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
Investigations

March 2014

Great Lakes and Ohio River Division

Investigations

Illinois

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2014	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$
DuPage River, IL (New/Completion)	150,000	0	0	150,000	0

Chicago District

The DuPage River and tributaries drain approximately 353 square miles in suburban Cook, DuPage and Will Counties in Metropolitan Chicago. The study area has experienced rapid development over the past two decades, and currently includes 40 communities and approximately 900,000 residents. Major storm events occurred in the basin in 1996, 2008, 2009, and most recently in April 2013 resulting in overbank flooding to at least 20 communities and caused significant damage to residential and non-residential structures, critical infrastructure and the closure of two major interstate highways (I-80 and I-55) for several days. Average annual flood damages are currently estimated at $30 million.

The reconnaissance study would determine if there is a federal interest in pursuing a feasibility study to manage flood risk throughout the Du Page River watershed including damages to structures (residential, commercial, industrial, public) and transportation delays. Potential non-Federal sponsors include the State of Illinois, Du Page and Will Counties, and townships within the basin. The reconnaissance phase is scheduled to be completed in September 2015.

This study is authorized by Section 206 of the Flood Control Act of 1958 (Public Law 85-500).

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	GLRI Allocations Through FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$	$
25,500,000	1,304,310	3,000,000	4,740,500	10,302,190 2/	3,000,000	500,000 1/	TBD

Study Name - Interbasin Control of Great Lakes- Mississippi River Aquatic Nuisance Species, IL, IN, OH, & WI – Ecosystem Restoration (Completion)

Chicago District

The Great Lakes & Mississippi River Interbasin Study (GLMRIS) evaluates a range of options and technologies available to prevent the spread of aquatic nuisance species (ANS) between the Great Lakes and Mississippi River basins through the Chicago Sanitary and Ship Canal (CSSC), and other aquatic pathways. The Chicago Area Waterway System (CAWS), which includes the CSSC, is considered to be the primary aquatic pathway that ANS may utilize to spread between the basins because it provides a highly-utlized, multipurpose, continuous connection. Principal uses of the CAWS include navigation, flood risk management, water quality/conveyance and recreation. Specific tasks of GLMRIS include: i) the identification of other aquatic pathways that may exist between the two watersheds; ii) the inventory of current and future potential ANS in the study area; iii) the evaluation of possible ANS controls to prevent ANS transfer between the basins; and iv) the analysis of the impacts that each ANS control may have on existing waterway uses and natural resources. GLMRIS is currently being conducted in two Focus Areas (FA1 & FA2).

In FA1, study efforts are concentrated on evaluating prevention measures for the potential threat of ANS transfer via the CAWS. FY 2014 funds of $1,500,000 have been used to complete the MAP-21 GLMRIS Report, publish a summary document of public comments on the GLMRIS Report, and coordinate public engagement activities. Proposed FY 2015 funds of $500,000 will be used to continue stakeholder engagement activities and to support regulatory, technical and policy compliance activities.

In FA2, an investigation of potential surface-water connections has been conducted along the remainder of the boundary between the two basins in order to evaluate the relative probability of ANS transfer via these pathways. The Corps is providing feasibility level technical support to other stakeholders for the development of solutions for some of the high risk pathways outside of the CAWS. FA2 activities are supported in FY 2014 by the Great Lakes Restoration Initiative; there are currently no anticipated activities in FA2 for FY 2015.

In January 2014, the GLMRIS Report was sent to Congress fulfilling the directive in the Moving Ahead for Progress in the 21st Century Act (MAP-21). The report included a range of options and technologies to prevent[3/] the spread of ANS between the two basins through the CAWS (FA1). Completed FA2 pathway assessments are located on the GLMRIS website. For both focus areas, the study teams coordinate regularly with other Federal, state, and local agencies, as well as regional stakeholders.

This study was authorized by WRDA 2007, P. L.110-114, Section 3061(d), 121 Stat. 1121.

1/ Estimated Unobligated Carry-in Funding: 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 $1,500,000. This amount will remain available to support appropriate future work including alternative-specific engineering, technical design, or environmental and regulatory compliance analyses.

2/ Great Lakes Restoration Initiative funding from FY 2010, FY 2011, FY 2012 and FY 2013 through 31 May 2013.

3/ In GLMRIS, USACE has interpreted the term “prevent” to mean the reduction of risk to the maximum extent possible, because it may not be technologically feasible to achieve an absolute solution.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Kentucky

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2014	Allocation in FY 2014	Budgeted Amount For FY 2015	Additional To Complete After FY 2015
$	$	$	$	$
100,000	0	0	100,000	0

Study Name: Kentucky River Locks and Dams 1-4, Disposition Study, KY (New/Continuing)

Louisville District

Locks and Dams 1, 2, 3, and 4 are on the Kentucky River in North Central Kentucky. Lock and Dam 1 is located near Carrollton, Lock and Dam 2 near Lockport, Lock and Dam 3 in Henry County, and Lock and Dam 4 in Frankfort. Between 1830 and 1880, Locks and Dams 1 through 4 were built by private interests and the Commonwealth of Kentucky. The Corps of Engineers took responsibility for the facilities before 1900, rehabilitating the locks and dams, and operating and maintaining the facilities for commercial navigation purposes. Navigation on the river steadily declined until it was determined in the mid-1970's that a Federal interest in continued operation of Locks and Dams 6-14 no longer existed. Commercial navigation activities through the locks effectively ceased in September 2001. Since 2002, navigation data through Locks and Dams 1-4 has not been collected or monitored by the Corps. During the period 1996 - 2006, Locks and Dams 5-14 were transferred by Quitclaim deed to the Kentucky River Authority (KRA). KRA owns Locks and Dams 5-14. A lease that grants KRA the use of land and improvements for park and recreational purposes was signed in April 2002. In August 2002, the KRA began to operate the locks for recreational purposes. The KRA has expressed interest in assuming ownership of the properties associated with Locks and Dams 1-4. The Disposition Study will identify actions needed to safely dispose of Locks and Dams 1,2,3, and 4; ensure compliance with laws and regulations, including the National Environmental Policy Act; and confirm interest in future ownership of the properties. Deauthorization and disposal of the facilities will eliminate future Federal operation and maintenance funding requirements after the facilities have been turned over to others. Prior to disposing of the facilities, the commercial navigation purpose would be deauthorized. Subsequent to completion of the Reconnaissance Disposition Study, a feasibility study will be required. The estimated Reconnaissance study completion date is FY 2016.

Study Authority: Section 216, 1970 Flood Control Act (P.L. 91-611)

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation In FY 2013	Allocation In FY 2014	Budgeted Amount in FY 2015	Additional To Complete After FY 2015
$	$	$	$	$	$	$
1,891,000	79,000	0	0	712,000	1,100,000 1/	0

Licking River, Cynthiana, KY

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Flood Risk Management (Continuing)

Louisville District

Cynthiana, Kentucky is located on the South Fork of the Licking River in Harrison County, Kentucky approximately 25 miles north of Lexington, Kentucky, and 50 miles south of Cincinnati, Ohio. The maximum flood of record, March 1997, caused an estimated $34,000,000 in damages to 315 residential structures, 85 commercial properties, and 15 public buildings at October 2006 prices and conditions of development. The feasibility report was completed in September 2005, with a Chief's Report signed in October 2006. The cost of the recommended project is estimated at $22,109,000, consisting of an estimated Federal cost of $14,476,000 and an estimated non-Federal cost of $7,633,000 at October 2013 prices (with future inflation). The project consists of two dry bed detention basins with roller compacted concrete being used to construct the dam structures. The project would reduce damages to the study area by 86 percent. The average annual benefits amount to $3,350,000. The benefit-cost ratio is 2.3 to 1 using the 7 percent discount rate based upon the latest economic analysis (June 2013). The City of Cynthiana, Kentucky is the non-Federal sponsor, will cost share the PED phase, and has provided an initial cost share of $26,333. PED will ultimately be cost shared at 35 percent, but will be financed through the PED period at 25 percent non-Federal. Any adjustments that may be necessary to bring the non-Federal contribution in line with the project cost sharing will be accomplished in the first year of construction.

Total Estimated Preconstruction Engineering and Design Costs	$2,521,333	Total Estimated Preconstruction Engineering and Design Costs	$2,521,333
Initial Federal Share	1,891,000	Ultimate Federal Share	1,638,866
Initial Non-Federal Share	630,333	Ultimate Non-Federal Share	882,467

The project is authorized for construction by Section 1001(22) of Water Resources Development Act, 2007 (P.L. 110-114). Fiscal Year 2015 funds will be used to complete PED.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the project in FY 2006.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Ohio

APPROPRIATIONS TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2014	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$
Short Creek and Wheeling Creek, Ohio (New/Completion)	150,000	0	0	150,000	0

Pittsburgh District

Description: The purpose of the study is to determine if there is a Federal interest in investigating potential structural and non-structural measures to reduce risk to loss of life and property from flood events in the Short Creek watershed in Jefferson County, Ohio and the Wheeling Creek watershed in Belmont County, Ohio.

A Federal disaster declaration was declared for Jefferson County in August 2003 after flooding caused extensive property damage and a severe threat to public safety, including the loss of one life in the watershed. The Buckeye Local School District documented that local flooding closed various roadways, causing the closure of schools. A second Federal disaster that included Jefferson County was declared in September 2004 associated with the remnants of Hurricane Ivan, which also caused extensive damage in the Short Creek Watershed. The Jefferson County Commissioner's Office has provided a letter-of-intent to cost-share on a subsequent feasibility study and the implementation of a flood risk management project.

Wheeling Creek has experienced accelerated sedimentation, which has caused increased flooding. The Ohio Department of Natural Resources supports completion of a subsequent basin-wide feasibility study that would focus on quantifying the degree to which increased sedimentation and erosion is causing an increased flooding hazard to human life.

The Reconnaissance Report would be completed 12 months after receipt of funds.

Study Authority: PL 110-114, WRDA 2007, Sec. 4070; House Document Number 306, 74th Congress, 1st Session.

Pennsylvania

APPROPRIATIONS TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2014	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$
Allegheny River Disposition Study, PA	100,000	0	0	100,000	0

Allegheny River Disposition Study, PA (New/Completion)

Pittsburgh District

There has been no commercial navigation through locks and dams (L/D) 8 and 9 on the Allegheny River for years. The Allegheny River L/Ds 6-9 are operated for commercial barges by appointment only. There are no signs of increasing demands. The cost of "caretaker" and minimal minor maintenance on these facilities diverts resources from other L/Ds that are operated 24 hours/day.

The FY 2015 funds will be used to conduct a reconnaissance study of the upper locks and dams (L/Ds 5-9) on the Allegheny River . In addition to the absence of commercial barge traffic, other changed conditions that justify such a review include the increasing cost of repairs and maintenance to assure safe and reliable project operations; the use of four of the projects for hydropower generation by a private operator; the use of the navigation pools for water intakes and water discharges permitted by the National Pollutant Discharge Elimination System; and consideration of other potential needs and uses of the water resources.

In short, this study will determine if there is a Federal interest in distributing or transferring operation and maintenance costs of the Upper Allegheny River locks and dams 5-9 to another interested entity.

An initial appraisal was completed in Fiscal Year 2011 and reviewed by LRD for policy compliance on 25 March 2011. The Reconnaissance Report would be completed 12 months after receipt of funds.

Study Authority: Section 216, Flood Control Act of 1970 (PL 91-611).

Mississippi Valley Division

Investigations

ARKANSAS

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
White River Basin Comprehensive, AR and MO (Continuing)	4,185,000 1/	3,380,000 4/ 5/	5,000 2/	0	650,000 3/	150,000	0
Cache River Sub Basin Watershed Management Plan, AR							

Memphis District

The Cache River Watershed Management Plan under the White River Basin Comprehensive (WRBC) effort studies a 2,018 square mile sub-basin within the White River basin (approximately 27,765 square miles - Missouri 10,622 and Arkansas 17,143). The area is a significant migratory waterfowl wintering area. The southern portion of the watershed is a Wetland of International Importance per the 1986 Ramsar Convention. It includes the Cache National Wildlife Refuge, several state Wildlife Management Areas, State Parks and Natural Areas. The basin provides habitat for several threatened or endangered species including fat pocketbook, pink mucket, scaleshell, curtis pearly, and speckled pocketbook mussels; pallid sturgeon; gray and Indiana bats; alligator gar, red-cockaded woodpeckers; and piping plover.

Several studies have been completed under the WRBC that will inform the Cache River Watershed Management Plan, including the Cache River Ecosystem Restoration Study and the Cache River Sedimentation Study. The expectation of the Cache River Watershed Management Plan effort is to identify measures necessary to address the water resource issues in the watershed and to identify what organization or agency would lead the effort to address each of those issues. In this manner, this will be a comprehensive, collaborative watershed management plan. It will establish multi-agency (Federal and state) collaborative programs to identify sub-watershed projects, which would potentially include habitat restoration, sediment management, recreational opportunities, and public outreach. Federal, state, and private natural resource agencies and organizations are highly supportive of the Cache River Management Plan and the WRBC study.

The WRBC offers opportunities to support, in a collaborative multi-agency environment, President Obama's America's Great Outdoors (AGO) Initiative. A component of the WRBC, the Cache River sub-basin, is identified in the Project Management Plan in support of the AGO as a near term plan. The project sponsors for the WRBC study are the Arkansas Game and Fish Commission, Arkansas Natural Resources Commission, Arkansas Natural Heritage Commission, Arkansas Waterways Commission, Missouri Department of Natural Resources, Missouri Department of Conservation, and The Nature Conservancy. The study is authorized by Section 729 of WRDA 1986, as amended by Section 202 of WRDA 2000 and Section 2010 of WRDA 2007. A Feasibility Cost Sharing Agreement for the WRBC study was executed 22 May 2002 and amended 6 April 2009 as a result of WRDA 2007 to change the cost share requirements to 75 percent Federal and 25 percent non-Federal.

Fiscal Year 2014 funds are being used to initiate the Cache River Sub-Basin Watershed Restoration/Management Plan and complete the Bottom Land Hardwood-Hydro Geomorphic study which is a near term component of the overall WRBC study. Fiscal Year 2015 funds will be used to complete the Cache River Sub-Basin Watershed Restoration/Management Plan. A summary of study cost sharing for the Cache River Watershed Management Plan is as follows:

Total Estimated Study Cost	$5,527,000
Reconnaissance Phase (Federal)	160,000
Feasibility Phase (Federal)	4,025,000
Feasibility Phase (Non-Federal)	1,342,000

1/ Total estimated cost shown includes previous sunk costs associated with the WRBC study which is the allocation prior to FY 2012.
2/ Reflects $5,000 reprogrammed to the project.
3/ Estimated Unobligated "Carry-in" Funding: 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 study effort are $0. This amount will be used to perform work on the study as follows: N/A
4/ $0 rescinded from the study.
5/ $0 transferred to Flood Control and Coastal Emergencies

ILLINOIS

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocation Prior To FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
ILLINOIS							
Illinois River Basin Restoration, IL – Continuing	12,170,000	6,749,000 3/4/	383,000	399,000	400,000	400,000 1/	3,839,000
McKee Creek	600,000 2/	0	0	0	400,000	200,000	0
Ten Mile Creek	600,000 2/	0	0	0	0	200,000	400,000

Rock Island District

The Illinois River Basin Restoration Study encompasses the entire Illinois River watershed within the State of Illinois. The primary purpose of the Illinois River Basin Restoration Study is to develop a comprehensive plan for the restoration of the Illinois River watershed and evaluate and construct critical restoration projects that have been determined to produce independent, immediate, and substantial restoration, preservation, and protective benefits within the basin. The feasibility cost sharing agreement with the State of Illinois was signed 31 July 2002.

The Comprehensive Plan was completed and transmitted to Congress in June 2008. The Plan addresses habitat, water quality, navigation, and economic opportunities. Major components include fish and wildlife conservation and rehabilitation measures; land and water resources enhancement; sediment transport; sediment removal and disposal measures; long-term resource monitoring; and a computerized inventory and analysis. The Illinois River Basin Critical Restoration Projects authorized in WRDA 2000, Section 519, (as amended by WRDA 2007) are continuing and no additional authority is required.

Sixteen critical restoration projects have been identified to date. These projects were selected based on assessment of restoration needs with involvement of Federal and non-Federal partners. Critical restoration projects are currently being evaluated through feasibility, design, and two have proceeded to construction using Construction funds.

Feasibility planning has been completed for six critical restoration projects with the latest being Starved Rock Pool and Alton Pool. Pekin Lake South, Pekin Lake North, Waubonsie Creek and Blackberry Creek feasibility reports were completed prior. Construction of the Waubonsie Creek fish passage project was completed in 2010, construction of Blackberry Creek fish passage project completed in 2013 and construction of the Peoria Upper Island project completed in 2013.

Fiscal Year 2014 funds and carry-in funds are being used to:

Feasibility:		
Complete:	Senachwine Creek	$55,000
Initiate:	McKee Creek	$400,000

Fiscal Year 2015 funds will be used as follows:

Feasibility:		
Complete:	McKee Creek	$200,000
Initiate:	Ten Mile Creek	$200,000

.
The study is authorized by Section 519(b) of WRDA 2000; as amended by Section 5071, WRDA, 2007.

In accordance with Section 519, WRDA 2000, this study is to be shared on a 65-35 percent basis by Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$18,475,000
Reconnaissance Phase (Federal)	460,000
Feasibility Phase (Federal)	11,710,000
Feasibility Phase (Non-Federal)	6,305,000

The recon phase was completed in July 2002. The feasibility study completion is TBD.

1/ Estimated Unobligated “Carry-in” Funding: 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 study effort is $0.

2/ Included in the total estimated Federal cost.

3/ $0 rescinded from the study.

4/ $0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

LOUISIANA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
Louisiana Coastal Area, Ecosystem Restoration, LA (ENR) (Continuing)							
LCA Study Cost	73,527,000	60,423,000[1/]	3,620,000	0	3,321,000	2,500,000	3,663,000
LCA PED Cost	47,637,000	0	5,916,000	299,000	1,436,000	0[2/]	39,986,000[3/]
LCA Program New Orleans District	121,164,000	60,423,000 [1/,4/,5/,6/,7/,8/,9/]	9,536,000	299,000	4,757,000	2,500,000[2/]	43,649,000

The Louisiana Coastal Area Ecosystem Restoration (LCA) Program study area includes the entire Louisiana coastal area. Over 1 million acres of Louisiana's coastal wetlands have been lost since the 1930's; another one-third of a million acres could be lost over the next 50 years unless large-scale corrective actions are taken. This loss of land reduces the habitat available for native and migratory bird species. The past and continued loss of Louisiana's coastal wetlands will significantly affect the ecology, society, and economy of the region and the Nation. Unless the trend of accelerated land loss is reversed, the health and productivity of the coastal ecosystem cannot be sustained. The continued decline of the natural ecosystem will result in a decrease in various functions and values associated with wetlands, including corresponding diminished biological productivity and increased risk to critical habitat of Federally-listed threatened and endangered species. The primary cause of coastal land loss in the study area is the disruption of natural Mississippi River processes through the development of the watershed and in the Louisiana coastal area. Additional adverse impacts result from natural subsidence and erosion of the lands where the Mississippi delta meets the Gulf of Mexico. Specific causes of coastal land loss, both from human intervention and natural processes, include: (1) efforts to maintain a Federal navigation channel from the Gulf of Mexico to New Orleans and farther up the Mississippi River; (2) the implementation of flood and storm damage reduction projects by or for communities in the Louisiana coastal plain; (3) oil and gas development, including thousands of miles of canals built by private interests for exploration and production; (4) natural subsidence and erosion of the lands where the Mississippi Delta meets the Gulf of Mexico; and (5) winter cold fronts, tropical storms, and hurricanes. The LCA Program aims to manage water and sediment for restoration, which creates/sustains nesting, feeding and resting habitats for threatened/endangered species (eagle, sturgeon, brown pelican, piping plover and numerous migratory avian and waterfowl species). The Program also involves barrier Island restoration, which can reduce the rate of loss of wetlands and provide nesting and resting cover for brown pelican and piping plover.

1/ Includes $11,000,000 provided in Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006, PL109-148, December 2005. $1,000,000 was executed by the Louisiana Coastal Area Science & Technology Program for Hurricane Assessment.
2/ Estimated Unobligated Carry-in Funding: As of this 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 efforts are $3,023,000. This amount will be used to perform work on this study as follows: complete PED for Barataria Basin Barrier Shoreline-Caminada Headland and Small Diversion at Convent/Blind River.
3/ $8,100,000 Preconstruction Engineering and Design (PED) is unprogrammed at this time in lieu of the State's current path forward, leaving $31,886,000 to complete.
4/ $3,000 were rescinded from the project in FY 2001.
5/ $6,000 were rescinded from the project in FY 2003.
6/ $15,000 were rescinded from the project in FY 2004.
7/ $55,000 were rescinded from the project in FY 2005.
8/ $75,000 were rescinded from the project in FY 2006.
9/ $2,000,000 were transferred to Flood Control and Coastal Emergencies (FCCE) account for the Mississippi River Flood in FY 2011.

The LCA Program (WRDA 2007, Title VII) is a near-term plan consisting of several studies and projects developed through a public involvement process, working closely with other Federal agencies and the State of Louisiana (the LCA Program partner acting through the Louisiana Coastal Protection and Restoration Authority Board).

The primary purpose of the LCA Program is to restore the Louisiana wetland coastal area through the beneficial use of dredged material, river diversions of sediment and water, headland and barrier island restorations, and coastal protection efforts. The Louisiana coastal plain contains one of the largest expanses of coastal wetlands in the contiguous United States, 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 include upland areas as well as the near shore Gulf of Mexico and are hydrologically connected to each other. 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. The LCA Program was designed to construct significant restoration features; undertake Beneficial Use of Dredged Material (BUDMAT) Program projects and Demonstration Program projects; study potentially promising large-scale, long-term concepts; and take other authorized near-term actions to restore the ecosystem.

Fiscal Year 2013 funds carried into Fiscal Year 2014 are being used for the following:

Feasibility		
Initiate	Demonstration Project	$ 100,000
Continue	Mississippi River Hydrodynamic Model/Delta Management Study	
	Model	$ 737,000
	Study	$ 750,000
Total Feasibility		$1,587,000
PED		
Initiate	Barataria Basin Barrier Shoreline – Caminada Headland	$ 500,000
Initiate & Complete	BUDMAT (Tiger Pass)	$1,175,000
	BUDMAT (West Bay)	$1,175,000
Continue	Small Diversion at Convent/Blind River	$1,220,000
Suspend	Medium Diversion at White Ditch	$ 347,000
Total PED		$4,417,000
Total		$6,004,000

Fiscal Year 2014 funds are being used to:

Feasibility		
Continue	Mississippi River Hydrodynamic Model/Delta Management Study	
	Model	$1,734,000
Total		$1,734,000

Fiscal Year 2015 funds plus carry-in funds will be used to:

Feasibility		
Continue	Mississippi River Hydrodynamic Model/Delta Management Study	
	Model	$ 700,000
	Study	$1,800,000
Total Feasibility		$2,500,000
PED		
Complete	Barataria Basin Barrier Shoreline – Caminada Headland	$1,587,000
Complete	Small Diversion at Convent/Blind River	$1,436,000
Total PED		$3,023,000
Total		$5,523,000

* The Mississippi River Hydrodynamic/Delta Management feature is a combination of the Mississippi River Hydrodynamic Model and the Mississippi River Delta Management Study features. This combined feature would provide a model to assess the effects on navigation and sediment dynamics along the Mississippi River main stem associated with combinations of Mississippi River diversions. Model outputs would also be used to formulate and assess management options for the Delta. The project would help develop option to improve habitat for many wildlife species including pallid sturgeon and eagle, pelican, migratory/colonial birds. The Feasibility Cost Sharing Agreement (FCSA) was signed 24 August 2011. This study is continuing in FY 2014 and FY 2015. The total cost of the study is currently estimated at $25,400,000 ($12,700,000 Federal and $12,700,000 million non-Federal), of which $8,700,000 Federal has been appropriated through FY 2014.

* Demonstration Program projects (DEMO Prgm). These projects are designed to resolve critical areas of scientific or technological uncertainty related to the implementation of the restoration plan and ultimately the comprehensive plan. In FY 2014 a Feasibility Cost Sharing Agreement is being negotiated with two potential non-Federal Sponsors, The Nature Conservancy and Lake Pontchartrain Basin Foundation, who are willing to cost share in implementation. Decision documents will be initiated in order to implement Demonstration projects.

* Small Diversion at Convent / Blind River project. The 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 National Ecosystem Restoration 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 Romeville, 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 (AAHUs) 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. The Design Agreement (DA) was executed 9 December 2011 and included six individual LCA projects; however, the State has requested that the DA be amended to suspend five of the projects and continue with Small Diversion at Convent / Blind River project only. Execution of the DA amendment is expected in the 4th quarter of FY 2014. PED for the first set of plans & specifications for Small Diversion at Convent / Blind River project will be completed in FY 2015.

* The Beneficial Use of Dredged Material Program (BUDMAT) program. The Program will provide 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 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. Plaquemines Parish Government has indicated a willingness to cost share the BUDMAT program project and agreed to execute a DA. PED for the first set of plans & specifications for Tiger Pass and West Bay will be completed in FY 2014.

* Barataria Basin Barrier Shoreline (BBBS) Restoration (Caminada Headland and Shell Island separable elements) – (barrier island restoration): The State has indicated that construction of the Caminada Headland Component of the BBBS Restoration project is its highest priority LCA construction project. The Project Management Plan (PMP) for the BBBS project will incorporate portions of the design performed by the State outside of an LCA agreement. The State completed design of the beach and dune for about 90 percent of the Caminada Island. This PMP will incorporate that design into the project and further design the back-bay marsh and the remaining 10 percent of the easternmost features of the Island. The estimated total first cost of the project is $494,161,000. The Federal share of the estimated first cost of this project is $321,205,000 and the non-Federal share is estimated at $172,956,000. In FY 2014, a DA is being executed and PED is being initiated. PED for the first set of plans & specifications for Caminada Headland will be completed in FY 2015.

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

* Medium Diversion at White Ditch project (MDWD) project. Additional Congressional authority is required to build the project. The project will restore the supply and distribution of freshwater and sediment disrupted by the construction of the Mississippi River and Tributaries flood control. The project includes a 35,000 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 Phoenix. Louisiana. Dredged material from the conveyance channel will be used beneficially to create approximately 416 acres of marsh and ridge habitat. The project will improve habitat function by 13,353 Average Annual Habitat Units (AAHUs) by creating and nourishing approximately 20,315 acres of fresh, intermediate, brackish, and saline wetlands. The project would improve habitat for many wildlife species including to pallid sturgeon, manatee; also brown pelican/eagle/migratory/colonial birds. The DA was executed 9 December 2011. PED activities for White Ditch are being used for an orderly shutdown in FY 2014.

* Medium Diversion at Myrtle Grove (Myrtle Grove) with dedicated dredging project. The study is assessing diversions ranging from 15,000 cfs to 125,000 cfs from the Mississippi River into the Barataria Basin through a box culvert system (in the vicinity of Myrtle Grove) and using 2 million cubic yards of Mississippi River material annually for several years to create marsh wetlands. As authorized, this feature is expected to deliver benefits in the range of 11,500 acres. The project would improve habitat for many wildlife species including sturgeon/manatee/loggerhead, Kemp's Ridley, hawksbill turtles; eagle, pelican, and migratory/colonial birds; and essential fish habitat. Non-Federal funds are being used for an orderly shutdown in FY 2014.

* Terrebonne Basin Barrier Shoreline Restoration project - 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 supra-tidal 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. The estimated total first cost of the project is $725,012,000. The Federal share of the estimated first cost of this project is $439,401,000 and the non-Federal share is estimated at $285,611,000. Post-construction monitoring and adaptive management of this ecosystem restoration project is projected to be conducted for no more than ten years. Additional authority is needed to implement the entire project. The Whiskey Island component can be implemented under the existing authority provided in Section 7006(e)(3) of WRDA 2007. The Whiskey Island component is an implementable increment of the National Ecosystem Restoration (NER) plan. The estimated total first cost of the Whiskey Island component is $140,825,000. The DA was executed 9 December 2011. By letter dated 20 August 2012, the State of Louisiana requested suspension of PED work.

