated under the American Reinvestment and Recovery Act are not subject to the cost sharing provisions of WRDA 1986.

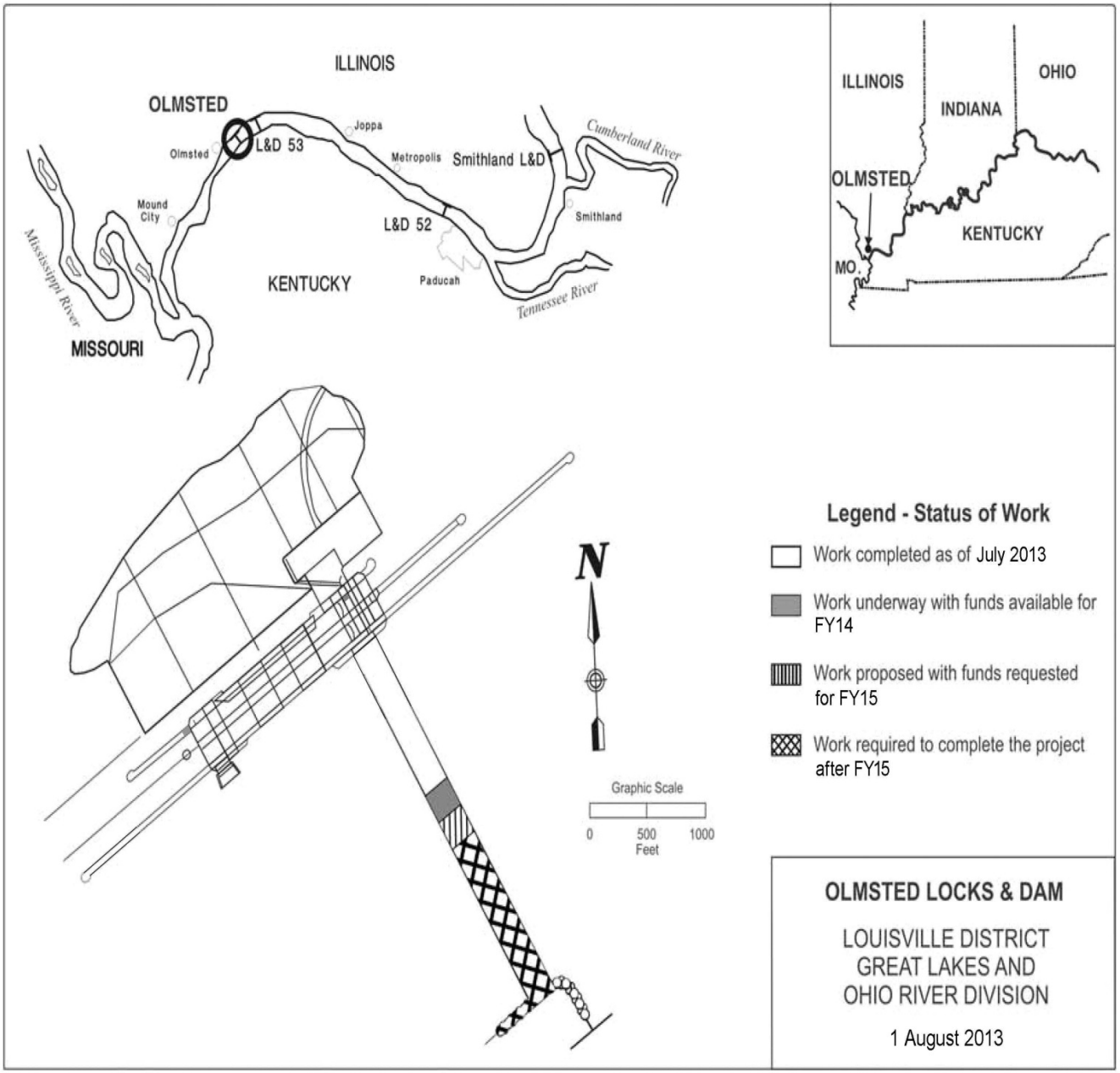
STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $3,082,777,000 is a decrease of $21,223,000 from the latest estimate ($3,104,000,000) presented to Congress (FY 2013). The change includes the following items.

Items	Amount
Price De-escalation on Construction Features	$21,223,000
Total	$21,223,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE : A final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency on April 4, 1986. Due to project changes, a Draft Supplemental EIS was filed in November 1991. The Final Supplement to the EIS was filed on March 26, 1993, and the Record of Decision was signed on May 5, 1993.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1986. Funds to initiate construction were appropriated in FY 1991. The twin 110 x 1200-foot locks were substantially completed in 2005. Construction on the dam was initiated in Jan 2004. Demolition of Locks and Dams 52 and 53 will follow completion of dam construction. A Post Authorization Change Report has been approved and submitted to Congress. The H.R. 2775 – Continuing Appropriations Act of 2014 included a provision to increase the authozied cost of Olmsted to $2,918,000,000.


ILLINOIS
OLMSTED
Olmsted
L&D 53
Joppa
Metropolis
Smithland L&D
Cumberland River
Mound City
L&D 52
Smithland
Mississippi River
KENTUCKY
Paducah
Tennessee River
MISSOURI
ILLINOIS
INDIANA
OHIO
OLMSTED
KENTUCKY
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N
Graphic Scale
0
500
1000
Feet
Legend - Status of Work
Work completed as of July 2013
Work underway with funds available for FY14
Work proposed with funds requested for FY15
Work required to complete the project after FY15
OLMSTED LOCKS & DAM
LOUISVILLE DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION
1 August 2013

Kentucky

APPROPRIATION TITLE: Construction – Dam Safety Seepage Correction, Major Rehabilitation

PROJECT: Rough River Lake, KY Major Rehabilitation (Continuing)

LOCATION: The dam site is located on Rough River, 89.3 miles east of the confluence with the Green River, and about 60 air miles southwest of Louisville, KY.

DESCRIPTION: The Rough River Dam is part of a system of dams providing flood protection to the Green River Basin of Kentucky. Construction began in 1955 and the dam began full operation in 1960. The project is a 1,590 foot long earth filled embankment with a maximum height of 130 feet. It includes a gate-controlled outlet works on the right abutment and a 65-foot wide uncontrolled spillway near the left abutment.

AUTHORIZATION: Flood Control Act (Public Law 761, 75th Congress, 28 June 1938)

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

INITIAL BENEFIT-COST RATIO: 0.016 to 1 at 7 percent

BASIS OF BENEFIT-COST RATIO: Dam Safety Modification Report approved by ASA(CW) on March 7, 2013.

SUMMARIZED FINANCIAL DATA

ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014) Entire Project	PERCENT COMPLETE 2	PHYSICAL COMPLETION SCHEDULE TBD

Original Project

Actual Federal Cost	$10,620,000		
Actual Non-Federal Cost	$23,000		
Total Original Project Cost	$10,643,000		

Project Modification

Estimated Federal Cost	$149,000,000		
Total Estimated Modification Cost	$149,000,000		
Total Estimated Project Cost	$159,643,000		

Allocations to 30 September 2011	$1,561,000		
Allocations for FY 2012	$1,030,000		
Allocations for FY 2013	$1,023,000		
Allocation for FY 2014	$5,800,000		6%
Allocations through FY 2014	$9,414,000	1/2/3/5/	
Estimated Unobligated Carry-in Funds	$0	4/	
President's Budget for FY 2015	$25,000,000		23%
Programmed Balance to Complete after FY 2015	$114,586,000	6/	
Unprogrammed Balance to Complete after FY 2015	$0		

1/ $323,000 reprogrammed to 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 balance from Fiscal Year 2013 into Fiscal Year 2014 (3011A report) for this project is $251,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
5/ PED costs of $1,823,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA:
Dam: Earth core with rock fill, 1,590 ft in length.

Spillway: In a natural saddle, approx 900 ft southwest of the left abutment of the embankment, 65 ft wide, with design discharge capacity of 22,000 cfs.
Outlet Works: Intake structure with 3 slide gates, two 24 inch low flow bypass pipes, 12' x 12' semi-elliptical concrete conduit, and discharge bucket.

JUSTIFICATION: Rough River Dam is a Dam Safety Action Classification (DSAC) 2, which is defined by ER 1110-2-1156 as "High Urgency" where progression toward failure could be taking place under normal operations. The risk assessment cited the potential for seepage and piping failure modes and recommended action to remedy these potential risks. Well-developed karstic features and solution cavities throughout the region support the overall assessment. The DSMR was approved by the Dam Safety Officers within the District, the Great Lakes and Ohio River Division, and Headquarters, USACE on 17 September 2012. The annual probability of failure is estimated to be nearly 2 orders of magnitude above the acceptable risk. Major rehabilitation of the dam is necessary to lower the risk to meet tolerable risk guidelines and to maintain the safety of the project and safeguard the public. Unacceptable foundation conditions and associated seepage requires rehabilitation to remove uncertainty and lower project risk. Failure of dam from seepage / piping would result in catastrophic effects downstream including loss of life, property, agriculture, flood control, water supply, recreation, and significant economic losses in Breckinridge, Hardin, and Grayson Counties, KY. Average annual benefits at 7 percent are $157,120.

FISCAL YEAR 2014: Funds received in Fiscal Year 2014 are being used as follows:

Initiate Construction Contract: Highway Relocation and Work Platform	$4,800,000
Planning, Engineering, and Design – Complete P&S for first construction contract and continue design of grouting and cutoff wall	800,000
Construction Management	$ 200,000
Total	$5,800,000

FISCAL YEAR 2015: The requested amount of $25,000,000 for this project will be applied as follows:

Continue Construction – Initiate Grouting Contract	$ 23,000,000
Planning, Engineering, and Design	$ 1,000,000
Construction Management	$ 1,000,000
Total	$ 25,000,000

STATUS OF LOCAL COOPERATION: None required.

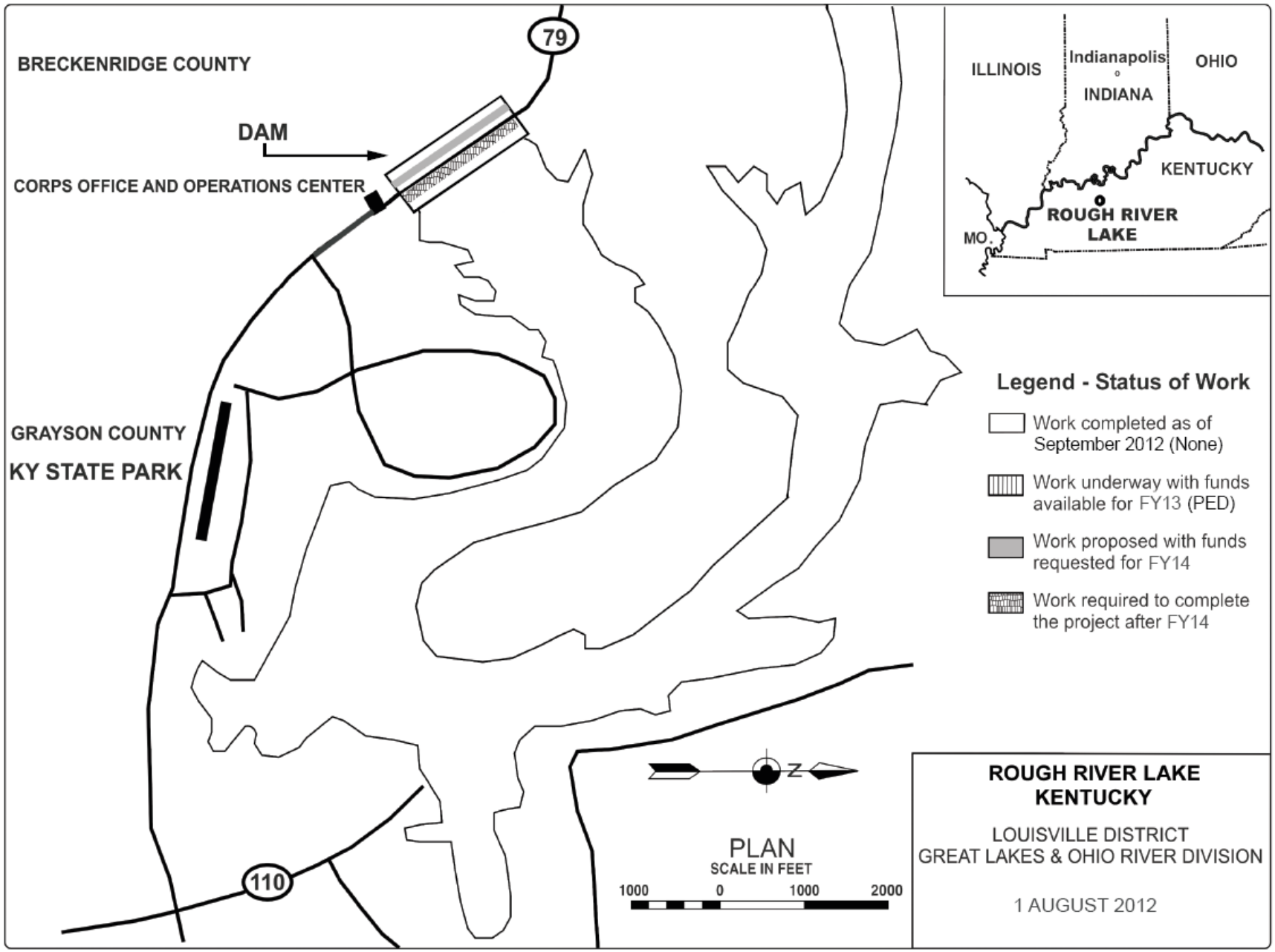
COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $149,000,000 is an increase of $2,000,000 from the latest estimate ($147,000,000) presented to Congress (FY 2014). The change includes the following items.

Items	Amount

Price Escalation on Construction Features	$2,000,000
Total	$2,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The Environmental Assessment was prepared in conjunction with the Dam Safety Modification Report and a Finding of No Significant Impact (FONSI) was signed by the District Commander in July 2012.

OTHER INFORMATION: Construction funds were first appropriated in FY 2008 utilizing “Dam Safety and Seepage/Stability Correction Program” funds.



Division: Great Lakes and Ohio River District: Louisville Rough River Lake, KY (Dam Safety)

Ohio

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: Bolivar Dam, Muskingum River Lakes, Ohio (Major Rehabilitation – Seepage Control) (Continuing)

LOCATION: The Bolivar Dam is located on Sandy Creek of the Tuscarawas River, a tributary of the Muskingum River, in Stark and Tuscarawas Counties, Ohio. The dam is located 183.4 miles above the mouth of the Muskingum River.

DESCRIPTION: Project construction was completed in September 1938 as one of a system of dams designed to provide flood risk management and water conservation in the Muskingum Watershed in Ohio. This dry dam is a rolled, earthfill dam with an impervious core founded on glacial outwash material. The maximum height of the dam is 87 feet, with a crest length of 6,300 feet and a crest elevation of 982.5'. The project has an uncontrolled saddle type spillway at the left abutment with a crest length of 540 feet and a crest elevation of 962.0'. The project has an intake structure containing six 7' by 15' sluice gates discharging through two 16' by 16' horseshoe tunnels. The project also consists of the Magnolia Levee to protect the residents of the Town of Magnolia and two industrial levees. The drainage area upstream of the dam is 504 square miles.

Bolivar Dam has a history of excessive seepage with a potential of underseepage instability at higher pools. The project experienced significant seepage during the Jan 2005 flood event and emergency repairs were made to the project during that period. To maintain the safety of the project and safeguard the public, major rehabilitation of the dam is necessary, and will include construction of a concrete seepage barrier, augmentation of the existing seepage blanket, automation of existing and installation of additional instrumentation, rehabilitation of 6 sluice gates and gate slots, electrical / mechanical repairs to gate operating equipment and the overhead crane, and abutment grouting.

AUTHORIZATION: Flood Control Act (FCA) of 1939 (P.L. 76-396), Section 4

REMAINING BENEFIT – REMAINING COST RATIO: Not applicable

TOTAL BENEFIT – COST RATIO: Not applicable

INITIAL BENEFIT – COST RATIO: 1.6 to 1 at 4 7/8 percent

BASIS OF BENEFIT – COST RATIO: Major Rehabilitation Report, dated July 2009

SUMMARIZED FINANCIAL DATA				STATUS (1 JAN 2014)	PCT CMPL	PHYSICAL COMPLETION
ORIGINAL PROJECT						
Actual Federal Cost		26,590,000		Project Modification	10	TBD
Actual Non-Federal Cost		8,000,000				
Cash Contributions	8,000,000					
Total Original Project Cost		34,590,000	1/			
PROJECT MODIFICATION						
Estimated Federal Cost		110,913,000				
Estimated Non-Federal Cost		33,130,000				
Cash Contributions	33,130,000					
Total Estimated Modification Cost		144,043,000				
TOTAL ESTIMATED PROJECT COST		178,633,000				
				ACCUM PCT OF EST FED COST		
Allocations to 30 September 2011		$ 10,909,453				
Allocation for FY 2012		5,465,100				
Allocation for FY 2013		7,500,000				
Allocation for FY 2014		32,500,000				
Allocations through FY 2014		56,374,553	2/3/4/6/	50		
Estimated Unobligated Carry-In Funds		0	5/			
Budget Amount for FY 2015		12,300,000		61		
Programmed Balance to Complete after FY 2015		42,238,447	7/			
Unprogrammed Balance to Complete after FY 2015		$ 0				

1/ Muskingum Basin Lakes is a system. No costs allocations are available for individual elements.
2/ $1,770,000 reprogrammed to 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 balance from FY13 into FY14 for this project is $3,105,825 ($3,000,000 committed on the pending seepage barrier contract award). As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this project is $0. This amount will be used to perform work on the study as follows: N/A.
6/ PED costs of $2,685,000 are included in this amount.
7/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA: Concrete seepage barrier; augmentation of the existing seepage blanket; rehabilitation of sluice gates and gate slots; electrical and mechanical repairs to gate operating equipment and the overhead crane; abutment grouting; and automation of existing and installation of additional instrumentation.

JUSTIFICATION: Bolivar Dam was classified as a Dam Safety Action Classification (DSAC) 2, which is defined by ER 1110-2-1156 as "High Urgency" where progression toward failure could be taking place under normal operations. The Bolivar Dam has a history of excessive seepage and a potential for underseepage instability at high pools. Several areas of the embankment and foundation could become unstable due to piping at pool levels below the spillway crest. Emergency repairs were done during the Pool of Record of 951.7 feet in 2005; large boils were observed in 2008. If a failure were to occur, the estimated population at risk is 50,000 and the potential economic damages are $52,000,000. Failure of Bolivar Dam would close Interstate 77 and could cause failure of Dover Dam. Average annual benefits, all flood risk management, are $12,699,000.

FISCAL YEAR 2014: The TOTAL unobligated dollars are being applied as follows:

Continue Sluice Gate / Machinery Rehab and initiate Concrete Seepage Barrier Construction (CCC)	$29,900,000
Continue Engineering and Design During Construction	2,300,000
Continue Construction Management	3,405,825
Total	$35,605,825

FISCAL YEAR 2015: The budget amount will be applied as follows:

Continue Sluice Gate / Machinery Rehab and Concrete Seepage Barrier Construction (CCC)	$6,900,000
Continue Engineering and Design During Construction	2,400,000
Continue Construction Management	3,000,000
Total	$12,300,000

NON-FEDERAL COST: In accordance with Army policy and Section 4 of the Flood Control Act of 1938, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements
Pay 23 percent of the costs of the Major Rehabilitation measures that are allocated to project purposes	$ 33,130,000
Total Non-Federal Costs	$ 33,130,000

The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: A Project Partnership Agreement (PPA) was executed with the non-Federal Partner, the Muskingum Watershed Conservancy District (MWCD), on 5 July 2011.

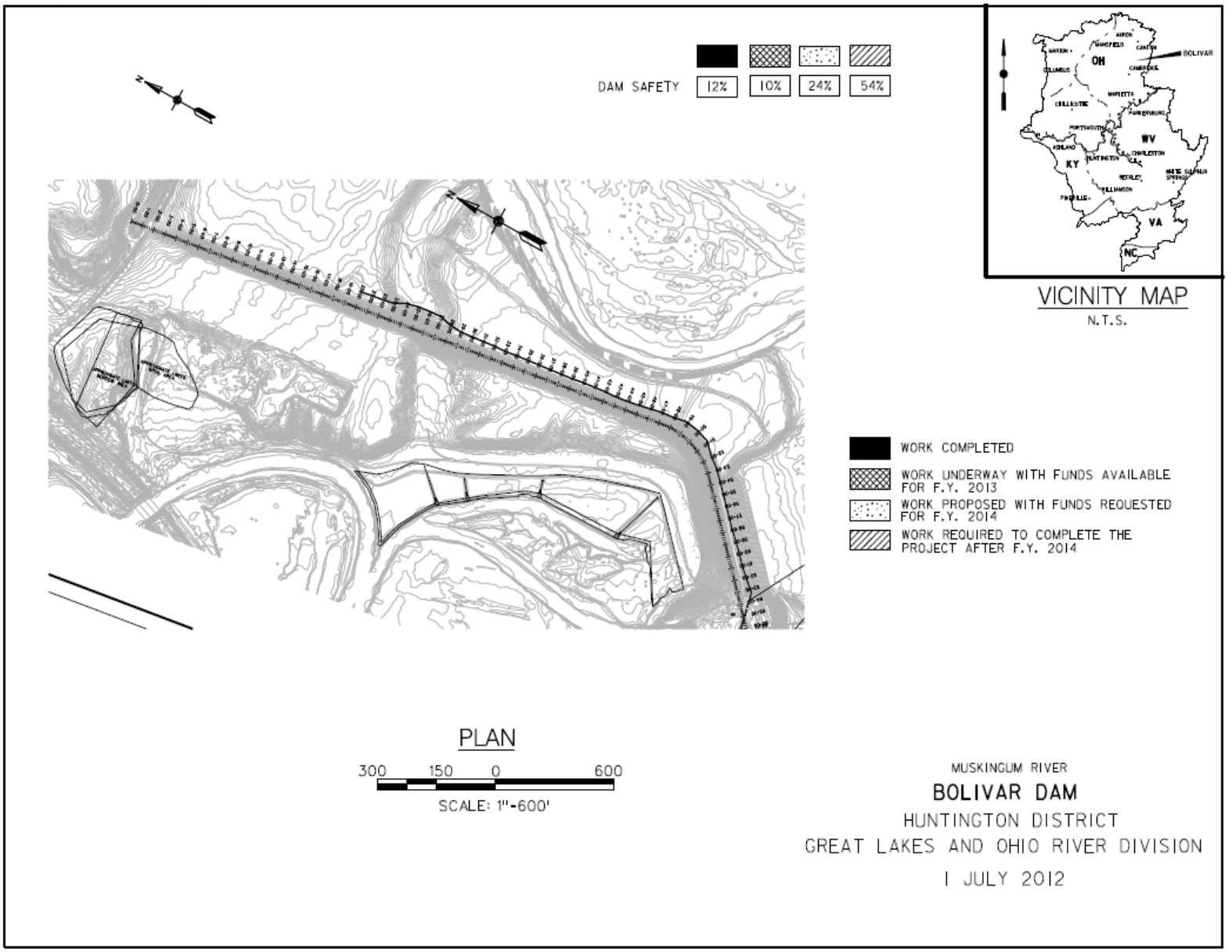
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $ 110,913,000 is a decrease of $22,455,000 from the latest estimate presented to Congress (FY 2014). The $110,913,000 estimate is the fully funded estimate of the 2009 baseline costs price leveled to Oct 2013. This change includes the following items:

Price De-escalation on Construction Features	($ 4,734,394)
Design Changes	(11,783,962)
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	(5,936,644)
Total	($22,455,000)

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Assessment was prepared in conjunction with the Major Rehabilitation Report and a Finding of No Significant Impacts was signed by the District Commander on 25 August 2008. The Major Rehabilitation Report was approved 12 June 2009.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 2011. Dam Safety Wedge funds received in FY 2011 enabled initial construction activities that included construction of a resident engineer office, extension of a seepage blanket, and rehabilitation of one sluice gate.

CORPS OF ENGINEERS U.S. ARMY



APPROPRIATION TITLE: Construction - Navigation

PROJECT: Cleveland Harbor, Ohio (New Phase)

LOCATION: Cleveland Harbor is located on Lake Erie and ranks 6th among Great Lakes harbors based on five-year average tonnage. The Federal channel portions of the Cuyahoga River and Outer Harbor are dredged in support of commercial navigation and the dredged sediment is placed in confined disposal facilities (CDFs) east of the harbor entrance.

DESCRIPTION: Federal cost share of plan for progressive construction improvements to gain new disposal capacity at the existing CDFs. The Dredged Material Disposal Facility (DMDF) will be a feature of an existing authorized project and not a separable element. The feature is within the existing navigation project at Cleveland Harbor and will be constructed in accordance with the Decision Document for Short Term Dredged Material Management in Cleveland Harbor scheduled to be completed in FY 2014.

AUTHORIZATION: River & Harbor Acts of 1875, 1886, 1888, 1896, 1899, 1902, 1907, 1910, 1916, 1917, 1935, 1937, 1945, 1946, 1958, 1960, 1962, Water Resources Development Acts of 1976 and 1986, Supplemental Appropriations Act of 1987 and the Energy & Water Appropriations Act of 1988

REMAINING BENEFIT - REMAINING COST RATIO: Not required for DMDF

TOTAL BENEFIT - COST RATIO: Not required for DMDF

INITIAL BENEFIT - COST RATIO: Not required for DMDF

BASIS OF BENEFIT - COST RATIO: N/A

SUMMARIZED FINANCIAL DATA:	ACCUM PCT OF EST FED COST	STATUS	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
		Entire Project	0	TBD

Estimated Federal Cost		$ 13,915,227		
Programmed Construction	0			
Un-programmed Construction	13,915,227			
Estimated Non-Federal Cost		$ 7,492,815		
Programmed Construction	0			
Cash Contributions	7,492,815			
Other Costs	0			
Estimated Non-Federal Cost				
Unprogrammed Construction	7,492,815			
Cash Contributions				
Other Costs				
Total Estimated Programmed Construction Cost		0		
Total Estimated Unprogrammed Construction Cost		$ 21,408,042		
Total Estimated Project Cost		21,408,042		
Allocations to 30 September 2011		$0		
Allocation for FY 2012		0		
Allocation for FY 2013		0		
Allocation for 2014		0	1/2/3/	
Allocations through FY 2014		0		0
Estimated Unobligated Carry-In Funds		0	4/	
Budget Amount for FY 2015		5,729,900		41
Programmed Balance to Complete after FY 2015		0		
Unprogrammed Balance to Complete after FY 2015		$ 8,185,3278		

1/ $0 reprogrammed to 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 balance from 2013 into 2014 for this project is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A

JUSTIFICATION: The regional economic benefits of commercial navigation rely on dredging and disposal capacity. Failure to implement critical interim CDF capacity measure will lead to reduction in dredging and inability to dredge once the existing CDF capacity is exhausted.

The annual benefits identified in the Design Memorandum updated to current price levels are as follows:

Annual Benefits	Amount
Commercial Navigation vessel transportation cost increases avoided	$11,419,200
Total	$11,419,200

FISCAL YEAR 2014: The allocated amount will be applied as follows: N/A

FISCAL YEAR 2015: The budgeted amount will be applied as follows:

Capital Improvements	$4,912,440
Planning, engineering, and design for Element A	363,415
Construction management	454,025
Total	$5,729,900

NON-FEDERAL COST: As the authorized depths for Cleveland Harbor are between 20 and 45 feet, the applicable cost-share percentage for construction of new dredged material disposal facilities is 25%. Therefore, in accordance with 33 USC 2211, the non-Federal sponsor shall provide 25% of the cost of construction, plus an additional 10% of the total project cost after construction over a maximum period of 30 years.

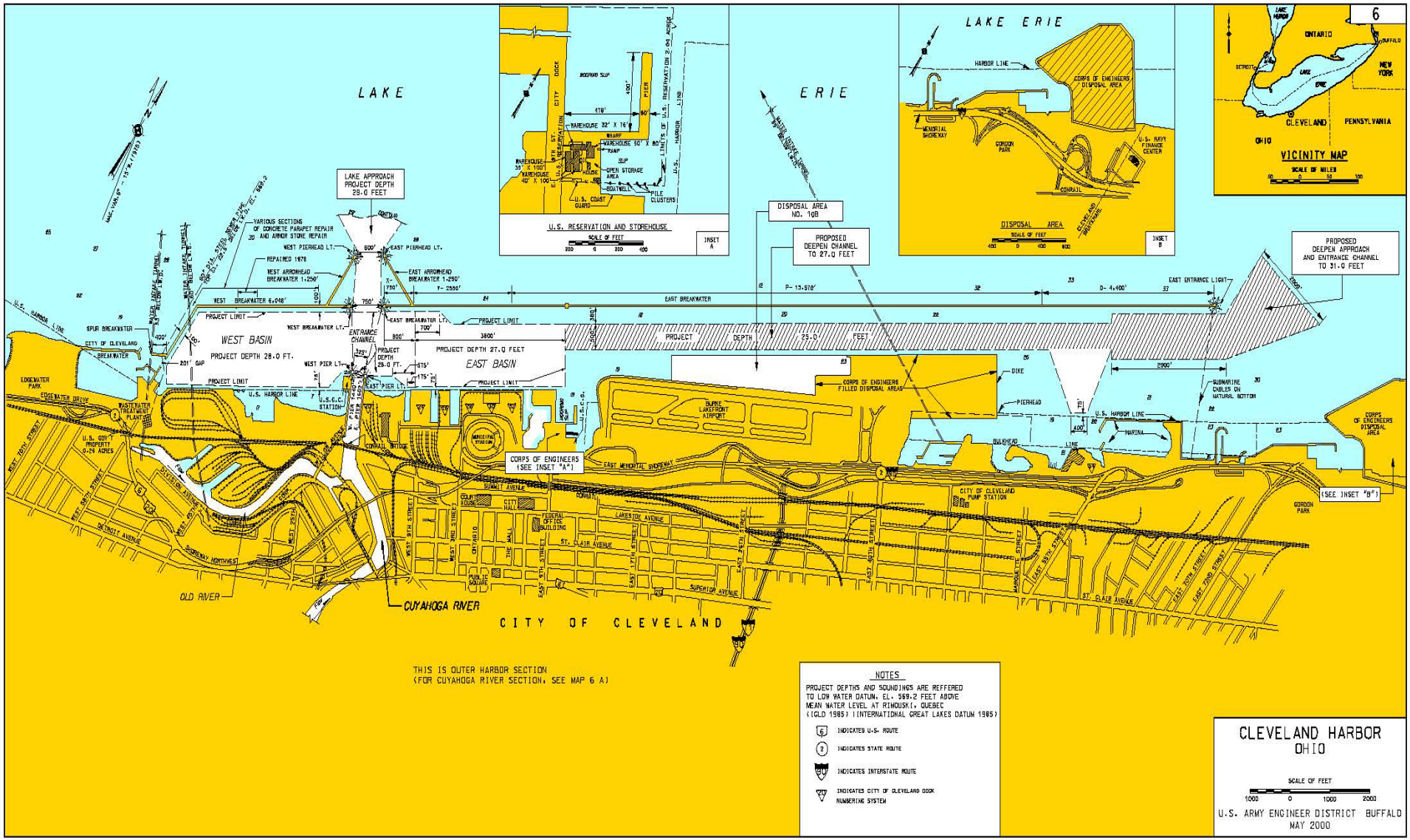
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
TBD		
Total Non-Federal Costs	$7,492,815	

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the Port of Cleveland.

COMPARISON OF FEDERAL COST ESTIMATES: N/A

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: N/A

OTHER INFORMATION: Cleveland is the 49th leading U.S. port with a five year average (2006-2010) tonnage of 11.1 million tons of material shipped and received and is ranked 6th among the Great Lakes Ports based on five year average (2006-2010) tonnage. Major stakeholders include the U.S. Coast Guard, Cleveland Cuyahoga County Port Authority, Burke Lakefront Airport, ArcelorMittal, Lake Carriers' Association and Cargill.



Division: Great Lakes and Ohio River

District: Buffalo

Cleveland Harbor, OH

28 March 2014

LRD-41

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: Dover Dam, Muskingum River, OH Dam Safety Assurance (DSA) (Continuing)

LOCATION: The Dover Dam is located on the Tuscarawas River, a tributary of the Muskingum River, in Tuscarawas County, OH. The dam is located 173.6 miles above the mouth of the Muskingum River.

DESCRIPTION: The Dover Dam is a concrete gravity dam. The dam was constructed by the U.S. Army Corps of Engineers and completed in 1937. The dam is 820 feet long and 69 feet high with a drainage area of 1,397 square miles. Dover Dam is a dry dam allowing the Tuscarawas River to flow freely through the dam for a significant portion of time and only retains water when necessary for flood risk management. The pool of record occurred in January 2005. The recommended plan of improvement for Dover Dam consists of adding parapet walls on top of the non-overflow sections, anchoring the dam and stilling basin, installing a stop-log closure at the left abutment, and providing bank protection immediately downstream of the dam. Phase I construction included installation of 36 anchors within the dam and is complete, while Phase II includes all remaining activities.

AUTHORIZATION: Section 4 of the Flood Control Act (FCA) of 1938 (P.L. 75-761) as amended by Section 4 of FCA 1939 (P.L. 76-398) as amended by Title XII of the Water Resources Development Act of 1986 (P.L. 99-662) for DSA.

REMAINING BENEFIT – REMAINING COST RATIO: Not applicable

TOTAL BENEFIT – COST RATIO: Not applicable

INITIAL BENEFIT – COST RATIO: 2.8 to 1, at 4 7/8 percent

BASIS OF BENEFIT – COST RATIO: Dam Safety Assurance Program Evaluation Report, dated June 2007.

SUMMARIZED FINANCIAL DATA:				STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYS COMPL SCHEDULE
ORIGINAL PROJECT				Project Modification	80	Sep 2015
Actual Federal Cost		$ 26 590,000				
Actual Non-Federal Cost		8,000,000				
Cash Contributions	8,000,000					
Other Costs	0					
Total Original Project Cost		34,590,000	1/			
PROJECT MODIFICATION						
Estimated Federal Cost		59,667,940				
Estimated Non-Federal Cost		2,132,101				
Cash Contributions	2,132,101					
Other Costs	0					
Total Estimated Modification Cost		61,800,041				
Total Estimated Project Cost		$96,390,041				
				ACCUM PCT OF EST FED COST		
Allocations to 30 September 2011		$46,152,582				
Allocation for FY 2012		6,900,000				
Allocation for FY 2013		65,358				
Allocation for FY 2014		3,750,000				
Allocations through FY 2014		56,867,940	2/3/4/6/	95		
Estimated Unobligated Carry-In Funds		0	5/			
President's Budget for FY 2015		2,800,000		100		
Programmed Balance to Complete after FY 2015		0	7/			
Unprogrammed Balance to Complete after FY 2015		$ 0				

1/ Muskingum Basin Lakes is a system. No costs allocations are available for individual elements.
2/ $2,244,000 reprogrammed from the project.
3/ $40,418 rescinded from the project.
4/ $0 transferred to the Flood Control and Coastal Emergencies account.
5/ Estimated Unobligated "Carry-in" Funding: The actual unobligated balance from 2013 to 2014 for this project is $8,327. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
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.

PHYSICAL DATA: Corrective measures to be undertaken include parapet walls on top of the non-overflow sections; anchoring the dam and stilling basin; a stop-log closure at the left abutment; and bank protection immediately downstream of the dam. Phase I construction includes installation of 36 anchors within the dam which is complete; Phase II includes all remaining activities.

JUSTIFICATION: Dover Dam is a Dam Safety Action Classification (DSAC) 2, which is defined by ER 1110-2-1156 as "High Urgency" where failure is foreseen to be taking place under normal operations. . The Dover Dam is hydrologically deficient – it will not safely pass the spillway design flood. The imminent failure flood is below the spillway crest. Periodic inspections of the Dover Dam by the Corps have revealed significant dam safety concerns which have grown over the life of the dam. The Corps has determined the dam cannot safely accommodate the Probable Maximum Flood (PMF) event. The dam is also believed to be unstable against sliding under conditions below the PMF due to known faulting and uncertain foundation bedrock quality. If a failure were to occur, the estimated population at risk is 40,000 and the potential economic damages are $1,550,000,000. Average annual benefits, all flood risk management, are $15,874,000.

FISCAL YEAR 2014: The TOTAL unobligated dollars are being applied as follows:

Existing Operations Building Structural Modifications		$ 2,000,000
Continue Engineering and Design During Construction		800,000
Continue Construction Management		958,327
	Total	$ 3,758,327

FISCAL YEAR 2015: The budget amount will be applied as follows:

Complete Construction Management		$ 800,000
Post Construction Risk Assessment		2,000,000
	Total	$ 2,800,000

NON-FEDERAL COST: In accordance with Section 1203 of the Water Resources Development Act of 1986 (P.L. 99-662), as amended, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual OMRR&R Costs
Pay 3.45 percent of the costs of the DSA corrective measures that are allocated to project purposes (3.45 percent of total project costs).	$ 2,132,000	$ 0
Total Non-Federal Costs	$ 2,132,000	$ 0

STATUS OF LOCAL COOPERATION: A Project Partnership Agreement (PPA) was executed with the non-Federal partner, the Muskingum Watershed Conservancy District (MWCD) in September 2007 for the bar anchors. An additional PPA was executed on 24 July 2009 for the remainder of the project. The non-Federal sponsor has agreed to make all required payments concurrently with project construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $59,667,940 is an increase of $14,940 from latest estimate presented to Congress (FY 2014).

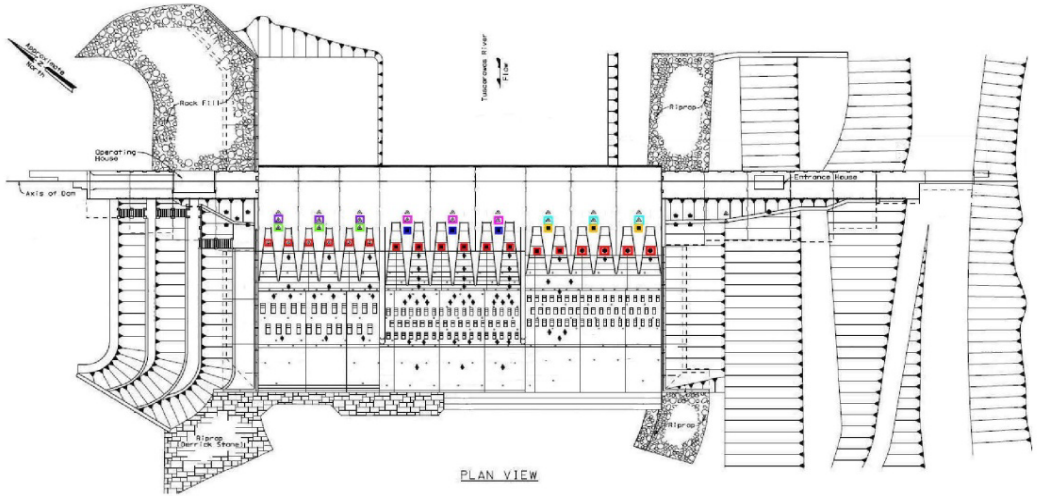
Price Escalation on Construction Features	$ 14,940
Total	$14,940

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The Environmental Impact Statement was prepared in conjunction with the Dam Safety Assurance Program Evaluation Report. The Evaluation Report was approved July 2007 and a concurrence memorandum from the ASA(CW) is dated 30 January 2008.

OTHER INFORMATION: Construction funds to initiate the Dover DSA, OH project implementation were appropriated in FY 2006. Project will complete in FY 2015 pending approval of the Post Construction Risk Assessment Report.

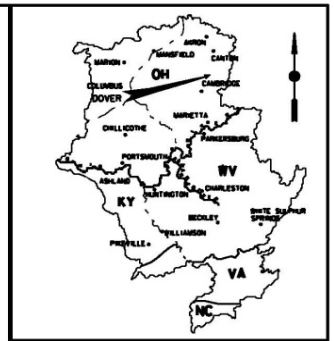
CORPS OF ENGINEERS U.S. ARMY

DAM SAFETY | 90% | 3% | 6% | 1%



PLAN VIEW

20 JANUARY 2012



VICINITY MAP
N.T.S.

STATUS OF WORK

- WORK COMPLETED
- WORK UNDERWAY WITH FUNDS AVAILABLE FOR F.Y. 2013
- WORK PROPOSED WITH FUNDS REQUESTED FOR F.Y. 2014
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER F.Y. 2014

MUSKINGUM RIVER

DOVER DAM

HUNTINGTON DISTRICT
GREAT LAKES AND OHIO RIVER DIVISION

1 JULY 2012

Pennsylvania

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: East Branch Clarion River Lake, PA (Dam Safety) (Continuing)

LOCATION: The dam is on the East Branch of the Clarion River, 7.5 miles upstream from the junction with the West Branch of the Clarion River at Johnsonburg, Pennsylvania, and 14 miles upstream of Ridgeway, Pennsylvania. The reservoir is located entirely in Elk County, Pennsylvania. The dam was constructed between 1947 and 1952 and has been in continuous operation since December 1952, with one notable exception. During 1957, an episode of internal erosion and piping resulted in emergency drawdown of the reservoir and loss of operating capability while repairs were made. The dam consists of a 184-foot high earth embankment with a 10-foot diameter concrete lined discharge tunnel, control tower, and an uncontrolled concrete lined side-channel spillway.

DESCRIPTION: The project consists of constructing a full length, full depth cut-off wall preceded by a phase of site development. The components of the cut-off consist of grouting of the bedrock, deep soil mixing around the 1957 void repair, and a lean concrete wall approximately 2,145 feet long with a minimum continous width of 18 inches and approximate maximum depth of 250 feet.

AUTHORIZATION: Flood Control Acts of 28 June 1938 (P.L. 75-761) and 1944 (P.L. 78-534)

REMAINING BENEFIT – COST RATIO: Not applicable

TOTAL BENEFIT – COST RATIO: Not applicable

INITIAL BENEFIT – COST RATIO: 0.94 at 4 5/8 percent

BASIS OF BENEFIT – COST RATIO: East Branch Dam, Clarion River, Final Dam Safety Evaluation Report, dated August 2010

SUMMARIZED FINANCIAL DATA:				ACCUM PCT OF EST FED COST	STATUS (1 MAR 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$280,000,000			Entire project	7	TBD
Programmed Construction	$280,000,000						
Total Estimated Project Cost		$280,000,000					
Allocations to 30 September 2011		$ 8,470,000					
Allocation for FY 2012		4,111,000					
Allocation for FY 2013		8,268,000					
Allocation for FY 2014		21,500,000					
Allocations through FY 2014		42,349,000	1/2/3/5/	15			
Estimated Unobligated Carry-In Funds		0	4/				
President's Budget for FY 2015		64,800,000		32			
Programmed Balance to Complete after FY 2015		172,851,000	6/				
Unprogrammed Balance to Complete after FY 2015		$ 0					

1/ $0 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 balance from 2013 into 2014 (3011a report) for this project is $3,430,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
5/ PED costs of $0 are included in this amount.
6/ For programmed work only.

JUSTIFICATION: In 1957, an episode of internal erosion of the dam embankment material and piping resulted in emergency drawdown of the reservoir and loss of operating capability. During this time a rapidly growing void in the embankment was located and filled by grouting to control internal seepage. Although a

catastrophic failure was narrowly prevented in 1957, the design and construction criteria and practices used to build this dam do not meet present-day safety standards. Consequently, the conditions that led to the development of seepage and piping in 1957 remain unchanged across the embankment and there remains significant potential for similar seepage and piping to redevelop in the future. In 2006, East Branch Dam was classified as a Dam Safety Action Classification (DSAC) 2, which is defined by ER 1110-2-1156 as "High Urgency" where progression toward failure could be taking place under normal operations. . If a failure of the dam were to occur the estimated loss of life is 227 lives and economic damages are $1.04 billion. The average annual benefits are $81,874,000.

PHYSICAL DATA: Develop the site. Construct full length, full depth cut-off wall preceded by a phase of site development. The components of the cut-off consist of grouting of the bedrock, deep soil mixing around the 1957 void repair, and a lean concrete wall approximately 2,145 feet long with a minimum continous width of 18 inches and approximate maximum depth of 250 feet.

FISCAL YEAR 2014: The TOTAL unobligated dollars are being applied as follows:

Description	Amount
Award cutoff wall construction contract	$20,430,000
Engineering and Design during Construction (EDC) and Construction Supervision and Administration (S&A) for continuation of cutoff wall construction	4,500,000
Total	$24,930,000

FISCAL YEAR 2015: The requested amount of $64,800,000 will be applied as follows:

Description	Amount
Continue cutoff wall construction contract	$54,800,000
EDC and S&A for continuation of cutoff wall construction	10,000,000
Total	$64,800,000

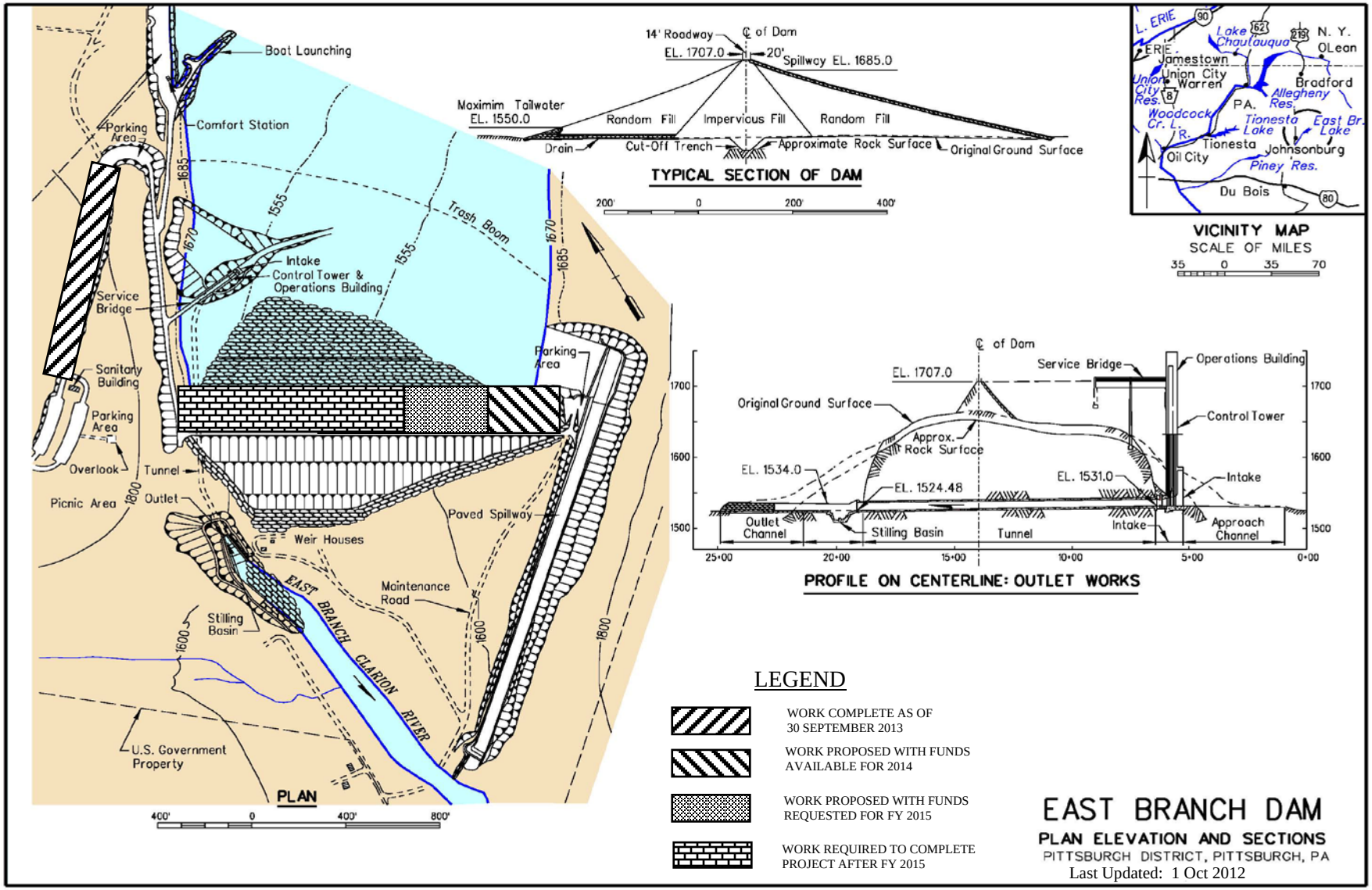
NON-FEDERAL COSTS: Not applicable.

STATUS OF LOCAL COOPERATION: Not applicable.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $280,000,000 is a decrease of $5,403,000 from the last estimate presented to Congress (FY2014). This change includes deletion of study cost funded with Dam Safety Wedge funds previously included in the construction cost estimate.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Assessment was prepared in conjunction with the Dam Safety Modification Report and a Finding of No Significant Impacts was signed by the District Commander on 1 July 2010. The Dam Safety Modification Report was approved on 22 October 2010.

OTHER INFORMATION: Construction funds were first appropriated in FY 2009.


Boat Launching
Parking Area
Comfort Station
Trash Boom
Intake
Control Tower & Operations Building
Service Bridge
Sanitary Building
Parking Area
Overlook
Tunnel
Picnic Area
Outlet
Weir Houses
Paved Spillway
Parking Area
Maintenance Road
Stilling Basin
EAST BRANCH CLARION RIVER
U.S. Government Property
PLAN
400' 0 400' 800'
14' Roadway
℄ of Dam
EL. 1707.0
20' Spillway EL. 1685.0
Maximim Tailwater EL. 1550.0
Random Fill
Impervious Fill
Random Fill
Drain
Cut-Off Trench
Approximate Rock Surface
Original Ground Surface
TYPICAL SECTION OF DAM
200' 0 200' 400'
L. ERIE
Lake Chautauqua
N. Y.
ERIE
Jamestown
Union City
Warren
Bradford
Allegheny Res.
PA.
Woodcock Cr. L.
Tionesta Lake
East Br. Lake
R.
Tionesta
Johnsonburg
Oil City
Piney Res.
Du Bois
VICINITY MAP
SCALE OF MILES
35 0 35 70
℄ of Dam
EL. 1707.0
Service Bridge
Operations Building
Original Ground Surface
Approx. Rock Surface
Control Tower
EL. 1534.0
EL. 1524.48
EL. 1531.0
Intake
Outlet Channel
Stilling Basin
Tunnel
Intake
Approach Channel
25+00 20+00 15+00 10+00 5+00 0+00
PROFILE ON CENTERLINE: OUTLET WORKS
LEGEND
WORK COMPLETE AS OF 30 SEPTEMBER 2013
WORK PROPOSED WITH FUNDS AVAILABLE FOR 2014
WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2015
WORK REQUIRED TO COMPLETE PROJECT AFTER FY 2015
EAST BRANCH DAM
PLAN ELEVATION AND SECTIONS
PITTSBURGH DISTRICT, PITTSBURGH, PA
Last Updated: 1 Oct 2012

l

ɛr Lake, PA

APPROPRIATION TITLE: Construction – Locks and Dams (Navigation)

PROJECT: Locks and Dams 2, 3, and 4, Monongahela River, Pennsylvania (Continuing)

LOCATION: These three Navigation facilities are located on the lower portion of the Monongahela River near the city of Pittsburgh, Pennsylvania. They are part of the Allegheny – Monongahela system and are located in Allegheny, Washington, and Westmoreland Counties. Measured from the Point in Pittsburgh, Locks and Dam 2 (Braddock) is at river mile 11.2, Locks and Dam 3 (Elizabeth) is at river mile 23.8, and Locks and Dam 4 (Charleroi) is at river mile 41.5. Six other navigation facilities situated upstream of Locks and Dam 4 provide a navigable waterway extending to Fairmont, West Virginia. At the Point in Pittsburgh, the Monongahela and Allegheny Rivers join to form the Ohio River.

DESCRIPTION: The authorized projects consist of a new gated dam and a rehabilitated auxiliary chamber floodway bulkhead structure at Braddock; new twin 84 by 720 foot locks and below-dam scour protection at Charleroi; raising pool 2 by a nominal five feet and lowering pool 3 by a nominal 3.2 feet; removal of Locks and Dam (L/D) 3; channel dredging; relocations; and bank stabilization. Construction began in Fiscal Year (FY) 1995 with the upgrade of the Locks 2 auxiliary chamber floodway bulkhead and relocations. Replacement of the dam at Braddock began in 1999 and is complete. Only one operational lock remains at L/D 4 (Charleroi). Efforts are now focused on the new twin locks at Charleroi and remaining pool 2 relocations. All work is programmed. Existing Locks and Dams 2, 3, and 4 are the last of the old and undersized locks on the Monongahela River system and have components that have been in service for nearly 100 years. The existing Braddock facility consists of a main lock with chamber dimensions of 110 by 720 feet, an auxiliary lock with chamber dimensions of 56 by 360 feet, and a 748-foot fixed-crest dam. The existing Elizabeth facility consists of locks with chamber dimensions of 56 by 720 feet and 56 by 360 feet and a 670-foot fixed-crest dam. The existing Charleroi facility consists of locks with chamber dimensions of 56 by 720 feet and 56 by 360 feet and a gated dam consisting of five 84-foot gated sections and a 43-foot fixed weir section.

