

PROGRAM ASSESSMENT

PROGRAM ASSESSMENT

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Program Assessment

Flood Damage Reduction

Program

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This program aims to reduce flood damage by constructing levees, floodwalls and other structural and non-structural projects. The Corps of Engineers shares the cost of these projects with states and local communities. The Corps also assists states in floodplain management and maintains large federally owned dams and levees.

Rating

[What This Rating Means](#)

NOT PERFORMING Results Not Demonstrated

- **The program lacks information on how completed flood damage reduction projects help reduce the Nation's overall flood damages on an annual or long-term basis.** The Corps can estimate, however, the economic and environmental return from flood projects under design or construction, and these estimates are used to set funding priorities for the program's budget each year.
- **Greater coordination is needed among this program, FEMA mitigation programs, the National Flood Insurance Program and states and local communities that set floodplain management policies.** The lack of coordination between these entities can result in increased or unaddressed risk to communities in flood hazard areas.
- **The program's state and local partners often do not make citizens sufficiently aware of their actual flood risks by publicizing regional flood plain management plans to reduce the impact of future flood events in the project area.** Anecdotal evidence also indicates that state and local partners may not be properly maintaining completed flood projects to ensure the level of protection over time.

Improvement Plan

[About Improvement Plans](#)

We are taking the following actions to improve the performance of the program:

- Collecting performance information on the actual contribution of completed flood damage reduction projects toward reducing the Nation's overall flood damages.
- Conducting two pilot projects to improve coordination among Federal and non-Federal programs involved in reducing flood damages.
- Funding an inventory of the Nation's flood and storm damage reduction infrastructure and development of a methodology for assessing the risk and level of protection provided from completed projects.

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Coastal Storm Damage Reduction

Program Assessment

Coastal Storm Damage Reduction

Program

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The program aims to protect lives and reduce damages resulting from hurricanes and storms. The Army Corps of Engineers partners with coastal communities to share the cost of placing sand on beaches or building structures such as jetties or groins. Most projects involve regular, recurring sand placement for up to 50 years.

Rating

[What This Rating Means](#)

NOT PERFORMING **Results Not Demonstrated**

- **The program lacks necessary information on its success in reducing damages from hurricanes and storms in communities where the Corps has built projects or placed sand on beaches.** Additional funding may be needed to collect such performance information for completed projects. At this time only anecdotal evidence is available on the program's success.
- **The Administration does not support Federal funding for long-term beach renourishment (for up to 50 years); it supports a scaled back Federal role instead.** The Administration supports Federal funding for the initial placement of sand on beaches after which states and local communities would finance the long-term, periodic beach renourishment.
- **Greater coordination may be needed between the Army Corps of Engineers and other Federal, state and local entities to help prevent unwise future development in coastal communities, including those where the Corps has partnered to provide long-term beach renourishment.**

We are taking the following actions to improve the performance of the program:

Improvement Plan

[About Improvement Plans](#)

- Collecting information on the economic and other benefits from completed projects that have reduced hurricane and storm damages. Additional funding may be needed for this data collection effort.
- Proposing funds in the budget for the initial sand placement, and long-term renourishment only if it is necessary to mitigate the impacts of operating and maintaining a Federal navigation project.
- Conducting two pilot projects to promote improved coordination among Federal and non-Federal programs that address damages from floods, storms and hurricanes.

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Program Assessment

Corps of Engineers: Hydropower

Program

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This program generates hydropower at 75 Federal multi-purpose dams with a total capability of 21,000 megawatts, the largest in the USA. About three percent of the nation's electricity is produced by Corps hydropower facilities, a clean, reliable source of power for the nation.

PERFORMING

★ Adequate

Rating

[What This Rating Means](#)

- **The program's performance generally has declined over the past 10 years.** System availability has been declining as much of the infrastructure is approaching the end of its design life.
- **The Corps does not have an overall short-term and long-term asset management strategy.** Each regional office develops its own plan for the maintenance, major rehabilitation, and replacement of its equipment.
- **Performance results reflect high forced outage rates, the lack of a quality, systematic program evaluation and the failure to develop a strategy for undertaking major rehabilitations.**

Improvement Plan

[About Improvement Plans](#)

We are taking the following actions to improve the performance of the program:

- Developing a comprehensive asset management strategy to better account for the inventory, value, condition and reliability of its hydropower assets.
- Developing a program-wide strategy to better plan for the future funding of needed hydropower improvements.

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Corps of Engineers: Coastal Ports and Harbors

This program helps design, build, operate and maintain the nation's coastal maritime infrastructure -- ports, harbors, and navigation channels. More than 1.3 billion tons of cargo worth more than \$900 billion moves through these facilities annually.

PERFORMING

★★ Moderately Effective

- **The Corps coastal navigation program plays an important role in constructing, operating and maintaining coastal maritime infrastructure essential for meeting international commercial and military needs.**
- **Corps investment decisions to construct new coastal maritime infrastructure facilities under this program have not always been based on sound economic considerations.** That somewhat undisciplined approach tends to waste valuable resources and reduce the program's effectiveness.
- **Corps decisions on how to spend its operation and maintenance budget need improvement.** The Corps needs to develop and apply better management techniques to budget O&M expenditures, including facility condition indices, channel availability, and economic analysis which assess the need for O&M spending in an orderly and methodical way.

We are taking the following actions to improve the performance of the program:

- Selecting Corps coastal navigation construction projects using objective, business-like, economic criteria to achieve the maximum benefits possible and to eliminate waste and inefficiency.
- Developing & implementing improved techniques for managing O&M expenditures including facility condition indices, channel availability, economic analysis, and standardizing decision-making across Corp.

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Program Assessment

Inland Waterways Navigation

The goal of the program is to facilitate substantial movements of waterborne commerce on the inland waterways where highly cost-effective. The Corps uses locks and dams, navigation channels, and other measures to support safe, reliable, and environmentally sustainable transportation on these waterways.

NOT PERFORMING

Results Not Demonstrated

- **The rehabilitation of existing infrastructure is funded from a different appropriation than routine maintenance, and responsibility for these interrelated investments is fragmented.** The current approach diffuses accountability and oversight, does not reflect the full cost of operating and maintaining existing projects, and impedes development of an integrated investment strategy.
- **The Corps proposed new navigation locks on the Upper Mississippi River and Illinois Waterway based on an outdated economic model that overstates benefits and a second economic model that reflects flawed, hypothetical data and assumptions.** The National Academy recommended developing a new model based on real willingness-to-pay data to form the foundation for estimating the benefits.
- **The Corps needs to develop standard risk and reliability criteria to measure the condition of its inland waterways projects nationwide and use in establishing priorities for maintenance funding.**

We are taking the following actions to improve the performance of the program:

- Proposing to transfer the rehabilitation of inland waterways projects, where the extent of the work is not large enough to be considered a replacement, from construction to the maintenance program.
- Developing a new economic model to estimate properly the economic benefits of a range of possible improvements on the Upper Mississippi River and Illinois Waterway.
- Improving how the program measures risk and reliability. The Corps has held five workshops with waterways users to discuss the factors relevant to the allocation of maintenance funding.

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Program Assessment

Aquatic Ecosystem Restoration

Program
View Assessment Details

The Corps Aquatic Ecosystem Restoration program focuses on restoring degraded ecosystem processes to a more natural condition. Projects restore aquatic resources such as wetlands, rivers and estuaries. The primary focus is on large hydrologically complex projects. Non-Federal partners share the cost and maintain projects.

NOT PERFORMING

Results Not Demonstrated

- **The Corps has recently identified a limited number of annual/long-term measures and an efficiency measure.** It has not yet established baselines to allow evaluation of program effectiveness. The number of acres restored, the percentage of the total that is nationally significant, and the cost per acre to restore nationally significant acres will be among the metrics measured.
- **Individual projects receive extensive review but the program as a whole has not been subject to regular independent evaluation.** Such evaluation may contribute to identification of enhanced methods for performing comparative analysis of projects with dissimilar ecological outputs, refinement of the definition of nationally significant, and improved or alternative performance metrics.
- **The program focuses on restoring nationally and regionally significant ecosystems throughout the United States in partnership with local entities.** The Corps program is relatively unique in its focus on large projects requiring manipulation of hydrology and geomorphology.

Rating
What This Rating Means

We are taking the following actions to improve the performance of the program:

- Acquiring baseline data for performance measures and increasing the accuracy of evaluations. Fiscal year 2006 results will be used as the baseline, compared to estimates and targets adjusted.
- Increasing focus on project effectiveness through environmental benefit assessment research. Increased project effectiveness will contribute to increased program effectiveness.
- Identifying the most effective means to obtain independent program evaluation. Specific criteria will be developed to be considered in a program review by building on previous and ongoing reviews.

Improvement Plan
About Improvement Plans

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Program Assessment

Corps of Engineers: Environmental Stewardship

Program

[View Assessment Details](#)

The Corps operates 456 dams, reservoirs and other water-related projects nationwide. It is responsible for adjacent Army Corps-owned land. This Corps-owned property covers 12 million acres, equal in size to the States of Vermont and New Hampshire combined. The purpose of this program is to manage this land responsibly.

Rating

[What This Rating Means](#)

PERFORMING

★ Adequate

- **The Corps has done an adequate job managing the land and other natural resources entrusted to it, but it needs to take a more proactive management approach so it has better knowledge of the resources it is responsible for.** For example, it needs to complete natural resource inventories for the sites it manages.
- **An up-to-date Master Plan can help the Corps manage its properties in a responsible way.** Corps regulations require Master Plans for Corps properties but these are not always kept up-to-date.
- **An independently-conducted comprehensive evaluation of the Environmental Stewardship program may provide additional information useful to enhance program effectiveness.**

Improvement Plan

[About Improvement Plans](#)

We are taking the following actions to improve the performance of the program:

- Preparing a series of natural resource inventories, focusing first on areas where an inventory is likely to improve Corps management.
- Preparing and updating Master Plans for Corps properties, as called for in Corps regulations, whenever doing so is cost-effective.
- Conducting an independent assessment of the Corps' Environmental Stewardship program.

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Formerly Utilized Sites Remedial Action Program

Program Assessment

Formerly Utilized Sites Remedial Action Program

Program

View Assessment Details

The purpose of this program is to clean up contamination resulting from the Nation's early atomic weapons program -- the Manhattan Project, for example -- at 22 sites in nine States. The Army Corps of Engineers determines what needs to be cleaned up and how, in consultation with the affected communities and regulators.

Rating

What This Rating Means

PERFORMING

☆☆ Moderately Effective

- **The program has a clear purpose.** However, stakeholders at individual project sites in some cases have different views of what the goals of the program are.
- **The Corps has significantly reduced cleanup costs.** It has done this by increasing competition among contractors and by selecting disposal methods based on the risk posed by the actual materials being disposed of rather than higher theoretical risks that more concentrated materials might pose.

Improvement Plan

About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Working with stakeholders to better document and clarify program goals and commitments.
- Identifying ways to increase the program's efficiency while protecting the health and safety of the public and the environment, increasing competition where warranted.

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Program Assessment

Corps of Engineers: Regulatory Program

The Corps is responsible for protecting the environmental integrity of the nation's rivers, streams, and wetlands, in a way that supports a growing economy. It issues permits to land developers, road builders and others affecting these aquatic resources. It requires them to avoid, minimize and mitigate environmental damage.

PERFORMING

☆☆ Moderately Effective

- **The Corps needs to improve the way it checks to be sure that recipients of Corps permits comply with the terms of their permits, especially with respect to offsetting or mitigating any damage they cause to wetlands.** The Government Accountability Office studied this compliance issue and agrees it is a problem.
- **The program should improve the extent to which its regulations are consistent countrywide.** The Government Accountability Office recently conducted two surveys of Corps procedures in different parts of the country and found inconsistencies which need to be eliminated.
- **The Corps needs to do more watershed planning in advance of development and less project-by-project planning.** The Corps of Engineers Civil Works strategic plan calls on the agency to make this change. There is widespread agreement that a broadly-focused watershed approach is more likely to improve the environment and the economy than a narrowly-based site-by-site approach.

We are taking the following actions to improve the performance of the program:

- Publishing a final rule on mitigation in December 2007 and installing a new database to improve our ability to track the extent to which permit recipients comply with the terms of their permits.
- Revising Nationwide permit regulations (in March 2007) and publishing our Standard Operating Procedures (in October 2007) to promote a consistent regulatory approach nationwide.
- Increasing our focus on watershed planning. The Corps has funded several watershed pilot projects. We are sharing data with other federal, state and local agencies to expand watershed planning.

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Program Assessment

Corps of Engineers: Recreation Management

Program

[View Assessment Details](#)

This program provides recreation opportunities in and around Corps lakes and parks. The Corps manages 4,300 recreation areas at 456 projects in 43 states. The recreation opportunities the Corps (and its partners) offer are diverse, ranging from primitive camp sites to four-star conference centers.

Rating

[What This Rating Means](#)

PERFORMING

☆☆ Moderately Effective

- **The Corps of Engineers recreation program is large, diverse and well managed.** It takes place on 12 million acres of water and land, equal in size to the States of Vermont and New Hampshire. Its managers are often resourceful and entrepreneurial, working collaboratively with the local community to ensure customer satisfaction.
- **The Corps recreation infrastructure is aging and, in many cases, obsolete.** Many recreation facilities are 30 to 40 years old and are nearing the end of their useful life. They need to be replaced and upgraded but federal funding is not likely to be available.
- **Baselines and targets for recreation performance have not been developed to date.** Accordingly, the use of these measures to guide budget decisions is limited. Also, land use policy might be improved to attract private financing and investment where appropriate.

We are taking the following actions to improve the performance of the program:

Improvement Plan

[About Improvement Plans](#)

- Working to enact legislation that would provide managers improved incentives to collect fees, increase receipts, and work collaboratively with local community leaders.
- Obtaining authority to use increased fees the program collects to operate, maintain and upgrade facilities at Corps recreation sites where the fees are collected.
- Collecting data to develop performance measures useful for managing recreation sites. Also conducting competitive solicitations, where appropriate, to use private financing to improve the program.

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Program Assessment

Corps of Engineers: Emergency Management

This program prepares for and responds to natural disasters, including floods, storms and hurricanes, by training and equipping personnel to respond to flood and storm events, repairing flood control and storm protection structures damaged by major floods and storms and conducting other emergency response activities.

PERFORMING

☆☆ Moderately Effective

- **The program addresses the specific need for disaster response and recovery after hurricanes or major floods by performing emergency repairs to damaged levees and floodwalls.** The Army Corps of Engineers is well-suited to conduct emergency project repairs, given their extensive knowledge of and experience with planning, constructing and maintaining such projects.
- **The program does not always receive funding in the regular, annual budget.** Despite the relative certainty associated with preparing for and responding to emergencies each year, the program routinely relies upon erratic, emergency supplemental funding or emergency fund transfers from other programs.
- **The program lacks a comprehensive database for tracking the maintenance and performance of flood and storm protection projects that it regularly inspects and/or maintains.** This information is necessary to ensure projects perform well during flood and storm events and to improve state and local accountability for maintaining and repairing flood and storm protection projects.

We are taking the following actions to improve the performance of the program:

- Exploring ways to improve decision-making on the restoration of flood and storm protection structures after an emergency.
- Funding this program at a robust level in the regular, annual budget to support important emergency planning, preparedness, response and recovery activities.
- Proposing funds for an inventory of the Nation's flood and storm projects and development of an analytical tool for assessing project performance and risk of failure.

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Program Assessment

Corps of Engineers: Water Storage for Water Supply

The purpose of the water supply program is to manage Corps reservoirs in a cost-efficient and environmentally responsible manner to provide water supply storage space for use by non-Federal water management agencies.

PERFORMING

☆☆ Moderately Effective

- Corps reservoirs provide water supply storage in a cost efficient and environmentally responsible manner.
- The program provides an alternative source of water for municipal and industrial use to meet the ever increasing demands brought on by rapid population and economic growth.
- Meeting this growing demand will require more efficient use of existing water supplies and the development of new supplies.

We are taking the following actions to improve the performance of the program:

- Exploring in a systematic way how much storage space the Corps owns for storing water and how best to use it.
- Adjusting the fees, charges and contributions the Corps collects for water storage to ensure that scarce water is not wasted and instead used in an economically and financially sound way.

GREAT LAKES AND OHIO RIVER DIVISION

**GREAT LAKES AND OHIO RIVER DIVISION
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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Great Lakes and Ohio River Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Des Plaines River, IL & WI (Phase II) Chicago District	5,520,000	3,970,000	362,000	500,000	688,000

The Des Plaines River Basin originates in southwest Wisconsin and flows south into northeastern Illinois. The study area, located in Lake and Cook Counties in Illinois and Kenosha County in Wisconsin, has a drainage area of approximately 700 square miles. The Des Plaines River has a long history of flooding which has caused significant economic losses throughout the basin. This study will provide benefits to a significant number of residential and commercial structures with an estimated market value of over \$100M. Record flooding in 1986 & 1987 caused an estimated \$100 million in damage to 10,000 dwellings and 263 business and industrial sites and severely impacted the entire transportation network including air, rail and surface roads in this densely populated region of NW metro Chicago. There were seven fatalities during 1986/1987 events including six deaths related to basement flooding and electrocution and one death due to drowning during evacuation. Floods severely impacted communication, transit, drinking water, emergency services and hospitals. Flooding in the Des Plaines River watershed affects at least 1,733,290 people but approximately 4,634,516 people regionally are impacted by the wide-ranging impacts to the transportation network. There are over 73 municipalities in the watershed that contend with flood damages from the Des Plaines River and tributaries. The average annual damages are estimated to be over \$27.1 million for the Des Plaines River mainstem, alone. Section 419 of the Water Resources Development Act of 1999 directs the Corps not to exclude flood damage reduction measures based on restrictive policies regarding the frequency of flooding, the drainage area, and the amount of runoff. Flood Damage Reduction Measures would reduce the risk to life and health, and further prevent severe disruption to air and land transportation network including O'Hare Airport. Due to density of residential and commercial development and the relatively flat glacial lake plain topography, substantial risk to life, safety and health result from moderate flood depths and velocities, as result in significant flood-related damages to 73 municipalities in the watershed. Recent flood events include May 2004 and August 2007, both of which resulted in significant flood damages and disaster declarations. While the banks of the Upper Des Plaines are protected by a narrow system of forest preserve holdings along its course in portions of suburban Cook County, suburban development within the watershed has created a river system that is in danger of losing its ecological and hydrological integrity. An estimated 10,000 acres of wetlands have been drained along the Upper Des Plaines and its tributaries in Wisconsin, and Illinois. The study will also evaluate environmental measures such as instream, riparian and wetland restoration. Complementary to flood damage reduction, this watershed study incorporates formulation of multi-purpose plans for the Mainstem and on 15 tributaries in both Illinois and Wisconsin that include ecosystem restoration and protection, improved water quality, floodplain management and related recreation opportunities in this rapidly urbanizing region. The Illinois Department of Natural Resources, Lake County Storm Management Commission, County of Kenosha, Cook County Highway Department and Metropolitan Water Reclamation District of Greater Chicago are sponsors for the project. The Feasibility Cost Sharing Agreement was executed in February 2002.

The preliminary estimated cost of the feasibility phase is \$11,040,000 which is to be 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 Cost	\$11,040,000
Feasibility Phase (Federal)	5,520,000
Feasibility Phase (Non-Federal)	5,520,000

FY 2008 funds are being used to continue the feasibility study. FY2009 funds will be used to continue feasibility study. The feasibility phase completion date is to be determined.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction – Dam Safety Assurance (Flood and Coastal Storm Damage Reduction)

PROJECT: Bluestone Lake, West Virginia (Dam Safety Assurance) (Continuing)

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

DESCRIPTION: The dam modifications include stability improvements such as installation of post tensioning high strength steel anchors, and construction of mass concrete thrust blocks at the downstream face of the dam. The height of the dam will be raised by 8 feet and an additional monolith constructed at the east abutment to prevent overtopping of the existing dam and safely accommodate the probable maximum flood. A floodgate closure will be constructed across a state highway at the west abutment. The existing hydropower penstocks will be extended and retrofitted with gates to supplement the discharge capacity of the spillway and outlet works. All work is programmed.

AUTHORIZATION: Executive Order of the President 7183-A, September 12, 1935; Flood Control Acts of 1936 and 1938.

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable.

BASIS OF BENEFIT-COST RATIO: Not applicable.

SUMMARIZED FINANCIAL DATA:

Original Project	
Actual Federal Cost	\$ 28,618,100
Actual Non-Federal Cost	0
Total Original Project Cost	\$ 28,618,100

Division: Great Lakes & Ohio River

District: Huntington

Bluestone Lake, WV
(Dam Safety Assurance)

4 February 2008

SUMMARIZED FINANCIAL DATA: (continued)

Project Modification		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 232,000,000	Project Modification	30	To Be Determined
Estimated Non-Federal Cost	0			
Total Estimated Modification Cost	\$ 232,000,000			
Total Estimated Project Cost	\$ 260,618,000			
				PHYSICAL DATA
				Increase height of dam 8 feet; install anchors and thrust blocks; construct gate closure across State Route 20; modify penstocks to supplement discharge capacity; relocate electrical lines.
				ACCUM PCT OF EST
Allocations through FY 2007	\$ 67,444,000			
Conference Amount for FY 2008	11,808,000			
Allocations through FY 2008	79,252,000		34	
Allocation requested for FY 2009	12,000,000		39	
Programmed Balance to Complete after FY 2009	140,748,000			
Unprogrammed Balance to Complete after FY 2009	0			

JUSTIFICATION: The probable maximum flood is estimated to overtop the existing dam by 8 feet. Evaluations to date indicate the dam is in imminent danger of failure at pool levels below the top of dam. Dam failure would cause catastrophic flooding along the Greenbrier, New, Gauley, Kanawha, and Elk Rivers, including the metropolitan area and heavily industrialized capital city of Charleston, West Virginia. This is a serious public safety concern, with more than 115,000 persons at risk. Property damage would exceed \$6.5 billion. Average annual benefits, all flood control, are \$70,749,000.

Division: Great Lakes & Ohio River

District: Huntington

Bluestone Lake, WV
(Dam Safety Assurance)

4 February 2008

FISCAL YEAR 2008: The amount provided will be applied as follows:

<u>Continue Work Under Contract</u> for Dam Modifications	\$ 8,546,000
Continue Planning, Engineering and Design	2,178,000
Continue Construction Management	1,084,000
Total	\$ 11,808,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

<u>Continue Work Under Contract</u> for Dam Modifications	\$ 10,000,000
Continue Planning, Engineering and Design	1,400,000
Continue Construction Management	600,000
Total	\$ 12,000,000

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

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$232,000,000 is an increase of \$7,000,000 from the latest estimate (\$225,000,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	\$ 4,378,000
Post Contract Award and Other Estimating Adjustments	(2,997,000)
Inflation During Construction	5,619,000
Total	\$ 7,000,000

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

OTHER INFORMATION: The Bluestone Dam, West Virginia, Final Evaluation Report and Environmental Impact Statement were approved on August 13, 1998.

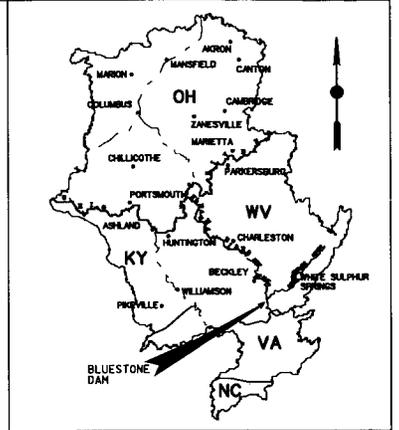
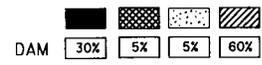
The scheduled completion date is to be determined.

Division: Great Lakes & Ohio River

District: Huntington

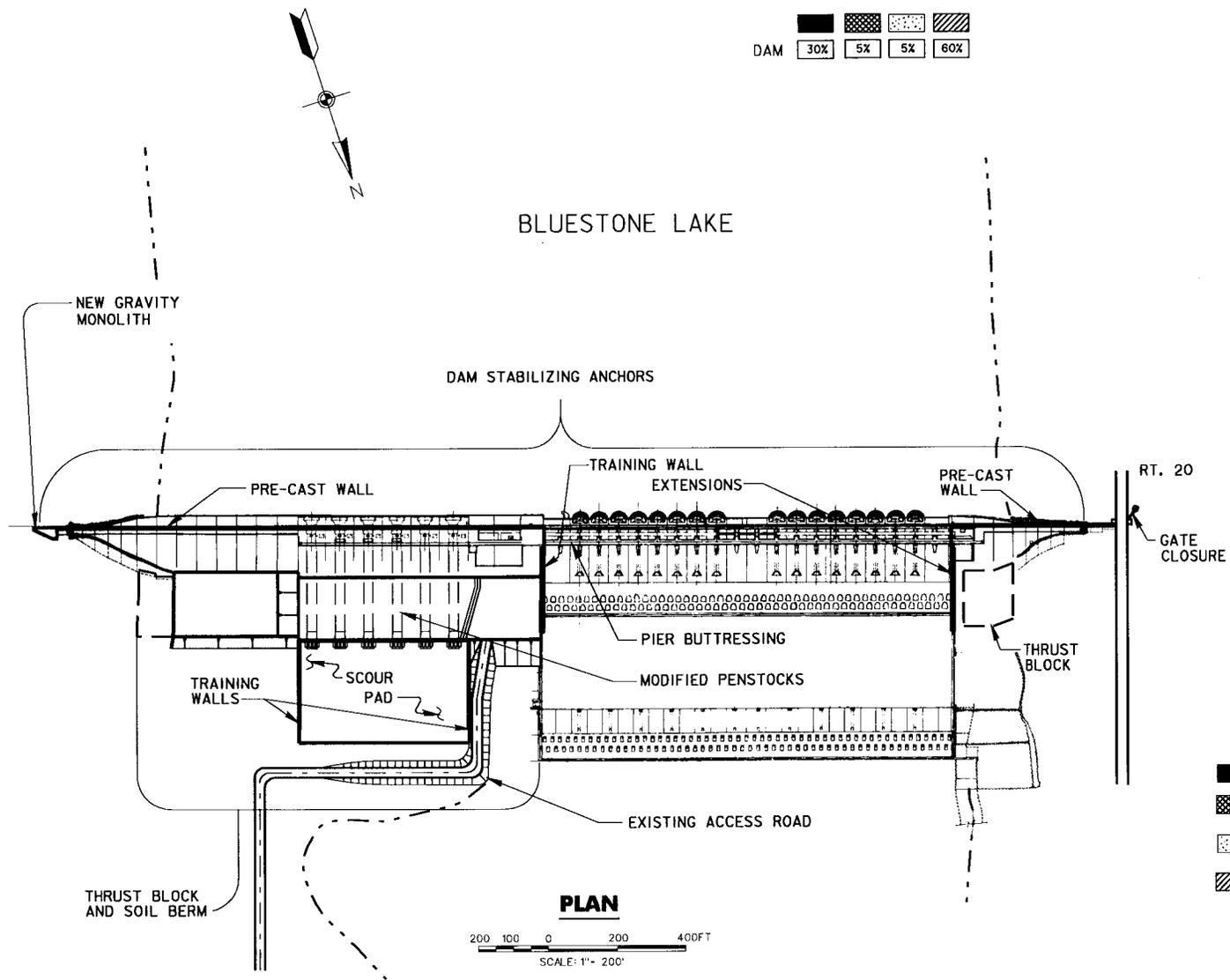
Bluestone Lake, WV
(Dam Safety Assurance)

4 February 2008



VICINITY MAP
50 25 0 50 100FT
SCALE: 1" = 50'

BLUESTONE LAKE



PLAN
200 100 0 200 400FT
SCALE: 1" = 200'

STATUS OF WORK

- WORK COMPLETED
- WORK UNDERWAY WITH FUNDS AVAILABLE FOR F.Y. 2008
- WORK PROPOSED WITH FUNDS REQUESTED FOR F.Y. 2009
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER F.Y. 2009

NEW RIVER
BLUESTONE DAM SAFETY ASSURANCE
HUNTINGTON DISTRICT
GREAT LAKES AND OHIO RIVER DIVISION

5 FEBRUARY 2007

APPROPRIATION TITLE: Construction – Dam Safety Assurance, Replacement (Flood and Coastal Storm Damage Reduction)

PROJECT: Center Hill Dam, Tennessee (Seepage Control) (Continuing)

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

DESCRIPTION: Center Hill Dam has been in service for 58 years (1951-2008) providing flood control, hydropower, recreation, water supply and water quality benefits. The Dam has a maximum height of 250 feet and consists of a 1,382 foot long concrete section, a 778 foot long rolled earth embankment and a 125 foot high by 770 foot long saddle dam in the right rim. The dam impounds 2,092,000 acre-feet at its maximum flood control pool elevation. Since construction, seepage problems through the karst limestone dam foundation have cost millions of dollars in monitoring, subsurface investigation and grouting. Seepage has increased. Foundation conditions are deteriorating because of erosion of the clay-filled joints in the rock within the rims and dam foundation. Erosion jeopardizes the two earthen embankments, the abutments and the integrity of the rims. The Major Rehabilitation Evaluation Report dated 30 May 2006 evaluated several alternatives to improve the long term reliability of the dam. The recommended alternative, which is also the National Economic Development alternative, includes 5 separable features: 1) A grout curtain and cut-off wall through the main embankment and foundation, approximately 800 feet long; 2) a grout curtain to treat seepage through the left rim, approximately 3,500 feet long; 3) a grout curtain on the right rim, approximately 2,400 feet long; 4) a cut-off wall through the saddle dam embankment and foundation, approximately 800 feet long; and 5) rehabilitation of the Station Service Power House Unit to improve reliability and enhance environmental performance. This work on the Station Service Power House Unit is needed to mitigate the downstream flow loss resulting from the remedial work. The Major Rehabilitation Evaluation Report was approved July 14, 2006.

AUTHORIZATION: Flood Control Act of 1938 and the River and Harbor Act of 1946

REMAINING BENEFIT-REMAINING COST RATIO: 2.6 at 7.0 percent.

TOTAL BENEFIT-COST RATIO: 2.6 at 7.0 percent.

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

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation, dated July 2006, at January 2006 price levels.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 263,000,000			
Programmed Construction	\$263,000,000	Entire Project	3	TBD
Total Estimated Project Cost	\$ 263,000,000			
		PHYSICAL DATA		
		Cutoff Wall 1,600 feet long, Grout Curtain 5,900 feet long		

Division: Great Lakes and Ohio River

District: Nashville

Center Hill Dam, TN

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST
Allocations to 30 September 2005	0	
Allocation for FY 2006	600,000 <u>1/</u>	
Allocation for FY 2007	6,500,000 <u>1/</u>	
Conference Allowance for FY 2008	31,488,000	
Allocation for FY 2008	31,488,000	
Allocations through FY 2008	38,588,000	15
Allocation Requested for FY 2009	53,400,000	35
Programmed Balance to Complete after FY 2009	171,012,000	
Unprogrammed Balance to Complete after FY 2009	0	

1/ Funded from Dam Safety and Seepage/Stability Correction Program.

JUSTIFICATION: Continued, uncontrolled seepage creates the potential for dam failure or partial loss of the reservoir. Karst foundation seepage is difficult to accurately predict, however, in the event of failure, downstream damages would likely exceed a billion dollars. There is a probable loss of life associated with dam failure.

FISCAL YEAR 2008: The allocated amount will be applied as follows:

Initiate Dam Embankment & Left Rim Grouting Contract	\$ 27,348,000
Initiate Station Service Power House Unit Rehabilitation	500,000
Planning, Engineering and Design	2,440,000
Construction Management	1,200,000
Total	\$ 31,488,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Dam Embankment & Left Rim Grouting Contract	\$ 43,100,000
Initiate Contract for Grouting Concrete Dam, Right Rim, & Saddle Dam	1,000,000
Complete Station Service Generator Rehabilitation	1,000,000
Planning, Engineering and Design	4,800,000
Construction Management	3,500,000
Total	\$ 53,400,000

STATUS OF LOCAL COOPERATION: This Major Rehabilitation project is designed as a reliability-based improvement. There are no anticipated efficiency benefits. The project will require full initial federal funding. There are two classes of users that may be required to share in the final cost of this project, the water supply and hydropower customers. Three water supply users currently have signed agreements with Nashville District. The users are the Cities of Cookeville and Smithville plus Riverwatch Resort. Hydropower from the project is marketed through the Southeastern Power Administration (SEPA). SEPA will repay their share of the costs by periodic direct payment to the U.S. Treasury after construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current cost estimate of \$263,000,000 is an increase of \$23,000,000 from the latest estimate (\$240,000,000) presented to Congress (FY2007). The change includes the following items.

Item	Amount
Increased Construction Cost	16,000,000
Price Level Updating and Inflation	7,000,000
Total	23,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental analysis (EA) was completed early in the study process and a finding of no significant impact (FONSI) was signed July 2005. An EA Supplement was completed to address additional alternatives and the FONSI was signed in May 2006. A second supplemental EA was completed in December 2007 to address specific grouting methods proposed by potential construction contractors. An EIS evaluating lake level alternatives during construction is underway. A draft Record of Decision (ROD) will be submitted to CELRD in December 2007.

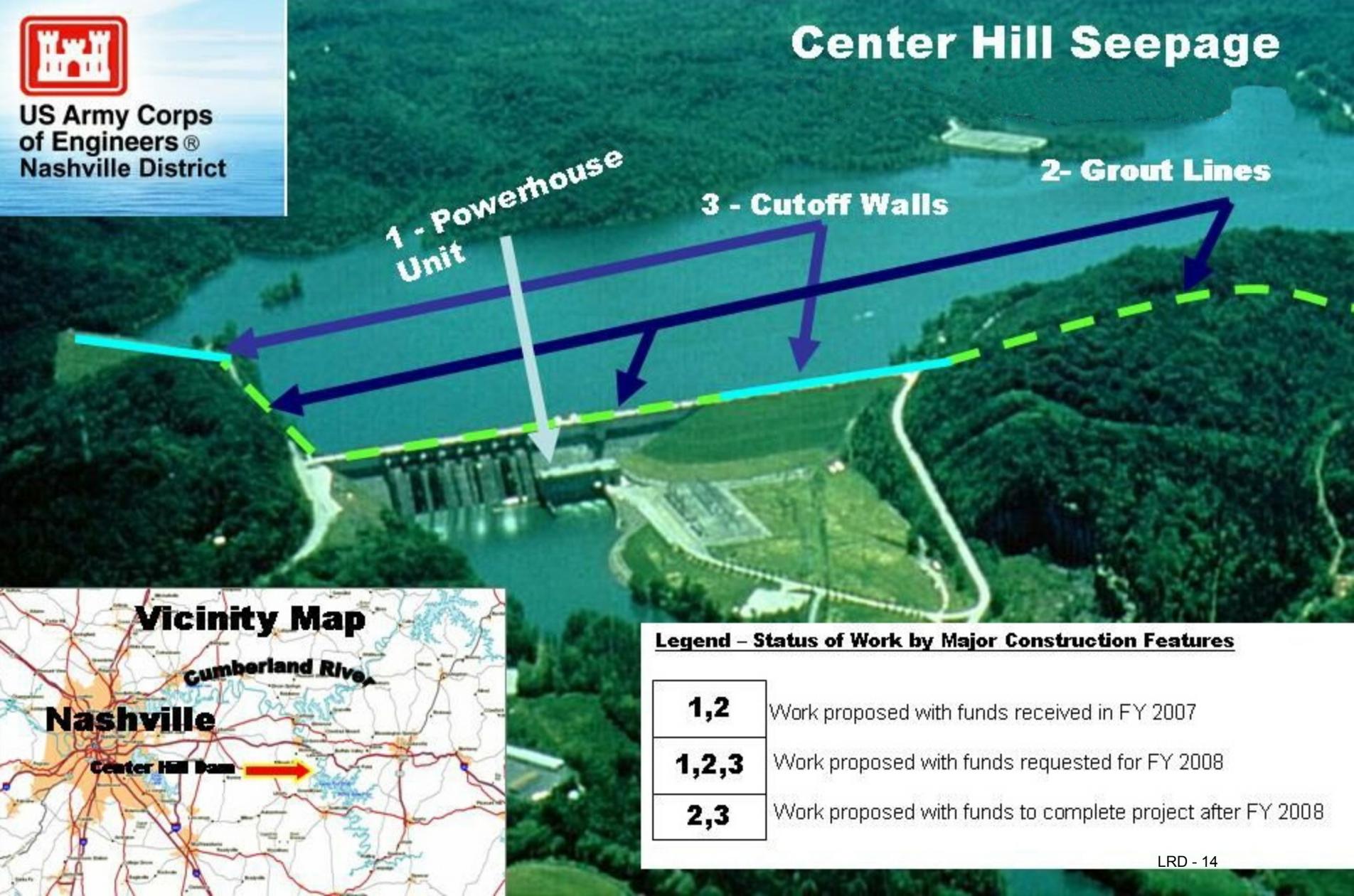
OTHER INFORMATION: Probable loss of life with dam failure is 357, with a range from 184 to 533. The 2005 Corps-wide Screening Portfolio Risk Assessment for Dam Safety ranked Center Hill Dam in Class I category for Corps dams nationwide. ASA(CW) concurred with the report recommendations on August 14, 2006. Design for construction began in FY 2007 utilizing Dam Safety and Seepage/Stability Correction Program funds.

The scheduled completion date of the project is to be determined.



US Army Corps
of Engineers®
Nashville District

Center Hill Seepage



Legend - Status of Work by Major Construction Features

1,2	Work proposed with funds received in FY 2007
1,2,3	Work proposed with funds requested for FY 2008
2,3	Work proposed with funds to complete project after FY 2008

APPROPRIATION TITLE: Construction – Shoreline Protection (Flood and Coastal Storm Damage Reduction)

PROJECT: Chicago Shoreline, Illinois (Continuing)

LOCATION: The project is located in northeast Illinois on the southern shore of Lake Michigan within the City of Chicago in Cook County.

DESCRIPTION: The project consists of constructing shoreline protection structures along 9.2 miles of the shoreline. Other project features include: revetments near the Adler Planetarium; a breakwater to protect the South Water Purification Plant near 78th Street; and beach nourishment of two short reaches of shoreline near Fullerton Avenue and at 31st Street.

AUTHORIZATION: Water Resources Development Act of 1996, and Water Resources Development Act of 1999.

REMAINING BENEFIT - REMAINING COST RATIO: 3.2 to 1 at 7 percent.

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

INITIAL BENEFIT-COST RATIO: 5.5 to 1 at 7 3/4 percent (1997).

BASIS OF BENEFIT COST RATIO: Benefits are from the latest available evaluation approved in March 1998, at October 1999 price levels.

SUMMARIZED FINANCIAL DATA		STATUS: (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$192,000,000	Entire Project	82%	To be determined
Estimated Non-Federal Cost	162,000,000			
Cash Contributions	53,000,000			
Other Costs	109,000,000			
Total Estimated Project Cost	\$354,000,000			
			PHYSICAL DATA	
		Step Stone Revetment	44,208 feet	
		Breakwater Reconstruction	2,670 feet	
		Beach Replenishment	2,000 feet	

Division: Great Lakes and Ohio River

District: Chicago

Chicago Shoreline, IL

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued):

		ACCUM PCT. OF EST FED COST
Allocations to 30 September 2004	\$134,302,000	
Allocations for FY 2005	\$11,551,000	
Allocations for FY 2006	\$18,302,000	
Allocation for FY 2007	11,136,000	
Allocation for FY 2008	8,856,000	
Total Allocations through FY 2008	184,147,000	96
Allocation Requested for FY 2009	1,000,000	97
Programmed Balance to Complete After FY 2009	6,853,000	
Unprogrammed Balance to Complete after FY 2009	0	

JUSTIFICATION: The project area includes 9.2 miles of the 28 miles of publicly owned shoreline within the City of Chicago. The adjacent land mass and transportation network are protected by continuous revetments and seawalls, most of which were built in the early 1900's. Those constructed of wood pilings and stone cribs have begun to fail. As the land behind the structures is lost due to storms, a high capacity road network, including Lake Shore Drive, a major State transportation artery which runs parallel to the shoreline, will be impacted. These roads carry an estimated 192,000 vehicles per day. Re-routing this traffic will cause serious disruption and significant traffic delay damages. In addition, facilities located on public property, with a capital investment of several billion dollars, will be destroyed. Over the past several years, significant degradation of the existing shore structures has occurred. Large sections of revetment have collapsed as a result of medium duration and intensity storm events. The rate of degradation is increasing, and short-term changes in sections are easily recognizable. The purification plant breakwater had collapsed to the point where gaps in the structure were visible. The breakwater protects the South Water Purification Plant, which services 2.5 million people. The Federal Government and local sponsors have invested over \$260 million in this project thus far which has benefited over 3 million people. Failure to complete this project will jeopardize these investments.

Average annual benefits are as follows:

Annual Benefits	Amount
Storm Damage Prevention	45,735,000
Recreation	27,718,000
Total	\$ 73,453,000

Division: Great Lakes and Ohio River

District: Chicago

Chicago Shoreline, IL

4 February 2008

FISCAL YEAR 2008: The current amount is being applied as follows:

Initiate construction Montrose to Irving	1,856,000
Fully fund Diversey Revetment construction	6,000,000
Engineering and Design	300,000
Construction Management	700,000
TOTAL	\$ 8,856,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Engineering and Design	300,000
Construction Management	700,000
TOTAL	\$ 1,000,000

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

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Pay 35 percent of the costs allocated to hurricane and storm damage reduction for the Federally supportable plan as reduced for credit allowed for non-Federal work under Section 215 of the Flood Control Act of 1968 and/or Section 206 of the Water Resources Development Act of 1992, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of hurricane and storm damage reduction facilities	\$ 103,000,000	\$ 500,000
Pay all the incremental costs of the locally preferred plan over the Federally supportable plan as reduced for credit allowed for non-Federal work under Section 215 of the Flood Control Act of 1968 and/or Section 206 of the Water Resources Development Act of 1992.	59,000,000	
Total Non-Federal Costs	\$ 162,000,000	\$ 500,000

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

Division: Great Lakes and Ohio River

District: Chicago

Chicago Shoreline, IL

4 February 2008

STATUS OF LOCAL COOPERATION: The City of Chicago and the Chicago Park District are the local sponsors for the project. The reimbursement agreement for protection of the filtration plant (Reach 5) was executed on April 28, 1997. A Project Cooperation Agreement encompassing 31st Street to 33rd Street, 1,000 feet of protection at Belmont Avenue, and beach stabilization at 31st Street was executed 7 August 1998. The Project Cooperation Agreement for the remainder of the project was executed on May 17, 1999. The Chicago Park District currently owns all lands required for the project. The non-Federal cost estimate of \$162,000,000 is an increase of \$36,000,000 from the non-Federal contribution of \$126,000,000 as noted in the PCA. The non-Federal sponsor is financially capable and willing to contribute the non-Federal share.

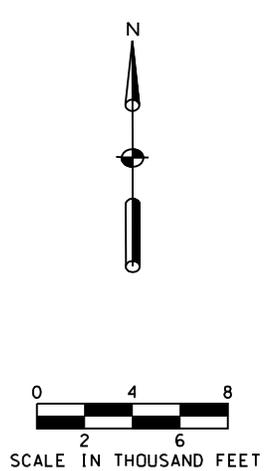
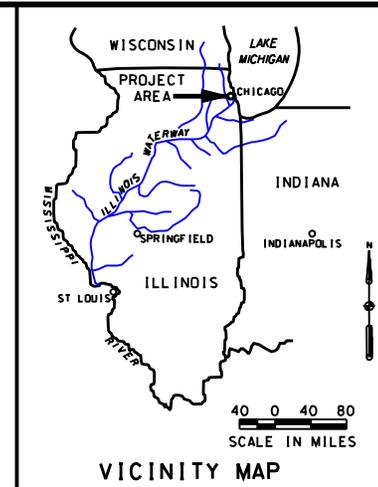
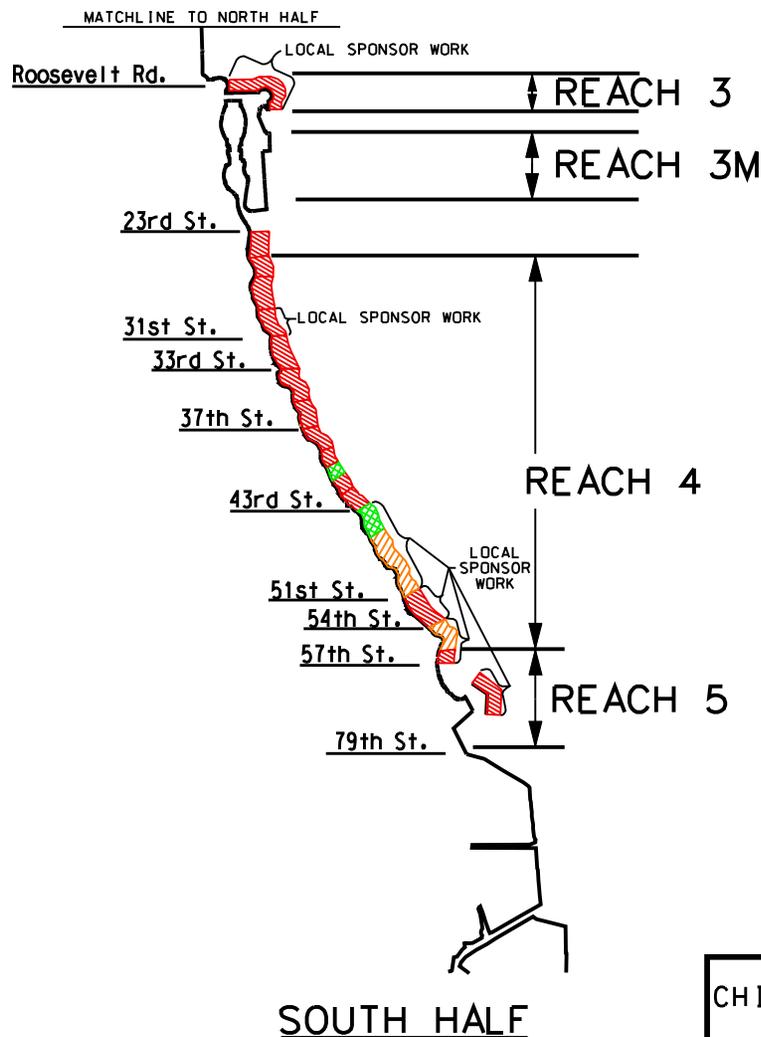
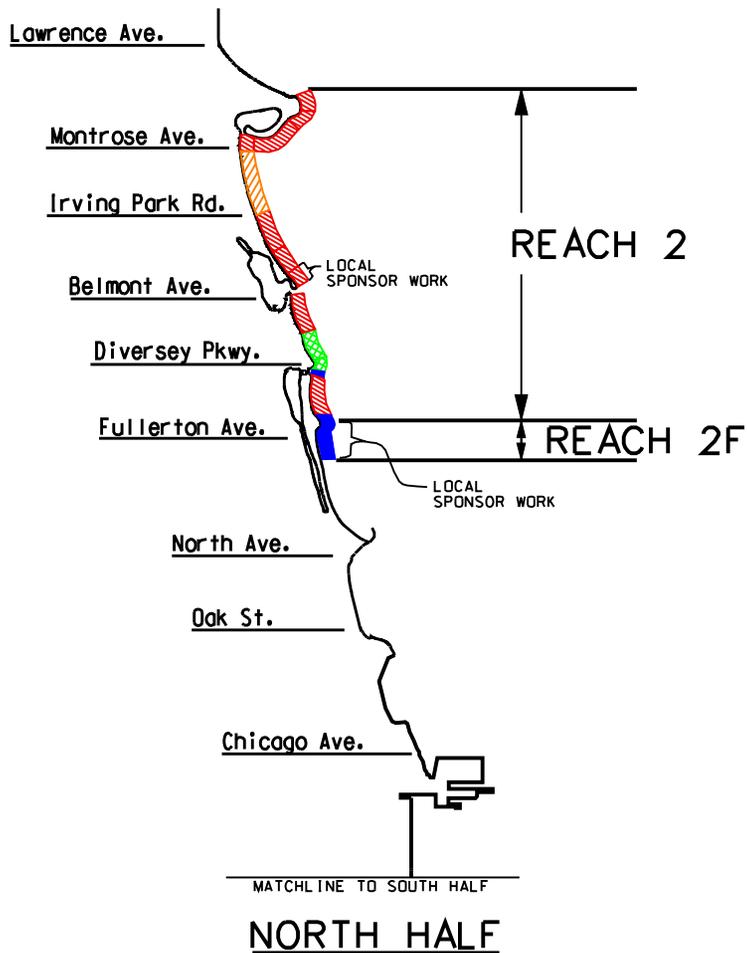
COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$192,000,000 is an increase of \$4,000,000 from the latest estimate (\$188,000,000) presented to Congress (FY 2008) due to increased costs for concrete and steel and higher petroleum prices. In addition, there have been changes to the design during construction due to differing site conditions, which resulted in increased construction costs.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: One Finding of No Significant Impact (FONSI) for the entire project was signed on July 3, 1993, and another FONSI, for additional land at Reach 4, 51st to 54th Street, was signed on June 25, 1999. A FONSI for the 40th-41st Street segment was signed in June 2005. A FONSI for the Belmont to Diversey South segment was signed on September 11, 2006.

OTHER INFORMATION: Funds to initiate PED were appropriated in FY 1992. Funds to initiate construction were appropriated in FY 1997. The project authorization provides for reimbursement for the Federal share of construction work performed by the non-Federal sponsor in Reach 5. WRDA 1999 authorized credit for work that was performed at Reach 3, Solidarity Drive, prior to execution of the Project Cooperation Agreement.

The Federal plan includes rubblemound revetments along 9.2 miles of publicly owned lakefront shoreline. The locally preferred plan substitutes steel sheet pile, and concrete step-stone revetments for the rubblemound revetments. The non-Federal sponsor will pay the incremental costs of the locally preferred plan.

The scheduled completion date is to be determined.



LEGEND

-  WORK COMPLETED AS OF 30 SEPTEMBER 2007
-  WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
-  WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
-  WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

CHICAGO SHORELINE PROJECT

CHICAGO DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION

4 FEBRUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood and Coastal Storm Damage Reduction)

PROJECT: Des Plaines River, IL (Phase I) (Continuing)

LOCATION: The project area is located in Lake and Cook Counties in northeastern Illinois and has a drainage area of approximately 500 square miles.

DESCRIPTION: The project consists of six elements: two levee units, expansion of two existing reservoirs, raising of one existing dam to increase storage, construction of one new lateral storage area, and environmental mitigation. Both levee units are a combination of floodwalls, levees, and closure structures; and both provide residents with a 100-year level of protection in addition to significant transportation benefits.

AUTHORIZATION: Water Resources Development Act of 1999 (Public Law 106-53).

REMAINING BENEFIT-REMAINING COST RATIO: 3.7 to 1 at 7 percent. (Entire project)
6.9 to 1 at 7 percent. (Levee 37)

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 7 percent. (Entire project)
2.2 to 1 at 7 percent. (Levee 37)

INITIAL BENEFIT-COST RATIO: 1.6 to 1 at 6 5/8 percent. (Entire project)
3.0 to 1 at 6 5/8 percent (Levee 37)

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest approved feasibility report, dated June 1999 at October 1998 price levels.

SUMMARIZED FINANCIAL DATA		STATUS	PERCENT	PHYSICAL
		(1 Jan 2008)	COMPLETE	COMPLETION
				SCHEDULE
Estimated Federal Cost	\$47,000,000	Entire Project	15	To be determined
Estimated Non-Federal Cost	25,000,000			
Cash Contributions	3,589,000	PHYSICAL DATA		
Other Costs	21,411,000	Levees and Floodwalls		
Total Estimated Project Cost	\$72,000,000	Reservoirs		
		Dam		
		Storage Areas		
				2 Miles
				1,063 Acre Feet
				500 Acre Feet
				412 Acre Feet

Division: Great Lakes and Ohio River

District: Chicago

Des Plaines River, IL

4 February 2008

SUMMARIZED FINANCIAL DATA (CONTINUED)		ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2004	\$ 1,594,000	
Allocations for FY 2005	1,367,000	
Allocations for FY 2006	3,559,000	
Allocation for FY 2007	6,000,000	
Conference Amount for FY 2008	6,001,000	
Allocation for FY 2008	6,001,000	
Allocations through FY 2008	18,521,000	40
Allocation Requested for FY 2009	5,620,000	51
Programmed Balance to Complete After FY 2009	22,859,000	
Unprogrammed Balance to Complete after FY 2009	0	

JUSTIFICATION: The Des Plaines River has a long history of frequent floods causing significant economic losses in the Chicago metropolitan area. 1986/1987 flooding of the Des Plaines River resulted in an estimated \$100 million in damages to this densely populated area of 10,000 dwellings and 300 commercial/industrial sites. Flooding also resulted in closure of Interstate 90/94 and severely disrupted the entire Chicago metropolitan area transportation network, including closure of one of the busiest airports, O'Hare International Airport, the first time ever for a non-winter event, for over 24 hours. O'Hare was surrounded by floodwaters, and egress possible only by foot, down Interstate 90 for stranded passengers. Over 15,000 residents were evacuated from the flooded area. There were 7 fatalities associated with the 1986/1987 flood events on the Des Plaines River including 6 deaths related to basement flooding which included electrocution and 1 death due to drowning during evacuation. Portions of the watershed are among the most rapidly developed and developing in the Chicago metro area. Near record flooding occurred again in 2007, resulting in damage to structures, road closures and 1 fatality. Due to density of residential and commercial development and the relatively flat glacial lake plain topography, substantial risk to life, safety and health result from moderate flood depths and velocities result, as well as significant damages to 73 municipalities in the watershed. Flooding affects residential, commercial and industrial structures, and the large, dense transportation network in this area of 800,000 plus residents. There are also affects to communication, emergency egress, safe drinking water supply and hospitals. Governor of Illinois declared Lake and Cook Counties area of Des Plaines watershed a disaster area during May 2004 and August 2007 flood events. This flood caused estimated damages of \$3 Million. Flooding caused evacuation of residents and numerous road closings for over a week. Average annual flood damage prevention benefits estimated at \$6,001,000 for the entire Des Plaines River, IL project.

Division: Great Lakes and Ohio River

District: Chicago

Des Plaines River, IL

4 February 2008

FISCAL YEAR 2008: The amount will be applied as follows:

Initiate construction of Levee 37	\$ 6,000,000
Engineering and Design	200,000
Construction Management	420,000
Total	\$ 6,620,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete construction of Levee 37	\$ 5,000,000
Engineering and Design	200,000
Construction Management	420,000
Total	\$ 5,620,000

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

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$6,667,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project, which may be reduced for credit allowed based on prior work (Section 104 of the Water Resource Development Act of 1986) after reductions for such credit have been made in the required cash payments.	14,711,000	
Pay 5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	3,622,000	\$273,200
Total Non-Federal Costs	\$25,000,000	\$273,200

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

Division: Great Lakes and Ohio River

District: Chicago

Des Plaines River, IL

4 February 2008

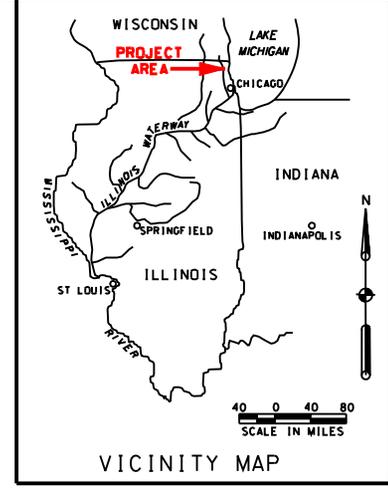
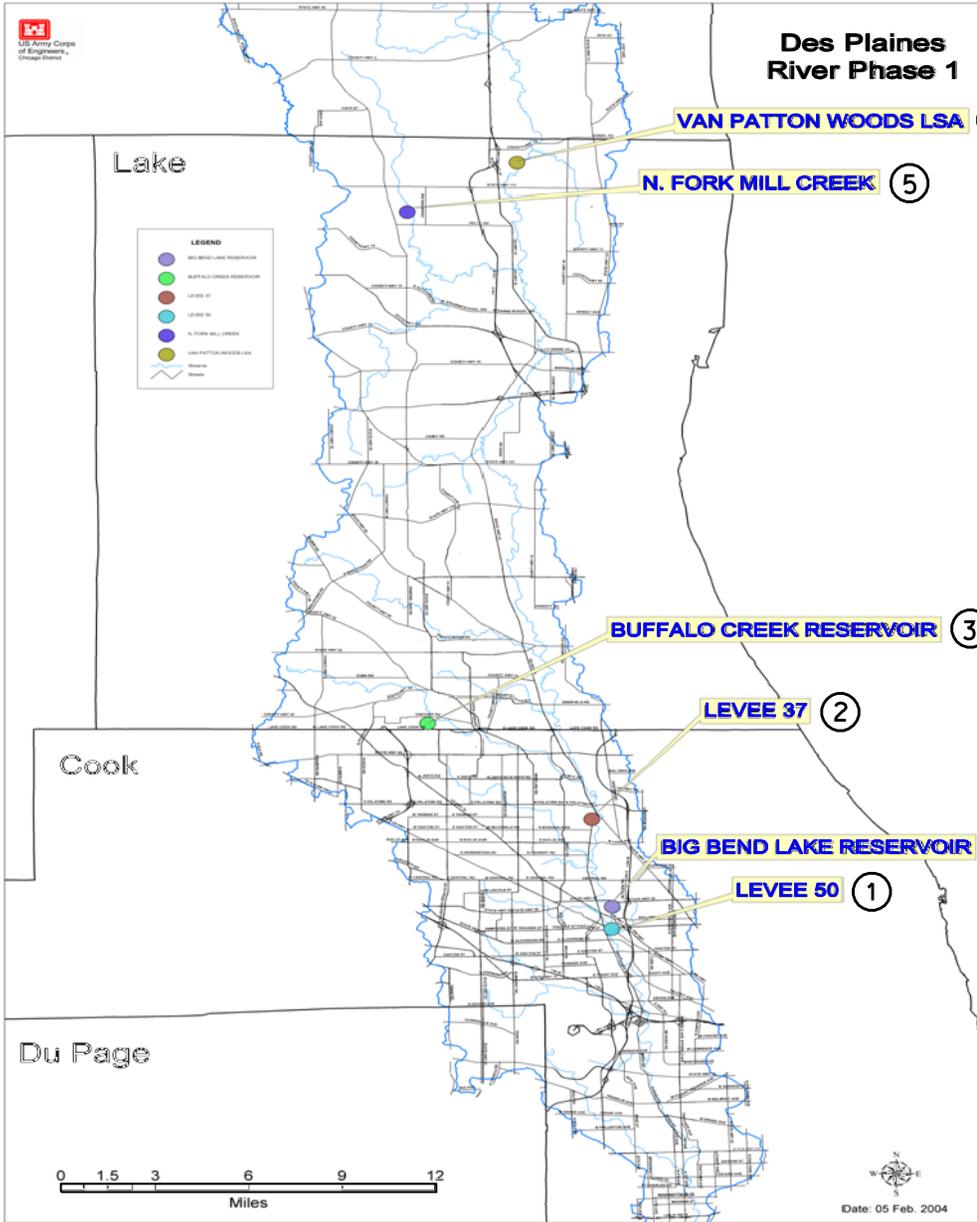
STATUS OF LOCAL COOPERATION: The State of Illinois is the local sponsor for the project. The Project Cooperation Agreement (PCA) was executed on 12 Oct 2007. The local sponsor has received ASA(CW)'s approval for Section 104 in the amount of \$ 14,711,000.

COMPARISON OF FEDERAL COST ESTIMATE: The Federal cost estimate of \$47,000,000 is an increase of \$4,330,000 over the previously estimated cost of \$42,670,000, last presented to Congress (FY 2007). This increase is due to price levels, inflation adjustments and post contract award adjustments.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with the United States Environmental Protection Agency on 15 July 1999. The Record of Decision was signed on 5 January 2000. A supplemental EIS was filed on 11 May 2006. The Record of Decision was signed on 16 June 2006.

OTHER INFORMATION: Funds to initiate PED were appropriated in FY 1998. Local sponsor initiated and completed construction of gates in FY99 and awarded a pump station contract in June 2003 that was completed in FY 2005. The local sponsor awarded a construction contract of the final phase of Levee 50 in FY 2006.

The scheduled project completion date is to be determined.



SCHEDULES	Project No.
WORK COMPLETED AS OF 30 SEPTEMBER 2007	1
WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008	2
WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009	2
WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009	2, 3, 4, 5, & 6

NOTE:

- ① LEVEE 50 CONSTRUCTED BY NON-FEDERAL SPONSOR

DES PLAINES RIVER
ILLINOIS

CHICAGO DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION

4 FEBRUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood and Coastal Storm Damage Reduction)

PROJECT: Little Calumet River, Indiana (Continuing)

LOCATION: Little Calumet River Basin, Northwest Indiana, Lake County.

DESCRIPTION: The project consists of replacing 9.5 miles of existing spoil bank levees with 12.1 miles of new levees, floodwalls, and closure and appurtenant structures between the Illinois-Indiana State line and Cline Avenue in Gary, Indiana; constructing 9.7 miles of set-back levees and appurtenant drainage structures between Cline Avenue and I-65; installing a flow control structure at Hart Ditch; permanent evacuation of 37 structures in the Black Oak area of Gary, Indiana; constructing a betterment levee from Cline to Clark; modifying 7 miles of channel with 3 accompanying bridge culvert modifications; modifying 1 highway bridge; constructing 16.8 miles of hiking/biking trails and accompanying recreation support facilities, and preserving 788 acres of wildlife habitat. A Post Authorization Change Report was approved in May 1999 extending the eastern limit of the project to include the Marshalltown area.

AUTHORIZATION: Water Resources Development Act of 1986. Energy and Water Development Appropriations Act of 2006.

REMAINING BENEFIT-REMAINING COST RATIO: 12.8 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 8.875 percent

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in October 1994 at 1993 price levels. A Post Authorization Change Report was approved in May 1999.

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$159,000,000	Entire Project	75	To Be determined
Estimated Non-Federal Cost	53,000,000			
Cash Contributions	15,013,000			
Other Costs	37,987,000			

Total Estimated Project Cost \$212,000,000

PHYSICAL DATA

Levees and Floodwalls	21.8 miles
Pumping Plant Modifications	17
Structures Removed	37
Structures Floodproofed	53
Channel Modification	7 miles
Hiking Trails	6.8 miles

ACCUM.
PCT. OF EST.
FED. COST

Allocations to 30 September 2004	\$ 92,082,400	
Allocations for FY 2005	4,886,000	
Allocations for FY 2006	8,435,000	
Allocation for FY 2007	14,000,000	
Conference Allowance for FY 2008	14,760,000	
Allocation for FY 2008	14,760,000	
Allocations through FY 2008	134,163,400	83
Allocation Requested for FY 2009	8,000,000	92
Programmed Balance to Complete After FY 2009	16,836,600	
Unprogrammed Balance to Complete after FY 2009	0	

JUSTIFICATION: Overbank flood damages occur to 10,000 structures, primarily residential, along the Little Calumet River in Indiana within the communities of Hammond, Munster, Griffith and Gary. The total value of these structures is in excess of \$775 million. Continued flood damages occur to commercial and public buildings, and the transportation network. The major East/West highway transportation link between the Chicago metropolitan area and the eastern United States, Interstate 80/94, is susceptible to closure during flooding. About 160,000 vehicles per day of which 40% are trucks transit the area on the interstate. Average

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008

JUSTIFICATION (continued) annual benefits are estimated at \$18,550,000. Completion of the project will protect residents from flood events up to the 200-year event. This project benefits 1.2 Million people and 10,000 dwellings. An estimated \$35 Million in flood damages were incurred and one life lost in the November 1990 flood, the most recent significant flood event. The communities of Hammond, Highland and Munster, IN were inundated. The President declared the area inundated by the November 1990 flood a National Disaster Area on December 6, 1990. The State of Indiana continues to rate the flood damage potential along the Little Calumet River as the most severe in the state. The project avoids the short-and long-term adverse impacts associated with the destruction or modification of wetlands by designating the existing wetland areas in the Gary reach for overbank flood storage, a vital requirement of the hydraulic operation and design of the project, and hence required project lands. Environmental attributes are being mitigated for, as well as enhanced along the river corridor. Construction of the Hart Ditch Control structure is required to meet statutory requirements to minimize flow impacts (for all events up to the 100 year) to the State of Illinois communities, resultant from changes to the floodplain/floodway in Indiana as part of the Project. Additionally, the Control Structure minimizes impact to the flow volume attributable to the State of Illinois' Lake Michigan Diversion, which is regulated by Supreme Court Decree. Also critical is rehabilitation of existing pump stations to eliminate risks from interior flooding that could result since the existing system is insufficient to provide significant protection from interior runoff during major storm events along the West Reach of the project. An intense localized rainfall event occurred on September 13, 2006 that was centered over the communities of Highland and Griffith, Indiana resulting in widespread flooding and damage to approximately 1,500 homes. The precipitation event was estimated to be a 600 year event rainfall over these communities. Lake County, Indiana qualifies as an area of persistent and chronic unemployment. A minority plan has been developed that identifies construction contracts which can be set aside for small business contractors and minority owned/Section 8A contractors in the project area. A 40 percent minority participation goal has been established for all future construction contracts for the Contractor's aggregate workforce in each trade.

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	15,917,000
Recreation	411,000
Land Enhancement	2,222,000
Total	18,550,000

The Budget includes funding for this project primarily to addresses a significant risk to human safety. The Corps made this determination based on many factors such as the likelihood and magnitude of the potential flooding, the number of people living in the flood plain, the likely warning time, the availability of evacuation routes, and site-specific engineering factors.

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008

FISCAL YEAR 2008: The current amount is being applied as follows:

Fully fund Stage V-2	11,900,000
Fully fund Pumps 2A	1,810,000
Initiate construction Stage VIII	50,000
Engineering and Design	200,000
Construction Management	800,000
Total	\$ 14,760,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue construction Stage VIII	\$ 4,000,000
Construct Pump 2B	2,500,000
Engineering and Design	300,000
Construction Management	1,200,000
Total	\$ 8,000,000

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

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	15,215,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project, reduced for credit allowed based on prior work (Section 104 of the Water Resource Development Act of 1986; \$1,667,200) after reductions for such credit have been made in the required cash payments.	17,752,000	
Pay one-half separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities;	2,681,000	

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Pay approximately 5 percent of the costs allocated to flood control (other than non-structural measures) to bring the non-Federal share of flood control costs to 25 percent as determined under Section 103 (m) of the Water Resource Development Act of 1986, as amended; to reflect credit allowed for prior work (Section 104 of the Water Resource Development Act of 1986; \$1,667,200); and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	14,824,000	150,000
Pay 25 percent of the first cost allocated to non-structural flood control measures.	2,254,000	
Pay 25 percent of the costs allocated to fish and wildlife enhancement, and pay 25 percent of the costs of operation, maintenance, repair, rehabilitation and replacement of the fish and wildlife facilities.	274,000	
Total Non-Federal Costs	\$53,000,000	\$ 150,000

STATUS OF LOCAL COOPERATION: The Little Calumet River Basin Development Commission is the local sponsor for the project. The Local Cooperation Agreement (LCA) was executed on August 16, 1990. The LCA was supplemented twice to include the East Reach Remediation, 30 July 1999 and Burr Street Betterment, 26 April 2000. The current non-Federal cost estimate of \$53,000,000, which includes a cash contribution of \$15,013,000, is an increase of \$29,400,000 from the non-Federal cost estimate of \$23,600,000 noted in the Local Cooperation Agreement, which included a cash contribution of \$4,800,000. The non-Federal sponsor is financially capable and willing to contribute the non-Federal share. The local sponsor has received approval for Section 104 credits in the amount of \$1,667,200.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$159,000,000 is an increase of \$8,000,000 from the latest estimate (\$151,000,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 500,000
Post Contract Award and Other Estimating Adjustments	\$7,500,000
Total	\$8,000,000

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with the United States Environmental Protection Agency on February 3, 1984. The Record of Decision was signed on July 13, 1990. Environmental Assessments (EA) were subsequently prepared addressing potential borrow and disposal sites which were not covered in the EIS and the three Findings of No Significant Impact were signed on May 9, 1990, July 11, 1991 and April 21, 1992. A supplemental Environmental Impact Statement was completed for the levee re-alignment, excavated ponding areas and new borrow sites. The Record of Decision was signed on June 23, 1995.

OTHER INFORMATION: Funds to initiate PED were appropriated in FY 1984 and funds to initiate construction were appropriated in FY 1990. Fish and wildlife mitigation and enhancement costs for this project are estimated at \$5,220,000. A 902 PAC report was approved by HQUSACE on 5 December 2000. Section 127 of the FY 2006 Appropriation Bill raised project authorization cost to \$198,000,000.

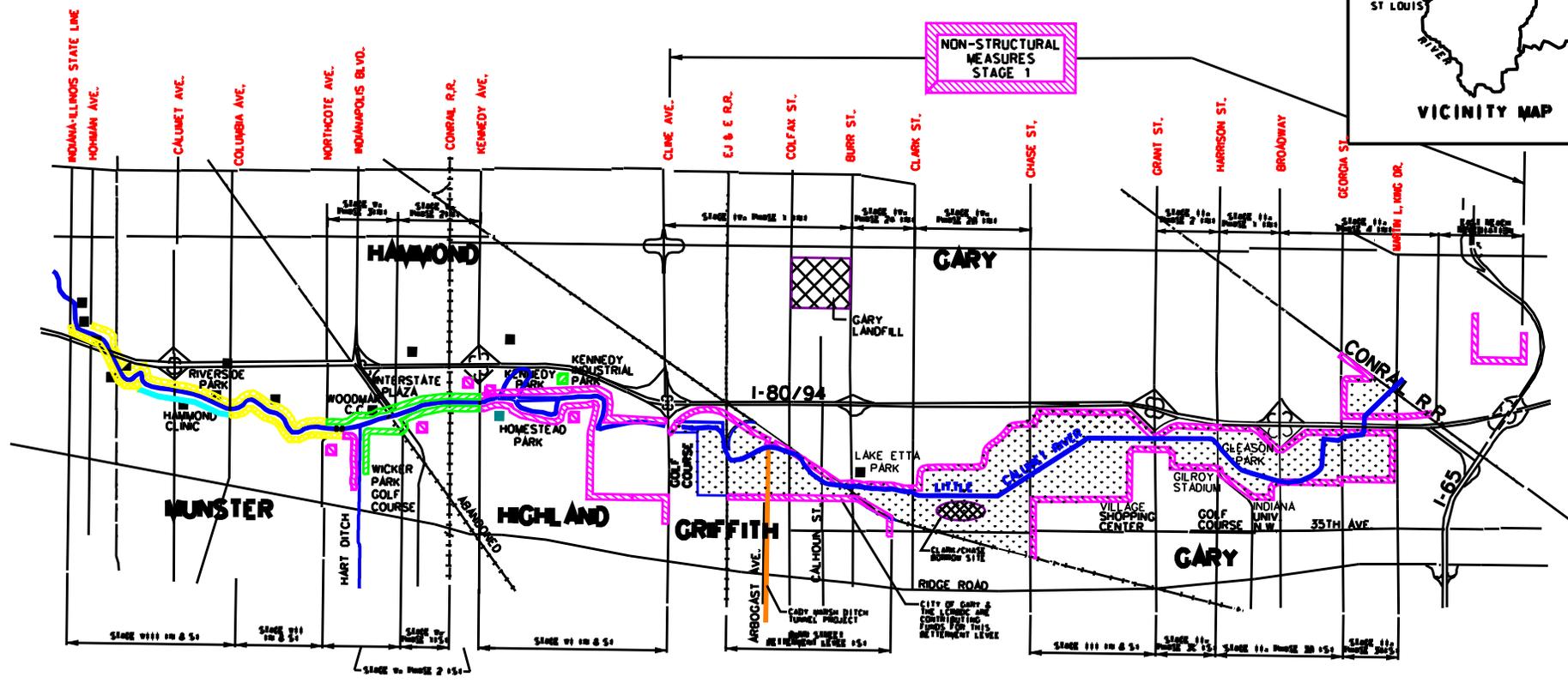
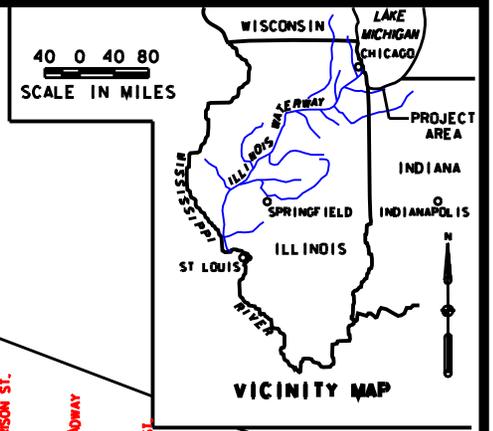
The scheduled completion date is to be determined.

Division: Great Lakes and Ohio River

District: Chicago

Little Calumet River, IN

4 February 2008



LEGEND

- WORK COMPLETED AS OF FY 2007
- WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
- WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009
- LEVEES/FLOODWALLS
- OVERBANK STORAGE WILDLIFE HABITAT
- CONTROL STRUCTURE
- PUMPING STATION MODIFICATIONS

Stage I Non-structural Measures
 Stage II No. Levee Burr to Broadway
 Stage III So. Levee Chase to Broadway
 Stage IV Levee Broadway to Conrail RR
 Stage V Levee Northcote to Kennedy
 Stage VI Levee Kennedy to Cline Ave.
 Stage VII Levee Columbia to Northcote
 Stage VIII Levee State Line to Columbia

**LITTLE CALUMET RIVER
 INDIANA
 FLOOD CONTROL PROJECT**

CHICAGO DISTRICT
 GREAT LAKES AND
 OHIO RIVER DIVISION

4 FEBRUARY 2008



APPROPRIATION TITLE: Construction - Local Protection (Flood and Coastal Storm Damage Reduction)

PROJECT: McCook and Thornton Reservoirs, Illinois (Continuing)

LOCATION: The project area covers 341 square miles of the combined sewer area in Cook County in Chicago and 48 adjacent suburban communities.

DESCRIPTION: The authorized project consists of constructing two reservoirs from stone quarries located in McCook and Thornton, Cook County, Illinois with floodwater storage capacities of 21,400 acre-feet (7 billion gallons) and 14,600 acre-feet (4.8 billion gallons), respectively. The Thornton Reservoir project authorization was modified to evaluate inclusion of the National Resource Conservation Service Thorn Creek Reservoir with the Thornton Reservoir project. The combined reservoir at Thornton, determined feasible in a 2003 Limited Re-evaluation Report, has a combined capacity of 24,200 acre-feet (7.8 billion gallons). McCook and Thornton both will serve as the termini of the Metropolitan Water Reclamation District of Greater Chicago's TARP project (Tunnel and Reservoir Plan) Phase I tunnels. TARP was developed by Federal, State, regional and local governments as a regional plan for reducing flood damages and improving water quality in area waterways. The two reservoirs will capture and store combined sewer flows from the tunnel systems for later treatment after the storm event. Currently, when the tunnels reach their capacity, the combined flow of raw sewage and storm water backs up through the sewer system into basements of homes and businesses and on to the roadways and is discharged directly into area waterways. When storm events are severe, the navigation locks on the Chicago River must be opened to release the combined sewer flow into Lake Michigan - the source of drinking water for millions. Reservoir features include pumps, a cutoff wall, main and distribution tunnels, gates and valves, hydraulic structures, wall stabilization and aquifer protection, aeration and wash-down systems.

AUTHORIZATION: Water Resources Development Act of 1988, modified by the Water Resources Development Act of 1999.

REMAINING BENEFIT-REMAINING COST RATIO: 4.3 to 1 at 7 percent (McCook and Thornton combined).
7.8 to 1 at 7 percent (McCook only)

TOTAL BENEFIT-COST RATIO: 2.1 to 1 at 7 percent. (McCook and Thornton combined)
2.7 to 1 at 7 percent (McCook only)

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

BASIS OF BENEFIT-COST RATIO: McCook Reservoir benefits are based on the latest available evaluation in the Final Special Reevaluation Report dated February 1999 at October 1997 price levels. Thornton Reservoir benefits are based on the economic evaluation completed for the Limited Reevaluation Report dated July 2003 at October 2001 price levels.

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

4 February 2008

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 558,000,000	McCook Reservoir	37	To Be determined
Estimated Non-Federal Cost	186,000,000	Thornton Reservoir	0	To Be determined
Cash Contributions	91,348,000	Entire Project	25	To Be determined
Other Costs	94,652,000			
Total Estimated Project Cost	\$ 744,000,000			

		ACCUM. PCT. OF EST. FED. COST	PHYSICAL DATA	
Allocations to 30 September 2004	\$ 77,138,000			
Allocations for FY 2005	27,772,000			
Allocations for FY 2006	25,825,000			
Allocation for FY 2007	46,400,000		McCook Reservoir	
Conference Amount for FY 2008	29,490,000		Storage Capacity	21,400 acre-feet
Allocations for FY 2008	29,490,000		Thornton Reservoir	
Allocations through FY 2008	206,625,000	37	Storage Capacity	24,200 acre-feet
Allocation Requested for FY 2009	34,000,000	43		
Programmed Balance to Complete After FY 2008	351,376,000			
Unprogrammed Balance to Complete after FY 2008	0			

JUSTIFICATION: The McCook and Thornton Reservoirs Project covers 341 square miles of the combined sewer area in Chicago and suburban communities. Within this region, nearly 1,200,000 structures suffer flooding attributable to combined storm sewer outfall submergence caused by inadequate capacity of area waterways. The McCook Reservoir will provide an additional 7 times the storage capacity of its billion gallon capacity connecting tunnel system and will provide flood damage reduction benefits to Chicago and 37 suburban communities where 146,000 homes and businesses flood annually. The Thornton Reservoir will provide an additional 8 times the storage capacity of its half billion gallon capacity connecting tunnel system and will provide flood damage reduction to Chicago and 13 suburban communities where nearly 200,000 homes and businesses flood annually. The project will also improve water quality in area waterways, reduce untreated sewage backflow into Lake Michigan and reduce beach closures. The project benefits over 3 million people. The sponsor, the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC), has been under pressure from the USEPA to have at least Stage 1 of the McCook Reservoir constructed by CY 2014 when their current NPDES (National Pollution Discharge Elimination System of the Clean Water Act) permit expires. Department of Justice requested

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

4 February 2008

JUSTIFICATION (continued):MWRDGC to sign an Administrative Order with USEPA on a timeline to get McCook Reservoir constructed and operational. Delays in completion of the project due to the pace of past Federal funding could force Department of Justice to order enforced settlement to comply with the Clean Water Act. Risks to human health are high due to continued contaminated flooding. One of the intended purposes of this project is to prevent sewage backflow to Lake Michigan, impacting drinking water supply and damaging the aquatic ecosystem, including fish tainting, contaminant uptake and degradation of spawning areas. The elimination of backflows of raw sewage to Lake Michigan is a priority issue of the Great Lakes Governors and Mayors and is a priority issue of the Great Lakes Regional Collaboration established in response to Executive Order 13340 signed by President Bush in May 04.

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

Annual Benefits	Amount
Flood Damage Prevention	85,066,000
Water Quality	14,732,000
Water Supply	9,572,000
Recreation	1,030,000
Total	\$ 110,400,000

FISCAL YEAR 2008: The current amount is being applied as follows:

Initiate construction of Main Tunnels and Gates	\$ 22,990,000
Engineering and Design – McCook Reservoir	2,500,000
Construction Management	4,000,000
Total	29,490,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue construction of Main Tunnels and Gates	\$ 26,000,000
Engineering and Design – McCook Reservoir	3,000,000
Construction Management	5,000,000
Total	\$ 34,000,000

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

4 February 2008

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

Requirements of Local Cooperation	Payment During Construction and Reimbursements	Maintenance, Repair, Rehabilitation, and Replacement Costs
<p>McCook Reservoir: Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.</p>	5,069,000	
<p>Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.</p>	32,833,000	
<p>Pay 17 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.</p>	77,098,000	4,300,000
<p>Total McCook Reservoir</p>	\$115,000,000	4,300,000
<p>Thornton Reservoir: Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.</p>	27,682,000	
<p>Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary, for the construction of the project, and less credits allowed for prior work per Section 501 of Water Resources Development Act of 1999.</p>	29,068,000	
<p>Pay approximately 5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.</p>	14,250,000	2,800,000
<p>Total Thornton Reservoir</p>	\$ 71,000,000	\$2,800,000
<p>Total Non-Federal</p>	\$186,000,000	\$7,100,000

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

4 February 2008

STATUS OF LOCAL COOPERATION: The Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) is the local sponsor for the project. The Project Cooperation Agreement for McCook Reservoir was executed on 10 May 1999, and amended on 10 July 2003. Project Cooperation Agreement for Thornton Reservoir was executed on 18 September 2003. The non-Federal sponsor is expected to make all required payments concurrently with project construction. The current non-Federal cost estimate for the McCook Reservoir is \$115,000,000, which includes a cash contribution of \$ 77,098,000 and is a decrease of \$14,050,000 from the non-Federal cost estimate of \$129,050,000 noted in the Project Cooperation Agreement, which included a cash contribution of \$99,978,000. The current non-Federal cost estimate for the Thornton Reservoir is \$71,000,000, which includes a cash contribution of \$14,250,000 and is a decrease of \$2,000,000 from the non-Federal cost estimate of \$73,000,000 noted in the Project Cooperation Agreement, which included a cash contribution of \$14,600,000.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$558,000,000 is an increase of \$ 11,000,000 from the latest estimate (\$547,000,000) presented to Congress (FY 2008). This change is due to price levels and inflation adjustments and post contract award adjustments.

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

OTHER INFORMATION: Funds to initiate PED were appropriated in FY 1988. Funds to initiate construction were appropriated in FY 1994. The scheduled completion date is to be determined,

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

4 February 2008

SEPARABLE ELEMENT: McCook Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		\$ 344,000,000
Non-Federal Cost		115,000,000
Cash Contributions	77,098,000	
Other Costs	37,902,000	
Total Estimated Project Cost		\$ 459,000,000

REMAINING BENEFIT-REMAINING COST RATIO: 7.8 to 1 at 7 percent

TOTAL BENEFIT-COST RATIO: 2.7 to 1 at 7 percent

SEPARABLE ELEMENT: Thornton Reservoir, Illinois

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		\$214,000,000
Non-Federal Cost		71,000,000
Cash Contributions	14,250,000	
Other Costs	56,750,000	
Total Estimated Project Cost		\$285,000,000

REMAINING BENEFIT-REMAINING COST RATIO: 1.8 to 1 at 7 percent

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

Division: Great Lakes and Ohio River

District: Chicago

McCook and Thornton Reservoirs, IL

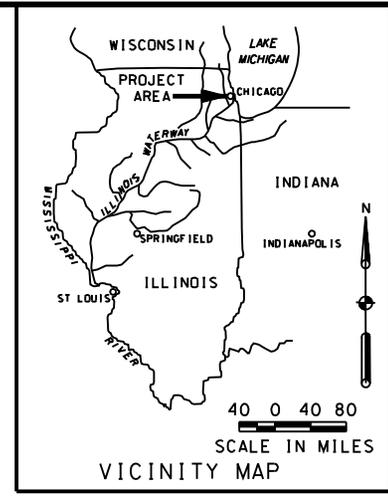
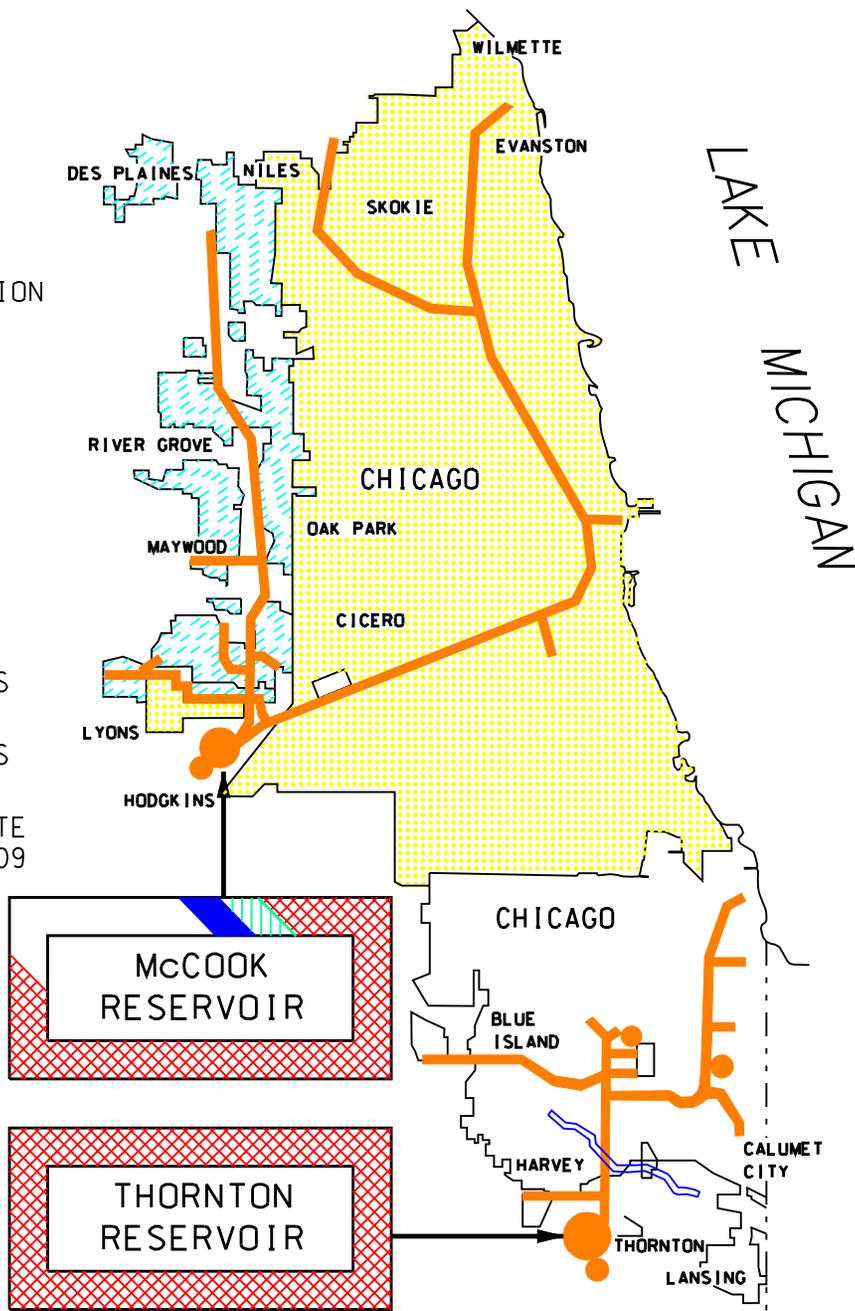
4 February 2008

SYMBOL LEGEND

-  DES PLAINES SYSTEM
-  MAINSTREAM SYSTEM
-  CALUMET SYSTEM
-  COMPLETED TUNNELS
-  TUNNELS UNDER CONSTRUCTION
-  FUTURE TUNNELS
-  STORAGE RESERVOIR
-  PUMPING STATIONS

LEGEND

-  WORK COMPLETED AS OF 30 SEPTEMBER 2007
-  WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
-  WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
-  WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009



CHICAGOLAND UNDERFLOW PLAN
ILLINOIS
McCOOK & THORNTON RESERVOIRS
CHICAGO DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION
4 FEBRUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood and Coastal Storm Damage Reduction)

PROJECT: Metropolitan Region of Cincinnati, Duck Creek, Ohio (Continuing)

LOCATION: The project encompasses 3.2 miles of stream reach in the City of Cincinnati and the Village of Fairfax, in Hamilton County, Ohio.

DESCRIPTION: The recommended plan consists of 1,200 feet of stream channel relocation; 8,500 feet of streambank protection; 3,300 feet of earth levees; 7,100 feet of concrete floodwalls; 1,250 feet of precast concrete arch culvert, widening of one railroad bridge; demolition of one abandoned highway bridge; one pump station for interior drainage; one automated floodgate closure; one emergency access road; one flood emergency warning system; 32.1 acres of permanent easements and 10.0 acres of temporary easements; and environmental mitigation. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1996 and Water Resources Development Act of 2000.

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

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.26 to 1 at 7 3/4 percent (FY 1997).

BASIS OF BENEFIT-COST RATIO: Project Design Memorandum for Duck Creek, Ohio, dated January 1996, at January 1996 price levels. An economic update of the Duck Creek, Cincinnati, OH study was completed in September 2000 at October 2000 price levels. An Engineering Document Report was approved in September 2003 at October 2002 price levels.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$51,800,000	Entire Project	62	To Be Determined
Estimated Non-Federal Cost	4,200,000	PHYSICAL DATA		
Cash Contribution	2,800,000	Levees	3,300 ft.	Access Road 1
Other Costs	1,400,000	Floodwalls	7,100 ft.	Widen R.R. Bridge 1
Total Estimated Project Cost	\$56,000,000	Channel Relocation	1,200 ft.	Pump Station 1
		Streambank Protection	8,500 ft.	Permanent Easements 32ac
		Triple Box Culvert	1,250 ft.	Demolish Hwy Bridge

Division: Great Lakes & Ohio River

District: Louisville
4 February 2008

Metropolitan Region of Cincinnati, Duck Creek, OH

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM. PCT OF EST. FED. COST
Allocations to 30 September 2005	\$ 20,014,000	
Allocations for FY 2006	1,633,000	
Allocations for FY 2007	5,650,000	
Conference Allowance for FY 2008	11,119,000	
Allocation for FY 2008	11,119,000	
Allocations through FY 2008	38,416,000	74
Allocation Requested for FY 2009	\$4,000,000	82
Programmed Balance to Complete after FY 2009	9,384,000	100
Unprogrammed Balance to Complete after FY 2009	0	

JUSTIFICATION: Duck Creek suffers from frequent flash flooding affecting people, roads, utilities, 9 residential properties, and 32 commercial/industrial properties valued at \$62.4 million; threatens over 1,000 jobs in manufacturing; and disrupts production. There have been two drownings within the Duck Creek watershed since authorization of the project in WRDA 1996. During flood conditions, the velocity of the creek, at overbank locations, is approximately 2 feet per second. The depth of flooding is approximately 5 feet with a warning time for egress of about 20 minutes. Numerous cars and other vehicles have been damaged and swept away by the flash flooding. Occupants are often forced to climb from vehicle windows and wade to higher ground or await rescue by emergency responders. The most recent out-of-bank flooding causing property damage occurred in June 1997, July 2001, and May 2003. Threatening flood conditions occurred 3 times in a two-month period during 2005. The potential for frequent damaging floods and for less frequent but catastrophic flooding exists during any given year. Flood waters enter existing structures during events as small as a 2-year flood. Additional significant flooding occurred in 1982 and 1985. These two floods are estimated to have been a 25-year frequency event and a 10-year frequency event, respectively. Average annual damages are estimated at \$3.9 million. The recommended plan reduces average annual flood damages by 94 percent and provides a uniform 100-year level of protection for the three protected areas.

Average annual benefits at 7 percent are as follows

Annual Benefits	Amount
Flood Control	\$ 4,213,000
Advance Bridge Replacement Location	50,000
	9,000
Total	\$ 4,272,000

Division: Great Lakes & Ohio River

District: Louisville
4 February 2008

Metropolitan Region of Cincinnati, Duck Creek, OH

JUSTIFICATION (Continued):

The Budget includes funding for this project primarily to address a significant risk to human safety. The Corps made this determination based on many factors such as the likelihood and magnitude of the potential flooding, the number of people living in the flood plain, the likely warning time, the availability of evacuation routes, and site-specific engineering factors.

FISCAL YEAR 2008: The allocated amount will be applied as follows:

Continue Phase 4B Contracts	8,535,000
Environmental Mitigation Contract	250,000
Complete Federal Land Acquisition	1,096,000
Federal Admin of Real Estate	50,000
Complete Planning, Engineering and Design	154,000
Construction Management	1,034,000
Total	\$11,119,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Phase 4B Contracts	3,700,000
Construction Management	300,000
Total	\$4,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986 and modified by the Water Resources Development Act of 2000, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Const/Reimb	Annual OMRR&R Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 1,148,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	252,000	

Division: Great Lakes & Ohio River

District: Louisville
4 February 2008

Metropolitan Region of Cincinnati, Duck Creek, OH

NON-FEDERAL COSTS (Continued)

Pay approximately 5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation, maintenance, repair, replacement, and rehabilitation.	2,800,000	\$ 55,000
Total Non-Federal Costs	\$ 4,200,000	\$ 55,000

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

STATUS OF LOCAL COOPERATION: The non-Federal sponsors are the City of Cincinnati, Ohio, and the Village of Fairfax, Ohio. The terms of the Project Cooperation Agreement (PCA) have been discussed with each sponsor and each understands its responsibilities. The PCA was executed in December 1997. A PCA amendment to support the new authorized total project cost and maximum non-federal cost was executed in September 2004. In May 1993, the Cincinnati City Council approved a rate increase by the Cincinnati Stormwater Management Utility that included funds for the city's share of project costs. Construction of flood damage reduction features is nearing completion in the Village of Fairfax.

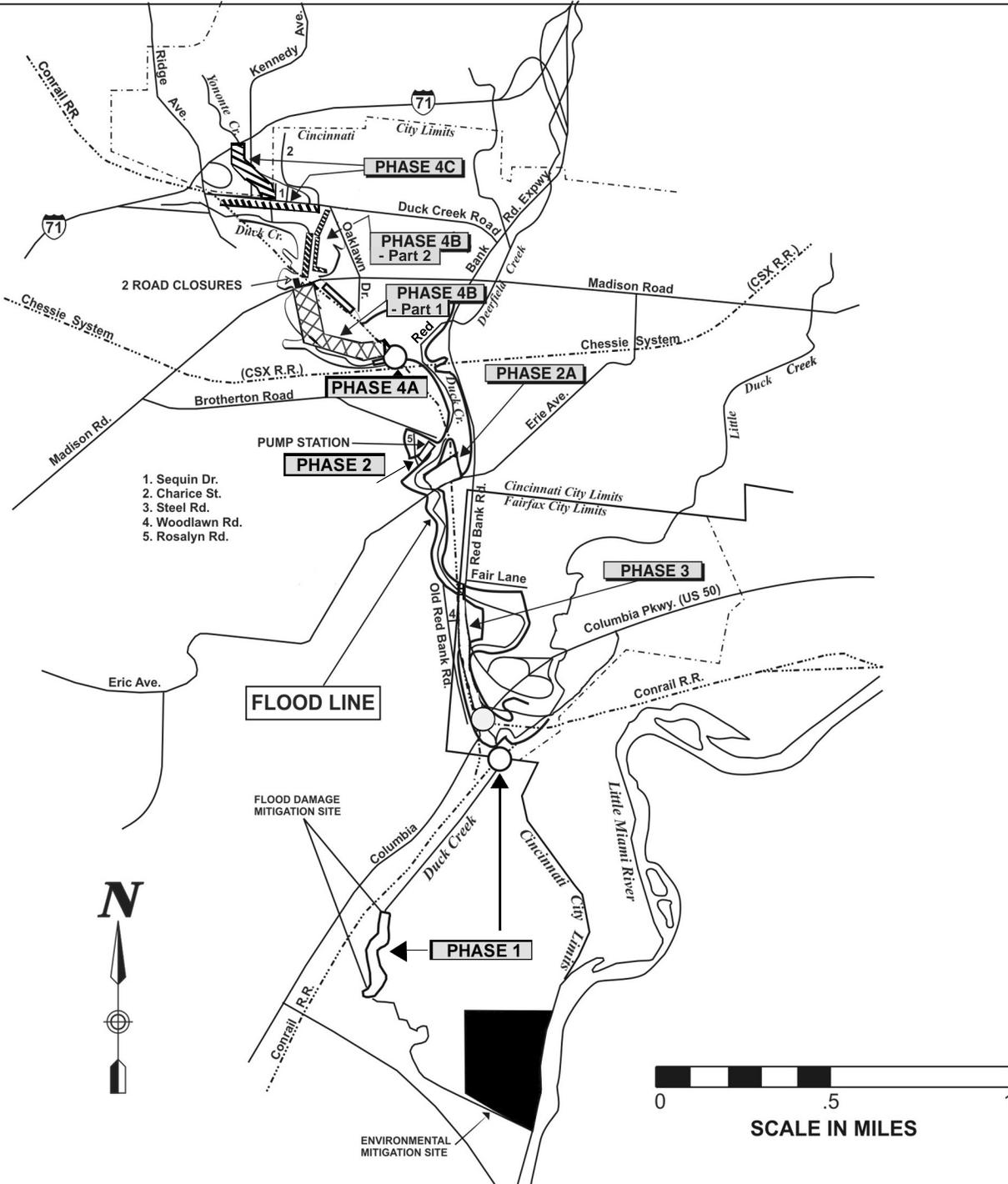
The current non-Federal cost estimate of \$4,200,000, which includes a cash contribution of \$2,800,000, is the same as the last non-Federal cost estimate presented to Congress (FY 2008). The cost estimate reflects the project's modified authorization in the Water Resources Development Act of 2000, which capped the non-Federal sponsor's costs.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$51,800,000 is an increase of \$12,656,000 from the latest estimate (\$39,144,000) presented to Congress (FY 2008). The change includes the following items:

Item	Amount
Design Changes	\$ 12,445,000
Price Escalation on Construction Features	\$ 211,000
Total	\$ 12,656,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment was conducted and a Finding of No Significant Impact was signed on 14 January 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1994. Funds to initiate construction were appropriated in FY 1997. The scheduled project completion date is to be determined



Legend - Status of Work

- Work completed as of September 2007
- Work underway with funds available for FY08
- Work proposed with funds requested for FY09
- Work required to complete the project after FY09

DUCK CREEK, OHIO

**LOUISVILLE DISTRICT
 GREAT LAKES AND
 OHIO RIVER DIVISION**

APPROPRIATION TITLE: Construction - Reservoirs (Flood and Coastal Storm Damage Reduction)

PROJECT: Stonewall Jackson Lake, West Virginia (Continuing)

LOCATION: The project is located in Lewis County, northern West Virginia, on the West Fork River, which joins the Tygart River at Fairmont, West Virginia to form the Monongahela River. The dam site is located at Brownsville, West Virginia.

DESCRIPTION: The project consists of a concrete gravity dam 95 feet high and 620 feet long. The spillway section is uncontrolled. The reservoir has a 74,650 acre feet capacity and controls a drainage area of 102 square miles. The authorized project purposes are flood control, water quality control, water supply, and recreation.

AUTHORIZATION: Flood Control Act of 1966 as amended by the River Basin Monetary Authorization Act of 1971 (P.L. 92-222) and the Water Resources Development Act of 1974.

REMAINING BENEFIT-REMAINING COST RATIO: 508.7 to 1 at a 7 %.

TOTAL BENEFIT-COST RATIO: 1.6 to 1 at a 7 %.

INITIAL BENEFIT-COST RATIO: 1.0 to 1 at 6 7/8 % (FY 1979).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation contained in the Chiefs report approved in Sep 1966 at FY 1964 price levels.

Division: Great Lakes & Ohio River

District: Pittsburgh

Stonewall Jackson Lake, WV

4 February 2008

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2006)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	212,340,646	Entire project	99	*Physically Complete
Programmed Construction	212,340,646			
Unprogrammed Construction	0			
Estimated Non-Federal Cost	35,465,408	*Complete except for final Real Estate actions.		
Programmed Construction	0			
Cash Contributions	0			
Other Costs	35,465,408			
Total Estimated Programmed Construction Cost	247,806,054	PHYSICAL DATA		
Total Estimated Unprogrammed Construction Cost	0	Dam: Type – Concrete Gravity		
Total Estimated Project Cost	247,806,054	Height – 95 feet		
		Length – 620 feet		
		Spillway – Uncontrolled gravity ogee, 117 feet with		
		a capacity of 27,800 cfs		
		Reservoir Capacity – 74,650 acre-feet		
		Relocations:		
		Roads – 25 miles		
		Railroad – 3.2 miles		
		Utility lines, cemeteries and school		

		ACCUM. PCT OF EST FED COST
Allocations to 30 September 2005	211,440,646	
Allocation for FY 2006	0	99
Allocation for FY 2007	0	
Conference Allowance for FY 2008	0	
Allocation for FY 2008	0	
Allocations through FY 2008	0	
Allocation Requested for FY 2009	900,000	100
Programmed Balance to Complete after FY 2009	0	
Unprogrammed Balance to Complete after FY 2009	0	

Division: Great Lakes & Ohio River

District: Pittsburgh

Stonewall Jackson Lake, WV

4 February 2008

JUSTIFICATION: Project has outstanding real estate issues relating to relocations. Approximately 22 miles of roads need to be turned over to local entities for operation and maintenance responsibilities. Until these items of work are completed, the operation and maintenance of these roads will remain a federal responsibility and a source of potential liability. Funds requested in FY 2009 will complete the work on this project.

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Control	765,000
Water Quality	1,001,000
Water Supply	82,000
Recreation	479,000
Area Development	137,000
Total	2,464,000

FISCAL YEAR 2008: No funds are programmed for FY 2008.

FISCAL YEAR 2009: FY 2009 funds will be used for the following:

Description	Amount
Real Estate Acquisition closeout	900,000
Total	\$900,000

Division: Great Lakes & Ohio River

District: Pittsburgh

Stonewall Jackson Lake, WV

4 February 2008

NON-FEDERAL COST:

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation Recreation	35,465,408 1/	0
Total Non-Federal Costs	35,465,408	0

1/ Local sponsor was not required to reimburse costs during construction. Credits for facilities built by the local sponsor (100% non-federal) were accepted in lieu of cash contributions.

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the State of West Virginia. The sponsor has met all fiscal responsibilities of the agreement.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$247,806,054 is an increase of \$16,806,054 from the latest estimate(\$231,000,000) presented to Congress (FY 1992). This change includes the following items.

Item	Amount
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	\$16,806,054
Total	\$16,806,054

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: A final Environmental Impact Statement was filed with CEQ on 12 November 1971.

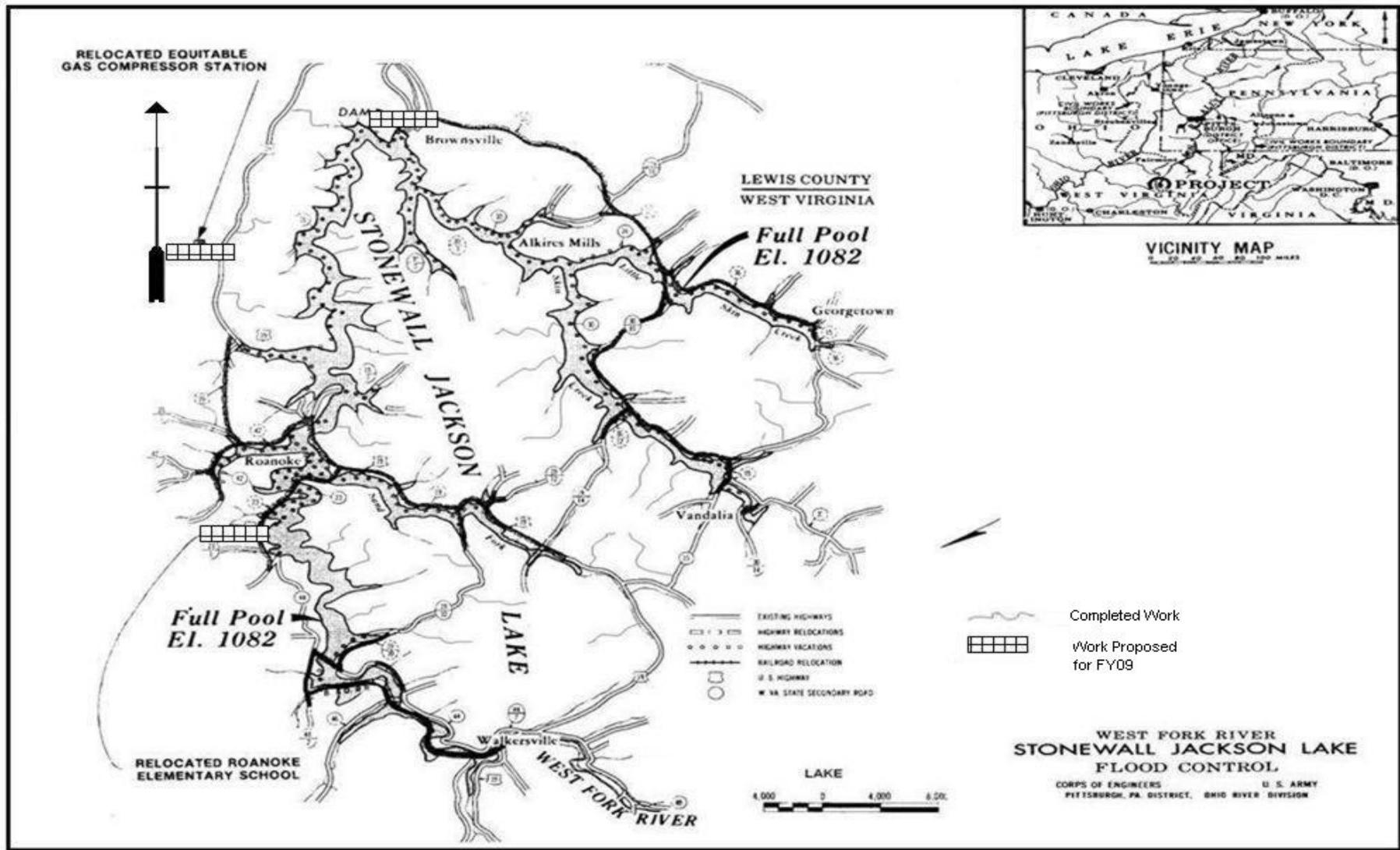
OTHER INFORMATION: Funds to initiate preconstruction planning were allocated in FY 1968. Funds to initiate land acquisition were appropriated in FY 1970. The FY 1970 funds were placed in budgetary reserve and allotted in FY 1971. Funds to initiate construction were appropriated in FY 1971.

Division: Great Lakes & Ohio River

District: Pittsburgh

Stonewall Jackson Lake, WV

4 February 2008



Division: Great Lakes & Ohio River

District: Pittsburgh

Stonewall Jackson Lake, WV

4 February 2008

APPROPRIATION TITLE: Construction – Dam Safety Assurance, Replacement (Flood and Coastal Storm Damage Reduction)

PROJECT: Wolf Creek Dam, Kentucky (Seepage Control) (Continuing)

LOCATION: Wolf Creek Dam is on the Cumberland River at mile 460.9 in south central Kentucky near Jamestown, Kentucky.

DESCRIPTION: Wolf Creek Dam impounds Lake Cumberland, which is the Corps largest storage capacity reservoir east of the Mississippi River. Seepage problems currently threaten the stability of the dam. The Major Rehabilitation Evaluation Report dated July 11, 2005 was prepared in accordance with EP 1130-2-500 and evaluates several alternatives to improve the long term reliability of the dam by using a reliability analysis based on an analytical model built upon historical instrumentation data. From this analysis, the recommended alternative, which is also the National Economic Development alternative, is a new concrete diaphragm wall constructed using the secant pile method and supplemented with grouting. This new wall will start immediately upstream of the right most concrete monoliths and run the length of the embankment into the right abutment. The final approval of the Major Rehabilitation Evaluation Report was made July 25, 2005.

AUTHORIZATION: The Wolf Creek project was authorized by the Flood Control Act approved June 28, 1938 (Public Law No. 761, 75th Congress, 3d session).

REMAINING BENEFIT-REMAINING COST RATIO: 6.4 at 7.0 percent.

TOTAL BENEFIT-COST RATIO: 6.4 at 7.0 percent.

INITIAL BENEFIT-COST RATIO: 7.1 at 5 3/8 percent (FY 2005).

BASIS OF BENEFIT COST RATIO: Benefits are from the latest available evaluation approved in July 2005 at FY05 price levels.

SUMMARIZED FINANCIAL DATA

			STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$317,200,000			
Programmed Construction	\$317,200,000		Entire Project	9	TBD
Total Estimated Project Cost		\$317,200,000			

PHYSICAL DATA

Concrete Cutoff Wall and Foundation Grouting 4170' long x 350' max. depth

Division: Great Lakes and Ohio River

District: Nashville

Wolf Creek Dam, Kentucky

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST
Allocations to 30 September 2005	100,000 <u>1/</u>	
Allocation for FY 2006	8,800,000 <u>1/</u>	
Allocation for FY 2007	44,000,000	
Conference Allowance for FY 2008	53,234,000	
Allocation for FY 2008	53,234,000	
Allocations through FY 2008	106,134,000	34
Allocation Requested for FY 2009	57,000,000	51
Programmed Balance to Complete after FY 2009	154,066,000	
Unprogrammed Balance to Complete after FY 2008	0	

1/ Funded from Dam Safety and Seepage/Stability Correction Program.

JUSTIFICATION: Worsening, chronic seepage problems originating from 1940's foundation construction methods currently threaten the stability of Wolf Creek Dam. Review of foundation construction data indicate the problems are due to the karst geology of the site characterized by an extensive interconnected network of solution channels in the limestone foundation. If the 55-year old dam should fail, loss of life is expected to exceed one-hundred lives. Inundation damages in the Nashville area alone are expected to exceed two billion dollars.

FISCAL YEAR 2008: The allocated amount will be applied as follows:

Continue Foundation Grouting Contract	\$ 37,656,000
Award Contract for Cutoff Wall	8,000,000
Planning, Engineering, and Design	5,751,000
Construction Management	<u>1,827,000</u>
Total	\$ 53,234,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Cutoff Wall Contract	\$ 50,900,000
Planning, Engineering, and Design	3,500,000
Construction Management	<u>2,600,000</u>
Total	\$ 57,000,000

Division: Great Lakes and Ohio River

District: Nashville

Wolf Creek Dam, Kentucky

4 February 2008

STATUS OF LOCAL COOPERATION: The project is designed as a reliability-based improvement. There are no anticipated efficiency benefits. The project will require full initial federal funding. There are two classes of users that may be required to share in the final cost of this project, the water supply and hydropower customers. There are ten water supply users on Lake Cumberland, mostly small cities. There are no current water supply agreements. Any future water supply agreements will include their share of these project costs. The hydropower from Wolf Creek is marketed through the Southeastern Power Administration (SEPA). SEPA will repay their share of the costs by periodic direct payment to the U.S. Treasury.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of 317,200,000 is an increase of \$8,100,000 from the latest estimate (\$309,100,000) presented to Congress (FY 2008). The change includes the following items.

Item	Amount
Price Level Updating and Inflation	\$ 8,100,000
Total	\$ 8,100,000

STATUS OF ENVIRONMENTAL ASSESSMENT: An Environmental Assessment and signed Finding of No Significant Impact (FONSI) were included in the Major Rehabilitation Report approved July 14, 2005 by the Great Lakes and Ohio River Division and July 25, 2005 by HQUSACE.

OTHER INFORMATION: ASA(CW) concurred with the Rehabilitation Report recommendations on August 17, 2005. The scheduled project completion date is to be determined.

Division: Great Lakes and Ohio River

District: Nashville

Wolf Creek Dam, Kentucky

4 February 2008



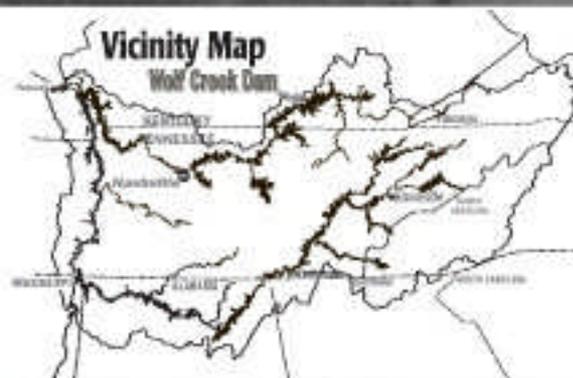
Great Lakes &
Ohio River Division
Nashville District

Wolf Creek Seepage

**1 - Halcombs
Landing**

**2 - Foundation
Grouting**

**3 - Cutoff Wall
Construction**



Legend - Status of Work by Major Construction Feature

- | | |
|-------|---|
| 1 | Work to be completed with funds received in FY 2007 |
| 2 & 3 | Work proposed with funds received in FY 2008 |
| 3 | Work proposed with funds requested for FY 2009 |
| 3 | Work required to complete project after FY 2009 |

NAVIGATION

INVESTIGATIONS

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Division: Great Lakes and Ohio River Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Great Lakes Navigational System, Michigan, Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin	8,214,700	4,723,700	1,272,000	1,232,000	787,000	200,000	0

Detroit District

The Great Lakes/St. Lawrence Seaway navigation system is an international waterway that provides a minimum 25.5' safe draft for nearly 2,300 miles. The system extends from the Atlantic Ocean throughout the Great Lakes to Duluth, MN. The navigation system is operated and maintained by both the United States and Canadian Governments through the St. Lawrence Seaway Development Corporation (USDOT), the St. Lawrence Seaway Management Corporation (Transport Canada), and the U.S. Army Corps of Engineers. The system contributes significantly to the North American economy in both the United States and Canada. Section 456 of the Water Resources Development Act of 1999 directed the Corps to review the feasibility of improving commercial navigation on the Great Lakes navigation system, including locks, dams, harbors, ports, channels, and other related features, in consultation with the St. Lawrence Seaway Development Corporation (SLSDC). A Reconnaissance Report, in response to the 1999 WRDA study authorization, was approved in February 2003. Prior to initiation of any feasibility studies, additional information is needed, as a supplement to the reconnaissance report, for determination of the Federal interest. This effort will also include an assessment of baseline without-project conditions for the environment, engineering features and economic conditions, and examine concerns that have been raised as a result of public involvement and coordination. Should the recommendation be to proceed with further studies, this phase must also determine the scope of additional studies, including cost and duration, and develop a Project Management Plan. Since the system is a bi-national waterway, coordination with Canada occurred during the development of the Reconnaissance Report, and in May 2003, Transport Canada and the Department of Transportation entered into a Memorandum of Cooperation to support the Great Lakes St. Lawrence Seaway System. Further coordination between the Canadian and U.S. Governments has resulted in a draft Memorandum of Understanding between the USDOD, SLSDC and Transport Canada (TC). Canadian funding for their involvement in the study has been proceeding at a level commensurate with that of the USACE.

Bi-national Steering Committee/working groups have been established for the supplemental study efforts, including representatives from TC, USDOT, USACE, USFWS, Environment Canada, and both U.S. and Canadian Seaway Authorities. Engineering analyses and reliability modeling of the system have been completed, including infrastructure inspections. Future traffic forecasts have been developed, including a new cargo/new vessel market assessment. An environmental appendix discussing the role the system plays in the ecosystem has been completed. A bi-national report summarizing these efforts was released in Nov 2007.

FY 2008 funding will be used to review feedback on the bi-national study and prepare a supplemental reconnaissance report, which will include the formalization of the scope and cost sharing requirements of any follow-on study efforts.

FY 2009 funding will be used to provide supplemental reconnaissance report to interested Federal/State entities and the public for up to a one year review period per 2008 appropriation language. To formulate scope and cost of any follow-on feasibility studies and to identify necessary local sponsors.

CONSTRUCTION

APPROPRIATION TITLE: Construction - Locks & Dams (Navigation)

PROJECT: Chickamauga Lock and Dam, Tennessee River, Tennessee (Continuing)

LOCATION: The project is located on the Tennessee River at Mile 471.0 about 7 miles upstream of Chattanooga, Tennessee.

DESCRIPTION: Chickamauga Lock has structural problems that result from ongoing alkali aggregate reaction (AAR) that cause the concrete to physically expand and this is threatening the structural integrity of the lock. Funding for construction initiation was provided in the FY 2004 Energy & Water Development Appropriations Act, P.L. 108-357.

AUTHORIZATION: Section 114 of the FY 2003 Energy & Water Development Appropriations Act, P.L. 108-7.

REMAINING BENEFIT-REMAINING COST RATIO: 1.4 at 7.0 percent.

TOTAL BENEFIT-COST RATIO: 1.5 at 7.0 percent.

INITIAL BENEFIT-COST RATIO: 2.0 at 6 3/8 percent

BASIS OF BENEFIT COST RATIO: Benefits are from the latest available evaluation approved in June 2005 at FY01 price levels.

SUMMARIZED FINANCIAL DATA

		STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE	
Estimated Federal Cost		\$364,600,000			
Construction General	\$182,300,000				
Inland Waterways Trust Fund	\$182,300,000				
Total Estimated Project Cost		\$364,600,000	Entire Project	16	TBD

PHYSICAL DATA

Lock Chamber (New) 110 ft. x 600 ft.

Division: Great Lakes and Ohio River

District: Nashville

Chickamauga Lock and Dam, Tennessee River, TN

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued)

	CONSTRUCTION GENERAL	INLAND WATERWAYS TRUST FUND	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2005	11,119,000	11,119,000	
Allocation for FY 2006	4,950,000	4,950,000	
Allocation for FY 2007	13,500,000	13,500,000	
Conference Allowance for FY 2008	17,318,500	17,318,500	
Allocation for FY 2008	17,318,500	17,318,500	
Allocations through FY 2008	46,887,500	46,887,500	26
Allocation Requested for FY 2009	21,000,000	21,000,000	38
Programmed Balance to Complete after FY 2009	114,412,500	114,412,500	
Unprogrammed Balance to Complete after FY 2009	0	0	

JUSTIFICATION: The existing 60-foot X 360-foot Chickamauga Lock, which was completed in 1940, is plagued with “concrete growth” resulting from an alkali-aggregate reaction (AAR). This reaction creates a gel that absorbs moisture, swells, and expands the concrete. When the concrete is restrained, the growth increases internal stresses, which causes cracking and movement of the concrete monoliths. This movement causes equipment misalignment as well as structural instability. The growth is continuing, therefore non-standard, major maintenance is increasing, raising both expenses and lock outages. Under an economic scenario, the cost for maintaining the lock will determine when the lock should be closed. With significant annual maintenance, Chickamauga Lock can be economically kept open until at least the year 2010. Beyond that time, the accelerating rate of deterioration will increase both in the frequency and cost of major repairs. Replacement of the lock is far more economical than trying to continue maintaining and repairing a “deteriorating lock”. As the lock deteriorates, there is the added risk that the owner, Tennessee Valley Authority, will close the lock due to safety concerns. Lock closure before a new lock is in place will shut off 318 miles of river above Chattanooga, including river access to Knoxville and Oak Ridge, TN. Closing off the upper river to navigation impacts ability to barge asphalt for highway construction in these areas and critical oversized components such as nuclear steam generators and components of the \$1.7 billion Spallation Neutron Source program (moved by water transportation). The 110-foot x 600-foot replacement lock will reduce lock transit time and will be consistent with the size of the six locks downstream on the Tennessee River.

Division: Great Lakes and Ohio River

District: Nashville

Chickamauga Lock and Dam, Tennessee River, TN

4 February 2008

FISCAL YEAR 2008: The allocated amount will be applied as follows:

Continue Cofferdam Construction Contract	\$28,500,000
Planning, Engineering, and Design	4,237,000
Construction Management	1,900,000
Total	\$34,637,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Cofferdam Construction Contract	\$38,700,000
Planning, Engineering and Design	1,400,000
Construction Management	1,900,000
Total	\$42,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, 50 percent of the total cost for the project will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$364,600,000 is an increase of \$15,600,000 from the latest estimate (\$349,000,000) submitted to Congress (FY 2008). The change includes the following items:

Item	Amount
Price Level Updating and Inflation	\$10,300,000
Increase in E&D (lock & decommissioning design effort)	2,800,000
Increase in Cofferdam Construction Estimate	2,500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Final Supplemental Environmental Impact Statement was included in the Feasibility Report dated February 26, 2002. The Record of Decision was signed on July 20, 2004.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 2004. The scheduled completion date is to be determined.

Division: Great Lakes and Ohio River

District: Nashville

Chickamauga Lock and Dam, Tennessee River, TN

4 February 2008



Chickamauga Lock, TN

**US Army Corps
of Engineers**

Great Lakes and Ohio River Division
Nashville District

1
Rd/Bridge
Relocation

Hwy 153

"NEW" Lake Resort Dr.
Lake Resort Dr.

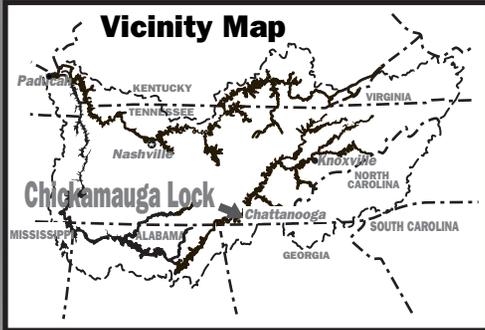
N. Chickamauga Creek

Access Rd.