* Convey Atchafalaya River Water to Northern Terrebonne Marshes/Multipurpose Operation of Houma Navigation Canal Lock restoration project – The Intracoastal project would increase existing Atchafalaya River influence to central (Lake Boudreaux) and eastern (Grand Bayou) Terrebonne marshes via the Gulf Intercoastal Waterway (GIWW) by introducing flow into the Grand Bayou Basin. This may be accomplished by enlarging the connecting channel (Bayou L'Eau Bleu) to capture as much of the surplus flow (maximum 2,000 to 4,000 cfs) that would otherwise leave the Terrebonne Basin. Gated control structures would be installed to restrict channel cross-sections to prevent increased saltwater intrusion during the late summer and fall when Atchafalaya River influence is typically low. Some auxiliary freshwater distribution structures may be included. This project also includes increasing freshwater supply through repairing banks along the GIWW, enlarging constrictions in the GIWW, and diverting additional Atchafalaya River freshwater through the Avoca Island Levee and into Bayou Chene/GIWW system. Benefits to threatened/endangered species and colonial nesting birds are in addition to wetlands benefits. The DA was executed 9 December 2011. By letter dated 20 August 2012, the State of Louisiana requested suspension of PED work.

* Amite River Diversion Canal Modification project. The State sponsor has indicated they wish Federal participation be suspended. Therefore, they have no interest at this time in pursuing any previously scheduled PED as they anticipate using only non-Federal funds to complete PED and execute construction. This project involves the construction of gaps in the existing dredged material banks of the Amite River Diversion Canal. The objective of this project is to allow waters to introduce additional nutrients and sediment into western Maurepas Swamp to facilitate organic deposition, improve biological productivity, and prevent further swamp deterioration. The exchange of flow would occur during high flow events on the river. This project would also provide benefits to threatened/endangered species and colonial nesting birds. The DA was executed 9 December 2011. By letter dated 20 August 2012, the State of Louisiana requested suspension of PED work.

* Modification to Davis Pond Diversion project. The 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. Wetland acreage benefits may range from 2,000 to 14,000 acres. The tentatively selected plan may call for increased use of the structure which can result in the need to purchase of flowage easements in the influence area as a major construction cost. The project would improve habitat for many wildlife species including pallid sturgeon/manatee; eagle, migratory/colonial birds; and essential fish habitat. The FCSA was signed 5 June 2009. By letter dated 16 Oct 2012, the State of Louisiana requested suspension of future performance --- feasibility work currently suspended.

* Modification to the Caernarvon Diversion project. The 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. Wetland acreage benefits may range from 2,000 to 14,000 acres. The project would improve habitat for many wildlife species including pallid sturgeon/manatee; also eagle, migratory/colonial birds and essential fish habitat. The FCSA was signed 5 June 2009. By letter dated 16 October 2012, the State of Louisiana requested suspension of future performance --- feasibility work currently suspended.

* Land Bridge between Caillou Lake and Gulf of Mexico project. The 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. Subsidence, storm damage, increased tidal influence, and lack of sediment inputs have all caused significant adverse impacts resulting 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 tentatively selected plan 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. The tentatively selected plan 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. The project would improve habitat for many wildlife species including manatee; migratory/colonial birds; loggerhead, Kemp's Ridley, hawksbill sea turtles; and essential fish habitat. The FCSA was signed 5 June 2009. By letter dated 16 October 2012, the State of Louisiana requested suspension of future performance --- feasibility work currently suspended.

* The Gulf Shoreline at Point Au Fer Island (Point Au Fer) project. The 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 provides storm surge protection to the southwestern corner of the Terrebonne Bay wetland system. Subsidence, storm damage and increased tidal influence and lack of sediment inputs have all resulted in shoreline retreat/loss, dune habitat, and protected back-bay barrier marshes. The project would improve habitat for many wildlife species including piping plover; manatee; and migratory/colonial birds; loggerhead, Kemp's Ridley, and hawksbill sea turtles. The FCSA was signed 5 June 2009. By letter dated 16 October 2012, the State of Louisiana requested suspension of future performance --- feasibility work currently suspended.

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

Small Bayou Lafourche Reintroduction Project. The 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 and thousands of acres would benefit as would the bald eagle and essential fish habitat. During prior face-to-face meetings the State indicated no interest in cost sharing in this project at this time.

Small Diversion at Hope Canal Project. The project 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 10-foot deep outflow channel roughly 27,500 feet long that will run from the river to U.S. Interstate 10. During prior face-to-face meetings, the State indicated no interested in cost sharing in this project at this time.

Mississippi River Gulf Outlet Environmental Restoration (which is separate from WRDA 2007 Section 7013). The project 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 was finalized in September 2012.

The estimated cost of preparing the Near-Term Program follow-on feasibility studies is $147,054,000 which is cost shared on a 50-50 percent basis by Federal and non-Federal interests. PED will be cost shared 65 percent Federal and 35 percent non-Federal as authorized in Title VII, WRDA 2007.

The total estimated cost of preparing all LCA feasibility studies is $147,054,000. The total estimated cost for preparing all LCA PED documents is $73,288,000. Both are the same as presented to Congress in FY 2014. PED costs in the amount of $8,100,000 Federal and $4,362,000 non-Federal are unprogrammed based on the current direction from the State of Louisiana.

Total Estimated Study Cost

	$ 147,054,000	Total Estimated PED Cost (65/35)	$73,288,000
Reconnaissance Phase (Federal)	N/A	Federal	$47,637,000
Feasibility Phase (Federal)	73,527,000	Non-Federal	$25,651,000
Feasibility Phase (Non-Federal)	73,527,000		

STATUS SUMMARY

Active	
Beneficial Use of Dredged Material Program	Feasibility Complete: ROD signed 13 Aug 2010, developing Design Agreement
Demonstration Projects Program	Program Implementation Plan approved by HQ
Barataria Basin Barrier Shoreline Restoration	Revised Draft Design Agreement and PMP presented to State for their review in February 2014.
Small Diversion at Convent/Blind River	In PED
Mississippi River Hydrodynamic/Delta Management Study	Continuing Modeling and Feasibility Study

Suspended (In close–out)	
Amite River Diversion Canal Modification	Suspended by state's letter dated 20 August 2012
Convey Atchafalaya River Water to Northern Terrebonne Marshes/	Suspended by state's letter dated 20 August 2012
Houma Navigation Canal	Suspended by state's letter dated 20 August 2012
Terrebonne Basin Barrier Shoreline Restoration	Suspended by state's letter dated 20 August 2012
Medium Diversion at Myrtle Grove with Dedicated Dredging	Pending Suspension
Medium Diversion at White's Ditch	Pending Suspension

Suspended	
Landbridge between Caillou Lake and the Gulf of Mexico	Suspended by state's letter dated 16 October 2012
Gulf Shoreline at Point au Fer Island	Suspended by state's letter dated 16 October 2012
Modification of Caernarvon Diversion	Suspended by state's letter dated 16 October 2012
Modification of Davis Pond Diversion	Suspended by state's letter dated 16 Oct 2012

Feasibility studies never initiated
Hope Canal
Bayou Lafourche

OTHER	
Mississippi River Gulf Outlet Environmental Restoration	Pursuant to WRDA 2007 Section 7013: Production of a feasibility report proceeding separately from Section 7006 - Section 2013 report in review

WRDA 2007, Title VII (Public Law 110-114); the Report of the Chief of Engineers, LCA Ecosystem Restoration, Six Projects Authorized by Section 7006(e)(3) of WRDA 2007,dated 30 December 2010; Louisiana Coastal Area (LCA), Louisiana, Beneficial Use of Dredged Material Program Record of Decision (signed 13 August 2010); and the Report of the Chief of Engineers (dated 22 June 2012), LCA Ecosystem Restoration, Barataria Basin Barrier Shoreline Restoration Project, Louisiana.

The completion schedule of the near-term program is TBD.

MINNESOTA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocations Prior to FY 2012 $	Allocation In FY 2012 $	Allocation In FY 2013 $	Allocation In FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
Minnesota River Watershed Study, MN and SD (Minnesota River Basin) SURVEYS – Continuing (ENR) St. Paul District	$4,520,000	828,000	335,000	649,000	635,000	600,000 1/	$1,473,000

The Minnesota River in southwestern Minnesota originates at the Minnesota-South Dakota border and flows 335 miles through some of the richest agricultural land in Minnesota before joining the Mississippi River at Minneapolis and St. Paul, Minnesota. The river drains 16,770 square miles, of which 14,840 are in Minnesota, 1,610 in South Dakota, and the remainder in North Dakota and Iowa. The Minnesota River reconnaissance study recommended three Feasibility studies. One of the recommendations included an integrated watershed, water quality management, and ecosystem restoration analysis that would produce a watershed management plan to facilitate better watershed management and identify specific opportunities for the Corps of Engineers and other stakeholders. This study was initiated in September 2008 and the Minnesota Environmental Quality Board is acting as the local sponsor. An interagency technical team of Federal and non-Federal partners with expertise in hydrology, geomorphology, limnology, ecology, agriculture, and economics, planning and modeling has assisted in the scoping of the study. The non-Federal participants include the Minnesota Pollution Control Agency, the Minnesota Department of Natural Resources, the Minnesota Board of Water and Soil Resources, the Metropolitan Council of the Twin Cities, Minnesota State University – Mankato, the University of Minnesota and the Nature Conservancy. Federal participants would include the Corps of Engineers, the Natural Resources Conservation Service, the Agricultural Research Service, the U.S. Fish and Wildlife Service, the U.S. Geological Survey, the National Weather Service, and the U.S. Environmental Protection Agency. The study will take advantage of advanced watershed modeling techniques to understand the relationship of hydrologic and water quality parameters and the relative impacts and benefits of alternative measures for watershed management and ecosystem restoration and integrate the efforts of a wide range of agencies currently working independently, leading to more cost-effective use of existing government programs. The watershed study will identify additional projects for study and potential implementation. The local sponsors will be providing in-kind technical services as well as collecting Light Detection and Ranging data in the Minnesota River Basin to fulfill cost-share obligations. The study is authorized by resolution of the House Committee on Public Works, 10 May 1962.

Fiscal Year 2013 carry out funds of $187,000 and Fiscal Year 2014 funds will be used for continuing the feasibility study and modeling. Funds requested for Fiscal Year 2015 will be used to complete simulations for existing hydrology and materials transport of small watersheds, continue modeling work, and initiate development of a decision support system. The preliminary estimated cost of the feasibility phase is $9,040,000, which is to be shared through a 50 percent Federal and 50 percent non-Federal basis. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$9,040,000
Reconnaissance Phase (Federal)	N/A 2/
Feasibility Phase (Federal)	4,520,000
Feasibility Phase (Non-Federal)	4,520,000

A feasibility cost share agreement was executed 29 September 2008. The completion for the feasibility study is TBD.

1/ Estimated Unobligated "Carry-in" Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this study are $0. This amount will be used to perform work on the study as follows: N/A

2/ Reconnaissance phase funded under overall study authority for Minnesota River Basin.

$0 rescinded from the project.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

NORTH DAKOTA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation In FY 2012 $	Allocation In FY 2013 $	Allocation In FY 2014 $	Budgeted Amount In FY 2015 $	Additional to Complete After FY 2015 $
Red River of the North Basin, ND, MN, SD and Manitoba, Canada SURVEYS – Continuing (ENR) St. Paul District	$10,103,000	6,023,000 3/	489,000	711,000	553,000	600,000 1/	$1,727,000

A watershed study for the Red River of the North Basin was initiated with execution of a feasibility cost share agreement in June 2008. Reconnaissance activities will continue for specific locations within the basin as described in the reconnaissance report, which was approved in October 2002. The Red River of the North, a northward flowing stream, originates at the convergence of the Ottertail, Minnesota, and Bois de Sioux Rivers, Minnesota and North Dakota and ends at Lake Winnipeg in Manitoba, Canada. Within the United States, the Red River drains portions of South Dakota, Minnesota, and North Dakota and forms the border between the latter two. The basin has lost much of the natural environment that existed in early settlement times, and flooding has repeatedly caused economic and human hardship. Major flood events where historic high flows have been recorded at different sites throughout the basin have occurred in 1826, 1852, 1893, 1897, 1914, 1919, 1950, 1974, 1975, 1978, 1979, 1985, 1989, 1996, 1997, 2001, 2006, 2009, 2010, and 2011. Additional floods with substantial documented damages occurred on tributaries in other years. Drainage, river modifications, and land use changes (including those for enhancement of agriculture) have adversely affected the natural ecosystems. The basin's water resources issues have been the focus of several watershed planning and management initiatives by the International Red River Board and Red River Basin Commission. Studies will address flood damage reduction and ecosystem restoration. Federal agencies along with state agencies in Minnesota, North Dakota, and South Dakota, local units of government, non-profit environmental organizations, Canadian interests, businesses, agricultural representatives, and citizens participating in support of these initiatives see this study as critical to continued basin planning and implementation. The major outputs of the basin-wide watershed study include development of a digital elevation model using Light Detection and Ranging data, development of a decision support system, building hydrologic models, and development of a comprehensive watershed management plan. The study is providing tools to assist local governments in managing the watershed. The study is authorized by resolution of the Senate Committee on Public Works, 30 September 1974.

Fiscal Year 2013 carry out funds in the amount of $176,000 and Fiscal Year 2014 funds will be used for continuing progress on the updated decision support system, hydrologic model development, a non-structural study, and the comprehensive watershed management plan. Funds requested for Fiscal Year 2015 will be used to continue progress on the comprehensive watershed management plan, and if approved, any follow-on feasibility studies. The estimated cost of the feasibility phase is $18,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. The total study cost has decreased as a result of applying SMART Planning principles to this study. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$19,103,000 2/
Reconnaissance Phase (Federal)	1,103,000
Feasibility Phase (Federal)	9,000,000
Feasibility Phase (Non-Federal)	9,000,000

The feasibility study completion date is TBD.

1/ Estimated Unobligated “Carry-in” funding: As of the date this J-Sheet was prepared, the total dollars estimated to be carried into Fiscal Year 2015 from prior appropriations for use on this study are $0. This amount will be used to perform work on the study as follows: N/A
2/ Excludes costs for Wild Rice River, MN; Roseau, MN; Fargo, ND-Moorhead, MN and Upstream; and Fargo, ND-Moorhead, MN Metro; feasibility studies.
3/ $75,000 increase in FY2012 Allocation due to funding of $400,000 received from child feasibility study of Fargo, ND-Moorhead, MN Metro and funding of $325,000 reallocated to child feasibility study of Valley City, ND.

$4,000 rescinded from the project in 2011.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

North Atlantic Division

Investigations

Connecticut

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$
100,000	0	0	100,000	0

Fairfield and New Haven Counties, CT - Flood Control and Coastal Storm Damage Reduction (New/Completion)

New England District

Fairfield County is located in the southwest corner of Connecticut with a total area of approximately 837 square miles. The major communities in the county include Bridgeport, Danbury, Norwalk and Stamford. New Haven County is located in south central Connecticut and has a total area of approximately 862 square miles. The largest communities in New Haven County are New Haven and Waterbury. Numerous areas within the two counties have been identified by state and community officials as flood prone areas. Meetings held with community officials from the two counties identified flood prone areas along the Five Mile River, the Housatonic River, Ox Brook, the Rooster River, and the Saugatuck River. The most recent flood events affected these rivers in December of 2008 and during hurricanes Irene in August 2011 and Sandy in October 2012. During the 18 year period from 1992-2010, prior to Hurricane Sandy, four presidential disasters had been declared in Fairfield and New Haven counties due to major storm events. The reconnaissance phase will determine if there is a Federal interest for further feasibility level studies to evaluate potential flood control and coastal storm damage reduction measures in both counties along all of the coastal tributaries and shoreline.

Fiscal Year 2015 funds will be used to initiate and complete the reconnaissance study, including Section 905 (b) report. If the reconnaissance report determines there is a Federal interest for further feasibility level study, the scope of work and feasibility cost-sharing agreement will be prepared. The reconnaissance phase would be completed within one year of initiation.

The study is authorized by House Committee on Transportation and Infrastructure Resolution dated April 29, 2010.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$
New Haven Navigation Improvements, CT (New/Completion)	100,000	0	0	100,000	0

New England District

New Haven Harbor is located on the central Connecticut coast on Long Island Sound about 40 miles south of Hartford. New Haven is Connecticut's largest deep water commercial industrial port. WRDA 1986 authorized the deepening of the port's main ship channels and maneuvering basins from their current depth of 35 feet to a depth of 40 feet. That project was never constructed and the authorization lapsed in 2002. The existing project, authorized in 1882 as modified, was completed in 1950, consists of a 35-foot deep 500-foot long channel from deep water in the Long Island Sound to the outer breakwaters. The width of the channel varies from this point from 400 feet to 800 feet through the upper harbor to the I-90 Bridge at the mouth of the Quinnipiac River. The project also includes a maneuvering basin; anchorage areas in the upper harbor; auxiliary channels in the West River, both branches of the Mill River, and the Quinnipiac River; a stone breakwater and dike at Sandy Point separating the outer and inner harbors; and a harbor of refuge completed in 1915. Deep draft commercial facilities consist of liquid petroleum and dry bulk terminals located at the head of the harbor along the east side of the 35-foot channel. The port handled 8.9 million tons of cargo in 2011.

The reconnaissance phase will determine if there is a Federal interest for further feasibility level studies to evaluate potential navigation improvement measures in harbor. The New Haven Port Authority has requested re-consideration of the deepening improvements authorized in 1986 to the main channel and associated maneuvering/turning areas to 40 feet or greater, to enable more deeply loaded ships and larger ships to reach the terminals. Tidal delays and light loading currently restrict deep draft vessel operations. The potential sponsor for the feasibility level studies is the New Haven Port Authority who understands the cost-sharing requirements for the feasibility phase of the study.

Fiscal Year 2015 funds would be used to initiate and complete a Section 905(b) reconnaissance investigation of navigation improvements at New Haven Harbor. If the reconnaissance report determines there is a Federal interest in further feasibility level study, a portion of these funds would be used to develop the scope of work and cost of future cost-shared feasibility investigations. The reconnaissance phase would be completed within one year of initiation.

Study is authorized by Senate Committee on Environment and Public Works Resolution dated July 31, 2007.

Maryland

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,083,794	83,794	0	250,000	500,000	250,000 1/	0

Anacostia Watershed Restoration, Montgomery County, MD – Aquatic Ecosystem Restoration (Completion)

Baltimore District

The study area includes the Anacostia River watershed within Montgomery County, Maryland, including parts of four major sub-watersheds in the basin. The Anacostia watershed is one of the most urbanized watersheds within the Chesapeake Bay basin; since European settlement, the watershed has lost 70 percent forest cover, 93 percent of its tidal wetlands, and 95 percent of native submerged aquatic vegetation. As such, the Anacostia watershed reflects a system that has suffered from years of environmental neglect although major restoration efforts since 1987 are beginning to improve conditions. The Corps, in conjunction with local stakeholders, including Montgomery County, have developed the Anacostia Restoration Plan to protect, improve and restore the watershed by identifying specific restoration strategies to be implemented by the Corps and/or stakeholders in the future.

The Section 905(b) analysis determined there is a Federal interest for further feasibility studies to develop watershed restoration plans for the Anacostia River. Major tasks included: data consolidation and trends analyses; watershed modeling; the identification, scoring, ranking, and prioritization of restoration opportunities. The Anacostia Restoration Plan was completed in February 2010 and was released to the public on April 19, 2010. This current feasibility study is follow-on to the restoration plan and will include investigations and analyses necessary to formulate, evaluate, and potentially implement projects from the restoration plan in Montgomery County that are in the Federal interest. Primary problems to be addressed in this feasibility effort will include stream restoration, fish blockage removal and wetland restoration. This feasibility study supports the habitat goals of the Chesapeake Bay protection Executive Order 13508. The non-Federal sponsor is Montgomery County, Maryland, who executed a cost-sharing agreement in January 2014.

Fiscal Year 2014 funds are being used to continue the feasibility study, including environmental analysis and plan formulation. Fiscal Year 2015 funds will be used to complete the feasibility phase of the study, including completion of the feasibility study report. An independent external peer review is not required for this effort. The estimated cost of the feasibility phase is $2,000,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the cost-sharing is as follows:

Total Estimated Study Costs	2,083,794
Reconnaissance Phase (Federal)	83,794
Feasibility Phase (Federal)	1,000,000
Feasibility Phase (Non-Federal)	1,000,000

The study is authorized by House Committee on Public Works and Transportation resolution, dated September 8, 1988.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Anacostia Watershed Restoration, Montgomery County, MD – Aquatic Ecosystem Restoration (Completion)

Baltimore District

The reconnaissance phase was completed in January 2014. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,083,794	83,794	0	250,000	500,000	250,000 1/	0

Anacostia Watershed Restoration, Prince George's County, MD – Aquatic Ecosystem Restoration (Completion)

Baltimore District

The study area includes the Anacostia River watershed within Prince George's County, Maryland, including all or parts of 12 major sub-watersheds and the tidal portion of the river. The Anacostia watershed is one of the most urbanized watersheds within the Chesapeake Bay basin; since European settlement, the watershed has lost 70 percent forest cover, 93 percent of its tidal wetlands, and 95 percent of native submerged aquatic vegetation. As such, the Anacostia watershed reflects a system that has suffered from years of environmental neglect although major restoration efforts since 1987 are beginning to improve conditions. The Corps, in conjunction with local stakeholders, including Prince George's County, have developed the Anacostia Restoration Plan (ARP) to protect, improve and restore the watershed by identifying specific restoration strategies to be implemented by the Corps and/or stakeholders in the future.

The Section 905(b) analysis determined there is potential Federal interest for further feasibility studies to develop watershed restoration plans for the Anacostia River. Major tasks included: data consolidation and trends analyses; watershed modeling; the identification, scoring, ranking, and prioritization of restoration opportunities. The Anacostia Restoration Plan was completed in February 2010 and was released to the public on April 19, 2010. This current feasibility study is follow-on to the restoration plan and will include investigations and analyses necessary to formulate, evaluate, and potentially implement projects from the restoration plan in Prince George's County that are in the Federal interest. Primary problems to be addressed in this feasibility effort will include stream restoration, fish blockage removal and wetland restoration. This feasibility study supports the habitat goals of the Chesapeake Bay protection executive order, E.O. 13508. The non-Federal sponsor is Prince George's County, Maryland, who executed a cost-sharing agreement in October 2013.

Fiscal Year 2014 funds are being used to continue the feasibility study, including environmental analysis and plan formulation. Fiscal Year 2015 funds will be used to complete the feasibility phase of the study, including completion of the feasibility study report. The estimated cost of the feasibility phase is $2,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. An independent external peer review is not required for this effort. A summary of study cost sharing is as follows:

Total Estimated Study Costs	$2,083,794
Reconnaissance Phase (Federal)	83,794
Feasibility Phase (Federal)	1,000,000
Feasibility Phase (Non-Federal)	1,000,000

The study is authorized by House Committee on Public Works and Transportation resolution, dated September 8, 1988.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Anacostia Watershed Restoration, Prince George's County, MD – Aquatic Ecosystem Restoration (Completion)

Baltimore District

The reconnaissance phase was completed in October 2013. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,500,000	0	0	0	400,000	600,000 1/	500,000

Baltimore Harbor and Channels (50-foot), General Reevaluation Report, MD & VA – Navigation

Baltimore District

The Baltimore Harbor and Channels 50-Foot project, constructed in the 1980s, provides a 50-foot deep main shipping channel from the Virginia Capes at the mouth of the Chesapeake Bay to Fort McHenry in the Port of Baltimore, Maryland. The main channels are authorized to 1,000 feet wide in Virginia and 800 feet wide in Maryland. However, the York Spit Channel and Rappahannock Shoal Channel in Virginia were constructed to 800 feet wide and the Maryland channels were constructed to 700 feet wide. The project also provides for depths of 50 feet in Curtis Bay, 49 feet in the East Channel, and 40 feet in the West Channel and widths of 600 feet in all three channels. The Curtis Bay Channel was constructed to 400 feet wide. The general reevaluation report will evaluate the benefits and costs of options for widening these channels up to their authorized widths based on current and anticipated future vessel traffic and safety considerations. The shipping industry is moving towards larger vessels. Shipping pilots are concerned about the potential for safety problems in the future, when larger ships pass each other in these channels. For example, once the Panama Canal improvements are completed, it is anticipated that there will be more vessel calls by ships with beams of 160 feet. The current main channel widths were designed for dry bulk and tanker ships of up to 150,000 DWT, with beams of about 145 feet, passing Panamax containerships with beams of 106 feet. The Maryland Port Administration understands the financial requirements for the general re-evaluation effort and is ready to execute the feasibility cost sharing agreement in FY 2014.

FY 2014 funds are being used to initiate the general re-evaluation report, including simulation modeling. Fiscal Year 2015 funds will be used to continue the general re-evaluation report, including simulation modeling. The preliminary estimated cost of the general re-evaluation is $3,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. An independent external peer review will be required for this effort. However, the IEPR costs have not yet been be determined for this effort. A summary general re-evaluation cost sharing is as follows:

Total Estimated Phase GRR Cost	$3,000,000
Reconnaissance Phase (Federal)	0
Feasibility Phase GRR (Federal)	1,500,000
Feasibility Phase GRR (Non-Federal)	1,500,000

Division: North Atlantic District: Baltimore Study Name: Baltimore Harbor and Channels, MD, VA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Baltimore Harbor and Channels, MD & VA – Navigation

Baltimore District

The project is authorized by Rivers and Harbors Act of 1917, as modified by the Rivers and Harbors Acts 1927, 1930, 1940, 1945, 1958, and 1970.
The general re-evaluation report schedule is TBD.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2014 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,800,000	0	0	0	250,000	100,000 1/	1,450,000

Chesapeake Bay Comprehensive Plan, MD, PA, & VA - Aquatic Ecosystem Restoration (Continuing)

Baltimore District

The Chesapeake Bay watershed and tidal tributaries is the single largest estuary in the United States with a surface area of approximately 4,400 square miles. It is approximately 200 miles long and varies from 4 to 30 miles in width. The Chesapeake Bay's ecosystem consists of a connection of terrestrial and aquatic habitats. It is composed of thousands of miles of river and stream habitat that interconnect the land, water, living resources and human communities of the Bay watershed. The Bay's vital habitats, including open water, submerged aquatic grasses, tidal and non-tidal marshes, freshwater wetlands and vernal pools, streams and forests support species abundance and diversity.

The reconnaissance phase will determine if there is a Federal interest for further feasibility level studies to evaluate potential aquatic ecosystem restoration measures in the study area. Possible implementable solutions include: wetland creation and restoration, environmental dredging, shoreline stabilization, and the beneficial use of dredged material. The analysis will include existing Federal, State and local plans and will address the most recent Chesapeake Bay Agreement commitments and Executive Order 13508 Chesapeake Bay Protection and Restoration goals, such as the integration of living resource protection and restoration; vital habitat protection and restoration; water quality restoration; sound land use stewardship and community engagement, to the extent that such goals fall within the Corps' mission. The potential sponsors for the feasibility level studies are the State of Maryland and the Commonwealth of Virginia, who both understand the cost sharing requirements for the feasibility phase of the study. A feasibility cost-sharing agreement is scheduled to be executed in FY 2015.

Fiscal Year 2014 funds are being used to initiate the reconnaissance phase of the study including preparation of the Section 905(b) report at full Federal expense. Fiscal Year 2015 funds of $50,000 will be used to complete the reconnaissance phase of the study. If the reconnaissance report determines a Federal interest in additional feasibility level study, the remaining $50,000 of the FY 2015 funds will be used to initiate the feasibility phase of the study, including data collection and public coordination. The Independent External Peer Review requirements and the total cost, schedule, and scope of the feasibility study will not be known until the completion of the reconnaissance phase. However, the study will be compliant with the principles of SMART Planning; the preliminary estimated cost of the feasibility phase is $3,000,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$3,300,000
Reconnaissance Phase (Federal)	300,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Chesapeake Bay Comprehensive Plan, MD, PA, & VA - Aquatic Ecosystem Restoration (Continuing)

Baltimore District

The study is authorized by a resolution from the Committee on Environment and Public Works of the United States Senate, adopted September 2002.