AUTHORIZATION: Section 101, Water Resources Development Act of 1992 (P.L. 102 – 580)

REMAINING BENEFIT – REMAINING COST RATIO: 1.4 to 1 at 7 percent

TOTAL BENEFIT – COST RATIO: 1.3 to 1 at 7 percent

INITIAL BENEFIT – COST RATIO: 6.7 to 1 at 7 3/4 percent (FY 1995)

BASIS OF BENEFIT – COST RATIO: The initial Benefit-Cost ratio is based upon the benefits and costs listed in the Feasibility Report dated December 1991. The initial rate is the FY 1995 rate when Construction funds were first expended. The Benefit-Cost ratio was recalculated in FY 2011 using both updated Benefits as well as updated Costs.

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost	$1,762,652,000
General Appropriations	$915,528,000
Inland Waterway Trust Fund	$847,124,000
Estimated Non-Federal Cost	0
Total Estimated Programmed Construction Cost	$1,762,652,000
Total Estimated Unprogrammed Construction Cost	0
Total Estimated Project Cost	$1,762,652,000

STATUS (1 MAR 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Renovation and extension of Locks 2 Upper Guard wall	100	Jan 98
Bulkhead Structure L/D 2	100	Mar 96
Braddock Dam	100	Jul 04
Dredging & Remove L/D 3	0	TBD
Raise and Lower Pool	0	TBD
Public Relocations	55	TBD
Charleroi River Chamber Lock	30	TBD
Charleroi Scour Protection	0	TBD
Charleroi Land Chamber Lock	0	TBD
Entire project	36.0	TBD

	GENERAL APPNS		INLAND WATERWAYS TRUST FUNDS		ACCUM PCT OF EST FED COST
Allocations to 30 September 2011	$298,177,000		$233,246,000		
Allocation for FY 2012	2,461,000		500,000		
Allocation for FY 2013	12,604,000		11,094,000		
Allocation for FY 2014	37,337,500		37,337,500		
Allocations through FY 2014	350,579,500	1/2/3/5/	282,177,500	1/2/3/5/	36
Estimated Unobligated Carry-In Funds	0	4/	0	4/	
President's Budget for FY 2015	4,516,000		4,516,000		37
Programmed Balance to Complete after FY 2015	560,431,500	6/	560,431,500	6/	
Unprogrammed Balance to Complete after FY 2015	$ 0		$ 0		

1/ $0 reprogrammed to (from) the project.
2/ $0 rescinded from the project.

Division: Great Lakes and Ohio River District: Pittsburgh Locks and Dams 2, 3, & 4, Monongahela River, PA

[3/] $27,336,000 transferred to the Flood Control and Coastal Emergencies account.
[4/]Unobligated Carry-in Funding: The actual unobligated balance from FY13 into FY14 (3011A report) is $913,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
[5/] PED costs of $12,542,294 are included in this amount.
[6/] For programmed work only.

JUSTIFICATION: The continued viability of the Lower Monongahela River navigation system is vital to the economic well being of southwestern Pennsylvania, northeastern West Virginia, and the nation. Locks and Dam 2, 3, and 4 cumulatively provide over 14,000 direct jobs in the region. Between 2000 and 2009, an average of 15 Million tons of cargo per year was shipped through the Lower Monongahela River at a transportation rate savings of approximately $13 per ton ($195 Million per year). The primary commodity shipped was coal. Loss of transportation on this river would have an extremely detrimental effect to the regional and local economy. These impacts include the shipments of steam coal from the Bailey Enlow Coal Mine, the largest underground coal mine in the Nation and potential impacts to the Clairton Coke Works, the largest steel coking plant in the Nation. The average annual benefits at 7 percent are as follows:

Annual Benefits	Amount
Commercial Navigation	$ 39,729,000
Advanced replacement of shore side facilities	2,000,000
Eliminated cost of help boats	100,000
Flood damage reduction	500,000
Normal O&M reduction	1,000,000
Maintenance Savings	176,703,000
Total	$ 220,032,000

The major risks associated with these facilities are their deteriorated structural condition and lock capacity. The risk to navigation is becoming increasingly severe as the facilities age and continue to deteriorate. There is a significant probability of structural failure and loss of navigation on the Monongahela River, causing major cost impacts to the production of electricity due to its dependency on coal from the Monongahela River corridor. The extreme structural deterioration of Locks and Dam 3 and Locks 4 is of paramount concern. Replacement of Lock 4 and removal of Dam 3 are necessary because major repairs and rehabilitation will not prevent structural failure. The highest risks are at Elizabeth L/D 3 and at Charleroi L/D 4.

Locks 3 (Elizabeth) are highly unreliable. Dam 3 has been classified as a Dam Safety Action Class (DSAC) 1 navigation dam and has previously shown signs of active failure. Operation and Maintenance (O&M) funds were used in FY 2007 and FY 2008 to perform emergency stabilization work to the most critical portions of this nearly 110 year old dam. These emergency repairs appear to be functioning adequately. Monitoring and observation of the dam have not indicated a need to perform more rigorous monitoring, investigation, or apply additional risk reduction measures at this time. Failure of Dam 3 would result in loss of navigation in pool 3, adverse impacts to multiple water intakes, and a potential failure of the only operational lock at the upstream Lock 4, Charleroi.

Lock 4 (Charleroi) is highly unreliable, approaching 80 years old, and in poor condition. The Charleroi Dam was classified as a DSAC 2 dam in 2009. The District is focusing resources on completing the new Charleroi River Chamber as quickly as possible. Loss of downstream pool due to failure of Dam 3 would seriously affect the stability of the existing Lock 4 and potentially compromise the integrity of the dam. Lock 4 has a 56 foot wide chamber that is a safety hazard to the navigation industry as well as a significant bottleneck to efficient navigation on the lower Monongahela River. Upon completion of a new 84 foot wide lock chamber at Lock 4 and removal of Locks and Dam 3, the significant bottlenecks to navigation will have been removed improving transportation benefits.

FISCAL YEAR 2014: The TOTAL unobligated dollars are being applied as follows:

Project Management	$ 500,000
Engineering and Supervision and Administration for Contract #4	1,600,000
Charleroi River Chamber Design (carry-in from FY13)	$ 913,000
Finalize the design for Charleroi River Chamber Phase 1 contract.	$ 600,000
Award Phase 1 Contract for the Charleroi River Chamber, M22-M27	$ 70,000,000
Modeling and Design of the Charleroi Dam Stilling Basin	$ 975,000
Engineering and Construction oversight for the demonstration and repair of the Charleroi River Wall drilled shafts.	$ 500,000
Emptying Basin Contract, awarded in Sept 2013, potential contract modifications.	$ 500,000
Total	$ 75,588,000

FISCAL YEAR 2015: The requested amount will be used as follows:

Project Management of the project	$ 2,100,000
Engineering and Supervision and Administration for Contract #4	4,000,000
Engineering and Supervision and Administration for Drilled Shaft Repair	1,200,000
Land Acquisition	1,000,000
Cultural & Environmental Resource Mitigation	732,000
Total	$9,032,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Section 102, Water Resource Development Act of 1986, 50% of the total cost of construction will be derived from the Inland Waterways Trust Fund (IWTF). Funds received through the American Recovery and Reinvestment Act (ARRA) are not required to have a matching cost share from the IWTF.

Construction of this project requires modification to privately owned shore side facilities and submarine utility crossings, which were all constructed under Department of the Army permits pursuant to Section 10 of the Rivers and Harbors Act of March 3, 1899. The estimated cost to owners for adapting these facilities to new project conditions was $111,000,000 in October 1992 dollars.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The original fully funded project cost estimate was $750,000,000 (October 1992). The total project cost and current 902 cost ceiling was updated in 2013 . The new fully funded project estimate is $1,762,652,000 (October 2013). The current Federal cost estimate is an increase of $33,278,000, approximately a 1.9% increase, over the latest estimate ($1,729,374,000) presented to Congress for the FY 2014 budget request.

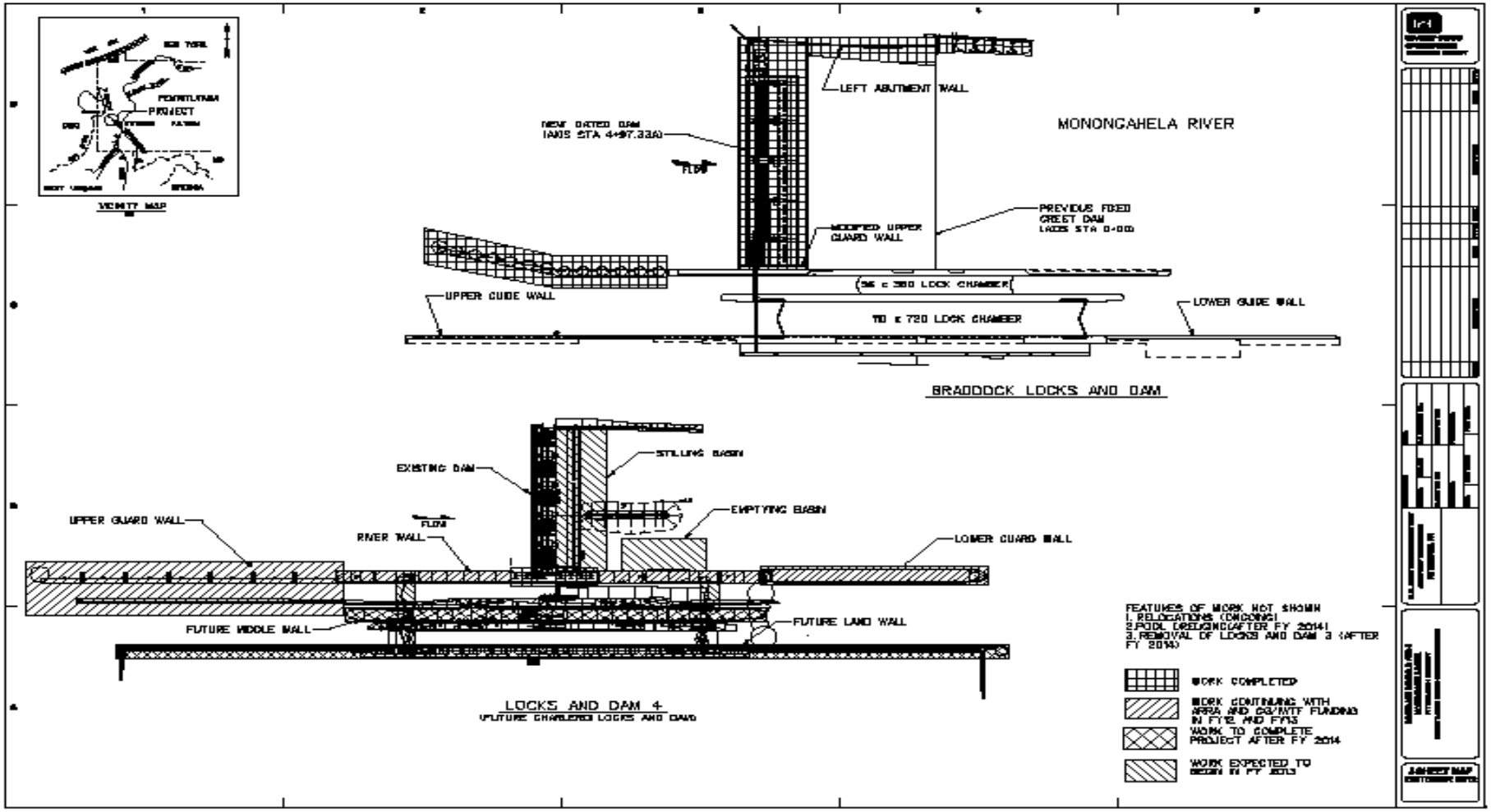
Item	Amount	
Price Escalation or De-escalation on Construction Features	$33,363,000	1/
Price Escalation on Real Estate	$-85,000	
Total	$33,278,000	

1/ The increase in project cost due to higher price levels reflecting higher energy, materials and labor costs. Price level increases for all other features including planning, engineering and design, and supervision and administration are included in this category.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT AND CLEAN WATER ACT COMPLIANCE: Final Environmental Impact Statement was filed with the Environmental Protection Agency on January 28, 1992. Director of Civil Works signed the Record of Decision on December 17, 1992. A Supplemental Environmental Impact Statement on Project Disposal and various other Environmental Assessments, all resulting in Findings of No Significant Impact has been completed pursuant to the National Environmental Policy Act. Changes since the last supplemental have been captured through the issuance of Public Notices under the Clean Water Act.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were first appropriated in FY 1992. Funds to initiate construction were first appropriated in FY 1995. The Project costs have increased significantly, primarily due to inefficient construction funding associated with prior year appropriations and most recently insufficient revenues in the IWTF. Other cost increases are associated with assumptions made during the development of the Feasibility Study that proved to be invalid and design modifications. The project cost was updated to $1.76 Billion (Oct 2013 price level). The revised cost estimate includes lessons learned from past and ongoing construction activities associated with this project, risks associated with funding constraints, as well as cost and schedule risks. The updated cost estimate includes sunk costs as well as the estimated cost to construct remaining project features. The updated cost estimate is unable to be certified without a realistic project schedule or funding profile. The primary assumption associated with the current cost estimate relates to the Olmsted project

completing in the year 2024, at which time efficient funding could be made available for Locks and Dams 2, 3, and 4. However, several unknowns remain, including: resolution of the IWTF insolvency and the status of the Olmsted project. A disposal facility has been secured for the overall project. This project will require a Post Authorization Change Report when the allocated amount approaches the current estimated 902 Authorization Limit of $1,291,220,000. The vast majority of the project benefits will be realized within the 902 limit. Through September 2013 the project has been allocated $558M which is $733M below the 902 authorization limit.



Division: Great Lakes and Ohio River | District: Pittsburgh | Locks and Dams 2, 3, & 4, Monongahela River, PA

Tennessee

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: Center Hill Dam Safety Major Rehabilitation, Caney Fork River, Tennessee (Continuing)

LOCATION: Center Hill Dam is located at Mile 26.6 on the Caney Fork River in DeKalb County, Tennessee, 55 miles east and upstream of Nashville, Tennessee.

DESCRIPTION: Center Hill Dam has been in service since 1948 providing flood risk management, hydropower, recreation, water supply and water quality benefits. The dam has a maximum height of 250 feet and consists of a 1,382 feet long concrete section, a 778 feet long compacted clay embankment and a 125 feet high by 770 feet long earthen saddle dam in the right rim. The dam impounds 2,092,000 acre-feet at its maximum flood control pool elevation. Since construction, seepage problems through the karst limestone dam foundation have cost millions of dollars in monitoring, subsurface investigation and grouting. In recent years, seepage has increased. Foundation conditions are deteriorating due to erosion along open and clay-filled joints and solution features in the rock within the rims and dam foundation. Erosion jeopardizes the two earthen embankments, the left abutment and the integrity of the left rim. The initial Major Rehabilitation Evaluation Report (MRER) was approved in 2006 and construction began in 2008. Risk based regulation changes resulted in a 2104 Supplemental MRER and a revised scope. The recomended plan includes: 1) a grout curtain approximately 3,000 feet long into the main embankment foundation, left groin and left rim; 2) a concrete barrier wall into foundation of main dam embankment; 3) a Roller Compacted Concrete (RCC) Reinforcing berm downstream of the Saddle Dam Embankment; and 4) rehabilitation of Station Service Power House hydropower unit required to mitigate downstream flow loss resulting from the remedial work.

AUTHORIZATION: Section 4, Flood Control Act of 1938 (P.L. 75-761) and Section 1, River and Harbor Act of 1946 (P.L. 79-525)

REMAINING BENEFIT – REMAINING COST RATIO: N/A

TOTAL BENEFIT – COST RATIO: N/A

INITIAL BENEFIT – COST RATIO: 3.4 at 5 1/8 percent (FY 2006)

BASIS OF BENEFIT – COST RATIO: Benefits are from the latest available evaluation, dated June 2013, at October 2012 price levels.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	STATUS	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$364,200,000					
Programmed Construction	$364,200,000				Entire Project	37	TBD
Total Estimated Project Cost					PHYSICAL	Cut-off Wall	900 feet long
		$364,200,000			DATA:		
						Grout Curtain	3,000 feet long
Allocations to 30 September 2011		$128,587,000	1/2/			RCC Berm	850 feet long
Allocation for FY 2012		$48,500,000	1/				Max height 90
Allocation for FY 2013		$49,900,000					feet
Conference Allowance for FY 2014		$10,000,000	3/				
Allocations through FY 2014		$236,987,000					
Estimated Unobligated Carry-in Funds		$500,000	4/				
President's Budget for FY 2015		$53,400,000	5/				
Programmed Balance to Complete after FY2015		$73,813,000	6/				
Unprogrammed Balance to Complete after FY 2015		0					

1/ $15,000,000 reprogrammed to Wolf Creek Dam Safety Major Rehabilitation Project in FY 2009. $1,500,000 reprogrammed to Bolivar Dam in FY 2012.
3/ $4,000,000 transferred to the Flood Control and Coastal Emergencies (FCCE) account in FY 2011.
4/ Unobligated Carry-in Funding: The unobligated balance from FY 2013 into FY 2014 (3011A report) for this project is $515,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $500,000. This amount will be used to perform work on the project as follows: Complete the Main Dam Barrier Wall
5/ FY 2015 Capability reduced from $56,300,000 to $53,400,000 due to extended schedule for the RCC Berm.
6/ FY 2014 reduced capability of $26,500,000 and FY 2015 reduced capability of $2,900,000 increased balanced to complete. Also, a detailed, risk-based total project cost and schedule update was completed and received a cost agency technical review certification in February 2014. The estimate was significantly higher than previously reported to Congress. The increase is due to an extension of the barrier wall length due to highly solutioned rock, a greater level of detail on the RCC Berm, stabilization of the Left Rim through drilling, blasting and excavation and using the excavated rock to fill between the existing saddle dam and proposed RCC Berm to significantly reduce risk of failure. The increase also includes greater level of detail on site restoration, higher contingency than the previous estimate and an additional year of E&D and S&A expenses.

JUSTIFICATION: Center Hill Dam is a Dam Safety Action Classification (DSAC) 1, which is defined by ER 1110-2-1156 as "Very High Urgency" where progression toward failure is confirmed to be taking place under normal operations and the dam is almost certain to fail under normal operations within a few years without intervention. Continued, uncontrolled seepage creates the potential for dam failure or partial loss of the lake. Progression of seepage through the karst foundation is difficult to accurately predict; however, in the event of dam failure, downstream damages would likely exceed one billion dollars. Only 6 hours warning time is estimated for Metro Nashville. The estimated loss of life is 357. If complete dam failure occurs, the potential depth is 47 feet in Nashville. The project has a Life Safety Hazard Index of 0.072. Failure would also cause damage to interstate bridges over the main east-west route of Interstate 40, and loss of water, wastewater facilities, and electrical services. Average Annual Damages without the project are $86,694,000 and Average Annual Damages with the project are $34,885,000; the Population at Risk is 350,000. The Average Annual Benefits are $51,809,000.

FISCAL YEAR 2014: Funds will be used to continue construction of the main dam barrier wall and the saddle dam seepage rehabilitation. The allocated amount is being applied as follows:

Continue Main Dam Barrier Wall	$6,000,000
Construction Management	$1,500,000
Complete Saddle Dam RCC Berm Design and Acquisition Documents	$2,500,000
Total	$10,000,000

FISCAL YEAR 2015: Funds will be used to complete construction of the main dam barrier wall and continue construction of the saddle dam seepage rehabilitation. The requested amount plus carry-in funds will be applied as follows:

Complete Main Dam Barrier Wall	$15,000,000
Construction Management	$2,000,000
Continue Construction of Saddle Dam Seepage Rehab	$36,400,000
Total	$53,400,000

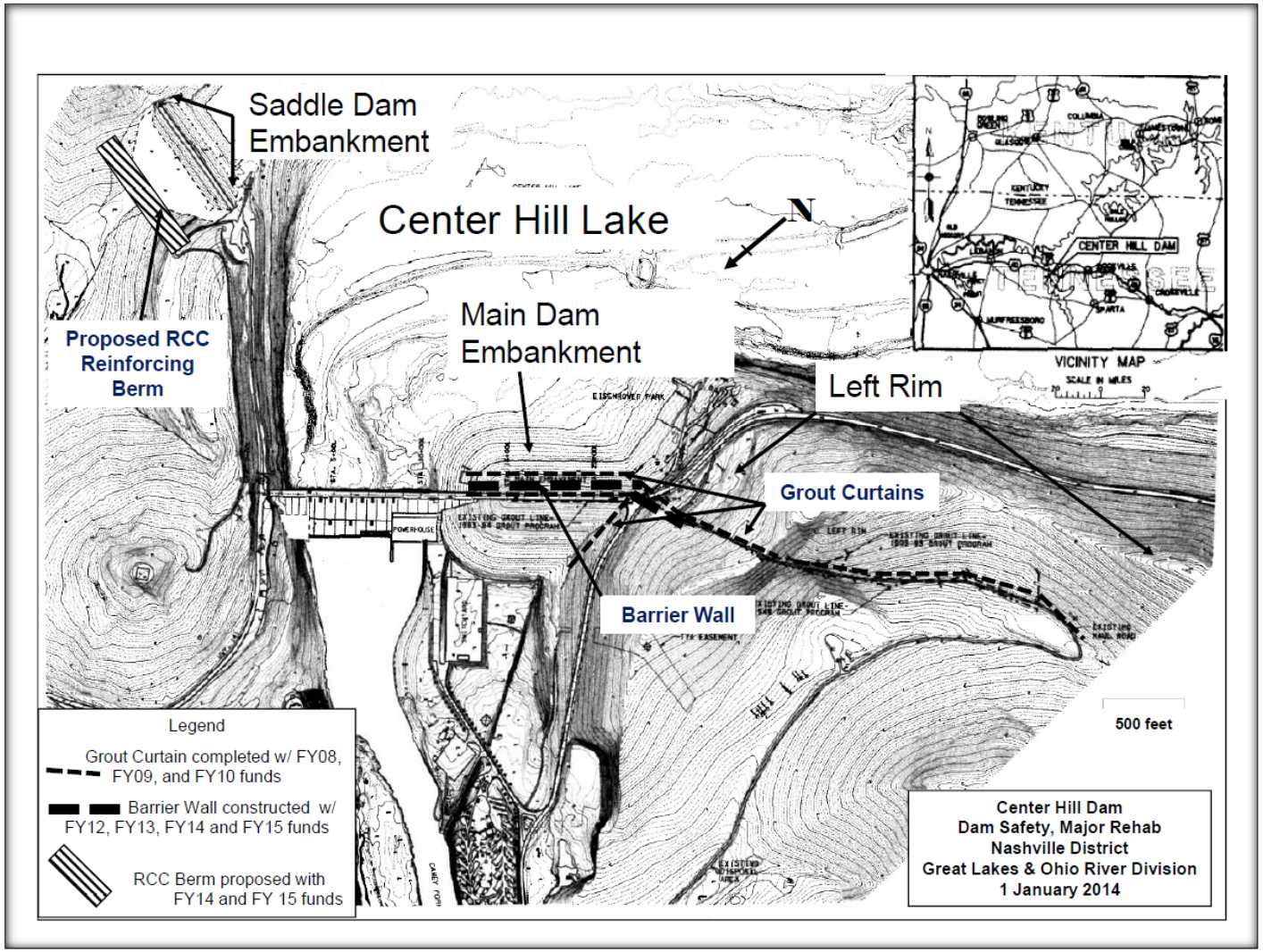
STATUS OF LOCAL COOPERATION: There are two classes of users that will be required to share in the final cost of this project: the water supply and hydropower customers. Three water supply users currently have signed agreements with USACE, Nashville District. The users are the Cities of Cookeville and Smithville, and DeKalb County. Hydropower from the project is marketed through the Southeastern Power Administration (SEPA). SEPA will repay their share of the costs after construction by periodic direct payment to the U.S. Treasury. In accordance with a hydropower agreement with SEPA, cost sharing will begin at the end of construction. The amortization period is yet to be determined. Water Supply users will pay their share in a lump sum at the end of construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $364,200,000 is an increase of $64,600,000 from the latest estimate ($299,600,000) presented to Congress (FY 2014). Additional length was added to the barrier wall contract in an area of highly solutioned rock. A detailed, risk-based total project cost and schedule update was completed and received a cost agency technical review certification in February 2014. The estimate was significantly higher than previously reported to Congress. This change includes the following items.

Item	Amount
Price Escalation or De-escalation on Construction Features	$ 2,000,000
Extension of the Barrier Wall length	$12,000,000
RCC Berm elements to address new failure mode	$22,800,000
Stabilization of the Left Rim as fill for RCC Berm	$ 5,500,000
Site Restoration	$ 2,500,000
Risk-based contingencies	$15,300,000
Additional year of E&D and S&A	$ 4,500,000
Total	$64,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment (EA) was completed early in the study process and a finding of no significant impact (FONSI) was signed in July 2005. An EA Supplement was completed to address additional alternatives and the FONSI was signed in May 2006. A second supplemental EA was completed in December 2007 to address specific grouting methods proposed by potential construction contractors. An EIS evaluating lower lake level alternatives during construction was completed in November 2007 and a Record of Decision (ROD) was signed in February 2008. Another EA Supplement will be completed in FY2014 to evaluate the Roller Compacted Concrete (RCC) reinforcing berm alternative for seepage for the Saddle Dam rehab portion of the project. A FONSI was signed 9 Jan 2014.

OTHER INFORMATION: Design for construction began in FY 2007 utilizing Dam Safety and Seepage/Stability Correction Program funds. Probable loss of life with dam failure is 357, with a range from 184 to 533. The 2005 Corps-wide Screening Portfolio Risk Assessment for Dam Safety ranked Center Hill Dam in Class I category for Corps dams nationwide. The risk-based current scope changes documented in the 2014 Supplemental MRER are under final review.



Division: Great Lakes & Ohio River

District: Nashville

Project: Center Hill Dam Safety Major Rehab, TN

West Virginia

APPROPRIATION TITLE: Construction – Flood Risk Management

PROJECT: Bluestone Lake, WV Dam Safety Assurance (Continuing)

LOCATION: The dam is located in southern WV, in Summers County, on the New River two miles south of Hinton, WV. It is situated 2.5 miles downstream from the confluence of the New and Bluestone Rivers, and 0.8 miles upstream from the confluence of the New and Greenbrier Rivers.

DESCRIPTION: Under the Dam Safety Assurance program, the current plan to correct the deficiencies includes raising the dam eight feet by installing a pre-cast concrete wall, stabilizing the dam with anchors and mass concrete thrust blocks, improving the spillway, modifying six penstocks to increase discharge capacity, and installing scour protection for the modified penstocks. Construction will be accomplished in five main phases. To date, Phases 1 and 2 have been completed. Phase 1 consisted of construction of a temporary access bridge crossing below the dam, construction of a thrust block, extension of six existing penstocks, and installation of sacrificial bulkheads on three of the six penstocks. Phase 2A included construction of a swing gate closure across Route 20, improvements to the access road on left side of dam, construction of a fishing pier on the right side, and construction of an additional monolith on the east abutment. Phase 2B consisted of installation of 150 high strength anchors for critical monoliths and installation of the three sacrificial bulkheads on the remaining penstocks. Additional funding from the American Recovery & Reinvestment Act in 2009 increased the number of anchors to be installed in Phase 2B by adding 66 additional anchors (for a Phase 2B total of 216 anchors), and the installation of gallery drains in the dam. Phase 3 includes installation of scour protection and training walls to create an auxiliary spillway with the existing penstocks. Phase 4 includes the installation of approximately 278 high strength anchors primarily over the stilling basin. Phase 5 is currently in the planning phase and may involve a parapet wall, additional anchors, spillway improvements, or other measures to achieve tolerable risk levels.

AUTHORIZATION: Section 5 of the Flood Control Act (FCA) of 1936 (P.L. 74-738) as amended by Section 4 of the FCA 1938 (P.L. 75-761) incorporating the Executive Order of the President 7183A, September 12, 1935.

REMAINING BENEFIT – REMAINING COST RATIO: Not applicable

TOTAL BENEFIT – COST RATIO: Not applicable

INITIAL BENEFIT – COST RATIO: 4.1 to 1 at 7 1/8 percent

BASIS OF BENEFIT – COST RATIO: Dam Safety Evaluation Report, dated May 1998

SUMMARIZED FINANCIAL DATA			STATUS (1 JAN 2014)	PCT CMPL	PHYSICAL COMPLETION
ORIGINAL PROJECT					
Actual Federal Cost	$28,618,100		Project Modification	35	TBD
Actual Non-Federal Cost	0				
Total Original Project Cost	$28,618,100				
PROJECT MODIFICATION					
Estimated Federal Cost	$475,160,000				
Estimated Non-Federal Cost	0				
Total Estimated Modification Cost	$475,160,000				
TOTAL ESTIMATED PROJECT COST	$503,778,100				
			ACCUM PCT OF EST FED COST		
Allocations to 30 September 2011	$ 231,687,000				
Allocation for FY 2012	$70,680,000				
Allocation for FY 2013	$30,620,000				
Allocation for FY 2014	$30,000,000				
Allocations through FY 2014	$362,987,000	1/2/3/5/	76		
Estimated Unobligated Carry-In Funds	0	4/			
Budget Amount for FY 2015	$22,000,000		81		
Programmed Balance to Complete after FY 2015	$90,173,000	6/			
Unprogrammed Balance to Complete after FY 2015	$ 0				

1/ $28,103,000 reprogrammed from the project, which includes $13,260,775 of ARRA funds.
2/ $442,000 rescinded from the project.
3/ $12,500,000 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated "Carry-in" Funding: The actual unobligated balance from FY13 into FY14 for this project is $168,328. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
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.

PHYSICAL DATA: Increase height of dam 8 feet; install anchors and thrust blocks; construct gate closure across State Route 20; modify penstocks to supplement discharge capacity and provide adequate scour protection; address scour potential in spillway to meet necessary discharge capacity; relocate electrical lines.

JUSTIFICATION: Bluestone Lake Dam is a Dam Safety Action Classification (DSAC) 2, which is defined by ER 1110-2-1156 as "High Urgency" where failure could begin during normal operations or be initiated by an event. The DSA Program provides for modification of completed Corps dam projects which are potential safety hazards in light of present-day engineering standards. An Issue Evaluation Study (IES) risk assessment done by Bureau of Reclamation and Corps personnel identified an unacceptable level of risk and life safety issues at the project. The Project Delivery Team, with international experts and experts from academia, is addressing several issues related to scour and rock strengths in an effort to strategically reduce risk levels at the project. The Interim Risk Reduction Measures Plan is being updated accordingly. Based on a downstream hazard assessment, there is sufficient justification to modify the project to accommodate 100% of the Probable Maximum Flood. It has been determined that there is a 1.02% annual probability that Bluestone Dam will reach a pool that threatens the dam's stability, the Imminent Failure Flood (IFF) elevation. The Mapping, Modeling and Consequence Center provided updated inundation data in late FY 2012. This revised data indicated a failure would cause catastrophic flooding along the Greenbrier, New, Gauley, Kanawha, and Elk Rivers and at the heavily industrialized state capital of Charleston, WV, putting 175,000 people at risk with property damages in excess of $21,000,000,000. Average annual benefits, all flood risk management, are $84,973,000.

FISCAL YEAR 2014: The TOTAL unobligated dollars are being applied as follows:

Award Options for Phase 4 Construction	$	20,000,000
Continue Phase 3 E&D and Construction Management		5,018,328
Continue Phase 4 E&D and Construction Management		2,400,000
Continue Auto Data ACQ System Instrumentation/Monitoring		325,000
Continue Dam Safety Modification Report – Phase 5		1,925,000
Continue General Risk Communication / Management Efforts		500,000
Total	$	30,168,328

FISCAL YEAR 2015: The budget amount will be applied as follows:

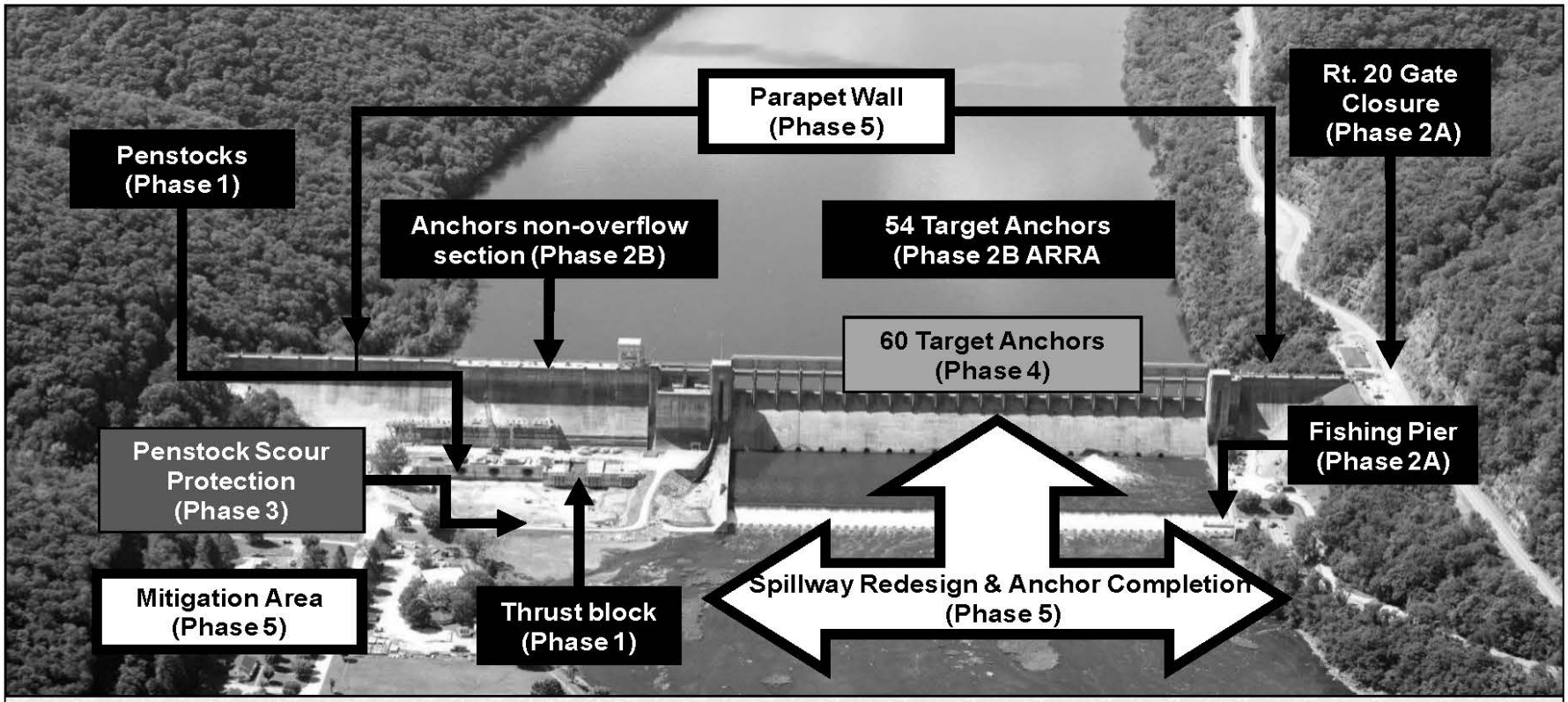
Exercise Final Option for Phase 4 Construction	$	9,200,000
Continue Phases 3&4 E&D and Construction Management		5,000,000
Continue E&D for Phase 5 to include DSMR Development		5,000,000
Perform required GIS Documentation		2,800,000
Total	$	22,000,000

NON-FEDERAL COST: None. The DSA modification is being performed at full Federal expense.

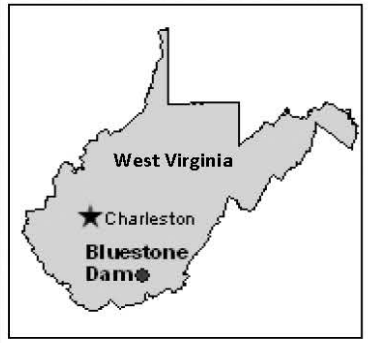
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $ 475,160,000 is unchanged from the latest estimate presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The final Environmental Impact Statement was filed with EPA on August 31, 1998.

OTHER INFORMATION: The Bluestone Dam, WV, Final DSA Evaluation Report and Environmental Impact Statement were approved August 13, 1998. Funds to initiate construction were appropriated in FY 2000. An amendment to the Evaluation Report in the form of a Letter Report was completed in 2004 to address project cost estimate changes due to differing site conditions. An Issue Evaluation Study (IES) risk assessment done in FY 2008 by Bureau of Reclamation and Corps personnel identified an unacceptable level of risk and life safety issues at the project. As a result, Congressional / state / local briefings were held in November 2008 and emergency exercises were performed in December 2008 and January 2009, with state and local entities participating. Local leadership briefings and public meetings were held in all counties. A functional emergency exercise was conducted July 2011 with Federal, state, and local entities, and the Huntington District serving as the central command center. The state of West Virginia continues to develop statewide emergency exercise initiatives. A Dam Safety Modification Report Supplement is underway and is expected to complete in January 2016. This report will address all items identified in the IES and will result in an updated baseline cost. This updated cost is expected to significantly raise the total project cost estimate. The report will incorporate the need for any subsequent phase development and will address spillway deficiencies.



Phases 1, 2A, 2B	Work Completed	57%
Phase 3	Work Underway with Funds Available for the Current FY	2%
Phase 4	Work Proposed with Funds Requested for the Budget FY	10%
Phase 5	Work Required to complete Project After the Budget FY	31%



New River
BLUESTONE DAM SAFETY ASSURANCE
HUNTINGTON DISTRICT
GREAT LAKES AND OHIO RIVER DIVISION
1 July 2012

Wisconsin

APPROPRIATION TITLE: Construction – Dredged Material Disposal Facility (Navigation)

PROJECT: Green Bay Harbor, Wisconsin (Completion)

LOCATION: The proposed project is located in Green Bay, on the western shore of Lake Michigan, adjacent to the City of Green Bay in Brown County, Wisconsin. Green Bay is designated as an Area of Concern by the International Joint Commission.

DESCRIPTION: The Green Bay Harbor Dredged Material Disposal Facility (DMDF) at the Cat Islands Chain would hold dredged material from the outer harbor of the Green Bay Harbor Federal Navigation Channel. The project would provide sufficient capacity for 20 years of maintenance dredging. The project is documented in the Green Bay Harbor Dredged Material Management Plan (DMMP).

AUTHORIZATION: Rivers and Harbors Act of 1866, as amended.

REMAINING BENEFIT – REMAINING COST RATIO: Not required for DMDF

TOTAL BENEFIT – COST RATIO: Not required for DMDF

INITIAL BENEFIT – COST RATIO: Not required for DMDF

BASIS OF BENEFIT – COST RATIO:

SUMMARIZED FINANCIAL DATA:			STATUS (1 JAN 14)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (COE)	9,027,000		Entire Project	60	May 2015
Estimated Appropriation Requirement (EPA)	9,160,700	1/			
Estimated Total Appropriation Requirement	18,187,700				
Future Non-Federal Reimbursement	(2,425,000)	3/			
Estimated Federal Cost (Ultimate)	15,762,700				
Estimated Non-Federal Cost	8,487,600				
Cash Contribution	0				
Other Costs	6,062,600	2/			
Reimbursements	2,425,000	3/			
Total Estimated Project Cost	24,250,300				

1/ FY 2012 allocations of $9,160,700 were provided through the Great Lakes Restoration Initiative program as appropriated in FY 2011 to the U.S. EPA.
2/ 25 percent of the costs allocated to general navigation features during construction.
3/ Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as reduced by a credit allowed for the value of lands, easements, rights of way, and relocations provided for commercial navigation.

			ACCUM PCT OF EST FED COST
Allocations to 30 September 2011	0		
Allocation for FY 2012	0		
Allocation for FY 2013	7,000,000		
Allocation for FY 2014	1,900,000		
Allocations through FY 2014	8,900,000	1/2/3/5/	99
Estimated Unobligated Carry-in Funds	0	4/	
President's Budget for FY 2015	127,000		100
Programmed Balance to Complete after FY 2015	0	6/	

1/ $0 reprogrammed to (from) the project.
2/ $0 rescinded from the project.

[3/] $0 transferred to the Flood Control and Coastal Emergencies account.
[4/] Estimated Unobligated Carry-in Funding: The actual unobligated balance from FY13 into FY14 (3011A report) for this project is $1,717,092. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
[5/] PED costs of $0 are included in this amount. PED costs of $258,700 were provided as part of the USEPA GLRI funds allocated in FY 2012.
[6/] Programmed balance to complete after FY 2015 reflects estimated out-year Supervision & Administration (S&A) costs through to project completion.

PHYSICAL DATA: Construction of a Dredged Material Disposal Facility (DMDF) for existing Federal navigation channel maintenance needs that will provide 20 years of material capacity. The DMDF will consist of three individual cells, called Disposal Islands, placed in shallow water and will also engender environmental benefits by restoring aquatic habitat.

JUSTIFICATION: Green Bay harbor handles approximately 2.5 million tons of commerce annually consisting primarily of coal, limestone, cement and concrete and other non-metallic minerals. Benefits attributable to continued maintenance of the Harbor are vessel transportation cost increases avoided. The increase in Transportation Cost Avoided is a proxy for the value of continuing to maintain the harbor. The recommended dredge material management plan provides the necessary capacity for the next 20 years while providing the greatest net benefits and some environmental restoration benefits. The average annual benefits are estimated to be $30,429,549.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus unobligated carry-in, is being applied as follows: The construction of the dredge material offload facility, including excavation of access channel from Federal navigation channel to DMDF offload platform..

FISCAL YEAR 2015: The budget amount will be applied as follows:

Construction Management and Fiscal Closeout of the Project	$127,000
TOTAL	$127,000

NON-FEDERAL COST: The current non-Federal cost estimate is $8,487,600, which includes a cash reimbursement of $2,425,000.

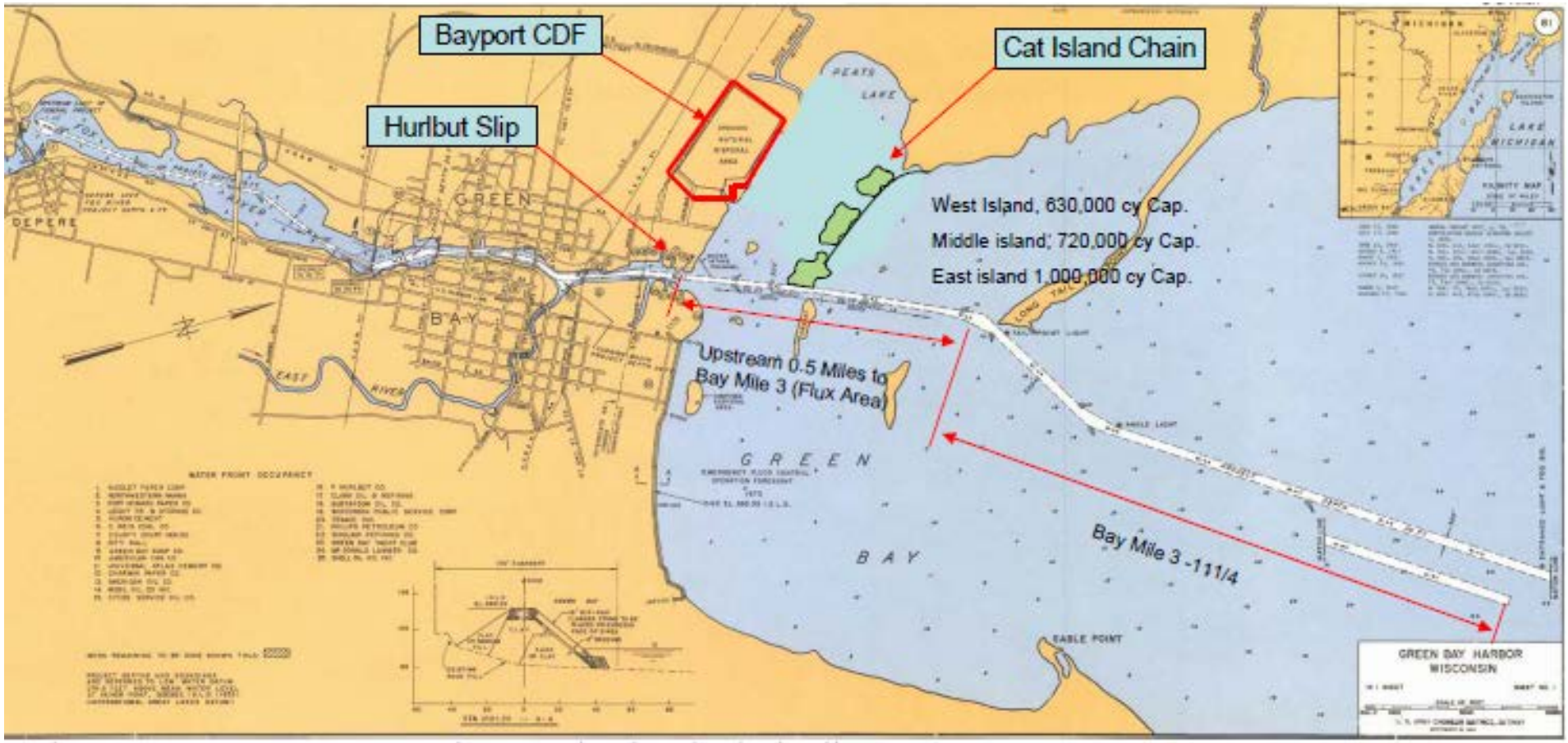
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights of way after reductions for such credit have been made in the required cash payments.	0	
Participate in Project Coordination Team, conduct audits of non-Federal costs, and perform investigations of hazardous substances.	75,000	
Pay 25 percent of the costs allocated to general navigation features during construction.	5,987,600	0
Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as reduced by a credit allowed for the value of lands, easements, rights of way, and relocations provided for commercial navigation.	2,425,900	
Total Non-Federal Costs	8,487,600	0

STATUS OF LOCAL COOPERATION: A Project Partnership Agreement, dated July 2012, was executed with the County of Brown, Wisconsin acting as the non-Federal Sponsor. The County of Brown, Wisconsin agreed to make all required payments and provide all work-in-kind totaling 25% of total project costs during construction and provide an additional 10% of total project costs over a period of 30 years. These reimbursement payments will begin within 90 days of the final accounting of project costs upon completion of the period of construction. The Non-Federal Sponsor has indicated a desire to prepay the 10% cash requirement upon notification by the Government of the final accounting.

COMPARISON OF FEDERAL COST ESTIMATE: The current initial Federal cost estimate of $18,187,700 is a reduction of $216,500 from the last cost estimate presented to Congress of $18,404,200. This reduction is a result of favorable bids and variation in estimated quantities.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Environmental Assessment was completed as part of preparation of Dredged Material Management Plan, which was approved in October 2011.

OTHER INFORMATION: Initial construction funds were appropriated in FY 2013. No additional funding from the U.S. Environmental Protection Agency (USEPA) under the Great Lakes Restoration Initiative (GLRI) is anticipated beyond those allocations identified in the Summarized Financial Data. Prior construction funds appropriated to the Green Bay Harbor project in FY2008 were for closure activities of the Renard Island CDF at Green Bay Harbor, WI.



Division: Great Lakes and Ohio River

District: Detroit

Green Bay Harbor DMDF, WI

28 March 2014

LRD-77

MISSISSIPPI VALLEY DIVISION

28 March 2014

CONSTRUCTION

ILLINOIS

APPROPRIATION TITLE: Construction – Local Protection (Flood Risk Management)

PROJECT: East St. Louis, Illinois (Deficiency Correction) (Continuing)

LOCATION: The project is located in St. Clair and Madison Counties, Illinois, along the left bank of the Mississippi River between river miles 175 and 195 above the Ohio River.

DESCRIPTION: A Limited Reevaluation Report (LRR) that addresses design deficiencies in underseepage and through seepage controls was approved August 2010. These deficiencies manifested during the 1993, 1995, and 2008 floods. Deficiency corrections are required for a segment of levee that is adjacent to a proposed Environmental Protection Agency (EPA) Superfund site and other hazardous and toxic waste sites. A supplement to the LRR that addressed remediation features using berm designs that follow current criteria as specified in Engineering Technical Letter 1110-2-569 was approved 28 June 2011. The deficiency correction project consists of 305 new relief wells, grouting 312 existing wood stave relief wells, ditching and pipe collector systems, a seepage pump station, a lift station, a variable frequency drive, seepage berms, cutoff walls, riverside clay blanket, and environmental and archeological mitigation work.

AUTHORIZATION: Flood Control Act of 1936 (PL 74-738).

REMAINING BENEFIT-REMAINING COST RATIO: 1.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.1 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.7 at 4 percent (FY 2012).

BASIS OF BENEFIT-COST RATIO: Benefits for the deficiency correction project are from the Level 4 LRR and Environmental Assessment Design Deficiency Corrections Report, East St. Louis, approved Illinois Flood Protection Project 31 August 2010 and Level 4 LRR Supplement approved 28 June 2011.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$80,500,000		Entire Project	0	TBD
Programmed Construction	$80,500,000					
Unprogrammed Construction	0					
Estimated Non-Federal Cost		61,100,000				
Programmed Construction						
Cash Contributions	40,200,000					
Other Cost	3,100,000					
Estimated Non-Federal Cost						
Unprogrammed Construction						
Cash Contributions	0					
Other Cost	17,800,000					
Total Estimated Programmed Construction Cost		$123,800,000				
Total Estimated Unprogrammed Construction Cost		17,800,000				
Total Estimated Project Cost		$141,600,000				
Allocations to 30 September FY 2011		0				
Allocation for FY 2012		850,000				
Allocation for FY 2013		1,341,000				
Allocation for FY 2014		4,109,000	5/			
Allocation through FY 2014		6,300,000	1/ 2/ 3/		8	
Estimated Unobligated Carry-in Funds		0	4/			
President's Budget for FY 2015		9,810,000			20	
Programmed Balance to Complete after FY 2015		$64,390,000				
Unprogrammed Balance to Complete after FY 2015		0				

1/ $227,000 reprogrammed 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 balance from FY 2013 into FY 2014 for this project is $1,580,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0.
5/ This amount was reduced from $12,855,000 in the FY 2014 Budget due to a delay in local sponsor participation.

PHYSICAL DATA: Deficiency Correction: 305 relief wells, grouting 312 existing relief wells, ditching and pipe collector systems, seepage pump station, lift station, variable frequency drive, seepage berms, cutoff walls, riverside clay blanket, and environmental and archeological mitigation work.

JUSTIFICATION: The original project, authorized by the Flood Control Act of 1936, provides protection for 85,000 acres consisting of business, industrial, residential, and metropolitan areas, including East St. Louis, Granite City, Madison, Venice, Brooklyn, Fairmont City, Sauget, and Cahokia, Illinois. The urban design levee was designed to provide flood protection from the Mississippi River to a flood stage of 52 feet on the St. Louis, Market Street gage. The project protects the largest urbanized Mississippi River floodplain north of New Orleans. The levee system protects heavy industry (including chemical manufacturing facilities and steel mills) as well as hazardous/toxic chemical disposal sites (Sauget Area 1 Superfund Site/Sauget Area 2 Superfund site), failure of the levee could create an environmental disaster as well as adversely impact the economy. Flood events occurred in 1973, 1995, 1993, and 2008. 1993 was the flood of record, with an expected frequency of occurrence of once in 300 years. The design frequency against which flood risk reduction is to be provided is 500 year. This project, in addition to preventing damages to property, is effective in reducing a high risk to life for the populations in the project area. The life safety hazard index is: depth 22 feet, warning time 24 hours, and population affected 250,000. The average annual damages without the project are estimated at $12,585,000 and $11,000 with the project for deficiency correction. The average annual benefits, all flood damage reduction, are $12,574,000..