2
Cofferdam
Construction

Tennessee River

3
110' x 600'
Lock Construction



Legend - Status of Work By Major Construction Features

1	Work completed as of 30 Sept 2007
2	Work proposed with funds received in FY 2008
2	Work proposed with funds requested for FY 2009
2,3	Work required to complete project after FY 2009

APPROPRIATION TITLE: Construction – Locks and Dams (Replacement) (Dam Safety Assurance) (Navigation)

PROJECT: Emsworth Locks and Dams, Ohio River, Pennsylvania (Static Instability Correction) (Continuing)

LOCATION: Emsworth Locks and Dams are located on the Ohio River immediately downstream of the City of Pittsburgh in Allegheny County, Pennsylvania. The project includes two dams, one on either side of an island (Neville). The main channel dam and locks are located at river mile 6.2 and the back channel dam is located at river mile 6.4. The project creates the navigation pool for the City of Pittsburgh. The pool includes the uppermost 6.2 miles of the Ohio River, the lower 11.2 miles of the Monongahela River, and the lower 6.7 miles of the Allegheny River.

DESCRIPTION: The structural components of the Emsworth Locks and Dams are the oldest of any project on the Ohio River, dating back to 1919-1922 when Emsworth was constructed. The proposed work is directed to deficiencies with the dam gates, dam operating equipment and machinery, and the scour protection downstream of the dams. Potential work at the Emsworth Locks is being evaluated separately and is not part of this project. The main channel dam consists of 8 - 100 ft vertical lift gates and a 34 ft. fixed crest weir. The back channel dam consists of 5 - 100 ft. vertical lift gates and a tainter-style gate commonly referred to as a "Sidney Gate". The proposed project includes replacement of the dam gates, gate hoisting machinery, electrical power and distribution system, and scour protection system. The project also includes work to the dam service bridge and localized areas of dam concrete deterioration.

AUTHORIZATION: Rivers and Harbors Act dated July 1918.

REMAINING BENEFIT-REMAINING COST RATIO: 2.3 to 1 at 7%

TOTAL BENEFIT-COST RATIO: 1.3 to 1 at 7%

INITIAL BENEFIT-COST RATIO: 2.8 to 1 at 5 5/8% (FY 2004)

BASIS OF BENEFIT-COST RATIO: "EMSWORTH LOCKS AND DAMS, OHIO RIVER, MAJOR REHABILITATION EVALUATION REPORT" dated March 2001 is the basis for the initial benefit-cost ratio. The price level was March 2001. The initial rate is the rate for FY04 when CG funds were first expended. The total benefit-cost ratio would be 1.3 to 1 at 7% based on the current approved cost estimate.

SUMMARIZED FINANCIAL DATA		ACCM PCT OF EST FED COST	STATUS (1 JAN 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
			Entire project	11.2%	To be determined
Estimated Federal Cost	\$163,800,000				
Programmed Construction	\$163,800,000				
Unprogrammed Construction	\$0				
Estimated Non-Federal Cost	0				PHYSICAL DATA
Programmed Construction	0				13 Vertical Lift Gates
Cash Contributions	0				Emergency Bulkheads and Hoists
Other Costs	0				Vertical Lift Gate Machinery
					Erosion Protection
Total Estimated Programmed Construction Cost	\$163,800,000				Integral concrete repairs
Total Estimated Unprogrammed Construction Cost	\$0				Rehabilitation of Service Bridges
Total Estimated Project Cost	\$163,800,000				

	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2007	35,355,000		
Conference Allowance for 2008	3,758,000	38,554,000	/1
Allocation for 2008	3,758,000	38,554,000	/1
Allocations through 2008	39,113,000	38,554,000	47.4%
Allocation Requested for 2009	12,620,500	13,179,500	63.2%
Programmed Balance to Complete after 2009	30,166,500	30,166,500	
Unprogrammed Balance to Complete after 2009	0		

/1 Reflects a balancing of the General Appropriation and the Inland Waterways Trust Fund

JUSTIFICATION: Dams are presently in an exigent situation. There are 10 foot deep scour holes and 65 percent of the erosion protection was missing downstream of the dams. Failure of any of the thirteen lift gates would likely cause a portion of the stilling basin to fail and possibly undermine the dam. There is presently a 74 percent likelihood of failure of any of the dam gates. The systems are proven to be unreliable due to multiple failures within the past four years. Over 239 million tons of commodities are transported by barge annually on the Ohio River. The annual tonnage through Emsworth is approximately 24 million tons with the principle commodity being coal which is destined for electric generating plants and the nation's largest coke plant. The total benefits of traffic through Emsworth reflect a yearly savings of \$300 million over other modes of transportation. Gate failure during low flow conditions could lead to the loss of the Pittsburgh Pool halting navigation. Gate failure during high flow conditions may cause upstream flooding or stilling basin and dam failure ceasing navigation. If the Emsworth pool is lost, two major facilities dependent on river transportation are impacted – the US Steel Clairton Works, the largest coke plant in the US and the Bailey/Enlow Fork Complex owned by Consol Energy, the largest underground coal mine in the US. Disruption in coal supply and transportation would also impact steel plants and coal-fired electric power plants. The impact of the loss of Emsworth pool on the local economy and other communities would be substantial. Approximately 11,700 jobs are directly at risk due to loss of navigation and disruption to services and material. The loss in wages alone would range from \$1.5 to \$2.2 million per day. The project is cost-effective and in accordance with current Administration policy for navigation.

Average annual benefits are as follows:

Annual Benefits	Amount
Inland Navigation	\$12,000,000
Total	\$12,000,000

FISCAL YEAR 2008: \$2.5M will be used for EDC and S&A for the back channel gate rehab, main channel lift gate supply, main channel gate and scour rehab, and abutment stabilization; \$36.812M will be utilized for the main channel dam gate and permanent scour protection contract; \$2.5M will be used for the main channel abutment stabilization; and \$0.5M will be utilized for the back channel gate rehabilitation contract.

FISCAL YEAR 2009:

Description	Amount
EDC and S&A for the main channel gate rehab and permanent scour protection, main channel lift gate supply, and abutment stabilization.	\$5,800,000
Main channel dam gate and permanent scour protection contract	\$18,500,000
Back channel permanent scour protection, abutment rehabilitation & service bridges design	\$1,500,000
Total	\$25,800,000

NON-FEDERAL COST: N/A

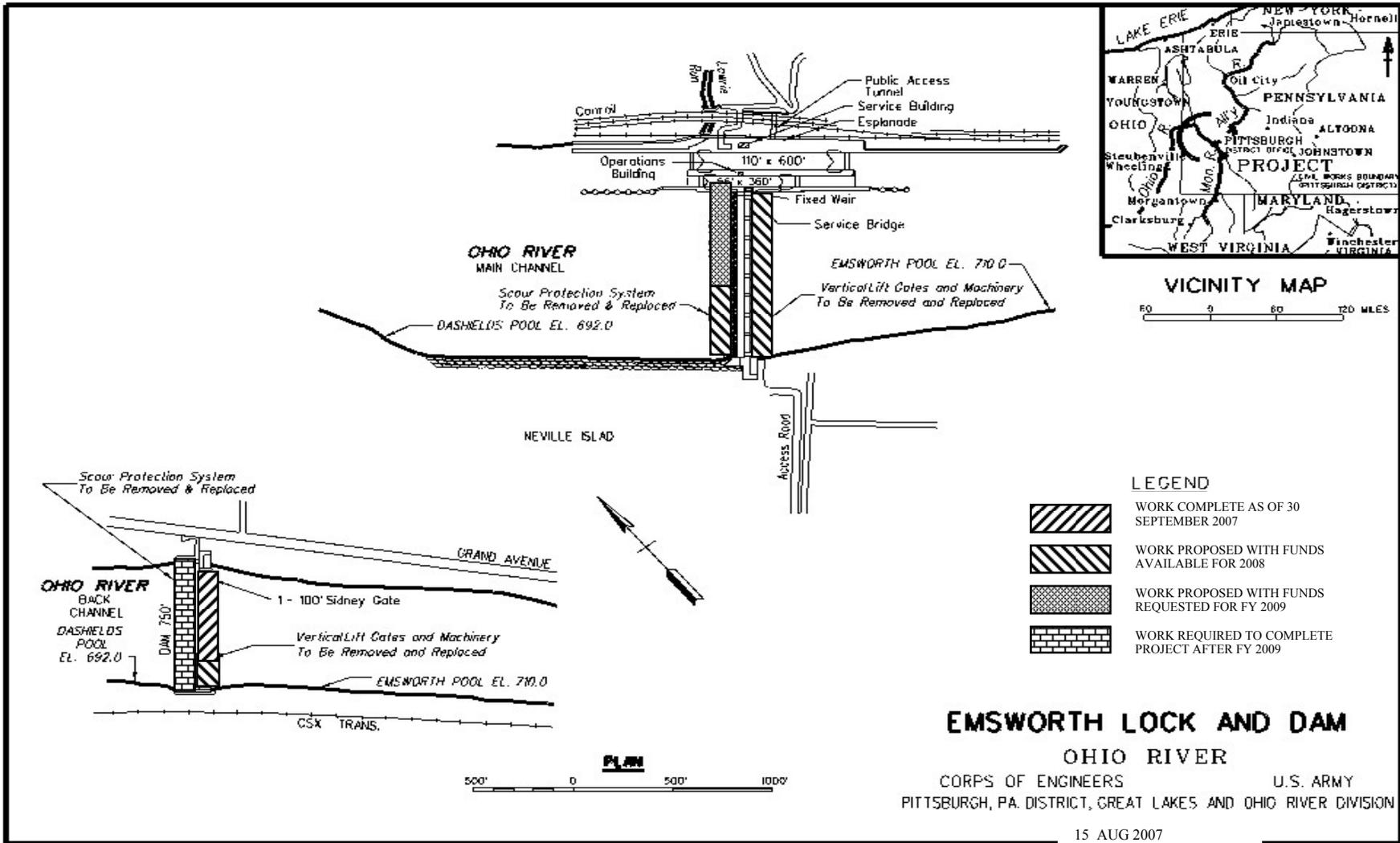
STATUS OF LOCAL COOPERATION: None Required

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$163,800,000 is an increase of \$85,540,000 from the latest estimate of \$78,260,000 presented to Congress (FY 2007). This change includes the following items:

Item	Amount
Price Escalation	\$16,786,000
Other Costs	\$68,754,000
Total	\$80,500,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment was completed during the Rehabilitation Evaluation study, and the Finding of No Significant Impacts (FONSI) was signed on 12 July 2001.

OTHER INFORMATION: Project is high priority. In FY 2005, a total of \$3,505,000 of CG "wedge" funds was provided through the Dam Safety and Seepage/Stability Correction program to initiate the Emsworth Locks and Dams Major Rehabilitation Project, PA. This project was presented to Congress in 2007. The scheduled completion date is to be determined.



Division: Great Lakes & Ohio River

District: Pittsburgh

Emsworth Locks and Dams, Ohio River,
 Pennsylvania

4 February 2008

APPROPRIATION TITLE: Construction, General - Locks and Dams (Navigation)

PROJECT: Grays Landing Lock and Dam, Monongahela River, Pennsylvania (Continuing)

LOCATION: Grays Landing Lock and Dam is located on the right descending bank of the Monongahela River, 82.0 Miles above its mouth at Pittsburgh, Pennsylvania and is in Fayette and Greene Counties, Pennsylvania.

DESCRIPTION: The project consists of the replacement of existing Lock and Dam 7, which consists of a 56 feet X 360 feet lock and fixed crest dam with a modern 84 feet X 720 feet lock and a non-navigable fixed crest dam. Note the recommended/authorized cost of these items.

AUTHORIZATION: Supplemental Appropriations Act of 1985 for Engineering and Design and Land Acquisition and the Water Resources Development Act of 1986 for construction.

REMAINING BENEFIT-REMAINING COST RATIO: 2,796 to 1

TOTAL BENEFIT-COST RATIO: 3.7 to 1 at 7 percent

INITIAL BENEFIT-COST RATIO: 1.9 to 1 at 8-5/8 percent interest rate (FY 1986)

BASIS OF BENEFIT-COST RATIO: Benefits are from the most recently available evaluation in the Grays Landing Post Authorization Change Report approved in April 1994, with cost at a 1 Oct 1993 price level (FY 1994). The Total Benefit-Cost Ratio would be 3.2 to 1 based on the original authorized cost.

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	173,447,200	Entire Project	99	*Physically Complete
Programmed Construction	173,447,200			
Unprogrammed Construction	0			
Estimated Non-Federal Cost	2,245,000	*Complete except for final Real		
Programmed Construction	0	Estate relocations and cultural		
Cash Contributions	0	resources actions.		
Other Costs	2,245,000			
		PHYSICAL DATA		
Total Estimated Programmed Construction Cost	175,692,200	Lock: Single Lock Chamber 84 feet		
Total Estimated Unprogrammed Construction Cost	0	wide X 720 feet long		
Total Estimated Project Cost	175,692,200	Dam: Fixed Crest Concrete Gravity		

Dam, 576 feet long, 15 feet lift; existing Maxwell pool at elevation 763.0 would be shortened by 3 miles. Existing pool 7 at elevation 778.0 would be extended down river to new dam.

	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2007	86,298,200	86,549,000	
Conference Allowance for 2008	0	0	
Allocation for 2008	0	0	99
Allocations through 2008	86,298,200	86,549,000	
Allocation Requested for 2009	425,400	174,600	100
Programmed Balance to Complete after 2009	0	0	
Unprogrammed Balance to Complete after 2009	0	0	

JUSTIFICATION: The completion of outstanding real estate actions associated with land acquisition, miscellaneous relocations and cultural resource activities will complete the project and allow the project to be fiscally closed out. Cultural resource activities are required under the Memorandum of Agreement between the Pittsburgh District, Corps of Engineers and the Pennsylvania State Historic Preservation Office, dated 27 Jul 1992. The completion of the remaining cultural resource activities will complete all actions required by the terms of the agreement.

Annual Benefits	Amount
Inland Navigation	39,100,000
Total	39,100,000

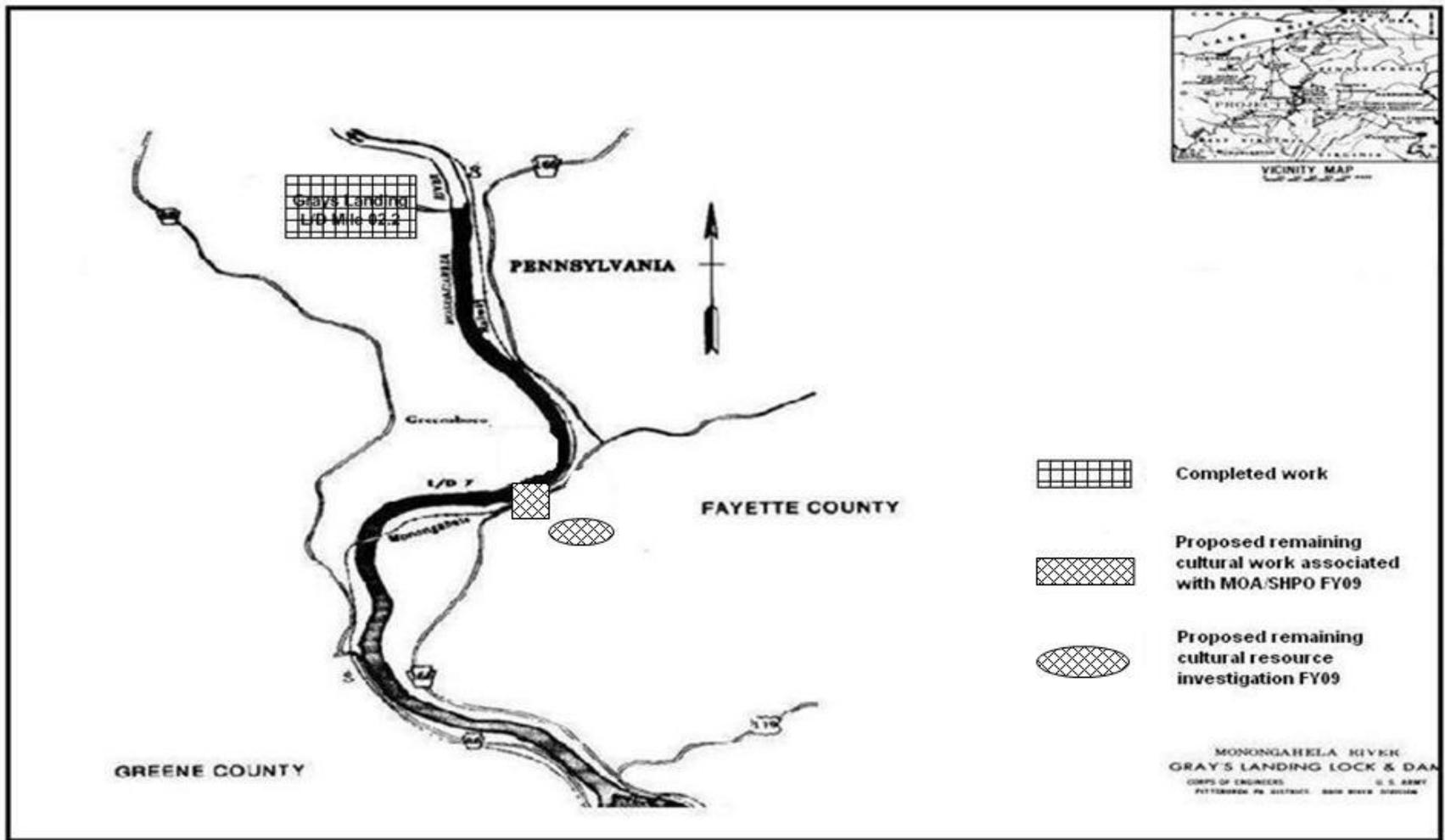
FISCAL YEAR 2008: No funding is programmed for this year. Minimal funds will be carried over from previous FY to maintain and update budget data as required.

FISCAL YEAR 2009:

Description	Amount
Continue and complete Land Acquisition	\$200,000
Continue and Complete Relocations	50,000
Continue and Complete Cultural Resources	350,000
Total	\$600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with the EPA on 3 August 1984.

OTHER INFORMATION: Funds for Engineering and Design were allocated in FY 1985 under the General Investigations Appropriation. Funds to initiate Land Acquisition were allocated in FY 1987 under Construction, General Appropriation from funds previously appropriated. Funds to initiate construction were appropriated in 1990.



Division: Great Lakes & Ohio River

District: Pittsburgh

Grays Landing Lock and Dam,
Monongahela River, PA

4 February 2008

APPROPRIATION TITLE: Construction - Locks and Dams (Navigation)

PROJECT: Kentucky Lock and Dam, Tennessee River, Kentucky (Continuing)

LOCATION: The project is located on the Tennessee River at Mile 22.4 near Grand Rivers, Kentucky.

DESCRIPTION: The modernization of the existing facility will include the addition of a 110-foot x 1200-foot lock landward and adjacent to the existing 110-foot x 600-foot lock, and the relocation of an existing railroad, highway, and powerhouse access road. The railroad and highway will be relocated downstream of the new lock's lower gates and will require the construction of new bridges across the river. The powerhouse access road will be relocated from the east bank to the west bank and will require the construction of a new ramp.

AUTHORIZATION: The Water Resources Development Act of 1996.

REMAINING BENEFIT-REMAINING COST RATIO: 3.6 at 7.0 percent.

TOTAL BENEFIT-COST RATIO: 2.5 at 7.0 percent.

INITIAL BENEFIT-COST RATIO: 1.8 at 8 percent (FY 1994).

BASIS OF BENEFIT COST RATIO: Benefits are based on the Limited Reevaluation Report approved in November 1995 and costs are based on a 2003 update of the Innovated Design/Cost Reduction Studies completed in June 1995.

SUMMARIZED FINANCIAL DATA

		STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$663,500,000			
Construction General	\$331,750,000			
Inland Waterways Trust Fund	\$331,750,000	Entire Project	31	TBD
Total Estimated Project Cost	\$663,500,000			

PHYSICAL DATA

Lock Chamber (New)	110 ft. x 1200 ft.
Bridges	
Railroad (New)	3100 ft.
Highway (New)	3100 ft.

Division: Great Lakes and Ohio River

District: Nashville

Kentucky Lock and Dam, Tennessee River, KY

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued)

	CONSTRUCTION GENERAL	INLAND WATERWAYS TRUST FUND	ACCUM PCT OF EST FED COST
Allocations to 30 September 2005	81,350,000	81,350,000	
Allocation for FY 2006	11,385,000	11,385,000	
Allocation for FY 2007	10,071,960	10,071,960	
Conference Allowance for FY 2008	25,584,000	25,584,000	
Allocation for FY 2008			
Allocations through FY 2008	128,390,960	128,390,960	38
Allocation Requested for FY 2009	11,165,000	11,165,000	42
Programmed Balance to Complete after FY 2009	192,194,040	192,194,040	
Unprogrammed Balance to Complete after FY 2009	0	0	

JUSTIFICATION: The existing 110-foot x 600-foot Kentucky Lock is too small to handle a modern 15-barge tow without two lockages. This greatly increases the processing time resulting in Kentucky Lock having one of the highest average delay times on the inland waterway system. Delays at the lock averaged over 5.7 hours per tow in 2005. System traffic is expected to grow annually from the 40.5 million tons recorded in 2005 to an estimated 77 million tons in 2050 resulting in a 38.4 hour average delay per tow. The addition of a new 1200-foot lock will greatly reduce these delays and generate \$71 million (FY03 dollars) in average annual benefits to the nation as a result of reduced cost to transport commodities through the system.

FISCAL YEAR 2008: The allocated amount will be applied as follows:

Continue Highway/Railroad Superstructure Contract	47,200,000
Planning, Engineering and Design	1,300,000
Construction Management	2,668,000
Total	51,168,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Highway/Railroad Superstructure Contract	21,164,000
Planning, Engineering and Design	166,000
Construction Management	1,000,000

Division: Great Lakes and Ohio River

District: Nashville

Kentucky Lock and Dam, Tennessee River, KY

4 February 2008

Total 22,330,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, 50 percent of the total cost for the project will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$663,500,000 is an increase of \$20,300,000 from the latest estimate (\$643,200,000) presented to Congress (FY 2007). The change includes the following items.

Item	Amount
Price Level Updating and Inflation	\$ 20,300,000
Total	\$ 20,300,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Impact Statement was included in the Final Feasibility Report and the Record of Decision was signed on March 26, 1998. A supplemental Environmental Impact Statement to address relocation feature changes and design refinements identified subsequent to the original report and Environmental Impact Statement was completed in 2001 and the Record of Decision was signed on July 20, 2001.

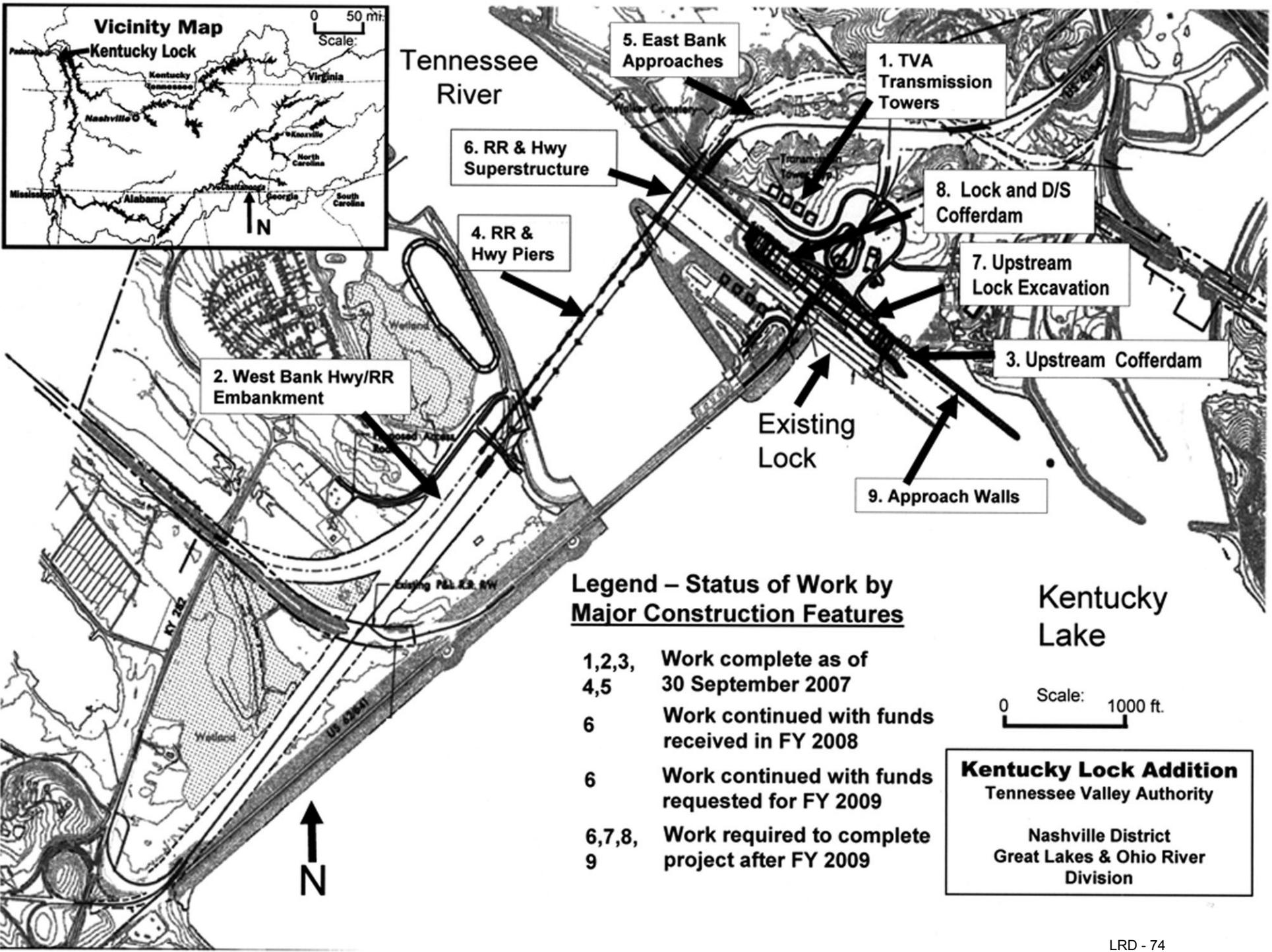
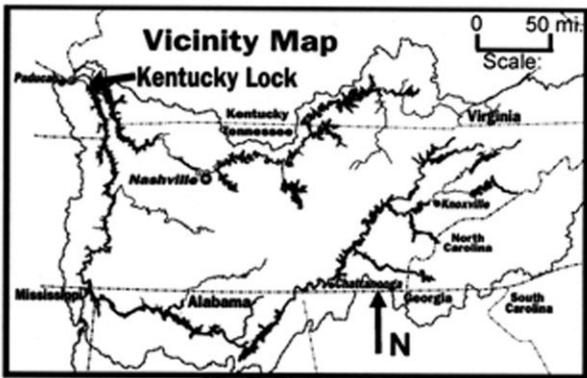
OTHER INFORMATION: Funds to initiate pre-construction engineering and design were appropriated in FY 1993. Funds to initiate construction were appropriated in FY 1998. The scheduled project completion date is to be determined.

Division: Great Lakes and Ohio River

District: Nashville

Kentucky Lock and Dam, Tennessee River, KY

4 February 2008



Legend – Status of Work by Major Construction Features

- 1,2,3, 4,5 Work complete as of 30 September 2007
- 6 Work continued with funds received in FY 2008
- 6 Work continued with funds requested for FY 2009
- 6,7,8, 9 Work required to complete project after FY 2009

Kentucky Lock Addition
 Tennessee Valley Authority
 Nashville District
 Great Lakes & Ohio River
 Division

APPROPRIATION TITLE: Construction – Locks and Dams (Navigation)

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

LOCATION: Existing Locks and Dams 2, 3, and 4 are the last of the old and undersized locks on the Monongahela River system and have components which have been in service for nearly 100 years. The three projects are located on the lower portion of the Monongahela River near the city of Pittsburgh, Pennsylvania and are located in Allegheny, Washington and Westmoreland Counties. Measured from the Point in Pittsburgh, Locks and Dam 2 (Braddock) is located at river mile 11.2, Locks and Dam 3 (Elizabeth) at river mile 23.8, and Locks and Dam 4 (Charleroi) at river mile 41.5. Six other navigation projects situated upstream of Locks and Dam 4 provide a navigable waterway extending to Fairmont, West Virginia. At the Point in Pittsburgh, the Monongahela River joins with the Allegheny River to form the Ohio River.

DESCRIPTION: Existing Locks and Dam 2 consists of a main lock with chamber dimensions of 110 by 720 feet, an auxiliary lock with chamber dimensions of 56 by 360 feet, and a 748-foot fixed-crest dam. Existing Locks and Dam 3 consists of locks with chamber dimensions of 56 by 720 feet and 56 by 360 feet and a 670-foot fixed-crest dam. Existing Locks and Dam 4 consists of locks with chamber dimensions of 56 by 720 feet and 56 by 360 feet and a gated dam consisting of five 84-foot gated sections and a 43-foot fixed weir section. The authorized projects consist of a new gated dam and a rehabilitated auxiliary chamber floodway bulkhead structure at Locks and Dam 2; new twin 84 by 720 foot locks and below-dam scour protection of Locks and Dam 4; raising pool 2 by 5 feet and lowering pool 3 by 3.2 feet; removal of Locks and Dam 3; and associated channel dredging, relocations and bank stabilization. Construction began in FY 1995 with the upgrade of the Locks 2 auxiliary chamber floodway bulkhead and relocations. Replacement of the dam at Locks and Dam 2 began in 1999 and is now complete. Efforts are now focused on the new twin locks at Locks 4 and completion of pool 2 relocations. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 4.8 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 2.3 to 1 at 7 percent.

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

BASIS OF BENEFIT-COST RATIO: The initial Benefit-Cost ratio is based upon the benefits and costs listed in the Feasibility Report dated December 1991. The initial rate is the FY 1995 rate when CG funds were first expended.

Division: Great Lakes and Ohio River

District: Pittsburgh

Locks and Dams 2, 3, and 4, Monongahela River, Pennsylvania

4 February 2008

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2007)	PCT Cmpl	PHYSICAL COMPLETION SCHEDULE
		Renovation and extension of Locks 2 Upper Guardwall	100	Jan 98
Estimated Federal Cost	750,000,000	Bulkhead Structure L/D 2	100	Mar 96
Programmed Construction	750,000,000	Braddock Dam	100	Jul 04
Unprogrammed Construction	0	Remove L/D 3	0	To be determined
Estimated Non-Federal Cost	0	Raise and Lower Pool	0	To be determined
		Public Relocations	50	To be determined
Total Estimated Programmed Construction Cost	750,000,000	Charleroi River Chamber Lock	10	To be determined
Total Estimated Unprogrammed Construction Cost	0	Charleroi Scour Protection	0	To be determined
Total Estimated Project Cost	750,000,000	Charleroi Land Chamber Lock	0	To be determined
		Entire project	47	To be determined

	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2005	153,021,000	153,021,000	
Allocation for 2006	24,883,500	24,861,500	
Allocation for 2007	31,636,000	31,636,000	
Conference Allowance for 2008	34,587,500	34,587,500	/1
Allocation for 2008*	34,587,500	34,587,500	/1
Allocations through 2008	244,128,000	244,106,000	65%
Allocation Requested for 2009	20,403,000	20,403,000	71%
Programmed Balance to Complete after 2009	110,469,000	110,491,000	/2
Unprogrammed Balance to Complete after 2009	0	0	

/1 Assumed allocation. Final, actual allocations yet to be determined.

/2 Reflects a \$22,000 balancing of Construction and IWTF funding.

Division: Great Lakes and Ohio River

District: Pittsburgh

Locks and Dams 2, 3, and 4, Monongahela River, Pennsylvania

4 February 2008

JUSTIFICATION: The projects are located on the Monongahela River near Pittsburgh. The major problems with the projects are deteriorated structural condition and limited lock capacity. These problems are expected to become increasingly severe as the projects age. The extreme structural deterioration of Locks and Dam 3 and Locks 4 is of paramount concern. Major repairs and rehabilitation will not prevent structural failure. There is a significant probability of structural failure and loss of navigation on the Monongahela River. The highest risk is at Lock 4 where navigation relies on only one aging chamber. The District is focusing resources on completing the new Charleroi River Chamber. The continued viability of the Lower Monongahela River navigation system is vital to southwestern Pennsylvania and northeastern West Virginia. Locks and Dam 2, 3, and 4 cumulatively provide over \$308M in transportation benefits to the region and over 14,000 direct jobs. Loss of these benefits due to the failure of navigation infrastructure would have an extremely detrimental effect to the regional and local economy. Average annual benefits at 7 percent are as follows:

Annual Benefits	Amount
Commercial Navigation	39,729,388
Advanced replacement of shoreside facilities	2,000,000
Eliminated cost of help boats	100,000
Flood damage reduction	500,000
Normal O&M reduction	1,000,000
Maintenance Savings	130,352,008
Total	173,681,396

FISCAL YEAR 2008: Work to be accomplished in FY 2008 includes continuation of construction of the river wall at Charleroi, relocations (McKeesport, Duquesne, North Versailles, Glassport, and Norfolk Southern), preparation of plans and specifications for the Charleroi river chamber, Victory Hollow disposal sight, mooring cells, miter gate fabrication, floating mooring bits, maintenance bulkheads, filling and emptying valves, and the purchase of sheet piling for the river chamber construction.

FISCAL YEAR 2009: The requested amount will be applied as follows:

	Amount
Complete River Wall Construction (Charleroi)	\$9,564,000
Continue Relocations	500,000
Initiate River Chamber Construction (Charleroi)	27,000,000
Pool 2 Clearing	2,072,000
Planning, Engineering, Design	1,570,000
Contract Mgmt for prior year fully funded contracts	100,000
Total	\$40,806,000

NON-FEDERAL COST: In accordance with the cost-sharing and financing concepts reflected in the Water Resource Development Act of 1986, 50% of the total cost of construction will be derived from the Inland Waterways Trust Fund.

Division: Great Lakes and Ohio River

District: Pittsburgh

Locks and Dams 2, 3, and 4, Monongahela River, Pennsylvania

4 February 2008

Construction of the projects will require modification to privately owned shore side facilities and submarine utility crossings, which were all constructed under Department of the Army permits pursuant to Section 10 of the Rivers and Harbors Act, approved March 3, 1899. The estimated cost to owners of adapting these facilities to new project conditions is \$111,000,000.

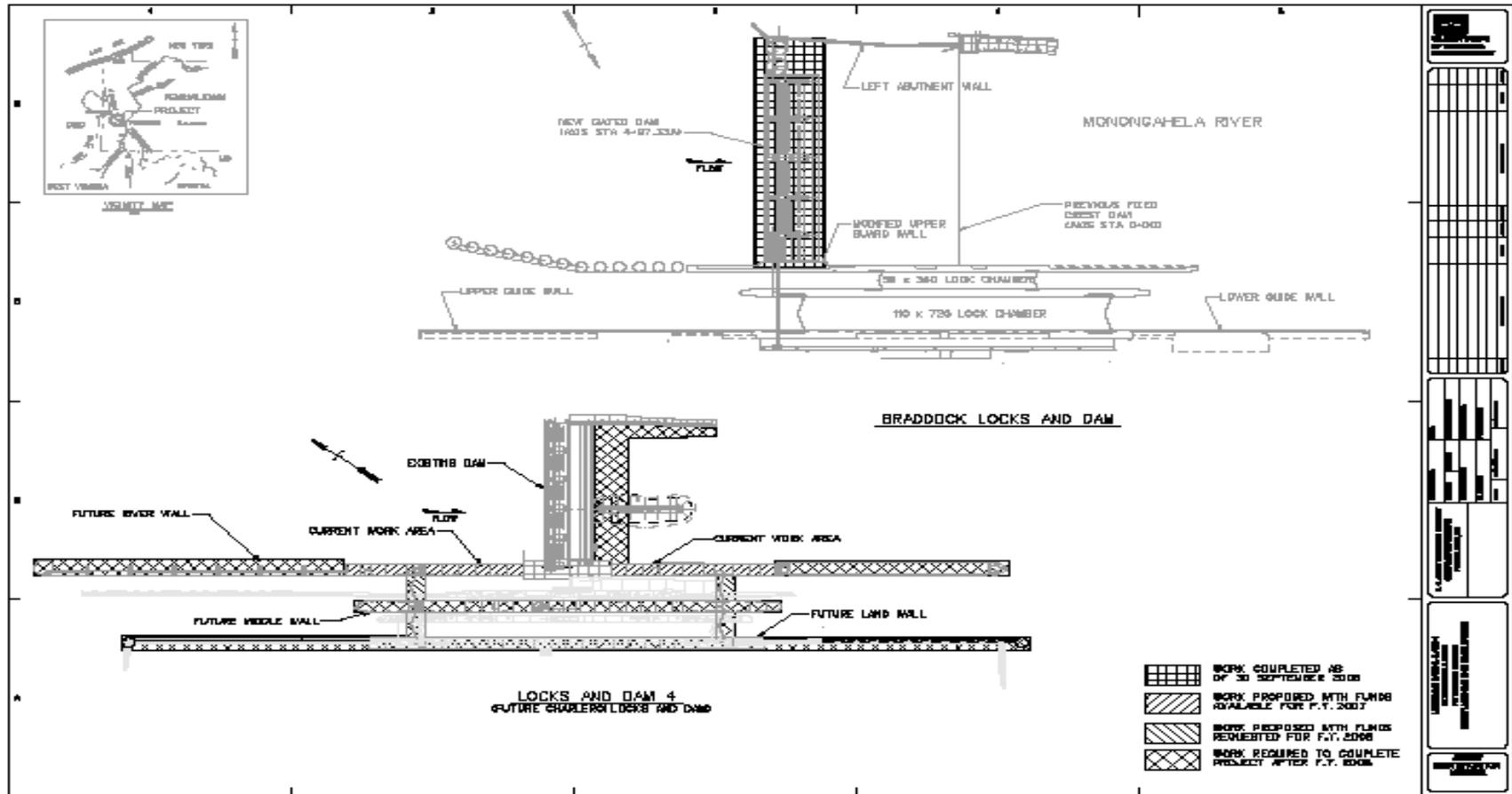
STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$750,000,000 remains unchanged from the last estimate presented to Congress (FY 2007). An updated MCACES cost estimate is being prepared and will be included in the FY 2010 budget submission.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The final Environmental Impact Statement was filed with the Environmental Protection Agency on January 28, 1992. The Director of Civil Works signed the Record of Decision on December 17, 1992. A Supplemental Environmental Impact Statement on Project Disposal and various other Environmental Assessments, all-resulting in Finding of No Significant Impacts has been completed pursuant to NEPA. Changes since the last supplemental have been captured through the issuance of a Public Notice under the Clean Water Act.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992. Funds to initiate construction were appropriated in FY 1995. Continued funding at the capability level could result in a completion date of 2016. The Corps continues to closely and more frequently monitor the condition of L/D 3 as a result of an accelerated trend in wall movements and began stabilization work on Dam 3 in 2006 in order to extend the service life of this facility using operations and maintenance funding. Additional stabilization efforts will continue in FY 2008 on Dam 3. Any improvement in the construction schedule could lessen rehabilitation and maintenance funding needs at L/D 3, a facility that will be demolished upon completion of the new river chamber at Charleroi, facility relocations, and pool 3 dredging. L/D 3 must be removed to reduce the threat to the integrity of the Lower Mon Navigation System and achieve the full benefits of the newly constructed Braddock dam.

The scheduled project completion date is to be determined.



Division: Great Lakes and Ohio River

District: Pittsburgh

Locks and Dams 2, 3, and 4, Monongahela River, Pennsylvania

4 February 2008

APPROPRIATION TITLE: Construction - Locks and Dams (Navigation)

PROJECT: Marmet Locks and Dam, West Virginia (Continuing)

LOCATION: Marmet Locks and Dam is located in Kanawha County near Belle, West Virginia, on the Kanawha River approximately 68 miles above its confluence with the Ohio River. The pool is located entirely in West Virginia.

DESCRIPTION: The proposed modernization plan includes the construction of an additional 110 foot by 800 foot lock on the right descending bank landward of the existing locks. The plan includes the continued use of both existing 56 foot by 360 foot lock chambers as auxiliary locks and rehabilitation of the existing dam. The hydroelectric power plant will also remain in operation. A total of 216 real estate tracts are required to support the project. Of the 216 tracts, 179 are residential, 9 are commercial and 28 are vacant. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1996, sec. 101(a)(31); Energy and Water Development Appropriations Act of 2006, section 112.

REMAINING BENEFIT-REMAINING COST RATIO: 230.7 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 2.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 7 1/8 percent (FY 1998).

BASIS OF BENEFIT-COST RATIO: Economic Update dated June 1996 and at October 1995 price levels.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost				
			Entire Project	To be determined
		\$405,822,000	Lock Operational	Spring 2008
Construction General	202,911,000			
Inland Waterways Trust Fund	202,911,000			
Total Estimated Project Cost		\$405,822,000		

Division: Great Lakes & Ohio River

District: Huntington
4 February 2008

Marmet Locks and Dam, WV

SUMMARIZED FINANCIAL DATA (Continued)

	GENERAL APPNS.	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations thru 30 September 2007	\$183,651,000	\$183,651,000	
Conference Amount for FY 2008	14,760,000	14,760,000	
Allocations through FY 2008	198,411,000	198,411,000	98
Allocation Requested for FY 2009	4,500,000	4,500,000	99
Programmed Balance to Complete after FY 2009	0	0	
Unprogrammed Balance to Complete after FY 2009	0	0	

PHYSICAL DATA

Lock:

Number – 3
 Existing Chambers - 2 - 56 ft. x 360 ft.
 Additional Chamber - 1 - 110 ft. x 800 ft.
 Lift - 24 ft.

Lands and Damages:

Acres - 21, Existing Locks and Dam
 - 103, New Lock

Structures: - 242 Residences
 - 10 Businesses

JUSTIFICATION: Marmet Locks and Dam links the Kanawha Valley, an important chemical and coal producing area, to its product markets and supply areas. During 2005, 14.2 million tons of traffic locked through Marmet. Coal is the major commodity shipped on the Kanawha River, accounting for 93 percent of the total tonnage at Marmet. The Marmet project presents a significant impediment to the efficient flow of waterborne commerce due to its outdated features. Amendments to the Clean Air Act, passed in November 1990, have caused an increase in demand for the Kanawha River Basin's low-sulphur coal. The congestion is expected to increase as traffic on the river increases.

The average annual benefits, at 7 percent, are \$47,272,270, all commercial navigation.

FISCAL YEAR 2008: The amount provided is being applied as follows:

Division: Great Lakes & Ohio River

District: Huntington
 4 February 2008

Marmet Locks and Dam, WV

Continue Lock Construction	\$18,110,000
Continue Real Estate Disposal	26,000
Continue Cultural Resource Mitigation	460,000
Continue Environmental Mitigation	260,000
Continue Permanent Operating Equipment	1,044,000
Continue Buildings, Grounds, & Utilities	1,532,000
Continue Planning, Engineering and Design	4,482,000
Continue Construction Management	1,606,000
Complete HTRW Remediation	2,000,000
Total	\$29,520,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Lock Construction	\$ 1,000,000
Complete Real Estate Disposal	25,000
Complete Environmental Mitigation	250,000
Complete Cultural Resource Mitigation	450,000
Continue Buildings, Grounds, & Utilities	1,500,000
Complete Permanent Operating Equipment	2,875,000
Complete Planning, Engineering and Design	1,300,000
Complete Construction Management	1,600,000
Total	\$ 9,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing contained in the Water Resources Development Act of 1986, 50 percent of the total costs of construction will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$405,822,000 is an increase of \$5,484,000 from the latest estimate (\$400,338,000) presented to Congress (FY 2008).

This change includes the following items.

Item	Amount
Post Contract Award and other Estimating Adjustments	\$ 5,484,000
Total	\$ 5,484,000

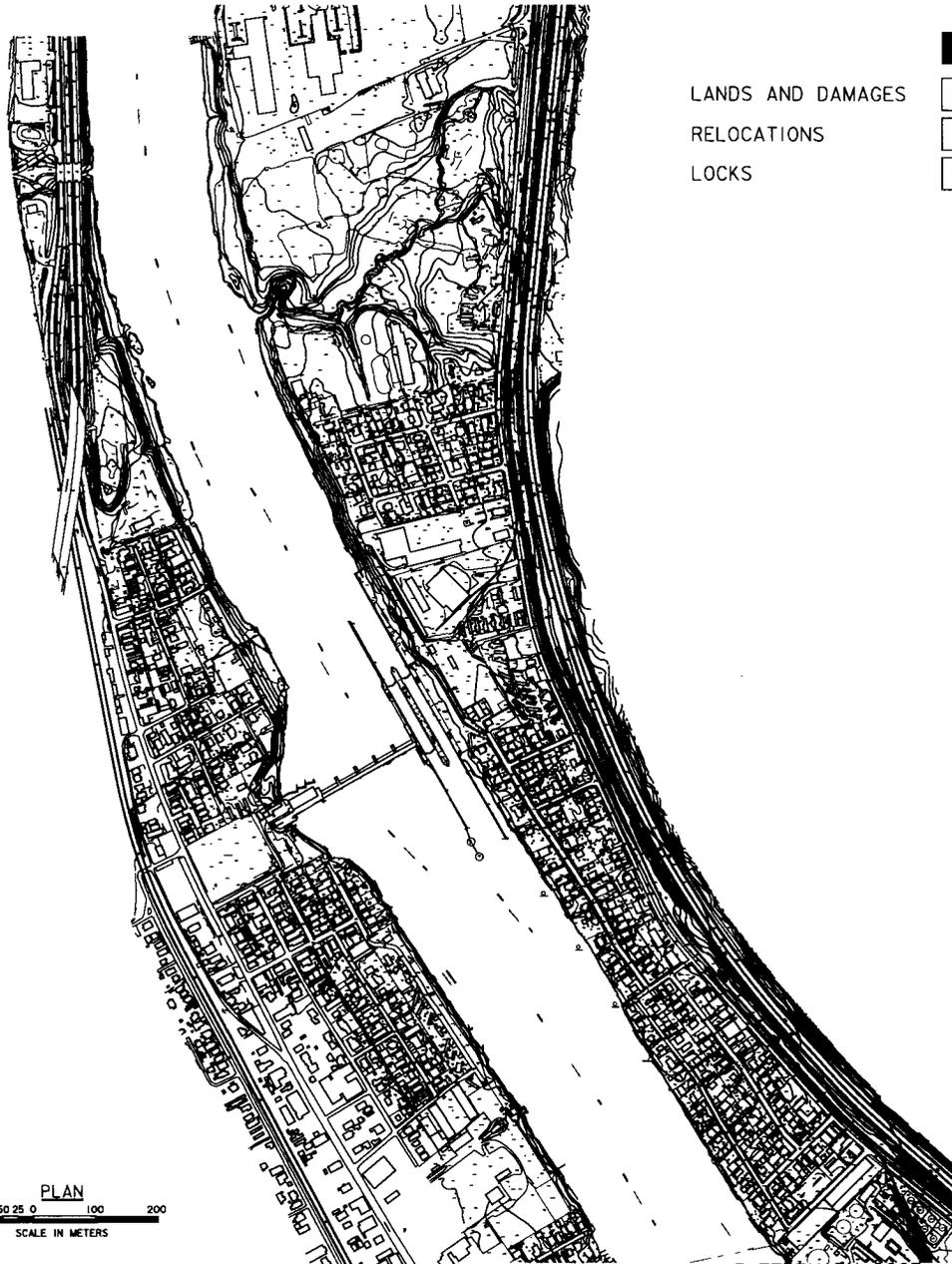
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with the Environmental Protection Agency (EPA) on January 26, 1994.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1994. Funds to initiate construction were appropriated in FY 1998.

Environmental Site Assessments (Phase I and II) identified soil contamination at levels sufficient to warrant remedial activity. None of the contamination identified is considered hazardous; rather, it is a non-hazardous contaminant which requires that the soil be disposed of in a landfill in conformance with Subtitle D of the Resource Conservation and Recovery Act (RCRA). All environmental remedial actions are complete. No groundwater contamination was found.

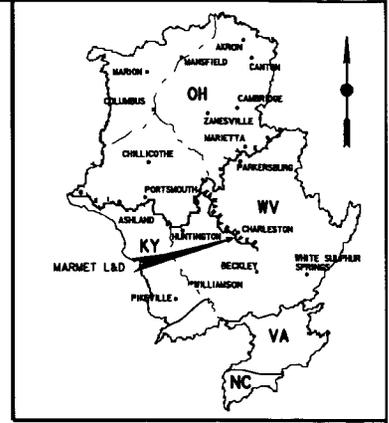
The Corps developed plans for the new lock construction to have minimum interference with river traffic during construction, but some interference is expected. The Corps established dialogue with the towing industry to determine the best methods to use to minimize interference. Installation of additional downstream navigation mooring facilities was completed in December 2002. A helper boat was used to alleviate construction impacts associated with cofferdam construction which is now complete. Addition of an upstream navigation cell on the right descending bank is planned for 2008.

The project cost was reauthorized to \$358,000,000 by P.L. 109-103, section 112.



LANDS AND DAMAGES
 RELOCATIONS
 LOCKS

100%	1%		
100%			
92%	6%	2%	



VICINITY MAP
 50 25 0 50 100 FT
 SCALE: 1" = 50'

STATUS OF WORK

- WORK COMPLETED
- WORK UNDERWAY WITH FUNDS AVAILABLE FOR F.Y. 2008
- WORK PROPOSED WITH FUNDS REQUESTED FOR F.Y. 2009
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER F.Y. 2009

PLAN
 100 75 50 25 0 100 200
 SCALE IN METERS

5 FEBRUARY 2007

KANAWHA RIVER
 MARMET LOCKS AND DAM
 HUNTINGTON DISTRICT
 GREAT LAKES AND OHIO RIVER DIVISION

APPROPRIATION TITLE: Construction – Locks and Dams (Navigation)

PROJECT: McAlpine Locks and Dam, Kentucky and Indiana (Continuing)

LOCATION: The project is located on the Ohio River at Louisville, Jefferson County, Kentucky, Ohio River mile 604.0 to 608.0.

DESCRIPTION: The modernization of the existing facility will replace a 600-foot auxiliary lock chamber and an inactive 360-foot 2-stage chamber with a 1,200-foot lock on the Kentucky bank side of the existing lock and dam. This effort will result in twin 1,200-foot locks for tow traffic. Construction of a new bridge is required to continue access to Shippingport Island and the Louisville Gas & Electric hydroelectric power facility.

AUTHORIZATION: The Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 135.7 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 2.8 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.8 to 1 at 8 percent (FY 1996).

BASIS OF BENEFIT-COST RATIO: Benefits are based on the General Design Memorandum, Project Economic Update approved in March 1994, at 1994 price levels.

SUMMARIZED FINANCIAL DATA			STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$ 429,280,000	Entire Project	91	Sep 2009
General Appropriations	214,640,000				
Inland Waterways Trust Fund	214,640,000				
PHYSICAL DATA					
Estimated Non-Federal Cost		0	Wharf Extension		35,400 sf
			Boat Mooring Facility		6,100 sf
			Fixed Bridge		2,100 ft
Total Estimated Project Cost		\$ 429,280,000	Lock Chamber (New)		110 by 1,200 ft
			Buildings:		
			Resident Engineer		6,100 sf
			Operations Service		2,300 sf
			Storage		5,100 sf

Great Lakes and Ohio River

District: Louisville
4 February 2008

McAlpine Locks and Dam, KY and IN

SUMMARIZED FINANCIAL DATA (Continued)	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2005	\$ 113,715,000	\$ 113,715,000	
Allocations for FY 2006	40,650,000	40,650,000	
Allocations for FY 2007	35,000,000	35,000,000	
Conference Allowance for FY 2008	22,140,000	22,140,000	
Allocation for FY 2008	22,140,000	22,140,000	
Allocations through FY 2008	211,505,000	211,505,000	98.5
Allocation Requested for FY 2009	3,135,000	3,135,000	100
Programmed Balance to Complete after FY 2009	0	0	
Unprogrammed Balance to Complete after FY 2009	\$ 0	\$ 0	

JUSTIFICATION: The new lock is in response to identified annual increases in tonnage levels and delays. The McAlpine Locks Project is one of the Inland Waterways Users Board Top Priority Capstone activities. Tonnages through the McAlpine Locks average 55 million per year and the latest commodities value for McAlpine is \$12.9 billion in 2004. Other project components include a fixed bridge spanning 2,100 feet, including 840 feet of embankment, and three one-story buildings for offices, service, and storage, an industrial wharf for miter gate erection and storage, and a boat mooring facility for small workboats. Construction of the 1,200 foot lock on an efficient schedule is imperative to minimize the risks associated with operating only one lock until the new lock is operational and the potential for closures due to needed major maintenance on the existing lock.

Average annual benefits at 7% percent are as follows:

Annual Benefits	Amount
Navigation from Reduced Delays	\$ 44,374,738
Total	\$ 44,374,738

FISCAL YEAR 2008: The Conference amount will be applied as follows:

Continue Lock Construction Contract	\$ 40,780,000
Planning, Engineering, and Design	1,000,000
Construction Management	2,500,000
Total	\$ 44,280,000

Great Lakes and Ohio River

District: Louisville
4 February 2008

McAlpine Locks and Dam, KY and IN

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Lock Construction Contract	\$ 5,670,000
Planning, Engineering, and Design	100,000
Construction Management	500,000
Total	\$ 6,270,000

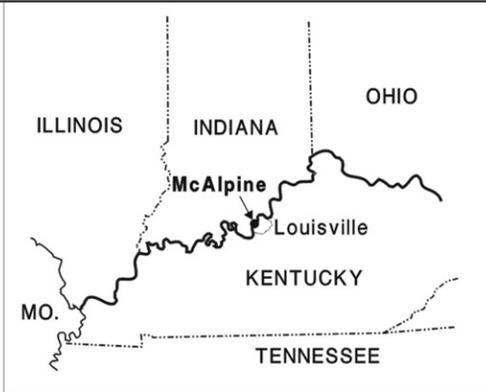
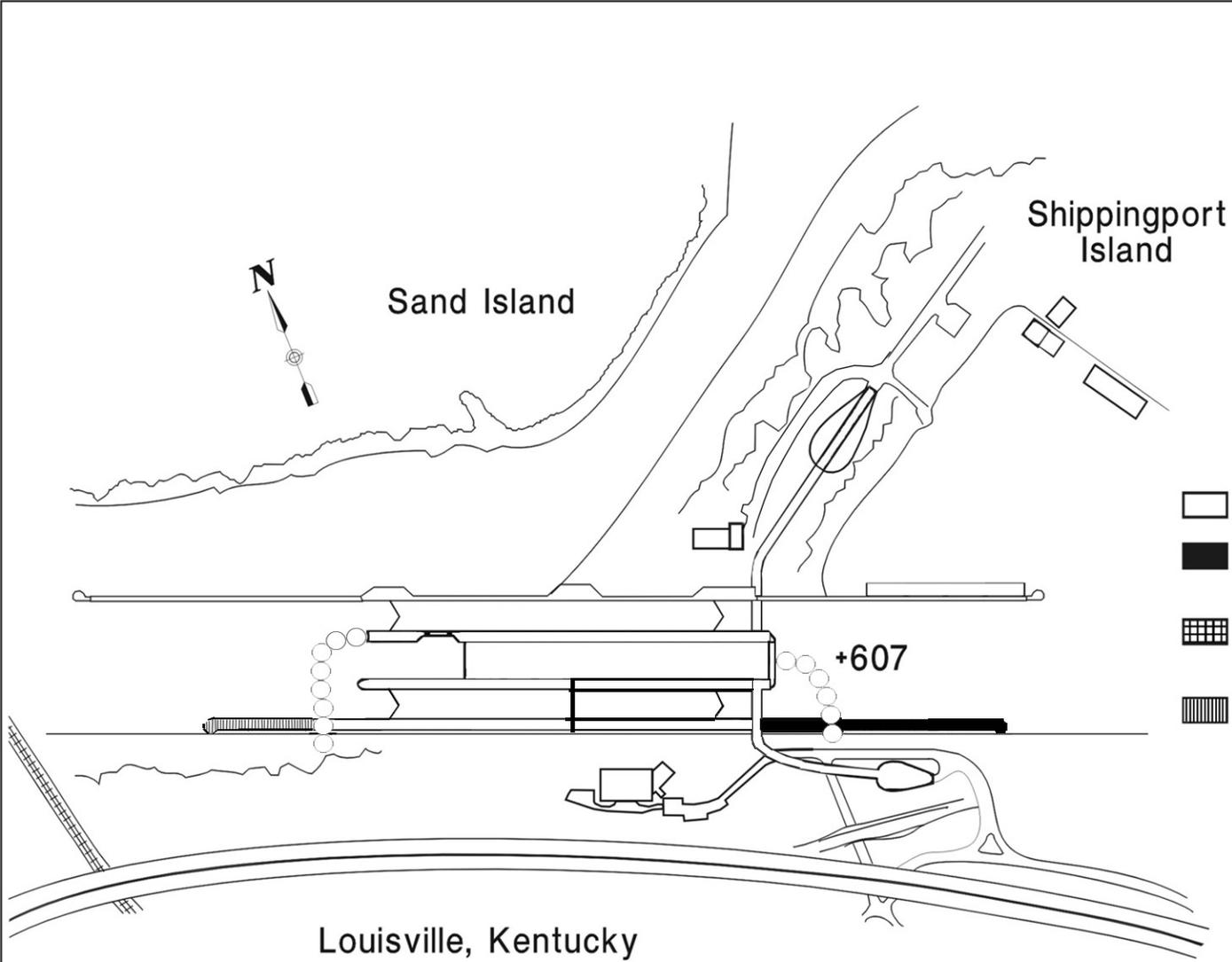
NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, 50 percent of the total cost of construction will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$429,280,000 is a decrease of \$720,000 from the latest cost estimate (\$430,000,000) presented to Congress in FY 2008. The change is due to the 1.6% reduction in the FY 08 Conference amount mandated by Congress in the Energy and Water Development and Related Agencies Appropriation Act, 2008.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment (EA) and a Finding of No Significant Impacts (FONSI) have been signed and included in the Final Feasibility Report. In addition, a Section 404 (b) (1) Evaluation has been completed and 401 Water Quality Certification has been obtained from the Kentucky Division of Water. The final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency in August 1990. A supplemental EIS updating project requirements was completed in FY 1998.

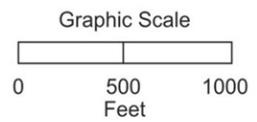
OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1990. Funds to initiate construction were appropriated in FY 1996. Construction of the lock structure will be substantially complete at the end of 2007. FY 2009 funds will be used to complete the project. The scheduled completion date has not changed from the latest present to Congress (FY 2008) and is 30 September 2009.



Legend - Status of Work

-  Work completed as of September 2007
-  Work underway with funds available for FY08
-  Work proposed with funds requested for FY09
-  Work required to complete the project after FY09

Louisville, Kentucky



**MCALPINE LOCK REPLACEMENT
LOUISVILLE, KENTUCKY**

LOUISVILLE DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION

APPROPRIATION TITLE: Construction - Locks and Dams (Navigation)

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

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

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

AUTHORIZATION: Water Resources Development Act of 1988.

REMAINING BENEFIT-REMAINING COST RATIO: 12.0 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 10.8 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 3.7 at 8 3/4 percent (FY 1991).

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Olmsted Locks and Dam Benefit Update, dated October, 1990.

SUMMARIZED FINANCIAL DATA			STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$2,067,000,000	Entire Project	46	To Be Determined
General Appropriations	1,033,500,000				
Inland Waterways Trust Fund	1,033,500,000				
PHYSICAL DATA					
Estimated Non-Federal Cost		0	Lock - 110 by 1,200 foot Chambers		2
			Dam - Navigable Pass		1,400 ft.
Total Estimated Project Cost		\$ 2,067,000,000	Fixed Weir		561 ft.
			Tainter Gates		744 ft.
			Acres – Dam		123 acres
			Road		21 acres
			Disposal Area		114 acres
			Flow Easements		35 acres

Division: Great Lakes & Ohio River

District: Louisville
4 February 2008

Olmsted Locks & Dam, IL. & KY

SUMMARIZED FINANCIAL DATA (Continued)	GENERAL APPNS.	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2005	\$ 345,755,500	\$ 345,755,500	34.1
Allocations for FY 2006	44,550,000	44,550,000	38.5
Allocations for FY 2007	55,000,000	55,000,000	44.0
Conference Allowance for FY 2008	51,168,000	51,168,000	
Allocation for FY 2008	51,168,000	51,168,000	
Allocations through FY 2008	496,473,500	496,473,500	48.0
Allocation Requested for FY 2009	57,000,000	57,000,000	53.6
Programmed Balance to Complete after FY 2009	480,026,500	480,026,500	100.0
Unprogrammed Balance to Complete after FY 2009	\$ 0	\$ 0	

JUSTIFICATION: The project is in a strategic location on the inland waterway system. Virtually all waterway traffic moving between the Ohio River and tributaries and the Mississippi River and tributaries passes through the project area. Olmsted Locks and Dam will replace existing Ohio River Locks and Dams 52 and 53, which are over 80 years old. Both projects have temporary lock chambers that are inefficient and neither project conforms to current design criteria for structural stability. Commercial navigation in 2006 was 97 million tons through Lock 52 and 84 million tons through Lock 53. Over the last five years, tonnage has been relatively constant, with the 5 year average of 94 million tons through Lock 52 and 85 million tons through Lock 53. The long term (2010-2030) average annual growth rate is projected to be between 0.9 and 1.1 percent. The value of the commodities through the project area in 2005 was estimated at \$18.7 billion. Energy-related commodities comprised approximately 35 percent of the total tonnage, aggregates 16 percent and grains and chemicals each contributed approximately 11 percent, of total tonnage. The projected increases in waterway traffic demands in combination with the limited capacity of the existing locks will result in increased lockage delays, costing the industry \$590 million on an annual basis.

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

Average annual benefits at 7 percent are as follows:	Annual Benefits	Amount
	Navigation	\$ 530,845,211
	Other Benefits	60,163,430
	Total	\$ 591,008,641

Division: Great Lakes & Ohio River

District: Louisville
4 February 2008

Olmsted Locks & Dam, IL. & KY

FISCAL YEAR 2008: The allocated amount of \$102,336,000 will be applied as follows:

Continue Dam Construction Contract	\$ 95,546,000
Planning, Engineering, and Design	1,480,000
Construction Management	4,884,000
Lock Operation during Construction (Hired Labor)	426,000
Total	\$ 102,336,000

FISCAL YEAR 2009: The requested amount of \$114,000,000 for this project will be applied as follows:

Continue Dam Construction Contract	\$ 104,534,000
Planning, Engineering, and Design	1,702,000
Construction Management	7,306,000
Lock Operation during Construction (Hired Labor)	458,000
Total	\$ 114,000,000

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, 50% of the total cost of construction will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

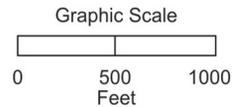
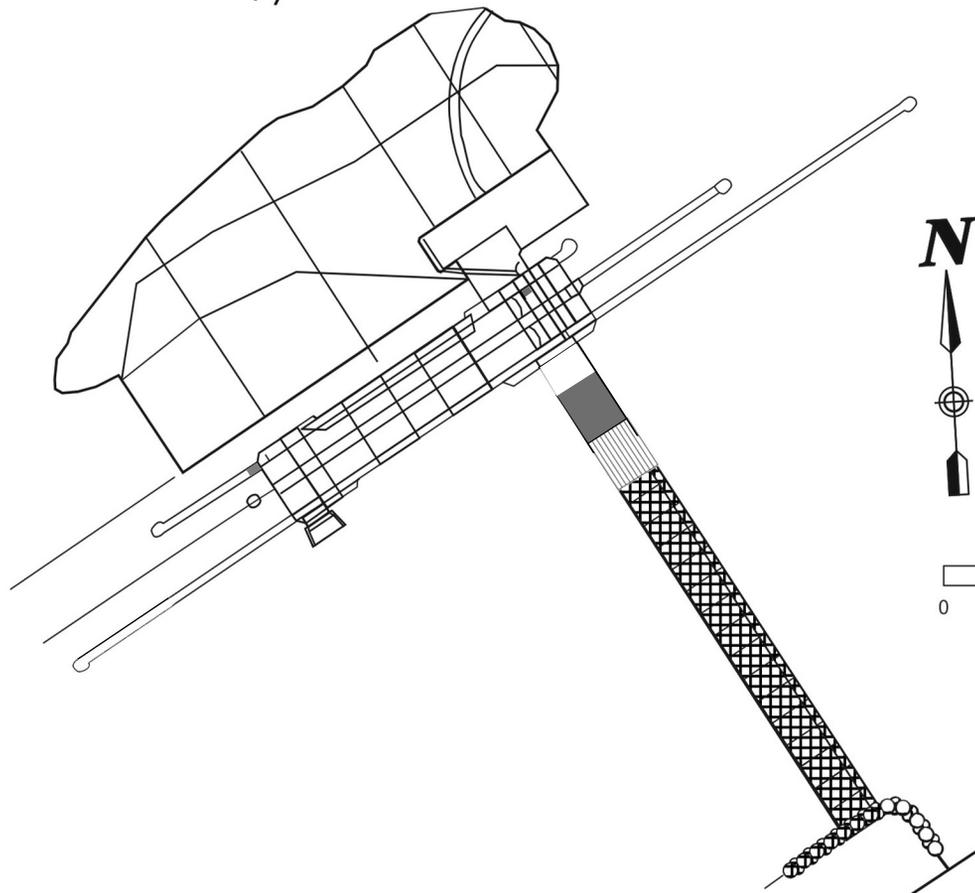
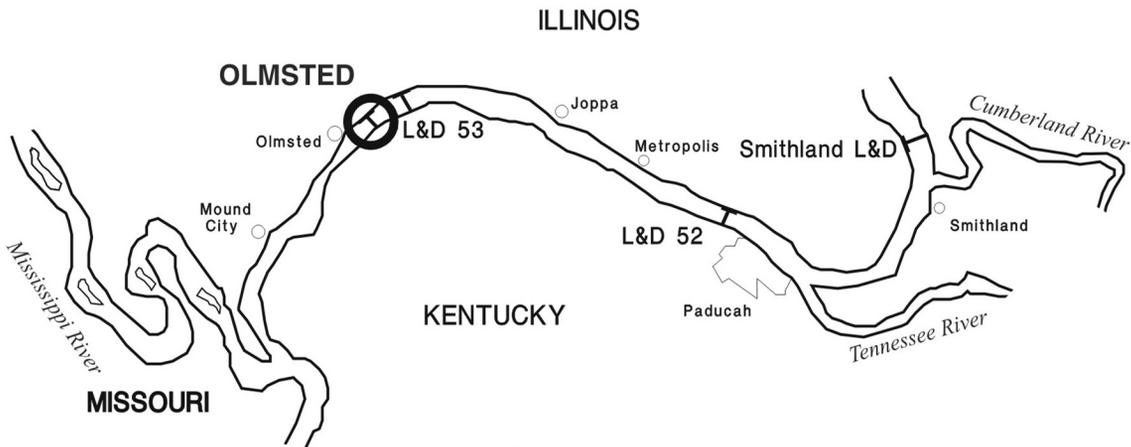
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$2,067,000,000 is an increase of \$532,000,000 from the latest estimate (\$1,535,000,000) presented to Congress (FY 2008). The change includes the following item.

Item	Amount
Post Contract Award and Other Estimating Adjustments.	\$ 455,754,000 1/
Inflation During Construction	76,246,000
Total	\$ 532,000,000

1/ Other Estimating Adjustments are further defined as Inefficient Funding, Market Conditions, Contractor Omissions, Changes, and Salvage Value of Equipment.

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

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1986. Funds to initiate construction were appropriated in FY 1991. The twin 110 x 1200-foot locks were substantially completed in 2005. Construction on the dam was initiated in Jan 2004. FY 2009 funds will be used to continue dam construction. Demolition of Locks and Dams 52 and 53 will follow completion of dam construction. The scheduled completion date is to be determined.



Legend - Status of Work

-  Work completed as of September 2007
-  Work underway with funds available for FY08
-  Work proposed with funds requested for FY09
-  Work required to complete the project after FY09

OLMSTED LOCKS & DAM

LOUISVILLE DISTRICT
 GREAT LAKES AND
 OHIO RIVER DIVISION

APPROPRIATION TITLE: Construction, General – Locks and Dams (Navigation)

PROJECT: Point Marion Lock and Dam (Lock and Dam 8), Monongahela River, Pennsylvania and West Virginia (Continuing)

LOCATION: Point Marion Lock and Dam is located on the left descending bank of the Monongahela River, 90.8 Miles above its mouth at Pittsburgh, Pennsylvania and is in Fayette and Greene Counties, Pennsylvania and Monongalia County, West Virginia.

DESCRIPTION: The project consists of the replacement of existing 56 feet X 360 feet lock with a modern 84 feet X 720 feet lock landward and adjacent to the existing lock. Note the recommended/authorized cost of these items.

AUTHORIZATION: Supplemental Appropriations Act of 1985 for Engineering and Design and Land Acquisition and the Water Resources Development Act of 1986 for construction.

REMAINING BENEFIT-REMAINING COST RATIO: 10,044 to 1

TOTAL BENEFIT-COST RATIO: 5.5 to 1 at 7 %.

INITIAL BENEFIT-COST RATIO: 1.5 to 1 at 8 7/8 % (FY 1987).

BASIS OF BENEFIT-COST RATIO: Benefits are from the most recently available evaluation in the Point Marion Lock Design Memorandum No.1, General Design Memorandum, approved in April 1987 at 1 January 1987 price levels.(FY 1987).

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	112,863,400	Entire Project	99	*Physically Complete
Programmed Construction	112,863,400			
Unprogrammed Construction	0			
Estimated Non-Federal Cost	0	*Complete except for final Real Estate actions.		
Programmed Construction	0			
Cash Contributions	0			
Other Costs	0			
Total Estimated Programmed Construction Cost	112,863,400			
Total Estimated Unprogrammed Construction Cost	0			
Total Estimated Project Cost	112,863,400			

PHYSICAL DATA

Lock: New Chamber 84 feet wide X 720 feet long.
Existing 56 feet wide X 360 feet long chamber to be removed.

Dam: Existing movable crest dam to remain, no change in pool elevation.

	GENERAL APPNS	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2007	56,226,400	56,487,000	
Conference Allowance for 2008	0	0	
Allocation for 2008	0	0	
Allocations through 2008	56,226,400	56,487,000	99
Allocation Requested for 2009	150,000	0	100
Programmed Balance to Complete after 2009	0	0	
Unprogrammed Balance to Complete after 2009	0	0	

JUSTIFICATION: The completion of outstanding real estate actions associated with land acquisition will complete the project and allow the project to be fiscally closed out.

Average annual benefits are as follows:

Annual Benefits	Amount
Inland Navigation	32,100,000
Total	32,100,000

FISCAL YEAR 2008: No funding is programmed for this year. Minimal funds will be carried over from previous FY to continue effort toward completing real estate actions.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Description	Amount
Continue and complete Land Acquisition Activities	\$150,000
Total	\$150,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concept reflected in the Water Resources Development Act of 1986, 50 percent of the total cost of construction will be derived from the Inland Waterways Trust Fund.

STATUS OF LOCAL COOPERATION: None required.

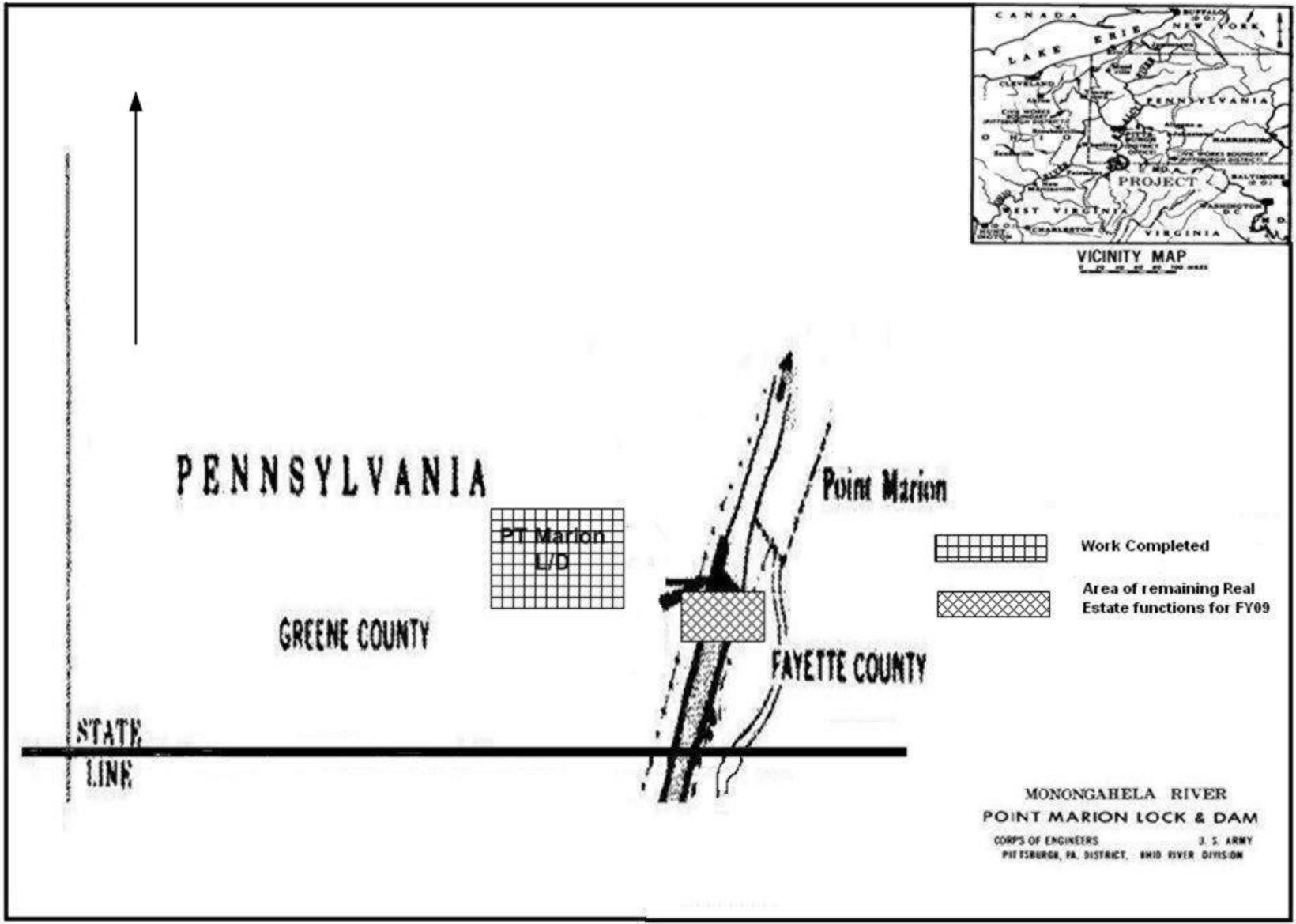
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$112,863,400 is an increase of \$2,063,400 from the latest estimate (\$111,000,000) presented to Congress (FY 1994)

This change includes the following items.

Item	Amount
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	\$1,663,400
Price Escalation or De-Escalation on Real Estate	400,000
Total	\$2,063,400

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: The EIS was filed with EPA on 3 August 1984.

OTHER INFORMATION: Funds for engineering and design were allocated in FY 1985 under the General Investigations Appropriation. Funds to initiate land acquisition were allocated in FY 1987 under Construction, General Appropriation from funds previously appropriated. Funds to initiate construction were appropriated in FY 1990.



DIVISION: Great Lakes & Ohio River

DISTRICT: Pittsburgh

POINT MARION Lock and Dam,
Monongahela River, PA & WV

4 February 2008

APPROPRIATION TITLE: Construction - Locks and Dams (Navigation)

PROJECT: Robert C. Byrd Locks and Dam (formerly Gallipolis Locks and Dam), West Virginia and Ohio (Continuing)

LOCATION: The project is situated in the Middle Ohio Valley at Ohio River mile 279.2, approximately 14 miles downstream from the mouth of the Kanawha River in West Virginia and approximately 30 miles upstream from the City of Huntington, West Virginia. The new locks are in Mason County, West Virginia and the abutment of the dam is in Gallia County, Ohio.

DESCRIPTION: The project includes the rehabilitation of the non-navigable, high-lift, gated, existing dam and construction of a new 1200 by 110 foot main lock and a new 600 by 110 foot auxiliary lock in a canal extending across a slight bend in the river, bypassing the existing locks and dam on the left descending (West Virginia) bank. The canal, in effect, straightens the river bend and provides a relatively straight down-bound approach for several miles. All work is programmed.

AUTHORIZATION: River and Harbor Act of 1935, Supplemental Appropriations Act, 1985, and the Water Resources Development Act of 1986. The Water Resources Development Act of 1992, Section 118, changed the project name to the Robert C. Byrd Locks and Dam. The Water Resources Development Act of 2000, Section 548, added authorization to preserve the General Jenkins House at Lesage/Greenbottom Swamp.

REMAINING BENEFIT-REMAINING COST RATIO: 556.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 5.1 to 1 at 7 percent

INITIAL BENEFIT-COST RATIO: 11.3 to 1 at 8 3/8 percent (FY 1985).

BASIS OF BENEFIT-COST RATIO: General Design Memorandum, dated November, 1982, at October, 1982 price levels.

		STATUS	PERCENT	PHYSICAL COMPLETION
SUMMARIZED FINANCIAL DATA		(1 Jan 2008)	COMPLETE	SCHEDULE
New Construction Work		Entire Project	99.5	Sep 2009
Estimated Federal Cost		Lock Construction	100	Jan 1993
General Appropriations	155,660,000	Mitigation Sites	99.5	Sep 2009
Inland Waterways Trust Fund	155,660,000	Dam Rehabilitation	99.5	Sep 2008
		Jenkins House	80	Sep 2009

Division: Great Lakes & Ohio River

District: Huntington
4 February 2008

Robert C. Byrd Locks and Dam, WV and OH

SUMMARIZED FINANCIAL DATA (Continued)

Dam Rehabilitation		
Estimated Federal Cost		\$ 72,180,000
General Appropriations	36,090,000	
Inland Waterways Trust Fund	36,090,000	
Total Estimated Federal Cost		\$ 383,500,000
General Appropriations	191,750,000	
Inland Waterways Trust Fund	191,750,000	
Estimated Non-Federal Cost		0
Total Estimated Project Cost		\$ 383,500,000

	GENERAL APPNS.	INLAND WATERWAYS TRUST FUNDS	ACCUM. PCT. OF EST. FED. COST
Allocations thru 30 September 2007	\$190,794,500 1/	\$190,794,500	
Conference Amount for FY 2008	452,500	452,500	
Allocations through FY 2008	191,247,000	191,247,000	99.5
Allocation Requested for FY 2009	500,000	500,000	99.5
Programmed Balance to Complete after FY 2009	0	0	
Unprogrammed Balance to Complete after FY 2009	0	0	

1/ Allocations thru FY06 include \$9,526,000 paid by the Department of Treasury Judgment Fund for settled claim.

PHYSICAL DATA

Bypass Canal:
 Length - 1.7 miles
 Bottom Width - 500 feet (min)

Locks:
 Number - 2
 Main Lock - 110 x 1,200 feet
 Auxiliary Lock - 110 x 600 feet

Dam:
 Major rehabilitation of the existing navigation dam to include replacing the dam roller gates and strengthening the foundation.

Lands and Damages:	
Total existing easement area	1798 acres
Existing locks and dam	82 acres
New locks and canal	546 acres
Mitigation	837 acres
Dam rehabilitation	28 acres

JUSTIFICATION: Completion of the new locks has enabled tows to transit the project area efficiently and has completed a series of 110 by 1200 foot locks from near Pittsburgh to Cairo, Illinois. Reduced delays and transportation costs are benefiting the economy of the Nation directly and indirectly. The project is strategically located between the highly industrialized upper Ohio River Basin area and its product markets and supply regions. Robert C. Byrd Locks and Dam captures a significant portion of the commodities transiting the Ohio River. The traffic levels (number of lockages) have decreased and volume of commodities have increased at Robert C. Byrd Locks and Dam, as forecast in the authorization document. Between the years of 1995 and 2004, traffic has ranged from 53.1M to 59.6M tons annually.

The new locks and the dam rehabilitation also remedy problems associated with the age, condition, and hazardous location of the existing facilities. The existing locks and dam are over 50 years old and have been increasingly difficult to operate and maintain. Lock outages have been a major problem and would have become very critical in the future. Accident reports and information from the navigation industry documented that the existing facilities were unsafe due to the location of the locks and velocities generated during above normal river conditions.

The average annual benefits, at 7 percent, are estimated as follows:

Annual Benefits	Amount
Commercial Navigation	\$ 18,320,000
Recreation	52,000
Total	\$ 18,372,000

FISCAL YEAR 2008: The amount provided will be applied as follows:

Complete Dam Rehabilitation	\$ 60,000
Continue Jenkins Preservation	500,000
Planning, Engineering and Design	170,000
Construction Management	175,000
Total	\$ 905,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Jenkins Preservation	500,000
Planning, Engineering and Design	200,000
Construction Management	230,000
Total	\$1,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, 50 percent of the total costs of construction will be derived from Inland Waterways Trust Fund. The West Virginia Division of Natural Resources will be responsible for operation and management of mitigation lands at an estimated average annual cost of \$55,000 for the Greenbottom area and \$345,000 for the on-site mitigation (fish hatchery). The West Virginia Division of Culture and History annual O&M cost for the General Jenkins House is estimated to be \$30,000.

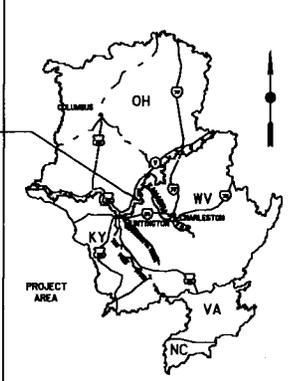
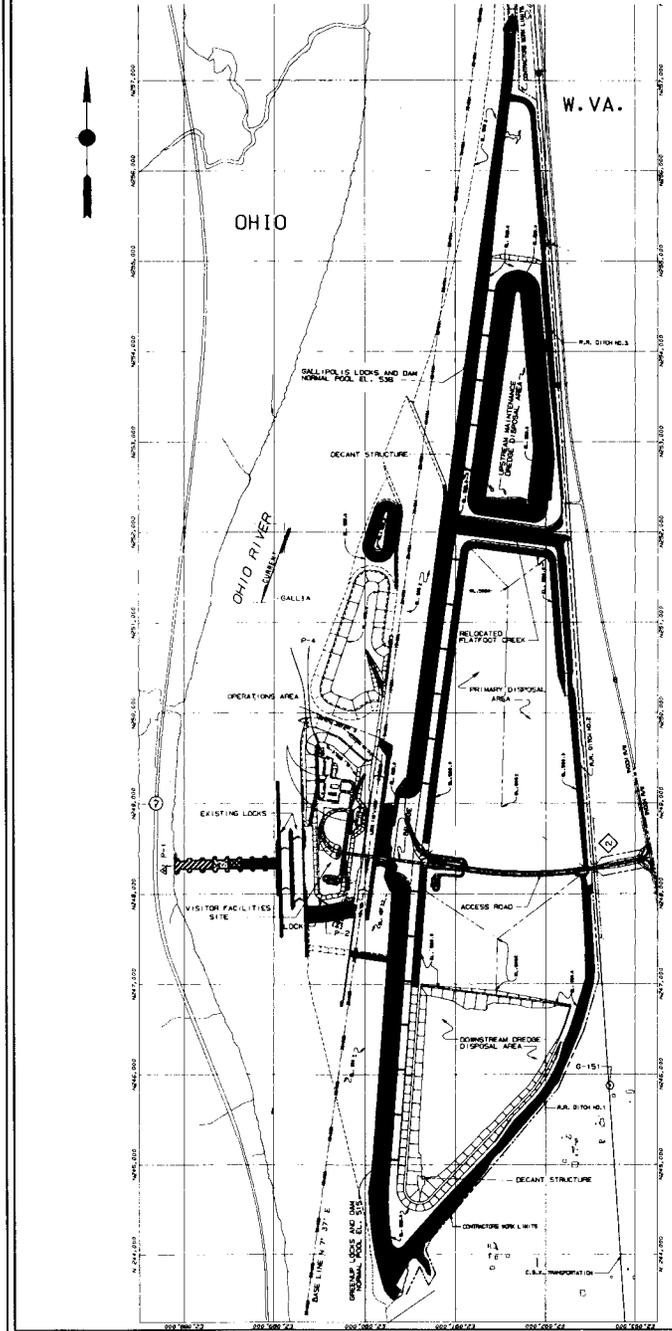
STATUS OF LOCAL COOPERATION: The West Virginia Division of Natural Resources by lease agreement has assumed responsibility for operation and management of the off-site mitigation area. The General Jenkins House has been subleased to the West Virginia Division of Culture and History. The Corps is in the process of turning the completed onsite mitigation fish hatchery in fee over to the State of West Virginia Division of Natural Resources.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$383,500,000 is unchanged from the latest estimate presented to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (EIS) was filed with Environmental Protection Agency on January 8, 1981. Supplement I to the EIS was filed on October 30, 1991.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1984. Funds to initiate construction were appropriated in FY 1985. The Water Resources Development Act (WRDA) of 1992, Section 118, changed the project name to the Robert C. Byrd Locks and Dam.

The Water Resources Development Act of 2000, Section 548, includes authority to preserve the General Jenkins House, which is located at the Greenbottom Wildlife Management Area. The Corps is working with the West Virginia Division of Culture and History and interested local historical groups to develop a strategy to implement the provisions of WRDA 2000 while performing the necessary planning and preparation steps for preservation.



VICINITY MAP
SCALE IN MILES
0 50 100 FT

STATUS OF WORK

- WORK COMPLETED
- WORK UNDERWAY WITH FUNDS AVAILABLE FOR F.Y. 2008
- WORK PROPOSED WITH FUNDS REQUESTED FOR F.Y. 2009
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER F.Y.2009

LANDS	100%	100%	99%	.5%	.5%
RELOCATIONS	100%				
DAM REHABILITATION	99%	.5%	.5%		
LOCKS	99%	.5%	.5%		

5 FEBRUARY 2007

OHIO RIVER
ROBERT C. BYRD LOCKS AND DAM
 HUNTINGTON DISTRICT
 GREAT LAKES AND OHIO RIVER DIVISION

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Great Lakes and Ohio River Division

Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2009 \$	Allocation FY 2009 \$	Tentative Allocation FY 2010 \$	Additional to Complete After FY 2010 \$
Buffalo River Environmental Dredging, NY Cost-shared Feasibility Study Buffalo District	1,050,000	583,204	100,000	400,000	11,796

The Buffalo River is located at the eastern end of Lake Erie in Buffalo, NY. The Buffalo River has been identified as one of 43 Areas of Concern (AOCs) in the Great Lakes Basin. Contaminated sediments adjacent to the Federal navigation channel eventually settle in the Federal navigation channel and are unsuitable for open lake disposal. Periodic maintenance of the Federal navigation project requires disposal of the contaminated sediments into a confined disposal facility (CDF) at considerable Federal expense. The reconnaissance report was completed in December 2003 and addressed the use of Section 312 of the WRDA 1990, as amended, which allows the removal of contaminated sediments adjacent to Federal Navigation projects. The feasibility study provides for sediment analyses, delineation of areas requiring environmental dredging, development of project cost estimates/cost sharing, and an assessment of the ability of the local sponsor to support the project. Removal or remediation of these sediments will significantly reduce the future Federal cost of maintaining the navigation channel, restore beneficial uses of the river, and allow for the implementation of ecosystem restoration projects. Beneficial use impairments for the Buffalo River currently listed by the USEPA include: restrictions on fish and wildlife consumption; fish tumors or other deformities; degradation of benthos; restrictions on dredging activities; and loss of fish and wildlife habitat. The New York State Department of Environmental Conservation and the Buffalo River Remedial Action Plan (RAP) Committee support contaminated sediment removal. Additionally, the city of Buffalo and Erie County have demonstrated an interest in supporting environmental restoration projects within the study area. The feasibility cost sharing agreement initiating the feasibility study was signed with the Friends of the Buffalo Niagara Rivers, now the Buffalo/Niagara RIVERKEEPERS, on April 8, 2005.

Fiscal Year 2008 funds are being used to execute the technical investigations composing the feasibility study such as the human health and ecological risk assessment; the geotechnical analysis; and the engineering and design analysis. The estimated cost of the feasibility phase is \$2,100,000, which is to be shared on a 50/50 percent basis by both Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$2,100,000
Feasibility Phase (Federal)	1,050,000
Feasibility Phase (Non-Federal)	1,050,000

The scheduled completion date of the feasibility study is to be determined.

4 February 2008

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Great Lakes and Ohio River Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Davidson County, Mill Creek Watershed, TN Nashville District	1,388,000	662,000	223,000	150,000	253,000	100,000	0

Mill Creek is a major tributary of the Cumberland River in southeastern Davidson County and north eastern Williamson County. The Mill Creek watershed is 108 square miles and home to the federally listed endangered Nashville Crayfish. A recurrence of the May 1979 flood of record would cause an estimated \$93M in flood damages today. Over 1,000 homes and businesses are subject to flooding. Corrective measures evaluated during the reconnaissance study include floodway evacuation combined with wetland restoration and enhancement. These outputs will be further refined during the feasibility phase. The sponsor is the Metropolitan Government of Nashville and Davidson County. The sponsor understands its cost sharing responsibilities and has expressed an interest in cost sharing the feasibility phase, by letter of intent dated March 2001. The Feasibility Cost Sharing Agreement was executed on April 24, 2003.

FY 2008 funds will be used to continue the feasibility study. FY 2009 funds will be used to complete the feasibility phase. The estimated cost of the feasibility phase is \$2,550,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. A summary of study cost sharing follows:

Total Estimated Study Cost	\$2,663,000
Reconnaissance Phase (Federal)	113,000
Feasibility Phase (Federal)	1,275,000
Feasibility Phase (Non-Federal)	1,275,000

The reconnaissance phase was completed in April 2003. The completion date for the feasibility study is September 2009.

4 February 2008

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Great Lakes and Ohio River Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Indiana Harbor, IN Chicago District	3,686,000	1,639,000	297,000	550,000	900,000	300,000	0

The study area is located in northwest Indiana in the communities of Gary, East Chicago, and Hammond, Indiana. The study area covers 15.4 river miles, including the Indiana portion of the Grand Calumet River (with the exception of an area cleaned up by United States Steel) and the portions of the Lake George Canal and the Indiana Harbor Canal that are not part of the federal navigation channel. This area contains approximately two million cubic yards of bottom sediments that are highly contaminated with polynuclear aromatic hydrocarbons, metals (including lead and chromium), and PCB's (below the Toxic Substance Control Act level), causing it to be designated an Area of Concern (AOC) in the Great Lakes Water Quality Agreement. AOCs are identified as areas with one or more impairments of fourteen beneficial uses. This area fails all fourteen beneficial uses. The Grand Calumet River/Indiana Harbor is a high priority clean-up area for the Indiana Department of Environment Management (IDEM) and the Indiana Department of Natural Resources (IDNR), the non-Federal sponsors. The purpose of this study is to investigate and recommend alternatives for management of the contaminated sediment including removal and stabilization of embankments and other features within the ordinary High Water Mark for the Grand Calumet River. Sediment is the source of contamination and environmental restoration cannot occur without removal or management of the contaminated sediment. The Feasibility Cost Sharing Agreement was executed on 24 May 2004.

FY 2008 funds are being used to complete work on the draft Feasibility Report, draft EIS and HQ reviews. FY 2009 funds will be used to complete the Feasibility Report, EIS and approval process by the ASA (CW). The estimated cost of the feasibility phase is \$6,900,000, which is to be shared on a 50/50 percent basis by Federal and non-Federal interests. The non-Federal sponsor will provide their share as work-in-kind. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	\$7,122,000
Reconnaissance Phase (Federal)	250,000
Feasibility Phase (Federal)	3,436,000
Feasibility Phase (Non-Federal)	3,436,000

The feasibility phase completion date is 30 March 2009.

CONSTRUCTION

APPROPRIATION TITLE: Construction - (Aquatic Ecosystem Restoration and Protection)

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

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

DESCRIPTION: The Chicago Sanitary and Ship Canal (CSSC) is a man-made waterway that connects the Chicago River and the Des Plaines River, which creates a connection between Lake Michigan and the Mississippi River basin. A temporary Demonstration Dispersal Barrier has been operating in the CSSC since 2002. The design life is estimated at 3-5 years. This project was initiated as a demonstration project to determine what techniques may best prohibit the dispersal of aquatic nuisance species, such as Asian carp, through the CSSC. The Chicago District installed an electric Dispersal Barrier (Barrier I) that would not interfere with navigation. An array of DC electrodes was installed on the channel bottom. When power is provided, an electric field is created within the water that repels fish. A second permanent dispersal barrier is needed to provide continued protection against nuisance species. Barrier II will also be an electric field barrier, but will include design improvements identified during monitoring and testing of the Demonstration Barrier. Barrier II is being constructed in two phases, IIA and IIB. The first phase consists of construction of two underwater electrode arrays and one control house. This control house will be able to operate one of the two arrays. The second phase consists of construction of a second control house that will allow both arrays to be operated at the same time.

Barrier I and Barrier II were authorized as separate projects; however, WRDA 2007 authorized that they constitute a single project at Federal expense. WRDA 2007 further authorized USACE to upgrade and make permanent Barrier I; complete Barrier II; operate and maintain both barriers as a system; conduct a study of a range of options and technologies for reducing impacts of hazards that may reduce the efficacy of the barriers (hazards study); and provide to each state a credit in an amount equal to the amount of funds contributed toward Barrier II.

AUTHORIZATION: Section 3061, Water Resources Development Act 2007. Barrier I: Section 1202, Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (PL 101-636, 11/29/90, as amended through 10/26/96), Section 2309, Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery 2006 (P.L. 109-234). Barrier II: Section 1135, Water Resources Development Act 1986 (Continuing Authority Program), Section 345, FY 2005 DC Appropriations Act (P.L. 108-335).

REMAINING BENEFIT-REMAINING COST RATIO: N/A.

TOTAL BENEFIT-COST RATIO: N/A.

INITIAL BENEFIT-COST RATIO: N/A.

BASIS OF BENEFIT-COST RATIO: N/A.

Division: Great Lakes and Ohio River

District: Chicago

Chicago Sanitary and Ship Canal Dispersal Barrier, IL

4 February 2008

SUMMARIZED FINANCIAL DATA			PHYSICAL STATUS (1 Jan 2008)	PERCENT COMPLETE	COMPLETION SCHEDULE
	<u>Demo Barrier I</u>	<u>Barrier II & Perm. Barrier I</u>			
Estimated Federal Cost	\$5,808,000	\$23,830,000	Barrier I	50	2010
Estimated Non-Federal Cost	0	0	Barrier II	50	2009
Cash Contributions		2,275,000 ^{1/}	Physical Data		
Other Costs		0	Barrier I: 12 160-ft steel cable electrodes over 54 ft of the CSSC + control house.		
Project Cost Subtotals	\$5,808,000	\$23,830,000 ^{2/}	Barrier II: 84 160-ft steel billet electrodes over 480 ft of the CSSC + 2 control houses		
Total Estimated Project Cost	\$29,638,000				

^{1/} Non-federal cash contributions for which a credit is to be provided.

^{2/} \$16,000,000 for Barrier II, \$6,830,000 for making Barrier I permanent, and \$1,000,000 for the hazards study.

SUMMARIZED FINANCIAL DATA	<u>Demo Barrier I</u>	<u>Barrier II & Perm. Barrier I</u>	<u>Total</u>	ACCUM. PCT. OF EST. FED. COST
Allocations to 30 September 2004	\$3,170,000	\$ 4,653,000	\$7,823,000	
Allocations for FY 2005	500,000	2,172,000	2,672,000	
Allocations for FY 2006	400,000	0	400,000	
Allocations for FY 2007	500,000	0	500,000	
Conference Amount for FY 2008	738,000	7,872,000	8,610,000	
Allocations through FY 2008	5,308,000	14,697,000 ^{3/}	20,005,000	67
Allocation Requested for FY 2009	500,000	5,750,000	6,250,000	89
Programmed Balance to Complete after FY 2009	0	3,383,000	3,383,000	11
Unprogrammed Balance to Complete after FY 2009	0	0	0	

^{3/} Includes CAP Section 1135 allocations of \$3,702,000.

Division: Great Lakes and Ohio River

District: Chicago

Chicago Sanitary and Ship Canal Dispersal Barrier, IL

4 February 2008

JUSTIFICATION: The Chicago Sanitary and Ship Canal is the only continuous aquatic link between the Great Lakes and Mississippi River watersheds. The canal is heavily used by commercial and recreational crafts. This man-made canal serves as the primary corridor for the dispersal of aquatic invasive species between these two major drainage basins. The adverse economic and ecological effects of invasive species can be devastating, as has been evidenced by the Zebra Mussel and Sea Lamprey infestations of the Great Lakes. Currently the Asian Carp fish infestation in the Illinois Waterway is about 50 miles from the barrier location. Asian carp could have a strong negative effect on the commercial and sport fisheries in the Great Lakes, which have an estimated value to the regional economy of \$4 to \$5 billion annually. It is important to keep an operational barrier system and to ensure all possible steps are taken for the successful operation of the system. The aquatic nuisance species Dispersal Barriers protect the sustainability of aquatic habitat in the 5 Great Lakes and the 121 rivers within the Great Lakes basin and 852 rivers within the Mississippi River basin while maintaining the commercial and economic viability of the Chicago Sanitary and Ship Canal. The project provides an example of technologies that can be applied to other navigation canals where invasive species are a concern such as the Erie Canal, Lake Champlain, and the Tennessee Tombigbee Waterway.

FISCAL YEAR 2008: The requested amount of \$8,610,000 will be applied as follows:

Continue Operation of Barrier I	\$ 738,000 ^{1/}
Engineering and Design to make Barrier I permanent	750,000
Complete design and initiate construction of Barrier IIB	6,000,000
Construction Management of Barrier IIB	500,000
Complete Safety Testing and Begin Operation of Barrier IIA	622,000 ^{2/}
 Total	 \$ 8,610,000

FISCAL YEAR 2009: The requested amount of \$6,250,000 will be applied as follows:

Continue Operation of Barrier I	\$ 500,000 ^{1/}
Continue Operation of Barrier II	250,000 ^{2/}
Complete Construction of Barrier II	1,800,000
Engineering, Design and Initiate Construction to make Barrier I permanent	3,700,000
 Total	 6,250,000

^{1/} Continued operation of Barrier I during completion of Barrier II.

^{2/} Operation of Barrier IIA during completion of Barrier IIB.

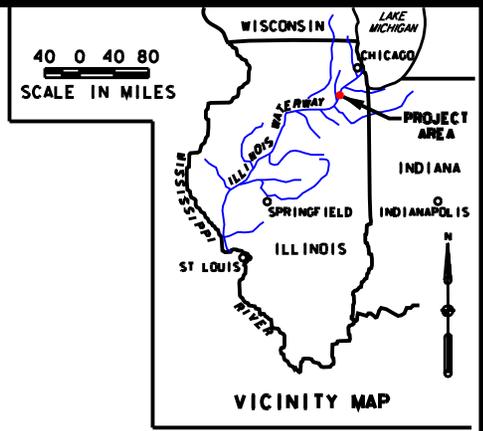
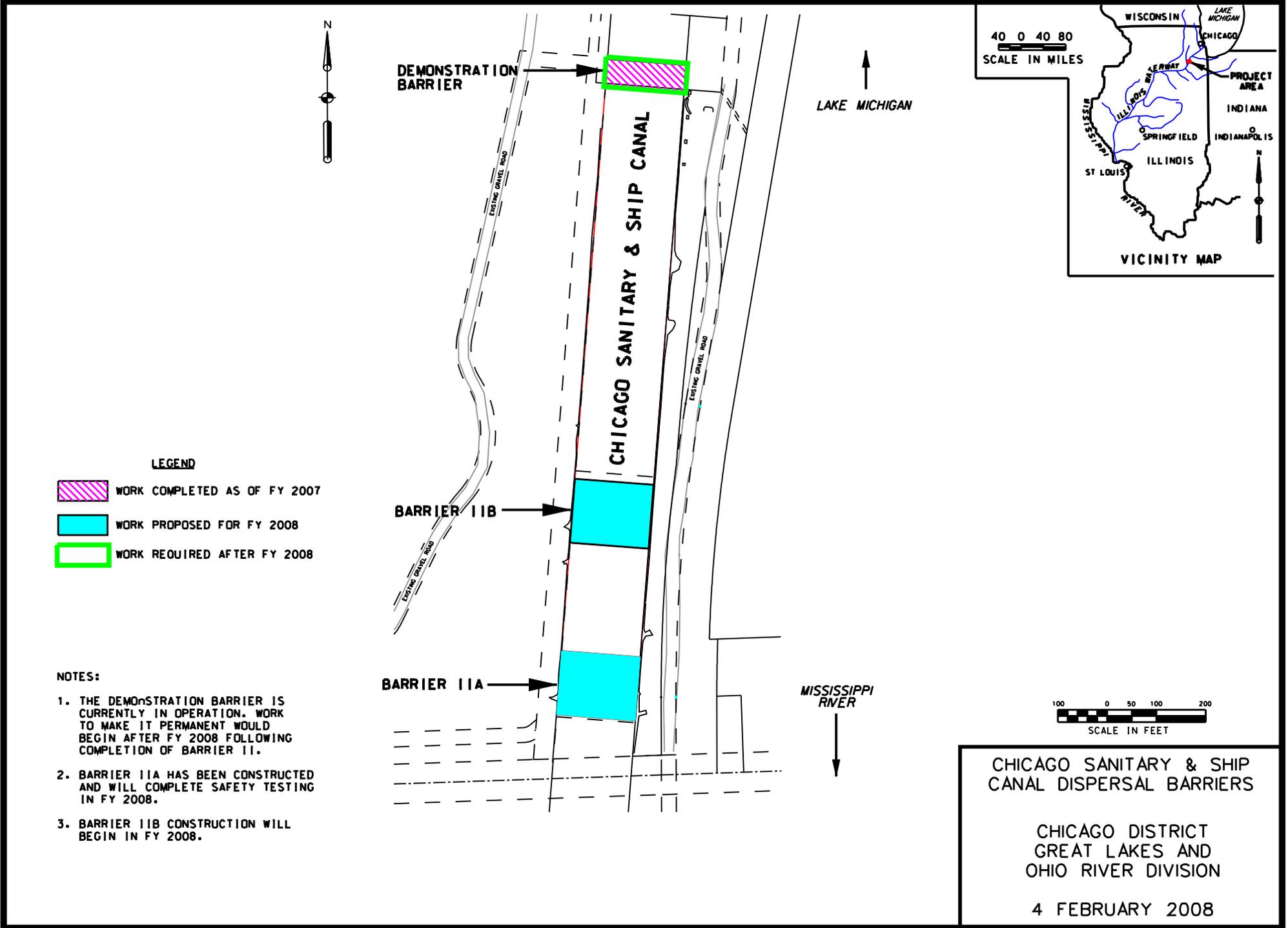
NON-FEDERAL COST: The non-Federal contribution to Barrier II through FY07 was \$2,275,000. WRDA 2007 makes the remainder of the project, including future operation and maintenance, a full Federal responsibility and provides the sponsor a credit on future work with the Corps for the funds they contributed.

STATUS OF LOCAL COOPERATION: As a result of WRDA 2007, the barrier project is 100% Federal. The State of Illinois was the local sponsor for the Barrier II project. The Project Cooperation Agreement was executed on 21 November 2003 and amended on 14 July 2005.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate is \$29,638,000. The Federal cost estimate reported for the FY08 budget was \$21,692,500. The increase of \$7,945,500 is because of transition of the project to 100% Federal funding, addition of the hazards study to the project scope, and the operation of the demonstration project for two more years than originally anticipated.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Assessment was issued in August 1999. A Finding of No Significant Impact was signed 28 December 1999.

OTHER INFORMATION: Funds to initiate construction for Barrier I were appropriated in FY 1998. Barrier II was initiated under Section 1135 of the Continuing Authorities Program. After Section 345 was enacted, funds specifically for Barrier II were appropriated in FY 2005. Barrier II will not become operational until safety testing is completed and approved by the Corps of Engineers and the Coast Guard. Safety testing of Barrier IIA is underway.



LEGEND

-  WORK COMPLETED AS OF FY 2007
-  WORK PROPOSED FOR FY 2008
-  WORK REQUIRED AFTER FY 2008

NOTES:

1. THE DEMONSTRATION BARRIER IS CURRENTLY IN OPERATION. WORK TO MAKE IT PERMANENT WOULD BEGIN AFTER FY 2008 FOLLOWING COMPLETION OF BARRIER 11.
2. BARRIER 11A HAS BEEN CONSTRUCTED AND WILL COMPLETE SAFETY TESTING IN FY 2008.
3. BARRIER 11B CONSTRUCTION WILL BEGIN IN FY 2008.



CHICAGO SANITARY & SHIP CANAL DISPERSAL BARRIERS

CHICAGO DISTRICT
GREAT LAKES AND
OHIO RIVER DIVISION

4 FEBRUARY 2008

MISSISSIPPI VALLEY DIVISION

MISSISSIPPI VALLEY DIVISION

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MISSISSIPPI VALLEY DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Project	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
LOUISIANA							
Calcasieu River Basin, LA New Orleans District	1,303,000	261,000	297,000	350,000	322,000	67,000	0

The study area is located in southwestern Louisiana and includes Calcasieu Parish (the City of Lake Charles, Gravity Drainage District 5 of Ward 4, and Gravity Drainage District 4 of Ward 3.) Development in the study area is subject to repetitive flooding particularly in the southwest portion of the Lake Charles area in the southern portion of the Calcasieu Basin. Headwater flooding and backwater flooding from the Calcasieu River is a major problem in the study area. Fish and wildlife habitat have been lost to development in the upper basin. Erosion, subsidence, saltwater intrusion, and development in the estuarine areas of the lower basin have also compounded this problem. The study will address the feasibility of measures to reduce flooding and restore fish and wildlife habitat in the area. The Calcasieu Parish Police Jury is the cost-sharing sponsor for the feasibility phase and a feasibility cost sharing agreement was signed on 3 May 2005. The anticipated outputs of flood damage prevention and environmental restoration are in accord with Administration policy.

Fiscal Year 2008 funds are being used to continue feasibility by completing the hydraulics and hydrology models for base and planned conditions, continue plan formulation, and public involvement. In addition, an economic analysis including a structural inventory, feasibility level design of alternatives, environmental compliance documentation, and a real estate plan will be initiated. The funds requested for Fiscal Year 2009 will be used in the final stages of the feasibility study, including environmental compliance documentation completion and submission of a decision document.

The preliminary estimated cost of the feasibility phase is \$2,206,000 and is being 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	\$2,406,000
Reconnaissance Phase (Federal)	200,000
Feasibility Phase (Federal)	1,103,000
Feasibility Phase (Non-Federal)	1,103,000

4 February 2008

Calcasieu River Basin, LA - Continued

The reconnaissance phase was completed in May 2005. The feasibility study completion date is scheduled for April 2009 with the Division Engineer's Transmittal Letter.

4 February 2008

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Project	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
LOUISIANA							
St. Charles Parish Urban Flood Control New Orleans District	2,976,000	613,000	438,000	860,000	197,000	500,000	368,000

St. Charles Parish is located west of the city of New Orleans, LA, with its northern boundary along the southwest shore of Lake Pontchartrain. Levees impound rainfall and the interior drainage system is insufficient to prevent flooding from heavy rainfall events. Flood damages from the May 1995 flood resulted in insurance payments of over \$57 million; total damage payments since 1978 are \$72 million. Flood control improvements are needed to reduce repetitive damages. The study will investigate the feasibility of reducing flood damages across the east bank of St. Charles Parish. Alternatives include adding pump stations in both the Federal and non-Federal levees and associated channel work. The feasibility cost sharing agreement was executed on 30 March 2005. The sponsors are the St. Charles Parish Council and the Pontchartrain Levee District.

Fiscal Year 2007 carryover funds combined with Fiscal Year 2008 funds are being used to complete hydraulic modeling of existing conditions and alternatives, and continue economic and environmental studies of without-project conditions.

Funds requested for Fiscal Year 2009 will be used to continue feasibility study efforts. The preliminary estimated cost of the feasibility phase is \$5,492,000, which is to be 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	\$5,722,000
Reconnaissance Phase (Federal)	230,000
Feasibility Phase (Federal)	2,746,000
Feasibility Phase (Non-Federal)	2,746,000

The feasibility study completion date is being determined.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction – Channels and Harbors (Navigation)

PROJECT: Chain of Rocks Canal, Mississippi River, Illinois, (Design Deficiency Correction) (Continuing)

LOCATION: The Chain of Rocks Canal is located on the Mississippi River adjacent to river miles 184 to 194.4 in Madison County, Illinois.

DESCRIPTION: The recommended plan for design deficiency correction involves the installation of relief wells and construction of berms and a pump station. All work is programmed.

AUTHORIZATION: The original project was authorized by the River and Harbor Act of 2 March 1945.

REMAINING BENEFIT-REMAINING COST RATIO: 2.0 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.6 to 1 at 7 3/8 percent (FY 1999).

BASIS OF BENEFIT-COST RATIO: Based on the Chain of Rocks Design Deficiency Report dated July 1997 at October 1996 price levels.

SUMMARIZED FINANCIAL DATA	Original Project	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
		Entire Project	40	TBD
Actual Federal Cost	\$59,260,000	PHYSICAL DATA		
Actual Non-Federal Cost	0	The proposed plan provides for correcting underseepage deficiencies on the nine-mile long levee, installing new relief wells, replacing nonfunctional relief wells, utility relocations landside of the levee, adding fill to berms and filling in low areas, constructing a 155 cfs pump station, and constructing wetland mitigation features.		
Cash Contributions	\$ 0			
Other Costs	0			
Total Original Project Cost	\$59,260,000			
Mississippi Valley Division	St. Louis District 4 February 2008	Chain of Rocks Canal, Mississippi River, Illinois (Design Deficiency Correction)		

			ACCUM PCT OF EST FED COST (Remedial Work Only)
Remedial Work			
Estimated Federal Cost		\$48,500,000	
Estimated Non-Federal Cost		0	
Cash Contributions	\$	0	
Other Costs		0	
Total Estimated Remedial Cost		\$48,500,000	
Total Estimated Project Cost		\$105,660,000	
Allocations to 30 September 2005		\$ 11,753,000	
Allocation for FY 2006		5,440,000	
Allocation for FY 2007		6,800,000	
Conference Allowance for FY 2008		4,080,000	
Allocation for FY 2008		4,080,000	
Allocations to 30 September 2008		28,073,000	58
Allocation Requested for FY 2009		2,500,000	63
Programmed Balance to Complete after FY 2009		17,927,000	
Unprogrammed Balance to Complete after FY 2009		0	

Mississippi Valley Division

St. Louis District
4 February 2008

Chain of Rocks Canal, Mississippi River, Illinois
(Design Deficiency Correction)

JUSTIFICATION: This project is receiving a higher funding priority in the budget than its remaining benefit-remaining cost ratio would normally allow because it addresses significant risk to human safety in accordance with the Army Corps of Engineers performance-based guidelines for the construction account. The Chain of Rocks Canal Levee System consists of a dual line of levees running parallel to the canal constructed as part of the Chain of Rocks Canal, Illinois, navigation project. The operation and maintenance of these levees is a 100 percent Federal responsibility. The eastern line of this levee system serves as an integral part of the main line levee protection to the East St. Louis and vicinity area, but is currently the weak link of the system. The east levee has demonstrated inadequate underseepage performance during past floods. Quick conditions and sand boils developed on the landside of the levee during high river stages. The original design assumptions related to the coefficients of permeability for the aquifer and top stratum materials were incorrect. The relief well system was found to be deficient. The levee, as originally designed, relies on the impoundment of water against the landside toe of the levee in order to maintain levee stability; however, development over the last 40 years has prevented effective use of this method. Correction of the deficiencies will assure the integrity of the levee system and provide urban level protection for the East St. Louis metropolitan area. Failure of the levee would affect a population of 250,000 mainly low income and poor residential neighborhoods and a heavily industrialized area with total property values of \$1.4 billion.

The Budget includes funding primarily to address a significant risk to human safety. The Corps made this determination based on many factors such as the likelihood and magnitude of the potential flooding, the number of people living in the flood plain, the likely warning time, the availability of evacuation routes, and site-specific engineering factors.

Average annual benefits for the design deficiency correction are as follows:

Annual Benefits	Amount
Flood Damage Reduction	\$ 2,618,000
Navigation	29,000
Total	\$ 2,647,000

FISCAL YEAR 2008: Current year funds are being used as follows:

Wetland Mitigation	\$ 675,000
Berms	2,785,000
Maintenance During Construction	35,000
Planning, Engineering and Design	345,000
Construction Management	240,000
Total	\$4,080,000

Mississippi Valley Division

St. Louis District
4 February 2008

Chain of Rocks Canal, Mississippi River, Illinois
(Design Deficiency Correction)

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue contract work for North Berms	\$2,125,000
Maintenance During Construction	25,000
Planning, Engineering and Design	200,000
Construction Management	150,000
Total	\$2,500,000

NON-FEDERAL COST: The project is 100 percent Federal.

STATUS OF LOCAL COOPERATION: Not applicable.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$48,500,000 is an increase of \$2,100,000 from the latest estimate (\$46,400,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 1,389,000
Post Contract Award and Other Estimating (including Contingency Adjustments)	640,000
Price Escalation on Real Estate	71,000
Total	\$2,100,000

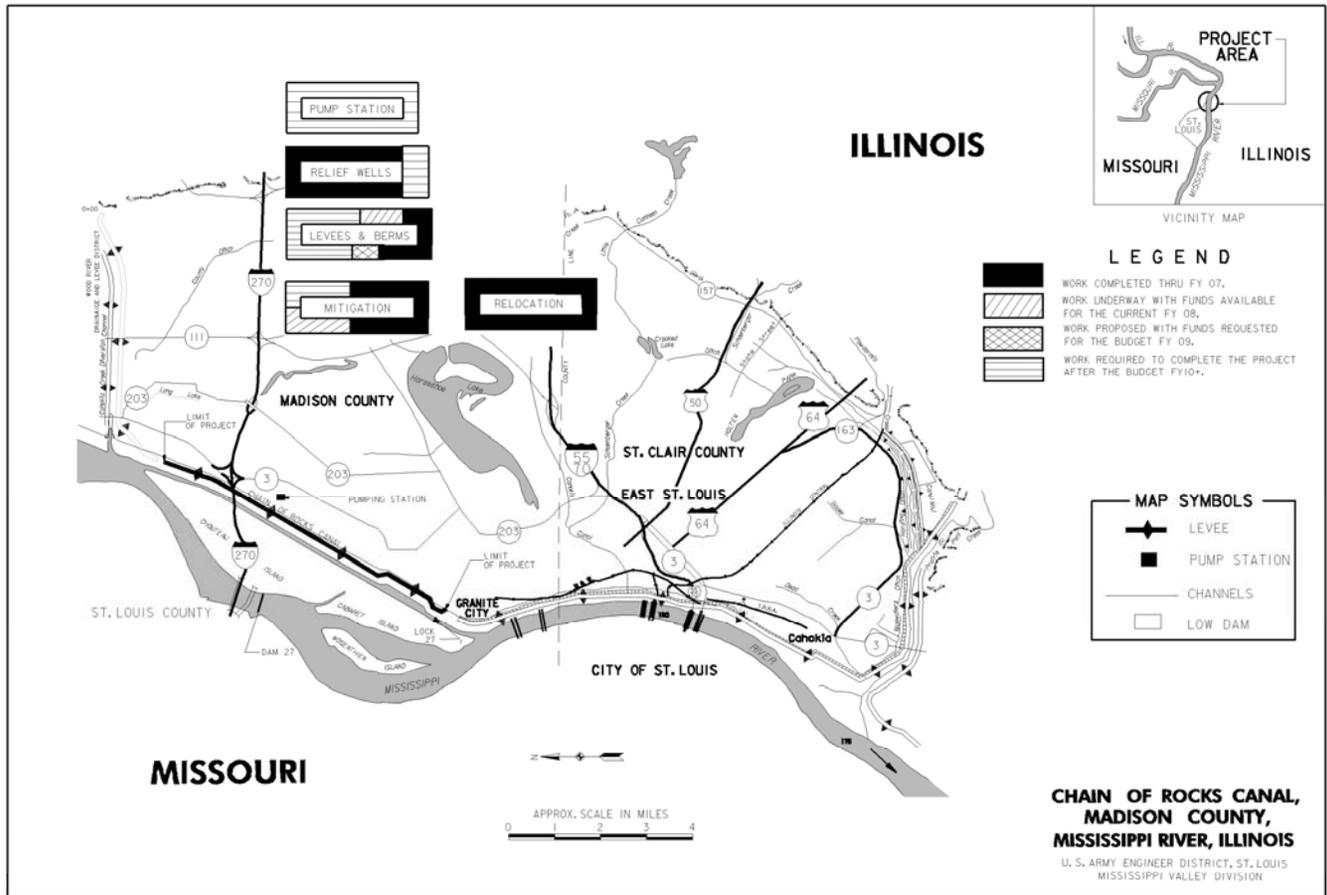
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Assessment resulted in a Finding of No Significant Impact (FONSI), which was signed 21 May 1996. A second FONSI for revised plans was signed 14 August 2002.

OTHER INFORMATION: Previous funding included the actual cost of \$59,260,000 for the construction of the original project, which was completed in Fiscal Year 1953. Funds to initiate construction for the remedial work were appropriated in Fiscal Year 1999. The deficiency report documented a need for a pumping station to handle 155 cubic feet per second in interior flows. Without this pump station, there is no means of handling the additional flows from newly installed relief wells. Award of the pump station contract is pending completion of the levee rehabilitation. Fish and Wildlife costs are \$1,236,000.

Mississippi Valley Division

St. Louis District
4 February 2008

Chain of Rocks Canal, Mississippi River, Illinois
(Design Deficiency Correction)



Mississippi Valley Division

St. Louis District
4 February 2008

Chain of Rocks Canal, Mississippi River, Illinois
(Design Deficiency Correction)

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Crookston, Minnesota (Continuing)

LOCATION: The City of Crookston is located on the Red Lake River in Polk County in northwestern Minnesota, about 25 miles east of the Minnesota - North Dakota border and about 85 miles south of the Canadian border.

DESCRIPTION: The project consists of two downstream high-flow channels, levees providing protection from the 100-year flood events for the neighborhoods of Woods Addition, Thorndale and Riverside/Downtown, and flood plain management techniques for areas not protected by permanent levees. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1999, Sec 101(a)(23) (Public Law 106-53).

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because project is substantially complete.

TOTAL BENEFIT-COST RATIO: Not applicable because project is substantially complete.

INITIAL BENEFIT-COST RATIO: 1.6 to 1 at 6 7/8 percent (FY 2001).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Feasibility Report and Environmental Assessment for Local Flood Control, Crookston, Minnesota dated June 1997 at October 1996 price levels.

STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Entire Project	98	Sep 2009

PHYSICAL DATA

Permanent Levees	1.5 miles
Channel Cutoffs	2
Road Raise	1

Mississippi Valley Division

St. Paul District
4 February 2008

Crookston, Minnesota

ACCUM
PCT OF EST
FED COST

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		\$ 7,338,000	
Estimated Non-Federal Cost		3,946,000	
Cash Contributions	\$1,461,000		
Other Cost	2,485,000		
Total Estimated Project Cost		\$ 11,284,000	
Allocations to 30 September 2005		\$7,038,000	
Allocation for FY 2006		0	
Allocation for FY 2007		0	
Conference Allowance for FY 2008		0	
Allocation for FY 2008		0	
Allocations through FY 2008		7,038,000	96
Allocation Requested for FY 2009		300,000	100
Programmed Balance to Complete After FY 2009		0	
Unprogrammed Balance to Completed After FY 2009		0	

JUSTIFICATION: About 800 Crookston residences are located in flood prone areas of the city. The 1950 flood inundated most of the flood prone properties. However, for subsequent floods in 1965, 1969, and 1979, the City of Crookston had erected levees that together with emergency flood fights prevented major damages to the flood prone residential areas. The local levees at Crookston were not constructed to permanent levee standards, and considerable deterioration has occurred since construction. There are six separable flood prone reaches in Crookston, and each reach is protected by a local levee, now in unreliable condition. The risk of failure of these levees during a large flood could cause catastrophic damages. The flood of April 1997 was the maximum flood of record, requiring a massive emergency flood fight to limit flood damages and prevent loss of life. It is expected that a 100-year flood event would result in damage in Crookston that would exceed \$15 million. The average annual benefits, all for flood control, are \$1,118,000.

FISCAL YEAR 2009: The requested amount of \$300,000 will be applied as follows:

Complete project by repairing/replacing damaged rock berms	\$ 300,000
Total	\$ 300,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights-of-way, and borrow and excavated or dredged material disposal areas.	\$ 2,152,000	\$ 0
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	333,000	
Pay 12.9 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent as determined under Section 103(m) of the Water Resources Development Act of 1986, as amended to reflect the non-Federal sponsor's ability to pay, but no less than 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	1,461,000	28,700
Total Non-Federal Costs	\$ 3,946,000	\$ 28,700

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

STATUS OF LOCAL COOPERATION: The City of Crookston is the local sponsor for this project. A Project Cooperation Agreement (PCA) for construction was coordinated with the city and they are in agreement with its terms and conditions. The PCA was executed in March 2001. The city has instituted a special services district property tax to pay for this flood control project. In addition, the city has assembled a package of financial support from several state and local agencies.