The reconnaissance phase is scheduled for completion in FY 2015. The feasibility phase schedule is TBD.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Massachusetts

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocations Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount for FY 2015 $	Additional to Complete After FY 2015 $
Boston Harbor, MA	4,875,000	825,000	(25,000) 2/	40,000 3/	400,000	1,800,000 1/	1,835,000

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Navigation (Continuing)

New England District

Boston Harbor is located along the eastern shoreline of Massachusetts and is New England's largest port serving as the principal distribution point for the commerce of Massachusetts, New Hampshire and Vermont. In 2011, waterborne commerce totaled 18.4 million tons, of which approximately 80 percent were liquid petroleum products. The inner harbor is comprised of the Main Ship, Reserved, Chelsea River and Mystic River Channels. The Massachusetts Port Authority (Massport) has been upgrading facilities at Conley Terminal, which is located along the southerly side of the Reserved Channel. In addition, Massport has plans to expand Conley Terminal onto the adjacent Coastal Oil Terminal property and to develop a bulk cargo terminal at nearby Massport Marine Terminal, increasing the number of berths that would benefit from deeper channels. Ships drawing 45-foot drafts now make 3 calls a week to Boston Harbor. The recommended project, estimated to cost $320,000,000, with an estimated Federal cost of $224,000,000 and an estimated Non-Federal cost of $96,000,000, would deepen the Broad Sound North Entrance Channel to 51 feet; the President's Roads, the outer Main Ship and the Lower Reserved Channels to 47 feet; the Main Ship Channel between the Reserved Channel and Massport Marine terminal to 45 feet; and the Chelsea River and a small portion of the Mystic River Channels to 40 feet. The average annual benefits amount to $103,496,000 all for commercial navigation. The benefit-to-cost ratio is 4.4 to 1 based upon the latest economic analysis dated December 2012. The potential project sponsor is Massport, who fully understands the cost sharing requirements for the project and is ready to execute the design agreement in FY 2014. PED will ultimately be cost shared at the rate for the project to be constructed, but will be financed through the PED phase at 25 percent non-Federal. Any adjustments that may be necessary to bring the non-Federal contribution in line with the project cost sharing will be accomplished in the first year of construction.

Total Estimated Preconstruction Engineering and Design Costs	$ 6,500,000	Total Estimated Preconstruction Engineering and Design Costs	$ 6,500,000
Initial Federal Share	4,875,000	Ultimate Federal Share	4,550,000
Initial Non-Federal Share	1,625,000	Ultimate Non-Federal Share	1,950,000

Study is authorized by Senate Committee on Environment and Public Works Resolution dated 12 September 1969. Consistent with the cost-sharing and financing concepts enacted by the Water Resources Development Act of 1986 and 1996 as amended, local interests are required to provide all lands, easements, right-of-way, and relocations (LERR) determined by the Federal Government to be necessary for the construction, operation and maintenance of the project; pay 25 percent of all costs allocated to General Navigation Features (GNF) for that portion of the project which has a depth in excess of 20 feet but not more than 45 feet during project construction; pay 50 percent of all GNF costs for that portion of the project which has a depth in excess of 45 feet during project construction; and pay an additional 10 percent of all GNF costs, less a credit for the cost of LERR, over a period not to exceed 30 years after project construction.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Boston Harbor, MA - Navigation

New England District

Fiscal Year 2014 funds are being used to continue design efforts, including subsurface explorations. The preconstruction engineering and design cost increased from $5,000,000 to $6,500,000 based on the final feasibility report which contains a more detailed cost estimate for the recommended project. Fiscal Year 2015 funds will be used to continue design efforts, including detailed engineering and design. The design effort schedule is TBD.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A
2/ The project received $10,000 in FY 2012 offset by a $35,000 reprogramming from the project.
3/ The project received $50,000 in FY 2013 offset by a $10,000 reprogramming from the project.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

New Hampshire

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,631,000	963,000	45,000	199,600	400,000	23,400 1/	0

Connecticut River Ecosystem Restoration, NH & VT – Aquatic Ecosystem Restoration (Completion)

New England District

The Connecticut River Watershed extends from the northernmost part of New Hampshire to Long Island Sound and includes a small portion of the Canadian Providence of Quebec. Its total drainage area is 11,260 square miles of which 3,046 square miles lie in New Hampshire and 3,928 square miles in Vermont. The watershed has experienced considerable development resulting in significant loss of floodplain, fish spawning habitat (e.g. Atlantic salmon, striped Bass), wetlands, waterfowl nesting areas and other valuable fish and aquatic habitat. Existing aquatic habitat resources have also been impacted by deposition of eroded stream bank material. The Connecticut River and its tributaries depend on a naturally variable flow to support all the different parts of the ecosystem. The construction of hydroelectric, flood risk management and other dams in the watershed along with municipal and commercial water withdrawals has altered the watershed's natural hydrologic regime and has blocked the passage of anadromous fish. The study will identify opportunities to modify the management of the dams and water systems to address ecological concerns while maintaining their intended purposes. Studies are also needed to identify and evaluate measures to reduce stream bank erosion, restore anadromous fisheries migratory corridors and spawning habitat, restore degraded wetlands and riverine habitat and improve the overall fish and wildlife habitat of the Connecticut River.

The reconnaissance report, certified in September 2002, recommends feasibility phase studies to improve flow management in the river, identify and evaluate measures to reduce stream bank erosion, restore degraded fish and wildlife habitat and provide fish passage. Available funds are being used to continue the feasibility study, which involves developing a series of flow models that simulate and optimize operations at 70 large reservoirs, including the 14 Corps owned flood control dams, in the watershed. A feasibility cost sharing agreement was executed with The Nature Conservancy on 5 August 2005.

Fiscal Year 2014 funds will be used to continue the feasibility study, including environmental analyses, plan formulation, completion of the basin-wide hydrologic modeling and public coordination. Funds requested for Fiscal Year 2015 will be used to complete the feasibility report. An independent external peer review is not required for this effort. The estimated cost of the feasibility phase is $3,000,000, which is to be shared on a 50-50 percent basis by the Federal and non-Federal interests. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$3,131,000
Reconnaissance Phase (Federal)	131,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

Study is authorized by Senate Committee on Environment and Public Works Resolution dated 23 May 2001.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Connecticut River Ecosystem Restoration, NH & VT – Aquatic Ecosystem Restoration (Completion)

New England District

The reconnaissance phase was completed in August 2005. The feasibility study is scheduled to be completed in FY 2015.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
4,368,000	2,318,000	226,000	299,400	700,000	700,000 1/	124,600

Merrimack River Watershed Study, NH and MA – Aquatic Ecosystem Restoration

The Merrimack River originates in Franklin, New Hampshire at the confluence of the Pemigewasset and Winnipesaukee Rivers and flows southerly towards the Massachusetts border then easterly towards the coast. The Merrimack River basin encompasses approximately 5,010 square miles and is the fourth largest watershed in New England. The main stem of the river is about 116 miles in length with about 74 miles in New Hampshire and 42 miles in Massachusetts. The headwaters are located in the White Mountain National Forest. The estuary includes 2,500 acres of coastal wetlands and is bordered by the Parker River National Wildlife Refuge. Existing uses include aquatic habitat for fish and wildlife, water supply, recreation, hydropower production and commercial shell fishing. The Merrimack River supports anadromous fisheries and endangered species. Although significant improvements have been made to the overall quality of the Merrimack River, many problems exist including poor water quality, degraded aquatic habitat and competing water uses. The watershed study will help define the overall condition of the watershed and inform science-based decisions on prioritized investments to improve water quality and ecosystem restoration. The Section 905(b) analysis was certified on January 25, 2002, which found there was a Federal interest to pursue comprehensive studies in the Merrimack River Watershed. A cost-sharing agreement was executed with the City of Lowell, representing the Merrimack Community Coalition, on February 20, 2002 for the Lower Merrimack River Basin (LMRB) study. Phase I of the LMRB study was completed in August 2006. A second cost-sharing agreement was signed with the New Hampshire Department of Environmental Services on August 25, 2006 to investigate the Upper Merrimack River Basin (UMRB) watershed assessment.

Fiscal Year 2014 funds are being used to continue UMRB and LMRB investigations, including additional watershed modeling, data collections, analysis of restoration alternatives, evaluation of designated uses, watershed flood analysis, and stakeholder coordination. Fiscal Year 2015 funds will be used to continue UMRB and LMRB investigations, including additional data collection and analysis of restoration alternatives, watershed modeling, and evaluation of alternative management scenarios. An independent external peer review is not required for this effort. The estimated cost of the watershed assessment is $5,624,000, and was originally cost shared on a 50-50 percent basis by Federal and non-Federal interests. This cost sharing was modified to 75-25 by Section 2010 of WRDA 2007, which authorizedSection 729 agreements executed on or after December 11, 2000to be amended to reflect the revised cost share. The agreements for continued investigation of both the UMRB and LMRB have been amended in accordance with WRDA 2007. The change in the cost share is retroactive to the start of the watershed assessment study. A summary of the watershed assessment cost sharing is as follows:

Total Estimated Study Cost	$5,774,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	4,218,000
Feasibility Phase (Non-Federal)	1,406,000

The study authority is Section 729 of the Water Resources Development Act of 1986, as amended.

APPROPRIATION TITLE: Investigations, Fiscal Year 2014
Merrimack River Watershed Study, NH and MA – Aquatic Ecosystem Restoration (Continuing)

New England District

The reconnaissance phase was completed in February 2002. The watershed assessment schedule is TBD.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

New Jersey

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
4,500,000 2/	3,682,000	166,000	200,000	400,000	52,000 1/	0

Hudson-Raritan Estuary, Lower Passaic River, NJ – Aquatic Ecosystem Restoration (Completion)

New York District

The study area is located in Essex County and Hudson, New Jersey, about five miles west of Battery of New York City and encompasses 17 miles of the lower Passaic River from the river's confluence with Newark Bay to Dundee Dam. The area is urban to suburban and has been heavily industrialized since the mid-nineteenth century. The industrial activity has degraded the wetlands from discharges of oils, chemicals and other chemical waste from the manufacturing of electrical components and petro chemical oil refinement resulting in contaminated bottom sediments in the river that are unfavorable for fish and wildlife habitat.

The reconnaissance report for the Hudson-Raritan Estuary, approved in July 2000, found there is a Federal interest for further studies in the Lower Passaic River Basin. The feasibility study for the Lower Passaic River Basin will assess items that have a Federal interest for ecosystem restoration, including creation of wetlands and alteration of hydrology/hydraulics to support habitat improvements within the Lower Passaic River and sections of Newark Bay. The non-Federal sponsor is the New Jersey Department of Transportation, who executed a cost-sharing agreement in June 2003. The restoration feasibility study is integrated with a CERCLA Superfund Remedial Investigation/Feasibility Study via the Urban Rivers Restoration Initiative with US Environmental Protection Agency, as well as additional coordination with trustees including New Jersey Department of Environmental Protection, National Oceanic Atmospheric Association and US Fish and Wildlife Service. In February 2013, the Lower Passaic River was selected as an Urban Waters Federal Partnership location with USACE and USEPA as co-leads.

Fiscal Year 2014 funds are being used to continue the feasibility phase, finalize the draft feasibility study report in coordination with the EPA's potential remedial action plans for the lower 8.2 miles, as well as any decisions for remediation resulting from the 17-mile Superfund Remedial Investigation. Fiscal Year 2015 funds will be used to complete the feasibility phase, including the feasibility study report. The estimated cost of the feasibility phase is $9,000,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. The Independent External Peer Review requirement is to be fulfilled under the Hudson-Raritan Estuary, NY and NJ feasibility study review, also funded to completion in FY 2015. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$9,000,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	4,500,000 2/
Feasibility Phase (Non-Federal)	4,500,000

The study is authorized by the House of Representatives Committee on Transportation and Infrastructure Resolution (Docket Number 2596) dated 15 April 1999. The reconnaissance phase was completed in June 2003. The feasibility study is scheduled for completion in FY 2015.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Hudson-Raritan Estuary, Lower Passaic River, NJ – Aquatic Ecosystem Restoration (Completion)

New York District

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A
2/ Total Estimated Study Cost and Feasibility Phase (Federal) costs was reduced by $200,000 for Independent External Peer Review based on a waiver to fulfill the review requirements under the Hudson Raritan Estuary, NY and NJ Feasibility Study.

$25,000 rescinded from the study in FY2012.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

New York

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
10,240,000	8,117,000	583,000	788,000	550,000	202,000 1/	0

Hudson-Raritan Estuary, NY and NJ – Aquatic Ecosystem Restoration (Completion)

New York District

The Hudson Raritan Estuary study area includes the Port of New York and New Jersey. The study is evaluating restoration measures for eight Planning Regions-State water systems within the estuary which include: Jamaica Bay; Lower Bay; Lower Raritan River; Arthur Kill and Kill Van Kull; Newark Bay, Hackensack River and Passaic Rivers; Lower Hudson River; Harlem River, East River, and Western Long Island Sound and Upper Bay. These waters and the surrounding shoreline, mudflats, intertidal marshes, and adjacent upland areas provide valuable habitat for fish, and wildlife resources, and migrating birds along the Atlantic flyway. The area is the habitat for several endangered species, such as, the shortnosed sturgeon, sea turtles, peregrine falcons, piping plover, and rosette terns.

The reconnaissance report for the Hudson-Raritan Estuary, approved in July 2000, found there is a Federal interest for further studies. The feasibility study is assessing the viability of restoring balance to overall ecological functions and values within the Hudson-Raritan Estuary through the development of a Comprehensive Restoration Plan (CRP). The CRP was developed in partnership with the NY-NJ Harbor Estuary Program and regional stakeholders to set forth a consensus vision, master plan and strategy to create future restoration opportunities and restore degraded habitat for coastal wetlands, oyster reefs, eelgrass beds and water birds. In addition, contaminant reduction measures, water quality improvements, and alteration of hydrology/hydraulics to improve water movement and quality will be evaluated and implemented by other partner agencies. The feasibility cost-sharing agreement was executed in July 2001 with the Port Authority of New York and New Jersey.

Fiscal Year 2014 funds will be used to complete the draft feasibility study report, incorporate the feasibility study recommendations for the Hudson-Raritan Estuary – Hackensack Meadowlands and Flushing Creek and Bay efforts, finalize the environmental impact statement, conduct agency technical and independent external peer reviews, and continue the public outreach program. Fiscal Year 2015 funds will be used to complete the feasibility study. The estimated cost of the feasibility phase is $19,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. An Independent External Peer Review is to be conducted at an estimated cost $500,000 at full federal expense, is exempted from the 50-50 cost sharing for the feasibility phase of the study, and will cover both the Hudson-Raritan Estuary, NY and NJ study as well as the Hudson-Raritan Estuary, Lower Passaic River, NY and NJ study. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$19,740,000
Reconnaissance Phase (Federal)	240,000
Feasibility Phase (Federal)	10,000,000
Feasibility Phase (Non-Federal)	9,500,000

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Hudson-Raritan Estuary, NY and NJ – Aquatic Ecosystem Restoration (Completion)

New York District

The study is authorized by the House of Representatives Committee on Transportation and Infrastructure Resolution (Docket Number 2596) dated 15 April 1999. The reconnaissance phase was completed in July 2001. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Pennsylvania

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,000,000	0	0	0	0	200,000 1/	800,000

Delaware River Dredged Material Utilization, PA – Navigation (New)

Philadelphia District

The study area includes the Federal navigation channels in the Delaware River and its tributaries in the Commonwealth Pennsylvania, to determine if beneficial uses of dredged materials are feasible for remedial uses for regional sediment management, aquatic ecosystem restoration and/or flood and coast storm damage reduction measures.

The Section 905 (b) report under Delaware River Dredged Material Utilization, NJ, DE & PA was approved in January 2013. This feasibility study is the third feasibility effort recommended in the Section 905 (b) report. The reconnaissance cost for the three recommended feasibility studies was $249,000. This feasibility study will evaluate beneficial uses of dredge materials measures in Pennsylvania for communities along the Delaware River. The potential sponsor for the feasibility level studies is the Pennsylvania Department of Environmental Protection who understands the cost-sharing requirements for the feasibility phase studies. An agreement is scheduled to be executed in FY 2015.

Fiscal Year 2015 funds will be used to initiate the feasibility phase of the study, including data gathering for cultural and environmental analyses. The preliminary estimated cost of the Feasibility phase is $2,000,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,000,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	1,000,000
Feasibility Phase (Non-Federal)	1,000,000

The study is authorized by a resolution from the Committee on Environment and Public Works of the United States Senate, adopted October 26, 2005.

The reconnaissance phase was completed in January 2013. The feasibility study completion date is TBD.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Delaware River Dredged Material Utilization, PA – Navigation

Philadelphia District

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Virginia

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
900,000	0	237,000	0	63,000	600,000 1/	0

Lynnhaven River Basin, Virginia Beach, VA

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Aquatic Ecosystem Restoration (Completion)

The Lynnhaven River Basin is located in Virginia Beach, Virginia, on the south shore of the Chesapeake Bay. The river drains approximately 50 square miles of watershed in southeastern Virginia and flows northerly emptying into the Chesapeake Bay. The river basin was once a highly productive ecosystem, producing the world famous Lynnhaven oyster. However, residential and commercial development, and the loss of wetlands and forested buffers have increased sedimentation, which degraded the ecosystem and water quality, causing the oyster population to decline to essentially no marketable production today. Only 900 acres of wetlands exist today, half of the acreage present 30 years ago. The feasibility study recommends ecosystem projects at five specific sites to restore or enhance 38 acres of wetlands, 32 acres of essential fish habitat, 94 acres of submerged aquatic vegetation and 22 acres of scallops to restore the watershed. These recommended ecosystem projects are estimated to cost $20,000,000, with an estimated Federal cost of $13,000,000 and an estimated Non-Federal cost of $7,000,000. No benefit-cost ratio has been computed for this project because it is an aquatic ecosystem restoration project and benefits are not quantifiable in monetary terms. The potential project sponsor is the City of Virginia Beach, VA, who fully understands the cost-sharing requirements for the project and is ready to execute the design agreement in FY 2014. Preconstruction, engineering and design (PED) will ultimately be cost shared at 35 percent non-Federal along with the project to be constructed but will be financed through PED phase at 25 percent non-Federal. Any adjustments that may be necessary to bring the non-Federal contribution in line with the project cost sharing will be accomplished in the first year of construction.

Total Estimated Preconstruction Engineering and Design Costs	$ 1,200,000	Total Estimated Preconstruction Engineering and Design Costs	$ 1,200,000
Initial Federal Share	900,000	Ultimate Federal Share	780,000
Initial Non-Federal Share	300,000	Ultimate Non-Federal Share	420,000

The study authority is a resolution by the Committee on Transportation and Infrastructure, U.S. House of Representatives adopted May 6, 1998. Consistent with the cost-sharing and financial concepts enacted by the Water Resources Development Acts of 1986 and 1996, as amended, local interests are required to provide all lands, easements and right of ways, and disposal areas; and pay 35 percent of all costs allocated to aquatic ecosystem restoration. Fiscal year 2014 work efforts for PED will be funded with prior year appropriated funds from FY 2012 to initiate the preconstruction engineering and design. Fiscal Year 2015 funds will used to complete preconstruction engineering and design. The design phase is scheduled for completion in FY 2015.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Lynnhaven River Basin, Virginia Beach, VA N– Aquatic Ecosystem Restoration (Completion)

Norfolk District

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,500,000	0	0	0	800,000	700,000 1/	0

Norfolk Harbor and Channels, Southern Branch of the Elizabeth River Deepening, General Reevaluation Report, VA – Navigation (Completion)

Norfolk District

The Norfolk Harbor and Channels project is located in Hampton Roads, Virginia, a 25-square mile natural harbor serving the ports of Norfolk, Newport News, Portsmouth, Chesapeake, and Hampton, Virginia with numerous terminal facilities for bulk, containerized and general cargo and nine shipyards. The project has been constructed in separable elements based on the needs of the port community and the financial capability of the non-Federal Sponsor, the Virginia Port Authority, an agent of the Commonwealth of Virginia. This study area includes the existing Elizabeth River channel and extends as far upstream as the existing Southern Branch channel. A reconnaissance-level report was completed in July 2012, which demonstrated continued economic feasibility and local sponsor support for implementing this separable element. The proposed project improvements would consist of deepening the existing 40-foot channel on the Main Branch and Southern Branch of the Elizabeth River to the authorized depth of 45 feet and the existing 35-foot channel on the Southern Branch of the Elizabeth River to the authorized depth of 40 feet. These deeper channel depths would allow current and future vessel fleets to fully load the various commodities that move in and out of the waterway. A general re-evaluation effort will be required to reexamine the channel dimensions required and conduct a new economic analysis. The Virginia Port Authority understands the financial requirements for the general reevaluation effort and is ready to execute the feasibility cost sharing agreement in FY 2014. A second general reevaluation underway for Norfolk Harbor is evaluating the feasibility of deepening the 55-foot main shipping channel.
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Fiscal Year 2014 funds are being used to implement a general reevaluation of the project in accordance with the Planning Transformation guidance, including development of a project management plan, execution of a feasibility cost sharing agreement, vessel simulation studies, and data gathering for economic and environmental analyses. Fiscal Year 2015 funds will be used to complete these efforts. The estimated cost of this effort is $3,000,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the study cost sharing is as follows:

Total Estimated Phase GRR Cost	$3,000,000
Reconnaissance Phase (Federal)	0
Feasibility Phase GRR (Federal)	1,500,000
Feasibility Phase GRR (Non-Federal)	1,500,000

The project is authorized by the Supplemental Appropriations Act of 1985 and the Water Resources Development Act of 1986.

The reconnaissance report was completed in July 2012. The general reevaluation report is scheduled for completion in FY 2015.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015
Norfolk Harbor and Channels, Elizabeth River Element, VA – Navigation (Completion)

Norfolk District

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Northwestern Division

Investigations

COLORADO

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budget Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,952,000	302,000	50,000	100,000	200,000	500,000 1/	800,000

Adams and Denver Counties, Colorado – Environmental (New)

Omaha District

The study area includes the South Platte River and its tributaries in Adams and Denver County, Colorado. The City and County of Denver is in the center of the Denver, Colorado metropolitan area. Urbanization in Denver County has adversely affected the South Platte River, its tributaries, the riparian corridors, and the surrounding grasslands. Significant development (including residences and commercial, industrial, and municipal facilities) lies within floodplains of the South Platte River and several tributaries, and the existing waterways have been channelized through a prior Corps flood control project and encroached upon, impacting historic adjoining wetlands, riparian forests, and grasslands. However, in recent years, local governments and organizations have begun restoring habitats along some of these waterways, and interest is high in expanding restoration activities throughout the area. Additionally, historic flooding in Colorado in September 2013, as a result of heavy thunderstorms, damaged hundreds of public and private businesses and residences, and infrastructure, and resulted in 8 fatalities, in and around the Colorado Front Range has elevated interest in addressing flood risks within the City and County of Denver. The purpose of this study is to mitigate flood risks along the South Platte River and its tributaries in Adams and Denver County, Colorado. Efforts under this study contribute to the Urban Waters Federal Partnership, an initiative to improve interagency communication and collaboration in restoring healthy urban waterways and connected environments for economic, ecological, and social benefits. Specifically, the South Platte Corridor in Denver was selected as one of seven pilot projects for enhanced collaboration and communication amongst agencies. The City and County of Denver will be the sponsors of this study.

Fiscal Year 2014 funds will be used to execute the Feasibility Cost Sharing Agreement and initiate the feasibility study. Fiscal Year 2015 funds will be used to continue the feasibility phase of the study, with a focus on quantifying problems and opportunities. The estimated cost of the feasibility phase is $2,865,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests, except for $135,000 for the Independent External Peer Review, which is funded at full Federal expense. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,317,000
Reconnaissance Phase (Federal)	452,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,365,000

Authority for this study was received through a resolution adopted by the Committee on Transportation and Infrastructure, U.S. House of Representatives on September 24, 2008.

The reconnaissance phase was completed in Fiscal Year 2013. The feasibility study schedule for completion is TBD.
1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

IDAHO

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budget Amount FY 2015 $	Additional to Complete After FY 2015 $
2,105,000	495,000	50,000	160,000	0	1,000,000 1/	400,000

Boise River, Idaho – Flood Damage Reduction (Continuing)

Walla Walla District

The Boise River is a tributary of the Snake River located in Idaho, predominately in Ada and Canyon counties. Forty percent of the state population lives in this basin; one-sixth of the state population resides in the 500-year floodplain. The floodplain also houses the state capital, associated government facilities and $10 billion of infrastructure vital to the State and regional economy. Boise is the largest commercial hub between Salt Lake City, Utah and Portland, Oregon. The Corps and the Bureau of Reclamation cooperatively operate three federal dams as a system to manage flood risk. Since completion of the Corps' Lucky Peak Dam in 1961, the flood stage has been equaled or exceeded 10 times; the most recent floods were in 2011 and 2012. The watershed now contains significant development within the 100-year chance floodplain; estimated damages from a 500-year flood exceed $2.2 billion in Ada County alone. Critical infrastructure and services including medical, water treatment, evacuation routes, schools, and government, emergency and communication facilities would be disrupted by a flood. The study will develop a multi-purpose project to reduce significant flood risk while providing water supply and aquatic ecosystem restoration benefits. One alternative involves interagency cooperation between the Corps and the Bureau of Reclamation to identify improvements to the existing reservoir system to meet project objectives. Fiscal Year 2015 will include continuation of the feasibility phase of the study. The non-federal sponsor, the Idaho Water Resource Board, signed the Feasibility Cost Share Agreement on May 29, 2009.

This study was not included in Fiscal Year 2014 President's Budget. Fiscal Year 2015 funds plus any carry-in funds will be used to continue the feasibility phase of the study. The cost of the feasibility phase is $3,724,000 to be cost shared on a 50-50 percent basis by Federal and non-Federal interests with the exception of $200,000 for the Independent External Peer Review which is 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,867,000
Reconnaissance Phase (Federal)	143,000
Feasibility Phase (Federal)	1,962,000
Feasibility Phase (Non-Federal)	1,762,000

The study is authorized by: Section 414 of the Water Resources Development Act 1999; Section 4038, Water Resources Development Act 2007; and the Senate Committee on Public Works resolution (Upper Snake River and Tributaries) passed on 19 March 1954.

The reconnaissance phase was completed in May 2009 and the Feasibility Cost Share Agreement was signed on May 29, 2009. The feasibility study completion schedule is TBD.

1/ Estimated Unobligated “Carry-in” Funding: 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 study as follows: N/A.

$0 rescinded from the project.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

MISSOURI

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
2,907,000	1,135,000	529,000	200,000	450,000	593,000 1/	0

Missouri River Degradation, Missouri and Kansas - Navigation (Completion)

Kansas City District

The Missouri River between miles 340 and 400 in the Kansas City reach has exhibited significant systemic degradation or down cutting of the riverbed. This phenomenon has been observed from Missouri River gage data collected over a long period of time. Degradation has been observed in other reaches of the River to a lesser extent, but with potential to increase in future. Degradation within the Kansas City reach has impacted the critical zone of the Kansas Cities Federal levee system with erosion and threatens to undermine the foundations. Degradation is most acute during flood events, and a long duration flood with associated bed erosion could threaten to fail the system during a large flood which would be catastrophic. The problem has also impacted major water supply intakes, cooling water intakes, and outfall structures causing millions of dollars in repair costs and threatening to cause more costly damage in future. Degradation is also undermining the Federal Bank Stabilization and Navigation Project by destabilizing the reinforced banks. If allowed to continue unchecked, this will critically impact bank stability as well as the navigation mission. Data shows the problem is worsening and will continue to cause increased impacts to Federal and public infrastructure if not addressed. The river bed did not fully recover to pre-flood elevations following the 2007 flood event, indicating flood events are a contributing factor to the continued down cutting. Information gathered during the 2011 flood indicates that this flood has broadened the area of impact. Emergency repairs consisting of rock placement at the toe to stabilize banks at critical levee/floodwall units were implemented during the flood event due to significant scour resulting from the flood. The sponsor is Mid-America Regional Council, a regional planning agency located in Kansas City, Missouri. Mid-America Regional Council is supported with funding from 17 stakeholder entities that represent a wide cross section of interests in sustaining the River and Federal infrastructure, including levee districts, water supply, power supply, and transportation agencies, local municipalities, railroads, and others. The reconnaissance study establishing a Federal interest in the project was completed August 2009. The Feasibility Cost Share Agreement was signed November 1, 2010.