FISCAL YEAR 2014: The FY 2014 funds and the total unobligated carry-in are being applied as follows:

Planning, Engineering, and Design	$4,878,000
Construction Management	811,000
Total	$5,689,000

FISCAL YEAR 2015: The budget amount will be applied as follows:

Construct cutoff wall	$7,110,000
Planning, Engineering, and Design	2,320,000
Construction Management	380,000
Total	$9,810,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas.	$ 3,100,000	
Deficiency Correction: pay 34.1 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent, and a maximum of 50 percent of flood control costs, and bear all costs of operation, maintenance, repair and maintenance, repair and rehabilitation, and replacement of flood control facilities.	40,200,000	$ 0
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for construction of the project.	17,800,000	
Total Non-Federal Costs	$61,100,000	$ 0

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction. Local interests are also required to operate and maintain all works after completion.

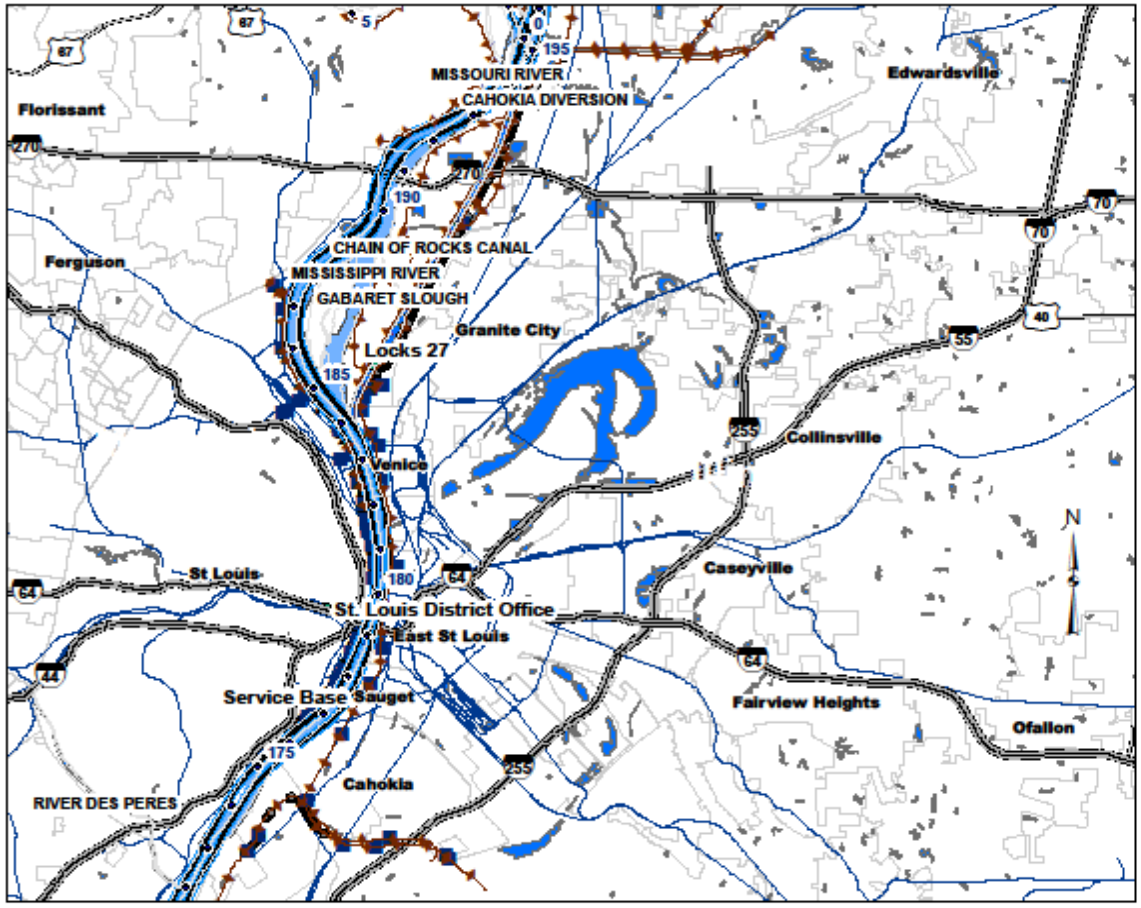
STATUS OF LOCAL COOPERATION: The local sponsor, the Metro East Sanitary District, is strongly supportive of the project. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment. In order to restore the authorized level of protection to the levee, additional work will be needed to address critical underseepage and through-seepage problems that manifested themselves during the floods of 1993, 1995 and 2008. The project sponsor has been notified that these problems are the result of design deficiency issues that have been addressed in the LRR and Supplemental LRR. The Design Agreement for the deficiency correction project was executed 20 December 2012. The Project Partnership Agreement (PPA) was executed on 7 March 2014.

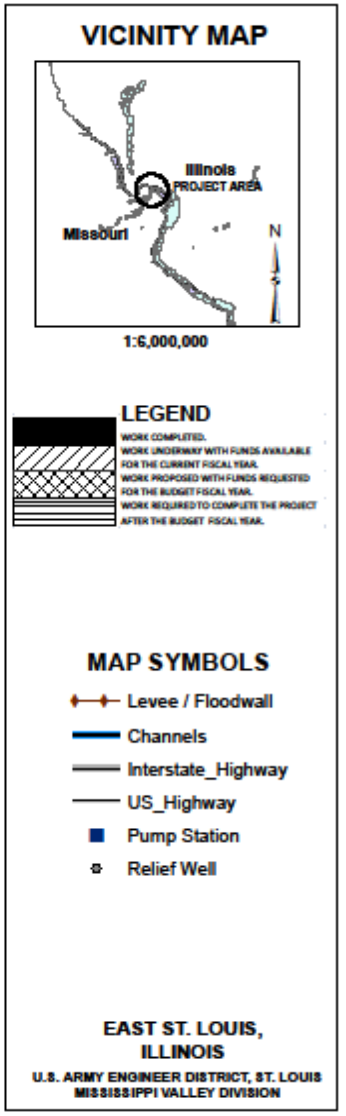
COMPARISON OF FEDERAL COST ESTIMATES: The current total Federal cost estimate reflects only the deficiency correction of $80,500,000 which is the same as the latest estimate presented to Congress (FY 2014). The Rehabilitation portion of the project will complete with previously appropriated funds.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment and Finding of No Significant Impact for the deficiency correction project supplement was signed by the District Commander on 16 May 2011.

OTHER INFORMATION: Funds to initiate construction for the deficiency correction project were appropriated in Fiscal Year 2012. Fish and Wildlife mitigation costs are estimated at $879,000 for the deficiency correction project.

The last construction contract for the rehabilitation project was complete November 2013. Remaining work to complete the project includes O&M manuals, as-built drawings and project closeout, which are estimated to be complete in FY 2015 with previously appropriated funds.





REHABILITATION PROJECT

Pump Stations | Levee & Floodwalls

Channels | Dams

DEFICIENCY CORRECTION PROJECT

Pump Stations | Relief Wells

Cutoff Wall | Seepage Berm

Mississippi Valley Division

St. Louis District

East St. Louis, IL
(Deficiency Correction)

APPROPRIATION TITLE: Construction – Locks and Dams (Navigation)

PROJECT: Melvin Price Lock and Dam, Illinois and Missouri (Deficiency Correction) (Continuing)

LOCATION: Melvin Price Lock and Dam (L&D) is located in Madison County, Illinois, and St. Charles County, Missouri, in the vicinity of Alton, Illinois, at approximately river mile 200.8 above the mouth of the Ohio River.

DESCRIPTION: The project includes one 1,200-foot main lock; one 600-foot auxiliary lock (see Other Information); a gated dam with 9 tainter gates, an overflow dike; removal of most of the existing structure; relocation/abandonment of the Burlington-Northern Railroad bridge, and a visitors center. Mitigation land was provided to compensate for wildlife losses due to creation of a new pool for the two-mile distance downstream of the old structure. The construction of the lock and dam extended the pool approximately 2 miles downstream of the old lock and dam, which raised the water surface elevation along a segment of the Wood River Levee. As a result, that portion of the levee experiences increased underseepage. A deficiency correction report was completed in 2012. The project is part of the Upper Mississippi River Navigation System.

AUTHORIZATION: Internal Revenue Code of 1954, Title I – Replacement of Locks and Dam 26; Water Resources Development Acts of 1986, 1990, 1992, and 1996; and the Consolidated Appropriations Act, 2001, PL 106-554.

REMAINING BENEFIT-REMAINING COST RATIO: 6.0 to 1 at 7 percent

TOTAL BENEFIT-COST RATIO: 5.7 to 1 at 7 percent

INITIAL BENEFIT-COST RATIO: 1.06 to 1 at 6 7/8 percent (FY 1974)

BASIS OF BENEFIT-COST RATIO: Benefits are based on Supplement No. 2 to Design Memorandum No. 2, approved on 31 August 1979 at October 1978 price levels. Completion of the supplemental Limited Reevaluation Report (LRR) scheduled for FY 2014 will include updated economics.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	STATUS (1 JAN 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (COE)		$801,000,000	1/		Entire Project	99	TBD
Estimated Appropriation Requirement (F&WS)		30,000			Lock and Dam	99	Dec 1994
Estimated Appropriation Requirement (USGS)		51,000			Open to Navigation	100	Feb 1990
					Underseepage Measures		TBD
Estimated Total Appropriation Requirement		$801,081,000					
Estimated Non-Federal Cost		$8, 917,000					
Cash Contribution	8,917,000						
Other	0						
Total Estimated Project Cost		$809,998,000	1/				
Allocations to 30 September 2011		$753,208,000					
Allocation for FY 2012		1,100,000					
Allocation for FY 2013		4,571,000					
Conference Allowance for FY 2014		3,400,000					
Allocation through FY 2014		762,279,000	2/3/4/6/	95			
Estimated Unobligated Carry-in Funds		2,800,000	5/				
President's Budget for FY 2015		3,800.000		96			
Programmed Balance to Complete after FY 2015		34,921,000	1/				
Unprogrammed Balance to Complete after FY 2015		0					

1/ Total project cost (and remaining balance) are pending approval of a supplemental Limited Reevaluation Report (LRR) addressing the deficiency correction of the underseepage.
2/ $1,000,000 reprogrammed to the project.
3/ $324,800 ARRA funds rescinded from the project.
4/ $300,000 transferred to the Flood Control and Coastal Emergencies (FCCE) account.
5/ / Unobligated Carry-in Funding: The actual unobligated balance from FY 2013 into FY 2014 for this project was $2,000,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort are $2,800,000. This amount will be used to perform work on the project as follows: Complete the National Flood Insurance Program (NFIP) evaluation, complete the LRR, and continue design work on underseepage controls.
6/ PED costs of $5,414,000 are included in this amount.

PHYSICAL DATA: The project includes one 1,200-foot lock; one 600-foot lock (authorized separately); a gated dam with nine tainter gates; an overflow dike; and a visitors center. The project also included removal of most of the existing structure and the relocation/abandonment of the Burlington Northern Railroad bridge.

JUSTIFICATION: After the new Melvin Price L&D was placed in operation, a substantial increase in the underseepage on adjacent Wood River Levee was observed. Investigations have shown that the normal operating pool levels for Melvin Price have resulted in permanent ponding against the levee resulting in the increase in uncontrolled underseepage. This additional underseepage was not anticipated in the original design for the Melvin Price project. The Wood River Levee is authorized as a flood risk management structure. However, it now serves a dual purpose since being integrated into the Melvin Price navigation project as a saddle dam to ensure operating pool is maintained. Failure of the Wood River Levee adjacent to Melvin Price L&D will result in regional catastrophic losses due to flooding, as well as shut down shipping on the Mississippi River north of St. Louis. A LRR was prepared to address corrective measures for this uncontrolled underseepage condition. The LRR was approved in August 2012 and recommended a cutoff wall with relief wells to control the underseepage. Implementation of the Interim Operations Plan (IOP) and newly obtained field information revealed that the selected alternative would not be feasible. A Supplemental LRR is being prepared to re-evaluate alternatives and identify the preferred solution for this reach. The average annual waterborne commerce tonnage (2004-2011) was 64,000,000 tons valued at approximately $10,000,000,000. Grains, chemicals, petroleum, and coal account for 90 percent of this traffic. Because of the small size of the locks, multiple lockages were required to pass a complete tow measuring 1,200 feet in length. The average delay to tows at the old Locks No. 26 was approximately 10.5 hours. Based on the Master Plan Study, a single lock 110 feet wide by 1,200 feet long would have an estimated capacity of 94,000,000 to 100,000,000 tons per year. A lock with a length of 1,200 feet permits tows to lock through as a single unit, thus eliminating the delays from double locking and congestion. Future tow sizes are expected to remain at 110 feet wide by 1,200 feet long. Total transportation charges for commodity movements by inland water range between 40 and 60 percent lower than least cost alternative modes. More than 60 percent of traffic is grain, the bulk of which is for export.

The correction project is estimated to produce average annual benefits of $14,005,000 based on flood control ($6,619,000) and navigation ($7,386,000). Average annual benefits from the original report for the lock and dam construction are as follows:

Annual Benefits	Amount
Navigation	$82,678,000
Recreation	469,000
Total	$83,147,000

FISCAL YEAR 2014: The total unobligated carry-in and current amount are being applied as follows:

Initiate Upper Wood River NFIP evaluation	$ 200,000
Continue supplemental LRR	$1,400,000
Planning, Engineering and Design for underseepage controls	$1,000,000
Total	$2,600,000

FISCAL YEAR 2015: The budget amount plus carryin will be applied as follows:

Complete:	
NFIP evaluation	$ 100,000
Supplemental LRR	$ 400,000
Planning, Engineering and Design for underseepage controls	$6,100,000
Total	$6,600,000

NON-FEDERAL COST: The deficiency correction portion of the project will be constructed at 100 percent Federal cost.

STATUS OF LOCAL COOPERATION: The original Lock & Dam 26 Replacement project (Melvin Price) was authorized and funded at 100 percent Federal cost. The uncontrolled underseepage of Wood River Levee is caused by operations of the original project. Therefore, costs for the underseepage correction measures are to be 100 percent Federal. The Water Resources Development Act of 1990 contains provisions that allow the state of Illinois and the Corps to enter into a Project Cost-sharing Agreement (PCA) for the construction of riverfront recreation facilities. The Water Resources Development Act of 1992 amended the 1990 Act by allowing cost-sharing with other non-Federal interests. The consolidated Appropriations Act, 2001 directed the Corps to enter into an agreement that allows the City of Alton, Illinois, to construct recreation facilities and the Corps to reimburse the city for 50 percent of the cost. Approximately $13,000,000 in recreation facilities can be cost-shared. The City of Alton, Illinois, submitted a letter of intent dated 4 June 1991 for cost-sharing of the developing recreation facilities along the riverfront at Alton, in the vicinity of the existing structure. The PCA was executed 5 July 2005. Construction of the recreation facilities was initiated in 2006. Reimbursements through FY 2013 total nearly $1,000,000.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $801,000,000 is an increase of $57,157,000 from the latest estimate ($743,843,000) presented to Congress (FY 2005). This increase includes the following:

ITEM	AMOUNT
Price Escalation on Construction Features	$ 1,885,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	$ 55,272,000
Total	$ 57,157,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Council on Environmental Quality on 24 August 1976 and published in the Federal Register on 8 September 1976.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1970, and funds to initiate construction were appropriated in FY 1974. In accordance with the Melvin Price Lock and Dam Act, 1981, the project name changed from Lock and Dam 26 (Replacement) to Melvin Price Lock and Dam.

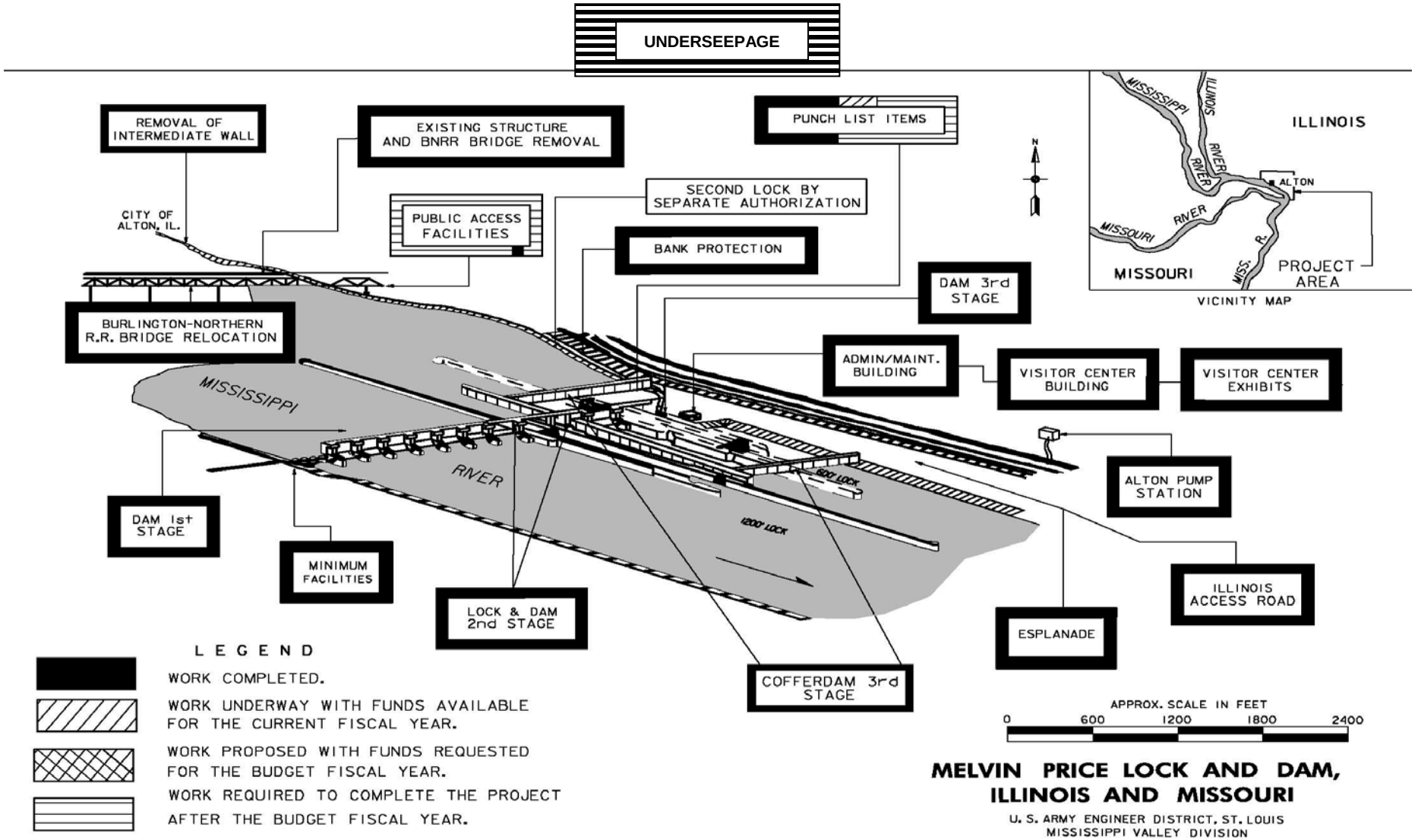
Dredge material disposal sites were used on Ellis Island during construction, but this phase is complete and no further construction dredging is expected.

The Fish and Wildlife Service and the U.S. Geological Service provided $81,000 to fund a portion of the visitor center exhibits.

The completed 600-foot second lock was funded as a separate project, cost shared with the Inland Waterways Trust Fund. The second lock was authorized by the Supplemental Appropriations Act of 1985 and the Water Resources Development Act of 1986.

The current total project cost reflects punch list items which were first funded in 2007. The majority of this work was completed with American Recovery and Reinvestment Act (ARRA) funds. The total project cost (including comparison paragraph above) requires further update, pending approval of the report addressing the Wood River Levee underseepage issue. Serious underseepage, with the conveyance of some soils material, is occurring during normal operating conditions under Wood River Levee adjacent to the upper pool of the Melvin Price Locks and Dam. This levee is part of the Wood River levee system, which does not meet Corps criteria for a 1 percent chance of exceedance (100-year) and is therefore not accredited by FEMA.

Fish and Wildlife mitigation costs are $2,961,000.


UNDERSEEPAGE
REMOVAL OF INTERMEDIATE WALL
EXISTING STRUCTURE AND BNRR BRIDGE REMOVAL
PUNCH LIST ITEMS
CITY OF ALTON, IL.
PUBLIC ACCESS FACILITIES
SECOND LOCK BY SEPARATE AUTHORIZATION
BANK PROTECTION
DAM 3rd STAGE
BURLINGTON-NORTHERN R.R. BRIDGE RELOCATION
ADMIN/MAINT. BUILDING
VISITOR CENTER BUILDING
VISITOR CENTER EXHIBITS
MISSISSIPPI
RIVER
600' LOCK
1200' LOCK
ALTON PUMP STATION
DAM 1st STAGE
MINIMUM FACILITIES
LOCK & DAM 2nd STAGE
ILLINOIS ACCESS ROAD
ESPLANADE
COFFERDAM 3rd STAGE
N
ILLINOIS
ALTON
MISSOURI
PROJECT AREA
VICINITY MAP
LEGEND
WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.
APPROX. SCALE IN FEET
0 600 1200 1800 2400
MELVIN PRICE LOCK AND DAM, ILLINOIS AND MISSOURI
U. S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION

APPROPRIATION TITLE: Construction – Local Protection (Flood Risk Management)

PROJECT: Wood River Levee, Illinois – Deficiency Correction (Continuing)

LOCATION: The Wood River Levee Project is located in Madison County, Illinois, along the left bank of the Mississippi River between river miles 195 and 203 above the Ohio River. The study area lies in the Mississippi River flood plain of Madison County, Illinois, just upstream of the City of East St. Louis.

DESCRIPTION: The deficiency correction project includes replacing 163 of 170 of the existing relief wells, filling 83 non-functional existing obsolete relief wells with grout, and installing 154 new relief wells under the existing project authorization. The project also includes ditching and pipe collector systems; the addition of two 25 cubic feet per second pump stations; one 20 cubic feet per second pump station; 815 linear feet of seepage berm, 1,010 linear feet of landside clay fill, 2,910 linear feet of slurry trench cutoff wall at the riverside levee toe and to bedrock (140 feet deep), 1,060 linear feet of slurry trench cutoff wall (100 feet deep) at the riverside levee toe, 2,875 linear feet of slurry trench cutoff wall (25 ft deep) at the riverside toe, environmental and archeological mitigation work, utility relocations, 9.88 acres flowage easement area, easements for berms, relief wells, slurry trench cutoff wall staging areas and equipment access areas along the levee, disposal areas for material excavated for the slurry trench cutoff walls, and wetland and bottomland hardwood mitigation areas.

AUTHORIZATION: Section 4 of Flood Control Act of 1938. Cost sharing is consistent with Section 103 of Water Resources Development Act (WRDA) of 1986 as amended by Section 202 of WRDA 1996.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio is 3.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: The current benefit to cost ratio from the approved Limited Reevaluation Report (LRR) for Design Deficiency Corrections is 3.1 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: The initial benefit to cost ratio is 3.6 to 1 at 4 7/8 percent (FY 2008).

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Level 4 General Reevaluation Report (GRR) dated March 2006 at October 2005 price level and the Level 4 LRR for Design Deficiency Corrections, approved 31 August 2011 at May 2011 price level.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Mar 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
				Entire Project	10	TBD
Estimated Federal Cost		$45,590,000				
Estimated Non-Federal Cost		24,009,000				
Cash Contributions	$19,223,000					
Other Costs	4,786,000					
Total Deficiency Correction		$69,599,000				
Allocations to 30 September FY 2011		$8,444,000				
Allocation for FY 2012		212,000				
Allocation for FY 2013		2,818,000				
Allocation for FY 2014		3,689,000	[5/]			
Allocation through FY 2014		15,163,000	[1/ 2/ 3/ 4/]	33		
Estimated Unobligated Carry-in Funds		0				
President's Budget for FY 2015		8,650,000		52		
Programmed Balance to Complete after FY 2015		21,777,000				

[1/]$800,000 reprogrammed from the project.
[2/]$418,000 rescinded from the project
[3/] $0 transferred to the Flood Control and Coastal Emergencies account.
[4/] Unobligated Carry-In Funding: The actual unobligated balance from FY 2013 into FY 2014 is $1,554,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort are $0.
[5/] The $20,860,000 capability included in the FY 2014 Budget was reduced because the local sponsor elected to construct the initial upper and lower cutoff walls without a Federal cost share project.

PHYSICAL DATA: The original Wood River project includes 21 miles of levee, 170 relief wells, 26 closure structures, 41 gravity drains, 7 pump stations, and two low water dams. The Deficiency Correction project consists of new underseepage control features including 154 new relief wells, 3 new pump stations; 6,845 linear feet of slurry trench cutoff wall, 1,010 linear feet of landside clay fill, and 815 linear feet of seepage berm.

JUSTIFICATION: The levee district is protected by an urban design levee, across the Mississippi River from St. Louis and St. Charles counties in Missouri. This existing system includes approximately 21 miles of main line levee, 170 existing relief wells of which 7 are wells installed in 1985 and are not part of the deficiency correction, 26 closure structures, 41 gravity drains of which 3 have been fixed due to emergency, 7 pump stations, and two low water dams. It provides flood protection for residential, commercial, and industrial structures located within a 21.4 square mile area. There are approximately 12,700 acres of bottomland within the district and 4,700 acres of hill land tributary to the levee units. The design frequency against which flood risk reduction is to be provided is 500 year. The maximum flood of record occurred in 1993 when the St. Louis gage recorded 49.58 feet which was approximately a 200-year flood at the Wood River levee. River stage exceeds flood stage in approximately three out of every four years at the Wood River levee. For the design event and the without project condition, the average depth and velocity affecting most of the area is 22 feet and 2 feet per second, respectively. In the event of a design flood, overtopping would occur and

average warning time is estimated to be 24 hours; however, in case of catastrophic event occurrence (underseepage failure), estimated warning time is less than 6 hours. The limiting factor to leave most of the benefit area is several dozen roads. Certain reaches of the levee system could become unstable during high water events. Levee reaches where problems were identified during the 1993 flood will worsen, while new reaches will begin to demonstrate additional underseepage issues and additional problems. Depending on the level and type of failure experienced, there is a potential for the loss of pool at Melvin Price Lock and Dam resulting in a stoppage of river navigation. A catastrophic failure on the Upper Wood River Levee could impact the Lower Wood River Levee, while the Lower Wood River Levee could impact the downstream levee (East St. Louis), potentially affecting an additional 200,000 residents and potentially producing an additional $1 billion dollars in damage. The levee protects a significant amount of industrialization including the region's largest oil refinery (10th largest U.S. refinery of gasoline, jet and diesel fuel), chemical manufacturing, steel manufacturing, and ammunitions production, and protects a residential population of approximately 20,000 in the urban areas. Failure of the levee at the refineries or other heavy industrial areas adjacent to the system could create an environmental disaster whose recovery costs are projected to be a minimum of $125,000 per acre not accounting for relocation costs, loss of agricultural lands and damages to the river and surrounding ecosystems. An actual levee failure would result in a major catastrophe; with potential loss of life to thousands of residents in the immediate vicinity, billions of dollars in property damages and potential environmental contamination from oil, oil byproducts and chemicals used in the oil refinement and petrochemical industries adjacent to the levee. Development is expected to continue on the interior as a major Interstate Highway has recently opened in the levee district. The connection that this new highway makes to the regional interstate system increases the likelihood of future development in the project area. At current estimates, levee failure and flooding of the area would cause approximately $1,500,000,000 in economic damages to residential, commercial and industrial buildings and would shut down transport between Illinois and Missouri at St. Louis as bridge approaches could be submerged.

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Control (Deficiency Correction)	10,127,000
Navigation (Deficiency Correction)	2,900,000
Total	$13,027,000

FISCAL YEAR 2014: The FY2014 funds and the total unobligated carry-in are being applied as follows:

Planning, Engineering, and Design	$4,739,000
Construction Management	504,000
Total	$5,243,000

FISCAL YEAR 2015: The budget amount will be applied as follows:

Continue construction:	
Relief Wells	$3,000,000
Seepage Berms	2,000,000
Planning, Engineering, and Design	2,150,000
Construction Management	1,500,000
Total	$8,650,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, as amended, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas.	$3,632,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for the construction of the project.	1,154,000	
Pay 35 percent of the costs allocated to flood risk management to bring the total non-Federal share of flood risk management costs to 35 percent as determined under Section 103 (m) of the Water Resources Development Act of 1986, as amended, to reflect the non-Federal sponsor's ability to pay, but no less than 5 percent of the costs allocated to flood risk management and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood risk management features.	$19,223,000	
Total Deficiency Correction Non-Federal Costs	$24,009,000	$243,000

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction. Local interests are also required to operate and maintain all works after completion.

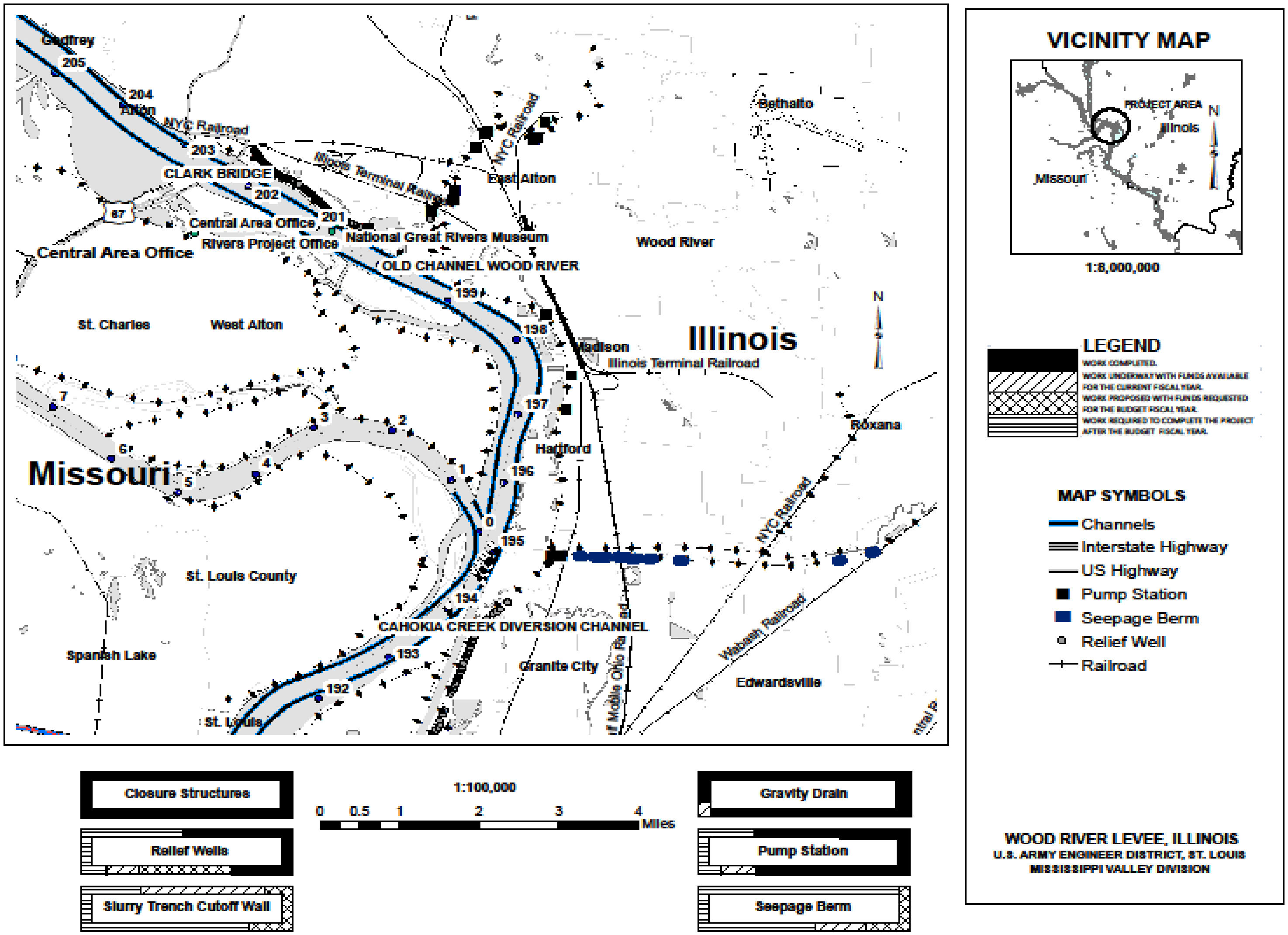
STATUS OF LOCAL COOPERATION: The Wood River Drainage and Levee District is the local sponsor for the project. The Project Partnership Agreement (PPA) was executed on 30 June 2008 in support of the GRR, which dealt with issues involving the reconstruction and design deficiency portions of the project. The Design Agreement for the deficiency corrections was executed on 28 November 2012. FY 2014 capability for deficiency correction was reduced from $20,860,000 to $3,689,000 as a result of the local sponsor's desire to include a Project Labor Agreement (PLA) in all contracts associated with the levee improvement projects. As identified in Executive Order (EO) 13502, contracting agencies are encouraged to consider the use of PLAs for construction projects of $25,000,000 or greater. After an extensive review and consideration process, it was determined that the inclusion of a PLA provision was not required for the Wood River Upper and Lower cutoff wall construction contracts. Due to this, the non-Federal sponsor elected to construct the initial upper and lower cutoff walls without a Federal cost share project. These issues have delayed the anticipated start of construction on the Wood River Deficiency Correction project. The PPA for new deficiency corrections was executed on 3 January 2014.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $45,590,000 reflects deficiency correction only and is the same as the latest estimate presented to Congress (FY 2014). Reconstruction was funded to completion with the FY 2014 Work Plan.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment was completed in July 2005. A Finding of No Significant Impact was signed on 23 March 2006. An environmental assessment for the deficiency correction project was completed in July 2011. A Finding of No Significant Impact was signed on 31 August 2011.

OTHER INFORMATION: Funds for the deficiency correction to initiate preconstruction engineering and design were appropriated in FY 2000 and construction funds were appropriated in FY 2008. The current approved GRR recommended that the project requires no mitigation. Based on the approved LRR, mitigation costs for the updated features are estimated to be $114,000.

Project features will be cost shared 65 percent Federal and 35 percent non-Federal in accordance with Section 103 of WRDA 1986, as amended by Section 202 of WRDA 1996.


Godfrey
205
204
Alton
NYC Railroad
203
CLARK BRIDGE
Illinois Terminal Railroad
202
67
201
Central Area Office
Rivers Project Office
National Great Rivers Museum
Central Area Office
OLD CHANNEL WOOD RIVER
East Alton
Bethalto
Wood River
NYC Railroad
199
198
St. Charles
West Alton
Madison
Illinois
Illinois Terminal Railroad
N
7
3
2
197
Roxana
6
Hartford
Missouri
5
4
1
196
0
195
NYC Railroad
St. Louis County
194
CAHOKIA CREEK DIVERSION CHANNEL
193
Wabash Railroad
Spanish Lake
Granite City
Edwardsville
192
St. Louis
Closure Structures
Relief Wells
Slurry Trench Cutoff Wall
1:100,000
0 0.5 1 2 3 4
Miles
Gravity Drain
Pump Station
Seepage Berm
VICINITY MAP
PROJECT AREA
Illinois
Missouri
N
1:8,000,000
LEGEND
WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.
MAP SYMBOLS
Channels
Interstate Highway
US Highway
Pump Station
Seepage Berm
Relief Well
Railroad
WOOD RIVER LEVEE, ILLINOIS
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION

APPROPRIATION TITLE: Construction – Environmental Mitigation, Restoration, and Protection

PROJECT: Upper Mississippi River Restoration, Illinois, Iowa, Minnesota, Missouri, and Wisconsin (Continuing)

LOCATION: The project is authorized for those river reaches having commercial navigation channels on the Upper Mississippi River, Illinois River, Minnesota River, St. Croix River, and Kaskaskia River in the states of Illinois, Iowa, Minnesota, Missouri, and Wisconsin. The following counties are included: (Illinois) Jo Daviess, Carroll, Whiteside, Rock Island, Mercer, Henderson, Hancock, Adams, Pike, Calhoun, Jersey, Madison, St. Clair, Monroe, Randolph, Jackson, Union, Alexander, Pulaski, Brown, Cass, Schuyler, Fulton, Mason, Peoria, Tazewell, Woodford, Marshall, Putnam, Bureau, LaSalle, Grundy, Will; (Iowa) Allamakee, Clayton, Dubuque, Jackson, Clinton, Scott, Muscatine, Louisa, Des Moines, Lee; (Wisconsin) St. Croix, Pierce, Pepin, Buffalo, Trempealeau, La Cross, Vernon, Crawford, Grant; (Minnesota) Anoka, Hennepin, Scott, Dakota, Ramsey, Washington, Goodhue, Wabasha, Winona, Houston; (Missouri) Clark, Lewis, Marion, Ralls, Pike, Lincoln, St. Charles, St. Louis, Jefferson, Ste. Genevieve, Perry, Cape Girardeau, Scott, Mississippi.

DESCRIPTION: The purpose of the Upper Mississippi River Restoration (UMRR) program is to address adverse impacts to the aquatic ecosystem of the Upper Mississippi River, which were caused by many factors, including changes in the river due to construction and maintenance of the inland navigation system, population growth, and more intensive land use within the watershed. Through this program, habitat rehabilitation and enhancement projects help preserve and improve fish and wildlife habitat on the Upper Mississippi River System (UMRS). Projects completed to date have been designed to counteract the effects of backwater sedimentation through dike construction to limit sedimentation of prime habitat and dredging to restore aquatic habitat; provide water level control and optimal food growth for waterfowl; create islands to decrease wind generated disturbances, thereby reducing turbidity; alter the flow of water to side channels and backwaters to decrease flows of sediment-laden water during high water and to increase dissolved oxygen levels during low water; increase the diversity and abundance of mast (nut) producing trees and prairies to benefit wildlife. Long-Term Resource Monitoring provides scientific information for more informed management of the UMRS ecosystem. Ninety-seven percent of authorized Upper Mississippi River Restoration appropriations have been used to design and construct habitat rehabilitation and enhancement projects and for Long-Term Resource Monitoring. Recreation development is also an authorized program element, although not a current program focus.

AUTHORIZATION: Fiscal Year 1985 Supplemental Appropriations Act, P.L. 99-88; Water Resources Development Act (WRDA) of 1986, PL 99-662, Section 1103; WRDA of 1990, P.L. 101-640, Section 405; WRDA of 1992, P.L. 102-580, Section 107; WRDA of 1999, P.L. 106-53, Section 509; and the WRDA of 2007, P.L. 110-114, Section 3177.

REMAINING BENEFIT-REMAINING COST: The remaining benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms. Projects within the Upper Mississippi River Restoration project are selected for design and construction based on continued assessment of habitat restoration and enhancement opportunities as determined by the involved Federal and non-Federal partners.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The basis for the benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	STATUS (8 FEB 2014)
Estimated Federal Cost		$ 1,047,689,000			
Estimated Non-Federal Cost		12,549,000			
Cash Contribution	$ 12,549,000				
Other Costs	0				
Total Estimated Project Cost		$ 1,060,238,000			
Allocations to 30 September 2011		$403,132,000	1/		
Allocations for FY 2012		$ 17,466,000			
Allocation for FY 2013		24,132,000			
Allocation for FY 2014		31,974,000			
Allocations through FY 2014		476,704,000	1/2/3/4/6/	45	
Estimated Unobligated Carry-in Funds		0	5/		
President's Budget for FY 2015		33,170,000		49	
Programmed Balance to Complete After FY 2015		537,815,000			
Unprogrammed Balance to Complete After FY 2015		0			

1/ Allocations include Supplemental Appropriations as well as American Recovery and Reinvestment Act (ARRA) funds.
2/ $0 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 balance from FY2013 into FY2014 for this project are $764,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort is $0.
6/ Includes ARRA funding of $14,847,000 in FY 2009; ($918,000) in FY 2010; ($8,000) in FY 2011; and ($315,000) in FY 2012.

JUSTIFICATION: Implementation of the UMRR program is essential to the continued viability of the ecosystem of the Upper Mississippi River. Habitat rehabilitation and enhancement projects help reduce the negative effects of navigation features on the system's backwater and side channels. Projects are selected for design and construction based on continued assessment of habitat restoration and enhancement opportunities as determined by the involved Federal and non-Federal partners and following the project sequencing process adopted in 2003. Long-Term Resource Monitoring provides data to indicate trends in key environmental parameters, analyzing sedimentation and other UMRS resource problems, and producing a spatial information database.

FISCAL YEAR 2014 and 2015: The FY 2014 unobligated carry-in funding is being used to continue construction on Lake Odessa, Iowa project; the FY 2014 appropriation amount is being used to finalize a new strategic plan in FY 2014 that will focus the program on improving the ecosystem health and resiliency of the UMRS and will include programmatic indicators to evaluate progress towards achieving the program's vision. FY 2014 funds will also be used to continue design and construction on multiple ongoing projects under way in FY 2013, complete one project, complete a stage on one project, initiate construction on one project and continue monitoring and other restoration-related activities. The FY 2015 funds will be used to continue design and construction on multiple projects under way in FY 2014, initiate construction on two new projects and to continue monitoring and other restoration-related activities. The total FY 2014 appropriations, plus unobligated carry-in, and the FY 2015 funds will be applied as follows:

Project[1/]	*District*	*FY 2014 Funding*	*FY 2014 Description*	*FY 2015 Funding*	*FY 2015 Description*	*Status (Mar 2014) % Complete*	*Scheduled Completion*
Boston Bay, IL	Rock Island	7,000	Continue Design	125,000	Continue Design	1	TBD
Delair Division, IL	Rock Island	4,000	Continue Design	10,000	Continue Design	1	TBD
Emiquon, IL	Rock Island	80,000	Continue Design	150,000	Continue Design	30	(Dec 18)
Fox Island, MO	Rock Island	123,500	Continue Construction	100,000	O&M Manual	90	(Sep 15)
Huron Island, IA	Rock Island	4,539,200	Initiate Construction	4,100,000	Continue Construction	35	(Sep 18)
Keithsburg Division, IL	Rock Island	101,500	Continue Design	211,000	Continue Design	1	TBD
Lake Odessa, IA	Rock Island	6,122,500	Continue Construction	100,000	O&M Manual	90	(Sep 15)
Pool 12, IL	Rock Island	1,050,000	Complete Stage I Construction	6,917,000	Initiate Stage II Construction	40	(Sep 19)
Snyder Slough, WI	Rock Island	4,000	Continue Design	10,000	Continue Design	1	TBD
Steamboat Island, IA	Rock Island	166,500	Continue Design	10,000	Continue Design	1	TBD
Turkey River Bottoms, IA/WI	Rock Island	4,000	Continue Design	10,000	Continue Design	1	TBD
Batchtown Mgmt Area, IL	St. Louis	250,000	Continue Construction	100,000	Continue Construction	91	(Aug 17)
Clarence Cannon NWR, MO	St. Louis	400,000	Continue Design	475,000	Initiate Construction	15	TBD
Glades Godar Wetlands,IL	St. Louis			125,000	Continue Design	2	TBD

Horseshoe Lake, IL	St. Louis			250,000	Continue Design	2	TBD
Piasa and Eagles Nest Islands, IL	St. Louis	285,000	Continue Design	285,000	Continue Design	4	TBD
Pool 25 and 26, MO	St. Louis	250,000	Continue Construction	250,000	Continue Construction	65	(Sep 19)
Red's Landing, IL	St. Louis	25,000	Continue Design	25,000	Continue Design	2	TBD
Rip Rap Landing, IL	St. Louis	450,000	Continue Design	320,000	Continue Design	9	TBD
Schenimann, MO	St. Louis	25,000	Continue Design	25,000	Continue Design	15	TBD
Swan Lake, IL	St. Louis	50,000	Continue Construction	25,000	Complete Construction	98	(Dec 15)
Ted Shanks, MO	St. Louis	5,220,400	Continue Construction	5,586,000	Continue Construction	30	(Oct 22)
Wilkinson Island, IL	St. Louis	25,000	Continue Design	25,000	Continue Design	5	TBD
Capoli Slough, WI	St. Paul	150,000	Complete Construction	50,000	O&M Manual	99	(Sep 14)
Conway Lake, IA	St. Paul	200,000	Continue Design	200,000	Complete Design	45	TBD
Harpers Slough, IA	St. Paul	6,204,400	Continue Construction	6,616,000	Continue Construction	25	TBD
Lake Winneshiek, WI	St. Paul	76,000	Continue Design	50,000	Continue Design	18	TBD
Lower Pool 10 Islands & Backwater Complex, IA	St. Paul	100,000	Continue Design	75,000	Continue Design	1	TBD
McGregor Lake, WI	St. Paul	200,000	Continue Design	200,000	Continue Design	5	TBD
North & Sturgeon Lakes, MN	St. Paul	300,000	Continue Design	300,000	Complete Design & Initiate Construction	15	TBD
Adaptive Management		125,000		105,000			
Habitat Evaluation/Monitoring		350,000		400,000			
Long Term Resource Monitoring		5,225,000		5,400,000			
Model Certification/ Regional HREP		150,000					
Public Outreach		50,000		60,000			
Regional Program Management		350,000		400,000			

Regional Project Sequencing		75,000		80,000			
Total		$32,738,000		$33,170,000			

[1/] No recreation projects scheduled.

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 and amended by Section 107(b) of the Water Resources Development Act of 1999, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 25 percent of the first costs allocated to fish and wildlife enhancement for the following projects:		
Baldwin Backwater, IL	$ 624,000	
Banner Marsh, IL	1,780,000	
Batchtown, IL	146,000	
Blackhawk Park, WI	77,000	
Bussey Lake, IA	162,000	
Cuivre Island, MO	479,000	
Osborne Channel, IL	190,000	
Peoria Lake, IL	42,000	
Princeton, IA	54,000	
Swan Lake, IL	262,000	
Subtotal	$ 3,816,000	$ 0
Pay 35 percent of the first costs allocated to fish and wildlife enhancement for the following projects		
Alton Pool	$ 231,000	
Ambrough Slough, WI	166,000	
KasKasKia Oxbows	350,000	
Pool Slough, IA, MN	175,000	
Rice Lake, IL	7,280,000	
Smith Creek, IA	300,000	
Rip Rap Landing	231,000	
Subtotal	$ 8,733,000	$ 0
Pay 50 percent of the first costs allocated to recreation projects.	0 [1/]	
Total Non-Federal Construction Costs	$ 12,549,000	$ 0

The non-Federal sponsors have agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: A Project Agreement is required only for projects that are not located on lands managed as a national wildlife refuge.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $1,047,689,000 is an increase of $121,906,000 from the latest estimate ($925,783,000) presented to Congress (FY 2014). Costs increased due to adjustments for inflation and the initiation of planning on additional projects which were previously approved.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: National Environmental Policy Act compliance is accomplished prior to implementation of each individual project.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1985. The Water Resources Development Act of 1999, P.L. 106-53, amends the previous authority to increase annual appropriation limits available to the project; requires submission of a report to Congress on a 6 year cycle which began in December 2004 to evaluate projects, accomplishments, systemic habitat needs, and identifies any needed changes to the project authorization; and authorized an independent technical review committee through FY 2009. To date the program has received $4,987,732 in Supplemental Appropriations due to flood damages at the Odessa Habitat site.

This project was authorized in Section 1103, WRDA 1986 as amended in Section 405, WRDA 1990, Section 107, WRDA 1992, and Section 509, WRDA 1999, Section 3177, WRDA 2007 as the Upper Mississippi River System Environmental Management Program (Section 3177, WRDA 2007). Since 2006, this program has been budgeted and funds appropriated under the name Upper Mississippi River Restoration, IL, IA, MN, MO & WI.

The following projects have been delayed or deferred due to prioritization or lack of a non-Federal sponsor.