Mississippi Valley Division

St. Paul District
4 February 2008

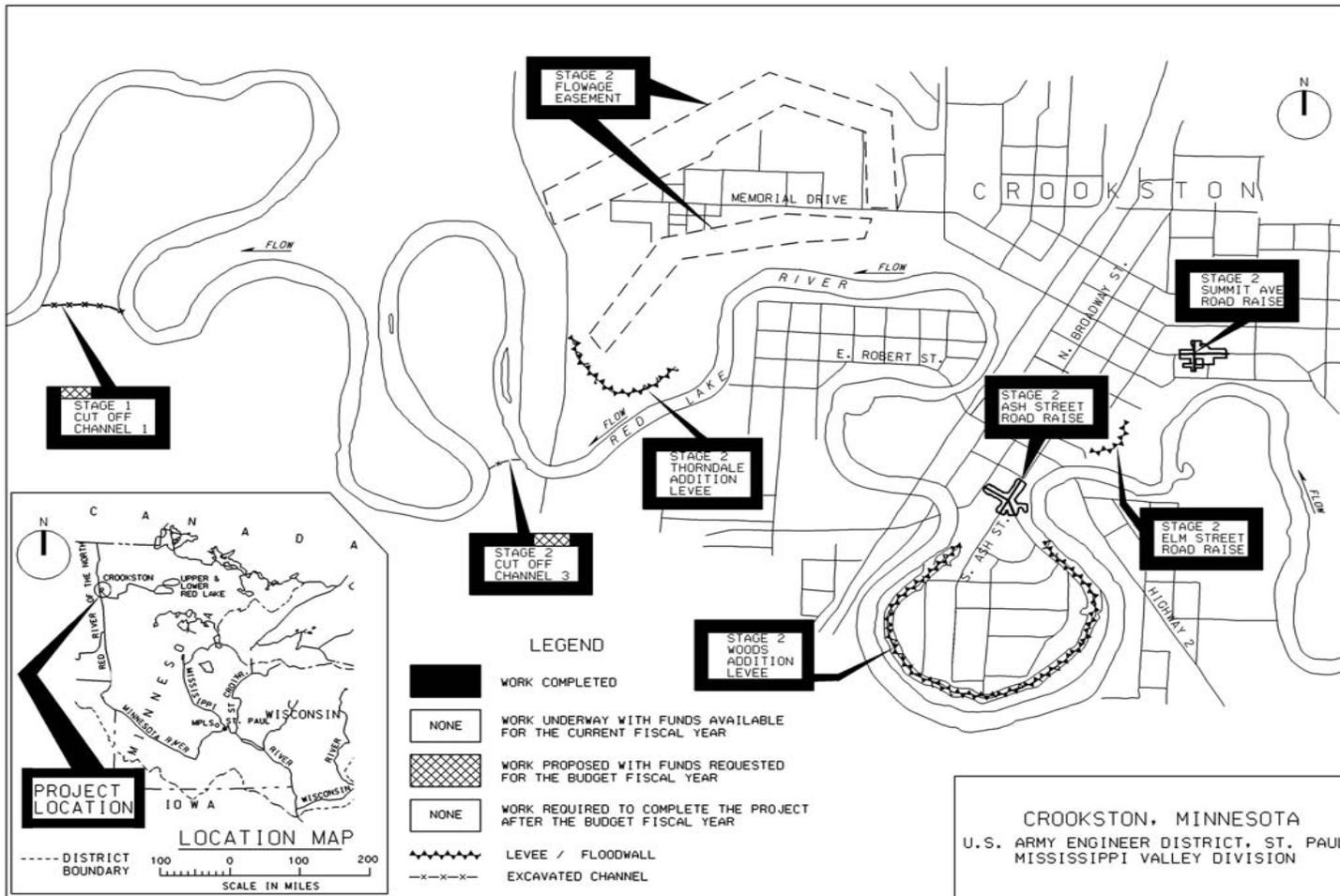
Crookston, Minnesota

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$7,338,000 is an increase of \$508,000 over the latest estimate (\$6,830,000) presented to Congress (FY 2004). This change includes the following items:

Item	Amount
Post Contract Award and Other Estimating adjustments	\$ 508,000
Total	\$ 508,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment was prepared in conjunction with the Feasibility Report. The environmental review process indicates that the proposed action does not constitute a major Federal action significantly affecting the environment. A Finding of No Significant Impact (FONSI) was signed 18 June 1997.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1997. Funds to initiate construction were appropriated in Fiscal Year 2001. Work was substantially complete in November 2004. In the spring of 2005, high flows and large ice severely damaged two rock berms at the upstream end of cutoff channels 1 and 3 before the project was turned over to the local sponsor. Requested funds are needed to complete the project by repairing and/or replacing the two rock berms to financially close out the project and turn it over to the local sponsor.



APPROPRIATION TITLE: Construction – Local Protection (Flood Control)

PROJECT: East St. Louis, Illinois (Continuing)

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

DESCRIPTION: The project consists of rehabilitation of 21 small gravity drains, 10 large gravity drains (gatewells), 20 closure structures, and 300 relief wells; minor floodwall and levee rehabilitation work; rehabilitation of 12 pumping stations and 3 drainage control structures; replacement of 3 bridge structures, abandonment and removal of 4 bridge structures and 6 segments of channel rehabilitation. All work, except bridges, is programmed. The bridge work, which is unprogrammed, will be performed at 100 percent non-Federal cost.

AUTHORIZATION: Energy and Water Development Appropriations Act of 1988 (PL 100-202).

REMAINING BENEFIT-REMAINING COST RATIO: 9.6 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 6.9 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 4.6 to 1 at 8 7/8 percent (FY 1988).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Supplemental Project Report, completed March 1999.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$ 40,651,000		Entire Project	93	TBD
Programmed Construction	40,651,000					
Unprogrammed Construction	0					
PHYSICAL DATA						
Estimated Non-Federal Cost		17,367,000		Floodwall & Levee Work		
Programmed Construction	13,409,000			Small Gravity Drains	21	
Cash Contributions	9,943,000 ¹			Large Gravity Drains	10	
Other Costs	3,466,000			Closure Structures	20	
Estimated Non-Federal Cost				Relief Wells	300	
Unprogrammed Construction	3,958,000			Pumping Stations	12	
Other Costs	3,958,000			Drainage Control Structures	3	
Total Estimated Programmed Construction Cost		\$ 54,060,000		Bridge Replacements	3	
Total Estimated Unprogrammed Construction Cost		3,958,000		Bridge Abandonment and Removal	4	
Total Estimated Project Cost		58,018,000		Channels	6 segments	
Allocations to 30 September 2005		33,186,000				
Allocation for FY 2006		990,000				
Allocation for FY 2007		2,802,000				
Conference Allowance for FY 2008		2,266,000				
Allocation for FY 2008		2,266,000				
Allocations to 30 September 2008		39,244,000	97			
Allocation Requested for FY 2009		200,000	97			
Programmed Balance to Complete After FY 2009		1,207,000				
Unprogrammed Balance to Complete After FY 2009		0				

¹ A cash contribution of \$12,842,000 is partially offset by a credit of \$2,899,000 for work-in-kind on completed work.

Mississippi Valley Division

St. Louis District
4 February 2008

East St. Louis, Illinois

JUSTIFICATION: The original project, authorized by the Flood Control Act of 1936, provides protection for 85,000 acres of business, industrial and residential areas, including East St. Louis, Granite City, Madison, Venice, Brooklyn, Fairmont and Sauget, Illinois. Urban design flood protection is provided for a Mississippi River flood stage of 52 feet on the St. Louis, Market Street gage. The project protects the largest urbanized Mississippi River floodplain north of New Orleans. The rehabilitation project was authorized by the Energy and Water Development Appropriations Act of 1988. As a result of failure of a deteriorated roller gate, localized flooding occurred in 1986 causing the evacuation of 1,200 persons and an estimated \$35,000,000 in damages. The need for extensive rehabilitation work was verified during preparation of a General Design Memorandum for the project during Fiscal Year 1990. The extensive rehabilitation work needed is the result of several decades of deferral of required project maintenance due to the limited financial capability of the local sponsor, Metro East Sanitary District. A tax referendum, which was passed in February 1989, provides the Metro East Sanitary District with increased tax revenue necessary to cost share in the rehabilitation project and to perform the necessary maintenance of the project after the rehabilitation is completed. The average annual benefits, all flood control, are \$30,159,000.

FISCAL YEAR 2008: Current year funds will be used as follows:

North Pump Station Triple Box Culvert, Phase 3	2,000,000
Planning, Engineering, and Design	166,000
Construction Management	100,000
Total	\$2,266,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

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

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas.	\$ 613,000	
Pay 23.9 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, as determined under Section 103(m) of the Water Resources Development Act of 1986 to reflect the non-Federal sponsor's work-in-kind credit based on Section 215 of the Flood Control Act of 1968.	12,842,000	\$ 426,000
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for construction of the project.	3,912,000	
Total Non-Federal Costs	\$17,367,000	\$ 426,000

Local interests are also required to operate and maintain all works after completion.

STATUS OF LOCAL COOPERATION: The local sponsor, the Metro East Sanitary District, is strongly supportive of the project. A tax referendum passed in February 1989, provided sufficient funds for local sponsorship of the project. Three Project Cooperation Agreements were executed for this project. The Project Cooperation Agreement for the first construction item was executed in November 1989. The second Project Cooperation Agreement was executed on 11 December 1990. The third Project Cooperation Agreement was executed on 11 March 1992. Amendment No. 1 to the third Project Cooperation Agreement, crediting the local sponsor for costs of work-in-kind (Clearing & Excavation of Drainage Channels), was executed on 9 August 1994. Amendment No. 2, executed on 2 September 1997, allows the Corps to award a contract for the previously identified work-in-kind and adds mitigation as a project cost feature. A Third Party Agreement, executed in August 1999 between Metro East Sanitary District and Canteen Creek Drainage District, eliminated the requirement for a fourth Project Cooperation Agreement for this project. The current non-Federal cost estimate of \$17,367,000, which includes a cash contribution of \$12,842,000, is an increase of \$9,763,000 from the non-Federal cost estimate of \$7,604,000 noted in the Project Cooperation Agreement, which included a cash contribution of \$7,062,000. In a financial document dated 19 May 1999, the non-Federal sponsor indicated they are financially capable and willing to contribute the increased non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

Mississippi Valley Division

St. Louis District
4 February 2008

East St. Louis, Illinois

COMPARISON OF FEDERAL COSTS ESTIMATES: The current Federal cost estimate of \$40,651,000 is an increase of \$1,015,000 from the latest estimate (\$39,636,000) presented to Congress (FY 2008). This change includes the following items:

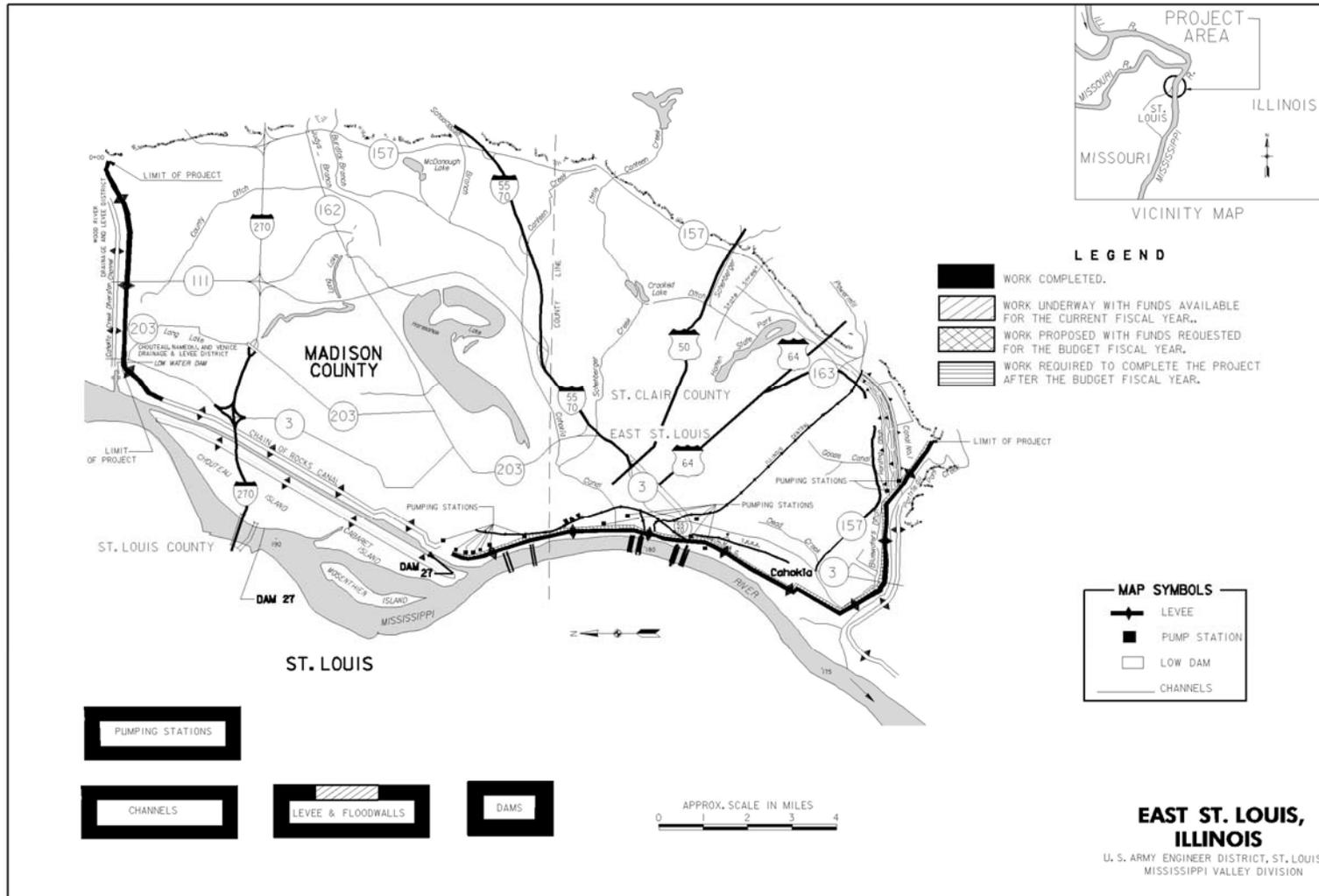
Item	Amount
Price Escalation on Construction Features	\$ 163,000
Post Contract Award and Other Estimated Adjustments (including Contingency Adjustments)	852,000
Total	\$1,015,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The project consists of rehabilitation of existing facilities and, for the major part of the project, will not affect environmental conditions except for short-term localized impacts. An environmental assessment and Finding of No Significant Impact was signed by the District Commander on 1 August 1991.

OTHER INFORMATION: Funds to initiate construction were appropriated in Fiscal Year 1988.

As a result of the drainage ditch clearing and excavation, mitigation was approved as a project cost per amendment Number 2 to the third Project Cooperation Agreement and was accomplished on project lands.

Fish and Wildlife mitigation costs are \$19,000.



APPROPRIATION TITLE: Construction – Local Protection (Flood Control)

PROJECT: St. Louis Flood Protection, Missouri and Illinois – Design Deficiency Correction (Continuing)

LOCATION: The St. Louis Flood Protection Project is located in St. Louis, Missouri, on the right bank of the Mississippi River between Miles 176.3 and 187.2, above the mouth of the Ohio River.

DESCRIPTION: The existing project consists of 11-miles of flood protection by combination of 35,614 feet of floodwalls, 20,700 feet of levees, 33 street and railroad closure structures, 28 pump stations, gravity drains, subdrains, relief wells, sheet pile cutoff walls, and pressure sewer emergency closure gatewells. The project protects approximately 3,160 acres of industrial and commercial development. The flood protection system was constructed with inadequate closure structures and underseepage protection. These design deficiencies must be corrected to ensure that the system provides its authorized level of service. The recommended rehabilitation includes replacing swing gates at 20 closure structures, permanently closing openings at 13 closure structures, installing 70 new relief wells and replacing 103 existing relief wells needed to improve underseepage control, and planting hardwoods to mitigate for 0.1 acre of impact. All work is programmed.

AUTHORIZATION: Public Law 84-256 dated 9 August 1955.

REMAINING BENEFIT-REMAINING COST RATIO: 4.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 4.0 to 1 at 7 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Reconstruction Reevaluation Report at October 2005 price level.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		10,829,000		Entire Project	0	TBD
Estimated Non-Federal Cost		5,831,000				
Cash Contributions	5,831,000			PHYSICAL DATA:		
Other	0					
 Total Estimated Project Cost		 \$16,660,000		Levee (main line)	11 miles	
Allocations to 30 September 2005		863,000		Relief wells – existing	103	
Allocation for FY 2006	297,000	Closure structures	33	Relief wells – new	70	
Allocation for FY 2007		378,000				
Conference Allowance for FY 2008		1,968,000				
Allocations for FY 2008		1,993,000 ¹				
Allocations through FY 2008		3,531,000	33			
Allocation Requested for FY 2009		2,000,000	52			
 Programmed Balance to Complete after FY 2009		 5,298,000				
Unprogrammed Balance to Complete after FY 2009		0				

¹ Includes allocation of \$25,000 to PED.

JUSTIFICATION: The flood frequency against which protection is to be provided is 800-year. River stage exceeds flood stage in approximately 1 out of every 2 years at the St. Louis Flood protection. For the design event and the without project condition, the average depth and velocity affecting most of the area is 22 feet and 7 feet per second, respectively. For the design event and the without project condition, the average warning time affecting most of the area is 12 hours, and the limiting factor to leave most of the benefit area is several dozen roads. During the flood of 1993, the system's current flood of record, portions of the levee experienced unexpected seepage problems that had to be handled on an emergency basis. The flood of record occurred during the summer of 1993 when the St. Louis gage recorded 49.58 ft. River elevations were above flood stage from 3 April to 7 October 1993. The frequency interval of that event was approximately 300-years. The project endured two other significant flood events: 43.3 feet on the St. Louis gage in 1973 and 41.9 feet on the St. Louis gage in 1995. The most recent flood was in 2002 which was approximately 37 feet on the St. Louis gage and was approximately an 8-year flood. In 1993, a severe underseepage floodwall foundation blow out occurred immediately east of Riverview Boulevard. On July 22, 1993, with a Mississippi River level at 46.9 feet on the St. Louis gage, a geyser of seepage water and foundation material that was gushing up from underneath the floodwall monolith on the landside of the floodwall was observed to be 4 feet high and 18 inches in diameter. With the floodwall monolith in imminent danger of collapse from loss of foundation materials that had eroded away by the uncontrolled seepage, extraordinary emergency flood fight measures were required to prevent disastrous flooding of the protected area. Hundreds of tons of crushed stone were rushed to the failing floodwall monoliths and dumped over the geyser, which slowed down the flows. During the ensuing months after the

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St. Louis Flood Protection, Missouri

Flood of 1993, four floodwall monoliths were demolished, the foundation was replaced with a compacted clay backfill and a sheet pile cutoff wall to bedrock that completely blocks underseepage flows at this location, and the floodwall monoliths were reconstructed. The flood of 1993 showed that the City of St. Louis flood control project has a deficiency related to underseepage, and most likely will not function safely with floods of the design level of 52.0 feet on the St. Louis Gage because of inadequate underseepage control features. As time continues to pass without corrections being undertaken the probability that the project will fail continues to increase. As the flood protection continues to age, many components of the system will reach their design life. Flood fighting could be especially difficult if underseepage issues are not addressed. Even with proper maintenance, continued deterioration of the system and lack of correction will threaten the ability of the flood protection system to prevent interior damages from a major flood. If the City of St. Louis experiences a flood protection system failure during a major flood, inundation damages have been estimated at upwards of \$1,000,000,000 in the City of St. Louis. The St. Louis Flood Protection levee protects a floodplain population of several hundred thousand people as well as major industrial and commercial businesses, one major sewage treatment plant, and several dozen roads. Design deficiency correction is necessary to ensure the proper functioning of the underseepage system of the existing project which protects a high value industrial area with significant transportation, power and sewage treatment infrastructures. The City of St. Louis would face potential risk to human safety and loss of jobs, property, and industrial production. Relief well failure can be sudden and catastrophic. The City of St. Louis and areas downstream would also incur significant environmental degradation due to the many chemical plants and a radioactive waste site in the protected area. Failure of the flood protection system would inundate areas that have nuclear contaminants, superfund sites, a sewage treatment plant, and industries such as plating factories. These contaminants would be redistributed with the floodplain and carried into the Mississippi River. The average annual damages without the project are \$3,505,000 and with the project are \$97,000. The average annual benefits for the total project, all flood control, are \$3,429,000.

FISCAL YEAR 2008: The current year funds will be used as follows:

Construct 39 relief well contract	\$1,550,000
Planning, Engineering, and Design	308,000
Construction Management	110,000
Total	\$1,968,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Construct 43 relief wells	\$1,729,000
Planning, Engineering, and Design	98,000
Construction Management	173,000
Total	\$2,000,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 35 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent as determined under Section 103 (m) of the Water Resources Development Act of 1986, as amended, to reflect the non-Federal sponsor's ability to pay and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control features.	\$5,831,000	
Total Non-Federal Costs	\$5,831,000	\$94,500

Local interests are also required to operate and maintain all works after completion.

STATUS OF LOCAL COOPERATION: The City of St. Louis is the local sponsor for the project. A Project Cooperation Agreement is scheduled to be executed in February 2008.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$10,829,000 has not been submitted to Congress.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An environmental assessment was completed in July 2005 and a Finding of No Significant Impact was signed on 27 July 2005.

OTHER INFORMATION: Funds to initiate preconstruction, engineering, and design (PED) were appropriated in FY 2000. PED will complete in FY 2008. Funds to initiate construction were appropriated in FY 2008. This project requires minimal mitigation for removal of 0.1 acre of forest for relief well installation.

APPROPRIATION TITLE: Construction – Local Protection (Flood Control)

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

LOCATION: The Wood River Levee Project is located in Madison County, Illinois, along the left bank of the Mississippi River between river miles 195 and 203 above the Ohio River.

DESCRIPTION: The proposed project includes rehabilitation of 21 miles of levee, replacing 163 of 170 existing relief wells and installing 60 new relief wells as a design deficiency correction under the existing project authorization.

AUTHORIZATION: Section 4 of Flood Control Act of 1938.

REMAINING BENEFIT-REMAINING COST RATIO: 3.2 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 2.8 to 1 at 7 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are based on the General Reevaluation Report dated March 2006 at October 2005 price level.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
			Entire Project	0	TBD
Estimated Federal Cost	9,168,000		PHYSICAL DATA:		
Estimated Non-Federal Cost	4,937,000				
Cash Contributions	4,824,000		Levee (main line)	21 miles	
Other Costs	113,000		Relief wells - existing	170	
Total Estimated Project Cost	14,105,000		Relief wells – new	60	
Allocations to 30 September FY 2005	1,132,000		Closure structures	26	
Allocation for FY 2006	99,000		Gravity drains	41	
Allocation for FY 2007	0		Pump stations	7	
Conference Allowance for FY 2008	321,000				
Allocations for FY 2008	321,000				
Allocations through FY 2008	1,552,000	17			
Allocation Requested for FY 2009	684,000	24			
Programmed Balance to Complete after FY 2009	6,932,000				

JUSTIFICATION: The levee district is protected by an urban design levee, across the Mississippi River from St. Louis and St. Charles counties in Missouri. This existing system includes approximately 21 miles of main line levee, 170 existing relief wells of which 7 are wells installed in 1985 and are not part of the deficiency correction, 26 closure structures, 41 gravity drains of which 3 have been fixed due to emergency, and 7 pump stations. It provides flood protection for residential, commercial, and industrial structures located within a 21.4 square mile area. There are approximately 13,700 acres of bottomland within the district and 4,700 acres of hill land tributary to the levee units. The study area lies in the Mississippi River flood plain of Madison County, Illinois, just upstream of the City of East St. Louis. The flood frequency against which protection is to be provided is 500 year. The maximum flood of record occurred in 1993 when the St. Louis gage recorded 49.58 feet which was approximately a 200-year flood at the Wood River levee. River stage exceeds flood stage in approximately three out of every four years at the Wood River levee. The most recent flood was in 2002 which was approximately 11 feet over flood stage and was about a 10-year flood. For the design event and the without project condition, the average depth and velocity affecting most of the area is 22 feet and 2 feet per second, respectively. In the event of a design flood, overtopping would occur and average warning time is estimated to be 24 hours; however, in case of catastrophic event occurrence (underseepage failure), estimated warning time is less than 6 hours. The limiting factor to leave most of the benefit area is several dozen roads. Certain reaches of the levee system could become unstable during high water events. Levee reaches that presented problems in 1993 will worsen while new reaches will present similar problems. Failure of this levee would produce tremendous economic loss and create an unprecedented environmental disaster as the levee system protects a large refinery (10th largest U.S. refinery of gasoline, jet and diesel fuel) and chemical manufacturing area as well as an urban residential area. It could

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Wood River Levee, Illinois

adversely impact downstream levee systems. At a conservative estimate of \$125,000 per acre of clean up costs, a loss of this levee would result in environmental damages exceeding \$2,000,000,000 not including the relocation costs of residents and future loss of agriculturally productive land. Development is expected to continue on the interior as a major Interstate Highway has recently opened in the levee district. The connection that this new highway makes to the regional interstate system increases the likelihood of future development in the project area. At current estimates, levee failure would cost approximately \$1,500,000,000 in economic damages to residential, commercial and industrial buildings and would shut down transport between Illinois and Missouri at St. Louis as bridge approaches could be submerged. The average annual damages without the project are \$3,865,000, and with the project are \$1,200,800. The average annual benefits for the project, all flood control, are \$2,664,200.

FISCAL YEAR 2008: The current year funds will be used as follows:

Construct 8 relief wells (design deficiency correction)	\$300,000
Planning, Engineering, and Design	21,000
Total	\$321,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Construct additional relief wells (design deficiency correction)		\$533,000
Planning, Engineering, and Design	98,000	
Construction Management	53,000	
Total	\$684,000	

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

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights-of-way, and dredged material disposal areas.	\$ 113,000	
Pay 34.7 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 35 percent as determined under Section 103 (m) of the Water Resources Development Act of 1986, as amended, to reflect the non-Federal sponsor's ability to pay and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control features.	\$4,824,000	
Total Non-Federal Costs	\$4,937,000	100,856

Local interests are also required to operate and maintain all works after completion.

STATUS OF LOCAL COOPERATION: The Wood River Drainage and Levee District is the local sponsor for the project. A Project Partnership Agreement is scheduled to be executed in April 2008.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$9,168,000 has not been submitted to Congress.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An environmental assessment was completed in July 2005. A Finding of No Significant Impact was signed on 23 March 2006.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 2000, and construction funds were appropriated in FY 2008.

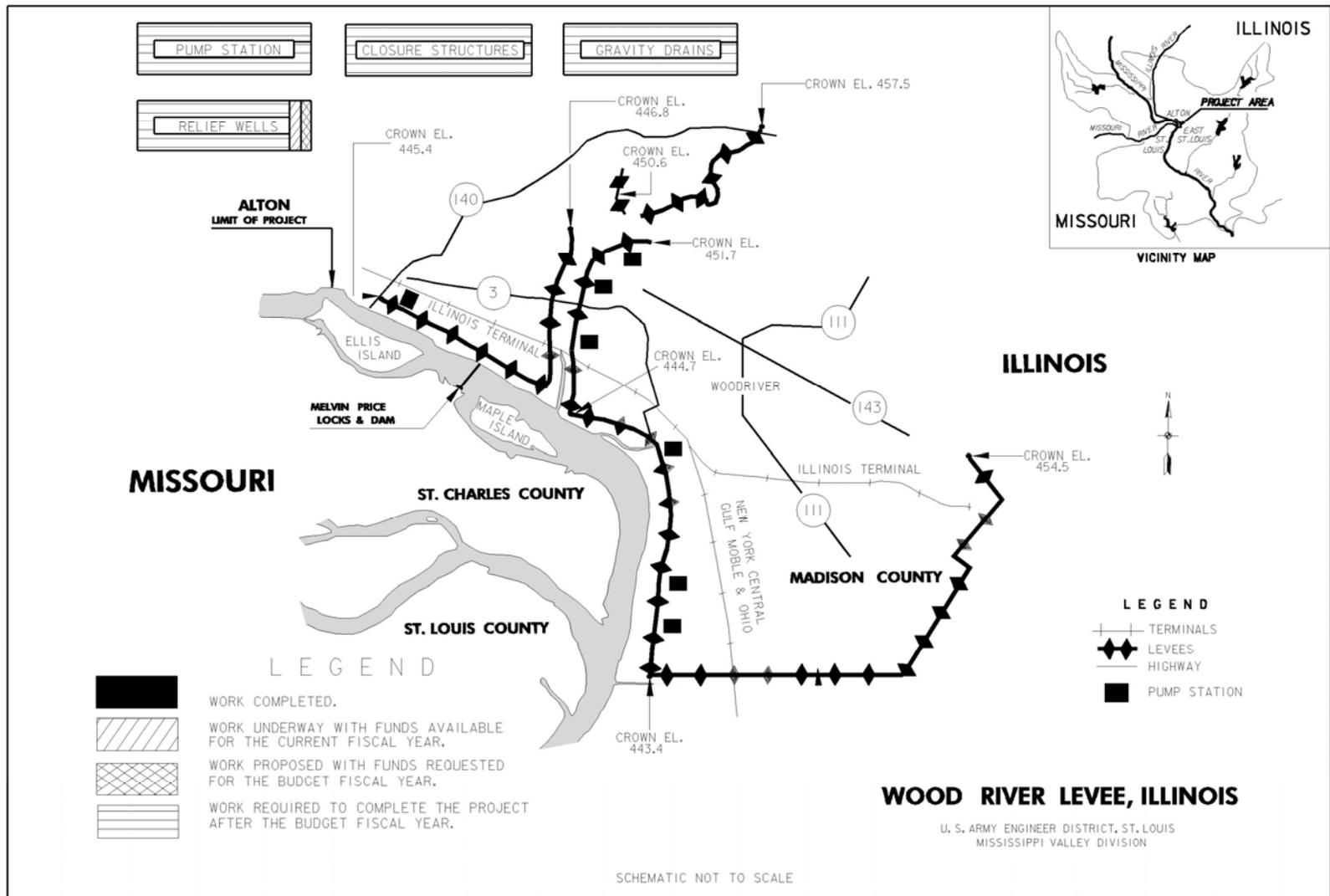
A General Reevaluation Report was submitted to HQ on 5 August 2005. The final GRR was transmitted to MVD and HQ on 27 March 2006. The Chief's report was signed on 18 July 2006 and transmitted to ASA(CW) on 18 July 2006. The OMB clearance letter was signed on 14 June 2007. Correction of performance problems that resulted from deficiencies (relief wells) would not require further authorization. Design deficiency correction project features will be cost shared 65 percent Federal and 35 percent non-Federal in accordance with Section 103 of Water Resources Development Act of 1986, as amended by Section 202 of WRDA 1996.

This project requires no mitigation.

Mississippi Valley Division

St. Louis District
4 February 2008

Wood River Levee, Illinois



NAVIGATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Project	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (Continuing)							
LOUISIANA							
Bayou Sorrel Lock, LA New Orleans District	9,300,000	991,000	1,238,000	2,970,000	1,263,000	1,599,000	1,239,000

Bayou Sorrel Lock is a component of the Mississippi River and Tributaries (MR&T), Atchafalaya Basin, Louisiana Project. The lock provides navigation access, while maintaining a continuous line of protection against the MR&T project design flood flow. The project flood flow line for the Atchafalaya Basin was modified in 1986 to the current elevation of 28.7 feet National Geodetic Vertical Datum (NGVD). In order to maintain the level of flood protection provided by the Atchafalaya Basin, Louisiana Project, the lock must be modified or replaced. The need to modify Bayou Sorrel Lock presents an opportunity to address increasing navigation concerns at this lock. Planning, engineering, and design of the modification or replacement for flood reduction benefits were delayed until the optimum navigation plan could be studied. The feasibility study was approved in March 2004. The recommended plan consists of replacing the existing lock with a new 75- by 1,200-foot concrete chamber lock immediately adjacent to the existing lock at an estimated cost of \$102,200,000, of which \$9,600,000 is the navigation portion and \$92,600,000 is attributed to MR&T. The benefit-cost ratio is 14 to 1 based on the latest economic analysis dated September 2002. Preconstruction engineering and design cost is 100 percent Federally funded.

Total Estimated Preconstruction Engineering and Design Costs	\$9,300,000	Total Estimated Preconstruction Engineering and Design Costs	\$9,300,000
Initial Federal Share	9,300,000	Ultimate Federal Share	9,300,000
Initial Non-Federal Share	0	Ultimate Non-Federal Share	0

PED activities are being performed by a “Regional Team” composed of individuals from the Vicksburg, St Louis, St Paul, Rock Island, and New Orleans Districts. The team completed the DDR (35 percent PED) and it was subjected to a formal ITR in Fiscal Year 2007.

Fiscal Year 2008 funds are being used to advance development of construction plans and specifications. Another formal ITR will be performed in Fiscal Year 2008 at the 65 percent PED milestone.

Funds requested for Fiscal Year 2009 will be used to finalize construction plans and specifications for the initial construction contract.

The project was authorized for construction by the Water Resources Development Act of 2007, Public Law 110-114. The PED completion date is being determined.

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APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Project	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation Requested for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to complete after FY 2009 \$
SURVEYS - CONTINUING							
LOUISIANA							
Calcasieu Lock, LA New Orleans District	4,481,000	1,683,000	198,000	422,000	98,000	53,000	2,027,000

Calcasieu Lock is a feature of the Gulf Intracoastal Waterway between Appalachee Bay, Florida, and the Mexican Border Project. The lock is located east of the Calcasieu River, approximately 10 miles south of Lake Charles, Louisiana, in Calcasieu Parish. The lock prevents saltwater intrusion from the Calcasieu River into the Mermentau River basin, a major rice producing area. Calcasieu Lock, which was completed in 1950, has dimensions of 13 by 75 by 1,206 feet and is structurally sound. The lock is congested due to increasing traffic. Intracoastal Waterway Locks, Louisiana, a reconnaissance study completed in 1992, determined that there is an immediate need for capacity increases at Bayou Sorrel and Calcasieu Locks. The Calcasieu Lock Section 905(b) analysis supports a benefit-cost ratio of 1.2:1 for provision of a new lock and recommended proceeding with feasibility phase studies. The study is addressing the feasibility of measures to replace or supplement the existing lock to reduce navigation delays. The study is 100% Federally funded. The anticipated output of improved navigation efficiency is in accord with Administration policy.

Fiscal Year 2008 funds and the funds requested for Fiscal Year 2009 will be used to continue feasibility study efforts.

The reconnaissance phase was completed in February 2001. The feasibility study completion date is being determined.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction – Dam Safety Assurance/Safety and Seepage/Stability Correction – Locks and Dams (Navigation)

PROJECT: Lockport Lock and Dam, Illinois Waterway, Illinois (Replacement)

LOCATION: The project is located within a three mile reach of the Lockport Lock Pool of the Illinois Waterway (River Mile 291.0 - 294.1) at Lockport, Illinois. As part of the Chicago Sanitary and Ship Canal (CSSC), which extends from the Chicago River to the Illinois Waterway, the structures extend from the Lockport Lock.

DESCRIPTION: This section of the CSSC is a perched pool sitting 38 feet above the Des Plaines River on the right descending bank and Deep Run Creek on the left descending bank. The Lockport Pool contains five major features that are located on this lower reach of the CSSC, a component of the Illinois Waterway System. The Approach Dike is a high hazard dam and is constructed of limestone cement core wall and non-homogeneous materials dating back as far as the early 1900's, which has deteriorated where its function as a seepage cutoff is limited. The concrete guide walls of the CSSC are in an advance state of concrete deterioration that could affect wall stability. The controlling works primarily functions as a flood control feature for the CSSC navigation pool. The controlling works rehabilitation involves gate bay sub-structure repairs and embankment reconstruction. The Lockport powerhouse structure and dam retains the navigation pool. The key powerhouse structure components are deteriorated and require rehabilitation. All work is programmed.

AUTHORIZATION: River and Harbor Act of 1930.

REMAINING BENEFIT-REMAINING COST RATIO: 1.7 to 1 at 7 percent.

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

INITIAL BENEFIT-COST RATIO: 1.6 at 5-1/8 percent.

BASIS OF BENEFIT-COST RATIO: The Lockport Pool Rehabilitation Evaluation Report, dated March 2004. Price levels have been projected to 1 Oct 2007 by escalation to applicable price level indices. BCR computations are for the replacement feasible components (\$116,000,000).

Mississippi Valley Division

Rock Island District
4 February 2008

Lockport Lock and Dam,
Illinois Waterway, Illinois
(Replacement)

SUMMARIZED FINANCIAL DATA		STATUS: (1 January 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$132,400,000 ¹	Entire Project	0	TBD
General Appropriations	66,200,000			
Inland Waterways Trust Fund	66,200,000			
Estimated Non-Federal Cost	0			
Total Estimated Project Cost	132,400,000			

PHYSICAL DATA

Lock – 1000 feet long x 110 feet wide.
 Dam –257 long with 53 foot Concrete control structure.

	GENERAL APPROPRIATIONS	INLAND WATERWAYS TRUST FUND	ACCUM PCT OF EST FED COST
Allocations to 30 September 2005	\$ 0	\$ 0	
Allocation for FY 2006	500,000	0	
Allocation for FY 2007	4,200,000	0	
Conference Allowance for FY 2008	20,118,000	0	
Allocation for FY 2008	20,118,000	0	
Allocations through FY 2008	24,818,000 1/	0	19%
Allocation Requested for FY 2009	\$1,891,000	26,709,000	22%
Programmed Balance to Complete after FY 2009	39,491,000	39,491,000	
Unprogrammed Balance to Complete after FY 2009	0	0	

1/ Reflects Construction, allocation of \$500,000 in FY 2006 and \$4,200,000 in FY 2007 from the Dam Safety and Seepage/Stability Correction Program and \$20,118,000 in FY 2008.

Mississippi Valley Division

Rock Island District
4 February 2008

Lockport Lock and Dam,
Illinois Waterway, Illinois
(Replacement)

JUSTIFICATION: The CSSC construction began in 1892 and opened in 1900 allowing water from Lake Michigan, to flow through the Chicago River and into the Des Plains River at Lockport. An extension was added in 1907 including the Lockport lock, Lockport powerhouse, the lock approach dike, the controlling works, and the concrete guide walls. The CSSC has been in service for over 100 years, and the original dike was built with a lime cement core wall and non-homogeneous materials, to cut off seepage through the dike, to a height matching river levels in the early 1900's. The river level has long since been raised and is causing seepage over and through cracking and deterioration of the core wall. The Metropolitan Water Reclamation District of Greater Chicago (MWRD), through Congressional action, transferred the operations and maintenance responsibilities of the substructures and support structures to the US Army Corps of Engineers in the early 1980's for this roughly 45-foot high embankment, the controlling works and powerhouse substructures, and all pool retention structures. The embankment has a long history of sinkhole development seepage and surface slumping. Failure of this high hazard dam would mean loss of pool from Lockport to Chicago River.

The CSSC is perched above surrounding ground levels and can exceed 38 feet in depth. Concrete guidewalls separate the CSSC from Deep Run Creek on the left descending bank. These concrete walls were built in stages, and the lower wall area is deteriorating at its key connection to the upper wall. These walls are continually subject to barge strikes and normal freeze-thaw deterioration. Like the dike, loss of one wall section could mean complete loss of pool and a halt to navigation. The powerhouse, controlling works, and dam were all built about the same time and are subject to the same types of deterioration. While the District is only responsible for the base and support structures under the 1980 Congressional action, loss of the base structures could mean total loss of pool and a halt to navigation. These factors affect the District's ability to maintain the safety, reliability, and design service level of these facilities.

Lock tonnage figures for the last eleven years are as follows:

Year	Tonnage	Year	Tonnage	Year	Tonnage	Year	Tonnage
2005	17,774,000	2002	16,893,524	1999	16,039,564	1996	14,846,590
2004	17,341,066	2001	15,990,547	1998	17,102,920	1995	14,986,564
2003	15,300,280	2000	16,788,986	1997	15,415,018	1994	19,698,080

FISCAL YEAR 2008: The requested amount of \$20,118,000 will be applied as follows:

Continue Planning, Engineering, and Design	\$ 1,748,000
Continue Construction of the Approach Dike	\$17,198,000
Continue Construction Management	\$ 1,172,000
Total	\$20,118,000

FISCAL YEAR 2009: The requested amount of \$28,600,000 will be applied as follows:

Continue Planning, Engineering, and Design	\$ 572,000
Continue Approach Dike Rehab	\$10,856,000
Initiate Concrete Walls & Control Works rehab	\$14,884,000
Continue Construction Management	\$ 2,288,000
Total	\$28,600,000

NON-FEDERAL COST: None required.

STATUS OF LOCAL COOPERATION: None required.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$132,400,000 is an increase of \$9,000,000 from the latest estimate (\$123,400,000) presented to Congress (FY 2007). This includes the following items:

<u>ITEM</u>	<u>AMOUNT</u>
FY07 Price leveling	\$3,060,000
Price adjustment due to inflation	<u>\$5,940,000</u>
Total	\$9,000,000

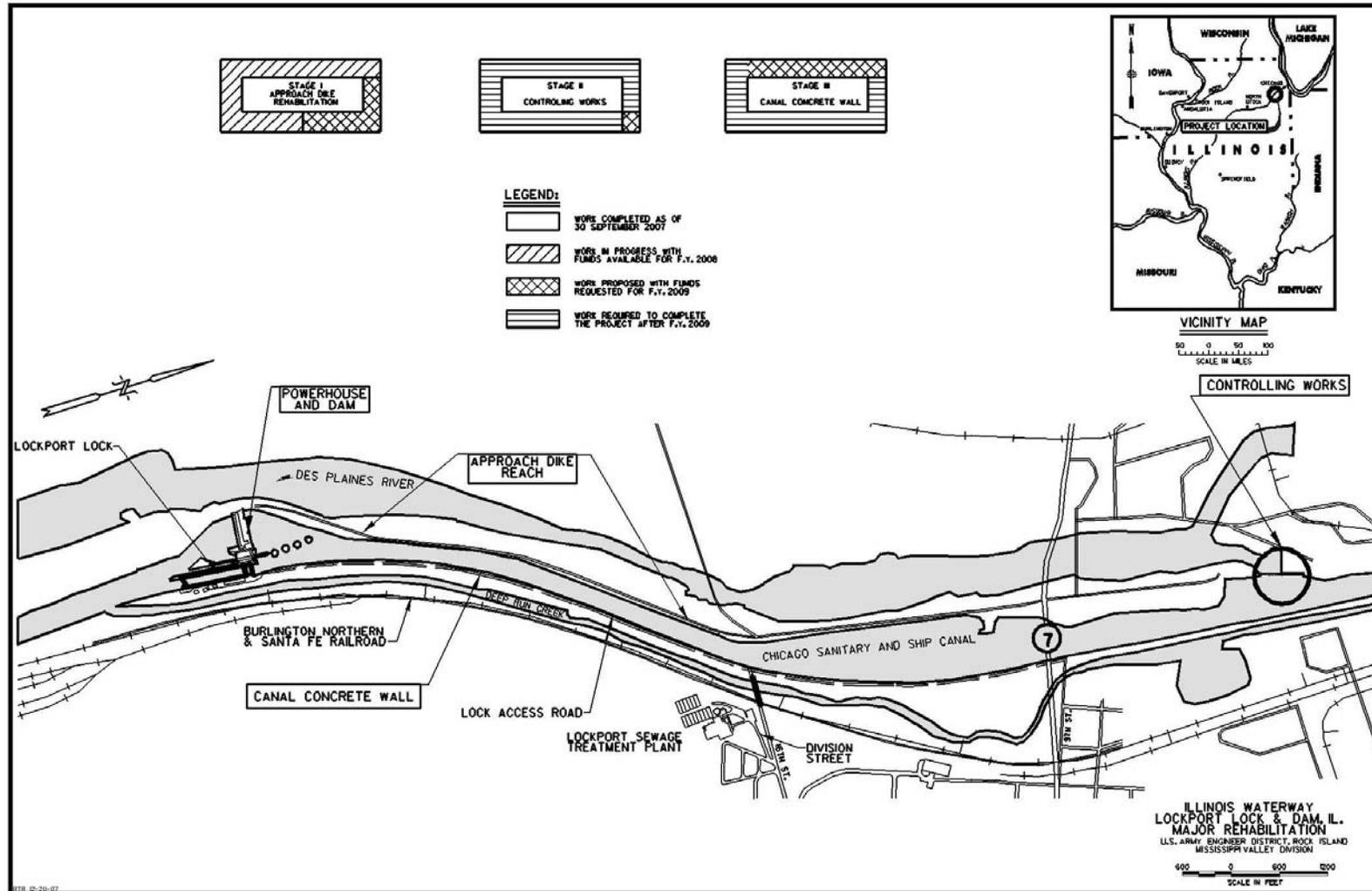
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Finding of No Significant Impact for the environment assessment was sign on 19 May 2004.

OTHER INFORMATION: Operations and Maintenance, General, funds were allocated to initiate and complete the Rehabilitation Evaluation Report. The benefit – cost analysis does not include the Dam and Powerhouse Rehabilitation. Project was approved to be included in the Dam Safety and Seepage/Stability Correction Program and allocated \$4,700,000 of FY 2006 and FY 2007 funds from the Construction, General Appropriation.

Mississippi Valley Division

Rock Island District
4 February 2008

Lockport Lock and Dam,
Illinois Waterway, Illinois
(Replacement)



Mississippi Valley Division

Rock Island District
4 February 2008

Lockport Lock and Dam,
Illinois Waterway, Illinois
(Replacement)

APPROPRIATION TITLE: Construction - Locks and Dams (Navigation)

PROJECT: J. Bennett Johnston Waterway - Mississippi River to Shreveport, Louisiana (Continuing)

LOCATION: The project is located in central and northwest Louisiana and provides a commercial navigation route from the Mississippi River at its juncture with Old River via Old and Red Rivers to Shreveport, Louisiana. The effected parishes and counties for this project include (Louisiana) Caddo, Bossier, Webster, De Soto, Red River, Bienville, Lincoln, Winn, Natchitoches, La Salle, Grant, Rapides, Avoyelles, Concordia; and (Arkansas) Hempstead, Miller, Nevada, Lafayette, and Columbia.

DESCRIPTION: The project provides for a 9- by 200-foot navigation channel extending about 236 miles from the Mississippi River through Old River and Red River to the vicinity of Shreveport, Louisiana. Five locks with dimensions of 84 by 705 by 14 feet and adjacent dams provide a lift of 141 feet. The project also provides for realigning the channel by means of dredging, cutoffs, and training works and for stabilizing its banks by means of revetments, dikes, and other methods. Recreation facilities and fish and wildlife development are also an integral part of the project. The major unprogrammed work includes recreation sites, and continued acquisition of mitigation lands. This project is part of the J. Bennett Johnston Waterway, Louisiana, Texas, Arkansas, and Oklahoma, which also includes the Shreveport, to Daingerfield, Texas (navigation), Shreveport, Louisiana, to Index, Arkansas (bank stabilization), and Index, Arkansas, to Denison Dam (bank stabilization) reaches.

AUTHORIZATION: River and Harbor Act of 1968, Water Resources Development Act of 1976, Supplemental Appropriations Act of 1984, Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996, and 2000 and Energy and Water Development Appropriations Act of 1994.

REMAINING BENEFIT - REMAINING COST RATIO: 1.6 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 0.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 3-1/4 percent (FY 1973).

BASIS OF BENEFIT-COST RATIO: Benefits are from the General Reevaluation Report and Final Supplement No. 2 to the Environmental Impact Statement, at 1982 price levels, approved 4 January 1984. Costs for current analysis are based on October 2005 costs deflated to October 1982 price levels.

Mississippi Valley Division

Vicksburg District
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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

SUMMARIZED FINANCIAL DATA			STATUS	PCT	PHYSICAL
Estimated Federal Cost (COE)			(1 Jul 2007)	CMPL	COMPLETION
			Entire Project	93	SCHEDULE
					TBD
Programmed Construction	\$ 1,929,572,000				
Unprogrammed Construction	26,783,000				
Estimated Apprn Requirements (U.S. Coast Guard)			710,000		
Programmed Construction	710,000				Open to 9-Foot Navigation
Unprogrammed Construction	0				Dec 87
					Lindy Boggs Lock & Dam
					Dec 87
					John H. Overton Lock and Dam
					Dec 87
					Lock and Dam No. 3
					Dec 91 ²
					Russell B. Long Lock and Dam
					Dec 94
					Joe D. Waggoner, Jr., Lock and Dam
					Dec 94
Estimated Non-Federal Cost			105,188,000		
Programmed Construction	80,819,000				PHYSICAL DATA
Cash Contributions	\$31,271,000				
Other Costs	49,548,000				Lands and Damages: 26,000 acres, authorized mitigation
Unprogrammed Construction	24,369,000				Channels and Canals: Channel 9 feet deep,
Cash Contributions	633,000				200 feet wide, and 236 miles long from
Other Costs	23,736,000				Old River to Shreveport, Louisiana. Total length of
					bank protection - 273 miles
					Locks: Number - 5; Size - 84 by 705 feet
					Dams: Number - 5; Type - Tainter Gated
					Relocations: Roads (Modify one bridge)
					Railroads (Replace one and modify one bridge)

² Initial interim pool impounded.

Mississippi Valley Division

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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

SUMMARIZED FINANCIAL DATA (Continued)		ACCUM	PCT OF EST	FED COST
Total Estimated Programmed Construction Cost	\$ 2,011,101,000			
Total Estimated Unprogrammed Construction Cost	51,152,000			
Total Estimated Project Cost	2,062,253,000	1		
Allocations to 30 September 2005	\$ 1,789,502,000			
Allocations for FY 2006	12,870,000	2		
Allocations for FY 2007	1,600,000			
Conference Allowance for FY 2008	6,888,000			
Allocation for FY 2008	6,888,000	*		
Allocations through FY 2008	1,810,860,000	1	92	
Allocation Requested for FY 2009	1,500,000		92	
Programmed Balance to Complete After FY 2009	\$ 120,336,000			
Unprogrammed Balance to Complete After FY 2009	24,369,000			

* Assumed allocation. Final, actual allocations yet to be determined.

¹ Includes \$26,654,000 for John H. Overton Lock and Dam and \$21,653,000 for Red River Emergency Bank Protection for construction work.

² Reflects \$130,000 rescission in accordance with the Department of Defense, Emergency Supplemental Appropriations to Address Hurricanes in the Gulf of Mexico, and Pandemic Influenza Act, 2006.

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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

JUSTIFICATION: The Red River was a very erratic river, subject to wide fluctuations in stage and meandering because of the erodible soils. A system of dependable pools was constructed to enable navigation and work continues on channel alignment. The pools are provided by five locks and dams and the proper alignment is provided by bank and channel stabilization works. These works improve water quality, fish and wildlife habitat, and preserve lands. On 31 December 1994, a 9-foot-deep by 200-foot-wide navigation channel was opened from the Mississippi River to Shreveport. The channel provides dependable 9-foot commercial navigation depths year-round.

Navigation from the Mississippi River to Shreveport provides an artery for low-cost transportation which is an integral part of economic growth of the region. Estimated savings are based on an average annual movement, as forecast, of 7,845,000 tons. Waterborne commerce tonnage on the waterway in 2005 was 10,501,000 tons including all commodities that transited any portion of the system. Commodities carried over the waterway include iron and steel products and pipe, industrial chemicals, paper and allied paper products, petroleum and petroleum products, other metals and ores, sulphur, agricultural chemicals, and grain. The public will realize an average annual savings of \$68,831,000 which will result from reduced transportation costs. Several local entities are actively involved in port development on the waterway. The City of Alexandria has constructed port facilities in Pool 2 for use by industry. The Natchitoches Parish Port in Pool 3 was opened in 1996, and a chip loading facility, general cargo dock and transit shed has been constructed at the port. The Caddo-Bossier Port in Pool 5 was opened in April 1997 and shipped 244,000 tons in 2005. Commodity movement through the port is steadily increasing. The Red River Parish Port was opened in 2002 in Pool 4. These ports will be able to accommodate tows or barges of various sizes. The usable lock dimensions were designed for a configuration of six barges with individual dimensions of 35 by 195 feet and a towboat. Larger grain and petroleum barges can also be expected to call at the ports. The project is credited with benefits derived from transportation savings from use of the waterway, flood control, damages prevented by bank stabilization, security against levee crevasses, fish and wildlife, recreation, area redevelopment, reduced maintenance on existing revetments, reduced sedimentation, irrigation, reduced costs of municipal and industrial water supply, and reduced pumping costs.

The average annual benefits are as follows:

Annual Benefits	Amount
Navigation	\$ 68,831,000
Flood Control	2,037,000
Bank Stabilization	16,602,000
Fish and Wildlife	460,000
Recreation	4,435,000
Area Redevelopment	14,808,000
Other:	
Irrigation and reduced costs of municipal and industrial water supply	53,000
Total	\$ 107,226,000

Mississippi Valley Division

Vicksburg District
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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

FISCAL YEAR 2008: Current year funds are being used as follows:

Pools 1-5

Continue Mitigation	\$1,500,000
LCB Barrier Upgrade	\$5,388,000
TOTAL	\$6,888,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Pools 1-5

Continue Mitigation	\$1,500,000
TOTAL	\$1,500,000

NON-FEDERAL COST: With the exception of the Louisiana-Arkansas Railroad Bridge Relocation and the mitigation element, local interests are required to provide all lands, easements, and rights-of-way, including a proportionate share of the cost of the bridge relocations over existing channels in accordance with the principles of Section 6 of the Bridge Alteration Act (Truman-Hobbs) of 21 June 1940, as amended by the Act of 16 July 1952, 25 percent of the cost of necessary retaining dikes for dredged materials and 50 percent of the total cost of recreation facilities. The non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas	\$ 33,753,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project	11,731,000	\$ 211,700
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities	54,060,000	1,448,000
Pay 6 percent of the first costs allocated to fish and wildlife and pay 6 percent of the costs of operation, maintenance, repair, rehabilitation, and replacement of fish and wildlife facilities	527,000 ¹	332,800 ²
Pay 25 percent of the first cost allocated to retention dikes required for construction and maintenance dredging	2,005,000	31,200
Replacement costs		302,900
Total Non-Federal Costs	\$ 105,188,000	\$ 2,326,600

¹ Since the local sponsor will assume all operation and maintenance costs and this cost will exceed the 6 percent local share, there will be no local requirement toward implementation costs for Loggy Bayou increment. Implementation costs shown are for the Bayou Bodcau increment.

² 100 percent of annual management costs for Loggy Bayou and Bayou Bodcau increments.

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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

The non-Federal sponsor has also agreed to make all required payments concurrently with project construction. Non-Federal cost associated with the scheduled portion of the project are broken down as follows:

Lands and Damages	\$ 19,872,000
Utility Relocations	6,864,000
Recreation (Other)	21,971,000
Cash Contribution	32,112,000
Recreation Facilities	(28,098,000)
Bridge Relocations	(1,432,000)
Retaining Dikes	(1,973,000)
Mitigation	(609,000)
Total	\$80,819,000

STATUS OF LOCAL COOPERATION: Formal assurances of local cooperation were furnished by the Red River Waterway Commission on 26 February 1969 and accepted on behalf of the United States on 15 April 1969. That agency was formed expressly to provide the local cooperation required for the project and has levied a 2-mill assessment to fulfill its obligations. Amended assurances covering the provisions of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, and the specific written agreement requirements of Section 221 of the Flood Control Act of 1970, Public Law 91-611, were executed by the Red River Waterway Commission on 23 May 1973 and were accepted on behalf of the United States on 14 November 1973. A cost sharing agreement covering nine recreation sites in Pools 1 and 2 was approved by the Deputy Chief of Engineers on 23 July 1985. A Memorandum of Understanding between the Corps and the local sponsor for development of these nine sites was executed in January 1986. A supplement to this cost-sharing agreement was executed in the last quarter of FY 1994 to cover the construction of three boat ramps and ancillary facilities in Pools 4 and 5 in FY 1995. In the Conference Report that accompanied the Energy and Water Development Appropriations Act of 1993, Congress directed the Corps of Engineers to prepare a supplement to the recreation master plan to serve as the project document to support the contract for recreation development in Pools 3 to 5. The Project Cooperation Agreement for recreation developments in Pools 3 to 5 was executed in April 2000.

The Red River Waterway Commission agreed by letter dated 6 September 1983 to fulfill all responsibilities of the local sponsor relative to the purchase of wildlife mitigation lands. The Louisiana Department of Wildlife and Fisheries, by letter dated 22 July 1983, agreed to assume operation and maintenance responsibilities for acquired wildlife mitigation lands. Updated letters of agreement covering the mitigation plan as presently conceived (i.e., acquisition of up to 5,000 acres in the vicinity of Loggy Bayou) were furnished by the Red River Waterway Commission and the Louisiana Department of Wildlife and Fisheries on 13 August 1990 and 17 August 1990, respectively. The Local Cooperation Agreement between the Federal Government and the State of Louisiana for the acquisition of up to 5,000 acres of mitigation lands in the vicinity of Stumpy Lake/Swan Lake/Loggy Bayou Wildlife Management Area was executed by the Red River Waterway Commission in May 1993 and by the Assistant Secretary of the Army in June 1993.

The Project Cooperation Agreement covering the acquisition of mitigation lands in the vicinity of the Bayou Bodcau Wildlife Management Area was executed in June 1996.

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The Red River Waterway Commission furnished a letter of agreement dated 10 October 1997 supporting additional mitigation lands in Red River and Caddo Parishes that are to be considered adjacent to the Loggy Bayou Wildlife Management Area. These new areas were directed in the Water Resources Development Act of 1996. A report detailing a plan of action to acquire these lands was processed as directed by the legislation. Amendment No. 1 to the June 1993 Loggy Bayou Area Local Cooperation Agreement covering the initial acquisition effort in Caddo Parish was executed by the Red River Waterway Commission and the Assistant Secretary of the Army in October 1999. The Water Resource Development Act of 2000 authorized the acquisition of mitigation lands in any of the parishes that comprise the Red River Waterway District, consisting of Avoyelles, Bossier, Caddo, Grant, Natchitoches, Rapides, and Red River Parishes.

The Red River Waterway Commission is providing its share of the project first costs by furnishing the necessary lands, easements, and rights-of-way, performing utility relocations as needed, and providing cash contributions for recreation facilities, bridge relocations, and retaining dikes. They will contribute their share of retention dike construction for maintenance dredging by cash contribution and they will provide the lands, easements, and rights-of-way for these dikes.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate (Corps of Engineers) of \$1,956,355,000 is a decrease of \$1,645,000 from the latest estimate (\$1,958,000,000) presented to Congress (FY 2008). This change includes the following item.

Item	Amount
Price Escalation on Construction Features	\$-1,645,000
Total	\$-1,645,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final statement was filed with the Council on Environmental Quality on 11 May 1973. The Environmental Impact Statement is included in the project "Red River Waterway." Supplement No. 1 to the Environmental Impact Statement was prepared for the Mississippi River to Shreveport reach of the J. Bennett Johnston Waterway due to a change in project alignment from the authorizing document, and to include updated environmental information due to a reanalysis and to include results of the ground-water studies. The final Supplement No. 1 was filed with the Council on Environmental Quality on 18 February 1977, and published in the Federal Register on 25 February 1977. A third Environmental Impact Statement (Supplement No. 2) was submitted to the Environmental Protection Agency in final form on 10 November 1983, and the record of decision was signed by the Division Engineer on 4 January 1984.

An Environmental Assessment was prepared for Pool No. 2 to present the results of investigations of the impacts of the 58- and 64-foot elevations. The Environmental Assessment resulted in a Finding of No Significant Impact which allowed a design change from 58- to 64-foot pool elevations. Following review by the public, the Finding of No Significant Impact was signed on 21 April 1982.

An Environmental Assessment of the Loggy Bayou Area mitigation increment has been performed. This area was not included in the original mitigation report. The Environmental Assessment was required to satisfy the National Environmental Policy Act. The Environmental Assessment resulted in a Finding of No Significant Impact, which was signed 11 January 1993. Environmental Assessments are required to present the impacts associated with the construction of riverside levee protection berms in Pools 3 and 5. The berms are necessary to ensure the integrity of the existing flood control levee system. The Environmental Assessment for the berms in Pool 3 resulted in a Finding of No Significant Impact which was signed on 16 July 1992. The Environmental Assessment for the berms in Pool 5 also resulted in a Finding of No Significant Impact which was signed on 24 May 1993.

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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

Environmental Assessments were required for the Bayou Bodcau mitigation increment and the Nantachie Lake drawdown structure to satisfy National Environmental Policy Act requirements. The Bayou Bodcau mitigation Environmental Assessment resulted in a Finding of No Significant Impact that was signed on 28 April 1995, and the Nantachie Lake drawdown structure Environmental Assessment was completed in FY 1996, also resulting in a Finding of No Significant Impact. An Environmental Assessment for the mitigation lands to be acquired in Caddo and Red River Parishes will be performed. An assessment of the initial tract in Caddo Parish has been completed, and resulted in a Finding of No Significant Impact that was signed on 23 September 1999.

A Final Environmental Assessment has been prepared covering instream disposal of maintenance dredge material in Pools 3, 4, and 5 in lieu of disposal in contained upland areas. A Finding of No Significant Impact was signed on 19 March 1996.

A Final Environmental Assessment has been prepared covering maintenance dredging of the oxbow lakes designated for preservation in project documentation. The dredging consists of maintaining a 5-foot-deep by 20-foot-wide connection from the river into the oxbow lakes in order to achieve all project benefits. The dredged material will be disposed of instream. A Finding of No Significant Impact was signed 18 November 1997.

An Environmental Assessment and Finding of No Significant Impact are included in Supplement No. 2 to the Recreation Master Plan which presents the revised plan for recreation development in Pools 3, 4, and 5. Supplement No. 2 was approved by the Mississippi River Commission on 1 May 1998. The Finding of No Significant Impact was signed on 6 October 1997. An Environmental Assessment was performed in Fiscal Year 2000 for the Hampton's Lake Recreation Area that was added to the Pools 3 to 5 Master Plan by August 1999, Supplement No. 3. A Finding of No Significant Impact was signed on 24 May 2000.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1971 and allotted in Fiscal Year 1972. Funds to initiate construction were appropriated in Fiscal Year 1973.

The Energy and Water Development Appropriations Act of 1996 authorized a Regional Visitors Center in the vicinity of Shreveport. The Energy and Water Development Appropriations Act of 1997 provided \$3,000,000 and directions to initiate design and construction of the Regional Visitors Center in Fiscal Year 1997. The 1997 Appropriations Act also provided funds to initiate design of the previously authorized Project Visitors Center at Grand Ecore. The Fiscal Year 2001 Appropriations Act (P.L. 106-377) directed the use of available Construction funds, in addition to the funds provided by the Fiscal Year 1997 Appropriations Act, to complete design and construction of the Regional Visitor Center at an estimated cost of \$6,000,000. Construction of the Project Visitors Center at Grand Ecore was completed in Fiscal Year 2003 and the Regional Visitors Center at Shreveport was completed in the 1st quarter of Fiscal Year 2006.

The Master Plan Supplement No. 3 covering adjustments to cost-shared recreation facilities in Pools 3, 4, and 5 was approved by the District Commander in September 1999. The Project Cooperation Agreement covering the same recreation facilities presented in Supplement Nos. 2 and 3 was executed in April 2000. Recreation Master Plan Supplement No. 4 covering minor transfers of facilities between approved sites, with no net change in quantity of facilities, was approved by the District Commander in April 2003.

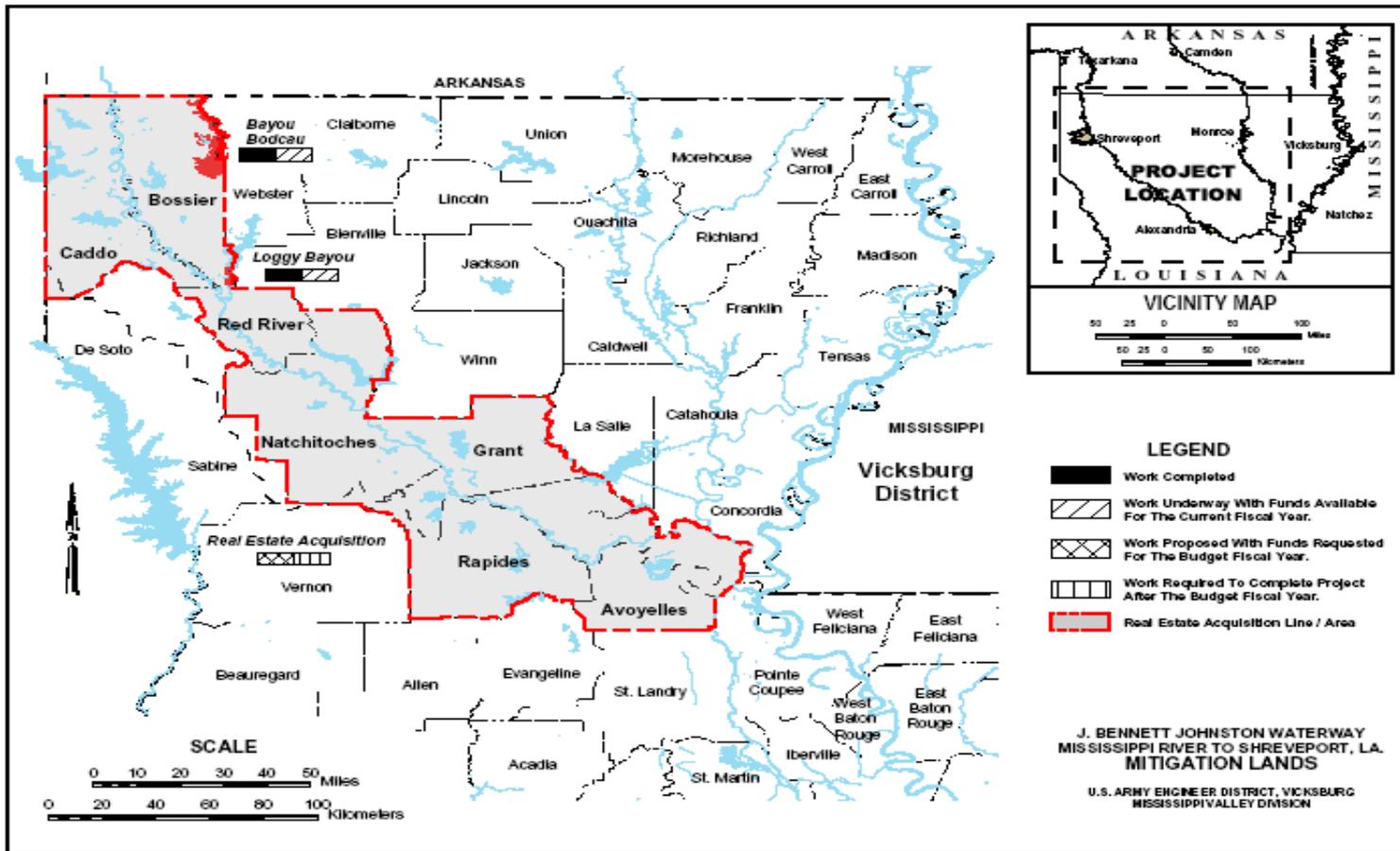
Mississippi Valley Division

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J. Bennett Johnston Waterway-
Mississippi River to Shreveport, Louisiana

The Water Resources Development Act of 1996 increased the total cost of the Loggy Bayou mitigation increment to \$10,500,000. It further provided that lands that are purchased adjacent to the Loggy Bayou Wildlife Management Area may be located in Caddo Parish or Red River Parish. The Water Resources Development Act of 1996 also modified the waterway project to require the Secretary to dredge or perform other related work as required to reestablish and maintain access to, and the environmental value of, the bendway channels designated for preservation in previous project documentation. Further, this work shall be carried out in accordance with the local cooperation requirements for other navigation features of the project. These project modifications are subject to completion of reports showing the work is technically sound and environmentally and economically acceptable, as applicable. The favorable bendway channel (oxbow lakes) dredging report has been returned by OMB for the development of supplemental environmental data and resubmission, and was resubmitted in late Fiscal Year 2001.

The Water Resources Development Act of 1986, as modified by the Water Resources Development Acts of 1988, 1990 and 2000, and the Fiscal Year 1990 and Fiscal Year 1994 Energy and Water Development Appropriations Acts, authorized the wildlife mitigation project for the waterway above mile 104 to Shreveport, Louisiana, at a total cost of \$9,420,000. The Water Resources Development Act of 1990 modifies the mitigation project by authorizing the Secretary of the Army to acquire an additional 12,000 acres adjacent to or close to the Bayou Bodcau Wildlife Management Area. The real estate design memorandums, which present the real estate requirements for the Loggy Bayou area and Bayou Bodcau area mitigation lands, have been approved. A supplemental report, which was submitted prior to passage of the Fiscal Year 1990 Energy and Water Development Appropriations Act and the Water Resources Development Act of 1990, recommends the acquisition of only 300 acres in the Stumpy Lake area and no lands in the vicinity of the Bayou Bodcau Wildlife Management Area. In the Energy and Water Development Appropriations Act of 1994, the Corps was directed to reimburse the project local sponsor annually for the Federal share of management costs for the Bayou Bodcau mitigation area. The Water Resources Development Act of 2000 modifies the mitigation project by authorizing the purchase of mitigation land from willing sellers in any of the parishes that comprise the Red River Waterway District, consisting of Avoyelles, Bossier, Caddo, Grant, Natchitoches, Rapides, and Red River Parishes.



APPROPRIATION TITLE: Construction – Channels and Harbors (Navigation)

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

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

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

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

REMAINING BENEFIT-REMAINING COST RATIO: 7.0 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 5.3 to 1 at 7 percent.

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

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Upper Mississippi River Master Plan Report of 1982 at 1986 price levels.

Mississippi Valley Division

St. Louis District
4 February 2008

Mississippi River Between the Ohio and
Missouri Rivers (Regulating Works), Missouri and Illinois

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$269,000,000		Entire Project	80	TBD
Estimated Non-Federal Cost	0				
Cash Contributions	0				
Other Cost	0				
PHYSICAL DATA					
Total Estimated Project Cost	\$269,000,000		195 miles of navigation channel Ohio River to mouth of Missouri River 9 feet deep x 300 feet wide		
Allocations to 30 September 2005	\$207,771,000				
Allocation for FY 2006	3,960,000				
Allocation for FY 2007	7,560,000				
Conference Allowance for FY 2008	1,966,000				
Allocation for FY 2008	1,966,000				
Allocations to 30 September 2008	221,257,000	82			
Allocation Requested for FY 2009	5,011,000	84			
Programmed Balance to Complete After FY 2009	\$ 42,732,000				
Unprogrammed Balance to Complete After FY 2009	0				

JUSTIFICATION: The Mississippi River between the Ohio and Missouri Rivers is a major artery of the inland waterway system. Commerce in this reach has increased from 4,500,000 tons in 1945 to 110,243,075 tons in 2006 worth approximately \$15 billion. Commerce is expected to increase to 167,000,000 tons by the year 2020; therefore, it is essential that construction of project works be continued at a rate which will insure 9-foot channel depths for a year-round navigation season. The average annual benefits, all navigation, are \$261,809,000.

Mississippi Valley Division

St. Louis District
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Mississippi River Between the Ohio and
Missouri Rivers (Regulating Works), Missouri and Illinois

FISCAL YEAR 2008: Current year funds will be used as follows:

Complete Kaskaskia Bend (Phase5) dike and revetment contract	\$646,000
Purchase easements at Thompson Bend Riparian Corridor	\$290,000
Bankline stabilization through tree planting at Thompson Bend Riparian Corridor	\$75,000
Planning, Engineering, and Design	\$735,000
Construction Management (S&A)	\$220,000
Total	\$1,966,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Initiate and complete Grand Tower Phase 4 Dike and Revetment	\$1,916,000
Initiate Eliza Point/Greenfield Bend Phase 2 Dike and Revetment	1,984,000
Bankline stabilization through tree planting at Thompson Bend Riparian Corridor	75,000
Planning, Engineering, and Design	802,000
Construction Management	234,000
Total	\$5,011,000

NON-FEDERAL COST: None.

STATUS OF LOCAL COOPERATION: Not applicable.

Mississippi Valley Division

St. Louis District
4 February 2008

Mississippi River Between the Ohio and
Missouri Rivers (Regulating Works), Missouri and Illinois

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$269,000,000 is an increase of \$1,000,000 from the latest estimate of \$268,000,000 presented to Congress (FY 2008). This change includes the following item:

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

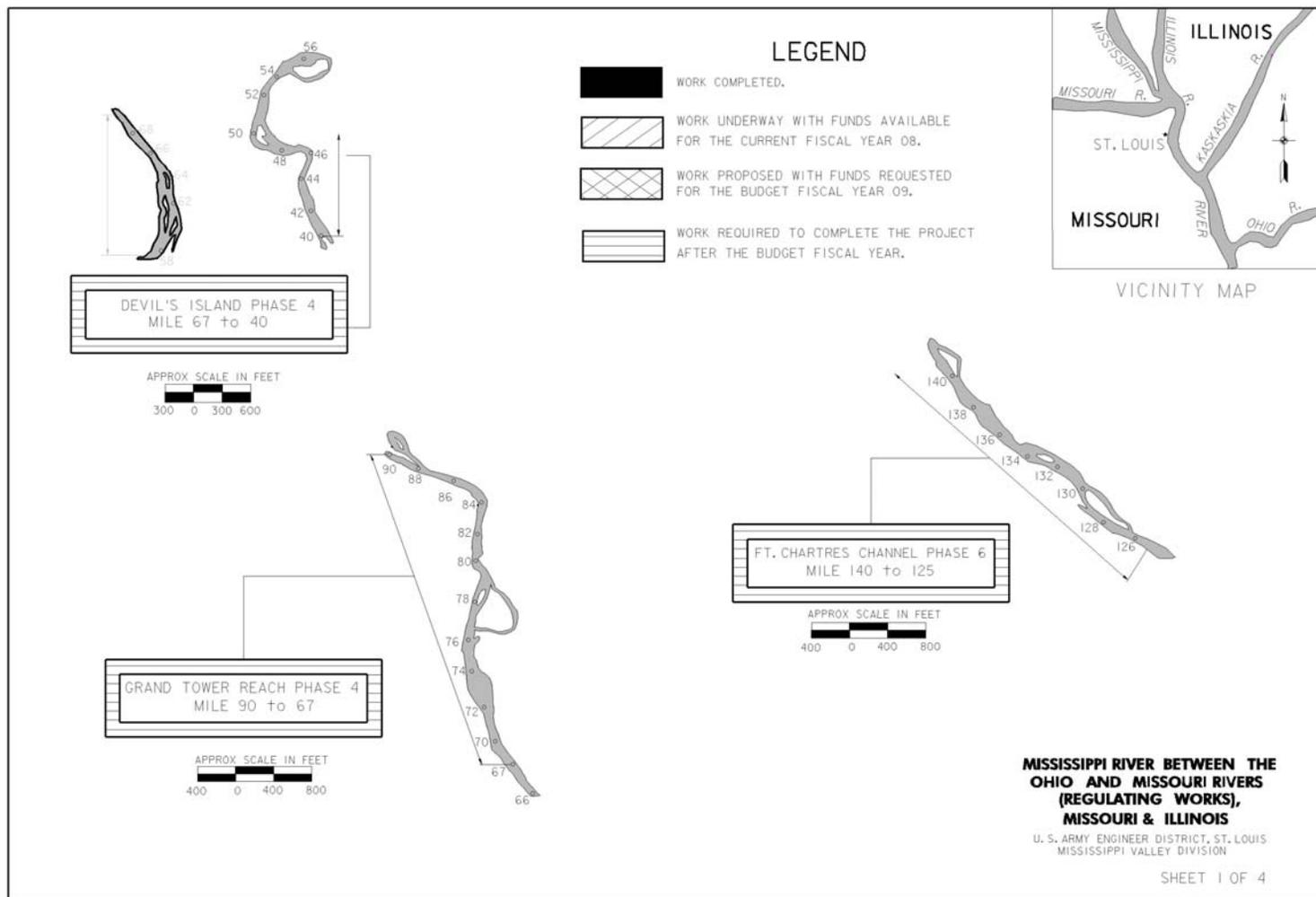
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Council on Environmental Quality on 8 April 1976 and published in the Federal Register on 23 April 1976. An Environmental Analysis was completed for the Rock Removal and Finding of No Significant Impact signed on 28 October 1988.

OTHER INFORMATION: Planning was initiated prior to 1910, and construction was initiated in 1910. This project requires no mitigation.

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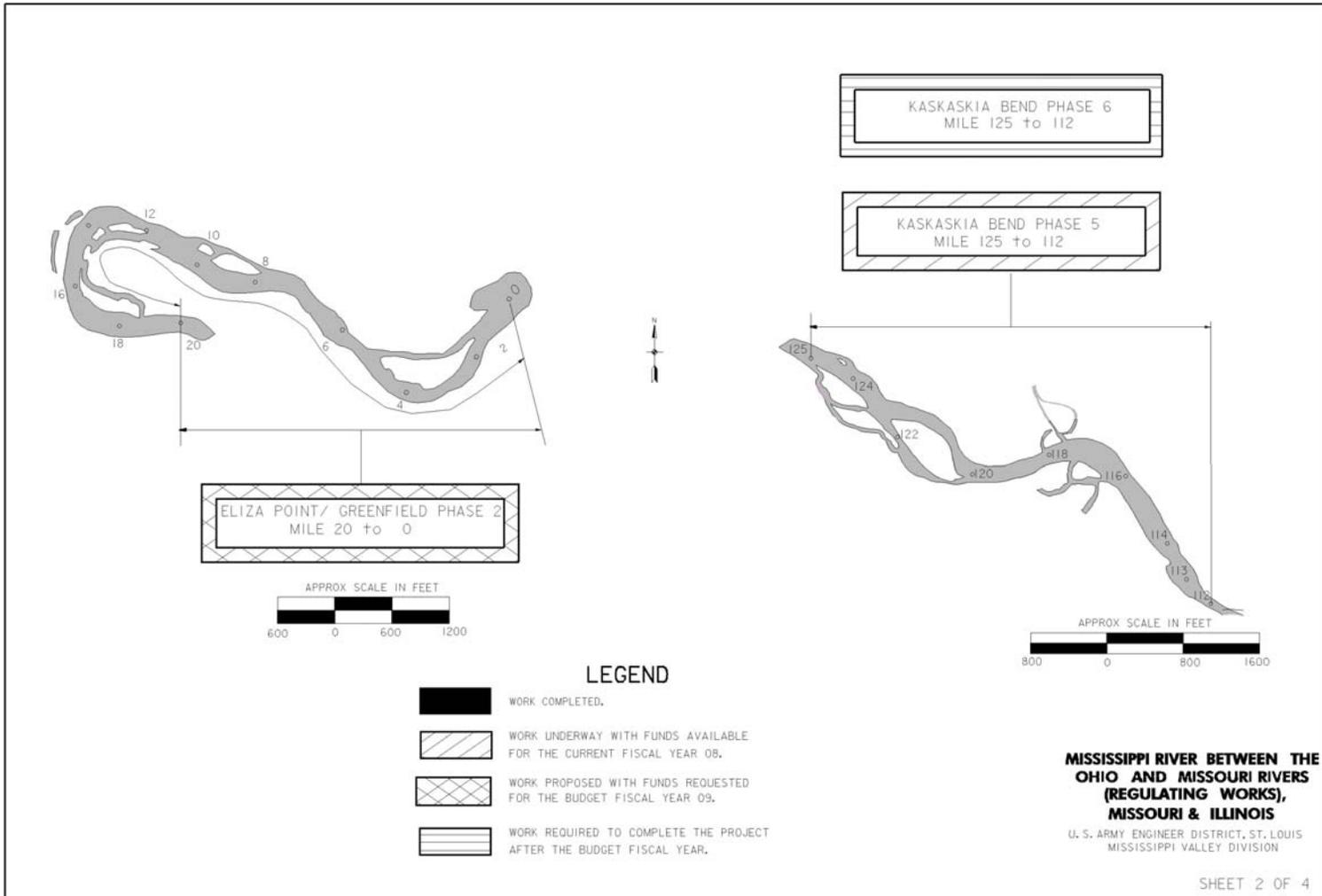
Mississippi River Between the Ohio and
Missouri Rivers (Regulating Works), Missouri and Illinois



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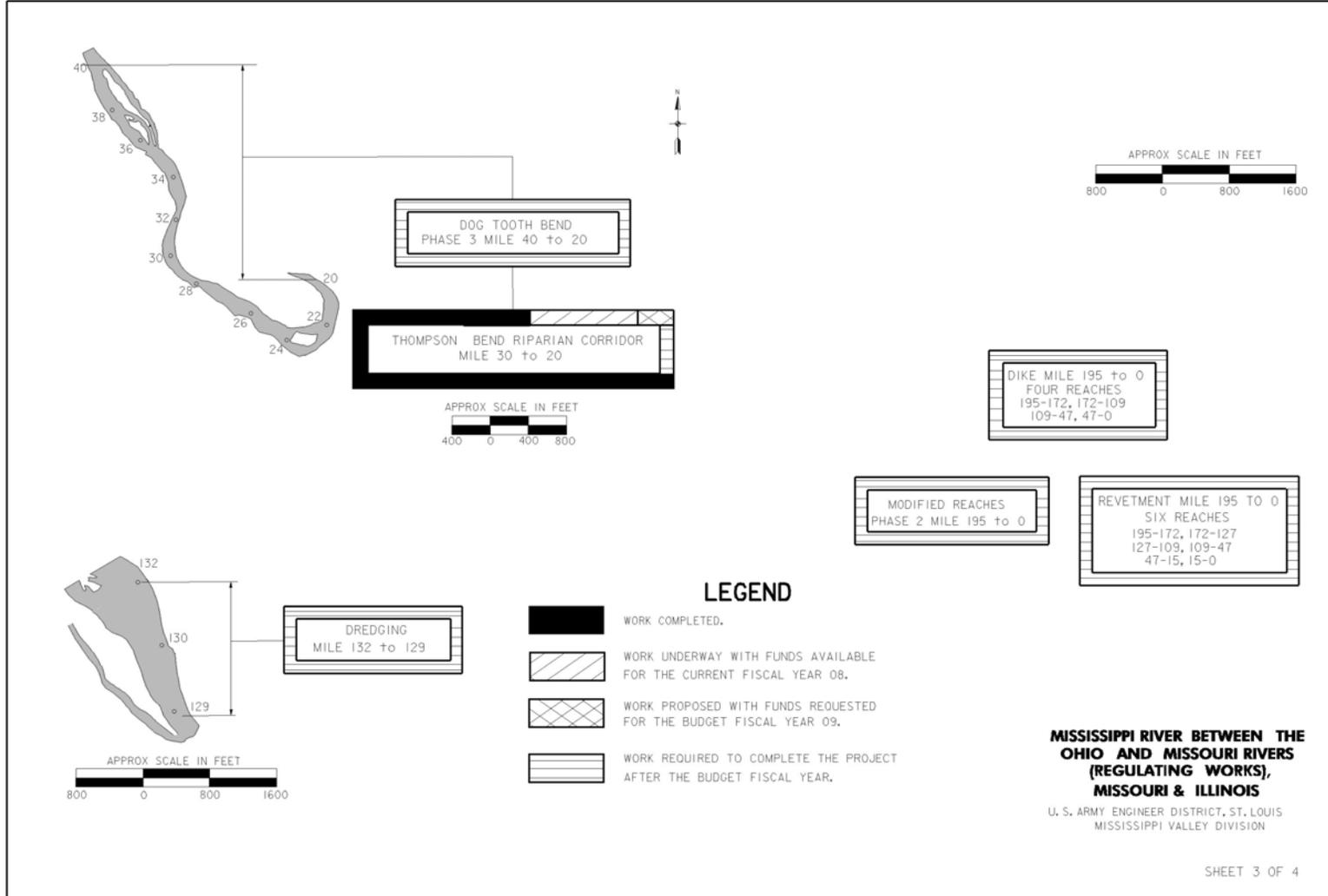
Mississippi River Between the Ohio and Missouri Rivers (Regulating Works), Missouri and Illinois



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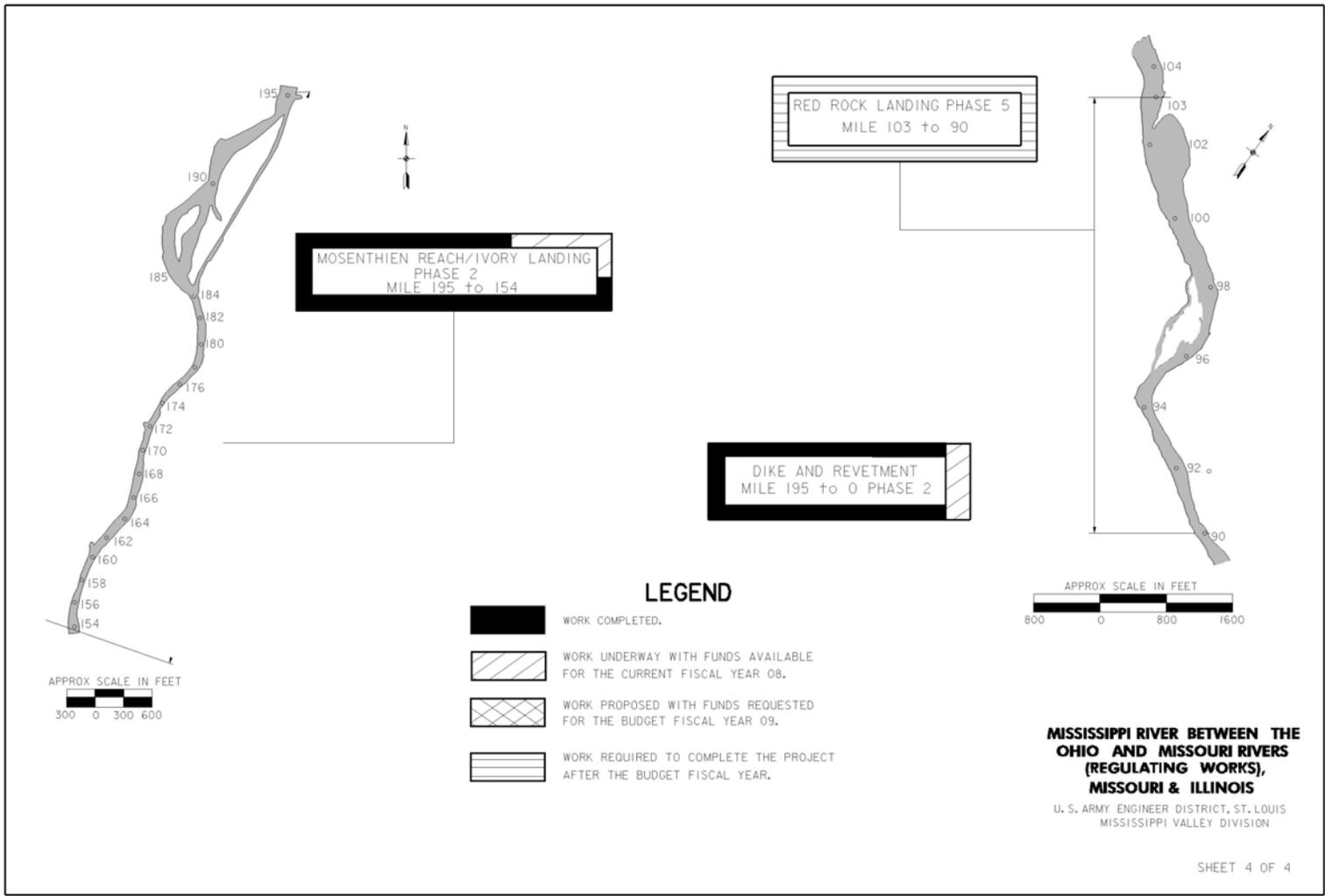
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Mississippi River Between the Ohio and Missouri Rivers (Regulating Works), Missouri and Illinois



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Mississippi River Between the Ohio and Missouri Rivers (Regulating Works), Missouri and Illinois

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Study	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
ILLINOIS							
Illinois River Basin Restoration, IL Rock Island District	7,623,000	2,600,000	1,162,000	750,000	725,000	400,000	1,986,000

The Illinois River Basin Restoration study encompasses the entire Illinois River watershed within the State of Illinois, a nationally significant ecosystem. The purpose of the Illinois River Restoration study includes the development of a comprehensive plan for the restoration of the Illinois River watershed, evaluation of critical restoration projects, and initiation of long-term resource monitoring. The plan will address habitat, water quality, navigation, and economic opportunities. Components will 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. This effort complements the related Illinois River Ecosystem Restoration Feasibility Study. The comprehensive plan for this project will be included with the Illinois River Ecosystem Restoration study in a joint report. 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 being designed and will be constructed using Construction funds concurrently with the preparation of the comprehensive plan. The feasibility cost sharing agreement with the State of Illinois was signed 31 July 2002.

Fiscal Year 2008 funds are being used to continue feasibility level analysis of critical restoration projects (i.e., Senachwine Creek, Starved Rock Pool, Blackberry Creek, Alton Pool, Kankakee River, Fox River, Tenmile Creek, and Yellow River), sediment gaging and program management.

Funds requested for Fiscal Year 2009 will be used to complete critical restoration project feasibility efforts at Starved Rock Pool, Blackberry Creek, and Alton Pool, and continue critical restoration project feasibility efforts on five projects (e.g. Fox River, Senachwine Creek, Kankakee River, Tenmile Creek, and Yellow River) at an efficient rate in concert with the non-Federal sponsor.

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Illinois River Basin Restoration, IL - Continued

The estimated cost of the feasibility phase is \$11,020,000. 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	\$11,480,000
Reconnaissance Phase (Federal)	460,000
Feasibility Phase (Federal)	7,163,000
Feasibility Phase (Non-Federal)	3,857,000

The reconnaissance phase was completed in July 2002. The feasibility studies for Critical Restoration Projects, depending on funding, can be completed by September 2011.

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APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Study	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
PROJECT: Louisiana Coastal Area -- Science Program, LA New Orleans District	65,000,000	0	2,475,000	2,500,000	0	10,000,000	50,025,000

LOCATION: 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. The area supports a complex, coastal wetlands and barrier island ecosystem, which is an environmental resource of national significance. The coastal land loss results from human intervention and natural processes, including: (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) storms associated with winter colds fronts, tropical storms, and hurricanes.

JUSTIFICATION: The overall goal of the LCA Science Program is to inform and guide the LCA Ecosystem Restoration Program both in the near-term and in the long-term. It will be independent of, yet responsive to, the State and Federal managers of the LCA Ecosystem Restoration Program, who are ultimately accountable for ensuring that the restoration effort is highly cost-effective and meets the most critical ecological needs. The LCA Science Program will assist them by providing the necessary science support aimed at improving implementation. It will also evaluate the validity of scientific hypotheses and assumptions regarding the effectiveness of current approaches to the restoration of this ecosystem, thereby reducing uncertainty over time. This program is an integral component of the Corps effort to help protect and rebuild this ecosystem.

DESCRIPTION: The responsibilities of the LCA Science Program will include leading the research effort to advance our understanding of the dynamics of the ecosystem and its needs; identifying the key scientific uncertainties and challenges facing the effort to protect and restore the ecosystem; monitoring the ecological effects of the overall restoration effort; and reporting on its failures and successes.

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DESCRIPTION CONT'D

The LCA Ecosystem Restoration program will be responsible for monitoring the operational performance of each restoration project. The LCA Science Program will provide assistance in designing these project-specific monitoring plans and review the data gathered by the LCA Ecosystem Restoration Program to evaluate the impacts of the individual projects and the impacts of the restoration program as a whole on the coastal ecosystem. The LCA Science Program will be responsible for any additional monitoring needed on a system-wide basis to support its evaluations of the overall effectiveness of the LCA Ecosystem Restoration Program.

The LCA Science Program will support the development by the LCA Ecosystem Restoration Program of system-wide frameworks for use in the ongoing process of formulating restoration projects and for use in modeling and evaluating their synergistic impacts and cost-effectiveness in reaching overall restoration goals. This support will include providing advice on the direction and the development of these system-wide frameworks. The LCA Science Program will also review the restoration projects, demonstration projects, and large-scale studies proposed by the LCA Ecosystem Restoration Program for the purpose of ensuring that significant scientific findings and recommendations, including recommendations for adaptive management, are made available for incorporation into its project plans on an ongoing basis.

The efforts of the LCA Science Program will be closely coordinated with the LCA Ecosystem Restoration Program to ensure that they support both near-term and long-term restoration needs. For example, the LCA Science Program will solicit annual requests for research "thrust areas" from State and Federal project managers in an effort to anticipate and address their upcoming science needs and support their ongoing and future ecosystem restoration studies and projects. The LCA Science Program will also maintain and fund a technical support team to allow project managers in the LCA Ecosystem Restoration Program ready access to short-term technical support, to encourage ongoing dialogue between these project managers and research scientists, to facilitate the use of the most recent science in the restoration effort, and to suggest ways to improve existing models, tools, and processes.

An external Science Board composed of academics and Federal research scientists who are familiar with other large ecosystem restoration efforts will review the activities of the LCA Science Program annually. The LCA Science Program was established as a separate line item in the FY06 Budget. Under the direction of the LCA Science Program office, all research funding will be awarded on a competitive basis. Funding for model development and monitoring undertaken by the LCA Science Program will generally be awarded on a competitive basis, unless the LCA Science Program concludes that it can achieve significant cost savings or efficiency gains by using other sources. The local sponsor for the LCA Science Program is the State of Louisiana, Department of Natural Resources.

FISCAL YEAR 2008: In FY08, carryover funds will be used to continue identification of monitoring, modeling, and planning tools needed to support analyses of the coastal ecosystem of Louisiana and Mississippi including the role of coastal features in storm damage reduction, and to begin an assessment of historical water quality data sets associated with freshwater diversions. New activities that will be undertaken in FY08 will include establishing the LCA Science Board, the LCA Science Coordination Team, and the LCA Science Technical Support program; an evaluation of the "leaky levee" concept; identifying benchmarks for subsidence monitoring in wetlands; and developing baseline water quality and ecological monitoring plans for the area east of the Mississippi River.

FISCAL YEAR 2009: FY09 funds will be used to sustain the LCA Science Program and support its ongoing activities, including the LCA Science Board, LCA Science Coordination Team and Technical Support program meetings and activities; the maintenance of a data management system; the development of decision frameworks that integrate hydrodynamics, water quality and ecology; and the provision of technical support to the LCA Restoration Program's project managers and project execution teams. New activities that would be undertaken in FY09 will include: modeling the role of current and restored Louisiana barrier islands in storm surge mitigation, the enhancement of land-building modules in coastal modeling systems, and the establishment of an improved salinity monitoring network. Tools to enhance the ability to assess wetland functions will be developed and coordinated; efforts to link ecological models to hydrodynamic and water quality models will be expanded. In support of the Mississippi River Hydro/Delta Management study, the science program will also develop a strategy to improve our understanding of the sediment loads and flow characteristics of the Mississippi River, and its ability to supply adequate freshwater and associated sediment for restoration while continuing to support commercial navigation and flood and storm damage reduction needs.

SUMMARIZED FINANCIAL DATA

The estimated cost of the LCA Science Program is \$100,000,000 over a 10-year period and will be cost shared on a 65-35 percent basis consistent with WRDA 2007.

Total Estimated Program Cost	\$100,000,000
Federal	\$ 65,000,000
Non-Federal	\$ 35,000,000

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Study	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
LOUISIANA							
PROJECT: Louisiana Coastal Area -- Ecosystem Restoration, LA New Orleans District	92,500,000	20,767,000	18,425,000 ^{a/}	0	2,952,000	10,000,000	40,356,000

LOCATION: 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. The area supports a complex, coastal wetlands and barrier island ecosystem, which is an environmental resource of national significance. The coastal land loss results from human intervention and natural processes, including: (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) storms associated with winter colds fronts, tropical storms, and hurricanes.

JUSTIFICATION: The Louisiana Coastal Area Ecosystem Restoration Study Report was completed in November 2004. A feasibility cost-sharing agreement was executed between the Federal Government and the State of Louisiana, Department of Natural Resources, which is the non-Federal sponsor, in February 2000 and amended in March 2002 and October 2004. A near-term plan of studies and projects was developed through a public involvement process, and working closely with other Federal agencies and the State of Louisiana. A Chief of Engineers Report on this near-term plan was signed on 31 January 2005, and was then authorized in the Water Resources Development Act of 2007 (WRDA 2007). This budget request continues the restoration planning efforts that are currently underway. The LCA Ecosystem Restoration Program will construct significant restoration features, undertake demonstration projects, study potentially promising large-scale, long-term concepts, and take other needed actions to restore the ecosystem. All construction activities under the plan will be subject to approval of feasibility level of detail documents by the Secretary of the Army.

The plan emphasizes projects that involve diverting and managing freshwater and the associated sediment for restoration purposes. Wetlands created or sustained in this manner can help restore/sustain nesting, feeding and resting habitats for fish and wildlife, including threatened and endangered species (eagle, sturgeon, brown pelican, piping plover). The plan also includes barrier Island restoration, which can favorably impact nesting and resting cover for brown pelican and piping plover.

DESCRIPTION: Work on the Mississippi River Hydro/Delta Management (MS Rvr Hydro/Delta) study will continue to be a priority in FY09. This study involves a combination of the previous Mississippi River Hydrodynamic Model and the Mississippi River Delta Management Study. The combined study will feature and rely on a model to assess the effects on navigation and sediment dynamics along the Mississippi River mainstem associated with possible combinations of diversions from the river. The study thus supports the formulation of all of the proposed LCA diversion features. One focus of the study will be to use this model's outputs to formulate and assess alternative management options for the outflow channel of the delta. In FY08, the Corps will also expand the study's scope to include the hydrodynamics of the watershed of the Atchafalaya River. FY 09 funds will also be used to further develop morphological and sediment transport models for the Mississippi and Atchafalaya Deltas.

Funding for FY09 is based in part on the sorting criteria defined in Section 3 of the Final Report on the LCA near-term plan. Additional consideration was also given if a feature could contribute to storm damage reduction in the New Orleans Metro area. Based on the above criteria, the Barataria Basin Barrier Shoreline Restoration (BBBS), Diversion at Myrtle Grove, and Diversion at Hope Canal would be advanced. In some locations, the Mississippi River Gulf Outlet (MRGO) Ecosystem Restoration plan or the Beneficial Use of Dredged Material Program may also meet these criteria.

* The Barataria Basin Barrier Shoreline Restoration (BBBS) feature consists of headland and barrier island restoration. Restoring and protecting these features helps preserve the western boundary of the Barataria Basin, preserve natural hydrologic function, provide habitat for migratory birds and other wildlife including some endangered species, and support commercial and recreational fisheries, as well as providing storm surge protection to Barataria Basin interior wetlands. This study is being undertaken pursuant to the execution of a cost sharing agreement dated June 2006. In FY09, the decision document is scheduled to be completed and pre-construction engineering and design (PED) will be initiated.

* The Diversion at Myrtle Grove (Myrtle Grove) with dedicated dredging project consists of diverting freshwater and associated sediment from the Mississippi River into the Barataria Basin through a box culvert system, in combination with dredged Mississippi River material for several years, to create marsh wetlands. This feature is expected to deliver benefits over 11,500 acres and would benefit the bald eagle and essential fish habitat. In FY09, the study is scheduled to be completed and PED initiated.

* The Diversion at Hope Canal (Hope Canal) is expected to enhance approximately 36,000 acres of Maurepas Swamp wetlands primarily by introducing freshwater and associated sediment from the Mississippi River. Project features include two box culverts; a receiving pond reinforced with riprap; and an outflow channel that will run from the river to U.S. Interstate 10. The bald eagle is expected to be benefitted. In FY09, the study and design work is scheduled to be completed and PED initiated.

* The MRGO Ecosystem Restoration plan. The LCA report recommended two phases of ecosystem restoration in the MRGO area. Phasing of the plan was associated with questions about the future of the MRGO navigation project. In coordination with the pending recommendations of the Chief and in view of the recent related authorizations in Title III of the Water Resources Development Act of 2007, the LCA MRGO plan will be re-evaluated to identify the critical ecological needs in the area affected by the navigation channel and determine the best way to meet them.

DESCRIPTION CONT'D

*The Beneficial Use of Dredged Material Program will provide the framework, process, and procedures for selecting, funding and implementing projects over a 10-year period that could support up to an estimated 21,000 acres of coastal wetlands. The Corps will only pursue this work under the LCA Ecosystem Restoration program where, and to the extent that, it is the most cost-effective way to address a critical ecological need. Dredged material would be acquired from maintenance activities of Federal waterways. This study is being undertaken pursuant to the execution of a cost-sharing agreement dated June 2006. During FY09, submittal of the final report for the Division Commander's notice is scheduled, which may include identification of an initial suite of potential BUDMat projects.

The second set of screening criteria evaluates if a project would prevent future losses where predicted to occur, would restore or preserve critical geomorphic structure, and can contribute to storm damage reduction in the New Orleans Metro or other Metro areas. Based on this set of screening criteria, the Bayou Lafourche Reintroduction, the Modification to Caernarvon, the Modification to Davis Pond, the Terrebonne Basin Barrier Shoreline Restoration, Land Bridge between Caillou Lake and Gulf of Mexico, and the Gulf Shoreline at Point Au Fer Island would be advanced. The Mississippi River Hydro/Delta Management is included here as a necessary effort to scale and design diversions from the Mississippi and the Atchafalaya Rivers.

* The Bayou Lafourche Reintroduction feature consists of increasing channel flows by introducing Mississippi River freshwater and associated sediment into the Bayou at Donaldsonville to mimic the actions of a river crevasse. The introduction method will be determined as a study output. Dredging and bank stabilization would be required to control water levels and maintain bank stability. A sediment trap and weirs are also features. Projections are that 2,500 acres of coastal marsh would be protected and thousands of acres more would be benefited, including bald eagle and essential fish habitat. In FY09, the study is scheduled to be completed and PED initiated.

* The Modification to Caernarvon (Caernarvon) feature will involve changes to the operation of this project to increase its cost-effectiveness in creating and protecting wetlands. Currently, to maintain salinity gradients, the structure now operates on average at about ½ of its capacity. The modification would directly benefit the wetlands of St. Bernard and Plaquemines Parishes, which suffered extensive losses from Hurricane Katrina, through the addition of more freshwater and associated sediment from the Mississippi River. Any change that would require a significant structural modification to the existing structure would be proposed for Congressional authorization. The bald eagle and essential fish habitat are expected to benefit. In FY09, the study will continue.

* The Modification to Davis Pond feature will involve changes to the operation of this project to increase its cost-effectiveness in creating and protecting wetlands. Currently, to maintain salinity gradients, the structure now operates on average at about ½ of its capacity. In addition to wetland creation, the freshwater wetlands of the central Barataria Basin will be directly benefitted by the added freshwater and associated sediment introduced from the Mississippi River. Any change that would require a significant structural modification to the existing structure would be proposed for Congressional authorization. The bald eagle and essential fish habitat are expected to benefit. In FY09, the study will continue.

* The Terrebonne Basin Barrier Shoreline Restoration (TBBS) feature consists of barrier island restoration of the Timbalier and Isle Derniers barrier island chains. Restoring and protecting these features will help preserve the southern boundary of the Terrebonne Basin, preserve natural hydrologic function, provide and

DESCRIPTION CONT'D

protect habitat for migratory birds and wildlife including some endangered species, support commercial and recreational fisheries, as well as provide storm surge protection to the interior wetlands of Terrebonne Basin. In FY09, the study will conclude and PED initiated.

* The Land Bridge between Caillou Lake and Gulf of Mexico (Caillou LB) feature 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. Project features to be considered may include armoring the Gulf shoreline and rock armoring or marsh creation to plug/fill broken marsh. This will help to preserve the integrity of the land bridge and thereby increase freshwater influences. Coastal marsh would be protected, as would habitat for migratory birds and wildlife. Bald eagle and essential fish habitat would also benefit.

* The Gulf Shoreline at Point Au Fer Island (Point Au Fer) feature provides for stabilizing the Gulf shoreline of this island. The project would prevent shoreline erosion, protect coastal wetlands, and prevent the formation of direct connections with the Gulf and Four League Bay that would otherwise increase the salinities of nearby coastal wetlands. Stabilizing this island will help preserve habitat for migratory birds and wildlife, protect essential fish habitat, and provide storm surge protection to the southwestern corner of the Terrebonne Bay wetland system. The study begins in FY09.

SUMMARIZED FINANCIAL DATA:

The estimated cost of preparing feasibility studies under the LCA near-term plan is \$185,000,000 and will be cost-shared on a 50-50 percent basis as follow:

Total Estimated Study Cost	\$185,000,000
Reconnaissance Phase (Federal)	N/A
Feasibility Phase (Federal)	\$92,500,000
Feasibility Phase (Non-Federal)	\$92,500,000

^{a/} Includes \$11 million 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. Of this amount, \$1M was executed by Science Program for Hurricane Assessment.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Mississippi Valley Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
MINNESOTA							
Wild Rice River, MN (Red River of the North Basin, MN, ND, SD and Manitoba, Canada) St. Paul District	1,710,000	720,000	99,000	185,000	148,000	271,000	287,000

The Wild Rice River is a tributary of the Red River of the North in northwestern Minnesota, about 250 miles northwest of Minneapolis. Agriculture dominates the watershed economy and land use and has been the prime motivator for extensive channel straightening, ditching, and drainage. The topography contributes to flood problems. The Wild Rice River's fast moving flow from relatively steep upland and beach ridges from glacial Lake Agassiz discharges onto the flat glacial lakebed where channel capacity is inadequate. Flooding has become more frequent and severe in recent years. For example, the June 2002 flood was the flood of record at Ada, Minnesota (Norman County seat) and exceeded the 500-year event in portions of the watershed. In collaboration with Federal and State agencies, environmental organizations, landowners, and other stakeholders, the Wild Rice Watershed District, non-Federal sponsor for the Wild Rice River Feasibility Study, conducted an assessment of water resource problems, needs, and opportunities. That assessment determined that priority should be given to flood damage reduction and environmental restoration in the lower portion of the watershed, recommended further investigation of a number of corrective measures, and concluded that high implementation costs necessitated Federal participation. Based on those findings, the Wild Rice Watershed District and Corps executed a feasibility cost sharing agreement 10 January 2003 and are partnering the study to address ecosystem restoration as well as floodwater storage and diversion alternatives. The feasibility study will collect baseline data, develop analytical models, and conduct preliminary screenings of storage and diversion measures to determine the likelihood of Corps participation.

Fiscal Year 2008 funds are being used for continuing the feasibility study. Specific goals include generating an environmental inventory, developing a community model for measuring the environmental outputs, hydraulic modeling of the without-levee condition, alternatives to land acquisition, and conducting an alternatives formulation briefing.

Funds requested for Fiscal Year 2009 will be used to continue the feasibility study. Specific goals include preparing the environmental assessment; preparing a geotechnical studies report, social/institutional analysis, financial analysis, and real estate analysis; identifying plans, including the local sponsor's preferred plan; and continuing public involvement.

Wild Rice River, MN (Red River of the North Basin, MN, ND, SD and Manitoba, Canada) – Continued

The estimated cost of the feasibility phase is \$3,420,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Feasibility Study Cost	\$3,420,000
Reconnaissance Phase (Federal)	N/A ¹
Feasibility Phase (Federal)	1,710,000
Feasibility Phase (Non-Federal)	1,710,000

The reconnaissance phase was completed in January 2003. The feasibility study completion date is scheduled for September 2010.

¹ Reconnaissance phase funded under overall study authority for Red River of the North.

CONSTRUCTION

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

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

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

DESCRIPTION: The purpose of the Upper Mississippi River Restoration project is to address adverse impacts to the aquatic ecosystem of the Upper Mississippi River. Habitat rehabilitation and enhancement projects are effectively preserving and improving fish and wildlife habitat on the Upper Mississippi River System (UMRS). Projects completed to date have been designed to counteract the effects of backwater sedimentation through dike construction to limit sedimentation of prime habitat and dredging to restore aquatic habitat; provide water level control and optimal food growth for waterfowl; create islands to decrease wind generated disturbances, thereby reducing turbidity; alter the flow of water to side channels and backwaters to decrease flows of sediment-laden water during high water and to increase dissolved oxygen levels during low water; increase the diversity and abundance of mast (nut) producing trees and prairies to benefit wildlife. Long-Term Resource Monitoring provides scientific information for more informed management of the UMRS ecosystem. Ninety-seven percent of authorized Upper Mississippi River Restoration appropriations have been used to design and construct habitat rehabilitation and enhancement projects and for Long-Term Resource Monitoring. Recreation development is an authorized program element. All work is programmed.

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

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

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

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

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

Mississippi Valley Division

Rock Island District
4 February 2008

Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	
Estimated Federal Cost		\$ 766,195,000	
Estimated Non-Federal Cost		8,204,000	
Cash Contribution	\$ 8,204,000		
Other Costs	0		
Total Estimated Project Cost		\$ 774,399,000	
Allocations to 30 September 2005		\$ 277,368,000	
Allocation for FY 2006		19,799,000	
Allocation for FY2007		21,894,000	
Conference Allowance for FY 2008		16,851,000	
Allocation for FY 2008		16,851,000	
Allocations to 30 September 2008		335,912,000	44
Allocation Requested for FY 2009		\$ 20,000,000	46
Programmed Balance to Complete After FY 2009		\$410,283,000	
Unprogrammed Balance to Complete After FY 2009		0	

Mississippi Valley Division

Rock Island District
4 February 2008

Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

STATUS: (1 January 2008)		PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE ^{1/}
Long Term Resource Monitoring		NA	NA
Economic Impacts of Recreation Study		100	(Sep 92)
Traffic Monitoring		100	(Sep 90)
Habitat Rehabilitation and Enhancement Projects (Construction)			
Angle Blackburn, MO	ST. LOUIS DISTRICT	0	Deferred
Batchtown Mgt. Area, IL	ST. LOUIS DISTRICT	75	Dec 09
Calhoun Point, IL	ST. LOUIS DISTRICT	90	TBD
Clarksville Refuge, MO	ST. LOUIS DISTRICT	100	(Apr 90)
Cuivre Island, MO	ST. LOUIS DISTRICT	100	(Jul 99)
Dresser Island, MO	ST. LOUIS DISTRICT	100	(Sep 91)
Establishment Chute, MO	ST. LOUIS DISTRICT	0	Deferred
Godar, IL	ST. LOUIS DISTRICT	1	TBD
Jefferson Barracks Side Channel	ST. LOUIS DISTRICT	0	Deferred
Least Tern, MO	ST. LOUIS DISTRICT	22	Deferred
Norton Woods, MO	ST. LOUIS DISTRICT	0	Sep 14
Pharrs Island, Phase I, MO	ST. LOUIS DISTRICT	100	(Jun 92)
Piasa & Eagle Nest Island, IL	ST. LOUIS DISTRICT	1	TBD
Pool 24 Islands, MO	ST. LOUIS DISTRICT	1	TBD
Pools 25 and 26, MO	ST. LOUIS DISTRICT	26	Nov 08
Reds Landing, IL	ST. LOUIS DISTRICT	0	Deferred
Rip Rap Landing, IL	ST. LOUIS DISTRICT	1	TBD
Salt Lake/Ft Chartres S.C., IL	ST. LOUIS DISTRICT	7	TBD
Stag & Keaton Is., MO	ST. LOUIS DISTRICT	100	(Sep 98)
Stump Lake, IL	ST. LOUIS DISTRICT	100	(Nov 98)
Schenimann, MO	ST. LOUIS DISTRICT	15	TBD
Stone Dike Alteration, IL/MO	ST. LOUIS DISTRICT	10	Deferred
Swan Lake, IL	ST. LOUIS DISTRICT	99	Dec 08
Ted Shanks, MO	ST. LOUIS DISTRICT	1	TBD
Wilkinson Island, IL	ST. LOUIS DISTRICT	1	TBD
Andalusia Refuge, IL	ROCK ISLAND DISTRICT	100	(Dec 94)
Banner Marsh, IL	ROCK ISLAND DISTRICT	100	(Dec 03)
Mississippi Valley Division	Rock Island District		Upper Mississippi River Restoration, Illinois, Iowa, Minnesota, Missouri, and Wisconsin
	4 February 2008		

STATUS: (1 January 2008) (Continued)

PERCENT COMPLETE PHYSICAL COMPLETION SCHEDULE ^{1/}

Bay Island, MO	ROCK ISLAND DISTRICT	100	(Nov 94)
Beaver Island, IA	ROCK ISLAND DISTRICT	2	TBD
Bertom Lake, WI	ROCK ISLAND DISTRICT	100	(Jun 92)
Big Timber, IA	ROCK ISLAND DISTRICT	100	(Jun 95)
Brown's Lake, IA	ROCK ISLAND DISTRICT	100	(Sep 94)
Chautauqua Refuge, IL	ROCK ISLAND DISTRICT	100	(Dec 03)
Cottonwood Island, MO	ROCK ISLAND DISTRICT	25	(Dec 99)
Fox Island, MO	ROCK ISLAND DISTRICT		TBD
Gardner Div., IL	ROCK ISLAND DISTRICT	100	TBD
Huron Island, IA	ROCK ISLAND DISTRICT	7	TBD
Lake Odessa, IA	ROCK ISLAND DISTRICT	65	TBD
Pool 11 Islands, WI/IA	ROCK ISLAND DISTRICT	99	TBD
Pleasant Creek, IA	ROCK ISLAND DISTRICT	100	(Jan 03)
Monkey Chute, MO	ROCK ISLAND DISTRICT	100	(Aug 89)
Peoria Lake, IL	ROCK ISLAND DISTRICT	100	(Sep 97)
Peosta Channel, IA	ROCK ISLAND DISTRICT	0	Deferred
Pool 12 Overwintering IA/IL	ROCK ISLAND DISTRICT	23	TBD
Potters Marsh, IL	ROCK ISLAND DISTRICT	100	(Jun 96)
Princeton, IA	ROCK ISLAND DISTRICT	100	(Dec 01)
Rice Lake, IL	ROCK ISLAND DISTRICT	20	TBD
Smith's Creek, IA	ROCK ISLAND DISTRICT	9	Deferred
Spring Lake, IL	ROCK ISLAND DISTRICT	100	(Sep 01)
Ambrough Slough, WI	ST. PAUL DISTRICT	100	(Sep 04)
Blackbird Slough, MN	ST. PAUL DISTRICT	0	Deferred
Blackhawk Park, WI	ST. PAUL DISTRICT	100	(Nov 90)
Bussey Lake, IA	ST. PAUL DISTRICT	100	(Jun 96)
Capoli Slough, WI	ST. PAUL DISTRICT	20	TBD
Cold Springs, WI	ST. PAUL DISTRICT	100	(Aug 94)
Conway Lake, IA	ST. PAUL DISTRICT	10	TBD
East Channel, WI, MN	ST. PAUL DISTRICT	100	(Jun 97)
Finger Lakes, MN	ST. PAUL DISTRICT	100	(Jul 94)

Mississippi Valley Division

Rock Island District
4 February 2008

Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

STATUS: (1 January 2008) (Continued)		PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE ¹
Guttenberg Fish Ponds, IA	ST. PAUL DISTRICT	100	(Oct 90)
Harpers Slough, IA	ST. PAUL DISTRICT	20	TBD
Indian Slough, WI	ST. PAUL DISTRICT	100	(Jun 94)
Island 42, MN	ST. PAUL DISTRICT	100	(May 87)
Lake Onalaska, WI	ST. PAUL DISTRICT	100	(Jul 90)
Lake Winneshiek, WI	ST. PAUL DISTRICT	5	TBD
Lansing Big Lake, IA	ST. PAUL DISTRICT	100	(Nov 94)
Long Lake, WI	ST. PAUL DISTRICT	100	(May 00)
Long Meadow Lake, MN	ST. PAUL DISTRICT	100	(Nov 06)
McGregor Lake, WI	ST. PAUL DISTRICT	1	TBD
Miss. River Bank Stabilization, MN/WI	ST. PAUL DISTRICT	100	(Sep 99)
Peterson Lake, MN	ST. PAUL DISTRICT	100	(Jun 96)
Polander Lake, MN	ST. PAUL DISTRICT	100	(Nov 00)
Pool 8 Isl, Phase I, WI	ST. PAUL DISTRICT	100	(Jun 93)
Pool 8 Isl, Phase II, WI	ST. PAUL DISTRICT	100	(Sep 99)
Pool 9 Isl Protection, WI	ST. PAUL DISTRICT	100	(Jun 95)
Pool 8 Isl, Phase III, WI	ST. PAUL DISTRICT	35	TBD
Pool Slough, IA	ST. PAUL DISTRICT	100	Apr 07
Rice Lake, MN	ST. PAUL DISTRICT	100	(Nov 98)
Small Scale Drawdown, WI	ST. PAUL DISTRICT	100	(Sep 97)
Spring Lake Peninsula, WI	ST. PAUL DISTRICT	100	(Nov 94)
Spring Lake Islands, WI	ST. PAUL DISTRICT	100	(Jul 06)
Trempealeau NWR, WI	ST. PAUL DISTRICT	100	(Sep 99)
Whitewater River, MN	ST. PAUL DISTRICT	2	Deferred
Zumbro River, WI	ST. PAUL DISTRICT	0	Deferred
Recreation		0	Unscheduled
Habitat Needs Assessment		100	(Sep 00)

¹ Parentheses indicate actual date.

Mississippi Valley Division

Rock Island District
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Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

JUSTIFICATION: Implementation of the Upper Mississippi River Restoration project is essential to the continued viability of the ecosystem of the Upper Mississippi River and important to the long-term public acceptance and support of Upper Mississippi River System (UMRS) navigation. Habitat rehabilitation and enhancement projects help reduce the negative effects of navigation features on the system's backwater and side channels. Projects are selected for design and construction based on continued assessment of habitat restoration and enhancement opportunities as determined by the involved Federal and non-Federal partners. Long-Term Resource Monitoring provides data to indicate trends in key environmental parameters, analyzing sedimentation and other UMRS resource problems, and producing a spatial information database. An Economic Impacts of Recreation Study has been conducted to enable Federal and non-Federal management decisions to better consider impacts on recreation and the consequent changes in recreation-related expenditures in the local and regional economies.