Fiscal Year 2014 funds will be used to continue feasibility. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the study. The cost of the feasibility phase is $4,456,000 which is cost shared on a 50-50 percent basis by Federal and non-Federal interests, except for an estimated $300,000 that will be used for an Independent External Peer Review and is 100% Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$4,985,000
Reconnaissance Phase (Federal)	529,000
Feasibility Phase (Federal)	2,378,000
Feasibility Phase (Non-Federal)	2,078,000

The study authority is Section 216 of the Flood Control Act of 1970 “Review of Completed Projects”.

The reconnaissance phase was completed with the signing of the Feasibility Cost Share Agreement on November 1, 2010. The feasibility study completion is scheduled for CY 2015.

1/ Estimated Unobligated “Carry-in” Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

MONTANA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocations Prior to in FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
6,102,000	4,616,000	241,000	200,000	750,000	295,000 1/	0

Yellowstone River Corridor, Montana - Environmental (Completion)

Omaha District

The purpose of the Yellowstone River Corridor Comprehensive Study is to determine the cumulative hydrologic, biological and socio-economic impacts along the corridor from Gardiner, Montana, to the confluence of the Missouri River, as authorized by Section 431 of Water Resources Development Act of 1999. The Yellowstone River corridor has been subject to natural and human factors affecting sustainable use and conservation of resources. Flooding in 1996 and 1997 caused damage to private property and public facilities with a subsequent increase in requests for regulatory approvals under Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act, as well as for Corps of Engineers emergency technical assistance. Given the natural and cultural heritage of this river corridor, public and private sector and environmental interests have raised issues regarding the long-term effects of bank stabilization and the potential for adverse cumulative impacts. The primary goal of this study is to develop a set of publicly-supported river corridor management recommendations that address effects of channel modifications on the human community and riparian ecosystem along the Yellowstone River corridor. The corridor study will be used to formulate management and protection objectives based on a cumulative effects analysis and stakeholder input, evaluate trade-offs among objectives, and assess impacts of the management objectives to help determine their acceptability as contrasted with potential long-term riparian deterioration. In accordance with Section 431 of P.L. 106-53, this study continues to be formulated in consultation with the United States Fish and Wildlife Service, United States Geological Survey, Natural Resources Conservation Services and with full participation of the State of Montana, tribal, and local entities; funding for the consultation efforts is the responsibility of each respective agency. The cost share sponsor is the Custer County Conservation District, the fiscal agent for the Yellowstone River Conservation District Council. The Feasibility Cost Sharing Agreement was signed on January 22, 2004.

Fiscal Year 2014 funds will be used to complete a comprehensive socio-economic study of economic activities and trends along the Yellowstone River corridor and initiate the cumulative effects analysis of how human activities have historically affected the physical characteristics and natural habitats along the river. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the comprehensive study. The study cost of the feasibility phase is $7,591,000, which is cost-shared on a 75/25 percent basis by Federal and non-Federal interests. This study will not result in a decision document; therefore an Independent External Peer Review is not required. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$ 8,000,000
Reconnaissance Phase (Federal)	409,000
Feasibility Phase (Federal)	5,693,000
Feasibility Phase (Non-Federal)	1,898,000

The study authority is Section 431 of the Water Resources Development Act of 1999 (P.L. 106-53).

The reconnaissance phase was completed with the signing of the Feasibility Cost Sharing Agreement on January 22, 2004. The study is scheduled for completion in CY 2015.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

NORTH DAKOTA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation FY 2012	Allocation FY 2013	Allocation FY 2014	Budget Amount FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,289,200	200,000	205,000	240,000	0	400,000 1/	244,200

James River, North Dakota - Flood Damage Reduction (Continuing)

Omaha District

The James River flows south through eastern North Dakota and eastern South Dakota, with the confluence to the Missouri River just south of Yankton, South Dakota. In 2009, the James River in North Dakota experienced record flooding. As a result, the Corps has been involved in flood fighting efforts focused on the communities of Jamestown and La Moure. Flooding in 2009 led to an emergency declaration and advance measures in Jamestown. The Governor of North Dakota issued a statewide emergency declaration on March 13, 2009 that included Stutsman and LaMoure counties. The flood fight included 5.5 miles of temporary levees and 17,500 feet of barriers, costing $10,000,000 and protecting infrastructure valued at $70,000,000. The primary study purposes are flood damage reduction and aquatic ecosystem restoration. The Feasibility Cost Share Agreement was signed on April 23, 2012 between the Department of the Army and The James River Joint Water Resource District.

Fiscal Year 2015 funds plus any carry-in funds will be used to continue the feasibility phase of the study. The cost of the feasibility phase is $2,076,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests with the exception of costs for Independant External Peer Review currently estimated at $150,000, which is 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Costs	$2,252,200
Reconnaissance Phase (Federal)	176,200
Feasibility Phase (Federal)	1,113,000
Feasibility Phase (Non-Federal)	963,000

This study is authorized by Section 557 of WRDA 1996.

The reconnaissance phase was completed with the signing of the Feasibility Cost Share Agreement on April 23, 2012. The feasibility schedule for completion is TBD.

1/ Estimated Unobligated Carry-in Funding: 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 $0. This amount will be used to perform work on the study as follows: N/A

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

OREGON

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
3,641,000	2,246,000	362,000	300,000	450,000	283,000 1/	0

Lower Columbia River Ecosystem Restoration, Oregon and Washington – Environmental (Completion)

Portland District

The Lower Columbia River Ecosystem Restoration comprehensive watershed study extends from the mouth of the Columbia River, where there is a 43-foot deep-draft Federal navigation channel that runs to the Portland metropolitan area, to a shallow draft channel upstream to river mile 145 at Bonneville Lock and Dam. The Columbia River's estuary is classified as nationally significant under the Environmental Protection Agency's (EPA) National Estuary Program. The river divides the states of Oregon and Washington throughout this area. The lower Columbia River basin system includes projects with flood damage reduction, navigation, fish and wildlife, ecosystem restoration, hydropower, bank protection, recreation and water supply improvement purposes. Thirteen different populations of anadromous salmonids that use the estuary and reproduce in the Columbia River basin have been listed as threatened or endangered under the Endangered Species Act. Such listings have broad implications to existing water resource uses and future developments. 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 significantly impacted this ecosystem's ability to produce and sustain fish and wildlife resources. The purpose of this ongoing study is to investigate and recommend appropriate solutions to address aquatic ecosystem restoration opportunities in the lower Columbia River basin. Some of the key areas to be addressed in this comprehensive study include wetland/riparian habitat restoration and stream and fisheries habitat improvement. This study would serve as the catalyst to bring together current efforts by a number of Federal and state governmental agencies, private organizations, and other stakeholders, including recreation, ports, industry, agriculture, labor, commercial fishing, environmental interests and citizens. For example, this study will consider opportunities to add up to 10,000 acres of Estuarine / Riverine emergent and forested wetland in the study area, consistent with the Lower Columbia River Estuary Partnerships Comprehensive Conservation Management Plan and Washington State recovery plans. The states of Oregon and Washington are joint sponsors for the study and understand the cost sharing provisions as evidenced by the 16 December 2003 signed Feasibility Cost Share Agreement.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility study. The feasibility phase cost has decreased by an estimated $340,000 from the Fiscal Year 2014 budget submission to $6,700,000, which will be shared on a 50-50 percent basis by Federal and non-Federal interests, except for $200,000 will be used for the required Independent External Peer Review and will be 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$6,891,000
Reconnaissance Phase (Federal)	191,000
Feasibility Phase (Federal)	3,450,000
Feasibility Phase (Non-Federal)	3,250,000

The authorization for this study is Resolution of the Senate Committee on Environment and Public Works dated 28 June 2000.

The reconnaissance phase was completed in August 2001. The Feasibility Cost Share Agreement was signed 16 December 2003. The feasibility study is scheduled for completion in CY 2015.

1/ Estimated Unobligated "Carry-in" Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this study effort is $0. This amount will be used to perform work on the study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
600,000	0	0	0	50,000	550,000 1/	0

Willamette River Floodplain Restoration, Oregon

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Environmental (Completion)

Portland District

The Willamette River Basin is located in northwestern Oregon and drains an area of about 12,000 square miles into the Columbia River. The feasibility study identified the locally preferred plan (LPP) as the recommended plan, with 574 acres along the Middle Fork and Coast Fork Rivers, tributaries of the Willamette River, including riverine aquatic bed, forested wetland, and riparian woodland habitat that may be restored to natural floodplain function to promote aquatic ecosystem restoration. The estimated first construction cost of the LPP according to the feasibility study is $42,155,000 (FY 2014 price levels), with a 65% Federal cost-share and a 35% non-Federal cost-share. The recommended plan will be fully developed during the PED phase to refine the implementation schedule and prioritize key features such as stream reconnection, re-creation of riparian habitat, removal of non-native species, strategic placement of large wood and habitat restoration of old gravel mining pits to restore natural wetlands and promote ecosystem restoration. The Chief's Report, signed in January 2014, identifies habitat improvement projects for fish listed as threatened under the Endangered Species Act. The Mid-Willamette Valley Council of Governments was the non-federal sponsor, working closely with The Nature Conservancy for the feasibility study. The Nature Conservancy will be the non-federal sponsor during the PED phase and any future implementation of the recommended plan. PED will ultimately be cost shared at the rate for the project to be constructed, but will be financed through the PED period at 25% non-Federal. Any adjustments that may be necessary to bring the non-Federal contribution in line with the project cost sharing will be accomplished in the first year of construction. Before this project could begin construction, it would need to be authorized by Congress.

Total Estimated Preconstruction Engineering and Design Cost	$ 800,000
Initial Federal Share (75%)	600,000
Initial Non-Federal Share (25%)	200,000

Total Estimated Preconstruction Engineering and Design Cost	$ 800,000
Ultimate Federal Share (65%)	520,000
Ultimate Non-Federal Share (35%)	280,000

Fiscal Year 2014 funds are being used to begin the Preconstruction Engineering and Design (PED) activities. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the PED activities.

1/ Estimated Unobligated "Carry-in" Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this study effort is $0.00. This amount will be used to perform work on the study as follows: "N/A".

$0 rescinded from the study.

$0.00 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

WASHINGTON

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budget Amount FY 2015 $	Additional to Complete After FY 2015 $
2,545,000	595,000	450,000	500,000	500,000	500,000 1/	0

Puyallup River, Washington - Flood Damage Reduction (Completion)

Seattle District

The Puyallup River and its primary tributary, the White River, are located in western Washington State near the city of Tacoma. The Puyallup River watershed drains the slopes of Mount Rainier through King and Pierce counties into Puget Sound. In 2008, flooding damages on the Puyallup and White Rivers, exceeded $10,000,000 in commercial damages and $5,000,000 in residential damages. The Puyallup and White rivers have significantly degraded habitat and highly manipulated hydraulic and hydrologic regimes. Multiple species that reside within the basin (Bull Trout, Puget Sound Spring Chinook, and several wildlife species) have been listed under the Endangered Species Act. The combination of these flooding and environmental issues has increased the importance of undertaking a comprehensive effort addressing watershed issues. The study will identify and recommend measures to reduce flood hazards in urban areas and restore ecosystem functions and processes to support critical fish and wildlife habitat. This study has support from a wide range of stakeholders including the Puyallup and Muckleshoot Tribes, King County, the Port of Tacoma and major municipalities throughout the basin. The Feasibility Cost Share Agreement (FCSA) was executed September 2010, between the Department of the Army and Pierce County.

Fiscal Year 2014 funds are being used to select a Tentatively Selected Plan and complete the Tentatively Selected Plan Milestone, draft decision document, conduct a full agency and public review, and work toward the Agency Decision Milestone. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $4,492,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests, except for Independent External Peer Review, estimated at $300,000, which is 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$4,641,000
Reconnaissance Phase (Federal)	149,000
Feasibility Phase (Federal)	2,396,000
Feasibility Phase (Non-Federal)	2,096,000

The study authority is Section 209 of the Flood Control Act of 1962 (P.L.84-874).

The reconnaissance phase completion was September 2010 and the FCSA was executed September 2010. The feasibility study is scheduled to complete in CY 2015.

1/ Estimated Unobligated “Carry-in” Funding: 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 study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budget Amount FY 2015 $	Additional to Complete After FY 2015 $
Seattle Harbor, WA - Navigation (New)	1,600,000	0	0	0	100,000	200,000 1/	1,300,000

Seattle District

The Seattle Harbor study area is located between the East, West, and Duwamish Waterways navigation channel in Puget Sound's Elliott Bay in Seattle, WA. The harbor provides access to existing container terminals and other marine industrial users that includes nearly 11,000 annual transits. The 5-year average for tonnage is over 25 million and is valued at over $40 billion annually. In 2012, 27,000,000 tons of goods came through harbor terminals with a value of over $44,000,000. The 34 foot authorized depth on the West Waterway and the 51 foot authorized depth on the East Waterway frequently result in delays of up to several days at existing container terminals while ships wait for high enough tides to load and unload cargo. Currently, the Port of Seattle is targeting a depth of 53 feet for the East, West, and Duwamish Waterways. A substantial competitive threat for the Port is coming from Prince Rupert in Canada which has a natural depth of over 70 feet allowing for significantly larger cargo ships than Seattle Harbor can currently support. Some cargo and associated job loss has already occurred as a result of this international competition, and Prince Rupert is aggressively pursuing increased market share of cargo destined for American markets. Increased depth in Seattle Harbor, particularly the West Waterway, would have a significant impact on economic development and would increase the number of calls made to Seattle each year for larger vessels with drafts exceeding the current authorized depth of 34 foot in the West and 51 feet in East Waterways. The Port of Seattle is the potential non-Federal sponsor for the feasibility portion of the study and understands the cost-sharing requirements of the feasibility phase.

Fiscal Year 2014 funds are being used to fully fund reconnaissance phase at Federal expense. If the reconnaissance report determines there is a Federal interest in further feasibility-level study, Fiscal Year 2015 funds plus any carry-in funds will be used to initiate the feasibility phase of the study. The scope, cost, and schedule of the feasibility study and the cost of the Independent External Peer Review will not be determined until the reconnaissance study is complete. The preliminary estimated cost of the feasibility phase is $2,800,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests except for the estimated $200,000 for the Independent External Peer Review, which is 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,900,000
Reconnaissance Phase (Federal)	100,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,300,000

The study authority is Section 216 of the Flood Control Act of 1970.

The reconnaissance phase is scheduled for completion with the signing of the FCSA in no later than CY 2015. The feasibility study completion date is TBD.
1/ Estimated Unobligated "Carry-in" Funding: 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 study as follows: N/A.

$ 0 rescinded from the study.

$ 0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation FY 2012	Allocation FY 2013	Allocation FY 2014	Budget Amount FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
7,259,000	5,609,000	700,000	300,000	400,000	250,000 1/	0

Skagit River, WA - Flood Damage Reduction (Completion)

Seattle District

The Skagit River Basin is located in the northwest corner of the State of Washington, in Skagit County. The 100-year flood event in the Skagit River Basin has the potential to cause $1,000,000,000 in damages, close Interstate 5, the major north-south route through Western Washington, and damage over 10,000 structures with flooding depths from 12 to 20 feet. Current non-Federal levees along the Skagit River provide only 25-35 year recurrence interval protection, including the levees for the cities of Mt. Vernon, Burlington, and Sedro Woolley. The study will examine options to reduce flood damages in the Skagit River flood plain as well as provide aquatic ecosystem restoration to the Skagit River basin. The study will evaluate the potential for additional flood control storage at five existing non-Federal hydropower dams, and the construction of ring levees, overflow levees, diversion channels, and non-structural measures. The Feasibility Cost Share Agreement (FCSA) was executed July 1997, between the Department of the Army and Skagit County.

Fiscal Year 2014 funds are being used to complete the Tentatively Selected Plan Milestone and continue feasibility. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility phase of the study. The cost of the feasibility phase is $13,172,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests, with the exception of the Independent External Peer Review (IEPR) of $400,000, which is 100 percent Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$13,645,000
Reconnaissance Phase (Federal)	473,000
Feasibility Phase (Federal)	6,786,000
Feasibility Phase (Non-Federal)	6,386,000

The study authority is Section 209, 1962 Flood Control Act (P.L. 87-874).

The reconnaissance phase completion was in July 1997 and the original FCSA was executed July 1997, Amendment No. 1 was executed May 2003, Amendment No. 2 was executed February 2004, Amendment No. 3 was executed April 2007, Amendment No. 4 was executed September 2007. The feasibility study is scheduled to complete in CY 2015.

1/ Estimated Unobligated “Carry-in” Funding: 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 study as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budget Amount FY 2015 $	Additional to Complete After FY 2015 $
3,720,000	2,070,000	150,000	300,000	650,000	550,000 1/	0

Skokomish River Basin, WA - Environmental (Completion)

Seattle District

The Skokomish River, located in Mason County, Washington is the primary drainage basin for the southeast region of the Olympic Peninsula, carrying flow from its headwaters in the Olympic Mountains to its outlet in Hood Canal. The basin consists of 80 mainstream river miles and 260 miles of tributaries. The purpose of the study is to investigate opportunities for ecosystem restoration. Since 1884, 33% (~1700 acres) of the lower Skokomish basin wetlands, including estuarine wetlands, that have been lost. Flow alterations from Cushman Dam have contributed to side channel isolation. The Endangered Species Act-listed threatened species, including Puget Sound Chinook, Hood Canal Summer Chum salmon, steelhead, and bull trout, would benefit from rearing and spawning habitat improvements to nationally recognized critical habitat, as well as nesting and rearing habitat for bald eagles. The primary improvements will likely be reconnections of isolated off channel habitats on Forest Service, private, and tribal lands. This study is included in the Puget Sound Action Agenda, and the State and Federal plan for Puget Sound recovery. The Feasibility Cost Share Agreement was executed July 2006, between the Department of the Army, Mason County, and the Skokomish Indian Tribe.

Fiscal Year 2014 funds are being used to continue the feasibility study. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the Feasibility study. The cost of the re-scoped feasibility phase is $6,472,000, which is to be cost-shared on a 50-50 percent basis by Federal and non-Federal sponsor except for an estimated $500,000 for the Independent External peer Review, which is 100% Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$6,706,000
Reconnaissance Phase (Federal)	234,000
Feasibility Phase (Federal)	3,486,000
Feasibility Phase (Non-Federal)	2,986,000

The study authority is Section 209 of the Flood Control Act of 1962 (PL 87-874).

The reconnaissance phase was completed March 2000 and the Feasibility Cost Share Agreement was executed July 2006. The Feasibility study is scheduled for completion in CY 2015.

1/ Estimated Unobligated “Carry-in” Funding: 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 $0.00. This amount will be used to perform work on the study as follows: N/A.

$0.00 rescinded from the study.

$0.00 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Pacific Ocean Division

Investigations

ALASKA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
2,225,000	1,220,000	5,000	300,000	650,000	50,000 1/	0

Alaska Regional Ports (Arctic Deep Draft), AK – Navigation (Completion)

Alaska District

The Alaska Regional Ports study focuses on evaluating the problems, opportunities, and needs for regional ports throughout the State of Alaska. Navigation access to local ports is critical to all the 200 plus coastal communities in Alaska, which are primarily served by a regional port system where small barges transship cargo from ocean going barges and small freighters. Since there are few connecting roads and the economy is primarily based on commercial fishing and natural resources development, consideration of regional ports is needed due to the economic, social and cultural dependence these communities have on marine resources and waterborne transportation. The Alaska Department of Transportation and Public Facilities (ADOT&PF) requested the study for harbor improvements in Alaska that focuses on developing a regional ports system that would serve as an integrated intermodal system of importance to the state, the nation, and global markets. As resource extraction demands increase for the Arctic and the sea ice continues to melt, deep draft commercial vessels usage of the Northern Sea Route for passage between Pacific and Atlantic ports has been increasing exponentially. As natural resource extraction becomes more economically feasible, harbors of refuge would be needed to provide safe moorage and tug assistance to vessels in distress. Regional ports would provide a comprehensive harbor network for national defense support and safe moorage for the fishing fleet and small commercial ships. As an Arctic Nation, the Alaska Department of Transportation and Public Facilities (ADOT&PF) requested a Tier 1 Agreement to study the problems, opportunities, and need to develop a deep-draft port system in the Arctic. Vessel traffic in the Arctic is on the rise; oil and gas industry activities on the Outer Continental Shelf began in the summer 2012; cruise liners, military craft, tugs and barges, and fishing vessels are all present and active in the Arctic. There are significant safety concerns as well as implications related to the Nation's economy, environment, and national security. The study assessed 14 potential port locations along the coast of western and northern Alaska identifying Nome and Port Clarence as sites with greatest potential to meet the needs of Arctic navigation. Detailed analysis of Nome and Port Clarence are ongoing to identify the recommended plan. This study is consistent with the Implementation Plan for the National Strategy for the Arctic Region released January 2014. The Feasibility Cost Sharing Agreement was executed in December 2011 between the Department of the Army and the non-Federal sponsor, the State of Alaska.

FY 2014 funds will be used to continue the study. FY 2015 funds will fully fund the feasibility phase. The preliminary estimated cost of the feasibility phase is $2,374,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Independent External Review will be conducted in the amount of $300,000 and is an exception to the 50-50 cost share.

A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$3,262,000
Reconnaissance Phase (Federal)	888,000
Feasibility Phase (Federal)	1,337,000
Feasibility Phase (Non-Federal)	1,037,000

The study is being conducted under the Study Resolution on Rivers and Harbors in Alaska adopted on 2 December 1970 by the Committee on Public Works of the U.S. House of Representatives.

The feasibility phase is scheduled for completion in FY 2016.

1/ Estimated Unobligated “Carry-in” Funding: 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 study effort is $0. This amount will be used to perform work on the project as follows: N/A.

$0 rescinded from the study.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY2012	Allocation in FY2012	Allocation in FY2013	Allocation in FY2014	Budgeted Amount in FY2015	Additional to Complete After FY2015
	$	$	$	$	$	$	$
	1,447,600	212,600	50,000	300,000	50,000	300,000 1/	535,000

Craig Harbor, AK (Continuing)

Alaska District

The City of Craig is located on the west coast of Prince of Wales Island, approximately 55 air miles northwest of Ketchikan. The population of Craig was 1,397 in 2000. Existing moorage includes the South Cove Harbor, North Cove Harbor, and unprotected docks. South Cove Harbor is a Federal project and provides a mooring basin with 110 slips and an entrance channel, both at a depth of -11 feet MLLW. Two overlapping breakwaters protect the basin. Vessels using the South Cove harbor are a mixture of smaller commercial and recreational vessels. North Cove harbor provides 105 slips. A floating breakwater protects the majority of vessels moored at this harbor. The city dock provides 12 docks for a total of 227 public slips. Commercial vessels use approximately 70 percent of these slips, while the remaining 30% are used for recreational vessels. Several unprotected docks, primarily privately owned, are located on the north side of Craig Island. Based on local observations, 6- to 7-foot waves impact the South Cove harbor breakwater during the worst storms. During such conditions, waves of 4 to 5 feet inside the harbor have been observed. Vessel and dock damages occur from impacts and rubbing action of the rafted vessels during storm events. Rafting of vessels up to 5 deep occurs due to overcrowding at the North Cove harbor and unprotected docks along the north side of Craig Island. Vessel and dock damages similar to that at the South Cove are experienced along the north side docks. Overcrowded conditions cause operational inefficiencies to the commercial fleet operating out of Craig, including delays departing during critical times to reach fishing grounds during limited open seasons. Local interests desire an expansion of moorage in Craig to ease congestion and reduce adverse impacts currently occurring to vessels and harbor infrastructure. Benefits to the Nation would include reduced damage costs, increased efficient use of time, decreased delays, increased efficient harbor operations, and increased recreational opportunities. As the local sponsor, the City of Craig will be required to provide 50 percent of the cost of the feasibility phase.

FY2014 appropriations and carry-in funds will be used to continue feasibility study efforts. FY2015 funds will be used to continue the study efforts. The study is being conducted under the Study Resolution adopted on 2 December 1970 by the Committee on Public Works of the U.S. House of Representatives. The preliminary estimated cost of the feasibility phase is $2,370,000, which is to be cost shared on a 50-50 percent basis by Federal and non-Federal interests. Up to one-half of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$2,632,620
Reconnaissance Phase (Federal)	262,620
Feasibility Phase (Federal)	1,185,000
Feasibility Phase (Local)	1,185,000

The schedule for completion of the feasibility study is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$ 0 rescinded from the study.
$ 0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY2012	Allocation in FY2012	Allocation in FY2013	Allocation in FY2014	Budgeted Amount in FY2015	Additional to Complete After FY2015
	$	$	$	$	$	$	$
Port Lions, AK	480,000	0	0	0	180,000	300,000 1/	0

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Navigation (Completion)

Alaska District

Port Lions is located on Kodak Island, approximately 260 air miles southwest of Anchorage, Alaska. The primary problem is the lack of adequate wave protection for the existing inner harbor facilities and moored vessels. The mooring basin is subject to severe damages and undesirable wave conditions from northeast waves entering the basin through the near-shore breach and around the deep-water end of the main breakwater. Significant portions of the mooring floats are unsafe and have been blocked off from public access or removed from the water. Year round use of the basin has been reduced from about 124 to 35 vessels. Additional protective structures are required to provide wave protection for full utilization of the existing moorage area and to reduce damages to vessels and the mooring system. The project consists of a single new 1,360-foot rubblemound breakwater and a 100-foot wide entrance channel with a depth of -14 feet, between the existing and the new breakwaters. The harbor will provide 10 acres of protected moorage at a depth of -8 to -14 feet. The local sponsor is the City of Port Lions.

Total Estimated Preconstruction Engineering and Design Costs	$613,300	Total Estimated Preconstruction Engineering and Design Costs	$613,300
Initial Federal Share	$480,000	Ultimate Federal Share	$490,640
Initial Non-Federal Share	$133,300	Ultimate Non-Federal Share	$122,660

The project is authorized for construction by Sec. 1001 (1) of the Water Resource Development Act of 2007. FY 2014 funds are being used to initiate the PED phase. FY 2015 funds will fully fund the PED phase.

The PED phase is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A

$ 0 rescinded from the study.
$ 0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

HAWAII

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocations Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
4,830,000	3,084,000	383,000	443,000	800,000	120,000 1/	0

Ala Wai Canal, Oahu, HI – Flood Risk Management (Completion)

Honolulu District

The Ala Wai watershed encompasses more than 19 square miles on the island of Oahu. The study area extends from the ridge of the Koolau Mountains to the nearshore waters of Malama Bay and includes Makiki, Manoa and Palolo streams. These streams all drain to the Ala Wai Canal, a two-mile long, man-made waterway constructed during the 1920's to drain extensive coastal wetlands. Due to development and alterations over the years, residents of the Ala Wai watershed are at risk to flood damages and the aquatic ecosystem is significantly degraded.

Approximately 3,000 properties are at risk of damage from a 100-year flood event under existing conditions. In 1965, 1967, and 1992, Waikiki experienced severe flooding. In 2004, Manoa stream overflowed its banks and caused over $80M in damages to property and irreplaceable documents in the University of Hawaii's library. In 2006, the Makiki neighborhood also experienced heavy flooding.

Urban uses and activities have exacerbated ecosystem degradation through loading of sediment and pollutants that impair fish habitat and health. As a result, the streams and the Canal are included on the Environmental Protection Agency Section 303(d) List of Impaired Waters.

The study is a cooperative effort with Federal, State and local agencies. Based on recent flood events and coordination with the local sponsor, the primary focus of the study has shifted from focusing on both aquatic ecosystem restoration and flood risk management to a single purpose flood risk management study.

The feasibility cost sharing agreement was executed in April 2001 with the State Department of Land and Natural Resources and subsequently amended in August 2006 and November 2012 for a total study cost of $9,258,000. The current estimated total cost to complete the study is $2,269,000. The draft Feasibility/Environmental Impact Statement is scheduled for Fiscal Year (FY) 2014. FY 2014 funds will be used to continue the study. FY 2015 funds will fully fund the feasibility phase.

The total estimated cost of the feasibility phase is shared on a 50-50 percent basis by Federal and non-Federal interests, except for the Independent External Peer Review which is funded at 100% federal cost and is estimated to cost $152,000. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$9,383,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	4,705,000
Feasibility Phase (Non-Federal)	4,553,000

The study is authorized under Section 209 of the Rivers and Harbors Act of 1962, Harbors and Rivers in Hawaii.