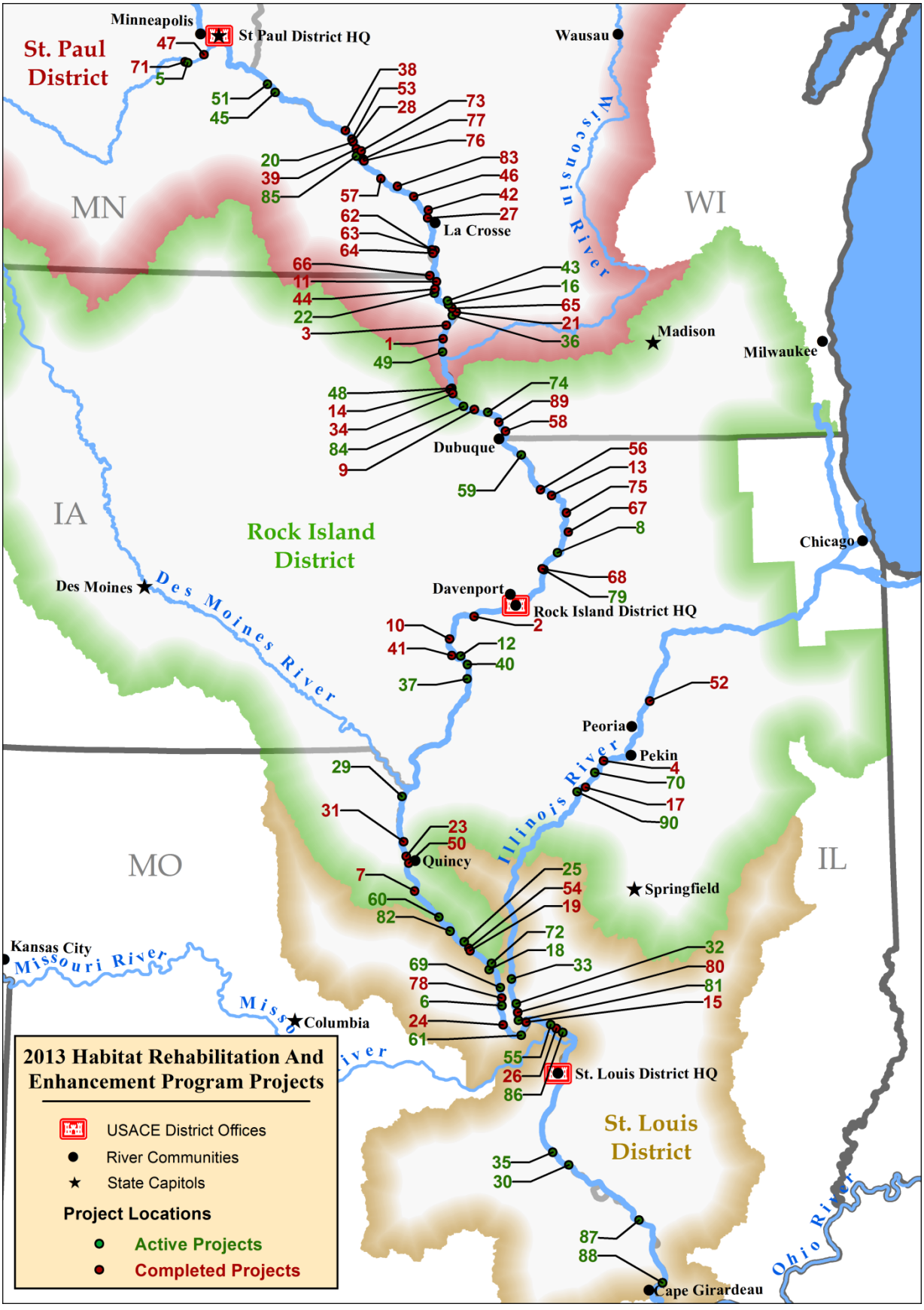
Project	*District*	*% Complete*
Beaver Island, IA	Rock Island	3
Peosta Channel, IA	Rock Island	0
Rice Lake, IL	Rock Island	85
Establishment Chute, MO	St. Louis	0
Harlow Island, MO	St. Louis	1
Jefferson Barracks Side Channel, IL	St. Louis	0
Least Tern, MO	St. Louis	22
Pool 24 Island, MO	St. Louis	2
Salt Lake/Ft Chartres S.C., IL	St. Louis	7
Stone Dike Alteration, IL/MO	St. Louis	10
West Alton, MO	St. Louis	2

Bass Ponds, MN	St. Paul	0
Clear Lake, MN	St. Paul	0
Lock & Dam 3 Fish Passage, MN/WI	St. Paul	20
Weaver Bottoms, MN	St. Paul	0
Whitewater River, MN	St. Paul	2

The following projects have been completed:

Project	*District*	*Date of Completion*
Calhoun Point, IL	St. Louis	(Aug 11)
Clarksville Refuge, MO	St. Louis	(Apr 90)
Cuivre Island, MO	St. Louis	(Jul 99)
Dresser Island, MO	St. Louis	(Sep 91)
Pharrs Island, MO	St. Louis	(Jun 92)
Stag & Keaton Is., MO	St. Louis	(Sep 98)
Stump Lake, IL	St. Louis	(Nov 98)
Andalusia Refuge, IL	Rock Island	(Dec 94)
Banner Marsh, IL	Rock Island	(Dec 03)
Bay Island, MO	Rock Island	(Nov 94)
Bertom Lake, WI	Rock Island	(Jun 92)
Big Timber, IA	Rock Island	(Jun 95)
Brown's Lake, IA	Rock Island	(Sep 94)
Chautauqua Refuge, IL	Rock Island	(Dec 03)
Cottonwood Island, MO	Rock Island	(Dec 99)
Gardner Div., IL	Rock Island	(Jan 98)
Pool 11 Islands, WI/IA	Rock Island	(Sept 07)
Pleasant Creek, IA	Rock Island	(Jan 03)
Monkey Chute, MO	Rock Island	(Aug 89)
Peoria Lake, IL	Rock Island	(Sep 97)
Potters Marsh, IL	Rock Island	(Jul 96)
Princeton, IA	Rock Island	(Dec 01)
Spring Lake, IL	Rock Island	(Sep 01)
Ambrough Slough, WI	St. Paul	(Sep 04)

Blackhawk Park, WI	St. Paul	(Nov 90)
Bussey Lake, IA	St. Paul	(Jun 96)
Cold Springs, WI	St. Paul	(Aug 94)
East Channel, WI, MN	St. Paul	(Jun 97)
Finger Lakes, MN	St. Paul	(Jul 94)
Guttenberg Waterfowl Ponds, IA	St. Paul	(Oct 90)
Indian Slough, WI	St. Paul	(Jun 94)
Island 42, MN	St. Paul	(May 87)
Lake Onalaska, WI	St. Paul	(Jul 90)
Lansing Big Lake, IA	St. Paul	(Nov 94)
Long Lake, WI	St. Paul	(May 00)
Long Meadow Lake, MN	St. Paul	(Nov 06)
Miss. River Bank	St. Paul	(Sep 99)
Peterson Lake, MN	St. Paul	(Jun 96)
Polander Lake, MN	St. Paul	(Nov 00)
Pool 8 Isl, Phase I, WI	St. Paul	(Jun 93)
Pool 8 Isl, Phase II, WI	St. Paul	(Sep 99)
Pool 8 Isl, Phase III, WI	St. Paul	(Jul 12)
Pool 9 Island, WI	St. Paul	(Jun 95)
Pool Slough, IA	St. Paul	(Apr 07)
Rice Lake, MN	St. Paul	(Nov 98)
Small Scale Drawdown, WI	St. Paul	(Sep 97)
Spring Lake Peninsula, WI	St. Paul	(Nov 94)
Spring Lake Islands, WI	St. Paul	(Jul 06)
Trempealeau NWR, WI	St. Paul	(Sep 99)
Habitat Needs Assessment		(Sep 00)
Economic Impacts of Recreation Study		(Sep 92)
Traffic Monitoring		(Sep 90)



Mississippi Valley Division | Rock Island District | Upper Mississippi River Restoration, IL, IA, MN, MO, and WI

EMP Projects	Site #
Ambrough Slough	1
Andalusia Refuge	2
Mississippi River Bank Stabilization	3
Banner Marsh	4
Bass Ponds, Marsh, and Wetland	5
Batchtown	6
Bay Island	7
Beaver Island	8
Bertom McCartney Lakes	9
Big Timber	10
Blackhawk Park	11
Boston Bay	12
Brown's Lake	13
Bussey Lake	14
Calhoun Point	15
Capoli Slough	16
Chautauqua Refuge	17
Clarence Cannon	18
Clarksville Refuge	19
Clear Lake (Finger Lake) Dredging	20
Cold Springs	21
Conway Lake	22
Cottonwood Island	23
Cuivre Island	24
Delair Division	25
Dresser Island	26
East Channel	27
Finger Lakes	28
Fox Island	29
Salt Lake/Ft Chartres Side Channel	30
Gardner Division (Long Island Division)	31
Glades Wetlands	32
Godar Refuge	33
Guttenberg Waterfowl Ponds	34
Harlow Island	35
Harpers Slough	36
Huron Island	37
Indian Slough	38
Island 42	39
Keithsburg Division	40
Lake Odessa	41
Lake Onalaska	42
Lake Winneshiek	43
Lansing Big Lake	44
Lock & Dam 3	45
Long Lake	46

EMP Projects	Site #
Long Meadow Lake	47
Lower Pool 10 Island and Backwater Complex	48
McGregor Lake	49
Monkey Chute	50
North and Sturgeon Lakes	51
Peoria Lake	52
Peterson Lake	53
Pharrs Island	54
Piasa - Eagle's Nest Islands	55
Pleasant Creek	56
Polander Lake	57
Pool 11 Islands-Sunfish Lake	58
Pool 11 Islands-Mud Lake	89
Pool 12 Overwintering	59
Pool 24 Islands	60
Pool 25 and 26 Islands	61
Pool 8 Islands Phase I	62
Pool 8 Islands Phase II	63
Pool 8 Islands Phase III	64
Pool 9 Islands	65
Pool Slough	66
Potters Marsh	67
Princeton Refuge	68
Red's Landing Wetlands	69
Rice Lake-IL	70
Rice Lake-MN	71
Rip Rap Landing	72
Small Scale Drawdown	73
Snyder Slough Backwater Complex	74
Spring Lake	75
Spring Lake Islands	76
Spring Lake Peninsula	77
Stag and Keaton Islands	78
Steamboat Island	79
Stump Lake	80
Swan Lake	81
Ted Shanks	82
Trempeleau	83
Turkey River Bottoms Delta and Backwater Complex	84
Weaver Bottoms	85
West Alton Tract	86
Wilkinson Island	87
Schenimann Chute	88
Emiquon	90

IOWA

LOUISIANA

APPROPRIATION TITLE: Construction, Channels and Harbors (Navigation)

PROJECT: Calcasieu River and Pass, LA (Dredged Material Disposal Facility) (Continuing)

LOCATION: The 68-mile channel is located in southwest Louisiana and extends from the Gulf of Mexico to Lake Charles, Louisiana. The project is authorized at -40x400 feet inland and - 42x800 feet in the bar channel.

DESCRIPTION: The project will perform major rehabilitation of existing confined disposal facilities and construct new dredged material disposal facilities and beneficial use disposal areas to create additional disposal capacity in accordance with the approved 2010 Dredged Material Management Plan (DMMP).

AUTHORIZATION: River and Harbor Act of 24 July 1946, as amended, CH 594-PL525, River and Harbor Act of 1960, PL86-645, dated Jul 14, 1960, River and Harbor Act of October 23, 1962, House Document 582.

REMAINING BENEFIT - REMAINING COST RATIO: Not applicable.

TOTAL BENEFIT - COST RATIO: Not applicable.

INITAL BENEFIT - COST RATIO: Not applicable.

BASIS OF BENEFIT: Not applicable.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	STATUS (Jan 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$170,765,000			Construction Portion of Project	0%	TBD
Estimated Non-Federal Cost		$78,955,000					
Cash Contributions	$56,922,000						
Other Cost	$22,033,000						
Total Estimated Project Cost		$249,720,000					
Allocations to 30 September 2011		$ 13,000					
Allocation for FY 2012		$0					
Allocation for FY 2013		$0					
Allocation for FY 2014		$10,543,000					
Allocation through FY 2014		$10,556,000	1/ 2/ 3/	6%			
Estimated Carry-in Funds		0	4/				
Budget for FY 2015		$9,800,000		12%			
Programmed Balance to Complete After FY 2015		$150,409,000					
Unprogrammed Balance to Complete After FY 2015		$0					

1/ $0 reprogrammed to (from) the project.
2/ $1,855,000 rescinded from the project in FY 2011.
3/ $300,000 transferred for the Mississippi River Flood in FY 2011.
4/ Unobligated Carry-In Funding: The estimated unobligated balance from FY 2013 into FY 2014 for this project is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this project effort are $0. This amount will be used to perform work on the project as follows: N/A.

PHYSICAL DATA: The project will include new dredged material disposal facilities; perform major rehabilitation of existing confined disposal facilities or construct new dredged material disposal facilities and beneficial use disposal areas to create additional disposal capacity in accordance with the approved 2010 Dredged Material Management Plan.

JUSTIFICATION: Currently, the project does not have the adequate dredged material disposal capacity needed to maintain the channel to authorized dimensions. The gross 20-year dredging capacity required to maintain the channel is approximately 97 million cubic yards, while the existing confined disposal capacity is only five million cubic yards. Existing discharge sites are at or near capacity, and past maintenance have resulted in substantial erosion of discharge facilities into adjacent water bodies. As a result, it has become necessary to reduce channel widths in some reaches.

The Calcasieu Ship Channel supports a thriving commercial navigation industry. The tonnage of commodities handled at the ship channel's docks makes the Port of Lake Charles the 14th largest seaport in the United States and the 3nd largest Strategic Petroleum Reserve facility. The Port of Lake Charles is also the 3rd largest export port in the country. Calcasieu River is very important to the nation's energy resources. It services two major refineries, 2 Liquified Natural Gas facilities plus many other facilities requiring the deep draft channel.

Since 1932, Louisiana has lost 1,200,000 million acres of coastal wetlands from the combined impact of natural processes and human intervention. In Southwestern Louisiana, a primary resource for restoring coastal wetlands is dredged material. The Calcasieu DMMP designates 9,550 acres of eroded and subsided coastal wetlands for the beneficial use of material.

FISCAL YEAR 2014: The current year funds will be used as follows:

Initiate construction of the Dredged Material Placement Sites	$10,543,000

FISCAL YEAR 2015: The budget amount will be applied as follows:

Continue construction of the Dredged Material Placement Sites	$9,800,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

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.	$22,033,000	
Provide during the period of construction a cash contribution equal to 25 percent of total project cost allocated to building navigation features.	$56,922,000	
Modify or relocate utilities, roads, bridges (except railroad bridges) where necessary for the construction of the project.	N/A	
Pay all cost allocated to operation, maintenance, repair, rehabilitation, and replacement of the project features.		
Total Non-Federal Cost	$ 78,955,000	

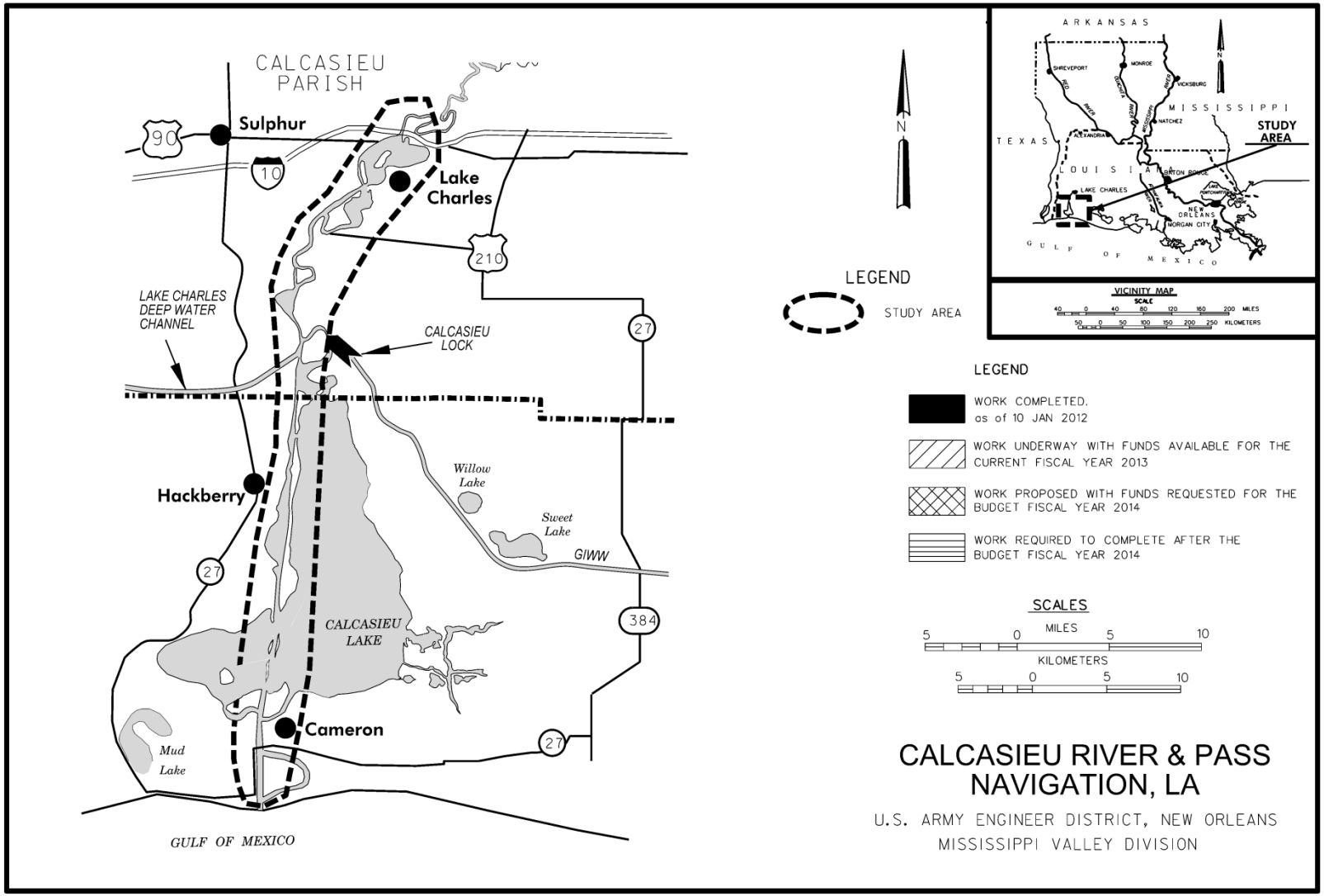
Non federal cost share for construction of navigation features will be 25% of total construction cost plus LERRD's. However, above statements are subject to change pending the signing of the PPA.

STATUS OF LOCAL COOPERATION: The Lake Charles Harbor and Terminal District is the Local Sponsor for this project. A Letter of Intent, dated January 31, 2013 was provided. Negotiations have begun on the Project Partnership Agreement (PPA). The PPA is scheduled for execution in FY 2014.

COMPARISON OF FEDERAL COST ESTIMATE: The Federal project cost estimate of $170,765,000 is a decrease of $17,570,000 from the last estimate ($188,335,000) reported to Congress (FY 2014). The decrease is the result of an error in the FY 2014 cost estimate.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with Environmental Protection Agency on 15 December 2010.

OTHER INFORMATION: The Calcasieu River and Pass Dredged Material Management Plan was approved on 16 December 2010. Construction funds were allocated in FY 2007 and FY 2008.


CALCASIEU PARISH
Sulphur
Lake Charles
LAKE CHARLES DEEP WATER CHANNEL
CALCASIEU LOCK
Hackberry
Willow Lake
Sweet Lake
GIWW
CALCASIEU LAKE
Cameron
Mud Lake
GULF OF MEXICO
90
10
210
27
384
N
LEGEND
STUDY AREA
ARKANSAS
TEXAS
MISSISSIPPI
LOUISIANA
SHREVEPORT
MONROE
VICKSBURG
NATCHEZ
ALEXANDRIA
BATON ROUGE
LAKE CHARLES
NEW ORLEANS
MORGAN CITY
STUDY AREA
GULF OF MEXICO
VICINITY MAP
SCALE
MILES
KILOMETERS
LEGEND
WORK COMPLETED. as of 10 JAN 2012
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR 2013
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR 2014
WORK REQUIRED TO COMPLETE AFTER THE BUDGET FISCAL YEAR 2014
SCALES
MILES
KILOMETERS
CALCASIEU RIVER & PASS NAVIGATION, LA
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
MISSISSIPPI VALLEY DIVISION

APPROPRIATION TITLE: Construction, Ecosystem Restoration

PROJECT: Louisiana Coastal Area, Ecosystem Restoration, Louisiana (New)

LOCATION: The project Louisiana Coastal Area (LCA) includes the Louisiana coastal area from Mississippi to Texas, that includes the following Louisiana parishes in the study area: Ascension, Assumption, Calcasieu, Cameron, Iberia, Jefferson, Lafourche, Livingston, Orleans, Plaquemines, St. Bernard, St. Charles, St. James, St. John the Baptist, St. Martin, St. Mary, St. Tammany, Tangipahoa, Terrebonne, and Vermilion.

DESCRIPTION: The project's primary purpose is to restore the Louisiana wetland coastal area through the beneficial use of dredged material, river diversion of sediment and water, head land and barrier island restoration, and coastal protection efforts. The Louisiana coastal plain contains one of the largest expanses of coastal wetlands in the contiguous United States (U.S.), and has experienced 90 percent of the total coastal marsh loss in the Nation. The coastal wetlands, built by the deltaic processes of the Mississippi River, contain diverse coastal habitats that range from narrow natural levee and beach ridges to expanses of forested swamps and freshwater, intermediate, brackish, and saline marshes. These unique habitats are hydrologically connected to each other, upland areas, the Gulf of Mexico, and migratory routes of species, including birds and fish. Taken as a whole, these habitats combine to make Louisiana's wetlands among the Nation's most productive and ecologically-significant natural assets. Additionally, Louisiana's coastal wetlands have also been a center for culturally diverse social development.

AUTHORIZATION: WRDA 2007, Title VII (Public Law 110-114).

REMAINING BENEFIT - REMAINING COST RATIO: The remaining benefit-remaining cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT - COST RATIO: The total benefit-cost-ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT - COST RATIO: The initial benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFITS: Benefits are based on the Report of the Chief of Engineers (dated 31 January 2005) on Louisiana Coastal Area, Ecosystem Restoration Feasibility Study; the Report of the Chief of Engineers (dated 30 December 2010), LCA Ecosystem Restoration, Six Projects Authorized by Section 7006(e)(3) of WRDA 2007; and the Report of the Chief of Engineers (dated 22 June 2012), LCA Ecosystem Restoration, Barataria Basin Barrier Shoreline Restoration Project, Louisiana.

SUMMARIZED FINANCIAL DATA – Total Project			ACCUM PCT of EST FED COST
Estimated Federal Cost		$2,238,212,000	
Programmed	$1,580,128,000		
Un-Programmed	$ 658,084,000[1]/		
Estimated Non-Federal Cost		$1,254,204,000	
Programmed: Cash	$850,841,000		
Other	$		
Un-Programmed: Cash	$403,363,000[1/]		
Other	$ [1/]		
Total Estimated Programmed Construction Cost		$2,430,969,000	
Total Estimated Un-programmed Construction Cost		$1,061,447,000	
Total Estimated Project Cost		$3,492,416,000	
Allocations to 30 September 2011		0	
Allocations for FY 2012		0	
Allocations for FY 2013		0	
Allocations for FY 14		0	
Allocations through FY 2014		0	
Estimated Unobligated Carry-in Funds		0	
President's Budget for FY 2015		$10,000,000	
Programmed Balance to Complete After FY 2015		$1,570,128,000	
Un-Programmed Balance to Complete After FY 2015		$658,084,000	1/

STATUS (Jan 2014)	PCT CMPL	PHYSICAL COMPETION SCHEDULE
Beneficial Use Dredge Material	0	
Demonstration Projects	0	
Amite River Diversion	0	
Convey Atchafalaya River	0	
Houma Navigation Canal	0	
Convent LA & Blind River	0	
Terrebonne Basin	0	
Barataria Basin Shoreline Rest	0	
Houma Navigation Canal	0	
Convent LA & Blind River	0	
Terrebonne Basin	0	
Barataria Basin Shoreline Rest	0	
Caillou Lake & Gulf	0	
Point Au Fer island	0	
Mod to Caernarvon	0	
Mod to Davis Pond	0	
Bayou Lafourche	0	
Diversion at Myrtle Grove	0	
Hope Canal	0	
Mississippi R. Gulf Outlet-Env Rest	0	
Diversion at White's Ditch	0	
Total Project	0	

1/ Medium Diversion at White Ditch, Barataria Basin Barrier Shoreline, and Terrebonne Basin Barrier Shoreline – requires additional authorization; the unprogrammed cost of $1,061,447,000 is the difference between the 2005 Fully Funded Authorized cost of $576,497,000 and the Fully Funded project cost of $1,637,944,000 for each project identified in subsequent Chief's Reports.

PHYSICAL DATA:

Pumping Stations & Siphon Facility	Adjustable Weirs
Sediment Traps	Land Bridge Creation
Dredging	Breakwaters
Dredged Material	Diversion Structure
Bank Stabilization	Conveyance Channel
Monitoring Stations	Groins

JUSTIFICATION:

Louisiana's coastal wetlands provide nationally significant habitat to migratory bird species, protect an internationally significant commercial-industrial complex from storm-driven waves and tides, and support commercial and recreational fishing activities. However, natural land building process limitations, saltwater intrusion, subsidence, and sea level rise have led to the degradation of Louisiana's coastal wetlands. This threatens the environmental, economic, and social benefits provided to the region. This project seeks to restore Louisiana's coastal wetlands to preserve these benefits. The below details further explain the value and history of the Louisiana wetlands to be restored through this construction program.

The coastal wetlands of Louisiana provide nationally significant habitat to migratory bird species. Approximately 70 percent of all waterfowl migrating through the U.S. use the Mississippi and Central flyways, which pass over these wetlands. These wetlands are habitat to the more than 5 million birds wintering in Louisiana and for neo-tropical migratory songbirds and other avian species that use them as stopover habitat. Additionally, coastal Louisiana provides crucial nesting habitat for many water bird species, such as the endangered brown pelican.

Louisiana's coastal wetlands were built by deltaic processes through which the Mississippi River transported enormous volumes of sediment and water. This sediment was eroded from the Mississippi River Basin lands and carried through the river to eventually be deposited at the river's mouth forming the delta. For the last several thousand years, deltaic processes that built land resulted in a net increase of more than four million acres of coastal wetlands. In addition, processes created an extensive skeleton of higher natural levee ridges along the past and present Mississippi River channels, distributaries, and bayous in the Deltaic Plain and beach ridges of the Chenier Plain. The landscape created by these deltaic processes gave rise to one of the most productive ecosystems on Earth.

Today, however, most of the Mississippi River's fresh water, nutrients, and sediment, flow directly into the Gulf of Mexico, largely bypassing the coastal wetlands. Deprived of land building sediment, the wetlands are damaged by saltwater intrusion and other factors associated with sea level change and land subsidence, and will eventually convert to open water. Deprived of nutrients, the plants that define the surface of the coastal wetlands die off. Once the coastal wetlands are denuded of vegetation, the substrate is left exposed to the erosive forces of waves and currents, especially during tropical storm events. The loss of coastal wetlands has been well documented over time. Since the 1930s, coastal Louisiana has lost more than 1.2 million acres (485,830 ha) (Barras et al. 2003; Barras et al. 1994; and Dunbar et al. 1992). As recently as the 1970s, the loss rate for Louisiana's coastal wetlands was as high as 25,200 acres per year (10,202 ha per year). The rate of loss from 1990 to 2000 was about 15,300 acres per year (6,194 ha per year), mainly due to the residual effects of past human activity (Barras et al. 2003). It was estimated in 2000 that coastal Louisiana would continue to lose land at a rate of approximately 6,600 acres per year (2,672 ha per year) over the next 50 years. It is estimated that an additional net loss of 328,000 acres (132,794 ha) may occur by 2050, which is almost 10 percent of Louisiana's remaining coastal wetlands (Barras et al. 2003). The cumulative effects of human and natural activities in the coastal area have severely degraded the deltaic processes and shifted the coastal area from a condition of net land building to one of land loss.

Project descriptions for FY 2015:

This project is part of the LCA Program portfolio and is scheduled to initiate construction in FY 2015:

Beneficial Use of Dredged Material Program (BUDMat) - The BUDMat Program is a stand-alone component of the LCA Program. The BUDMat Program provides the framework, process and procedures for selecting, funding and implementing projects over a 10-year period that could create an estimated 21,000 acres of coastal wetlands over the 10-year life of the BUDMat Program. Dredged material will be acquired from maintenance activities of Federal waterways. A Program report approved by the Administration was transmitted to Congress 13 August 2010. In July 2012, the State indicated they were not interested in cost sharing in the BUDMat Program at this time. Plaquemines Parish Government has indicated a willingness to cost share the BUDMat Program project and execute a Project Partnership Agreement (PPA).

These projects are part of the LCA Program portfolio but are not currently scheduled for construction in FY 2015:

Barataria Basin Barrier Shoreline (BBBS) Restoration –The BBBS project is a barrier island restoration project situated between the west bank of the Mississippi River at the active delta and the eastern shore of Terrebonne Bay. The Recommended Plan for this project restores and protects the shorelines, dunes, and marshes of the Caminada Headlines and Shell Island. The initial construction of the barrier shorelines will restore or create 2,849 acres of beach, dune, and marsh habitats. On the Caminada Headland, approximately 880 acres of beach and dunes and 1,186 acres of marsh will be restored or created. Shell Island will be restored to its pre-Hurricane Bob (1979) configuration and create or restore 317 acres of beach and dune and 466 acres of marsh. The Recommended Plan will include re-nourishment of the Caminada Headland and Shell Island, sustaining the benefits created by the project construction. Over each 10 year period, a minimum of 3.9 million cubic yards of material will be returned. Completion of the project will result in: restoring/protecting water and sediment dynamics impacting the landscape features affecting thousands of coastal wetland acres of the Barataria Basin and their dependent flora and fauna to include the habitats of migratory waterfowl, threatened and endangered species, as well as Federal and state refuges and management areas. Additional authority is needed to raise the total project cost to allow the entire project's implementation. However, Caminda Headlines is a separable element that could be constructed within the existing authority.

Small Diversion at Convent / Blind River. This project is located approximately equidistant between Baton Rouge and New Orleans, Louisiana within the Maurepas Swamp, one of the largest remaining cypress swamps in coastal Louisiana. The recommended plan (Alternative 2), which is also the NER plan, will reintroduce the natural periodic, nearly annual flooding by the Mississippi River to the Maurepas Swamp and Blind River that was cut off by construction of the Mississippi River and Tributaries (MR&T) flood control system. The project consists of a 3,000 cubic feet per second (cfs) capacity gated box culvert diversion on the Mississippi River with a delivery channel to be constructed in the vicinity of Romerville, Louisiana. The project will restore freshwater, nutrients, and sediment input from the Mississippi River and improve habitat function by 6,421 average annual habitat units over a total of 21,369 acres of bald cypress-tupelo swamp. The project would improve habitat for many fish and wildlife species including migratory birds, bald eagles, alligators, gulf sturgeon, and the manatee.

Demonstration Projects are designed to resolve critical areas of scientific or technological uncertainty related to the implementation of the restoration plan, and in the future, the comprehensive plan.

Projects that are part of the LCA Program portfolio, however, the State of Louisiana does not intend to pursue a partnership at this time. No work is anticipated to be performed in FY 2015:

Medium Diversion at White's Ditch project provides for a medium diversion from the Mississippi River into the central River aux Chenes area using a controlled structure to provide additional freshwater, nutrients, and fine sediment to the area. The additional freshwater would facilitate organic sediment deposition, improve biological productivity, and prevent further deterioration of the marshes. Additional authorization will be required prior to initiating construction as the recommended plan exceeds the authorized project cost.

Medium Diversion at Myrtle Grove with Dedicated Dredging project consists of diverting 2,500 to 15,000 cfs from the Mississippi River into the Barataria Basin through a box culvert system and using two million cubic yards of Mississippi River material annually for several years to create marsh wetlands. As authorized, this project is expected to deliver benefits in the range of 11,500 acres and would benefit essential fish habitat, threatened/endangered species and colonial nesting birds. The Feasibility Cost Share Agreement was enacted May 2010.

Amite River Diversion Canal Modification restoration project includes portions of the Maurepas Swamp adjacent to the Amite River Diversion Canal which connects and diverts flows from the Amite River to the lower Blind River near Lake Maurepas. The Amite River Diversion Canal recommended plan (Alternative 33-Chief of Engineers Report dated 30 December 2010) will restore the most degraded portion of the Maurepas Swamp within the study area by restoring the natural hydrology modified by the construction of the Amite River Diversion Canal and from the resulting impoundment of water, lack of freshwater, sediment and nutrients and surge-related saltwater intrusion. The project includes the creation of three gaps and delivery channels through the north bank of the Amite River Diversion Canal. The recommended plan is an implementable increment of the NER plan, meets the LCA Program and project objectives, and is within the cost and scope of the authorization contained in Section 7006(e)(3) of WRDA 2007. The NER plan would create gaps on both the north and south bank of the Amite River Diversion Canal along with delivery channel, gaps in the railroad grade and vegetative plantings benefiting 3,881 acres of swamp. The NER plan also includes all the areas addressed by the recommended plan and an additional area that is expected to need restoration in the next 20 years. The NER plan would provide 1,602 average annual habitat units (AAHUs). The recommended plan will improve habitat function by 679 AAHUs over the 50-year period of analysis and benefit approximately 1,602 acres of existing freshwater swamp.

Convey Atchafalaya River Water to Northern Terrebonne Marshes / Multipurpose Operation of the Houma Navigation Canal Lock restoration project is located in coastal Louisiana south of Houma, between the Atchafalaya River and Bayou Lafourche. These two projects are hydrologically linked and subsequently have been analyzed and are presented as a combined project. The Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of the Houma Navigation Canal Lock recommended plan (Alternative 2-Chief of Engineers Report dated 30 December 2010), which is also the NER plan, will reduce the current trend of marsh degradation in the project area resulting from subsidence, sea level rise, erosion, saltwater intrusion, and lack of sediment and nutrient deposition. The project consists of elimination of GIWW flow constrictions and construction of flow management features in the interior portions of the project area.

The project consists of construction of 56 structures and other water management features and also includes the multipurpose operation of the proposed Houma Navigation Canal Lock, if and when constructed. The lock complex would be closed and operated more frequently in order to maximize distribution of freshwater into wetlands downstream of the lock and minimizing saltwater intrusion upstream of the lock. The project would improve habitat function by approximately 3.220 AAHUs. The project would improve habitat for fish and wildlife species including migratory birds, estuarine fish and shell fish. Benefits include the reduction of projected existing wetland loss by approximately 9,655 acres over the 50-year period of analysis.

Terrebonne Basin Barrier Shoreline Restoration project is located in Terrebonne Parish, which is 30 miles south of the city of Houma, Louisiana and includes the Isles Dernieres and the Timbalier Islands. These barrier islands have undergone significant reductions in size due to natural processes and human actions

including lack of sediment, storm-induced erosion and breaching, subsidence, sea level rise and hydrologic modifications such as navigation and oil and gas canals. The project will reintroduce sediment to the coastal sediment transport system through the restoration of Raccoon Island with 25 years of advanced fill and construction of a terminal groin. The project also includes restoration of Whiskey and Trinity Islands with five years of advanced fill and restoration of Timbalier Island with 25 years of advanced fill. The project consists of restoration of four islands (Whiskey, Raccoon, Trinity, and Timbalier), improving habitat function by 2,833 AAHUs by adding 3,283 acres to the islands for a total size of 5,840 acres. The restored acreage would include 472 acres of dune, 4,320 acres of supratidal habitat, and 1,048 acres of intertidal habitat and ensure the geomorphic and hydrologic form and ecological function of the majority of the estuary over the period of analysis. Additional authority is needed to raise the total project cost to allow the entire project's implementation. However, Whiskey Island is a separable element that could be constructed within the existing authority. The Whiskey Island component includes renourishment every 20 years to maintain the constructed features. Restoration of the one island will increase habitat function by 678 AAHUs by restoring a total of 1,272 acres on the island, including 65-acres of dune, 830 acres of supratidal habitat, and 377 acres of intertidal habitat.

Land-bridge between Caillou Lake and the Gulf of Mexico project would maintain the natural hydrologic barrier between the Gulf and Caillou Lake and associated Terrebonne Basin wetlands as well as allow increased freshwater influence from the Atchafalaya River waters flowing eastward into Four League Bay. The project includes armoring the Gulf shoreline and rock armoring or marsh creation to plug and fill broken marsh to preserve the land bridge's integrity and increase freshwater influences. Coastal marsh and habitat crucial to migratory birds would be protected. The bald eagle and essential fish habitat would also benefit. Subsidence, storm damage, increased tidal influence, and lack of sediment inputs have resulted in wetland loss, habitat conversion, and ecosystem degradation. These habitat losses have had a direct adverse impact on wildlife and fisheries resources and State-designated Public Oyster Seed Reservations. The bald eagle and essential fish habitat would also benefit. Essential fish habitat is defined as waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity (Magnuson-Stevens Act), specific to Federally managed species. The project would maintain the separation between Caillou Lake and the Gulf of Mexico and Bay Voisin and the Gulf of Mexico, maintain the estuarine gradient, reduce the marine influences on Caillou Lake and Bay Voisin, and reverse the trend of deterioration in the associated wetlands and wildlife habitat. It will create and nourish approximately 1,588 acres of saline marsh and install 29,000 linear feet (8,839 m) of shoreline protection to increase the stability of the land bridge separating Caillou Lake from the Gulf of Mexico and of the stability of the critical land bridge separating Bay Voisin and the Gulf of Mexico.

Gulf Shoreline at Point Au Fer Island project provides for stabilizing the Gulf shoreline of this island, thereby precluding the formation of direct connections between the Gulf and Four League Bay, a situation that would lead to increasing salinities of island and inland coastal wetlands influenced by Atchafalaya River water. Protecting this island also protects habitat crucial to migratory birds, and provides storm surge protection to the southwestern corner of the Terrebonne Bay wetland system.

Modification of Caernarvon Diversion project will increase wetland creation and protection outputs for this existing structure through changes in the structure's operation. Currently, the structure operates on average at about one-half capacity to maintain salinity gradients. The wetlands of St. Bernard and Plaquemines Parishes suffered extensive losses from Hurricane Katrina and will directly benefit from the added sediments and freshwater introduced from the Mississippi River by increasing the freshwater introduction volume. The bald eagle and essential fish habitat are also expected to benefit.

Modification of Davis Pond Diversion project will increase wetland creation and protection outputs for this existing structure through changes in the structure's operation. The structure, operating on average at about one-half capacity, maintains salinity gradients in the central Barataria Basin. In addition to wetland creation, the freshwater wetlands of the upper Barataria Basin will be directly benefitted by the added sediments and freshwater introduced from the Mississippi River. The bald eagle and essential fish habitat are also expected to benefit.

Projects that are part of the LCA Program portfolio; however, Feasibility studies have not been initiated:

Small Bayou Lafourche Reintroduction project consists of increasing channel flows by introducing 1,000 cfs of Mississippi River water into the Bayou at Donaldsonville to mimic the actions of a river crevasse. Dredging and bank stabilization would be required to control water levels and maintain bank stability and a sediment trap. Weirs are also features of the project. Projections are that 2,500 acres of coastal marsh would be protected, thousands of acres would benefit as would the bald eagle and essential fish habitat.

Small Diversion at Hope Canal is expected to enhance approximately 36,000 acres of Maurepas Swamp wetlands primarily by introducing approximately 5,000 cfs from the Mississippi River. Project includes two box culverts; a receiving pond reinforced with riprap; and a 50-foot wide, and a 10-foot deep outflow channel roughly 27,500 feet long that will run from the river to U.S. Interstate 10.

Mississippi River Gulf Outlet Environmental Restoration (which is separate from WRDA 2007 Section 7013) involves the construction of shoreline protection measures such as rock breakwaters along the north bank of the Mississippi River Gulf Outlet and along important segments of the southern shoreline of Lake Borgne. Additional ecosystem restoration features including marsh creation, freshwater introduction, barrier island restoration, and channel modification would be investigated to develop a suite of measures to stabilize and maintain important estuarine components. Pursuant to WRDA 2007 Implementation Guidance for Section 7006, the Section 7006 study is held in abeyance pending completion of the supplemental report under Section 7013 of WRDA 2007. Section 7013 report is in review.

FISCAL YEAR 2014: None.

FISCAL YEAR 2015: Funds of $10,000,000 will be used as follows:

BUDMat: Execute PPA agreement and initiate construction:

Vicinity of West Bay	$10,000,000
TOTAL	$10,000,000

NON-FEDERAL COST: In accordance with the cost sharing reflected in the Water Resources Development Act of 2007; Chief's Report dated 30 Dec 2010; and Chief's Report dated 22 June 2012, the non-Federal sponsor must comply with the requirements listed below:

Provide all lands, easements, relocations, rights-of-way, and disposal areas and pay a share of the project costs to bring the total non-Federal share to 35 percent.

Requirements for Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Barataria Basin Barrier Shoreline Restoration	172,956,000	500,000
Small Diversion at Convent/Blind River	48,931,000	2,754,000
Beneficial Use of Dredged Material Program	35,000,000	0
Demonstration Projects	35,000,000	0
Amite River Diversion Canal Modification	3,540,000	10,000
Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of Houma Navigation Canal Lock	116,611,000	73,000
Terrebonne Basin Barrier Shoreline Restoration	285,611,000	6,900,000
Land-bridge between Caillou Lake and the Gulf of Mexico	28,003,000	745,000
Gulf Shoreline at Point Au Fer Island	21,669,000	644,000
Modification of Caernarvon Diversion	14,894,000	0
Modification of Davis Pond Diversion	33,872,000	0
Small Bayou Lafourche Reintroduction	73,837,000	1,400,000
Medium Diversion at White's Ditch	146,570,000	120,000
Medium Diversion at Myrtle Grove with Dedicated Dredging	140,705,000	120,000
Small Diversion at Hope Canal	37,144,000	120,000
Mississippi River Gulf Outlet Environmental Restoration	59,861,000	711,000
Total	1,254,204,000	14,097,000

STATUS OF LOCAL COOPERATION: Plaquemines Parish Government will serve as the non-Federal Sponsor for the first LCA BUDMat project. A PPA is scheduled to be executed in March 2015. The State of Louisiana has indicated its intent to pursue, on its own, four of the LCA six projects outside of the LCA Program: Amite River Diversion Canal Modification; Terrebonne Basin Barrier Shoreline Restoration; and Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of Houma Navigation Canal Lock; with development of the Small Diversion at Convent/Blind River projects continuing within the LCA program. Additionally, the State has also requested suspension of the LCA four projects: Land Bridge between Caillou Lake and the Gulf of Mexico, Gulf Shoreline at Point au Fer Island, Modification of Caernarvon Diversion, and Modification of Davis Pond Diversion.

COMPARISON OF FEDERAL COST ESTIMATES: The Federal project cost estimate of $2,238,212,000 is an increase of $126,068,000 from the latest cost estimate of $2,112,144,000 presented to Congress (FY 2014) due to price escalation on construction features.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Record of Decision for the Programmatic Environmental Impact Statement for the Beneficial Use of Dredged Material Program (BUDMat) was signed on 13 August 2010.

A Record of Decision (ROD) for the following LCA Six Projects Authorized by WRDA 2007 Section 7006(e) was signed 12 April 2011: Small Diversion at Convent/Blind River; Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of Houma Navigation Lock; Medium Diversion at White Ditch; Amite River Diversion Canal Modification; and Terrebonne Basin Barrier Shoreline Restoration.

A Barataria Basin Barrier Shoreline Project Integrated Report completed state and agency review May 2012, Chief of Engineers Report signed 22 June 2012, ROD was signed 20 March 2013.

All subsequent environmental documentation associated with the planned work will be completed prior to initiation of construction.

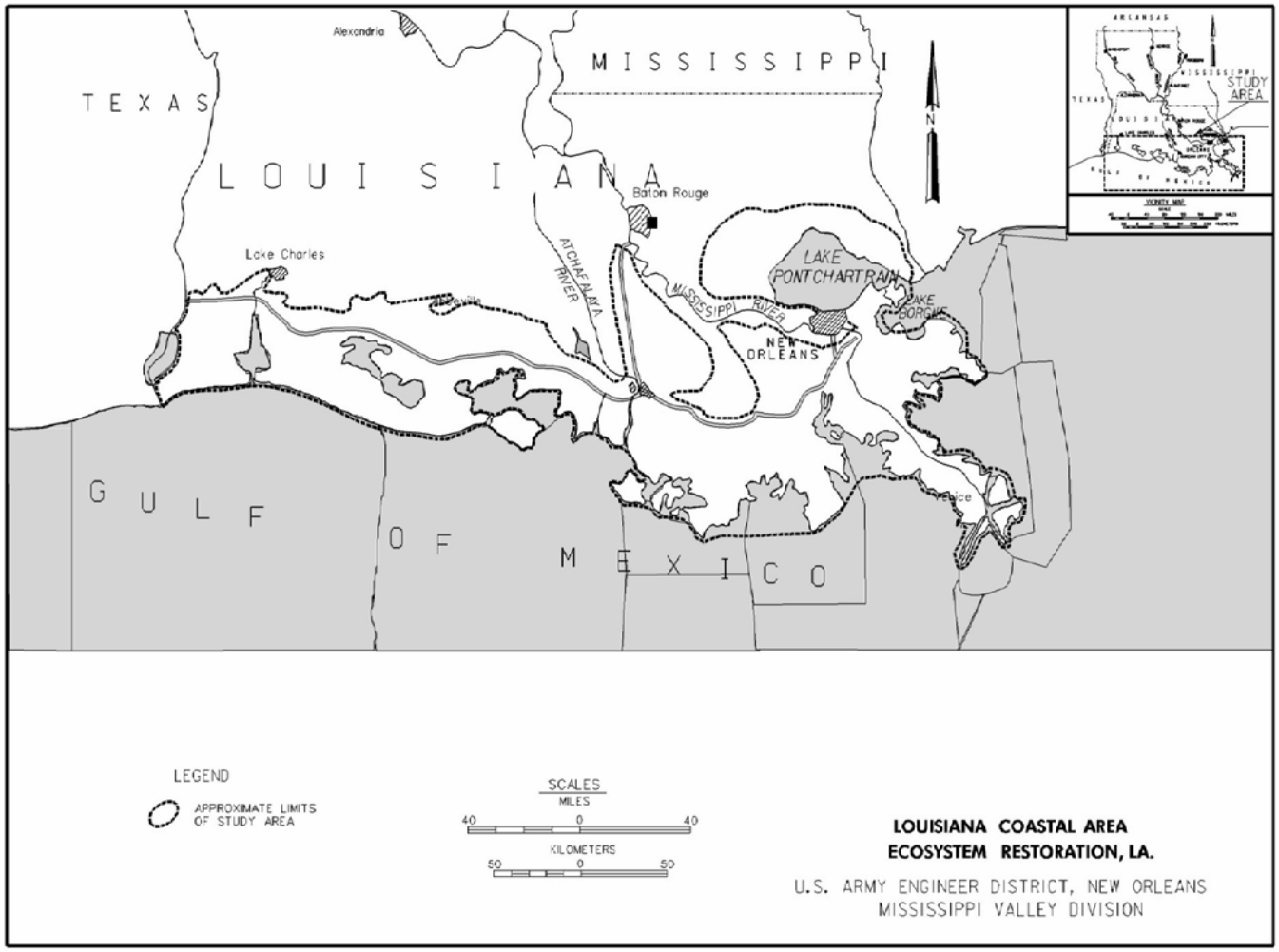
OTHER INFORMATION: PED for the near-term program was initiated in FY 2012. Medium Diversion at White Ditch will require additional authorization prior to initiating construction as the recommended plan exceeds the authorized project cost; however, the project is currently suspended. There is not a constructible feature of the project that can be completed within the cost authorized in WRDA 2007. Terrebonne Basin Barrier Shoreline and Barataria Basin Barrier Shoreline projects require additional authorization; however there is a constructible feature within the cost authorized in WRDA 2007.

STATUS SUMMARY(as of March 2014)	
Active	
Beneficial Use of Dredged Material Program	Developing Design Agreement and initiating PED Negotiating FCSA
Demonstration Projects Program	Draft Design Agreement under review
Barataria Basin Barrier Shoreline Restoration	In PED; will complete in FY 2015
Small Diversion at Convent Blind River	
Suspended (In close–out)	
Amite River Diversion Canal Modification	Suspended by state's letter dated 20 Aug 2012
Convey Atchafalaya River Water to Northern Terrebonne Marshes	Suspended by state's letter dated 20 Aug 2012
Houma Navigation Canal	Suspended by state's letter dated 20 Aug 2012
Terrebonne Basin Barrier Shoreline Restoration	Suspended by state's letter dated 20 Aug 2012
Medium Diversion at White's Ditch	Pending suspension
Medium Diversion at Myrtle Grove with Dedicated Dredging	Pending suspension
Suspended	
Landbridge between Caillou Lake and the Gulf of	Suspended by state's letter dated 16 Oct 2012

Mexico	
Gulf Shoreline at Point au Fer island	Suspended by state's letter dated 16 Oct 2012
Modification of Caernarvon Diversion	Suspended by state's letter dated 16 Oct 2012
Modification of Davis Pond Diversion	Suspended by state's letter dated 16 Oct 2012
Feasibility studies never initiated	
Hope Canal	
Bayou Lafourche Mississippi River Gulf Outlet Environmental Restoration	Sec. 7006 held in abeyance pending completion of the Sec. 7013 supplemental study
OTHER Mississippi River Gulf Outlet Environmental Restoration	Pursuant to WRDA 2007 Section 7013: Production of a supplemental report proceeding separately from Section 7006 - Section 7013 report in review

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

Updated cost estimates: effective date 1 October 2013	Estimated Federal Cost $	Estimated Non-Federal Cost $	Total Estimated Cost (Fully Funded) $	Federal Programmed Balance to Complete $	Federal Un-Programmed Balance to Complete $
Barataria Basin Barrier Shoreline Restoration	$321,206,000	$172,956,000	$494,162,000	$213,397,000	$107,809,000
Small Diversion at Convent/Blind River	$ 90,871,000	$ 48,931,000	$139,802,000	$ 90,871,000	$0
Beneficial Use of Dredged Material Program (BUDMat)	$ 65,000,000	$ 35,000,000	$100,000,000	$ 65,000,000	$0
Demonstration Projects	$ 65,000,000	$ 35,000,000	$100,000,000	$65,000,000	$0
Amite River Diversion Canal Modification	$ 6,573,000	$ 3,540,000	$ 10,113,000	$6,573,000	$0
Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of Houma Navigation Canal Lock	$216,562,000	$116,611,000	$333,173,000	$216,562,000	$0
Terrebonne Basin Barrier Shoreline Restoration	$439,401,000	$285,611,000	$725,012,000	$81,148,000	$358,253,000
Land-bridge between Caillou Lake and the Gulf of Mexico	$ 52,006,000	$ 28,003,000	$ 80,009,000	$52,006,000	$0
Gulf Shoreline at Point Au Fer Island	$ 40,242,000	$ 21,669,000	$ 61,911,000	$40,242,000	$0
Modification of Caernarvon Diversion	$ 27,660,000	$ 14,894,000	$ 42,554,000	$27,660,000	$0
Modification of Davis Pond Diversion	$ 62,904,000	$ 33,872,000	$ 96,776,000	$62,904,000	$0
Small Bayou Lafourche Reintroduction	$137,127,000	$ 73,837,000	$210,964,000	$137,127,000	$0
Medium Diversion at White's Ditch	$272,201,000	$146,570,000	$418,771,000	$ 80,179,000	$192,022,000
Medium Diversion at Myrtle Grove with Dedicated Dredging	$261,308,000	$140,705,000	$402,013,000	$261,308,000	$0
Small Diversion Hope Canal	$ 68,981,000	$ 37,144,000	$106,125,000	$68,981,000	$0
Mississippi River Gulf Outlet Environmental Restoration	$111,170,000	$ 59,861,000	$171,031,000	$111,170,000	$0
TOTAL LCA PROGRAM ESTIMATE	**$2,238,212,000**	**$1,254,204,000**	**$3,492,416,000**	**$1,580,128,000**	**$658,084,000**


Alexandria
MISSISSIPPI
TEXAS
LOUISIANA
Baton Rouge
Lake Charles
ATCHAFALAYA RIVER
MISSISSIPPI RIVER
LAKE PONTCHARTRAIN
LAKE BORGNE
NEW ORLEANS
GULF OF MEXICO
STUDY AREA
LEGEND
APPROXIMATE LIMITS OF STUDY AREA
SCALES
MILES
40 0 40
KILOMETERS
50 0 50
LOUISIANA COASTAL AREA
ECOSYSTEM RESTORATION, LA.
U.S. ARMY ENGINEER DISTRICT, NEW ORLEANS
MISSISSIPPI VALLEY DIVISION

MINNESOTA

MISSOURI

APPROPRIATION TITLE: Construction – Channels and Harbors (Navigation)

PROJECT: Mississippi River between the Ohio and Missouri Rivers (Regulating Works), Missouri and Illinois (Continuing)

LOCATION: The project involves improvement of the Mississippi River from the mouth of the Ohio River to the mouth of the Missouri River at river mile 195 above the mouth of the Ohio River. The project covers the following counties: (Missouri) St. Louis, Jefferson, Ste. Genevieve, Perry, Cape Girardeau, Scott, Mississippi; (Illinois) Madison, St. Clair, Monroe, Randolph, Jackson, Union, Alexander, and Pulaski.

DESCRIPTION: The project consists of a navigation channel 9 feet deep and not less than 300 feet wide with additional width in bends, from the mouth of the Ohio River to the mouth of the Missouri River, a distance of approximately 195 miles. Project improvements are achieved by means of dikes, revetment, construction dredging, and rock removal. All work is programmed.

AUTHORIZATION: River and Harbor Acts of 1910, 1927, and 1930.

REMAINING BENEFIT-REMAINING COST RATIO: 33.6 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 18.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 7.2 to 1 at 2.5 percent (FY 1961).

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Regulating Works Project – Mississippi River between Ohio and Missouri Rivers Level 2 – Benefit Update Report, approved 28 October 2011, at October 2011 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2013)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	$375,000,000			Entire Project	86	TBD
Estimated Non-Federal Cost	0					
Cash Contributions	0					
Other Cost	0					
Total Estimated Project Cost	$375,000,000					
Allocations to 30 September 2011	$255,348,000					
Allocation for FY 2012	1,487,000					
Allocation for FY 2013	9,237,000					
Allocation for FY 2014	49,715,000					
Allocation through FY 2014	315,787,000	1/ 2/ 3/	84			
Estimated Unobligated Carry-in Funds	17,500,000	4/				
President's Budget for FY 2015	50,000		84			
Programmed Balance to Complete After FY 2015	59,163,000					
Unprogrammed Balance to Complete After FY 2015	0					

1/ $25,000 reprogrammed to the project.
2/ $5,814,000 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2013 into FY 2014 for this project are $113,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort are $17,500,000. $9,250,000 will be used in FY 2015 to perform work on the project as follows: Construction Management and Engineering during Construction on FY 2014 contract awards; award of Dogtooth Bend Phase 6 Dike and Revetment Contract; award of Grand Tower Phase 5 Dike and Revetment Contract, and complete the EA/SEIS. The remaining $8,265,000 will be carried over into FY 2016 to continue construction of dike and revetment efforts and complete environmental documentation.

PHYSICAL DATA: Maintaining 195 miles of navigation channel from the mouth of the Ohio River to the mouth of Missouri River 9 feet deep and a minimum of 300 feet wide

JUSTIFICATION: The Mississippi River between the Ohio and Missouri Rivers is a major artery of the inland waterway system. Commerce in this reach has increased from 4,500,000 tons in 1945 to 102,968,000 tons in 2010 worth approximately $15 billion. Commerce is expected to increase to 167,000,000 tons by the year 2020; therefore, it is essential that construction of project works be continued at a rate which will insure 9-foot channel depths for a year-round navigation season. The ten year average (2002-2011) tonnage is 107,938,000. The average annual benefits, all navigation, are $5,018,392,000.

FISCAL YEAR 2014: The FY 2014 funds and the total unobligated dollars are being applied as follows:

Initiate Rock Removal Phase 2 Contract	$18,000,000
Initiate and Complete:	
Dogtooth Bend Phase 5 Dike and Revetment Contract	2,200,000
Eliza Point-Greenfield Bend Phase 3 Dike and Revetment Contract	1,200,000
Mosenthein-Ivory Landing Phase 4 Dike and Revetment Contract	4,400,000
Continue bank line stabilization through tree planting at Thompson Bend Riparian Corridor	100,000
Initiate EA/Supplemental EIS	1,500,000
Planning, Engineering, and Design	3,550,000
Construction Management	1,363,000
Total	32,313,000

The changes in capability for FY 2014 are due to contract savings as well as further engineering analysis which indicated a low risk that further rock removal would be required.