Mississippi Valley Division

Rock Island District
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Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

FISCAL YEAR 2008: The requested amount will be used to continue projects under way in FY 2007 and to continue monitoring and other restoration-related activities, as follows:

PROJECT	DISTRICT	AMOUNT	STATUS
Batchtown Mgmt Area III, IL	ST. LOUIS DISTRICT	\$ 2,700,000	Continue Construction
Pool 25 and 26, MO	ST. LOUIS DISTRICT	50,000	Continue Design
Rip Rap Landing, IL	ST. LOUIS DISTRICT	25,000	Initiate Design
Swan Lake, IL	ST. LOUIS DISTRICT	50,000	Continue Construction
Ted Shanks, MO	ST. LOUIS DISTRICT	50,000	Continue Design
Wilkinson Island, IL	ST. LOUIS DISTRICT	59,000	Continue Design
Beaver Island, IA	ROCK ISLAND DISTRICT	112,000	Continue Design
Fox Island	ROCK ISLAND DISTRICT	200,000	Continue Design
Huron Island, IA	ROCK ISLAND DISTRICT	175,000	Continue Design
Lake Odessa Stg 2, IA	ROCK ISLAND DISTRICT	3,400,000	Complete Construction
Rice Lake, IL	ROCK ISLAND DISTRICT	225,000	Continue Design
Capoli Slough, WI	ST. PAUL DISTRICT	500,000	Continue Construction
Conway Lake, IA	ST. PAUL DISTRICT	150,000	Continue Design
Lake Winneshiek, WI	ST. PAUL DISTRICT	150,000	Continue Design
McGregor, IA	ST. PAUL DISTRICT	200,000	Continue Design
Pool 8 Phase III, Stg II, WI	ST. PAUL DISTRICT	2,000,000	Continue Construction
Zumbro River, WI	ST. PAUL DISTRICT	100,000	Continue Design
Habitat Evaluation/Monitoring		600,000	
Public Involvement		50,000	
Long Term Resource Monitoring		5,134,000	
Independent Technical Review Committee		105,000	
Program Management		816,000	
TOTAL		\$ 16,851,000	

Mississippi Valley Division

Rock Island District
4 February 2008

Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

FISCAL YEAR 2009: The requested amount will be used to continue projects under way in FY 2008 and to continue monitoring and other restoration-related activities, as follows:

PROJECT	DISTRICT	AMOUNT	STATUS
Batchtown Mgmt Area III, IL	ST. LOUIS DISTRICT	2,550,000	Continue Construction
Pool 24 Islands, MO	ST. LOUIS DISTRICT	100,000	Continue Design
Pool 25 and 26, MO	ST. LOUIS DISTRICT	100,000	Continue Design
Rip Rap Landing, IL	ST. LOUIS DISTRICT	100,000	Continue Design
Swan Lake, IL	ST. LOUIS DISTRICT	500,000	Continue Construction
Ted Shanks, MO	ST. LOUIS DISTRICT	100,000	Continue Design
Wilkinson Island, IL	ST. LOUIS DISTRICT	100,000	Continue Design
Beaver Island, IA	ROCK ISLAND DISTRICT	75,000	Continue Design
Fox Island	ROCK ISLAND DISTRICT	1,000,000	Initiate Construction
Huron Island, IA	ROCK ISLAND DISTRICT	150,000	Continue Design
Lake Odessa Stg 2, IA	ROCK ISLAND DISTRICT	750,000	Complete Construction
Rice Lake, IL	ROCK ISLAND DISTRICT	200,000	Continue Design
Rice Lake, IL	ROCK ISLAND DISTRICT	2,700,000	Initiate Construction
Capoli Slough, WI	ST. PAUL DISTRICT	500,000	Continue Construction
Conway Lake, IA	ST. PAUL DISTRICT	150,000	Continue Design
Harpers Slough, IA	ST. PAUL DISTRICT	1,200,000	Continue Construction
Lake Winneshiek, WI	ST. PAUL DISTRICT	150,000	Continue Design
McGregor, IA	ST. PAUL DISTRICT	250,000	Continue Design
Pool 8 Phase III, Stg II, WI	ST. PAUL DISTRICT	1,200,000	Continue Construction
Zumbro River, WI	ST. PAUL DISTRICT	100,000	Continue Design
Habitat Evaluation/Monitoring		800,000	
Public Involvement		100,000	
Long Term Resource Monitoring		6,092,000	
Independent Technical Review Committee		175,000	
Program Management		858,000	
TOTAL		\$ 20,000,000	

Mississippi Valley Division

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4 February 2008

Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 25 percent of the first costs allocated to fish and wildlife enhancement for the following projects:		
Baldwin Backwater, IL	\$ 624,000	
Banner Marsh, IL	1,780,000	
Batchtown, IL	146,000	
Blackhawk Park, WI	77,000	
Bussey Lake, IA	162,000	
Cuivre Island, MO	498,000	
Osborne Channel, IL	190,000	
Peoria Lake, IL	42,000	
Princeton, IA	54,000	
Swan Lake, IL	262,000	
Subtotal	\$ 3,835,000	\$ 0
Pay 35 percent of the first costs allocated to fish and wildlife enhancement for the following projects:		
Ambrough Slough, WI	\$ 166,000	
Pool Slough, IA, MN	175,000	
Rice Lake, IL	3,378,000	
Smith Creek, IA	300,000	
Kaskaskia Oxbow	350,000	
Subtotal	\$ 4,369,000	\$ 0
Pay 50 percent of the first costs allocated to recreation projects.	0	
Total Non-Federal Construction Costs	\$ 8,204,000	\$ 0

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Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin

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

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

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$766,195,000 is the same as the latest estimate presented to Congress (FY 2008).

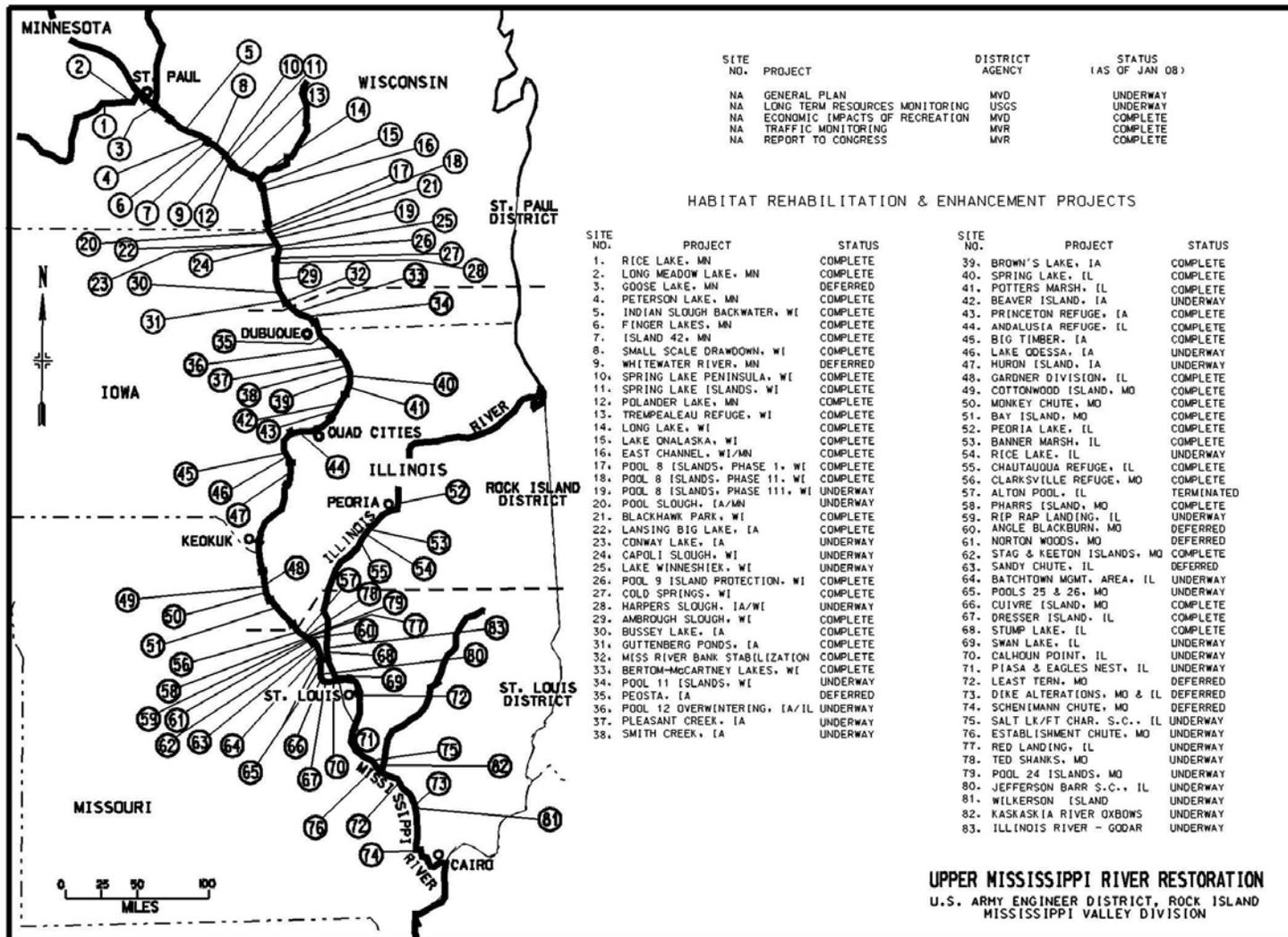
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: National Environmental Policy Act compliance is accomplished prior to implementation of each individual project.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 1985. The Water Resources Development Act of 1999, P.L. 106-53, amends the previous authority to increase annual appropriation limits available to the project; requires submission of a report to Congress on a 6 year cycle which began in December 2004 to evaluate projects, accomplishments, systemic habitat needs, and identifies any needed changes to the project authorization; and authorizes an independent technical review committee through FY 2009.

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Upper Mississippi River Restoration,
Illinois, Iowa, Minnesota,
Missouri, and Wisconsin



APPROPRIATION TITLE: Construction - (Hurricane and Storm Damage Risk Reduction)

PROJECT: Hurricane and Storm Damage Risk Reduction Project, New Orleans Area, Louisiana – (Continuing)

LOCATION: The project area encompasses portions of Orleans, Jefferson, St. Bernard, St. Charles and Plaquemines Parishes.

DESCRIPTION: The New Orleans Area Hurricane and Storm Damage and Risk Reduction System (HSDRRS) will provide risk reduction from hurricane storm surges and perform as a comprehensive, integrated system. The new system will protect the greater New Orleans metropolitan area to include the most populous areas of Orleans, Jefferson, St. Bernard, Plaquemines, and St. Charles Parishes. Levee and floodwall improvements will protect the area from a surge that has a 1 percent chance of occurring each year. Armoring of critical elements will improve resiliency during storm events. New pump stations, water control structures and floodgates will add perimeter protection to reduce the threat of storm surges from outfall canals and navigation channels. Improvements to drainage features will enhance the effectiveness of interior drainage systems, under the Southeast Louisiana, LA (SELA) Urban Drainage (Flood Control) project within the geographic perimeter of the Lake Pontchartrain and Vicinity (LPV) and West Bank and Vicinity (WBV) projects. The Administration's Fiscal Year 2009 Budget includes authorizing language to create this single system, as well as to apply a 65 percent Federal/35 percent non-Federal cost-share to the new cost-shared funds to be applied to this work. The 2009 funds are being requested as emergency funding.

1. PROJECT: Greater New Orleans Area, Louisiana – Perimeter Protection encompassing the Lake Pontchartrain and Vicinity (LPV), and West Bank and Vicinity (WBV) Louisiana, projects. The project consists of the following elements; Repair and restoration of existing and Construction of new system elements to include, Modifications of the Outfall Canals and Installation of Pump Stations and Closures as necessary, Improved protection of the Inner Harbor Navigation Canal (IHNC), Armoring critical elements, Floodwall reinforcement or replacement, Improvements to levees to provide 100-year protection and authorized (SELA) interior drainage improvements within Orleans and Jefferson Parishes.

2. PROJECT: Coastal Louisiana – Local Protection: New Orleans to Venice (NOV), Louisiana consists of repair, restore, and accelerate completion of levees and floodwalls, incorporating Non-Federal levees in Plaquemines Parish and Storm Proofing the vital interior pump stations.

New Orleans to Venice: The project consists of repair and restoration of authorized protection and floodwalls and accelerate completion to authorized protection. The protection system will consist of bringing a 23 mile section of non-federal levees located on the west bank into the Federal levee system. The project area extends approximately 60 miles north to south from Belle Chasse, LA to Venice, LA and is approximately 2 miles in width of developable lands. One major transportation artery (LA Hwy 23) on the west bank is the only route available that spans the entire north/south 60-mile distance. This route is subject to flooding when the "back levee" system is overtopped during storm events.

Storm Proofing: The project will consist of providing protection against hurricane force winds, storm surges and high water events at drainage pump stations in Southeast Louisiana. Features could include strengthening of structures, elevation of pump drives and switch gear, electrical system modifications, provision of backup power, and waterproofing to ensure operability during storms and high water events.

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New Orleans District
4 February 2008

Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

AUTHORIZATION: Section 108 of the Energy and Water Resources Development Appropriations Act, 1996 and Section 533 of the Water Resources Development Act of 1996, as amended, within the geographic perimeter of the West Bank and Vicinity and Lake Pontchartrain and Vicinity projects. Emergency Supplemental Appropriations Act, Dec 2005 – P.L. 109-148 One Hundred Ninth Congress of the United States of America AT THE FIRST SESSION. Emergency Supplemental Appropriations Act, June 2006 – P.L. 109-234 One Hundred Ninth Congress of the United States of America AT THE SECOND SESSION. Supplemental Appropriations Act, May 2007 – P.L. 110-28 One Hundred Ninth First Congress of the United States of America AT THE FIRST SESSION.

REMAINING BENEFIT – REMAINING COST RATIO: NA

TOTAL BENEFIT – COST RATIO: NA

INITIAL BENEFIT – COST RATIO: NA

BASIS OF BENEFIT – COST RATIO: NA

SUMMARIZED FINANCIAL DATA (New Funding)

Estimated Federal Cost	\$ 5,761,000,000
Estimated Non-Federal Cost	\$ 1,527,000,000
Total Estimated Project Cost	\$ 7,288,000,000
Allocation Requested for FY 2009	\$ 5,761,000,000

PHYSICAL COMPLETION SCHEDULE

PHYSICAL DATA

On the east bank of the Mississippi River in the vicinity of New Orleans, the physical area protected from storm surge by the New Orleans 100-year HSDRRS consists of low land and water areas between the Mississippi River alluvial ridge and Lake Pontchartrain and the Pleistocene escarpment to the north and west.

Pre-Katrina Authorized Project Features. Lake Pontchartrain, LA. and Vicinity Project:

- New levee north of U.S. Highway 61 - Bonnet Carre' Spillway east guide levee to Jefferson-St. Charles Parish boundary
- Floodwall along the Jefferson-St. Charles Parish line
- Enlarged levee along the Jefferson Parish Lakefront (including measures to intercept and convey drainage from the land side slope of the levees)
- Enlarged levee along the Orleans Parish Lakefront
- Parallel protection (including levees, floodwalls and flood proofed bridges) along the three outfall canals (17th St., Orleans Avenue, and London Avenue)
- Levees and floodwalls along the Inner Harbor Navigation Canal (IHNC) in Orleans Parish

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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

- Levees and floodwalls along the Orleans Parish Lakefront extending from the New Orleans Lakefront Airport to South Point in New Orleans East
- Enlarged levee from South Point to the Gulf Intracoastal Waterway (GIWW)
- Levees and floodwalls along the north bank of the GIWW to the IHNC
- Levee from the IHNC along the south bank of the GIWW and the Mississippi River-Gulf Outlet to vicinity of Verret and extending to the Mississippi River Levee near Caernarvon

On the west bank of the Mississippi River in the vicinity of New Orleans, the project area is located on the northern edge of the Barataria Basin with a western edge defined by the natural levee ridge of Bayou Lafourche and an eastern end at Belle Chase.

Pre-Katrina Authorized Project Features. West Bank and Vicinity, New Orleans:

52 miles of earthen levees
 4 miles of floodwalls
 Sector floodgate in the Harvey Canal

SELA Interior Drainage Project. Interior drainage under the Southeast Louisiana Urban Drainage (Flood Control) Project (SELA). The project supports the master drainage plans and generally provides flood protection from a 10-year rainfall event.

Pre-Katrina Authorized project Features. Southeast Louisiana Urban Drainage (Flood Control) Project Orleans

Improve 5 major drainage lines
 Add one pump station
 Build two new pump stations

Jefferson

Improve 24 drainage canals
 Add pumping capacity for 4 pump stations
 Add two new pump stations

On the east bank of the Mississippi River, the New Orleans to Venice, LA project stretches from Phoenix, Louisiana, (approximately 28 miles southeast of New Orleans) down to Bohemia, Louisiana, and along the west bank of the river from St. Jude, Louisiana (approximately 39 miles southeast of New Orleans) to the vicinity of Venice, Louisiana.

Pre-Katrina Authorized Project Features. New Orleans to Venice:

West Bank:

- 37 miles earthen back levees
- 34 miles of Mississippi River Levees
- 2 54" flap-gated culverts
- 1 floodgate at Empire

East Bank:

- 16 miles of earthen back levees
- 2 flap-gated culverts

Armor critical elements of the New Orleans HSDRRS.

Improve protection at the Inner Harbor Navigation Canal (IHNC).

Modify the 17th Street, Orleans Avenue, and London Avenue drainage canals and install pumps and closure structures at or near the lake.

Provide storm proofing of interior pump stations to ensure the operability of the stations during hurricanes, storms, and high water events.

Replace or modify certain non-Federal levees in Plaquemines Parish to incorporate the levees into the existing NOV hurricane protection project.

JUSTIFICATION: Hurricane and Storm Damage Risk Reduction Project, New Orleans, Louisiana (HSDRRS): Hurricanes Katrina (August 2005) and Rita (September 2005) demonstrated the consequences of an ineffective protection system. These events caused catastrophic damage in southeast Louisiana resulting in a commitment from the Administration and the Congress to repair, restore and improve hurricane and storm damage risk reduction projects. The rebuilding of the hurricane protection system and the commitment to construction of significant improvements to the system will greatly affect the viability of communities in southeast Louisiana. The New Orleans area Hurricane and Storm Damage Risk Reduction System will provide risk reduction from hurricane storm surges and perform as a comprehensive, integrated system rather than a collection of individual projects. The new system will provide the greater New Orleans metropolitan area to include the most populous areas of Orleans, Jefferson, St. Bernard, Plaquemines and St Charles Parishes risk reduction against a 100-year storm surge. Raising nearly 200 miles of floodwalls and levees 3 to 10 feet will protect the area from a surge that has a 1 percent chance of occurring each year. Armoring of high-risk locations of floodwalls and levees will improve resiliency during storm events. New pump stations, water control structures and floodgates will add perimeter protection to reduce the threat of storm surges to outfall canals and navigation channels. Improvements to drainage features will enhance the effectiveness of the interior drainage systems, under SELA.

New Orleans to Venice: The project will provide protection from hurricane tidal overflow to a major part of the developed and inhabited area along the Mississippi River delta. Approximately seventy-five percent of the population and seventy percent of the improved lands within the delta are contained in the project area. Hurricanes in the past have caused overtopping of the existing protective works, resulting in extensive damage to structures, industries, other urban

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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

and rural developments, crops, and livestock. Evacuation of inhabitants has been required frequently. Severe damages were sustained throughout the entire project area during the most recent storm, Hurricane Katrina. The back levees are designed for protection against hurricane-generated stages of 100-year frequency.

Storm Proofing: Hurricane Katrina demonstrated the consequences of compromised pumping system. Severe storms and tropical storm events often cause the loss of power and result in flooding to vulnerable areas of existing pumping stations. When this occurs, rainfall associated with these events floods residential and commercial properties. Damage associated with this extensive flooding can result in the partial or total loss of pumping capacity causing increased flood levels and delayed evacuation of water from the area. The proposed improvements to the pump stations and equipment will stabilize operations thus reducing the likelihood of flooding and damages to property within the protected area. These improvements will also support quicker evacuation of water from the protected area should the levees/floodwalls be overtopped by storm surges greater than the design level.

The loss of pump capacity following Hurricane Katrina severely hampered the removal of floodwaters from inundated areas of New Orleans. Critical equipment such as switchgear in existing pump stations was submerged or inundated and was not operable until it could be isolated, dewatered and dried out. This made dewatering the City of New Orleans immensely more difficult as pumping capacity was greatly diminished and increased only slowly as pump stations and equipment came above water. Dewatering of the City of New Orleans could have been achieved in a fraction of the time if pumps had been operational from the start. Damages to structures and infrastructure would have been significantly reduced if the City of New Orleans could have been dewatered sooner. Jefferson Parish pump stations are in a similar situation. Pump stations suffered roof damage as a result of Hurricane Katrina. Rain rendered some pump equipment inoperable. Had the 17th Street Canal breached on the west side, the east bank of Jefferson Parish would have been submerged and dewatering would have presented the same problems and delays as with Orleans Parish. This applies to the west bank of Jefferson Parish, as well, in the vicinity of New Orleans. The proposed improvements would greatly increase the reliability of the drainage systems in Orleans and Jefferson Parishes.

FISCAL YEAR 2009: The requested amount will be used to complete the following:

Greater New Orleans Area, Louisiana:	Estimated Federal Cost
Repair & restore authorized protection and floodwalls on the LPV project	\$ 133,000,000
Accelerate completion to authorized protection on the LPV and WBV projects*	\$ 171,000,000
Modifications of the Outfall Canals and Installation of Pump Stations and Closures **	\$ 704,000,000
Improved protection of the Inner Harbor Navigation Canal (IHNC) **	\$ 53,000,000
Armoring critical elements	\$ 459,000,000
Floodwall reinforcement or replacement on the LPV and WBV projects**	\$ 412,000,000
Provide 100-year protection for the LPV and WBV projects***	\$1,997,000,000
SELA interior drainage improvements within the geographical perimeter of the LPV and WBV projects.	<u>\$ 838,000,000</u>
	<u>\$4,767,000,000</u>

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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

*Accelerate to completion to authorized protection on LPV is \$16,000,000 and WBV is \$155,000,000.

** Note: These new budget cost reflects the net impact of the pending reallocation of (\$800,000,000) to the IHNC improvements from Outfall Canals and Installation of Pump Stations and Closures (\$430,000,000) and from Floodwall Reinforcement or replacement (\$370,000,000).

***100-year protection for LPV is \$1,077,000,000 and WBV is \$920,000,000.

Coastal Louisiana:	Estimated Federal Cost
Repair & restore authorized protection and floodwalls – New Orleans to Venice project	\$ 260,000,000
Accelerate completion to authorized protection – New Orleans to Venice	\$ 188,000,000
Plaquemines Parish – Incorporate non-Federal levees	\$ 456,000,000
Storm-proof interior pump stations	\$ 90,000,000
	<u>\$ 994,000,000</u>

NON-FEDERAL COST: Based on proposed reauthorization included in the FY 2009 President’s Budget, the non-federal sponsor is responsible for 35 percent cost share of SELA and 100–year protection of LPV and WBV and the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) cost.

STATUS OF LOCAL COOPERATION: In accordance with State statute the Coastal Protection and Restoration Authority of Louisiana (CPRA) serves as the authority to act as the non-Federal sponsor for construction, operations, and maintenance of all hurricane, storm damage reduction, and flood control projects authorized by the United States Congress in the greater New Orleans and southeast Louisiana area.

P.L. 109-234 Title II, Chapter 3, Flood Control and Coastal Emergencies (120 STAT. 455), the “4th Supplement”, provides: “...That any project using funds appropriated under this heading shall be initiated only after non-Federal interests have entered into binding agreements with the Secretary requiring the non-Federal interests to pay 100 percent of the operation, maintenance, repair, replacement, and rehabilitation costs of the project and to hold and save the United States free from damages due to the construction or operation and maintenance of the project”.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Appropriate NEPA documentation is being developed consistent with alternative arrangements. Coordinated with the White House Council on Environmental Quality on 13 March 2007 as stated in the Federal Register.

OTHER INFORMATION: Population. The total population of the metropolitan New Orleans area in 2000 was approximately 1.3 million (U.S. Census data) with approximately 250,000 people residing on the west bank and 11,500 residing in the New Orleans to Venice area southeast of the City of New Orleans. The remaining 1.038 million residents reside in east bank areas of Orleans, Jefferson, St. Bernard, and St. Charles parishes. Current, post-Katrina population estimates vary with averages for the metropolitan area ranging between 1.0 and 1.1 million residents. While there were significant losses in Orleans, St. Bernard, and Plaquemines Parishes, other parishes have experienced a growth of residents, especially in area located along the northern shore of Lake Pontchartrain. A rough estimate of current metropolitan population is 1.00-1.05 million (based on the 2000 census and considering 95% losses in St Bernard and Plaquemines Parishes and Orleans Parish population of 290,000 with no changes in St. Charles or Jefferson Parishes).

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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

SUMMARIZED FINANCIAL DATA (New Funding)

Greater New Orleans Area, Louisiana:

Estimated Federal Cost	\$ 4,767,000,000
Estimated Non-Federal Cost	\$ 1,527,000,000
Total Estimated Project Cost	\$ 6,294,000,000
Allocation Requested for FY 2009	\$ 4,767,000,000

Repair & restore authorized protection and floodwalls on the LPV and WBV projects:

Estimated Federal Cost	\$ 133,000,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 133,000,000
Allocation Requested for FY 2009	\$ 133,000,000

Accelerate completion to authorized protection on the LPV and WBV projects:

Estimated Federal Cost	\$ 171,000,000*
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 171,000,000
Allocation Requested for FY 2009	\$ 171,000,000

(*LPV \$16,000,000 and WBV \$155,000,000)

SELA interior drainage improvements within the geographical perimeter of the LPV and WBV projects:

Estimated Federal Cost	\$ 838,000,000
Estimated Non-Federal Cost	\$ 452,000,000
Total Estimated Project Cost	\$ 1,290,000,000
Allocation Requested for FY 2009	\$ 838,000,000

Provide 100-year protection for the LPV and WBV projects:

Estimated Federal Cost	\$ 1,997,000,000*
Estimated Non-Federal Cost	\$ 1,075,000,000
Total Estimated Project Cost	\$ 3,072,000,000
Allocation Requested for FY 2009	\$ 1,997,000,000

(*LPV \$1,077,000,000 and WBV \$920,000,000)

Modify outfall canals; Install pumps & closures:

Estimated Federal Cost	\$ 704,000,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 704,000,000
Allocation Requested for FY 2009	\$ 704,000,000

Improve protection at IHNC:

Estimated Federal Cost	\$ 53,000,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 53,000,000
Allocation Requested for FY 2009	\$ 53,000,000

Armor critical elements of HSDRS:

Estimated Federal Cost	\$ 459,000,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 459,000,000
Allocation Requested for FY 2009	\$ 459,000,000

Floodwall reinforcement or replacement on the LPV and WBV projects:

Estimated Federal Cost	\$ 412,000,000
Estimated Non-Federal Cost	\$ 0
Total Estimated Project Cost	\$ 412,000,000
Allocation Requested for FY 2009	\$ 412,000,000

Coastal Louisiana:

Estimated Federal Cost	\$	994,000,000
Estimated Non-Federal Cost	\$	0
Total Estimated Project Cost	\$	994,000,000
Allocation Requested for FY 2009	\$	994,000,000

New Orleans to Venice:

Estimated Federal Cost	\$	904,000,000
Estimated Non-Federal Cost	\$	0
Total Estimated Project Cost	\$	904,000,000
Allocation Requested for FY 2009	\$	904,000,000

Storm Proofing:

Estimated Federal Cost	\$	90,000,000
Estimated Non-Federal Cost	\$	0
Total Estimated Project Cost	\$	90,000,000
Allocation Requested for FY 2009	\$	90,000,000



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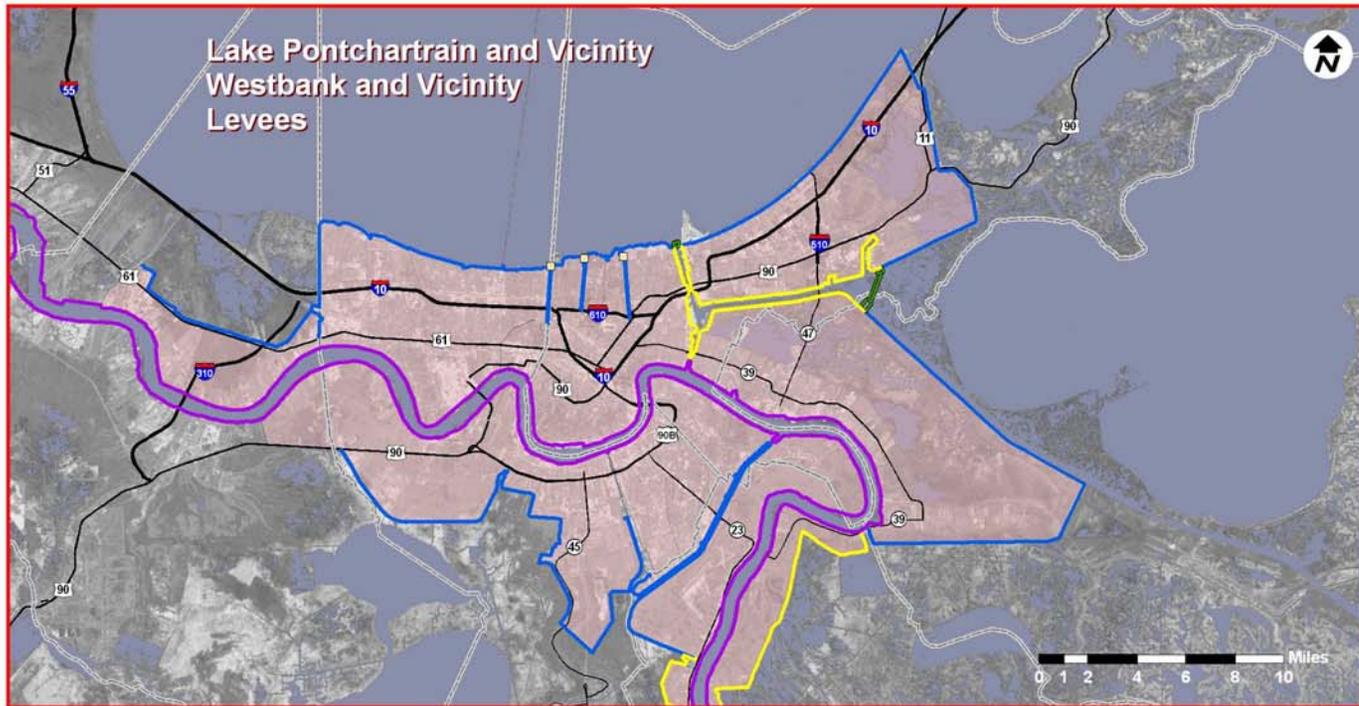
Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana



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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana



**US Army Corps
of Engineers®**

**Southeast Louisiana
Hurricane Protection System
and Major Evacuation Routes
100 Year Map**

- Pump Stations
- Mississippi River Levees
- Authorized Levees
- IHNC Closures
- 100 Year Levees
- Parish Boundaries
- Interstate
- Major Highway



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Hurricane and Storm Damage Risk Reduction Project,
New Orleans Area, Louisiana

MISSISSIPPI RIVER AND TRIBUTARIES

MISSISSIPPI RIVER AND TRIBUTARIES

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Investigations, Fiscal Year 2009

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
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PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (NEW)

LOUISIANA

Alexandria, Louisiana, to the Gulf of Mexico, Louisiana New Orleans District	2,750,000	0	0	0	0	790,000	1,960,000
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The study area is located in south-central Louisiana and encompasses an area of about 1,700 square miles extending through nine parishes from Alexandria, Louisiana, to the Gulf of Mexico. The area is the drainage basin for the West Atchafalaya Basin Floodway Levee intercepted drainage system, a feature of the Mississippi River and Tributaries project that prevents overflow from the Atchafalaya Basin Floodway and intercepts flows from the areas major outlets. The largest urban area in the study area is Alexandria, which has experienced numerous floods in its metropolitan area. There have been extensive flooding problems in the Alexandria area and widespread flooding throughout the basin in the more rural and agricultural areas. Since 1953 there have been fifteen significant storm events with rainfall ranging from 5.4 to 18 inches in the study area. The local sponsor is the Louisiana Department of Transportation and Development and the Rapides Parish Gravity Drainage District No. 1.

Total Estimated Preconstruction Engineering and Design Costs	\$3,667,000	Total Estimated Preconstruction Engineering and Design Costs	3,667,000
Initial Federal Share	2,750,000	Ultimate Federal Share	TBD
Initial Non-Federal Share	917,000	Ultimate Non-Federal Share	TBD

The reconnaissance phase was completed in June 1999. The feasibility study completion is scheduled for April 2009. Fiscal Year 2008 funds are being utilized to complete the feasibility study. Fiscal Year 2009 funds will be used to initiate PED.

4 February 2008

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Investigations, Fiscal Year 2009

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – NEW					
LOUISIANA					
Atchafalaya Basin Floodway System Land Study, Louisiana New Orleans District	300,000	0	0	100,000	200,000

The study area includes the Atchafalaya Basin Floodway System (ABFS) located between the West Atchafalaya Basin Levee and the East Atchafalaya Basin Levee from the approximate latitude of Krotz Springs, Louisiana at the north to below Morgan City, Louisiana to the south encompassing approximately 595,000 acres. The purpose of the study is to investigate further needs and opportunities in the acquisition of fee and easement lands for floodplain management and aquatic ecosystem restoration purposes beyond the amount of land authorized for acquisition in the Supplemental Appropriations Act of 1985, Public Law 99-88 and WRDA 1986, Public Law 99-662, which authorized the Atchafalaya Basin Floodway System Project, Louisiana. The Atchafalaya Basin Floodway System Project has two major, mutually supporting goals: to preserve the environmental values of the nation's largest river, cypress and tupelo swamps, their bayous and abundant water and land species, and to ensure that the Lower Atchafalaya Basin can pass a flood of 1.5 million cubic feet per second (cfs) as required by the Mississippi River and Tributaries Project.

The ABFS Project as authorized by the WRDA 1986 Section 906(e)(f) as a fish and wildlife enhancement project of national significance. The ABFS contains the largest expanse of cypress tupelo swamp in the nation supporting the migratory flyways of ducks and Neotropical birds, estuarine gradient of the gulf coast, and nitrogen uptake reducing gulf hypoxia, and three (3) National Wildlife Refuges. The ABFS also supports habitat for the Louisiana Black Bear and the American Bald Eagle.

This study has a high priority because land acquisition is an important component of the overall flood damage reduction plan for the watershed. The study will further investigate for flowage, developmental control, and environmental enhancement, the necessity of acquiring necessary rights to ensure passage of project flood within the floodway and limit development that restricts the passage of flood waters, within the floodway. The study will also explore whether the acquisition of fee title is, or is not, preferable to the acquisition of easements. Proposed activities for Fiscal Year 2009 would include updating of the Project Management Plan and advancing the reconnaissance study to completion. The reconnaissance study is scheduled for completion in 24 months.

4 February 2008

Atchafalaya Basin Floodway System Land Study, Louisiana

Fiscal Year 2009 funds will be used to fund the reconnaissance phase at full Federal Expense. The preliminary estimated cost of the feasibility phase is \$4,000,000, which is to be fully funded at the Federal expense in accordance with WRDA 1986, Section (601) which authorized the Atchafalaya Basin Floodway project.

Total Estimated Study Cost	\$4,300,000
Reconnaissance Phase (Federal)	300,000
Feasibility Phase (Federal)	4,000,000

The reconnaissance phase is scheduled for completion in September 2009. The feasibility study is scheduled for completion in September 2010.

4 February 2008

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Investigations, Fiscal Year 2009

Study	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
MISSISSIPPI							
Coldwater River Basin Below Arkabutla Lake, Mississippi Vicksburg District	2,119,000	924,000	470,000	300,000	295,000	125,000	5,000

The study area is located in northwest Mississippi approximately 30 miles south of Memphis, Tennessee. Increased development has created adverse impacts on area streams in meeting water quality standards while maintaining flood damage reduction goals. The Yazoo Mississippi Delta Joint Water Management District in conjunction with Tunica County, Mississippi, has requested assistance in identifying measures to improve water management, water quality, flood control, and the wetland ecosystem throughout this watershed. The sponsors desire specific projects and guidelines for future development that will improve flood protection and the aquatic environment and conserve water resources. Projects will also be designed to prevent increases in downstream stages outside the study area. The sponsors are the Yazoo Mississippi Delta Joint Water Management District and Tunica County Soil and Water Conservation District. The feasibility cost sharing agreement was executed 18 June 2003.

Fiscal Year 2008 funds are being utilized to continue environmental and economic base condition analyses, continue alternative plan formulation and coordination with local, state and Federal agencies for watershed optimization, and continue hydrologic and hydraulic modeling and economic and environmental analyses for future without-project and with-project watershed conditions.

Fiscal Year 2009 funds will be used to continue the feasibility phase of the study.

The estimated cost of the feasibility phase is \$3,924,000, which is to be 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	\$4,081,000
Reconnaissance Phase (Federal)	157,000
Feasibility Phase (Federal)	1,962,000
Feasibility Phase (Non-Federal)	1,962,000

The reconnaissance phase was completed in June 2003. The estimated feasibility study completion date is 31 October 2009.

4 February 2008

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, TN - Investigations, Fiscal Year 2009

Study	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation for FY 2006 \$	Allocation for FY 2007 \$	Allocation for FY 2008 \$	Allocation Requested for FY 2009 \$	Additional to Complete After FY 2009 \$
Collection and Study of Basic Data	N/A	N/A	673,000	1,092,000	1,378,000	400,000	N/A

Surveys, Gages, and Observations.

Fiscal Year 2008 funds are being utilized for the collection of essential basic data which are subsequently used in the planning and design of flood control projects. The data collected under this activity are for authorized projects or units thereof for which funds have not been appropriated. The data to be collected will consist of information on stream flow, rainfall, floods, and other items of related hydrologic nature. Fiscal Year 2008 funds are also being utilized to initiate LIDAR mapping in the Delta portion of Mississippi. This LIDAR mapping is being undertaken jointly by the U.S. Department of Agriculture and U.S. Geological Survey (USGS). Without this new mapping, planners, engineers, landowners, and county governments will have to continue to rely on the old and outdated USGS quadrangle maps, many of which have not been updated in 40 years.

Fiscal Year 2009 funds will be used for the collection of essential basic data which are subsequently used in the planning and design of flood control projects. The data collected under this activity are for authorized projects or units thereof for which funds have not been appropriated. The data to be collected will consist of information on stream flow, rainfall, floods, and other items of related hydrologic nature.

4 February 2008

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Investigations, Fiscal Year 2009

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS - CONTINUING							
TENNESSEE & MISSISSIPPI							
Memphis Metropolitan Area, Storm Water Management Study, TN & MS Memphis District	1,300,000	0	120,000	150,000	146,000	34,000	850,000

The study area includes all or part of five counties: Shelby, Tipton and Fayette Counties in southwest Tennessee, and DeSoto and Marshall Counties in northwest Mississippi. The area encompasses all or part of six major drainage basins: Hatchie River, Loosahatchie River, Wolf River, Nonconnah Creek, Horn Lake Creek, and Coldwater River and includes approximately 2,600 square miles. The area has experienced extensive growth and development in recent years, and these trends are projected to continue at an accelerated rate. Major problems with drainage and other infrastructure are prevalent throughout the area. Recent studies show that the 100-year flood profile has increased up to two feet in some locations as a result of development with similar situations expected area wide. Integrated solutions to these issues will require significant collaborative and consensus building efforts among all stakeholders and local agencies. The Memphis Metropolitan Area Reconnaissance Report, completed in March 1999, identified over 70 areas where flooding, erosion and water quality problems exist, but it did not fully address all of the problem areas and the need for a collaborative, wholistic approach to storm water management. The purpose of the Memphis Metropolitan Storm Water Management study is to evaluate the additional need for improvements for flood control, ecosystem restoration, water quality, and related purposes associated with storm water runoff and management in the area. Record rainfalls in 2001 and 2002 prompted the need for such a comprehensive study of flooding and storm water management problems. Approximately 7 inches of rain fell in a 24-hour period in November 2001 prompting evacuations in the Hillshire and Wheel Estates subdivisions, street flooding, and road closures. Initial flood damage estimates from the 2001 and 2002 rainfall events are \$1,000,000 for residential and business properties in the study area. Preliminary estimates for flood-related damages to bridges and utilities are approximately \$3,000,000 in the Memphis area. The Metro Area Steering Committee has been reformed to address these and other watershed management problems in the area. Committee members include local, state, and Federal agencies, environmental resource agencies and local academia. Potential local sponsors are the City of Memphis, Shelby County, and the Chickasaw Basin Authority in Tennessee; and DeSoto County in Mississippi. Areas of study will be along Gray's Creek, Harrington Creek, Mary's Creek, and North Fork Creek (tributaries to the Wolf River); Clear Creek, Cypress Creek, and Beaver Creek (tributaries to the Loosahatchie River). Probable solutions include diversion channels, channel enlargement, detention structures, and riparian buffer zones.

Memphis Metropolitan Area, Storm Water Management Study, TN & MS

Fiscal Year 2008 funds are being used to continue the reconnaissance phase of the study. If the reconnaissance report is certified to be in accord with policy, the funds requested for Fiscal Year 2009 will be used to initiate the feasibility phase of the study. The preliminary 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. A summary of study cost sharing is as follows:

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

The reconnaissance phase is scheduled for completion in February 2009. The feasibility study is scheduled for completion in June 2012.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Construction

PROJECT: Atchafalaya Basin, Louisiana (Continuing)

LOCATION: The project is located in south-central Louisiana below the latitude of Old River and west of and generally paralleling the Mississippi River. The Atchafalaya River flows through the middle of the basin.

DESCRIPTION: The plan of improvement consists of a leveed floodway about 15 miles wide and 110 miles long that extends generally from the latitude of Old River to the Gulf of Mexico. The upper half of the basin is divided by the leveed Atchafalaya River. The Morganza Floodway is to the east of the Atchafalaya River and has a capacity of 600,000 cubic feet per second, which is introduced into the floodway by a gated control structure. The West Atchafalaya Floodway, which is located to the west of the river, is placed into operation when the fuse plug sections are overtopped bringing flows from the river that will introduce 900,000 cubic feet per second into the lower basin. After passing through the floodways, the flood waters enter the Gulf of Mexico through the Lower Atchafalaya River at Morgan City and the Wax Lake Outlet channel constructed west of Patterson, Louisiana. The project is part of a system and all work is programmed.

AUTHORIZATION: Flood Control Acts of 1928, 1934, 1936, 1938, 1941, 1946, 1950, 1954.

REMAINING BENEFIT - REMAINING COST RATIO: Validated Remaining Benefit – Remaining Cost Ratio not available.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 7 percent. The benefit-cost ratio is based on all features which comprise the Main Stem system of the Mississippi River and Tributaries project.

INITIAL BENEFIT - COST RATIO: This project feature of the Main Stem system was authorized in Fiscal Year 1928 and initial construction funds were provided in Fiscal Year 1928. The authorized comprehensive review of the Mississippi River and Tributaries project, contained in House Document 308/88/2, as updated to reflect 1965 conditions and price levels, is considered to be the base estimate for the Main Stem system. The benefit-cost ratio for the Main Stem components computed for the base estimate was 7.9 to 1.

BASIS OF BENEFIT - COST RATIO: Benefits are from latest available evaluation approved in October 1979 at 1979 price levels. The latest comprehensive analysis was conducted in 1974. The 1979 analysis is the same as the 1974 analysis except that certain undocumented benefit categories were eliminated and 1979 prices were used.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 January 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$1,798,000,000		Entire Project	96	TBD
Estimated Non-Federal Cost		\$ 11,000,000				
Cash Contributions	\$2,500,000					
Other Costs	8,500,000					
Total Estimated Project Cost		\$1,809,000,000				
Allocations to 30 September 2005		\$ 975,163,000				
Allocation for FY 2006		18,210,000				
Allocation for FY 2007		24,919,000				
Conference Allowance for FY 2008		23,419,000				
Allocation for FY 2008		23,419,000	58			
Allocations through FY 2008		1,041,711,000				
Allocation Requested for FY 2009		\$ 6,300,000	58			
Programmed Balance to Complete after FY 2009		749,989,000				
Unprogrammed Balance to Complete after FY 2009		0				

Mississippi River Commission

New Orleans District
4 February 2008

Atchafalaya Basin, LA

PHYSICAL DATA

Levees:

Average Height - 20 feet
Length - 449 miles

Relocations:

Roads - 15 miles
Railroads - 20 miles

Drainage Structures:

Pointe Coupee	2 gates, 10.5 by 15 feet
Melville	2 - 72-inch corrugated metal pipe with vertical lift gate
Darbonne	10-foot by 10-foot barrel with vertical lift gate
Bayou des Glaises	72-inch corrugated metal pipe with flap gate
Bayou Courtableau	2 weirs, 503 feet long
Brushy Bayou	5-foot by 6-foot barrel with vertical lift gate
Bayou Courtableau	5-barrel, each 10 feet by 15 feet with vertical lift gate
Wax Lake East	25 pipes, 5 feet in diameter with slide gates
Wax Lake West	15 pipes, 5 feet in diameter with slide gates

Lands and Damages:
289,212 acres

Pumping Stations:

Number - 15
Capacity - Minimum - 50 cubic feet per second
Maximum - 1,500 cubic feet per second
Average - 400 cubic feet per second

Bank Stabilization:

Length - 58 miles

Floodgates:

Charenton - Sector-gated, 45 feet wide
East Calumet - Sector-gated, 45 feet wide
West Calumet - Sector-gated, 45 feet wide

Channels:

Length: 147.1 miles

Locks:

Bayou Boeuf, 75 feet by 1,156 feet, earth chamber
Bayou Sorrel, 56 feet by 797 feet, earth chamber
Berwick, 45 feet by 300 feet, concrete chamber

Atchafalaya River Navigation:

New Channel-10.1 miles

Freshwater Control Structure (Planned):

Sherburne - dual 10-foot by 10-foot reinforced
concrete box culverts with gates
Henderson - dual 10-foot by 10-foot reinforced
concrete box culverts with gates

JUSTIFICATION: The Mississippi River below Morganza Floodway is capable of carrying 1,500,000 cubic feet per second without threatening the integrity of the levees along its banks which protect densely populated areas, highly developed agricultural lands, industries, and the City of New Orleans, as well as a number of communities. Studies indicate that the project flood against which the flood control protection works are designed could be of such magnitude that 3,030,000 cubic feet per second will pass the latitude of Old River. Since the Mississippi River below the Morganza Floodway can carry only one-half this amount, the other one-half must be diverted from the main channel. The diversion is made through the Old River Control Structure, the Old River Auxiliary Structure, and the Atchafalaya River, and through the Morganza and West Atchafalaya Floodways. In order to prevent diverted waters from spreading over the rich and highly developed agricultural lands within the Atchafalaya Basin, these rivers and floodways have been leveed to confine the diverted flow.

This floodway system is, for all practical purposes, a part of the main river system, in as much as the integrity of the main river system depends upon its utilization. Since this construction began, farms and industries have developed in the areas adjacent to the floodway assuming that they would receive protection. Therefore, overtopping or crevassing of the levees would cause far more damage than anticipated at the start of project construction. The main protection levees in the lower reaches are deficient because of consolidation of the soft underlying soils, especially those below the latitude of Krotz Springs, LA. Early construction of these levees to the approved grade is essential, not only for flood protection, but as a means of access for the movement of manpower and equipment to any spot threatened by floods.

The Atchafalaya Basin project is one of several Main Stem components, which together comprise the plan of improvement for the control of floods on the Mississippi River. The components are: Mississippi River Levees, Channel Improvement, South Bank Arkansas and South Bank Red River Levees, the Atchafalaya Basin, Atchafalaya Basin Floodway System, Old River, and a few miscellaneous items. Because the benefits of the Atchafalaya Basin derive from the way in which they operate together with the other Main Stem components when the Mississippi River floods, the benefit-cost ratio is a composite one that covers the entire plan.

The value of lands and improvements protected by authorized works against the design flood is \$184.8 billion in 2007 dollars. This consists of 226,000 residential acres which include the City of New Orleans, 45,000 acres of commercial lands, 10 million acres of agricultural lands, and 6.5 million acres of woodland and marshland. The area subject to flooding by project flood assuming no protective works is 22.7 million acres. The area that will be provided complete protection by the completed project is 15.1 million acres.

The maximum flood of record was the 1927 flood which overflowed about 26,000 square miles, caused the deaths of 214 people, rendered 637,000 people temporarily homeless, and caused property damages of \$347.0 million. This would be equivalent to \$14.0 billion damages in 2007 prices.

The next flood of magnitude was the 1973 flood which overflowed 16,875 square miles (10.8 million acres), caused the death of 28 people, and displaced approximately 45,300 persons. The deaths and displacements of persons would have been significantly higher without the project in place. Without Federal projects, approximately 19.8 million acres would have been inundated. Total damages with existing projects in operation were \$643 million (1973 price levels). Damages without projects would have been \$11.3 billion and total damages prevented by projects amount to \$10.6 billion. Expressed in 2007 prices, damages without the projects would have been \$50.6 billion and damages prevented would have been \$47.5 billion.

The benefit-cost ratio was derived by measuring the total benefits credited to those Main Stem components against their total cost. Average annual benefits for the composite of Main Stem features are as follows:

Annual Benefits	Amount @ 2.5%	Amount @ 7%
Flood Control	\$1,127,581,971	\$382,799,518
Navigation	\$227,928,488	\$101,002,007
Area Redevelopment	\$1,998,285	\$965,893
Recreation	\$2,765,302	2,520,768
Total	\$1,360,274,046	\$487,288,186

FISCAL YEAR 2008: Current year funds are being used as follows:

Initiate and Complete:	
W74 Levee Enlargement Phase 1	4,000,000
West Bayou Sale North Bend	5,000,000
E54/58	8,000,000
Lands and Damages	300,000
Surveys and Layouts	100,000
Planning, Engineering, and Design	4,319,000
Construction Management	1,700,000
Total	\$23,419,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Lands and Damages	200,000
Surveys and Layouts	100,000
Planning, Engineering, and Design	4,300,000
Construction Management	1,700,000
Total	\$6,300,000

Mississippi River Commission

New Orleans District
4 February 2008

Atchafalaya Basin, LA

NON-FEDERAL COST: In accordance with the Flood Control Act of 15 May 1928, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Bear the administrative costs for furnishing rights-of-way for levee and levee drainage construction; purchase maintenance equipment; and perform miscellaneous levee work.	\$ 1,110,000	0
Agree to accept lands turned over to them under the provision of Section 4 of the Flood Control Act of 15 May 1928, and as provided in the Flood Control Act of 18 August 1941.	0	0
Bear costs for and maintain all flood control works after their completion, except controlling and regulating spillway structures, including special levees; maintenance includes normally such matters as cutting grass, removal of weeds, local drainage and minor repairs to the levees.	0	\$3,700,000
For the Upper Point Coupee Loop Area, provide an interior drainage system and comply with the applicable provisions of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970, PL 91-646, approved 2 January 1971, and comply with the provision of Section 221 of the Flood Control Act of 1970, PL 91-611.	7,390,000	0
The State of Louisiana, through the Department of Transportation and Development as the local sponsor, will provide a voluntary 25% cost share for the planning, design, and construction of the interim protection for floodproofing of riverfront businesses in Morgan City and Berwick.	2,500,000	0
Total Non-Federal Costs	\$11,000,000	\$3,700,000

Mississippi River Commission

New Orleans District
4 February 2008

Atchafalaya Basin, LA

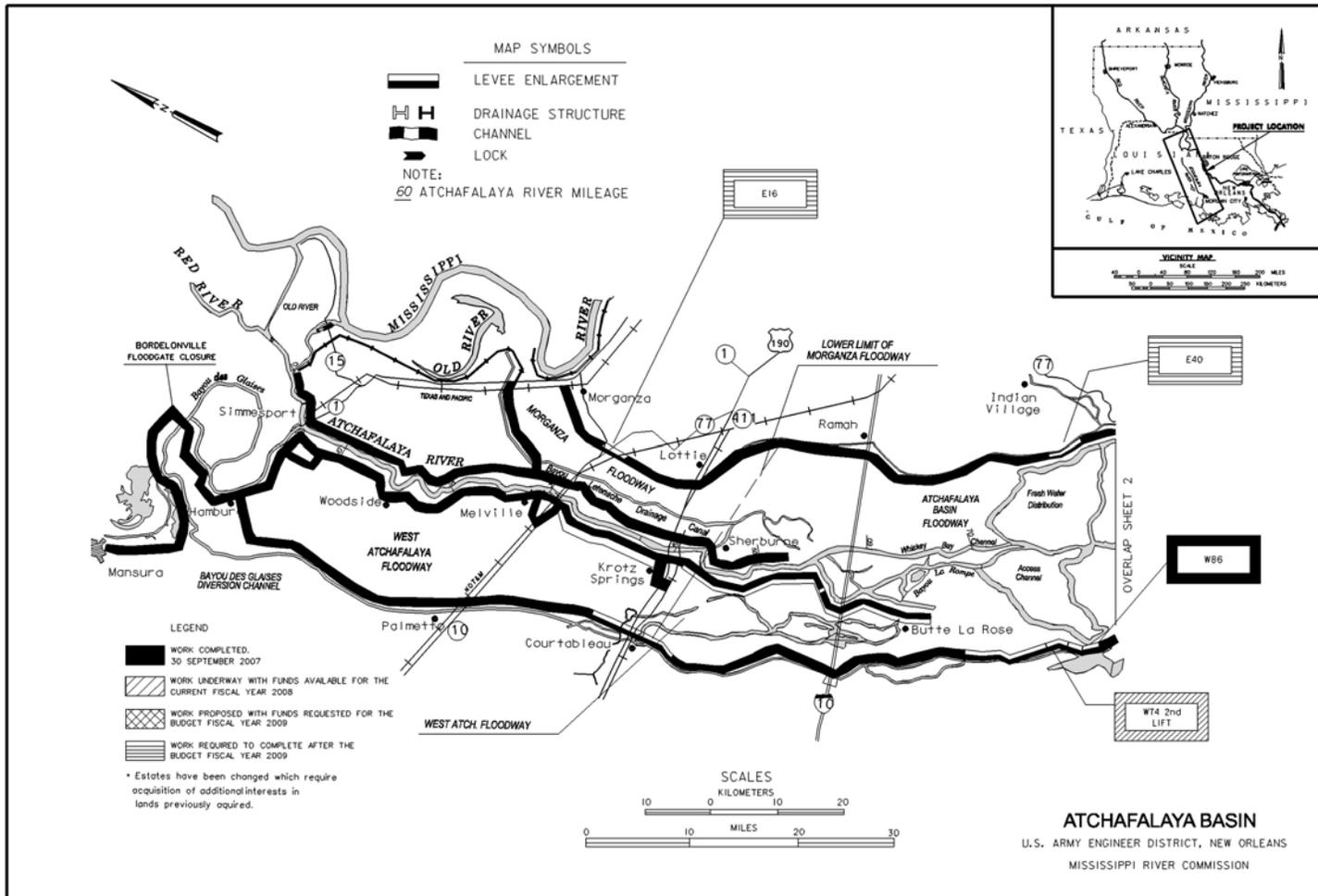
STATUS OF LOCAL COOPERATION: Necessary assurances for maintaining the project have been furnished by the Atchafalaya Basin Levee District; Red River, Atchafalaya and Bayou Boeuf Levee District; St. Mary Parish Government; Pointe Coupee Parish Police Jury; and the towns of Berwick and Morgan City, LA. These agencies are furnishing all requirements of local cooperation necessary for meeting present project schedules.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$1,798,000,000 is an increase of \$15,000,000 from the latest estimate (\$1,783,000,000) presented to Congress (Fiscal Year 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 15,000,000
Total	\$ 15,000,000

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

OTHER INFORMATION: Funds to initiate construction were appropriated in 1928.



SHEET 1 OF 2

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO and TN - Construction

PROJECT: Channel Improvement, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee (Continuing)

LOCATION: The project is located in the Mississippi River and along its banks from the vicinity of Cairo, Illinois, to the Head of Passes, Louisiana, a distance of approximately 966 miles.

DESCRIPTION: The plan of improvement consists of stabilizing the banks of the river in a desirable alignment and obtaining the most efficient flow characteristics for it for flood control and navigation by means of revetments, dikes, foreshore protection, and improvement dredging. All work is programmed.

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

REMAINING BENEFIT-REMAINING COST RATIO: Validated Remaining Benefit – Remaining Cost Ratio not available.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 7 percent. The benefit-cost ratio is based on all features which comprise the Main Stem system of the Mississippi River and Tributaries project.

INITIAL BENEFIT-COST RATIO: This project feature of the Main Stem system was authorized in Fiscal Year 1928 and initial construction funds were provided in Fiscal Year 1928. The authorized comprehensive review of the Mississippi River and Tributaries project, contained in House Document 308/88/2, as updated to reflect 1965 conditions and price levels, is considered to be the base estimate for the Main Stem system. The benefit-cost ratio for the Main Stem components computed for the base estimate was 7.9 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in October 1979 at 1979 price levels. The latest comprehensive analysis was conducted in 1974. The 1979 analysis is the same as the 1974 analysis except that certain undocumented benefit categories were eliminated and 1979 prices were used.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 January 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$4,015,000,000		Entire Project	93	TBD
Estimated Non-Federal Cost	\$ 1,870,000				
Cash Contributions	\$1,770,000				
Other Costs	100,000				
Total Estimated Project Cost	\$4,016,870,000				PHYSICAL DATA
Allocations to 30 September 2005	\$2,757,498,000		Lands and Damages	19,135 acres	
Allocation for FY 2006	51,570,000		Revetments	1,085 miles	
Allocation for FY 2007	48,714,000		Dikes	339 miles	
Conference Allowance for FY 2008	54,527,000		Dredging	As required	
Allocation for FY 2008	54,527,000		Foreshore Protection	160 miles	
Allocations to 30 September 2008	2,912,309,000	73	Pumping Station	1	
Allocation Requested for FY 2009	45,223,000	74			
Programmed Balance to Complete After FY 2009	\$1,057,468,000				
Unprogrammed Balance to Complete After FY 2009	0				

Mississippi River Commission

Memphis, Vicksburg, and
New Orleans Districts
4 February 2008

Channel Improvement, AR, IL,
KY, LA, MS, MO, and TN

JUSTIFICATION: The Channel Improvement Project is one of several Main Stem components, which together comprise the plan of improvement for the control of floods on the Mississippi River. The components are: Mississippi River Levees, Channel Improvement, South Bank Arkansas and South Bank Red River Levees, the Atchafalaya Basin, Atchafalaya Basin Floodway System, Old River, and a few miscellaneous items. Because the benefits of Channel Improvement derive from the way in which they operate together with the Main Stem components when the Mississippi River floods, the benefit-cost ratio is a composite one that covers the entire plan.

The Mississippi River, with a drainage area of about 1,245,000 square miles, has a wide range of flow, increasing from an approximate minimum of 90,000 cubic feet per second (675,000 gallons per second) to a maximum of 2,345,000 cubic feet per second (17,587,000 gallons per second) which occurred in 1927 at the latitude of Red River Landing. The project flood is 3,030,000 cubic feet per second (22,500,000 gallons per second). Part of the tremendous energy of this volume of flowing water is directed toward a relentless attack on the banks of the river, causing the unprotected banks to cave into the river. As this caving progresses, the attack becomes more direct, the bendway moves in toward the levee, and more sediment is placed in the river and deposited downstream in the form of a sandbar. This bar gradually builds out into the channel and deflects the river's attack to the opposite bank. As the cycle is repeated the river tends to meander and lengthen. Revetment is placed against the banks of the river at locations where mainline levees are being threatened with destruction or where unsatisfactory alignment and channel conditions are developing. Revetment serves a three-fold purpose in that the river is prevented from encroaching on the Main Stem levees, excess material is kept out of the stream, and a favorable channel alignment and depth are maintained. An objective of the plan is to preserve favorable alignments and efficient cross-sectional areas and to prevent the river from creating new meander patterns. In wide reaches of the river, dikes are used to contract the channel width so as to produce a single efficient channel for navigation and to insure the flood carrying capacity of the river. Chutes and secondary channels are controlled for the same purpose. Improvement dredging is employed to assist the river in removing natural obstructions which deflect the current into undesirable patterns of flow and to assist in developing an efficient channel. Foreshore protection is utilized to preserve the integrity of the Mississippi River Levees from attack by erosion of the batture. Erosion of the batture leads to steep slopes which, when undermined, result in considerable loss of batture and possible failure of the levee.

The value of lands and improvements protected by the Main Stem System authorized works against the design flood is \$184.8 billion in 2007 dollars. This consists of 226,000 residential acres which include the City of New Orleans, 45,000 acres of commercial lands, 10 million acres of agricultural lands, and 6.5 million acres of woodland and marshland. The area subject to flooding by project flood assuming no protective works is 22.7 million acres. The area that will be provided complete protection by the completed project is 15.1 million acres.

The maximum flood of record was the 1927 flood which overflowed about 26,000 square miles, caused the deaths of 214 people, rendered 637,000 people temporarily homeless, and caused property damages of \$347.0 million. This would be equivalent to \$14.0 billion in damages in 2007 prices.

The next flood of magnitude was the 1973 flood which overflowed 16,875 square miles (10.8 million acres), caused the death of 28 people, and displaced approximately 45,300 persons. The deaths and displacements of persons would have been significantly higher without the project in place. Without Federal projects, approximately 19.8 million acres would have been inundated. Total damages with existing projects in operation were \$643 million (1973 price levels). Damages without projects would have been \$11.3 billion and total damages prevented by projects amounted to \$10.6 billion. Expressed in 2007 prices, damages without the projects would have been \$50.6 billion and damages prevented would have been \$47.5 billion.

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Channel Improvement, AR, IL,
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The benefit-cost ratio was derived by measuring the total benefits credited to those Main Stem components against their total cost. Average annual remaining benefits for the composite of Main Stem features are as follows:

Annual Remaining Benefits	Amount @ 2.5 %	Amount @ 7%
Flood Control	\$ 1,127,581,971	\$ 382,799,518
Navigation	227,928,488	101,002,007
Area Redevelopment	1,998,285	965,893
Recreation	2,765,302	2,520,768
Total	\$ 1,360,274,046	\$ 487,288,186

FISCAL YEAR 2008: Current funds are being used as follows:

Revetments	\$ 35,599,000
Dikes	18,928,000
Total	\$ 54,527,000

Revetments: The planned program consists of items of work for which funds will be required as follows:

Lands and Damages	\$ 115,000
Construction of Revetments	28,607,890
Cultural Resources	55,000
Planning, Engineering, and Design	5,922,540
Construction Management	898,570
Total	\$ 35,599,000

The items of revetment work are:

Approximate length in feet:

Merriwether-Cherokee, TN	2,200
Scrubgrass, MS	1,200
Wolf Island, KY	2,700
Rosedale, MS	3,000
Reinforcement	12,430

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Channel Improvement, AR, IL,
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FISCAL YEAR 2008 (continued):

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

Cat Island & Seyppell, AR	\$ 2,500,000
Westover, AR	3,500,000
MV MS Bow Piece	1,000,000
Tarpley Cutoff, MS	2,006,000
Bondurant Towhead, LA	2,650,000
Opposite Warnicott Landing, MS	3,400,000
Lands and Damages	213,000
Cultural Resources	60,000
Planning, Engineering, and Design	2,758,000
Construction Management	841,000
Total	\$18,928,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Revetments	\$ 32,289,000
Dikes	\$ 12,934,000
Total	\$ 45,223,000

The items of revetment work are: Approximate length in feet:

Island 18, MO	2,500
Bauxippi Wyanoke, AR	2,200
Commerce, MS	2,000
Gold Bottom	3,000
Baleshed-Stack Island, MS-AR	2,300
Reinforcement	8,830

Revetments: The planned program consists of items of work for which funds will be required as follows:

Lands and Damages	\$ 170,000
Construction of Revetments	25,160,200
Cultural Resources	50,000
Planning, Engineering, and Design	5,970,000
Construction Management	938,800
Total	\$ 32,289,000

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

Friar Point, MS	\$2,300,000
Robinson Caruso, AR	2,600,000
Island 70, MS	3,300,000
Lands and Damages	60,000
Cultural Resources	50,000
Planning, Engineering, and Design	3,320,000
Construction Management	1,304,000
Total	\$12,934,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal area.	\$ 100,000	
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, and replacement of recreation facilities.	1,770,000	\$ 191,667
Total Non-Federal Costs	\$ 1,870,000	\$ 191,667

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

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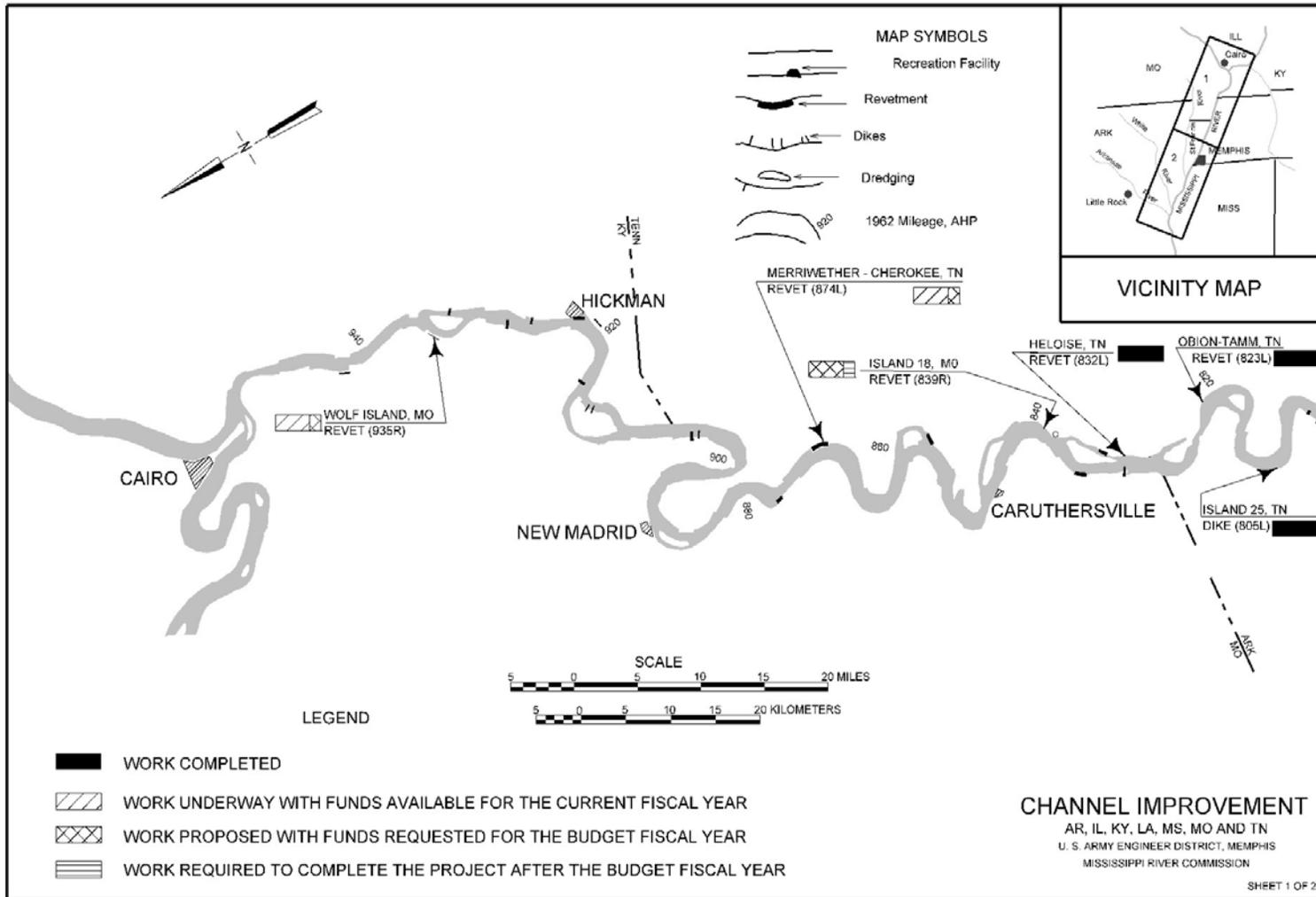
Ramp with the State of Tennessee was signed 11 October 1990. A Local Cooperation Agreement for the Dyersburg, Tennessee, Boat Ramp with the State of Tennessee was signed 11 July 1994.

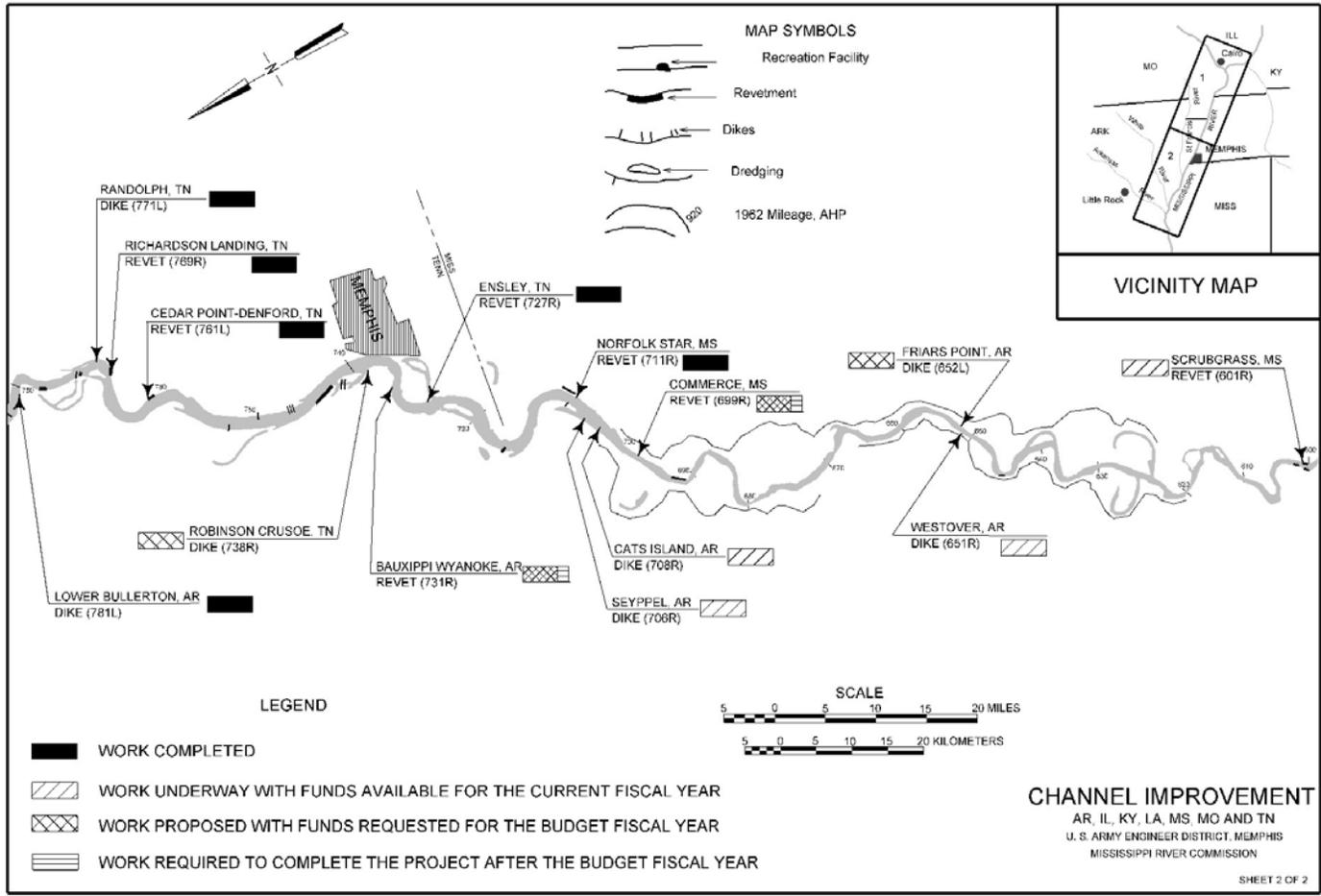
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$4,015,000,000 is an increase of \$30,000,000 from the latest estimate (\$3,985,000,000) presented to Congress (FY 2008). This change includes the following items:

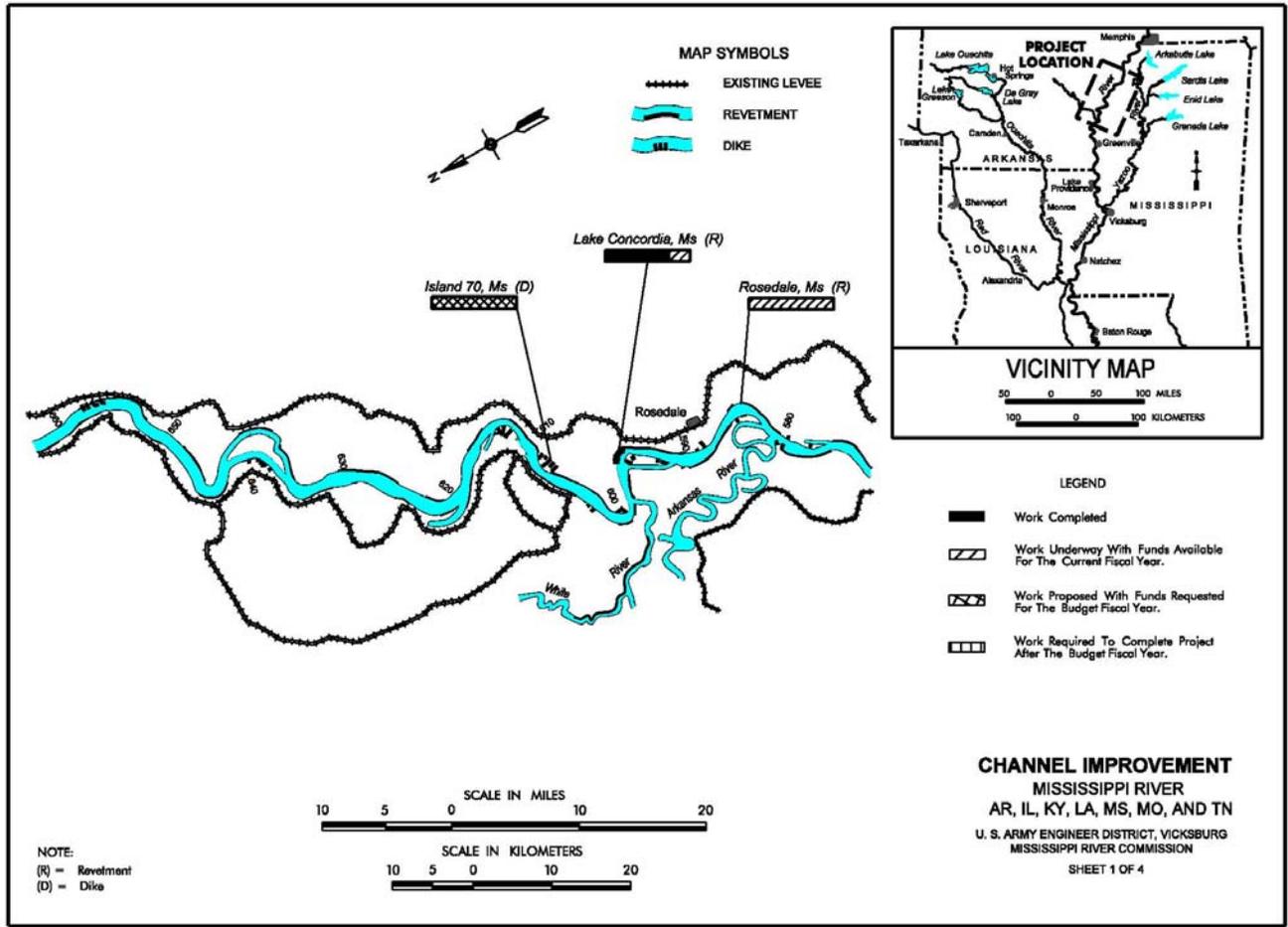
Item	Amount
Price Escalation on Construction Features	\$ 14,920,000
Post Contract Award and Other Estimating Adjustments	15,000,000
Price Escalation on Real Estate	80,000
Total	\$ 30,000,000

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

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





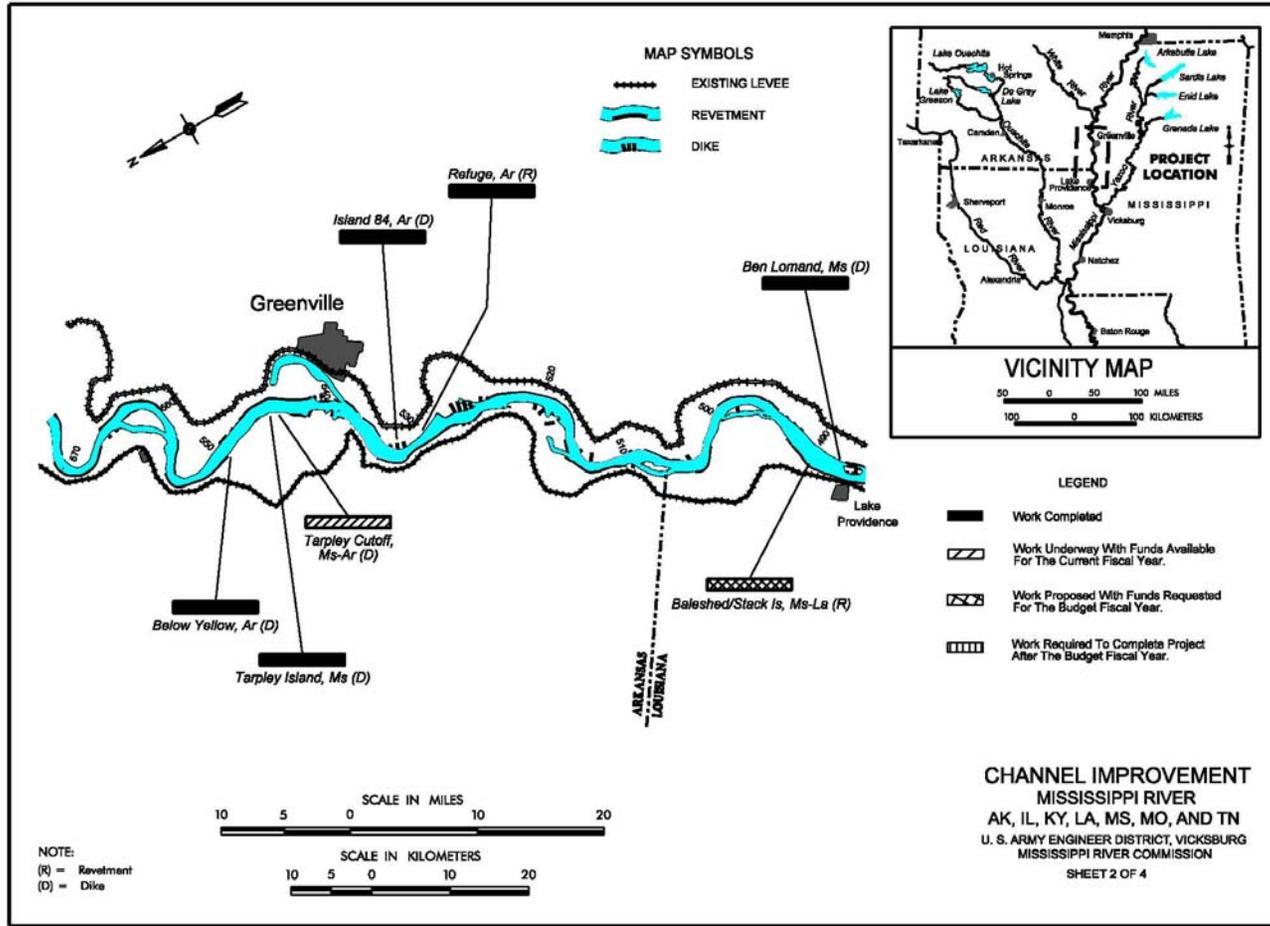


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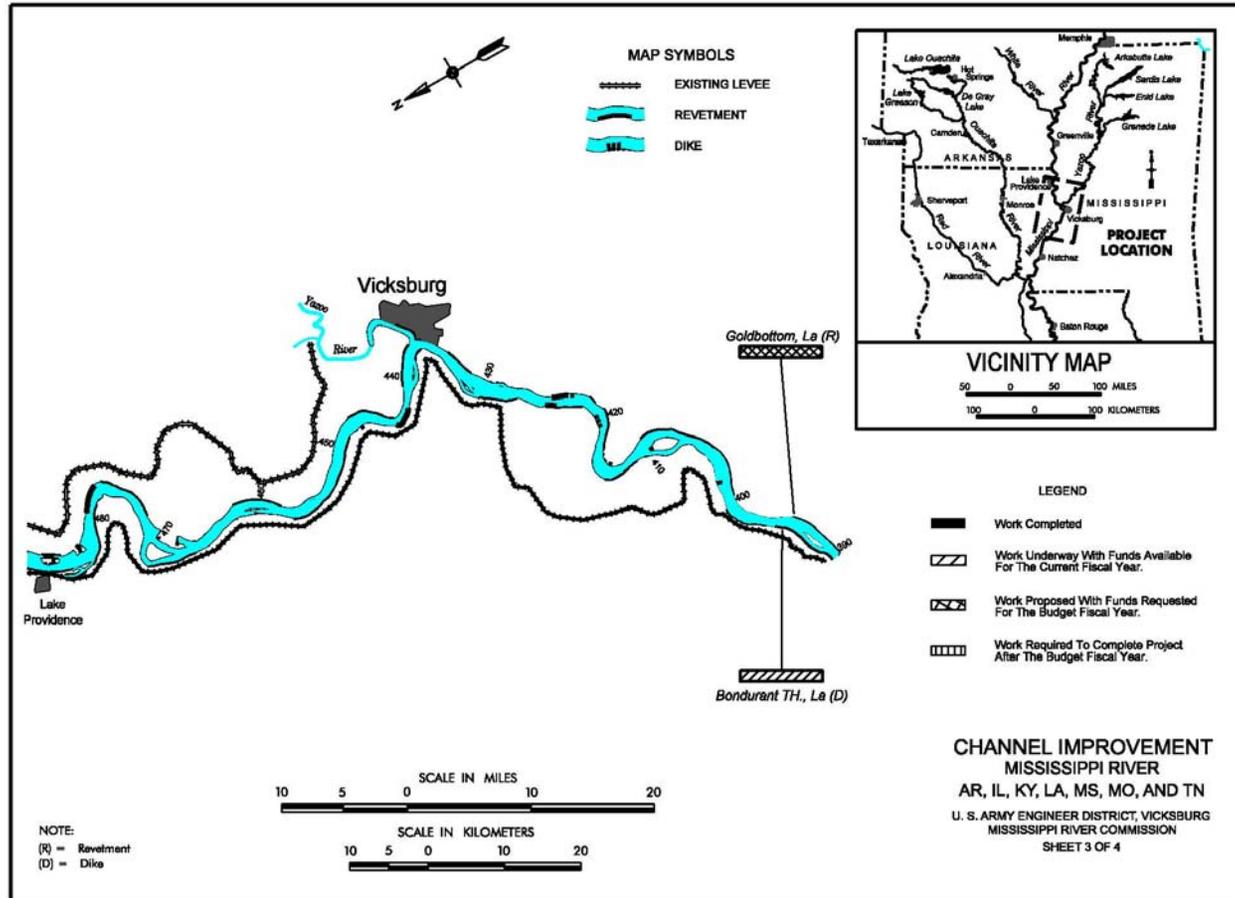


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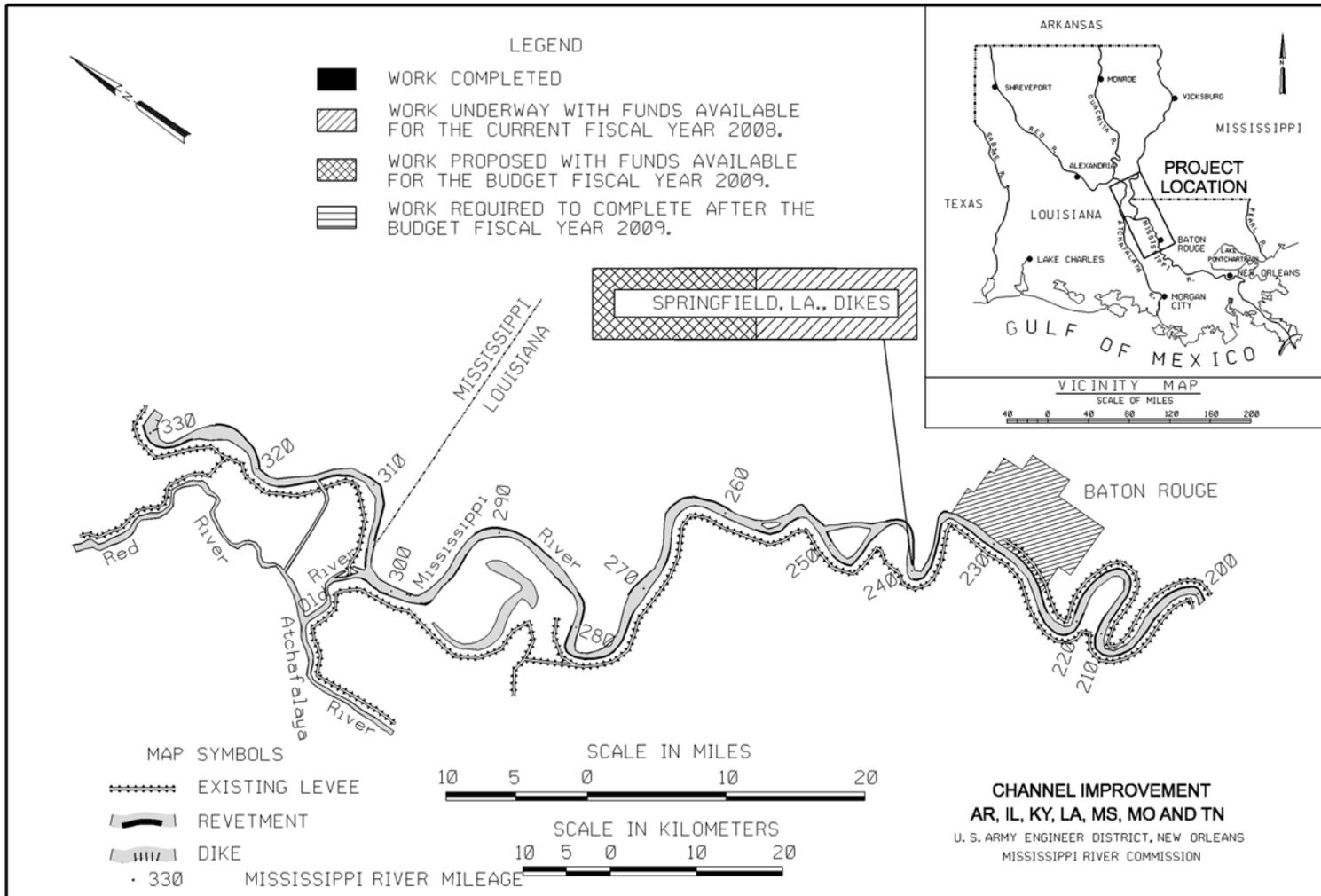


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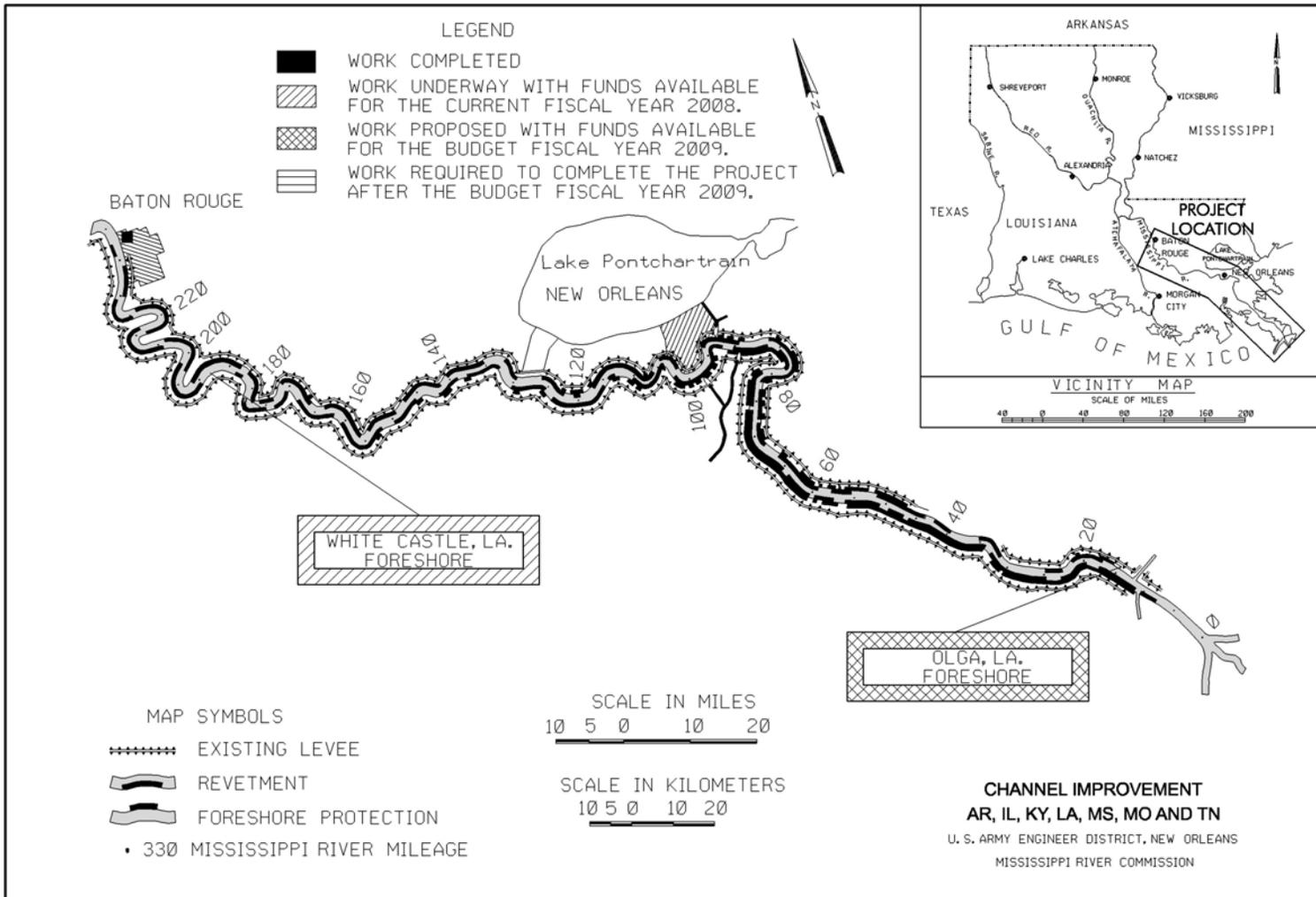
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Channel Improvement, AR, IL,
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SHEET 1 OF 2



SHEET 2 OF 2

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, TN - Construction

PROJECT: Mississippi River Levees, Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri and Tennessee (Continuing)

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

DESCRIPTION: The plan of improvement provides for raising, strengthening, and in some cases, extending existing levees to provide protection against the project flood. This feature includes 1,519.5 miles of levees and 14.8 miles of floodwall. All work is programmed.

AUTHORIZATION: Flood Control Acts of 1928, 1936, 1938, 1941, 1946, 1950, 1954, 1962, 1965, 1968, and PL 92-222.

REMAINING BENEFIT-REMAINING COST RATIO: Validated Remaining Benefit – Remaining Cost Ratio not available.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 7 percent. The benefit-cost ratio is based on all features which comprise the Main Stem system of the Mississippi River and Tributaries project.

INITIAL BENEFIT-COST RATIO: This project feature of the Main Stem system was authorized in Fiscal Year 1928 and initial construction funds were provided in Fiscal Year 1928. The authorized comprehensive review of the Mississippi River and Tributaries project, contained in House Document 308/88/2, as updated to reflect 1965 conditions and price levels, is considered to be the base estimate for the Main Stem system. The benefit-cost ratio for the Main Stem components computed for the base estimate was 7.9 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in October 1979 at 1979 price levels. The last comprehensive analysis was conducted in 1974. The 1979 analysis is the same as the 1974 analysis except that certain undocumented benefit categories were eliminated and 1979 prices were used.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 January 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement	\$2,181,674,000		Entire Project	94	TBD
Future Non-Federal Reimbursement	674,000				
Estimated Federal Cost (Ultimate)	2,181,000,000				PHYSICAL DATA
Estimated Non-Federal Cost	\$ 85,346,000		Channel and Canals		72 miles
Cash Contributions	\$ 2,442,000		Levees:		
Other Costs	82,230,000		Average Height		20-35 feet
Reimbursement	674,000		Length		1,519.5 miles
Recreation Facilities	\$674,000		Floodwalls:		
Total Estimated Project Cost	\$2,266,346,000		Average Height		14-23 feet
			Length		14.8 miles
Allocations to 30 September 2005	\$ 1,100,947,000		Levee Berms		629.3 miles
Allocation for FY 2006	62,764,000		Levee Roads		1,500.0 miles
Allocation for FY 2007	67,617,000		Pumping Stations		5
Conference Allowance for FY 2008	54,129,000				
Allocation for FY 2008	54,129,000				
Allocations to 30 September 2008	1,285,457,000	59			
Allocation Requested for FY 2009	20,000,000	60			
Programmed Balance to Complete After FY 2009	875,543,000				
Unprogrammed Balance to Complete After FY 2009	0				

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Mississippi River Levees, AR, IL,
KY, LA, MS, MO, and TN

JUSTIFICATION: The Mississippi River Levee system is one of several Main Stem components, which together comprise the plan of improvement for the control of floods on the Mississippi River. The components are: Mississippi River Levees, Channel Improvement, South Bank Arkansas and South Bank Red River Levees, the Atchafalaya Basin, Atchafalaya Basin Floodway System, Old River and a few miscellaneous items. Because the benefits of the Mississippi River Levees derive from the way in which they operate together with the other Main Stem components when the Mississippi River floods, the benefit-cost ratio is a composite one that covers the entire plan.

The Mississippi River Levee System provides protection to 23,620 square miles and partial protection to an additional 3,780 square miles in the alluvial valley subject to flooding by the project flood. The alluvial valley is over 650 miles long and varies in width from 20 to 90 miles. Numerous railroads, highways, and airfields connecting the major transportation centers lie within the protected area as do several major transcontinental communication routes. In addition to highly developed agricultural areas, the levees afford protection to urban areas and many industries.

The value of lands and improvements protected by the Main Stem System authorized works against the design flood is \$184.8 billion in 2007 dollars. This consists of 226,000 residential acres which include the City of New Orleans, 45,000 acres of commercial lands, 10 million acres of agricultural lands, and 6.5 million acres of woodland and marshland. The area subject to flooding by project flood assuming no protective works is 22.7 million acres. The area that will be provided complete protection by the completed project is 15.1 million acres.

The maximum flood of record was the 1927 flood which overflowed about 26,000 square miles, caused the deaths of 214 people, rendered 637,000 people temporarily homeless, and caused property damages of \$347.0 million. This would be equivalent to \$14.0 billion in damages in 2007 prices.

The next flood of magnitude was the 1973 flood which overflowed 16,875 square miles (10.8 million acres), caused the death of 28 people, and displaced approximately 45,300 persons. The deaths and displacements of persons would have been significantly higher without the project in place. Without Federal projects, approximately 19.8 million acres would have been inundated. Total damages with existing projects in operation were \$643 million (1973 price levels). Damages without projects would have been \$11.3 billion and total damages prevented by projects amounted to \$10.6 billion. Expressed in 2007 prices, damages without the projects would have been \$50.6 billion and damages prevented would have been \$47.5 billion.

The benefit-cost ratio was derived by measuring the total benefits credited to those Main Stem components against their total cost. Average annual remaining benefits for the composite of Main Stem features are as follows:

Annual Remaining Benefits	Amount @ 2.5 %	Amount @ 7%
Flood Control	\$ 1,127,581,971	\$ 382,799,518
Navigation	227,928,488	101,002,007
Area Redevelopment	1,998,285	965,893
Recreation	2,765,302	2,520,768
Total	\$ 1,360,274,046	\$ 487,288,186

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Mississippi River Levees, AR, IL,
KY, LA, MS, MO, and TN

FISCAL YEAR 2008: Current funds are being used as follows:

Continue:

Lands and Damages	\$ 180,000
Surveys & Layouts	100,000

Award:

Council Bend, AR Relief Well	780,000
Gammon, AR Relief Wells	420,000
Cairo, IL Slurry Trench	5,500,000
Delta, MS Relief Wells	1,800,000
Trotters, MS Relief Wells	1,600,000
Tallula Magna Vista, Item 474-L	4,600,000
Reid Bedford-King, Item 428-R	3,500,000
Magna Vista-Brunswick, Item 468-L	10,000,000
Bayou Vidal-Elkridge, Item 419-R	7,100,000
Jefferson Heights	3,300,000
Fifth LA Levee District	1,200,000
Gretna To Point Celeste, LA (Ph 1)	1,030,000
MRL Assessment Investigations	225,000

Planning, Engineering, and Design	9,704,000
Supervision and Administration	3,090,000

Total	\$54,129,000
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In the event of emergency conditions, such as levee slides, sand boils, bank erosion or other events which threaten levee integrity, the Corps intends to reallocate the funds identified on the priorities presented below to accomplish necessary emergency actions.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue:

Lands and Damages	80,000
Surveys and Layouts	70,000

Award:

Reid Bedford-King, Item 424-R	5,810,000
Carrolton Levee Enlargement	3,500,000

Planning, Engineering, and Design	7,290,000
Supervision and Administration	3,250,000

Total	\$20,000,000
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NON-FEDERAL COST: In accordance with the Flood Control Acts of 1928, 1936, 1938, 1941, 1946, 1950, 1954, 1962, 1965, 1968 and PL 92-222, the non-Federal sponsor must comply with the requirements listed below:

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	\$81,908,000	
Minor maintenance of all flood control works after their completion, except controlling a regulating spillway structures, including special relief levees; maintenance includes normally such matters as cutting grass, removal of weeds, local drainage and minor repairs to mainline river levees.		\$637,000
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	3,116,000	0
Other (levee and revetment construction)	322,000	
Total Non-Federal Costs	\$85,346,000	\$637,000

STATUS OF LOCAL COOPERATION: It is estimated that local interests had spent approximately \$292,000,000 for flood protection prior to the Act of 15 May 1928. After passage of the Act, the 37 levee districts along the Mississippi River adopted resolutions assuring the United States that the requirements of local cooperation will be met. These local interests have acquired all rights-of-way for work completed and underway and will try to provide the rights-of-way for work scheduled for Fiscal Year 2009. Some levee boards are having difficulty in providing right-of-way when requested, even for construction work in areas where the existing levees are farthest below the authorized grade. Supplemental assurances covering the requirements of the Uniform Relocations Assistance and Real Property Acquisition Policies Act of 1970 (PL 91-646) have been accepted for Main Stem Mississippi River Levees in Arkansas, Illinois, Kentucky, Louisiana, Mississippi, Missouri, and Tennessee.

Assurances of local cooperation for the recreation facilities at Warfield Point, Mississippi, were accepted on 14 October 1969. Supplemental assurances covering the River and Harbor Act of 1970 (PL 91-611) and PL 91-646 were accepted 7 August 1972. Assurances have not as yet been requested for the recreation facilities at Mississippi River State Park, Arkansas.

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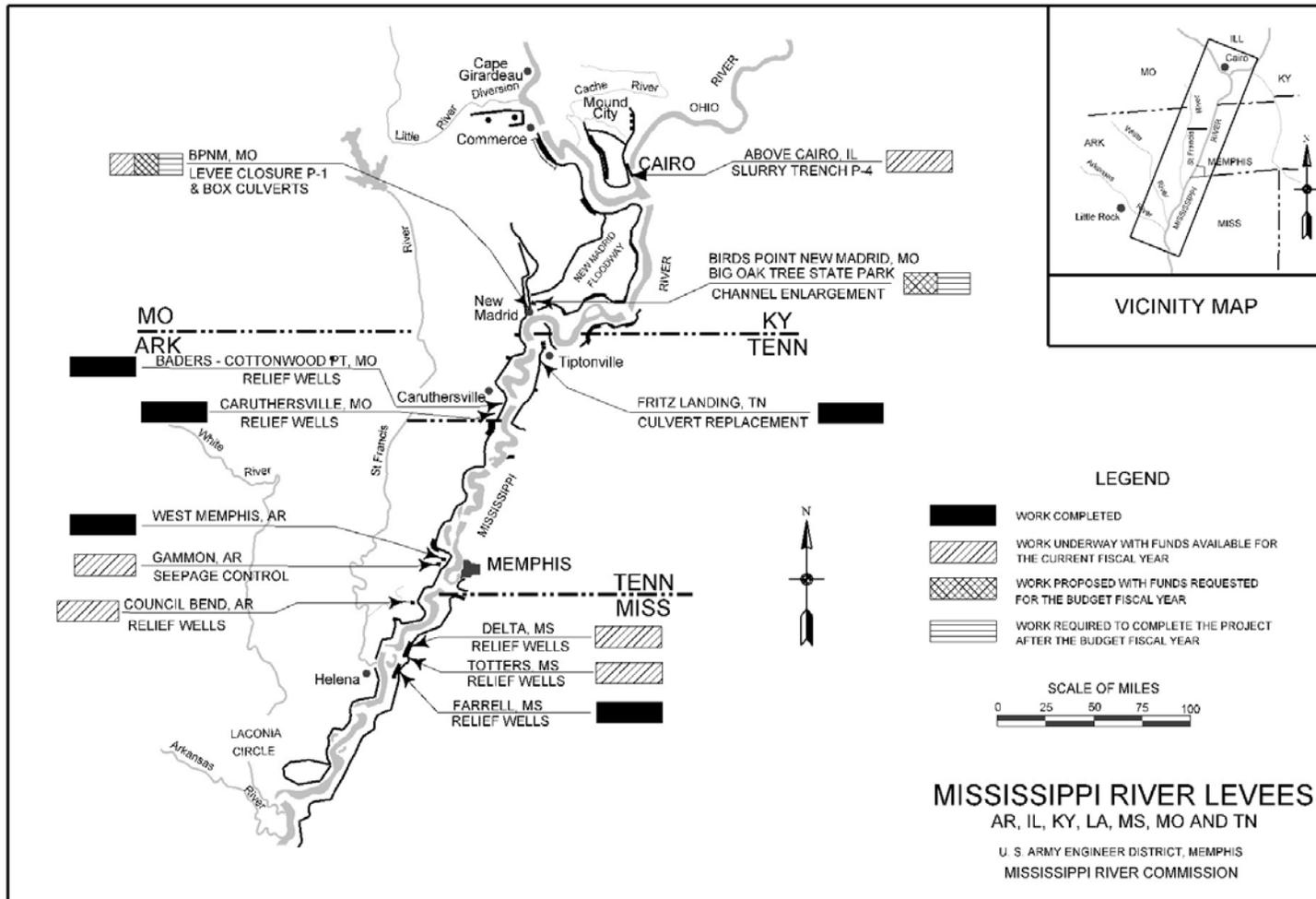
Mississippi River Levees, AR, IL,
KY, LA, MS, MO, and TN

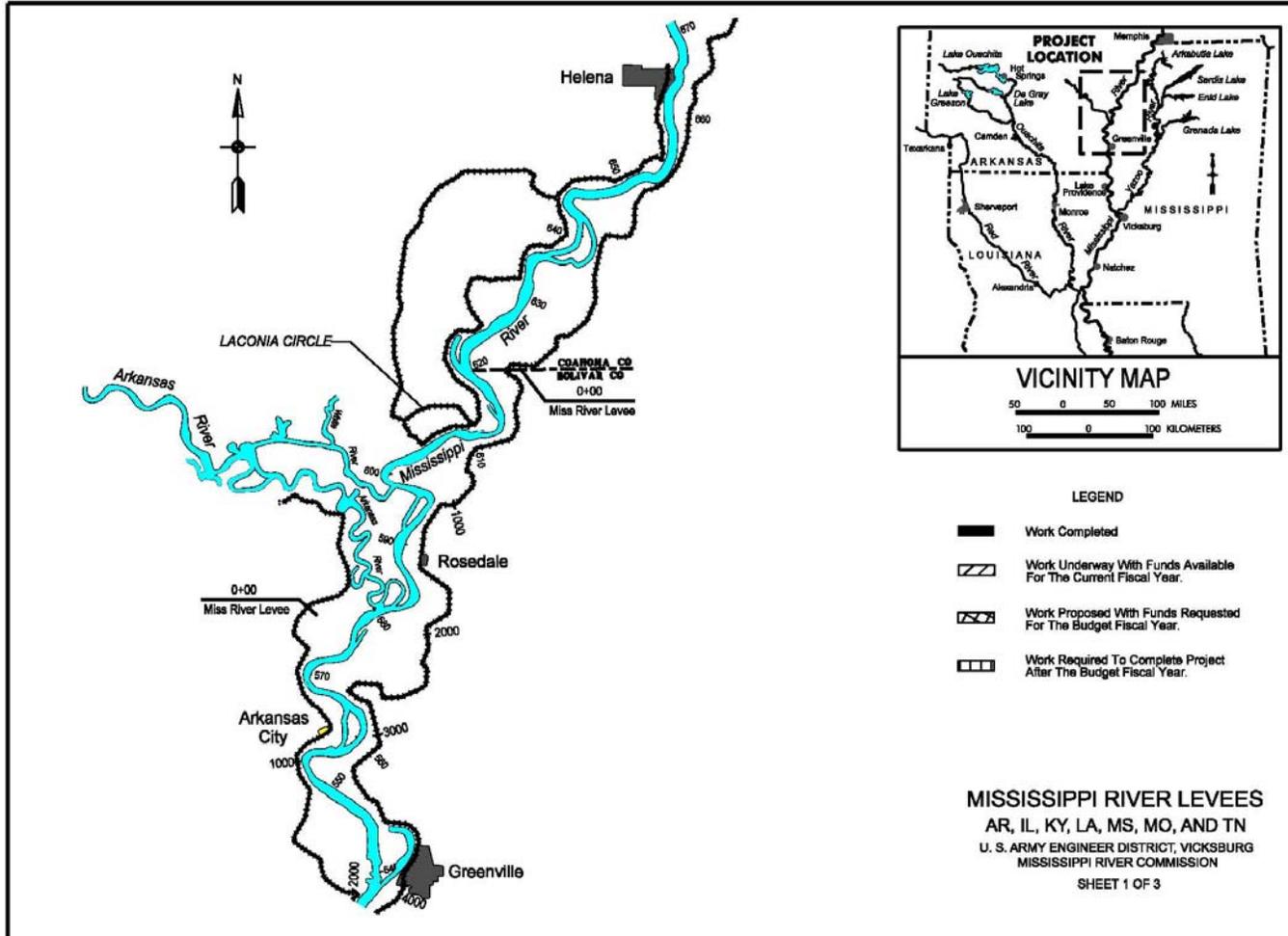
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$2,181,000,000 is an increase of \$92,000,000 from the latest estimate (\$2,089,000,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	47,757,000
Post Contract Award and Other Estimating Adjustments	20,149,000
Price Escalation on Real Estate	-4,206,000
Price Escalation on Design Costs	3,900,000
Additional Deficiencies Identified	24,400,000
Total	\$ 92,000,000

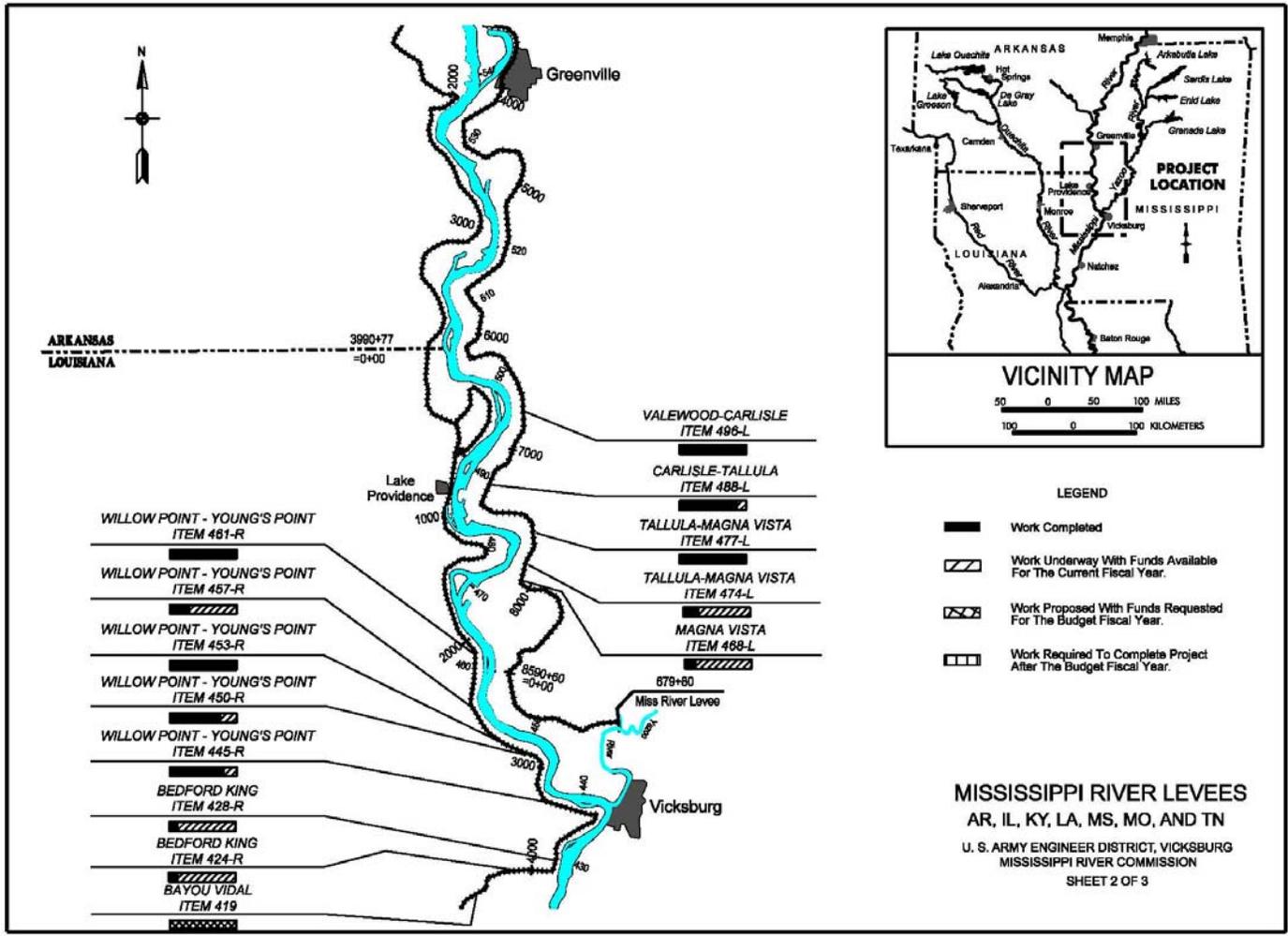
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with the Council on Environmental Quality on 16 April 1976. A Supplemental Environmental Impact Statement for the project was completed and the Record of Decision was signed on 5 October 1998. The adequacy of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

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

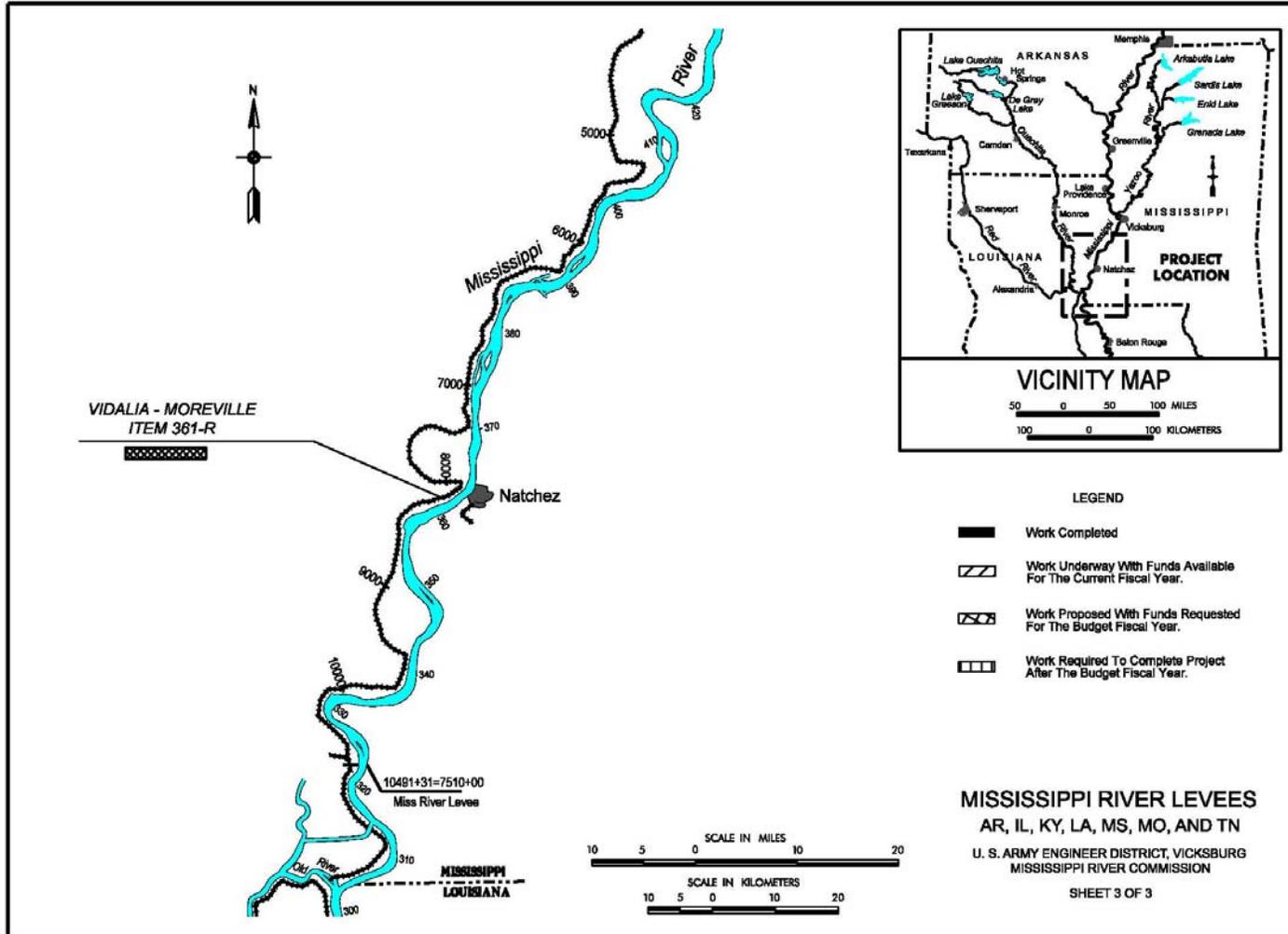




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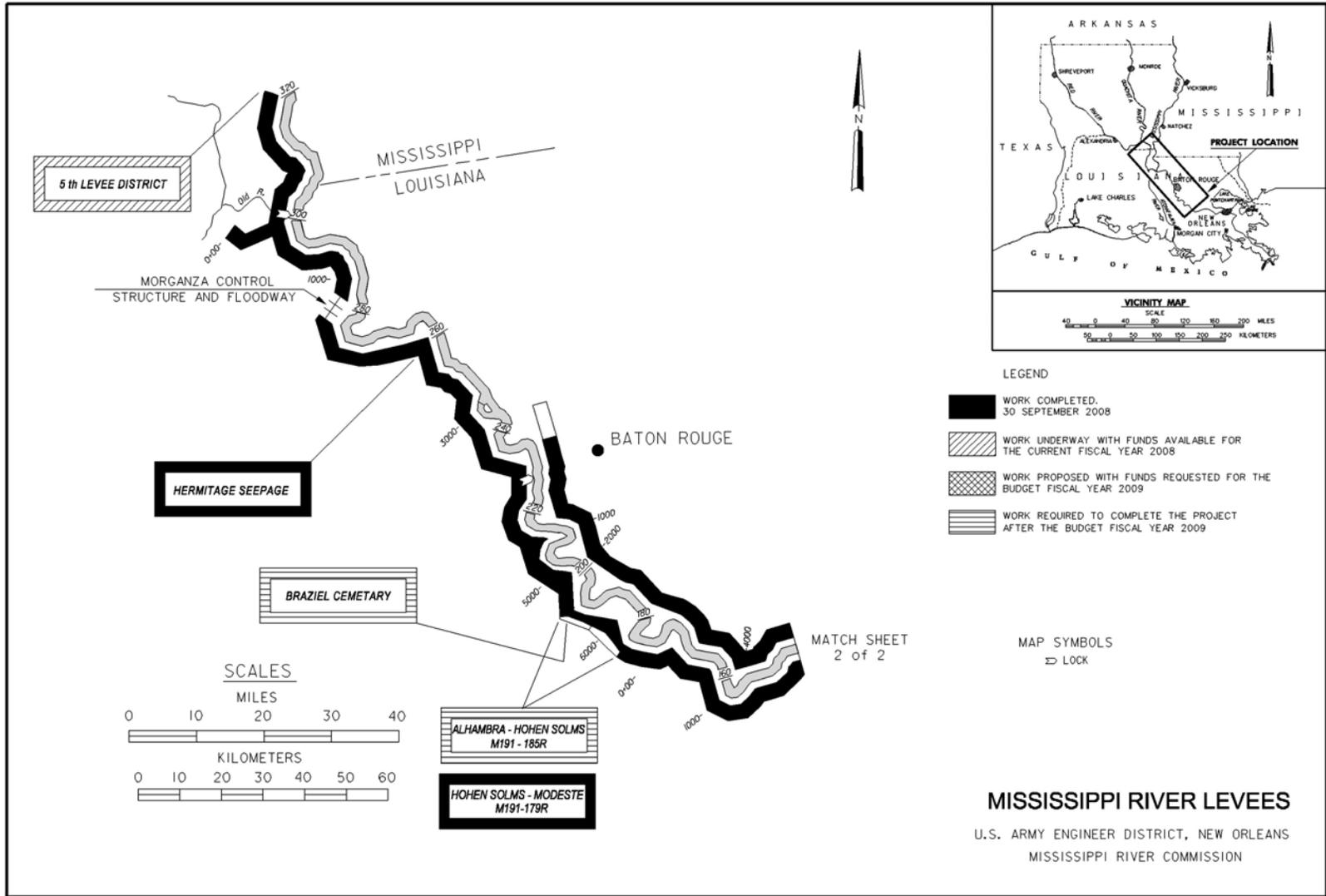


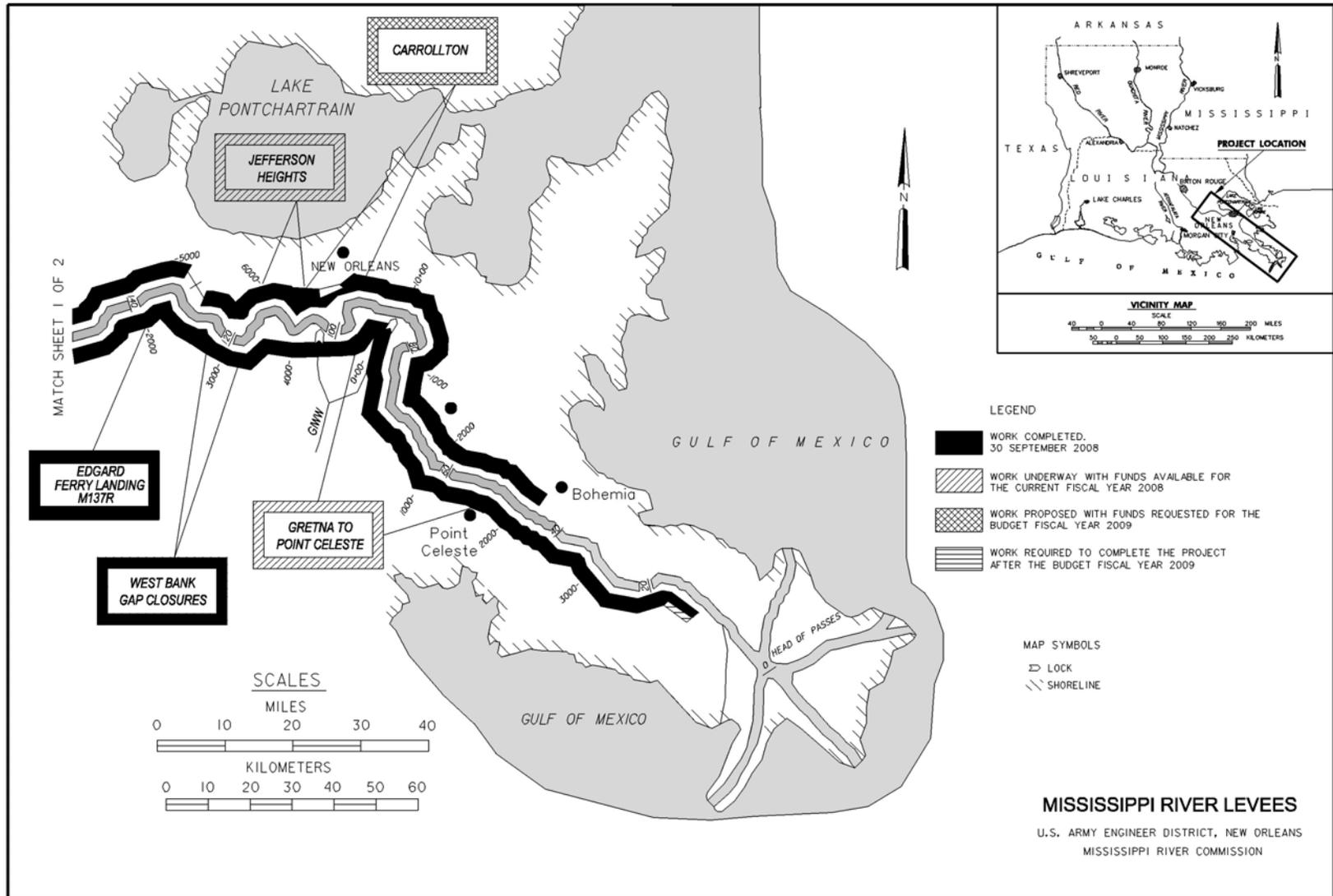
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Mississippi River Levees, AR, IL,
KY, LA, MS, MO, and TN
MR&T - 47





AQUATIC ECOSYSTEM RESTORATION

CONSTRUCTION

APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Construction

PROJECT: Atchafalaya Basin Floodway System, Louisiana (Continuing)

LOCATION: The project is located in south-central Louisiana and encompasses approximately 595,000 acres in an area bounded on the north by south right-of-way line of the Union Pacific Railroad (just south of US Hwy 190); on the south by Morgan City; and on the east and west by the East and West Atchafalaya Basin Protection Levees.

DESCRIPTION: The plan of improvement consists of acquisition of real estate interest, excluding minerals, in the Lower Atchafalaya Floodway for flood control purposes, environmental protection purposes, developmental control purposes, and public access; acquisition of real estate interest, excluding minerals, in the Lower Atchafalaya Floodway, for recreation developmental purposes and construction of several campgrounds, boat launching ramps, visitor's center, other recreational facilities and initial construction of two pilot water management units, including construction of miscellaneous canal closures and water circulation improvements, and implementation of future units at the discretion of the Chief of Engineers. These project features will be implemented in accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986. All work is programmed.