The reconnaissance phase was completed in August 1999. The feasibility phase is scheduled for completion in FY 2016.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for this study effort is $0. This amount will be used to perform work on the study as follows: N/A.

$0 was rescinded from the project.

$0 was transferred to the Flood Control and Coastal Emergencies (FCCE).

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
1,691,000	96,000	351,000	0	775,000	469,000 1/	0

Hilo Harbor Modification, Hawaii, HI – Navigation (Completion)

Honolulu District

Hilo Harbor is located on the northeast coast of the island of Hawaii, the State of Hawaii's southernmost island. The harbor is approximately two miles from the business district of Hilo, the island's city and county seat and is the principal commercial port for the island (the second being Kawaihae Harbor on the west side of the island) and the fourth largest port in the State in terms of total goods shipped. The harbor provides a wide range of maritime facilities and services including the island's only pier large enough to accommodate visiting cruise ships. Among the commodities moving through the harbor are liquid bulk cargo, including all of the island's petroleum products, container cargo, and new vehicles.

Hilo Harbor was constructed by the Corps of Engineers in 1930 and consists of a 10,080-foot long breakwater protecting a 35-foot deep turning basin. Vessel traffic is currently resulting in maximum usage of the existing commercial harbor facilities. The State of Hawaii, Department of Transportation, Harbors Division's (DOT-Harbors) current master plan for Hilo Harbor identifies the need for modification of the existing harbor to accommodate larger vessels with the intent of increasing the efficiency of port operations and reducing cargo transportations costs. Additionally, adverse surge conditions during winter months often preclude users from safely mooring and operating their vessels. DOT-Harbors is the non-federal sponsor for this project. In December 2011, DOT-Harbors provided a letter of intent indicating their interest in participating in the cost shared Feasibility Phase of the project and their understanding of the feasibility cost-sharing requirements.

The FCSA was executed on 30 September 2013. FY 2014 funds and carry-in funds will be used to continue the feasibility study. FY 2015 funds will fully fund the feasibility phase. The estimated cost of the feasibility phase is $3,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. An Independent External Peer Review (IEPR) will be conducted in the Feasibility Phase at an estimated cost of $150,000. The IEPR will be conducted at full Federal expense and is included in the cost estimate. A summary of the study cost sharing follows:

Total Estimated Study Cost	$3,116,000
Reconnaissance Phase (Federal)	116,000
Feasibility Phase (Federal)	1,575,000
Feasibility Phase (Non-Federal)	1,425,000

This study is authorized under Section 216 of the Flood Control Act of 1970.

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The reconnaissance report was approved in July 2012. The feasibility phase is scheduled for completion in FY 2016.

1/ Estimated Unobligated Carry-in Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into FY 2015 from prior appropriations for this study effort is $0. This amount will be used to perform work on the study as follows: N/A.

$0 was rescinded from the project.

$0 was transferred to the Flood Control and Coastal Emergencies (FCCE).

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
672,000	47,000	199,000	273,000	0	153,000 1/	0

Waiakea-Palai, Hawaii, HI – Flood Risk Management (Completion)

Honolulu District

Waiakea and Palai Stream basins are adjacent to each other near the town of Hilo on the island of Hawaii, HI. The most recent significant floods occurred in 2000 and 2008. Floodwaters at low lying sections of roadways were impassable during the 2000 flood and resulted in safety risks to motorists and residents. The bridge at Kupulau Road has the potential for being overtopped at the 100-year flood flow. Separate studies of Waiakea stream and Palai stream were previously conducted in the Continuing Authorities Program (CAP) under Section 205 of the Flood Control Act of 1948 (Public Law 80-858), as amended. The separate CAP studies were combined into one Specifically Authorized study and initiated in March 2012. The combined project will afford the opportunity to develop flood risk management measures in the shared drainage area above Waiakea and Palai Streams and will reduce the flood risk in both basins. The hydraulic linkages between the two watersheds have led to looking at the larger area for a more comprehensive solution. The work performed in the combined feasibility report will provide the basis for initiating the PED phase. The County of Hawaii is the primary sponsor for this project. The County of Hawaii fully understands the cost-sharing requirements of the project and is committed to active participation with the Corps. An amended FCSA was executed on March 23, 2012.

Carryover funds are being used in FY 2014 to continue the study. FY2015 funds will fully fund the feasibility phase. The estimated cost of the feasibility phase is $1,234,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests, except for the Independent External Peer Review,which is funded at 100% Federal and is estimated at $110,000. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	1,234,000
Reconnaissance Phase (Federal)	N/A
Feasibility Phase (Federal)	672,000
Feasibility Phase (Non-Federal)	562,000

The Waiakea-Palai project is authorized under Section 209 of the Flood Control Act of 1962 (PL87-874). The feasibility phase is scheduled for completion in FY 2016.

1/ Estimated Unobligated Carry-in Funding: As 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 study is $0. This amount will be used to perform work on the study as follows: N/A.

$0 was rescinded from the study.

$0 was transferred to the Flood Control and Coastal Emergencies (FCCE).

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
$	$	$	$	$	$	$
2,594,000	434,000	399.000	49,000	538,000	1,040,000 1/	134,000

West Maui Watershed, Maui, HI – Environmental (Continuing)

Honolulu District

The West Maui watershed includes the 5 watersheds from Kaanapali to Honolua on the island of Maui, Hawaii (24,000 acres). Coral reefs provide $360 million (Ceasar, et al., *Economic Valuation of the Coral Reefs of Hawaii*, Nov 2002) annually in net economic benefits to Hawaii. Coral reefs support complex food systems, diverse biological life, recreation, commerce, shoreline protection, and cultural resources. In West Maui, nearly one-fourth of all living corals have been lost in the last 13 years. Causes of coral reef decline are complex and not yet fully understood. However, land-based pollution is known to be a serious threat to coral reef ecosystems. Increased sedimentation associated with loss of forest land, historical agriculture practices, stream channelization, and rapid development has clearly impacted coral reef health. The study area supports 60 Endangered Species Act (ESA) listed terrestrial and marine species and 62 ESA designated critical habitat units and contains the Hawaiian Humpback Whale National Marine Sanctuary and two state designated Marine Protected Areas.

The watershed plan will provide a comprehensive and integrated water resource management strategy for the West Maui Ridge to Reef Initiative. The initiative engages various federal and state agencies and organizations in the implementation of actions to reduce the threats of land-based pollution to coral reefs in West Maui. As an action oriented initiative, the State and federal and non-governmental organizations are funding technical studies, public education and on-the-ground actions as they are identified within the comprehensive strategy. Partner agencies include National Oceanic and Atmospheric Administration, Environmental Protection Agency, Department of Interior, Natural Resources Conservation Service, and National Fish and Wildlife Foundation. The West Maui Watershed has been identified as a national priority by the U.S. Coral Reef Task Force, the National Ocean Council, and the federal Interagency Task Force on Climate Change Adaptation – providing an alternative approach to IWRM. This watershed plan will help the region reduce land-based pollution in a more comprehensive manner, which will help improve coral reef ecosystem functions and health and coastal water quality in a way not possible with isolated actions.The cost share agreement was executed in August 2012 between the Department of the Army and the non-Federal sponsor, the State of Hawaii

FY 2014 funds will be used to seek concurrence on the final array of alternatives, develop, evaluate and compare alternative approaches and seek concurrence on the tentative selected strategy. FY 2015 funds will be used for obtaining public input on the tentatively selected strategy, finalizing the strategy, and for the required internal and external reviews of the final documents. The total estimated cost of the assessment is $3,000,000, which will be shared on a 75-25 percent basis by Federal and non-Federal interests.

A summary of the study cost sharing follows:

Total Estimated Study Cost	$3,344,000
Reconnaissance Phase (Federal)	344,000
Feasibility Phase (Federal)	2,250,000
Feasibility Phase (Non-Federal)	750,000

The study is authorized by Sec 729 of the WRDA 86 (PL 99-662) as amended.

The reconnaissance phase was completed in August 2012. The schedule for completion of the watershed plan is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A

$0 was rescinded from the project in prior years.

$0 was transferred to the Flood Control and Coastal Emergencies (FCCE).

South Atlantic Division

Investigations

FLORIDA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Jacksonville Harbor, Florida	5,400,000	0	0	0	2,250,000	3,150,000 1/	0

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (Navigation) (Completion)

Jacksonville District

The project area is located in Duval County in northeast Florida, about 125 miles south of Savannah Harbor, Georgia, and about 145 miles north of Canaveral Harbor, Florida. The current authorized project allows for a 40-foot depth. The feasibility study, authorized by House Resolution from the Committee of Public Works and Transportation dated 5 Feb 1999, includes a National Economic Development (NED) plan depth of a 45-foot project with a recommended Locally Preferred (LP) plan depth of 47-feet. The recommended plan calls for deepening and widening the existing Federal project at Jacksonville Harbor from the mouth of the Saint's Johns River to River Mile 13.0. The main benefiting vessel fleets are cargo ships that transport various commodities throughout the world. The Chiefs Report is scheduled for completion in April 2014. The benefit-to-cost ratio of the locally preferred plan is 1.24 to 1 at 7.0%. The sponsor for the project, the Jacksonville Port Authority, has assured the required funding will be made available to finance the PED phase of the project. The design agreement is scheduled for June 2014. PED is initially cost shared at 75% Federal and 25% non-Federal. Adjustments will be necessary to bring the non-Federal contribution in line with the ultimate project cost sharing during the first year of construction.

Total Estimated Preconstruction Engineering and Design Costs	$7,200,000	Total Estimated Preconstruction Engineering and Design Costs	$7,200,000
Initial Federal Share	5,400,000	Ultimate Federal Share	4,337,000
Initial Non-Federal Share	1,800,000	Ultimate Non-Federal Share	2,863,000

Fiscal Year 2015 funds will be used to complete the PED phase. The project is not authorized for construction. Consistent with the cost-sharing and financing concepts enacted by the Water Resources Development Act of 1986 and 1996, as amended, local interests are required to provide all lands, easements, rights-of-way, and relocations determined by the Federal Government to be necessary for the construction, operation and maintenance of the project; pay 25 percent of all costs allocated to General Navigation Features for that portion of the project which has a depth in excess of 20 feet but not more than 45 feet during project construction; pay 50 percent of all General Navigation Features costs for that portion of the project which has a depth in excess of 45 feet during project construction; pay an additional 10 percent of all General Navigation Features costs, less a credit for the cost of lands, easements, rights-of-way, and relocations over a period not to exceed 30 years after project construction, and pay 100% of the construction cost greater than the cost of the NED plan.

1/ Estimated Unobligated Carry-in Funding: 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 is $0. This amount will be used to perform work on the project as follows: N/A.

$0 rescinded from the project.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocations Prior to FY 2014 $	Allocation in FY 2014 $	Budgeted Amount for FY 2015 $	Additional to Complete After FY 2015 $
Manatee Harbor, FL- (New/Completion)	100,000	0	0	100,000	0

Jacksonville District

Manatee Harbor is located in Tampa Bay along the west coast of Florida. The port handles over 3,700,000 short tons of cargo primarily associated with chemicals and related products, petroleum products, and crude construction materials destined for southwest Florida. The project provides for Federal maintenance of an existing 40-foot deep by 400-foot wide entrance channel and basin, construction of new wideners at the northwest end of the entrance channel, and enlarging the turning basin to 1,300 feet in diameter. The entrance channel extends approximately 3 miles from the turning basin to its intersection with the Tampa Harbor Main channel. The Stakeholders are concerned with the economic drivers that generate jobs for their citizens and a healthy economy, and a resilient and sustainable coastal and estuarine environment. These concerns are in concert with the study's problems and opportunities which include: reduce navigation transportation costs to and from Manatee Harbor to the extent possible; develop alternatives that are environmentally sustainable; and reduce navigation constraints facing harbor pilots and their operating practices to provide an even safer and more efficient port environment. The study will focus on deep draft navigation problems and opportunities primarily involving the problem of transportation cost inefficiency or the opportunity to reduce transportation costs. The navigation concerns will focus on two main problems; insufficient Federal channel depths and restrictive channel widths. The primary benefits will be derived by eliminating or reducing navigational restrictions and inefficiencies; the opportunity to reduce the risk of adverse environmental impacts from a new project or protect or improve environmentally sensitive areas in the vicinity of the Federal project through potential beneficial uses of dredged material. The study is anticipated to determine if the Manatee Harbor problems warrant Federal participation in a feasibility study, define the Federal interest, complete the 905(b) Analysis, assess the level of Non-Federal interest and support, and will develop a Feasibility Cost Share Agreement. The non-Federal sponsor is the Manatee County Port Authority and they have expressed their interest in a recent letter of intent dated June 17, 2013, that they have the financial capability and are willing to act as the cost sharing sponsor should the study enter the Feasibility phase. The reconnaissance study will be completed within 12 months.

The study is authorized by Section 216 of Water Resources Development Act 1970.

GEORGIA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Satilla Watershed, GA- Flood Risk Management (New)	1,650,000	0	0	0	150,000	200,000 1/	1,300,000

Savannah District

The Satilla River Watershed includes Satilla River, Little Satilla River, Big Satilla Creek, Turtle River, Seventeen Mile Creek, Hurricane Creek, Red Bluff Creek, Crooked River, Alabaha River and Sweet Water Creek. The Satilla River drains about 4,000 square miles of the southeastern portion of the state of Georgia and empties into the Atlantic Ocean at St. Andrew Sound amidst Georgia's Golden Isles. The reconnaissance study will examine the entire watershed to determine the cause of flooding and aquatic ecosystem degradation and investigate whether there is a Federal interest in developing solutions to address those problems within the watershed. In March 1998, Georgia experienced widespread flooding due to heavy rainfall. The severity of the rain and the damages that resulted from flooding caused more than 65 percent of Georgia's counties to be declared federal disaster areas under the Presidential Disaster Declaration 1209. Counties that experienced flooding in the Satilla River Watershed during the 1998 floods included Appling, Atkinson, Bacon, Brantley, Coffee, Glynn, and Jeff Davis. Due to the April 2009 flood, 46 counties in Georgia were declared disaster areas. Federal Emergency Management Agency reported 1,875 homes and 29 businesses were affected by floodwaters. No lives were reported lost in this flood. Approximately $60,000,000 in public infrastructure damage occurred to roads, culverts, bridges and a water treatment facility. The 2009 flood is the highest recorded since 1948 for several rivers, and since 1929 for a few others. Flooding, flow restrictions, and ecosystem degradation are all concerns to the stakeholders. In addition to flooding issues, there are major water quality and quantity concerns for the Satilla River Watershed, they are: dissolved oxygen, fecal coliform, fish consumption, erosion and sedimentation, drought conditions, widespread flooding, and saltwater intrusion. Although the primary focus of this study is flood risk management, aquatic ecosystem restoration could also be studied to determine how ecosystem features could be used to alleviate some flooding issues. Solutions to be considered would include both non-structural and structural measures and restoring the surrounding ecosystems to reduce the effects of flooding and improving the environment. The Georgia Environmental Protection Division signed a letter on May 10, 2013 stating their interest in being a sponsor for this study along with the following counties: Irwin, Coffee, Jeff Davis, Appling, Aiken, Ware, Atkinson, Pierce, Wayne, Brantley, Camden, Glynn, and Charlton. The cities include: Waycross, Waynesville, and Woodbine.

Fiscal Year 2014 funds are being used to initiate and complete the reconnaissance study which is 100% Federally funded. Fiscal Year 2015 funds will be used to execute a Feasbility Cost Sharing Agreement and initiate the feasibility study. The estimated cost of the independent external peer review and the scope, cost, and schedule for the feasibility study will be determined with conclusion of the reconnaissance study. The current estimated cost of the feasibility phase is $2,850,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. The current estimated cost of the external peer review is $150,000 and 100% federally funded. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$3,000,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,350,000

This study is authorized under the Flood Control Act of 1950.

The reconnaissance phase will be completed in March 2015. The feasibility study completion date is TBD.

1/ Estimated Unobligated Carry-In Funding: 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 study effort is $ 0. This amount will be used to perform work on the study as follows: N/A

$ 0 rescinded from the study.
$ 0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Savannah Harbor Expansion, GA	29,801,000 1/	15,287,000	3,088,000	2,794,000	1,280,000	1,520,000 2/	$5,832,000

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Navigation (Continuing)

Savannah District

The Savannah Harbor area includes the lower 21.3 miles of the Savannah River, which is the principal boundary between the states of Georgia and South Carolina. The City of Savannah is located 15 miles from the river mouth. The Harbor's main container terminal, the Garden City Terminal, is located several miles further upstream. Savannah Harbor is the second largest container port on the East Coast by container volume, and the fourth largest in the nation. According to the Georgia Ports Authority, over 82 percent of ships currently calling upon the Savannah Harbor are affected in some way by the project's current depth, and the number of vessels with deeper drafts is expected to increase once the expansion of the Panama Canal is completed. The project has an estimated PED cost of $73,995,000 and total cost of $677,717,000 at 2012 price levels. The BCR for the overall project is 3.8 at a discount rate of 7%. The benefits reflect transportation efficiencies through larger ships and reduced tidal delays, and are based on an estimated rate of future growth in the number of containers, as described in the General Re-evaluation Report, dated January 2012 and amended July 2012, and Chief's Report, dated 17 August 2012. The sponsor, Georgia Department of Transportation, is aware of project cost sharing requirements. The Georgia Ports Authority has funded the costs of some PED activities beyond its required share of these costs. Upon completion of construction, credit may be given to the local sponsor for financing this part of the Federal share of the PED cost, in accordance with Section 119, Public Law 109-7 (Consolidated Appropriations Resolution Fiscal Year 2003). A crediting report was submitted by the local sponsor in Fiscal Year 2013. The final selected plan is the 47 foot alternative resulting in an aggregated cost share of approximately 70% Federal and 30% non-Federal.

Total Estimated Preconstruction Engineering and Design Costs	$73,995,000	Total Estimated Preconstruction Engineering and Design Costs	$73,995,000
Initial Federal Share	$29,801,000	Ultimate Federal Share	$51,797,000
Initial Non-Federal Share	$44,194,000	Ultimate Non-Federal Share	$22,198,000

The Georgia Ports Authority conducted an initial Feasibility Study under the authority of Section 203 of the Water Resources Development Act of 1986 and was responsible for funding the associated study costs. The final General Re-evaluation Report (GRR) and Tier II Environmental Impact Statement documents were completed July 2012. The Record of Decision was signed 26 October 2012. A project to deepen the channel to 48 feet was conditionally authorized in WRDA 1999 at a total cost of $230,174,000. The Section 902 limit is $514,684,000 as detailed in the Final GRR, at 1 Oct 2011 price levels. This report resulted in changes, including deepening the channel only to 47 feet, instead of the 48 feet proposed in the initial Feasibility Study conducted by the port. The current total

project first cost is $677,717,000, which exceeds the Section 902 limit. FY 2014 and FY 2015 funds are being used to continue preconstruction engineering and design work, including environmental monitoring. The completion of PED is TBD.

1/ Prior PED allocations provided in the Investigations, Construction, and American Recovery and Reinvestment Act (ARRA) Construction appropriations as follows: Investigations- $6,334,000, Construction- $14,764,000 and ARRA Construction- $1,351,000.

2/ Estimated Unobligated "Carry-in" Funding: 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 study effort is $0. This amount will be used to perform work as follows: N/A.

$2,000 rescinded from the project in Fiscal Year 2003.
$3,000 rescinded from the project in Fiscal Year 2005.
$8,000 rescinded from the project in Fiscal Year 2006.
$6,218 rescinded from the project in Fiscal Year 2011.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

NORTH CAROLINA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Wilmington Harbor Improvements, NC - Navigation (Completion)	1,660,000	292,000	500,000	70,000	500,000	298,000 1/	0

Wilmington District

Wilmington Harbor, a 42 to 44 foot deep draft port located at the City of Wilmington on the southeastern coast of North Carolina, requires improvements in order to address navigation inefficiencies and potential safety issues being faced by navigation vessels currently calling on the Port of Wilmington. The current alignment of the entrance channel near Bald Head Island is subject to rapid and persistent shoaling and is problematic for navigation under typical wind and tidal conditions. The Battery Island navigation channel turn is problematic for some container vessels under certain conditions of wind and tide. The current anchorage/turning basin dimensions are not adequate to properly accommodate the turning of some of the larger container vessels currently calling at the port or larger ships that may potentially call on the port in the future. Alternatives to address these existing problems are being evaluated in a cost-shared feasibility study with the State of North Carolina. This detailed evaluation includes examining multiple channel alignments and turning basin widths. The State of North Carolina is committed to study completion, shown by execution of the Feasibility Cost Sharing Agreement in April 2012.

Fiscal Year 2014 funds are being used to identify a tentatively selected plan, complete the draft Feasibility Report and Environmental Impact Statement, conduct public, agency, and independent external peer reviews of the study and hold the agency decision meeting. Fiscal Year 2015 funds would be used to complete the feasibility phase. The estimated cost of the feasibility phase is $2,740,000 which is to be shared on a 50-50 percent basis by Federal and non-Federal interests with the exception of $100,000 for an independent external peer review, which will be 100% Federally funded. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$2,980,000
Reconnaissance Phase (Federal)	240,000
Feasibility Phase (Federal)	1,420,000
Feasibility Phase (Non-Federal)	1,320,000

This study is authorized under House Committee on Transportation and Infrastructure study resolution dated 28 June 2006.

The reconnaissance phase was completed in April 2012. The feasibility phase is scheduled for completion in Fiscal Year 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.
$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

PUERTO RICO

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocations Prior to FY 2014 $	Allocation in FY 2014 $	Budgeted Amount for FY 2015 $	Additional to Complete After FY 2015 $
San Juan Harbor Channel Improvement, PR- (New/Completion)	100,000	0	0	100,000	0

Jacksonville District

San Juan Harbor is located within the San Juan metropolitan area along the north coast of Puerto Rico. It is the island's principal port, handling over 75 percent of the Commonwealth's non-petroleum waterborne commerce and is the only harbor on the north coast affording protection during inclement weather. Stakeholders are concerned with economic drivers that generate jobs for their citizens and a healthy economy, in addition to a resilient and sustainable coastal and estuarine environment. These concerns are in concert with the study's problems and opportunities which include: reduce navigation transportation costs to and from San Juan Harbor to the maximum extent possible; develop alternatives that are environmentally sustainable; and reduce navigation constraints facing harbor pilots and their operating practices to provide an even safer port environment. Deepening, widening, and/or re-alignment of the following existing project features will be considered for evaluation: the Bar Channel with depths stepping from 56 to 49 feet; the 40-foot deep Anegado channel; the 40-foot deep Army Terminal Channel; the 39-foot deep Puerto Nuevo Channel; the 34-foot deep Sabana Approach; the 36-foot deep Graving Dock Channel; the 30-foot deep Graving Dock Turning Basin; the 36-foot deep San Antonio Channel; the 30-foot deep extension to the San Antonio Channel; two 36-foot deep Cruise Ship Basins; the 36-foot deep Anchorage Area E; and the 30-foot deep Anchorage area F. The benefits will result from transportation savings for the primary commodities of petroleum products, containerized cargo, and bulk grain. This study will determine the Federal interest in further study of the feasibility of providing navigation improvements at San Juan Harbor to increase security, safety, and efficiency. The Puerto Rico Ports Authority has expressed interest in pursuing this study and is willing to act as the cost sharing sponsor should the study enter the Feasibility phase. The reconnaissance study can be completed within 12 months.

The study authority is House Docket 2764, adopted 20 September, 2006.

SOUTH CAROLINA

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Charleston Harbor, SC- Navigation (Completion)	6,186,000	348,000	2,400,000	1,556,000	1,187,000	695,000 1/	0

Charleston District

Charleston Harbor is located about midway along South Carolina's Atlantic coastline. Latest commercial tonnage as reported by the Waterborne Commerce Statistics Center for Fiscal Year 2012 was 18.8 million tons of cargo. The major commodity imported and exported is manufactured equipment and machinery. Per United States Department of Commerce/Bureau of the Census, the 2012 value of waterborne commerce through Charleston was $62,700,000,000. Charleston Harbor is one of 17 US strategic ports because of the presence of the Joint Base Charleston, Military Surface Deployment and Distribution Command, Defense Energy Support Center and Army Strategic Logistics Activity Charleston. Mega-ships built to carry more cargo require ports to have deeper channels to accommodate them. The existing channel depths, widths, and alignments constrain the ability of these vessels to utilize the port to their design capacity, increase transit time due to limited ability to pass except at designated locations, and/or present hazardous conditions. Proposed improvements would allow deep draft vessels to safely navigate the channel, while remaining full loaded, thus avoiding the need for lightering or steaming under partial loads. Improvements to be investigated include (1) deepening channel(s) to a variety of depths up to 50 feet Mean Lower Low Water, (2) widening channel(s), (3) adjusting existing channel alignments/bend easing, and (4) widening and/or lengthening turning basins. The Feasibility Cost Sharing Agreement was executed with the South Carolina State Ports Authority in June 2011. An amendment to the Feasibility Cost Sharing Agreement, allowing for accelerated funding from the sponsor, was executed on September 8, 2011. The South Carolina General Assembly passed the State Fiscal Year 2013 Budget in June 2012 and it included an increase in the Harbor Deepening Reserve Fund to $300,000,000. The State and the South Carolina State Ports Authority want to show that South Carolina is committed to moving forward with this project as quickly as possible, even if that means at some point paying for the full cost of the deepening.

Fiscal Year 2014 funds are being used to continue feasibility efforts to include completing the tentative selective plan. Fiscal Year 2015 funds will be used to complete the feasibility study. The estimated cost of the feasibility phase is $11,756,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. The estimated cost of the independent external peer review is $250,000 which is 100% federally funded. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$11,938,000
Reconnaissance Phase (Federal)	183,000
Feasibility Phase (Federal)	6,003,000
Feasibility Phase (Non-Federal)	5,753,000

The study was authorized by Section 216 FCA 1970 (P.L. 91-611).

Division: South Atlantic District: Charleston Charleston Harbor, SC

The reconnaissance phase was completed in June 2011. The feasibility study is scheduled for completion in Fiscal Year 2015.

1/ Estimated Unobligated Carry-In Funding: 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 study effort is $ 0. This amount will be used to perform work on the study as follows: N/A

$ 0 rescinded from the study.
$ 0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

South Pacific Division

Investigations

Arizona

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Little Colorado River (Winslow), AZ (Completion)	3,092,000	1,002,000	340,000	499,000	500,000	751,000 1/	0

Los Angeles District

The study is located on the Little Colorado River in Navajo County, Arizona. This study is a result of the Little Colorado River, Arizona reconnaissance study. It will primarily study flood damage reduction and aquatic ecosystem restoration with secondary purposes of recreation, historic and cultural preservation, and water supply along the Winslow Levee that runs 7.2 miles, protecting the City of Winslow and adjoining unincorporated areas. Recently, the Winslow Levee experienced two failures. In 1993 the Little Colorado River overtopped the levee inundating 204 parcels and damage to 140 structures and in 2004 the levee suffered a piping failure. In both cases the timely and emergency actions taken by Navajo County prevented catastrophic and complete failure. Navajo County completed an engineering study that determined that the levee along the Little Colorado River will not provide 100-year flood protection. If the Winslow levee fails to contain a 100-year flood, urbanized areas west of the river and north of Interstate 40 will experience flooding. Navajo County also submitted a Technical Data Notebook to the Federal Emergency Management Agency, November 14, 2005, that redefines the floodplain for the Little Colorado River near the Winslow Levee. The County submittal to the Federal Emergency Management Agency acts to decertify the levee and increase the width of floodplain in the area adjacent to the levee. Additionally, dense salt cedar thickets have crowded out less dense native riparian vegetation and have increased flooding potential, decreased water supply, biodiversity and habitat for species, including several state and Federally-listed species of concern. Flooding potential at Homolovi Ruins State Park has increased and threatened historic and cultural resources. The Little Colorado River Resource Conservation and Development Group has brought together various Federal, State, County, Tribal and other entities in support of this project and other efforts that currently exist in the watershed. Navajo County Flood Control District, the local sponsor, signed the Feasibility Cost Sharing Agreement in August 2008.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds, plus any carry-in funds, will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $5,684,000. $5,184,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $500,000 for Independent External Peer Review funded at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$5,684,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	3,092,000
Feasibility Phase (Non-Federal)	2,592,000

Study Authority: Flood Control Act of 1937 and House Resolution 2425 dated May 17, 1994.