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Initiate and complete:	
Dogtooth Bend Phase 6 Dike and Revetment Contract	$1,000,000
Grand Tower Phase 5 Dike and Revetment Contract	4,000,000
Continue bank line stabilization through tree planting at Thompson Bend Riparian Corridor	100,000
Complete EA/SEIS	1,000,000
Planning, Engineering, and Design	1,500,000
Construction Management	1,700,000
Total	$9,300,000

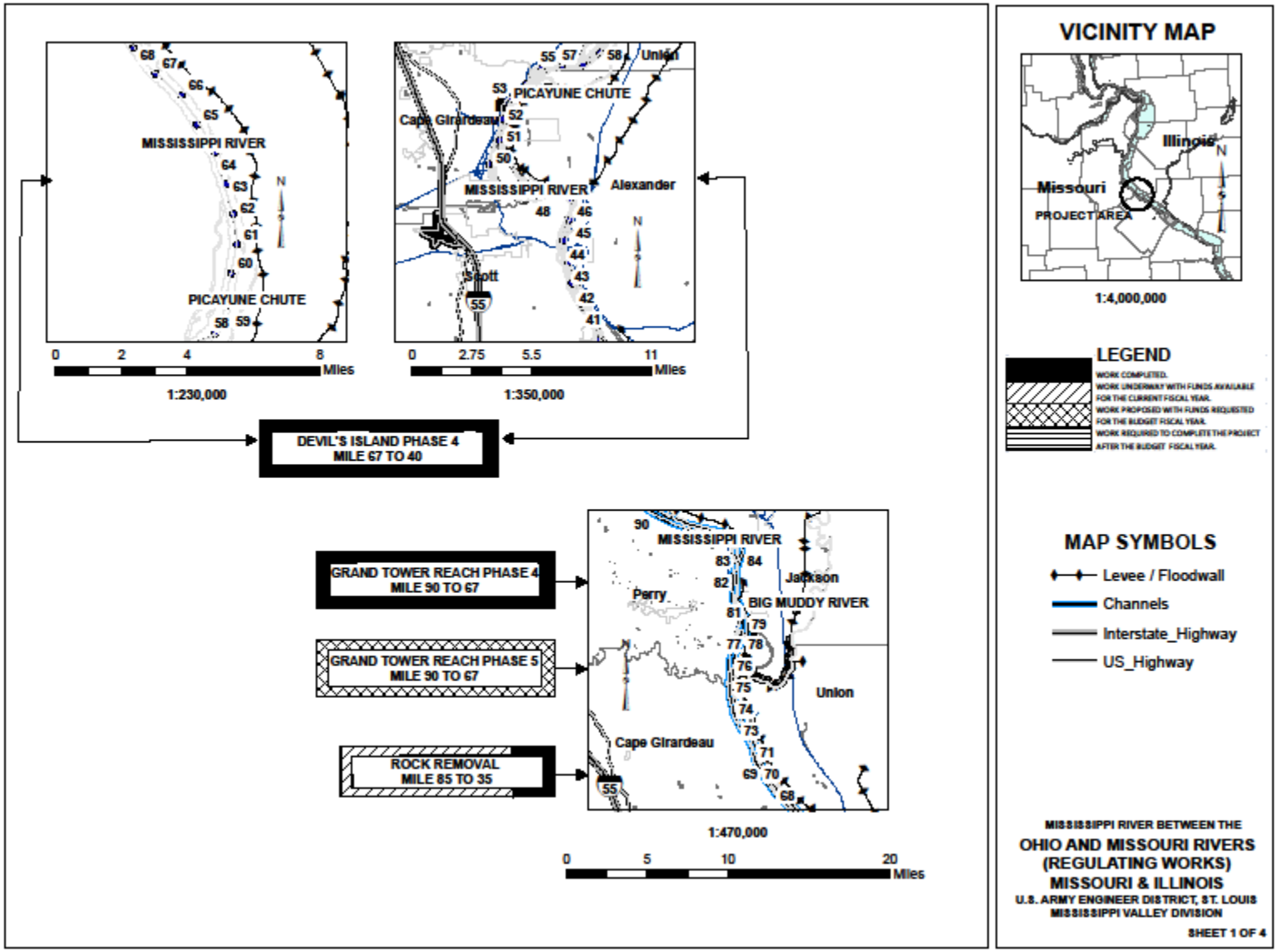
NON-FEDERAL COST: None.

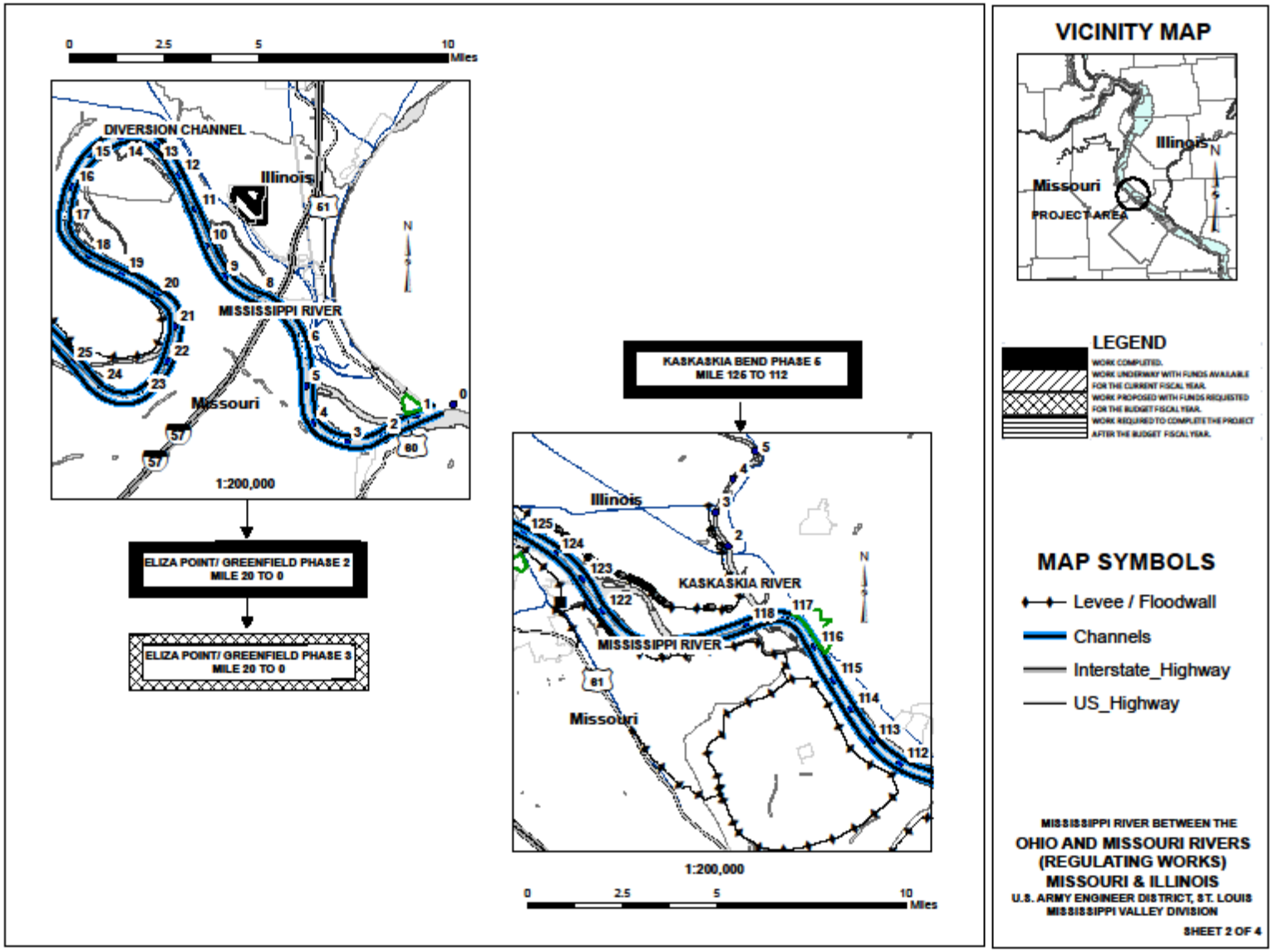
STATUS OF LOCAL COOPERATION: Not applicable.

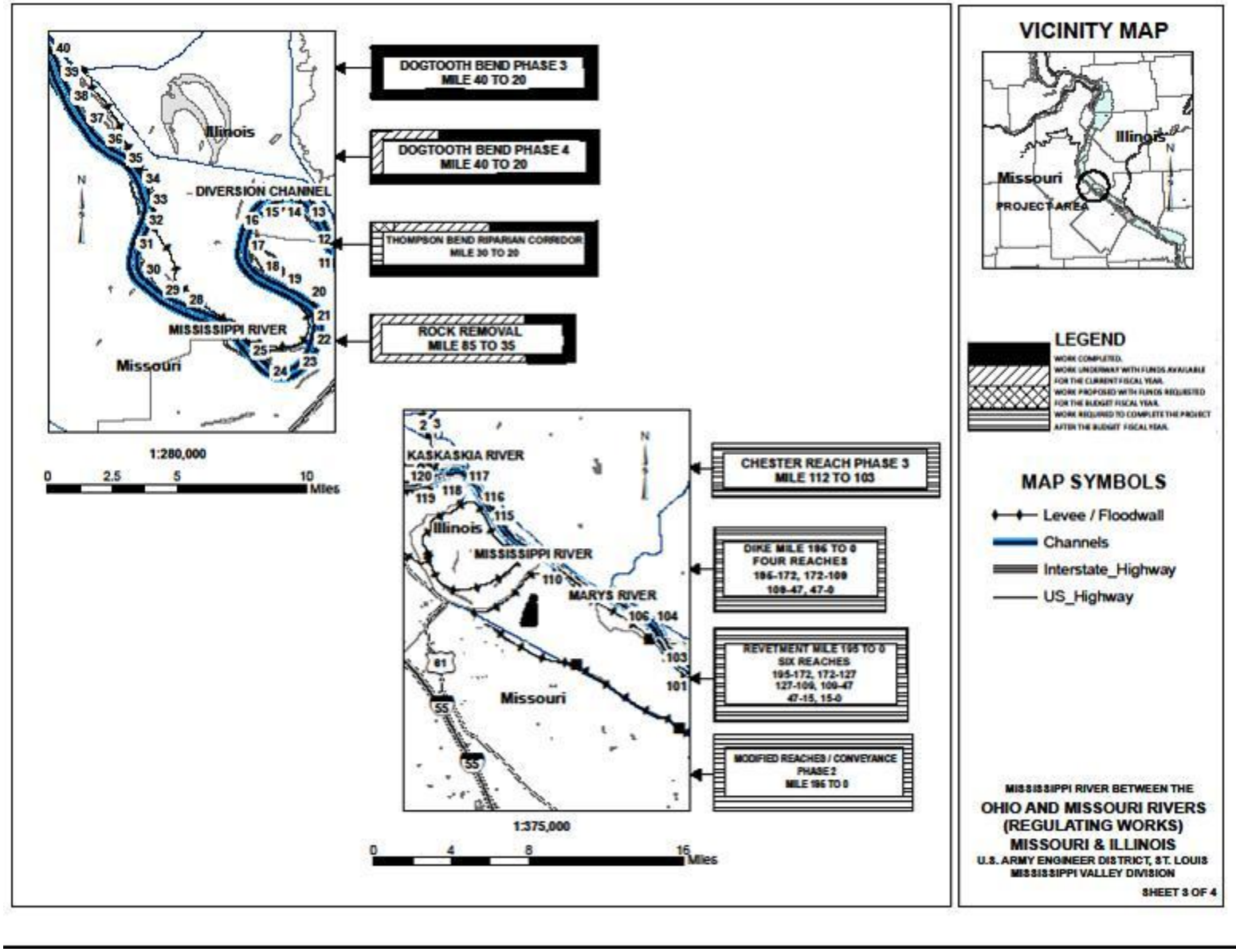
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $375,000,000 is the same as the latest estimate presented to Congress (FY 2014).

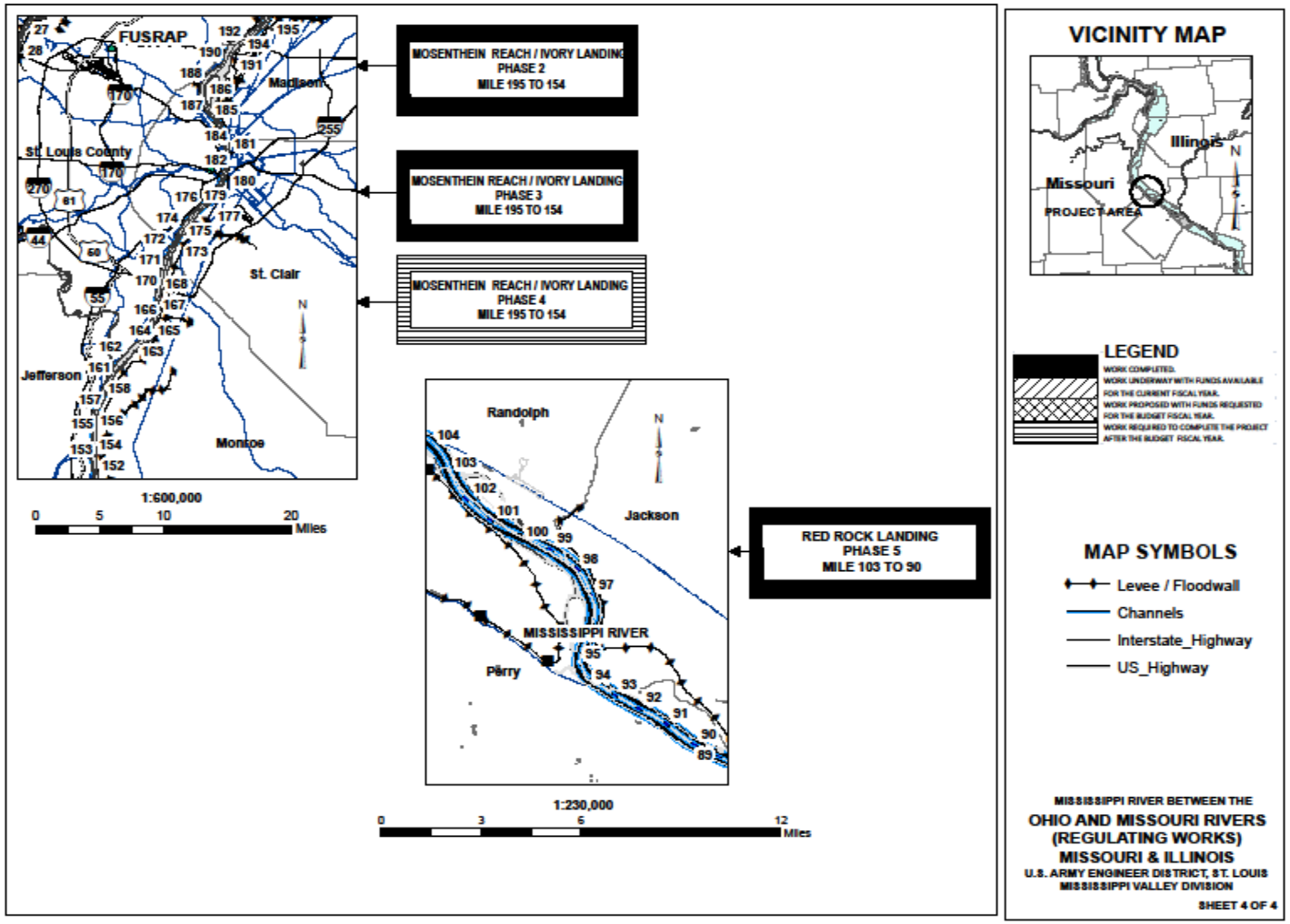
STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The final Environmental Impact Statement (EIS) was filed with the Council on Environmental Quality on 8 April 1976 and published in the Federal Register on 23 April 1976. The need for a Supplemental EIS has been determined and was initiated in FY 2013 and will continue through FY 2015.

OTHER INFORMATION: Planning was initiated prior to 1910, and construction was initiated in 1910.


MISSISSIPPI RIVER
PICAYUNE CHUTE
0 2 4 8 Miles
1:230,000
PICAYUNE CHUTE
Cape Girardeau
MISSISSIPPI RIVER
Alexander
Scott
Union
0 2.75 5.5 11 Miles
1:350,000
DEVIL'S ISLAND PHASE 4
MILE 67 TO 40
GRAND TOWER REACH PHASE 4
MILE 90 TO 67
GRAND TOWER REACH PHASE 5
MILE 90 TO 67
ROCK REMOVAL
MILE 85 TO 35
MISSISSIPPI RIVER
Perry
Jackson
BIG MUDDY RIVER
Union
Cape Girardeau
1:470,000
0 5 10 20 Miles
VICINITY MAP
Illinois
Missouri
PROJECT AREA
1:4,000,000
LEGEND
WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.
MAP SYMBOLS
Levee / Floodwall
Channels
Interstate_Highway
US_Highway
MISSISSIPPI RIVER BETWEEN THE
OHIO AND MISSOURI RIVERS
(REGULATING WORKS)
MISSOURI & ILLINOIS
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION
SHEET 1 OF 4


0 2.5 5 10 Miles
DIVERSION CHANNEL
Illinois
MISSISSIPPI RIVER
Missouri
61
57
80
1:200,000
ELIZA POINT/ GREENFIELD PHASE 2
MILE 20 TO 0
ELIZA POINT/ GREENFIELD PHASE 3
MILE 20 TO 0
KASKASKIA BEND PHASE 6
MILE 126 TO 112
Illinois
KASKASKIA RIVER
MISSISSIPPI RIVER
Missouri
81
1:200,000
0 2.5 5 10 Miles
VICINITY MAP
Illinois
Missouri
PROJECT AREA
LEGEND
WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.
MAP SYMBOLS
Levee / Floodwall
Channels
Interstate_Highway
US_Highway
MISSISSIPPI RIVER BETWEEN THE
OHIO AND MISSOURI RIVERS
(REGULATING WORKS)
MISSOURI & ILLINOIS
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION
SHEET 2 OF 4


DOGTOOTH BEND PHASE 3
MILE 40 TO 20
DOGTOOTH BEND PHASE 4
MILE 40 TO 20
THOMPSON BEND RIPARIAN CORRIDOR
MILE 30 TO 20
ROCK REMOVAL
MILE 85 TO 35
DIVERSION CHANNEL
Illinois
Missouri
MISSISSIPPI RIVER
1:280,000
0 2.5 5 10 Miles
CHESTER REACH PHASE 3
MILE 112 TO 103
DIKE MILE 196 TO 0
FOUR REACHES
196-172, 172-109
109-47, 47-0
REVETMENT MILE 196 TO 0
SIX REACHES
195-172, 172-127
127-109, 109-47
47-15, 15-0
MODIFIED REACHES / CONVEYANCE
PHASE 2
MILE 196 TO 0
KASKASKIA RIVER
MARYS RIVER
1:375,000
0 4 8 16 Miles
VICINITY MAP
PROJECT AREA
LEGEND
MAP SYMBOLS
Levee / Floodwall
Channels
Interstate_Highway
US_Highway
MISSISSIPPI RIVER BETWEEN THE
OHIO AND MISSOURI RIVERS
(REGULATING WORKS)
MISSOURI & ILLINOIS
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION
SHEET 3 OF 4


FUSRAP
St. Louis County
St. Clair
Jefferson
Monroe
Madison
MOSENTHEIN REACH / IVORY LANDING
PHASE 2
MILE 195 TO 154
MOSENTHEIN REACH / IVORY LANDING
PHASE 3
MILE 195 TO 154
MOSENTHEIN REACH / IVORY LANDING
PHASE 4
MILE 195 TO 154
1:600,000
0 5 10 20 Miles
Randolph
Jackson
Perry
MISSISSIPPI RIVER
RED ROCK LANDING
PHASE 5
MILE 103 TO 90
1:230,000
0 3 6 12 Miles
VICINITY MAP
Illinois
Missouri
PROJECT AREA
LEGEND
WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.
MAP SYMBOLS
Levee / Floodwall
Channels
Interstate_Highway
US_Highway
MISSISSIPPI RIVER BETWEEN THE
OHIO AND MISSOURI RIVERS
(REGULATING WORKS)
MISSOURI & ILLINOIS
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION
SHEET 4 OF 4

APPROPRIATION TITLE: Construction – Local Protection (Flood Risk Management)

PROJECT: Monarch-Chesterfield, Missouri (Continuing)

LOCATION: The project is located in westernmost St. Louis County, Missouri within the boundaries of the City of Chesterfield. The levee system is located along the right bank of the Missouri River between river miles 46.0 and 38.5.

DESCRIPTION: The existing private levee system is 11.5 miles long and protects approximately 4,700 acres from the 1 percent annual chance of exceedance (100-year event). During the Great Flood of 1993, the existing levee failed causing flood damages in excess of $200,000,000. The project consists of raising the existing levees on the Missouri River and Bonhomme Creek to provide protection from a .2 percent annual chance of exceedance (500-year event) along with relief wells, a sheet pile cutoff, and berms to control underseepage. Other features include roadways, railroad and roadway closure structures, retaining walls, relocations, pumping stations with gravity structures, and environmental mitigation features. All work is programmed.

AUTHORIZATION: The Water Resources Development Act of 2000.

REMAINING BENEFIT-REMAINING COST RATIO: 4.4 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.8 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 5 5/8 percent (FY 2004).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Level 2 Economic Reevaluation on the Chesterfield Flood Control Feasibility Study approved 28 June 2011 at 2011 price level.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	PHYSICAL STATUS (1 Jan 2014)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost		$61,421,000		Entire Project		63	TBD
Estimated Non-Federal Cost		33,071,000					
Cash Contributions	$ 4,725,000						
Other Costs	28,346,000						
Total Estimated Project Cost		$94,492,000					
Allocations to 30 September 2011		28,183,000					
Allocation for FY 2012		1,936,000					
Allocation for FY 2013		4,182,000					
Allocation for FY 2014		2,000,000					
Allocation through FY 2014		36,301,000	1/ 2/ 3/ 5/	59			
Estimated Unobligated Carry-in Funds		0	4/				
President's Budget for FY 2015		915,000		61			
Programmed Balance to Complete after FY 2015		24,205,000					
Un-Programmed Balance to Complete after FY 2015		0					

1/ Net $525,000 reprogrammed to (from) the project ($504,000 of ARRA).
2/ $25,500 funds rescinded from the project.
3/ $530,000 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2013 into FY 2014 for this project is $541,000. As of the date this justification sheet was prepared, total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort are $0.

5/Planning, Engineering, and Design costs of $1,153,000 are included in this amount.

PHYSICAL DATA: Major project facilities consist of the following: a system-wide levee raise (11.5 miles) to the 500-year event along with seepage control structures including berms, relief wells and cutoffs, railroad closure structures, road closure structures, retaining walls, pump stations, gravity drains, and mitigation features.

JUSTIFICATION: During the Great Flood of 1993 the levee system breached with approximately 8 feet of water covering the valley causing 250 businesses, comprising over 3,000,000 square feet of commercial development to close, 50 residences were evacuated, Interstate 64/U.S. Route 40 was closed for three weeks as were other transportation routes into the area, the Spirit of St. Louis Airport was closed for nearly three months, and the St. Louis County Correctional Institution was forced to evacuate inmates to temporary quarters for up to six months. Estimated flood damages totaled in excess of $200,000,000. The present value of properties that will be protected by the project is $1,800,000,000. Major flood events along the lower Missouri River occurred in 1951, 1973, 1986, 1993 and 1995, with 1993 being the largest flood in the last 50 years. The design frequency against which flood risk reduction is to be provided is 500 year. The life safety hazard

index is 15 feet, warning time 12 hours for Missouri River and 1 hour for local streams, and population affected is 61,000. With an average annual cost of $7,251,000, the average annual net benefit for this project is $20,000,000. The average annual damages without the project are estimated at $27,300,000 and $49,000 with the project. The average annual benefits, all flood control, are $27,251,000.

FISCAL YEAR 2014: The FY 2014 funds and the total unobligated carry-in are being applied as follows:

Continue construction:	
Levee Raise	$150,000
Relief Wells	900,000
Pump Station	150,000
Planning, Engineering, and Design	431,000
Construction Management	910,000
Total	$2,541,000

FISCAL YEAR 2015: The budget amount will be applied as follows:

Initiate Gravity Drains at Watershed 4	$ 350,000
Planning, Engineering, and Design	465,000
Construction Management	100,000
Total	$915,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts contained in the Water Resources Development Act of 1986, as amended, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way.	$13,933,000	$0
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	3,900,000	0

Pay 35 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent as determined under Section 103(m) of the Water Resources Development Act of 1986, as amended, to reflect the non-Federal sponsor's ability to pay as reduced for credit allowed based on prior work (Section 104 of the Water Resources Development Act of 1986) as amended; and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	15,238,000	836,000
Total Non-Federal Costs	$33,071,000	$836,000

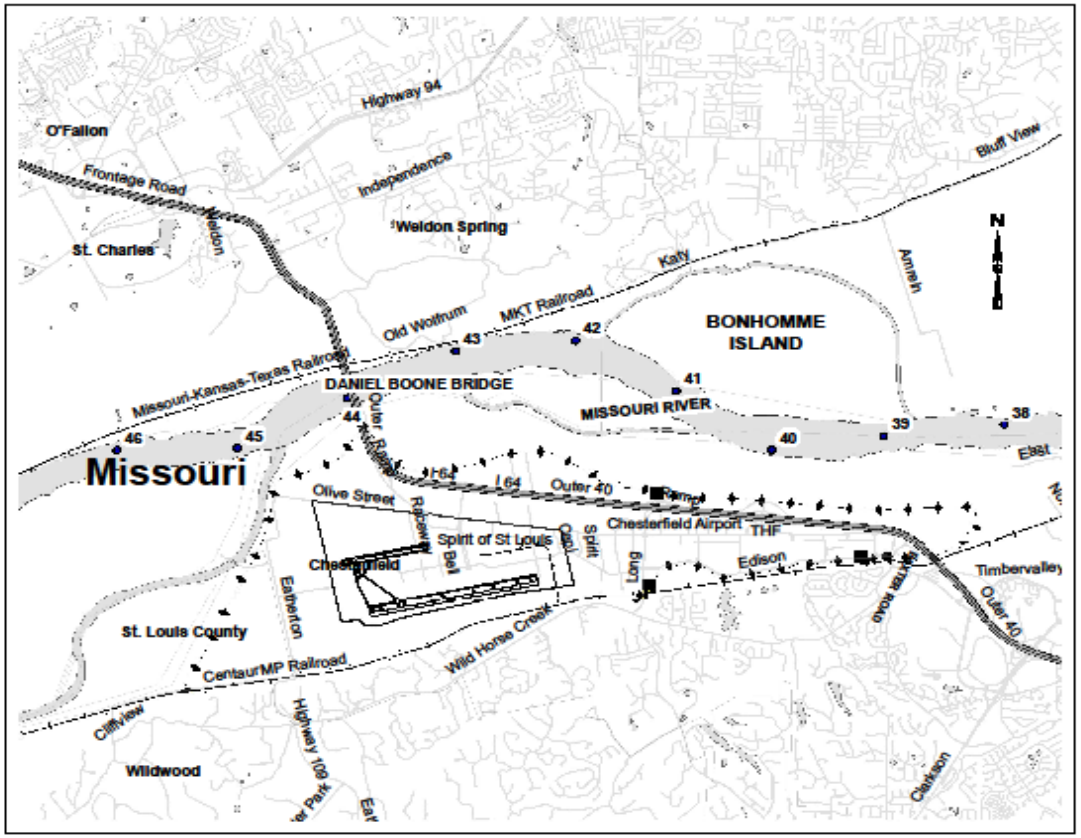
The non-Federal sponsor has also agreed to make all required payments concurrently with project construction and, for general navigation, reimburse its share of construction costs within a period of 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: The local sponsor for this project is the Monarch-Chesterfield Levee District. The Project Cooperation Agreement was executed 1 February 2008. The local sponsor has received approval from the Assistant Secretary of the Army (Civil Works) for three credit applications of work. These applications included: 1) construction of three pump stations within the protected area, 2) levee improvement from Centaur Road to Interstate 64/U.S. 40, and 3) realignment of the levee near Boone's Crossing Interchange and levee improvement along the left bank of Bonhomme Creek. The Levee District has not been reimbursed for the credits.

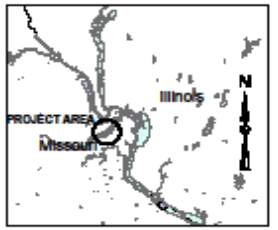
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $61,421,000 is the same as the latest estimate presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The final Environmental Impact Statement was filed with Environmental Protection Agency (EPA) in October 2000 and published in the Federal Register on 9 November 2000.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 2001. Funds to initiate construction were appropriated in FY 2004. The FY 2014 Justification Sheet reflected 13.6 to 1 at 7 percent as the Remaining Benefit-Remaining Cost Ratio (RBRCR) the correct RBRCR is 4.4 to 1 at 7 percent. Fish and wildlife mitigation costs are estimated at $470,000; mitigation is accomplished concurrent with construction.



VICINITY MAP



1:6,000,000

LEGEND

WORK COMPLETED.
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR.
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR.
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR.

MAP SYMBOLS

- Levee / Floodwall
- Channels
- Interstate_Highway
- US_Highway
- Railroad
- Pump Station
- Relief Well

MONARCH-CHESTERFIELD, MISSOURI
U.S. ARMY ENGINEER DISTRICT, ST. LOUIS
MISSISSIPPI VALLEY DIVISION

WISCONSIN

North Atlantic Division

Construction

Maryland

APPROPRIATION TITLE: Construction – Aquatic Ecosystem Restoration

PROJECT: Assateague Island, Maryland (Continuing)

LOCATION: The Town of Ocean City and adjacent areas of Worcester County comprise an area of 625 square miles including Assateague Island, Ocean City Inlet, and Chincoteague, Sinepuxent, Assawoman, and Isle of Wight Bays on the eastern shore of Maryland. Adjacent to Ocean City is the Assateague Island National Seashore and Assateague Island State Park.

DESCRIPTION: The project involves the short-term (initial) and long-term (renourishment) restoration of Assateague Island. The completed short-term restoration plan included dredging approximately 1.4 million cubic meters from Great Gull Bank and placing it on Assateague Island in the area between 2.5 kilometers and 12.0 kilometers south of the south jetty. The beach was widened varying distances based on the varying erosion rates. A low-storm berm was constructed to an approximate elevation of 3.3 meters National Geodetic Vertical Datum (NGVD) (averaging 0.8 meters in height) between approximately 5.1 kilometers and 7.9 kilometers south of the south jetty. The final placement and berm elevation was configured to minimize adverse impacts to the two federally-listed threatened species (piping plover and seabeach amaranth), that occur on the island, and to restore the integrity of the island. The continuing long-term phase of the project allows for the renourishment of the northern Assateague Island through“ mobile bypassing” of sand that would naturally have reached the island had the jetties never been built. Mobile bypassing will involve using a small mobile hopper dredge to remove sand that has been redirected to a number of sites, and then bypassing it to Assateague Island. This dredging takes place during the spring and fall of each year, using a small split-hull dredge built, owned, and operated by the USACE Wilmington District. This schedule will provide sediment to the island on a periodic basis that will more closely mimic natural processes. The renourishment mitigation is evenly cost-shared with the National Park Service.

AUTHORIZATION: Section 534 of Water Resources Development Act of 1996, PL 104-303.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The initial benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	39,236,000			
Estimated Federal Partner (NPS) Cost	26,184,000	Initial construction	100	Dec 2002
Cash Contributions	26,035,000	Renourishment	23	Req’t through 2028
Other Costs	149,000			
Total Estimated Construction Cost	65,420,000			

Division: North Atlantic District: Baltimore Assateague Island, MD

SUMMARIZED FINANCIAL DATA: (Continued)		ACCUM PCT OF EST FED COST	PHYSICAL DATA	
Allocations to 30 September 2011	18,441,000		Initial Beach Construction -	1,400,000 CY
Allocation for FY 2012	700,000		Annual Renourishment –	189,000 CY
Allocation for FY 2013	1,198,000			
Allocation for FY 2014	1,200,000			
Allocations through FY 2014	21,539,000 1/ 2/ 3 5/	51		
Estimated Unobligated Carry-in Funds	0 4/			
President's Budget for FY 2015	900,000	54		
Programmed Balance to Complete after FY 2015	16,797,000 6/			
Un-programmed balance to Complete after FY 2015	0			

1/ $0 reprogrammed from the project.
2/ $2,488 rescinded from the project.
3 /$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.
4/ Unobligated "Carry-in" Funding. The actual unobligated balance from FY 2013 into FY 2014 (3011A report) for this project is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried-into FY 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
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.

JUSTIFICATION: This project mitigates for damages caused by the Federal navigation channel at Ocean City Inlet. Construction of the jetties by the Corps of Engineers in 1934 to stabilize the Ocean City Inlet interrupted the natural longshore transport of sand from Ocean City to Assateague, starving the northern end of Assateague Island of sand. The northern 1.5-7 miles of Assateague has eroded at an accelerated rate since then. It is estimated that the induced erosion rate for this section of the island was 10.8 feet per year. The island is at severe risk of breaching, which would result in adverse physical, biological, and economic impacts in the area and threaten the habitat of several endangered species such as the piping plover. Barrier island geologic integrity must be maintained to conserve this important component of the Western Hemisphere Shorebird Reserve Network and considered among the most important areas for migratory shorebirds. Prior to the restoration, 70% of seabeach amaranth habitat and 80% of Piping Plover habitat have been lost as compared to 1960's. The long term phase of the project is mitigating for the portion of the sand losses that are attributable to the inlet, not those due to natural erosion. The Ocean City Harbor and Inlet and Sinepuxent Bay MD project w/372 acres of barrier island habitat are protected by this mitigation. The project consists of initial construction of a beach berm of varying width at elevation 3.3 m National Geodetic Vertical Datum. Initial construction was completed in 2002 with the placement of 1.4M cubic yards (cy) of beach quality sand from an offshore borrow area. The authorized project also includes periodic nourishment. In accordance with the Chief's Report, the authorized project requires an estimated 189,000 cy of sand to be placed on the beach on a bi-annual basis to maintain the level of protection. This is the estimated average amount of sand that would have been bypassed across Ocean City Inlet by natural forces in the absence of the Federal navigation project. Periodic nourishment is authorized for a period of 50 years from the commencement of initial construction, and is scheduled to complete in 2028. The project has had to date 9 cycles of periodic nourishment: 2004 (180,000 cy), 2005 (113,000 cy), 2006 (160,000 cy), 2007 (188,000 cy), 2008 (115,000 cy), 2009 (153,000 cy), 2010 (141,000 cy), 2011 (129,000 cy), 2012 (157,000 cy), and 2013 (180,000 cy) placing a total of 1,515,000 cy to date. The project has been very successful at maintaining beach profiles required to sustain the required environmental habitat. Without continued periodic nourishment the natural habitat would be subject to severe damage if erosion of the shore protection project was allowed to continue and the minimum design template was compromised.

FISCAL YEAR 2014: The total unobligated dollars are being applied as follows:

Continue dredging/restoration	$1,200,000 7/

7/ Includes unobligated carry-in from FY2013.

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Continue dredging/restoration	$ 900,000

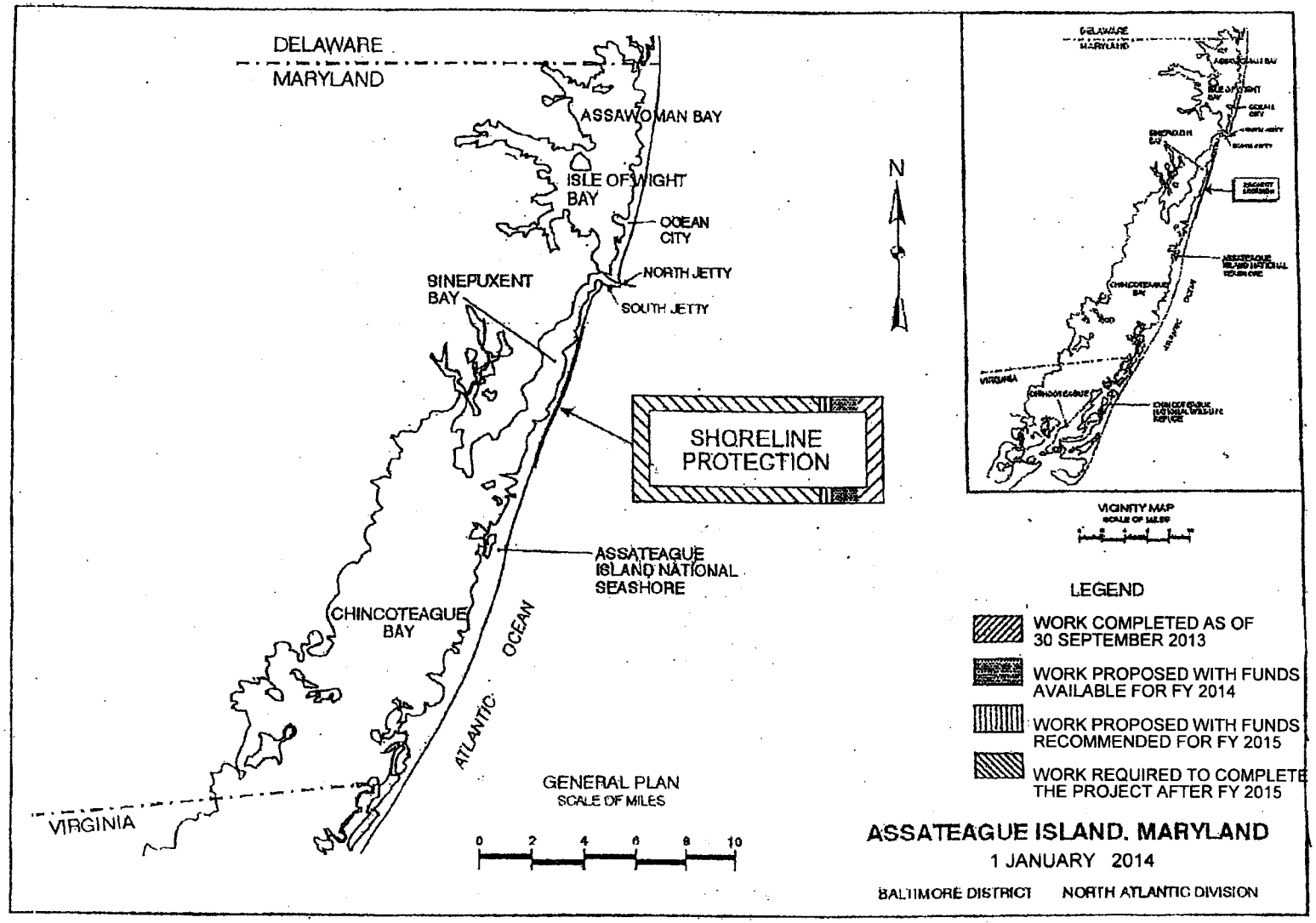
NON-FEDERAL COSTS: None.

STATUS OF LOCAL COOPERATION: The sponsor for the project is the National Park Service who administers the Assateague Island National Seashore. The National Park Service has provided lands, easements and rights-of-way for the initial construction work and has agreed to cost share 50% of the long-term work. An agreement between the Park Service and the Corps was executed in September 2001.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $39,236,000 is the same as the last estimate ($39,236,000) presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A draft Environmental Impact Statement was incorporated in the draft Integrated Interim Report dated May 1997. The final Environmental Impact Statement was incorporated in the final feasibility report completed in June 1998.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1997. Funds to initiate construction were appropriated in FY 2001.


DELAWARE
MARYLAND
ASSAWOMAN BAY
ISLE OF WIGHT BAY
OCEAN CITY
NORTH JETTY
SINEPUXENT BAY
SOUTH JETTY
N
SHORELINE PROTECTION
ASSATEAGUE ISLAND NATIONAL SEASHORE
CHINCOTEAGUE BAY
ATLANTIC OCEAN
VIRGINIA
GENERAL PLAN
SCALE OF MILES
0 2 4 6 8 10
VICINITY MAP
LEGEND
WORK COMPLETED AS OF 30 SEPTEMBER 2013
WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2014
WORK PROPOSED WITH FUNDS RECOMMENDED FOR FY 2015
WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2015
ASSATEAGUE ISLAND, MARYLAND
1 JANUARY 2014
BALTIMORE DISTRICT NORTH ATLANTIC DIVISION

APPROPRIATION TITLE: Construction, General – Aquatic Ecosystem Restoration

PROJECT: Chesapeake Bay Oyster Recovery, Maryland & Virginia (Continuing)

LOCATION: In the Chesapeake Bay as located in the State of Maryland and the Commonwealth of Virginia

DESCRIPTION: The purpose of the project is to restore the oyster population in Chesapeake Bay in the states of Maryland and Virginia. This project includes construction and rehabilitation of oyster reefs to create disease-free oyster habitat; construction of seed bars for production and collection of disease-free oyster seed or "spat;" planting disease-free spat in locations which best foster oyster reproduction and health; and monitoring the performance of the project to increase oyster populations. To date, 393 acres of oyster habitat have been created in Virginia, and 459 acres of habitat in Maryland. A long-term master plan for future restoration sites, addressing the Executive Order 13508 goal to restore 20 tributaries to 20% to 40% of historic habitat (circa 1906-1911) by 2025 was approved in November 2012. This recommendation builds upon the continuing short term restoration efforts and includes the construction of oyster habitat restoration sites in Tangier and Pocomoke Sounds and the Great Wicomico, Lynnhaven and Piankatank Rivers in Virginia, as well as in several Chesapeake Bay tributaries in Maryland.

AUTHORIZATION: Section 704(b) of Water Resources Development Act (WRDA) of 1986 (PL 99-662), as amended by Section 505 of WRDA 1996 (PL 104-303); Section 342 of WRDA 2000 (PL 106-541); Section 113 of the Energy and Water Development Appropriation Act, 2002; Section 126 of the Energy and Water Development Appropriations Act, 2006; and Section 5021 WRDA 2007 (PL 110-114).

REMAINING BENEFIT-REMAINING COST RATIO: The total benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The total benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	50,000,000			
Estimated Non-Federal Cost:	16,666,000	Entire Project	78	TBD
Cash Contributions	0			
Other Costs	16,666,000			
Total Estimated Project Cost	66,666,000			

SUMMARIZED FINANCIAL DATA: (Continued)			ACCUM PCT OF EST FED COST
Allocations to 30 September 2011	$ 29,630,000		
Allocation for FY 2012	4,510,000		
Allocation for FY 2013	4,938,000		
Allocation for FY 2014	5,000,000		
Allocations through FY 2014	44,078,000	1/ 2/ 3/ 5/	88
Estimated Unobligated Carry-in Funds	0	4/	
President's Budget for FY 2015	5,000,000		98
Programmed Balance to Complete after FY 2015	922,000	6/	
Un-programmed Balance to Complete after FY 2015	$ 0		

PHYSICAL DATA	
New oyster bars construction	2,000 acres
Existing oyster bars rehabilitation	135 acres
Seed bars creation	100 acres
Hatchery Spat transplanted	10 billion

1/ $1,192,900 reprogrammed from the project.
2/ $10,365 rescinded from project.
3/ $350,000 transferred to the Flood Control and Coastal Emergencies (FCCE) account.
4/ Estimated Unobligated "Carry-in" Funding: The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $5,305,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried-into FY 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
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.

JUSTIFICATION: Restoration of oyster populations in the bay is a high priority of the State of Maryland, the Commonwealth of Virginia, and the Chesapeake Bay Program due to influence of the robustness of those population on both the regional environment and regional economy. In May 2009, Executive Order 13508 provided a renewed interest in Chesapeake Bay restoration on the national level, and oysters are considered a keystone species for such Bay restoration.

FISCAL YEAR 2014: The fiscal year 2014 appropriation, plus the total unobligated carry-in dollars are being applied as follows:

Fish and Wildlife Facilities:	Maryland	6,644,000
	Virginia	1,452,000
Planning, Engineering, and Design:	Maryland	782,000
	Virginia	683,000
Construction Management:	Maryland	611,000
	Virginia	133,000
Total		10,305,000 7/

7/ Includes unobligated carry-in from FY 2013.

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Fish and Wildlife Facilities:	Maryland	2,175,000
	Virginia	1,479,000
Planning, Engineering, and Design:	Maryland	550,000
	Virginia	460,000
Construction Management:	Maryland	200,000
	Virginia	136,000
Total		5,000,000 8/

8/ Approximately 80 acres of habitat to be created

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

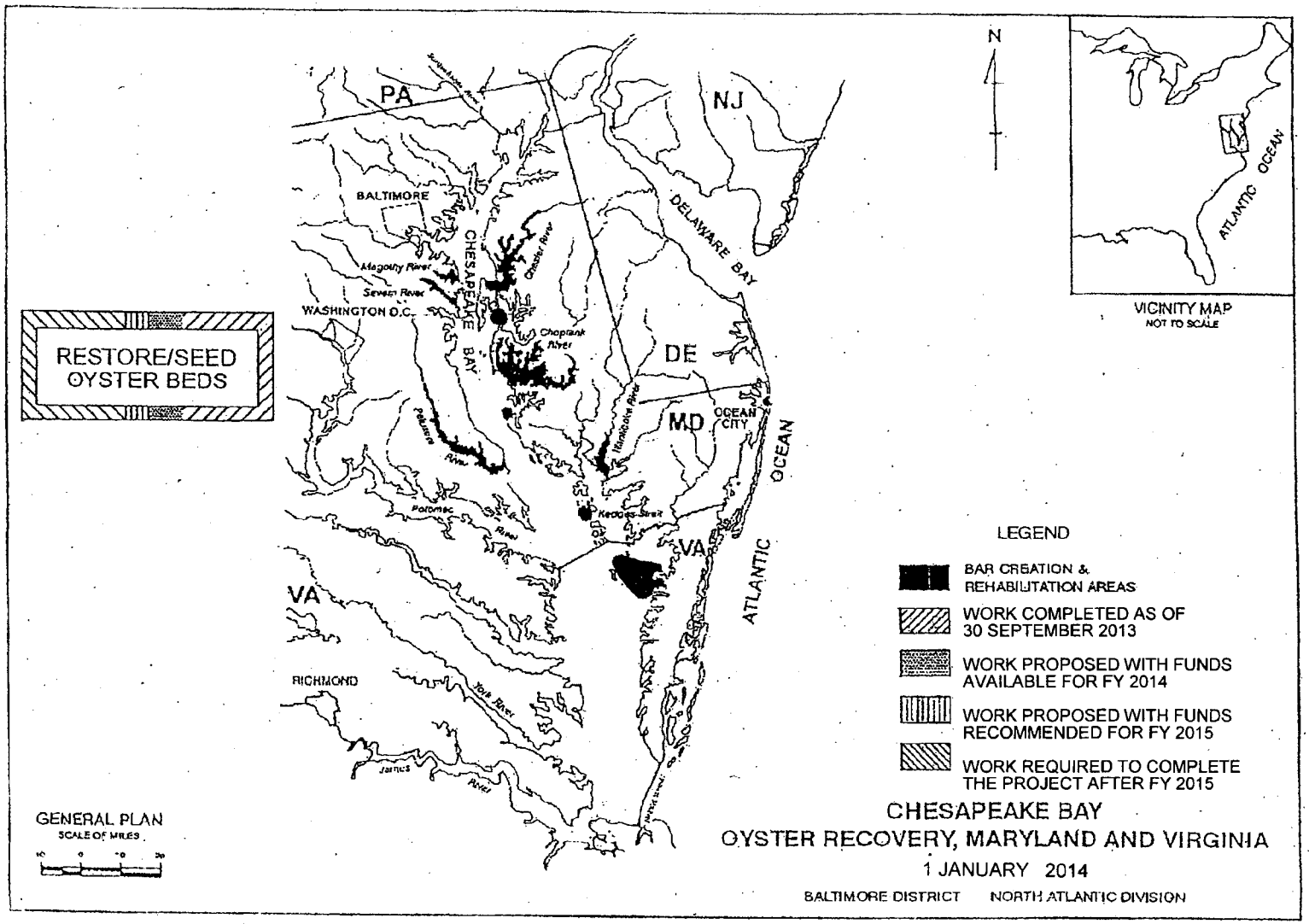
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Pay 25 percent of the cost allocated to fish and wildlife restoration (by work-in-kind credits) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of fish and wildlife facilities.	$16,666,000	$0
Total Non-Federal Costs	$16,666,000	

STATUS OF LOCAL COOPERATION: The State of Maryland and the Commonwealth of Virginia are the non-Federal project sponsors. The project cooperation agreement between the Corps of Engineers and the State of Maryland was executed in February 1997. An amendment to this agreement was executed in July 2002. The project cooperation agreement between the Corps and the Commonwealth of Virginia was executed in September 2001. To date, the States have fully complied with the requirements of local cooperation.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal estimate of $50,000,000 is the same as the last estimate ($50,000,000) presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An environmental assessment and finding of no significant impact was completed in January 1996 for the Maryland activities. Supplemental environmental efforts for the Maryland activities were completed in July 1999, June 2002, and June 2009. Separate environmental assessments and findings of no significant impacts were prepared in 2001, 2003 and 2005 for Virginia activities in the Tangier Sound, Great Wicomico River and the Lynnhaven River.

OTHER INFORMATION: The current authorized Federal program cost limit is expected to be exhausted in early FY 2016 with work suspended pending Congressional re-authorization. Section 5021 of WRDA 2007 increased the authorized limit for this project to $50,000,000. Funds to initiate construction were appropriated in FY 1995.


RESTORE/SEED
OYSTER BEDS
PA
NJ
DE
MD
VA
VA
BALTIMORE
WASHINGTON D.C.
CHESAPEAKE BAY
DELAWARE BAY
OCEAN CITY
ATLANTIC OCEAN
RICHMOND
N
VICINITY MAP
NOT TO SCALE
LEGEND
BAR CREATION & REHABILITATION AREAS
WORK COMPLETED AS OF 30 SEPTEMBER 2013
WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2014
WORK PROPOSED WITH FUNDS RECOMMENDED FOR FY 2015
WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2015
GENERAL PLAN
SCALE OF MILES
CHESAPEAKE BAY
OYSTER RECOVERY, MARYLAND AND VIRGINIA
1 JANUARY 2014
BALTIMORE DISTRICT NORTH ATLANTIC DIVISION

APPROPRIATION TITLE: Construction, General – Aquatic Ecosystem Restoration

PROJECT: Poplar Island, Maryland (Continuing)

LOCATION: Poplar Island is a group of islands located in the upper middle Chesapeake Bay approximately 34 nautical miles southeast of the Port of Baltimore and 1 mile northwest of Tilghman Island, Talbot County, MD.

DESCRIPTION: The environmental restoration project consists of reconstructing Poplar Island to its approximate size in 1847—1,140 acres—using an estimated 40 million cubic yards of uncontaminated dredged material from maintenance dredging of the approach channels of the Baltimore Harbor and Channels navigation project. This restoration will be accomplished through the construction of approximately 35,000 feet of armored dikes, which will contain the dredged material needed to form tidal marsh wetlands and upland habitat and to protect the dredged material placement area from severe wave activity.

Section 3087 of WRDA 2007 authorized a 575-acre expansion of Poplar Island. The expansion would be approximately 29 percent wetlands, 47 percent uplands and 24 percent open water. The expansion would include a 5-foot raising of the existing uplands dikes on Poplar Island and would increase the island's overall dredged material placement capacity by 28 million cubic yards.

AUTHORIZATION: Section 537 of P.L. 104-303 (WRDA 1996), as amended by: Section 318 of P.L. 106-541 (WRDA 2000); and, Section 3087 of P.L. 110-114 (WRDA 2007).

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The initial benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The benefit –cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA			. Entire Project (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		474,250,000	Entire Project	47	TBD
Estimated Non-Federal Cost:		192,750,000			
Cash Contributions	42,500,000				
Other Costs	150,250,000				
Total Estimated Project Cost		667,000,000			

SUMMARIZED FINANCIAL DATA: (Continued)		ACCUM PCT OF EST FED COST	PHYSICAL DATA	
Allocations to 30 September 2011	197,311,000		Earth and rock dikes	35,000 feet
Allocation for FY 2012	14,690,000		Wetlands created	736 acres
Allocation for FY 2013	11,976,000		Uplands created	851 acres
Allocation for FY 2014	18,400,000			
Allocations through FY 2014	242,377,000	1/ 2/ 3/ 5/ 51		
Estimated Unobligated Carry-in Funds	0	4/		
President's Budget for FY 2015	15,100,000	54		
Programmed Balance to Complete after FY 2015	216,773,000	6/		
Un-programmed balance to Complete after FY 2015	0			

1/ $1,615,000 reprogrammed to the project.
2/ $5,244 rescinded from the project.
3 /$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.
4/ Estimated Unobligated "Carry-in" Funding. The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $2,495,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried-into FY 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
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.