AUTHORIZATION: Supplemental Appropriations Act, 1985; Water Resources Development Act, 1986; Energy and Water Development Appropriations Act, 1988; Energy and Water Development Appropriations Act, 1991; Energy and Water Development Appropriations Act, 1997; and Water Resources Development Act, 2000.

REMAINING BENEFIT-REMAINING COST RATIO: Validated Remaining Benefit – Remaining Cost Ratio not available.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 7 percent. The benefit-cost ratio is based on all features that comprise the Main Stem system of the Mississippi River and Tributaries project.

INITIAL BENEFIT-COST RATIO: This project is a feature of the Main Stem system that was authorized in Fiscal Year 1928. Initial funds for the acquisition of real estate interests for flood control, developmental control, environmental protection, and public access were provided in 1985. The authorized comprehensive review of the Mississippi River and Tributaries project, contained in House Document 308/88/2, as updated to reflect 1965 conditions and price levels, is considered to be the base estimate for the Main Stem system. The benefit-cost ratio for the Main Stem components computed for the base estimate was 7.9 to 1.

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation approved in October 1979 at 1979 price levels. The latest comprehensive analysis was conducted in 1974. The 1979 analysis is the same as the 1974 analysis except that certain undocumented benefit categories were eliminated and 1979 prices were used.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 January 2008)	PCT Cmpl	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$387,366,000		Land Acquisition	60	TBD
Estimated Non-Federal Cost	\$ 78,816,000		Recreation	4	TBD
Cash Contribution	\$70,934,400		Management Units	5	TBD
Other Costs	7,881,600		Entire Project	48	TBD
 Total Estimated Project Cost	 \$466,182,000				
				PHYSICAL DATA	
Allocations to 30 September 2005	\$116,226,000				
Allocations for 2006	\$4,257,000		Lands and Damages:		388,000 Acres
Allocations for 2007	\$4,000,000		Recreational Facilities		
Conference Allowance for FY 2008	1,771,000				3 campgrounds – developed
Allocation for FY 2008	1,771,000				7 campgrounds – primitive
Allocations through FY 2008	\$126,254,000	33			15 2-lane boat launching ramps
Allocation Requested for FY 2009	\$2,025,000	33			Trails
 Programmed Balance to Complete after FY 2009	 \$259,087,000		Water Management Units		
Unprogrammed Balance to Complete after FY 2009	0		Miscellaneous canal closures and water circulation channels		

JUSTIFICATION: The Atchafalaya Basin Floodway System features result from a comprehensive study with a view to developing a plan for the enhancement, management, and preservation of the water quality and related land resources of the Atchafalaya River Basin, Louisiana, which would include provisions for reductions of siltation, improvement of water quality, and possible improvements of the area for commercial and sport fishing. The features of the Atchafalaya Basin Floodway System are compatible with the current flood control plan, and include real estate acquisition of lands, flowage easements, and developmental control easements in the floodway south of Krotz Springs, Louisiana, to ensure unhampered use of the floodway during major floods; and environmental protection easements to protect the basin's environmental resources. Provision of additional public access and several campgrounds, boat launching ramps, visitors' center, and other recreational facilities are also authorized. The water management units' feature involves making use of distinct and unique hydrologic units within the floodway to improve historical (where practical) overflow conditions and thereby enhance aquatic ecosystem productivity.

The Atchafalaya Basin Floodway System Project has two major, mutually supporting goals: to preserve the environmental values of the nation's largest river, cypress and tupelo swamps, their bayous and abundant water and land species, and to ensure that the Lower Atchafalaya Basin can pass a flood of 1.5 million cubic feet per second as required by the Mississippi River and Tributaries Project.

The ABFS Project as authorized by the WRDA 1986 Section 906(e)(f) as a fish and wildlife enhancement project of national significance. The ABFS contains the largest expanse of cypress tupelo swamp in the nation supporting the migratory flyways of ducks and neotropical birds, estuarine gradient of the gulf coast, and nitrogen uptake reducing gulf hypoxia, and three (3) National Wildlife Refuges. The ABFS also supports habitat for the Louisiana Black Bear and the American Bald Eagle.

The Atchafalaya Basin Floodway System is one of several Main Stem components, which together comprise the plan of improvement for the control of floods on the Mississippi River. The components are: Mississippi River Levees, Channel Improvement, South Bank Arkansas and South Bank Red River Levees, the Atchafalaya Basin, Atchafalaya Basin Floodway System, Old River, and a few miscellaneous items. The benefits of the Atchafalaya Basin Floodway System are derived from the way in which they operate together with all other Main Stem components when the Mississippi River floods, the benefit-cost ratio is a composite one that covers the entire plan.

The value of lands and improvements protected by the Main Stem System authorized works against the design flood is \$184.8 billion in 2007 dollars. This consists of 226,000 residential acres which include the City of New Orleans, 45,000 acres of commercial lands, 10 million acres of agricultural lands, and 6.5 million acres of woodland and marshland. The area subject to flooding by project flood assuming no protective works is 22.7 million acres. The area that will be provided complete protection by the completed project is 15.1 million acres.

The maximum flood of record was the 1927 flood which overflowed about 26,000 square miles, caused the deaths of 214 people, rendered 637,000 people temporarily homeless, and caused property damages of \$347.0 million. This would be equivalent to \$14.0 billion in damages in 2007 prices.

The next flood of magnitude was the 1973 flood which overflowed 16,875 square miles (10.8 million acres), caused the death of 28 people, and displaced approximately 45,300 persons. The deaths and displacements of persons would have been significantly higher without the project in place. Without Federal projects, approximately 19.8 million acres would have been inundated. Total damages with existing projects in operation were \$643 million (1973 price levels). Damages without projects would have been \$11.3 billion and total damages prevented by projects amounted to \$10.6 billion. Expressed in 2007 prices, damages without the projects would have been \$50.6 billion and damages prevented would have been \$47.5 billion.

The benefit-cost ratio was derived by measuring the total benefits credited to those Main Stem components against their total cost. Average annual remaining benefits for the composite of Main Stem features are as follows:

Annual Remaining Benefits	Amount @ 2.5 %	Amount @ 7%
Flood Control	\$ 1,127,581,971	\$ 382,799,518
Navigation	227,928,488	101,002,007
Area Redevelopment	1,998,285	965,893
Recreation	2,765,302	2,520,768
Total	\$ 1,360,274,046	\$ 487,288,186

FISCAL YEAR 2008: Current year funds are being used as follows: Buffalo Cove Water Management Unit Construction provided by Task Orders through five-year construction period, Two Supplemental Environmental Impact Statements including Buffalo Cove, Flat Lake, Beau Bayou, Bayou Cocodrie, and Henderson Management Units to include Atchafalaya Basin Floodway System Recreation Feature. Recreation Feature: Complete Bayou Sorrel and Krotz Springs Boat Launch E&D and continue Myette Point construction. Real Estate: Continue with acquiring Flood Control and Environmental Easements.

Supplemental Environmental Studies	400,000
Lands and Damages	100,000
Continue Myette Point Construction	100,000
Planning, Engineering, and Design:	
Lands Acquisition	400,000
Recreation Feature	300,000
Management Units	400,000
Construction Management	71,000
Total	\$ 1,771,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue:	
Henderson Management Unit (EIS)	\$600,000
Lands and Damages	\$400,000
Flood Damage Reduction	
Lands and Damages	\$625,000
Recreation Feature	
Launching Facilities	\$100,000
ABFS Recreation (EIS)	\$300,000
Total	\$2,025,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Pay one-half of the separable cost allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.	\$ 54,085,000	\$ 1,081,700
Provide lands, easements, rights-of-way, and dredged material disposal areas for recreation.	2,247,750	0
Pay 25 percent of operation and maintenance of Water Management Units.	22,483,250	4,271,818
Total Non-Federal Costs	\$ 78,816,000	\$ 5,353,518

The non-Federal Sponsor has provided official letter agreeing to pay 25 percent of construction costs for future Water Management Units undertaken between the State of Louisiana and the Corps of Engineers, contingent upon the State's review and approval of specific project plans once completed, execution of a Project Cooperation Agreement (PCA), and the receipt of appropriations for the funding of projects. Buffalo Cove Water Management Unit has been exempted from non-Federal sponsor cost sharing. Letter was signed November 15, 2007 by Mr. Scott Angelle, Secretary LA Dept of Natural Resources, designated by the LA Legislature as the non-Federal Sponsor.

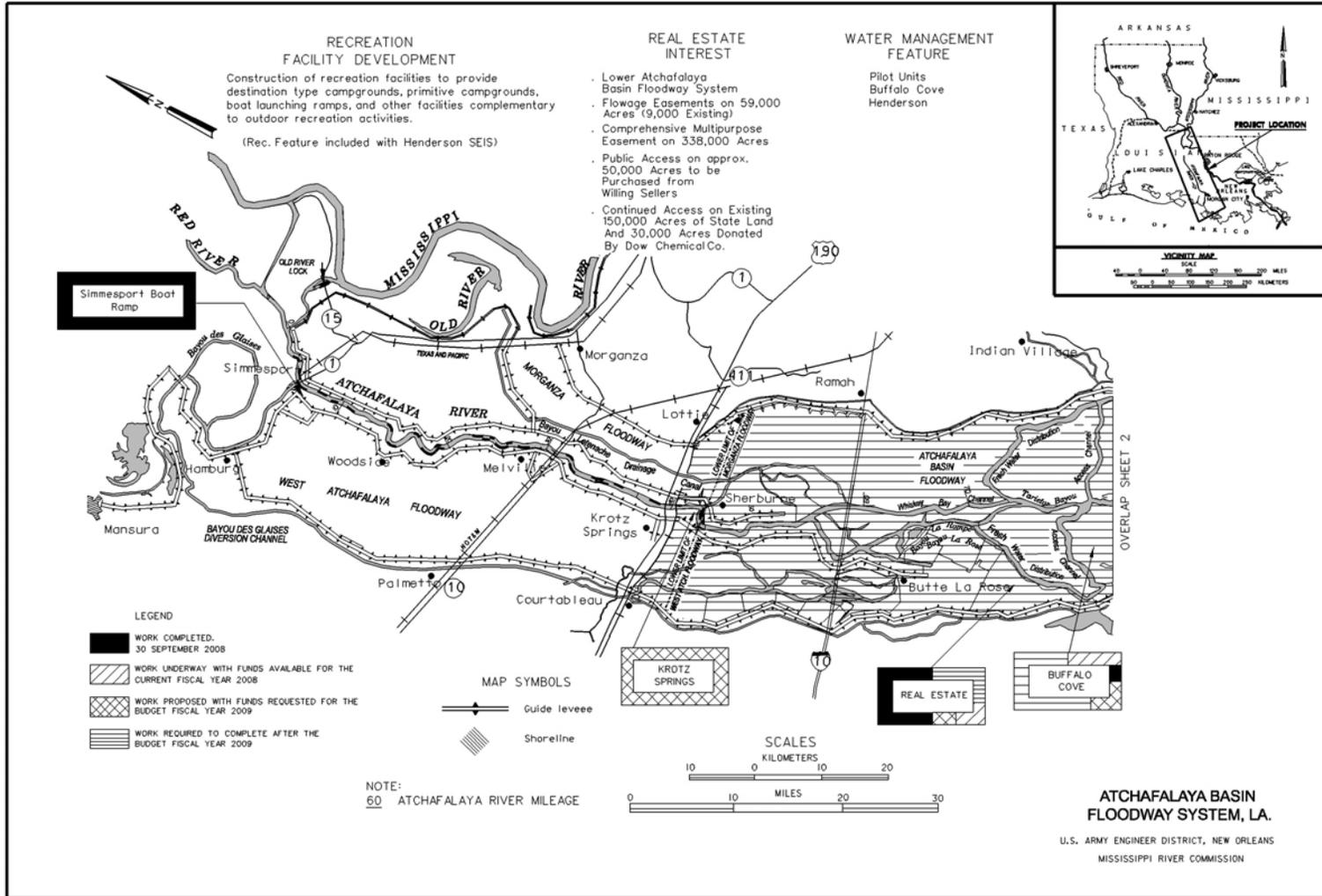
STATUS OF LOCAL COOPERATION: The Avoyelles Parish Police Jury is the non-Federal sponsor for the Simmesport Boat Ramp and the PCA was executed on 18 April 2001. The State of Louisiana has provided a letter of intent supporting the recreation feature of the project and agrees to its cost sharing requirements.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

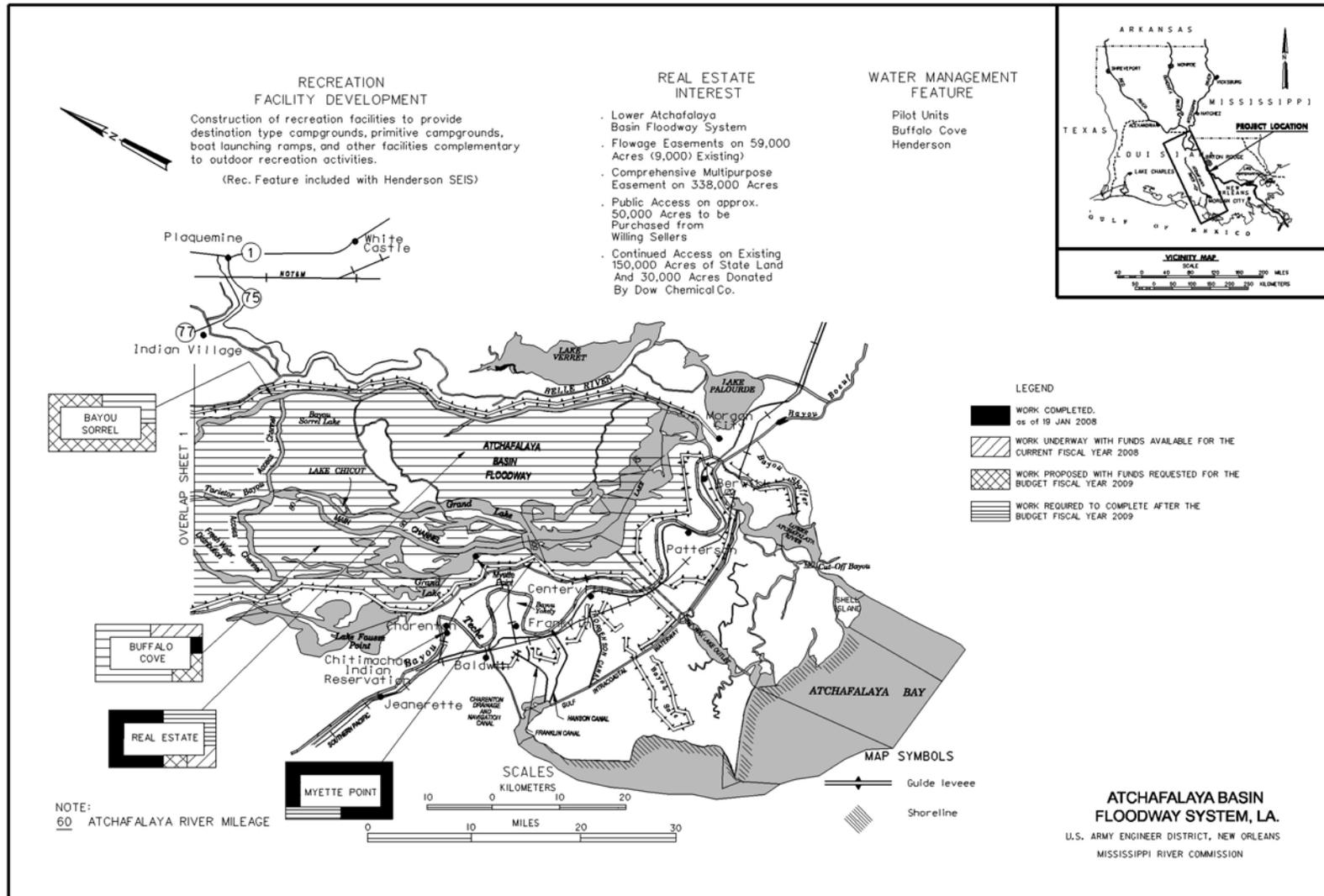
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$387,366,000 is an increase of \$185,366,000 from the latest estimate (\$202,000,000) presented to Congress (Fiscal Year 2008). This change includes the following items:

Item	Amount
Price Escalation updated to reflect current cost	\$ 74,146,400
Post Contract Award and Other Estimating Adjustments	46,341,500
Price Escalation on Real Estate	64,878,100
Total	\$185,366,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Environmental Protection Agency on 20 August 1982. A Supplemental Environmental Impact Statement (SEIS) for Henderson Lake Management Unit and Recreation Feature (combined) has been initiated in April 2006. A Supplemental Environmental Impact Statement (SEIS) for Buffalo Cove, Flat Lake, Beau Bayou, Cocodrie Swamp will be initiated in early Fiscal Year 2010 with completion paralleling the five year monitoring program for Buffalo Cove.

OTHER INFORMATION: Funds to initiate construction were appropriated in Fiscal Year 1985.





APPROPRIATION TITLE: Flood Control, Mississippi River and Tributaries, AR, IL, KY, LA, MS, MO, and TN - Construction

PROJECT: Mississippi Delta Region, Louisiana (Salinity Control Structures) (Continuing)

LOCATION: The project is located in the lower Mississippi River delta region in Plaquemines and St. Charles Parishes, Louisiana. The Caernarvon structure is located in Plaquemines Parish on the east bank of the Mississippi River in the vicinity of Caernarvon, Louisiana. The Davis Pond structure is located in St. Charles Parish on the west bank just downstream of Luling, Louisiana.

DESCRIPTION: The plan of improvement originally consisted of four salinity control structures (Caernarvon, Davis Pond, Homeplace, and Bohemia) with appurtenant levees and channels, to divert freshwater from the Mississippi River into coastal bays and marshes for fish and wildlife restoration. The Caernarvon and Davis Pond salinity control structures are programmed, including post-construction environmental monitoring which will continue for four years after completion of construction of each structure. The Homeplace and Bohemia structures were deauthorized on 1 May 1997.

AUTHORIZATION: Flood Control Act of 1965, and Water Resources Development Acts of 1974, 1986 and 1996.

REMAINING BENEFIT - REMAINING COST RATIO: 21.2 to 1 at 7 percent (Davis Pond).

TOTAL BENEFIT-COST RATIO: 2.8 to 1 at 3-1/4 percent for Caernarvon (Fiscal Year 1969), and 2.4 to 1 at 8-7/8 percent for Davis Pond.

INITIAL BENEFIT - COST RATIO: 3.4 to 1 at 3-1/4 percent for Caernarvon (Fiscal Year 1969), and 3.0 to 1 at 8-1/8 percent for Davis Pond (Fiscal Year 1983).

BASIS OF BENEFIT - COST RATIO: Benefits are from the latest available evaluations: Caernarvon - approved in November 1985, at 1985 price levels; and Davis Pond - approved in September 1992 at 1990 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 January 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$116,247,542		Caernarvon	100	February 1997
Estimated Non-Federal Cost	38,749,181		Davis Pond	90	TBD
Cash Contribution	\$27,762,000		Entire Project	95	TBD
Other Costs	10,987,181				
Total Estimated Project Cost	\$154,996,723				
Allocations to 30 September 2005	\$102,619,542				
Allocations for FY 2006	3,297,000				
Allocations for FY 2007	3,984,000				
Conference Allowance for FY 2008	984,000				
Allocation for FY 2008	984,000				
Allocations through FY 2008	110,884,542	95			
Allocation Requested for FY 2009	2,259,000	97			
Programmed Balance to Complete After FY 2009	0				
Unprogrammed Balance to Complete After FY 2009	3,104,000				

PHYSICAL DATA

	Caernarvon	Davis Pond
Lands and Damages	2,092 acres	10,213 acres
Relocations		
Roads/Bridges	1,600 linear feet	2,920 linear feet
Railroads	2,500 linear feet	3,600 linear feet
Utilities	4,600 linear feet	7,980 linear feet
Fish & Wildlife Facilities		
Structures	5 box culverts 15 feet by 15 feet	4 box culverts 14 feet by 14 feet
	8,000 cubic feet per second	10,650 cubic feet per second
	Caernarvon	Davis Pond
Pumping Stations		1 pumping station, 570 cfs capacity
Channels	1.7 miles	2.2 miles
Levees	3.7 miles	16.9 miles

JUSTIFICATION: The project diverts freshwater from the Mississippi River to coastal bays and marshes for fish and wildlife restoration. Benefits include restoration of former ecological conditions by controlling salinity and supplementing nutrients. The bays are important to oyster production and as breeding areas for shrimp and food fishes, while the marsh areas produce natural food for fur-bearing animals and migratory waterfowl. A total of approximately 643,000 acres at Davis Pond of marshes and bays will be benefited. The Davis Pond marsh acres enhanced are estimated at 281,000 and the water acres enhanced are 362,000. A total of 77,000 acres at Caernarvon will be benefited. The diversions take place under regulated conditions developed from monitoring the impact on the environment and the fish and wildlife. Average annual benefits are as follows:

Annual Benefits	Amount
Fish and Wildlife	\$ 8,706,000
Caernarvon	14,997,000
Davis Pond	
Recreation	
Caernarvon	449,000
Davis Pond	298,000
Total	\$24,450,000

FISCAL YEAR 2008: Current funds are being used as follows:

Davis Pond

Continue:

Gabion Weir Cuts	\$ 493,000
Planning, Engineering, and Design	300,000
Construction Management	50,000
Oyster Lease Closeout	141,000

Total	\$ 984,000
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FISCAL YEAR 2009: The requested amount will be applied as follows:

Davis Pond

Continue:

Monitoring	\$ 300,000
Cypress Lumber Canal Breach Armoring	1,534,000
Planning, Engineering, and Design	350,000
Construction Management	75,000

Total	\$ 2,259,000
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NON-FEDERAL COST: Based on the cost sharing concept adopted for the Caernarvon Structure, the non-Federal sponsor will voluntarily contribute 25 percent of the first cost of the project as well as the required 25 percent of the cost of operating, maintaining, repairing, rehabilitating, and replacing the project after completion.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Contribute 25 percent of the costs allocated to fish and wildlife restoration and pay 25 percent of the costs of operation, maintenance, repair, rehabilitation, and replacement of fish and wildlife facilities.		
Davis Pond	\$30,700,000	\$188,626
Caernarvon	5,850,000	71,277
Total Non-Federal Costs	\$36,550,000	\$259,903

The non-Federal sponsor for the Caernarvon and Davis Pond Structures has also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement for the Caernarvon Structure was signed by the State of Louisiana on 2 June 1987 and by the Assistant Secretary of the Army for Civil Works on 10 June 1987. The current non-Federal cost estimate of \$5,850,000, which includes a cash contribution of \$5,850,000, is a decrease of \$275,000 from the non-Federal cost estimate of \$6,125,000 noted in the Project Cooperation Agreement, which included a cash contribution of \$6,125,000. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment. The State of Louisiana has provided cash contributions of \$5,850,000 for the Caernarvon Structure. The State has also performed biological monitoring, with an estimated value of \$1,044,000. The Project Cooperation Agreement for the Davis Pond Structure was signed 17 April 1993 by the State of Louisiana and the Acting Assistant Secretary of the Army. The Water Resources Development Act of 1996 authorized the Corps to credit the State of Louisiana up to \$7,500,000 in oyster relocation costs. We are currently preparing an amendment to the Davis Pond PCA to incorporate these requirements. We anticipate execution of the amendment in November 2007. The State of Louisiana is funding both the construction and the operations and maintenance of the project through the Wetlands Conservation and Restoration Trust Fund. Our recent analysis of the non-Federal sponsor's financial capability affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$116,247,542 is an increase of \$6,397,542 from the latest estimate (\$109,850,000) presented to Congress (Fiscal Year 2007). This change includes the following item:

Item	Amount
Price Escalation on Construction Features	\$ 6,397,542
Total	\$ 6,397,542

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement for the Louisiana Coastal Area Study was filed with the Environmental Protection Agency on 5 April 1985. This statement is adequate for the Caernarvon and Davis Pond structures. An environmental assessment was completed November 19, 2004 and addressed changes, in the Davis Pond gabion weir structure, required to improve the efficiency of the ponding area. An environmental assessment is also being developed to discuss the construction of a Site Operation Building in the Davis Pond Pumping Station vicinity. It is scheduled for completion in FY 2010.

OTHER INFORMATION: Local interests, during the period 1954-1970, spent an estimated \$420,000 for construction and maintenance of freshwater diversion structures and channel improvements on the east bank of the Mississippi River in the vicinity of Bohemia and Bayou Lamoque.

Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1969 and funds to initiate construction were appropriated in Fiscal Year 1987.

SUMMARIZED FINANCIAL DATA

Davis Pond:		
Estimated Federal Cost		\$98,697,542
Estimated Non-Federal Cost		32,899,181
Cash Contributions	\$21,912,000	
Other Costs	10,987,181	
Total Estimated Cost		\$131,596,723
Caernarvon:		
Estimated Federal Cost		\$17,550,000
Estimated Non-Federal Cost		5,850,000
Cash Contributions	\$5,850,000	
Other Costs	0	
Total Estimated Cost		\$23,400,000

REMAINING BENEFIT - REMAINING COST RATIO:

Davis Pond: 19.3 to 1 at 8-7/8 percent.
Caernarvon: Not applicable because construction is complete.

TOTAL BENEFIT - COST RATIO:

Davis Pond: 2.4 to 1 at 8-7/8 percent.
Caernarvon: Not applicable because construction is complete.

NORTH ATLANTIC DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Flood and Coastal Storm Damage Reduction) NEW JERSEY							
Delaware River Basin Comprehensive, NJ Philadelphia District	2,000,000	0	134,000	350,000	247,000	290,000	979,000

The Delaware River basin is located in 42 counties in portions of New York, New Jersey, Delaware and Pennsylvania, draining an approximate 13,539 square mile area. The river basin has experienced considerable degradation over the past two hundred years due to urbanization and industrialization. In addition, the river basin includes the Atlantic Flyway, the final stopover for millions of migratory birds. The river basin is divided into the upper and lower basins. The upper basin area includes small rural and agricultural communities, some heavily populated and industrialized areas, and abandoned mining complexes, which are experiencing developmental, recreational, and environmental pressures; and acid mine drainage problems from over twenty locations. The lower basin, which includes the area from Trenton to Philadelphia through Delaware Bay is heavily urbanized and industrialized, and includes commercial navigation projects. These deep draft navigation projects place millions of cubic yards of sediments annually into numerous upland disposal sites that has degraded thousands of acres of wetlands and terrestrial habitat.

The study will investigate and recommend solutions to problem watershed problems, which include, flood damage reduction, floodplain management, aquatic ecosystem restoration, dredged material disposal, water quality control, and acid mine drainage abatement with dredged material. The study will be coordinated with ongoing initiatives be conducted by the State of New Jersey Division of Watershed Management. The sponsor for the feasibility phase of the study is the New Jersey Department of Environmental Protection, who understands the cost-sharing requirements to the feasibility phase of the study. The feasibility cost-sharing agreement was executed in July 2006.

Fiscal Year 2007 funds were used to continue feasibility study, which included initiation of plan formulation.

Fiscal Year 2008 funds are being used to continue the feasibility study, including the plan formulation and alternative plan identification.

Fiscal Year 2009 funds will be used to continue the feasibility study, including alternative plan identification and data collection. The estimated cost of the feasibility phase is \$4,000,000, which is to be 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	\$4,000,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	2,000,000
Feasibility Phase (Non-Federal)	2,000,000

The reconnaissance phase was completed under the Delaware River Basin Comprehensive, NY, NJ, PA, and DE in September 2005. The feasibility study is scheduled to be completed in September 2011.

CONSTRUCTION

APPROPRIATION TITLE: Construction – Flood and Coastal Storm Damage Reduction

PROJECT: Atlantic Coast of New York City, Rockaway Inlet to Norton Point, Coney Island, New York (continuing)

LOCATION: The project is located on the South shore of Long Island in Brooklyn (Kings County), New York, approximately nine miles south of the Battery, New York City.

DESCRIPTION: Programmed work consists of construction of a 100-foot-wide berm at an elevation of 13 feet above mean low water, a groin at the western end of the restored beach, and a fillet of beachfill extending westward from the groin at West 37th Street. Also included is the construction of T-groins with beachfill westward of the groin at West 37th Street. Unprogrammed work includes construction of comfort and lifeguard stations, construction of a groin at east end of project and extending beach seaward of historic shoreline.

AUTHORIZATION: Water Resources Development Act of 1986 as modified by the Intermodal Surface Transportation and Efficiency Act of 1991, amended by WRDA 2000, Section 329.

REMAINING BENEFIT-REMAINING COST RATIO: 9.3 to 1 at 7 percent

TOTAL BENEFIT-COST RATIO: 3.2 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 2.7 to 1 at 8 7/8 percent (FY 1992).

BASIS OF BENEFIT-COST RATIO: Final General Design Memorandum entitled Atlantic Coast of New York City, Rockaway Inlet to Norton Point (Coney Island Area), New York, dated April 1992, at October 1990 price levels.

STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Programmed Work		
Initial Construction	85	To be determined
Periodic Nourishment	0	To be determined
Entire Project	20	To be determined
Unprogrammed Work		
Comfort and Lifeguard Stations	0	Indefinite
Groin and additional Beach Berm	0	Indefinite

1/ For programmed work only; remaining work is indefinite pending a decision to construct these features.

Division: North Atlantic

District: New York

Atlantic Coast of New York City, Rockaway Inlet to
Norton Point, Coney Island, NY

SUMMARIZED FINANCIAL DATA:

ACCUM.
PCT. OF EST.
FED COST

Estimated Federal Cost			105,800,000
Programmed Construction		71,900,000	
Initial Construction	21,700,000		
Periodic Nourishment	47,700,000		
Comfort and Lifeguard Stations	2,500,000		
Unprogrammed Construction		33,900,000	
Initial Construction	15,900,000		
Periodic Nourishment	0		
Comfort and Lifeguard Stations	18,000,000		
Estimated Non-Federal Cost			53,200,000
Programmed Construction		37,300,000	
Initial Construction		11,700,000	
Cash Contribution	11,700,000		
Other Costs	0		
Periodic Nourishment		25,600,000	
Cash Contributions	25,600,000		
Other Costs	0		
Unprogrammed Construction		15,900,000	
Initial Construction		15,900,000	
Cash Contribution	15,900,000		
Other Costs	0		
Periodic Nourishment	0		
Cash Contributions	0		
Other Costs	0		
Comfort and Lifeguard Stations	0		

PHYSICAL DATA

Berm 100 feet wide at 13 feet NGVD
Extended berm 165 feet wide at
8 feet NGVD.
Groins at the eastern and western
ends of the restored beach.

Fillet of beachfill extending
westward from groin at West 37th St.
Relocation and/or reconstruction
of existing comfort and lifeguard
stations.

Division: North Atlantic

District: New York

Atlantic Coast of New York City, Rockaway Inlet to
Norton Point, Coney Island, NY

SUMMARIZED FINANCIAL DATA: (Continued)

ACCUM.
PCT. OF EST.
FED COST

Total Estimated Programmed Construction Cost	109,200,000	
Initial Construction	33,400,000	
Periodic Nourishment	73,300,000	
Comfort and Lifeguard Stations	2,500,000	
Total Estimated Unprogrammed Construction Cost	49,800,000	
Initial Construction	31,800,000	
Periodic Nourishment	0	
Comfort and Lifeguard Stations	18,000,000	
Total Estimated Project Cost	159,000,000	
Initial Construction	65,200,000	
Periodic Nourishment	73,300,000	
Comfort and Lifeguard Stations	20,500,000	
Allocation to 30 September 2005	16,327,000	
Allocation for FY 2006	0	
Allocation for FY 2007	75,000	
Conference allowance for FY 2008	8,735,000	
Allocation for FY 2008	8,735,000	
Allocations through FY 2008	25,137,000	18
Allocation Requested for FY 2009	3,800,000	26
Programmed Balance to Complete after FY 2009	43,198,000	
Unprogrammed Balance to Complete after FY 2009	33,900,000	

JUSTIFICATION: Erosion had caused serious damage to the shoreline extending through the communities of Coney Island, Brighton Beach, and Sea Gate, New York. Due to this erosion, residential and commercial developments had become increasingly susceptible to storm damage from wave attack and inundation. In March 1962, a severe northeast storm caused breaching and failure of the breach and shore protection structures with damages estimated at \$18,000,000. A recurrence of the March 1962 storm would have caused damages of approximating \$56,000,000 (October 1989 price levels) without the project in place. A 100 year event would cause storm damage by wave attack in excess of \$156,000,000 at October 1993 prices. Project implementation has eliminated these damages.

Fiscal Year 2008: Funds are being used to award the basic of "base plus option" construction contract for the T-Groins downdrift of West 37th Street terminal groins

Division: North Atlantic

District: New York

Atlantic Coast of New York City, Rockaway Inlet
to Norton Point, Coney Island, NY

4 February 2008

NAD - 10

Fiscal Year 2009: The requested amount will be applied as follows:

Continue T-Groins Construction Sea Gate Area	\$ 3,400,000
Planning, Engineering and Design	\$ 100,000
Construction Management	\$ 300,000
Total	\$ 3,800,000

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

	Payments During Construction and Reimbursement	Annual Operation, Maintenance, and Replacement Costs
Requirement of Local Cooperation		
Pay 35 percent of the costs of periodic nourishment allocated to storm damage reduction and 50 percent of the costs allocated to recreation, bear all costs of operation, maintenance and replacement of storm reduction facilities	\$ 53,200,000	\$950,000
Total Non-Federal Costs	\$ 53,200,000	\$950,000

STATUS OF LOCAL COOPERATION: The non-Federal sponsor for this project is the New York State Department of Environmental Conservation. The Local Cooperation Agreement for this project was executed in October 1993. The PCA will be modified in May 2008.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$105,800,000 is the same as the latest estimate (105,800,000) presented to Congress (FY 2008).

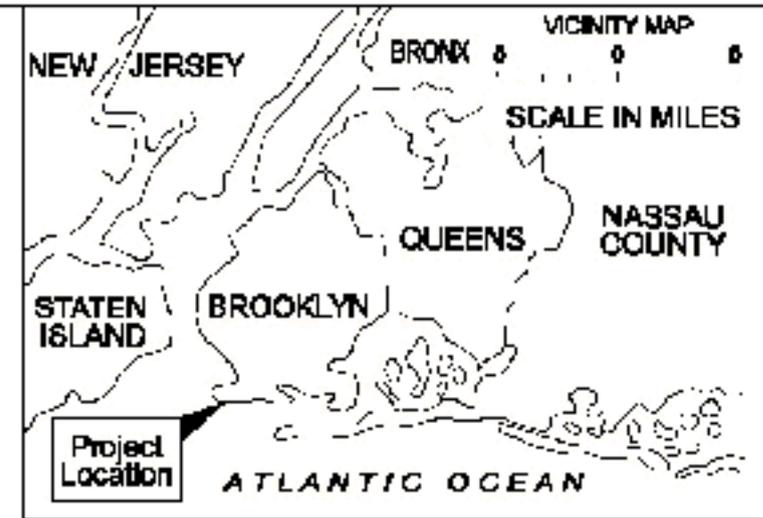
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A final Supplemental Environmental Impact Statement was filed with the United States Environmental Protection Agency on 5 June 1992.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1992. The budget funds the initial construction phase of beach nourishment projects that reduce storm damages, but does not support follow-up work for such projects, except to the extent that the operation and maintenance of Federal navigation projects contributed to the erosion of the shoreline.

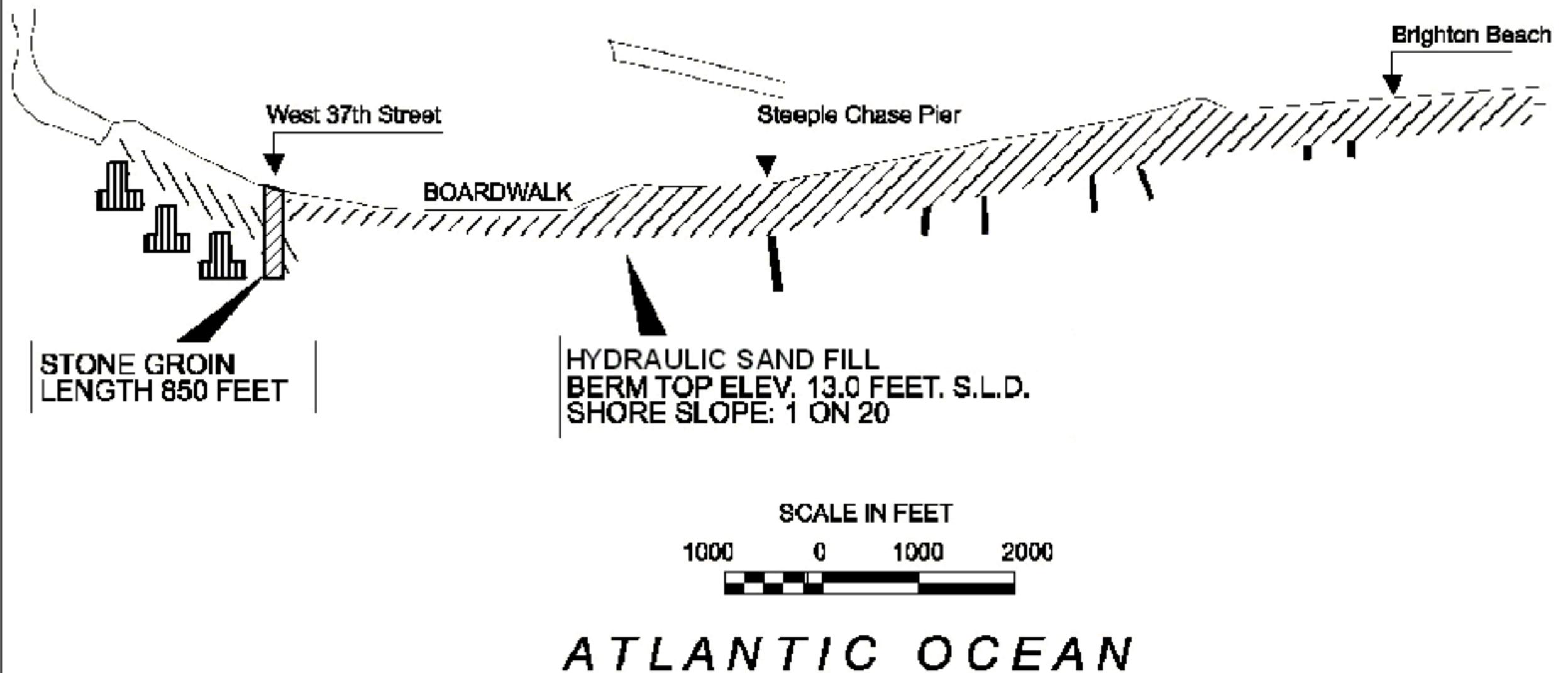
Division: North Atlantic

District: New York

Atlantic Coast of New York City, Rockaway Inlet
to Norton Point, Coney Island, NY



CONEY ISLAND



-  Work Completed As of 30 September 2007
-  Work Proposed with Funds Available for FY 2008
-  Work Proposed with Funds Recommended for FY 2009
-  Work Required to Complete the Project after 30 September 2009

Atlantic Coast of New York City
Rockaway Inlet to Norton Point, New York
CONEY ISLAND AREA
New York District
North Atlantic Division
1 January 2008

APPROPRIATION TITLE: Construction – Flood and Coastal Storm Damage Reduction

PROJECT: Barnegat Inlet to Little Egg Harbor Inlet, New Jersey

LOCATION: The project is located along the Atlantic coast of New Jersey approximately 14 miles north of Atlantic City, covering Long Beach Island, New Jersey.

DESCRIPTION: The selected plan consists of berm and dune restoration utilizing sand obtained from offshore borrow sources. This plan would require 4.95 million cubic yards of sand for initial berm placement, and 2.45 million cubic yards for dune placement. Approximately 1.9 million cubic yards would be needed for periodic nourishment every 7 years for the 50-year period of analysis. The template for the plan is a dune at an elevation of +22-ft NAVD, with a 30-ft dune crest width; 1V:5H slopes from dune crest down to a berm at elevation +8-ft NAVD, with a berm width of 125 feet from the centerline of the dune.

AUTHORIZATION: Section 101 (a) (1) of WRDA 2000.

REMAINING BENEFIT-REMAINING COST RATIO: 1.9 to 1 at 7 percent

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

INITIAL BENEFIT-COST RATIO: 1.9 to 1 at 6 3/8 percent (FY 2004)

BASIS OF BENEFIT-COST RATIO: Benefits and costs (October 1999 price level) based on the Chief of Engineers Report dated 26 July 2000.

SUMMARIZED FINANCIAL DATA:		PHYSICAL STATUS:	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost	\$ 119,500,000	(1 Jan 2008)		
Initial Construction	\$ 54,262,000	Initial Beachfill	9	Sept 2012
Periodic Nourishment	\$ 65,238,000	Periodic Nourishment	0	Sept 2061
Estimated Non-Federal Costs	\$ 97,000,000	Entire Project	9	Sept 2061
Initial Construction	\$28,759,000	PHYSICAL DATA:		
Cash Contributions	\$ 28,759,000	Initial Placement: Berm-4.95 million cubic yards of sand; Dune - 2.45 million cubic yards of sand.		
Other Costs	\$1,311,000	Periodic Nourishment: 1.9cy every 7 years for 50 years		
Periodic Nourishment	\$ 66,930,000			
Cash Contributions	\$ 66,693,000			
Other Costs	0			
Total Estimated Project Cost	\$ 216,500,000			
Initial Construction	\$ 84,332,000			
Periodic Nourishment	\$ 132,168,000			

Division: North Atlantic

District: Philadelphia

Barnegat Inlet to Little Egg Harbor Inlet, NJ

		ACCUM. PCT. OF EST FED COST
Allocations to 30 September 2005	\$ 514,000	
Allocations FY2006	\$ 5,957,000	
Allocations FY2007	\$ 8,500,000	
Conference Allowance for FY 2008	\$ 4,920,000	
Allocation for FY 2008	\$ 4,920,000	
Allocations through FY 2008	\$ 19,891,000	17
Allocation Requested for FY 2009	\$ 11,700,000	26
Programmed Balance to Complete after FY 2009	\$ 22,671,000	
Unprogrammed Balance to Complete after FY 2009	\$ 65,238,000	

JUSTIFICATION: Public and private property are subject to storm damage from wave attack and tidal inundation. During times of storms, extensive damages have occurred and lives have been lost. Major storms occurred in September 1944, March 1962, March 1984, September 1985, October 1991, January 1992, and December 1992. The coastal storm of March 1962 resulted in physical damage to 1,234 structures and damages of \$19,000,000 at that time. Local interests report damages of \$1,700,000, \$2,000,000 and \$2,300,000 for the storms of 1984, October 1991 and January 1992, respectively. The December 1992 storm produced the second highest water levels recorded at the Atlantic City, New Jersey tide gage, resulting in structural damage, extensive beach and dune erosion and overwash. Damage to public facilities which qualified for FEMA assistance totaled \$1,800,000 for Long Beach Island. Average annual benefits are \$10,597,000 (Oct. 1999 price level).

FISCAL YEAR 2008: FY 2008 funds will be used to continue initial construction. The next beachfill contract will most likely be in Beach Haven or Harvey Cedars. A decision on the location will be dependent on technical considerations and real estate acquisition.

FISCAL YEAR 2009: The requested amount will be applied to accomplish Phase III of the Munitions and Explosives of Concern:

Continue Mitigation Work	\$ 10,700,000
Planning, Engineering and Design:	\$ 250,000
Construction Management:	\$ 750,000
Total	\$ 11,700,000

Division: North Atlantic

District: Philadelphia

Barneгат Inlet to Little Egg Harbor Inlet, NJ

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

	Payments during Construction and Reimbursement	Annual Operation, Maintenance, and Replacement Costs
Provide 35 percent of the initial construction costs assigned to the non-mitigation portion of the project for hurricane and storm damage reduction	\$28,759,000	
Provide all lands, easements, rights-of-way, and relocations.	\$ 1,311,000	
Provide during construction 35 percent of each periodic nourishment costs assigned to the non-mitigation portion of the project for hurricane and storm damage reduction	\$ 66,930,000	
Bear all costs of operation, maintenance, repair, replacement, and rehabilitation of the completed project.		\$110,000
Total Non-Federal Cost	\$ 97,000,000	\$110,000

STATUS OF LOCAL COOPERATION: The non-Federal sponsor is the State of New Jersey Department of Environmental Protection. The Project Cooperation Agreement was executed on 17 August 2005.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$119,500,000 is the first estimate presented to Congress.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Assessment was completed in September 1999.

OTHER INFORMATION: Funds to initiate construction were appropriated in FY 2004.

On 5 Mar 07 the Corps was notified that a number of Munitions and Explosives of Concern (MEC) items were discovered on the restored beach at Surf City and a portion of Ship Bottom. The MECs were determined to be Discarded Military Munitions (DMM). It is presumed that previously undetected DMM items were dredged from the borrow area and pumped onto the beach during beachfill placement. The Corps immediately closed the beach and provided security. A Time Critical Removal Action (TCRA) was immediately implemented to reduce the explosives safety hazard presented to individuals due to presence of DMM on the Public Beaches. The objective of the TCRA (Phase I) was to safely locate, identify, and dispose of all DMM items to detection depth on the beaches before Memorial Day. Phase I was completed on 18 May 07 and the beaches were reopened on 23 May 07. Currently Phase II is on-going which includes monitoring, implementation of a Public Information Plan and Land Use Controls. During Phase I over 1,100 DMM items were recovered from the beach by the TCRA investigation or were turned-in by citizens. Between 23 May 07 and 12 Aug 07, 12 more DMM items were recovered during the Phase II beach monitoring by the USACE Ordnance and Explosive Safety Specialist, or reported by citizens. A Draft Final Engineering Evaluation and Cost Estimate (EECA) completed in September 2007 recommended to sieve the berm and surf zone to the depth of the sand placement and to continue land use controls on the dune for five years at an estimated cost of \$18,000,000. This would be a project cost with \$11,700,000 being the Federal portion.

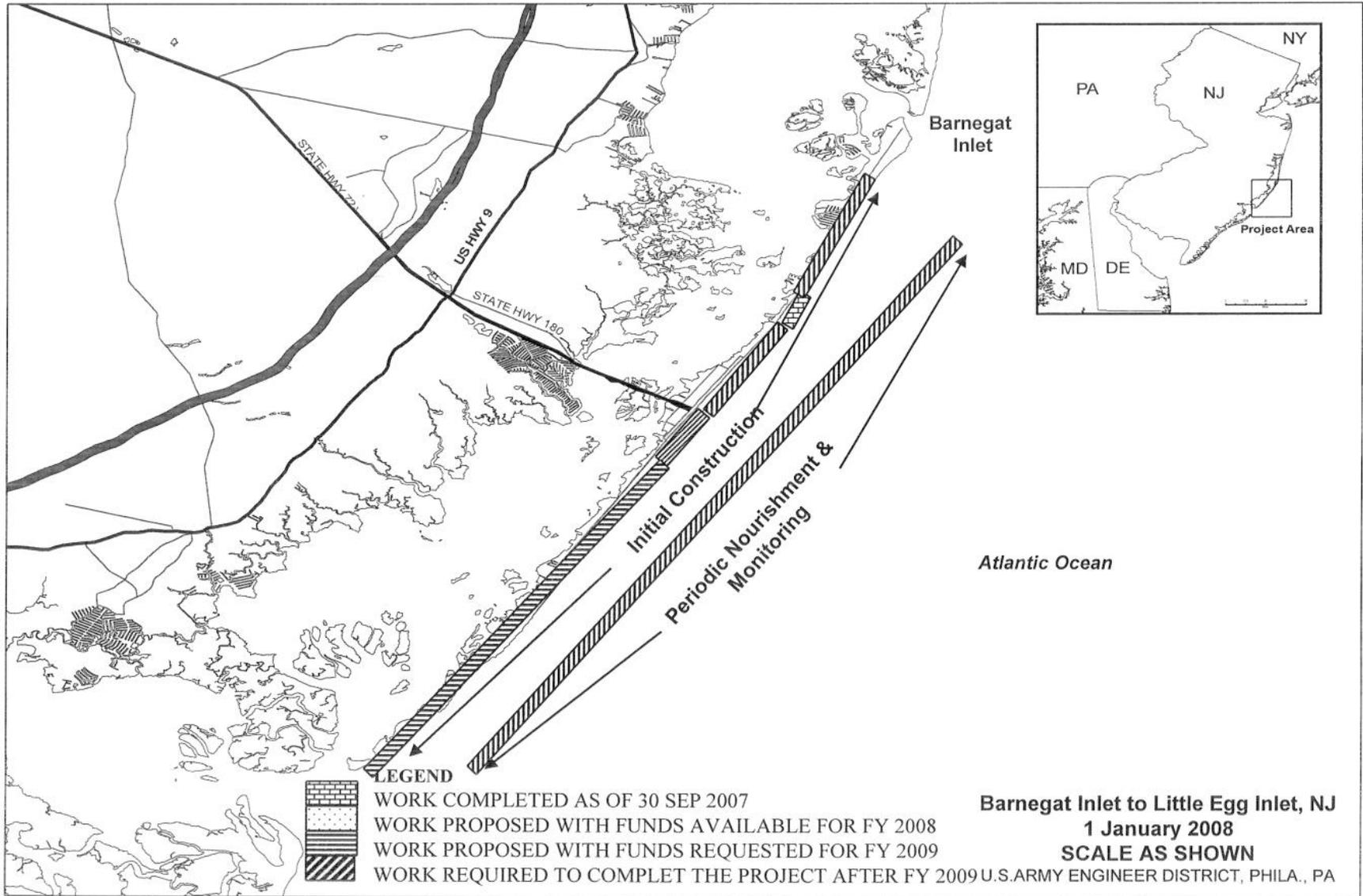
Division: North Atlantic

District: Philadelphia

Barnegat Inlet to Little Egg Harbor Inlet, NJ

4 February 2008

NAD - 16



APPROPRIATION TITLE: Construction - Flood and Coastal Storm Damage Reduction

PROJECT: Fire Island Inlet to Montauk Point, New York (continuing)

LOCATION: The overall project area, extends from Fire Island Inlet easterly to Montauk Point along the Atlantic Coast of Suffolk County. The project is about 83 miles long and comprises about 70 percent of the total ocean frontage of Long Island. Fire Island Inlet is located about 50 miles by water East of the Battery, New York City.

DESCRIPTION: The project provides for beach erosion control and hurricane protection along five reaches of the Atlantic Coast of New York from Fire Island Inlet to Montauk Point. Work includes widening the beaches along the developed areas to a minimum width of 100 feet at an elevation of 14 feet above mean sea level and by raising dunes to an elevation of 20 feet above mean sea level from Fire Island Inlet to Hither Hills State Park and at Montauk and opposite Lake Montauk Harbor, supplemented by grass planting on the dunes, interior drainage structures, construction of up to 50 groins, and subsequent periodic beach nourishment. A reformulation study is underway to evaluate storm damage protection measures. An interim project at Westhampton Beach has been constructed prior to completion of an ongoing overall project reformulation effort. This interim project provides for 30 years of periodic nourishment to maintain a beach berm extending westwardly from Groin 15 to Moriches Inlet at an elevation of 9.5 feet above mean sea level backed by a dune with a height of +15 feet above msl. The Westhampton Beach Interim project also includes tapering of the existing westernmost two groins, construction of a new groin between groins 14 and 15, and beachfill as necessary within the existing groinfield to promote sand transport. A Breach Contingency Plan has been developed which permits closing of breaches of the barrier island with use of a pre-approved Project Cooperation Agreement format, provided that estimated breach costs are no greater than \$5 million. A Decision document was finalized and approved in July 2002 for an interim project to protect the area west of Shinnecock Inlet. This interim project provides for initial beachfill which was initiated in September 2004, in conjunction with the second nourishment of the Westhampton Interim Project. The study for an interim project along Fire Island has been discontinued due to lack of a Non-Federal sponsor.

AUTHORIZATION: River and Harbor Act 14 July 1960, modified by the Water Resources Development Act of 1974, the Water Resources Development Act of 1986, and the Water Resources Development Act of 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 1.7 to 1 at 7 percent.

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

INITIAL BENEFIT-COST RATIO: 2.6 to 1 at 2 5/8 percent (FY 1963).

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		591,100,000
Programmed Construction	201,600,000	
Initial Construction	67,000,000	
Periodic Nourishment	134,600,000	
Unprogrammed Construction	389,500,000	
Initial Construction	113,400,000	
Periodic Nourishment	276,100,000	
Estimated Non-Federal Cost		295,200,000
Programmed Construction	83,200,000	
Initial Construction	19,500,000	
Cash Contributions	18,800,000	
Other Costs	700,000	
Periodic Nourishment	63,700,000	
Cash Contribution	63,700,000	
Other Costs	0	
Unprogrammed Construction	212,000,000	
Initial Construction	59,200,000	
Cash Contributions	48,850,000	
Other Costs	10,350,000	
Periodic Nourishment	152,800,000	
Cash Contribution	152,800,000	
Other Costs	0	
Total Estimated Programmed Construction	284,800,000	
Initial Construction	86,500,000	
Periodic Nourishment	198,300,000	
Total Estimated Unprogrammed Construction Cost	601,500,000	
Initial Construction	172,600,000	
Periodic Nourishment	428,900,000	
Total Estimated Project Cost		886,300,000
Initial Construction	259,100,000	
Periodic Nourishment	627,200,000	

STATUS: (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Reach 2		
11 groins	100	Oct 1966
4 groins	100	Nov 1970
8 groins	0	<u>1/</u>
Westhampton Interim	40	To be determined
Initial Construction	100	Dec 1997
Periodic Nourishment	10	To be determined
West of Shinnecock Interim		
Initial Construction	100	Mar 2005
Periodic Nourishment	10	To be determined
Balance of Reach	0	<u>1/</u>
Reach 4		
2 groins	100	Sep 1965
Beach Fill-18.4 mi.	0	<u>1/</u>
Balance of Project		
Dune/Beach Fill-39.7 mi	0	<u>1/</u>
27 groins	0	<u>1/</u>
Studies for Interim Projects		
Fire Island	90	<u>2/</u>
West of Shinnecock	100	Dec 2002
Beach Contingency Plan	100	Jan 1996

1/ Schedule is dependent on the outcome of the Reformulation effort.

2/ Study terminated due to lack of a non-federal sponsor and environmental issues that will be addressed in the overall reformulation effort

PHYSICAL DATA

Dunes and beach replenishment: 73,5 miles
 Dunes: raise to elevation 20 feet above msl Beaches: widen to a minimum of 100 ft Interior drainage structures: 3 gated culverts
 Groins: 52
 Periodic nourishment: 480,000 cubic yards/yr

	ACCUM. PCT. OF EST. FED. COST	
SUMMARIZED FINANCIAL DATA (continued)		
Allocations to 30 September 2005	75,684,000	
Allocation for FY 2006	1,856,000	
Allocation for FY 2007	2,500,000	
Conference Allowance for FY 2008	6,888,000	
Allocation for FY 2008	6,888,000	
Allocations Through FY 2008	86,928,000	15
Allocation Requested for FY 2009	2,150,000	15
Programmed Balance to Complete After FY 2009	112,522,000	
Unprogrammed Balance to Complete After FY 2009	389,500,000	

JUSTIFICATION: Erosion has seriously reduced the width of the shoreline in the study area with consequent exposure of the shore and the mainland to wave attack and inundation damages. A recurrence of the hurricane tide of record (September 1938) when 45 lives were lost, would cause inundation and wave damage estimated at \$717,000,000 (April 1996 price levels). As a result of the 11 December 1992 storm, in the Westhampton area (Section 1B of Reach 2), over 200 residential structures were destroyed and two breaches of the barrier island occurred. Closure costs for these breaches in 1992 was approximately \$6,600,000.

FISCAL YEAR 2008: The allocated amount is being used to award West of Shinnecock and Westhampton Beach renourishment contracts, perform required environmental monitoring, and to continue the reformulation study.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue West of Shinnecock (Required Environmental Monitoring)	\$ 400,000
Continue Westhampton Beach(Required Environmental Monitoring)	400,000
Complete 3 rd cycle of Periodic Nourishment for Westhampton Interim Project	850,000
Reformulation Study	500,000
Total	\$2,150,000

Division: North Atlantic

District: New York

Fire Island Inlet to Montauk Point, NY

4 February 2008

NAD - 20

NON-FEDERAL COSTS: Local interests are required to bear 30 percent of the total project cost including periodic nourishment for the Westhampton Interim project and 35 percent of the total project cost for the rest of the project, which includes the value of lands, easements, and rights-of-way.

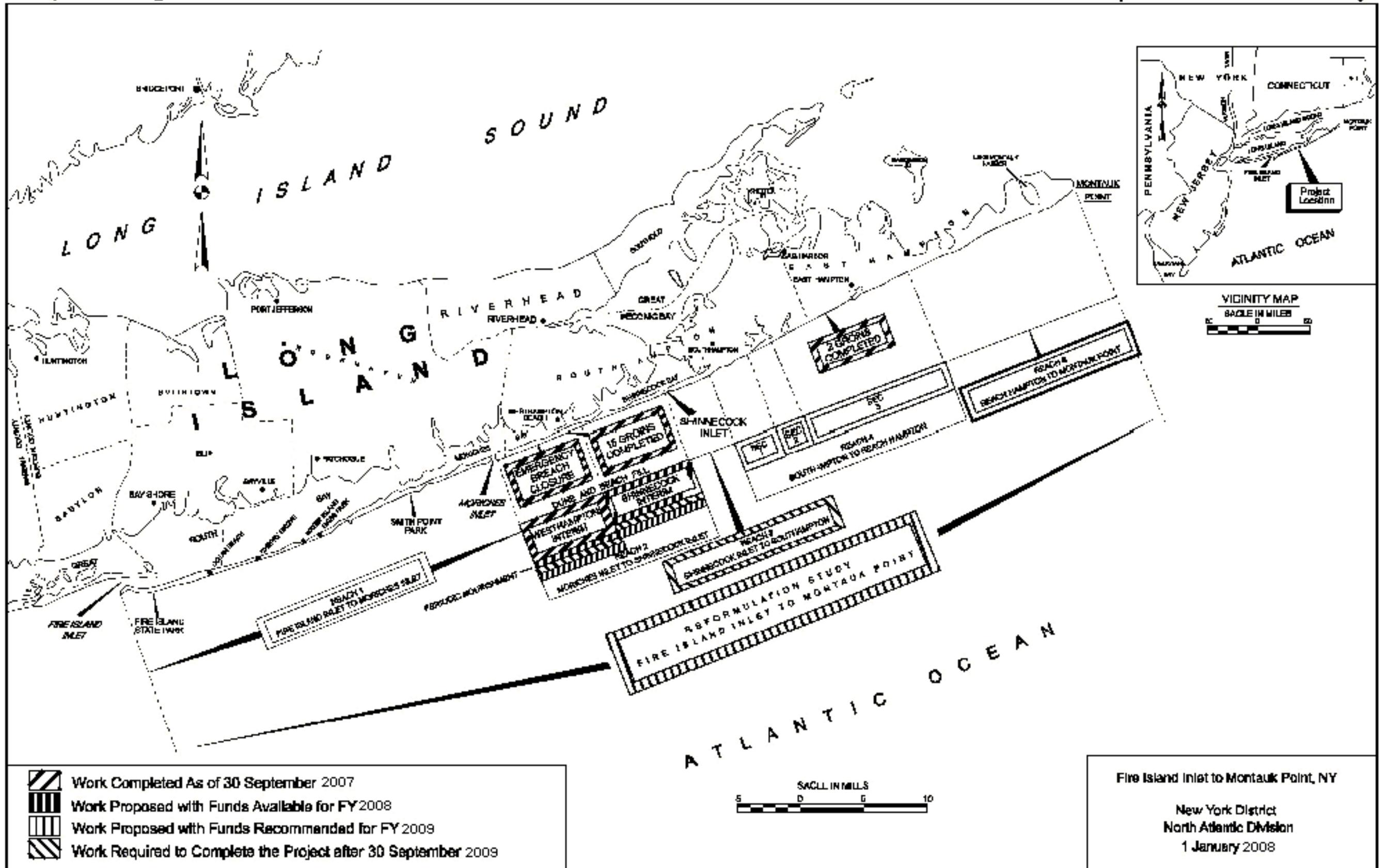
Requirements of Local Cooperation:	Payments During Construction and Reimbursements	Annual Operation Maintenance and Replacement Costs
Provide all lands, easements, and rights-of-way, and relocations.	\$ 11,050,000	
Pay 30 percent of the first costs for the Westhampton Interim project and 35 percent of the first costs for the remainder of the project including creditable lands and easements and rights of way, and bear all costs of operation and maintenance and replacement of storm damage reduction facilities.	67,650,000	\$0
Pay 30 percent of the periodic nourishment costs for the Westhampton Interim project and 35 percent of the periodic nourishment cost for the remainder of the project.	216,500,000	
Total Non-Federal Costs	\$ 295,200,000	\$0

STATUS OF LOCAL COOPERATION: The agency responsible for local cooperation is the New York State Department of Environmental Conservation (NYSDEC). Assurances of local cooperation were executed by the NYSDEC on 14 August 1963 and accepted by the Federal Government on 20 August 1963. A project cooperation agreement (PCA) for the Westhampton Interim project was executed in February 1996. A PCA for the West of Shinnecock project was executed in December 2003.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$591,100,000 is the same as the latest estimate (\$591,100,000) presented to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with the Environmental Protection Agency (USEPA) on 28 January 1978. On 7 March 1978, the Department of the Interior (DOI), supported by other agencies referred the EIS to the Council on Environmental Quality (CEQ) as unacceptable. Subsequent to the strong objections on the projects final environmental impact statement, meetings were held between September 1978 and January 1980 with DOI, USEPA, U.S. Department of Commerce, and NYSDEC. Two public scoping meetings were held in October 1979. Subsequently, the Federal agencies agreed to a basis for the reformulation of the Fire Island to Montauk Point project, including a general agreement on the studies necessary to answer the outstanding concerns. An environmental analysis was included in Supplement No. 2 to GDM No. 1 to determine environmentally acceptable measures of beach protection for the critically eroded areas at Westhampton Beach.

OTHER INFORMATION: Initial planning and construction funds were appropriated in FY 1963. The work remaining to be done is completion of construction of Reach 2-Moriches Inlet to Shinnecock Inlet, Reach 4-Southhampton to Beach Hampton, initiation of construction of Reach 1-Fire Island Inlet to Moriches Inlet, Reach 3-Shinnecock to Southhampton, and Reach 5-Beach Hampton to Montauk, as well as the completion of the reformulation effort. The Corps of Engineers concurred with the request by the State of New York to initially construct 11 groins (Reach 2), and 2 groins (Reach 4) with beach fill to be added as necessary but not sooner than 3 years after groin completion. In recognition of the critical condition of the beaches due to earlier storms, the Corps recommended to the State in June 1967 that the 3 year observation period be waived and that construction of urgent hurricane protection be resumed. The State concurred and requested that work be undertaken on additional groins, replacement of beach fill and dunes in Reach 2, as well as construction of groins, drainage structures and dune fill in Reach 4. Suffolk county, however, did not endorse the placement of beach and dune fills. Continuing negotiations during FY 1969 resulted in agreement on a plan for construction for certain groins, drainage structures, beach fill, and dunes to an interim height of 16 feet in Reaches 2 and 4. In December 1973, the State requested planning for Reach 2 (Section 1b), (Westhampton Beach) and Reach 4 (Georgica Pond), indicating that it would provide funds. Planning resumed and assurances were requested from the State in October 1974. However, strong opposition developed with Suffolk County and the county legislature refusing to provide support. Subsequently, erosion of the shoreline downdrift of the groin field at Westhampton Beach accelerated to the point where Dune Road, the only access to the homes in this area, was under water during normal high tide. In December 1992, two breaches occurred in the barrier island near Westhampton Beach, which were subsequently closed. An interim plan for the severely eroded Westhampton Beach area was prepared in June 1994, which provides for a lower level of protection than that provided in the original authorization. This interim plan has been designed such that it could be modified based on future recommendations in the to-be-completed Reformulation study. The USEPA and DOI agreed in concept to the interim plan, provided that a full environmental assessment and/or environmental impact study was completed, and the reformulation of the overall project was reinstated. The planning engineering and design has been completed for an interim project to address the severely eroded shoreline west of Shinnecock Inlet. The initial construction contract for the West of Shinnecock Interim project was awarded in September 2004. An interim plan for Fire Island barrier island has been discontinued due to the lack of a non-federal sponsor and environmental concerns which will be addressed during the reformulation study. The cost of these interim studies is \$4 million. Additionally, a Breach Contingency Plan was approved in January 1996 to provide for rapid response to breaches along the islands while awaiting completion of the reformulation study. In 1984, a lawsuit was brought against Suffolk County, the State of New York and the United States of America, which claimed that the groinfield constructed in the early 1960's caused erosion and damage to downdrift properties. In October 1994, the Village of West Hampton Dunes intervened and a settlement agreement was reached between the plaintiffs and the county, state and Federal governments to provide for storm damage protection and the agreed upon monitoring as described in the Corps 1995 Decision Document, and include periodic nourishment for a period of 30 years.



APPROPRIATION TITLE: Construction - Flood and Coastal Storm Damage Reduction and Ecosystem Restoration

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

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

DESCRIPTION: The flood damage reduction portion of the project involves dredging approximately 65,000 cubic yards of sediment to deepen the Muddy River, removal or replacement of undersized culverts and streambank protection which will provide flood damage reduction against the recurrence of a 20-year event. The ecosystem restoration portion of the project involves dredging approximately 135,000 cubic yards of sediment and restoration of riparian vegetation to improve water quality, enhance aquatic and riparian habitat, and promote recreational use of the river and surrounding parklands. Only flood damage reduction work is programmed. The project would be constructed in two phases. Phase I involves replacement of two undersized culverts, day-lighting two sections of the river and modification of a bridge and culvert headwall for flood damage reduction. Phase II involves dredging of the river for both flood damage reduction and ecosystem restoration.

AUTHORIZATION: Section 552 of the Water Resources Development Act of 2000.

REMAINING BENEFIT-REMAINING COST RATIO: The remaining benefit-remaining cost ratio for the flood damage reduction portion of the project is 5.1 to 1 at 7 percent. The remaining benefit-remaining cost ratio for the ecosystem restoration portion of the project is not applicable.

TOTAL BENEFIT-COST RATIO: The total benefit to cost ratio for the flood damage reduction portion of the project is 3.2 to 1 at 7 percent. The total benefit to cost ratio for the ecosystem restoration portion of the project is not applicable.

INITIAL BENEFIT-COST RATIO: The initial benefit to cost ratio for the flood damage reduction portion of the project is 3.2 to 1 at 5 7/8 percent (FY 2003). The initial benefit to cost ratio for the ecosystem restoration portion of the project is not applicable.

BASIS OF BENEFIT-COST RATIO: Flood damage reduction benefits are based on the economic evaluation contained in the Revised Draft Muddy River Decision Document, dated September 2003. Benefits are expressed at June 2001 price levels.

SUMMARIZED FINANCIAL DATA		ACCUMULATED PCT. OF EST. FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 48,965,000		Flood damage reduction	0	To be determined
Estimated Non-Federal Cost	29,435,000		Ecosystem Restoration	0	Unprogrammed
Cash Contribution	\$ 29,345,000		Entire Project	0	Unprogrammed
Other Costs	90,000				
 Total Estimated Project Cost	 \$78,400,000				
Allocations to 30 September 2005	\$ 1,331,000				
Allocation for FY 2006	1,485,000				
Allocation for FY 2007	1,000,000				
Conference Allowance for FY 2008	9,362,000				
Allocation for FY 2008	9,362,000				
Allocations through FY 2008	13,178,000	27			
 Allocation Requested for FY 2009	 4,000,000	 35			
Programmed Balance to Complete					
After FY 2009	9,657,000				
Unprogrammed Balance to Complete					
After FY 2009	22,130,000				

PHYSICAL DATA

Flood Damage Recudtion	
Dredging.65,000 cubic yards
Daylighting River.700 linear feet
Replace/Install Culverts.530 linear feet
 Ecosystem Restoration	
Dredging.	135,000 cubic yards
Planting Emergent Vegetation.	3.5 acres

JUSTIFICATION: During the past century the Muddy River watershed has experienced the effects of gradual urbanization and is now over 70 percent developed. Flooding has worsened because there is little natural storage remaining in the watershed and the carrying capacity of the river has been restricted by undersized culverts, accumulated sediment, vegetation and debris. Several residential neighborhoods and some of the area's most prominent businesses and institutions are subject to frequent flood damage. In October 1996 a 20 to 25-year storm, caused widespead flooding along the Muddy River. The Kenmore Square Subway Station, part of the Massachusetts Bay Transportation Authority's Green Line, was flooded with over 30 feet of water causing \$51 million in damages and disrupting service for about 6 months. Average annual damages for the Muddy River are estimated at about \$7 million. The proposed project would protect against damages from all floods up to an average recurrence frequency of once in 20 years, as well as reducing damages from larger, more infrequent floods. The average annual benefits, all flood damage reduction, are estimated at \$6,299,500 at June 2001 prices. The Muddy River is the only remaining small urban stream in Boston or Brookline that still provides significant aquatic habitat. Its location within one of the nation's premier historic park systems and close proximity to internationally known medical, cultural and educational institutions further adds to its significance. Accumulated sediment from urban runoff has contributed to poor water quality, loss of aquatic habitat, and proliferation of invasive aquatic and emergent wetland vegetation. Removal of nutrient rich sediment and invasive plant species will significantly improve water quality, restore 8 acres of open water habitat, create more diverse emergent and riparian habitat, and restore the aesthetic quality of the Muddy River.

Division: North Atlantic

District: New England

Muddy River, Boston and Brookline, MA

FISCAL YEAR 2008: Funds are being used to award a fully funded contract and initiate construction of Phase I work. These funds will also be used to complete design of the flood damage reduction elements of Phase II work.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Construction of Phase I	\$ 3,600,000
Construction Management	350,000
Planning, Engineering and Design	50,000
Total	\$ 4,000,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Provide lands, easements, rights-of-way, and suitable borrow and dredged or excavated material disposal areas, and perform all relocations determined by the Federal Government to be necessary for the construction, operation and maintenance of the project.	\$ 90,000	
Pay 34.9 percent of the costs allocated to flood damage reduction and ecosystem restoration to bring the total non-Federal share of these costs to 35 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood damage reduction and ecosystem restoration facilities.	26,245,000	\$ 202,000
Pay all additional costs for the locally preferred plan to dredge Wards Pond instead of the Federally implementable plan of aeration.	3,100,000	
Total Non-Federal Costs	\$29,435,000	\$ 202,000

Division: North Atlantic

District: New England

Muddy River, Boston and Brookline, MA

STATUS OF LOCAL COOPERATION: The City of Boston, in cooperation with the Massachusetts Executive Office of Environmental Affairs and the City of Brookline, is the local sponsor for the project. The City of Boston signed an agreement for design of the entire project on 13 June 2005. The city understands the requirements of local cooperation and is prepared to enter into a Project Cooperation Agreement with the Corps in July 2008. The city will obtain all state and local permits, as well as acquire all lands, easements, rights-of-way, and dredged material disposal areas necessary for project construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$48,965,000 is an increase of \$5,805,000 from the latest estimate (\$43,160,000) presented to Congress (FY 2008). This change includes the following items:

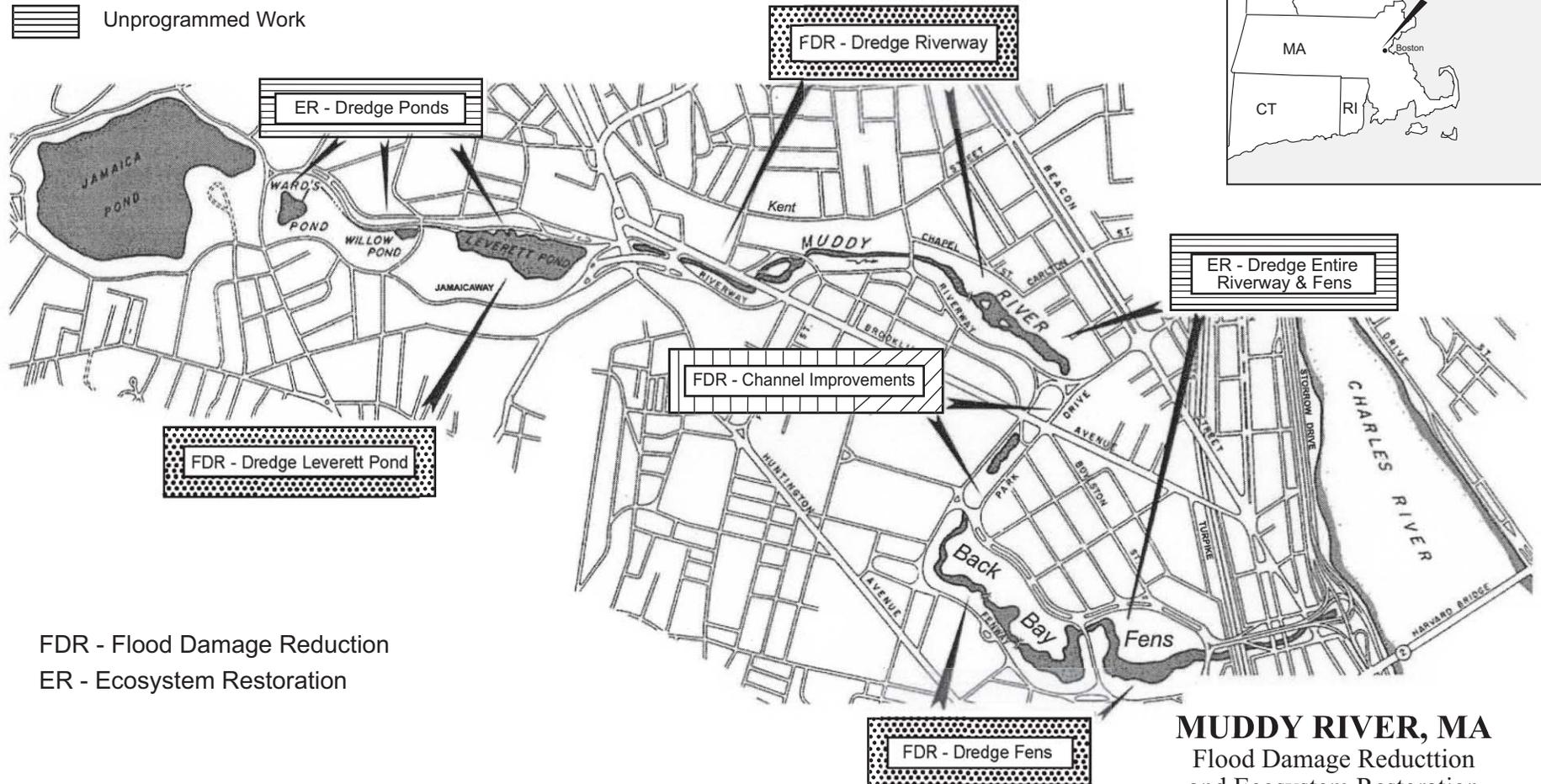
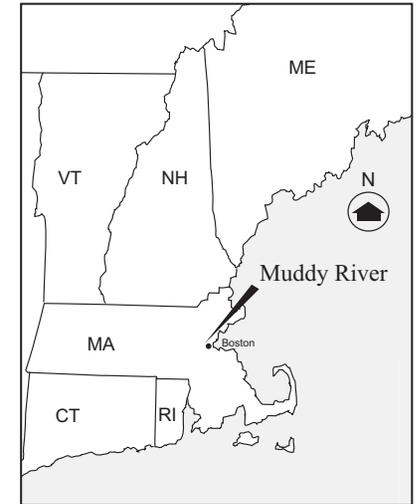
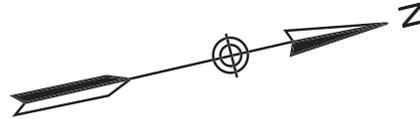
Item	Amount
Price Escalation on Construction Features	\$ 1,424,000
Other Estimating Adjustments	4,381,000
Total	\$ 5,805,000

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

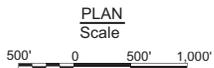
OTHER INFORMATION: Funds to initiate Preconstruction Engineering and Design (PED) were appropriated in FY 2001. The design agreement was signed on 13 June 2005 with the City of Boston. Funds to initiate construction of the project were first appropriated in FY 2003. In a letter dated 5 July 2004, the Assistant Secretary for the Army (Civil Works) expressed support for the flood damage reduction elements of the project, but determined that the ecosystem restoration elements do not demonstrate environmental significance and are therefore not justified.

LEGEND

- (none) Work Completed as of 30 September 2007
- Work Underway with Funds available for FY 2008
- Work Proposed with Funds Requested for FY 2009
- Work Required to Complete the Project after FY 2009
- Unprogrammed Work



FDR - Flood Damage Reduction
 ER - Ecosystem Restoration



Muddy River, MA
 Flood Damage Reduction
 and Ecosystem Restoration
 1 January 2008
North Atlantic Division
New England District, Corps of Engineers

APPROPRIATION TITLE: Construction - Flood and Coastal Storm Damage Reduction

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

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

DESCRIPTION: The Project plan consists of a system of levees and floodwalls in the lower portion of the basin, channel modifications and dry detention basins in the upper portion of the basin, and channel modifications in the Stony Brook portion of the sub-basin. The upper portion of the sub-basin has been deferred.

AUTHORIZATION: Water Development Act of 1986.

REMAINING BENEFITS-REMAINING COST RATIO: 2.8 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.4 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 7 1/8 percent (FY 1998).

BASIS OF BENEFIT-COST RATIO: Benefits are from the analysis contained in the Final General Reevaluation Report dated May 1997 at April 1996 price levels.

Division: North Atlantic

District: New York

Raritan River Basin, Green Brook Sub-Basin, NJ

SUMMARIZED FINANCIAL DATA:		ACCUM.		
		PCT. OF EST.	STATUS	PERCENT
		FED. COST	(1 Jan 2008)	COMPLETE
Estimated Federal Cost		309,400,000		
Programmed Construction	263,200,000		Element 1	27
Unprogrammed Construction	46,200,000		Element 2	0
			Element 3	3
			Entire Project	22
Estimated Non-Federal Cost		104,000,000		
Programmed Construction	87,700,000			
Cash Contributions	25,500,000			
Other Costs	62,200,000			
Unprogrammed Construction	16,300,000			
Cash Contributions	3,100,000			
Other Costs	13,200,000			
Total Estimated Programmed Construction Cost	350,900,000			
Total Estimated Unprogrammed Construction Cost	62,500,000			
Total Estimated Project Cost	413,400,000			
Allocations thru 30 September 2005		59,774,000		
Allocations to 30 September 2006		4,950,000		
Allocations to 30 September 2007		10,229,000		
Conference Allowance for FY 2008		10,001,000		
Allocation for FY 2008		10,001,000		
Allocations through FY 2008		84,954,000		28
Allocation Requested for 2009		10,000,000		31
Programmed Balance to complete after FY 2009		168,246,000		
Unprogrammed Balance to complete after FY 2009		46,200,000		

PHYSICAL DATA
Element 1 is lower portion of the basin. It consists of levees, floodwalls, closure structures interior drainage facilities, a bridge re construction and non-structural measures including flood proofing and buyouts
Element 2(Unprogrammed) is the Upper portion of the basin consists of channel modifications and two dry detention basins.
Element 3 is the Stony Brook Portion of the basin.

JUSTIFICATION: The project area suffers annual flood damages of \$41,000,000 (Apr 96 P.L.) without the project. On August 28, 1971 Hurricane Doria caused \$85,200,000 in damages (Oct 95 P.L.). Another major storm occurred on August 2, 1973 which caused \$89,300,000 in damages (Oct 95 P.L.). Flooding was so extensive that the area was designated a Major Disaster Area. Six deaths were attributed to this storm, thirty four people were injured and there were more than 1,000 people evacuated from their residences. Average annual benefits, all flood control, are \$37,773,000 (April 1996 price level)

FISCAL YEAR 2008: The allocated amount is being used for the of "base plus option" Talmage Avenue Bridge Raising Contract and Initiate Segment R2 Levee Contract

Division: North Atlantic

District: New York

Raritan River Basin, Green Brook Sub-Basin, NJ

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Segment R2 Levee Contract	\$ 8,000,000
Construction Management	\$ 1,000,000
Engineering and Design	\$ 1,000,000
Total	\$ 10,000,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, relocations and borrow excavated or dredged material disposal areas.	\$ 62,200,000	
Pay 25 percent of cost associated with non-structural flood protection	16,300,000	
Pay 6 percent of the costs allocated to flood control, to bring the total non-Federal share of flood control costs to 25 percent, as determined under Section 103 (m) of the Water Resources Development Act of 1986, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	25,500,000	\$1,157,000
Total Non-Federal Costs	\$104,000,000	\$1,157,000

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

STATUS OF LOCAL COOPERATION: The State of New Jersey Department of Environmental Protection, provided a letter dated 17 April 1997 stating their support and endorsement of the project. Governor Whitman also provided a letter of support on 26 February 1998. The Green Brook Flood Control Commission has stated their strong support for the project in a letter dated 4 October 1995. Also, several counties and municipalities have adopted resolutions endorsing and supporting the project. The Project Cooperation Agreement was executed in June 1999.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$309,400,000 is the same as the latest estimate (\$309,400,000) presented to Congress (FY 2008):

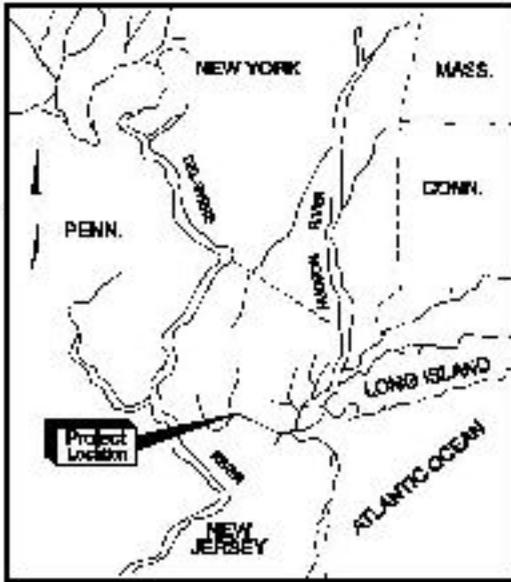
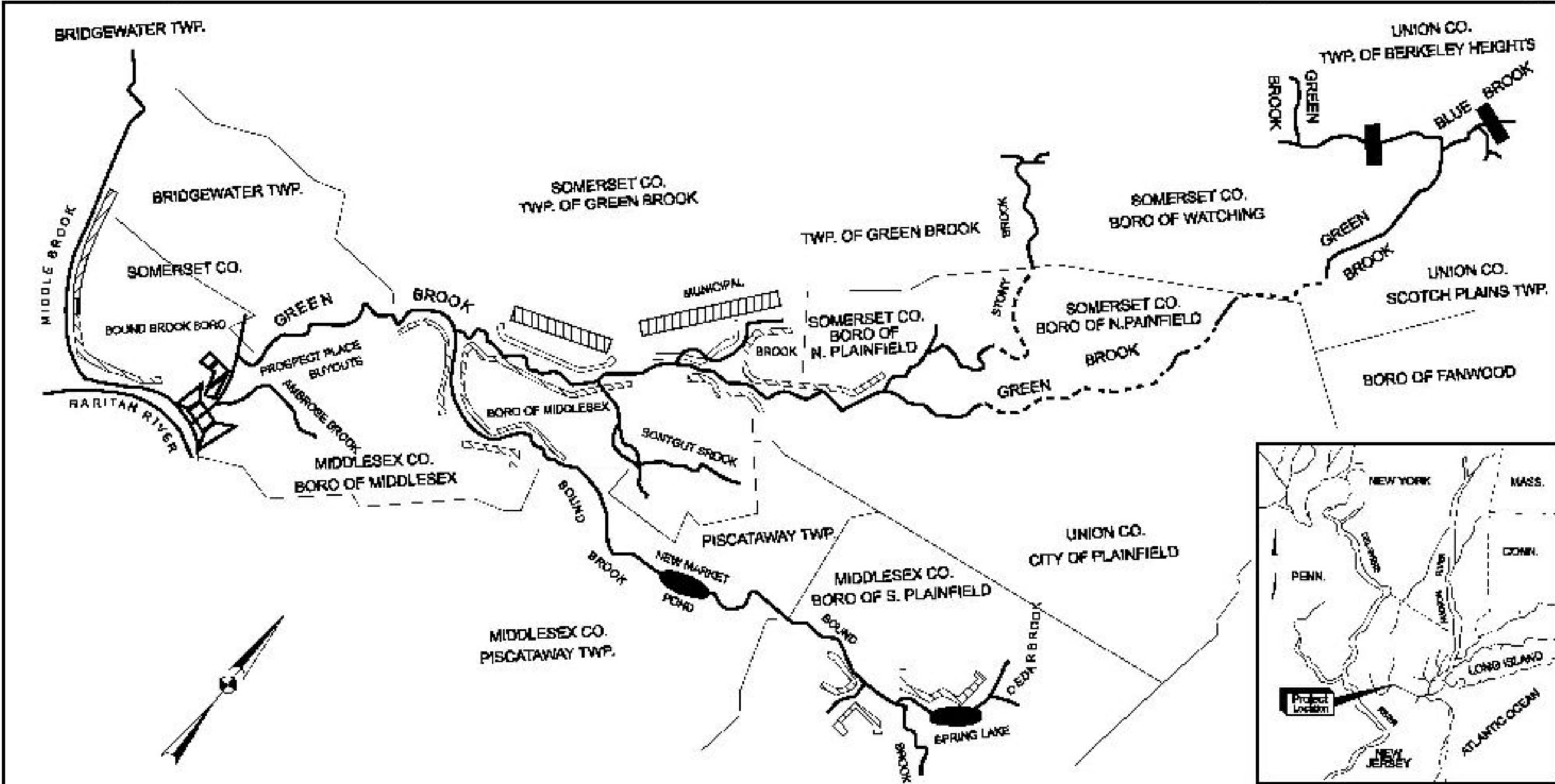
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed in August 1980. A Supplemental Environmental Impact Statement with the Final General Reevaluation Report was released in May 1997 and the Record of Decision was issued in July 1998.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1986 and funds to initiate construction were appropriated in FY 1998.

Division: North Atlantic

District: New York

Raritan River Basin, Green Brook Sub-Basin, NJ



VICINITY MAP
 0 5 10 20
 SCALE IN MILES

- Work Completed As of 30 September 2007
- Work Proposed with Funds Available for FY 2008
- Work Proposed with Funds Recommended for FY 2009
- Work Required to Complete the Project after 30 September 2009

- LEGEND**
- LEVEES WITH LIMITED FLOODWALL SECTIONS
 - CHANNEL MODIFICATIONS
 - DRY DETENTION BASIN (deferred)
 - Bridge
 - Flood Proofing

Green Brook Sub-Basin
Raritan River, NJ
New York District
North Atlantic Division
1 January 2008

NAVIGATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
PRECONSTRUCTION ENGINEERING AND DESIGN – (Navigation) MASSACHUSETTS							
Boston Harbor, MA New England District	6,000,000	0	0	0	0	2,300,000	3,700,000

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 2005, waterborne commerce totaled 22.4 million tons, of which approximately 76 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 North Jetty 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 \$250,000,000, with an estimated Federal cost of \$163,000,000 and an estimated Non-Federal cost of \$87,000,000, would deepen the Broad Sound North Channel to 50 feet and the President's Roads Main Ship and Lower Reserved Channels to 48 feet. The average annual benefits amount to \$22,029,000 all for commercial navigation. The benefit-to-cost ratio is 1.7 to 1 based upon the latest economic analysis dated August 2007. Massport understands the requirements of local cooperation for preconstruction engineering and design requirements and is expected to be the Non-Federal sponsor for this effort. Preconstruction engineering and design (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 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	\$ 8,000,000	Total Estimated Preconstruction Engineering and Design Costs	\$ 8,000,000
Initial Federal Share	6,000,000	Ultimate Federal Share	5,200,000
Initial Non-Federal Share	2,000,000	Ultimate Non-Federal Share	2,800,000

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.

Fiscal Year 2009 funds will be used to negotiate and execute the design agreement and initiate preconstruction engineering and design. This design effort is scheduled to be completed in September 2011.

CONSTRUCTION

APPROPRIATION TITLE: Construction - Channels and Harbors (Navigation)

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

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

DESCRIPTION: This project consolidates four authorized projects.

- 1.) The Kill Van Kull and Newark Bay Channels, NY and NJ project consists of deepening existing 40-foot project to 45 feet MLW. Unprogrammed work includes dredging of Pierhead Channel and Port Newark in the vicinity of Port Newark and Port Elizabeth.
- 2.) The New York Harbor and Adjacent Channels, Port Jersey Channel, NJ project consists of deepening the non-Federal access channel to 41 feet MLW from the Federal Anchorage Channel to its head of navigation.
- 3.) The Arthur Kill, Howland Hook Marine Terminal, NY and NJ project consists of deepening the existing Federal 35-foot Arthur Kill Channel to 41 feet MLW from its confluence with the Kill Van Kull Channel to Howland Hook Marine Terminal in Staten Island, New York, and to 40 feet MLW from the Howland Hook Marine Terminal to the Tosco Oil Terminal oil facilities, New Jersey and New York, respectively. Also included within the Arthur Kill Channel are selected widenings and realignments. The Arthur Kill Project also provides for mitigation consisting of restoration and enhancement of approximately 23 acres of intertidal salt marsh.
- 4.) The New York and New Jersey Harbor, NY and NJ, project consists of deepening the Ambrose Channel to 53 feet MLW; the Anchorage Channel, Kill Van Kull, Newark Bay, Port Jersey Channel, Bay Ridge Channel, and the Arthur Kill Channel to Howland Hook to 50 feet MLW or 52 feet MLW, if in rock or otherwise hard material. The project also includes mitigation for project impacts, and selective bulkheading. All work is programmed.

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

REMAINING BENEFIT - REMAINING COST RATIO: 5.0 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 2.7 to 1 at 7 percent.

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

BASIS OF BENEFIT - COST RATIO: The benefit-to-cost ratio shown above applies to the consolidation of the four authorized projects. The analysis reflects annualized costs and benefits, adjusted to October 2001 price levels.

Division: North Atlantic

District: New York

New York & New Jersey Harbor, NY and NJ

4 February 2008

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SUMMARIZED FINANCIAL DATA	ACCUM. PCT OF EST FED. COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (CoE)	\$1,399,800,000	Programmed work:		
Programmed Construction	\$1,325,300,000	KVK (a)		
Unprogrammed Construction	74,500,000	Phase I 40 ft.	100	Sep 1995
		Phase II 45 ft.	100	Dec 2004
		Port Jersey Channel (b)	85	Oct 2008
Estimated Appropriation Requirement (USCG)	4,050,000	Arthur Kill Channel (c)	90	Sep 2010
Estimated Total Appropriation Requirement	1,403,850,000	NY & NJ Harbor (50 ft) (d)	10	Indefinite
		S-AM-1	95	Sep 2007
		S-KVK-2	87	Mar 2008
		KVK	0	Indefinite
Unprogrammed work:		Entire Project:	57	Indefinite
Future Non-Federal Reimbursement	234,362,800			
Programmed Construction	225,990,800			
Unprogrammed Construction	8,372,000			
PHYSICAL DATA				
Estimated Federal Cost (Ultimate) (CoE)	1,165,437,200	a. Deepen the Kill Van Kill and Newark Bay from 35 ft to 40 ft then to 45 ft		
Programmed Construction	1,099,309,200	b. Deepen the Port Jersey Channel from 35 ft. to 41 ft.		
Unprogrammed Construction	66,128,000	c. Deepen the Arthur Kill Channel from its confluence with the Newark Bay to the New York Container Terminal from 35 ft. to 41 ft (completed) and then from 35 ft to 40 ft to the TOSCO Terminal.		
Estimated Non-Federal Cost	1,314,698,800	d. NY & NJ Harbor: Deepen the above channels from their depths to 50 ft. deepen the Ambrose Channel from 45 ft. to 53 ft. the Anchorage Channel from 45 ft. to 50 ft. and the Bay Ridge Channel from 40 ft. to 50 ft. Turning areas are provided for the Bay Ridge, Arthur Kill and Port Jersey Channels, along with mitigation for loss of benthic habitat and air quality.		
Programmed Construction	1,289,906,800			
Cash Contribution	739,541,000			
Other Costs	324,375,000			
Reimbursements:	225,990,800			
Unprogrammed Construction	24,792,000			
Cash Contribution	16,420,000			
Other Costs	0			
Reimbursements	8,372,000			
Total Estimated Programmed Construction Costs	\$2,393,266,000			
Total Estimated Unprogrammed Construction Costs	90,920,000			
Total Estimated Project Cost	\$2,484,186,000			
Division: North Atlantic	District: New York	New York & New Jersey Harbor, NY and NJ		

SUMMARIZED FINANCIAL DATA: (continued)

		ACCUM PCT OF EST FED. COST
Allocations thru 30 September 2005	\$593,602,000	
Allocation for FY 2006	99,990,000	
Allocation for FY 2007	90,000,000	
Conference Allowance for FY 2008	85,192,000	
Allocation for FY 2008	85,192,000	
Allocation through FY 2008	868,784,000	62
Allocation Requested for FY 2009	90,000,000	68
Programmed Balance to Complete after FY 2009	366,516,000	
Unprogrammed Balance to Complete after FY 2009	74,500,000	

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

FISCAL YEAR 2008: The allocated amount of \$85,192,000 is being used as follows:

Initiate "base plus options" construction contracts		\$34,192,000
NY & NJ Harbor Deepening (50 Feet) Area S-KVK-1	19,000,000	
NY & NJ Harbor Deepening (50 Feet) Area S-AM-2	1,000,000	
NY & NJ Harbor Deepening (50 Feet) Area S-AN-1B	13,192,000	
NY & NJ Harbor Deepening (50 Feet) Area S-E-1	1,000,000	
Continue construction		29,000,000
NY & NJ Harbor Deepening (50 Feet) Area S-NB-1	29,000,000	
Complete construction		16,000,000
NY & NJ Harbor Deepening (50 Feet) Area S-AN-1a	6,000,000	
NY Harbor and Adjacent Channels, Port Jersey, Cont 3	10,000,000	
Planning, engineering, and design		4,500,000
Construction management		1,500,000
TOTAL		\$85,192,000

Division: North Atlantic

District: New York

New York & New Jersey Harbor, NY and NJ

FISCAL YEAR 2009: The requested amount will be applied as follows:

Initiate "base plus options" construction contracts		\$18,000,000
NY & NJ Harbor Deepening (50 Feet) Area S–NB-2	18,000,000	
Exercise options on construction contracts		\$66,000,000
NY & NJ Harbor Deepening (50 Feet) Area S-KVK-1	28,000,000	
NY & NJ Harbor Deepening (50 Feet) Area S–AM-2	8,000,000	
NY & NJ Harbor Deepening (50 Feet) Area S –E-1	15,000,000	
NY & NJ Harbor Deepening (50 Feet)	15,000,000	
Area S –AN-1b		
Planning, engineering, and design		4,500,000
Construction management		1,500,000
TOTAL		\$90,000,000

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

REQUIREMENTS OF LOCAL COOPERATION:	Payments During Construction And Reimbursement	Annual Operation, Maintenance and Replacement Costs
Pay 100 percent of costs to modify local service facilities, where necessary, for the construction of the project.	\$ 278,195,000	\$205,000
Pay 25-50 percent of the costs allocated to deep draft navigation during construction. <u>1/</u>	755,961,000	
Pay for all lands, easements, rights of way and relocations	46,180,000	

Division: North Atlantic

District: New York

New York & New Jersey Harbor, NY and NJ

NON-FEDERAL COSTS (continued):

Pay an additional 10 percent of the costs allocated to deep draft navigation within a period of 30 years following completion of construction which is partially offset by a credit allowed for the value of lands, easements, rights of way, and relocation.	234,362,800	
Contribute 50 percent of the annual charges for interest and amortization of the Federal first cost of the Port Jersey 41-foot project and 50 percent of the operations and maintenance until the improvement is serving/benefiting multiple owners/properties. (Approximately \$3 million annually.) If multiple owners are not established, the contribution could range to a maximum of \$145,629,000.	0	
Total Non-Federal Costs	\$1,314,698,800	\$205,000

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

STATUS OF LOCAL COOPERATION:

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

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

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

(4) On New York and New Jersey Harbor element, the Port Authority of NY & NJ is the Non-Federal sponsor for the project. The project cooperation agreement was executed on 28 May 2004.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps of Engineers) cost estimate of \$1,399,800,000 is the same as the latest estimate presented to Congress (FY 2008).

Division: North Atlantic

District: New York

New York & New Jersey Harbor, NY and NJ

STATUS OF ENVIRONMENTAL IMPACT STATEMENT:

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

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

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

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

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

OTHER INFORMATION:

(1) All project elements were being funded separately prior to FY 2002. Congressional direction provided to the Secretary of the Army in the Energy and Water Development Appropriations, FY 2002, Conference Report consolidated the four project elements with the 50-foot deepening project authorized by the Water Resources Development Act of 2000. An updated Project Management Plan for the consolidated project was prepared in January 2003. This plan lays out the construction activities to consolidate ongoing interim depth construction with the overall deepening project. Critical to this analysis is the ongoing extensive close coordination with the States of New York and New Jersey, Port Authority of New York and New Jersey, the Environmental Protection Agency, US Coast Guard, and other interested agencies and public. Additional engineering and environmental analyses will be completed before extensive dredging of the 50-foot channels are undertaken. Individual opportunities to advance work, such as consolidated drilling and blasting in the Kill Van Kull channel which began in FY 2002 will be implemented

(2) On the Kill Van Kull and Newark Bay Channels element, funds to initiate construction were appropriated in FY 1985.

(3) On the NY Harbor and Adjacent Channels, Port Jersey Channel element, funds to initiate preconstruction engineering and design were appropriated in FY 1988 and funds to initiate construction were appropriated in FY 1994.

(4) On the Arthur Kill, Howland Hook Marine Terminal element, funds for preconstruction engineering and design were appropriated in FY 1986 and funds to initiate construction were appropriated in FY 2001.

(5) On the 50-foot New York and New Jersey Harbor Deepening element, funds to initiate preconstruction engineering and design were appropriated in FY 2000 and funds to initiate construction were appropriated in FY 2002.

(6) The Port Jersey Channel PCA was modified on 17 July 2007 to facilitate consolidated implementation of the cost-shared 41' channel with the State of New Jersey's advancement of the 50' channel.

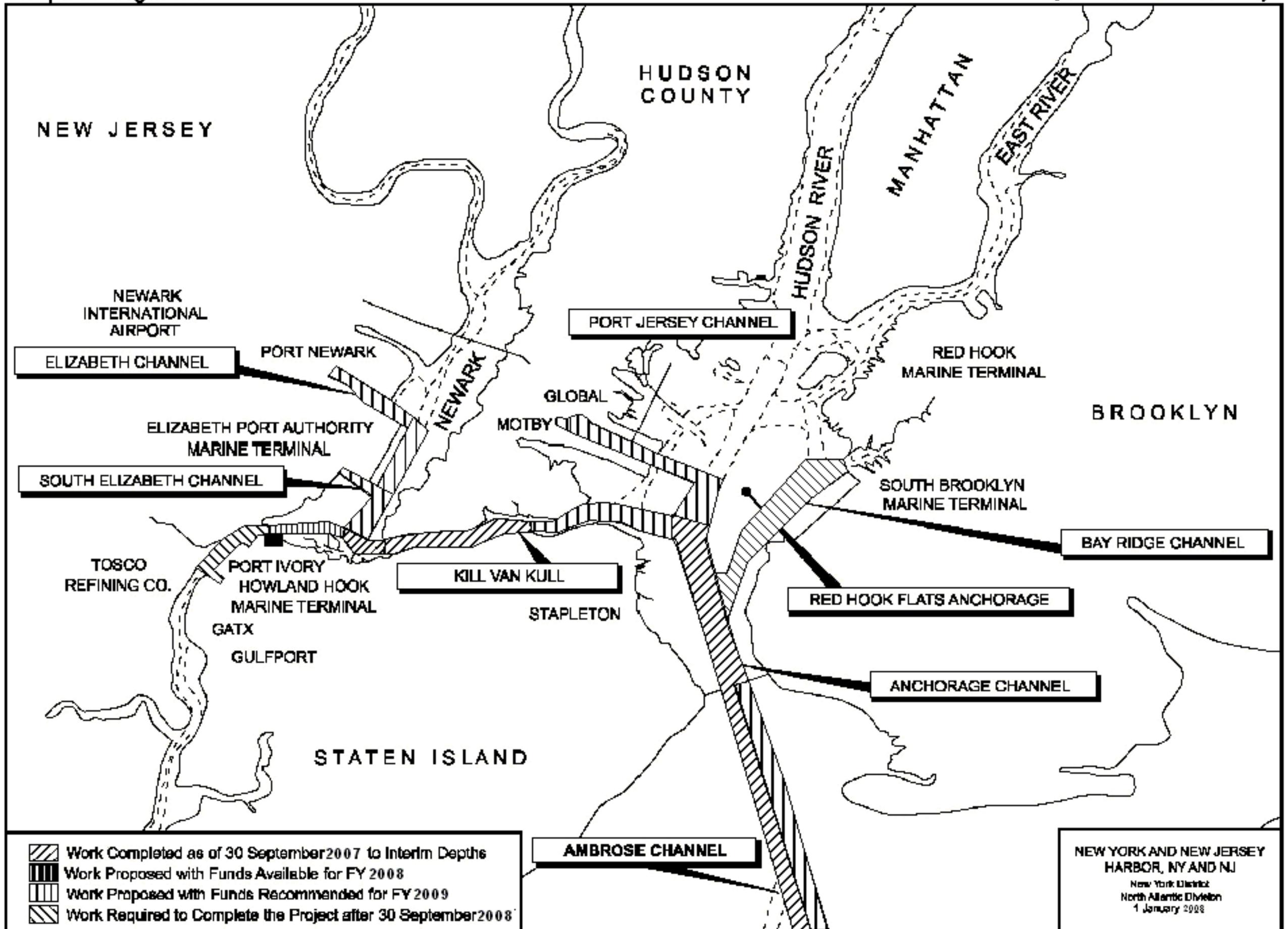
Division: North Atlantic

District: New York

New York & New Jersey Harbor, NY and NJ

4 February 2008

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AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration) MASSACHUSETTS							
Coastal Massachusetts Ecosystem Restoration Massachusetts and Cape Cod Bays, Malden River and Pilgrim Lake, MA New England District	562,000	318,000	40,000	10,000	98,000	96,000	0

The study area encompasses the Massachusetts and Cape Cod Bays (MCCB) coastal shoreline and associated waters within the Commonwealth of Massachusetts, including the EPA designated national estuary of MCCB. The biologically diverse ecosystem created by the many natural salt marshes along the Massachusetts coast has historically provided exceptionally productive fish and wildlife habitat. Salt marshes provide significant economic and environmental benefits for the region by providing flood storage, filtering pollutants, and supporting commercial fisheries as well as recreational fishing and tourism. Over the past century, many of these natural salt marshes have been lost or degraded by the construction of transportation facilities and other coastal development. There are 25 navigation and 11 beach erosion control projects in this region of Massachusetts. Several of these projects involved the disposal of dredged material in coastal wetlands or salt marshes such as the Green Harbor project. Dredged material was disposed of in Town Marsh filling approximately 35 acres of productive salt marsh above mean high tide, resulting in a relatively unproductive upland habitat. Studies will evaluate this and other sites to determine measures to restore the ecological productivity of the MCCB coastline. This study is consistent with the objectives of Coastal America to restore all degraded salt marshes in the Commonwealth and is supported by the Executive Office of Environmental Affairs, Department of Transportation and numerous Federal agencies, as evidenced by their signing a Memorandum of Understanding to restore Massachusetts wetlands. A feasibility cost-sharing agreement was executed with the Mystic Valley Development Commission on 15 October 2002 to study environmental restoration measures along the Malden River in the communities of Malden, Medford and Everett, Massachusetts.

The reconnaissance report, certified in August 2001, recommended feasibility phase studies to identify potential solutions to restore lost or degraded salt marshes by restoring the natural tidal exchange and ecological productivity of these areas. A second feasibility cost-sharing agreement was executed on 1 April 2005 with the Massachusetts Department of Coastal Zone Management for study of environmental restoration measures at Pilgrim Lake in Truro and Provincetown, Massachusetts. Tidal flow into Pilgrim Lake was blocked by the construction of the railroad and Route 6 Highway. Tidal exchange is now limited to a single 4-foot diameter culvert. Feasibility studies will evaluate alternatives to restore the natural tidal exchange and ecological productivity of the 490-acre lake and surrounding salt marsh.

Fiscal Year 2007 funds were used to continue the Malden River and Pilgrim Lake Interim Feasibility Studies.

Fiscal Year 2008 funds are being to complete the Malden River Interim Feasibility Study in April 2008 and to continue the feasibility study of Pilgrim Lake, including development of various restoration plans, environmental analysis and cost estimating.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration)							
MASSACHUSETTS							
Coastal Massachusetts Ecosystem Restoration Massachusetts and Cape Cod Bays, Malden River and Pilgrim Lake, MA New England District							

Fiscal Year 2009 funds will be used to complete the Pilgrim Lake Interim Feasibility Study, including preparation of the final Feasibility Report and Environmental Assessment. The estimated cost of the feasibility phase is \$840,000, 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	\$982,000
Reconnaissance Phase (Federal)	142,000
Feasibility Phase (Federal)	420,000
Feasibility Phase (Non-Federal)	420,000

The reconnaissance phase was completed in October 2002. The feasibility study is scheduled to be completed in December 2009.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
PRECONSTRUCTION ENGINEERING AND DESIGN – (Aquatic Ecosystem Restoration) VIRGINIA							
Elizabeth River Basin, Phase I, Scuffletown Creek, Hampton Roads, VA Norfolk District	944,000	309,000	248,000	193,000	97,000	97,000	0

The project area includes Scuffletown Creek, a tributary to the Southern Branch of the Elizabeth River Basin, located within the cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach. Bottom sediments within the creek have been contaminated by three hundred years of industrial and commercial development making Scuffletown Creek one of the Country's most contaminated waterways with limited wetlands to support wildlife and filter pollution. The feasibility study, completed in July 2001, recommended an environmental restoration project to remove or clean-up 60,000 cubic yards of sediment in Scuffletown Creek. The feasibility study also recommended eight ecosystem restoration projects to restore 22 acres of marine tidal wetlands located throughout the Elizabeth River Basin to be accomplished under the Continuing Authorities Section 206 program. The estimated project cost for the Scuffletown Creek is \$8,600,000, with an estimated federal cost of \$5,200,000 and an estimated non-Federal cost of \$3,400,000. No benefit-cost ratio has been computed for this project because it is an ecosystem restoration project and benefits are not quantifiable in monetary terms. The Commonwealth of Virginia, and the Cities of Chesapeake, Norfolk, Portsmouth, and Virginia Beach, Virginia, fully understand the cost-sharing requirements for the design agreement. The design agreement was executed in November 2004. Preconstruction engineering and design will ultimately be cost-shared at the rate for the project to be constructed but is financed through the preconstruction engineering and design effort at 25 percent non-Federal. Any adjustment that may be necessary to bring the non-Federal construction in line with the project cost sharing will be accomplished in the first year of construction. This project will be implemented under the authority of Section 312(b) of WRDA 1990, as amended.

This project is authorized for construction by Section 312(b) of the Water Resources Development Act of 1990, as amended. In accordance with the cost sharing and financing concepts enacted by the Water Resources Development Act of 1986 and 1996, local interests are required to provide all lands, easements, rights-of-ways, relocations, and disposal areas, and pay 35 percent of all costs allocated to environmental protection and restoration.

Total Estimated Preconstruction Engineering and Design Costs	\$ 1,258,000	Total Estimated Preconstruction Engineering and Design Costs	\$ 1,258,000
Initial Federal Share	944,000	Ultimate Federal Share	818,000
Initial Non-Federal Share	314,000	Ultimate Non-Federal Share	440,000

Fiscal Year 2007 funds were used to continue preconstruction engineering and design, including final design and preparation of plans and specifications.

Fiscal Year 2008 funds are being used to continue preconstruction engineering and design, including plans and specifications.

Fiscal Year 2009 funds will be used to complete preconstruction engineering and design in September 2008.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration) NEW YORK							
Hudson-Raritan Estuary, NY and NJ New York District	9,740,000	4,302,000	792,000	600,000	313,000	200,000	3,533,000

The study area includes the Port of New York and New Jersey and includes the Ambrose and Anchorage Channel; New York and New Jersey Channels; Newark Bay Channel; Port Jersey Channel; Claremont Channel; Bay Ridge and Red Hook Channel; and Buttermilk Channel, the Upper and Lower New York Bays, the Raritan Bay and Jamaica Bay. The Port of New York-New Jersey is the largest port on the East coast with channels depths ranging from 35 to 45 feet. These waters and the surrounding shoreline, mudflats, intertidal marshes, and adjacent upland areas provide valuable habitat for fish, plant and wildlife resources, and accommodate migrating birds along the Atlantic flyway. The area is also utilized by a number of Federally threatened/endangered species including the shortnosed sturgeon, five species of sea turtles, peregrine falcons, piping plovers 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). As an interim measure the study will be assessing thirteen specific sites within the estuary for potential ecosystem restoration measures, including contaminant reduction measures, creation of wetlands, water quality improvements, and alteration of hydrology/hydraulics to improve water movement and quality. The feasibility cost-sharing agreement was executed in July 2001 with the Port Authority of New York and New Jersey.

Fiscal Year 2007 funds were used to continue the feasibility phase, including refinement of target restoration goals for the estuary, preliminary plan formulation efforts for the comprehensive restoration plan, and coordination with local interests.

Fiscal Year 2008 funds are being used to continue the feasibility study, including development of the comprehensive restoration plan, plan formulation and coordination.

Fiscal Year 2009 funds will be used to continue the feasibility study, including economic, engineering, and environmental evaluations to formulate feasibility recommendations for the comprehensive restoration plan, initiation of the environmental impact statement and coordination with local interests. The estimated cost of the feasibility phase is \$19,000,000, 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	\$19,240,000
Reconnaissance Phase (Federal)	240,000
Feasibility Phase (Federal)	9,500,000
Feasibility Phase (Non-Federal)	9,500,000

The reconnaissance phase was completed in July 2001. The feasibility study is scheduled for completion in September 2012.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration) NEW JERSEY							
Hudson-Raritan Estuary, Hackensack Meadowlands, NJ New York District	2,600,000	904,000	545,000	450,000	497,000	204,000	0

The study area encompasses approximately 8,450 acres of tidal wetlands in the Hackensack River Basin located in Bergen Essex and Hudson Counties, New Jersey. The Hackensack Meadowlands the largest remaining brackish tidal wetland complex in the Greater New York area. The area, about five miles west of Manhattan Island, is urban to suburban and has been heavily industrialized since the mid-nineteenth century. Since the 1890's, deforesting of the cedar stands, channel modifications, levee construction, and damming of the Hackensack River and its tributaries for irrigation and water supply purposes, has changed the estuary. Furthermore, the industrial activities, effluents discharges from local sources and highway stormwater systems, and leachates from former garbage dumps within the estuary, have contaminated portions of the meadowlands and further degraded the wetlands producing an unfavorable environment for fish and wildlife, including wading birds, shorebirds, raptors, anadromous fish, estuarine fish, and terrapins.

The reconnaissance report for the Hudson-Raritan Estuary, approved in July 2000, found there is a Federal interest for further studies for the Hackensack Meadowlands. The interim feasibility study for the Hackensack Meadowlands is assessing items that have a Federal interest for ecosystem restoration, including contaminant reduction measures, enhancement of wetlands, water quality improvements, and alteration of hydrology/hydraulics to improve water movement and quality with in the Hackensack Meadowlands. The New Jersey Meadowlands Commission, executed a cost-sharing agreement in April 2003.

Fiscal Year 2007 funds were used to continue the feasibility phase, including coordination with the USFWS, environmental data analysis for sites under consideration for restorations, and coordination with local interests.

Fiscal Year 2008 funds will be used to continue the feasibility study, including geotechnical and biological baseline data collection, design development, and plan formulation for the selected sites, (Anderson Creek Marsh, Meadowlark Marsh, Metromedia Marsh and Lyndhurst Riverside Marsh) and conceptual plans for the remaining sites.

Fiscal Year 2009 funds are being used to complete the feasibility phase, including completion of the draft report and coordination with local interests. The estimated cost of the feasibility phase is \$5,200,000, 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	\$5,200,000
Reconnaissance Phase (Federal)	0
Feasibility Phase (Federal)	2,600,000
Feasibility Phase (Non-Federal)	2,600,000

The reconnaissance phase was completed in April 2003. The feasibility study is scheduled for completion in September 2009.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration)							
NEW JERSEY							
Hudson-Raritan Estuary, Lower Passaic River, NJ New York District	4,500,000	884,000	545,000	675,000	492,000	200,000	1,704,000

The study area is located in Essex County, New Jersey, about five miles west of Battery of New York City and encompasses the Lower Passaic River Basin 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. This industrial activity has resulted in the degradation of the wetlands: discharges of effluents into the river, and dumping of refuse resulting in contaminated sediments in the river that is 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 contaminant reduction measures, creation of wetlands, water quality improvements, and alteration of hydrology/hydraulics to improve water movement and quality with in the Lower Passaic River and sections of Newark Bay. The non-Federal sponsor is the New Jersey Department of Transportation, Office of Maritime Resources, who executed 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.

Fiscal Year 2007 funds were used to continue the feasibility phase, including coordination of the integrated remediation and restoration study plan, and an evaluation of future sites for the lower 8.3 miles of the Lower Passaic River.

Fiscal Year 2008 funds will be used to continue the feasibility phase, including field data collection and development of restoration plans.

Fiscal Year 2009 funds are being used to continue the feasibility phase, including continued data collection, economic analysis, and development of a comprehensive restoration plan. 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. 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
Feasibility Phase (Non-Federal)	4,500,000

The reconnaissance phase was completed in June 2003. The feasibility study is scheduled for completion in September 2013.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration)							
VIRGINIA							
Lynnhaven River Basin, VA Norfolk District	1,640,000	487,000	297,000	349,000	300,000	175,000	32,000

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. A Federal navigation project is maintained within the upper reaches of the river. The project depth varies from 10 feet deep at the river's entrance to Chesapeake Bay, to a 6 feet deep channel at the narrows between Broad Bay and Linkhorn Bay. In addition, 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 Section 905 (b) analysis, certified in January 2004, found there was a Federal interest for further feasibility phase studies for six areas of concern within the Lynnhaven River Basin. The feasibility study will evaluate ecosystem restoration measures to improve water quality, restore wetlands, submerged aquatic vegetation, and fish and wildlife habitats, and improve the river bottom material by dredging or other methods. The sponsor for the feasibility phase of the study is the City of Virginia Beach, Virginia, who understands the cost-sharing requirements to the feasibility phase of the study. The feasibility cost-sharing agreement was executed in September 2004.

Fiscal Year 2007 funds are being used to continue the feasibility phase of the study including data gathering, public involvement, preliminary plan formulation and the continued development of the hydrodynamic and water quality model of the basin.

Fiscal Year 2008 funds will be used to continue the feasibility phase of the study, including completion of the river basin modeling efforts, public involvement, economic and environmental analyses, plan formulation, and local coordination.

Fiscal Year 2009 funds will be used to continue the feasibility phase of the study, including completing the draft feasibility report and environmental analysis. The estimated cost of feasibility phase is \$3,080,000, 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	\$3,180,000
Reconnaissance Phase (Federal)	100,000
Feasibility Phase (Federal)	1,540,000
Feasibility Phase (Non-Federal)	1,540,000

The reconnaissance phase was completed in September 2004. The feasibility study is scheduled to be completed in September 2010.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: North Atlantic

Study	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
SURVEYS – (Aquatic Ecosystem Restoration) MASSACHUSETTS							
Merrimack River Watershed Study, MA and NH New England District	3,750,000	1,101,000	198,000	102,000	233,000	200,000	1,916,000

The Merrimack River originates in Franklin, New Hampshire at the confluence of the Pemigewasset and Winnepesaukee 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 Plum Island 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 lack of fish passage, loss of habitat, degraded wetlands and poor water quality. The Corps study will help define the overall condition of the watershed and allow for science-based decisions on prioritized investments to improve water quality and ecosystem restoration. The Section 905(b) analysis was certified on 25 January 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 20 February 2002 for Phase I of the study.

Fiscal Year 2007 funds were used to initiate Phase II work including development of a detailed scope of study, data collection and evaluation, river studies and computer modeling.

Fiscal Year 2008 funds are being used to continue the Phase II investigations, including water quality sampling, data collection, development of a quality assurance project plan and additional computer modeling between Manchester and Lincoln, New Hampshire. Stream flow analysis will be added to the model to analyze competing water uses during low flow conditions.

Fiscal Year 2009 funds will be used to continue the Phase II investigations, including additional watershed modeling, data collection and analysis of restoration alternatives. The estimated cost of the feasibility study is \$7,200,000, 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	\$7,350,000
Reconnaissance Phase (Federal)	150,000
Feasibility Phase (Federal)	3,600,000
Feasibility Phase (Non-Federal)	3,600,000

The reconnaissance phase was completed in February 2002. The feasibility study is scheduled to be completed in September 2013.

NORTHWESTERN DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Kansas Citys, Missouri Kansas City District	5,083,000	3,498,000	495,000	425,000	350,000	262,000	53,000

The existing Kansas Citys, Missouri and Kansas Local Protection Project consist of seven levee units along both banks of the Missouri and Kansas Rivers in the Kansas City Metropolitan area. The units extend over 50 miles in length along the rivers. The units have been complete and operating for 30 to 60 years. The Kansas Citys levee system protects about 32 square miles of mostly urban industrial, commercial and residential areas. More than 94,000 persons work in the protected area. The project protects approximately 4,800 significant structures and investment estimated at approximately \$16 billion. The protected area is vital to the entire Midwest economy and is a central rail, highway, and warehousing hub for the entire nation.

In July 1993, floodwaters from both the Missouri and Kansas Rivers were near overtopping several of the levee units. Underseepage concerns were also noted during this event. People, equipment, and aircraft were evacuated from areas behind the levee units. The project has prevented approximately \$8.5 billion in damages through 1996, of which \$3.9 billion was prevented in 1993 alone.

The feasibility study and decision documents for this project are organized into an interim and final feasibility report. The interim report established implementation recommendations for Argentine Unit, Fairfax/Jersey Creek Unit, North Kansas City Unit, and the East Bottoms Unit. The final feasibility report will establish implementation recommendations for the remaining work.

The project currently recommends under seepage, retaining wall, and floodwall modifications to improve the reliability of Missouri River units, and a levee raise and reliability improvements on the Argentine unit located on the Kansas River. The Final Feasibility Report will continue with analysis and recommendations for the Armourdale and Central Industrial District units respective to a lower Kansas River system solution and other minor improvements in various units. The Feasibility study is conducted under the authority of Sec 216 of the 1970 Flood Control Act for review of existing civil works. The local sponsors are the City of Kansas City, Missouri, the North Kansas City Levee District, the Kaw Valley Drainage District, and the Fairfax Drainage District. A FCSA/PMP was executed on 18 Sep 2000.

The funds for FY 2008 will be used to conduct plan formulation on Phase II feasibility study tasks.

The funds for FY 2009 will be used to continue work on the feasibility report. The estimated cost of the feasibility phase is \$8,466,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. Part of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$9,316,000
Reconnaissance Phase (Federal)	850,000
Feasibility Phase (Federal)	4,233,000
Feasibility Phase (Non-Federal)	4,233,000

The Interim feasibility study was completed Dec 2006. The schedule for completion of the final feasibility study is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Topeka, Kansas Kansas City District	2,025,000	0	0	74,000	297,000	100,000	1,554,000

Construction of a flood protection project at Topeka was completed in Fiscal Year 1974 at a total Federal cost of \$21,175,000. The project has prevented an estimated \$229,280,000 in flood damages through December 1994, with an estimated \$57,792,000 prevented in July and August 1993. A Feasibility Study will be completed in FY 2008 with initiation of PED in FY 2009.

The recommended project to increase the reliability of the levee system is estimated to cost \$18.3 million, with an estimated Federal cost of \$11.9 million and an estimated non-Federal cost of \$6.4 million. The project includes floodwall, underseepage, foundation, and pump station modifications. Raising the levees is not included in the proposal. The average annual benefits are \$13.5 million, all for flood control. The benefit-cost ratio is 13.8:1 based upon the latest economic analysis, September 2007. The City of Topeka and the North Topeka Drainage District are the sponsors for the project. Latest evidence of sponsor support is the updated letter of support agreement dated May 2006. The sponsor has assured that they understand and are ready to sign a design agreement and have funds available to finance the PED portion of the design of the project. Preconstruction Engineering and Design will ultimately be cost shared at the rate for the project to be constructed but will be financed through the Preconstruction Engineering and Design 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. The cost sharing for the project will be 65 percent Federal and 35 percent non-Federal in accordance with the Water Resources Development Act of 1996.