The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2011.
$6,000 rescinded from the study in FY 2006.
$1,000 rescinded from the study in FY 2005.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Lower Santa Cruz River, AZ (Continuing)	1,680,000	0	0	0	100,000	200,000 1/	1,380,000

Los Angeles District

Lower Santa Cruz River - The Santa Cruz River begins in Southern Arizona then turns south on its way through a 35-mile loop in northern Mexico before reentering the United States near Nogales, Arizona. The basin covers approximately 8,600 square miles in Arizona, flowing northwest through southern and central Arizona. Santa Cruz River flooding impacts Pinal County, the City of Maricopa, and two Native American Tribes. Pinal County was the 2nd fastest growing county in the United States in the past decade, nearly doubling its population to 383,000 in 2011. The City of Maricopa saw its population grow from 750 in 1983, when the city was destroyed by a flood, to 44,000. Major flood events occurred in 1983 and 1993 which impacted residences, businesses, schools, agriculture, and transportation infrastructure. The damage from these floods has been widespread forcing aerial evacuations, bridge closures, serious river, stream erosion, channel migration and significant sediment deposition. The Santa Cruz River Data Collection report found that 34 major flood events have occurred since the late 1800s, roughly one every 4 years. Six of the seven largest flood events have occurred since the 1960s. This area is now one of the fastest growing communities in Arizona. Repeat flooding similar to that of 1983 could result in an estimated $186 million in damages. The study will investigate watershed issues and opportunities to include flood risk management and ecosystem restoration. In Fiscal Year 2013, the Corps completed a Flood Plain Management Services study for basic data collection and stakeholder coordination to characterize the relative risk in the Lower Santa Cruz River Watershed. The information was provided to the Lower Santa Cruz River Alliance, a coalition of over a 20 member organization representing various stakeholders to identify the scale of flood risk problems and support for a larger study effort. The potential sponsors, the Pinal County Flood Control District and the City of Maricopa, understand the two-phase planning process and are willing to participate in 50-50 cost-sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in the first quarter of Fiscal Year 2015.

Fiscal Year 2014 funds will be used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in additional feasibility-level study, the FY 2015 funds plus any carry-in funds will be used to continue into the feasibility phase of the study. The cost of the Independent External Peer Review and the scope, cost, and schedule for the feasibility study will be determined with conclusion of the reconnaissance study. The estimated cost of the feasibility phase is $3,000,000; $2,840,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $160,000 for Independent External Peer Review funded at 100 percent Federal expense. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,100,000
Reconnaissance Phase (Federal)	100,000
Feasibility Phase (Federal)	1,580,000
Feasibility Phase (Non-Federal)	1,420,000

Study Authority: Flood Control Act of 1938.

The reconnaissance phase is scheduled for completion in the first quarter of Fiscal Year 2015. The feasibility study completion is to be determined.
1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

California

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budget Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Aliso Creek Mainstem, CA (Completion)	3,247,000	2,128,000	0	2,000	400,000	717,000 1/	0

Los Angeles District

The study area is located in south Orange County about 40 miles southeast of Los Angeles, California. This watershed covers approximately 36 square miles. The study was previously funded as part of the overall Aliso Creek Watershed Management study and will examine channel stability, aquatic ecosystem restoration, flood risk management and recreation in the lower 6.5 miles of Aliso Creek. Channel degradation and flood damage along the mainstem of Aliso Creek and some of its tributaries have caused severe environmental degradation. This multi-objective study addresses degradation of scarce riparian and freshwater marsh habitat in a significant undeveloped coastal canyon resource in Southern California associated with 28 listed plant and animal species. While the canyon itself remains undeveloped, heavy urbanization of the surrounding area has contributed to degradation. The mouth of Aliso Creek is designated critical habitat by the United States Fish and Wildlife Service for the Tidewater goby. Other threatened and endangered species with potential to occur in the study area include the Coastal California gnatcatcher and Least Bell's vireos for bird species and thread-leaved brodiaea, Laguna Beach dudleya, and big-leaved crownbeard for plant species. The study area also contains numerous California Species of Concern. The study area includes public waste water infrastructure vulnerable to bank erosion, which threatens human health and environmental quality, and is an important local recreation area. Damage to structures, public facilities, utilities, roads, bridges, and embankments has cost an estimated $30 million since 1969 2/. The study is authorized by Section 4015 of the Water Resources Development Act of 2007 to specifically address stream bed and stream bank erosion and protection of threatened infrastructure. Orange County Watershed Group, the local sponsor, signed the Feasibility Cost Sharing Agreement in September 2004.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds, plus any carry-in funds, will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $5,904,000. $5,704,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $200,000 for Independent External Peer Review at 100 percent Federal expense. Up to 100 percent of the non-Federal costs may be in-kind services. A summary of current study cost sharing is as follows:

Total Estimated Study Cost	$6,099,000
Reconnaissance Phase (Federal)	195,000
Feasibility Phase (Federal)	3,052,000
Feasibility Phase (Non-Federal)	2,852,000

Study Authority: Santa Ana River Basin & Orange County (SARBOC) adopted by Resolution of Committee of Public Works, House: May 8, 1964 and the Water Resources Development Act of 2007, Section 4015.

The reconnaissance phase was completed in September 2004. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study effort is $0. This amount will be used to perform work on the study as follows: N/A.

2/ $30 million estimate is based on recorded flooding and erosion damages between 1969 and 2008 and updated through 2013 at current price levels.

$3,000 rescinded from the study in FY 2006.
$2,000 rescinded from the study in FY 2005.
$1,000 rescinded from the study in FY 2004.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocation Prior to FY 2012 $	Allocation FY 2012 $	Allocation FY 2013 $	Allocation FY 2014 $	Budget Amount FY 2015 $	Additional to Complete After FY 2015 $
American River Watershed (Common Features), Natomas Basin, CA	6,000,000	0	0	0	1,000,000	675,000 1/	4,325,000

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (Continuing)

Sacramento District

The Natomas Basin extends northward from the American River and includes portions of the City of Sacramento, the County of Sacramento, and the County of Sutter. In addition to the American and Sacramento rivers, the Natomas Basin is bordered on the north by the Natomas Cross Canal and on the east by the Pleasant Grove Creek Canal and the Natomas East Main Drain Canal. The Natomas Cross Canal is an engineered channel that diverts the runoff from a large watershed in western Placer and southern Sutter counties around the Natomas Basin and is a contributor to the flows in the upper reach of the Sacramento River channel. The Natomas East Main Drain Canal is an engineered channel along the southeastern flank of the Natomas Basin. Tributaries to the Natomas East Main Drain Canal include Dry Creek, Arcade Creek, Rio Linda Creek, Robla Creek, and the Magpie Creek Diversion Channel. The Natomas Basin is protected from high flows in these water bodies and in the American and Sacramento rivers by an interconnected perimeter levee system. The Sacramento River watershed covers approximately 26,000 square miles in central and northern California. Shasta Dam impounds the upper Sacramento River watershed. Major tributaries of the Sacramento River include the Feather, Yuba and American rivers. The American River Watershed covers about 2,100 square miles northeast of the City of Sacramento and includes portions of Placer, El Dorado, Alpine, and Sacramento counties. The American River watershed includes Folsom Dam and Reservoir; inflowing rivers and streams, including the North, South, and Middle forks of the American River; and the American River downstream to its confluence with the Sacramento River in the City of Sacramento. The Sacramento and American rivers, in the Sacramento area, form a flood plain covering roughly 110,000 acres at their confluence, approximately half of which comprises the Natomas Basin. The flood plain includes most of the developed portions of the City of Sacramento and the Natomas Basin. The Natomas Basin is hydraulically separable and is a separable element of the authorized Common Features Project.

After the 1997 flood event, the Corps, in conjunction with State of California, Central Valley Flood Protection Board and the Sacramento Area Flood Control Agency, put together a task force to extensively study the seepage problems. Based on the recommendations of the task force, studies of Natomas Basin were finalized in 2005. On the basis of those results, primarily because of underseepage, the Natomas levees were no longer certifiable for the flood event that has a 1% chance of occurrence in any year, or the 100-year event. In December 2006, Federal Emergency Management Agency notified the City and County of Sacramento and Sutter County that they planned to revise the community's existing Flood Insurance Rate Map resulting in the entire Natomas Basin being placed within a regulatory Special Flood Hazard Area.

The project is not yet authorized for construction. The Post Authorization Change Report for Natomas Basin was signed by the Chief of Engineers on December 30, 2010. The selected plan for Natomas Basin separable element, estimated to cost $1.15 billion (October 2013 price levels) with an estimated Federal cost of $670 million and an estimated non-Federal cost of $480 million, includes through seepage, underseepage, stability, and erosion remediation. The average annual benefits amount to $443 million for the Natomas Basin, all flood control. The benefit-to-cost ratio is 4.2 to 1 at a discount rate of 7 percent. The State of California

Central Valley Flood Protection Board, the local sponsor, continues to express support for the project and is scheduled to sign a design agreement in early Summer 2014. Fiscal Year 2014 funds are being used to initiate preconstruction engineering and design. Fiscal Year 2015 funds, and any carry-in funds, will be used to continue preconstruction engineering and design. The preconstruction engineering and design phase completion is to be determined. Preconstruction engineering and design will be cost shared at 65 percent Federal and 35 percent non-Federal.

Total Estimated Preconstruction Engineering and Design Costs	$9,230,000
Federal Share	6,000,000
Non-Federal Share	3,230,000

The study is authorized by Section 209 of the Flood Control Act of 1962, P.L. 87-874.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the project.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budget Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Arroyo Seco Watershed, CA (Completion)	1,990,000	1,390,000	0	0	150,000	450,000 1/	0

Los Angeles District

The Arroyo Seco Watershed encompasses approximately 22 square miles within the cities of Pasadena and Los Angeles, California in central Los Angeles County, and drains into the Los Angeles River near Elysian Park. Arroyo Seco is a major tributary to the Los Angeles River. Rapid development and urbanization in the watershed have aggravated flowing in the area and degraded wildlife habitat and water quality. Channelization and damming has resulted in riparian and wetland ecosystem degradation and loss of floodplain and groundwater connection. Restoration would provide biodiversity of aquatic, wetland, and riparian habitat for the return of several endangered species including the Santa Ana sucker, steelhead and arroyo chub. Arroyo Seco provides a near continual link of publicly-owned lands and rights-of-way upstream for connectivity with Hahamongna Watershed Park and the Angeles National Forest in the San Gabriel Mountains to the north. The study will examine opportunities for watershed management, flood risk reduction, aquatic ecosystem restoration and water quality and supply. Restoration would partially restore natural riparian corridors which have been lost due to channelization of the Arroyo Seco. Due to urbanization, 90 percent of riparian habitat was lost to development along with 95 percent of the wetlands. The Los Angeles County Department of Public Works, the local sponsor, signed the Feasibility Cost Sharing Agreement in August 2005.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds will be used to complete the feasibility study. The estimated cost of the feasibility phase is $3,470,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to 100 percent of the non-Federal share may be in-kind services. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$3,725,000
Reconnaissance Phase (Federal)	255,000
Feasibility Phase (Federal)	1,735,000
Feasibility Phase (Non-Federal)	1,735,000

Study Authority: Senate Public Works Committee Resolution, Document No. 838, June 25, 1969 (Los Angeles County Drainage Area).

The reconnaissance phase was completed in August 2005. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2006.

$1,000 rescinded from the study in FY 2005.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Berryessa Creek, CA	1,030,000	0	0	30,000	770,000	230,000 1/	0

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (Completion)

San Francisco District

The Berryessa Creek watershed is located in Santa Clara County, California, about 50 miles south of San Francisco Bay. Berryessa Creek is a tributary to the Coyote Creek system, which flows into the southernmost end of San Francisco Bay. Berryessa Creek flows west out of the Diablo Range and into the residential neighborhoods of San Jose and Milpitas, finally turning north through industrial portions of Milpitas before joining Lower Penitencia Creek, and then into Coyote Creek. The Coyote Creek Element of the Coyote and Berryessa Creeks Project was physically complete in April 1997. The project was authorized for construction in the early 1990s, but due to changing environmental needs, the sponsor's environmental concerns and local input, the authorized plan was deemed unacceptable. In coordination with resource agencies, a General Reevaluation Report/Environmental Impact Statement has been prepared for the Berryessa Creek element which is scheduled for completion in spring FY 2014. The intent of the redesign is to be within the current authorization. The recommended project, estimated to cost $27.2 million (October 2013 price level) at an estimated Federal cost of $13.67 million and an estimated non-Federal cost of $13.53 million, includes construction of approximately 2 miles of channel improvements and upgrades to existing berms extending from Interstate 680 to Calaveras Boulevard within the cities of Milpitas and San Jose for flood risk management. The estimated average annual damages are $11,824,000 and approximately 2,152 structures would be impacted. Average annual benefits are estimated at approximately $10,950,000, all flood control. The benefit-cost ratio is 5.2 to 1 at 7 percent based on the latest economic analysis dated December 2013. The Santa Clara Valley Water District, the local sponsor, understands the cost-sharing requirements during preconstruction, engineering and design and is prepared to execute a design agreement in FY 2014. Preconstruction engineering and design will be cost shared at 75 percent Federal and 25 percent non-Federal, which is the rate for the project to be constructed.

Total Estimated Preconstruction Engineering and Design Costs	$1,373,000
Federal Share	1,030,000
Non-Federal Share	343,000

The project is authorized for construction by Section 101(b) of the Water Resources Development Act of 1990 and Section 2855 of the National Defense Authorization Act for FY 1994. Fiscal Year 2014 funds are being used to negotiate and sign a design agreement and initiate preconstruction engineering and design. Fiscal Year 2015 funds, and any carry-in funds, will be used to complete the preconstruction engineering and design phase for the first construction contract. Preconstruction engineering and design completion is scheduled for FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
California Coastal Sediment Master Plan (Completion)	7,100,000	4,092,000	861,000	898,000	800,000	449,000 1/	0

Los Angeles District

The study area encompasses the entire California coastline, including the nearshore ocean environment and coastal watersheds. California has approximately 1,100 miles of coastline, of which 86% is actively eroding due to natural and human induced alteration in sediment cycles. Navigation and shoreline structures, along with water control projects, have significantly modified total yield and movement of sediments to and along the coast. The purpose of this study is to develop a comprehensive plan to manage, restore, protect, and preserve sediment resources along the coast of California. The study will evaluate regional alternatives for reducing coastal storm damages; increasing natural sediment supply to the coast through dam removal and other means; restoring aquatic ecosystems; and identifying such potential sediment sources as dredged material from ports and harbors. The Master Plan will provide Federal and non-Federal entities with an adaptive, programmatic road map to plan and program potential future coastal resources projects. The Master Plan will allow these entities to develop water resources projects within a system-oriented context wherein data can be easily shared and technical expertise and tools can be efficiently directed to solve coastal resources problems on a regional basis. A Geographic Information System-based decision support system for economic optimization will be developed to assist Federal, State, and local decision makers in identifying, ranking, and selecting projects for program investment that would yield significant regional benefits, relative to costs. Ultimately, the Master Plan will, for significant savings, reduce the number of discrete water resources projects by regionalizing solutions that holistically address individual problem areas. Regionalized projects recommended in the Master Plan will be considered in collaboration with other Federal and non-Federal agencies, including the United States Environmental Protection Agency, California State Resources Agency, National Oceanic and Atmospheric Association, regional/local governments and the United States Geological Survey. The Feasibility Cost Sharing Agreement was signed between the Department of the Army and the State of California Resource Agency, Division of Boating and Waterways in September 2005.

Fiscal Year 2014 funds are being used to complete the Regional Sediment Management Plan documents for the 4 regions developed in Fiscal Year 2010 (Northern California-Crescent City, San Luis Obispo, North Monterey Bay/Santa Cruz Littoral Cell, North San Francisco Shoreline [North of San Francisco Bay]) and draft environmental documents for them. Funds will also be used to initiate Regional Sediment Master Plans for Santa Cruz, Central Coast and Northern California (Crescent City) and complete the programmatic Environmental Impact Statement/Environmental Impact Report for 3 regional areas (Eureka Littoral Cell, San Francisco Coastline and North Monterey Bay). Fiscal Year 2015 funds, plus any carry-in funds, will be used to complete the master plan.

The estimated cost of the feasibility phase is $13,800,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to 100 percent of the non-Federal costs may be in-kind services. The current estimate reflects a decrease of $200,000 from last presented to Congress (FY 2014). The study does not require an Independent External Peer Review Plan as it is a programmatic plan document that will not have a recommended plan or decision document.

A summary of study cost sharing is as follows:

Total Estimated Study Cost	$14,000,000
Reconnaissance Phase (Federal)	200,000
Feasibility Phase (Federal)	6,900,000
Feasibility Phase (Non-Federal)	6,900,000

Study Authority: House Committee on Transportation and Infrastructure Resolution 2672, dated May 22, 2002 and Section 227 of the Water Resources Development Act of 1996.

The reconnaissance phase was completed in September 2005. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2013.
$2,000 rescinded from the study in FY 2011.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Coyote Valley Dam Restoration, CA (Continuing)	1,925,000	0	0	0	300,000 1/	200,000 2/	1,425,000

San Francisco District

The study area is located in northern California on the east fork of the Russian River at Coyote Valley, near the city of Ukiah, about 115 miles northeast of San Francisco, California. The Russian River drains an area of 1,485 square miles. Approximately two-thirds of this area is in Sonoma County, with the remainder in Mendocino County. The existing Corps project, Coyote Dam, was completed in 1957. It consists of an earth-filled dam 160 feet high and 3,560 feet long, with a reservoir storage capacity of 122,000 acre feet. The authorized project included sediment management, flood control, and domestic and agricultural water supply pools with a storage capacity of 199,000 acre feet. A September 24, 2008, Biological Opinion, issued by the National Oceanic and Atmospheric Administration's National Marine Fisheries Service, mandates that the United States Army Corps of Engineers perform various actions to save threatened salmonid species. The Biological Opinion calls for 15 actions that are directly related to the Corps, but the Corps currently only has authority to address seven actions. This study will look at non-structural measures and studies required under the Biological Opinion to keep the dam operational and to mitigate for impacts. Delay in completion of the study could potentially result in the extinction of a local genetic strain of threatened salmonids, and affect future operability of the Dam, which protects thousands from flood risks. The sponsor, the Sonoma County Water Agency, expressed support for the study, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in September 2014.

This study parallels the Dry Creek (Warm Springs) Restoration, California study. National Oceanic and Atmospheric Administration's National Marine Fisheries Service issued a Biological Opinion that requires the Corps to correct water quality impacts that inhibit the passage of salmonids and affect breeding potential for threatened and endangered species on the Russian River. Because the problem being addressed with the reconnaissance study is the same problem under the same Biological Opinion with the same local sponsor, both Coyote Valley Dam and Warm Spring Dam are being studied under the same reconnaissance report. The FY 2015 Budget presumes the reconnaissance study will recommend two separate feasibility studies to be carried out separately due to the fact that operations are pursuant to two separate dams with individual separate authorizations and that technically, the dams' hydraulic operations are distinct and separate.

Fiscal Year 2014 funds are being used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in pursuing additional feasibility-level study, the Fiscal Year 2015 funds plus any carry-in funds will be used to continue into the feasibility phase of the study. The cost of the Independent External Peer Review and the scope, cost, and schedule of the feasibility study will be determined with conclusion of the reconnaissance study. The preliminary estimated cost of the feasibility phase is $3,000,000. $2,750,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $250,000 for Independent External Peer Review funded at 100 percent Federal expense. Up to 100 percent of the non-Federal costs may be in-kind services.

A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,300,000	
Reconnaissance Phase (Federal)	300,000	1/
Feasibility Phase (Federal)	1,625,000	
Feasibility Phase (Non-Federal)	1,375,000	

Study Authority: Section 204 of Pub. L. No. 81-516, the Flood Control Act of 1950.

The reconnaissance phase is scheduled for completion in September 2014. The feasibility study completion date is to be determined.

1/ Reflects FY 14 funds of $300,000 for the combined reconnaissance study for Dry Creek (Warm Springs) and Coyote Valley Dam Restoration, CA. This amount is also reflected on the Dry Creek (Warm Springs) Restoration, CA justification sheet.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Dry Creek (Warm Springs) Restoration, CA (Continuing)	1,925,000	0	0	0	300,000 1/	200,000 2/	1,425,000

San Francisco District

The study area is located in northern California along the Russian River at Lake Sonoma and Warm Springs Dam, near the cities of Geyserville and Cloverdale, about 75 miles northeast of San Francisco, California. The Russian River drains an area of 1,485 square miles. Approximately two-thirds of this area is in Sonoma County, with the remainder in Mendocino County. The existing Corps project, Warm Springs Dam, is an earthen dam 319 ft high and 3,000 ft long, completed in 1983. The project authorization was amended by section 95 of the Water Resources Development Act of 1974 to compensate for fish losses on the Russian River which may be attributed to the operation of the Coyote Dam component of the watershed through measures such as possible expansion of the capacity of the fish hatchery. A September 24, 2008, Biological Opinion, issued by the National Oceanic Atmospheric Administration's National Marine Fisheries Service on Dry Creek at Warm Springs Dam, mandated that the United States Army Corps of Engineers perform various actions to save threatened salmonid species. The Biological Opinion calls for 15 actions that are directly related to the Corps, but the Corps currently only has authority to address seven of these actions. This study will look at non-structural measures and studies, as required by the Biological Opinion, to keep the dam operating and to mitigate for associated impacts. Delay in study completion could potentially result in the extinction of a local genetic strain of threatened salmonids, and affect future operability of the dam, which protects thousands from flood risks. The sponsor, the Sonoma County Water Agency, expressed support for the study, understands the two-phase planning process, and is willing to participate in 50-50 cost sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in September 2014.

This study parallels the Coyote Valley Dam Restoration, California study. National Oceanic Atmospheric Administration's National Marine Fisheries Service issued a Biological Opinion that requires the Corps to correct water quality impacts that inhibit the passage of salmonids and affect breeding potential for threatened and endangered species on the Russian River. Because the problem being addressed with the reconnaissance study is the same problem under the same Biological Opinion with the same local sponsor, both Warm Springs Dam and Coyote Valley Dam are being studied under the same reconnaissance report. The FY 2015 Budget presumes the reconnaissance study will recommend two separate feasibility studies to be carried out separately due to the fact that operations are pursuant to two separate dams with individual separate authorizations and that, technically, the dams' hydraulic operations are distinct and separate.

Fiscal Year 2014 funds are being used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in pursuing additional feasibility-level study, the Fiscal Year 2015 funds plus any carry-in funds will be used to continue into the feasibility phase of the study. The cost of the Independent External Peer Review and the scope, cost, and schedule of the feasibility study will be determined with conclusion of the reconnaissance study. The preliminary estimated cost of the feasibility phase is $3,000,000. $2,750,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $250,000 for Independent External Peer Review funded at 100 percent Federal expense.

Up to 100 percent of the non-Federal costs may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,300,000	
Reconnaissance Phase (Federal)	300,000	1/
Feasibility Phase (Federal)	1,625,000	
Feasibility Phase (Non-Federal)	1,375,000	

Study Authority: Section 203 of Pub. L. No. 87-874, the Flood Control Act of 1962, amended by section 95 of the Water Resources Development Act of 1974, Pub. L. No. 93-251 (1974), "to compensate for fish losses on the Russian River which may be attributed to the operation of the Coyote Dam component of the project through measures such a possible expansion of the capacity of the fish hatchery at the Warm Springs Dam component of the project."

The reconnaissance phase is scheduled for completion in September 2014. The feasibility study completion date is to be determined.

1/ Reflects FY 14 funds of $300,000 for the combined reconnaissance study for Dry Creek (Warm Springs) and Coyote Valley Dam Restoration, CA. This amount is also reflected on the Coyote Valley Dam Restoration, CA justification sheet.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Lower Cache Creek, Yolo County, Woodland, and Vicinity, CA (Continuing)	3,470,000	1,845,000	0	50,000 1/	205,000 2/	800,000 3/	570,000

Sacramento District

The study area is located in the lower portion of the Cache Creek watershed, in the vicinity of Woodland, California (Yolo County), approximately 15 miles northwest of Sacramento, California. The origin of Cache Creek is Clear Lake, Lake County, California. Cache Creek flows through the Capay Valley in Yolo County into the Cache Creek Settling Basin and then into the Yolo Bypass. The lake and creek drain about 1,150 square miles. Flooding in the Cache Creek basin is principally caused by runoff of high-intensity rainstorms during the winter and spring. The flood threat in the area is enhanced by the raised bed of Interstate 5 that diverts flood flows into Woodland and a levee system that increased flows into the city of Woodland. Population at risk is about 50,000. This project would reduce the estimated $12,000,000 in annual damages to the city of Woodland. Preliminary plans have been identified with benefit to cost ratios of 1.1 to 3.9 at 7 percent.

The original feasibility study was stopped in 2004 due to lack of public support. New floodplain maps now show that nearly half of Woodland is at risk from flooding. A new Feasibility Cost Sharing Agreement for flood risk management was executed May 23, 2011, with the State of California, Central Valley Flood Protection Board, previously known as the Reclamation Board, and the city of Woodland as co-sponsors. An amendment to the Feasibility Cost Sharing Agreement was executed in March 2013 allowing the sponsors to accelerate their share.

Fiscal Year 2014 reprogrammed funds, plus any carry-in funds, and accelerated sponsor funds, will be used to continue the feasibility phase of the study. Fiscal Year 2015 funds will be used to continue the feasibility phase of the study. The estimated total cost of the feasibility phase is $6,708,000; $6,558,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests and $150,000 for an Independent External Peer Review at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$6,749,000
Reconnaissance Phase (Federal)	41,000
Feasibility Phase (Federal)	3,429,000
Feasibility Phase (Non-Federal)	3,279,000

Study Authority: Flood Control Act of 1962, Pub. L. 87-874, § 209, 76 Stat. 1180, 1197 (1962).

The reconnaissance phase was completed in January 2000. The feasibility study completion is to be determined.

1/ Reflects $50,000 reprogrammed to the study.

2/ Reflects $205,000 reprogrammed to the study.

3/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2001.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Port of Long Beach Navigation Improvements, CA (Continuing)	1,750,000	0	0	0	150,000	200,000 1/	1,400,000

Los Angeles District

The Port of Long Beach is on the coast of southern California in San Pedro Bay, approximately 20 miles south of downtown Los Angeles, California. It is the second busiest seaport in the nation. Trade valued at more than $140 billion moves through the Port each year. More than 30,000 jobs in Long Beach and 316,000 jobs in southern California generate about $16 billion in wages in California, associated with goods moving through the Port. A series of navigation improvements to the Port for safety in maneuvering and to accommodate the current container vessel and liquid bulk fleet is needed. (1) Deepening the east approach channel and turning basin for the Pier J container terminal is essential. Work would include deepening of the channel from its current depth of approximately -47 feet MLLW. The Pier J container terminal includes 256 acres of land and intermodal rail yard and 3 berths accessed by the east approach channel. (2) Pier T Berth T124 and T126 which are adjacent to the main channel (-76 ft) requires deepening of the channel, berths to accommodate latest liquid bulk vessels' draft and expansion of the turning basin to support the import of crude and refined petroleum products and the import/export of additional liquid bulk products. (3) The federal approach channel, which is not sheltered from the open ocean, requires substantial safety clearance that restricts operations for larger crude oil tankers. Deepening the approach channel is essential to improving vessel safety and operating efficiency. (4) The Harbor Pilots maintain a variety of anchorage sites inside the Long Beach and Middle Harbor Breakwater to anchor ocean-going vessels. Anchorages are used on a daily basis for ships waiting to access a berth, for vessel operations that can be accommodated while at anchor, for Coast Guard or Customs required inspections and for emergency repair or inspection when necessary. Anchorage sites are also used in case of rough weather when transit of a vessel to a berth is unsafe. The current number of deep draft anchorage sites is insufficient to accommodate the number of large deep draft vessels that currently call at the Port. There is a specific need for additional large anchorage locations for crude petroleum ocean-going vessels. The Harbor Pilots have additional anchorage sites with a minimum water depth of -68 ft MLLW. Current sites range from -34 to -68 feet MLLW. The potential sponsor, Port of Long Beach, understands the two-phase planning process and is willing to participate in 50-50 cost-sharing of feasibility phase studies. The Feasibility Cost Sharing Agreement is scheduled to be signed in September 2014.