JUSTIFICATION: Chesapeake Bay remote island habitat and wetlands are being lost at a very high rate due to subsidence, sea level rise, and erosion, which adversely impacts Bay health. The Poplar Island project is an example of a continuing Chesapeake Bay restoration and protection effort designed and built to improve the health of the Bay. Islands are preferentially selected by many fish and wildlife species as nesting/production areas, and the lack of human disturbance and limited predators make islands more ecologically productive. Poplar Island was eroding at more than 13 feet per year before this restoration began and would have disappeared without this effort. The plan to restore the island using uncontaminated dredged material from maintenance dredging of the Baltimore Harbor and Channels navigation project was developed through the cooperative efforts of many state and Federal agencies, as well as private organizations. Total inflow of dredged material through 2013 is 24.3 million cubic yards (MCY) with 2.0 MCY expected in 2014 and another 2.0 MCY being placed with the FY 2015 funds. The project has created 177 acres of tidal wetlands to date and another 115 acres will be established with the FY 2015 funds.

FISCAL YEAR 2014: The fiscal year 2014 appropriations, plus the total unobligated carry-in dollars are being applied as follows:

Construction management, monitoring, and stakeholder coordination.	$ 2,600,000
Inflow of dredged material for wetlands and island cell development.	14,595,000
Electrical Repairs, Opening Cell 4d, and Spillway 15 repair	1,200,000
Award and complete wetland planting of cells 3A & 3C	1,500,000
Continue Expansion Design	1,000,000
Total	$ 20,895,000 7/

7/ Includes unobligated carry-in from FY 2013

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Construction management, monitoring, and stakeholder coordination.	$ 2,500,000
Inflow of dredged material for wetlands and island cell development	11,300,000
Continue design of expansion component	1,300,000
Total	$ 15,100,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

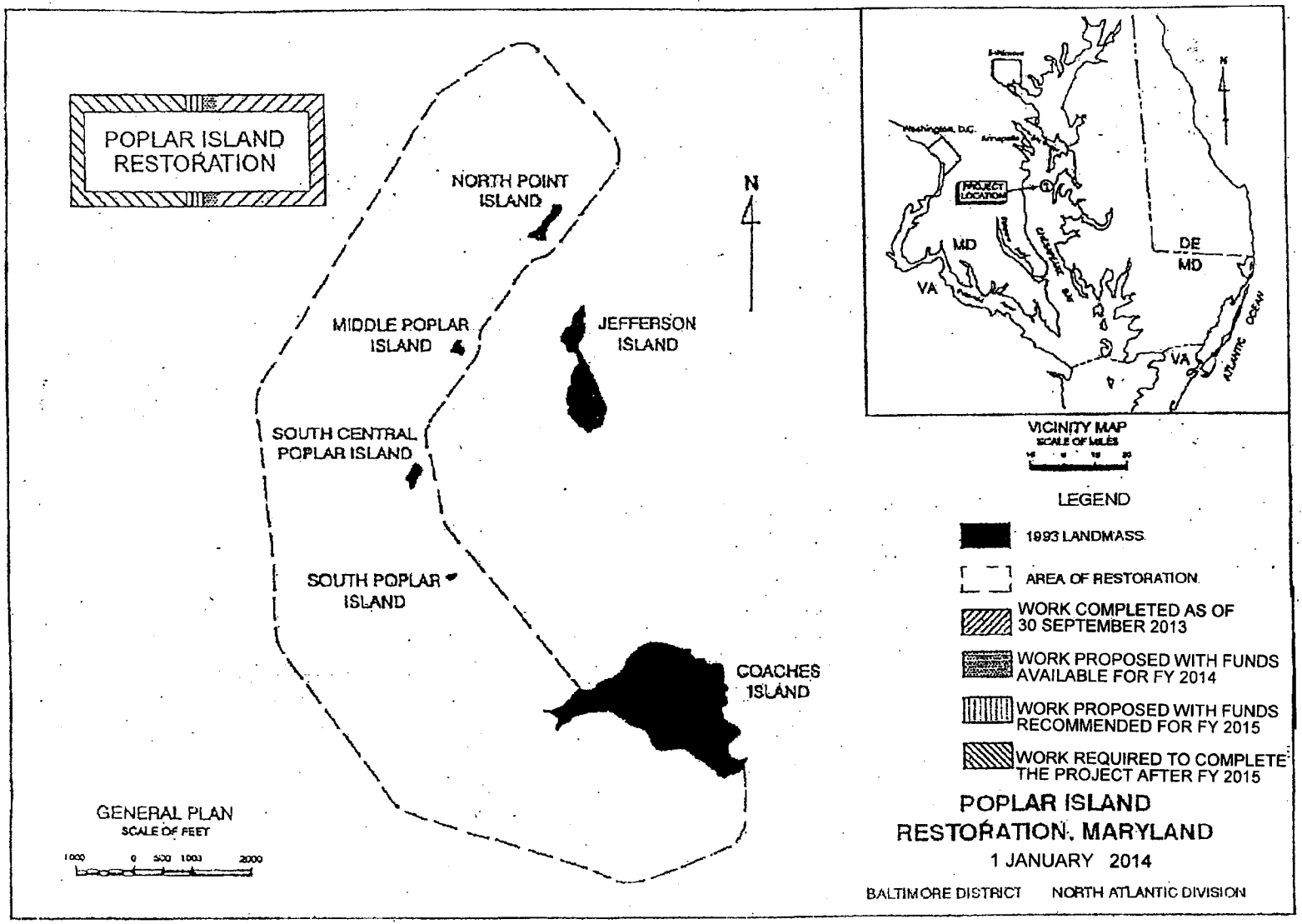
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Provide lands, easements, and rights-of-way	$ 37,000	
Pay 25 percent of the original and 35 percent of the expansion cost allocated to fish & wildlife restoration (including $150,213,000 in credits for in-kind services and materials) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of fish and wildlife facilities.	192,713,000	440,000
Total Non-Federal Costs	$192,750,000	440,000

STATUS OF LOCAL COOPERATION: The State of Maryland is the non-Federal sponsor. By letter dated 16 May 1996, the State of Maryland stated its intent to be the non-Federal sponsor and participate in project cost sharing in accordance with the Water Resources Development Act of 1986. The Project Cooperation Agreement was executed in April 1997, amended 9 April 2002 to reflect in-kind services authorized by the Water Resources Development Act of 2000, and being amended December 2009 to reflect expansion authorized by WRDA 2007. To date, the State has fully complied with the local requirements on the project.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The EIS was distributed for review and was finalized in February 1996 under the authority of Section 204 of the Water Resources Development Act of 1992.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $474,250,000 is the same as the last estimate ($474,250,000) presented to Congress (FY 2014).

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1994. Planning for this project was accomplished under the authority of Section 204 of the Water Resources Development Act (WRDA) of 1992. Section 3087 of WRDA 2007 authorized expansion construction in accordance with the cost sharing provisions of section 204 WRDA 1992 (75-25). Section 2037 of WRDA 2007 amended Section 204 to provide that the additional work would be cost shared in accordance with Section 103(d)(7) of WRDA 1986 which provides for 65-35 cost sharing as opposed to the 75-25 cost sharing previously authorized. A Limited Reevaluation Report presenting the new increased cost estimate, was completed using project funds in the amount of $110,000 and submitted for reauthorization to the Speaker of the House and the President of the Senate on February 26, 2014. As part of the continuing wetlands development design process it was determined to be more effective and efficient to increase the size of cells 3a and 3c thereby eliminating the need and additional costs for cell 3b while maintaining the tidal wetlands development and delivery schedule. The expansion work is in the design phase and has not begun construction. Through FY 2014, $1,345,000 has been obligated for design of the Poplar Island Expansion. Construction work on Poplar Island Expansion cannot begin without additional authorization.


POPLAR ISLAND RESTORATION
NORTH POINT ISLAND
MIDDLE POPLAR ISLAND
JEFFERSON ISLAND
SOUTH CENTRAL POPLAR ISLAND
SOUTH POPLAR ISLAND
COACHES ISLAND
N
GENERAL PLAN
SCALE OF FEET
1000 0 500 1000 2000
PROJECT LOCATION
MD
VA
DE
MD
VA
ATLANTIC OCEAN
VICINITY MAP
LEGEND
1993 LANDMASS
AREA OF RESTORATION
WORK COMPLETED AS OF 30 SEPTEMBER 2013
WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2014
WORK PROPOSED WITH FUNDS RECOMMENDED FOR FY 2015
WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2015
POPLAR ISLAND
RESTORATION, MARYLAND
1 JANUARY 2014
BALTIMORE DISTRICT NORTH ATLANTIC DIVISION

Massachusetts

APPROPRIATION TITLE: Construction, General - Flood and Coastal Storm Damage Risk Reduction

PROJECT: Muddy River, Boston and Brookline, Massachusetts (Completion)

LOCATION: The Muddy River is a 3.5 mile urban waterway located in eastern Massachusetts in the communities of Boston, Brookline and Newton. The Muddy River originates at Jamaica Pond and flows through the heart of Frederick Law Olmsted's famed "Emerald Necklace", one of the most carefully crafted park systems in America. The park is located next to several residential neighborhoods and some of the area's most prominent businesses and institutions such as the Museum of Fine Arts, Longwood Medical Center, Northeastern University and Wentworth, Simmons and Emmanuel Colleges.

DESCRIPTION: The project involves dredging approximately 65,000 cubic yards of sediment to deepen the Muddy River, removal or replacement of undersized culverts and streambank protection which will provide flood damage reduction against the recurrence of a 20-year event. The project will be constructed in two phases. Phase I involves replacement of two undersized culverts, day-lighting two sections of the river and modification of a bridge and culvert headwall for flood risk management. Phase II involves dredging of the river for both flood risk management purposes.

AUTHORIZATION: Section 552 of the Water Resources Development Act of 2000, Public Law 106-541 dated 11 December 2000.

REMAINING BENEFIT-REMAINING COST RATIO: 3.3 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.8 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 3.2 to 1 at 5 7/8 percent (FY 2003).

BASIS OF BENEFIT-COST RATIO: Benefits are based on an approved Economic Update Report of the Muddy River Flood Risk Management Project, Boston, Massachusetts, dated May 2011. Benefits are expressed at January 2011 price levels.

SUMMARIZED FINANCIAL DATA			ACCUMULATED PCT. OF EST. FED COST	STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$ 38,340,000		Entire Flood Risk Management	40	TBD
Programmed Construction	38,340,000			Management Project	0	Unprogrammed
Un-programmed Construction	0			Estimated Non-Federal Cost		20,645,000
Programmed Construction	20,645,000					
Cash Contribution	20,585,000					
Other Costs	60,000					
Un-programmed Construction	0					
Cash Contribution	0					
Other Costs	0					
Total Estimated Project Cost		$ 58,985,000				
Allocations to 30 September 2011		$ 19,670,000				
Allocation for FY 2012		3,920,000				
Allocation for FY 2013		4,952,000				
Allocation for FY 2014		8,000,000				
Allocations through FY 2014		36,542,000	1/ 2/ 3/ 5/	60		
Estimated Unobligated Carry-In Funds		11,500,000	4/			
President's Budget for FY 2015		1,798,000		62		
Programmed Balance to Complete after FY 2015		0	6/			

1/ $1,599,000 regrogrammed from the project.
2/ $4,029,000 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated unobligated "Carry-in" Funding: The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $5,040,000. As of the date this justification sheet was prepared,the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this project is $11,50,000. 5/ PED costs of $3,900,000 are included in this amount.
6/ For programmed work only; remaining Ecosystem Restoration work is un-programmed pending a decision to construct these features.

PHYSICAL DATA: The flood risk management portion of the project involves dredging 65,000 cubic yards of accumulated sediments, daylighting 700 linear feet of river and replacing 530 linear feet of undersized culverts. The ecosystem restoration portion of the project involves dredging 135,000 cubic yards of accumulated sediments and planting 3.5 acres of emergent vegetation.

JUSTIFICATION: During the past century the Muddy River watershed has experienced the effects of gradual urbanization and is now over 70 percent developed. The Muddy River is the only remaining small urban stream in Boston or Brookline that still provides significant aquatic habitat. Its location within one of the nation's premier historic park systems and close proximity to internationally known medical, cultural and educational institutions further adds to its significance. Accumulated sediment from urban runoff has contributed to poor water quality, loss of aquatic habitat, and proliferation of invasive aquatic and emergent wetland vegetation. Removal of nutrient rich sediment and invasive plant species will significantly improve water quality, restore 8 acres of open water habitat, create more diverse emergent and riparian habitat, and restore the aesthetic quality of the Muddy River. Flooding has worsened because there is little natural storage remaining in the watershed and the carrying capacity of the river has been restricted by undersized culverts, accumulated sediment, vegetation and debris. Several residential neighborhoods and some of the area's most prominent businesses and institutions are subject to frequent flood damage. In October 1996 a 20 to 25-year storm, caused widespead flooding along the Muddy River. The Kenmore Square Subway Station, part of the Massachusetts Bay Transportation Authority's Green Line, was flooded with over 30 feet of water causing $51,000,000 in damages and disrupting public transportation services for about 6 months. Average annual damages for the Muddy River are estimated at about $8,000,000. The proposed project would protect against damages from all floods up to an average recurrence frequency of once in 20 years, as well as reducing damages from larger, more infrequent floods. The average annual flood risk management benefits for the Muddy River are estimated at $8,228,900 at a January 2011 price level.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus unobligated carry-in, are being applied as follows:

Planning, Engineering and Design of Phase II	$ 640,000
Construction Management of Phase I	$ 900,000
Total	$ 1,540,000 7/

7/ Includes unobligated carry-in from FY2013.

FISCAL YEAR 2015: The budget amount plus projected carry-in funds will be applied as follows:

Award Construction Contract for Phase II	$ 11,600,000
Construction Management of Phase II	$ 648,000
Complete Planning, Engineering and Design of Phase II	$ 550,000
Complete Construction Management of Phase I	$ 500,000
Total	$ 13,298,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the following requirements:

Requirements of Local Cooperation	Construction and Reimbursements	Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas, and perform all relocations determined by the Federal Government to be necessary for the construction, operation and maintenance of the project.	$ 90,000	
Pay 34.9 percent of the costs allocated to flood risk management and ecosystem restoration to bring the total non-Federal share of these costs to 35 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood risk management and ecosystem restoration facilities.	32,915,000	$ 230,000
Pay all additional costs for the locally preferred plan to dredge Wards Pond instead of the Federally implementable plan of aeration.	3,300,000	
Total Non-Federal Costs	$ 36,305,000	$ 230,000

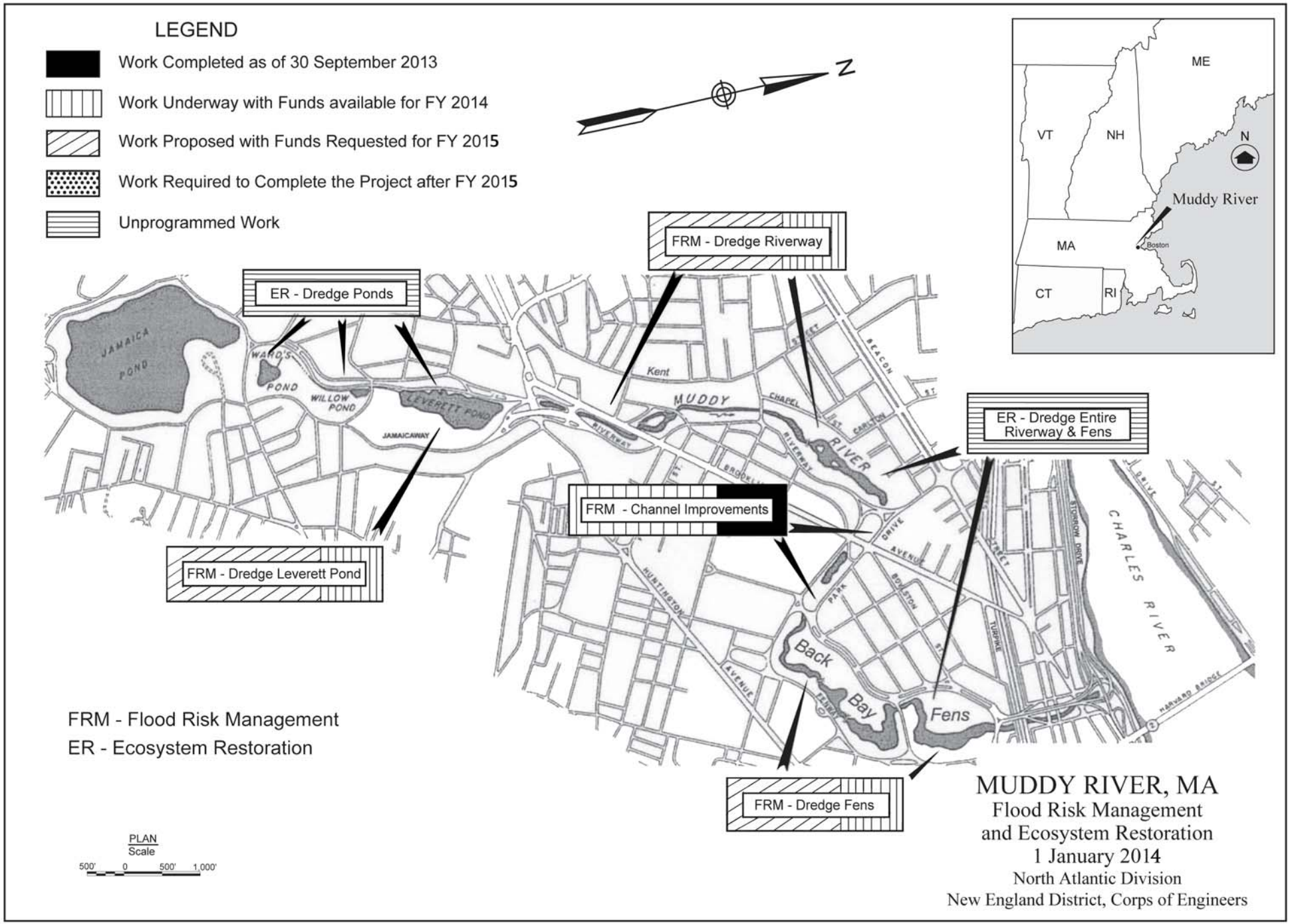
STATUS OF LOCAL COOPERATION: The City of Boston, Town of Brookline, Massachusetts Executive Office of Environmental Affairs (EOEA) and Massachusetts Department of Conservation and Recreation (DCR) are the local sponsors for the project. The City of Boston signed an agreement for design of the entire project on 13 June 2005. The sponsors entered into a Project Partnership Agreement (PPA) with the Corps on 17 February 2011. The current non-Federal cost estimate has increased $6,390,000 from the estimate contained in the PPA. Project sponsors have expressed a willingness to continue contributions.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $38,340,000 is an increase of $1,430,000 from the latest estimate ($36,910,000) presented to Congress (FY 2014). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	$ 1,430,000
Total	$ 1,430,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment and Finding of No Significant Impact was completed on 1 October 2003.

OTHER INFORMATION: Funds to initiate Preconstruction Engineering and Design were appropriated in FY 2001. Funds to initiate construction of the project were first appropriated in FY 2003. It has been determined that the ecosystem restoration elements do not demonstrate environmental significance and are therefore not justified. Phase I construction was awarded on 10 August 2012 and is scheduled to be completed in November 2015. Delay in award of Phase II construction has resulted in the large estimated carryover into FY 2015.


LEGEND
Work Completed as of 30 September 2013
Work Underway with Funds available for FY 2014
Work Proposed with Funds Requested for FY 2015
Work Required to Complete the Project after FY 2015
Unprogrammed Work
N
ME
VT
NH
N
Muddy River
MA
Boston
CT
RI
FRM - Dredge Riverway
ER - Dredge Ponds
ER - Dredge Entire Riverway & Fens
FRM - Channel Improvements
FRM - Dredge Leverett Pond
FRM - Dredge Fens
JAMAICA POND
WARD'S POND
WILLOW POND
LEVERETT POND
JAMAICAWAY
Kent
MUDDY
RIVER
BEACON
CHAPEL
CARLTON
RIVERWAY
HUNTINGTON
AVENUE
BOSTON
PARK
DRIVE
STORROW
MASS TURNPIKE
CHARLES RIVER
HARVARD BRIDGE
Back Bay
Fens
FRM - Flood Risk Management
ER - Ecosystem Restoration
PLAN
Scale
500' 0 500' 1,000'
MUDDY RIVER, MA
Flood Risk Management
and Ecosystem Restoration
1 January 2014
North Atlantic Division
New England District, Corps of Engineers

New Jersey

APPROPRIATION TITLE: Construction, General - Navigation (Deep Draft)

PROJECT: Delaware River Main Channel New Jersey, Pennsylvania, and Delaware, (Continuing)

LOCATION: The project area is located within the Delaware Estuary and borders Pennsylvania, New Jersey and Delaware. It extends over 100 miles of the Delaware River from Philadelphia, Pennsylvania, and Camden, New Jersey, to the mouth of the Delaware Bay.

DESCRIPTION: The recommended plan of improvement calls for deepening the existing Delaware River Federal Navigation Channel from 40 to 45 feet from Philadelphia Harbor, Pa., and Beckett Street Terminal, Camden, N.J., to the mouth of the Delaware Bay, appropriate bend widening, and partial deepening of the Marcus Hook anchorage and relocation of and addition of aids to navigation. The dredged material from the Delaware River portion of the project will be placed in Federally-owned confined upland disposal facilities. Dredged material from the Delaware Bay portion of the project will be used for two beneficial use projects.

AUTHORIZATION: Section 101(6) Water Resources Development Act of 1992, as modified by Section 308 Water Resources Development Act of 1999 and by Section 306 Water Resources Development Act of 2000.

REMAINING BENEFIT-REMAINING COST RATIO: 2.2 to 1 at 7 percent

TOTAL BENEFIT-COST RATIO: 1.2 to 1 at 7 percent

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 7 3/8 percent, based on the Limited Reevaluation Report dated February 1998.

BASIS OF BENEFIT-COST RATIO: Updated Assessment of Relevant Market and Industry Trends Report, approved September 2011.

SUMMARIZED FINANCIAL DATA:

Estimated Total Federal Cost		$226,000,000
Estimated Federal Cost (Ultimate) (COE)	$226,000,000	
Estimated Other Federal Cost (USCG)	$ 0	
Estimated Non-Federal Cost		$112,948,000
Cash Contributions	$ 75,235,000	
Other Costs	$ 37,713,000	
Total Estimated Project Cost		$338,948,000

STATUS: (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Channel Dredging:	43	TBD
Entire Project:	43	TBD

PHYSICAL DATA:

Channel: Channel deepening (dredging of about 103 miles; widening and deepening of bends; deepening of an anchorage

Disposal Construction: Eight Federally owned confined upland disposal areas and two beneficial use areas

Navigation aids: Relocation and additional navigation aids

SUMMARIZED FINANCIAL DATA (continued)

			ACCUM. PCT OF EST. FED COST
Allocations to 30 September 2011	$ 32,713,000		
Allocation for FY 2012	$ 16,864,000		
Allocation for FY 2013	$ 41,916,000		
Allocation for FY 2014	$ 20,000,000		
Allocations through FY 2014	$111,493,000	1/ 2/ 3/ 5/	49
Estimated Unobligated Carry-In Funds	$ 0	4/	
President's Budget for FY 2015	$ 35,000,000		65
Programmed Balance to Complete after FY 2015	$ 79,507,000	6/	
Unprogrammed Balance to Complete after FY 2015	$ 0		

1/ $44,745,000 reprogrammed from the project.
2/ $149,000 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated Unobligated Carry-in Funding: The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $16,076,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort is $0.
5/ PED costs of $10,025,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

JUSTIFICATION: The existing 40-foot Federal navigation project restricts efficient movement of tankers, dry bulk carriers, and containerized cargo vessels, resulting in transportation delays from light loading and lightering of vessels entering the Delaware River port system. The deeper 45-foot project would reduce transportation cost by allowing the Maritime industry to use deeper draft vessels to move these commodities more efficiently. In addition, the project will use dredged material to construct two beneficial use projects.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus the unobligated carry-in, is being applied as follows:

Complete Dredging Reach A	$15,000,000
Initiate and complete Reach AA	$10,000,000
Initiate Reach E including Beneficial Use of Dredged Material for Disposal	$11,076,000
Total	$36,076,000 7/

7/ Includes unobligated carry-in from FY 2013.

FISCAL YEAR 2015: The budget amount will be applied as follows:

Continue Reach E Dredging with completion of contract awarded in FY 14 which includes Beneficial Use of Dredged Material for Disposal	$20,000,000
Initiate Reach B Rock Removal	$15,000,000
Total	$35,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, as amended, the non-Federal sponsor must comply with the requirements listed below:

	Payments during Construction and Reimbursement	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, and rights-of-way	$ 0	
Pay 100 percent of costs to modify local service facilities, where necessary, for the construction of the project.	$ 37,713,000	
Pay 25 percent of the costs allocated to general navigation features during construction.	$ 75,235,000	
Bear all costs of operation, maintenance, repair, replacement, and rehabilitation of the completed project.		$316,000
Total Non-Federal Cost	$112,948,000 1/	$316,000

1/ The Non-Federal sponsor has also agreed to reimburse an additional 10 percent of the general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights of way, and relocation provided for commercial navigation.

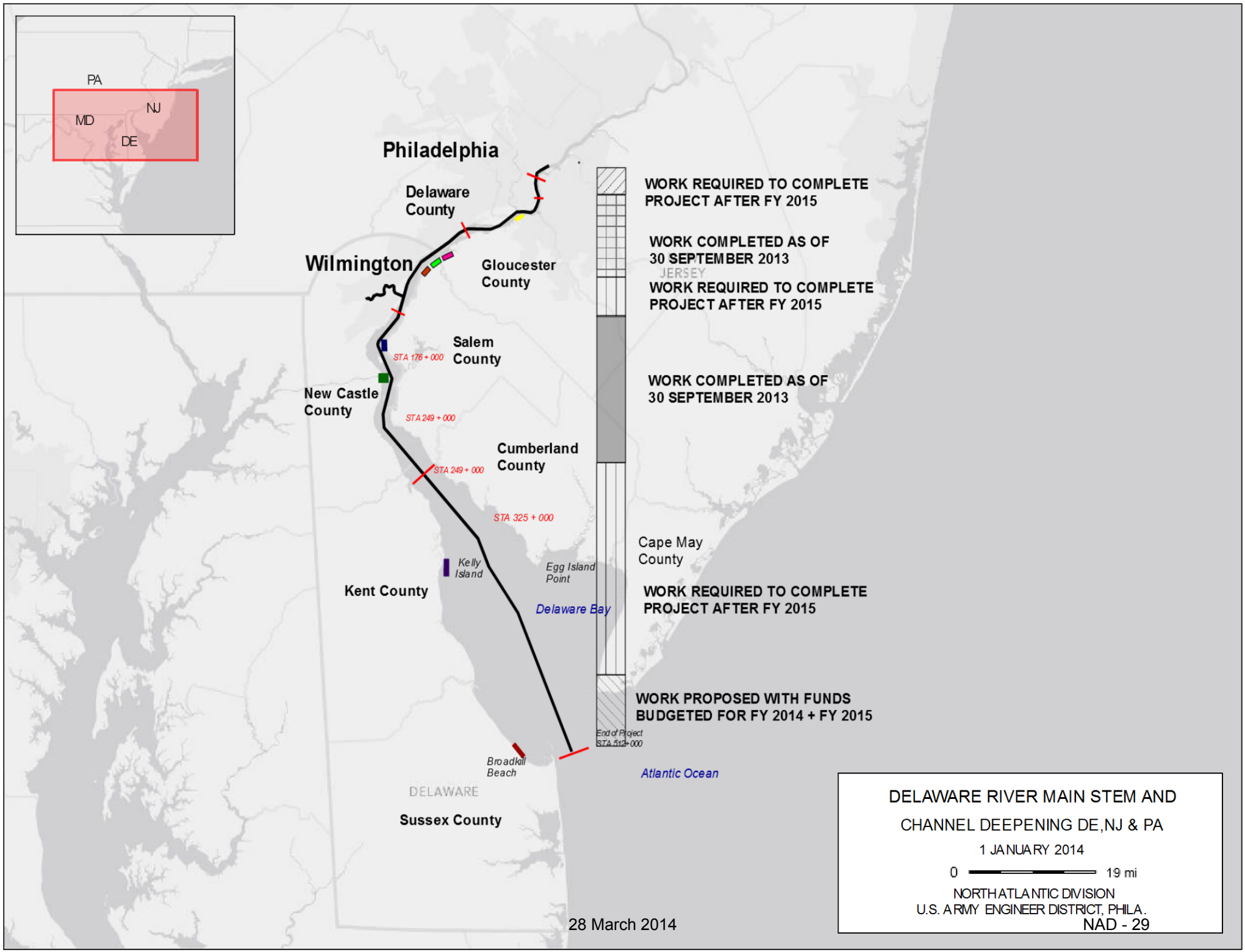
STATUS OF LOCAL COOPERATION: The Project Partnering Agreement (PPA) was executed on 23 Jun 2008 between the Department of the Army and the Philadelphia Regional Port Authority (PRPA). The sponsor is willing to continue contributions.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $226,000,000 is the same as the latest estimate ($226,000,000) presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: As part of the preconstruction engineering and design (PED) effort a Supplemental Environmental Impact Statement (SEIS) was prepared in December 1996. The Final Supplemental Environmental Impact Statement was filed with U.S. Environmental Protection Agency in July 1997, and the Record of Decision was signed in December 1998. Additionally, an Environmental Assessment (EA) was completed in April 2009. The purpose of this EA was to evaluate the impacts of changes to the authorized project, which are the result of detailed Preconstruction, Engineering and Design (PED) studies, as well as changes to the existing conditions in the project area from those described in the 1992 EIS, 1997 SEIS, and 1998 Record of Decision (ROD), and to consolidate in one document the results of post-SEIS monitoring and data collection efforts. The conclusion of the 2009 EA was that any changes to the project or changes to the physical conditions where the project will be constructed would have no significant, adverse effects on the human environment, over and above the potential environmental effects already addressed in the earlier EIS, SEIS, and ROD. No significant adverse environmental effects are expected to occur as a result of the issues addressed in the EA. A second EA was completed in September 2011 to address changes to the affected environment and changes to the project since completion of the 2009 EA, which primarily included the potential listing of the Atlantic sturgeon as a Federally-listed endangered species. The EA concluded that the evaluated changes will have no significant, adverse effects on the human environment beyond the effects addressed in the earlier documents and a Finding of No Significant Impact (FONSI) was issued.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992. Funds to initiate construction were appropriated in FY 1999. The change in the BCR is a result of the fact that, as a project is constructed, the estimated costs are replaced by actual costs in the BCR calculation. As a result of this, the calculation outcome for the Delaware River Main Channel project, resulted in the BCR actually only dropping 0.05 from (1.28 to 1.23), but with rounding, the BCR is presented as moving from 1.3 to 1.2.

CORPS OF ENGINEERS U. S. ARMY



DELAWARE RIVER MAIN STEM AND
CHANNEL DEEPENING DE,NJ & PA

1 JANUARY 2014

0 19 mi

NORTH ATLANTIC DIVISION
U.S. ARMY ENGINEER DISTRICT, PHILA.

NAD - 29

28 March 2014

APPROPRIATION TITLE: Construction, General - Flood and Coastal Storm Damage Risk Reduction

PROJECT: Raritan River Basin, Green Brook Sub-Basin, New Jersey (Continuing)

LOCATION: The Green Brook Sub-Basin project area is located within the Raritan River Basin in north-central New Jersey in Middlesex, Somerset and Union Counties. It drains approximately 65 square miles of primarily urban and industrialized area. It includes the following communities: Dunellen, Middlesex Borough, Piscataway, South Plainfield, Bound Brook, Bridgewater, Green Brook, North Plainfield, Warren, Watchung, Berkeley Heights, Plainfield and Scotch Plains. The project area is divided into three sub-areas: the lower, upper and Stony Brook portions of the sub-basin.

DESCRIPTION: The project plan consists of a system of levees, floodwalls, closure gates and pump stations in the lower portion of the basin, channel modifications and dry detention basins in the upper portion of the basin, and channel modifications in the Stony Brook portion of the basin. The upper portion of the sub-basin has been deferred because this project is justified as a life safety project and improvements in the lower portion of the project will mitigate that life safety risk.

AUTHORIZATION: Water Development Act of 1986.

REMAINING BENEFITS-REMAINING COST RATIO: 1.9 to 1 at 7 percent.

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

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 7 percent (FY 1998).

BASIS OF BENEFIT-COST RATIO: Benefits are from the analysis contained in the Final General Reevaluation Report (dated May 1997) at April 1996 price levels, and the Level 1 Economics Update Report (dated 9 June 2011) as updated in July 2012 for budget purposes.

SUMMARIZED FINANCIAL DATA:			ACCUM. PCT. OF EST. FED. COST	STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost			492,037,000	Element 1a	99	FY 2014
Programmed Construction	417,037,000			Element 1b	7	TBD
Unprogrammed Construction	75,000,000			Element 1c	0	TBD
				Element 2	0	TBD
				Element 3	0	TBD
				Entire Project	33	TBD
Estimated Non-Federal Cost			164,012,000			
Programmed Construction	139,012,000					
Cash Contributions	89,012,000					
Other Costs	50,000,000					
Unprogrammed Construction	25,000,000					
Cash Contributions	10,000,000					
Other Costs	15,000,000					
Total Estimated Programmed Construction Cost		556,049,000				
Total Estimated Unprogrammed Construction Cost		100,000,000				
Total Estimated Project Cost		656,049,000				
Allocation to 30 September 2011			126,207,000			
Allocation for FY 2012			5,880,000			
Allocations for FY 2013			4,990,000			
Allocation for FY 2014			20,000,000			
Allocations through FY 2014			153,077,000	1/2/3/5/	31	
Estimated Unobligated Carry-in Funds			4,000,000	4/		
President's Budget Amount for 2015			11,000,000		34	
Programmed Balance to complete after FY 2015			248,960,000	6/		
Unprogrammed Balance to complete after FY 2015			75,000,000			

PHYSICAL DATA

Element 1a is Bound Brook (Somerset County) portion lower basin. Element 1b is Boro of Middlesex portion of lower basin in Middlesex County. Element 1c includes all final portions remaining within the lower basin. Element 2 (Unprogrammed) is the Upper Basin, includes channel modifications, dry detention basins. Element 3 is the Stony Brook Portion of the basin.

1/ $590,300 reprogrammed from the project in prior FYs.
2/ $199,000 rescinded from the project.
3/ $ 0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated Unobligated "Carry-in" Funding. The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $1,647,000. As of the date this Justification Sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort is $4,000,000. This amount will be used to perform work on the project as follows: Applied towards the award of Element 1b, Segment B3.
5/ PED costs of $ 23,998,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

JUSTIFICATION: The project area suffers annual flood damages of $41,000,000 (Apr 96 P.L.) without the project. Most recently, the April 15-17, 2007 Nor'easter and September 16-18, 1999 Tropical Storm Floyd flooding were so extensive that the area was designated a Major Disaster Area. Eight deaths have been attributed to floods in the basin. In the recent April 2007 Nor'easter, thirty four people were injured and there were more than 1,000 people evacuated from their residences. In Bound Brook, five homes caught fire and burned to the ground the night of April 16th when high water prevented emergency personnel from reaching them. After the flood, FEMA and SBA spent about $16.5 million on loans and grants for individuals and businesses statewide; another $3.3 million was provided by FEMA as public assistance to help repair infrastructure and pay for police overtime. National Flood Insurance claims paid in Bound Brook totaled about $19.8 million. Beyond the Federal dollars, the April flood cost private insurers $160 million statewide for homeowner, auto, and other claims.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus the unobligated carry-in, is being applied as follows:

Complete Element 1a	$ 5,000,000	
Construction Management/ Engineering and Design,	$ 3,000,000	
Construction of Element 1b, Segment B2		$ 5,000,000
Design of Element 1b, Segment B3	$ 1,447,000	
Design of Element 1b, Segment B4	$ 1,200,000	
Initiate Upper Basin General Reevaluation Report		$ 1,400,000
Non-structural Design	$ 600,000	
Total	$ 17,647,000 7/	

7/ Includes unobligated carry-in from FY 2013

FISCAL YEAR 2015: The budget amount plus projected carry-in funds will be applied as follows:

Construction Management/ Engineering and Design	$ 1,000,000
Award Element 1b Segment, B3 contract	$ 14,000,000
Total	$ 15,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, relocations and borrow excavated or dredged material disposal areas.	$ 50,000,000	
Pay 25 percent of cost associated with non-structural flood protection	25,000,000	
Pay 6 percent of the costs allocated to flood control, to bring the total non-Federal share of flood control costs to 25 percent, as determined under Section 103 (m) of the Water Resources Development Act of 1986,and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	89,012,000	$1,157,000
Total Non-Federal Costs	$164,012,000	$1,157,000

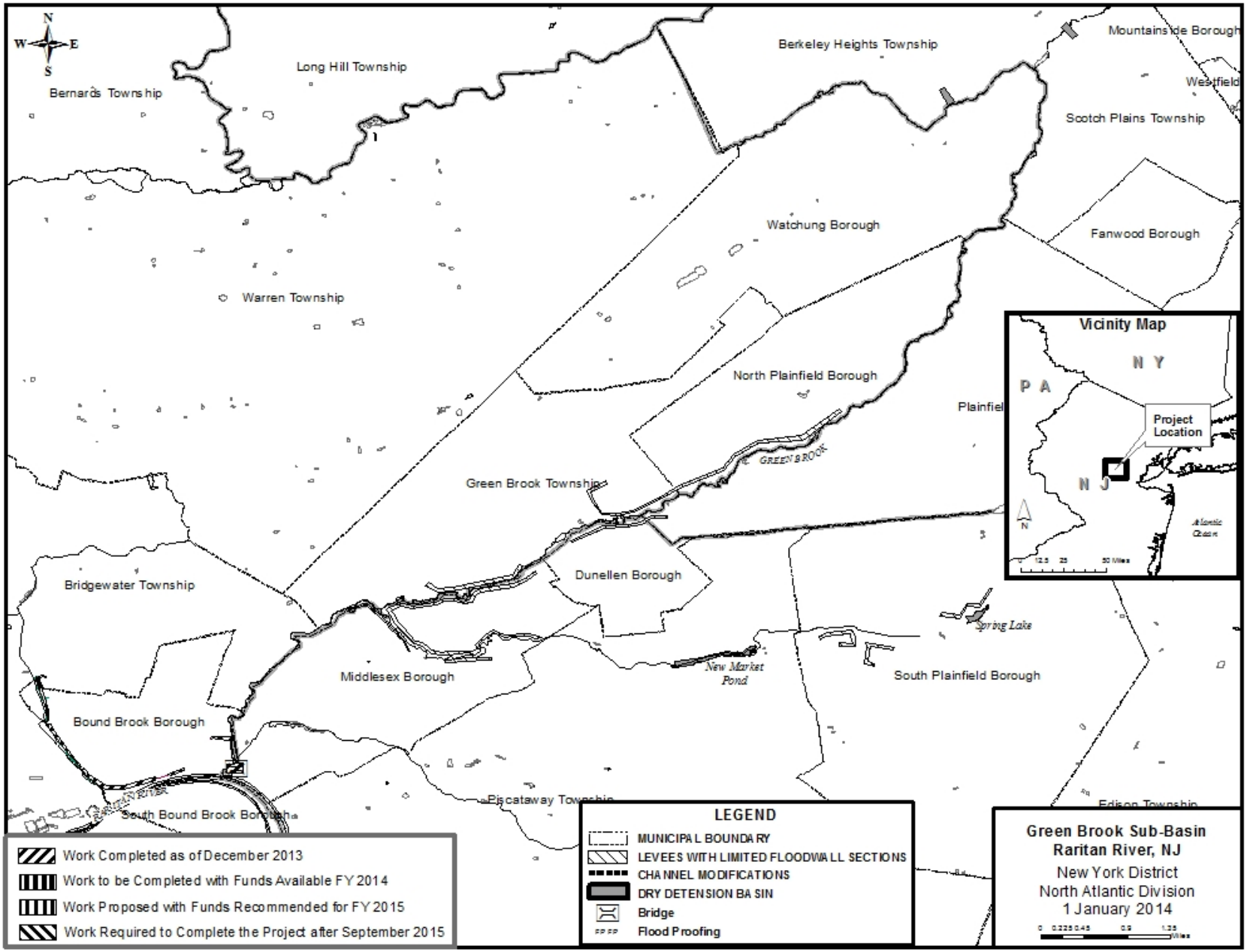
The non-Federal sponsor has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement was executed in June 1999 between the Department of the Army and the New Jersey Department of Environmental Protection. Project support continues.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $492,037,000 is the same as the latest estimate ($492,037,000) presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed in August 1980. A Supplemental Environmental Impact Statement with the Final General Reevaluation Report was released in May 1997 and the Record of Decision was issued in July 1998.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1998.


N
W
E
S
Bernards Township
Long Hill Township
Berkeley Heights Township
Mountainside Borough
Westfield
Scotch Plains Township
Watchung Borough
Fanwood Borough
Warren Township
North Plainfield Borough
Plainfield
GREEN BROOK
Green Brook Township
Dunellen Borough
Bridgewater Township
Middlesex Borough
New Market Pond
Spring Lake
South Plainfield Borough
Bound Brook Borough
RARITAN RIVER
South Bound Brook Borough
Piscataway Township
Edison Township
Vicinity Map
N Y
P A
N J
Project Location
Atlantic Ocean
LEGEND
MUNICIPAL BOUNDARY
LEVEES WITH LIMITED FLOODWALL SECTIONS
CHANNEL MODIFICATIONS
DRY DETENSION BASIN
Bridge
Flood Proofing
Work Completed as of December 2013
Work to be Completed with Funds Available FY 2014
Work Proposed with Funds Recommended for FY 2015
Work Required to Complete the Project after September 2015
Green Brook Sub-Basin
Raritan River, NJ
New York District
North Atlantic Division
1 January 2014

New York

APPROPRIATION TITLE: Construction, General - Channels and Harbors (Navigation)

PROJECT: New York & New Jersey Harbor, New York and New Jersey (Completion)

LOCATION: The Port of New York and New Jersey is located within the bi-state NY/NJ Harbor Estuary. The Federal navigation channels within the NY & NJ Harbor project include: Ambrose Channel; Anchorage Channel; Kill Van Kull and Newark Bay Channel; Arthur Kill Channel; Port Jersey Channel; and Bay Ridge Channel.

DESCRIPTION: This project consists of four separately authorized Federal navigation projects.

1.) The Kill Van Kull and Newark Bay Channels, NY and NJ project consists of deepening existing 40-foot project to 45 feet mean low water (MLW); construction is complete and financial closeout is underway.
2.) The New York Harbor and Adjacent Channels, Port Jersey Channel, NJ project consists of deepening and realigning the non-Federal access channel to 41 feet MLW from the Federal Anchorage Channel to its head of navigation; construction is complete and financial closeout is underway.
3.) The Arthur Kill, Howland Hook Marine Terminal, NY and NJ project consists of deepening the existing Federal 35-foot Arthur Kill Channel to 41 feet MLW from its confluence with the Kill Van Kull Channel to Howland Hook Marine Terminal in Staten Island, New York, and to 40 feet MLW from the Howland Hook Marine Terminal to Phillips 66 Bayway Terminal oil facility in Linden, New Jersey respectively. Also included within the Arthur Kill Channel are selected widenings and realignments. The Arthur Kill Project also provides for mitigation consisting of restoration and enhancement of approximately 23 acres of intertidal salt marsh. Apart from a segment of 40' channel south of the Goethal's Bridge. All construction on this project is complete.
4.) The New York and New Jersey Harbor, NY and NJ, project consists of deepening the Ambrose Channel to 53 feet MLW, the Anchorage Channel, Kill Van Kull, Newark Bay, Port Jersey Channel, and the Arthur Kill Channel to Howland Hook to 50 feet MLW or 52 feet MLW, if in rock or otherwise hard material. The project also includes mitigation for project impacts and the beneficial use of dredged material in restoring marsh islands (i.e. Elder's West and Yellow Bar) in Jamaica Bay, NY and selective bulkheading. This work is funded to fiscal completion in FY 2015.

AUTHORIZATION: Supplemental Appropriations Act of 1985, Water Resources Development Acts of 1986, 1996, 1999, and 2000.

REMAINING BENEFIT - REMAINING COST RATIO: 151.9 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 6.8 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 2.8 to 1 at 6 5/8 percent (FY 2002).

BASIS OF BENEFIT - COST RATIO: The benefit-to-cost ratio shown above applies to the consolidation of the four authorized projects. The analysis reflects annualized costs and benefits, adjusted to January 2011 price levels, and Economic Update Report, 9 June 2011 as updated in June 2013 for budget purposes.

SUMMARIZED FINANCIAL DATA			ACCUM. PCT of EST FED. COST
Estimated Appropriation Requirement (CoE)		$1,367,090,000	
Programmed Construction	$1,367,090,000		
Unprogrammed Construction	0		
Estimated Appropriation Requirement (USCG)		4,050,000	
Estimated Total Appropriation Requirement		1,371,140,000	
:			
Future Non-Federal Reimbursement		253,990,800	
Programmed Construction		253,990,800	
Unprogrammed Construction		0	
Estimated Federal Cost (Ultimate) (CoE)		1,110,309,200	
Programmed Construction	1,119,309,200		
Unprogrammed Construction	66,128,000		
Estimated Non-Federal Cost	1,317,906,800		
Programmed Construction	1,317,906,800		
Cash Contribution	759, 541,000		
Other Costs	324,375,000		
Reimbursements:	233,990,800		
Unprogrammed Construction	0		
Cash Contribution	0		
Other Costs	0		
Reimbursements	0		
Total Estimated Programmed Construction Costs		$2,675,256,800	
Total Estimated Unprogrammed Construction Costs		0	
Total Estimated Project Cost		$2,675,256,800	
Allocations thru 30 September 2011	$1,071,531,000		
Allocation for FY 2012	63,841,000		
Allocation for FY 2013	67,869,000		
Allocation for FY 2014	69,000,000	7/	94
Allocations through FY 2014	1,345,090,000	1/ 2/ 3/ 4/ 5/	98

STATUS (1 Jul 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Programmed work:		
KVK (a)		
Phase I 40 ft.	100	Sep 1995
Phase II 45 ft.	100	Dec 2004
Port Jersey Channel (b)	100	Jul 2010
Arthur Kill Channel (c)	80	Dec 15
NY & NJ Harbor (50 ft) (d)		
Ambrose	100	Mar 2014
Anchorage	95	Dec 2014
KVK	98	Dec 2014
Newark Bay	98	Dec 2014
Port Jersey	98	Mar 2014
Arthur Kill	90	Jun 2014
Bay Ridge	0	Indefinite
Entire Project:	95	Dec 15

PHYSICAL DATA

a. Deepen the Kill Van Kill and Newark Bay from 35 ft to 40 ft then to 45 ft

b. Deepen the Port Jersey Channel to 41 ft.

c. Deepen the Arthur Kill Channel from its confluence with the Newark Bay to the NYCT from 35 ft. to 41 ft and then from 35 ft to 40 ft to the Phillips 66 Bayway Terminal.

d. NY & NJ Harbor: Deepen the above channels from their depths to 50 ft navigational use, along with mitigation for loss of benthic habitat and air quality. Accumulated shoals exacerbated by Hurricane Sandy require minor dredging for completion/transition to Corps O&M. Dredging of utility corridor areas in Anchorage Channel were also impacted by Hurricane Sandy.

SUMMARIZED FINANCIAL DATA: (continued)

		ACCUM PCT OF EST FED. COST
Budget Amount for FY 2015	22,000,000	100
Disaster Relief Appropriations Act, 2013 Funds	20,000,000 8/	
Programmed Balance to Complete after FY 2015	0 6/	
Unprogrammed Balance to Complete after FY 2015	0	

1/ $3,786,000 reprogrammed to the project.
2/ $2,990,000 rescinded from the project.
3/ $ 0 transferred to the Flood Control and Coastal Emergencies account.
4/ Estimated "Carry-in" Funding: The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the 2015 from prior appropriations for use on this effort is $20,000,000. .
5/ PED costs of $13,188,000 are included in this amount.
6/ For programmed work only; remaining work is unprogrammed pending a decision to construct these features.
7/ $49,000,000 budgeted and $20,000,000 added for Sandy related quantity increase in shoal removal contracts.
8/ Disaster Relief Appropriations Act, 2013 (P.L. 113-2) funds ($20,000,000) will be used in FY 2014 to remove shoals. FY 2014 appropriated funds will be carried into FY 2015 to award the AK-4 contract to deepen the existing 35 ft. channel to 40 ft. navigable depth from New York Container Terminal to Phillips 66 Refinery

JUSTIFICATION: The Port of New York-New Jersey is the largest port on the East Coast, providing more than 228,000 port related jobs, $12 billion in economic activity, and serves more than 17 million consumers in the States of New York and New Jersey. Through its intermodal links, the Port provides second day access to another 80 million consumers in the northeast and mid-western states (35% of the nation). The Port annually receives and ships over $82 Billion (110 million long tons) of waterborne general cargo to all parts of the United States and throughout the world and receives petroleum and related products from ports in the Atlantic, and Gulf Coasts, the Caribbean, Africa, and the Persian Gulf.

FISCAL YEAR 2014: The total unobligated dollars are being applied as follows:

Initiate "base plus options" construction contracts	$10,000,000
Anchorage Channel Utility Corridor	
Continue construction contracts	$35,000,000
NY & NJ Harbor Deepening (50 Feet) Shoal Removal (S–SR-2)	
Planning, engineering, and design and Construction management	$4,000,000
TOTAL	$49,000,000 8/

8/ Includes unobligated carry-in from FY2013

FISCAL YEAR 2015: The budget amount plus P.L. 113-2 funds will be applied as follows to fully fund physical and fiscal completion of this project:

Award Arthur Kill Channel, NJ Contract No.4 construction contract	$38,000,000
Construction management	$4,000,000
and out-year required monitoring	
TOTAL	$42,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financial concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsors must comply with the Requirements listed below:

REQUIREMENTS OF LOCAL COOPERATION:	Payments during Construction and Reimbursement	Annual Operation, Maintenance and Replacement Costs
Pay 100 percent of costs to modify local service facilities, where necessary, for the construction of the project.	$278,195,000	$205,000
Pay 25-50 percent of the costs allocated to deep draft navigation during construction. 1/	755,961,000	
Pay for all lands, easements, rights of way and relocations	46,180,000	
Pay an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction which is partially offset by a credit allowed for the value of lands, easements, rights of way, and relocation.	242,362,800	
NON-FEDERAL COSTS (continued):		
Contribute 50 percent share for Project operation and maintenance for all costs in excess of those attributable to dredging to a depth of 45 feet plus associated over-depth and entrance channel wave allowances.		TBD
Total Non-Federal Costs	$1,322,698,800	$205,000

1/ The cost sharing percentage of this project includes the cost sharing of the general navigation features deepening from 20 ft to 45 feet at 25 percent and deepening of those features beyond 45 feet at 50%.

STATUS OF LOCAL COOPERATION:

(1) On the Kill Van Kull and Newark Bay Channels element, a Project Cooperation Agreement for the 45-foot deepening project was executed for the Phase II deepening on 13 January 1999.

(2) On the NY Harbor and Adjacent Channels, Port Jersey Channel element, the State of New Jersey and the Port Authority of New York and New Jersey (for the limited purpose of indemnification only) are the Non-Federal sponsors of the project. The project cooperation agreement was executed on 23 July 2002 with a modification of the agreement executed in July 11, 2007.

(3) On the Arthur Kill, Howland Hook Marine Terminal element, The Port Authority of New York and New Jersey is the non-Federal sponsor for the project. The PCA was executed on 25 July 2002.

(4) On New York and New Jersey Harbor element, the Port Authority of NY & NJ is the Non-Federal sponsor for the project. The project cooperation agreement was executed on 28 May 2004 and amended on 21 Sep 09 and 12 Sep 11 to facilitate the beneficial use of dredged material for marsh restoration sites (Elder's west and Yellow Bar) in Jamaica Bay, NY.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps of Engineers) cost estimate of $1,367,090,000 is an increase of $34,790,000 over the latest estimate ($1,333,300,000) presented to Congress (FY 2014). This change includes the following item:

Item	Amount
Price escalation on construction features	$ 34,790,000
Total	$ 34,790,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT:

(1) On the Kill Van Kull and Newark Bay Channels element, the Final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (EPA) on 31 July 1981. A Supplemental EIS was filed with EPA on 14 February 1986. The Final Supplement to the EIS was filed with EPA on 13 February 1987. The Record of Decision was executed on 1 April 1987. An Environmental Assessment and Finding of No Significant Impact was issued on 30 April 1997 as part of the LRR for the Phase II deepening.