The funds requested for FY 2008 will be used to continue the PED phase.

The funds requested for FY 2009 will be used to continue PED.

Total Estimated Preconstruction Engineering and Design Costs	\$2,700,000	Total Estimated Preconstruction Engineering and Design Costs	\$2,700,000
Initial Federal Share	2,025,000	Ultimate Federal Share	1,755,000
Initial Non-Federal Share	675,000	Ultimate Non-Federal Share	945,000

The PED phase completion date is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Swope Park Industrial Area, Kansas City Kansas City District	1,050,000	493,000	99,000	158,000	162,000	138,000	0

The Blue River drains a 272 square-mile area, much of which is a highly urbanized part of the Kansas City Metropolitan Region. About 56 percent of the basin lies in Johnson County, Kansas, and the remainder is in Cass and Jackson Counties, Missouri. Flooding has been a major problem in the basin for many years. Several additional Corps of Engineers flood damage reduction projects are either constructed, under construction, or authorized for construction in the vicinity of the Swope Park Industrial Area. These include the Federal Complex floodwall/levee at Bannister Road (constructed) two miles upstream, the Dodson levee project (authorized) 1 mile upstream, and the channel modification on the lower 12-mile reach of the Blue River approaching the Missouri River (under construction).

The recommended project is estimated to cost \$17.6 million, with an estimated Federal cost of \$11.4 million and an estimated non-Federal cost of \$6.1 million. The average annual benefits amount to \$1.7 million, all for flood control. The benefit-cost ratio is 1.7 based upon the latest economic analysis dated October 2007. The city of Kansas City, Missouri, is the sponsor for the project. Preconstruction Engineering and Design will ultimately be cost shared at the rate for the project to be constructed but will be financed through the Preconstruction Engineering and Design 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. The cost sharing for the project will be 65 percent Federal and 35 percent non-Federal in accordance with the Water Resources Development Act of 1996.

The requested funds for FY08 will be used to continue PED phase.

The requested funds for FY09 will complete PED phase.

Total Estimated Preconstruction Engineering and Design Costs	\$1,400,000	Total Estimated Preconstruction Engineering and Design Costs	\$1,400,000
Initial Federal Share	1,050,000	Ultimate Federal Share	910,000
Initial Non-Federal Share	350,000	Ultimate Non-Federal Share	490,000

The PED agreement was signed September 2003. The PED phase completion date is June 2009.

CONSTRUCTION

APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009
 PROJECT: Antelope Creek, Lincoln, Nebraska (Continuing)

LOCATION: Antelope Creek is a right bank tributary of Salt Creek and is located in the city of Lincoln, which is in Lancaster County, Nebraska.

DESCRIPTION: The flood protection project consists of channel improvements upstream and downstream of an existing 4,060 foot long concrete conduit, construction of a channel west of the existing conduit (from the conduit entrance to the railroad bridge), railroad bridge modifications and bridge improvements. The project provides a recreation multipurpose trail to be constructed within the flood protection project limits.

AUTHORIZATION: Sec 101 of WRDA 2000.

REMAINING BENEFIT-REMAINING COST RATIO: 73 to 1 at 7 percent

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

INITIAL BENEFIT-COST RATIO: 1.35 to 1 at 6.625 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from the Chief of Engineers Report (December 2000) based on May 2000 price levels.

SUMMARIZED FINANCIAL DATA:

		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$28,594,000				
Estimated Non-Federal Cost	\$28,594,000				
Cash Contribution	\$ 3,489,000		Entire Project	83	FY 2009
Other Costs	\$25,105,000				
Total Estimated Project Cost	\$57,188,000				
Allocations through 30 September 2005	5,647,000				
Allocations for FY 2006	2,193,000				
Allocations for FY 2007	7,500,000				
Allocations for FY 2008	8,426,000				
Allocations through FY 2008	23,766,000	83			
Allocations Requested for FY 2009	4,828,000	100			
Programmed Balance to Complete after FY 2009	0				
Unprogrammed Balance to Complete after FY 2009	0				

Division: Northwestern

District: Omaha

Antelope Creek, Lincoln, Nebraska

4 February 2008

PHYSICAL DATA

Relocations:

- 101 utilities,
- 2 streets (bridge replacements)
- 5 streets (new bridges),
- 46 structures (buildings)

Control Structure:

- 1 labyrinth weir structure

Channel:

- Length: 2.1 miles
- Contains 100-year flood plain

Multipurpose Trail (Recreation):

- Length: 2.3 miles
- 3 trail bridges

Bridges:

- 5 new bridges for streets
- 2 existing bridge replacements
- 1 existing street bridge modification
- 1 existing railroad bridge modification

JUSTIFICATION: The flood control project will reduce flood damages and the threat to human life along Antelope Creek. The project will confine the 100-year flood within the channel banks and conduit by constructing a channel segment west of the existing conduit which will also restore an open water feature on Antelope Creek that was obliterated when the conduit was constructed in 1915. The existing conduit currently has a capacity of less than a 5-year event. The residential, downtown urban and University of Nebraska-Lincoln city campus areas are subject to frequent flooding when the conduit capacity is exceeded above the 5-year event. Significant flooding recently occurred in the Antelope Creek project area in June 2003. Flood damages in excess of \$1.5 million occurred as the result of an approximate 5-year rainfall event. Any funding delays in constructing the remainder of the project will subject a major portion of the Lincoln downtown urban and residential area and the University of Nebraska-Lincoln campus to prolonged exposure to potentially devastating flood damages. The flood control project will provide annual net benefits of \$4,710,000 and total recreation benefits of \$176,000. The project would remove 219 commercial, industrial, and public structures, and 202 residential structures out of the existing regulatory 100-year flood plain.

FISCAL YEAR 2008: The allocation amount of \$8,426,000 will be used as follows:

Real Estate Activities	\$ 75,000
Phase 2C/3A Channel Improvements Construction (new contract)	7,800,000
Continue Engineering & Design	75,000
Construction Management Activities (300k continuing contract, 176k new contract)	<u>476,000</u>
Total	\$8,426,000

Division: Northwestern

District: Omaha

Antelope Creek, Lincoln, Nebraska

4 February 2008

NWD - 10

FISCAL YEAR 2009: The requested amount of \$4,828,000 will be used as follows:

Construction Management Activities (fully funded contract from FY08)	1,174,000
Reimbursement to Sponsor per PCA provisions	3,601,000
Contract & Project Closeout Activities	<u>53,000</u>
Total	\$4,828,000

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

Requirements of Local Cooperation	Payments during Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation and Replacement Costs
Provide all lands, easements, right-of-ways, and Dredged material disposal areas.	\$19,034,000	
Relocate utilities, buildings, roads, bridges (except railroad bridges), and other facilities required for construction of the project.	\$9,673,000	
Pay 5 percent of the cost allocated to flood control, and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	\$ 2,788,000	\$28,000
Pay 50 percent of costs allocated to recreation, and bear all cost of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	\$ 700,000	\$19,000
Total Non-Federal Costs	\$32,195,000	
Federal reimbursement of costs in excess of 50 percent of all flood control project costs.	\$ 3,601,000	
Ultimate Non-Federal cost	\$28,594,000	

Communities must agree to adopt additional flood plain management activities, beyond the requirement to participate in the National Flood Insurance Program, to qualify for Federal participation in a structural flood damage reduction project. These activities include public information and education on flood hazards within the community, flood plain regulation to promote sound use and reduce future flood damages, control of storm water runoff, and preservation of open space.

Division: Northwestern

District: Omaha

Antelope Creek, Lincoln, Nebraska

STATUS OF LOCAL COOPERATION: The City of Lincoln, the University of Nebraska-Lincoln, and the Lower Platte South Natural Resources District are the non-Federal sponsors. The sponsors formed a Joint Antelope Valley Authority (JAVA) that is sponsoring the project. The sponsors strongly support the project and are proceeding with project implementation. The Project Cooperation Agreement (PCA) with JAVA to sponsor the Antelope Creek flood control project was signed on 21 October 2002.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$28,594,000 is unchanged from the latest estimate presented to Congress (FY 2008).

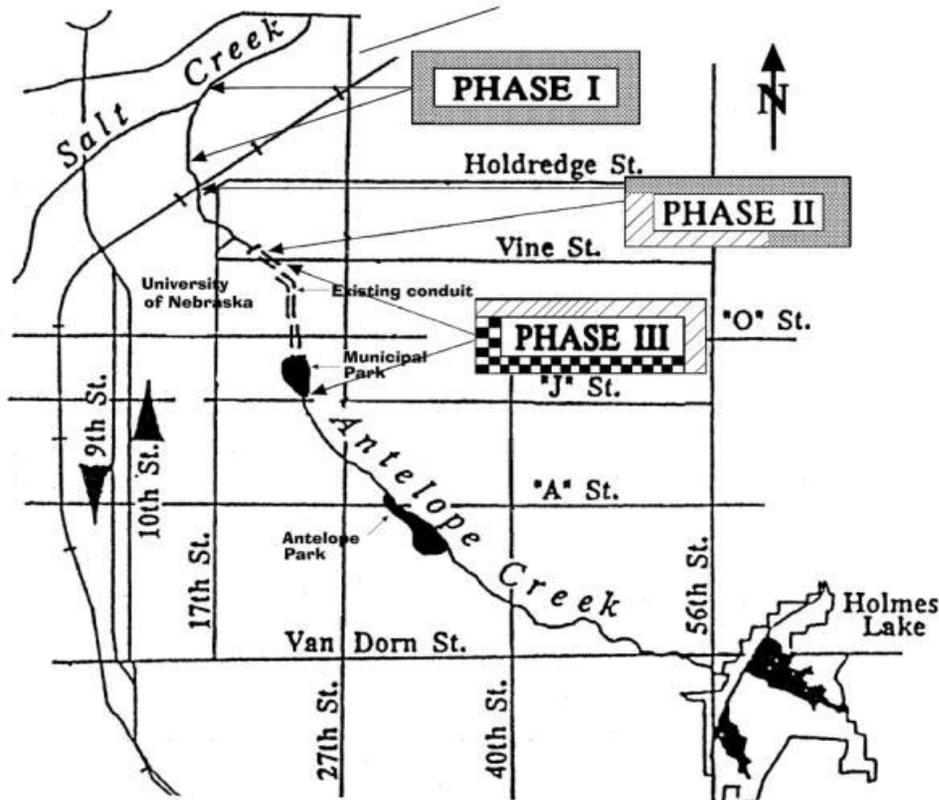
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environment Assessment was prepared and included in the Feasibility Report released to the public for review in June 2000. The Environmental Assessment and the Findings of No Significant Impact was filed with the Environmental Protection Agency on 10 October 2000.

OTHER INFORMATION: Initial funds were appropriated for Pre-construction, engineering and design in Fiscal Year 2000. Congress in the FY02 Energy and Water Appropriations Act added initial construction funding. A construction contract for the downstream ½ mile channel of the 2-mile project was awarded 13 December 2002. The project was not included in the President's Budget request for FY03, FY04, FY05, or FY06 due to budget priorities and constraints.

The Transportation Act passed by Congress in 1998 included \$5.6 million for work associated with a major component (overpass) of the roadway project proposed parallel to the flood control project. The flood control project and the roadway project involve joint right-of-way acquisition and easement actions that benefits both Federal projects.

The sponsor has initiated over \$90 million of financial investments (acquisitions, relocation projects, and construction projects compatible with the flood control project). The sponsors \$90 million (of a planned \$230 million) of financial investments are dependent upon completion of the flood control project. This is a major sponsor investment undertaking compared to the \$15.3 million that the Federal government has already invested (of a planned \$28.6 million) on the flood control project. Sponsor projects also involve Federal Highway Administration funding and coordination. Any delays will impact the successful completion of projects that coordinate the use of Federal funding from multiple Federal agencies.

ANTELOPE CREEK LINCOLN, NEBRASKA



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

**ANTELOPE CREEK
AT LINCOLN, NEBRASKA**
U.S. Army Engineer District, Omaha
Northwestern Division

APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Blue River Channel, Kansas City, Missouri – (Continuing)

LOCATION: The project is located along the Blue River and tributaries in Kansas City, Jackson County, Missouri, and extends from near its mouth (located at Missouri river mile 358.0) to 63rd Street, channel mile 12.5.

DESCRIPTION: The project plan consists of a channel modification along 12.5 miles of the Blue River channel providing flood protection for a once in 30-year flood and reducing flooding for less frequent events.

AUTHORIZATION: 1970 Flood Control Act

REMAINING BENEFIT - REMAINING COST RATIO: 4.0 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.0 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.6 to 1 at 6 5/8 percent (FY 1979).

BASIS OF BENEFIT-COST RATIO: Benefits are from the Supplemental Report dated 24 October 1990 to the General Design Memorandum and approved on 14 December 1990 at October 1990 price levels.

SUMMARIZED FINANCIAL DATA:

		STATUS (1 Jan 08)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$259,558,000			
Estimated Non-Federal Other Costs	35,372,000	Entire Project	92	To be determined.
Cash Contribution	0			
Other Costs	35,372,000			
Total Estimated Project Cost	\$294,930,000			
Allocations to 30 September 2005	\$201,002,000			PHYSICAL DATA
Allocation for FY 2006	4,950,000	ACCUM		Bridge Alterations at Federal Cost:
Allocation for FY 2007	9,750,000	PCT OF EST		Railroad Bridges - Modify - 15 \$23,868,000
Conference Allowance for FY 2008	3,277,000	FED COST		
Allocation for FY 2008	3,277,000			Bridge Alterations at Non-Federal Cost:
Allocations to 30 September 2008	218,979,000	84%		Highway Bridges - Modify - 4 \$7,502,000
Allocation Requested for FY 2009	1,700,000	85%		
Programmed Balance to Complete after FY 2009	38,879,000			Channel Improvement: Length Main Stem, Blue River Channel 12.5 miles

Division: Northwestern

District: Kansas City

Blue River Channel, Kansas City, Missouri

4 February 2008

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JUSTIFICATION: The Blue River basin lies completely in the Kansas City Metropolitan Region, with a 2000 population of 1,776,000 persons. The basin drains an area of 272 square miles and is subject to cloudbursts, prolonged rainstorms, floods, and extended drought periods. The maximum flood of record in the basin occurred in September 1961 and caused an estimated \$8 million in damages. An August 1982 flood caused an estimated \$3.3 million in damages, and an October 1986 flood along the Brush Creek tributary of the river caused an estimated \$209,000 in damages in the lower flood plain. A major flood occurred on the lower portion of the river in May 1990 and caused damages estimated at \$100.8 million. The July 1993 flood was not severe in this basin, causing damages estimated at \$60,000. The authorized project would have prevented all but minor damages caused by the 1961 event, and all damages caused by the later events. The channel project provides for about a 30-year level of protection to 3,400 acres in the lower basin, including the Blue River Valley Industrial District. Estimated annual average benefits, all flood control, based on 1 October 1990 prices, are \$57.3 million, of which \$53.7 million are existing benefits and \$3.6 million are future benefits.

FISCAL YEAR 2008: Assumed allocation will be applied as follows:

Item	Amount
Continue Brush Creek to 53 rd Street Contract	\$2,630,000
Engineering & Design	447,000
Construction Mgmt	<u>200,000</u>
Total	\$3,277,000

FISCAL YEAR 2009: The Budget amount of \$1,700,000 will be applied as follows:

Item	Amount
Complete Brush Creek to 53 rd Street Contract	\$ 1,484,000
Engineering and Design	156,000
Construction Management	<u>60,000</u>
Total	\$1,700,000

NON-FEDERAL COSTS: Local interests are required to furnish without cost to the United States all lands, easements, and rights-of-way required for construction and subsequent maintenance of the project; hold and save the United States free from damages due to construction; perform without cost to the United States necessary highway, highway bridge, and utility alterations required in connection with this project; maintain and operate the project after completion in accordance with regulations prescribed by the Secretary of the Army; and adequately inform all affected persons, at least annually, that the project will not provide complete flood protection. The investment is broken down as follows:

Division: Northwestern

District: Kansas City

Blue River Channel, Kansas City, Missouri

4 February 2008

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	Payments During Construction Costs	Annual Operation, Maintenance and Replacement
Requirements of Local Cooperation:		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$20,786,000	\$50,000
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities.	\$14,586,000	\$32,000
Total Non-Federal Costs	\$35,372,000	\$82,000

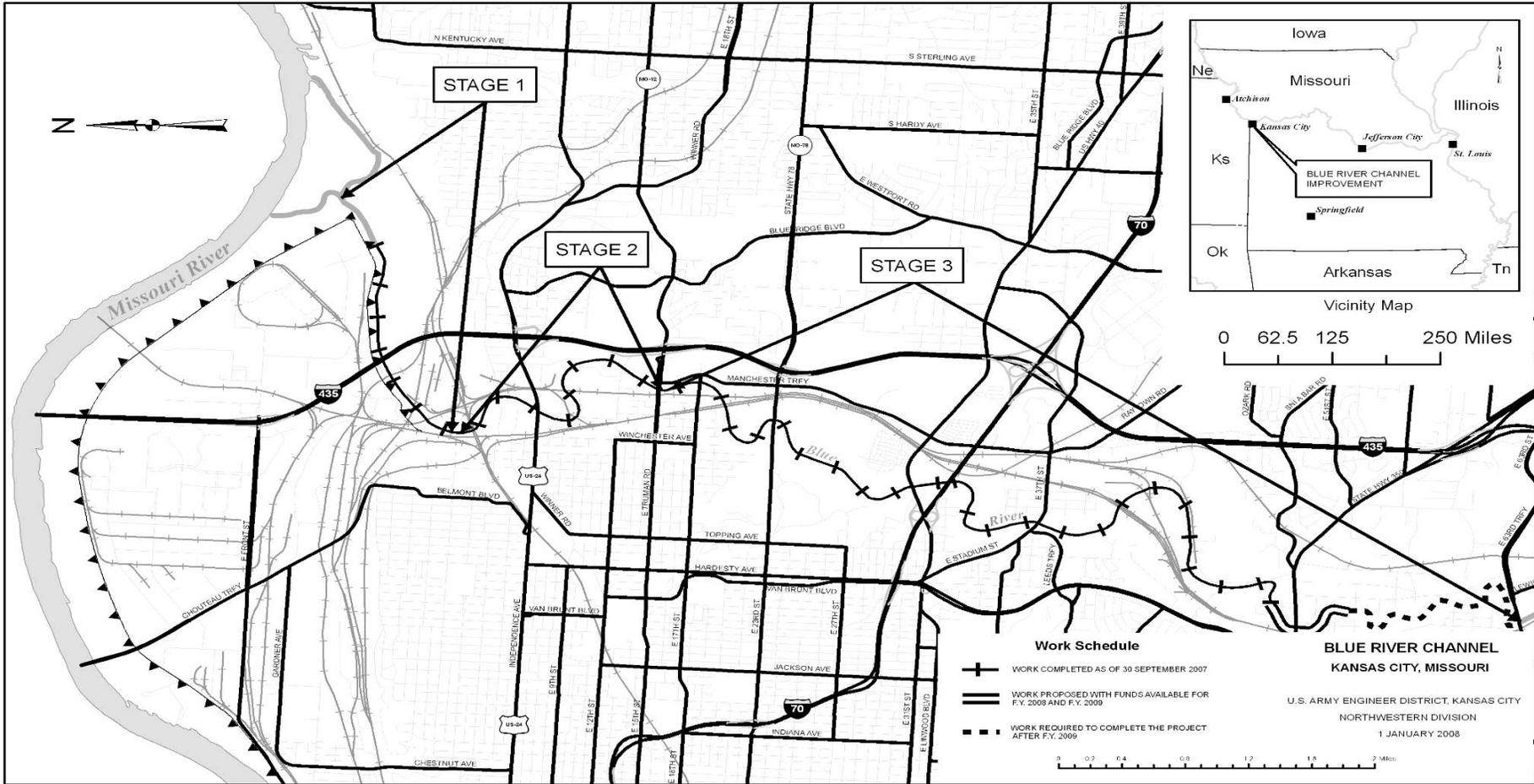
STATUS OF LOCAL COOPERATION: The Section 221 Local Cooperation Agreement (LCA) was signed by the Kansas City District Engineer on 8 September 1983. The City of Kansas City, Missouri provided all rights-of-way for Stages 1 and 2 construction that have been completed. Acquisitions for Stage 3 construction are substantially complete.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$259,558,000, which reflects actual completed construction costs, is an increase of \$15,157,000 over the estimate last presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	\$7,139,000
Post Contract Award and Other Estimating Adjustments	\$8,018,000
Total	\$15,157,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Final statement on Blue River Basin plan made in connection with preauthorization studies was filed with the Council on Environmental Quality (CEQ) on 13 November 1970. A more complete draft statement on the Blue River Basin plan, including specific information on the impacts of the Blue River Channel, was filed with the CEQ on 11 April 1974. The final statement was forwarded to HQUSACE on 24 October 1974, and was filed with the CEQ on 8 September 1975.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1973, and funds to initiate construction were appropriated in FY 1979.



APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Elk Creek Lake, Oregon (Continuing)

LOCATION: In Jackson County, on Elk Creek, a tributary of Rogue River, at river mile 1.7 about 26.5 miles north of Medford, Oregon.

DESCRIPTION: The Elk Creek Lake Project was authorized as one of three multiple-purpose dams in the Rogue River Basin. The three dams were designed to operate as a system to reduce flooding and to accomplish additional purposes of water supply, irrigation, fish and wildlife enhancement, hydropower, and recreation. Two of the three dams are complete and operating. Authorized features of the Elk Creek Lake project include a 249-foot high, roller-compacted concrete gravity dam, a gate controlled concrete chute spillway, regulating outlet conduits, a diversion for power penstock, and a multiple use intake tower attached to the upstream face of the dam. Based on the selected alternative described in final EIS Supplement Number 2, filed 1 May 1991, the project would be redesigned for interim operation with no conservation pool and with fish passage.

Elk Creek Dam was partially completed prior to a court injunction halting construction. Fish passage through the partially completed facility remains an issue. The Corps' analysis determined that removing a section of the dam to provide a fish passage corridor through the project is the most cost effective and biologically sound method to provide fish passage with the partially completed project.

AUTHORIZATION: 1962 Flood Control Act

REMAINING BENEFIT - REMAINING COST RATIO: The remaining benefit-remaining cost ratio has not been calculated because the project was enjoined and the agency decided not to complete dam construction. The portion of the project funded in FY 2009 is for mitigation purposes.

TOTAL BENEFIT - COST RATIO: The total benefit-cost ratio has not been calculated because the project was enjoined and the agency decided not to complete dam construction. The portion of the project funded in FY 2009 is for mitigation purposes.

INITIAL BENEFIT - COST RATIO: The benefit-cost ratio for the fiscal year for which Congress appropriated initial construction funds (FY 1971) was 1.01 to 1 at a 3 1/4% rate and was based on allocating a share of the system benefits to this project.

BASIS OF BENEFIT - COST RATIO: Not applicable. The portion of the project funded in FY 2009 is for mitigation purposes

Division: Northwestern

District: Portland

Elk Creek Lake, OR

4 February 2008

SUMMARIZED FINANCIAL DATA:

		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008) Entire Project	PERCENT COMPLETE 70%	PHYSICAL COMPLETION SCHEDULE To Be Determined
Estimated Federal Cost		\$179,400,000	1/		PHYSICAL DATA (authorized)
Programmed Construction	\$130,634,000				Dam: Type - Roller compacted concrete
Unprogrammed Construction	\$ 48,766,000				Height - 249 feet; Length - 2,580;
Estimated Non-Federal Cost		\$	0		Concrete Volume - 1,100,000 cubic yards
Total Estimated Project Cost		\$179,400,000			Spillway: Type - Concrete gravity
Allocations to 30 September 2005		112,147,000			Gate Ogee Section: Design discharge- 68,400 cfs;
Allocation for FY 2006		297,000			Gates - 3 (33 feet x 34 feet) tainter
Allocation for FY 2007		720,000			Lands and Damages: Acres - 3,570
Conference Allowance for FY 2008		9,998,000			Land Use: Irrigated - 130 acres;
Allocation for FY 2008		9,998,000			Pasture - 182 acres; Wooded - 3,151 acres (of which 841
Allocations through FY 2008		123,162,000	94%		acres are Government owned); Lesser Interests- 67 acres;
Allocation Requested for FY 2009		3,120,000	97%		Building Sites - 40 acres
Programmed Balance to Complete after FY 2009		4,352,000			Relocations: County Road - 7.9 miles;
Unprogrammed Balance to Complete after FY 2009		48,766,000			Power and Telephone lines - 15 miles, Cemetery Reservoir
					Capacity: Total storage at elev 1,726 - 101,000 acre feet
					Usable Storage - 95,000 acre feet
					Flood Control Storage (elev 1726- 1665) - 60,000 acre feet
					Conservation Storage (elev 1665 - 1581) - 35,000 acre feet
					Inactive Storage (elev 1581-1500) - 6,000 acre feet

1/ Reflects the cost of the selected alternative described in the 1991 EIS Supplement Number 2. Estimate excludes deferred costs for future potential modification to operate with a conservation pool. This estimate must be significantly updated if the project is completed in the future.

Division: Northwestern

District: Portland

Elk Creek Lake, OR

4 February 2008

JUSTIFICATION: Passage through the existing diversion tunnel and continued operation of the existing temporary trap and haul facility is not a viable long-term solution to address the threatened species concerns in the watershed. The Corps biological assessment and NOAA-Fisheries biological opinion found that a fish passage corridor would be a better option in the long-term, from a biological perspective. The current Biological Opinion concludes that the temporary trap and haul facility can be operated without jeopardy through 30 September 2008. It is unlikely that NOAA Fisheries will extend a no jeopardy opinion beyond that date. Elk Creek Lake could be operated without conservation storage on an interim basis together with Lost Creek and Applegate Lakes as the three-dam Rogue River Basin system to provide flood control. The project would control run-off from about 132-square miles upstream from Elk Creek site. The flood problems occur principally in discontinuous areas in the 50-mile reach of the Rogue River from the junction of Elk Creek downstream to about ten miles past Grants Pass and in scattered areas in the lower 100-mile reach of the Rogue River. The major flood plain comprises some 7,400 acres of hay, alfalfa, pasture orchards (peaches, pears), and hops and affects a population of 14,560. Damages from past floods include agricultural crop losses and land damage due to inundation and erosion, and destruction of industrial, residential, commercial, and recreation developments. A total of 95,000 acre-feet of usable storage would be available at Elk Creek for flood control. The maximum flood that could be completely controlled at the Elk Creek site would have a peak flow of about 19,200 cubic feet per second and a frequency of occurrence of once in about 40 years. During the flood of 1964, the most severe flood since 1861, damages to the area downstream from Elk Creek and Lost Creek Lakes amounted to \$13,161,000 of which about \$2,350,000 would have been prevented by Elk Creek Lake. The peak stage of a flood such as that of 1964 would be reduced about 5.6 feet at Grants Pass by Lost Creek, and 7.4 feet by Lost Creek and Elk Creek Lakes combined.

FISCAL YEAR 2008: The current amount of \$9,998,000 is being applied as follows: Operate and maintain the temporary trap and haul and the partially completed dam structure; prepare contract procurement documentation and award a contract to notch the dam for fish passage.

FISCAL YEAR 2009: The requested amount of \$3,120,000 will be applied as follows:

Operate and maintain the temporary trap and haul and the partially completed dam structure	\$ 500,000
Continue construction of the fish passage notch	\$ 2,620,000

NON-FEDERAL COST: N/A

STATUS OF LOCAL COOPERATION: N/A

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$179,400,000 remains unchanged from the latest estimate submitted to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Statement was filed with CEQ on September 17, 1971. Supplement No. 1, addressing water quality effects, was filed with EPA on December 24, 1980, and a Record of Decision was filed with EPA in February 1982. An environmental assessment addressing design changes (such as roller compacted concrete instead of embankment dam) was completed on October 11, 1983. Supplemental Information Reports dated September 23, 1985 and January 14, 1986 were provided to the public. These reports described the findings of the 1983 environmental assessment and other new information that had become available since the 1980 EIS Supplement. Another EIS supplement was prepared as a result of litigation. This Supplement was completed and filed with the EPA on May 1, 1991. A Record of Decision, selecting the no conservation pool as the interim operating alternative, was signed on January 24, 1992.

Division: Northwestern

District: Portland

Elk Creek Lake, OR

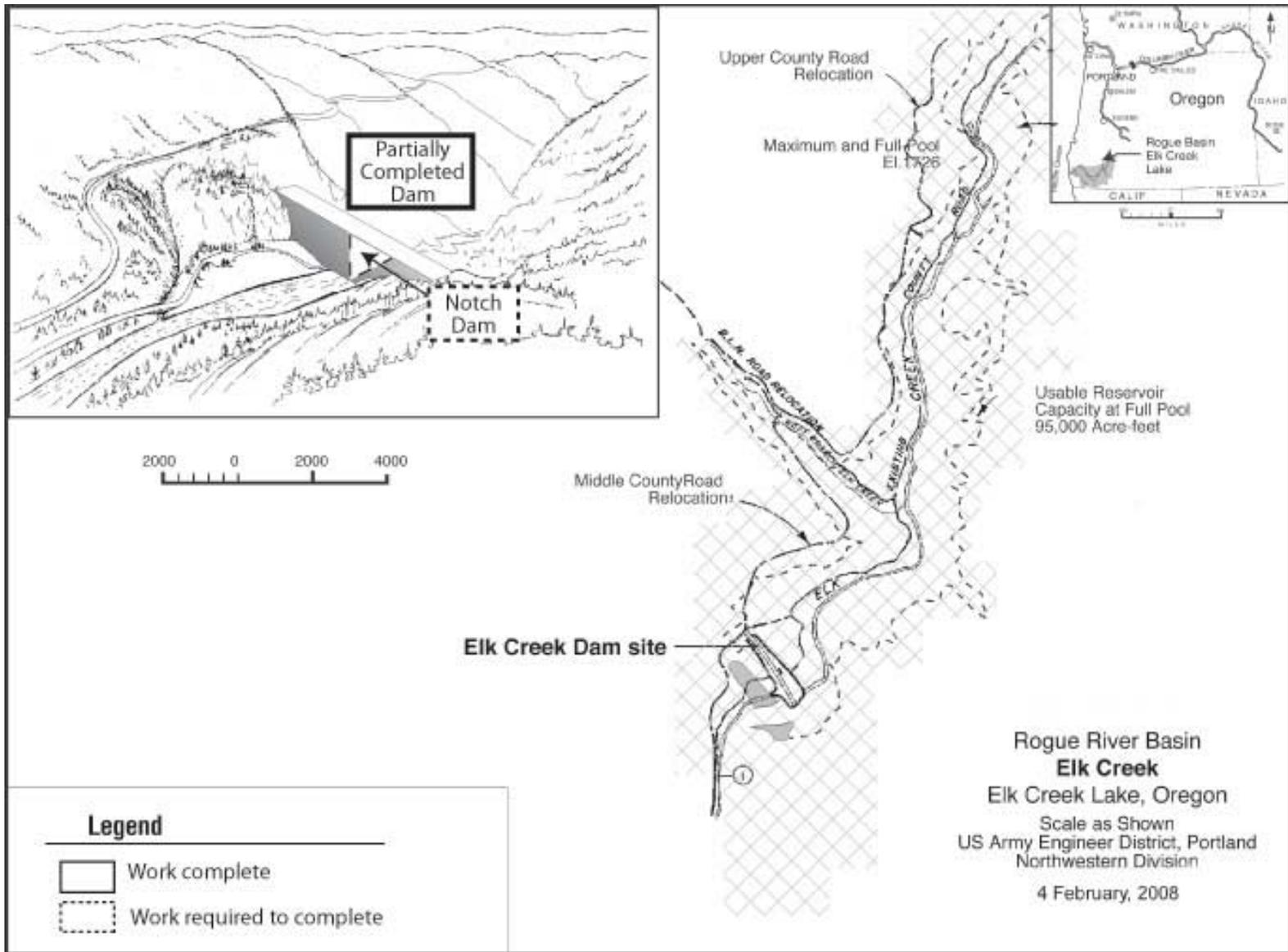
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OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1965, and for construction in FY 1971. After initiation of construction, an injunction was placed against completion of the project. Construction of the project was terminated with the project at 83 feet, one-third its design height. After completion of the final EISS #2, the Department of Justice filed a motion with the Court to remove the injunction. The Ninth Circuit Court of Appeals issued a ruling on April 21, 1995. In a decision, the Court also reversed the District Court decision that EISS #2 met the requirements of the earlier Ninth Circuit opinion and awarded attorneys fees to the plaintiffs. The case was remanded with instructions to prepare a third supplement adequately addressing all issues raised under the NEPA process.

Due to the Ninth Circuit Court of Appeals decision and status of local support, the Corps did not perform the environmental studies under the National Environmental Policy Act (NEPA) necessary to remove the Federal court injunction against completion of the project. Therefore, an evaluation of the requirements for long-term management of the project in its partially completed state was required. The Division Engineer notified the Congressional Appropriations Committees on 6 November 1995 of the Corps' intention to study options for long-term management of the project in its partially completed state. Temporary fish passage was initiated until a long-term fish passage solution is implemented.

Consultation began with the National Marine Fisheries Service (NMFS) concerning alternatives for long-term fish passage at Elk Creek under the Endangered Species Act. Four potential upstream fish passage alternatives were evaluated in the Corps biological assessment. Based on this analysis, it was determined that passage through the existing diversion tunnel and continued operation of the existing temporary trap and haul facility would result in jeopardy to the continued existence of coho salmon in Elk Creek over a ten to fifty year period. The assessment found that construction of a new trap and haul facility designed to function effectively with the partially completed project or removal of a section of the dam to provide a fish passage corridor would not impact the continued existence of the species. Removing a section of the dam would provide long-term passive fish passage and was the most cost-effective method to provide fish passage over the long term with the project in an partially completed state, even when including the cost to replace the removed section of the dam if it is completed in the future.

NMFS issued a biological opinion in January 2001. The opinion concurred with the Corps' assessment that passage through the existing diversion tunnel and continued operation of the existing temporary trap and haul facility would result in jeopardy. They also concurred with the Corps' assessment that the fish passage corridor would not result in jeopardy, and would be the best alternative from a biological perspective. Their opinion stated that a new trap and haul facility could result in jeopardy, but stated that impacts of a new trap and haul facility could potentially be reduced to an acceptable level. The opinion recognized the need to operate the existing trap and haul facility in the interim until an acceptable, long-term solution is implemented. In FY 2003, 2004, 2005, and 2006 Congress included language that specifically prohibited use of project funding for the fish passage corridor (notch).



APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Mount St. Helens Sediment Control, Washington (Continuing)

LOCATION: A sediment retention structure on the North Fork Toutle River, 3 miles upstream from its confluence with the Green River; a Fish Collection Facility located on the North Fork Toutle River, 8,500 feet downstream of the Sediment Retention Structure; levee improvements at Kelso, Washington on the Cowlitz river (river mile 3 to river mile 8); and dredging in the Cowlitz River (river mile 0 - to river mile 20); all located in Cowlitz County, southwest Washington. The river systems impacted by the project include the Toutle, Cowlitz and a portion of the Coweeman River. Most of the population affected by the problems resides in the communities of Longview, Kelso, Lexington and Castle Rock, Washington.

DESCRIPTION: An earth and rock fill sediment retention structure with a spillway height of 125 feet, length of 1,800 feet and a retention capacity of 258 million cubic yards of sediment; a barrier type fish trap facility with a length of 300 feet and a 210 foot fish ladder; levee raise and improvements on the Cowlitz River at Kelso, WA; dredging in the Cowlitz River from the mouth to river mile 20; and provide system-wide flood protection throughout the fifty year life cycle (1985-2035) at congressionally authorized levels.

AUTHORIZATION: Supplemental Appropriations Act, 1985, PL 99-88.

REMAINING BENEFIT - REMAINING COST RATIO: The remaining benefit-remaining cost ratio is 5.5 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: The total benefit cost ratio is 1.6 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: The benefit-cost ratio for the fiscal year for which Congress appropriated initial construction funds (FY 1986) is 3.0 to 1 at 8-5/8 percent. The benefit to cost ratio is based on the project functioning independently.

BASIS OF BENEFIT - COST RATIO: Benefits were updated in June 2007 based on the evaluation reported in the April 1985 Chief of Engineers Report.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$202,500,000				
Programmed Construction	155,608,000		Sediment Retention		
Unprogrammed Construction	46,892,000		Structure	100	Feb 90
			Dredging	100	Mar 90
Estimated Non-Federal Cost	\$ 24,600,000		Future Dredging	0	To Be Determined
Programmed Construction	24,600,000		Entire Project	64	To Be Determined
Cash Contribution	3,600,000				
Other	21,000,000				
Unprogrammed Construction	0				

Division: Northwestern

District: Portland

Mount St. Helens Sediment Control, Washington

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SUMMARIZED FINANCIAL DATA (Continued)

ACCUM
PCT OF EST
FED COST

Total Estimated Programmed Construction Cost	\$180,208,000	
Total Estimated Unprogrammed Construction Cost	46,892,000	
Total Estimated Project Cost	\$227,100,000	
Allocations to 30 September 2005	117,618,000	
Allocation for FY 2006	590,000	
Allocation for FY 2007	632,000	
Conference Allowance for FY 2008	9,247,000	
Allocation for FY 2008	9,247,000	
Allocations Through FY 2008	128,087,000	63%
Allocation Requested for FY 2009	1,410,000	64%
Programmed Balance to Complete after FY 2009	26,111,000	
Unprogrammed Balance to Complete after FY 2009	46,892,000	

PHYSICAL DATA

Dam: Type - Earth and Rockfill
 Spillway Height - 125 feet
 Length - 1,800 feet
 Spillway Width - 400 feet
 Fish Facility: 300 feet long, concrete
 with stilling basin
 Fish Ladder: 210 feet long by
 6 feet wide, concrete
 Lands and Damages: Acres -
 5,374 (Sediment Retention Structure)
 1,300 (Disposal Sites for Dredging)
 25 (Levee Improvements)
 Ultimate Sediment Capacity:
 258 million cubic yards

JUSTIFICATION: The eruption of Mount St. Helens dramatically altered the hydraulic and hydrologic regimes of the Cowlitz and Toutle River Valleys. The Supplemental Appropriation Act, 1985 authorized the Corps to construct, operate and maintain a sediment retention structure (SRS) with such design features and associated downstream actions necessary to provide flood protection to the communities of Longview, Kelso, Castle Rock and Lexington. About 50,000 people and their property are at risk if the flood protection is not maintained.

Changing hydraulic and hydrologic conditions impact downstream deposition of sediment that is now infringing on the congressionally authorized levels of flood protection. It is likely that without dredging in the Cowlitz River the authorized level of flood protection will not be maintained through the winter of 2007/08.

The ongoing data collection and sediment management analysis work is a critical step in determining what additional measures should be implemented to maintain long-term flood protection for these communities. Potential alternatives to regain/maintain the authorized levels of protection through 2035 include: dredging, improving levee integrity, increasing flood control storage, develop sediment storage sump, establish a main channel above the SRS to reduce sediment delivery.

FISCAL YEAR 2008: The current amount of \$9,247,000 is being applied as follows: Continue annual sediment monitoring and gradation analysis to track sediment migration and flood protection levels; continue analysis of potential follow-on long-term alternatives for system-wide flood and navigation protection; initiate and complete incremental dredging; evaluate long-term fish passage alternatives at the sediment retention structure.

FISCAL YEAR 2009: The requested amount of \$1,410,000 will be applied as follows:

Continue annual sediment monitoring; continue analysis of follow-on long-term alternatives for system-wide flood and navigation protection	\$ 410,000
Continue planning activities for long term sediment management	\$ 1,000,000

Division: Northwestern

District: Portland

Mount St. Helens Sediment Control, Washington

4 February 2008

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NON-FEDERAL COST: In accordance with the agreement between the United States of America and the State of Washington for local cooperation at, along and near the Cowlitz and Toutle Rivers, Cowlitz County, State of Washington, the total estimated non-federal cost for construction is \$24,600,000 including allowances for inflation. The non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction	Annual Operation Maintenance and Replacement Costs
Provide lands, easements, rights-of-way, and dredged material disposal areas.	\$16,200,000	
Modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project.	400,000	
Mitigation for dredging operations	4,400,000	\$846,000
Sales & Use Tax Offset from the State of Washington	3,600,000	
Total Non-Federal Payments During Construction	\$24,600,000	

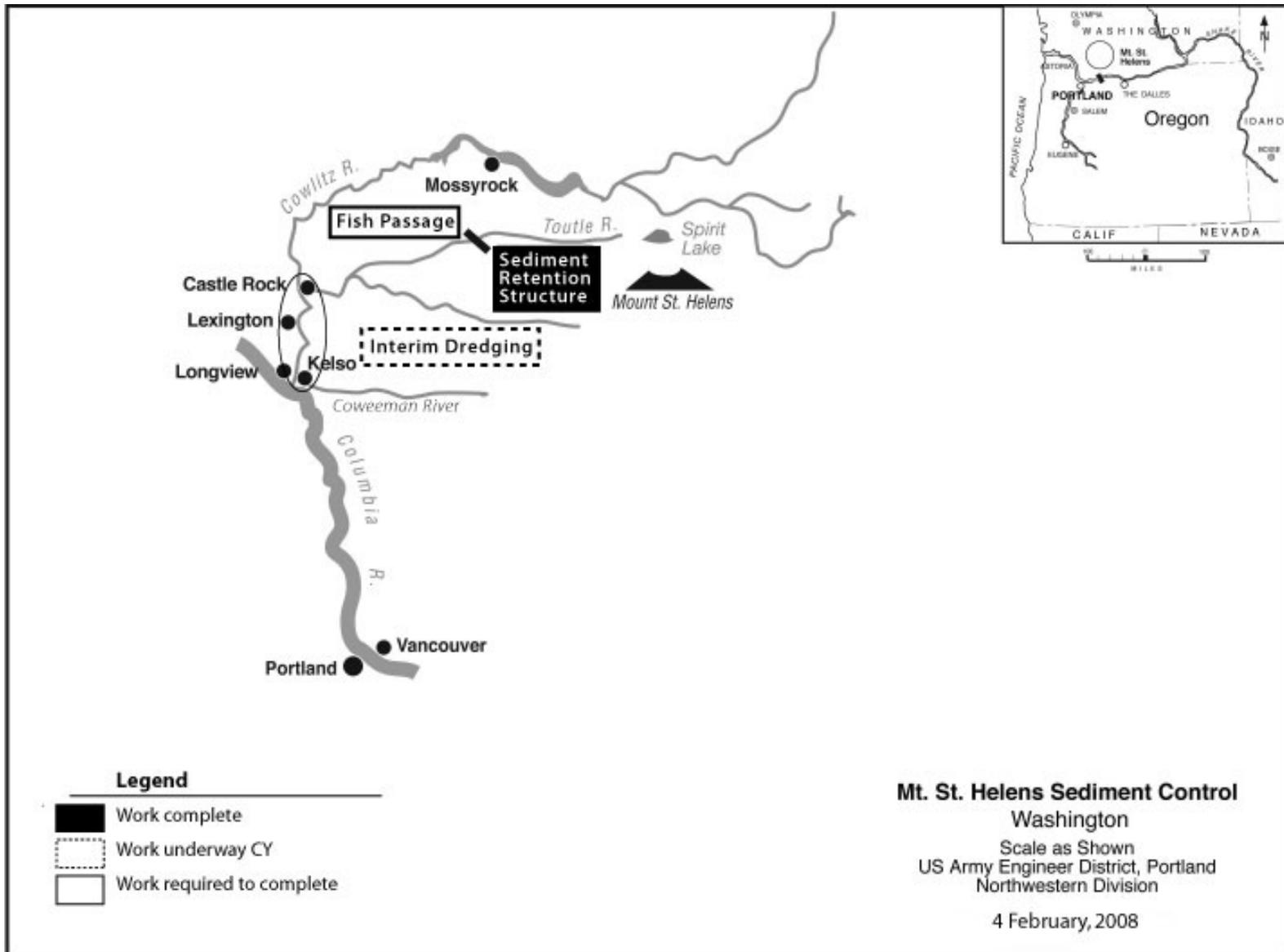
STATUS OF LOCAL COOPERATION: A local cooperation agreement (LCA) for the Sediment Control project was signed on 26 April 1986. The State of Washington is the sponsor for the Sediment Retention Structure (SRS) and dredging portions of the project. Consolidated Diking Improvement District No. 3 and Drainage Improvement District No. 1 are sponsors for the Kelso levee improvement.

Land rights have been obtained by the State over the lands required for initial construction of the SRS. All persons residing within the SRS acquisition boundary have been relocated. The Diking and Drainage Districts have been furnished right-of-way requirements and are continuing their acquisition program. The State is continuing to acquire rights-of-way for additional dredge disposal areas should future dredging be required to preserve authorized flood protection levels.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$202,500,000 is unchanged from the latest estimate submitted to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with the EPA in December, 1984.

OTHER INFORMATION: Funds to initiate preconstruction planning were allotted in FY 1985 and construction in FY 1986. The project remains open because of the unique circumstances created by the eruption of Mt. St. Helens. Since the small explosive eruption that occurred 1 October 2004, there have been several larger eruptions of steam and ash, with some additional growth of the lava dome within the mountain's existing crater. Sediment deposition in the lower Cowlitz River is beginning to infringe on the authorized level of flood protection. As a result, the project is at the end of the "natural pause" in construction work. Resumption of physical construction is appropriate.



APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Mud Mountain Dam, Washington (Fish Passage Facilities) (Continuing)

LOCATION: Mud Mountain Dam is located at river mile 29.6 on the White River, 6 miles upstream and southeast of Enumclaw, WA and 38 miles southeast of Tacoma, WA in western Washington State.

DESCRIPTION: The fish collection facility currently sorts and collects salmon to be trucked upstream around Mud Mountain Dam. The current facility is deteriorated and unsafe. Replacement will allow the Corps to continue meeting mitigation requirements for the Mud Mountain Dam Project.

AUTHORIZATION: Flood Control Act of 1936 authorized the Mud Mountain Dam and reservoir on the White River as the main unit of the Puyallup River flood control project.

REMAINING BENEFIT - REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: THE INITIAL BENEFIT - COST RATIO: Not applicable

BASIS OF BENEFIT-COST RATIO: Not applicable

SUMMARIZED FINANCIAL DATA:

		Accumulated Percent of Estimated Federal Cost	Status (1 Jan 2008) Entire Project	Percent Complete 8%	Physical Completion Schedule TBD
Estimated Federal Cost	\$47,738,000				
Estimated Non-Federal Cost	0				
Total Estimated Project Cost	\$47,738,000				
Allocations to 30 September 2005	\$2,353,000				
Allocation for FY 2006	594,000				
Allocation for FY 2007	1,070,000				
Conference Allowance for FY 2008	2,340,000				
Allocation for FY 2008	2,340,000				
Allocations through FY 2008	6,357,000	13%			
Allocation requested for FY 2009	1,000,000	15%			
Programmed Balance to Complete after FY 2009	40,381,000				
Unprogrammed Balance to Complete after FY 2009	0				

Division: Northwestern

District: Seattle

Mud Mountain Dam, Washington

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PHYSICAL DATA:

Fish Trap and Haul Facilities Improvements

JUSTIFICATION: Upstream migratory fish passage is currently provided at the fish collection facility located at Buckley, WA which is co-located with a privately owned barrier dam 6 miles downstream of Mud Mountain Dam. The barrier dam is also used to divert water to a recreational lake and a future regional water supply facility and is in need of replacement. The current owner of the diversion dam, Puget Sound Energy, is terminating operations at the project and the Corps is taking possession of the facility. Since 2002, funds have been provided to plan and design a replacement facility to meet ESA requirements.

FISCAL YEAR 2008: The allocation amount will be used as follows:

FISH PASSAGE:

Complete Decision Document	\$ 38,000
Engineering 95% Submittal	870,000
Begin Real Estate Acquisition	1,432,000
Total	\$2,340,000

FISCAL YEAR 2009: The requested amount will be used as follows:

FISH PASSAGE:

Real Estate Acquisition	1,000,000
Total	\$1,000,000

NON-FEDERAL COSTS: N/A. Fish passage improvements are a Federal cost.

STATUS OF LOCAL COOPERATION: N/A.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$47,738,000 is an increase of \$30,650,000 from the last estimate (\$17,088,000) presented to Congress (FY 2008). This change includes the following items:

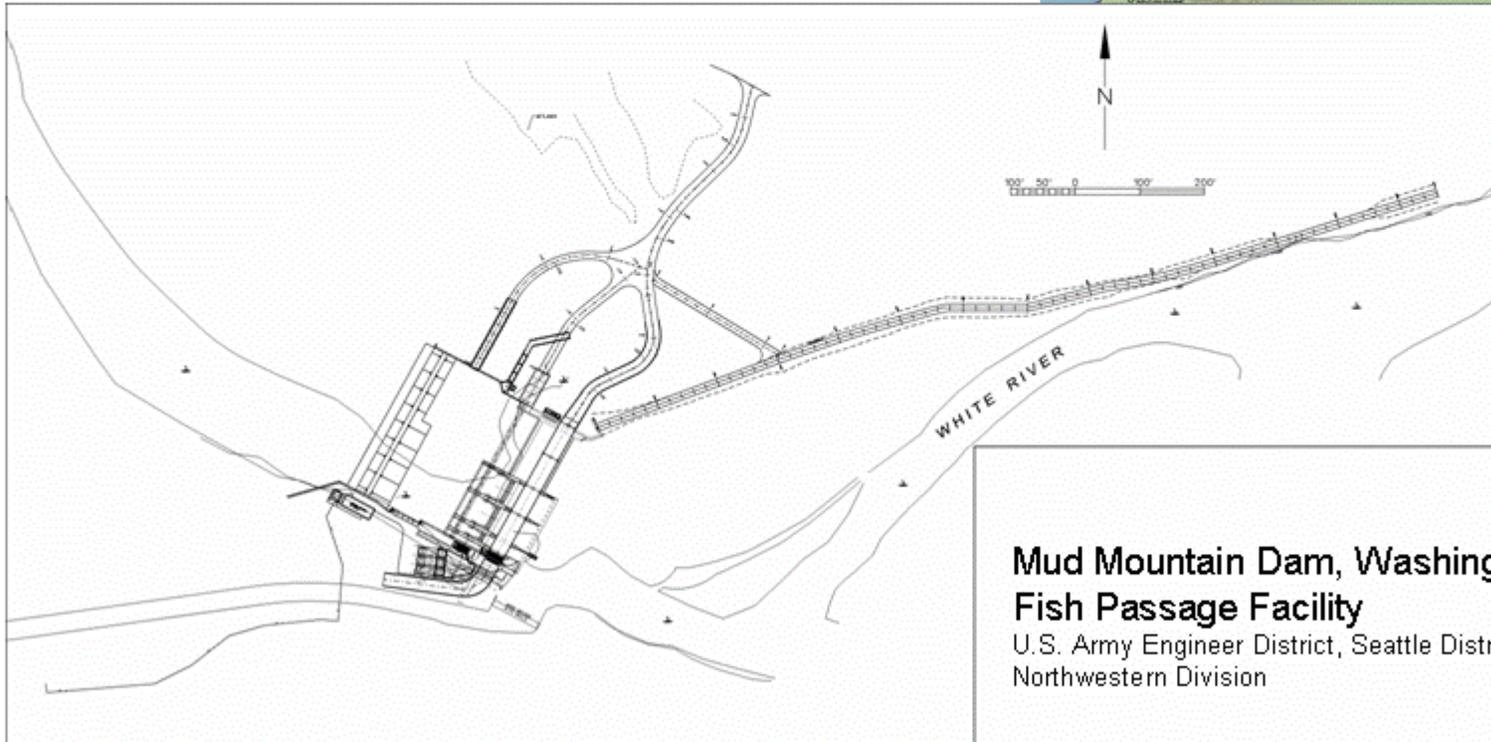
Item	Amount
Price Escalation or De-escalation on Construction Features	0
Design Changes	\$30,650,000
Additional Functions Added under General Authority	0
Authorized Modifications	0
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	0
Schedule Changes	0
Price Escalation or De-Escalation on Real Estate	0
Total	\$30,650,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment for the Dam Safety Assurance Program was completed in June 1986 with an additional Environmental assessment and Finding of No Significant Impact completed in June 1999. An Environmental Assessment and draft Finding of No Significant Impact for the replacement of the barrier dam was completed in October 2007. A programmatic biological assessment under ESA for the Operations and Maintenance of MMD as well as the replacement of the barrier dam was completed in June 2005.

OTHER INFORMATION: Congress added \$500,000 to the project in FY 2002 for “the design of fish passage facilities”. In FY 2003, Congress also “provided \$2,500,000 to continue work on dam safety measures and the fish passage facility.” Funding for FY 2004 and FY 2005 included appropriations for the fish passage facility but no specific language. FY 2006 funding included specific language for the fish passage facility.

The previous cost estimate of \$17,088,000 was based on a preliminary design, incorporating 2 radial gates and a spillway. The design has now been detailed and environmental coordination has determined additional requirements. The design includes 3 radial gates, a spillway, a drilled shaft foundation, a new fish ladder, a new fish sorting facility, and a bridge over the dam. Also, construction is now estimated to take 4 years, and not start until 2010. With these changes, the estimated total cost is \$47,738,000.

Schedules	Project No.
Work completed as of 30 September 2007	None
Work proposed with funds available for FY 2008	1- Real Estate Acquisition and Design
Work proposed with funds requested for FY 2009	1- Real Estate Acquisition
Work required to complete the project after FY 2009	1- Real Estate Acquisition and Initiate Construction



**Mud Mountain Dam, Washington
Fish Passage Facility**
U.S. Army Engineer District, Seattle District
Northwestern Division

APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Turkey Creek Basin, Kansas City, Kansas and Missouri – (Continuing)

LOCATION: The 23 square mile urban Turkey Creek basin drains Johnson and Wyandotte Counties in Kansas, and a portion of Kansas City, Missouri. Turkey Creek parallels Interstate Highway 35 for much of its length and flows through a tunnel into the Kansas River approximately three miles upstream of its confluence with the Missouri River.

DESCRIPTION: The plan of improvement consists of approximately ten thousand feet of urban channel modification, a levee section, the raising of two railroad bridges, 12.7 acres of riparian planting and four large drainage interceptor pipelines. A dual flood threat exists in the affected area, which consists of Turkey Creek over-bank flow and localized hillside runoff. Either flood source can cause considerable damage. The channel modification addresses the channel flooding threat, and the interceptors address the hillside component. All work is programmed.

AUTHORIZATION: Section 101 of the Water Resources Development Act of 1999 and Section 123 of the Consolidated Appropriations Act of 2003.

REMAINING BENEFIT – REMAINING COST RATIO: 1.8 to 1 at 7 percent.

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

BASIS OF BENEFIT-COST RATIO: Benefits are from the General Reevaluation Report dated January 2003 at October 2003 price levels.

SUMMARIZED FINANCIAL DATA:	ACCUM PCT. OF EST. FED COST	STATUS (1 Jan 08)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$56,852,000			
Estimated Non-Federal Cost	35,695,000			
Cash Contribution	23,956,000	Entire Project	20	To be determined.
Other Costs	11,739,000			
Total Estimated Project Cost	92,547,000			
Allocations to 30 September 2005	2,902,000			
Allocation for FY 2006	2,970,000			
Allocation for FY 2007	5,500,000			
Conference Allowance for FY 2008	8,856,000			
Allocation for FY 2008	8,856,000			
			PHYSICAL DATA	
				Channel Modification: 10,000 feet
				Levee: 2,800 feet

SUMMARIZED FINANCIAL DATA (continued):

Allocations to 30 September FY 2008	20,228,000	36%		Railroad Bridge Raises: 2 each
Allocation Requested for FY 2009	10,000,000	53%		Interceptors: 16,000 feet
Programmed Balance to Complete after FY 2009	26,624,000			Riparian Planting: 12.7 Acres
Division: Northwestern	District: Kansas City			Turkey Creek Basin KS & MO

JUSTIFICATION: The Turkey Creek basin is a 23-square-mile area within Kansas City, Kansas and suburbs in Johnson and Wyandotte Counties. The basin is nearly 100 percent urbanized, and a significant amount exists within the flood plain. Commercial and industrial investment, valued at over \$139 million, along with residential and other property valued at approximately \$9 million are subject to flood damage. There are almost 500 businesses within the project area accounting for more than 6,000 jobs. Phasing of channel construction to coincide with widening of Interstate Highway 35 by the Kansas Department of Transportation (KDOT) will result in significant project cost savings. KDOT work on the channel is nearly complete. A dual flood threat exists in the study area that consists of Turkey Creek over-bank flows and localized hillside runoff. Either flood source can cause considerable damage. Average annual damages without the project are estimated at \$11.7 million and with the project at \$3.2 million. Six damaging floods have occurred since 1977. The flood of record occurred in July 1993 causing one fatality and damages estimated at \$20 million in 1993 or \$28 million at current price level. Another flood of similar magnitude to the 1993 event occurred in October of 1998. The recent severe floods have occurred at night and on weekends when the commercial industrial corridor was inactive. A flood of similar magnitude occurring during normal business hours has the potential to result in multiple fatalities. The recommended project will include construction of channel modifications with a one-percent level of protection and tributary floodwater diversion. Average annual benefits are \$8,487,000.

FISCAL YEAR 2008: Assumed allocation will be used as follows:

Complete Tunnel Contract	\$3,200,000
Award Channel Contract	4,300,000
Engineering and Design	900,000
Construction Management	<u>456,000</u>
Total	\$8,856,000

FISCAL YEAR 2009: The Budget amount will be applied as follows:

Continue Channel Contract	\$9,000,000
Engineering and Design	500,000
Construction Management	<u>500,000</u>
Total	\$10,000,000

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

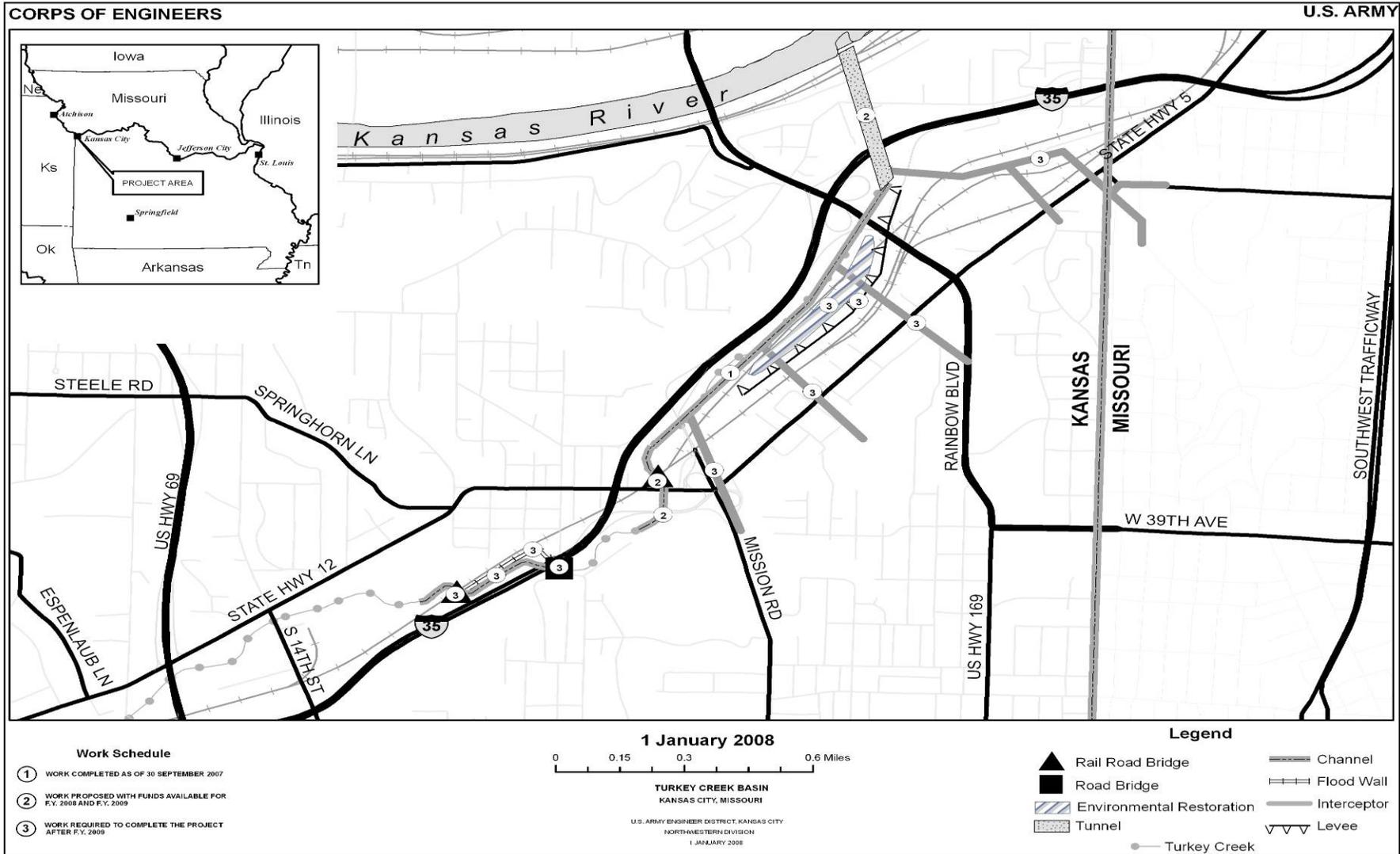
	Payments During Construction And Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights of way, and borrow and excavated material disposal areas.	4,976,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	6,763,000	
Pay 100% of the cost allocated to the Mission Road Interceptor and increasing the level of protection of the Missouri Interceptor from 10 years to 15 years (Locally Preferred Plan).	4,587,000	
Credit allowed based on prior work.	5,082,000	
Pay 22 percent of the costs allocated to flood control to bring the non-Federal share of flood control costs to 35 percent, as determined under Section 103 (m) of the Water Resources Development Act of 1986, as amended, to reflect non-Federal sponsor's ability to pay as reduced for credit allowed based on prior work, or pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	14,287,000	112,000
Total Non-Federal Costs	35,695,000	112,000

STATUS OF LOCAL COOPERATION: The City of Kansas City, Missouri and the Unified Government of Wyandotte County and Kansas City, Kansas expressed their intent to sponsor the project and a statement of financial capabilities in letters provided in January 2003 and November 2002 respectively. The Project Cooperation Agreement (PCA) was signed 17 July 2006, following completion of tunnel work initiated by the Sponsor.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$56,852,000 is unchanged from that last presented to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A Revised Environmental Assessment, dated January 2003, concluded that no significant impacts, which would adversely affect the quality of the environment, were identified for the plan for flood protection measures for the lower Turkey Creek Basin. The District Commander signed a Finding of No Significant Impact February 4, 2003.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1998. Preconstruction Engineering and Design (PED) was completed in September 2004. Funds to initiate construction were first appropriated in FY04.



APPROPRIATION TITLE: Construction, Flood and Coastal Storm Damage Reduction, Fiscal Year 2009

PROJECT: Tuttle Creek Dam (Dam Safety Assurance), Manhattan, Kansas – (Continuing)

LOCATION: Tuttle Creek Dam is located in northeastern Kansas on the Big Blue River, 12.3 miles above its confluence with the Kansas River and 6 miles upstream of the City of Manhattan, Kansas.

DESCRIPTION: The Tuttle Creek Dam Safety Assurance project will provide for increased safety to the existing Tuttle Creek Dam and Lake during seismic and flood events through construction of foundation treatment, flood wave run-up barriers, and spillway gate improvements. As an interim measure, a dam failure warning system was installed for the period of construction. The system provides warning for the area from the dam to the confluence of the Big Blue and Kansas Rivers where the highest population density and lowest warning times exist.

To withstand ground motions from the Maximum Credible Earthquake, soil stabilization will be performed on the liquefiable foundation (alluvial sands) beneath the dam using excavated shear walls beneath the downstream slope. Treatment of the downstream foundation will require temporary removal of the existing downstream berm. The implementation of soil stabilization will include conducting additional exploratory borings and soil testing, a soil stabilization technology demonstration, replacement of upstream slope protection due to construction damage and disturbance, and general road and park modifications to accommodate construction and mitigate impacts.

The Probable Maximum Flood (PMF) creates a static pool, which would be within 2 feet of the crest of the dam. The ability of the project to safely pass the PMF is dependent upon the reliability of the spillway tainter gates. The original spillway gate design did not fully consider friction in the bearings for all of the appropriate load cases. Reanalysis indicates that the gate structure is not adequate under all loading conditions. The inability to open two gates would result in overtopping of the dam during a Probable Maximum Flood. In order to ensure the ability to safely pass these flows and avoid overtopping of the dam by the static pool, the structural integrity of the spillway gates must be ensured. As such, general spillway rehabilitation and spillway gate modification are critical to the safety of the dam and will be performed.

AUTHORIZATION: Flood Control Acts of 1938, 1941, and 1944.

REMAINING BENEFIT – REMAINING COST RATIO: Not applicable.

TOTAL BENEFIT-COST RATIO: Not applicable.

INITIAL BENEFIT-COST RATIO: Not applicable.

BASIS OF BENEFIT-COST RATIO: Not applicable.

SUMMARIZED FINANCIAL DATA:

		STATUS (1 Jan 08)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$131,200,000			
Estimated Non-Federal Cost	0	Construction Initiated	50	To be determined.
Total Estimated Project Cost	131,200,000			
Allocations to 30 September 2005	16,097,000			
Allocation for FY 2006	26,730,000			
Allocation for FY 2007	36,000,000	ACCUM		
Conference Allowance for FY 2008	28,044,000	PCT. OF EST.		
Allocation for FY 2008	28,044,000	FED COST		
Allocations to 30 September 2008	106,871,000	81%		
Allocation Requested for FY 2009	23,800,000	99%		
Programmed Balance to Complete after FY 2009	529,000			

PHYSICAL DATA (All Federal):

Dam: Type - Rolled earth and rock fill and hydraulic fill	Spillway: Type - Controlled 952 feet wide chute
Height - 137 feet above valley floor	Gates: 18 Tainter gates 20 feet (high) x 40 feet (wide)
Crest - 7,500 feet long	Design Capacity – 600,000 cfs
Width - 1,200 – 1,600 feet at base, 50 feet at crest	

JUSTIFICATION: Tuttle Creek Dam became operational in 1962 and has prevented more than \$3.9 billion in flood damages. The project provides flood protection for the Big Blue, Kansas and Missouri River valleys, as well as the other authorized purposes of fish and wildlife, water quality, water supply, and supplemental releases for navigation, on the Missouri River downstream of Kansas City.

Tuttle Creek Dam was evaluated for adequacy, considering the design earthquake (Maximum Credible Earthquake, moment magnitude 6.6 at 20 km from the site). The design earthquake is capable of inducing liquefaction of the foundation sands, failure of the embankment slopes, significant deformation of the entire embankment, and probable release of the lake within 2 to 6 hours. A 5.7 magnitude earthquake could induce limited liquefaction beneath the downstream toe, and damage to the relief wells due to slope deformation. With the loss of the relief wells, uncontrolled release of the pool initiated by piping through the foundation could occur. A damaging earthquake in the 5.7 to 6.6 magnitude range that could impact Tuttle Creek Dam would most likely originate from the Humboldt Fault Zone, near Wamego, Kansas. The 6.6 magnitude earthquake is the largest possible earthquake that is believed to be possible and the approximate probability of the 5.7 magnitude earthquake is 3 percent over 50 years. The consequences of an earthquake induced dam breach would include the loss of the project, loss of all project benefits (\$56.2 million), extensive downstream damage (estimated \$458 million), and high potential for loss of life (estimated at 384 of the 13,000 population at risk).

Division: Northwestern

District: Kansas City

Tuttle Creek Dam, Kansas
(Dam Safety Assurance)

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FISCAL YEAR 2008: Assumed allocation will be applied as follows:

Item	Amount
Continue QA Lab Testing	\$ 300,000
Continue Ground Modification	25,000,000
Engineering and Design	2,200,000
Construction Management	344,000
Continue Operating Dam Failure Warning System	<u>200,000</u>
Total	\$28,044,000

FISCAL YEAR 2009: The Budget amount of \$23,800,000 will be applied as follows:

Item	Amount
Continue QA Lab Testing	\$ 300,000
Complete current phase of Ground Modification	21,100,000
Engineering and Design	1,800,000
Construction Management	400,000
Continue Operating Dam Failure Warning System	<u>200,000</u>
Total	\$23,800,000

NON-FEDERAL COSTS: Not applicable.

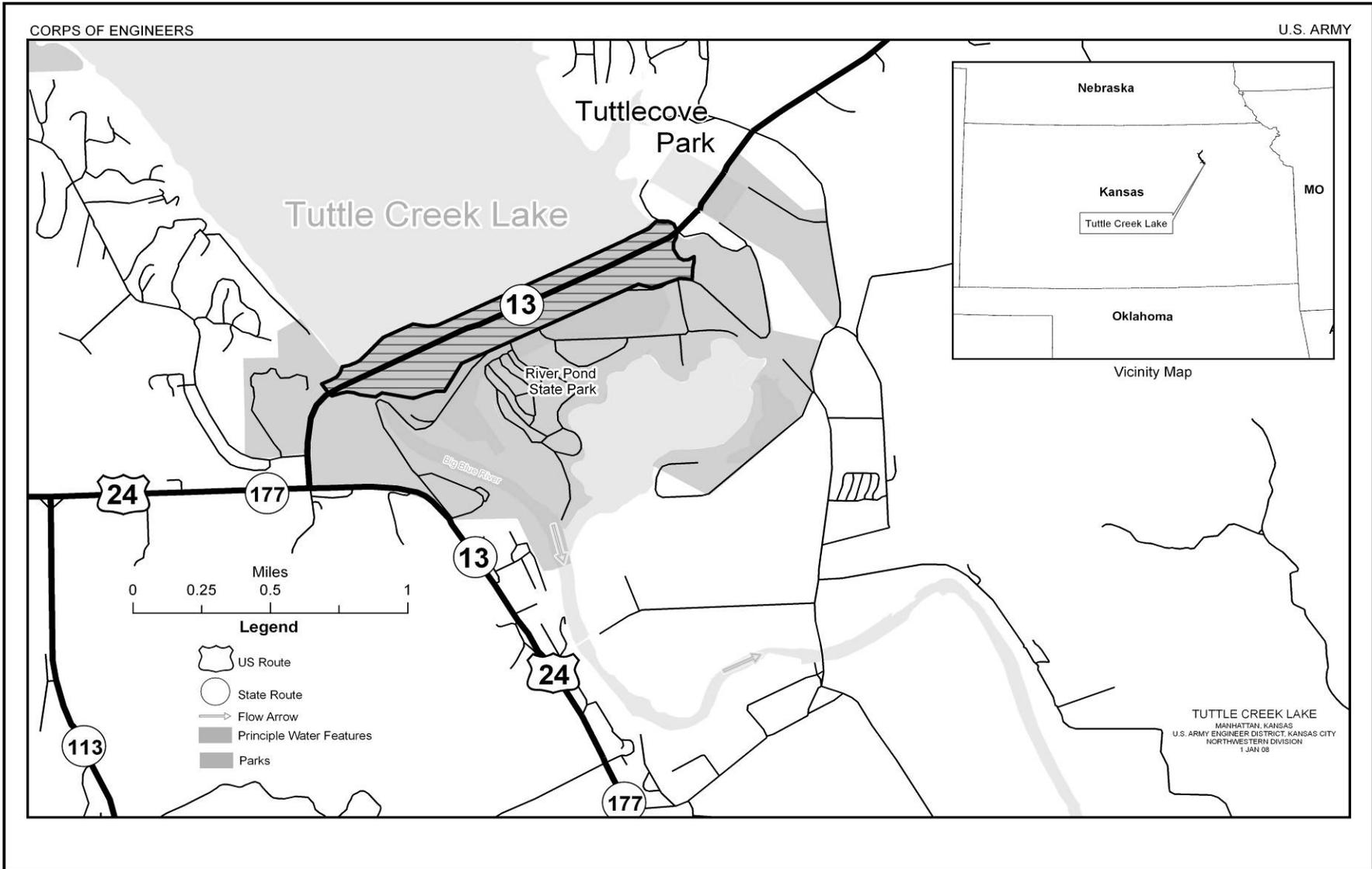
STATUS OF LOCAL COOPERATION: A cost sharing agreement is not required for the proposed dam safety improvements. However, there is an existing water supply contract with the State of Kansas for water supply storage and the State has provided reimbursement for 0.3735 percent of the original cost of construction and is continuing annual reimbursements for operation and maintenance. Accordingly, the State will be required to reimburse 0.3735 percent of costs of scheduled dam safety improvements, or approximately \$490,000. The state has been formally notified of the requirement and concurs with scheduled work.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$131,200,000 is a decrease of \$78,015,000 below the cost last presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Design Changes	\$78,015,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement and associated Evaluation Report were completed in July 2002. The final National Environmental Policy Act public comment period ended on November 2002, and Northwestern Division and Headquarters USACE approved the documents in December 2002. The Record of Decision was signed at Headquarters USACE on 06 January 2003.

OTHER INFORMATION: The Dam Safety Evaluation Report was approved in December 2002. Construction funds were first provided in FY 2003 through the Construction General, Dam Safety and Seepage/Stability Correction Program account. Based on recent analysis and National Risk Ranking criteria, the schedule and scope of work is currently under review. Efforts in FY08 and FY09 will be used to complete ongoing work.



HYDROPOWER

CONSTRUCTION

APPROPRIATION TITLE: Construction, Hydropower, Fiscal Year 2009

PROJECT: Columbia River Treaty Fishing Access Sites, Oregon and Washington (Continuing)

LOCATION: Thirty-two sites located along the Columbia River on Bonneville Pool, John Day Pool, and The Dalles Pool.

DESCRIPTION: The project includes land acquisition and access facility development on Bonneville, The Dalles and John Day pools and redevelopment of Celilo Village on The Dalles Pool. The intent is to provide "equitable satisfaction" of the United States government's commitment to replace usual and accustomed fishing sites inundated by construction of the Bonneville Dam. In 1855, the Tribes reserved the right to access and fish at usual and accustomed sites through treaties. The United States Supreme Court upheld these rights in 1905 and again in 1919. The improvements will include access roads, camping facilities, boat ramps and docks, sanitation and support facilities. Upon improvement, the land and improvements will be transferred to the U.S. Department of Interior for operation and administration on behalf of the Tribes.

AUTHORIZATION: Public Law 100-581 Title IV, as amended by Public Law 104-109, Public Law 104-303, Public Law 106-541, and Public Law 108-204.

REMAINING BENEFIT - REMAINING COST RATIO: N/A Economic justification is not required. This project is specifically authorized in PL 100-581 to mitigate Bonneville Project impact on the treaty fishing access on the Columbia River.

TOTAL BENEFIT-COST RATIO: N/A

THE INITIAL BENEFIT - COST RATIO: N/A

BASIS OF BENEFIT-COST RATIO: N/A

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 08)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Appropriation Requirement	\$ 93,144,000	Entire Project	85 %	TBD
Future Non-Federal Reimbursement	0			
Estimated Federal Cost (Ultimate)	0			
Estimated Non-Federal Cost	0			
Total Estimated Project Cost	\$ 93,144,000	PHYSICAL DATA: Improvements: Access roads, utilities, and camping facilities.		

Division: Northwestern

District: Portland

Columbia River Treaty Fishing Access Sites,
Oregon and Washington

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SUMMARIZED FINANCIAL DATA (continued)

			ACCUM % OF EST FED COST
Allocation to 30 September 2005	\$ 60,994,000		
Allocation for FY 2006	3,928,000		
Allocation for FY 2007	14,336,000		
Conference Allowance for FY 2008	1,666,000		
Allocation for FY 2008	1,666,000		
Allocations through FY 2008	80,924,000	<u>1/</u>	86%
Allocation Requested for FY 2009	2,455,000		89%
Programmed Balance to Complete after FY 2009	9,765,000		
Unprogrammed Balance to Complete after FY 2009	0		

1/ Includes \$8,339,000 transferred to Department of Interior for operation and maintenance of the completed sites.

JUSTIFICATION: In 1855, Indian Tribes of the Pacific Northwest entered into treaties with the United States. They ceded title to lands in the Columbia Basin and reserved the non-reservation treaty right to access the Columbia River and to take fish at "usual and accustomed" fishing places. In the 1930's, the United States constructed Bonneville Dam which inundated 37 of the treaty protected "usual and accustomed" sites. In accordance with a 1939 agreement between the War Department and the Indian Tribes, the United States was to provide 400 acres of land at six sites from Bonneville Dam to The Dalles, Oregon. Under subsequent authority the United States provided five sites totaling approximately 40 acres. In hearings held by the United States Senate Select Committee on Indian Affairs, Congress acknowledged the inequity and later enacted Public Law 100-581, Title IV - Columbia River Treaty Fishing Access Sites. The project provides "equitable satisfaction" of the United States government's commitment to replace those lands inundated by construction of the Bonneville project in accordance with the authorizing legislation.

NON-FEDERAL COSTS: Fully Federal funded.

STATUS OF LOCAL COOPERATION: N/A

FISCAL YEAR 2008: The current amount of \$1,666,000 is being used to continue Phase 2 construction of Celilo Village.

FISCAL YEAR 2009: The requested amount of \$2,455,000 will be applied as follows:

Continue construction of Celilo Village.....	\$	0
Initiate design of Wyeth treaty fishing access site	\$	800,000
Capitalization payment to Dept of Interior for completed sites	\$	255,000
Land acquisition on Bonneville pool	\$	1,400,000

Division: Northwestern

District: Portland

Columbia River Treaty Fishing Access Sites,
Oregon and Washington

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COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$93,144,000 is an increase of \$4,242,000 from the latest estimate presented to Congress (FY 2007). The increase is due to price leveling and the addition of Celilo Village Redevelopment to the authorized project.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Draft Environmental Assessment indicates the potential environmental impacts from the development are minor. The Environmental Assessment was completed and a Finding of No Significant Impact was signed in April 1995.

OTHER INFORMATION: The four involved Indian tribes include the Nez Perce Tribe of Idaho, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, and the Confederated Tribes of the Yakima Indian Nation. The Evaluation Report and the Post Authorization Change Report indicated that the recommended project is technically sound, cost effective, environmentally acceptable, and complies with applicable Corps of Engineers' procedures and regulations. However, the Post Authorization Report notified Congress of required changes to the boundaries or locations of 19 sites to improve constructability. Specific legislative language is included in Public Law 104-303. Also, the views of interested parties, including federal, state, and local agencies, have been considered. On 23 June 1995, a Memorandum of Understanding was signed between ASA(CW) and Bureau of Indian Affairs (BIA) for the Corps to fund, in advance, the capitalized costs for long-term O&M for all sites. Public Law 104-109 authorizes transfer of funds to Department of Interior to be used for operation and maintenance of improved sites. In December 2000 Public Law 106-541 amended the project authorization to increase the acquisition limit from \$2 million to \$4 million. In March 2004 Public Law 108-204 amended the project authorization to include rehabilitation of Celilo Indian Village, Oregon.



APPROPRIATION TITLE: Construction, Hydropower (Replacement), Fiscal Year 2009

PROJECT: Garrison Dam and Power Plant, North Dakota (Continuing)

LOCATION: The Garrison Dam Project is located in McLean and Mercer Counties in North Dakota on the Missouri River approximately 77 river miles upstream of Bismarck near Riverdale, North Dakota.

DESCRIPTION: Garrison Dam and Reservoir is a multi-purpose project consisting of a rolled earth-filled dam with a sheet pile cutoff, a hydroelectric power plant, and a reservoir with storage capacity of 23,821,000 acre feet for flood control, navigation, power, recreation, irrigation, and municipal supply. Five hydraulic turbine-driven generating units with a total plant rated capacity of 518 MW and the operation and maintenance facilities are housed in the powerhouse. The present hydropower benefits directly associated with Garrison Power Plant include (1) clean, non-polluting power generation for the region, and (2) average power generation revenues of about \$33.6 million per year to the U.S. Treasury. This replacement project will replace the existing turbine runners on all five units with new runners designed to improve reliability and maximize efficiency over a broad range of operating conditions. A Phase II scope was added from an addendum to the replacement project that was approved on 15 September 2004. The Phase II work will address upgrades to electrical components that will allow the project to maximize the full reliability and efficiencies obtained in the powerhouse upgrades.

AUTHORIZATION: Flood Control Act of 1944, PL 78-534 (existing project)

REMAINING BENEFIT-REMAINING COST RATIO: 4.1 to 1 at 7 percent

TOTAL BENEFIT-COST RATIO: 3.3 to 1 at 7 percent

INITIAL BENEFIT-COST RATIO: 1.9 to 1 at 7 3/4 percent (FY 1997)

BASIS OF BENEFIT-COST RATIO: Benefits are from the Garrison Dam & Power Plant Replacement Evaluation Report approved 27 February 1995 at 1994 price levels. Phase II benefits are from the Garrison Dam & Power Plant Replacement Evaluation Report Addendum approved 15 September 2004 at 2004 price levels.

SUMMARIZED FINANCIAL DATA:

		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement	\$105,183,000		Entire Project	60	To be determined
Estimated Non-Federal Reimbursement	105,183,000		Phase I	100	
Estimated Federal Cost (Ultimate)	0		Phase II	18	
Estimated Non-Federal Cost	105,183,000				
Cash Contributions	\$ 0		PHYSICAL DATA		
Other Costs	0		Phase I		
Reimbursement, Power	105,183,000		Power Installation:	3 Units at 109,250 KW	
Total Estimated Project Cost	105,183,000			2 Units at 95,000 KW	

Division: Northwestern

District: Omaha

Garrison Dam and Power Plant, North Dakota

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SUMMARIZED FINANCIAL DATA (continued)

Allocations through 30 September 2005	\$54,998,000	
Allocations for FY 2006	3,423,000	
Allocations for FY 2007	4,800,000	
Allocations for FY 2008	5,805,000	
Allocations through FY 2008	69,026,000	66
Allocation Requested for FY 2009	3,500,000	69
Programmed Balance to Complete after FY 2009	32,657,000	
Unprogrammed Balance to Complete after FY 2009	0	

PHYSICAL DATA (continued)

Phase II
Electrical Reliability Equipment

JUSTIFICATION: All five of the Garrison turbine runners have experienced cracking at the trailing edges of their runner blades near the runner crown. Cracking was first discovered on Unit 3 in 1958 during an annual inspection. Cracking has continued through the years such that occasional repairs of blades in Unit 1 and annual-to-biennial repairs of blades in Units 2 through 5 must be performed. The continued cracking jeopardizes the future reliability of the runners, creating a potential for long outages due to a possible failure requiring complete shutdown of an affected unit. While no failures have occurred, continued weld repairs produce increasingly unfavorable metallurgy and residual stress distribution, increasing the probability of a failure. Studies indicate that without the proposed correction the failure probability will gradually increase until failure occurs. Installation of new improved turbine runners for all five units will avoid such reliability problems, both present and future, by correcting the cyclic loading which causes the turbine runner blade cracking. This will decrease operation and maintenance costs and extend the life of the hydropower plant. Lost plant efficiency will be restored and efficiency will be increased beyond the original 1950's design without an increase in cost over a replacement option using in-kind turbine runners. The addendum work will allow the plant to achieve full efficiencies and reliabilities obtained from the ongoing replacement work. The generator set-up (GSU) transformers, electrical power train equipment, and switchyard equipment are from the original construction of the project, circa 1950. All are underrated and exhibiting conditions indicating they are nearing the end of productive life. The reliability of the generating power onto the transmission system by the Garrison project is no greater than the least reliable equipment in the electrical power train. Prior to the ongoing rehabilitation, the turbine-generators were capable of producing 98 MW each. As a result of the ongoing rehabilitation, the turbines and generators both are capable of producing 112.5 MW each. The existing electrical power train equipment and systems, along with associated peripheral equipment including GSU transformers and oil-filled pipe cable, and switchyard are rated for the 98 MW capacities of the turbine-generators prior to rehabilitation. Although the capacity of the turbine-generators is significantly increased, their capability is currently limited to 98 MW by this equipment. Average annual benefits are as follows:

Annual Benefits	Amount
Deferred Maintenance Benefits	\$ 3,144,100
Restored Efficiency Benefits	7,903,500
Efficiency Improved Benefits	5,457,400
Total Benefits	\$16,505,000

FISCAL YEAR 2008: The allocated amount of \$5,805,000 will be applied as follows:

Switchyard Improvements & misc. electrical component replacement unit #5 (including associated E&D and S&A) (new contract)	<u>5,805,000</u>
Total	\$5,805,000

FISCAL YEAR 2009: The requested amount of \$3,500,000 will be applied as follows:

Replace Autotransformers #1 and #2 (including associated E&D and S&A) (new contract)	<u>3,500,000</u>
Total	\$3,500,000

NON-FEDERAL COSTS: Garrison Dam is a multi-purpose project, and the cost for the turbine runner modifications will benefit hydropower generation only. The hydropower from Garrison Powerplant is marketed by Western Area Power Administration (WAPA), through which project costs are ultimately repaid to the Treasury. WAPA has provided a letter stating that they "will be able to market any additional power gained through increased efficiency of the turbines."

STATUS OF LOCAL COOPERATION: N/A

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$105,183,000 is unchanged from the latest estimate presented to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The proposed rehabilitation is not a major Federal action that would significantly affect the quality of the human environment, and therefore did not require the preparation of an environmental impact statement. The U.S. Fish and Wildlife Service concurred with the "Finding of no Significant Impact."

OTHER INFORMATION: This project consists of replacing all 5 turbine runners at the Garrison Dam Project. Turbine related work was completed under a furnish and install contract. Machining and painting work were subcontracted. The units removed were dismantled and sold as scrap metal, except for one unit that has become a display for the plant tourists. Additional work consisting of fabricating and installing new wicket gates and replacing existing circuit breakers and transformers was added to the project in FY00. Additional work consisting of removal of the existing generator coils and iron core, re-level and align the stator frame and purchase and install new laminations and coils was added to the project in FY02 as a result of unexpected shaft alignment problems on 3 generator units. There is no requirement to undertake fish and wildlife mitigation measures in conjunction with this rehabilitation project.

Now that the turbine and generator rehab is complete, the generators have increased capacity and ratings significantly greater than the capability of the existing electrical power train and peripheral equipment. The turbines and generators both are capable of producing 112.5 MW each. The existing electrical power train equipment and systems, along with associated peripheral equipment, are rated for 98 MW capacities of the turbines and generators prior to the rehabilitation. Although the capacity of the turbine generators is significantly increased, their capability is still limited to the 98MW of the existing equipment. Consequently an addendum to the Major Rehab report was prepared and approved on 15 September 2004. The addendum report includes replacement of the existing transformers, electrical power train, peripheral equipment, and switchyard equipment. The additional construction cost was originally estimated at \$51,399,700 with an incremental benefit-to-cost ratio of 2.52. Completion of the approved plan will take approximately three years to award all contracts and 5 years to physically complete the work. The Western Area Power Administration (WAPA), the Federal power marketing agency with marketing jurisdiction over the power produced at Garrison, has provided a letter of support for the recommended plan.

Initial construction of the powerhouse was completed in 1955.

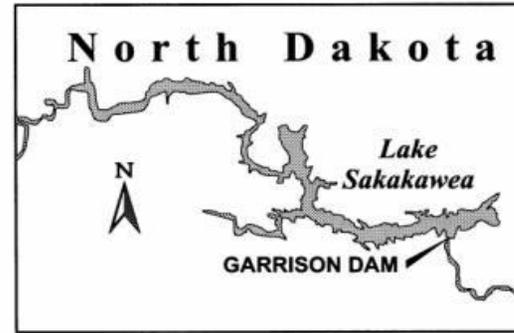
Division: Northwestern

District: Omaha

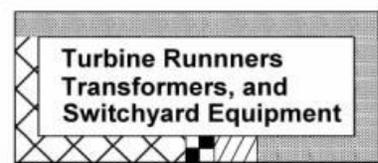
Garrison Dam and Power Plant, North Dakota

4 February 2008

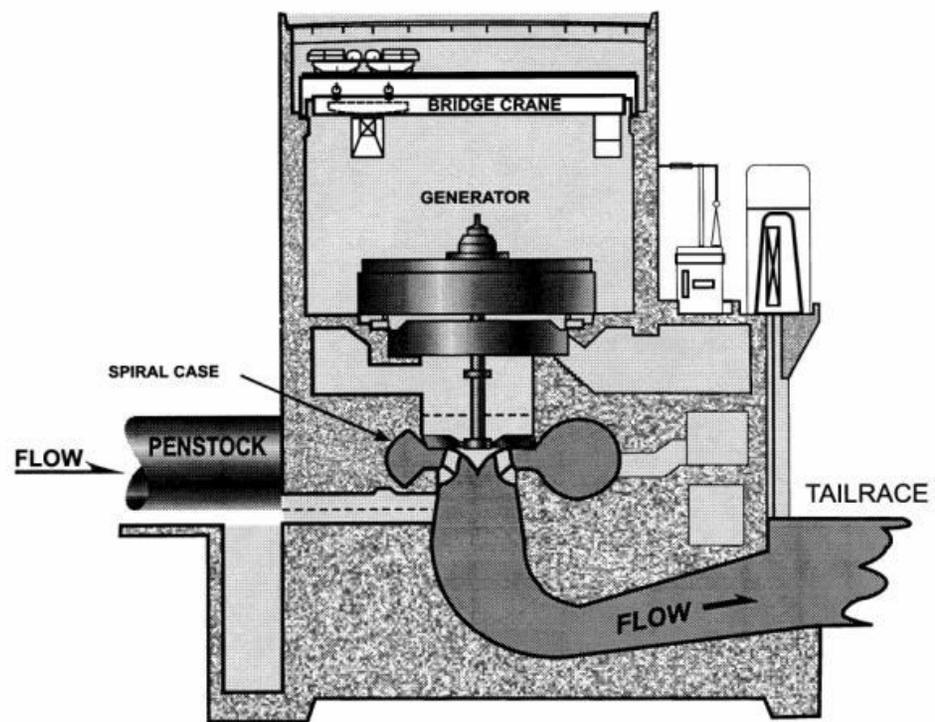
NWD - 48



VICINITY MAP



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



TRANSFER SECTION THRU GARRISON DAM POWER PLANT

**GARRISON DAM & POWER PLANT
NORTH DAKOTA
MAJOR REHABILITATION**
U.S. Army Engineer District, Omaha
Northwestern Division

NAVIGATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Northwestern

Study	Total Estimated Federal Cost	Allocation Prior to FY 2006	Allocation FY2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
	\$	\$	\$	\$	\$	\$	\$
Missouri River Degradation, MO Kansas City District	1,795,000	0	0	0	295,000	88,000	1,412,000

The Missouri River has exhibited significant degradation or downcutting of the riverbed, and it is particularly acute between miles 340 and 400 in Kansas City. This phenomenon has been observed by evaluation of Missouri River gage data collected over a long period of time. In other reaches of the Missouri River from Rulo, Nebraska to St. Louis, MO, data indicates that the river bed is relatively stable. Concern has been expressed by local entities that continued degradation within this reach could destabilize the navigation structures, the bank stability, and impact local intake/discharge infrastructure (i.e., water supply intake structures, power supply intake structures, and other critical infrastructure along the river). Continued degradation could also impact Federal interests in the existing Kansas City's Metropolitan Flood Protection System. The city of Kansas City, Missouri has expressed support for a study on bed degradation and potential methods to control or eliminate future impacts.

In 2009 we will use the \$88,000 to initiate feasibility studies to acquire new and existing data as required. Initiate modeling to characterize hydraulic, geomorphology, bank stability and sediment conditions. Initiate investigations to evaluate and characterize the causes and determine the most predominant causes of degradation. Initiate preparation of statistical analyses and evaluation of trends, as well as forecast of future effects on infrastructure, Federal projects, and economic conditions to develop the likely future condition of the River without Federal action. The panel of expert team members initially formed during reconnaissance phase will be confirmed and further engaged in study planning activities.

Fiscal Year 2008 funds will be used to initiate and complete a reconnaissance study and prepare a Project Management Plan. Fiscal Year 2009 funds will initiate the feasibility study.

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. Part of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$3,295,000
Reconnaissance Phase (Federal)	295,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

The schedule for completion of the final feasibility study is TBD.

CONSTRUCTION

APPROPRIATION TITLE: Construction, Navigation, Fiscal Year 2009

PROJECT: Columbia River Channel Improvements (Columbia River Element), Oregon and Washington

LOCATION: The project area begins at the mouth of the Columbia River (river mile 3) and extends upstream to the vicinity of the Port of Vancouver, Washington (river mile 106.5), and also includes the Lower Willamette River from its confluence with the Columbia River (river mile 101.5) upstream to the vicinity of downtown Portland (river mile 11.6).

DESCRIPTION: Lower Columbia River ports have been the primary shipping point for West Coast grain and feed grain exports for many years. More than 40 million tons of commerce annually is shipped to or from Lower Columbia River ports valued at \$16 billion in 2004. Increasing trade between the Pacific Northwest states and the Pacific Rim nations has accentuated the need for a deepened navigation channel in the Lower Columbia River, to accommodate larger, deeper-draft vessels. The channel is currently at a 40-foot depth and generally a 600-foot width. The project area begins at the mouth of the Columbia River and extends upstream to the vicinity of the Port of Vancouver, Washington (approximately river mile 105), and also includes the Lower Willamette River from its confluence with the Columbia River (river mile 101.5) upstream to the vicinity of downtown Portland (approximately river mile 11). The Willamette River portion of construction has been deferred. The purposes of the project are to improve the deep-draft transport of goods on the authorized navigation channel and to provide ecosystem restoration for fish and wildlife habitats.

AUTHORIZATION: P.L. 106-53 Water Resources Development Act of 1999, Section 101(b)(13), and P.L. 108-199 Consolidated Appropriations Act, 2004, Division H, Section 123.

REMAINING BENEFIT - REMAINING COST RATIO: 3.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 7 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from approved Final Supplemental Integrated Feasibility Report and Environmental Impact Statement for Channel Improvements, Columbia River Federal Navigation Channel, dated January 2003.

THE INITIAL BENEFIT - COST RATIO: 1.9 to 1 at 6-7/8% (FY 2001)

SUMMARIZED FINANCIAL DATA 1/

		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
			Columbia River	69%	To Be Determined
			Willamette River	0%	To Be Determined
Estimated Federal Cost	\$110,024,000	<u>3/</u>			
Estimated Non-Federal Cost	60,784,000	<u>2/</u>			
Cash Contributions	\$40,468,000	<u>2/</u>			
Other Costs	20,316,000				
Total Estimated Project Cost	170,808,000	<u>2/</u>			
					PHYSICAL DATA
Allocations to 30 September 2005	\$13,914,000				Deepen 103.5 miles of the Columbia river channel from 40' to 43'.
Allocation for FY 2006	14,850,000				Deepen 11.6 miles of the Willamette river channel from 40' to 43'.
Allocation for FY 2007	30,500,000				Deepen three turning basins on the Columbia and three on the Willamette to 43'.
Conference Allowance for FY 2008	14,760,000				Construct environmental mitigation and restoration features at selected locations
Allocation for FY 2008	14,760,000				
Allocations through FY 2008	74,024,000	<u>3/</u>	69%		
Allocation Requested for FY 2009	36,000,000		100%		
Programmed Balance to Complete after FY 2009	0	<u>4/</u>			
Unprogrammed Balance to Complete after FY 2009	0				

1/ The summarized financial data excludes cost of the Willamette River Channel Improvements element.

2/ Includes \$3.315 million increment of the Locally Preferred Plan (LPP) over NED Plan and credit for an estimated \$10 million of non-Federally performed work.

3/ Includes \$1,340,000 of Investigation (Preconstruction Engineering and Design) funds.

4/ If blasting is required an additional \$25 million will be needed to complete the project.

JUSTIFICATION: The need for navigation improvements has been driven by the steady growth in waterborne commerce and the use of larger, more efficient vessels to transport bulk commodities. With the increased use of deep-draft vessels, limitations posed by the existing channel dimensions now occur with greater frequency. By improving navigation, the opportunity to realize greater benefits would result from reducing transportation costs by allowing deep-draft vessels to carry more tonnage, and by reducing vessel delays. For these reasons, a coalition of the Lower Columbia River Ports (Port of Portland in Oregon and Vancouver, and Kalama, Longview, and Woodland in Washington) committed to sponsor the project construction. Columbia River ports are second in the world in grain exports. Each year, about 2,000 ocean-going ships transit the Columbia River, carrying approximately \$15 billion in imports and exports. Deepening the Columbia River from 40-43 feet is necessary to accommodate the larger, deeper-draft cargo ships that comprise a growing share of worldwide shipping fleets. Today, 20 percent of the wheat, 45 percent of the corn, 70 percent of the soybeans, and 90 percent of the containerized exports leaving lower Columbia River ports are carried on ships requiring some or all of the additional three feet in depth.

Division: Northwestern

District: Portland

Columbia River Channel Improvements, OR & WA

4 February 2008

FISCAL YEAR 2008: The current amount of \$14,760,000 is being applied as follows: Deepen approximately 10 river miles, construct one mitigation site, and construct one ecosystem restoration feature.

FISCAL YEAR 2009: The requested amount of \$36,000,000 will be applied as follows:

Complete channel deepening and mitigation	\$31,000,000
Complete ecosystem restoration	\$ 5,000,000

NON-FEDERAL COSTS:

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements for Local Cooperation		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal area.	19,374,000	
Modify or relocate or remove utilities, roads bridges (except railroad bridges), dredging of berthing areas, and other facilities, where necessary for construction of the project.	942,000	
Pay 25 percent of the separable and joint costs allocated to the NED plan for navigation channel improvements offset by credit for authorized construction (an estimated \$10 million) by the sponsor from river mile 95 to the upstream end of the project, and have the amount credited against their total cost share.	30,233,000	
Pay an estimated \$2,483,000 for the incremental first costs of the locally preferred plan over the NED plan and pay an estimated \$450,000 in incremental annual operating and maintenance costs over the operating and maintenance costs of the NED navigation plan.	2,483,000	450,000
Pay 35 percent of the first costs allocated to ecosystem restoration and provide all costs for ecosystem restoration operation and maintenance	5,747,000	38,000
Total Non-Federal Costs	58,779,000	488,000

Division: Northwestern

District: Portland

Columbia River Channel Improvements, OR & WA

4 February 2008

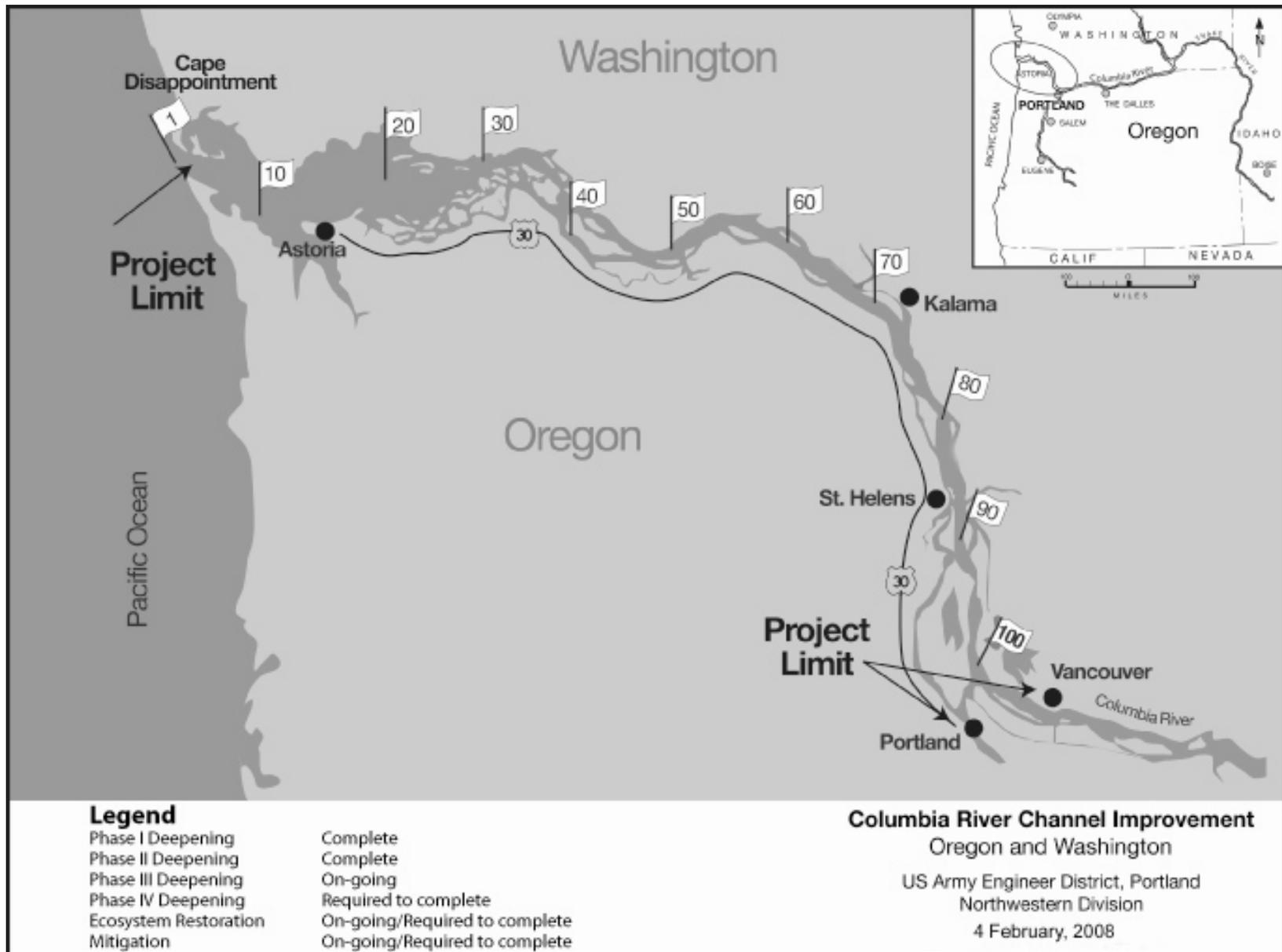
STATUS OF LOCAL COOPERATION: The non-federal sponsors for this project are the Ports of Portland, Oregon and Vancouver, Kalama, Longview, and Woodland, Washington. The PCA was executed on 23 June 2004. The non-Federal sponsors are committed to this project and have all funds necessary to construct the project. It should be noted that, at the request of the local sponsors, dredging of the Willamette River will be delayed in order to allow coordination with an ongoing EPA and State of Oregon evaluation and remediation planning for the Portland Harbor. This will delay construction of the Willamette River portion to insure that final implementation decisions incorporate both the evaluation results and the remediation plan.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$110,024,000 is an increase of \$2,637,000 from the last estimate submitted to Congress (FY 2008). The increase is due to post contract award and other estimating adjustments.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Corps of Engineers completed a new Biological Assessment for the project in December 2001. NMFS and USFWS issued new no-jeopardy Biological Opinions in May 2002. The Corps completed a Supplemental Integrated Feasibility Report and Environmental Impact Statement in November 2002. The Record of Decision was signed on 9 January 2004.

OTHER INFORMATION: The project was authorized for construction in WRDA 1999. Construction funding was first appropriated in FY 2001.

The disposal sites will consist of 29 upland sites, with a total of 1,681 acres; three beach nourishment and two ocean disposal sites for the disposal of construction and subsequent channel maintenance dredged material. Fourteen of the upland disposal sites, totaling 1,025 acres, are currently in use. All Federal and State approvals have been received.



Division: Northwestern

District: Portland

Columbia River Channel Improvements, OR & WA

4 February 2008

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Lower Columbia River Ecosystem Restoration, OR & WA Portland District	3,191,000	470,000	148,000	290,000	98,000	100,000	2,085,000

The Lower Columbia River Ecosystem Restoration study extends from the mouth of the Columbia River to river mile (RM) 145 at Bonneville Lock and Dam; its estuary is classified nationally significant under the National Estuary Program (NEP). The river divides the states of Oregon and Washington throughout this area. The study area includes a 40-foot deep-draft federal navigation channel from the mouth of the river to the Portland metropolitan area about RM 105 and a shallow draft channel upstream to RM 145. The Corps of Engineers' 125-year involvement with the Lower Columbia Basin system includes flood and coastal storm damage reduction, navigation, fish and wildlife, environmental restoration, hydropower, bank protection, recreation and water supply improvements.

Competing water resource requirements and significant environmental degradation has occurred within the Lower Columbia Basin system. Modification of the system by human activities has led to a marked change in the hydrologic regime, and caused pollution and substantial losses of instream, riparian and wetland habitats, and a concomitant reduction in fish and wildlife resources. Flood control, water quality, navigation, water-related infrastructure, and ecosystem restoration needs have all been evaluated on a case-by-case basis. Twelve different populations of anadromous salmonids that reproduce in the Columbia River Basin have been listed as threatened or endangered and they all use the estuary to some extent. Such listings have broad implications to existing water resource uses, and future developments. The updated proposed action for the Columbia River Federal Power System includes actions calling for planning and restoration efforts in the Columbia River estuary to help avoid jeopardy for these listed species. 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. Much of this wetland loss can be attributed to the 84,000 acres encompassed by diking districts and the 20,000-acre increase in urban development that has occurred along the lower Columbia River.

The purpose of this ongoing study is to investigate and recommend appropriate solutions to accomplish a comprehensive ecosystem approach for addressing restoration and water resource opportunities in the Lower Columbia River Basin and is not limited to the tidally influenced areas but is ecosystem-wide in scope. A comprehensive, long-range approach to address water resource problems and opportunities for the Lower Columbia River is needed. Some of the key areas to be addressed in this comprehensive study include wetland/riparian habitat restoration and stream and fisheries habitat improvement. It is imperative that reversals of these impactful trends occur now before further growth causes irreparable impairment of current water uses and ecosystem functions, and while regional interest and financial support is high. This comprehensive watershed study would serve as the catalyst to bring together and implement current efforts by a number of governmental and private organizations including the NEP, six state agencies from Oregon and Washington, four Federal agencies, recreation, ports, industry, agriculture, labor, commercial fishing, environmental interests and citizens. The states of Washington and Oregon have jointly sponsored the study. The project has the potential to add up to 10,000 acres of Estuarine / Riverine emergent and forested wetland, consistent with the Lower Columbia River Estuary Partnerships Comprehensive Conservation Management Plan and Washington State recovery plans.

Lower Columbia River Ecosystem Restoration, Oregon and Washington (continued)

The Fiscal Year 2008 funds will be used to continue the feasibility phase. Specific actions include development of programmatic project methodologies, benefit types and initial project screening criteria. Funds will also be use to coordinate with the sponsors on specific site selection and project development.

The Fiscal Year 2009 funds will be used to continue the feasibility phase. Specific actions include the screening and refining the potential actions and alternatives for the identified sites and begin to develop costs and benefits for potential actions.

The estimated cost of the feasibility phase is \$6,000,000, which will be shared on a 50-50 percent basis by the Corps and the non-Federal sponsor. All or part of the non-Federal share may be in-kind services. Sponsors have provided \$539,336 in work-in-kind to date. A summary of study cost sharing is as follows:

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

The reconnaissance study was completed in Aug 2001. The states of Oregon and Washington are jointly sponsoring the study and understand the cost sharing provisions associated with the feasibility phase of the study. The FCSA was executed 16 December 2003. The schedule for completion of the feasibility study is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Puget Sound Nearshore Marine Habitat Restoration, WA Seattle District	10,123,000	2,171,000	748,000	1,527,000	1,279,000	400,000	3,998,000

The Puget Sound Nearshore study area is located along the marine shorelines and waters of Puget Sound, WA. Over the years a significant amount of estuary, wetlands, marsh, river delta, and marine shoreline habitat in Puget Sound has been destroyed or degraded through development, including a 70% loss of estuarine wetlands and 60% beach degradation. The degradation has contributed to a severe reduction in the number of fish and wildlife being produced or residing in the nearshore area. Numerous Endangered Species Act (ESA) listed species use the nearshore for forage, nesting, and/or migration. These include southern resident Orca whale, marbled murrelet, stellar sea lion, sea otter, brown pelican, short-tailed albatross, Puget Sound bull trout, Puget Sound chinook, Hood Canal summer chum, and steelhead trout.

The study is identifying ways to restore nearshore habitat for fish and wildlife within the Puget Sound Basin, including all the major sub-basins - Hood Canal, South, Central and North Puget Sound, and the Straits of Georgia and Juan De Fuca. Twenty management measures, such as dike and seawall removal, beach restoration, and tidal marsh nutrient recycling, have been identified that address the fundamental causes of declining Puget Sound ecological health. This study is strongly supported by multiple local, state, and Federal agencies, and is part of an ongoing multi-agency effort to restore and improve habitat throughout Puget Sound. In Fiscal Year 2007 the Governor of the State of Washington reaffirmed this project as a priority restoration initiative for the state, including naming 12 Nearshore team members to her Puget Sound partnership and science committee. She acknowledged the project's role in her "Sound Health, Sound Future" report and allocated \$61 million to protect and restore Puget Sound nearshore ecosystems in her 2008-2009 budget.

Fiscal Year 2007 funds were used to continue an inventory of ecologically significant Puget Sound changes and an analysis of future-conditions. The strategic assessment initiated in 2007 will identify potential large-scale restoration project locations and integrate smaller community based restoration activities.

Fiscal Year 2008 funds will be used to complete the strategic needs assessment, and to reevaluate the Feasibility Cost Share Agreement (FCSA) for scope, cost, and schedule with the local sponsor. Total estimated study cost, stated below, will be better determined during the FCSA reevaluation.

Fiscal Year 2009 funds will be used to begin to formulate feasible solutions.

A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$20,123,000
Reconnaissance Phase (Federal)	123,000
Feasibility Phase (Federal)	10,000,000
Feasibility Phase (Non-Federal)	10,000,000

The reconnaissance phase was completed in December 2000. The FCSA was executed on 28 September 2001. The study is currently in the feasibility phase and the completion date is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Willamette River Flood Plain Restoration, Oregon Portland District	2,116,000	997,000	396,000	400,000	83,000	240,000	0

The Willamette River, Oregon, is a major tributary of the Columbia River and the tenth largest river in the United States based on average annual flow. The Basin comprises an area of approximately 11,741 square miles, or about 12 percent of the land area of the state (USGS, 1991). All or portions of four of Oregon's five Congressional Districts lie within the Basin: District 1 (Wu), District 3 (Blumenauer), District 4 (DeFazio), and District 5 (Hooley).

After a thirty-year absence, major flooding became a real and powerful presence in February 1996 for the Willamette River Basin in Oregon. Flood frequencies ranged from a 2- to 200-year event. Twenty-three counties were declared disaster areas. Cities suffering major damage include Portland, Tualatin, Lake Oswego, Salem, Keizer, Oregon City as well as many other communities. Damages throughout the state are estimated in excess of \$286 million dollars, including about \$40 million in housing losses, \$30 million in business losses, \$28 million in agricultural losses, and \$188 million in local government facility losses. The existing Willamette reservoir system only controls about 27 percent of the basin runoff. The 1996 flood emphasizes an urgent need for additional flood damage reduction measures for the Willamette Basin. Traditional measures, such as large storage projects, are no longer practical or environmentally feasible.

In addition to flooding, there is an urgent need to address ecosystem restoration needs. The Corps is consulting with NOAA-F and USFWS on continued operation of 13 reservoir projects in the Willamette Basin. A draft Biological Opinion (BO) from NOAA-F (April 2004) indicates that project operations jeopardize Upper Willamette Chinook salmon and winter steelhead, listed as Threatened under ESA. Loss of aquatic habitat due to reservoir operations and historic bank protection measures undertaken by the Corps is seen as a critical factor in decline of populations of those species. Draft RPA measures in the BO call for the Corps to undertake efforts to restore degraded downstream habitat in the floodplain. The Willamette River also does not meet Clean Water Act standards for temperature, in part due to reservoir operations. River temperatures are another limiting factor for endangered salmonids. The Corps is working cooperatively with Oregon Department of Environmental Quality to develop temperature Total Maximum Daily Loads (TMDLs) for the Willamette River. Shading associated with restored riparian forests and increased groundwater flows resulting from increased floodplain connectivity are viewed as important measures for helping reduce river temperatures. The feasibility study and potential projects resulting from it are viewed as a important vehicle for implementing such measures. The Willamette is designated as an American Heritage River (AHR). Section 202 of the Water Resources Development Act of 2000 (P.L. 106-541, 11 December 2000) "Watershed and River Basin Assessments authorized the Secretary of the Army to assess the water resources needs of river basins and watersheds of the United States. The Willamette River Basin was identified as one of five priority watersheds.

This flood plain restoration study assesses opportunities to modify existing flood plain features in the Willamette Valley to reduce flood damages while restoring natural wetlands and promoting ecosystem restoration. The reconnaissance study (Section 905(b) Analysis) was completed in April 1999. It recommended following a two-phase approach in the Feasibility study. The Feasibility Cost-Sharing Agreement was executed in January 2004. The Willamette Restoration Initiative, acting through its fiscal agent the Mid-Willamette Council of Governments, is the local sponsor. Oregon Department of Fish and Wildlife and several other state agencies will provide cash and in-kind services in support of the sponsor's share. The first phase I of the feasibility study, completed in August 2004, resulted in the "Willamette Subbasin Plan", a watershed-based framework plan for the entire Willamette Basin with a focus on prioritizing needs for restoring habitat for aquatic and related terrestrial species. The second phase, currently underway, is a more focused study on the Middle and Coast Forks of the Willamette.

Willamette River Flood Plain Restoration, Oregon (Continued)

The Feasibility Study has the potential to restore natural floodplain function along up to 70 miles of the Coast and Middle forks, including riverine aquatic bed, forested wetland and riparian woodland habitat. This study and subsequent projects have the potential to cost share habitat restoration for endangered species with a non-federal sponsor.

Fiscal Year 2008 funds will be used to continue feasibility phase.

Fiscal Year 2009 funds will be used to continue feasibility phase.

Coordination is on-going with key stakeholders to add biologically important areas into the project, resulting in an increased scope and length of the Feasibility Study. This will require the agreement to be revised, and \$239,000 will be used to continue the Feasibility phase of the project and the total estimated Federal Cost will be increased. The estimated cost of feasibility phase is shared on a 50-50 percent basis by the Corps and the non-Federal sponsor. All or part of the non-Federal share will be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$ 3,840,000
Reconnaissance Phase (Federal)	392,000
Feasibility Phase (Federal)	1,724,000
Feasibility Phase (Non-Federal)	1,724,000

The reconnaissance study (Section 905(b) Analysis) was completed in April 1999. The Feasibility Cost-Sharing Agreement was executed in January 2004 and its schedule for completion is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Northwestern Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional After FY 2009 \$
Yellowstone River Corridor, Montana Omaha District	4,759,000	739,000	396,000	1,100,000	313,000	200,000	2,011,000

The study area from Gardiner, Montana, to the confluence of the Missouri River is 515 river miles of the Yellowstone River corridor, defined linearly as approximately 600 river miles in Montana and North Dakota and laterally from the channel as the upper riverine terrace formed from historic fluvial processes, has been subject to natural and human interactive factors affecting sustainable use and conservation of resources. Flooding in 1996 and 1997 caused damage to private landowners and public facilities with a subsequent increase in requests for regulatory approvals under Section 10 of the Rivers and Harbors Act/Section 404 of the Clean Water Act as well as for Corps of Engineers emergency technical assistance. Given the natural and historic heritage of this river corridor, issues regarding the long-term effects of bank stabilization and the potential for significant adverse cumulative impacts have been raised by public and private sector and environmental interests. In contrast, issues regarding an individual's right to protect personal property and more local control of floodplain/riverine activities have been evident from the landowner and local government interest groups.

A comprehensive study of the Yellowstone River corridor from Gardiner, Montana, to the confluence of the Missouri River is to determine the hydrologic, biological and socioeconomic cumulative impacts as authorized by Section 431 of Water Resources Development Act of 1999.

The 515 miles of the corridor will be subdivided into representative river reaches (totaling approximately 250 miles), which will be studied in detail. The sub-reaches will be based on hydro geomorphic characteristics and comparative analyses of altered vs. unaltered reaches will be conducted. These comparison studies will form the basis for analyzing the cumulative effect of past, present, and potential future land use changes. The cumulative effects analysis will form the basis for formulation of management and protection objectives in concert with the local public/private sector interest groups.

A related Upper Yellowstone River Study was directed by the 1999 Energy and Water Development Appropriation Bill, Senate Report 105-206. This special area management plan study from Gardiner to Springdale, MT, a reach of about 85 miles, is assessing the long-term effects of streambank stabilization on that reach of the river. The Yellowstone River Corridor Study will incorporate results from the ongoing Upper Yellowstone River technical studies.

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 1) develop the formulation of management and protection objectives; 2) evaluate trade-offs among objectives; 3) assess environmental impacts as a factor in determining the acceptability of management objectives as contrasted with potential long-term riparian deterioration.

Yellowstone River Corridor, Montana (continued)

The Feasibility Cost Sharing Agreement (FCSA) was signed in January 2004. The cost share sponsor is the Custer County Conservation District, the fiscal agent for the Yellowstone River Conservation District Council (YRCDR). The sponsor has provided \$900,000 in in-kind services through Fiscal Year 2007.

Fiscal Year 2008 funds are being used to continue the feasibility study. The funds requested for Fiscal Year 2009 will also be used to continue the feasibility phase of the study. The preliminary estimated cost of the feasibility phase is \$5,800,000, which is to be shared on a 75-25 percent basis by Federal and non-Federal interests. All of part of the non-Federal share may be in-kind services. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$ 6,209,000
Reconnaissance Phase (Federal)	409,000
Feasibility Phase (Federal)	4,350,000
Feasibility Phase (Non-Federal)	1,450,000

In accordance with Section 431 of P.L. 106-53, this study is to be performed in consultation with the United States Fish and Wildlife Service (USFWS), United States Geological Survey (USGS), Natural Resources Conservation Services (NRCS) and with full participation of the State of Montana, and the tribal and local entities, and provide for public participation. Funding for the consultation efforts of the USFWS and NRCS during the study should be obtained by each respective agency.

The reconnaissance phase was completed in January 2004. The feasibility study schedule for completion is to be determined.

CONSTRUCTION

PROJECT: Lower Columbia River Ecosystem Restoration, Oregon and Washington – (Continuing)

LOCATION: The Lower Columbia River extends from the mouth of the Columbia River to river mile (RM) 145 at Bonneville Lock and Dam. The river divides the states of Oregon and Washington throughout this area.

DESCRIPTION: The study areas include the estuary of the Columbia River and all of the tributaries of the Columbia River that are tidally influenced, which includes the Willamette River up to Willamette Falls. Justification for the project is based on non-monetary quantitative change in fish and wildlife habitat units and other biological benefits. Since benefits are non-monetary, a benefit-to-cost ratio has not been prepared. A comprehensive conservation and management plan was developed for the Lower Columbia River under Section 320 of the Federal Water Pollution Control Act (33 U.S.C. 1330).

AUTHORIZATION: Section 536 of the Water Resources Development Act of 2000 (P. L. 106-541, dated 11 December 2000).

REMAINING BENEFIT - REMAINING COST RATIO: N/A (Environmental restoration project costs are not subject to formal benefit calculations.)

TOTAL BENEFIT-COST RATIO: N/A

BASIS OF BENEFIT-COST RATIO: N/A

SUMMARIZED FINANCIAL DATA:

		ACCUM % OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost	\$20,000,000		Entire Project	42%	To be determined
Estimated Non-Federal Cost	4,000,000				
Cash Contributions	TBD				
Total Estimated Project Cost	\$24,000,000				
Allocations to 30 September 2005	3,214,000				
Allocation for FY 2006	1,978,000				
Allocation for FY 2007	2,200,000				
Conference Allowance for FY 2008	1,688,000				
Allocation for FY 2008	1,688,000				
Allocations through FY 2008	9,080,000	45%			
Allocation Requested for FY 2009	1,500,000	53%			
Programmed Balance to Complete after FY 2009	9,420,000				
Unprogrammed Balance to Complete after FY 2009	0				

PHYSICAL DATA:

Types of projects will include, but not be limited to:
a) creation and restoration of shallow water habitat;
b) restoration of wetlands;
c) improvements to fish passage;
d) restoration of floodplain functions and other actions to restore the estuary ecosystem.

Division: Northwestern

District: Portland

Lower Columbia River Ecosystem Restoration
Oregon and Washington

4 February 2008

JUSTIFICATION: NOAA Fisheries has identified the Columbia River Estuary as playing a vital role in rebuilding the productivity of Columbia River Basin salmon and steelhead listed under the Endangered Species Act. Over time, this basin has experienced considerable changes in water resource needs and uses. In addition, significant environmental degradation has occurred within the lower Columbia system. Modification of the system by human activities has led to a marked change in the hydrologic regime, and caused pollution and substantial losses of in-stream, riparian and wetland habitats, and a concomitant reduction in fish and wildlife resources. Flood control, water quality, navigation, water-related infrastructure, and ecosystem restoration needs have all been evaluated on a case-by-case basis. Twelve different populations of anadromous salmonids that reproduce in the Columbia River Basin have been listed as threatened or endangered and they all use the estuary to some extent. Such listings have broad implications to existing water resource uses, and future developments. The updated proposed action for the Federal Columbia River Power System (FCRPS) includes actions calling for planning and restoration efforts in the Columbia River estuary to help avoid jeopardy for these listed species. 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. Much of this wetland loss can be attributed to the 84,000 acres encompassed by diking districts and the 20,000-acre increase in urban development that has occurred along the lower Columbia River.