Fiscal Year 2014 funds will be used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in additional feasibility-level study, FY 2015 funds plus any carry-in funds will be used to continue into the feasibility phase of the study. The estimated cost of the feasibility phase is $3,000,000. $2,800,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $200,000 for Independent External Peer Review funded at 100 percent Federal expense. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,150,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,600,000
Feasibility Phase (Non-Federal)	1,400,000

Study Authority: Water Resources Development Act of 1986

The reconnaissance phase is scheduled for completion in September 2014. The feasibility study completion is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocations Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
Redwood City Harbor, CA (Completion)	2,604,000	650,000	400,000	175,000	800,000	579,000 1/	0

San Francisco District

Redwood City Harbor is a deep draft moderate use (<10M tons/yr) port located in San Mateo County, California, on the south west side of San Francisco Bay, about 20 miles south of San Francisco. An existing deep draft navigation project was completed in 1965 and is maintained at a depth of 30 feet by the Corps of Engineers. It consists of inner and outer turning basins and three channels, all used extensively for deep draft commercial vessel traffic, including petroleum, chemical, scrap metal, and construction material tonnage. Tonnage at the Port grew approximately 700% between the 1990s and mid 2000s. Tonnage at the Port was on the order of 2 million and 1.8 million tons, respectively, for the Port's FY 2005 and 2006. Due to the current economic downturn, tonnage has dropped to an estimated 1,000,000 tons in the latest fiscal year. Tonnage figures are rebounding with the economy and this trend is expected to continue. The Port is very diversified in its operations and the goods it imports and exports. During the housing boom in the bay area in the late 1990's to mid 2000's, over a million tons of construction materials a year were being brought in to fuel rapid development in the San Francisco South Bay. Currently one of the biggest enterprises at the Port is the collection and processing of scrap metal which is being shipped to China in record tonnage amounts. The Port Deepening study will address deepening the project up to 35 feet and will ameliorate continued navigation hazards as well as loss of revenues and commerce. New larger vessels, which currently call on the port, require more than the authorized depth. These vessels are forced to light load and top off at other ports, significantly adding to the cost of calling on the port and reducing the amount of materials that can be imported and exported from the Port. It was recently estimated by the Port that the average vessel visiting the Port loses approximately $275,000 a visit in dead freight and demurrage fees (extra fees needed to time the tides when riding into the Port) due to limited depths at the Port. The study was rescoped in October 2012. A deepening project would improve transportation efficiency and eliminate wasted time. The Port of Redwood City, the local sponsor, signed the Feasibility Cost Sharing Agreement in July 2008.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is $4,762,000. $4,612,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $150,000 for Independent External Peer Review funded at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$4,910,000
Reconnaissance Phase (Federal)	148,000
Feasibility Phase (Federal)	2,456,000
Feasibility Phase (Non-Federal)	2,306,000

Study Authority: House Committee on Transportation and Infrastructure Resolution Docket 2511, adopted May 7, 1997.

The reconnaissance phase was completed in July 2008. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2006.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Sacramento River Bank Protection Project (GRR), CA (Continuing)	1,575,000	0	0	0	200,000	500,000 1/	875,000

Sacramento District

The Sacramento River Flood Control Project consists of 977 miles of levees plus overflow weirs, pumping plants and bypass channels along the Sacramento River from River Mile 0 near Collinsville to River Mile 194 near Chico, including several sloughs and the lower reaches of major tributaries. The Sacramento River levee system was initiated as a purely local project and in many cases the levees were constructed close to the riverbanks without a protective berm. The levee system, which was adopted as the Sacramento River Flood Control Project in 1917, has been modified and expanded several times since that date but no major change in the basic levee alignment has been made since the original conception of the project.

Bank protection is necessary to preserve the Sacramento River Flood Control Project and ensure that it will continue to provide expected performance and flood risk management. The levees are continuously threatened by erosion, and unless corrective measures are taken, levee failures may occur with resultant catastrophic damage and possible loss of many lives. Flood events that occurred in February 1986 and January 1997 greatly emphasized these problems. Several levees located along the Sacramento River were subjected to an extensive amount of erosion due to the extremely high river flows. High flows in January and March 1995 caused flooding and erosion in the Butte Basin area along the Sacramento River, RM 188 at Glenn County Road 29. If levee repairs had not been made, additional flooding would have caused extensive loss of agricultural land and endangered residents in nearby communities of Butte City, Princeton and Colusa. In addition, during moderately high flows in February 1996, a 500 foot portion of berm on the American River failed, threatening the levee protecting the city of Sacramento. A contract was awarded in August 1996 to repair this section and provide bank protection for a total of 1,200 lineal feet. The 1997 flood event and the high flows experienced in 1998 again put additional stress on the levee system (approximately 1,100 river miles) within the Sacramento River Bank Protection Project. The sustained high water in January/February 2006 caused great concern and instigated an emergency declaration from the Governor of California relative to levee repair.

The area protected by the levees comprises over one million acres in which about 50 communities are located; approximately 2.3 million people live within this flood plain. The value of improvements (October 2003 prices) to be protected is about $38 billion. The levee system enables the use of the flood plain for the benefit of the state and nation. The extremely fertile flood plain lands produce about 6.6 percent of the total agricultural production of the state and over 88 percent of the state's rice production. The Sacramento River Bank Protection Project provides a long-range program of bank protection to protect the levees where significant erosion carries away useful land, deposits sediment in downstream flood and navigation channels, damages valuable riparian vegetations and wildlife habitats, and ultimately threatens to destroy the integrity of the flood protection project, producing dangerous flooding.

Since the initial bank protection contract was let in June 1963, about 837,462 lineal feet of bank protection has been provided. Approximately 83,491 lineal feet of bank protection, including 80,000 lineal feet authorized by WRDA 2007, remains to be implemented under Phase II of this project. The local sponsor supports the addition of a third phase, which will require Congressional authorization. A General Reevaluation Report is underway to determine continued Federal interest in bank protection within the Sacramento River Flood Control Project footprint and to address the third phase. The State of California understands the two phase planning process, has expressed support for the study, and is willing to participate in 50-50 cost-sharing of the feasibility phase. The Feasibility Cost Sharing Agreement is scheduled to be signed in the 3rd quarter of FY 2014.

Fiscal Year 2014 funds are being used to initiate the General Reevaluation Report. Fiscal Year 2015 funds , plus any carry-in funds, will be used to continue the General Reevaluation Report to address changes in conditions, address policy and guidance that have occurred since project authorizations in 1960 and 1974 for a potential new/revised authorization and to move forward into Phase 3. The preliminary estimated cost of the feasibility phase is $3,000,000. An Independent External Peer Review, estimated at $150,000, will be conducted at 100 percent Federal expense and is an exception to the 50-50 cost share. The remaining study cost of $2,850,000 will be cost shared with the sponsor on a 50-50 percent basis. Up to 100 percent of the non-Federal costs may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,000,000
Feasibility Phase (Federal)	1,575,000
Feasibility Phase (Non-Federal)	1,425,000

Study Authority: Flood Control Act of 1950, Pub .L. 81-516, § 205; Flood Control Act of 1960, Pub. L. 86-645, § 203, 74 Stat. 488, 498 (1960); River Basin Monetary Authorization Act, Pub. L. 93-252, § 202, 88 Stat. 49 (1974); Water Resources Development Act of 2007, Pub. L. 110-114, § 3031, 121 Stat. 1041, 1113.

The General Reevaluation Report completion is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2014	Allocation in FY 2014	Budgeted Amount for FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$
Salton Sea, CA (New)	600,000 1/	0	0	200,000 2/	400,000

Los Angeles District

The Salton Sea is located in a closed basin in the southeastern corner of California and spans across Riverside and Imperial counties. The Salton Sea ecosystem is rapidly degrading from effects of high salinity and diminishing inflows. Water sources from the Colorado River and other tributaries to the sea have been lost due to natural and human actions. Degrading aquatic habitat has caused massive periodic fish and bird kills permeating putrid odor throughout most of southern California. As the sea shrinks, exposed lakebed sediments release wind-blown contaminants increasing risks to human health in the Coachella and Imperial Valleys in California and Mexico. This high salinity lake plays a vital role in the connectivity of bird migratory routes to and from breeding grounds as far as Alaska and Peru. It is a critical stop for migrating birds along the Pacific Flyway, an important lake fishery in the arid southwest, and provides habitat for over 400 different species. Among them are Federally listed species such as the Yuma clapper rail and the desert pupfish. The sea also provides roosting, breeding, and foraging areas for migratory birds including but not limited to brown pelicans, white pelicans, and eared grebes. The large southern part of the Sea has been designated as Sonny Bono National Wildlife refuge. Previous studies completed by the Department of Interior, (Bureau of Reclamation and Fish and Wildlife Service), the State of California, and the Salton Sea Authority representing local stakeholders, have identified potential short term and long term solutions for partial and full restoration of the Salton Sea. Efforts for short and long term solutions are concurrently being pursued by all parties.

Fiscal Year 2015 funds will be used to begin to examine the potential for a project of environmental improvements to the Salton Sea Funds will be used to initiate review of the State Plan and accompanying Environmental Impact Statement/Environmental Impact Report by technical and environmental specialists to determine if pilot projects identified in the plan are feasible, while considering the costs of potential projects and the sustainability of the proposed environmental improvements. This effort will include working collaboratively with the State, Salton Sea Authority, Salton Sea Science Center, Cities, resource and regulatory agencies, stakeholders and interested parties.

Authority: Section 3032, Water Resources Development Act of 2007.

1/ The $600,000 Federal cost for Investigations is part of the $30 million program limit.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocations Prior to FY 2012 $	Allocation in FY 2012 $	Allocation in FY 2013 $	Allocation in FY 2014 $	Budgeted Amount in FY 2015 $	Additional to Complete After FY 2015 $
San Francisquito Creek, CA (Continuing)	2,822,000	1,521,000	0	70,000	100,000	900,000 1/	231,000

San Francisco District

The study area is located in the northern portion of Santa Clara County, California. The area is about 2.5 miles long and extends from the Highway 101 to El Camino Real in the City of Palo Alto bounded by the San Francisquito Creek and Embarcadero Rd. Approximately 3,000 structures (homes, businesses, schools, and industrial sites) lie within the fluvial flood plain. The area has experienced repeated flooding including large events in 1955 and most recently the flood of record, which occurred in 1998. The 1998 flooding affected the Palo Alto Airport, golf course and over 1700 residential structures in Palo Alto, East Palo Alto and Menlo Park resulting in damages of $26 million. The primary problem area along the San Francisquito Creek is downstream of El Camino Real, which is a major transportation artery that forms the boundary between East Palo Alto, Menlo Park, and Palo Alto. This study was evaluating potential solutions to fluvial and tidal flooding and opportunities for aquatic ecosystem restoration. However, the rescoping charette conducted in August of 2013, narrowed the study area to the description above and is concentrating on flood risk management, exclusively. The San Francisquito Creek Joint Powers Authority, the non-Federal sponsor, signed the Feasibility Cost Sharing Agreement in November 2005. The Feasibility Cost Sharing Agreement was amended in November 2008 to allow acceleration of the non-Federal sponsor's cost share to expedite progress on the study. The non-Federal sponsor is continuing to contribute accelerated local funds to maintain progress on the study.

Fiscal Year 2014 funds and Fiscal Year 2015 funds , plus any carry-in funds, will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is $5,332,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$5,488,000
Reconnaissance Phase (Federal)	156,000
Feasibility Phase (Federal)	2,666,000
Feasibility Phase (Non-Federal)	2,666,000

Study Authority: Section 4 of the Flood Control Act of 1941, P.L. 77-228; House Transportation and Infrastructure Committee Resolution Docket 2659, May 22, 2002.

The reconnaissance phase was completed in November 2005. The feasibility study completion date is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$2,000 rescinded from the study in FY 2006.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015		Additional to Complete After FY 2015
	$	$	$	$	$	$		$
Westminster (East Garden Grove), CA (Completion)	3,984,000	3,232,000	0	0	300,000	452,000	1/	0

Los Angeles District

The watershed area encompasses approximately 90 square miles and is located in western Orange County about 25 miles southeast of the city of Los Angeles. The watershed lies on a flat coastal plain, and is almost entirely urbanized with residential and commercial development. There is a high risk of flood damage; including property and critical infrastructure damage, loss of life and negative environmental impact(s) along the East Garden Grove-Wintersburg/Ocean View and Bolsa Chica/Westminster Channels due to the fact that the channel systems generally convey less than 4 percent frequency storm events. The flood damages could potentially affect the cities of Anaheim, Stanton, Cypress, Garden Grove, Los Alamitos, Seal Beach, Westminster, Huntington Beach and Fountain Valley. The study will focus on flood risk management with strong consideration of watershed management, aquatic ecosystem restoration, water quality and water supply solutions. The local sponsor, Orange County, signed the Feasibility Cost Sharing Agreement in September 2003. The local sponsor expressed an interest in providing accelerated funds to complete the study. Pending a receipt of a letter from the sponsor, the Corps could amend the Feasibility Cost Sharing Agreement as early as fall 2014 to accelerate the non-Federal share to complete the study.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility phase. The estimated cost of the feasibility phase is $7,298,000. $7,048,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $250,000 for Independent External Peer Review at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$7,508,000
Reconnaissance Phase (Federal)	210,000
Feasibility Phase (Federal)	3,774,000
Feasibility Phase (Non-Federal)	3,524,000

Study Authority: Santa Ana River Basin & Orange County (SARBOC) adopted by Resolution of Committee of Public Works, House - 8 May '64 (Flood Control Act of 1938).

The reconnaissance phase was completed in July 2003. The feasibility study is scheduled for completion in FY 2015.

1/ Estimated Unobligated Carry-in Funding: 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 study effort is $0. This amount will be used to perform work on the study as follows: N/A.

$5,000 rescinded from the study in FY 2006.
$3,000 rescinded from the study in FY 2005.
$1,000 rescinded from the study in FY 2004.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Yuba River Ecosystem Restoration, CA (Continuing)	1,725,000	0	0	0	150,000	200,000 1/	1,375,000

Sacramento District

The study area is the Yuba River channel downstream from Bassetts Station on the North Fork of the Yuba River and downstream of Jones Bar on the South Fork of the Yuba River to the city of Marysville, Yuba County, California, which lies at the confluence of the Feather and Yuba Rivers. The purpose of the study is to recommend a plan to undertake project modifications for implementation of fish habitat improvement, fish passage improvements, and to prevent hydraulic mining debris stored behind Daguerre Point Dam and Englebright Dam from being a detriment to downstream navigation and other facilities. A United States Geological Survey study conducted in 2001, measuring the geochemistry of the sediment retained behind Englebright Dam indicated a relatively high concentration of mercury, methyl mercury and other toxic materials. The Environmental Protection Agency regulates the handling and disposal of these kinds of toxic materials. The presence of toxic materials within the sediment deposit complicates dam removal. Mobilizing the sediment into the water column could result in relocation of the hazardous materials downstream to the lower Yuba, Feather, and Sacramento Rivers potentially contaminating existing anadromous fisheries habitat. Identical conditions exist at Daguerre Point Dam. The goal of the study is to improve fish passage for native anadromous fish species, to improve conditions for listed species and critical habitat, and to contribute to overall population recovery. The Yuba River includes threatened Central Valley spring-run Chinook salmon and threatened California Central Valley steelhead, as well as designated critical habitat for these species. The threatened Southern distinct population segment of North American green sturgeon and their designated critical habitat also occur in the lower Yuba River. Englebright Dam is a complete barrier to fish passage. Daguerre Point Dam provides fish passage. The fish ladders at Daguerre Point Dam, however, were constructed decades ago and are relatively small compared to today's standards for ladder design. The current ladders require frequent inspections and maintenance because they have historically become clogged with sediment and woody debris that can temporarily block passage or substantially reduce attraction flows. Recently installed grates over the fish ladder bays reduce the occurrence of blockages by woody debris. The goal is to improve passage and critical habitat for threatened species at Daguerre Point Dam while preserving its numerous benefits to the region, which include: fish passage to cooler water spawning grounds upstream of Daguerre Point Dam, retaining hydraulic mining debris (which could impact downstream navigation if released), and agricultural water supply for Yuba County Water Agency and six irrigation entities: the Hallwood Irrigation Company, the Cordua Irrigation District, the Ramirez Water District, the Browns Valley Irrigation District, the Brophy Water District, and the South Yuba Water District. An Initial Appraisal Report (July 2005) indicated that an economically justifiable solution could be formulated to improve the fish ladders, preserve water supply interests, and address related downstream flood risk reduction. The potential local sponsors, the State of California and Yuba County Water Agency, expressed support for the study, understand the two-phase planning process, and are willing to participate in 50-50 cost-sharing of feasibility phase studies. The Corps and the proposed local sponsors plan to execute a Feasibility Cost Sharing Agreement in December of 2014.

In 2000, and again in 2007, the Corps initiated Endangered Species Act consultation with the National Marine Fisheries Service for a Biological Opinion on the impacts of routine operation of the dams to threatened salmon, steelhead trout and green sturgeon. On July 10, 2010, a federal District Court Judge issued an order remanding the 2007 Biological Opinion to National Marine Fisheries Service for further consideration and directed National Marine Fisheries Service to complete its review under the remand order by February 29, 2012. In July 2011, the same Judge ordered additional fish passage improvement measures at Daguerre Point Dam, which the Corps completed in September 2011, except for certain fish ladder maintenance requirements which are ongoing.

In October 2011, the Corps reinitiated consultation with National Marine Fisheries Service for a new Biological Opinion on the routine operations and maintenance activities at both dams, after submitting a Biological Assessment to National Marine Fisheries Service. Per court order, on February 29, 2012, National Marine Fisheries Service issued the Corps a jeopardy Biological Opinion, concluding that the dams threaten the continued existence of listed species and result in adverse modification of critical habitat. On November 27, 2012, National Marine Fisheries Service wrote a letter to the Corps extending the Biological Opinion deadlines for Corps actions. Per Court order, National Marine Fisheries Service is required to issue a new Biological Opinion in May 2014. The Corps continues to implement the portions of the 2012 Biological Opinion Reasonable and Prudent Alternatives and Reasonable and Prudent Measures for which there is legal authority and sufficient appropriated funds.

Fiscal Year 2014 funds will be used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in additional feasibility-level study, the Fiscal Year 2015 funds plus any carry-in funds will be used to continue into the feasibility phase of the study. The cost of the Independent External Peer review and the scope, cost, and schedule for the feasibility study will be determined with completion of the reconnaissance study. The preliminary estimated cost of the feasibility phase is $3,000,000; $2,850,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests and $150,000 for an Independent External Peer Review at 100 percent Federal expense.

A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,150,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,575,000
Feasibility Phase (Non-Federal)	1,425,000

Study Authority: Flood Control Act of 1970, Pub. L. 91-611, § 216, 84 Stat. 1824, 1830 (1970).

The reconnaissance phase is scheduled for completion in September 2014. The feasibility study completion is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

New Mexico

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation In FY 2012	Allocation In FY 2013	Allocation In FY 2014	Budgeted Amount in FY 2015	Additional To Complete After FY 2015
	$	$	$	$	$	$	$
Middle Rio Grande Flood Protection, Bernalillo to Belen, NM (Completion)	940,000	0	50,000 1/	299,000 1/	315,000 1/	276,000 2/	0

Albuquerque District

The project includes two parts - Corrales Unit and Mountain View to Belen unit. The construction of the Corrales Unit portion of the project was completed in 1997. A General Reevaluation Report was initiated in 1997 to reconfirm the economic justification for the remaining reach of the project. The remaining project is located along the Rio Grande between southern Albuquerque and Belen, New Mexico, and consists of constructing 55.4 miles of levees to replace existing non-engineered spoil banks. Major developed areas which will be protected include Mountain View, Isleta Pueblo, Bosque Farms, Los Lunas, Belen, and several unincorporated small rural communities on both sides of the Rio Grande. The valley has experienced significant growth with conversion of agricultural lands to urban and suburban land use. Approximately 27,000 residents and $1.3 billion worth of property are currently located in the floodplain. In spite of the existing upstream Rio Grande operating reservoirs, there is a residual flood threat from a 1,100 square mile uncontrolled drainage area upstream from the study area, which is capable of generating flood flows that exceed the capacity of the existing spoil banks, and result in recurring damages currently estimated at $118 million annually. The most recent flood event occurred in 1979 and caused $1.2 million in damages. The project was authorized for construction in the 1986 Water Resources Development Act.The Middle Rio Grande Conservancy District, the local sponsor, signed the Feasibility Cost Sharing Agreement for the remaining cost of the General Reevaluation Report in September 2012.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. The Fiscal Year 2015 funds , plus any carry-in funds, will be used to complete the General Reevaluation Report/Supplemental Environmental Impact Statement. The estimated cost of the feasibility phase is $1,580,000. $1,280,000 will be cost shared on a 50-50 percent basis by Federal and non-Federal interests and $300,000 for an Independent External Peer Review at 100 percent Federal expense. A summary of study cost sharing is as follows:

Total Estimated Study Costs	$1,580,000
Feasibility Phase (Federal)	940,000
Feasibility Phase (Non-Federal)	640,000

Project Authority: Water Resources Development Act of 1986.

The General Reevaluation Report is scheduled for completion in FY 2015.

1/ Funded under the construction appropriation.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Espanola Valley, Rio Grande and Tributaries, NM (Completion)	3,500,000	2,720,000	50,000 1/	130,000	300,000	300,000 2/	0

Albuquerque District

The Española Valley lies at the confluence of the Rio Grande, Rio Chama, Santa Cruz River, and several lesser streams in north-central New Mexico. Española, the largest community in the valley, is located 85 miles south of the New Mexico-Colorado border and 25 miles north of Santa Fe. Three tribal nations (Pueblos) are located within the study area. The Rio Grande is the 4th largest watershed in North America and has been designated by the World Wildlife Fund as one of the world's Top 10 Rivers at Risk. The bosque (forest) along the Rio Grande functions as critical habitat within the Española Valley. Wetlands in the area play a critical role in the larger ecosystem through maintaining water quality by filtering out sediments, harmful toxins, and excess nutrients along the Rio Grande. The basin has suffered significant ecosystem and environmental degradation due to disruption of these riparian areas by urbanization, exotic species introduction, livestock grazing, flood control, and water management. In addition, the basin has been subject to numerous severe floods since 1865; the most recent in 1958, 1969, 1970, 1978, 1987, and 1991. These floods were caused by summer rainfall or spring snowmelt. Corps of Engineers surveys after the floods in 1969 and 1970 estimated damages of $2,840,000 and $1,470,000 (October 2013 price levels), respectively. Flood damages occurred in Española, numerous small towns and villages, and at the pueblos causing both residential and commercial damages including urban and rural bridges, crops, orchards, and irrigation facilities. More recent flooding has occurred in 2011, 2012, and 2013, following devastating fires in the upper watershed, resulting in damages to the Pueblos and loss of drinking water supplies in the cities of Santa Fe and Albuquerque. The feasibility study will determine the potential to provide ecosystem restoration, flood risk management measures, water quality improvements, and recreation enhancements from the Ohkay Owingeh Pueblo to the San Ildefonso Pueblo along the Rio Grande including the city of Española, New Mexico. Proposed restoration features will improve and increase habitat (cottonwood, riparian gallery forest, wetlands type) in the study area, including habitat of the endangered Rio Grande Silvery Minnow and the Southwestern Willow Flycatcher. These features will make a significant connection between existing habitat areas in the Middle Rio Grande and provide a significant contribution to key life requisites for the silvery minnow and flycatcher. This feasibility study is a unique effort with three tribal nations acting as the local sponsors including the Pueblos of Santa Clara, San Ildefonso and Ohkay Owingeh, who signed a Feasibility Cost Sharing Agreement in December 2005.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds plus any carry-in funds will be used to complete the feasibility study. The estimated cost of the feasibility study is $5,906,000. $5,856,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $50,000 for Independent External Peer Review funded at 100 percent Federal expense. Up to 100 percent of the non-Federal costs may be in-kind services.

A summary of study cost sharing is as follows:

Total Estimated Study Cost	$6,428,000
Reconnaissance Phase (Federal)	522,000
Feasibility Phase (Federal)	2,978,000
Feasibility Phase (Non-Federal)	2,928,000

Study Authority: Flood Control Act of 1941 (P.L.77-228) as amended by Resolution of the Senate Committee on Environment and Public Works dated December 10, 2009.

The reconnaissance phase was completed in December 2005. The feasibility study is scheduled for completion in FY 2015.

1/ Reflects reprogramming of $50,000 to the study.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$5,000 rescinded from the study in FY 2006.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Rio Grande Basin, NM, CO, and TX (Completion)	4,228,000	3,092,000	237,000 1/	299,000	300,000	300,000 2/	0

Albuquerque District

The Rio Grande Basin is located in the states of New Mexico, Colorado, and Texas, and the study encompasses an area over 182,000 square miles within the Basin, including the Rio Grande main stem from Santa Acacia, New Mexico to Fort Quitman, Texas, and the Pecos River as its major tributary from Santa Rosa, New Mexico to the confluence. The river forms the international boundary between the United States and Mexico starting near El Paso, Texas.

Flooding, ecosystem degradation, water quality and interstate/international water deliveries are major issues in the basin. River flow regulation by nine major Corps of Engineers and Bureau of Reclamation dams on the main stem and tributaries for flood risk management and water delivery has changed the historical flow regime in the Rio Grande. Water is diverted for irrigation, industrial and residential uses, and for water deliveries in accordance with Interstate Compact Compliance and International Treaty Compliance. Changes in hydrology, channel configuration, land use activities, and the spread of exotic vegetation have adversely impacted the native riverine ecosystem. Now, indicator species such as the Rio Grande Silvery Minnow and the Southwestern Willow Flycatcher are listed as endangered under the Endangered Species Act, which is impacting existing flood risk management and water delivery operations. Another critical issue involves water supply storage at Elephant Butte Reservoir and Lake Amistad. Unless these losses are addressed, the Rio Grande Basin may lose at least one full year of its drought contingency potential by the year 2050. Many border cities in Texas and Mexico also depend on the Rio Grande for water supply, and under international agreements, 60 percent of the Rio Grande water rights below Fort Quitman, Texas belong to Mexico. Some border cities have rudimentary or non-existent water and wastewater treatment systems, which further exacerbate environmental degradation.

The watershed assessment will provide interagency collaboration to develop ecosystem restoration, watershed analysis and adaptive management strategies needed to improve degraded ecosystems in New Mexico, Colorado and Texas, and develop and evaluate potential salinity control management strategies. The states of New Mexico, Colorado and Texas (Texas Water Development Board) fully support this study and have signed three Feasibility Cost Sharing Agreements since 2001. Phase 1 was signed in December 2001 with the state of New Mexico; this phase was completed in June 2004. The Feasibility Cost Sharing Agreement for Phase 2 was signed in July 2005 with the state of Texas and was completed in January 2008. The Feasibility Cost Sharing Agreement for Phase 3 was signed in September 2008 with the state of New Mexico and was amended in March 2012 to include the state of Texas.

Fiscal Year 2014 funds are being used to continue the watershed assessment. Fiscal Year 2015 funds, plus any carry-in funds, will be used to complete the watershed assessment. The estimated cost of the assessment is $4,724,000 which is to be shared on a 75-25 percent basis by Federal and non-Federal interests, in accordance with Section 202 of the Water Resources Development Act of 2000, Section 2010 of the Water Resources Development Act of 2007 (modified non-Federal cost-sharing from 50% to 25%) and Section 108 of the 2008 Energy and Water Development Appropriations Act (allows the entire non-Federal share to be work-in-kind).

A summary of study cost sharing is as follows:

Total Estimated Study Cost	$5,409,000
Reconnaissance Phase (Federal)	685,000
Feasibility Phase (Federal)	3,543,000
Feasibility Phase (Non-Federal)	1,181,000

Study Authority: Section 729 of the Water Resources Development Act of 1986, amended by Section 202 of the Water Resources Development Act of 2000 and Section 2010 of the Water Resources Development Act of 2007; Section 108 of the Consolidated Appropriations Act, 2008 (P.L. 110-161).

The watershed assessment completion is scheduled for FY 2015.

1/ $50,000 reprogrammed from the study.