(2) On NY Harbor and Adjacent Channels, Port Jersey Channel element, the final EIS was filed with the Environmental Protection Agency (EPA) on 29 April 1988, and a final Environmental Assessment and Finding of No Significant Impact was issued June 2000. A Record-of-Decision was executed on 23 October 2000.

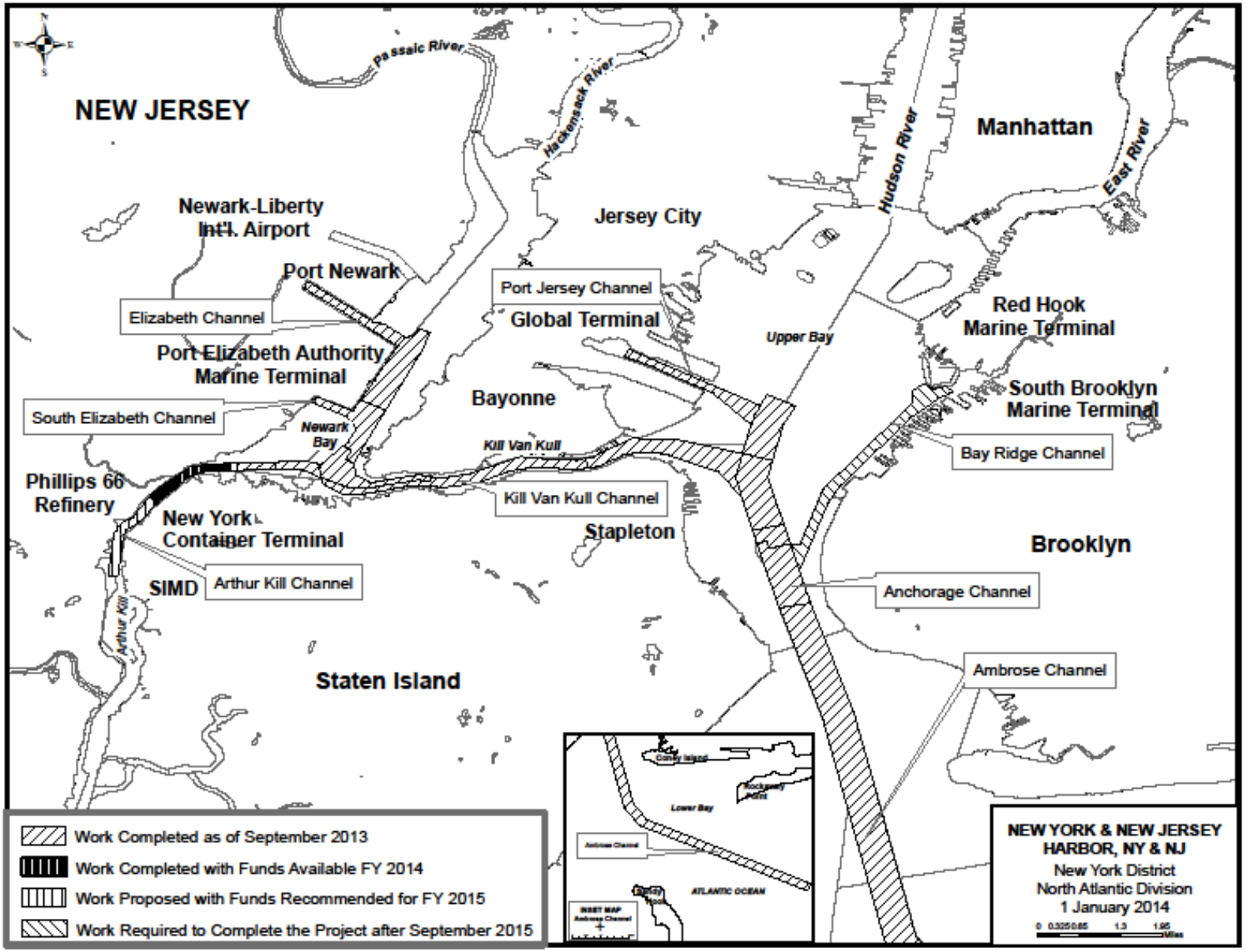
(3) On the Arthur Kill, Howland Hook Marine Terminal element, the Final Supplemental Environmental Impact Statement was filed with the Environmental Protection Agency on 16 September 1998. A Final Environmental Assessment for mitigation was issued in May 2001. The Record of Decision was executed on 29 August 2001.

(4) On the 50-foot project, New York and New Jersey Harbor Deepening element, the final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (EPA) on 29 December 1999. The Record-of-Decision was signed on 6 June 2002.An Environmental Assessment and Finding of No Significant Impact was issued in January 2004.

(5) An Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) were signed June 19, 2007 for the purpose of addressing impacts of Newark Bay Study Area (NBSA) instituted by USEPA in February 2004.

OTHER INFORMATION:
(1) All project elements were being funded separately prior to FY 2002. Congressional direction provided to the Secretary of the Army in the Energy and Water Development Appropriations, FY 2002, Conference Report consolidated the four project elements with the 50-foot deepening project authorized by the Water Resources Development Act of 2000.
(2) On the Kill Van Kull and Newark Bay Channels element, funds to initiate construction were appropriated in FY 1985. The Kill Van Kull and Newark Bay Channels, NY and NJ project consists of deepening existing 40-foot project to 45 feet mean low water (MLW). Unprogrammed work includes dredging of Pierhead Channel and Port Newark in the vicinity of Port Newark and Port Elizabeth. Otherwise, this project's construction is complete and financial closeout is underway.
(3) On the NY Harbor and Adjacent Channels, Port Jersey Channel element, funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1994. The New York Harbor and Adjacent Channels, Port Jersey Channel, NJ project consists of deepening and realigning the non-Federal access channel to 41 feet MLW from the Federal Anchorage Channel to its head of navigation. Unprogrammed work includes the turning basin at the western end of the channel. Otherwise, this project's construction is complete and financial closeout is underway.
(4) On the Arthur Kill, Howland Hook Marine Terminal element, funds for preconstruction engineering and design were appropriated in FY 1986 and funds to initiate construction were appropriated in FY 2001. The Arthur Kill, Howland Hook Marine Terminal, NY and NJ project consists of deepening the existing Federal 35-foot Arthur Kill Channel to 41 feet MLW from its confluence with the Kill Van Kull Channel to Howland Hook Marine Terminal in Staten Island, New York, and to 40 feet MLW from the Howland Hook Marine Terminal to Phillips 66 Bayway Terminal oil facility in Linden, New Jersey respectively. Also included within the Arthur Kill Channel are selected widenings and realignments. The Arthur Kill Project also provides for mitigation consisting of restoration and enhancement of approximately 23 acres of intertidal salt marsh. Apart from a segment of 40' channel south of the Goethal's Bridge, all construction on this project is complete. The remaining work is programmed.
(5) On the 50-foot New York and New Jersey Harbor Deepening element, funds to initiate preconstruction engineering and design were appropriated in FY 2000 and funds to initiate construction were appropriated in FY 2002. The PCA was modified on 21 Sep 09 and 12 Sept 11 to facilitate implementation of the beneficial reuse of the dredged material from the Ambrose Channel construction contracts through the construction of the Elders west and Yellow Bar Marsh island in Jamaica Bay, New York. Of the seven different authorized elements of this project, the Corps determined not to proceed with the Bay Ridge Channel. This project is funded to physical and fiscal completion in FY 2015.The Port Jersey Channel PCA was modified on 17 July 2007 to facilitate consolidated implementation of the cost-shared 41' channel with the State of New Jersey's advancement of the 50' channel.

(6)An Economic Update Report (EUR) was submitted by the New York District and approved by the Corps North Atlantic Division on January 14, 2011. The EUR corroborated prior estimates for project benefits and updated the prior project costs used in the BCR, which dated back to estimates from the various Project Cooperation Agreements, to current project costs on a present worth basis (P.L. January2011).
7) The beneficial use of dredged material EDR for placing Ambrose sand at Yellow Bar Marsh, Jamaica Bay, NY was approved by the ASA(CW) on June 27, 2011.
8) Reason for Change in BCR: Cost refined as project proceeds. Bids came in slightly lower than expected. Also small change in schedule due to Hurricane Sandy. BCR was recalculated based on the new cost.


NEW JERSEY
Passaic River
Hackensack River
Hudson River
Manhattan
East River
Newark-Liberty Int'l. Airport
Jersey City
Port Newark
Port Jersey Channel
Elizabeth Channel
Global Terminal
Red Hook Marine Terminal
Upper Bay
Port Elizabeth Authority Marine Terminal
Bayonne
South Brooklyn Marine Terminal
South Elizabeth Channel
Newark Bay
Kill Van Kull
Bay Ridge Channel
Phillips 66 Refinery
Kill Van Kull Channel
New York Container Terminal
Stapleton
Brooklyn
SIMD
Arthur Kill Channel
Anchorage Channel
Arthur Kill
Staten Island
Ambrose Channel
Lower Bay
ATLANTIC OCEAN
INSET MAP
Work Completed as of September 2013
Work Completed with Funds Available FY 2014
Work Proposed with Funds Recommended for FY 2015
Work Required to Complete the Project after September 2015
NEW YORK & NEW JERSEY HARBOR, NY & NJ
New York District
North Atlantic Division
1 January 2014

Pennsylvania

APPROPRIATION TITLE: Construction, General – Flood and Coastal Storm Damage Reduction

PROJECT: Wyoming Valley, Pennsylvania (Levee Raising) (continuing)

LOCATION: Wyoming Valley is located in northeastern Pennsylvania and extends from Duryea on the Lackawanna River southwestward to Nanticoke on the Susquehanna River. The Wyoming Valley flood control projects are located on the Susquehanna River in Luzerne County and are the four contiguous existing Federal flood control projects at Plymouth, Kingston-Edwardsville, Swoyersville-Forty Fort, and Wilkes-Barre and Hanover Township, which together function as a flood control system within the Valley.

DESCRIPTION: The four original Federal flood control projects in the Wyoming Valley were designed to protect against a flood equal to the March 1936 event which had a peak flow of 232,000 cubic feet per second. The authorized collective modification of the original projects are designed to protect against flood flows of 318,500 cubic feet per second that would be caused by a recurrence of Storm Agnes. The authorized project includes raising existing levees and floodwalls between 3 and 5 feet, modifying closure structures, relocating utilities, and providing some new floodwalls and levees to maintain the integrity of the flood control system. The authorized project also includes recreation features and a flood mitigation plan to reduce project-related induced flooding impacts.
AUTHORIZATION: Water Resources Development Acts of: 1986, 1988, 1992, 1996, and 2007.

REMAINING BENEFIT - REMAINING COST RATIO: 46.1 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 3.4 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 2.8 to 1 at 8 1/4 percent (FY 1995).

BASIS OF BENEFIT - COST RATIO: Basis of the current benefit-cost ratios is from the Wyoming Valley Levee Raising Project Economic Update 2011 approved 12 July 2013.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	$147,741,000			
Estimated Non-Federal Cost:	53,211,000	Levee Raising	100	Jan 2003
Cash Contributions $20,133,000		Entire Project	92	TBD
Other Costs 33,078,000				
Total Estimated Project Cost	$200,952,000			

SUMMARIZED FINANCIAL DATA: (Continued)		ACCUM PCT OF EST FED COST
Allocations to 30 September 2011	135,492,000	
Allocation for FY 2012	546,000	
Allocation for FY 2013	442,000	
Allocation for FY 2014	1,000,000	
Allocations through FY 2014	137,480,000 1/ 2/ 3/ 5/	93
Estimated Unobligated Carry-in-Funds	0 4/	
President's Budget for FY 2015	1,000,000	94
Programmed Balance to Complete after FY 2015	9,261,000 6/	
Un-programmed Balance to Complete after FY 2015	0	

PHYSICAL DATA

Swoyersville-Forty Fort: earth fill levee 16,500 ft by 3 to 5 ft; floodwall steel sheetpile 4,000 ft by 3 to 5 ft.

Plymouth: earth fill levee 8,600 ft by 2 to 4 ft; floodwall concrete 200 ft by 2 to 4 ft, steel sheetpile 200 ft by 2 to 4 ft, earth 500 ft by 2 to 4 ft; modify 2 pump stations.

Kingston-Edwardsville: earth fill levee 17,300 ft by 3 to 5 ft; floodwall concrete 200 ft by 2 to 4 ft, steel sheetpile 200 ft by 2 to 4 ft; modify 13 pump stations.

Wilkes-Barre and Hanover Township: earth fill levee 20,600 ft by 3 to 5 ft; floodwall concrete 500 ft by 3 to 5 ft, sheetpile 4,300 ft by 3 to 5 ft; modify 13 pump stations.

1/ $606,000 reprogrammed to project
2/ $3,746 rescinded from the project.
3 /$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.
4/ Estimated Unobligated "Carry-in" Funding. The actual unobligated balance from FY2013 into FY 2014 (3011A report) for this project is $501,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried-into FY 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
5/ PED costs of $11,095,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

JUSTIFICATION: The four existing local protection projects which comprise the Wyoming Valley system were constructed between 1935 and 1976 and provide protection for an area of 5,160 acres and a population of 225,000. Over the past 200 years at least 32 floods have been recorded which exceeded a stage of 25 feet at Wilkes-Barre compared to the flood stage of 22 feet. The discharge of 345,000 cubic feet per second during June 1972 (Storm Agnes) without the now completed Cowanesque and Tioga-Hammond Lakes projects in operation overtopped the protection and resulted in the greatest flood of record with damages at that time estimated to be $730,000,000. In 2011 Tropical Storm Lee resulted in the flood stage level of 42.66 feet at Forty Fort surpassing the1972 Agnes Storm of record and withstanding the flood crest 1.8 feet higher than current design level. It is estimated that the completed levee raising works prevented approximately $5,000,000,000 in damages. Unfortunately, not all areas of the Wyoming Valley escaped unharmed. Nearly 3,000 properties in unprotected communities were flooded. The average annual benefits amount to $27,143,000 essentially all for flood control, based on the final Phase II General Design Memorandum approved February 1996 at January 1993 price levels.

FISCAL YEAR 2014: The total fiscal year 2014 appropriations, plus the unobligated carry-in,is being applied as follows:

Complete Relief Well construction and Design Documentation Report	$ 501,000
Fund Federal portion of 1 completed project induced flood mitigation impact area in Columbia County	$1,000,000
Total	$1,501,000 7/

7/ Includes unobligated carry-in from FY2013.

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Complete flood mitigation work to reduce project-related induced flooding impacts in Luzerne County	$1,000,000
Total	$1,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

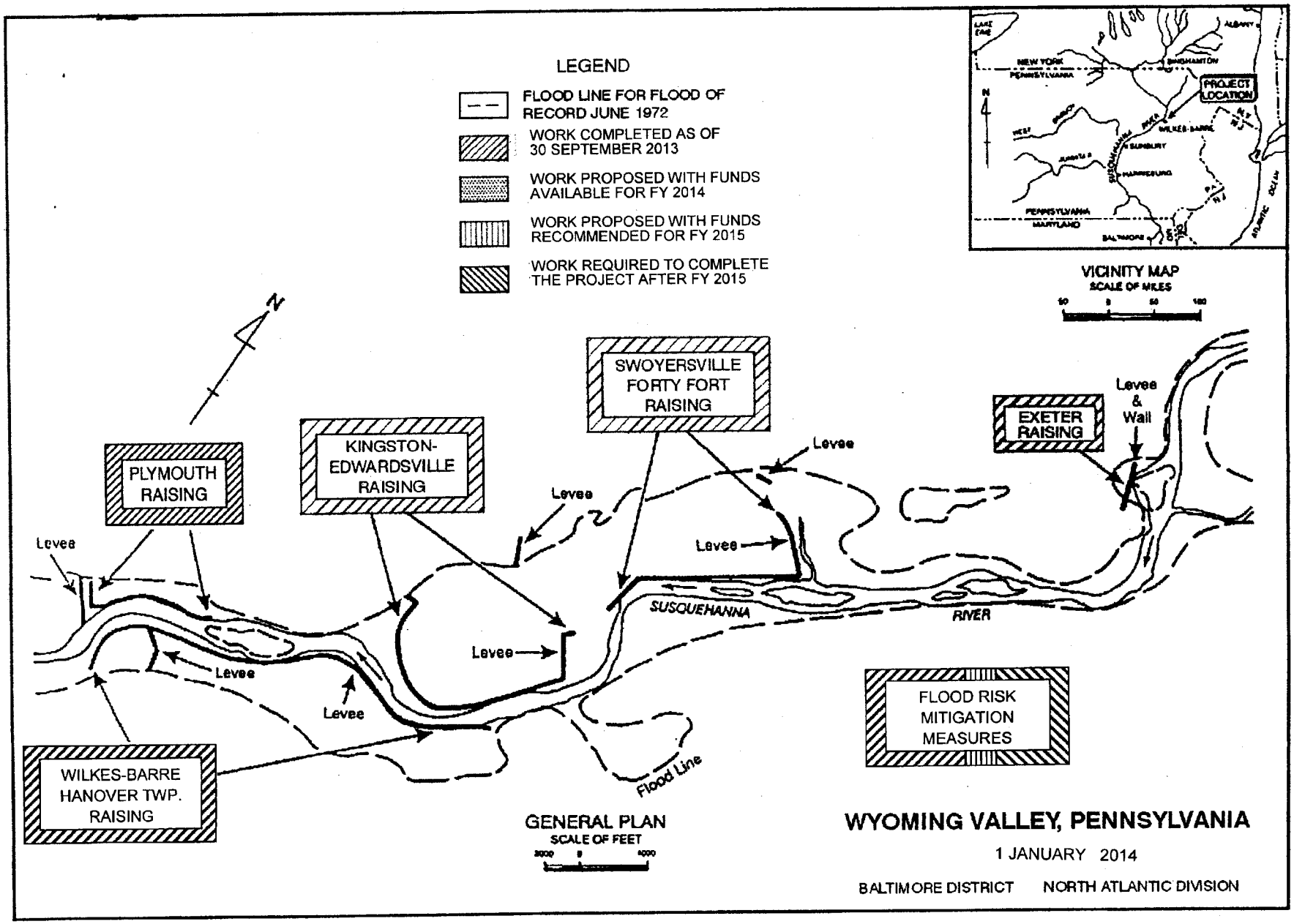
Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, and rights of way.	3,096,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges) and other facilities where necessary in the construction of the project.	5,220,000	
Pay 21 percent of the costs(cash and work-in-kind) allocated to flood risk management to bring the total non-Federal share of these costs to 25 percent and bear all costs of operation, maintenance and replacement of flood risk management facilities.	38,875,000	234,000
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.	6,021,000	51,000
Total Non-Federal Costs	53,211,000	285,000

STATUS OF LOCAL COOPERATION: A Project Cooperation Agreement was executed between the Department of the Army and the Luzerne County Flood Protection Authority (LCFPA)in October 1996. To date, the LCFPA has fully complied with the non-Federal sponsor requirements on the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of $147,741,000 is the same as the last estimate ($147,741,000) presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Supplemental Environmental Impact Statement is included in the final General Reevaluation Report approved September 2005. The Record of Decision was signed 15 November 2005.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1984. Funds to initiate construction work were appropriated in FY 1995.


LEGEND
FLOOD LINE FOR FLOOD OF RECORD JUNE 1972
WORK COMPLETED AS OF 30 SEPTEMBER 2013
WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2014
WORK PROPOSED WITH FUNDS RECOMMENDED FOR FY 2015
WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2015
PROJECT LOCATION
VICINITY MAP
SCALE OF MILES
N
PLYMOUTH RAISING
KINGSTON-EDWARDSVILLE RAISING
SWOYERSVILLE FORTY FORT RAISING
EXETER RAISING
Levee & Wall
Levee
SUSQUEHANNA RIVER
WILKES-BARRE HANOVER TWP. RAISING
Flood Line
FLOOD RISK MITIGATION MEASURES
GENERAL PLAN
SCALE OF FEET
WYOMING VALLEY, PENNSYLVANIA
1 JANUARY 2014
BALTIMORE DISTRICT NORTH ATLANTIC DIVISION

NORTHWESTERN DIVISION

CONSTRUCTION

IOWA

APPROPRIATION TITLE: Construction, Environment, Fiscal Year 2015

PROJECT: Missouri River Fish and Wildlife Recovery, Iowa, Kansas, Missouri, Montana, Nebraska, North Dakota, South Dakota, and Tributaries (Continuing)

LOCATION: The Missouri River mainstem and its tributaries.

DESCRIPTION: Within the Missouri River basin, activities will assist with recovery and provide protection to species listed under the Endangered Species Act (ESA), and the ecosystems on which they depend, to address the effects of the operation of the Missouri River Mainstem Reservoir System, the Missouri River Bank Stabilization and Navigation Project (BSNP), and the Kansas River Project. Between Sioux City, Iowa and the mouth of the Missouri River, activities will also provide for mitigation of fish and wildlife habitat losses specifically resulting from the construction and operation of the Missouri River BSNP. Only funding of activities to avoid jeopardy is being requested. This program is 100% Federally funded.

AUTHORIZATION: All existing authorized Corps of Engineers projects along the Missouri River and tributaries - including the Water Resources Development Acts (WRDA) of 1986, 1988, 1999, & 2007; National Industrial Recovery Act of 1933; Flood Control Acts of 1938, 1944, 1954; River and Harbor Act of 1945; as amended.

REMAINING BENEFIT - REMAINING COST RATIO: The remaining benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA:		ACCUM PCT OF EST FED COST	Status (1 Jan 2014)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	$3,739,687,000		Entire Project	17%	TBD
Estimated Non-Federal Other Costs	0				
Total Estimated Project Cost	3,739,687,000				
Allocations to 30 September 2011	503,469,000				
Allocation for FY 2012	72,888,000				
Allocation for FY 2013	71,856,000				
Allocation for FY 2014	58,229,000	7/			
Allocations through FY 2014	706,442,000	1/2/3/5/ 19%			
Estimated Unobligated Carry-In Funds	447,000	4/			
President's Budget for FY 2015	48,771,000	20%			
Programmed Balance to Complete after FY2015	2,984,474,000	6/			
Unprogrammed Balance to Complete after FY2015	0				

1/ $16,852,000 reprogrammed from the project.
2/ $1,071,000 rescinded from the project.
3/ $350,000 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2013 into FY 2014 for this project is $447,391. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
5/ PED costs of $700,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.
7/ Reflects the FY 2014 Omnibus Appropriations Bill. The FY 2014 Budget amount of $70 million included $20 million to award the Yellowstone Intake Diversion Dam construction contract, which could not be awarded in FY 2014. Approximately $8.229 million worth of work planned for FY 2015 was advanced into FY 2014 in order to expedite planned work on this program.

JUSTIFICATION: Funds for the Missouri River Recovery Program allow the Corps to avoid a jeopardy opinion on compliance with the Biological Opinion (BiOp) and operate the Missouri River projects in conformance with the eight authorized purposes. The Corps complies with the USFWS BiOp for the operation of the Missouri River Main Stem Reservoir System, Missouri River BSNP and the Kansas River Reservoir System (USFWS 2000, amended 2003). Actions with these funds include shallow water habitat construction/development and floodplain connection for the pallid sturgeon, emergent sandbar habitat construction for nesting tern and plover, pallid sturgeon propagation support, population assessments for the three species, an integrated science monitoring and evaluation program to assess success of management actions for the species, and development/implementation of an adaptive management strategy that includes USFWS and stakeholder participation in the Missouri River Recovery Implementation Committee (MRRIC). The program is targeting approximately 120 individual habitat creation sites, creating a riparian corridor over time. Only funding of activities to avoid jeopardy is being requested.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, including unobligated carry-in, are being used to first address the highest priority efforts to comply with the USFWS BiOp requirements. Design on the fish passage phase of the Lower Yellowstone Intake project will continue in FY 2014. Current estimated execution plan includes effort as follows:

Item	Amount	
Program Management Activities	$ 4,045,000	
Lower Yellowstone Intake Design	800,000	
Endangered Species Science, Monitoring and Evaluation	6,870,000	
MRRIC Coordination	1,814,000	
Programmatic NEPA and Consultation	2,600,000	
Shallow Water Habitat Construction	28,560,000	
Emergent Sandbar Habitat (terns and plovers)	1,600,000	
Real Estate Acquisition	12,387,000	9/
Total	$58,676,000	8/

8/ Includes unobligated carry-in from FY 2013.
9/ A survey of the acres of shallow water habitat that have been created as compared to the target acreage identified in the Biological Opinion is to be completed in FY 2014 as an interim checkpoint. Allocation of the funding for both real estate acquisition and additional habitat construction is subject to change within the overall confines of the program.

FISCAL YEAR 2015: The budget amount plus carry-in funds will be used to first address the highest priority efforts to comply with the USFWS BiOp requirements. Construction on the fish passage phase of the Lower Yellowstone Intake project will begin in FY 2015. Current estimated execution plan includes effort as follows:

Item	Amount	
Program Management Activities	$ 4,224,000	
Initiate construction of Lower Yellowstone Intake	20,000,000	
Endangered Species Science, Monitoring and Evaluation	9,805,000	
MRRIC Coordination	2,909,000	
Programmatic NEPA and Consultation	1,000,000	
Shallow Water Habitat Construction	9,913,000	10/
Emergent Sandbar Habitat (terns and plovers)	920,000	
Total	$48,771,000	

10/ A survey of the acres of shallow water habitat that have been created as compared to the target acreage identified in the Biological Opinion is to be completed in FY 2014 as an interim checkpoint. Allocation of the $9,913,000 is subject to change within the overall confines of the program.

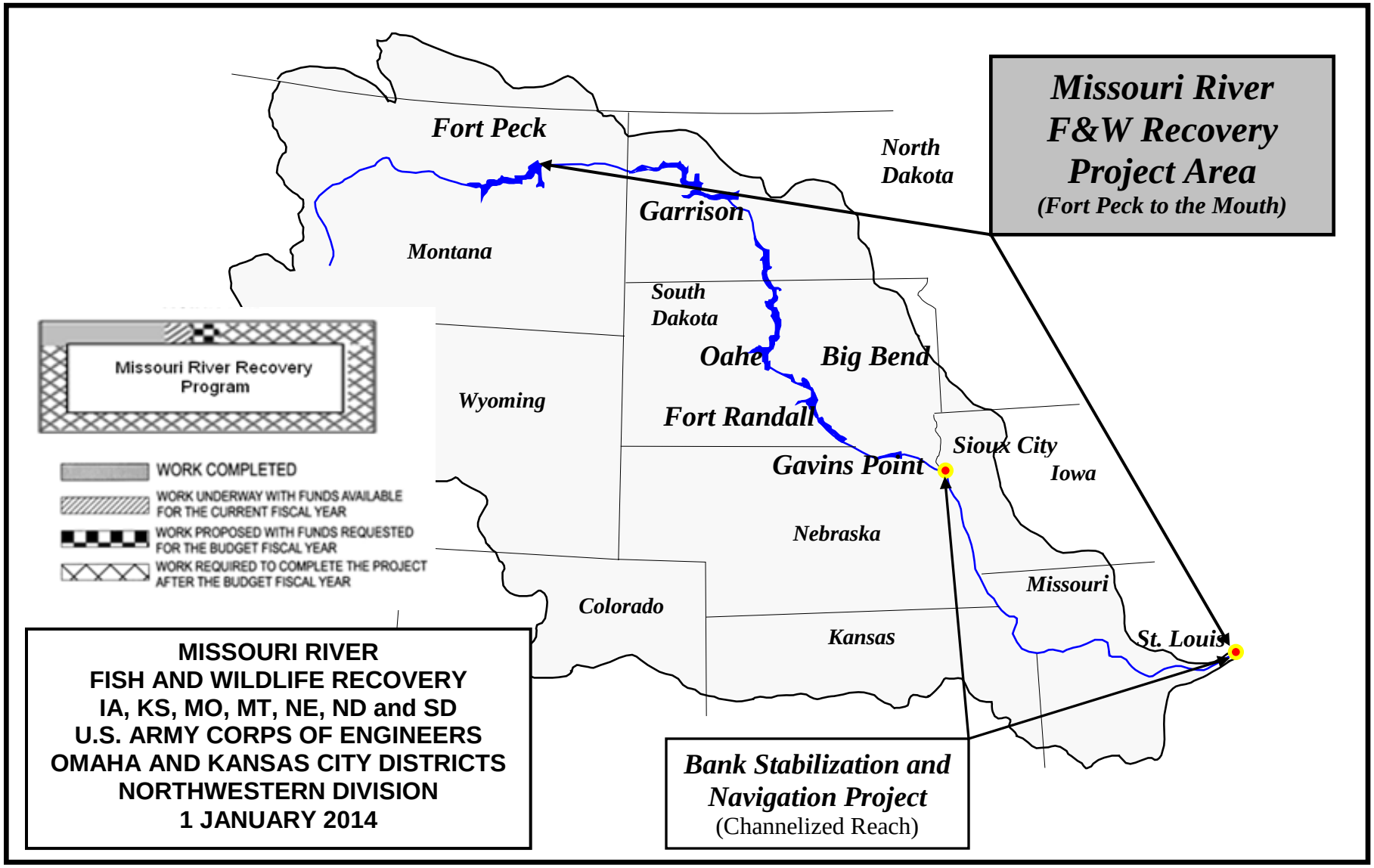
NON-FEDERAL COSTS: Not applicable

STATUS OF LOCAL COOPERATION: Endangered Species Act (ESA) compliance is a Federal responsibility. The 1986 and 1999 authorizing acts for the mitigation below Sioux City provides that the entire cost of the project, including all lands, easements, rights-of-way, and relocations, and all operation and maintenance costs be borne by the Federal Government with no costs to either local or state governments. Therefore, there is no non-Federal sponsor for the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal estimate of $3,739,687,000 is the same as last presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The 2003 Amended Biological Opinion was prepared in response to the Corps' proposed revision of the Missouri River Master Water Control Manual as discussed in the supporting National Environmental Policy Act (NEPA) documents. However, the scope of the Amended Biological Opinion is broader than dam operations. Both programmatic and site-specific NEPA documents are being prepared to fulfill NEPA responsibilities for compliance with the 2003 Amended Biological Opinion. The Missouri River Mitigation Project Final Environmental Impact Statement (EIS) was filed with the U.S. Environmental Protection Agency on 23 December 1982. A supplement to the EIS was completed to allow acquisition and habitat development on the 118,650 acres authorized in WRDA 1999. The Record of Decision was signed 12 June 2003. There remains a need to complete a NEPA document to address cumulative effects of past actions and planned BiOp actions on the Missouri River, which is being accomplished through the Missouri River Recovery Management Plan / EIS.

OTHER INFORMATION: Funds to initiate pre-construction engineering and design of the BSNP mitigation project were appropriated in FY 1990. Initial construction funds for the BSNP mitigation project were appropriated in FY 1992. Funding for the combined ESA and mitigation efforts, now known as Missouri River Fish and Wildlife Recovery, were first appropriated in FY 2005.


Missouri River F&W Recovery Project Area
(Fort Peck to the Mouth)
Fort Peck
Garrison
Oahe
Big Bend
Fort Randall
Gavins Point
Sioux City
Iowa
Missouri
St. Louis
North Dakota
Montana
South Dakota
Wyoming
Nebraska
Colorado
Kansas
Missouri River Recovery Program
WORK COMPLETED
WORK UNDERWAY WITH FUNDS AVAILABLE FOR THE CURRENT FISCAL YEAR
WORK PROPOSED WITH FUNDS REQUESTED FOR THE BUDGET FISCAL YEAR
WORK REQUIRED TO COMPLETE THE PROJECT AFTER THE BUDGET FISCAL YEAR
MISSOURI RIVER
FISH AND WILDLIFE RECOVERY
IA, KS, MO, MT, NE, ND and SD
U.S. ARMY CORPS OF ENGINEERS
OMAHA AND KANSAS CITY DISTRICTS
NORTHWESTERN DIVISION
1 JANUARY 2014
Bank Stabilization and Navigation Project
(Channelized Reach)

MISSOURI

APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2015

PROJECT: Kansas Citys, Missouri and Kansas (Continuing)

LOCATION: The Kansas Citys, Missouri and Kansas Local Protection Project consists of a system of seven levee units along both banks of the Missouri and Kansas Rivers in the Kansas City Metropolitan area.

DESCRIPTION: The North Kansas City (NKC) Levee Unit is located along the left bank of the Missouri River in North Kansas City, MO. Design deficiencies for the North Kansas City Levee System and the Fairfax-Jersey Creek Levee Unit at the BPU floodwall were both contained in the Chief's Report approved 19 December 2006 and approved by the ASA with no OMB objections and referred to Congress on 19 October 2007. Design deficiency corrections to address underseepage concerns are required at two locations, the Harlem area and the National Starch area. Modifications include the construction of relief wells and collector piping.

The Fairfax-Jersey Creek Unit is located on the left bank of the Kansas River and the right bank of the Missouri River in Kansas City, KS. Design deficiency modifications are proposed at the Board of Public Utilities (BPU) floodwall to provide stability reinforcements and underseepage control needed to provide the originally authorized level of performance. Reconstruction modifications are required at the 1,400-foot long Jersey Creek Sheet-pile Wall. Portions of this wall require replacement and 590 feet of new wall is needed.

The Chief's Report was approved on 19 December 2006 and recommended reconstruction at the Fairfax-Jersey Creek Unit at the sheet pile wall and modifications at the Argentine and East Bottoms Units:

The Argentine Unit is located on the right bank of the Kansas River in Kansas City, KS. Proposed reconstruction modifications include raising the unit height and replacing or modifying three pump stations and several closure and drainage structures.

The East Bottoms Unit is located on the right bank of the Missouri River in Kansas City, Missouri. Reconstruction modifications for underseepage improvements are needed including relief wells and buried collector pipeline.

AUTHORIZATION: 1936 and 1944 Flood Control Acts; Sec 1001 (28) Water Resources Development Act 2007.

REMAINING BENEFIT – REMAINING COST RATIO: 5.9 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 5.4 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 8.0 to 1 at 5.125 percent (FY 2010)

BASIS OF BENEFIT-COST RATIO: Benefits are from the Level I Economic Update approved in June 2012 at 2012 price levels.

SUMMARIZED FINANCIAL DATA:			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		75,286,000		Entire Project	6%	TBD
Estimated Non-Federal Cost		40,539,000				
Cash Contribution	36,938,000					
Other Costs	3,601,000					
Total Estimated Project Cost		115,825,000				
Allocations to 30 September FY 2011		5,069,000				
Allocation for FY 2012		490,000				
Allocation for FY 2013		5,723,000				
Allocation for FY 2014		5,200,000				
Allocations through FY 2014		16,482,000	1/2/3/5/ 30%			
Estimated Unobligated Carry-In Funds		2,596,000	4/			
Presidents Budget for FY 2015		1,600,000	32%			
Programmed Balance to Complete after FY 2015		57,204,000	6/			
Unprogrammed Balance to Complete after FY2015		0				

1/ $0 reprogrammed to 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 balance from FY2013 into FY2014 for this project is $2,596,161. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
5/ PED costs of $1,975,193 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.

PHYSICAL DATA: NKC Levee: underseepage control improvements in 2 areas (Harlem and National Starch sites) Deficiency Correction; Fairfax-Jersey Creek levee unit includes: (1) BPU 1,446 linear feet (lf) of floodwall strengthening – Deficiency Correction and (2) Jersey Creek Sheet-pile Wall 1,400 lf Reconstruction; East Bottoms Levee – underseepage improvements; and Argentine Levee – levee raise to provide original authorized protection.

JUSTIFICATION: NKC levee under-seepage control design deficiency (NKC Levee Unit): Failure will result in major life safety threats and property damage. Design deficiencies pose a risk of under-seepage failure for the NKC levee unit under major flood events. The project modification will provide added under-seepage control keeping pressures within appropriate design criteria. NKC levee unit provides protection to a wide range of businesses plus railroad yards, Kansas City Missouri drinking water supply facilities, and the entire downtown Kansas City airport. The unit protects approx $3,000,000,000 total investment and over 25,000 employees and 5,000 residents. Almost all of the North Kansas City community is located within the unit.

Fairfax Board of Public Utilities (BPU) floodwall foundation design deficiency (Fairfax-Jersey Creek Levee Unit): Failure will result in major life safety threats and property damage. There is a significant risk of floodwall failure which will affect entire Fairfax-Jersey Creek protected area under the extreme flood conditions. The BPU power plant which serves much of Kansas City, Kansas is adjacent to the floodwall. Overall, the Fairfax Industrial District is a major manufacturing hub including large a General Motors plant and several other Fortune 500 corporations, along with many smaller businesses. Approximately $3,000,000,000 total investment and 11,000 employees are protected by this unit.

Jersey Creek Sheet-pile Wall – Reconstruction – Failure will result in major life safety threats and property damage. This site poses a risk of sheetpile failure which would affect the entire Fairfax-Jersey Creek protected area under extreme flood conditions. Reconstruction includes replacing the wall located along the Missouri and Kansas Rivers confluence adjacent to the Fairfax Industrial District. Overall, the Fairfax Industrial District is a major manufacturing hub including a large General Motors plant and several other Fortune 500 corporations along with many smaller businesses. Approximately $3,000,000,000 total investment and 11,000 employees are protected by this unit.

Argentine Unit – Reconstruction – Failure will result in major life safety threats and property damage. The unit poses a high risk of levee overtopping and failure which will affect a large residential and business area of Kansas City, KS. Reconstruction includes raising the unit located along the Kansas River and modifying or replacing three pump stations and several closure and drainage structures. Approximately $2,500,000,000 total investment, 10,700 employees, and over 3,400 residents are protected by this unit.

East Bottoms Unit – Reconstruction – Failure will result in major life safety threats and property damage. The unit poses a risk of underseepage failure which will affect a large industrial, business, and residential area of Kansas City, MO. Reconstruction includes the installation of relief wells and buried collector piping. Approximately $4,500,000,000 total investment, 20,100 employees, and over 3,200 residents are protected by this unit.

The average annual benefits are $41,336,000.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus unobligated carry-in, are being applied as follows:

Initiate East Bottoms Construction	1,500,000	
Initiate Fairfax-Jersey Creek Sheetpile Construction	1,136,000	
Complete Fairfax-BPU Floodwall Construction	2,374,000	
Complete Fairfax-BPU Design	1,162,000	
Complete East Bottoms Design	500,000	
Complete Fairfax-Jersey Creek Sheetpile Design	600,000	
Construction Management	524,000	
Total	$7,796,000	8/ 9/

8/ Includes unobligated carry-in from FY2013.
9/ The work items have been adjusted between the four non-Federal Sponsors to maintain progress on the overall project completion.

FISCAL YEAR 2015: The budget amount will be applied as follows:

Continue Fairfax-Jersey Creek Sheetpile Construction	$1,500,000
Construction Management	100,000
Total	$1,600,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, as amended, 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: Provide lands, easements, rights of way, and borrow and excavated material disposal areas which may be reduced for credit allowed based on prior work after reductions for such credit have been made in the required cash payments.	2,314,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	1,287,000	
Pay for Plans and Specifications for Relocations of utilities and roads	0	
Pay the costs allocated to flood control to bring the non-Federal share of flood control costs to 35 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	36,938,000	93,000
Total Non-Federal Costs	40,539,000	93,000

STATUS OF LOCAL COOPERATION: The following is the status of cost sharing agreements:

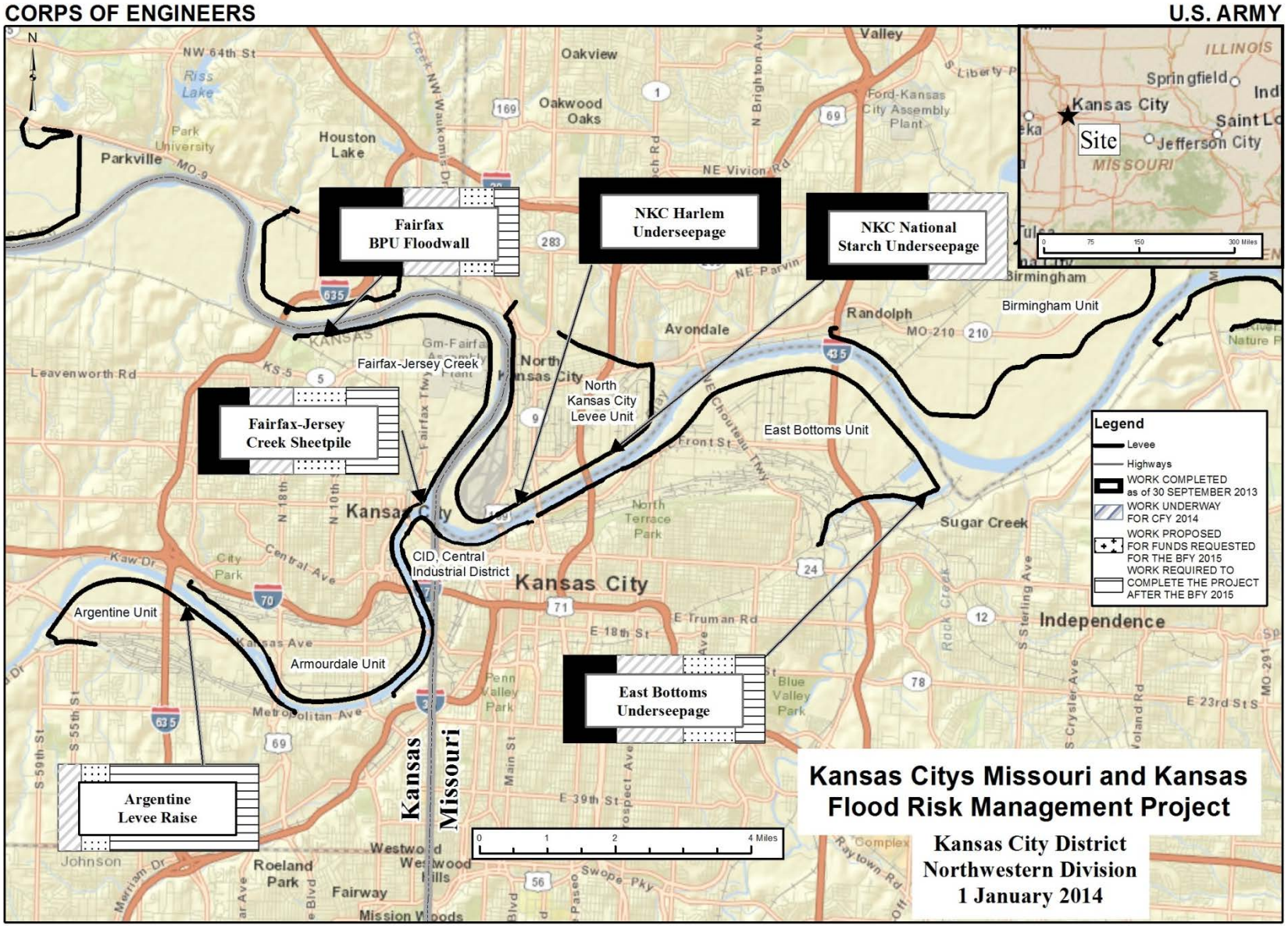
(1) Jersey Creek Sheetpile: A Design Agreement (DA) was executed in January 2010 with the Kaw Valley Drainage District and the Project Partnership Agreement (PPA) is scheduled for execution in April 2014.
(2) East Bottoms: A DA was executed in February 2012 with the Water Service Department of Kansas City, Missouri and the PPA is scheduled for execution in May 2014.
(3) Argentine: A DA has not been executed with the sponsor, Kaw Valley Drainage District,
(4) North Kansas City: The PPA was executed in June 2011 with the North Kansas City Levee District.
(5) Fairfax- BPU Floodwall: The PPA was executed in July 2013 with the Fairfax Drainage District.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $75,286,000 is an increase of $7,166,000 from the latest estimate ($68,120,000) presented to Congress (FY2014). This change includes the following items.

Item	Amount
Design Changes	$7,166,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The cost estimate is under review. The Interim Feasibility Report and Environmental Impact Statement (EIS), dated August 2006 with Addendum dated December 2006 addresses opportunities for flood risk reduction for the Argentine, East Bottoms, Fairfax-Jersey Creek, Birmingham and North Kansas City levee units of the Kansas Citys Local Flood Damage Reduction Project. The recommended plan has relatively minor impacts to the natural environment with overall positive benefits to the socio-economic environment. Impacts to the natural environment are minor because the project is located within a previously disturbed environment that is highly industrial and urbanized. All practicable means to avoid and/or minimize adverse environmental effects have been incorporated into the recommended plan. The Record of Decision was signed by the Assistant Secretary of the Army (CW) on 21 Nov 2007.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 2007 and funds to initiate construction were appropriated in FY 2010.



Division: Northwestern | District: Kansas City | Kansas Citys, MO & KS

28 March 2014

OREGON

APPROPRIATION TITLE: Construction, Navigation (Major Rehabilitation), Fiscal Year 2015

PROJECT: Columbia River at the Mouth, Oregon and Washington (Continuing)

LOCATION: The project is located at the entrance of the Columbia River to the Pacific Ocean and is about 120 miles downstream of Portland, OR and Vancouver, WA.

DESCRIPTION: The project will rehabilitate the Mouth of Columbia River (MCR) jetty system which consists of three rubble-mound jetties, with a total originally authorized length of 10.2 miles. It was constructed from 1885-1939 on massive tidal shoals to secure consistent navigation through the coastal inlet. The North Jetty is about 2.5 miles long, the South Jetty is about 6.6 miles long and the Spur Jetty 'A' is about 1.1 miles long.

AUTHORIZATION: River & Harbors Acts; 5 July 1884, 3 March 1905 and 3 September 1954. Public Law 98-63, 30 July 1983.

REMAINING BENEFIT - REMAINING COST RATIO: 1.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.1 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: N/A

BASIS OF BENEFIT COST RATIO: Benefits are from the June 2012 major rehabilitation report at 2012 price levels.

SUMMARIZED FINANCIAL DATA				ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
					Jetty 'A'	0%	TBD
					N. Jetty	0%	TBD
					South Jetty	0%	TBD
Estimated Federal Cost		$257,201,000	1/				
Programmed Construction	257,201,000						
Un-programmed Construction	0						
Estimated Non-Federal Cost		0					
Total Estimated Programmed Construction Cost		257,201,000					
Total Estimated Unprogrammed Construction Cost		0					
Total Estimated Project Cost		257,201,000					
Allocations to 30 September 2011		0					
Allocation for FY 2012		0					
Allocation for FY 2013		0					
Allocation for FY 2014		1,000,000					
Allocations through FY 2014		1,000,000	2/ 3/ 4/ 6	0%			
Estimated Unobligated Carry-in Funds		0	5/				
President's Budget for FY 2015		1,000,000					
Programmed Balance to Complete after FY 2015		255,201,000	7/		.		
Un-programmed Balance to Complete After FY 2014		0					

1/ The mitigation requirements for this project are currently unknown.
2/ $ 0 reprogrammed to 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 balance from FY 2013 into FY 2014 for this project is $0. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $ 0. This amount will be used to perform work on the project as follows: N/A
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.

PHYSICAL DATA: The Rivers and Harbor Act of 5 July 1884 authorized construction of the South Jetty (first 4.5 miles) to attain a 30-foot deep navigation channel across the MCR bar. The Rivers and Harbor Act of 3 March 1905 authorized the extension of the South Jetty to 6.6 miles and construction of the North Jetty to 2.5

miles long to attain a 40-foot channel. Jetty A was authorized and constructed to 1.1 miles in length for channel stabilization in connection with the rehabilitation of the North Jetty. Its purpose was to assist in controlling the location and direction of the ebb tidal flow through the navigation entrance.

JUSTIFICATION: The MCR jetty system is in a state of structural decay. Continued deterioration, ongoing storm activity, and the continued loss of sand shoal material at the foundation of each of the three MCR jetties, has resulted in more frequent and costly emergency repairs. In the absence of action to address this concern, the jetties and sand shoals upon which they rest will further deteriorate, increasing the likelihood of a jetty breach, which could have a significant impact on access to the entrance of the navigation channel by commercial deep draft vessels using Columbia River port facilities

Rehabilitation of all three jetties would also: (1) lessen wave heights and currents affecting the navigation channel thus improving safety; (2) decrease future O&M dredging; (3) decrease the need for O&M repairs; and (4) improve structural reliability of the jetties. The MCR jetty system is the most significant coastal navigation structure in the Pacific Northwest.

Functioning jetties at the MCR annually support the following:

- $20,000,000,000 in international trade
- 42 million tons of cargo 8/
- 4,000 vessel crossings 8/
- 1,375 vessel crossings requiring 30-foot draft or greater 8/
- More than 40,000 maritime-related jobs
- U.S. Coast Guard Search and Rescue activities

8/ Data from Waterborne Commerce of the United States, 2010

According to the Center for Economic Development and Research, the Columbia/Snake River navigation system is the number one export gateway for the Nation's wheat and barley exports. It is also the number one export gateway for west coast wood and mineral bulk exports and number one for automobile imports. Marine traffic passing the entrance of the Columbia River has increased by 34% from 32 million tons in 2003 to 42 million tons in 2010.

The Average Annual Benefits are: $13,464,633

FISCAL YEAR 2014: The total fiscal year 2014 appropriations are being applied as follows:

Initiate and complete design for Jetty 'A'	$1,000,000

FISCAL YEAR 2015: The budget amount plus carry-in will be applied as follows:

DDR, P&S, Modeling for North Jetty	$1,000,000

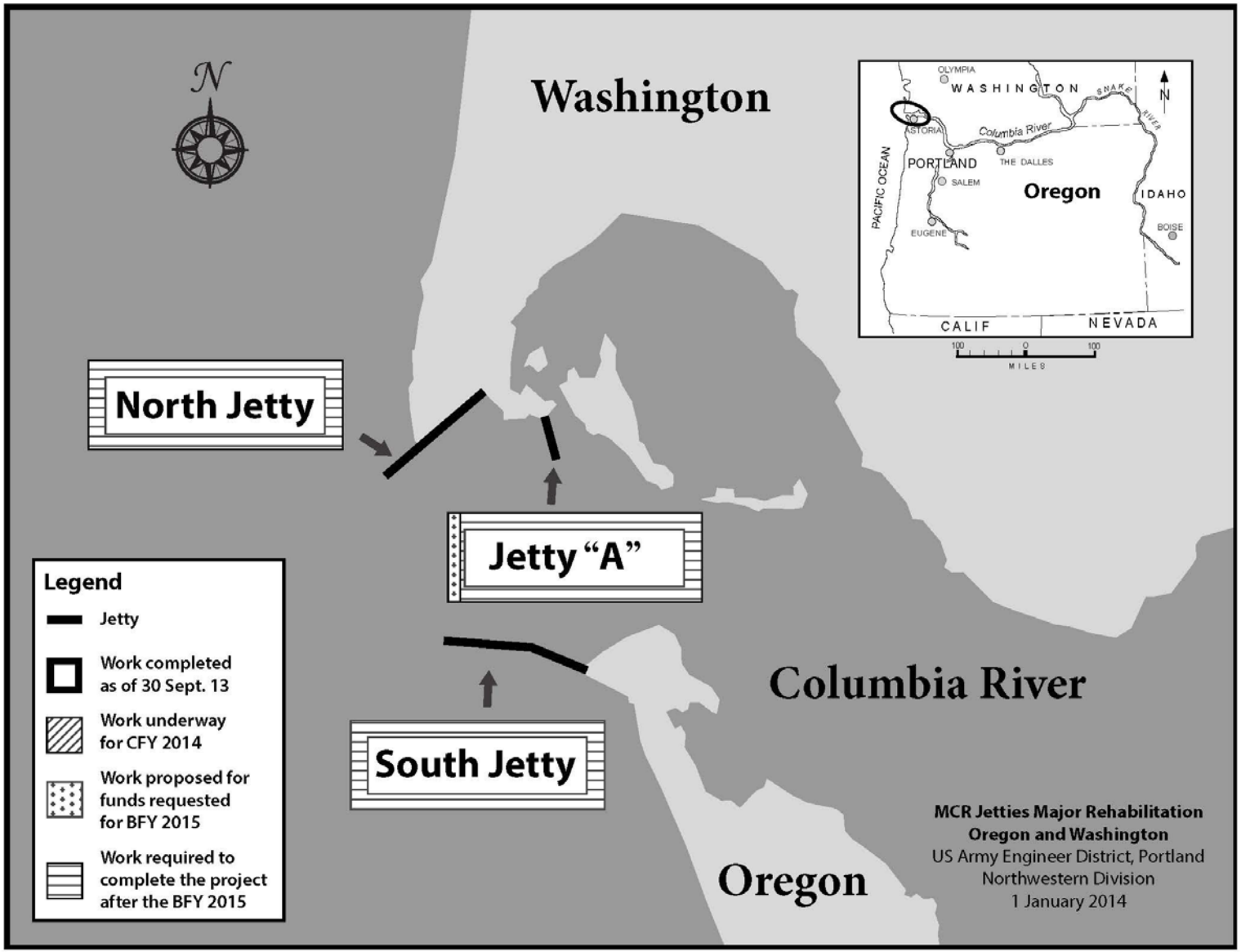
NON-FEDERAL COSTS: The MCR jetty system was authorized prior to the Water Resources Development Act of 1986, and was not subject to cost-sharing in that Act or subsequent law. Therefore, the Federal government will pay 100% of this project's costs.