The implementation of the Lower Columbia River element of this section 536 legislation will serve as the catalyst to bring together and implement current efforts by a number of governmental and private organizations including the National Estuary Program, six state agencies from Oregon and Washington, four Federal agencies, recreation, ports, industry, agriculture, labor, commercial fishing, environmental interests and citizens to identify and cost share restoration projects.

NON-FEDERAL COSTS: The authorization provides that studies shall be subject to cost sharing in accordance with Section 105 of WRDA 1986 and that restoration projects shall be cost shared at 35% by non-Federal interests, that nonfederal interests shall provide all lands, easements, rights-of-way, dredged material disposal areas, and relocations necessary for the projects to be carried out and that in-kind contributions can not exceed 50% of the non-Federal share. However, the Federal share of projects carried out on Federal lands shall be 100%.

STATUS OF LOCAL COOPERATION: Project Cooperation Agreements for individual restoration sites are prepared/executed as they are identified.

- (1) Crims Island Site: A Memorandum of Agreement was executed in May 2004 with U.S. Fish and Wildlife Service.
- (2) Columbia River Riparian Site: A Memorandum of Understanding was executed in February 2006 with U.S. Dept. of Agriculture (Forest Service).
- (3) Julia Butler Hanson Site: A Memorandum of Agreement is scheduled to be executed in February 2008 with U.S. Fish and Wildlife Service.
- (4) Water Resources Education Center Site: A Project Cooperation Agreement is scheduled to be executed in September 2008 with the City of Vancouver, WA.
- (5) Sandy River Delta Site: A Memorandum of Agreement is scheduled to be executed in June 2010 with U.S. Dept of Agriculture (Forest Service).
- (6) Vancouver Lake Site: A Project Cooperation Agreement is scheduled to be executed in September 2011 with Clark County Public Works, WA.

FISCAL YEAR 2008: The current amount of \$1,688,000 is being applied in the Columbia River as follows: Planning, engineering and design of projects in pre-construction status; continue Phase I construction of the Julia Butler Hanson Site.

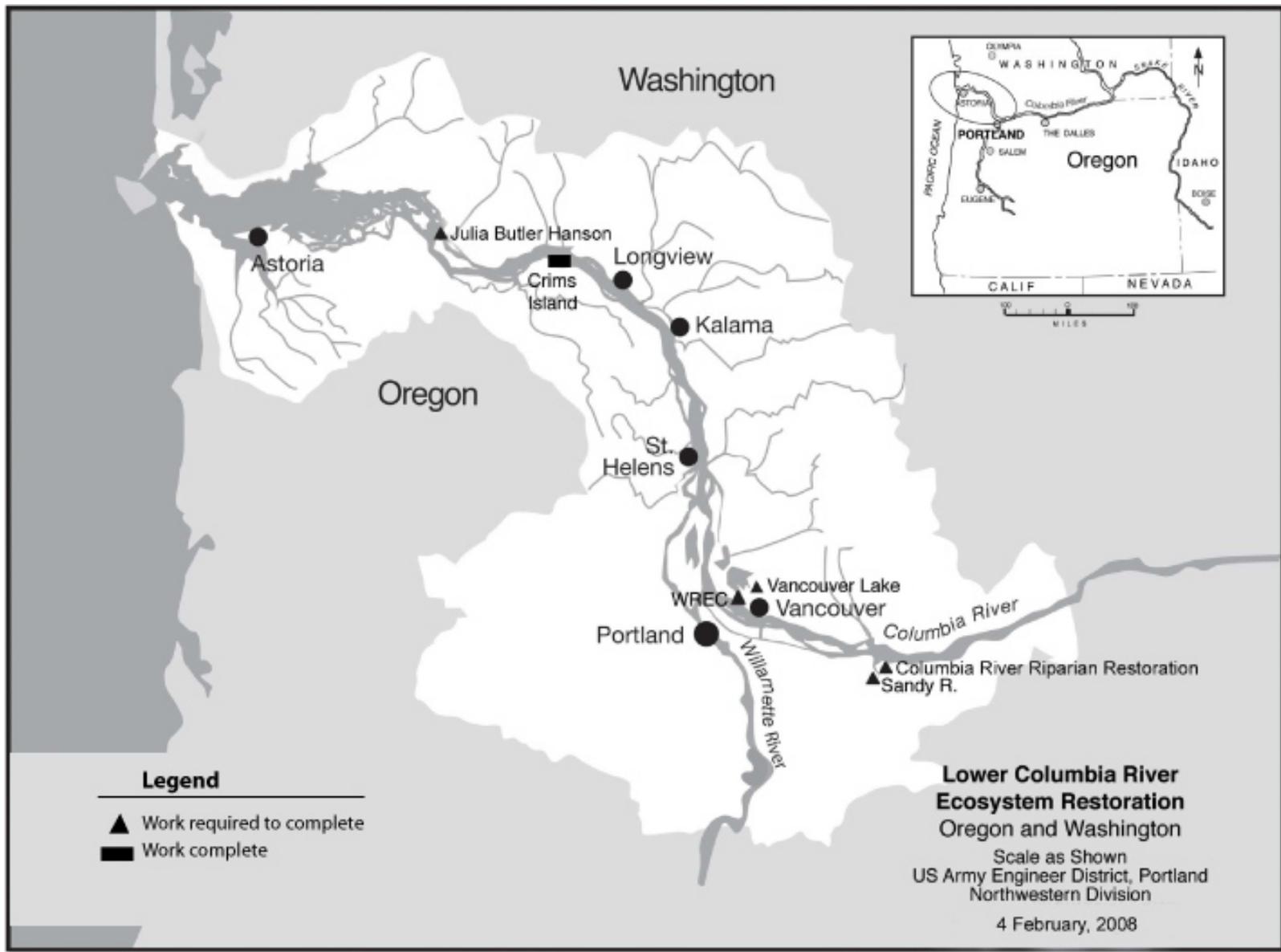
FISCAL YEAR 2009: The requested amount of \$1,500,000 will be applied in the Columbia River as follows:

Continue construction of the Julia Butler Hanson Site.....	\$1,200,000
Initiate construction of the Water Resources Education Center Site.....	\$300,000

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal cost estimate of \$20,000,000 is unchanged from last presented to Congress (FY 2008).

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Impact Statement has not been prepared. NEPA documentation for individual restoration sites is prepared as they are identified.

OTHER INFORMATION: The Lower Columbia River and Tillamook Bay Ecosystem Restoration, Oregon and Washington authority (Section 536 of WRDA 2000) was created in part to help the Corps meet the needs of listed salmon and steelhead using the Columbia River estuary and is one of the primary authorities for meeting Biological Opinion (BiOp) requirements. Estuary habitat improvement continues to be an important element of the draft proposed action being discussed in the remand process to develop a new BiOp for the FCRPS. Types of projects will include, but not limited to, creation and restoration of shallow water habitat, restoration of wetlands, improvements to fish passage, and restoration of floodplain functions and other actions to restore the estuary ecosystem. Also, the Corps is undertaking a feasibility study, Lower Columbia River Ecosystem Restoration, WA & OR, with a broader geographical scope than this project, and addressing ecosystem issues in addition to salmon recovery.



PACIFIC OCEAN DIVISION

PACIFIC OCEAN DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Pacific Ocean Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Barrow Flood & Coastal Storm Damage Reduction, AK Alaska District	4,141,000	3,347,000	394,000	400,000	0

Barrow, the northernmost community in the United States, is located on the Chukchi Sea coast, 10 miles south of Point Barrow from which it takes its name. It lies 725 air miles from Anchorage. Barrow is the economic center of the North Slope Borough and numerous businesses provide support services to oil fields. Marine and land transportation provide seasonal access. Presently, numerous public facilities are threatened by damages caused by coastal storms, including the continued loss of shoreline along 5,000 feet of beach, fronting the community and inundation from flooding. During the winter, near-shore pack ice prevents the formation of waves during severe storms; this in turn protects the sandy shoreline. However, recent years have seen the pack ice remaining further offshore for longer periods of time, thereby allowing severe storms to generate wind driven waves that cause erosion along the shoreline. Local officials also believe that sand-mining operations carried out by the Department of Defense and others during the 1950's through the 1970's have contributed to the existing shoreline erosion problems. Utilidors (heated below ground tunnels containing utility lines), roads, wastewater treatment facilities, and a 32-unit borough owned apartment building are among the public facilities threatened. Also, the Barrow solid waste landfill is threatened and poses a tremendous environmental threat to the marine environment due to the potentially hazardous nature of wastes placed in the landfill. Private facilities are also threatened and would incidentally benefit from a project. These include a gas station, a hotel, and numerous small shops. The study will consider the benefits and costs for protecting the shoreline, fronting the city and the road out to the landfill. It will also evaluate the merits of flood damage reduction measures.

The reconnaissance report was completed in June 2001. Fiscal Year 2008 funds are being used to continue the feasibility study. Fiscal Year 2009 funds will be used to complete the feasibility phase. The estimated cost of the feasibility phase is \$7,794,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. The North Slope Borough is the local sponsor, and is contributing some of its cost share as in-kind services. A summary of the study cost sharing is as follows:

Total Estimated Study Cost	\$8,038,000
Reconnaissance Phase (Federal)	244,000
Feasibility Phase (Federal)	3,897,000
Feasibility Phase (Local)	3,897,000

Completion of the feasibility study is to be determined.

Division: Pacific Ocean Division

District: Alaska

Barrow Flood & Coastal Storm Damage Reduction, AK

4 February 2008

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Pacific Ocean Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Hagatna River Flood Damage Reduction, Guam Honolulu District	900,000	187,000	98,000	350,000	265,000

The Territory of Guam is located approximately 3,800 miles west of Honolulu. The Hagatna River drainage basin is situated on the west-central section of the island. The drainage basin is bordered by plateau lands of northern Guam to the east and northeast; the Pago River basin to the south; coastal lowlands to the north; and sloping mountainous lands of the southwest. The basin is drained by the Hagatna River, which flows northerly through the downtown area of Hagatna, the political, commercial and economic center for Guam. Flood damages in the Hagatna River drainage basin result from inadequate channel capacity and flat topography. The flood of record occurred in May 1976 with estimated damages of \$4,000,000. Presently, there are more than 440 structures in the Hagatna River floodplain. Previous investigations completed before 1989 demonstrated that a flood control project, providing a 100-year level of protection, could reduce average annual flood damages by more than \$730,000. The area to be protected comprises about 215 acres with a total estimated value of more than \$145,000,000 for land and improvements. A letter was received in May 2001 from the Government of Guam requesting the Corps assistance in reinvestigating the feasibility of the Hagatna River Flood Damage Reduction project. The project was authorized under the Water Resources Development Act of 1986 (PL 99-662) as Agana River, but since that time, the project was subject to deauthorization. The Government of Guam was not in a position to implement the project at that time. Since then, conditions have changed allowing the Government of Guam to make this project a higher priority. Reinvestigation needs to first identify if there is continued Federal interest and issues associated with the project. The local sponsor fully understands the cost-sharing requirements of the study and is fully committed to active participation with the Corps of Engineers.

Authority to conduct this study is provided under Section 444 of the 1996 Water Resources Development Act (P.L. 104-303), as amended. The feasibility cost sharing agreement (FCSA) was executed in August 2005 and the local sponsor provided the required funds in September 2006 to initiate the study. Fiscal Year 2008 funds are being used to continue the feasibility study to perform topographic survey; finalize hydrologic study; initiate environmental studies; perform economic evaluations; and perform preliminary hydraulic design. Fiscal Year 2009 funds will be used to evaluate alternative plans, prepare an environmental assessment report; complete economic-benefit evaluations, perform hydraulic design, prepare cost estimates, and prepare documents for AFB. The total estimated cost of the feasibility phase is \$1,200,000, to be shared on a 50-50 percent basis by Federal and non-Federal interests. Section 1156 of P.L. 99-662 provides for a waiver of local cost-sharing requirements up to \$200,000. A summary of cost sharing is as follows:

Total Estimated Study Cost	\$1,300,000	
Reconnaissance Phase (Federal)	100,000	
Feasibility Phase (Federal)	800,000	
Feasibility Phase (Non-Federal)	400,000	(Reflects \$200,000 waiver under Sec 1156 of PL 99-662)

The scheduled completion date of the feasibility study is to be determined.

Division: Pacific Ocean Division

District: Honolulu

Hagatna River Flood Damage Reduction, GU

4 February 2008

POD - 6

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Division: Pacific Ocean Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Yakutat Dam Flood Damage Reduction, AK Alaska District	4,900,000	1,220,000	590,000	700,000	2,390,000

The study area is located in and near Yakutat. Yakutat is isolated among the lowlands along the Gulf of Alaska, 225 miles northwest of Juneau and 220 miles southeast of Cordova. The reconnaissance study determined that there is a Federal interest in participating in a feasibility study to investigate potential flood damage reduction improvements to protect nearby resources, notably the airport and the world-class fishery resources of the Situk River watershed. Flooding may result from the continued advancement of the nearby Hubbard Glacier, the largest tidewater glacier in North America. In response to the study authority, the reconnaissance study was initiated in February of 2004. Local interests for this study include the City and Borough of Yakutat and the Alaska Department of Transportation and Public Facilities. Likely project collaborators include the U. S. Forest Service, the U.S. Geological Service, the Corps Cold Regions Research and Engineering Laboratory, and glaciologists from the University of Alaska Fairbanks and other academia.

Fiscal Year 2008 funds are being used to progress the feasibility study. The study is being done in collaboration with the U.S. Forest Service and local and state interests. Fiscal Year 2009 funds will be used to continue the watershed feasibility study. Economic, environmental and engineering data will be collected to evaluate potential measures that could be taken if Hubbard Glacier moves forward to block Russell Fiord. Glaciological data will be collected to develop a model for predicting the potential for a stable ice dam to develop. If a stable ice dam develops and continues, the lake level of Russell Fiord will rise and overflow into the Situk River, causing major environmental and economic losses to the area. The fisheries of the Situk River are the economic lifeline of community. The community and the State requested the study be continued under authority of Section 117 of PL 108-447. The Assistant Secretary of the Army (Civil Works) approved the application of Section 117 cost sharing authority for the Yakutat feasibility study in January 2007 which allows the study to be conducted at full Federal cost.

Total Estimated Study Cost	\$4,900,000
Reconnaissance Phase (Federal)	370,000
Feasibility Phase (Federal)	4,530,000
Feasibility Phase (Local)	0

Completion of the feasibility study is to be determined.

NAVIGATION

INVESTIGATIONS

APROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Pacific Ocean Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Anchorage Harbor Deepening, AK Alaska District	5,460,000	4,460,000	492,000	100,000	408,000

Anchorage Harbor is the primary deep-water port for south-central Alaska, which contains two-thirds of the State's population, and is the hub of economic activity for the state. A sharp increase in the number and size of petroleum tankers serving the military and commercial tank farm operators delivering their cargo to Anchorage has occurred in recent years since the Department of Defense pipeline from Whittier ceased operation. Fuel is also delivered through the port to supply needs resulting from a sharp increase in air cargo activity at the Anchorage International Airport. Containerized cargo continues to increase, with the projected 2025 level being surpassed in 2003. Petroleum products and containerized cargo account for 96% of all Port of Anchorage cargo. There is increasing interest in the Port of Anchorage, with its many nearby attractions, as a cruise ship destination. Anchorage, as Alaska's largest metropolitan city, has certain inherent intrastate, interstate, national and international commerce responsibilities and activities. Nearly 80% of the goods for 90% of Alaska's population cross the docks at the Port of Anchorage. The Port of Anchorage is dredged annually to a depth of 35 feet below mean lower low water (MLLW) level by the Corps of Engineers. Significant delays have occurred when deeper draft vessels were unable to dock at the port because of limited available water depths. Some larger petroleum tankers arrive at high tide and quickly off load cargo to reduce draft. The Knik Arm Shoal (Cook Inlet) navigation channel was completed in September 2000, allowing deeper draft and larger ships to call at the port with greater flexibility regarding tides. Deeper draft capability is needed in the dock approach channels and around the terminals to accommodate the traffic. Transportation costs could be significantly reduced if the deeper draft vessels could call at the Port of Anchorage. Annual cargo throughput was about 4.4 million tons in 2003 and has increased about 8 percent per year since 1987. The Port of Anchorage, with MARAD as the lead Federal agency, has initiated a 5-year port expansion plan that will significantly increase the capability of the port. Section 118 of the Consolidated Appropriations Act, 2005, P.L. 108-447, Division C – Energy and Water Development Appropriations authorized a harbor depth of 45 feet below MLLW. Based on an analysis of military vessel usage, the ASA(CW) determined that the planning, design and construction supporting the Port of Anchorage expansion will be at 100% Federal expense. A feasibility study was initiated in FY 2006 and is scheduled for completion in FY 2010. Numerical and physical models will be used to determine flow and sedimentation rates, and to minimize maintenance requirements.

Fiscal Year 2008 funds are being used to continue the numerical and physical modeling work. Fiscal Year 2009 funds will be used to continue the numerical and physical modeling work, to conduct a qualitative economic analysis, and to prepare the decision document. The current estimated cost of the feasibility phase is \$4,943,000, which is 100% federally funded. Cost increases are primarily due to the geotechnical and modeling studies which were not initially anticipated to be part of the feasibility phase. A summary of the study costs is as follows:

Total Estimated Study Cost	\$5,460,000
Reconnaissance Phase (Federal)	517,000
Feasibility Phase (Federal)	4,943,000

Division: Pacific Ocean Division

District: Alaska

Anchorage Harbor Deepening, AK

4 February 2008

POD - 10

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Pacific Ocean Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Maalaea Harbor, Maui, HI Honolulu District	5,119,000 ^{1/}	4,769,000	148,000	200,000	2,000

Maalaea Bay is situated on the southwest coast of Maui, approximately 7 miles south of Wailuku, the county seat of Maui, State of Hawaii. Vessels moored in the existing State-owned facility at Maalaea Harbor have experienced surge and wave action from ocean swells generated by storms occurring in the southern hemisphere. The existing entrance channel is open to southerly swells and storm waves that directly enter the harbor basin causing damages to the vessels moored inside. The surge action renders much of the harbor basin unusable for safe mooring of vessels. The recommended project, estimated to cost \$19.9 million with an estimated Federal cost of \$17.9 million and an estimated non-Federal cost of \$2.0 million, includes the enlargement, deepening and the relocation of the entrance channel and extension of the existing south breakwater to reduce surge and wave action within the basin. These improvements would also increase the usable harbor basin area allowing Maui District boaters currently awaiting slips at Maalaea to safely wet-store their vessels at the harbor and provide safer navigation conditions for vessels using the facility. The harbor, when fully developed, would have a basin area of 13.5 acres with a maximum capacity of approximately 220 boats. The average annual benefits are \$4.6 million. The benefit-cost ratio is 3.70 to 1 at 7 percent. The non-Federal sponsor is the State of Hawaii. The entire local share of the project first costs was appropriated by the 1989 State of Hawaii Legislature for the Harbors Division Capital Improvement Program for the fiscal 1990-1991 biennium but has since been rescinded due to delays in finalizing the design, caused by environmental concerns. The funds will be reinstated prior to the construction award. The final EIS was filed with the EPA on April 28, 1980. A supplement to the EIS was completed in July 1994. The draft second supplement to the EIS was completed and circulated in May 1998. Numerous public and agency comments and concerns were received regarding the project's impacts on coral reef and surfing resources. These concerns are currently being addressed and include an independent review of alternatives and physical model studies to evaluate the impacts of alternative project features on surfing sites and navigability.

Total Estimated Preconstruction Engineering and Design Costs	5,119,000	Total Estimated Preconstruction Engineering and Design Costs	5,119,000
Initial Federal Share	5,119,000	Ultimate Federal Share	4,095,000
Initial Non-Federal Share	0	Ultimate Non-Federal Share	1,024,000

This project is authorized for construction by Section 101 of the Rivers and Harbors Act of 1968 (Public Law 90-483) in accordance with provisions contained in House Document No. 353, 90th Congress, 2nd Session, dated July 8, 1968. Fiscal Year 2008 funds are being used to complete preparation of the Limited Re-Evaluation Report (LRR) to include design activities and a value engineering study. Fiscal Year 2009 funds will be used to finalize project design; complete the SEIS; and prepare/negotiate the Project Cooperation Agreement.

^{1/} PED partially funded with Construction funds.

The scheduled completion date of the PED phase to be determined.

Division: Pacific Ocean Division

District: Honolulu

Maalaea Harbor, Maui, HI

4 February 2008

POD - 11

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2008 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Ala Wai Canal, Oahu, HI Honolulu District	2,810,000	1,821,000	689,000	300,000	0

The Ala Wai Canal, located in the Waikiki area on the Island of Oahu, is a two-mile long man-made waterway constructed during the 1920's that has served as a collection and transmission point for discharged silt, pollutants and floodwaters from the Makiki, Manoa and Palolo drainage basins and surrounding areas of Waikiki. This drainage area encompasses a total land area of approximately 16.3 square miles and is considered to be the most densely populated area in the state. The two-mile long canal is approximately half a mile inland from Hawaii's major landmark and primary tourist destination Waikiki Beach. The 150-to 250-foot-wide canal was originally dredged to a depth of 25 feet. In recent years the accumulation of debris, especially at the confluence of the major stream tributaries of the Makiki and Manoa-Palolo Streams and the Ala Wai Canal, has resulted in depths of only one to two feet. With increased urbanization of the drainage basin, the potential flood risk to the Waikiki area has become a major concern to the local sponsor. During the passage of Hurricane Iniki in 1992, the Ala Wai Canal overtopped its bank near the McCully Bridge and caused some flooding of streets in the Waikiki area. Flood mitigation measures, including both non-structural and structural alternatives, will be addressed and investigated for potential implementation.

The Ala Wai Canal also serves as an important link between the freshwater ecosystems of the upper drainage basins and the marine environment along the coast. Endemic amphidromous species such as native gobies and shrimp that had once utilized the Ala Wai Canal as a migratory pathway from the mountains to the sea are nearly non-existent. The accumulation of silt and pollutants over the years has resulted in a steady decline in water quality and has affected water flow and circulation. In a cooperative effort with Federal, State and local agencies, an effective comprehensive management and restoration plan will need to be implemented to restore aquatic habitat and biological diversity once present in the canal and upstream tributaries.

The community in this highly developed urban center is very active and interested in improving the overall health of the watershed. This is evidenced by numerous community restoration activities. The community, through the local sponsor, has requested an expansion of the project to address environmental degradation and flood control throughout the entire Ala Wai watershed. The recent Manoa Stream flood on October 30, 2004 that is estimated to have caused over \$100M in damages demonstrates the need for addressing watershed problems more comprehensively. Budgets for FY06 and beyond reflect the expansion of the Ala Wai Canal Project.

The feasibility cost sharing agreement (FCSA) was initially executed in April 2001 with the State Department of Land and Natural Resources and amended in August 2006 to expand the study scope and cost. Fiscal Year 2008 funds are being used to continue feasibility study efforts to include completion of the hydraulic analysis. Fiscal Year 2009 funds will be used to continue feasibility phase studies to include completion of the economic analysis and preparation of the environmental impact analysis. The total estimated cost of the feasibility phase is \$5.1M, which is to be cost shared at 50 percent by Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$5,495,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	2,685,000
Feasibility Phase (Non-Federal)	2,685,000

The completion date of the feasibility study is to be determined.

SOUTH ATLANTIC DIVISION

SOUTH ATLANTIC DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

Study/Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Augusta, Georgia Savannah District	1,399,500	0	0	25,000	445,000	278,000	651,500

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES - FDR

The study area is Richmond County and areas contiguous to it in the northeastern part of the state of Georgia, comprising an area of approximately 326 square miles on the West Side of the Savannah River, and is part of the Savannah River Basin that comprises about 11,000 square miles. The economy of the study area is highly diversified, including industry, agriculture, and maritime. It is the trade center for 13 counties in Georgia and 5 counties in South Carolina. Because of the rapid growth of the unincorporated areas, considerable development has occurred in the flood plains of the streams in the study area. This commercial, industrial, and residential expansion in and adjacent to the flood plains in the Richmond County area has resulted in recent widespread flood problems occurring in many parts of the county. The 12 October 1990 flood resulted in the loss of four lives and thousands of people were left homeless. Damage estimates, including damages to water lines, roads and bridges, wastewater systems, a hospital, the Augusta National Golf Course, residences and automobiles, exceeded \$47 million. The feasibility study identified several flood control alternatives that are concentrated in three water basins in Richmond County: Rae's Creek, Rocky Creek and Augusta Canal. The recommended project, estimated to cost \$17.558M with an estimated Federal cost of \$9.523M and an estimated non-Federal cost of \$8.035M, includes construction of 2 flood detention basins, a levee, 2500 feet of ecosystem restoration, 2.6 miles of recreation trail, and a 750 foot weir; removal of five houses; elevation of four houses; and installation of four or more remote control valves for flood gates. The average annual benefits amount to \$2.6 million, all for flood control. The benefit-cost ratio is 4.5 to 1 at 5 1/8 percent based upon the latest economic analysis dated Oct 2006. The local sponsor, Augusta - Richmond County, understands and supports the requirements of PED cost sharing. 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 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	1,866,000	Total Estimated Preconstruction Engineering and Design Costs	1,866,000
Initial Federal Share	1,399,500	Ultimate Federal Share	1,399,500
Initial Non-Federal Share	466,500	Ultimate Non-Federal Share	466,500

Fiscal Year 2008 funds are being utilized to continue the PED phase for Augusta Canal. Fiscal Year 2009 funds will be used to continue the PED phase for Augusta Canal. PED completion date is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009
 Division: South Atlantic Division

Study/Project	Total Estimated Federal Cost	Allocation Prior to FY 2006	Allocation FY 2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional To Complete After FY 2009
	\$	\$	\$	\$	\$	\$	\$
Edisto Island Charleston District	975,000	77,000	23,000	275,000	215,000	218,000	167,000

Edisto Island is a barrier island approximately 4.5 miles in length and is located approximately 30 miles southwest of Charleston, South Carolina. The northeastern portion of Edisto Island is a state park, which includes camping sites and cabins, while the remainder of the island is primarily single-family residential. The Town of Edisto Beach has developed as a permanent and seasonal residential community with limited commercial development. One commercial structure and 220 residences have been affected by storm damage. It is estimated that seven structures along the 700 block could fail completely and other residential structures could incur damage from a hurricane. Opportunities exist at Edisto Island to analyze and develop a recommendation that will provide for reduction of hurricane and storm damages to the beachfront structures located within the Town of Edisto Beach. This would be realized through placement of material along the beachfront that would sustain a wider beach profile through this reach of the study area. Additionally, environmental restoration and protection opportunities exist through the entire study area, primarily for protection of the habitat that exists at Edisto Beach State Park and to provide more stable turtle nesting habitat along the entire Edisto Island shoreline. The Town of Edisto Beach is the cost-sharing sponsor and the Feasibility Cost Sharing Agreement was executed on 29 September 2006.

Fiscal Year 2008 funds will be used to continue the feasibility phase of the study. Activities will consist of data collection efforts to include beach surveys for coastal engineering analysis and economic data collection to help determine the potential economic benefits of the project.

Fiscal Year 2009 funds will be used to continue the feasibility phase of the study. Activities will consist of environmental assessment, alternatives analysis and recommended plan determination. The preliminary estimated cost of the feasibility phase is \$1,750,000, which is to be 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	\$1,850,000
Reconnaissance Phase (Federal)	100,000
Feasibility Phase (Federal)	875,000
Feasibility Phase (Non-Federal)	875,000

The reconnaissance phase was completed in September 2006. The feasibility study is scheduled for completion in September 2010.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction - Local Protection Project (Flood and Coastal Storm Damage Reduction)

PROJECT: Cedar Hammock (Wares Creek), Florida (Continuing)

LOCATION: The project area is located in Bradenton and unincorporated Manatee County on the southwest coast of Peninsular Florida.

DESCRIPTION: The project provides for clearing and snagging from approximately 500 feet upstream of Manatee Avenue bridge and extending 17th Avenue West; trapezoidal grass-lined channel, 1V:2H side slopes, 26-foot-bottom width from 17th Avenue West to 21st Avenue West; Vertical Sheet Pile Wall channel from just upstream of 21st Avenue West to 14th Street West (Business Route 41) with a 40-foot-bottom; and trapezoidal grass-lined channel, 1V:2H side slopes, 26-foot-bottom width from upstream of 14th Street West (Business Route 41) and extending to just downstream of 44th Avenue West (Cortez Road) bridge.

AUTHORIZATION: Water Resources Development Act of 1996

REMAINING BENEFIT-REMAINING COST RATIO: 4.1 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.1 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 3.3 to 1 at 7-1/8 percent (FY2001).

BASIS OF BENEFIT-COST RATIO: Benefits are included in the Cedar Hammock (Wares Creek) Final Detailed Project Report and Environmental Assessment Report completed in April 1995 revised in 1996 at October price levels.

Division: South Atlantic

District: Jacksonville

Cedar Hammock (Wares Creek), Florida

4 February 2008

SUMMARIZED FINANCIAL DATA		ACCUM. PCT OF EST FED COST	STATUS (1 Jan 2008):	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$	18,700,000			
Estimated Non-Federal Cost		26,900,000	Channels & Canals	0	TBD
Cash Contribution	6,592,000		Total Project	0	TBD
Other	20,308,000				
Total Estimated Project Cost	\$	45,600,000			
Allocations through 30 September 2005		1,514,500			
Allocation for FY 2006		742,000			
Allocation for FY 2007		4,770,000			
Conference Allowance for FY 2008		4,681,000			
Allocation for FY 2008		4,681,000			
Allocations through FY 2008		11,707,500	63%		
Allocation Requested for FY 2009		2,773,500	77%		
Scheduled Balance to Complete After FY 2009		4,219,000			
Unscheduled Balance to Complete After FY 2009		0			

JUSTIFICATION: The Cedar Hammock (Wares Creek) are is urban, and existing development has encroached upon the channel in several areas. Heavy rains in September 1988 and June 1992 caused extensive flooding to the area and impacted residential as well as commercial development. Under existing conditions, average annual flood damages are estimated at \$6,725,000.

Annual Benefits	Amount
Flood Protection	3,735,000
Total	3,735,000

FISCAL YEAR 2008: Fiscal Year 2008 funds will be used to complete plans and specifications, PCA execution, and initiate construction of the project channels; engineering during construction; and construction management.

Division: South Atlantic

District: Jacksonville

Cedar Hammock (Wares Creek), Florida

4 February 2008

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Work on Channel Contract	\$ 2,400,500
Engineering and Design	123,000
Supervision & Administration	250,000
Total	\$ 2,773,500

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	20,308,000	
Modify or relocate utilities, roads, bridges, and other facilities, where necessary for the construction of the project.	542,000	
Pay 8.2 percent of the costs allocated to flood damage reduction during construction and 100% of the costs of betterments.	6,050,000	
Total Non-Federal Costs	26,900,000	

STATUS OF LOCAL COOPERATION: Manatee County, Florida strongly supports this project. The Project Cooperation Agreement will be executed in the 2nd quarter of FY 2008.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal (Corps of Engineers) cost estimate of \$18,700,000 is an increase over the latest estimate (\$13,700,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price escalation on construction features	\$ 5,000,000
Total	\$ 5,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Final Environmental Assessment was signed April 13, 1995.

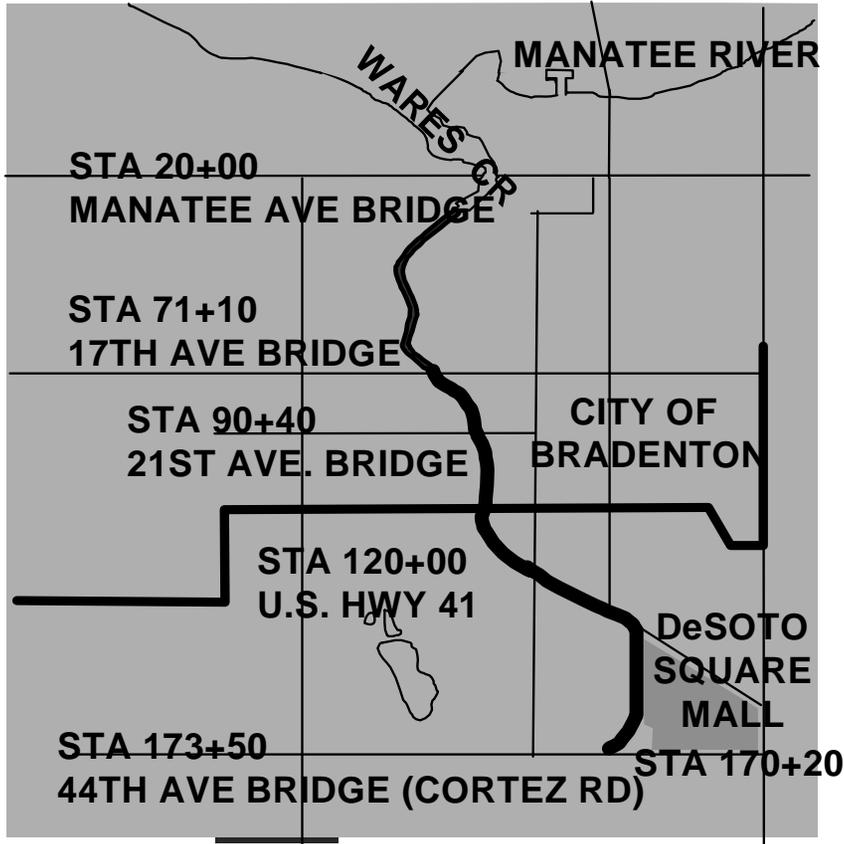
OTHER INFORMATION: Preconstruction, Engineering, and Design was initiated in August 1997 and is scheduled for completion in the 1st quarter of FY 2008.

Division: South Atlantic

District: Jacksonville

Cedar Hammock (Wares Creek), Florida

4 February 2008



-  CLEARING AND SNAGGING
-  VERTICAL SHEET PILE WALL, 40 FT. BOTTOM WIDTH
-  TRAPEZOIDAL GRASS-LINED CHANNEL, 1V:2H, 26 FT. BOTTOM WIDTH

CEDAR HAMMOCK, BRADENTON, FLORIDA

Division: South Atlantic

District: Jacksonville

Cedar Hammock (Wares Creek), Florida

4 February 2008

APPROPRIATION TITLE: Construction – (Replacement)

PROJECT: Herbert Hoover Dike, FL (Continuing)

LOCATION: The Herbert Hoover Dike (HHD) system encircles Lake Okeechobee entirely, except in the vicinity of Fisheating Creek on the western shore. The existing embankments total about 143 miles in length with typical crest elevations rising about 25 feet above adjacent land elevations. Reach 1 extends 22 miles from the Hillsboro Canal to the St. Lucie Canal in the southeast quadrant of the dike and Reaches 2 and 3 extend from Hillsboro Canal westward to C-43 (Caloosahatchee River).

DESCRIPTION: The Major Rehabilitation Report (MRR), approved in November 2000, divided the dike into 8 Reaches and included a detailed analysis of alternatives in the 1st Reach. The MRR proposed construction of a seepage/drainage berm along the landside toe of the dike for Reach 1. Following input from a variety of expert sources, the Jacksonville District convened an independent technical review panel to further evaluate the design of the proposed repairs, which were underway. After reviewing the findings of this panel, the Corps decided to fundamentally alter its plans for strengthening the HHD. The new design concept includes toe-ditch fill, cut-off wall at the center of the dike, and seepage berm.

AUTHORIZATION: Herbert Hoover Dike is a component of the Central and Southern Florida (C&SF) Project for Flood Control and Other Purposes. The C&SF Project was authorized in the Flood Control Act of 1948, 1954, 1958, 1960, 1965 and 1968; Authorization in 1970 under Section 201 of the Flood Control Act of 1965, the Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996, 2007 and the Rivers and Harbors Act of 1930.

REMAINING BENEFIT - REMAINING COST RATIO for the project as a whole: Not available. The latest economic analysis is based on a different, less expensive design.

TOTAL BENEFIT - COST RATIO for the project as a whole: Not available. The latest economic analysis is based on a different, less expensive design.

BASIS OF BENEFIT - COST RATIO: The latest economic analysis performed is in the November 2000 MRR, which estimated that the benefit-cost ratio for the project as a whole would be 0.94 to 1 at a 6 1/8 percent discount rate, using October 2000 price levels. This is the equivalent of a benefit-cost ratio of 0.96 to 1 at a 7 percent discount rate. Since that time, in response to the views of external peer reviewers and the findings of the independent technical review panel, the Corps significantly expanded the scale of the project plan. The resulting plan would cost roughly three times as much as the plan proposed in the 2000 report.

These benefit-cost ratios do not, however, reflect the benefits of reduced risk of loss of life, which cannot be quantified in economic terms. The Corps has classified the Herbert Hoover Dike as a Dam Safety Action Class I (DSAC I). Structures in this class are critically near failure or extremely high risk under normal operations without intervention. In this case, there is a concern even at a relatively low pool level due to the limitations of current outlet structures. As an interim measure, the Corps has changed the operating regime for Lake Okeechobee to lower the probability of failure from seepage. However, it is also proceeding to repair the dike as quickly as is practical in order to further mitigate the risk.

Division: South Atlantic

District: Jacksonville

Herbert Hoover Dike, FL

4 February 2008

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	959,600,000		Levees Reach 1	20	TBD
Estimated Non-Federal Cost	31,500,000		Levees Reaches 2 thru 8	0	Unscheduled
Cash Contributions	0		Total Project	0	Unscheduled
Other Costs	31,500,000				
Total Estimated Project Cost	991,100,000				
Allocation to 30 September 2005	4,932,000				
Allocations for 2006	16,221,000				
Allocations for 2007	39,884,000				
Conference Allowance for 2008	54,884,000				
Allocations for 2008	54,884,000				
Allocations through 2008	115,921,000	12%			
Allocation Requested for 2009	77,400,000	20%			
Programmed Balance to Complete after 2009	92,659,000	1/			
Unprogrammed Balance to Complete after 2009	673,620,000				

1/ Reflects funding for Reach 1 only.

PHYSICAL DATA

Levees – Miles – Reach 1	22.4
Levees – Miles – Reaches 2-3	27.1
Levees – Miles – Reaches 4-8	85.3

Division: South Atlantic

District: Jacksonville

Herbert Hoover Dike, FL

4 February 2008

JUSTIFICATION: The work on Reach 1 involves the construction of a cutoff wall with seepage berm and toe-ditch fill. Currently, the probability of catastrophic dike failure due to piping is unacceptably high. Such an event would produce flooding, which could (depending on its location) lead to the loss of life and/or significant economic damage. The Corps is proceeding first with work on the reaches where the potential risk is the greatest. Any such failure would also adversely affect the ecosystem of Lake Okeechobee (directly) and the estuaries of the Indian River Lagoon and the Caloosahatchee River (indirectly). It would also reduce the ability to store water in the lake for release in dry years for consumptive uses and to benefit the ecosystem of the Everglades.

FISCAL YEAR 2008: Fiscal Year 2008 funds will be used to prepare required NEPA analyses, and continue design and construction for Reach 1 on the toe-ditch fill, seepage berm and cut-off wall. Work will also continue on the Supplemental Major Rehabilitation Report for Reaches 2 and 3. The study is scheduled for completion in November 2009.

FISCAL YEAR 2009: The requested amount of \$77,400,000 will be applied to continue work on reach 1 as follows:

Continue Reach 1 Construction Cnt	\$ 68,551,000
Planning, Engineering, and Design	2,983,000
Construction Management	5,866,000
Total	\$ 77,400,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the original, 1930's-era authorizing legislation, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, and rights of way	31,500,000	
Total Non-Federal Costs	31,500,000	

STATUS OF LOCAL COOPERATION: A Project Cooperation Agreement (PCA) is not required for the Herbert Hoover Dike Project. There are resolutions through which the sponsor, South Florida Water Management District (SFWMD) commits to items of local cooperation. This consists of Resolutions 12 (1948) and 398(1949). The repairs to the Herbert Hoover Dike are being 100% Federally funded. Any additional real estate or easements required for the repairs are the responsibility of the local sponsor.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps) cost estimate of \$991,100,000 is an increase of \$135,200,000 from the latest estimate (\$855,900,000) submitted to Congress (FY2008). This change includes the following items:

Division: South Atlantic

District: Jacksonville

Herbert Hoover Dike, FL

4 February 2008

Item	Amount
Design Changes & Escalation in Costs of Materials	\$124,200,000
Post Contract Adjustments	11,000,000
Total	\$135,200,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The draft EIS for the project was completed December 1998. A Supplemental EIS was prepared and completed in January 2005 and the Record of Decision was signed in September 2005. An Environmental Assessment is scheduled to be completed in February 2008 for cut-off wall installation of Reach 1 (subreaches 1A-1D). A Supplemental EIS for land side repairs of Reach 1 is scheduled to be completed in September 2008.

OTHER INFORMATION: A value engineering (VE) study was done on design for Reach 1 described in the 2000 MRR. The VE recommendation was a modified plan of the recommended plan in the MRR. Subsequently, a Detailed Design Report (DDR) analyzed the VE plan and determined that it permitted too much seepage flow through the section and impacted local flood control. Following input from a variety of expert sources, the Jacksonville District convened an independent technical review panel to further evaluate the design of the proposed repairs, which were underway. After reviewing the findings of this panel, the Corps decided to fundamentally alter its plans for strengthening the HHD. The most recent approved MCASES is contained in the 2000 MRR. Major rehabilitation reports will be prepared for other reaches of the dike. Preliminary analyses indicate that construction of a cut-off wall in conjunction with landside repairs will be required in the 27-mile stretch of Reaches 2 and 3, which when complete would increase reliability of Reaches 1, 2, and 3 to authorized levels of protection.

The Herbert Hoover Dike Project is a multi-purpose project authorized for flood control, water supply, and navigation. The Comprehensive Everglades Restoration Plan (CERP) assumed the dike was fully functional. A fully functional dike will support the authorized ecosystem restoration benefits of the CERP. The current effort to strengthen the dike, when completed, will allow the Corps to hold more water safely in the lake. This will enable the Corps to release excess water to the estuaries of the Indian River Lagoon and the Caloosahatchee River in a more controlled, less damaging, fashion. In the long-term, it will also enable the Corps to release more water during dry periods to benefit the ecosystem of the Everglades.

Division: South Atlantic

District: Jacksonville

Herbert Hoover Dike, FL

4 February 2008

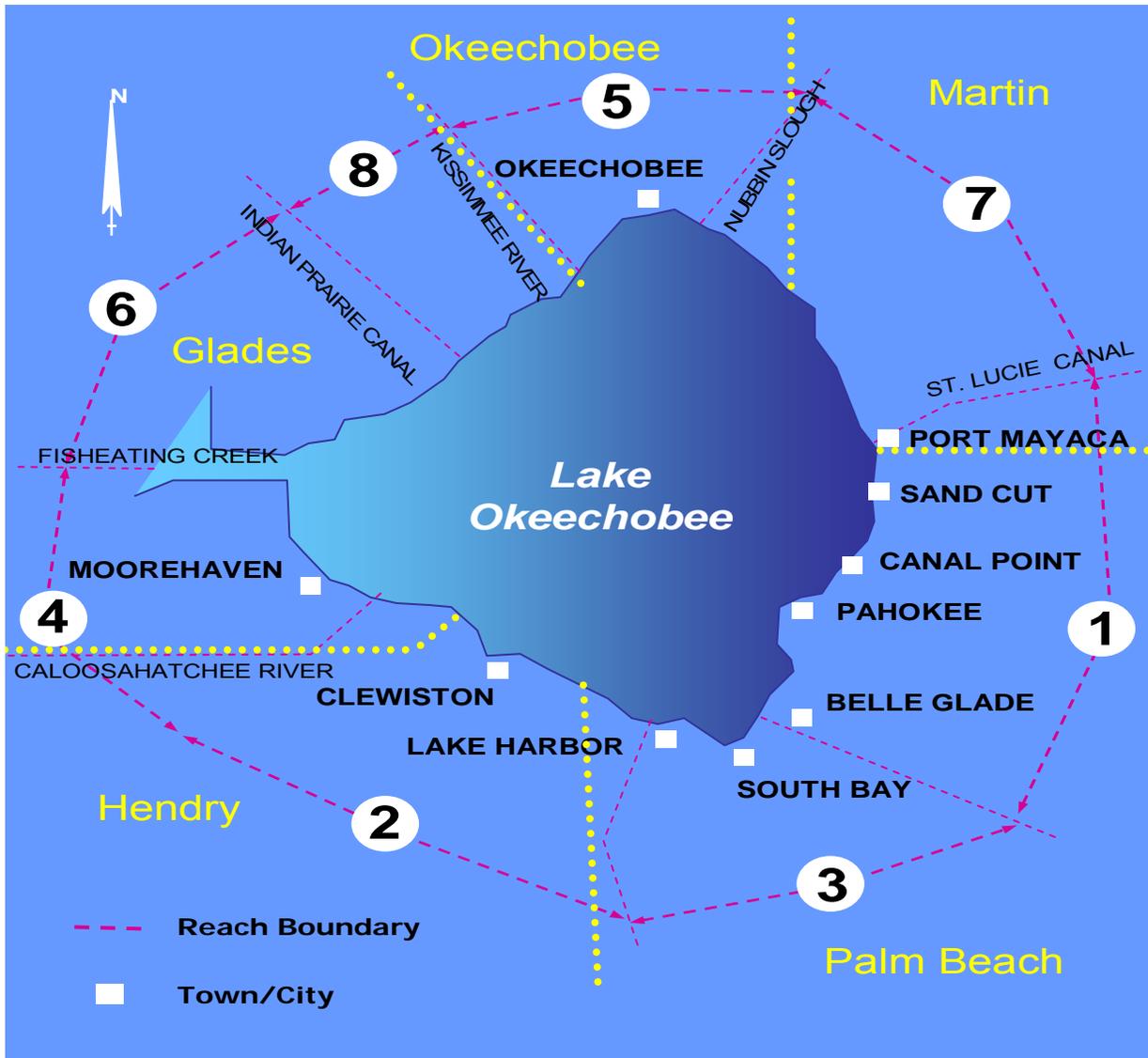
SUMMARIZED FINANCIAL DATA: HHD REACH 1

Estimated Federal Cost		285,980,000 ¹
Estimated Non-Federal Cost		31,500,000
Cash Contributions		
Other Costs	31,500,000	
Total Estimated Project Cost		317,480,000

1. Cost is estimated based upon recent design changes for Reach 1.

REMAINING BENEFIT-REMAINING COST RATIO (Reach 1): Not available. The latest economic analysis is based on a different, less expensive design.

TOTAL BENEFIT-COST RATIO (Reach 1): Not available. The latest economic analysis is based on a different, less expensive design.



US Army Corps
of Engineers
Jacksonville District

HHD Rehabilitation

Reaches in miles

1. 22.4	2. 20.4
3. 6.7	4. 15.7
5. 14.5	6. 28.0
7. 17.6	8. 12.5

Project construction Priorities

Reaches: 1, 2, 3

APPROPRIATION TITLE: Construction - Local Protection Project (Flood and Coastal Storm Damage Reduction)

PROJECT: Portugues and Bucana Rivers, Puerto Rico (Continuing)

LOCATION: Flood control improvements related to Portugues and Bucana Rivers are in, and near, the Municipality of Ponce, on the south coast of Puerto Rico.

DESCRIPTION: The Standard Project Flood (SPF) flood protection project involves construction of 9.1 miles of channel improvements, two multi-purpose dams with uncontrolled emergency spillways, a dependable water supply for the Ponce area, and recreational facilities on the lakes and channels. The Cerrillos Dam is located on the Cerrillos (Upper Bucana) River 9.5 miles above its mouth. The Cerrillos Dam is 323 feet high and its reservoir will provide 47,900 acre-feet of flood control and water supply storage. The estimated water supply yield of Cerrillos is 22 m.g.d. The Portugués Dam flood control structure will be located on the Portugués River 8.3 miles above its mouth. The Portugués Roller Compacted Concrete (RCC) Dam will be 219 feet high. The final reservoir will provide a total storage of 12,325 acre-feet. The Portugues Dam will be awarded as one contract with five phases of construction. Phase I will include mobilization, clearing and grubbing, quarry overburden excavation, and powerline relocation. Phase II will include foundation excavation, aggregate production and dental concrete. Phase III will include aggregate production, placement of one half of the Roller Compacted Concrete (RCC). Phase IV will include final RCC placement, spillway and intake structure. Phase V will include the valve house, access road and all mechanical and electrical items for valve house.

AUTHORIZATION: Flood Control Act of 1970 and Water Resources Development Act of 1986.

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

TOTAL BENEFIT - COST RATIO: 2.5 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 2.0 to 1 at 5-5/8 percent (FY1974).

BASIS OF BENEFIT - COST RATIO: Benefits are from the July 1973 Design Memorandum Phase 1, Plan Formulation and Site Selection Report at July 1973 prices levels except for Portugues Dam where benefits are from the Post Authorization change report dated April 2004 and approved by MSC in July 2005.

Division: South Atlantic

District: Jacksonville

Portugues and Bucana Rivers, PR

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement	\$616,600,000		Channels and Canals		
Future Non-Federal Reimbursement	213,974,000		Lower Channels	100	Aug 1978
			Upper Bucana Channel	100	Jun 1983
			Upper Portugues Channel	95	TBD
Estimated Federal Cost (Ultimate)	402,626,000		Bucana River Debris Basin	100	Jun 1987
			Portugues Debris Basin	100	Mar 1987
Estimated Non-Federal Cost	389,974,000		Dams		
Cash Contributions	71,888,000		Cerrillos	100	Sep 1994
Other Costs	104,112,000		Portugues (Flood Control)	30	TBD
Reimbursements	213,974,000		Portugues (Water Supply)	0	Indefinite
Water Supply	213,974,000		Recreation		
			Channels	60	TBD
Total Estimated Project Cost	\$792,600,000		Cerrillos	80	Feb 2008
			Portugues	0	TBD
Allocations to 30 September 2005	\$406,021,441				
Allocation for FY 2006	8,899,000		Entire Project	85	TBD
Allocation for FY 2007	5,310,000				
Conference Allowance for FY 2008	31,727,000				
Allocation for FY 2008	31,727,000				
Allocations through FY 2008	451,957,441	70%			
Allocation Requested for FY 2009	45,000,000	81%			
Programmed Balance to Complete After FY 2009	\$119,642,559				
Unprogrammed Balance to Complete After FY 2009	0				

Division: South Atlantic

District: Jacksonville

Portugues and Bucana Rivers, PR

PHYSICAL DATA

Dam	Portugues	Cerrillos
Type	Roller Compacted Concrete	Earth and rock-fill
Height	220 feet	323 feet
Crest Length	1,317 feet	1,555 feet
Spillway Type	Ungated concrete 150 feet wide	Ungated rock cut 400 feet wide
Reservoir Capacity (Acre-Feet)		
Flood Control	9,484	17,065
Water Supply	12,858	25,200
Sediment	2,841	5,635
Total	25,183	47,900
Portugues River Channel Enlargement		2.1 miles
Bucana River Channel Enlargement		5.7 miles
Diversion Channel Connecting Portugues River to the Lower Bucana River		1.3 miles

JUSTIFICATION: The completed components of the project (lower channels of Cerrillos Dam) provided over 100 year flood event level of protection to the eastern urban side of the city but less than 25 years to the city's main residential, commercial, public and industrial areas. Only with completion of the Portugues Dam will these areas receive the SPF level of protection as designed and authorized. There are over 15,000 families and several billion dollars worth of property subject to flooding because the dam, which was designed as an integrated system, has not been completed thereby exacerbating flood risk for some areas. This component is an integral part of the entire Portugues and Bucana project, and without it, the lower channels will not perform effectively. Close to \$10 million has been expended during the last 10 years to repair the lower channels and lower area due to high velocities and erosion from flood waters that are designed to be held back by the Portugues Dam. The additional investment of about \$164.6 million (Federal) to complete the Portugues Dam is holding back, to a large extent, the beneficial economic development impact of the already invested \$422.1 million (Federal) in the completed components. The construction of the Portugues Dam will provide annual benefits of over \$25 million in avoided flood damages. Average annual benefits for the total project are as follows:

Annual Benefits	Amount
Flood Control	43,387,000
Water Supply	13,968,000
Recreation	2,418,000
Area Redevelopment	1,116,000
Total	60,889,000

Division: South Atlantic

District: Jacksonville

Portugues and Bucana Rivers, PR

FISCAL YEAR 2008: Fiscal Year 2008 funds will be used to award Phase I of the Portugues Dam contract which includes initial mobilization and preparatory work, excavation and disposal of quarry overburden, clearing of disposal areas, access and haul roads and to include engineering during construction and associated construction management.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue Portugues Dam Construction Contract	\$38,400,000
Engineering During Construction	2,100,000
Construction Management	4,500,000
Total	\$45,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Flood Control Act of 1970 and the Water Resources Act of 1986, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, and Replacement Costs
Provide lands, easements, and rights-of-way.	\$83,165,000	
Modify or relocate buildings, utilities, roads, bridges, and other facilities, where necessary in the construction of the project.	21,388,000	
Pay additional cash required to bring the total Non-Federal share of the flood control costs to 25 percent and bear all costs of operation, maintenance, and replacement of flood control facilities.	55,705,000	249,900
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.	15,742,000	258,300
Reimbursement for water supply on Cerrillos Dam	213,974,000	
Total Non-Federal Costs	\$389,974,000	508,200

STATUS OF LOCAL COOPERATION: The Commonwealth of Puerto Rico Department of Natural and Environmental Resources is the local sponsor. The following contract agreements are required pursuant to Section 221 of the River and Harbor and Flood Control Act of 1970 and the Water Resources Development Act of 1986:

Contract	Actual or Anticipated Execution Date
Section 221 – Cerrillos Reservoir Channels	15 Mar 1982 22 Jul 1974
Water Supply – Cerrillos Reservoir	15 Mar 1982
Recreation – Cerrillos Reservoir Channels	15 Mar 1982 24 Jun 1987
Project Cooperation Agreement – Portugues Reservoir	9 Aug 1993

Portugues Dam is a roller compacted concrete dam. The dam is designed as a multi-purpose dam to be constructed in two phases. The Commonwealth of Puerto Rico has requested that the dam be constructed as soon as possible for flood control and recreation, but to defer the water supply feature to a later date. By letter dated May 2003, the Commonwealth restated their commitment to the full and complete multi-purpose Portugues Dam, and agreed to pay the additional costs required for the phased construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps) cost estimates of \$616,600,000 is an increase of \$84,700,000 over the estimate (\$531,900,000) last presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$2,782,000
Estimating Adjustments (Increased market value of construction materials)	81,918,000
Total	\$84,700,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with CEQ on 25 February 1974. A Supplemental EIS for the Portugues Dam was submitted in November 1992.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in Fiscal Year 1972. Funds to initiate construction were appropriated in Fiscal Year 1975.

Division: South Atlantic

District: Jacksonville

Portugues and Bucana Rivers, PR

SUMMARIZED FINANCIAL DATA FOR PROGRAMMED SEPARABLE ELEMENTS

Channels and Canals

Estimated Federal Cost		\$116,901,000
Estimated Non-Federal Cost		62,112,000
Cash Contribution	3,731,000	
Other Costs	58,381,000	
Total Estimated Project Cost		\$179,013,000

REMAINING BENEFIT - COST RATIO: Not applicable because construction is substantially complete.

Cerrillos Dam

Estimated Total Appropriation Requirement		\$232,799,000
Future Non-Federal Reimbursement (Water Supply)		213,974,000
Estimated Federal Cost Ultimate		18,825,000
Estimated Non-Federal Cost Ultimate		247,562,000
Cash Contributions	9,708,000	
Other Costs	23,880,000	
Reimbursement:		
Water Supply	213,974,000	
Total Estimated Project Cost		\$266,387,000

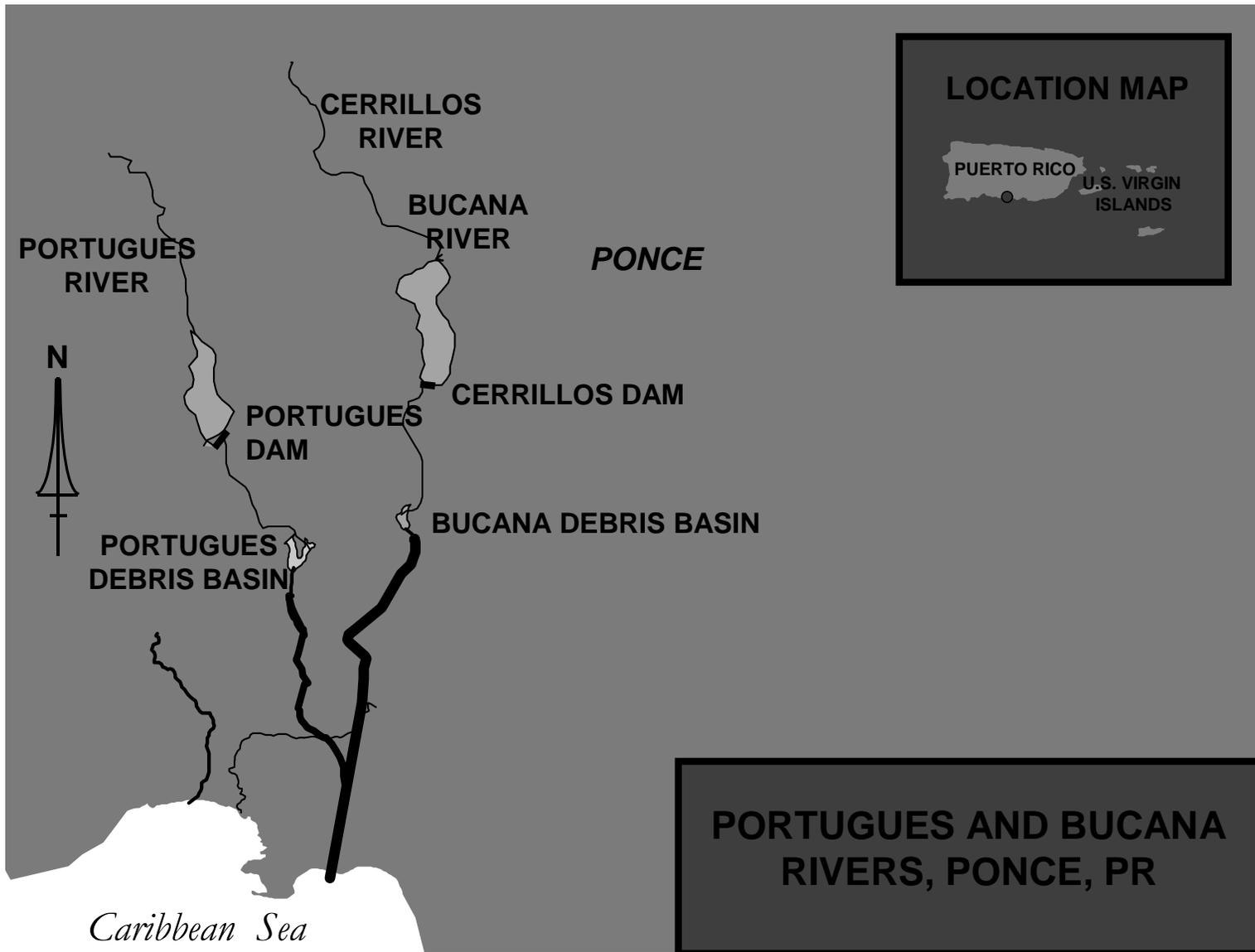
REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because construction is substantially complete.

Portugues Dam

Estimated Federal Cost		\$266,900,000
Estimated Non-Federal Cost		80,300,000
Cash Contribution	58,449,000	
Other Costs	21,851,000	
Total Estimated Project Cost		\$347,200,000

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

TOTAL BENEFIT-COST RATIO: 2.1 to 1 at 7 percent.



Division: South Atlantic

District: Jacksonville

Portugues and Bucana Rivers, PR

APPROPRIATION TITLE: Construction - Local Protection Project (Flood and Coastal Storm Damage Reduction)

PROJECT: Rio Puerto Nuevo, Puerto Rico (Continuing)

LOCATION: The Rio Puerto Nuevo drainage basin is located within the San Juan Metropolitan Area along the northern coast of Puerto Rico. The basin joins the southeast side of San Juan Harbor and extends south and up into the foothills of the central mountains of Puerto Rico. The Rio Piedras, Rio Puerto Nuevo, Quebrada Margarita, Quebrada Josefina, Quebrada Dona Ana, Quebrada Buena Vista, and Quebrada Guaracanal traverse the basin. The Río Puerto Nuevo Basin drains 24 square miles, 75 percent of which is highly developed with a population of 250,000 persons.

DESCRIPTION: The plan of improvement protects against the 100-year flood by the construction in the Puerto Nuevo River and its tributaries of 1.7 miles of earth lined channel, 9.5 miles of concrete lined channels (of which 5.1 miles are high velocity) and two debris basins. The plan will also require the construction of five new bridges, the replacement of 17 bridges, and the modification of eight existing bridges.

AUTHORIZATION: Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: 5.1 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 3.2 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 4.5 to 1 at 8 percent (FY1994).

BASIS OF BENEFIT - COST RATIO: Benefits are from the economic analyses performed for the revised General Design Memorandum dated June 1991 at October 1989 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	360,900,000		Relocations	39	TBD
			Roads, Railroads, Bridges	47	TBD
Estimated Non-Federal Cost	135,500,000		Channels and Canals	51	TBD
Cash Contributions	55,370,000		Recreation	0	TBD
Other Costs	80,130,000				
Total Estimated Project Costs	496,400,000		Entire Project	48	TBD
Allocations thru 30 September 2005	135,117,000				
Allocation for FY 2006	18,800,000				
Allocation for FY 2007	20,000,000				
Conference Allowance for FY 2008	10,424,000				
Allocation for FY 2008	10,424,000				
Allocations through FY 2008	184,341,000	51%			
Allocation Requested for 2009	12,000,000	54%			
Programmed Balance to Complete after FY 2009	164,559,000				
Unprogrammed Balance to Complete after FY 2009	0				

PHYSICAL DATA

Relocations - Bridges (Replacement)	17
Relocations - Bridges (Modification)	8
Relocations - Bridges (Construction)	5
Canals - Miles	11.2
Debris Basins	2
Stilling Areas	2

Division: South Atlantic

District: Jacksonville

Rio Puerto Nuevo, PR

4 February 2008

SAD - 28

JUSTIFICATION: The Rio Puerto Nuevo flows thru the middle of the San Juan Metropolitan area. The intense development in the basin has altered the natural discharge patterns, significantly increased the runoff rates and restricted the flows in the floodplain. In very short time, discharges reach over 30,000 cfs with stages of over 4 ft and velocities approaching 12 – 15 ft per second. There are over 250,000 people living in the 25 square mile drainage basin and over a quarter of a million people commute every day to work, study and visit the area. The area is 100% developed. About 125,000 persons are directly or indirectly affected by the 100-year flood. Property subject to flooding includes over 8,000 housing structures, several hospitals, police stations, dozens of schools and higher education colleges, San Juan Harbor ports facilities, electric power plants, wastewater treatment plant, main highways and bridges, the financial district and several regional shopping centers valued at over \$10 billion. Overflow of Rio Puerto Nuevo, even from very small floods resulting from frequent rainfalls of 2 inches or more in a few hours, bring the San Juan area to a stand still situation for hours several times per year. This results in millions of dollars of damages. San Juan is always part of Presidential Disaster Declarations for Puerto Rico associated with floods. There have been 8 of these during the last 20 years. Recently, Tropical Storm Jeanne, in 2004, resulted in FEMA expending over \$350 million in damage relief over the Island. Average annual inundation damage in the Rio Puerto Nuevo area is estimated at over \$75 million, over 90% of these damages will be reduced by the proposed flood control measures. Average annual benefits are as follows:

Annual Benefits	Amount
Flood Control	66,750,000
Total	66,750,000

FISCAL YEAR 2008: Fiscal Year 2008 funds will be used to continue the De Diego Bridge contract, the Bechara Channel contract, engineering during construction and construction management for the two construction contracts.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete de Diego Bridge contract	\$ 4,350,000
Complete Bechara Channel contract	6,100,000
Planning, Engineering, and Design	515,000
Supervision and Administration	1,035,000
Total	\$ 12,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the authorizing legislation, the non-Federal sponsor must comply with the requirements listed below for programmed work.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, right-of-way, and dredged material disposal areas.	34,142,000	0
Modify or relocate buildings, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary in the construction of the project.	45,988,000	0
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, and replacement of recreation facilities.	428,000	0
Pay 12.37 percent of the first costs allocated to flood control, and bear all cost of operation, maintenance, repair, rehabilitation, and replacement of flood control structures.	54,942,000	0
Total Non-Federal Costs	135,500,000	0

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

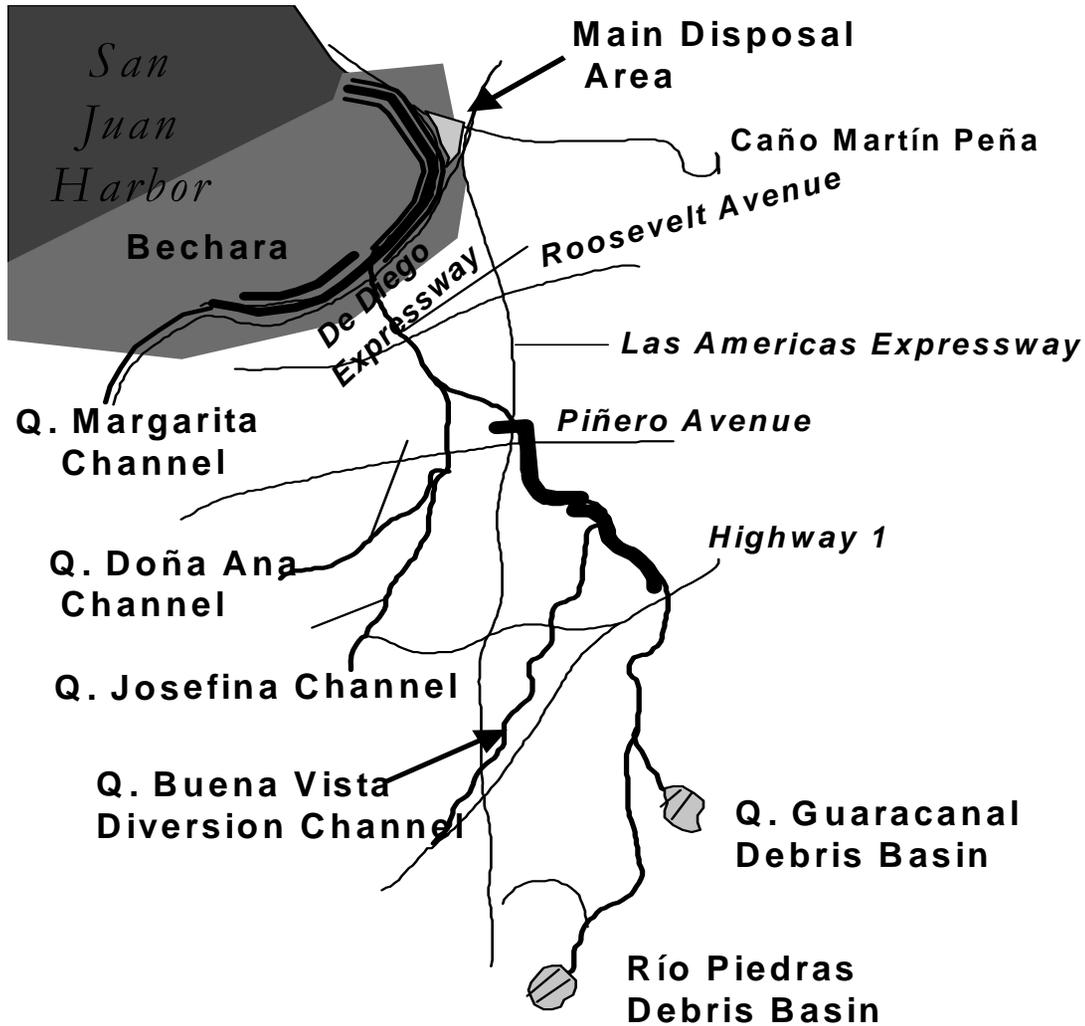
STATUS OF LOCAL COOPERATION: The Commonwealth of Puerto Rico Department of Natural and Environmental Resources is the local sponsor. A Project Cooperation Agreement for the project was executed in March 1994.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps) cost estimate of \$360,900,000 is an increase of \$13,900,000 over the last estimate (\$347,000,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price escalation on construction features	\$ 5,751,000
Post contract award and other estimating adjustments	8,149,000
Total	\$13,900,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Environmental Impact Statement for the project was filed on 6 December 1985. The Finding of No Significant Impact (FONSI) was approved in July 1992.

OTHER INFORMATION: Funds to initiate preconstruction, engineering and design were appropriated in Fiscal Year 1987. Funds to initiate construction were appropriated in Fiscal Year 1994.



LEGEND

-  MAIN DISPOSAL AREA
-  CONCRETE CHANNELS
-  EARTH CHANNEL
-  VERTICAL WALLS
-  RECREATION FEATURE
-  MITIGATION AREA
-  LEVEE



RIO PUERTO NUEVO PUERTO RICO

APPROPRIATION TITLE: Construction - Local Protection Project (Flood and Coastal Storm Damage Reduction)

PROJECT: Roanoke River Upper Basin, Virginia, Headwaters Area (Continuing)

LOCATION: The project is located on the Roanoke River in the City of Roanoke, Virginia.

DESCRIPTION: The project includes about 6.2 miles of channel widening along the 10 miles of river through the City of Roanoke, Virginia. Channel widening will be accomplished with the construction of a benched channel above the elevation of the average stream flow. Other flood damage reduction features include flood proofing at two locations, training walls to prevent floodwater intrusion into low areas along the river, replacement of two low-level bridges that constrict stream flows, and a flood warning system. Recreation facilities consist of a 9.5-mile recreation trail along the project reach and access and parking areas. All work is programmed.

AUTHORIZATION: Water Resources Development Act of 1986, Energy and Water Development Appropriation Act of 1990 and Energy and Water Development Appropriation Act of 2004.

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

TOTAL BENEFIT - COST RATIO: 1.6 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 1.1 to 1 at 8-7/8 percent (FY 1990).

BASIS OF BENEFIT - COST RATIO: Benefits are from the General Design Memorandum approved in January 1990 at 1988 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$46,700,000	Entire Project	63	TBD
Estimated Non-Federal Cost		\$23,300,000			
Cash Contributions	8,733,000				
Other Costs	14,567,000				
Total Estimated Project Cost		\$70,000,000			
Allocations to 30 September 2005		\$15,172,000			
Allocation for FY 2006		5,250,000			
Allocation for FY 2007		8,300,000			
Conference Allowance for FY 2008		9,502,000			
Allocation for FY 2008		9,502,000			
Allocations through FY 2008		38,224,000	81		
Allocation Requested for 2009		1,075,000	84		
Programmed Balance to Complete after FY 2009		7,401,000			
Unprogrammed Balance to Complete after FY 2009		0			

PHYSICAL DATA

Project Features:

Channel Excavation	27,000 linear feet
Training Wall	6,300 linear feet
Paved Recreation Trail	50,160 linear feet
Parking/Access Areas	3 each
Riprap	28,000 tons

Relocations:

Utility	3,880 linear feet
Roads	2,000 linear feet
Overhead Line	6,350 linear feet
Buildings	13 each

Division: South Atlantic

District: Wilmington

Roanoke River Upper Basin, VA, Headwaters Area

4 February 2008

PHYSICAL DATA - Continued

Land Acquisition (acres):

Total Rights of Way Requirement	195
Flood Control Rights of Way	185
Disposal Areas (Temporary)	40
Recreation Rights of Way (Separable)	20
Right of Way Underwater	110

JUSTIFICATION: The project will provide improvements for flood damage reduction and recreation. Most of the property that would be protected is industrial and commercial with a value of \$680,000,000. The average annual damages in the project area are estimated at \$5,777,000 at October 1988 price levels and 1988 level of development over the next 50 years if no flood damage reduction facilities are provided to manage flood risk. The project would reduce these damages by \$3,126,200. The maximum flood of record, November 1985, caused damages estimated at \$112,424,000 under 1985 conditions of development and price levels. Damages at 1988 levels of development and October 1988 price levels would be \$119,997,000. Floodplain development is not promoted by the project. Return on investments by local businesses is adversely affected by the flooding problem. Industrial and commercial property owners have to use their resources to repair and attempt flood proofing that could be used for expansion and modernization. In this respect, return on investment is suppressed. The project will have a beneficial effect on a variety of businesses and increase return on investment throughout the flood plain. Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	\$5,111,000
Recreation	1,642,000
Total	\$6,753,000

FISCAL YEAR 2008: The allocated amount of \$9,502,000 will be used to continue construction, continue monitoring of endangered species, planning, engineering and design and construction management.

FISCAL YEAR 2009: The requested amount of \$1,075,000 will be applied as follows:

Continue Monitoring of Endangered Species	\$ 400,000
Planning, Engineering and Design	180,000
Construction Management	495,000
Total	\$1,075,000

Division: South Atlantic

District: Wilmington

Roanoke River Upper Basin, VA, Headwaters Area

4 February 2008

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

Requirements of local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide all lands, easements, and rights of way including suitable spoil disposal areas	\$ 7,968,000	
Modify or relocate buildings, utilities, roads and other facilities except railroad bridges, where necessary for construction of the project.	6,559,000	
Pay 25 percent of the cost of the flood warning system (partially offset by a credit for lands, easements, rights of way, and relocations).	10,000	
Pay 5 percent of the total cost allocated to flood damage reduction in cash in addition to all lands, easements, rights of way and relocations, and bear all costs of operation, maintenance, and replacement of flood damage reduction facilities.	2,215,700	\$101,000
Pay one-half of the separable cost allocated to recreation (partially offset by a credit for land, easements, rights of way and relocations) and bear all costs of operation, maintenance and replacement of recreation facilities	6,180,300	9,000
Pay 25 percent of the cost of the non-structural flood proofing (partially offset by a credit for lands, easements, rights of way and relocations).	367,000	
Total Non-Federal Costs	\$23,300,000	\$110,000

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

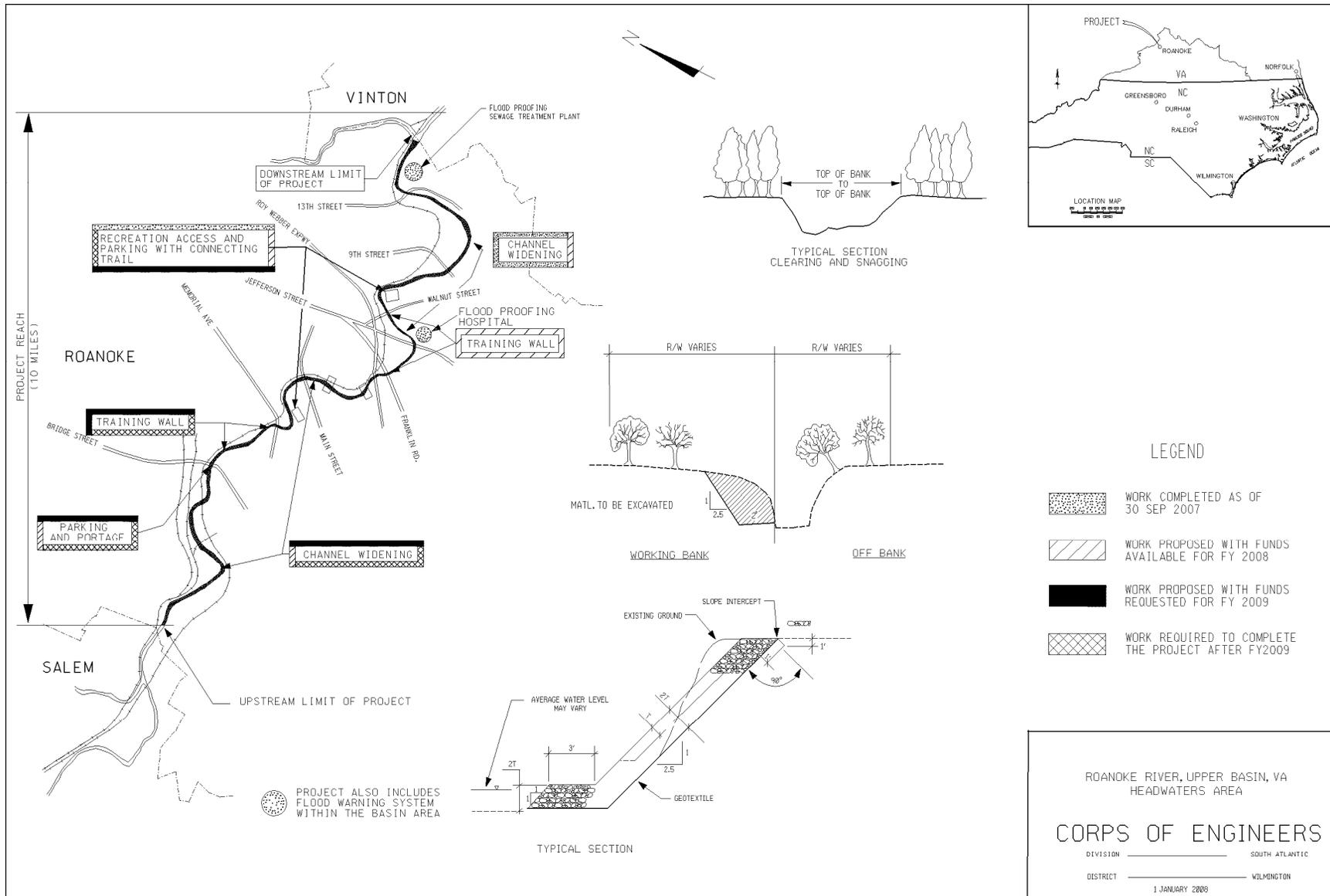
STATUS OF LOCAL COOPERATION: The City of Roanoke is the project sponsor. On 11 April 1989 the voters of the City of Roanoke approved the sale of \$7.5 million worth of bonds to pay Roanoke's required cash contribution, acquire lands that are not currently owned and pay for relocation of bridges and utilities. The Local Cooperation Agreement was executed on 25 June 1990. A supplement to the Local Cooperation Agreement addressing the reimbursement for the flood proofing of the hospital was executed in January 1993. Design and construction of the project is now underway, which had been deferred for eight years due to concerns the sponsor had over assuming liability for potential HTRW issues that might arise during project construction. The City in conjunction with the Corps, EPA and the Virginia Department of Environmental Quality conducted an extensive investigation and review of the project right of way to alleviate these concerns. Hazardous material was found at two sites. The landowner has cleaned these sites. Soil contamination was found at 14 other sites. A project action plan for the screening and disposal of this material has been prepared and reviewed by the sponsor and the Virginia Department of Environmental Quality.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps) cost estimate of \$46,700,000 is an increase of \$1,400,000 over the latest estimate (\$45,300,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 1,035,000
Post Contract Award and Other Estimating Adjustments	365,000
Total	\$1,400,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final environmental impact statement was filed with the Environmental Protection Agency in February 1985. A Finding of No Significant Impact for design changes was signed on 30 June 1989.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1986 and funds to initiate construction were appropriated in FY 1990. The project was modified by the Energy and Water Development Appropriations Act of 2004 to increase the total estimated project cost to \$61,700,000 (October 2004 price levels). The Roanoke Logperch, which is located in the project area, was listed as an endangered species effective 18 September 1989 and will be monitored during project construction. Reimbursement for the Federal share of the flood proofing of Roanoke Hospital, as authorized by Section 102cc of the Water Resources Development Act of 1990, in the amount of \$501,000, was made in February 1993.



Division: South Atlantic

District: Wilmington

Roanoke River Upper Basin, VA, Headwaters Area

4 February 2008

HYDROPOWER

CONSTRUCTION

APPROPRIATION TITLE: Construction - Multiple Purpose Power (Replacement)

PROJECT: John H. Kerr Dam and Reservoir, VA & NC (Continuing).

LOCATION: The Kerr Powerhouse is located on the Roanoke River in Mecklenburg County, Virginia, 7 miles east of Boydton, Virginia, 80 air miles southwest of Richmond, Virginia, and 60 air miles north of Raleigh, North Carolina.

DESCRIPTION: The recommended plan involves the rewinding of seven generator units to maximum capacity, replacement of the turbines and main power transformers, and the replacement or refurbishment of key electrical and mechanical peripheral equipment in order to improve the overall reliability of the project, reduce operation and maintenance costs, reduce unscheduled repair costs, and provide additional hydropower capacity and power revenues.

AUTHORIZATION: Flood Control Act of 1944.

REMAINING BENEFIT-REMAINING COST RATIO: 9.2 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.4 to 1 at 7-1/8 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluations contained in the Major Rehabilitation Evaluation Report addendum and transmittal memorandum dated June 1997 at October 1996 price levels. Benefits were brought to current conditions of the power generation facilities and expected alternative costs in January 2005 using information from the Hydropower Design Center, and are reflected in the benefit-to-cost ratios computations.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement	\$89,000,000		Entire Project	60	TBD
Future Non-Federal Reimbursement	\$89,000,000				
Estimated Non-Federal Cost (Ultimate)	\$ 0				
Cash Contributions	0				
Other Costs	0				
Reimbursements	\$ 89,000,000				
Power	\$89,000,000				
Total Estimated Project Cost	\$89,000,000				
Allocations to 30 September 2005	\$ 21,835,000				
Allocation for FY 2006	13,560,000				
Allocation for FY 2007	10,500,000				
Conference Allowance for FY 2008	12,792,000				
Allocation for FY 2008	12,792,000				
Allocations through FY 2008	58,687,000	66			
Allocation Requested for 2009	14,000,000	82			
Programmed Balance to Complete after FY 2009	16,313,000				
Unprogrammed Balance to Complete after FY 2009	0				

PHYSICAL DATA

Rewind Generator	7
Replace Turbines	6
Refurbish Turbines	1
Replace Transformers	All

Division: South Atlantic

District: Wilmington

John H. Kerr Dam and Reservoir, NC & VA

4 February 2008

JUSTIFICATION: The John H. Kerr Powerplant, which was initially placed into operation in 1953, is showing signs of excessive wear of the generators, the peripheral equipment and the turbines. This has resulted in a loss of efficiency, reduced reliability of the units and lost power output for the units. The recommended plan of improvement calls for rewinding the generators to maximum capacity, replacement of the turbines and main power transformers, and replacement or refurbishment of key electrical/mechanical peripheral equipment. The recommended plan will improve the powerplant's overall reliability, reduce further degradation of the hydroelectric units, decrease operation and maintenance costs, and increase the power generation capability. There is growing concern with project reliability due to recent malfunctions of oil circuit breakers in the switchyard, for which repair parts are no longer available and must be custom fabricated; frequent leaks in the raw water piping system, which is in extremely poor condition throughout; and the extremely heavy cavitation observed in the runner, stay ring and discharge ring of Unit Number 5. Average annual benefits for hydroelectric power are \$17,485,000.

FISCAL YEAR 2008: The allocated amount of \$12,792,000 will be used for power plant rehabilitation, planning, engineering and design and construction management including completion of rehabilitation of Unit Numbers 2 and 4 and initiation of rehabilitation of Unit Number 6.

FISCAL YEAR 2009: The requested amount of \$14,000,000 will be applied as follows:

Continue work under contract for rehabilitation of powerplant	\$12,500,000
Planning, Engineering and Design	710,000
Construction Management	790,000
Total	\$14,000,000

NON-FEDERAL COST: The costs allocable to power are reimbursable, and will be reviewed and adjusted based on construction costs when the project becomes operational.

Requirements of local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay all costs allocated to hydropower and bear all costs of operation, maintenance, repair, rehabilitation and replacement of hydropower facilities	\$89,000,000	\$6,043,000

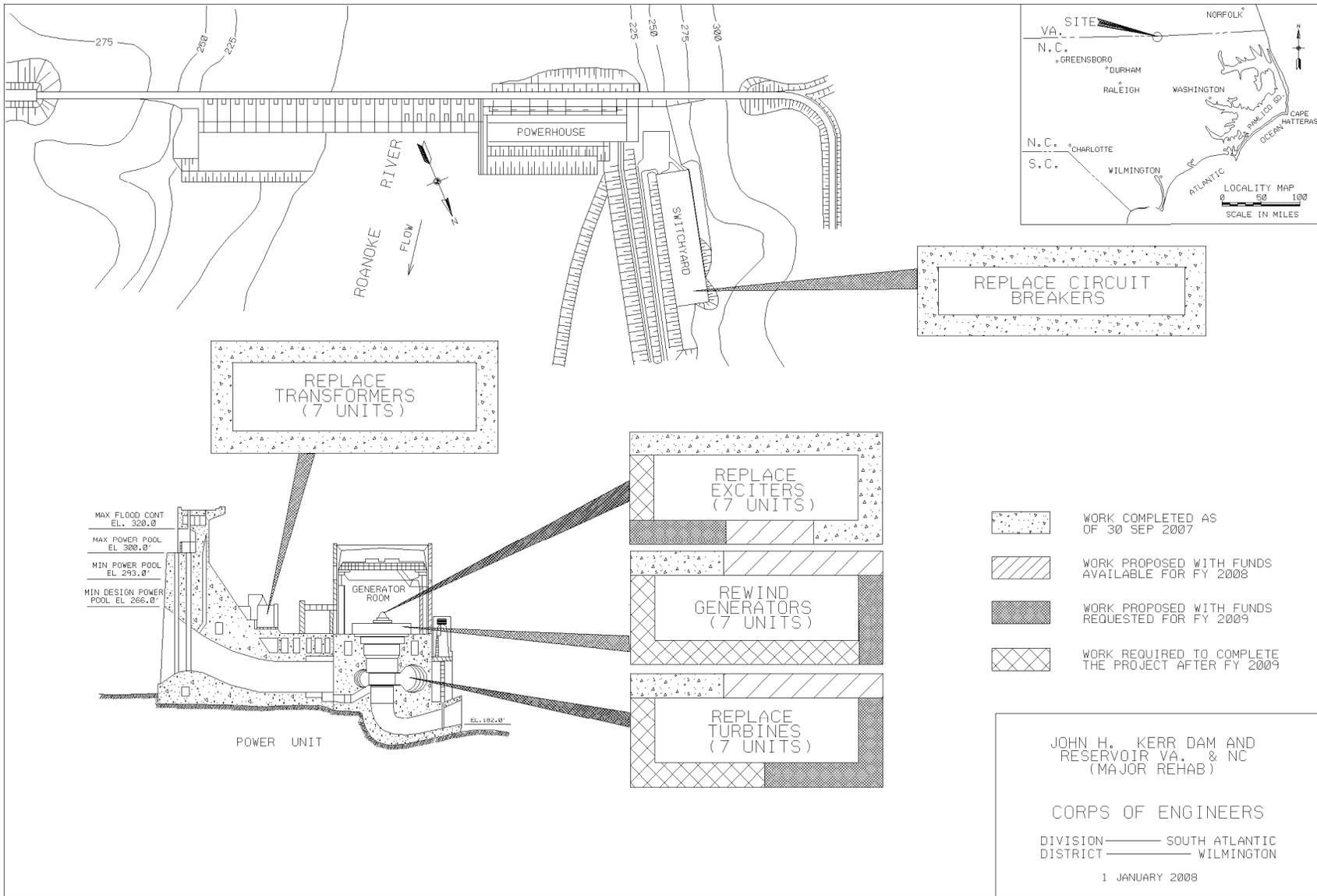
STATUS OF LOCAL COOPERATION: Pursuant to Federal Laws responsibility for repayment of hydropower costs rests with the power-marketing agency, the Southeast Power Administration.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps of Engineers) cost estimate of \$89,000,000 is an increase of \$8,600,000 over the latest estimate (\$80,400,000) presented to Congress (FY 2008). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 313,000
Post Contract Award and Other Estimating Adjustments	8,287,000
Total	\$8,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: An Environmental Assessment and Finding of No Significant Impact was prepared and distributed in December 1996 for public comment. The Finding of No Significant Impact was signed by the District Engineer on 7 February 1997.

OTHER INFORMATION: Initial construction funds appropriated in FY 1998.



Division: South Atlantic

District: Wilmington

John H. Kerr Dam and Reservoir, NC & VA

4 February 2008

APPROPRIATION TITLE: Construction - Multiple Purpose Power

PROJECT: Richard B. Russell Dam and Lake, Georgia and South Carolina (Continuing)

LOCATION: The project is located on the Savannah River about 275 miles above the mouth, 16 miles southeast of Elberton, Georgia and between the existing J. Strom Thurmond and Hartwell Lakes.

DESCRIPTION: The project consists of a concrete gravity-type dam, flanked by earth embankments with a maximum height of 200 feet above the river. The total length of 5,616 feet consists of a 1,884-foot concrete section and embankments of 3,732 feet. The gate-controlled spillway has a design capacity of 800,000 c.f.s. The project includes the installation of 328 megawatts of conventional power completed in January 1986 and 320 megawatts of reversible pumped storage power for a total available capacity of 648 megawatts.

AUTHORIZATION: Flood Control Act of 1966, modified by the Water Resources Development Act of 1976 and the Water Resources Development Act of 1986.

REMAINING BENEFIT - REMAINING COST RATIO: not applicable because project construction is substantially complete.

TOTAL BENEFIT - COST RATIO: 1.9 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 2.0 to 1 at 3-1/4 percent (FY 1972).

BASIS OF BENEFIT - COST RATIO: Benefits are from the cost allocation study completed in December 1991 at October 1991 price levels.

Division: South Atlantic

District: Savannah

Richard B. Russell Dam and Lake, GA & SC

4 February 2008

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement		\$627,700,000		Entire Project	99.5	TBD
Future Non-Federal Reimbursement		590,583,000				
Estimated Federal Cost (Ultimate)		33,517,000				
Estimated Non-Federal Cost		592,483,000				
Cash Contributions		1,900,000				
Reimbursements		590,583,000				
Power	590,583,000					
Total Estimated Project Cost		629,600,000				
Allocations to 30 September 2005		612,603,000				
Allocations for FY 2006		1,177,000				
Allocations for FY 2007		4,600,000				
Conference Allowance for FY 2008		6,255,000				
Allocation for FY 2008		6,255,000				
Allocations thru FY 2008		624,635,000	99.5%			
Allocation Requested for FY 2009		1,450,000	99.8%			
Programmed Balance to Complete after FY 2009		1,615,000				
Unprogrammed Balance to Complete after FY 2009		0				

Division: South Atlantic

District: Savannah

Richard B. Russell Dam and Lake, GA & SC

4 February 2008

PHYSICAL DATA

Dam		Relocations-Roads (Miles)	19.5
Type: Concrete Gravity, flanked by earth embankments		Railroads (Miles)	9.1
Maximum Height (Feet)	200	Initial Power Installation	
Length		4 Conventional Units (MW)	82
Concrete Section (Feet)	1,884	4 Pump Storage Units (MW)	80
Embankments (Feet)	3,732	Normal Average Head (Feet)	144
Spillway		Reservoir Capacity (Acre-feet)	
Type: Gate Controlled		Flood Control	140,000
Design Capacity (c.f.s)	800,00	Power	126,800
Lands and Damages (Acres)	0	Dead Storage	899,400
Type: Predominantly timber and Agricultural	53,112		
Improvements: Typical farm units			

JUSTIFICATION: The 648 megawatts installation, including pumped storage, will help meet the increased power requirements and rapid growth demands in this region. The output can be marketed and fully utilized immediately upon project completion in Federal Energy Regulatory Commission (FERC) supply areas 21, 22, and 23. This includes all of South Carolina, most of North Carolina, Georgia, Alabama, and parts of Mississippi and Florida. The FERC has stated repeatedly the need for this power source. This project will be an integral unit of the plan for development of the Savannah River Basin for flood control, navigation, power, and allied purposes. The recreational facilities will serve an area within a large zone of influences surrounding the three-lake complex of J. Strom Thurmond, Hartwell, and Richard B. Russell lakes. Average annual benefits are as follows:

Annual Benefits	Amount
Power	\$ 52,995,000
Flood Control	177,000
Recreation	3,597,000
Fish and Wildlife	71,000
Area Redevelopment	4,212,000
Total	\$ 61,052,000

Division: South Atlantic

District: Savannah

Richard B. Russell Dam and Lake, GA & SC

4 February 2008

FISCAL YEAR 2008: The FY2008 funds will be used to continue environmental monitoring of pumped storage operation (\$900k); initiate installation contracts for the Mitigation JST 02 System (\$5,055k); planning, engineering and design (\$100k) and construction management (\$200k).

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue environmental monitoring of pumped storage operation	\$950,000
Construction Management	\$500,000
Total	\$1,450,000

NON-FEDERAL COST: In accordance with Public Law 89-72, agreements for recreation development with the States of Georgia and South Carolina have been executed and were approved by the Secretary of the Army 20 May 1974. The costs allocable to power are reimbursable, and will be reviewed and adjusted, based on construction costs when the project becomes operational.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Capital Cost allocated to power.	590,583,000	3,557,000
Pay, contribute in kind, or repay (repayment not to exceed 50 years) with interest, one-half of the separable costs allocated to recreation.	1,900,000	0
Bear all costs of operation, maintenance, repair, rehabilitation, and replacement of recreation facilities.	0	249,000
Total Non-Federal Costs	592,483,000	3,806,000

STATUS OF LOCAL COOPERATION: The State of Georgia began payments for recreation reimbursements in May 1985. The State of South Carolina began payments in August 1985. Responsibility for repayment of power costs rests with the Southeastern Power Administration pursuant to Federal Laws.

Division: South Atlantic

District: Savannah

Richard B. Russell Dam and Lake, GA & SC

4 February 2008

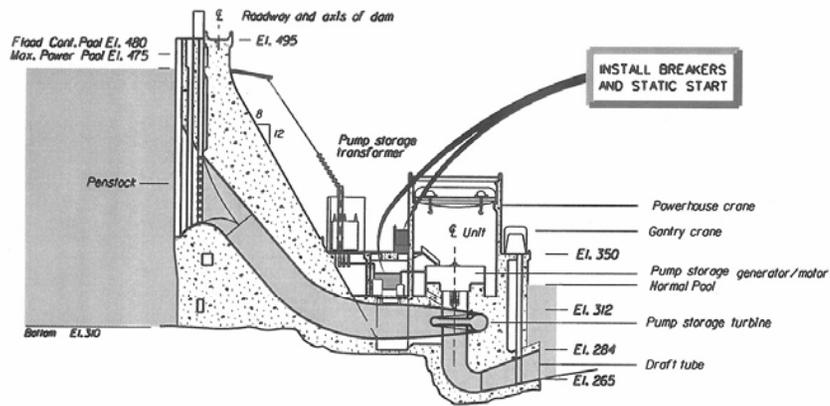
COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps) costs estimate of \$627,700,000 is the same as the latest estimate presented to Congress(FY 2008)

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) on conventional installation was submitted to Council on Environmental Quality (CEQ) on 31 May 1974. A supplement on water quality to the final EIS was filed with CEQ in May 1976. The final EIS on pumped storage was filed with the Environmental Protection Agency (EPA) in October 1979. The Supplement on fish and wildlife mitigation to the final EIS was filed with the EPA in December 1981. A supplement to the final EIS on pumped storage was filed in August 1991. A final NEPA document (Environmental Assessment) now based on 4 ½ years of environmental testing is complete. It embodies those technical items that the Corps of Engineers (COE) and South Carolina have reached agreement on, relating to operational measures, construction of a O2 system to increase fish habitat and continued environmental monitoring of a commercial operation. The EA for Pumped Storage was completed in FY 1999 and the FONSI was signed in August 1999.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1968. Funds to initiate land acquisition were appropriated in FY 1971 and allocated in FY 1972. Initial construction funds were appropriated in FY 1975.

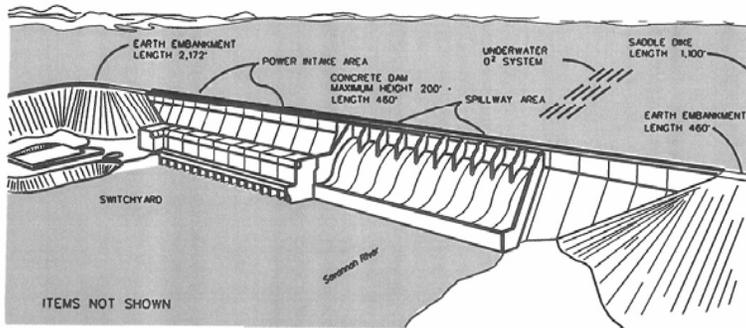
Pumped Storage was declared commercially available on 1 September 2002 with a favorable decision from U.S. District Court granted 03 May 2002. That hearing on the Corps' request for summary judgment to dismiss the injunction was conducted on 17 October 2000 in the Charleston, SC U.S. District Court.

In accordance with the NEPA Decision previously signed in August 1999, the District agreed to construct an oxygenation system in JST Lake to mitigate the environmental impacts from the potential summer time temperature rise to the striped bass habitat in the tailwater regime below RBR Dam. This mitigation must be in place before there is the full use of the 4 Pump-Back units year round. The O2 system is designed to provide for additional fish habitat and it is located near Modoc about 5 miles above JST Dam. Also, in accordance with the NEPA document, the Corps is required to continue environmental monitoring for seven years, five of which must be after the O2 system is operational, to cover the year round pump back capability using 4 pump units. The District has agreed to limit pumping to two units from June to September prior to the construction of the O2 system, after that, all 4 pump units will be available during the summer months.



PUMP STORAGE INTAKE AND POWERHOUSE SECTION

SCALE IN MILES
40 0 40



PERSPECTIVE



VICINITY MAP

STATUS OF WORK

- WORK COMPLETED AS OF 30 SEPTEMBER 2006
- WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2007
- WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2008
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2008

ITEMS NOT SHOWN:

INSTALL NEW JST O₂ STORAGE AND DISTRIBUTION SYSTEM-RBR PUMPED STORAGE STORAGE MITIGATION (25 MILES DOWNSTREAM)

CONTINUE ENVIRONMENTAL MONITORING FOR PUMPED STORAGE OPERATION

MULTIPLE PURPOSE PROJECTS INCLUDING POWER
RICHARD B. RUSSELL DAM AND LAKE GEORGIA AND SOUTH CAROLINA
 WORK COMPLETED, IN PROGRESS & PROPOSED
 SAVANNAH DISTRICT
 SOUTH ATLANTIC DIVISION
 1 JANUARY 2007

NAVIGATION

INVESTIGATIONS

Study/Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Mile Point, Florida Jacksonville District	922,000	514,000	233,000	125,000	0	50,000	0

Mile Point is located on the north bank of the St. Johns River in Duval County. The shoreline in the Mile Point area has experienced severe erosion, including a number of sinkholes, within the last few years. These sinkholes have engulfed hundreds of feet of property. Local interests have documented these occurrences and maintain that Corps of Engineers dredging of the federal navigation channel at Jacksonville Harbor has resulted in this erosion problem. Non-Federal efforts to stabilize the banks have proven to be useless. Regular and continued loss of significant amounts of property in the area warrants investigation of the cause of the shoreline and bank erosion as soon as possible. The study would also address high velocities in the area, which restrict deep draft ship traffic. The study was authorized by Resolution adopted March 24, 1998 by the Committee on Transportation and Infrastructure of the United States House of Representatives. The sponsor for the study is Jacksonville Harbor Port Authority and understands the requirements for study cost sharing. A Feasibility Cost Sharing Agreement was executed on 12 March 2003.

This study is not included in the FY 2008 President's budget. The funds requested for Fiscal Year 2009 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is \$1,606,000, which is to be 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 study cost sharing follows:

Total Estimated Study Cost	\$1,725,000
Reconnaissance Phase (Federal)	119,000
Feasibility Phase (Federal)	803,000
Feasibility Phase (Non-Federal)	803,000

The reconnaissance phase was completed in March 2003. The feasibility phase could complete in FY 2009 contingent upon funding.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Atlantic

Study/Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Port Everglades Harbor, Florida Jacksonville District	3,935,000	1,893,000	174,000	490,000	492,000	550,000	336,000

Port Everglades is about 25 miles north of Miami in Broward County, Florida. Currently, Port Everglades is the twelfth busiest container port in the United States and services approximately 16 cruise lines. Port Everglades experienced approximately 129 million barrels of petroleum throughput in 2005. The Port is a man-made deep-water port uniquely situated near Ft. Lauderdale Airport, with direct connections to the Interstate Highway system and the CSX Railroad lines. The present feasibility study is investigating widening and deepening the major channels within the port due to the expected use of larger and deeper draft vessels. The study includes expanding the Port into the Dania Cut-off Canal, deepening the Mid-Port turning basin, and widening and deepening the Turning Notch. Harbor pilots are required to restrict usage of the larger more efficient container vessel fleet due to maneuvering and turning restraints. The project is estimated to cost \$280 million with an estimated Federal cost of \$82 million and an estimated non-Federal cost of \$198 million. The local sponsor is Broward County, Port Everglades Department. The latest amendment to the feasibility cost sharing agreement was executed on 9 November 2006. A current amendment is being prepared to include Peer Review, Cost Risk Analysis, and additional environmental effort.

This study was not included in the FY 2008 President's budget. The funds requested for Fiscal Year 2009 will be used to continue the feasibility phase of the study. The estimated cost of the entire feasibility phase is \$6,810,000, which includes \$560,000 for a peer review study at 100% Federal expense. The balance of the study cost (\$6,250,000) is to be shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of study cost sharing follows:

Total Estimated Study Cost	\$7,060,000
Reconnaissance Phase (Federal)	250,000
Feasibility Phase (Federal)	3,685,000
Feasibility Phase (Non-Federal)	3,125,000

The reconnaissance phase was completed in May 1997. The current study estimate considers peer review at 100% Federal expense based on WRDA 2007. The feasibility phase could be completed in FY 2010 contingent upon funding.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009
 Division: South Atlantic

Study/Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Savannah Harbor Expansion Savannah District	6,491,500	3,071,500	880,000	1,194,000	646,000	700,000	0

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – NAV

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 about 18 miles from the river mouth. Savannah Harbor total commerce nearly doubled between 1996 (17.6 million short tons) and 2005 (30.1 million short tons). With an average annual growth rate of 12.5%, Savannah Harbor has been the fastest growing US container port since 1995. The Harbor's Garden City Terminal is the second largest container port on the US east coast, by container volume, and the fourth largest in the nation. Savannah's share of twenty-foot equivalent units (TEUs) among the four largest US East Coast ports has grown from 13.1% in 1995 to 19.1% in 2005. Garden City's annual total TEU volumes have grown continuously since 1988. Between 1988 and 2006, total TEU volume increased by 490% from 366,700 to 2,160,116. By 2050, TEUs are forecast to grow to approximately 9 million.

The non-Federal interest, Georgia Ports Authority (GPA), conducted the initial, Tier I feasibility study under the authority of Section 203 of the Water Resources Development Act of 1986 (WRDA 86) and was responsible for funding all associated study costs. The Feasibility Report was submitted to the Secretary of the Army in August 1998. The project was conditionally authorized in WRDA 99, with final approval contingent upon completion of a Tier II environmental impact statement and the concurrence of the EPA, Department of the Interior, the Department of Commerce and the US Army Corps of Engineers. The project was initially estimated to cost \$230,174,000 (2001 price levels), with an estimated Federal cost of \$145,160,000 and an estimated non-Federal cost of \$85,014,000. The work includes deepening the harbor channel from -42 feet to -48 feet. The average annual benefits at the time of authorization amounted to \$35.2 million, all for commercial navigation. The benefit-cost ratio was calculated at 3.0 to 1 at 7-1/8 percent based on the economic analysis dated August 1998. Updated economic data, which include the benefits of an expanded Panama Canal, are now being analyzed as are updated cost estimates for dredging and mitigation. Currently, the project estimated construction cost could be as high as \$530 million but this figure includes large contingencies in the selection of a mitigation plan. Project costs will exceed the current Section 902 Limit estimated to be \$395 million. The Georgia Ports Authority is aware of project cost sharing requirements. PED may ultimately be cost shared and will be financed through the PED period at 81 percent non-Federal and 19 percent Federal. Upon completion of construction, credit may be given to the local sponsor for the Federal share of the PED cost.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009
Division: South Atlantic

Savannah Harbor Expansion
Savannah District
(continued)

Total Estimated Preconstruction		Total Estimated Preconstruction	
Engineering and Design Costs	\$36,526,500	Engineering and Design Costs	\$36,526,500
Initial Federal Share	6,491,500	Ultimate Federal Share	27,395,000
Initial Non-Federal Share	30,035,000	Ultimate Non-Federal Share	9,131,500

In accordance with the cost sharing and financing concepts reflected in WRDA 86, non-Federal interests will be required to provide lands, easements, rights of way, and dredged material disposal areas; modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary, for the construction of the project; pay 25 percent of the cost of construction of the portion of the project which has a depth in excess of 20 feet but not in excess of 45 feet; pay 50 percent of the cost of construction of the portion of the project which has a depth in excess of 45 feet; and reimburse an additional 10 percent of the cost of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights of way, relocations, and dredged material disposal areas provided for commercial navigation.

Fiscal Year 2008 funds will be used to complete Federal oversight of the GRR and the completion of the Tier II EIS development, as well as continue to fund the other Federal Cooperating Agencies for their participation and review. The scheduled completion date for the Tier II EIS and General Reevaluation Report (GRR) is August 2008. Fiscal Year 2009 funds will be used to obtain the Record of Decision by June 2009 and initiate the first set of plans and specifications to the Ready to Advertise point. PED completion date is scheduled for the end of FY 2009.

4 February 2008

APPROPRIATION TITLE: Investigations, Fiscal Year 2009
 Division: South Atlantic

Study/Project	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Tybee Island Channel Impact Savannah District	821,000	116,000	124,000	125,000	0	250,000	206,000

Tybee Island is a 3.5-mile long barrier island, located 18 miles east of Savannah at the mouth of the Savannah River on the Atlantic Ocean. The mostly developed island is bordered on the north by the South Channel of the Savannah River, on the east by the Atlantic Ocean, and on the south and west by the Back River and other tidal creeks. Tybee Island has an average width of 0.5 miles and the ground elevation varies from 10 to 18 feet above mean low water and slopes westward to the salt marshes. Two potential project purposes have been identified: (1) Determine if the Savannah Harbor Federal Navigation Project is adversely impacting the shores of Tybee Island, Georgia and identify and evaluate alternatives to mitigate for any adverse affects to the shoreline of Tybee Island resulting from the Savannah Harbor Federal navigation project, and (2) Determine if the existing Tybee Island Shoreline Protection Project should be modified to include shore protection for the north end of Tybee Island from the North Terminal Groin to the mouth of Lazaretto Creek. The City of Tybee Island, Georgia, is the non-Federal partner and they understand the requirements for cost sharing in the feasibility phase. The 905(b) Report was completed under the scope of the Construction General (CG) Tybee Island Beach Erosion project using CG funds. The Feasibility Cost Share Agreement (FCSA) was signed on 11 January 2007 for the Initial Impact Report prepared by ERDC. The FCSA will be amended once the Feasibility Phase scope of work, schedule and budget have been finalized and agreed upon by the local sponsor.

This study is not in the FY2008 President's Budget. The funds requested for FY 2009 will be used to continue the feasibility study. The currently estimated cost of the feasibility phase is \$1,350,000 and to be shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the anticipated study cost sharing is as follows:

Total Estimated Study Cost	\$1,496,000
Reconnaissance Phase (Federal)	146,000
Feasibility Phase (Federal)	675,000
Feasibility Phase (Non-Federal)	675,000

With the execution of the FCSA, the reconnaissance phase was completed in January 2007. The scheduled completion for feasibility study is TBD.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction - Channels and Harbors (Navigation)

PROJECT: St. Lucie Inlet, Florida (Continuing)

LOCATION: The project area is located in Martin County on the east coast of Florida near the town of Stuart about midway between Cape Kennedy and Miami.

DESCRIPTION: Private interests created the artificial inlet in 1892 with a channel 5 feet deep and a width of 30 feet to provide access to the Atlantic Ocean. The U.S. Congress authorized the initial Federal Project in 1913 and a modification of the Federal project in 1945. The U.S. Congress authorized the existing project for implementation using Section 201 of the Rivers and harbors Act of 1965. That Act specifies authorization of the adoption of House and Senate resolutions that occurred in may 1974. Improvements approved in 1974 included (1) Extension of the north jetty, (2) Construction of a south jetty, (3) Construction of a detached breakwater south of the tip of the north jetty, (4) Excavation of a sand impoundment basin adjacent to the north jetty, (5) A channel through the bar cut 16 feet deep by 300 feet wide; tapering to 10 feet deep and 150 feet wide through the inlet; 7 feet deep by 100 feet wide to the Intracoastal Waterway, and (6) Transfer of suitable sand to the beach south of the inlet. Prior to 2002, only the channel, detached breakwater, and the north jetty were constructed to their authorized and recommended lengths and dimensions. The south jetty was constructed 200 feet short of its recommended length. The impoundment basin was not constructed to depth as rock was encountered. The Design Memorandum (DM) for St. Lucie Inlet, Florida, Navigation Project dated May 2000 evaluated the justification of constructing the remaining authorized project elements in order to provide a safer, more efficient and navigable channel, and bypassing of suitable maintenance material to the down drift beaches to account for impacts attributed to the navigation project. Recommendations in the DM included raising the seaward most 450 feet of the weir section of the north jetty, (2) construction of the impoundment basin, and (3) extending the south jetty 200 feet to its authorized length. In the summer of 2002, the impoundment basin was constructed to its authorized dimensions.

AUTHORIZATION: Section 201 of the 1974 River and Harbor Act (PL 89-298).

REMAINING BENEFIT-REMAINING COST RATIO: 4.2 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.7 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.7 to 1 at 6-3/8 percent (FY 2001)

BASIS OF BENEFIT-COST RATIO: Benefits are included in the St. Lucie Inlet, Florida, Navigation Project, Design Memorandum dated May 2000 at March 2000 price levels.

Division: South Atlantic

District: Jacksonville

St. Lucie Inlet, Florida

4 February 2008

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$23,291,000		Jetty Walkway	100	1980
			South Jetty Ext.	100	1980
Estimated Non-Federal Cost	4,573,000		Channel	100	1980
Cash Contributions	4,573,000		Detached Breakwater	100	1980
Other Costs	0		Impoundment Basin	100	2002
			North Jetty Modification	11	2009
Total Estimated Project Cost	27,864,000		South Jetty (Remaining 200')	11	2009
			Total Project	68	2009
Allocation to 30 September 2005	16,034,000				
Allocation for FY 2006	1,384,000				
Allocation for FY 2007	0				
Conference Allowance for FY 2008	1,873,000				
Allocation for FY 2008	1,873,000				
Allocations through FY 2008	\$19,291,000	83%			
Allocation Requested for FY 2009	4,000,000	100%			
Scheduled Balance to Complete After FY 2009	0				
Unscheduled Balance to Complete After FY 2009	0				

JUSTIFICATION: Project modifications will reduce the damages incurred by vessels that transit the inlet and increase vessel usage of the inlet. There would be reduced operating costs produced by shorter vessel transits to the ocean compared to alternative inlets. The increased height of the north jetty would allow the weir to function better, thus reducing the amount of material deposited in the navigation channel. The increased height will also reduce wave heights in the impoundment basin and increase its maintenance efficiency. The extension of the south jetty would halt by-passing material and slow sand migration into the inlet. In addition, the increased amount of sand being trapped at the south jetty would allow dredging maintenance intervals for the inlet to be lengthened. Average annual benefits are as follows:

Annual Benefits	Amount
Commercial Navigation	1,105,000
Total	1,105,000

Division: South Atlantic

District: Jacksonville

St. Lucie Inlet, Florida

4 February 2008

FISCAL YEAR 2008: Fiscal Year 2008 funds will be used to complete plans and specifications and initiate jetty construction; engineering during construction; and construction management.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete Modifications to North and South Jetties	\$3,290,000
Planning, Engineering and Design	364,000
Construction Management	346,000
Total	\$4,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts for the project, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 16.5 percent of the cost allocated to commercial navigation during construction.	\$4,556,000	0
Pay one-half of the separable costs allocated to recreation (except recreational Navigation) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	17,000	6,000
Total Non-Federal Cost	\$4,573,000	

STATUS OF LOCAL COOPERATION: The Martin County Board of Commissioners is the local sponsor and strongly supports this project. Local Cooperation Agreement was signed on March 21, 1978 and revised August 24, 1978.

COMPARISON OF FEDERAL COST ESTIMATE: The current Federal (Corps of Engineers) cost estimate of \$23,291,000 is an increase of \$1,391,000 over the latest cost estimate of \$21,900,000 submitted to Congress (FY 2008). This change includes the following:

Item	Amount
Price Escalation on Construction Features	1,391,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The project for St. Lucie Inlet was authorized prior to the National Environmental Policy Act of 1969 as a result no Environmental Impact Statement was prepared. An Environmental Assessment was prepared with the Design Memorandum dated May 2000.

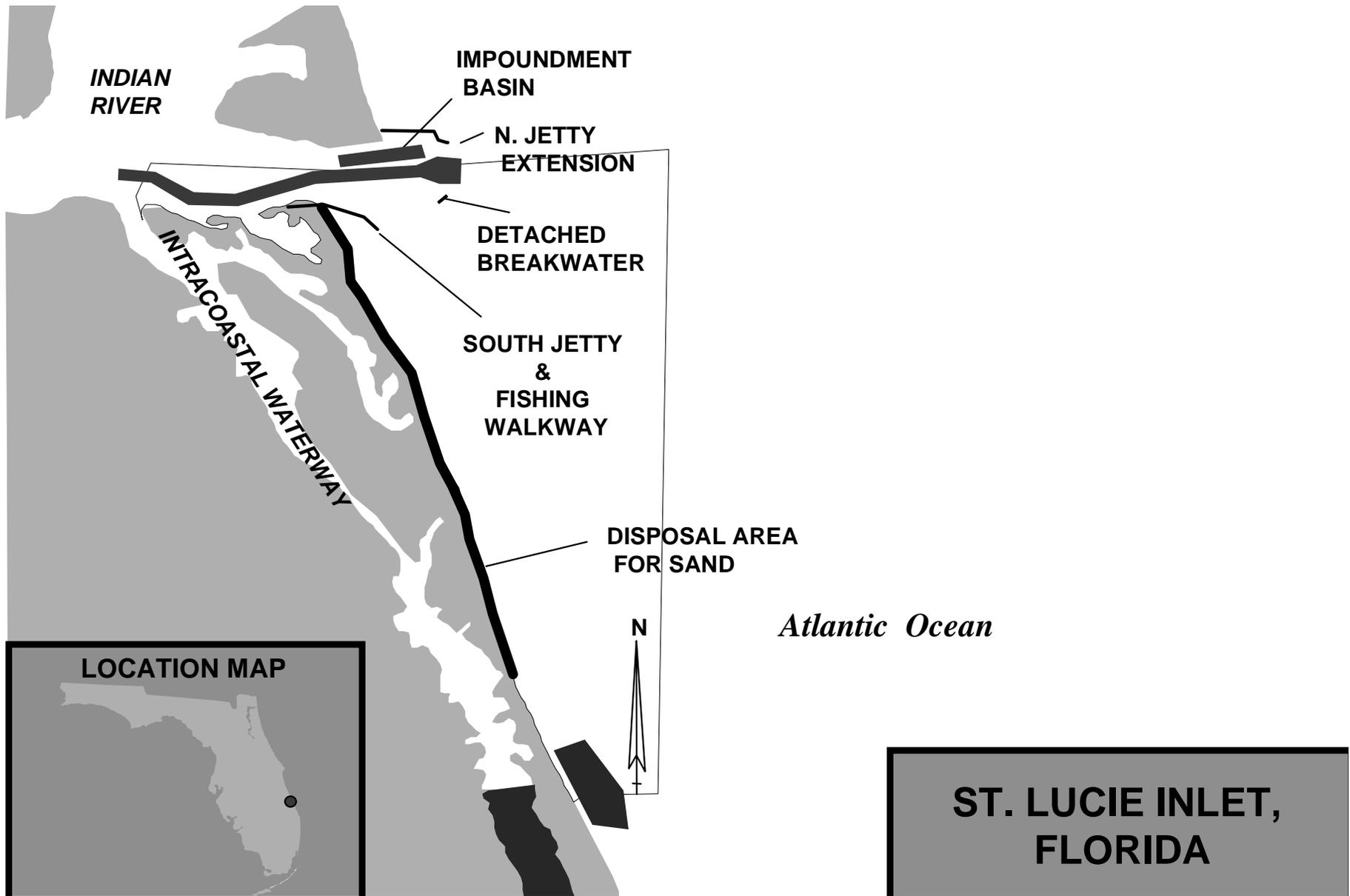
OTHER INFORMATION: Construction of the impoundment basin feature of the project was completed in August 2002. Construction completion of the remaining jetty elements is scheduled for 2009, pending appropriation of construction funds.

Division: South Atlantic

District: Jacksonville

St. Lucie Inlet, Florida

4 February 2008



Division: South Atlantic

District: Jacksonville

St. Lucie Inlet, Florida

4 February 2008

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Division: South Atlantic Division

Study	Total Estimated Federal Cost	Allocation Prior to FY 2006	Allocation FY 2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to complete After FY 2009
North Carolina	\$	\$	\$	\$	\$	\$	\$
Currituck Sound Wilmington District	1,625,000	361,000	149,000	275,000	138,000	150,000	552,000

The study area, comprised of Currituck Sound and Back Bay, is located in Currituck and Dare Counties in northeastern North Carolina, and in Chesapeake and Virginia Beach Counties in southeastern Virginia. Currituck Sound, Back Bay and their watersheds comprise one of the most unique brackish water estuaries and wildlife habitats in the United States. Together, they are the beginning of North Carolina's legendary Outer Banks, and the northern end of the Albemarle-Pamlico National Estuarine System (APES) comprising an area of over 190 square miles. Currituck Sound and Back Bay are renowned for prolific waterfowl and fish populations. Local interests are concerned about significant declines in these populations in recent years. Based on the Currituck Sound Study of mid-winter waterfowl surveys conducted from 1961 through 2006, the waterfowl population peaked in 1976, with 305,000 birds. Since then, the waterfowl population declined well below 50,000 birds, with an estimated average of 25,000 birds per year. Of the 21 fish species identified in 1961, only fifteen were identified in 2003. The declines in the fish and waterfowl populations are attributed to significant loss of submerged aquatic vegetation (SAV), a major food source for water bird and marine mammals, and critical habitat for a host of vertebrate and invertebrate organisms. SAVs once grew in abundance, covering most of the shallow waters of Currituck Sound and Back Bay. Today, these areas retain only 35% and 5%, respectively, of the SAV distributions of 25 years ago. SAV loss has been attributed to water quality degradation and development pressures in the region. The feasibility cost sharing agreement was signed on 5 February 2004 with the state of North Carolina, who is fully committed to the requirements of the study. Non-Corps study participants include Elizabeth City State University, the U.S. Geological Survey, the N.C. Estuarine Research Reserve, the U.S. Fish and Wildlife Service, and the N.C. Department of Environment and Natural Resources, Division of Water Resources.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study, significantly completing data collection and modeling activities, and to conduct a Feasibility Scoping Meeting (FSM). Work to date on problem identification and existing and without project conditions will be reviewed at the FSM. Fiscal Year 2009 funds will be used to continue the feasibility phase of the study including the completion of modeling activities. 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. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$3,125,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	1,500,000
Feasibility Phase (Non-Federal)	1,500,000

The reconnaissance phase was completed in February 2004. The feasibility study completion date is to be determined.