2/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$1,000 rescinded from the study in FY 2011.
$3,000 rescinded from the study in FY 2006.
$1,000 rescinded from the study in FY 2005.
$1,000 rescinded from the study in FY 2004.
$1,000 rescinded from the study in FY 2003.
$1,000 rescinded from the study in FY 2001.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Texas

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Northwest El Paso, TX (Continuing)	1,645,000	799,000	0	200,000	180,000	300,000 1/	166,000

Albuquerque District

The study is located in the northwest area of the city of El Paso and El Paso County, Texas. The combined population of the city and communities in northwest El Paso County is nearly 800,000 and is experiencing rapid population growth due to force build-ups at Ft. Bliss. Increased residential and commercial development in the area has encroached on arroyos and caused storm water ponding. This area is subject to flash flooding from uncontrolled runoff from the Franklin Mountains and there is currently no defined outlet to the Rio Grande for this runoff. Flooding impacts major roadways, including Air Craft Road (TX) (also known as Senator Domenici Highway), which provides access to the North American Free Trade Agreement transportation route, port of Santa Teresa and Interstate 10 which is a critical North/South highway. The North American Free Trade Agreement transportation route is a major route for Ft. Bliss troop mobilization and international border security. Flooding also cuts off access to the El Paso International Airport. In September 1987, flows resulting from thunderstorms flooded several areas in the study area and caused damages estimated at over $420,000. A series of slow-moving large thunder storms in early August 2006, delivered about 8+ inches of rain in the area causing flash floods throughout the city. This event was estimated at a 1,000 year rainfall event (0.01% chance event), and resulted in uncontrolled spills at three dams in the El Paso area and three large scale evacuations. Continued flooding occurring in August and September 2006 caused an estimated $250 million dollars in damages. Major flood events also occurred in 2008, 2009, and 2013. The feasibility study will investigate structural and non-structural solutions to flooding problems in the study area and determine the extent of the Federal interest. The study is being coordinated with the International Boundary and Water Commission, which is proposing a floodwall/levee on the Rio Grande that is scheduled for construction in 2018. The study will consider flood flows from the Franklin Mountains into the Rio Grande with the new construction of the International Boundary and Water Commission project. The City of El Paso, the local sponsor, signed the Feasibility Cost Sharing Agreement in December 1998. The study was put on hold in 2005 at the request of the local sponsor. The sponsor submitted a Letter of Intent in August 2009 to resume the study and to expand the scope to include additional arroyos in the study area that are now impacted by development and construction of the International Boundary and Water Commission floodwall.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study. Fiscal Year 2015 funds, plus any carry-in funds, will be used to continue the feasibility phase. The estimated cost of the feasibility phase is $3,000,000. $2,900,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests plus $100,000 for Independent External Peer Review at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,095,000
Reconnaissance Phase (Federal)	95,000
Feasibility Phase (Federal)	1,550,000
Feasibility Phase (Non-Federal)	1,450,000

Study Authority: Resolution of the Committee on Environment and Public Works of the United States Senate, adopted August 12, 1986.

The reconnaissance phase was completed in December 1998. The feasibility study completion date is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study effort is $0. This amount will be used to perform the work on the study as follows: N/A.

$2,000 rescinded from the study in FY 2005.
$2,000 rescinded from the study in FY 2004.
$1,000 rescinded from the study in FY 2001.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost	Allocations Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budgeted Amount in FY 2015	Additional to Complete After FY 2015
	$	$	$	$	$	$	$
Sparks Arroyo Colonia, El Paso County, TX (Continuing)	2,100,000	1,053,000	0	200,000	0	600,000 1/	247,000

Albuquerque District

The study is located in southern El Paso County, Texas along Sparks Arroyo, adjacent to the east-southeast edge of the City of El Paso. Sparks Arroyo cuts through a rapidly expanding community whose population has doubled to 30,000 since 1990 due to military force build-ups at Ft. Bliss. Interstate 10, local roads, and residential areas are subject to flooding from the 10 percent chance flood event resulting in extensive road damage, preventing emergency egress and evacuation; and creating a potential for loss of human life and impacts to Ft. Bliss troop mobilization, interstate traffic and international border security. On June 20, 1999, a local thunderstorm centered in the study area caused flooding in the community of Sparks Addition and closed Interstate 10 for eight hours. Flooding in August and September 2006 caused damage to more than 1,500 homes, 50 businesses, interstate highways, and local roads, estimated at over $100 million. The local sponsor, El Paso County, signed the Feasibility Cost Sharing Agreement in July 2003. The El Paso County Commission requested expansion of the study area in September 2006 to include an analysis of additional arroyos. The study was placed on hold in 2008 at the request of the sponsor while cost sharing issues were negotiated with the community of Socorro, Texas. The study was resumed in 2010.

Fiscal Year 2015 funds plus any carry-in funds will be used to complete the Independent External Peer Review and complete the draft feasibility report. The estimated cost of the feasibility phase is $3,600,000. $3,200,000 will be shared on a 50-50 percent basis by Federal and non-Federal interests and $400,000 for an Independent External Peer Review at 100 percent Federal expense. Up to 100 percent of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,700,000
Reconnaissance Phase (Federal)	100,000
Feasibility Phase (Federal)	2,000,000
Feasibility Phase (Non-Federal)	1,600,000

Study Authority: Resolution of the Committee on Environment and Public Works of the United States Senate, adopted August 12, 1986.

The reconnaissance phase was completed in July 2003. The feasibility study completion date is to be determined.

1/ Estimated Unobligated Carry-in Funding: 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 study as follows: N/A.

$2,000 rescinded from the study in FY 2006.
$2,000 rescinded from the study in FY 2005.
$1,000 rescinded from the study in FY 2004.

$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

Southwestern Division

Investigations

Texas

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocations Prior to FY2012 $	Allocation in FY2012 $	Allocation in FY2013 $	Allocation in FY2014 $	Budgeted Amount in FY2015 $	Additional Estimated to Complete After FY2015 $
1,700,000	0	0	0	200,000 1/ 2/	200,000	1,300,000

Coastal Texas Protection and Restoration, TX – Flood Risk Reduction (Continuing)

Galveston District

The study area consists of the entire Texas Gulf Coast from the mouth of the Sabine River to the mouth of the Rio Grande. The entire area is at risk for hurricane and flood damage. The study area includes Gulf and tidal waters, barrier islands, marshes, coastal wetlands, rivers and streams and adjacent areas that make up the interrelated coastal area of Texas. The Texas coastal zone contains several large cities at risk during storm events including the nation's 4th largest city based on population, Houston, Texas. The coastal region is home to approximately 6,100,000 people, or 25 percent of the State's population. Mineral production has a value of nearly one billion dollarsper year and commercial fisheries generate another $156,000,000. Agriculture in the less populated counties generates approximately $500 millionof product per year. The study area includes coastal ecosystems consisting of 3.900 million acres of wetlands, 235,000 acres of sea grass, 367 miles of sea turtle nesting habitat, 380,000 acres of piping plover critical habitat, and 328 square miles of whooping crane critical habitat, as well as 21 state and Federal wildlife refuges. Of the 367 miles of shoreline, more than 60 percent has been identified by the Texas General Land Office as subject to high rates of erosion. Flooding from hurricanes and other rainfall events makes the 25 percent of the state population that live within the 18 coastal county area vulnerable to impact from storms. The ten tropical storms and hurricanes that struck Texas in the last decade resulted in 176 fatalities and over $36 billionin damages. According to the Federal Emergency Management Agency , Hurricane Ike in 2008 was the third most destructive hurricane ever to hit the United States, with losses of more than $27 billion and responsible for 112 deaths. Rice University estimates that if Hurricane Ike had hit the coast 30 miles further south, the storm surge would have been between 20-25 feet in the Houston Ship Channel (home to one fourth of the United States oil refineries) and would have caused damages exceeding $100 billion. The US Coast Guard estimates that a one month closure of a major port like Houston (the Nation's second busiest port) would cost the national economy $60 billion. Infrastructure is inadequate to evacuate the one millionresidents in hurricane evacuation zones today, and 500,000 more are expected to move into these zones by 2035. Forty percent of the nation's petrochemical industry, 25 percent of national petroleum-refining capacity, 8 deep draft ports (4 of the 10 largest US seaports), 750 miles of shallow draft channels (including 400 miles of the Gulf Intracoastal Waterway), and critical transportation infrastructure will continue to be at risk without a comprehensive plan to restore and maintain a robust coastal ecosystem aimed at reducing storm damage to industries and businesses critical to the nation's economy and protecting the health and safety of Texas coastal communities.

Studies to identify feasible options along the upper Texas coast from the Sabine River to Brazoria County are ongoing under the Sabine Pass to Galveston Bay feasibility study. Under this ongoing study, a six county, state-authorized district (the Gulf Coast Community Protection and Restoration District) has been established to assess opportunities to provide flood risk management and to provide restoration, protection of marshes, national seashores and wildlife refuges,

and state wildlife management areas. The study will develop a comprehensive coastal protection and restoration plan to reduce risk and damages to public safety, property, and environmental resources from storms and erosion.
Coastal Texas Protection and Restoration, TX (Continued)

The goal of the study will be to identify data needs and whether there is a Federal interest in undertaking a comprehensive strategy for reducing flood risk through structural and nonstructural measures, including natural features like barrier islands and wetlands, which can reduce storm surge. The strategy will incorporate integrated plans for ecosystem restoration and flood damage reduction, coast-wide beach and dune ecosystem restoration, and comprehensive barrier island restoration. Alternatives to be considered will include improvements to existing systems (such as existing hurricane protection projects at Port Arthur, Texas City, Freeport, and Lynchburg and seawalls at Galveston, Palacios, Corpus Christi, North and South Padre Island), and the creation of new structural protection plans for hurricane storm damage reduction. This comprehensive study will include assessment of structural, nonstructural and environmental project elements based on their contributions to hurricane and flood damage reduction, reduction of salt water intrusion, reduction of shoreline erosion, fish and wildlife protection, and aquatic ecosystem restoration. Comprehensive coastal ecosystem opportunities include: 1) reducing the susceptibility of residential, commercial and public structures and infrastructure to storm-related damages; 2) assisting the recovery and long-term sustainability of coastal ecosystems that support important fish and wildlife resources and buffers storm impacts; 3) restoring barrier island and headland dune ridges that protect vast marsh systems and serve as protection for the nationally critical petrochemical refining industry and navigation infrastructure, including the Gulf Intracoastal Waterway; 4) assisting in recovery of infrastructure damaged by erosion and supporting programs that promote long-term erosion reduction during future storm events; and 5) creating opportunities for the collaboration of local, state and Federal agencies ton the comprehensive Coastal Protection and Restoration Plan. The State of Texas, acting through the General Land Office, has indicated their intent to share equally in the cost of a feasibility study. The Feasibility Phase scheduled for completion is TBD.

Fiscal Year 2014 funds are being used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines there is a Federal interest in feasibility level study, the funds requested for Fiscal Year 2015 plus any carry-in funds will be used to continue into the feasibility phase of the study. The cost of the Independent External Peer Review (IEPR) and the scope, cost, and schedule for the feasibility study will be determined upon conclusion of the reconnaissance study. The preliminary estimated cost of the overall feasibility phase is $2,800,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. In addition, the Independent External Peer Review (IEPR) is estimated to cost $200,000 and will be 100% Federal funded, which is an exception to the 50-50 cost share. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,200,000
Reconnaissance Phase (Federal)	200,000
Feasibility Phase (Federal)	1,400,000
Feasibility Phase (non-Federal)	1,400,000
Feasibility IEPR (Federal)	200,000

The study is authorized by Section 4091 of the Water Resource Development Act of 2007.

1/ Estimated Unobligated “Carry-in” Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the FY 2015 from prior appropriations for use on this study effort is $0. This amount, together with the Budget Amount shown above, will be used to perform work on the study as follows: Initiate Feasibility, complete alternative milestone meetings and work toward identifying the Tentatively Selected Plan.

2/ $0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

	Total Estimated Federal Cost $	Allocations Prior to FY2012 $	Allocation in FY2012 $	Allocation in FY2013 $	Allocation in FY2014 $	Budgeted Amount in FY2015 $	Additional to Complete After FY2015 $
Freeport Harbor, TX	3,849,000	0	0	1,000 1/ 2/	1,450,000	1,200,000	1,198,000

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – Navigation Channels & Harbors (Continuing)

Galveston District

The Freeport Harbor project is located immediately south of the city of Freeport in Brazoria County, Texas, on the middle Texas coast and is formed by the Brazos River from the mouth about 6 miles upstream to Freeport, Texas. The heavily developed industrial and commercial project area (channel and harbor) is also about 50 miles southwest of the nation's 4th largest city, Houston. The project area currently provides for a 47 feet deep, 400 feet wide entrance channel; 45 feet deep, 400 feet wide main channel with three associated 45 feet deep turning basins; plus the 36 feet deep, 200 feet wide Brazos Harbor channel and associated 36 feet deep Brazos Harbor Turning Basin. The current channel width limits existing traffic to one-way traffic for all vessels and daylight-only operation for larger vessels. Port Freeport was ranked 27th nationally in top deep-draft ports, Waterborne Commerce Statistics data, 2010. It services one of the largest petrochemical complexes on the Gulf coast. Crude oil represents 74 percent of the benefits for the locally preferred plan; containers account for 16 percent of the benefits; petro-chemical products 7 percent, and offshore traffic for 3 percent. The non-Federal sponsor, Port Freeport is actively pursuing improvements for its petroleum transits and Liquefied Natural Gas (LNG) facility. The Feasibility Report was completed in January 2013. The recommended project, estimated to cost $297,354,000 with an estimated Federal cost of $235,783,000 and an estimated non-Federal cost of $61,571,000. It provides deepening of the Outer Bar Channel from the jetties into the Gulf of Mexico to –58 feet Mean Lower Low Water (MLLW); deepening from the end of the jetties in the Gulf of Mexico to the Lower Turning Basin to –56 feet MLLW; deepening the Main Channel from the Lower Turning Basin to Sta. 132+66 (ConocoPhillips dock area, above 1,200-foot Brazos port Turning Basin) to –56 feet mean low tide; deepening of Freeport Harbor from Sta. 132+66 through the Upper Turning Basin to –51 feet MLLW, and deepen the remainder of the Stauffer Channel to -26 feet MLLW. The average annual benefits for this plan amount to $47,646,000, all for navigation, based on the latest economic analysis dated June 2012. The Benefit to Cost Ratio for the Recommended Plan is 1.3 to 1 at 7 percent. A deeper channel will allow larger and deeper draft vessels to call on the Port, while also making Port operations more efficient. The proposed improvements to the channel also include measures to address a potential navigation safety risk for some LNG ship traffic. Port Freeport understands and is prepared to sign a Design Agreement, and has funds available to finance its entire share of the Preconstruction Engineering and Design portion of the project. The Design Agreement is scheduled to be executed in FY 2014.

Freeport Harbor, TX (continued)

Preconstruction Engineering and Design (PED)will focus on refining the design for the overall recommended project, and to identify the feasibility of implementing the initial increment of the project to provide reliable transit of design vessels at a 45 foot depth to the Lower Stauffer's Channel. All PED work will ultimately be cost shared at the rate for the project to be constructed but will be financed through the PED period at 50 percent non-Federal. Any adjustments that may be necessary to bring the non-Federal contribution in line with the project cost sharing will be accomplished in the first year of construction.

Total Estimated Preconstruction Engineering and Design Costs	$ 7,698,000
Initial Federal Share	3,849,000
Initial Non-Federal Share	3,849,000

Total Estimated Preconstruction Engineering and Design Costs	$ 7,698,000
Ultimate Federal Share	3,849,000
Ultimate Non-Federal Share	3,849,000

The project is not authorized for construction. Fiscal Year 2014 funds are being utilized to initiate PED to include executing the design agreement; investigate slope stability issue related to the Hurricane Flood Protection Levee, initiate environmental testing, and conduct soil borings and surveys for plans and specifications for the new extension and outer bar contract. Fiscal Year 2015 funds will be used to continue PED. The schedule for completion of PED is TBD.

1/ Estimated Unobligated "Carry-in" Funding: 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 study as follows: Continue PED, complete environmental testing.

2/ $0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost $	Allocations Prior to FY2012 $	Allocation in FY2012 $	Allocation in FY2013 $	Allocation in FY2014 $	Budgeted Amount in FY2015 $	Additional to Complete After FY2015 $
1,700,000	0 1/ 2/	0	0	150,000	200,000	1,350,000

Houston Ship Channel, TX: Navigation Channels & Harbors

Galveston District

The Houston Ship Channel System is comprised of the Houston Ship Channel, Bayport Ship Channel, Barbour Terminal Channel, and Greens Bayou. The Houston Ship Channel extends 52 miles from its juncture with Texas City Channel at the entrance to Galveston Bay and terminates at its turning basin in the city of Houston. From channel mile 0 to channel mile 40 (Boggy Bayou), the authorized channel depth is 45 feet, with a bottom width of 530 feet. The remaining channel depth from channel mile 40 (Boggy Bayou) to channel mile 52 (turning basin) varies from 36 feet to 40 feet, with a bottom width of 300 feet. The Bayport Ship Channel extends 4.1 miles from its juncture with the Houston Ship Channel at mile 20.5 and terminates at its turning basin near the community of Shore Acres. The authorized channel depth is 40 feet, with a bottom width of 300. Barbour Terminal Channel extends 1.5 miles east from its juncture with the Houston Ship Channel at mile 26.3 and terminates at its turning basin. The authorized channel depth is 40 feet with a width of 300 feet. Greens Bayou is a shallow draft channel and will not be considered for improvement under this study. The latest improvement to the Houston Ship Channel included deepening of the channel to 45 feet from the Gulf of Mexico up to Boggy Bayou, which was completed in June 2005. The Port of Houston has expressed their concern and need for improvements to the Houston Ship Channel System, specifically: the reach of Houston Ship Channel from Boggy Bayou to Turning Basin due to current vessel traffic having to light load to be able to transit this reach of the channel; the Bayport flare due to safety concerns with making the turn into the Bayport Channel from the Houston Ship Channel; and both Bayport and Barbour Channels due to vessel traffic having to light load to be able to transit these channels. Development along the channel has continued to increase, resulting in more vessel traffic and creating an increased risk of collisions and other incidents between vessels, along with the need to improve efficiencies. This situation is expected to worsen with the increase in Panama vessels utilizing these channels after the Panama Canal Expansion Project opens in 2015. The Port of Houston is the nation's number one port in terms of foreign waterborne tonnage with an estimated value of $146,000,000 and number two in total US tonnage with an estimated value of $212,000,000 based on fiscal year 2010 Waterborne Commerce data. The major commodities include petroleum, chemicals, and bulk goods. A major challenge in this study, due to the industrial growth in the area, will be the coordination of new environmentally suitable placement areas in conjunction with beneficial use of dredge material. An Initial Appraisal Report of the Channel was completed in September 2011 that documented the Federal interests in investigating options to reduce the costs for transporting goods along the Boggy Bayou to Turning Basin reach of the Houston Ship Channel.

Houston Ship Channel, TX (continued)

The study will investigate the incremental deepening of the reach from 1-foot to 5-foot depth in addition to any necessary widening to accommodate larger vessels. A major challenge in this study, due to the industrial growth in the area, will be the coordination of new environmentally suitable placement areas in conjunction with beneficial use of dredge material. The Port of Houston Authority is the local sponsor for the existing 40 foot project and has indicated their intent to share equally in the cost of a feasibility study. The Feasibility Phase scheduled for completion is TBD.

Fiscal Year 2014 funds are being used to fully fund the reconnaissance phase at full Federal expense. If the reconnaissance report determines a Federal interest in further feasibility-level study, the funds requested for Fiscal Year 2015 plus any carry-in funds will be used to continue into the feasibility phase of the study and execute a feasibility cost sharing agreement. The cost of the independent external peer review and the scope, cost, and schedule of the feasibility study will be determined with conclusion of the reconnaissance study. The preliminary estimated cost of the feasibility phase is $2,800,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. In addition, the Independent External Peer Review (IEPR) is estimated to cost $200,000 and will be 100% Federal funded, which is an exception to the 50-50 cost share. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$3,150,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	1,400,000
Feasibility Phase (non-Federal)	1,400,000
Feasibility IEPR (Federal)	200,000

The study is authorized by Section 216 dated December 31, 1970.

The reconnaissance phase is scheduled for completion in September 2014. The schedule for completion of the feasibility study is TBD.

1/ Estimated Unobligated “Carry-in” Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the FY 2015 from prior appropriations for use on this study effort is $0. This amount, together with the Budget Amount shown above, will be used to perform work on the study as follows: Reassess Federal interest in the project, create a Project Management Plan and prepare a Draft Feasibility Cost Share Agreement.

2/ $0 rescinded from the study.
$0 transferred to the Flood Control and Coastal Emergencies (FCCE) account.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Study	Total Estimated Federal Cost $	Allocations Prior to FY2012 $	Allocation in FY2012 $	Allocation in FY2013 $	Allocation in FY2014 $	Budgeted Amount in FY2015 $	Additional to Complete After FY2015 $
Sabine Pass to Galveston Bay, TX (Continuing)	4,909,000	2,935,000 2/ 3/	191,000	200,000	400,000	583,000	600,000

Galveston District

The study area consists of the upper Texas Gulf Coast including Orange, Jefferson, Chambers, Galveston, Harris, and Brazoria Counties. The study area includes Gulf and bay waters, barrier islands, marshes, coastal wetlands, rivers and streams and adjacent areas that make up the interrelated coastal area. Within this reach of the upper Texas coastal zone lies the major population and economic centers of Houston (nation's fourth largest city and home to the nation's second busiest seaport), Freeport, Beaumont, and Port Arthur. Critical coastal ecosystems including sea turtle nesting habitat, piping plover critical habitat as well as two state and Federal wildlife refuges are within the study area. This reach of the upper Texas coastal zone is at risk from wind and surge damage during storm events. The area has experienced significant shoreline erosion causing the destruction of nationally significant wetlands, loss of land and damage to homes, commercial property, and State Highway 87. On September 13, 2008, Hurricane Ike moved directly over the entire study area with category two storm winds of 110 mph (sustained) and an estimated category four storm surge ranging between 10-15 feet above normal tides. The entire study area was significantly altered both physically and economically. The State, through the Texas General Land Office agreed to become the new non-Federal Sponsor and a new Feasibility Cost Sharing Agreement was executed in January 2013. This study will develop a comprehensive review of the problems and opportunities related to storm surge impacts for the six-county region along the upper Texas Coast, and provide impact and economic justifications for potential projects. Potential measures include both structural and non-structural solution types, such as levees, surge gates, beach replenishment, and buyouts. The study will include a programmatic assessment of the six county study area to identify all projects with potential Federal interest in Coastal Storm Damage Reduction and Ecosystem Restoration opportunities, and assess alternatives to identify a recommended project for the Sabine and Brazoria Regions for Coastal Storm Damage Risk Management with an outcome of a recommended plan for construction to Congress.

Fiscal Year 2014 funds are being used to continue the feasibility phase of the study by completing the scoping and continuing the alternative formulation portions of the study. The funds requested for Fiscal Year 2015 plus any carry-in funds will be used to continue the feasibility phase, which includes completion of the formulation and selection of the tentatively selected plan. The preliminary estimated cost of the overall feasibility phase is $9,028,000, which is to be shared on a

50-50 percent basis by Federal and non-Federal interests. In addition, the Independent External Peer Review is estimated to cost $200,000 and will be 100% Federal funded, which is an exception to the 50-50 cost share. A summary of study cost sharing is as follows:

Total Estimated Study Cost	$9,423,000
Reconnaissance Phase (Federal)	195,000
Feasibility Phase (Federal)	4,514,000
Feasibility Phase (non-Federal)	4,514,000
Feasibility IEPR (Federal)	200,000

The study is authorized by the Resolution of the Committee on Environment and Public Works of the United States Senate, June 23, 2004.

A new Feasibility Cost Sharing Agreement for the study was executed in January 2013. The feasibility study schedule for completion is TBD.

1/ Estimated Unobligated “Carry-in” Funding: 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 study effort is $0.

2/ $46,000 rescinded from the project in FY2011.

3/ $200,000 transferred to the Flood Control and Coastal Emergencies (FCCE) account in FY2011.

APPROPRIATION TITLE: Investigations, Fiscal Year 2015

Total Estimated Federal Cost	Allocation Prior to FY 2012	Allocation in FY 2012	Allocation in FY 2013	Allocation in FY 2014	Budget Amount in FY 2015	Additional To Complete After FY 2015
$	$	$	$	$	$	$
1,772,000	172,000	1,000 1/	99,000	500,000	500,000 2/	500,000

Sulphur River Basin, Texas – (Continuing)

Fort Worth District

The Sulphur River basin study area, located in northeast Texas, includes portions of eleven counties and encompasses most of the Sulphur River Basin, though focus is on the portion of the basin upstream of the Texas/Louisiana border. The study area includes portions of Lamar, Delta, Hopkins, Franklin, Red River, Fannin, Hunt, Bowie, Cass, Morris and Titus counties. Within the basin are the existing Corps of Engineers Wright Patman Lake and Jim Chapman multi-purpose reservoirs. The Sulphur Basin has the largest average watershed yield of any major river basin in Texas. The Sulphur River Basin contains approximately 60 percent of the potential additional water supply available in the State of Texas and is the only basin in Texas that contains relatively abundant, undeveloped and unpermitted surface water, making the basin integral to the State Water Plan. Due to the abundance of water in the region, the Sulphur Basin has been the focus of numerous studies for potential development of new water supply projects. The 2012 Texas State Water Plan calls for development of approximately 620,000 acre-feet annually of new municipal and industrial water supply from the Sulphur River Basin that could be used to meet the water supply needs for the rapidly growing North Central and Northeast Texas regions. This Feasibility Study will utilize the revised Corps Planning concepts and draw on a wide variety of prior studies conducted by various entities and the State of Texas in addressing long term water supply needs. The Sulphur River Basin Authority is the local sponsor, but there are numerous additional stakeholders with high interest including the Texas Water Development Board, the City of Dallas, the Tarrant Regional Water District, the North Texas Municipal Water District, the City of Irving, the City of Texarkana, and the Upper Trinity Regional Water District. A modification to the original Feasibility Cost Share Agreement dated 24 February 2005 was executed on 3 April 2012 to allow accelerated use of non-Federal funds to move the study forward. The feasibility study will consist of a review of all water supply alternatives, including assessment of potential new reservoir sites identified in the 2012 Texas State Water Plan, within the Sulphur River basin in order to develop a plan that optimizes potential reallocation of storage at Wright Patman Lake. The optimization study will provide information to non-Federal entities on proposed future non-Federal implemented projects that could be included in updates the Texas State Water Plan in 2017. Study recommendations will include an assessment on whether any proposed reallocation of storage at Wright Patman Lake can be accomplished within the authority of section 301 of the Water Supply Act of 1958, or if additional congressional authorization is required.

Fiscal Year 2014 funds are being used to assess potential measures required to develop preliminary costs for the reallocation of storage at Wright Patman Lake, and to conduct preliminary environmental and cultural resource investigations for screening of other municipal and industrial water supply alternatives within the basin. This preliminary analysis will be used to determine if reallocation of storage at Wright Patman is a viable alternative. Fiscal Year 2015 funds would be used to complete all work necessary to identify the Tentatively Selected Plan, complete work necessary for a draft Environmental Impact Statement, and complete a draft feasibility report.

Sulphur River Basin, Texas – (Continuing)

The estimated cost of the feasibility phase is $3,000,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. In addition, the Independent External Peer Review (IEPR) will be an estimated cost of $200,000 and will be 100% Federal funded, which is an exception to the 50-50 cost share. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	$ 3,172,000
Reconnaissance Phase (Federal)	172,000
Feasibility Phase (Federal)	1,400,000
Feasibility Phase (Non-Federal)	1,400,000
Feasibility IEPR (Federal)	200,000

The study is authorized by House Resolution dated March 11, 1998 and section 216 of the Flood Control Act of 1970 (P.L. 91-611, 33 U.S.C. §549a). The completion date for the Sulphur River Basin, Texas, feasibility study is To Be Determined.

1/ $1,000 reprogrammed to the study in FY 2012.

2/ Estimated Unobligated “Carry-in” Funding: As of the date this justification sheet was prepared, the total unobligated dollars estimated to be carried into the Fiscal Year 2015 from prior appropriations for use on this effort is $0. This amount will be used to perform work on the study as follows: NA.