STATUS OF LOCAL COOPERATION: The MCR jetty system is a 100% USACE owned and maintained project. There is no local cooperation required.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $257,201,000 is the same as last presented to Congress (FY 2014).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An EIS is not required. An Environmental Assessment was completed June 2012.

OTHER INFORMATION: None.


Washington
North Jetty
Jetty "A"
South Jetty
Columbia River
Oregon
Legend
Jetty
Work completed as of 30 Sept. 13
Work underway for CFY 2014
Work proposed for funds requested for BFY 2015
Work required to complete the project after the BFY 2015
MCR Jetties Major Rehabilitation
Oregon and Washington
US Army Engineer District, Portland
Northwestern Division
1 January 2014
OLYMPIA
WASHINGTON
SNAKE RIVER
ASTORIA
Columbia River
PORTLAND
THE DALLES
SALEM
Oregon
IDAHO
PACIFIC OCEAN
EUGENE
BOISE
CALIF
NEVADA
MILES

APPROPRIATION TITLE: Construction, Environment, Fiscal Year 2015

PROJECT: Lower Columbia River Ecosystem Restoration, Oregon and Washington (Continuing)

LOCATION: The Lower Columbia River extends from the mouth of the Columbia River to River Mile 145 at Bonneville Lock and Dam.

DESCRIPTION: The project area includes the estuary of the Columbia River and all tributaries of the Columbia River that are tidally influenced, which includes the Willamette River up to Willamette Falls. The project is based on non-monetary quantitative changes in fish and wildlife habitat units and other biological benefits (see Justification paragraph.) A comprehensive conservation and management plan was developed for the Lower Columbia River in 1999 under Section 320 of the Federal Water Pollution Control Act (33 U.S.C. 1330).

AUTHORIZATION: Section 536 of the Water Resources Development Act (WRDA) of 2000 (P. L. 106-541, dated 11 December 2000). Legislative language to increase the authorized cost is proposed with the President's Budget for FY 2015. See Other Information.

REMAINING BENEFIT - REMAINING COST RATIO: The remaining benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA:			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
				Entire Project	26%	TBD
Estimated Federal Cost		75,000,000				
Programmed Construction	75,000,000					
Unprogrammed Construction	0					
Estimated Non-Federal Cost	4,000,000					
Total Estimated Programmed Construction		79,000,000				
Total Estimated Unprogrammed Construction		0				
Total Estimated Project Cost		79,000,000				
Allocations to 30 September 2011		14,863,000	7/			
Allocation for FY 2012		4,200,000				
Allocation for FY 2013		3,643,000				
Allocation for FY 2014		4,634,000				
Allocations through FY 2014		27,340,000	1/ 2/ 3/ 5/ 36%			
Estimated Unobligated Carry-in Funds		18,000	4/			
President's Budget for FY 2015		1,400,000				
Programmed Balance to Complete after FY 2015		46,260,000	6/			
Un-programmed Balance to Complete after FY 2015		0				

1/ $1,981,000 reprogrammed from the project.
2/ $55,000 rescinded from the project.
3/ $0 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated Carry-in Funds: The actual unobligated balance from FY2013 into FY2014 for this project is $18,441. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A
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. See Authorization.
7/ Adjusted to correct $175,000 allocation error on J-sheets in prior years.

PHYSICAL DATA: Types of projects will include, but not be limited to: creation and restoration of shallow water habitat; restoration of wetlands; improvements to fish passage; restoration of floodplain functions and other actions to restore the estuary ecosystem.

JUSTIFICATION: The Lower Columbia River basin has undergone considerable changes in water resource needs and uses and experienced significant environmental degradation. Human modifications have changed the hydrologic regime and caused increased water temperatures and losses of critical juvenile salmon habitat. Losses of in-stream, riparian and wetland habitats, and reduced genetic diversity of fish and wildlife resources have resulted from these modifications. Over the last century, the amount of forested and tidal swamp habitat (including tidal sloughs in the region) has decreased by about 78% over historical levels because of dike and levee building and associated development activities. Riparian plant communities and forests have declined about 86% from historical levels. The lower river and estuary are critical areas for migrating juveniles, especially anadromous salmonids federally listed as threatened or endangered, because these areas provide refuge from predators, feeding grounds, and areas to transition physiologically from freshwater to saltwater. Flood risk management, water quality, navigation, water-related infrastructure, and ecosystem restoration needs have all been evaluated on a case-by-case basis. Section 536 of WRDA 2000 provided the authority for the U.S. Army Corps of Engineers to construct ecosystem restoration projects in the Lower Columbia River estuary and Tillamook Bay. These two estuaries are designated as national estuaries of significance under the National Estuary Program (NEP). As a result, added emphasis was placed on the Lower Columbia River Estuary programs Comprehensive Conservation Management Plan. Also during that time period, the National Marine Fisheries Service (NOAA Fisheries) identified the Columbia River Estuary as an important link in the anadromous salmonid lifecycle for rebuilding the productivity of Columbia River Basin salmon and steelhead listed under the Endangered Species Act (ESA). Thirteen stocks of anadromous salmonids, as well as green sturgeon and eulachon, have been listed as threatened or endangered under the ESA. These listed species rely on healthy estuary -conditions for their survival. The listing of these species have broad implications to existing water resource uses and future development. The 2010 Supplemental Biological Opinion (BiOp) to the 2008 Federal Columbia River Power System (FCRPS) Biological Opinion (BiOp) includes Reasonable and Prudent Alternative (RPA) actions calling for planning and restoration efforts in the Columbia River estuary to help avoid jeopardy for these listed species, or actions resulting in the destruction or adverse modification of critical habitat. On August 2, 2011, the U.S. District Court ruled that the 2008/2010 BiOp, including the RPA's habitat mitigation measures, remain in place through 2013, but ordered NOAA Fisheries to either produce a new or supplemental BiOp to correct the 2008/2010 BiOp's reliance on post-2013 measures that the court concluded were unidentified and not reasonably certain to occur. NOAA Fisheries issued a Supplemental BiOp on January 17, 2014. Historic losses of 52,000 acres of wetland/marsh habitats, 13,800 acres of riparian forest habitat and 27,000 acres of forested wetland habitat downstream of Portland have impacted this ecosystem's ability to produce and sustain fish and wildlife resources. Much of this wetland loss can be attributed to the 84,000 acres encompassed by diking districts and the 20,000-acre increase in urban development that has occurred along the Lower Columbia River.

The implementation of the Lower Columbia River element of the Section 536 legislation serves as a catalyst to bring together and implement current efforts by governmental and private organizations including, but not limited to, the EPA's National Estuary Program, six state agencies from Oregon and Washington, four Federal agencies, recreation, ports, industry, agriculture, labor, commercial fishing, environmental interests and citizens to identify and cost share restoration projects and provide ecosystem benefits to terrestrial, plant and 15 listed ESA fish species.

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus unobligated carry-in, are being applied as follows:

Continue study on the Trestle Bay site		$100,000	
Complete construction on the Sandy River site		93,000	
Complete construction on the Steamboat Slough site		4,459,000	
	Total	$4,652,000	8/

8/ Includes unobligated carry-in from FY2013

FISCAL YEAR 2015: The budget amount plus carry-in funds will be applied as follows:

Initiate two studies	$1,400,000
Total	$1,400,000

NON-FEDERAL COSTS: The authorization provides that studies shall be subject to cost sharing in accordance with Section 105 of WRDA 1986 and that restoration projects shall be cost shared at 35 percent by non-Federal interests, that non-federal interests shall provide all lands, easements, rights-of-way, dredged material disposal areas, and relocations necessary for the projects to be carried out and that in-kind contributions cannot exceed 50 percent of the non-Federal share. However, the Federal share of projects carried out on Federal lands shall be 100 percent.

STATUS OF LOCAL COOPERATION: Project Agreements for individual restoration sites are prepared/executed as they are identified.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $75,000,000 is an increase of $45,000,000 from the latest estimate of $30,000,000 presented to Congress (FY 2014). See Other Information. This change includes the following item:

Item	Amount
Additional project sites	$45,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Impact Statement has not been prepared. National Environmental Policy Act (NEPA) documentation for individual restoration sites is prepared as they are identified.

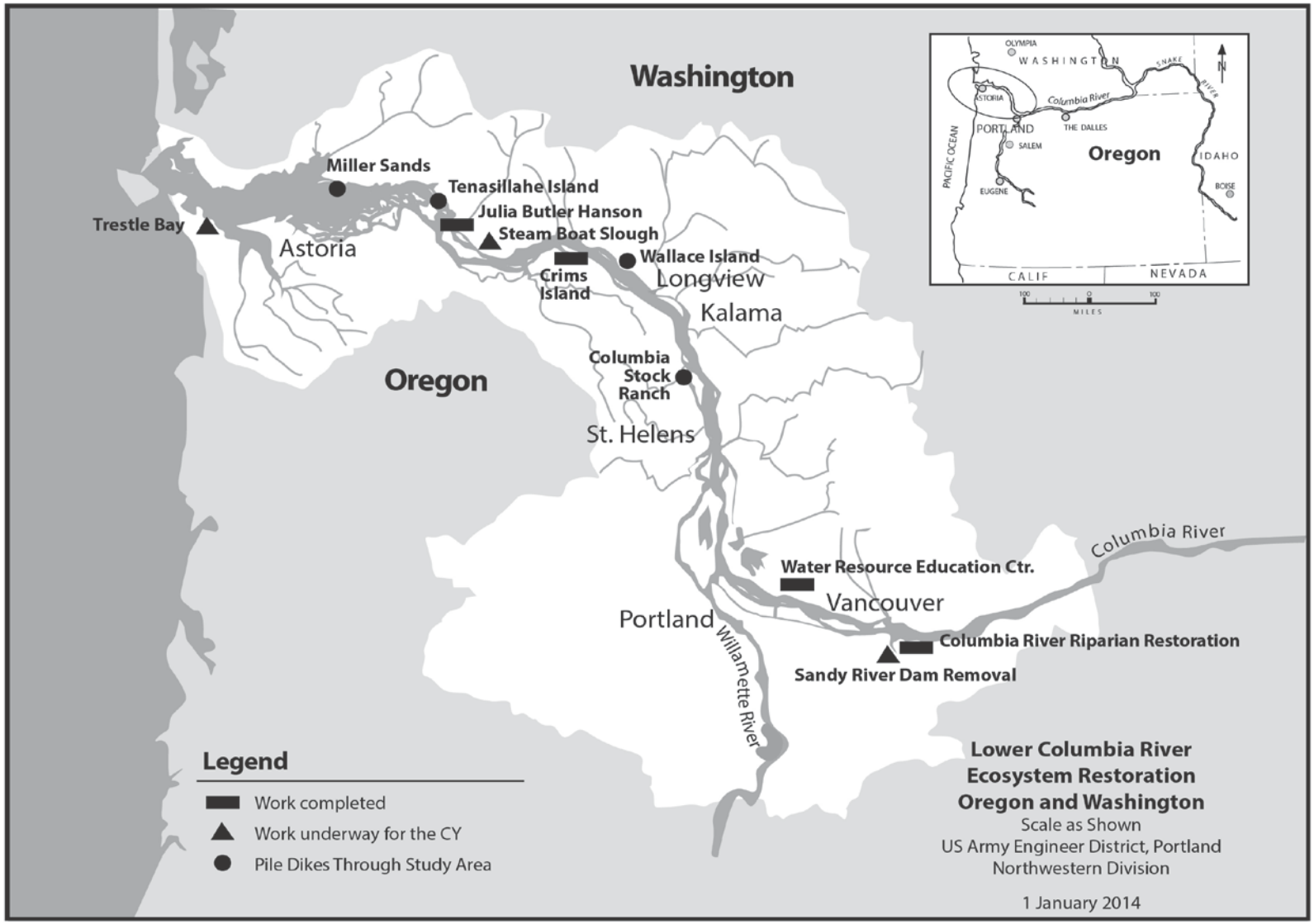
OTHER INFORMATION: Funds to initiate engineering and design and construction were first appropriated in FY 2003.

The current Federal amount authorized to be appropriated on this project is $30,000,000. The current Federal cost estimate of $75,000,000 is based on completion of additional restoration sites necessary to meet FCRPS BiOp requirements and requires enactment of legislation to increase the statutory authorization limit from $30,000,000 to $75,000,000. See Authorization.

The FCRPS BiOp requirements to be met by 2018 include increasing survival of ocean-type species by nine percent and stream-type species by six percent. Projects would include: Creation and restoration of shallow water habitat, restoration of wetlands, improvement of fish passage, restoration of floodplain functions and other actions to restore the Columbia River estuary ecosystem.

The Fiscal Year data identifies the projects and phases anticipated. The Corps and the region are continuously and frequently identifying new sites, prioritizing the list of projects to maximize both the return on the Federal investment and the benefit to listed species. Therefore, if a project cannot advance, a list of replacement projects is readily available.

The Corps is also undertaking the Lower Columbia River Ecosystem Restoration, WA & OR feasibility study, funded under the Investigations account, with a broader geographical scope than this project. That feasibility study will address ecosystem issues in addition to salmon recovery.


Washington
Oregon
Miller Sands
Tenasillahe Island
Julia Butler Hanson
Steam Boat Slough
Trestle Bay
Astoria
Wallace Island
Crims Island
Longview
Kalama
Columbia Stock Ranch
St. Helens
Water Resource Education Ctr.
Vancouver
Columbia River
Portland
Willamette River
Columbia River Riparian Restoration
Sandy River Dam Removal
Legend
Work completed
Work underway for the CY
Pile Dikes Through Study Area
Lower Columbia River
Ecosystem Restoration
Oregon and Washington
Scale as Shown
US Army Engineer District, Portland
Northwestern Division
1 January 2014
OLYMPIA
WASHINGTON
SNAKE RIVER
ASTORIA
Columbia River
PORTLAND
THE DALLES
SALEM
Oregon
IDAHO
PACIFIC OCEAN
EUGENE
BOISE
CALIF
NEVADA
MILES

WASHINGTON

APPROPRIATION TITLE: Construction, Environment, Fiscal Year 2015

PROJECT: Columbia River Fish Mitigation, Washington, Oregon, & Idaho (Continuing)

LOCATION: Lower Columbia, Snake and Willamette Rivers.

DESCRIPTION: The Columbia River Fish Mitigation program is comprised of efforts by the Corps to address the Endangered Species Act Biological Opinion Reasonable and Prudent Alternative (RPA) actions identified in the Federal Columbia River Power System (FCRPS) and the Willamette River Biological Opinions specified by the National Marine Fisheries Service and the U.S. Fish and Wildlife Service. These BiOp RPA actions address the effects of the operation and maintenance of the Corps' FCRPS and Willamette River projects in order to avoid jeopardy of ESA listed species and adverse modification of designated critical habitat. A Biological Opinion on the FCRPS was issued in 2000 and was remanded by the Court to the National Oceanic and Atmospheric Administration (NOAA). A new Biological Opinion was issued in 2004 which was also remanded. A new Biological Opinion was issued in 2008, which was also remanded and supplemented in 2010. On August 2, 2011, the U.S. District Court ruled that the 2008/2010 Supplemental BiOp remain in place through 2013, and NOAA Fisheries issued the 2014 FCRPS Supplemental BiOp on January 17, 2014 to correct the 2008/2010 Supplemental BiOp's reliance on post-2013 measures that the court concluded were unidentified and not reasonably certain to occur. Current RPA actions include adult and juvenile fish passage improvements, as well as avian predation management and salmon survival research and development. In addition, the Corps, Bonneville Power Administration and Bureau of Reclamation entered into the 2008 Columbia River Basin Fish Accords to provide certainty of implementation on many RPA actions. The Corps primary funding commitment to the Accords includes improvements to passage of Pacific Lamprey (Lamprey) at the lower Snake and lower Columbia River dams although Pacific Lamprey actions are not BiOp RPAs.

AUTHORIZATION: FCRPS : 1933 Federal Emergency Administration of Public Works; 1935, 1945 and 1950 River and Harbor Acts; 1937 Bonneville Project Act; 1938, 1948, 1950 and 1954 Flood Control Acts; Water Resources Development Act (WRDA) 1986, Section 906(b)(1); WRDA 1996, Section 511, as amended by WRDA 1999, Section 582 and WRDA 2007, Section 5025. Legislative language to increase the authorized cost of estuary actions under Section 511(a) of WRDA 1996 is proposed with the President's Budget for FY 2015. Willamette River: 1938, 1950 and 1960 Flood Control Acts; 1937 Bonneville Project Act; WRDA 1996 Section 101 (a) 25, as amended by Section 344 of WRDA 1999.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio for this project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The basis of benefit-cost ratio is not applicable to this project because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PCT COMPL	PHYSICAL COMPLETION SCHEDULE
Total Project Summary						
Estimated Appropriation Requirement (Corps of Engineers)		2,337,080,000		Entire Project	74%	TBD
				FCRPS	81%	TBD
Estimated Other Federal Costs [Bonneville Power Administration (BPA)]		9,670,000		Lamprey	43%	TBD
				Willamette River	34%	TBD
Total Federal Cost		2,346,750,000				
Future Non-Federal Reimbursement	1,780,338,000		7/			
Estimated Federal Cost (Ultimate)	556,742,000					
Estimated Non Federal Cost		1,780,338,000				
Cash Contributions	0					
Other Costs	0					
Reimbursements, Power	1,780,338,000					
Total Estimated Project Cost		2,346,750,000				
FCRPS						
Estimated Appropriation Requirement (Corps of Engineers)		1,970,962,000				
Estimated Other Federal Costs (BPA)		9,670,000				
Total Federal Cost		1,980,632,000				
Future Non-Federal Reimbursement	1,622,761,000		7/			
Estimated Federal Cost (Ultimate)	348,201,000					
Estimated Non Federal Cost		1,622,761,000				
Cash Contributions	0					
Other Costs	0					
Reimbursements, Power	1,622,761,000					
Total Estimated Project Cost		1,980,632,000				
Allocations to 30 September 2011		1,522,556,000				
Allocation for FY 2012		72,874,000				
Allocation for FY 2013		45,735,000				
Allocation for FY 2014		72,883,000				
Allocations through FY 2014		1,714,048,000	1/ 2/ 3/ 5/	87%		
Unobligated Carry-In Funds		346,000	4/			
President's Budget for FY 2015		44,000,000		89%		
Programmed Balance to Complete after FY 2015		212,914,000	6/ 8/			
Unprogrammed Balance to Complete after FY 2015		0				

Pacific Lamprey				
Estimated Appropriation Requirement (Corps of Engineers)		66,118,000		
Estimated Other Federal Costs (BPA)		0		
Total Federal Cost		66,118,000		
Future Non-Federal Reimbursement	53,556,000		7/	
Estimated Federal Cost (Ultimate)	12,562,000			
Estimated Non Federal Cost		53,556,000		
Cash Contributions	0			
Other Costs	0			
Reimbursements, Power	53,556,000			
Total Estimated Project Cost		66,118,000		
Allocations to 30 September 2011		16,275,000		
Allocation for FY 2012		8,657,000		
Allocation for FY 2013		9,240,000		
Allocation for FY 2014		4,100,000		
Allocations through FY 2014		38,272,000	5/	58%
Unobligated Carry-In Funds		3,000	4/	
President's Budget for FY 2015		2,000,000		61%
Programmed Balance to Complete after FY 2015		25,846,000	6/ 8/	
Unprogrammed Balance to Complete after FY 2015		0		

Willamette River				
Estimated Appropriation Requirement (Corps of Engineers)		300,000,000		
Estimated Other Federal Costs (BPA)		0		
Total Federal Cost		300,000,000		
Future Non-Federal Reimbursement	104,021,000		7/	
Estimated Federal Cost (Ultimate)	195,979,000			
Estimated Non Federal Cost		104,421,000		
Cash Contributions	0			
Other Costs	0			
Reimbursements, Power	104,021,000			
Total Estimated Project Cost		300,000,000	8/	
Allocations to 30 September 2011		51,423,000		
Allocation for FY 2012		46,780,000		
Allocation for FY 2013		27,859,000		
Allocation for FY 2014		24,570,000		
Allocations through FY 2014		150,632,000	5/	50%
Unobligated Carry-In Funds		11,000	4/	
President's Budget for FY 2015		25,000,000		59%
Programmed Balance to Complete after FY 2015		124,368,000	6/ 8/	
Unprogrammed Balance to Complete after FY 2015		0		

1/ $30,877,505 reprogrammed to the project.
2/ $2,806,814 rescinded from the project.
3/ $200,000 transferred to the Flood Control and Coastal Emergencies account.
4/ Unobligated Carry-in Funding: The total actual unobligated balance from FY 2013 into FY 2014 for this project is $360,000. Unobligated carry-in by subproject is: FCRPS $346,000, Lamprey $3,000 and Willamette River $11,000. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the project as follows: N/A.
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.
7/ Allocation for actual reimbursement by the Bonneville Power Administration is made as each element is placed in service.
8/ See Other Information.

PHYSICAL DATA

FCRPS

Lower Granite Lock & Dam
- Juvenile fish bypass system
- Juvenile fish transport facilities
- Barge moorage
- Fish transport barges
- Spillway flow deflectors
- Spillway weir
- Juvenile passage monitoring facilities
- Adult fish ladders
- Adult passage monitoring facilities

Little Goose Lock & Dam
- Juvenile fish bypass system
- Adult fish ladders
- Spillway flow deflectors
- Spillway weir
- Juvenile fish transport facilities

Lower Monumental Lock & Dam
- Juvenile fish bypass system
- Juvenile fish transport facilities
- Spillway flow deflectors
- Spillway weir
- Juvenile passage monitoring facilities
- Adult fish ladders

The Dalles Lock & Dam
- Tailrace spill wall
- Spillway improvements
- Sluiceway surface passage
- Adult fish ladders

McNary Lock & Dam
- Juvenile fish bypass system
- Juvenile fish transport facilities
- Juvenile passage monitoring facilities
- Spillway flow deflectors
- Spillway weirs
- Adult fish ladders
- Adult passage monitoring facilities

John Day Lock & Dam
- Juvenile fish bypass system
- Juvenile passage monitoring facilities
- Spillway flow deflectors
- Spillway weirs
- Adult fish ladders
- Mitigation hatcheries

Ice Harbor Lock & Dam
- Juvenile fish bypass system
- Spillway flow deflectors
- Spillway weir
- Juvenile passage monitoring facilities
- Adult fish ladders

Bonneville Lock and Dam
- Juvenile fish bypass system
- Independent station service
- Juvenile fish monitoring facilities
- Corner collector surface passage
- Spillway flow deflectors
- Sea lion barriers
- Adult fish ladders
- Adult passage laboratory
- Adult passage monitoring facilities
- Sluiceway surface passage

Mitigation Analysis
- Gas abatement
- Adult passage
- Turbine Passage
- Project passage efficiency and survival studies
- Prototype facility studies
- Delayed & multiple bypass mortality studies
- Temperature impacts

Lower Columbia River estuary
- Avian Predation Reduction
- Estuary Studies

Pacific Lamprey

Lower Granite Lock & Dam
- Minor Adult Ladder Modifications

McNary Lock & Dam
- Minor Adult Ladder Modifications
- South Shore Adult Ladder Entrance
- JBS Raceway Tail Screens

Bonneville Lock and Dam
- Cascade Island Lamprey Passage Structure
- WA Shore Adult Ladder Flume System
- Adult Count Station Picketed Lead Modifications
- Minor Adult Ladder Modifications

Little Goose Lock & Dam
- Minor Adult Ladder Modifications
- Adult Ladder Entrance Modifications

John Day Lock & Dam
- North Adult Fish Ladder
- Adult Lamprey Trap
- Minor Adult Ladder Modifications

The Dalles Lock and Dam
- Minor Adult Ladder Modifications

Lower Monumental Lock & Dam
- Minor Adult Ladder Modifications
- Adult Ladder Entrance Modifications

Ice Harbor Lock & Dam
- Minor Adult Ladder Modifications
- Adult Ladder Entrance Modifications
- Turbine Cooling Water Intake Screens

Mitigation Analysis
- JSATs Juvenile Lamprey Tag
- Adult Passage Studies
- Juvenile Passage and Success Studies

Willamette River (By Sub-Basin)

North Santiam River
- Adult Passage
- Juvenile Downstream Passage
- Temperature Control
- Research, Monitoring and Evaluation

South Santiam River
- Adult Passage
- Juvenile Downstream Passage
- Temperature Control
- Research, Monitoring and Evaluation

Middle Fork Willamette River
- Adult Passage
- Juvenile Downstream Passage
- Temperature Control
- Research, Monitoring and Evaluation

McKenzie River
- Juvenile Downstream Passage
- Research, Monitoring and Evaluation

System Wide
- Configuration and Operation Plan
- Sytemwide Research, Monitoring and Evaluation

JUSTIFICATION: The National Oceanic and Atmospheric Association National Marine Fisheries Service (NOAA Fisheries) has listed salmon and steelhead as threatened/endangered and has issued Biological Opinions [BiOp(s)] on operation of the FCRPS issued 1992, 1993, 1995, 1998, 2000, 2004, 2008, the 2010 Supplemental BiOp which includes the Adaptive Management Implementation Plan and amendments, and the 2014 FCRPS Supplemental BiOp The current scope of this project has been adjusted to be in accord with biological opinions and specific dates for Reasonable and Prudent Alternative (RPA) actions identified in the BiOp(s). The Mitigation Analysis, begun in FY 1991, is contributing to a regionally collaborative process for analyzing the RPA actions and their efficacy for avoiding jeopardy of ESA listed species and adverse modification of designated critical habitat.

In response to Section 582 of WRDA 1999 and in recognition of the effects of the hydropower system operations on the Columbia River estuary and concomitant impacts on salmonids, efforts began in FY 2001 to conduct monitoring, research, and evaluation of habitat and avian predation issues in the estuary. From FY 2008 to FY 2013, under the authority of Section 906b of WRDA 1986, the Corps initiated actions to relocate a portion of the Caspian Tern colony in the estuary to reduce predation on migrating juvenile salmonids. Starting in FY 2014, avian predation actions are being funded under the authority of Sec 511(c) of WRDA 1996. The FY 2015 Budget includes language to increase the authorized program limit for the Section 511(a) of WRDA 1996 as amended by Section 582 of WRDA 1999. This authority was further amended by WRDA 2007, Section 5025 to increase the funding cap for research and development from $10 million to $25 million and to increase the funding cap for avian predation from $1 million to $10 million.

Pacific Lamprey: As a result of the May 2008 Columbia Basin Fish Accords, increased efforts to investigate and improve juvenile and adult Pacific lamprey passage and survival at the FCRPS dams was initiated in FY 2009 with the goal to complete significant improvements by 2018.

Willamette River: Separate BiOps on the Willamette River were issued by NOAA Fisheries and the United States Fish and Wildlife Service (USFWS) in July 2008. The Corps has initiated actions to comply with the most urgent BiOp requirements and is additionally completing a study to further recommend appropriate structural and operational changes to the Willamette River Basin to address impacts on listed species resulting from the operation of the 13 Dams in the basin. The study is scheduled to be complete in 2015.

FISCAL YEAR 2014: The total unobligated dollars are being applied to address the highest priority actions to comply with the 2014 FCRPS Supplemental BiOp requirements, the NOAA Fisheries and USFWS 2008 BiOp for the Willamette River Basin, and the 2008 Columbia Basin Fish Accords. No funds are included for conservation measures or for work that will require additional authorization to complete. Current execution plans are for funds to be applied on major measures as follows:

<u>FCRPS</u>

Lower Granite Juvenile facility bypass improvements Spillway PIT monitoring system Surface passage alternative Spillway weir boat barrier	$43,250,000	John Day Adult ladder improvements	$200,000
Little Goose Spillway weir boat barrier Spillway weir gate hoist	1,900,000	The Dalles Emergency adult ladder aux water supply Adult PIT monitoring system	1,100,000
Lower Monumental Spillway weir boat barrier Spillway weir access	2,020,000	Bonneville Fish guidance efficiency gatewell modifications Fish unit trash rake	1,300,000
Ice Harbor Unit 2 replacement RSW Spillbay Chute/Deflector Mod	5,280,000	Lower Columbia River Estuary Avian predator relocation	3,300,000

McNary Spillway Weir Handling Equipment Intake Gate Closure	2,550,000	Mitigation Analysis, FCRPS Tagging studies, Fall Chinook studies, Adult passage and survival studies Turbine passage survival, Inland avian predation PIT tag recovery, post-FCRPS survival study FCRPS performance verification	12,329,000
		Subtotal FCRPS	$73,229,000

Pacific Lamprey

Lower Granite Minor Adult Ladder Modifications	$100,000	Ice Harbor Turbine Cooling Water Intake Screens	$120,000
McNary South Shore Adult Ladder Entrance	100,000	John Day North Adult Fish Ladder	275,000
Bonneville WA Shore Adult Ladder Flume System Minor Adult Ladder Modifications	415,000	Mitigation Analysis JSATs Juvenile Lamprey Tag Adult Passage Studies	3,093,000
		Subtotal Pacific Lamprey	$4,103,000

Willamette River

North Santiam River Adult Passage (Minto) Juvenile Downstream Passage Temperature Control Research, Monitoring and Evaluation	$4,250,000	South Santiam River Adult Passage (Foster) Juvenile Downstream Passage Research, Monitoring and Evaluation	$3,475,000
Middle Fork Willamette River Adult Passage (Dexter and Fall Ck) Juvenile Downstream Passage Temperature Control Research, Monitoring and Evaluation	6,825,000	McKenzie River Juvenile Downstream Passage Research, Monitoring and Evaluation	4,970,000

System Wide	5,061,000		
Configuration and Operations Planning			
Research, Monitoring and Evaluation			
			==========
		Subtotal Willamette River	$24,581,000
		TOTAL FISCAL YEAR 2014	$101,913,000 9/

9/ Includes unobligated carry-in from FY 2013

FISCAL YEAR 2015: The requested amount will be applied to address the highest priority actions to comply with the 2014 FCRPS Supplemental BiOp requirements, the NOAA Fisheries and USFWS 2008 BiOps for the Willamette River Basin, and the 2008 Columbia Basin Fish Accords. No funds are included for conservation measures or for work that will require additional authorization to complete. Current execution plans are for funds to be applied on major measures as follows (Specific amounts are tentative. See "Other Information" below):

FCRPS			
Lower Granite	$9,500,000	John Day	$0
Juvenile facility bypass improvements			
Spillway PIT monitoring system			
Surface passage alternative			
Spillway weir boat barrier			
Little Goose	150,000	The Dalles	15,020,000
Spillway weir boat barrier		Emergency adult ladder aux water supply	
		Adult PIT monitoring system	
Lower Monumental	150,000	Bonneville	3,615,000
Spillway weir boat barrier		Gatewell orifice modifications	
		Fish unit trash rake	
Ice Harbor	3,290,000	Lower Columbia River Estuary	2,250,000
Unit 2 replacement		Avian predator relocation	

McNary	200,000	Mitigation Analysis, FCRPS	9,825,000
Spillway Weir Handling Equipment		Tagging studies, Fall Chinook studies,	
Intake Gate Closure		Adult passage and survival studies	
		Turbine passage survival, Inland avian predation	
		PIT tag recovery, post-FCRPS survival study	
		FCRPS performance verification	
			==========
		Subtotal FCRPS	$44,000,000
Pacific Lamprey			
Bonneville Dam	$1,000,000	Mitigation Analysis	$1,000,000
Adult Lamprey Passage Structures		Adult Passage Studies	
Minor Adult Ladder Modification			
			==========
		Subtotal Pacific Lamprey	$2,000,000
Willamette River			
North Santiam River	$4,500,000	South Santiam River	$4,270,000
Juvenile Downstream Passage		Adult Passage (Foster)	
Temperature Control		Juvenile Downstream Passage	
Research, Monitoring and Evaluation		Research, Monitoring and Evaluation	
Middle Fork Willamette River	7,500,000	McKenzie River	6,000,000
Adult Passage (Dexter and Fall Ck)		Juvenile Downstream Passage	
Juvenile Downstream Passage		Research, Monitoring and Evaluation	
Temperature Control			
Research, Monitoring and Evaluation			
System Wide	2,730,000		
Configuration and Operations Planning			
Research, Monitoring and Evaluation			
			==========
		Subtotal Willamette River	$25,000,000
		TOTAL FISCAL YEAR 2015	$71,000,000

NON-FEDERAL COST: Costs eventually determined to be allocable to power are reimbursable. The dams being modified and analyzed are a part of the FCRPS. Bonneville Power Administration (BPA), the Federal Power Marketing Agency, establishes system rate levels adequate to recover all capital investment costs for generating projects (including Corps generating projects) within a 50-year period and to repay annual OM&R and interest expenses. BPA submits an annual financial statement to Congress, as required by law, on repayment and periodically recommends rate adjustments as required for meeting repayment obligations.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $2,346,750,000 is an increase of $237,080,000 from the latest estimate ($2,109,670,000) presented to Congress (FY 2014). This change includes:

FCRPS

Item	Amount
Price Escalation on Construction Features	$ 23,898,000
Authorized Modifications 1/	$113,460,000
Contingency Adjustments 2/	$ 83,604,000
Subtotal FCRPS	$220,962,000

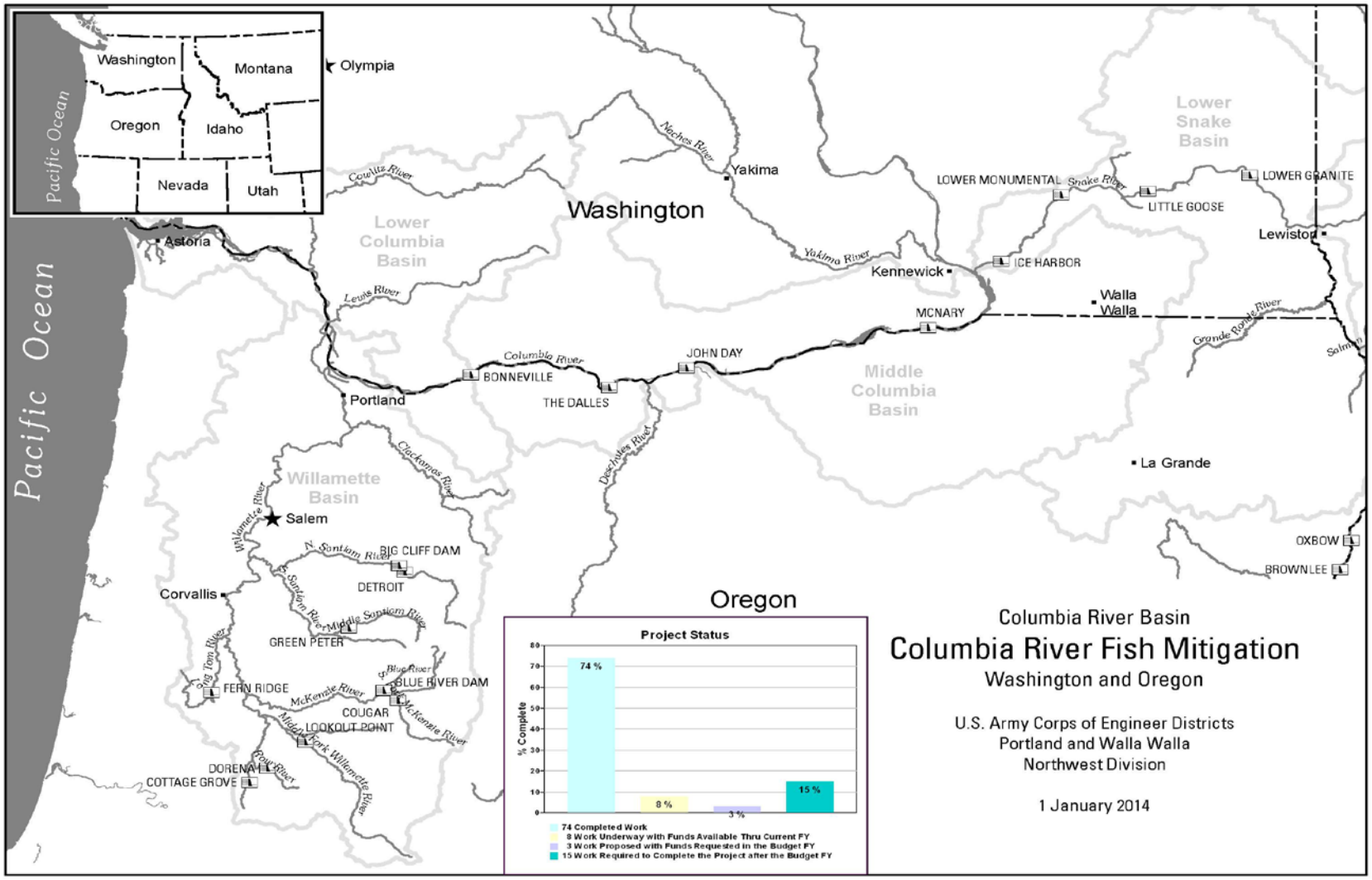
1/ Authorized modifications include additional adult and juvenile fish passage improvements, as well as avian predation controls and salmon survival research and development. that have been identified through the adaptive management process that were not included in the last estimate presented to Congress.
2/ FCRPS contingency adjustments were derived though conduct of a Cost and Schedule Risk Analysis which considered the identified scope, cost and schedule of remaining actions and risk factors developed by the Project Delivery Team. Key risk factors identified included: future scope growth due to adaptive management; impacts due to undefined acquisition strategies; incomplete scope definition for projects in the planning or pre-design phase; and impacts due to invalid or failed future juvenile performance standard test results. The derived contingency provides an 80% confidence level of completing all remaining items at the revised cost.

Lamprey

Item	Amount
Price Escalation on Construction Features	$ 5,748,000
Authorized Modifications	$0
Contingency Adjustments	$ 10,370,000
Subtotal Lamprey	$ 16,118,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Mitigation construction may be covered by existing environmental impact statements. Additional environmental documentation pursuant to National Environmental Policy Act (NEPA) will be accomplished as necessary. Consultations with NOAA Fisheries and USFWS will be held and biological assessments prepared as necessary to conform to the requirements of NEPA and the ESA.

OTHER INFORMATION: Funds to initiate construction were appropriated in Fiscal Year 1988. FCRPS: The total project cost estimate was updated to consider remaining FCRPS BiOp RPA actions to avoid jeopardy to ESA listed species and adverse modification of designated critical habitat, cost and schedule risk, and escalation factors. Willamette River: Willamette River Basin BiOp costs are under review. Actions and costs necessary to avoid jeopardy to ESA listed species and adverse modification of designated critical habitat in the Willamette River Basin are being evaluated and a compliance strategy is expected to be completed in FY 2015. The cost estimate for the Willamette River Basin BiOp will be updated subsequent to completion of the compliance strategy.


Washington
Montana
Olympia
Oregon
Idaho
Nevada
Utah
Pacific Ocean
Pacific Ocean
Washington
Oregon
Lower Columbia Basin
Willamette Basin
Middle Columbia Basin
Lower Snake Basin
Astoria
Portland
Salem
Corvallis
Yakima
Kennewick
Walla Walla
La Grande
Lewiston
Columbia River
Snake River
Yakima River
Lewis River
Cowlitz River
Naches River
Clackamas River
Willamette River
N. Santiam River
S. Santiam River
Middle Santiam River
Calapooia River
Long Tom River
McKenzie River
Blue River
Middle Fork Willamette River
Row River
Deschutes River
Grande Ronde River
BONNEVILLE
THE DALLES
JOHN DAY
MCNARY
ICE HARBOR
LOWER MONUMENTAL
LITTLE GOOSE
LOWER GRANITE
BIG CLIFF DAM
DETROIT
GREEN PETER
FERN RIDGE
BLUE RIVER DAM
COUGAR
LOOKOUT POINT
DORENA
COTTAGE GROVE
OXBOW
BROWNLEE
Project Status
% Complete
74 %
8 %
3 %
15 %
74 Completed Work
8 Work Underway with Funds Available Thru Current FY
3 Work Proposed with Funds Requested in the Budget FY
15 Work Required to Complete the Project after the Budget FY
Columbia River Basin
Columbia River Fish Mitigation
Washington and Oregon
U.S. Army Corps of Engineer Districts
Portland and Walla Walla
Northwest Division
1 January 2014

APPROPRIATION TITLE: Construction, Environment, Fiscal Year 2015

PROJECT: Duwamish and Green River Basin, Washington (Continuing)

LOCATION: The project is located in the Duwamish/Green River Basin, in King County in the Puget Sound Basin in northwestern Washington State.

DESCRIPTION: The project will provide ecosystem restoration sites throughout the 492 square mile Duwamish and Green River Basin. The project will create an estimated 1900 acres of new habitat, which includes significant habitat for three Endangered Species Act (ESA) listed species: Bull trout, Steelhead trout and Chinook salmon. Habitat improvements will occur over 200 miles of river and streams with features including stream restoration, levee removal to open up adjacent flood plains, reconnection of abandoned side channels, providing wood and gravel for fish habitat and other restoration actions.

AUTHORIZATION: Section 101 (b) (26) of the Water Resources Development Act of 2000, PL 106-541

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

TOTAL BENEFIT-COST RATIO: The total benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

INITIAL BENEFIT-COST RATIO: The initial benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

BASIS OF BENEFIT-COST RATIO: The basis of benefit-cost ratio for the entire project is not applicable because environmental benefits were not quantified in monetary terms.

SUMMARIZED FINANCIAL DATA:				ACCUM PCT OF EST FED COST	STATUS (1 Jan 2014)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		$130,017,000			Entire Project	13%	TBD
Estimated Non-Federal Cost		66,734,000					
Cash Contributions	4,000,000						
Other Costs	62,734,000						
Total Estimated Project Cost		$196,751,000					
Allocations to 30 September 2011		$14,153,000					
Allocation for FY 2012		1,782,000					
Allocation for FY 2013		2,494,000					
Allocation for FY 2014		8,500,000					
Allocations through FY 2014		26,929,000	1/ 2/ 3/ 5/	21%			
Estimated Unobligated Carry-In Funds		2,877,000	4/				
President's Budget for FY 2015		2,160,000		22%			
Programmed Balance to Complete after FY 2015		100,928,000	6/ 7/				
Unprogrammed Balance to Complete after FY 2015		0					

1/ $3,011,000 reprogrammed from the project.
2/ $37,000 rescinded from the project.
3/ $0 transferred to the Flood Control and Costal Emergencies account.
4/ Unobligated Carry-in Funding: The actual unobligated balance from FY 2013 into FY 2014 for this project is $2,876,964. As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for use on this effort is $500,000. This amount will be used to perform work on the project as follows: Construction management for Mill Creek Wetlands 5K and Boeing Levee construction.
5/ PED costs of $618,000 are included in this amount.
6/ For programmed work only; remaining work is un-programmed pending a decision to construct these features.
7/ See Other Information.

PHYSICAL DATA: Restoration sites will add an estimated 1,900 acres of new habitat to include culvert removal, side channel reconnection, levee setback, gravel nourishment, and large wood placement.

JUSTIFICATION: The Duwamish/Green ecosystem restoration project will restore habitat for three ESA-listed species: Chinook salmon, Steelhead, and Bull trout. Key elements of this project are included in the Duwamish/Green Salmon Habitat Restoration Plan prepared in response to listing of Chinook salmon under ESA in 1999. The proposed restoration focuses on improving the overall health of the Duwamish/Green River Basin over its 200 miles of river and streams through 1,900 acres of new habitat, enhancing and restoring fish and wildlife while maintaining existing flood protection within the basin. Of special interest are the habitat needs of the listed endangered species Chinook salmon, Steelhead, and Bull trout. Potential projects were proposed and screened by the Watershed Restoration Group, composed of the local sponsor, stakeholders, scientists, and Corps officials. Projects were scored according to the following environmental evaluation criteria: 1) effectiveness of project in addressing one or more limiting factors, including barriers to fish passage, reduction in channel forming flows, loss of channel diversity in the lower river, loss of estuarine and floodplain habitat, reduction in large woody debris, loss of sediment sources, and increase in water temperature; 2) scale, size, and effect; 3) technical and political feasibility; and 4) potential for wildlife benefits. Forty five (45) sites were evaluated which incorporated varying levels and degrees of restoration in an incremental cost analysis. The Corps received input to incorporate local needs and direction in the development of site-specific restoration criteria supportive to local goals. Assessing and incorporating the desires of stakeholders into the restoration plan will continue throughout project development. The project is an integral part of a Water Resource Inventory Area (WRIA) 9 recovery plan and a Regional Recovery Plan. The Water Resource Inventory Area (WRIA) 9 recovery plan is the Puget Sound Chinook Recovery Plan for the Green-Duwamish Watershed. The Regional Recovery Plan is the Puget Sound Wide Chinook recovery Plan adopted by National Marine Fisheries Service (NMFS). The project is an integral part of Washington's ESA recovery plan as documented in the WRIA 9 recovery plan and NMFS Puget Sound Chinook Recovery Plan

FISCAL YEAR 2014: The total fiscal year 2014 appropriation, plus unobligated carry-in, are being applied as follows:

Execute PPA and initiate construction for Mill Creek Wetlands 5K site	$ 5,000,000	8/
Execute PPA and initiate construction for Boeing Levee Setback site	5,000,000	8/
Execute design agreement (DA), initiate plans and specifications for Porter Levee Setback site	600,000	
Monitoring for completed sites	100,000	
Construction Management	677,000	
Total:	$11,377,000	9/

8/ Potential reduction of non-Federal sponsor funds may reduce scope and cost of construction contract.
9/ Includes unobligated carry-in from FY 2013.

FISCAL YEAR 2015: The requested amount will be applied as follows:

Complete plans and specs, execute PPA and initiate construction for Porter Levee Setback site	$2,160,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must comply with the requirements listed below:

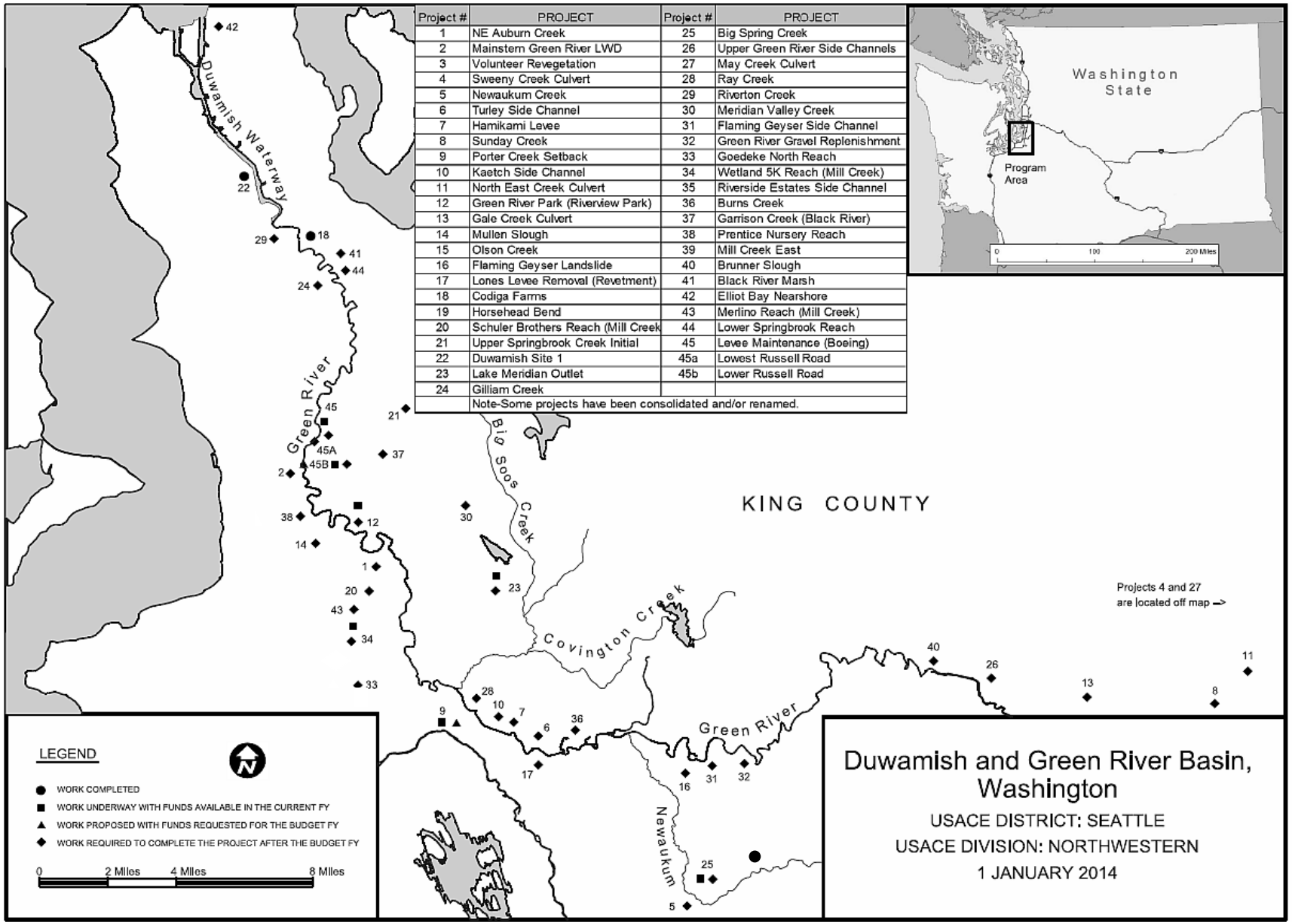
	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and relocations	$62,734,000	
Pay 35% of the costs allocated to fish and wildlife enhancement, and pay 100% of the costs of operation, maintenance, repair, rehabilitation, and replacement of fish and wildlife facilities.	4,000,000	TBD
Total Non-Federal Costs	$66,734,000	TBD

STATUS OF LOCAL COOPERATION: The primary local sponsor of this project has been King County with the full support of local cities; the Muckleshoot Tribe; the Suquamish Tribe; state and local agencies; 16 cities, federal resource agencies, Trout Unlimited and other interested stakeholders. These entities remain active in development of the project.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of $130,017,000 is unchanged from latest estimate presented to Congress (FY 2014). See Other Information.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Programmatic Environmental Impact Statement was completed in December 2000.

OTHER INFORMATION: The cost estimate is under review. Funds to initiate preconstruction engineering and design were appropriated in FY 2001 and funds to initiate construction were appropriated in FY 2004. The Chief of Engineer's report was signed 29 December 2000. The project will restore high quality ecosystem habitat that has been lost. Several Puget Sound salmon species are listed under the Endangered Species Act. The project will provide a major component for habitat restoration in the Duwamish/Green River Basin to stem declines and begin rebuilding salmon habitat. The project complements other local, state, and federal programs for salmon recovery in the Puget Sound Watershed.



Project #	PROJECT	Project #	PROJECT
1	NE Auburn Creek	25	Big Spring Creek
2	Mainstem Green River LWD	26	Upper Green River Side Channels
3	Volunteer Revegetation	27	May Creek Culvert
4	Sweeny Creek Culvert	28	Ray Creek
5	Newaukum Creek	29	Riverton Creek
6	Turley Side Channel	30	Meridian Valley Creek
7	Hamikami Levee	31	Flaming Geyser Side Channel
8	Sunday Creek	32	Green River Gravel Replenishment
9	Porter Creek Setback	33	Goedeke North Reach
10	Kaetch Side Channel	34	Wetland 5K Reach (Mill Creek)
11	North East Creek Culvert	35	Riverside Estates Side Channel
12	Green River Park (Riverview Park)	36	Burns Creek
13	Gale Creek Culvert	37	Garrison Creek (Black River)
14	Mullen Slough	38	Prentice Nursery Reach
15	Olson Creek	39	Mill Creek East
16	Flaming Geyser Landslide	40	Brunner Slough
17	Lones Levee Removal (Revetment)	41	Black River Marsh
18	Codiga Farms	42	Elliot Bay Nearshore
19	Horsehead Bend	43	Merlino Reach (Mill Creek)
20	Schuler Brothers Reach (Mill Creek	44	Lower Springbrook Reach
21	Upper Springbrook Creek Initial	45	Levee Maintenance (Boeing)
22	Duwamish Site 1	45a	Lowest Russell Road
23	Lake Meridian Outlet	45b	Lower Russell Road
24	Gilliam Creek		
	Note-Some projects have been consolidated and/or renamed.		