4 February 2008

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009
 Division: South Atlantic Division

Study	Total Estimated Federal Cost	Allocation Prior to FY 2006	Allocation FY 2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to complete After FY 2009
	\$	\$	\$	\$	\$	\$	\$
Virginia and North Carolina							
John H. Kerr Dam and Reservoir Wilmington District	2,350,000	608,000	297,000	500,000	277,000	300,000	368,000

John H. Kerr Dam and Reservoir is located in the Roanoke River Basin, which extends into north-central North Carolina and south-central Virginia. The project was completed in 1952 and provides hydropower, flood damage reduction, water supply, and recreation. Two downstream non-Federal hydropower reservoirs, Gaston and Roanoke Rapids, operated by the Dominion Power Company have minimal active storage for daily hydropower peaking. The Kerr, Gaston and Roanoke Rapids projects operate cooperatively generating power, managing flood risk, and ensuring adequate downstream flows. The lower Roanoke River basin is one of the finest remaining swamp forest ecosystems within the eastern United States, and is designated as one of The Nature Conservancy's Sustainable Rivers Projects. These bottomland hardwood forests, wetlands, uplands, and streams provide a high quality habitat for fish and wildlife, including waterfowl. Federal and State agencies have expressed concern that there is a probable correlation between fish kills and low dissolved oxygen in the lower Roanoke River basin and the operation of J.H. Kerr Dam. Resource concerns for the Lower Roanoke center on the need for restoration and enhancement of extensive swamp and flood plain forests and fisheries through improvements to the hydrologic regime. The Feasibility Cost Sharing Agreement (FCSA) was signed on 17 June 2003 by the State of North Carolina and the Commonwealth of Virginia, who are fully committed to the requirements for the feasibility study.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study including data collection, technical studies and modeling activities. Fiscal year 2009 funds will be used to continue the feasibility phase including formulation and evaluation of alternative plans and completion of data collection, technical studies and modeling. The estimated cost of the feasibility phase is \$4,350,000, which is to be 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	\$4,525,000
Reconnaissance Phase (Federal)	175,000
Feasibility Phase (Federal)	2,175,000
Feasibility Phase (Non-Federal)	2,175,000

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

4 February 2008

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Atlantic Division

Study	Total Estimated Federal Cost	Allocation Prior to FY 2006	Allocation FY 2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to complete After FY 2009
	\$	\$	\$	\$	\$	\$	\$
Georgia							
Long Island, Marsh, Johns Creeks, GA Mobile District	1,451,000	423,000	147,000	200,000	489,000	150,000	42,000

Long Island, Marsh and Johns Creeks are located within the metropolitan Atlanta watershed principally in Fulton County. Fulton County, Georgia has passed floodplain regulations, resolutions, or ordinances to restrict development in flood-prone areas; however, rapid urbanization prior to their passage resulted in the development of many areas subject to periodic flooding. Both scarcity of land and attractiveness of streamside areas contributed to encroachment on the floodplain. Local drainage patterns have also been greatly altered by the urbanization of the metropolitan area. At many locations, extensive storm drain systems have been used to substantially alter natural drainage patterns in order to remove water quickly. Rapid urbanization in the metropolitan Atlanta area over the last few decades has resulted in increases in the magnitude and frequency of severe floods; increased streambank erosion; depreciated water quality; a reduction in diversity and abundance of aquatic insects and fish; and destruction of wetlands, riparian buffers, and springs. The study will be conducted to develop portions of a comprehensive watershed plan for metropolitan Atlanta, including Long Island, Marsh and Johns Creeks. Development of portions of the master plan will be based on a thorough assessment of the changes in stream hydrology, morphology, water quality and habitat and ecology. Fulton County is the current sponsor and understands the cost-share requirements of the feasibility phase. The Feasibility Cost Sharing Agreement was signed in May 2003 for Johns Creek. The Feasibility Cost Sharing Agreement was amended to include Long Island and Marsh Creeks in March 2004. Sandy Springs became a city in December 2005 and Johns Creek became a city in December 2006. As a result, Fulton County has stated that they will not make any further financial commitments to the project; however, no official correspondence to support this statement has been received. Negotiations are underway with the City of Sandy Springs to become the sponsor for Long Island and Marsh Creeks. Negotiations are also underway with the City of Johns Creeks to become sponsor of Johns Creek. The City of Sandy Springs does not want to proceed with the study without the City of Johns Creek participating due to economy of scale.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study. Funds requested for Fiscal Year 2009 will be used to prepare the final feasibility report. However, this is dependent upon replacement Feasibility Cost Sharing Agreements being signed by 1 July 2008. The preliminary estimated cost of the feasibility phase is \$2,600,000, which is to be cost-shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of study cost sharing follows:

Total Estimated Study Cost	\$2,751,000
Reconnaissance Phase (Federal)	151,000
Feasibility Phase (Federal)	1,300,000
Feasibility Phase (Non-Federal)	1,300,000

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

APPROPRIATION TITLE: General Investigations, Fiscal Year 2009

Division: South Atlantic Division

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to complete After FY 2009 \$
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PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES – (ENVIRONMENTAL RESTORATION)

Neuse River Basin Wilmington District	1,875,000	0	0	0	0	200,000	1,675,000
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The recommended project is located in the eastern part of North Carolina. The Neuse River basin encompasses approximately 11 percent of the State of North Carolina and consists of all or portions of 19 counties. The basin is roughly oblong in shape, approximately 180 miles long, with a maximum width of about 46 miles. The Neuse River is formed by the confluence of the Eno and Flat Rivers, about 8 miles north of the city of Durham, and has a drainage area of approximately 5,710 square miles. The basin is primarily an agricultural region, but contains many small towns and several cities, which are important commercial centers. At the City of New Bern, the Neuse River system changes from a free-flowing river to a tidal estuary (i.e., Neuse Estuary). There have been considerable problems in the basin due to increased urbanization in the Raleigh-Durham area, sediment and nutrient loading from agricultural areas in the lower half of the basin, and over-harvesting of certain fisheries in the Neuse Estuary, all of which have had adverse impacts on wetlands and submerged aquatic vegetation (SAV). Estuarine bottom is lost annually due to low dissolved oxygen (DO). Environmental restoration alternatives include stream restoration, anadromous fish habitat restoration, and oyster habitat restoration in the Neuse Estuary, part of Albemarle-Pamlico National Estuary. A secondary focus of this project is flood damage reduction. A number of flood prone structures have been removed by the Federal Emergency Management Agency, which has reduced the occurrence of future flood damages within the flood plain. The sponsor, North Carolina Department of Environment and Natural Resources, supports the project as evidenced by their execution of the feasibility cost sharing agreement in May 2002, and is ready to sign the PED cost sharing agreement upon completion of the feasibility phase. 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 percent non-Federal. Any adjustment 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	\$2,500,000	Total Estimated Preconstruction Engineering and Design Costs	\$2,500,000
Initial Federal Share	1,875,000	Ultimate Federal Share	1,625,000
Initial Non-Federal Share	625,000	Ultimate Non-Federal Share	875,000

At this time, the project is not authorized for construction. Once authorized and in accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, the non-Federal sponsor must provide all lands, easements and rights of way, including suitable borrow and spoil disposal areas; pay 35 percent of the first costs allocated to environmental restoration and flood damage reduction; and bear all costs of operation, maintenance, repair, replacement and rehabilitation of constructed facilities. Fiscal year 2009 funds are being utilized to initiate PED. This feasibility phase is scheduled for completion in June 2009. PED completion is being determined.

CONSTRUCTION

APPROPRIATION TITLE: Construction – Environmental Restoration

PROJECT: South Florida Everglades Ecosystem Restoration, Florida (Continuing)

LOCATION: The South Florida Everglades Ecosystem Restoration Program stretches from the Southern Orlando area southward across the Everglades, the Florida Keys and the contiguous and near-shore waters of South Florida. This project encompasses an area of approximately 18,000 square miles, which includes all or part of 18 counties in the southeast part of the State of Florida. Principle areas are the Kissimmee River Basin, Lake Okeechobee, Everglades Agricultural Area, Upper East Coast, Lower East Coast, Big Cypress Basin, Water Conservation Areas, Everglades National Park, Southwest Florida, Florida Bay and the Florida Keys.

DESCRIPTION: The South Florida Everglades Ecosystem Restoration Program includes the Central and Southern Florida (C&SF) Project, the Kissimmee River Restoration Project, the Everglades and South Florida Restoration Project, and the Modified Waters Deliveries Project, which were previously budgeted separately. The consolidated budget request herein includes the following separable elements: West Palm Beach Canal, South Dade County, Comprehensive Everglades Restoration Plan (CERP), and Manatee Pass Thru Gates (previously separable elements under the C&SF Project); East Coast Canal Structures, Western C-11 Basin, Seminole Big Cypress, Ten Mile Creek, Tamiami Trail (Western Culverts), Florida Keys Carrying Capacity, Lake Okeechobee Water Retention, Southern CREW, and Lake Trafford (previously separable elements under the Everglades and South Florida Ecosystem Restoration Project); Kissimmee River Project; and the Modified Water Deliveries to Everglades National Park Project. The objective of the South Florida Everglades Ecosystem Restoration Program is to restore, protect and preserve the south Florida ecosystem including the Everglades, while providing for other water related needs of the region.

The C&SF Project includes 1,000 miles of canals, 720 miles of levees and several hundred water control structures, while providing water supply, flood damage reduction, water management and other benefits to south Florida.

The Everglades and South Florida Ecosystem Restoration Project separable elements must meet the following criteria: be within the C&SF Project and its near shore waters; provide immediate, independent, and substantial ecosystem restoration, protection, and preservation benefits; cost less than \$25 million in Federal funds, be consistent with the Governor's Commission's Conceptual Plan; and have a local sponsor to contribute a minimum of 50% of the total project cost. The Water Resources Development Act of 2007 amended authorization for the Seminole Big Cypress project to increase the Federal project cost from \$25M to \$30M.

The Kissimmee River basin is approximately 3,000 square miles in size and has two component parts; the upper basin, referred to as the Headwaters Revitalization, and the lower basin, referred to as the Kissimmee River Restoration. The upper basin portion of the project consists of water regulation schedule modifications, canal and structure improvements, and land acquisition. This will result in environmental benefits in the upper chain of lakes and in the lower basin. More natural fluctuations of water levels will enhance the peripheral marshes of the upper lakes, which in turn will also help to improve the water quality entering Lake Okeechobee. Reestablishing a more natural timing of flows to the lower basin will assist in the restoration of the Kissimmee River ecosystem. Structural improvements will include enlargements of existing canals and existing water control structures. The Kissimmee River project is restoring natural flooding in portions of the historic floodplain to reestablish wetland conditions. Construction will include backfilling approximately 22 miles of the C-38 canal, excavating approximately 9 miles of new river channel, and removing 2 water control structures and locks in the backfilled sections. The project also includes acquisition of fee title for lands within the 5-year-floodplain and acquisition of flowage easements for lands between the five-year-flood line and the 100-year-flood line.

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South Florida Everglades Ecosystem Restoration

DESCRIPTION CONT:

The Modified Water Deliveries to Everglades National Park (MWD) involves construction of certain modifications to the C&SF Project water management system and related operational changes to improve water deliveries to Everglades National Park (ENP). The project consists of structural features with the intended purpose of improving the conveyance of water between Water Conservation Areas (WCA) north of ENP and the Shark River Slough within the Park. It will also provide flood mitigation to the 8.5 Square Mile Area (SMA), a residential area adjacent to the Park expansion boundary in East Everglades. For management purposes, the project is described in four categories: 8.5 SMA, Conveyance and Seepage Control, Tamiami Trail (Eastern Segment), and Project Implementation Support (ENP requirements, Experimental Program, Cape Sable Seaside Sparrow Emergency, Combined Structural and Operational Plan, Environmental Monitoring, and Osceola Camp).

Picayune Strand (Southern Golden Gate Estates) Hydrologic Restoration was authorized under Section 1001 (15) of the Water Resources Development Act (WRDA) 2007. The purpose of this project is to restore and enhance the wetlands in the Southern Golden Gates Estates area of Picayune Strand and in adjacent public lands by reducing over-drainage. Implementation of the restoration plan would also improve the water quality of coastal estuaries by moderating the large salinity fluctuations caused by freshwater point discharge of the Fahka Union Canal. The plan would also aid in protecting the City of Naples eastern Golden Gate wellfield by improving groundwater recharge. The project includes a combination of spreader channels, canal plugs, road removal and pump stations.

The Site 1 Impoundment project was authorized under Section 1001 (16) of the Water Resources Development Act 2007. It includes: (1) 1,800-acre project footprint with a 1,660-acre, approximately eight-foot deep above ground impoundment, (2) a 650 cfs inflow pump station, (3) discharge gated culvert, (4) one combined service / auxiliary non-gated spillway and one auxiliary non-gated spillway, and (5) seepage control canal with an associated 150 cfs pump station and overflow weir. An additional gated culvert structure is designed to control stages in L-36 Borrow Canal and North Springs Improvement District discharges into the Hillsboro Canal. Recreation features include boardwalks, viewing platforms, picnic shelters, canoe launches and information kiosks at two sites within the footprint.

The Indian River Lagoon (IRL) was authorized under Section 1001 (14) of the Water Resources Development Act 2007. It is identified as the most biologically diverse estuarine system in all of North America. The Project Implementation Report (PIR) recommends a plan in Martin, St. Lucie, and Okeechobee Counties that will reduce the damaging effects of watershed runoff, reduce high peak discharges, reduce nutrient loads, provide water quality benefits to control salinity, pesticides, and other pollutants presently discharged to the estuary, and provide water supply for agriculture to offset reliance on the Floridan Aquifer. The plan includes 170,000 acre-feet of reservoir storage (C-44 Reservoir, C-23/24 North/South Reservoirs and C-25 Reservoir), and storm water treatment areas (C-44 West/East, C-23, C-24, and C-25), provides storage on 92,000 acres of natural storage areas (Allapattah, Palmar, and Cypress Creek). The plan may also include steps to remove up to 7,900,000 cubic yards of muck from the St. Lucie River and Estuary.

AUTHORIZATION: Flood Control Acts of 1948, 1954, 1960, 1962, 1965, and 1968; Authorization in 1970 under Section 201 of the Flood Control Act of 1965, and the Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996, 1999, 2000 and 2007. The Modified Water Deliveries to Everglades National Park was authorized under the Everglades Expansion Act of 1989 (PL 101-229). PL 101-229 specifically directs the Secretary of the Army, in consultation with the Secretary of Interior, to construct modifications to the C&SF Project to improve water deliveries to ENP.

REMAINING BENEFIT – REMAINING COST RATIO: NA

TOTAL BENEFIT - COST RATIO: NA

INITIAL BENEFIT – COST RATIO: NA

BASIS OF BENEFIT – COST RATIO: NA

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost (CoE)		4,644,851,000		Misc. Completed Works	100	Oct 1992
Programmed Construction	4,026,454,000			CERP, Plan and Design	27	TBD
Unprogrammed Construction	618,397,000			West Palm Beach	98	TBD
Estimated Federal Cost (OFA)		298,155,000		South Dade County	50	TBD
Programmed Construction	298,155,000			Manatee Pass Gates	90	TBD
Estimated Non-Federal Cost		3,814,244,000		E Coast Canal	100	Sep 2004
Programmed Construction	3,485,928,000			Western C-111	100	Sep 2005
Cash Contributions	311,144,000			Seminole Big Cypress	60	TBD
Other Costs	3,174,784,000			Ten Mile Creek *	95	TBD
Unprogrammed Construction	328,316,000			Tamiami Trail (Western Culverts)	TBD	TBD
Cash Contributions	176,860,000			Florida Keys Carrying	100	Dec 2004
Other Costs	151,456,000			Lake Okeechobee Water Retention	100	Apr 2006
Estimated Unallocated Cost				Southern CREW	TBD	TBD
Programmed Construction	15,000,000			Lake Trafford	TBD	TBD
				Kissimmee	50	TBD
				Mod Waters Del	TBD	TBD
				Picayune Strand **	50	TBD
Total Estimated Programmed Construction Cost		7,825,537,000				
Total Estimated Unprogrammed Construction Cost		946,713,000				
Total Estimated Project Cost		8,772,250,000	1/			
Allocations to 30 September 2005		949,253,000				
Allocations for 2006		130,840,000				
Allocations for 2007		152,548,000	2/	Entire Project	30	TBD
Conference Allowance for 2008		130,669,000				
Allocation for 2008		127,469,000	3/			
Allocations through 2008		1,360,110,000	29%			
Allocation Requested for 2009		185,000,000	33%			
Programmed Balance to Complete after 2009		2,481,344,000				
Unprogrammed Balance to Complete after 2009		618,397,000				

* Additional construction required prior to turnover.

** COE will initiate construction of ongoing work.

1/ Includes only authorized features for CERP.

2/ Reflects a decrease in allocation in the amount of \$12,652,00 for Upper St Johns and \$1,200,000 reprogramming from Big Bend.

3/ Reflects a decrease in allocation in the amount of \$3,200,000 of FY08 funding to the Upper St Johns River Project.

Division: South Atlantic

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South Florida Everglades Ecosystem Restoration

PHYSICAL DATA

Pumping Plants (Number)	38	Locks (Number)	25
Floodway Control & Diversion Structures (Number)	235	Canals (Miles)	999
Relocations-Highways (Bridges)	2	Levees (Miles)	720
Relocations-Railroads (Bridges)	58	Bridge	7
Canals - New River Channel	9		
Water Control Structures Removal	2		

JUSTIFICATION:

The Central and Southern Florida Project: The C&SF project was originally authorized and designed as a flood control project in response to the maximum flood of record in 1947. Existing damages, without the project, were \$59,693,000 (\$366,903,000 at 1 October 1989 price levels). The 1947 flood frequency averages 1 in 25 years over the project area, with an average duration of 70 days. Minor floods occur almost yearly in the project area and major floods occur frequently. This situation is aggravated by wet antecedent conditions followed by heavy seasonal rainfall. The average degree of protection provided by the completed project is about a 10-year flood frequency protection. Approximately 2,853,700 acres are protected. This encompasses 2,765,100 agricultural acres and 88,600 urban acres. The present value of property subject to flood damages is about \$12.3 billion. Property types include residential, commercial, industrial, public, and agricultural.

Average annual damages without the project would be \$110,580,000 and \$22,536,000 with the project. Damages attributable to urban property are 16.7 percent and 83.3 percent are attributable to rural property. The proportion of average annual damages prevented is 36.8 percent to existing development and 63.2 percent to future development.

Under Public Law 90-483 (River and Harbor Act of 1968), additional project features for the purpose of water supply were added to the Central and Southern Florida project. The storage capacity of the entire project is 2,953,000 average annual acre-feet divided into approximately 1,600,000 acre-feet for urban use by 2020 and 740,000 acre-feet for agricultural use by 2020. The Everglades National Park receives virtually its entire source of water (other than direct rainfall) from the Central and Southern Florida Project. The pumping rate for irrigation of 590 square miles would yield approximately 917,850 acre-feet per year for agricultural use. Recurrent drought conditions with resultant low flows require supplemental irrigation to ensure adequate crops yields.

JUSTIFICATION CONT:

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Control	235,213,000
Municipal and Industrial Water Supply	25,664,000
Agricultural Water Supply	27,614,000
Recreation	11,109,000
Fish and Wildlife	238,000
Area Redevelopment	3,012,000
Total	302,850,000

The Modified Water Deliveries to Everglades National Park and South Dade County (C-111) Projects: The Corps is working in stages to restore natural hydrological conditions in Everglades National Park. Public Law 90-483 and Public Law 101-229 (Everglades National Park Protection and Expansion Act) authorized modifications to the C&SF project for environmental restoration in the C-111 basin and NE Shark River Slough. The South Dade County effort will help restore natural hydrologic conditions in Taylor Slough within Everglades National Park. Modified Water Deliveries will take steps to restore natural hydrological flows to Shark River Slough in the Park. The Corps will evaluate the success of these projects, and incorporate the lessons learned into implementation efforts conducted under the WRDA 2000 Comprehensive Everglades Restoration Plan (CERP) authority with further steps to improve water deliveries to the park.

Due to a significant increase in the costs of the option selected in November 2005 for the TamiamiTrail (Eastern Segment) feature of the Modified Water Deliveries Project, the Corps is currently preparing a Limited Reevaluation Report (LRR) to re-examine prior reports and environmental documentation associated with this feature in an effort to re-evaluate the practicable alternatives for increasing the flow of water under the highway and into the Park.

Everglades and South Florida Ecosystem Restoration Project: WRDA 1996 authorized implementation of the Everglades and South Florida Ecosystem Restoration Project in order to provide immediate, independent, and substantial ecosystem restoration, protection and preservation benefits. The projects were justified on the basis of those benefits. Florida Keys Carrying Capacity Study, East Coast Canal Structure and Western C-11, and Lake Okeechobee Water Retention and Phosphorus Removal projects have been completed. The Ten Mile Creek project was physically completed in 2006. However, prior to turnover of the project, a determination will need to be made as to whether additional work may need to be performed.

Kissimmee River Restoration Project: Local water resource development of the Kissimmee River began in the late 1800's. In the 1960's, the river was channelized as part of the comprehensive Central and Southern Florida Project. Although the project has provided for navigation and reduced flood damages as intended, it also resulted in long-term degradation of the natural ecosystem. The 103-mile river that historically meandered across and inundated about 35,000 acres of wetlands over a broad flood plain was reduced to a 56-mile canal that has successfully contained almost all flows since its completion. The channelization coupled with the modifications of the Lower Basin tributary watersheds and efficient control of floodwaters and regulation of inflows from the Upper Basin significantly

JUSTIFICATION CONT:

altered hydrologic characteristics of the ecosystem. Project formulation and scoping was based on the most cost-effective plan that would meet fish and wildlife resources objectives for restoring ecological integrity. Completion of the project will result in the restoration of 52 miles of river; 27,000 acres of wetlands; improved water quality characteristics for the Kissimmee River; and restored conditions for over 300 fish and wildlife species.

The FY 2008 Budget proposed a Reevaluation Study to determine the Federal interest in expanding the geographic scope of the Kissimmee River Restoration Project authorized under Water Resources Development Act (WRDA) of 1992 (section 101) to achieve additional aquatic ecosystem benefits and reduce peak flows to Lake Okeechobee. Reducing peak flows to the lake could improve the ability to hold flood waters safely in the lake. However, pending further discussions with the non-Federal sponsor, the Corps is not proceeding with the proposed Reevaluation Study at this time due to a concern over the presence of about 350 homes in the floodplain. The features that were to be reevaluated were authorized as part of the project, but are currently authorized to be carried out only at 100 percent non-Federal expense.

FISCAL YEAR 2008: Fiscal Year 2008 funds for Kissimmee River will be used to complete construction on the Istokpoga Canal, complete construction of S-68A, award second backfill contract for Reach 4, and continue plans and specifications on future construction.

Funding for the Everglades & South Florida program will be used to continue construction on the Ten Mile Creek and Seminole Big Cypress projects.

Funding for the Central and Southern Florida project include: Comprehensive Everglades Restoration Plan (CERP): Continue Project Implementation Reports (PIR); plans and specifications on Indian River Lagoon South, Picayune Strand, Site 1 Impoundment, Broward County WPA, Everglades Agricultural Area Part 1; continue installation, testing and design on the Pilot projects; continue system wide monitoring. West Palm Beach Canal: continue Periphyton Stormwater Treatment Area (PSTA) contract and design of the L-40 feature. South Dade County: continue the design and construction for S-331 Command Building, construction of the Southern Detention Area. Manatee Pass Thru Gates: continue construction on acoustic devices at S-77 and S-308B.

Funding for the Modified Water Deliveries to Everglades National Park will be used to complete construction on the 8.5 Square Mile Area, continue design and begin implementation of a decision reached on Tamiami Trail following completion of the LRR, and continue design and construct a permanent command and control center at the 331 pump station conveyance and seepage feature.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Central and Southern Florida

Continue Construction for PSTA monitoring for West Palm Beach Canal	2,000,000
Initiate Construction on the CERP Picayune Strand	21,129,000
Complete Construction of locks, channels, and canals for Manatee Pass-Through Gates	1,310,000
Continue Construction of Pump Station S-332C for South Dade County	1,450,000
Engineering and Design for CERP Picayune Strand	1,500,000
Engineering and Design, to include Installation and Testing of Pilot Projects (CERP)	7,106,000
Engineering and Design for Comprehensive Everglades Restoration Plan (CERP), includes Adaptive Assessment and Monitoring	61,028,000
Engineering and Design for South Dade County	3,000,000
Engineering and Design for Manatee Pass-Through Gates	65,000
Construction Management for CERP Picayune Strand	1,600,000
Subtotal	\$ 100,188,000

Kissimmee

Continue Construction on Reach 4 backfill, second contract	\$ 26,734,000
Planning, Engineering, and Design/Monitoring	4,281,000
Construction Management	1,950,000
Subtotal	\$31,015,000

Everglades and South Florida Ecosystem Restoration

Complete construction of channels and canals	\$ 3,507,000
Planning, Engineering and Design	60,000
Construction Management	230,000
Subtotal	\$3,797,000

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South Florida Everglades Ecosystem Restoration

FISCAL YEAR 2009 CON'T

Modified Water Deliveries to Everglades National Park (Army Corps portion of funding request)	
Continue Work on Tamiami Trail (to implement decision reached following completion of the LRR)	45,750,000
Project Implementation Support	4,250,000
 Subtotal	 \$50,000,000
Total	\$185,000,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in specific authorizing legislation and the Water Resources Development Act of 1986, 1996 and 2000 as applicable, the non-Federal sponsor must comply with the requirements listed below:

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
West Palm Beach Canal		
Provide lands, easements, rights of way, and dredged material disposal areas.	12,240,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	1,400,000	
Pay 12.8 percent of the separable costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of facilities.	20,260,000	289,800
Total Non-Federal Costs	33,900,000	289,800

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South Florida Everglades Ecosystem Restoration

NON-FEDERAL COST CON'T

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
South Dade County		
Provide lands, easements, rights of way, and dredged material disposal areas.	116,292,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	330,000	
Pay one-half of the cost of the project assigned to flood control and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control facilities.	74,378,000	845,000
Total Non-Federal Costs	191,000,000	845,000
Manatee Pass-Through Gates		
Pay applicable percentage based upon authorized cost share for each particular project.	2,200,000	
Total Non-Federal Costs	2,200,000	
Comprehensive Everglades Restoration Plan (CERP)		
Provide lands, easements, rights of way, and dredged material disposal areas.	1,533,880,000	
Pay one-half of the cost of the project assigned to flood control and bear one half of the cost of operation, maintenance, repair, rehabilitation, and replacement of (CERP) facilities.	1,178,764,000	
Total Non-Federal Costs	2,712,644,000	

NON-FEDERAL COST CON'T

Requirements of Local Cooperation

	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Completed C&SF Works		
Provide lands, easements, rights of way, and modify or relocate buildings, utilities, roads, bridges and other facilities.	176,459,000	
Cash Contribution/WIK	232,241,000	
Total Non-Federal Costs Total	408,700,000	
CERP: Site 1 Impoundment		
Provide lands, easements, rights of way, and modify or relocate buildings, utilities, roads, bridges and other facilities.	9,144,000	
Cash Contribution/WIK	35,908,000	
Total Non-Federal Costs Total	45,052,000	
CERP: Indian River Lagoon South		
Provide lands, easements, rights of way, and modify or relocate buildings, utilities, roads, bridges and other facilities.	783,150,000	
Cash Contribution/WIK	0	6,144,700
Total Non-Federal Costs Total	783,150,000	
CERP: Picayune Strand		
Provide lands, easements, rights of way, and modify or relocate buildings, utilities, roads, bridges and other facilities.	154,958,000	
Cash Contribution/WIK	36,042,000	
Total Non-Federal Costs Total	191,000,000	

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South Florida Everglades Ecosystem Restoration

NON-FEDERAL COST CON'T

	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Western C-11 Basin		
Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	0	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	8,992,000	310,000
Total Non-Federal Costs	8,992,000	310,000
East Coast Canal Structures		
Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	0	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	1,796,000	150,000
Total Non-Federal Costs	1,796,000	150,000

NON-FEDERAL COST CON'T

Requirements of Local Cooperation	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Ten Mile Creek		
Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	5,074,000	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	15,507,000	660,000
Total Non-Federal Costs	20,581,000	660,000
Tamiami Trail (Western Culverts)		
Provide; with credit toward the non-Federal 84 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	0	
Modify or relocate; with credit toward the non-Federal 84 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 84 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	13,884,000	250,000
Total Non-Federal Costs	13,884,000	250,000
Seminole Big Cypress		
Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	7,500,000	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay 50% costs of operation, maintenance, repair, rehabilitation, and replacement.	20,369,000	600,000
Total Non-Federal Costs	27,869,000	600,000
Division: South Atlantic	District: Jacksonville	South Florida Everglades Ecosystem Restoration

NON-FEDERAL COST CON'T

Requirements of Local Cooperation	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Florida Keys Carrying Capacity Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	0	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	3,000,000	
Total Non-Federal Costs	3,000,000	

	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Lake Okeechobee Water retention & Phosphorus Removal Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	3,077,000	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	8,120,000	364,000
Total Non-Federal Costs	11,197,000	364,000

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South Florida Everglades Ecosystem Restoration

NON-FEDERAL COST CON'T

Requirements of Local Cooperation	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Southern CREW		
Provide; with credit toward the non-Federal 50 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	29,000,000	
Modify or relocate; with credit toward the non-Federal 50 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 50 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	4,040,000	175,000
Total Non-Federal Costs	33,040,000	175,000

Requirements of Local Cooperation	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Lake Trafford		
Provide; with credit toward the non-Federal 95 percent share of project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	1,342,000	
Modify or relocate; with credit toward the non-Federal 95 percent share of project costs; utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	0	
Pay 95 percent of the costs allocated to environmental restoration, and pay all costs of operation, maintenance, repair, rehabilitation, and replacement.	27,099,000	70,000
Total Non-Federal Costs	28,441,000	70,000

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South Florida Everglades Ecosystem Restoration

OTHER FEDERAL AGENCIES (OFA)

	Payments During Construction, and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation, and Replacement Costs
Modified Water Deliveries to Everglades National Park ** Provide; with credit toward Dol's share of the project costs; all lands, easements, rights of way, and excavated or dredged material disposal areas.	\$ 113,982,000	
Pay share of project costs.	TBD	
Total OFA Costs	TBD	

** Alternatives and costs are currently being compiled for a decision document. Final project cost pending final decision.

STATUS OF LOCAL COOPERATION: Assurances of local cooperation have been accepted from the local sponsor, the South Florida Water Management District, for all works authorized under the Central and Southern Florida project. The Project Cooperation Agreement for the South Dade County separable element was executed with the South Florida Water Management District in January 1995. The Design Agreement for the South Florida Water Management District segment of the Comprehensive Everglades Restoration Plan (CERP) was signed on 12 May 2000. The design agreement for Lake Park was signed on 17 January 2003 with Lee County and for Winsberg Farm on 03 January 2002 with Palm Beach County. Additional Design Agreements for CERP features are scheduled to be executed with Seminole Tribe of Florida, the Miccosukee Tribe of Florida, the Florida Department of Environmental Protection and Miami-Dade County.

The Kissimmee Project Cooperation Agreement reflects the cost sharing outlined in House Document 102-286 dated April 7, 1992 was executed with the South Florida Water Management District (SFWMD) in March 1994. The local sponsor will be required to provide a cash contribution of 11.4% (reflecting credit for lands, easements, rights of way, relocations, and disposal areas) of construction costs.

PCA's were executed 07 January 2000 for East Coast Canal Structures, Tamiami Trail Culverts, Western C-11, Seminole Big Cypress, Southern Crew, Lake Okeechobee Water Retention, 10-Mile Creek, and Lake Trafford. A PCA was executed Dec 1998 for Florida Keys Carrying Capacity. Local sponsors include: South Florida Water Management District (SFWMD), Seminole Tribe of Florida, and the Florida Department of Community Affairs (DCA).

PCA's were executed with the South Florida Water Management District September 1994 and July 2001 for the Modified Water Deliveries Project to implement modifications to the C&SF Project to improve water deliveries into Everglades National Park.

A PCA is scheduled to be executed on the CERP: Picayune Strand project in August 2008.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps cost estimate for the Corps' share of the overall restoration effort) cost estimate of \$4,644,851,000 is an increase of \$895,688,000 from the latest estimate (\$3,749,163,000) submitted to Congress (FY 2008). The changes include the following items:

Item	Amount
Price Escalation on Construction Features	\$10,200,000
Design Changes	48,979,000
Project Authorization in WRDA 2007	806,409,000
Schedule Changes	6,900,000
WRDA 2007 Change to E&SF Funding Cap	20,000,000
Post Contract Award Adjustment	3,200,000
Total	895,688,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT:

The latest Programmatic Environmental Impact Statement for Central and Southern Florida project was the Comprehensive Review Study in April 1999. NEPA documents have also been completed for Indian River Lagoon South, Picayune Strand, Site 1 and Broward County WPA.

The final Environmental Impact Statement for the Kissimmee project was filed with EPA on April 5, 1992. A supplement to the Environmental Impact Statement was integrated into the Upper Basin project modification report.

Appropriate NEPA documents were prepared and finalized prior to execution of the PCA for East Coast Canal Structures, Tamiami Trail Culverts (Western Culverts), Western C-11, Seminole Big Cypress, Southern Crew, Lake Okeechobee Water Retention, 10-Mile Creek, and Lake Trafford. A PCA was executed Dec 1998 for the Florida Keys Carrying Capacity Study.

The Record of Decision for the Integrated Environmental Impact Statement of the Picayune Strand Restoration recommended plan was signed on April 13, 2007.

OTHER INFORMATION: Funds to initiate preconstruction planning and construction on the original Central and Southern Florida project were appropriated in FY1950.

The Everglades National Park Protection and Expansion Act, signed 13 December 1989, authorized construction of structural works required to take steps to improve water deliveries to Shark River Slough in Everglades National Park, construction of flood mitigation works for the residential area in the East Everglades, and acquisition of 107,600 acres of privately owned wetlands in the East Everglades. The Department of the Interior and the State of Florida acquired the lands included in the ENP expansion area and the Secretary of the Army has responsibility for constructing all project modifications. Under the initial implementation plan, funds were appropriated to the National Park Service and transferred to the Corps of Engineers for this purpose. Beginning in FY2006, Congress has provided funding for this project to both the National Park Service and the Corps of Engineers.

Modifications to the C&SF, South Dade County separable element to improve the natural resources in Taylor Slough in Everglades National Park have been funded through the Corps.

The Kissimmee Restoration Project was authorized by the Water Resources Development Act of 1992. The project cooperation agreement was executed in March 1994. Engineering and design and construction are underway. Construction was initiated in Fiscal Year 1997.

The Water Resources Development Act of 1992 authorizes the Chief of Engineers to review the Central and Southern Florida project to determine whether modifications to the existing project are advisable at the present time due to significantly changed physical, biological, demographic, or economic conditions, with particular reference to modifying the project or its operation for improving the quality of the environment, improving protection of the aquifer, and improving the integrity, capability, and conservation of urban water supplies affected by the project or its operation. The central organizing theme of the Comprehensive Restudy was the restoration of the South Florida ecosystem while accommodating other demands for water and related land resources in south Florida. Recognizing the complexity of ecological restoration and the extensive interaction between the ecosystem and other uses of water and related land resources, oversight of the reconnaissance level study effort was provided by the interagency South Florida Ecosystem Restoration Task Force, which continues to provide policy guidance, study coordination, and appropriate agency participation. The Water Resources Development Act of 1996 (Section 528) required that the Comprehensive Restudy feasibility report be submitted to Congress, along with a Programmatic Environmental Impact Statement, in July 1999. The Final Integrated Feasibility Report and Programmatic Environmental Impact Statement was submitted to Congress on 01 July 1999. The Comprehensive Plan provided a conceptual framework for restoring the South Florida Everglades. Congress authorized this plan in WRDA 2000. The Energy and Water Appropriations Act of FY 2000, Public Law 106-50 authorized funds to initiate design of elements of the Comprehensive Plan for the Everglades and South Florida Ecosystem Restoration Project.

The Water Resources Development Act of 1996 also legislatively established the Task Force and expanded its membership to include State and local agency representatives. The Task Force is providing assistance to the Comprehensive Restoration Plan Program.

The Indian River Lagoon South Feasibility Study was initiated in 1996. This study evaluated potential modifications to the Central and South Florida Project for ecological restoration of Indian River Lagoon system. A final feasibility report, which included components of the Comprehensive Plan, was submitted to HQUSACE in FY02. The Project Implementation Report (PIR), required by WRDA 2000, for Indian River Lagoon South was completed August 2004. A Chief's Report on the PIR was signed 04 August 2004. Construction was authorized in WRDA 2007.

Division: South Atlantic

District: Jacksonville

South Florida Everglades Ecosystem Restoration

OTHER INFORMATION CON'T:

The Picayune Strand Project Implementation Report, which is a component of the Comprehensive Plan, was completed in December 2004. A Chief's Report on the PIR was signed on 15 September 2005. Construction was authorized in WRDA 2007. Construction has started with funds provided by the non-Federal sponsor and would continue with the funds requested for FY 09. Specifically, the local sponsor, South Florida Water Management District, has completed construction of road demolition and some plugging of canals. The Corps would complete the remaining construction of 3 pump stations, road removal and plugging of canals. The FY09 funds would be used for the first pump station, which is scheduled to be completed in two years. This project involves the restoration of natural flow across roughly 90 square miles in western Collier County, which were drained in the early 1960's. The project will restore wetlands in Picayune Strand (Southern Golden Gates Estates) and in adjacent public lands by reducing over drainage while restoring a natural and beneficial sheetflow of water to the Ten Thousand Islands National Wildlife Refuge. Additionally, the project will benefit the endangered Florida panther, and improve wetland/upland mosaic habitat west of the Everglades.

The Site 1 Impoundment Project Implementation Report, which is a component of the Comprehensive Plan, was completed in August 2006. A Chief's Report on the PIR was signed on 19 December 2006. Construction was authorized in WRDA 2007.

The Broward County WPA Project Implementation Report, which is a component of the Comprehensive Plan, was completed in April 2007.

The Caloosahatchee River (C-43) West Basin Storage Reservoir Project Implementation Report, which is a component of the Comprehensive Plan, was completed in September 2007.

The Water Resources Development Act 2000 authorized the Comprehensive Everglades Restoration Plan as the framework for modifications and operational changes to the Central & Southern Florida Project. In addition, specific authorization was provided for 10 projects totaling \$1.1 billion (including \$100 million for adaptive assessment and monitoring programs) and 4 pilot projects totaling \$69 million, and to allow for implementation of projects under a programmatic authority, not to exceed \$206 million. Two additional pilot projects and part of the Comprehensive Everglades Restoration Plan were authorized in the Water Resources Development Act of 1999 for \$29 million.

The Water Resources Development Act of 2007 also provided a new authorized project cost for the Hillsboro and Lake Okeechobee ASR Pilot and the Caloosahatchee ASR Pilot projects; and a provision for the establishment of Section 902 limits for the Programmatic Authority projects.

The Everglades and South Florida Ecosystem Restoration project authorization limit of a total federal funding of \$75 million was increased to \$95 million in WRDA 2007. It also provided for an increased project Federal funding cap on the Seminole Big Cypress project from \$25M to \$30M. The local sponsors have elected, on some projects, to fund more than 50% of project costs to complete those projects.

SUMMARIZED FINANCIAL DATA

C&SF Miscellaneous Completed Work

Estimated Federal Cost		934,900,000
Estimated Non-Federal Cost		408,700,000
Cash Contributions	232,241,000	
Other Costs	176,459,000	
Total Estimated Project Cost		1,343,600,000

Modified Water Deliveries to Everglades National Park **

Estimated Federal Cost (COE)		131,263,000
Programmed Construction	131,263,000	
Unprogrammed Construction	0	
Estimated Federal Cost (OFA)		252,155,000
Programmed Construction	252,155,000	
Unprogrammed Construction	0	
Estimated Unallocated Cost		15,000,000
Programmed Construction	15,000,000	
Unprogrammed Construction	0	
Total Estimated Programmed Construction Cost		398,418,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		398,418,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

.SUMMARIZED FINANCIAL DATA (Continued)

** Alternatives and costs are currently being compiled for a decision document. Final project cost pending final decision.

SUMMARIZED FINANCIAL DATA (Continued)

South Dade County

Estimated Federal Cost		191,000,000
Programmed Construction	191,000,000	
Unprogrammed Construction	0	
Estimated Non-Federal Cost		191,000,000
Programmed Construction	190,000,000	
Cash Contributions	74,378,000	
Other Costs	116,622,000	
Unprogrammed Construction		0
Cash Contributions	0	
Other Costs	0	
Total Estimated Programmed Construction Cost		382,000,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		382,000,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

SUMMARIZED FINANCIAL DATA (Continued)

West Palm Beach Canal

Estimated Federal Cost (COE)		239,900,000
Programmed Construction	239,900,000	
Unprogrammed Construction	0	
Estimated Federal Cost (OFA)		46,000,000
Programmed Construction	46,000,000	
Unprogrammed Construction	0	
Estimated Non-Federal Cost		30,900,000
Programmed Construction	33,900,000	
Cash Contributions	20,260,000	
Other Costs	13,640,000	
Estimated Non-Federal Cost		0
Unprogrammed Construction		0
Cash Contributions	0	
Other Costs	0	
Total Estimated Programmed Construction Cost		319,800,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		319,800,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

SUMMARIZED FINANCIAL DATA (Continued)

Manatee Pass-Through Gates

Estimated Federal Cost		15,800,000
Programmed Construction	15,800,000	
Unprogrammed Construction	0	
Estimated Non-Federal Cost		2,200,000
Programmed Construction	2,200,000	
Cash Contributions	2,200,000	
Other Costs	0	
Unprogrammed Construction		0
Cash Contributions	0	
Other Costs	0	
Total Estimated Programmed Construction Cost		18,000,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		18,000,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

SUMMARIZED FINANCIAL DATA (Continued)

Comprehensive Everglades Restoration Plan

Estimated Federal Cost		2,729,492,000
Programmed Construction	2,729,492,000	
Unprogrammed Construction	0	
Estimated Non-Federal Cost		272,211,480,000
Programmed Construction	2,722,148,000	
Cash Contributions	14,872,000	
Other Costs	2,707,276,000	
Estimated Non-Federal Cost		
Unprogrammed Construction		0
Cash Contributions	0	
Other Costs	0	
Total Estimated Programmed Construction Cost		5,451,640,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		5,451,640,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

SUMMARIZED FINANCIAL DATA (Continued)

Lake Okeechobee

Estimated Federal Cost		11,150,000
Estimated Non-Federal Cost		11,197,000
Cash Contributions	5,970,000	
Other Costs	5,227,000	
Total Estimated Project Cost		22,347,000

Southern CREW

Estimated Federal Cost		281,000
Estimated Non-Federal Cost	1/	33,040,000
Cash Contributions	3,462,000	
Other Costs	29,578,000	
Total Estimated Project Cost		33,321,000

East Coast Canal Structures

Estimated Federal Cost		1,902,000
Estimated Non-Federal Cost		1,796,000
Cash Contributions	1,571,000	
Other Costs	225,000	
Total Estimated Project Cost		3,698,000

Division: South Atlantic

District: Jacksonville

South Florida Everglades Ecosystem Restoration

SUMMARIZED FINANCIAL DATA (Continued):

Western C-11 Basin

Estimated Federal Cost		9,100,000
Estimated Non-Federal Cost		8,992,000
Cash Contributions	8,389,000	
Other Costs	603,000	
Total Estimated Project Cost		18,092,000

Seminole Big Cypress

Estimated Federal Cost		24,309,000
Estimated Non-Federal Cost 1/		27,869,000
Cash Contributions	11,870,000	
Other Costs	15,999,000	
Total Estimated Project Cost		52,178,000

Ten-Mile Creek

Estimated Federal Cost		19,995,000
Estimated Non-Federal Cost		20,581,000
Cash Contributions	14,305,000	
Other Costs	6,276,000	
Total Estimated Project Cost		40,576,000

Division: South Atlantic

District: Jacksonville

South Florida Everglades Ecosystem Restoration

SUMMARIZED FINANCIAL DATA (Continued):

Tamiami Trail (Western Culverts)

Estimated Federal Cost		2,622,000
Estimated Non-Federal Cost 1/		13,884,000
Cash Contributions	0	
Other Costs	13,884,000	
Total Estimated Project Cost		16,506,000

Lake Trafford

Estimated Federal Cost		1,602,000
Estimated Non-Federal Cost 1/		28,441,000
Cash Contributions	0	
Other Costs	28,441,000	
Total Estimated Project Cost		30,043,000

Keys Carrying Capacity

Estimated Federal Cost		3,000,000
Estimated Non-Federal Cost		3,000,000
Cash Contributions	1,500,000	
Other Costs	1,500,000	
Total Estimated Project Cost		6,000,000

Division: South Atlantic

District: Jacksonville

South Florida Everglades Ecosystem Restoration

SUMMARIZED FINANCIAL DATA (Continued):

INDIAN RIVER LAGOON SOUTH

Estimated Federal Cost		783,149,000
Estimated Non-Federal Cost		783,149,000
Cash Contributions		0
Other Costs	783,149,000	
Total Estimated Project Cost		1,566,298,000

REMAINING BENEFIT-REMAINING COST RATIO: N/A

TOTAL BENEFIT-COST RATIO: N/A

PICAYUNE STRAND

Estimated Federal Cost		187,233,000
Estimated Non-Federal Cost		193,043,000
Cash Contributions		0
Other Costs	193,043,000	
Total Estimated Project Cost		380,276,000

REMAINING BENEFIT-REMAINING COST RATIO: N/A

TOTAL BENEFIT-COST RATIO: N/A

Division: South Atlantic

District: Jacksonville

South Florida Everglades Ecosystem Restoration

SUMMARIZED FINANCIAL DATA (Continued):

SITE 1 IMPOUNDMENT

Estimated Federal Cost		45,052,000
Estimated Non-Federal Cost		45,052,000
Cash Contributions	0	
Other Costs	45,052,000	
Total Estimated Project Cost		90,104,000

REMAINING BENEFIT-REMAINING COST RATIO: N/A

TOTAL BENEFIT-COST RATIO: N/A

SUMMARIZED FINANCIAL DATA (Continued):

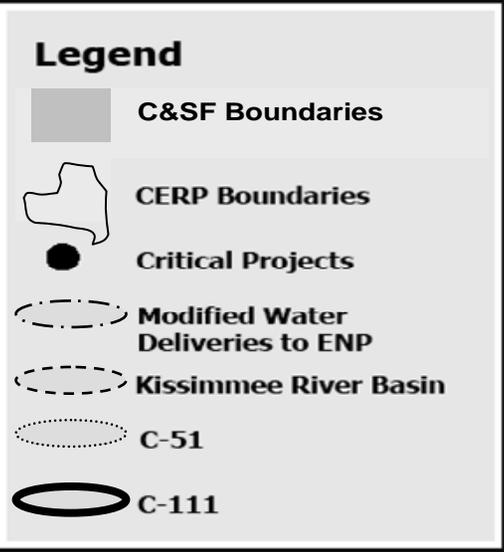
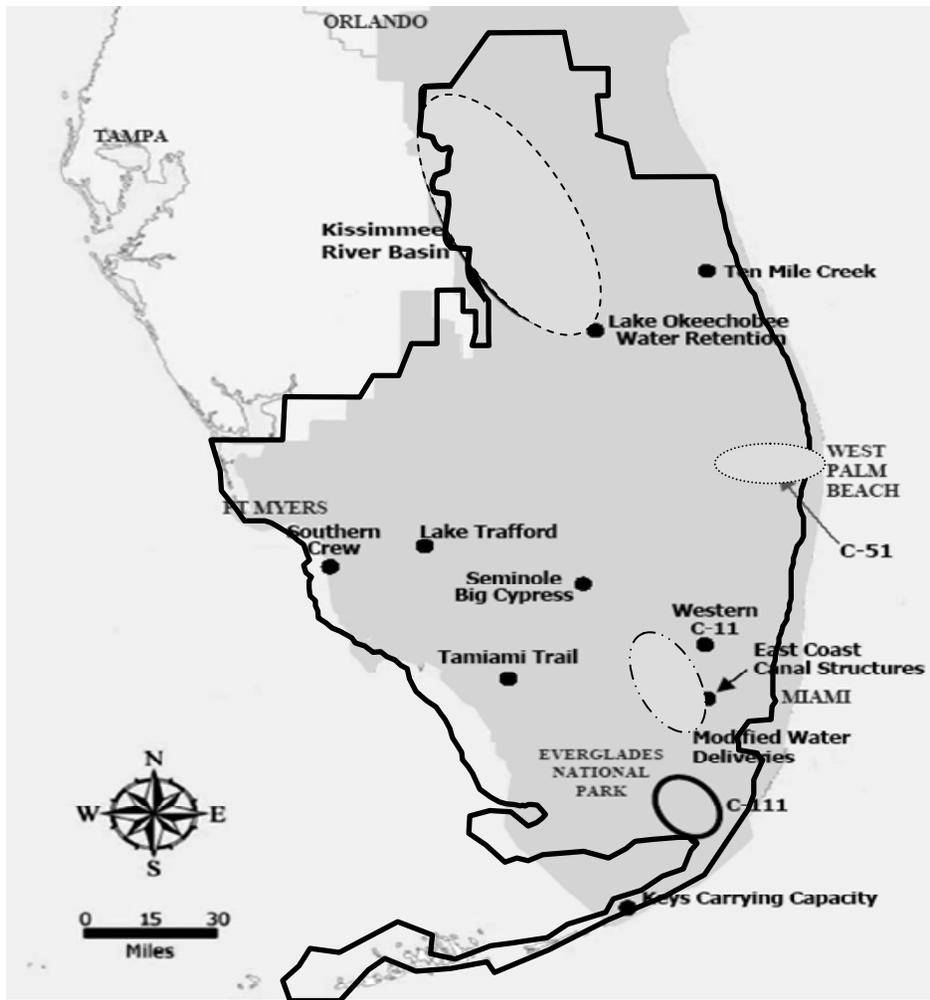
Kissimmee River

Estimated Federal Cost		317,000,000
Programmed Construction	317,000,000	
Unprogrammed Construction	0	
Estimated Non-Federal Cost		317,000,000
Programmed Construction	317,000,000	
Cash Contributions	96,986,000	
Other Costs	220,014,000	
Estimated Non-Federal Cost		
Unprogrammed Construction		0
Cash Contributions	0	
Other Costs	0	
Total Estimated Programmed Construction Cost		634,000,000
Total Estimated Unprogrammed Construction Cost		0
Total Estimated Project Cost		634,000,000

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable

TOTAL BENEFIT-COST RATIO: Not applicable

1/ Construction assigned to sponsor due to Federal funding cap on Everglades and South Florida program.



South Florida Everglades Ecosystem Restoration

SOUTH PACIFIC DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

ILLUSTRATION A-2.4
PRECONSTRUCTION ENGINEERING AND DESIGN

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study/GRR	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Berryessa Creek, CA Sacramento District	4,563,000	0	0	0	443,000	950,000	3,170,000

The Berryessa Creek watershed is located in Santa Clara County, California, 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. Results of the General Reevaluation Report to date recommend two sedimentation basins, concrete lined trapezoidal channel, and offset levees on Berryessa Creek. This design is being developed in coordination with resource agencies to provide a more environmentally sustainable project. Santa Clara Valley Water District, the local sponsor, understands the cost-sharing requirements for preconstruction, engineering and design and is prepared to execute a cost-sharing agreement scheduled for February 2009.

Fiscal Year 2008 preconstruction engineering and design funds will be planned for carryover into FY2009. Preconstruction engineering and design funds from Fiscal Year 2008 and Fiscal Year 2009 will be used to negotiate and execute a design agreement, scheduled for February 2009, and complete the bridge replacement designs for the seven (7) bridges. Preconstruction engineering and design will ultimately be cost shared at the rate for the project to be constructed, but will be financed through the preconstruction engineering and design 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	\$6,084,000	Total Estimated Preconstruction Engineering and Design Costs	\$6,084,000
Initial Federal Share	4,563,000	Ultimate Federal Share	3,955,000
Initial Non-Federal Share	1,521,000	Ultimate Non-Federal Share	2,129,000

A completion date is being determined for the preconstruction engineering and design phase.

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
California Coastal Sediment Master Plan Los Angeles District	7,100,000	219,000	594,000	490,000	340,000	900,000	4,557,000

The study area encompasses the entire California coastline, including the nearshore ocean environment and the coastal watersheds. California has approximately 1,100 miles of coastline, 86% of this valuable resource is actively eroding due to natural and human induced alteration in the sediments cycle. Navigation and shoreline structures, along with implementation of water control projects, have contributed significantly in affecting total yield and movement of sediments to and along the coast. The purpose of the study is to develop a comprehensive plan for the management, restoration, protection, and preservation of the sediment resources along the coast of California. The study will evaluate regional alternatives for reducing damages from coastal storms; increasing the natural sediment supply to the coast through dam removal and other means; restoring aquatic ecosystems; and identifying potential sources of sediment, such as material dredged 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 where 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 (GIS) -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 allow for minimizing the number of discrete water resources projects by regionalizing solutions that holistically address individual problem areas. Any subsequent regionalized projects recommended in the Master Plan will be considered in collaboration with other Federal and non-Federal agencies, including USEPA, California State Resources Agency, NOAA, regional and local governments, and USGS. The Feasibility Cost Sharing Agreement was signed in September 2005.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study, to include inventory and map existing resources, conduct geotechnical field investigations, develop a comprehensive GIS database, develop GIS based decision support applications and IMS webpage, develop Regional Sediment Management Plans and hold State-wide multiple public scoping meetings. Baseline conditions will be established in development of the F3 document.

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

Funds requested for Fiscal Year 2009 will be used to continue the feasibility phase of the study, develop a web-based mapping system, continue building the GIS database and decision support applications, conduct geotechnical field investigations for sediment sources, develop sediment transportation network analysis tool and incorporate state-led efforts and analysis started in Fiscal Year 2006.

The feasibility study completion date is to be determined.

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Sacramento-San Joaquin Delta, Delta Islands & Levees, California Sacramento District	6,153,000	120,000	247,000	800,000	859,000	468,500	3,658,500

The study area is located in six California counties, including Sacramento, San Joaquin, and Contra Costa, and extends from Sacramento south to the city of Stockton and west to Suisun Bay. The Sacramento-San Joaquin Delta consists of about 738,000 acres of land consisting of approximately 100 tracts and islands and 1,100 miles of levees. This study will assist and incorporate the results of the State of California's Delta Risk Management Strategy to develop a long-term strategy for Corps involvement in Delta levee system improvements as well as opportunities for ecosystem restoration, in the largest estuary system on the west coast. This feasibility study is closely associated with the Levee System Integrity and Environmental Restoration Programs. The State's Delta Risk Management Strategy is a technical study that will evaluate risk to the Delta levees, identify impacts, and develop potential projects and priorities. The Delta Risk Management Strategy will be the basis for this Islands and Levees Feasibility Study, which will assess existing and future flood risks in the Delta as well as water supply, ecosystem restoration, and recreation needs, providing a comprehensive vision and roadmap for future Corps participation in the Delta. The Corps is the Federal lead. The State of California, the local sponsor, signed the Feasibility Cost Sharing Agreement in May 2006.

Funds requested for Fiscal Year 2008 will be used to continue the feasibility phase; to include scoping meeting for development of problems and opportunities and NEPA compliance, hydraulic model scoping, collection of bathymetric data, collection of socio-economic data, and report writing. Funds requested for Fiscal Year 2009 will be used to work towards the Feasibility Scoping Meeting; developing problem and opportunity statements and identifying historic, existing, and future without project conditions. The estimated cost of the feasibility phase is \$12,000,000, which is to be shared on a 50-50 basis by Federal and non-Federal interests. A summary of study cost sharing is as follows:

Total Estimated Study Cost	\$12,153,000
Reconnaissance Phase (Federal)	153,000
Feasibility Phase (Federal)	6,000,000
Feasibility Phase (Non-Federal)	6,000,000

The reconnaissance phase was completed in May 2006. A completion date is being determined for the feasibility study.

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Solana Encinitas Beaches Los Angeles District	2,836,000	2,048,000	371,000	0	168,000	249,000	0

The study area is located on the Southern California Coast, about 15 miles north of San Diego Harbor. The protective beaches have been severely eroded, exposing backshore development, to wave attack, shoreline erosion and undermining. In addition, lagoons and embankments located along the coast are being plugged by littoral transport reducing tidal exchange and degrading ecological systems. The study will investigate shoreline erosion along the 8-mile stretch of beach from the mouth of the Baticuitos Lagoon to the southern boundary of Solana Beach. Under conditions, severe land loss would occur, public safety and infrastructure would be threatened and significant emergency protection costs would accrue. The reduced beach results in severely degraded recreational opportunities along the shoreline. The erosion causes undercutting of coastal bluffs, which will collapse with time and create a serious public hazard, as there are structures located on the bluff top. There is also public and agency concern of migrating sand covering reef habitat. Currently additional engineering and environmental studies and reformulation of alternatives are being conducted, which have increased the cost by an additional \$1,100,000. The City of Solana Beach and City of Encinitas, the local sponsors, signed the Feasibility Cost Sharing Agreement in July 2001.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study. Funds requested for Fiscal Year 2009 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is \$5,476,000, which is to be 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	\$5,574,000
Reconnaissance Phase (Federal)	98,000
Feasibility Phase (Federal)	2,738,000
Feasibility Phase (Non-Federal)	2,738,000

The reconnaissance phase was completed in June 2001. The feasibility study is scheduled to complete in November 2008.

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Sutter County Sacramento District	4,158,000	1,177,000	337,000	400,000	334,000	339,000	1,571,000

The study area is located within the boundaries of the Sacramento River Flood Control Project in Sutter County, California and includes the Sacramento, Feather and Bear Rivers, Sutter and Tisdale Bypass, Yuba City and communities of Live Oak, Meridian, Robbins and Nicolaus. Results from levee evaluation studies on the Sacramento Urban Area, Marysville/Yuba City, Mid-Valley, Lower and Upper Sacramento Area levee reconstruction projects indicate that structural problems caused by on-going seepage exist. The Corps is addressing levee reconstruction under these projects. The Sutter County reconnaissance study addressed levee improvements beyond reconstruction in these areas and investigated new areas for flood prevention. As a result of the January 1997 floods, high water caused seepage and boils, and a levee break occurred threatening the town of Meridian. In addition, seepage and boils were identified on the south levee of the Tisdale Bypass. The levee was stabilized constructing a stability berm under emergency construction authority. The State of California and Sutter County, the local sponsors, signed the Feasibility Cost Sharing Agreement in March 2000.

Fiscal Year 2008 funds are being used to finalize the Project Management Plan, negotiate a new cost-sharing agreement with the Reclamation Board and Sutter County as joint sponsors, determine the level of detail of geotechnical explorations required to complete the feasibility study, and initiate plan formulation of an array of alternatives. Funds requested for Fiscal Year 2009 will be used to continue feasibility, to include plan formulation of an array of alternatives. The estimated cost of the feasibility phase decreased from the previously reported estimate of \$13,000,000 to \$8,200,000, due to geotechnical exploration data made available by the non-Federal sponsor at no cost. The feasibility phase 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	\$8,258,000
Reconnaissance Phase (Federal)	58,000
Feasibility Phase (Federal)	4,100,000
Feasibility Phase (Non-Federal)	4,100,000

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

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Upper Penitencia Creek San Francisco District	3,498,000	2,174,000	514,000	319,000	229,000	191,000	71,000

The study area, extending along 3.6 miles of Upper Penitencia Creek, is located in the northwest portion of Santa Clara County, California in the city of San Jose and flows into Coyote Creek and the southern end of San Francisco Bay. Flooding has occurred in the watershed from Upper Penitencia Creek flows in 1955, 1958, 1962, 1963, 1973, 1980, 1982 and 1983. The 1982 flood, an approximate 10-year event, resulted in over \$2 million in damages. The flood plain contains approximately 1,600 properties that are subject to flood damage. It is estimated that a 100-year flood event would cause \$455 million in property damages. A study was initiated by the Soil Conservation Service, which developed feasibility level plans for flood damage reduction, but the amount of agricultural benefits identified in the analysis was insufficient to permit Soil Conservation Service participation. The Corps of Engineers was requested by the local sponsor to continue the effort under Section 4 of the Flood Control Act of 1941. The improvements proposed by the Soil Conservation Service include flood proofing, new levees, floodwalls, bypass channels, channel realignment, grade stabilization and vegetative work in order to provide a 100-year level of flood protection. The reconnaissance study provided a review of the Soil Conservation Service study efforts and identified the remaining tasks to be performed during the feasibility and design phases. The Santa Clara Valley Water District, the local sponsor, signed the Feasibility Cost Sharing Agreement in February 1998.

Fiscal Year 2008 funds are being used to continue the feasibility phase of the study to include preparation of the Alternative Formulation Briefing and sections of the draft Engineering Report. The funds requested for Fiscal Year 2009 will be used to continue the feasibility phase of the study. The estimated cost of the feasibility phase is \$6,306,000, 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	\$6,651,000
Reconnaissance Phase (Federal)	345,000
Feasibility Phase (Federal)	3,153,000
Feasibility Phase (Non-Federal)	3,153,000

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

CONSTRUCTION

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Alamogordo, New Mexico (Continuing)

LOCATION: The project is located in Otero County, in and near Alamogordo, New Mexico. The city of Alamogordo is situated at the foot of the Sacramento Mountains near the eastern edge of the Tularosa (Closed) Basin.

DESCRIPTION: The authorized project consists of two concrete and rip-rap lined diversion channels and a flood detention structure which will intercept flood flows from canyons and arroyos in the Sacramento Mountains east of the City.

AUTHORIZATION: Flood Control Act of 1962, Energy and Water Appropriations Act (PL 108-137, Section 105) of 2004.

REMAINING BENEFIT - REMAINING COST RATIO: 3.6 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 2.4 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 5.8 to 1 at 7 percent (FY 1988).

BASIS OF BENEFIT - COST RATIO: Benefits are from the General Reevaluation Report, approved in March 1999, using February 1998 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM. PCT. OF EST. FED. COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$54,000,000		Entire Project	54	September 2014
Estimated Non-Federal Cost	18,000,000				
Cash Contribution	\$15,000,000				
Other Costs	3,000,000				
Total Estimated Project Cost	\$72,000,000				
Allocations through 30 September 2005	\$ 19,055,000				
Allocation for FY 2006	4,158,000				
Allocation for FY 2007	4,200,000				
Conference Allowance for FY 2008	3,932,000				
Allocation for FY 2008	3,932,000				
Allocations through FY 2008	31,345,000	58			
Division: South Pacific		District: Albuquerque			Alamogordo, NM
		4 February 2008			

PHYSICAL DATA
Concrete Lined Channel: 47,500 ft.
Sediment Basins: 5
Detention Basins: 1
Stilling Basin: 1
Relocation: 3 (RR Bridges)

SUMMARIZED FINANCIAL DATA (continued)	FED. COST	ACCUM. PCT. OF EST.
Allocation Requested for FY 2009	\$ 4,200,000	66
Programmed Balance to Complete after FY 2009	18,455,000	

JUSTIFICATION: There are no well-defined watercourses in the Tularosa (Closed) Basin. Several arroyos flow westward from the Sacramento Mountains through the city of Alamogordo, causing extensive damage to residential and business properties, schools and churches, utilities, streets, highways, roads, and other public properties. The major problem arroyos from north to south are Dry, Beeman, Marble, and Alamo Canyons. In addition, several minor unnamed arroyos in the vicinity contribute to the problem. Estimated total property valuation of the area in the 100-year flood plain is \$569,000,000 (1 October 2007). Estimated damages from an occurrence of the one percent chance flood under present conditions are \$100,000,000. Records indicate that from 1935 through 1959, eleven floods exceeded the capacity of railroad drainage structures in the area, overtopping the tracks by as much as two feet. Floods on 17 and 26 August 1959 caused estimated damages of \$240,000 and \$57,000, respectively. These damages, based on 1 October 2007 price levels, would be \$3,000,000 and \$730,000, respectively. Other minor flooding, occurring as recently as 1979 and 1984, caused City officials to be concerned about the flood threat. The most recent flooding occurred in Alamogordo on 1 and 22 June 2006 and were considered 100 year and 250 year flood events, respectively. These events, which occurred on only one of the arroyos, caused residential damages estimated at \$7,000,000. The average annual benefits are \$9,739,600, all flood risk management, based on October 1998 price levels.

FISCAL YEAR 2008: The current amount is being applied as follows:

Continue Construction of South Channel	\$ 2,900,000
Planning, Engineering and Design	560,000
Construction Management	472,000
Total	\$ 3,932,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete construction of South Channel	\$ 2,300,000
Initiate construction of McKinley Channel	1,000,000
Planning, Engineering and Design	500,000
Construction Management	400,000
Total	\$ 4,200,000

Division: South Pacific

District: Albuquerque
4 February 2008

Alamogordo, NM

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair Rehabilitation and Replacement Cost
Provide lands, easements, rights of way, and dredged or excavated material disposal areas.	\$ 2,300,000	
Participate in Project Coordination Team, conduct audits of non-Federal costs, and perform investigations of hazardous substances.	100,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	600,000	
Pay 21 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, but no less than 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	\$15,000,000	\$147,000
Total Non-Federal Costs	\$18,000,000	\$147,000

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

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement with the city of Alamogordo, New Mexico, was executed in July 1999. The current non-Federal cost estimate of \$18,000,000, which includes a cash contribution of \$15,000,000 is an increase of \$4,200,000 from the non-Federal cost estimate of \$13,800,000 noted in the Project Cooperation Agreement which included a cash contribution of \$11,600,000. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

Division: South Pacific

District: Albuquerque
4 February 2008

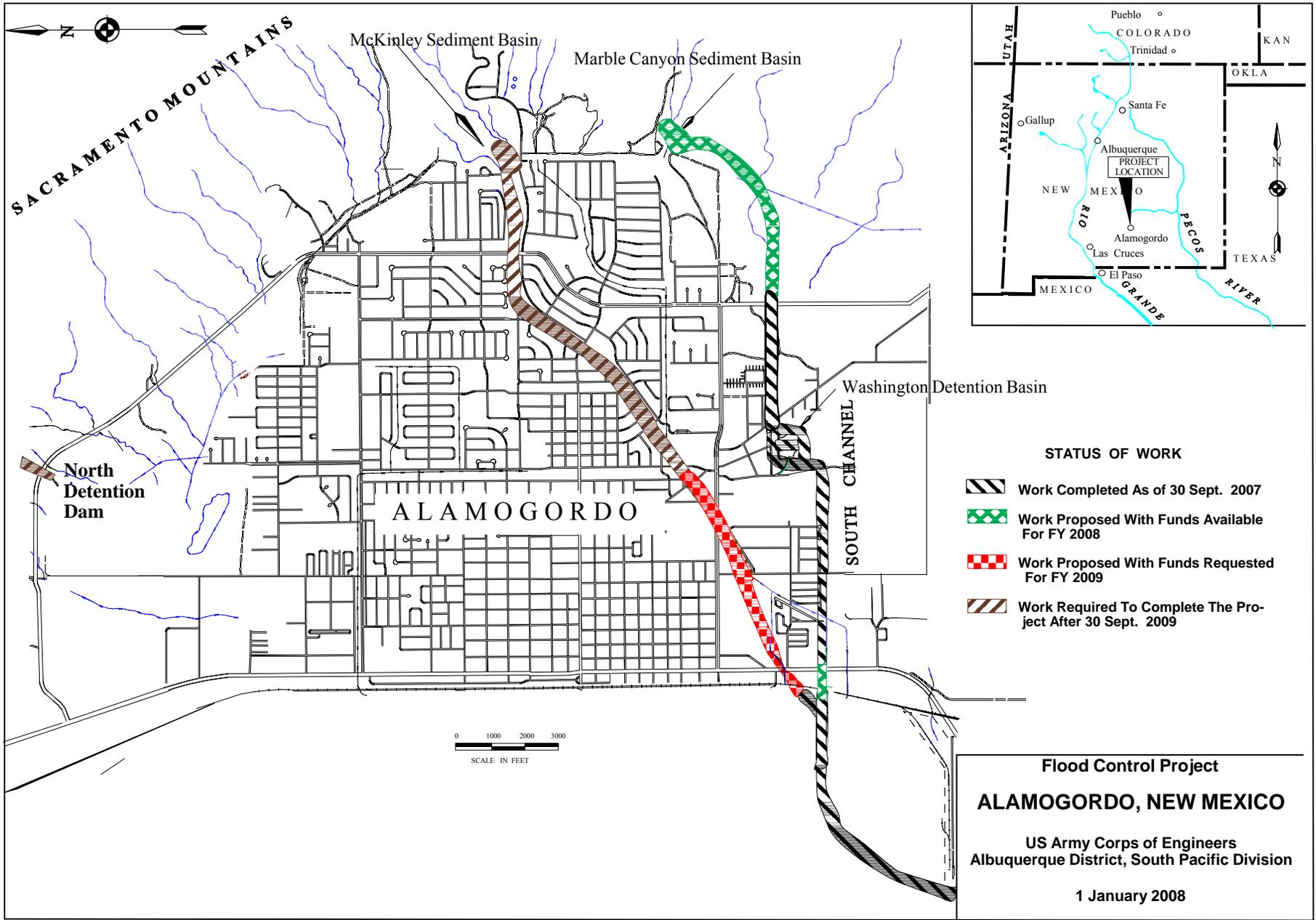
Alamogordo, NM

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$54,000,000 (1 October 2007) is an increase of \$12,600,000 from the latest estimate (\$41,400,000) presented to Congress (FY 2007). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 8,700,000
Post Contract Award and Other Estimating Adjustments (including contingency adjustments)	1,800,000
Schedule Changes	2,100,000
Total	\$12,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Assessment and Finding of No Significant Impact (FONSI) for the current plan of improvement were signed in October 1998.

OTHER INFORMATION: The city of Alamogordo has been working with the U.S. Army Corps of Engineers and the New Mexico Congressional delegation for over thirty years seeking a solution to the flood threat from the Sacramento Mountains located east of the City. Funds to initiate construction of the diversion channel were appropriated in Fiscal Year 1988. Work was discontinued in September 1988, without a contract being awarded, because the City could not give assurances of local cooperation due to the failure of a bond issue. To satisfy the concerns expressed by the City Commissioners and area residents, alternative solutions were investigated and outlined in an Interim Letter Report dated August 1992. The letter report recommended reevaluation of the project through the preparation of a General Reevaluation Report. The General Reevaluation Report addressed alternatives to the authorized Standard Project Flood protection plan. The new alternatives are being constructed in phases to accommodate the sponsor's financial plan. To that end, the City provided a letter of intent emphasizing their commitment and support for further analysis. The General Reevaluation Report was completed in April 1999. The General Reevaluation Report's recommended plan consists of construction of two new diversion channels and upgrading an existing earthen channel which will intercept flows from the Sacramento Mountains. Appurtenant project features include 5 sediment basins, 1 detention basin, and a stilling basin. The Local Sponsor requested that the U.S. Army Corps of Engineers consider a flood detention basin in place of the authorized channel to protect Alamogordo's north side from flooding. Section 105 of the Energy and Water Development Act, 2004 modifies the original project authority by authorizing and directing the Secretary "to construct a flood detention basin to protect the north side of the City of Alamogordo, New Mexico, from flooding. The flood detention basin shall be constructed to provide protection from a 100-year flood event. The project cost share for the flood detention basin shall be consistent with section 103(a) of the Water Resources Development Act of 1986, notwithstanding section 202(a) of the Water Resources Development Act of 1996." The Project Cooperation Agreement will be amended to incorporate this design modification. The detention basin design is scheduled to begin in 2010.



4 February 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: American River Watershed, California (Continuing)

LOCATION: The project is located in Placer, El Dorado and Sacramento Counties. It is comprised of three principal streams, the North, Middle and South Forks of the American River, which flow westward into Folsom Lake, through the city of Sacramento and into the Sacramento River, and includes Folsom Dam and Reservoir, located on the American River, about 29 miles upstream of the city of Sacramento, California. The American River watershed drains about 2,100 square miles northeast of Sacramento. Runoff from this basin flows through Folsom Reservoir and passes through Sacramento to the confluence with the Sacramento River.

DESCRIPTION: Recent evaluations indicated that the level of flood protection along much of the American River is less than 100-year level. Several flood control projects have been authorized for construction for the American River to reduce the risk of flooding to Sacramento. American River Watershed Common Features consists of modifications to the lower American River levees and Sacramento River east levee in the Natomas Basin; modification of the Natomas Cross Canal levees; telemetered gages above Folsom Dam; and improving the flood warning system for the lower American River. Currently, Folsom Dam is designed to release up to 115,000 cubic feet per second (cfs) during flood operations, however the existing outlets limit releases to 36,000 cfs until approximately one half of the reservoir's flood control space is filled. Additional work is scheduled for Folsom Dam and related facilities to increase flood protection. Authorized work for Folsom Dam Modifications, which will allow releases much earlier, consists of enlarging the eight existing river outlets; adding two new outlets; modifying the existing stilling basin; and modifying the auxiliary spillway gates and dikes to raise the surcharge elevation four feet to allow for an additional 48,000 acre-feet of storage. The authorization to raise Folsom Dam seven feet makes the need for the surcharge component unnecessary. The authorized project to raise Folsom Dam includes raising related dikes and auxiliary dam, temperature shutter modifications, modifications to L. L. Anderson Dam/spillway on the middle fork of the American River, construction of a permanent bridge downstream of Folsom Dam, and ecosystem restoration projects. The Folsom Dam Modification project is currently undergoing reanalysis to provide functionally equivalent flood protection more cost effectively and for greater compatibility with related Folsom Dam safety work being pursued by the Bureau of Reclamation. Other alternatives, including construction of an auxiliary spillway, are being considered and evaluated as part of a Joint Federal Project. The Folsom Dam Raise is being reevaluated as part of the design refinements of the auxiliary spillway and Joint Federal Project to determine the optimum height of the raise that achieves, in combination with the other components of the Joint Federal Project, the overall project performance objectives in a cost effective manner.

AUTHORIZATION: Water Resources Development Acts of 1996 and 1999; Energy and Water Development Appropriations Act, 2004; Energy and Water Development Appropriations Act, 2006, Sec. 134; Water Resources Development Act 2007, Section 3029.

REMAINING BENEFIT-REMAINING COST RATIO: 3.5 to 1 at 7 percent

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

INITIAL BENEFIT-COST RATIO: 1.95 to 1 at 7 percent

BASIS OF BENEFIT-COST RATIO: Common Features – Initial benefits are from the Supplemental Information Report (SIR) approved June 1996 at 1995 price levels for work authorized in the Water Resources Development Act of 1996 (WRDA 96). Benefits and costs are originally from the Second Addendum to the SIR

Division: South Pacific

District: Sacramento

American River Watershed,
California

BASIS OF BENEFIT-COST RATIO (cont'd)

approved October 2002 at October 2001 price levels. Benefits were updated to current price levels in the Engineering Documentation Report, June 2006; the new benefit to cost ratio is 3.6 to 1. Remaining Benefit – Remaining Cost Ratio updated to 2007 price levels is 6.38 to 1. Folsom Dam Modifications – Initial benefits are from the American River Watershed Information paper dated August 1999 at October 1998 price levels, based on the Supplemental Information Report approved June 1996 at 1995 price levels. Folsom Dam Raise – initial benefits are from the American River Watershed Long Term Study (Appendix B, Alternative 8) dated February 2002. Benefits and costs are associated with flood damage reduction only, and do not include the permanent bridge.

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE	
<u>Common Features</u>					
Estimated Federal Cost		\$213,100,000	WRDA 96 Features	80	TBD
Estimated Non-Federal Cost		68,900,000	WRDA 99 Features	10	TBD
Cash Contribution	\$54,509,000		Entire Project	75	TBD
Other Costs	14,391,000				
Total Common Features		\$282,000,000			
<u>Folsom Dam Modifications</u>					
Estimated Federal Cost		\$502,500,000	Entire Project	20	TBD
Estimated Non-Federal Cost		270,600,000			
Cash Contribution	\$270,600,000				
Other Costs	0				
Total Folsom Dam Modifications		\$773,100,000 1/			
<u>Folsom Dam Raise</u>					
Estimated Federal Costs		\$133,530,000	Entire Project	18	TBD
Estimated Non-Federal Costs		71,330,000			
Cash Contribution	\$70,115,000				
Other Costs	1,215,000				
Total Folsom Dam Raise		\$204,860,000			
<u>Folsom Bridge</u>					
Estimated Federal Costs		\$ 66,870,000 2/			
Estimated Non-Federal Costs		60,070,000			
Cash Contribution	\$45,582,000				
Other Costs	14,488,000				
Total Folsom Bridge		\$126,940,000			

1/ Reflects current project cost estimate, inflated through construction, included in Post Authorization Change Report approved by OMB in August 2007. Maximum allowable cost in accordance with Section 902 limits is \$259.8 million.

2/ Includes \$48,720,000 for permanent bridge not subject to cost sharing requirements with non-Federal interests.

Division: South Pacific

District: Sacramento

American River Watershed,
California

SUMMARIZED FINANCIAL DATA (cont'd)

Project Summary		
Estimated Federal Costs		\$ 916,000,000
Estimated Non-Federal Costs		470,900,000
Cash Contribution	\$440,806,000	
Other Costs	30,094,000	
Total Estimated Project Costs		\$1,386,900,000

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FED COST

PHYSICAL DATA

Allocations to 30 September 2005	\$154,025,000	
Allocations for FY 2006	27,235,000	
Allocations for FY 2007	76,600,000	
Conference Allowance for FY 2008	30,996,000	
Allocation for FY 2008	30,996,000	
Allocations through FY 2008	288,856,000	32
Allocation Requested for FY 2009	22,000,000	34
Balance to Complete after FY 2009	\$605,144,000	

COMMON FEATURES -

Streamflow Gages – Install 3 new telemetered gages upstream of Folsom Lake (WRDA 96)
Flood Warning System – Install on lower American River (WRDA 96)
Closure Structure – Install at Mayhew Drain (WRDA 99)

Levees:

- Construct slurry and jet grout cutoff wall on 19.7 miles of lower American River levees (WRDA 96)
- Modify 4.4 miles of American River levees (WRDA 96)
- Modify 12.1 miles of Sacramento River levees (WRDA 96)
- Modify 10 miles of Natomas Cross Canal levees (WRDA 99)

Authorized FOLSOM DAM MODIFICATIONS –

Enlarge eight existing river outlets
Construct two new outlets
Modify existing stilling basin

Authorized FOLSOM DAM RAISE -

Raise Folsom Dam, wing walls & dikes
Modify LL Anderson Dam spillway
Construct Bridge
Accomplish ecosystem restoration

Division: South Pacific

District: Sacramento

American River Watershed,
California

JUSTIFICATION: This flood and storm damage reduction project warrants a high funding priority because it addresses significant risk to human safety in accordance with the Army Corps of Engineers performance-based guidelines for the construction account. Folsom Dam and Reservoir are key features in the flood control system protecting Sacramento. Folsom Reservoir has a capacity of 975,000 acre-feet, which includes a minimum of 400,000 acre-feet of space seasonally dedicated to flood control. Significant rainfall in recent years has filled Folsom Lake and necessitated record releases in excess of design flow downstream. The levees along the American River are designed to accommodate releases from Folsom dam of up to 115,000 cfs. Downstream levees would likely fail with sustained flows above this level. Levee failure along the lower American River and Sacramento River could result in flooding of more than 100,000 acres, affecting approximately 330,000 residents. Damages could range from \$7 billion to \$16 billion, depending on the magnitude of the event. The Common Features project, consisting of levee improvements along the American and Sacramento River and Natomas Cross Canal, installation of new and telemetering existing streamflow gages and implementing a new flood warning system on the lower American River as authorized in WRDA 96 and WRDA 99 would decrease the probability of flood damage to about a 1 in 100 chance in any one year. Average annual benefits for the Common Features portion amount to \$42,300,000, all flood control, escalated to October 2007 price levels. The authorized Folsom Dam Modifications project would enlarge eight existing river outlets, construct two new outlets and modify the existing stilling basin. This would further reduce the risk of flood damage to a 1 in 140 chance in any one year. Average annual benefits amount to \$89,900,000, all flood control, at October 2007 price levels. The Folsom Dam Raise Project would further reduce the risk of flood damage to a 1 in 213 chance in any one year. Average annual benefits amount to \$19,200,000, all flood control, at October 2007 price levels.

FISCAL YEAR 2008: Current year funds will be applied as follows:

Folsom Dam Modifications	
Continue Engineering and Design	\$ 5,904,000
Total Folsom Mods	\$ 5,904,000
Folsom Dam Raise	
Continue Engineering and Design	\$ 3,220,000
Total Folsom Dam Raise	\$ 3,220,000
Folsom Bridge	
Continue Construction	\$14,000,000
Total Folsom Bridge	\$14,000,000
Common Features	
Continue Construction of Slurry Walls and Floodwalls	\$3,136,000
Engineering and Design	4,500,000
Construction Management	236,000
Total Common Features	\$ 7,872,000
Grand Total, American River Watershed	\$30,996,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Division: South Pacific

District: Sacramento

American River Watershed,
California

Folsom Dam Modifications	
Complete initial phases of detailed design	\$ 9,000,000
Total Folsom Mods	\$ 9,000,000
Common Features	
Award construction contract to close most critical gaps in slurry walls	\$ 9,800,000
Planning, Engineering, and Design	2,400,000
Construction Management	800,000
Subtotal	\$13,000,000
Total Common Features	\$13,000,000
Grand Total, American River Watershed	\$22,000,000

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

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation:		
Common Features		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$14,391,000	
Pay 20 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, as determined under Section 103 (m) of the Water Resources Development Act of 1996, as amended, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	54,509,000	\$ 54,000
Total Common Features Non-Federal Costs	\$68,900,000	\$ 54,000
Folsom Dam Modifications		
Pay 35 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	\$270,600,000	\$200,000 3/
Total Folsom Dam Modifications Non-Federal Costs	\$270,600,000	\$200,000 3/

3/ The operation and maintenance (O&M) would continue to be performed by the Bureau of Reclamation. An initial cost-sharing agreement has been negotiated between the Sacramento Area Flood Control Agency and the Bureau of Reclamation to pay the portion of O&M costs related to the new flood control features. Subsequent agreements are to be negotiated as project information is further defined.

Division: South Pacific

District: Sacramento

American River Watershed,
California

NON-FEDERAL COSTS (cont'd)

	Payments During Construction and Reimbursements	Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
<u>Folsom Dam Raise – Raise Component</u> Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 1,215,000	
Pay 35 percent of the costs allocated to flood control to bring non-Federal share to 35 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	42,697,000	\$301,000 4/
Pay 33 percent of the costs allocated to ecosystem restoration to bring non-Federal share to 35 percent.	27,418,000	
Total Folsom Dam Raise Component	\$71,330,000	
<u>Folsom Dam Raise – Bridge Component</u> Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas (City of Folsom).	\$9,589,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project (City of Folsom).	4,899,000	
City of Folsom's share of costs associated with bridge construction.	28,000,000	
Pay 22 percent of the costs allocated to flood control to bring non-Federal share to 35 percent, And bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood Control facilities.	17,582,000	
Total Folsom Bridge Component	\$60,070,000	
Total Folsom Dam Raise (including Bridge) Non-Federal Costs	\$126,940,000	
Total American River Watershed Non-Federal Costs	\$470,900,000	\$417,000
Division: South Pacific	District: Sacramento	American River Watershed, California

NON-FEDERAL COSTS: (cont'd)

4/ The operation and maintenance (O&M) would continue to be performed by the Bureau of Reclamation. An initial cost-sharing agreement would be negotiated between the Sacramento Area Flood Control Agency and the Bureau of Reclamation to pay the portion of O&M costs related to the new flood control features.

STATUS OF LOCAL COOPERATION: The California State Reclamation Board and the Sacramento Area Flood Control Agency (SAFCA) are the non-Federal sponsors for the Common Features and Folsom Dam Modifications. The Project Cooperation Agreement (PCA) for the Common Features was executed in July 1998 for implementation of features authorized by WRDA 1996. On 21 June 2007, the Reclamation Board signed an amendment to the PCA which includes both WRDA 96 and WRDA 99 sites. The PCA for the Folsom Dam Modifications was executed on 30 March 2004. The California State Reclamation Board and SAFCA are the non-Federal sponsors for the Folsom Dam Raise. The PCA for the Dam Raise is scheduled for execution in August 2008. The non-Federal sponsors are financially capable and willing to contribute the non-Federal share. The non-Federal sponsors have also agreed to make all required payments concurrently with project construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$916,000,000 is an increase of \$313,600,000 from the latest estimate (\$602,400,000) presented to Congress (FY 2008). This change includes the following:

Item	Amount
Price Escalation or De-escalation on Construction Features	\$ 50,000,000
Design Changes	263,600,000
Total	\$313,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: **Folsom Dam Raise** - A Supplemental Environmental Impact Statement/Environmental Impact Report (SEIS/EIR) was filed with the Environmental Protection Agency on 8 March 1996 for the American River Watershed Project. An Environmental Assessment was completed and published in the American River Watershed, California (Folsom Mods) Interim Limited Reevaluation Report (LRR) dated August 2001. The Finding of No Significant Impact (FONSI) was signed 16 August 2001. The final LRR dated November 2003 replaces previous interim LRRs and resulted in no change in the 16 August 2001 FONSI.

OTHER INFORMATION:

The American River Watershed Feasibility Report was completed in December 1991 and the Supplemental Information Report (SIR) was completed in March 1996. The SIR identified three candidate plans which would help reduce the flood risk facing Sacramento: modifying Folsom Dam and increasing the dedicated flood space; modifying Folsom Dam and the downstream system to allow increased objective releases; and constructing a detention dam upstream of Folsom Dam. In June 1996, the Chief of Engineers deferred a decision on a comprehensive flood control plan, but recommended that features common to all three plans be authorized as the first component of a comprehensive plan. WRDA 1996 authorized construction of the Common Features. Funds were appropriated in Fiscal Year 1998 to initiate construction. Additional flood control improvements along the lower American River and Natomas Cross Canal were authorized by Section 366 of WRDA 1999 as part of the overall project. The cost of slurry wall construction authorized by WRDA 1996 has increased significantly due to increased slurry wall quantities, the technical requirement for the more costly jet grout construction method for slurry wall construction around bridges and deep utilities, and

Division: South Pacific

District: Sacramento

American River Watershed,
California

OTHER INFORMATION (cont'd)

several high-cost contract modifications due to slurry leaks during construction. The cost of planning, engineering and design has also increased. Project reauthorization was required to increase the project cost estimate to complete most of the remaining WRDA 1996 and WRDA 1999 features. The Second Addendum to the SIR, dated March 2002 and revised July 2002, serves as the decision document/post-authorization change (PAC) report. Based on this report, Section 129 of the Energy and Water Development Appropriations Act, 2004 increased the authorized first cost to \$205 million. For implementation of the Natomas Basin features a separate decision document/PAC is being prepared to address the previously unknown levee under-seepage problem along the Sacramento River and the associated increased cost. A General Re-evaluation Report is being prepared.

Common Features – Funds used to initiate preconstruction engineering and design of the common elements were allocated in FY 1996. Construction of the first contract on the lower American River levees was initiated in July 1998. Remaining WRDA 96 Slurry Cut-Off Walls are scheduled to initiate construction Summer 2008. Fish and wildlife mitigation costs are currently estimated at \$3,773,000.

Folsom Dam Modifications – Funds used to initiate preconstruction engineering and design on the Folsom Modifications were allocated in FY 2000. Funds to initiate construction were appropriated in FY 2001.

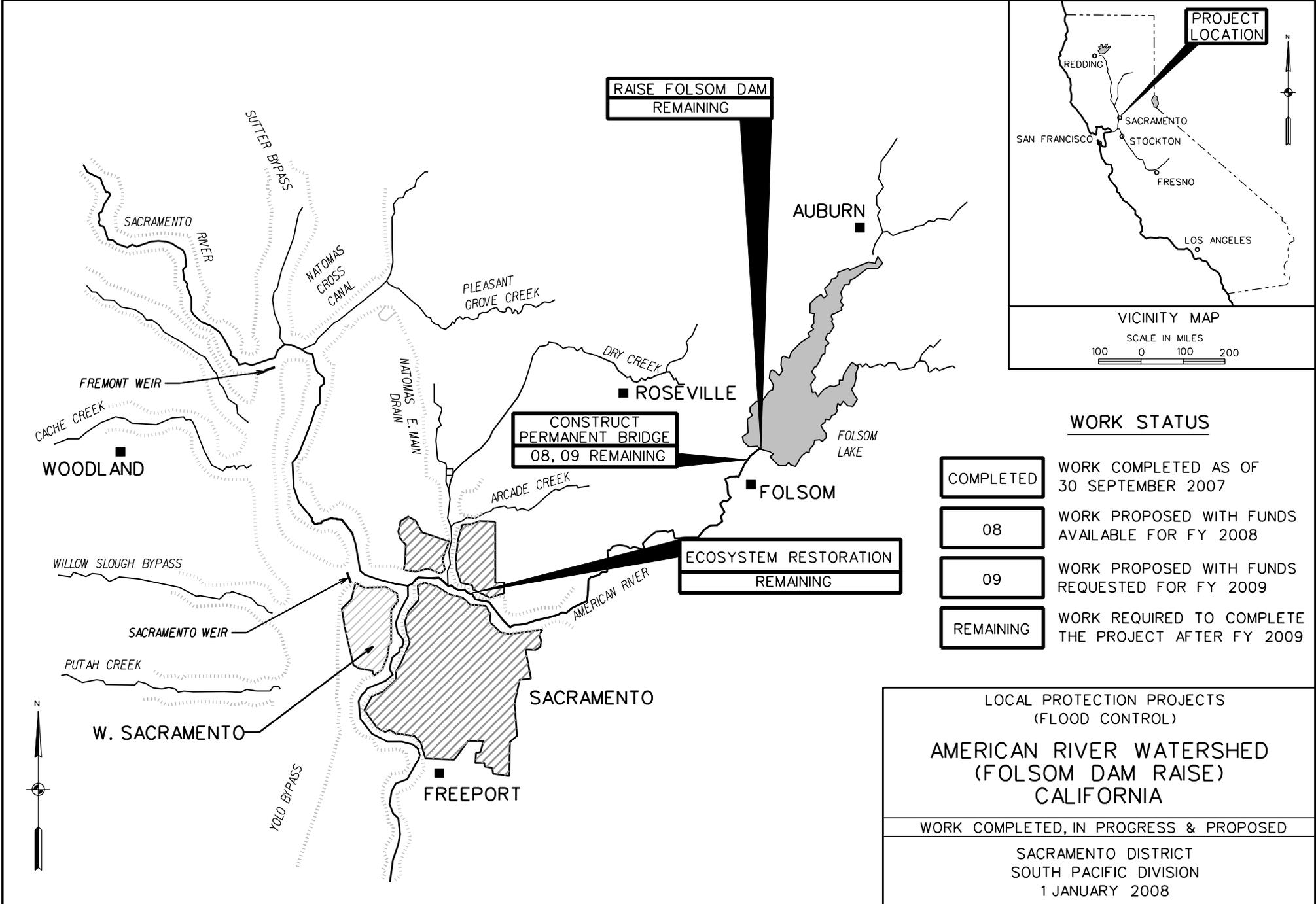
SAFCA prepared the Folsom Dam Modification Report New Outlets Plan dated March 1998 (SAFCA Outlet Report), which identified some proposed changes to the Folsom Modification Plan described in the 1996 SIR. The 1996 SIR as modified by SAFCA Outlet Report was the basis for the project authorized under the Water Resources Development Act of 1999. The LRR, dated November 2003, documents the 1996 SIR plan as modified by the SAFCA Outlet Report.

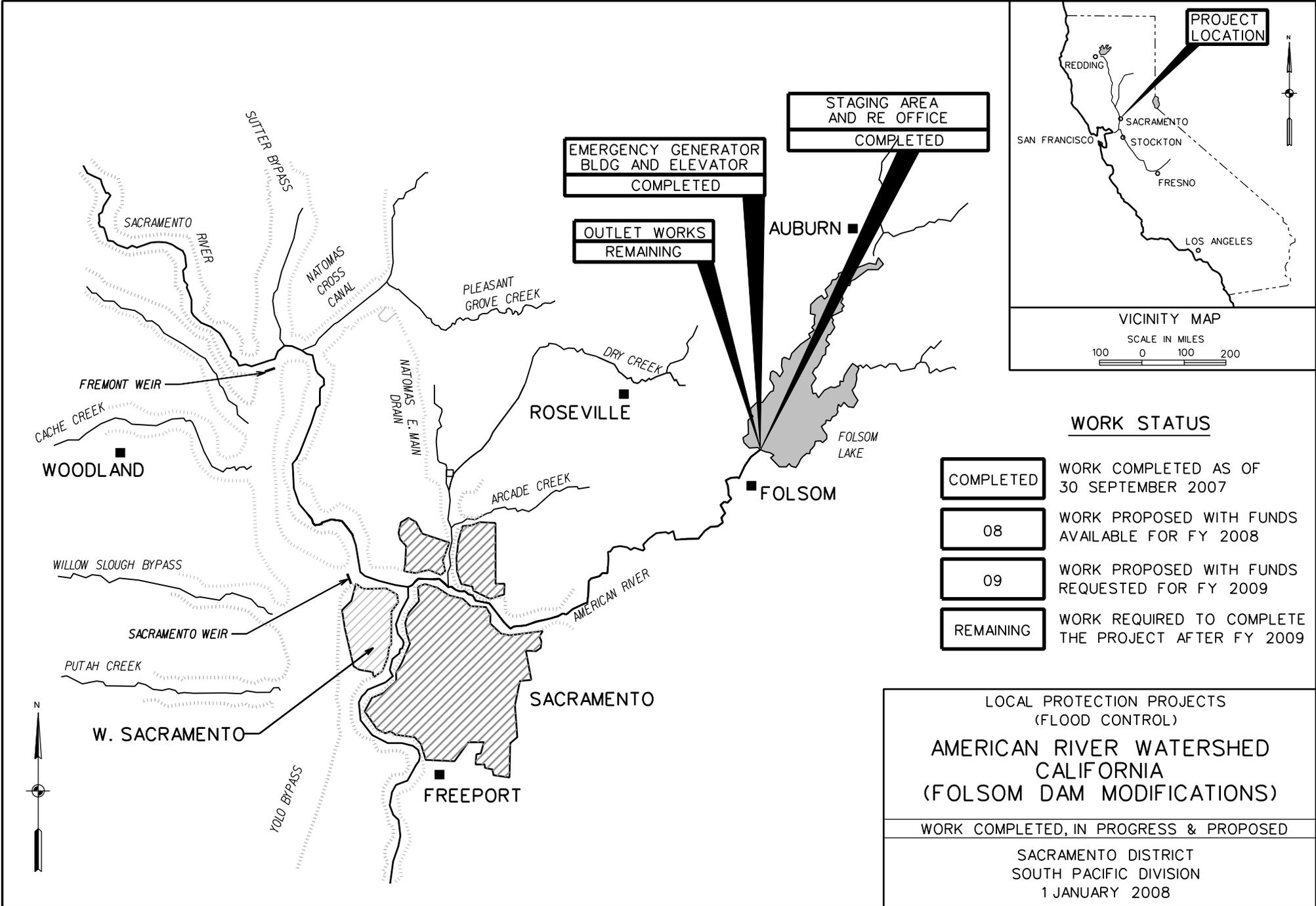
Information in FY 2007 budget submittal indicated that the project, as originally designed, would exceed the maximum authorized cost per Section 902 of WRDA 1986. Action was taken to conduct engineering evaluations and to develop a Post Authorization Change and Engineering Documentation Report (PAC/EDR) document recommending a functionally equivalent performance project that involves a new gated auxiliary spillway on the left embankment of Folsom Dam. PAC and U.S. Bureau of Reclamation Mod Reports recommending Joint Federal Project, which includes both Dam Safety and Flood Damage Reduction solutions, were approved by OMB in August 2007. Average annual costs and flood damage reduction benefits in the PAC report are \$37.9 million and \$89.9 million, respectively. Engineering and design effort on the Folsom Dam Modifications portion of the Joint Federal Project will continue in FY 2008. The modification of the spillway was authorized by Section 3029 of WRDA 2007.

Fish and wildlife mitigation costs are currently not expected to be significant.

Folsom Dam Raise – The Long Term Study (Feasibility Report) for the entire American River Watershed was completed in February 2002. The Chief's Report, dated 5 November 2002, was followed by the Division Engineer's Public Notice issued on 22 March 2003. Funds to initiate construction were appropriated in FY 2004. The Post Authorization Change (PAC) Report was submitted to OMB on 7 May 2007, recommending the Raise design be refined from 7-foot raise to a 3.5-foot raise. Fish and wildlife mitigation costs are currently not expected to be significant.

Folsom Bridge – Total project cost (including only the temporary bridge component) was authorized at \$257,300,000 in PL 108-137, Section 128. Section 128 also modified the cost sharing of the permanent bridge feature and required status reports to Congress. Funds budgeted in FY 2008 will be used to complete bridge construction.

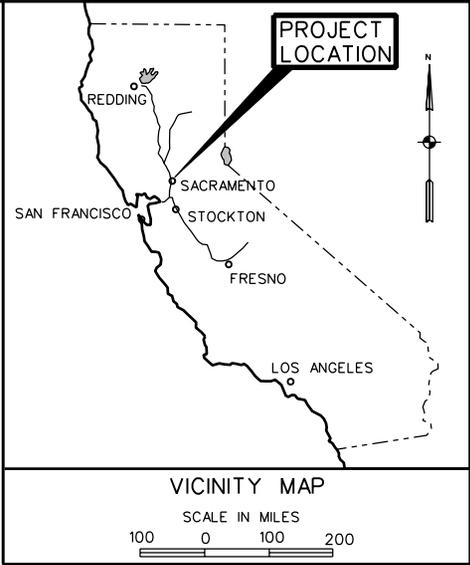




EMERGENCY GENERATOR
BLDG AND ELEVATOR
COMPLETED

STAGING AREA
AND RE OFFICE
COMPLETED

OUTLET WORKS
REMAINING



WORK STATUS

COMPLETED

WORK COMPLETED AS OF
30 SEPTEMBER 2007

08

WORK PROPOSED WITH FUNDS
AVAILABLE FOR FY 2008

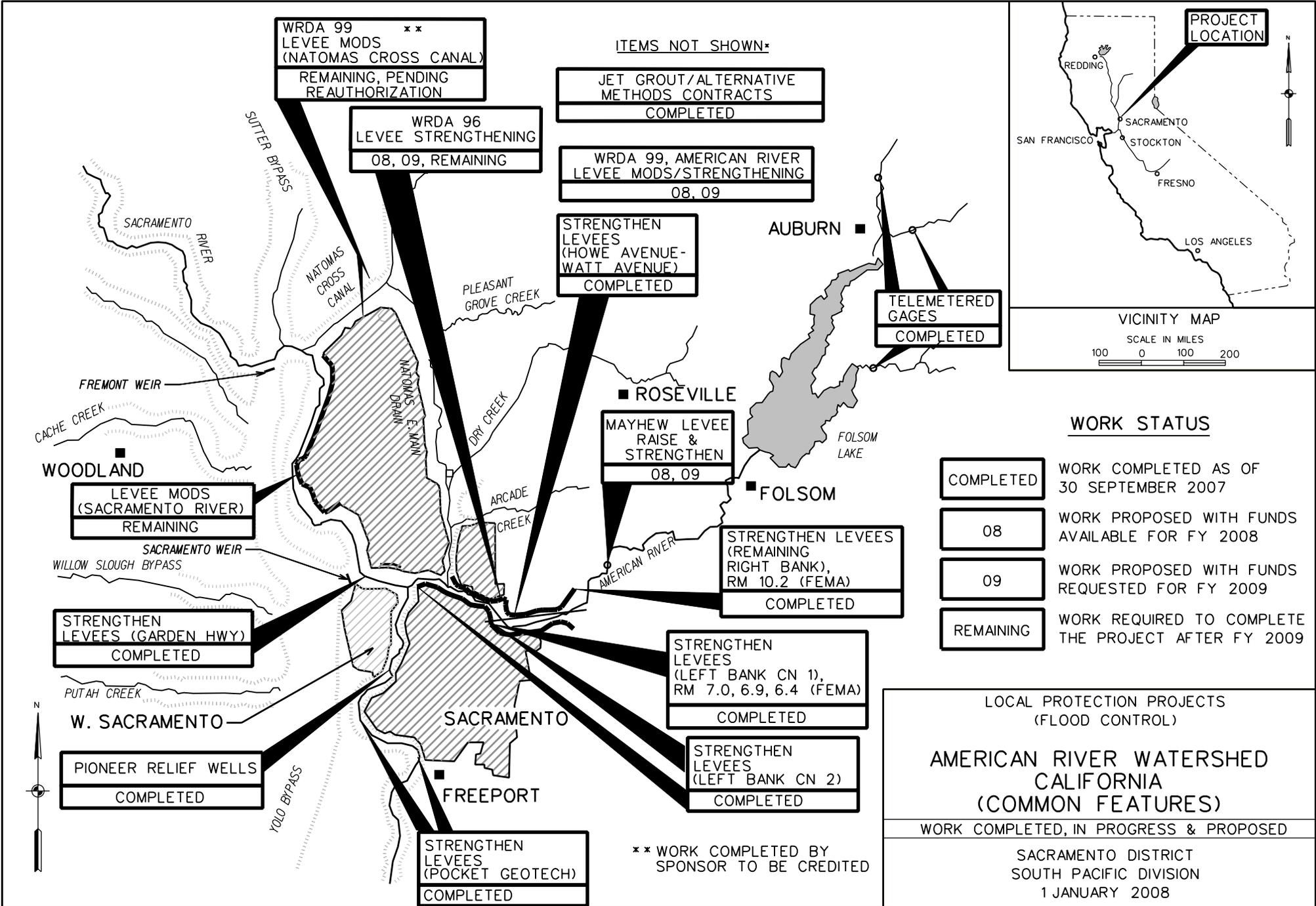
09

WORK PROPOSED WITH FUNDS
REQUESTED FOR FY 2009

REMAINING

WORK REQUIRED TO COMPLETE
THE PROJECT AFTER FY 2009

LOCAL PROTECTION PROJECTS
(FLOOD CONTROL)
**AMERICAN RIVER WATERSHED
CALIFORNIA
(FOLSOM DAM MODIFICATIONS)**
WORK COMPLETED, IN PROGRESS & PROPOSED
SACRAMENTO DISTRICT
SOUTH PACIFIC DIVISION
1 JANUARY 2008



APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Kaweah River, California (Continuing)

LOCATION: The project is located within the Tulare Lake Basin in the southeastern portion of the San Joaquin Valley between the cities of Fresno and Bakersfield, California.

DESCRIPTION: Lake Kaweah/Terminus Dam was completed in 1962, and has provided limited flood protection to Visalia and other rapidly developing urban areas along the Kaweah River. The project plan is to enlarge Lake Kaweah by 42,600 acre-feet by raising the spillway 21 feet to provide additional flood control and water conservation space.

AUTHORIZATION: Water Resources Development Act of 1996; Energy and Water Development Appropriations Act, 2003, Section 110

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable because project construction is substantially complete.

TOTAL BENEFIT-COST RATIO: 1.54 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 7-1/8 percent (FY 2000).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation in the Decision Document approved in December 1999 at 1998 price levels.

SUMMARIZED FINANCIAL DATA			STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$34,872,000	Entire Project	98	Sep 2009
Estimated Non-Federal Cost		23,753,000			
Cash Contribution	\$ 2,643,000				
Other Costs	21,110,000				
Total Estimated Project Cost		\$58,625,000			

Division: South Pacific

District: Sacramento

Kaweah River, California

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST	PHYSICAL DATA
Allocations to 30 September 2005	\$29,098,000		Spillway: Type – Fusegate, Install 6 fusegates (230.4 feet wide) along reconstructed spillway.
Allocation for FY 2006	4,257,000		Crest height - 715 feet
Allocations for FY2007	517,000		Capacity - Increase by 42,600 to total of 183,300
Conference Allowance for FY 2008	0		
Allocation for FY 2008	0		
Allocations through FY 2008	33,872,000	97	
Allocation Requested for FY 2009	1,000,000	100	Downstream and Upstream Mitigation
Programmed Balance to Complete after FY2009	0		D/S – 1,218 acres - Levee construction on interior of mitigation site
Unprogrammed Balance to Complete after FY2009	0		35 acres – Riparian site 2.1 acres – Endangered Species site U/S – 3,800 acres - Mitigation of oak woodland and riparian plantings

JUSTIFICATION: The Kaweah River originates in the Sierra Nevada mountains and drains about 560 square miles into Lake Kaweah (Terminus Dam). From Lake Kaweah it passes near the city of Visalia, with a population of about 111,200 (January 2006), as it flows west into the Tulare Lakebed. Terminus Dam was completed in 1962 to provide flood control and irrigation water supply. However, significant flood damages to communities and highly developed agricultural lands along the Kaweah River have continued to occur. Flood releases beyond Terminus Dam capacity have contributed to flood damages to agricultural lands in the Tulare Lakebed. The December 1966 rainflood exceeded the design capacity of Terminus Dam and floodflows passing downstream of the dam resulted in about \$1.0 million in damages below the dam, under conditions and prices at that time. These downstream flows peaked at about 5,700 cubic feet per second and inundated about 8,000 acres. The most recent flooding in 1983 caused extensive and widespread damages to properties in the Tulare Lakebed area where losses attributed to the Kaweah River were estimated at \$17.6 million. The project includes enlarging Lake Kaweah by 42,600 acre-feet. The average annual benefits at 1998 price levels are as follows:

Annual Benefits	Amount
Flood Control	\$3,882,000
Water Supply	251,000
Total	\$4,133,000

Division: South Pacific

District: Sacramento

Kaweah River, California

FISCAL YEAR 2009: The requested amount will be applied as follows:

Repair damage to completed work caused during initial lake filling	\$700,000
Correct weir seepage	100,000
Continue High Pool inspection program for the next 3 to 5 years	200,000
Total	\$1,000,000

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

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas for flood control.	\$10,054,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary for the construction of the project for flood control.	9,148,000	
Pay 35 percent of the costs allocated to agricultural water supply and bear all costs of operation, maintenance, repair, rehabilitation and replacement of water supply facilities. This is not a cash payment, but is included in the LERRD cost.	1,908,000	\$ 13,500

Division: South Pacific

District: Sacramento

Kaweah River, California

Requirements of Local Cooperation (Continued)

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Pay 5 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	2,643,000	125,600
Total Non-Federal Costs	\$23,753,000	\$139,100

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

STATUS OF LOCAL COOPERATION: The California State Reclamation Board and Kaweah Delta Water Conservation District are the non-Federal sponsors. The Project Cooperation Agreement was executed on 9 February 2001 (See OTHER INFORMATION).

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$34,872,000 is an increase of \$1,472,000 from the latest estimate (\$33,400,000) presented to Congress (FY 2006). This change includes the following items:

Item	Amount
Post Contract award and other Estimating Adjustments	\$1,472,000
Total	\$1,472,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement (EIS) was filed with Environmental Protection Agency on 11 October 1996. The Record of Decision for the EIS was issued on 19 November 1997. An Environmental Assessment (EA) supporting the Decision Document was approved in April 1998.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design (PED) were appropriated in FY 1996 and funds to initiate construction were appropriated in FY 2000. Design changes consist of toe drains and stability berms at the base of the auxiliary and main dams to better monitor seepage through the dams. Additional mitigation was required at the Tulare lakebed due to the presence of vernal pools and burrowing owls. The riparian site was increased by 4.65 acres when clearing was done downstream of the spillway and the endangered species site was increased by approximately 7 acres due to additional impacts on endangered species during construction. Ongoing replacement of plants has also extended the operation and maintenance periods for the endangered species site and the riparian sites.

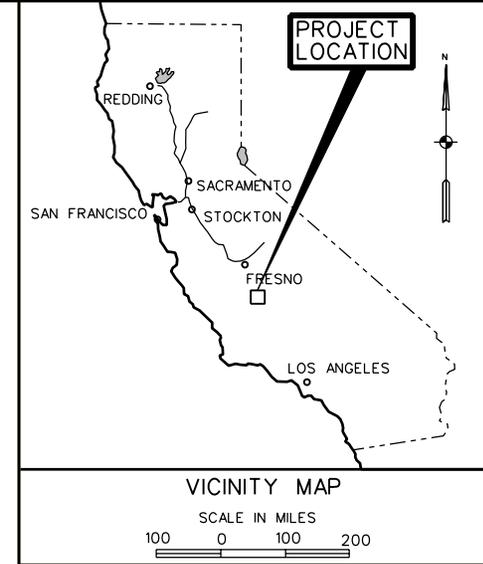
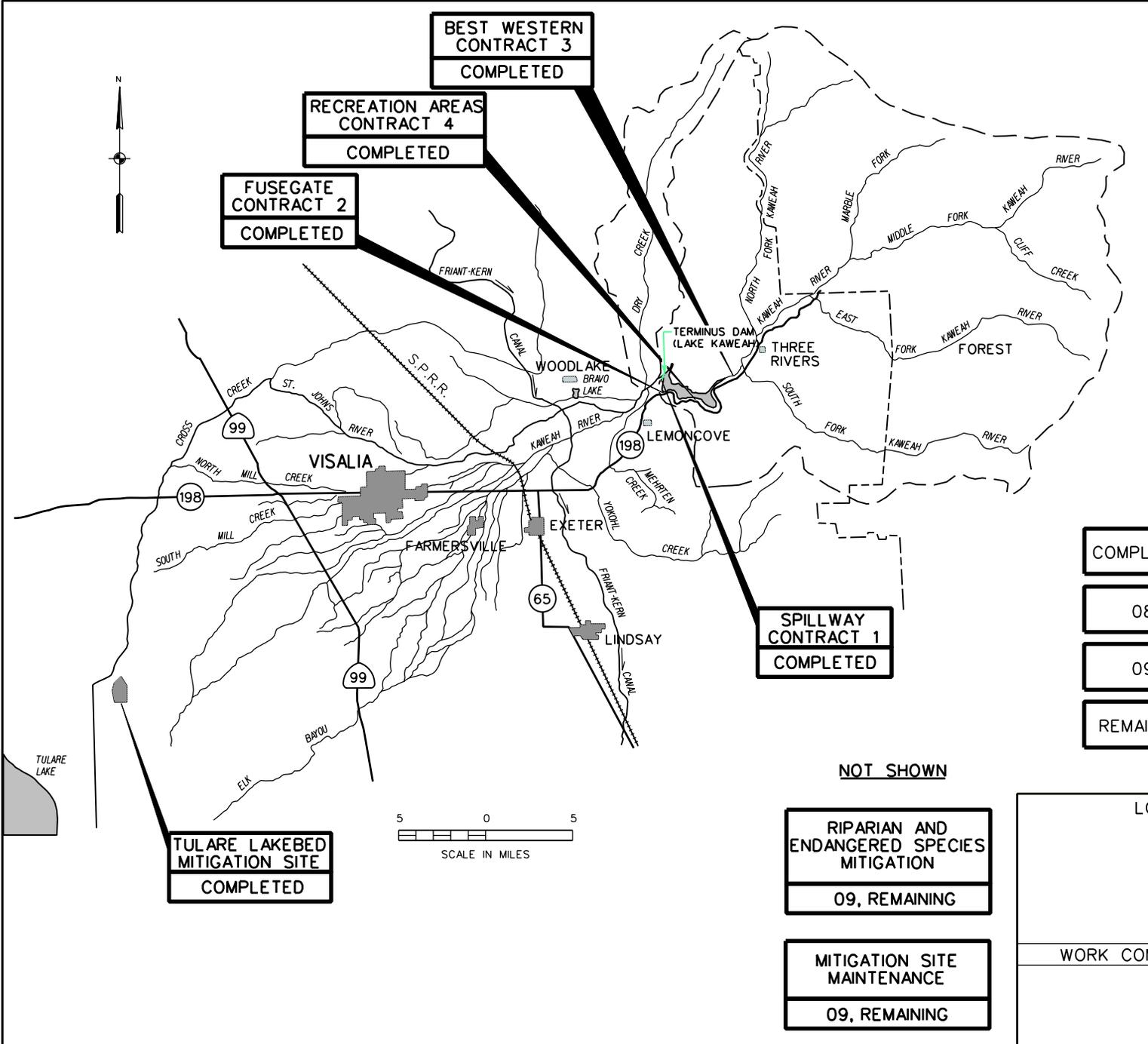
Despite increases in sponsor costs for lands and relocations and higher construction and mitigation costs, the local sponsor continues to strongly support the project and is capable of providing additional resources to complete the project.

Section 307 of the Water Resources Development Act of 1999 authorized the Secretary to accept title for lands required for the project and directs the Secretary and the non-Federal interests to enter into an agreement whereby the Corps of Engineers would be reimbursed by the non-Federal interests for costs associated with operations and maintenance.

Section 3020 of the Water Resources Development Act of 2007 directed the Secretary to credit, in accordance with section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d-5b), toward the non-Federal share of the cost of the project, or provide reimbursement not to exceed \$800,000, for the costs of any work carried out by the non-Federal interest for the project before the date of the project partnership agreement.

The fish and wildlife mitigation cost is estimated at \$4 million.

Initial fill tests caused damage to several construction features requiring unplanned repair and monitoring. Additional work includes road repair, boat ramp and electrical repairs, and 3 years of high water monitoring.



WORK STATUS

COMPLETED	WORK COMPLETED AS OF 30 SEPTEMBER 2007
08	WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
09	WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
REMAINING	WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

NOT SHOWN

RIPARIAN AND ENDANGERED SPECIES MITIGATION
09, REMAINING
MITIGATION SITE MAINTENANCE
09, REMAINING

LOCAL PROTECTION PROJECTS (FLOOD CONTROL)

KAWEAH RIVER CALIFORNIA

WORK COMPLETED, IN PROGRESS & PROPOSED

SACRAMENTO DISTRICT
SOUTH PACIFIC DIVISION
1 JANUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Los Angeles County Drainage Area, California (Continuing)

LOCATION: The project covers a 2,000 square-mile area within the county of Los Angeles and includes portions of the metropolitan region of the city of Los Angeles.

DESCRIPTION: The project consists of upgrading the existing system, raising and converting channel walls of the Rio Hondo and lower Los Angeles River channels, and modifying bridges.

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT - REMAINING COST RATIO: 3.6 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.5 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 3.1 to 1 at 7 percent.

BASIS OF BENEFIT-COST RATIO: Benefits are based on the Final Feasibility Report revised in June 1992, at October 1991 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	PHYSICAL STATUS (1 JAN 2006)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Federal Cost		\$158,100,000		Compton Creek	100	December 1997
Estimated Non-Federal Cost		52,700,000		Channel Improvements	100	September 2001
Cash Contributions	\$46,200,000			(Lower LA and Rio		
Other Cost	6,500,000			Hondo Rivers)		
Total Estimated Project Cost		\$210,700,000		Bridge Modifications	100	September 2001
				Close-out & Reconciliation	0	September 2009
				Entire Project	100	September 2009
Allocations to 30 September 2005		\$152,400,000				
Allocations for FY 2006		0				
Allocations for FY 2007		0				
Conference Allowance for FY 2008		0				
Allocation for FY 2008		0				
Allocations through FY 2008		152,400,000	96			
Allocation Requested for FY 2009		5,700,000	100			
Division: South Pacific			District: Los Angeles			Los Angeles County Drainage Area, CA

SUMMARIZED FINANCIAL DATA (Continued)

Programmed Balance to Complete after FY2009	0
Unprogrammed Balanced to Complete after FY2009	0

PHYSICAL DATA

CHANNELS

Parapet walls - approximately 21 miles	
Rio Hondo, Whittier Narrows Dam to Los Angeles River	- 9 miles
Los Angeles River, Rio Hondo to ocean	-12 miles
Converting trapezoidal channel to rectangular channel - approximately 1.2 miles	
Rio Hondo	-.7 miles
Los Angeles River	-.5 miles

Armoring back slopes of levees
Rio Hondo
Compton Creek
Los Angeles (Atlantic Boulevard to ocean)

BRIDGES - Modify 18 and raise 8 on the Los Angeles River

JUSTIFICATION: The Los Angeles County Drainage Area, current population of over 9 million, is partially protected by an urban flood control system which includes Corps flood control structures consisting of 5 major reservoirs, 22 debris basins, and 470 miles of channel improvements. The existing system, protecting the second largest urban metropolitan area in the United States, has prevented over \$4.4 billion in damages since construction. However, the flood of 1969 in Los Angeles County caused widespread damages of over \$12 million, \$64.5 million at 2005 prices. As urbanization of the basin has grown over the past 40 years, the ability of the existing systems to provide design levels of protection has diminished. The February-March 1980 floods exceeded the capacity of the channel in the upper reaches of the Los Angeles River and nearly overtopped the levee in the lower Los Angeles River near the city of Long Beach. A breach in the levee could have induced catastrophic damages to residential, commercial, and industrial properties in Long Beach. Studies to date indicate that a 100-year flood would impact 52,000 acres, with damages totaling about \$2.35 billion. Portions of the existing system for reaches above the channels cannot contain a 50-year flood event. The construction that has been completed corrected all of the listed problems. All that remains is the reconciliation of project cost sharing, contract modifications and close out of the project.

FISCAL YEAR 2008: No activity.

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete construction	\$1,400,000
Planning, Engineering and Design	3,600,000
Construction Management	700,000
Total	\$5,700,000

Division: South Pacific

District: Los Angeles

Los Angeles County Drainage Area, CA

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

	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 4,100,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	2,400,000	
Pay 22 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 25 percent as determined under Section 103 (m) of the Water Resources Development Act of 1986 to reflect the non-Federal sponsor's ability to pay and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	46,200,000	\$20,000
Total Non-Federal Costs	\$52,700,000	\$20,000

The non-Federal sponsor has also agreed to make all required payments concurrently with reconciliation, contract modifications, audits and storm management plan.

STATUS OF LOCAL COOPERATION: In February 1992, the Los Angeles County Department of Public Works, the local sponsor, affirmed its support and willingness to financially participate in the construction of the project at a level consistent with the current cost-sharing policy for construction. The Project Cooperation Agreement was executed 7 August 1995. The current non-federal cost estimate of \$52,700,000, which includes a cash contribution of \$46,200,000, is a decrease of \$55,300,000 from the non-federal cost estimate of \$108,000,000 noted in PCA, which included a cash contribution of \$15,600,000. The increase in the cash contribution is a result of a decrease in costs for lands and relocations requiring an additional cash contribution to bring the total non-federal share of flood control costs to 25 percent. The sponsor has indicated willingness and capability to contribute their share of increase.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$158,100,000 is an increase of \$8,100,000 from the latest estimate (\$150,000,000) presented to Congress (FY 2000). This change includes the following items.

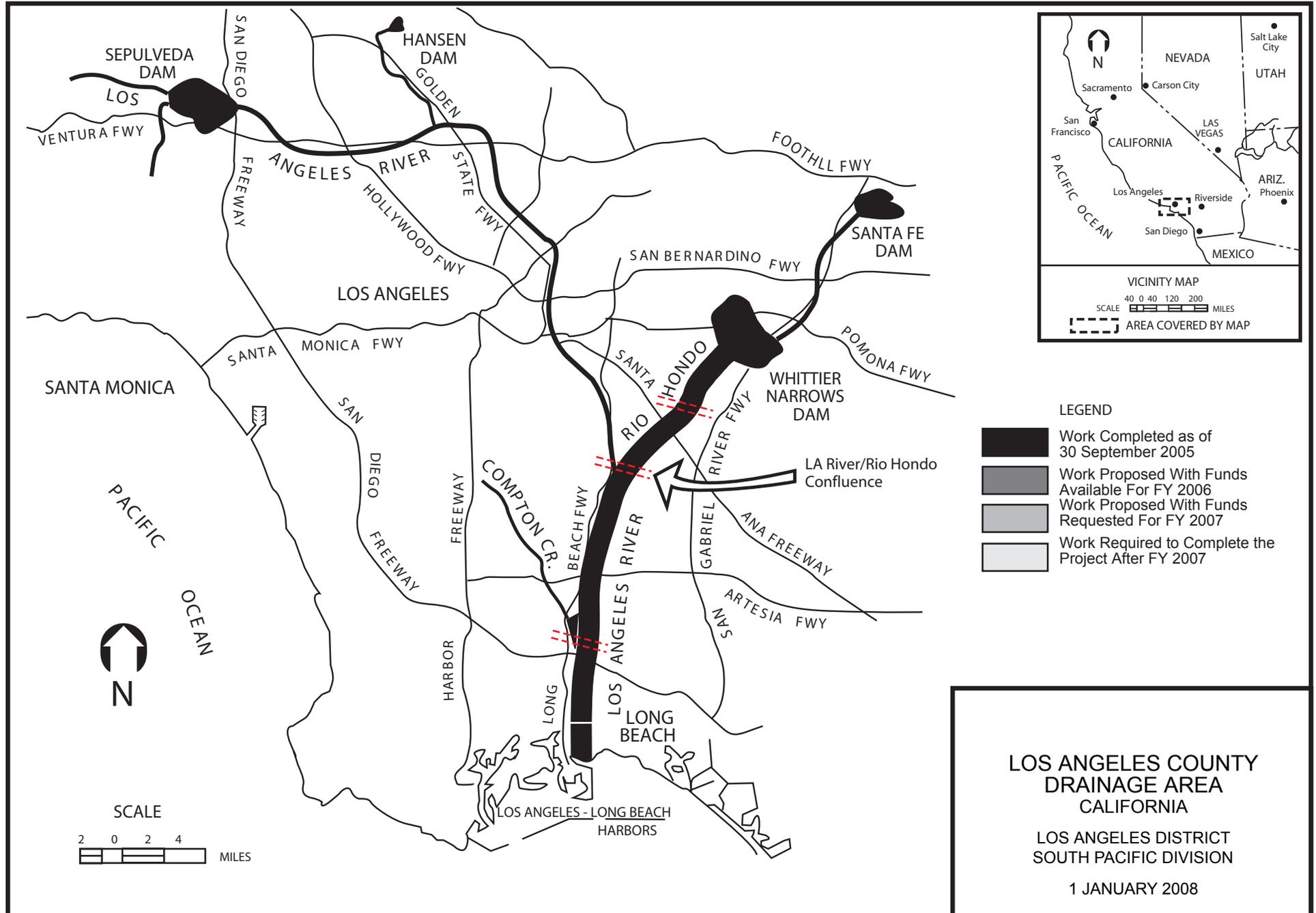
Item	Amount
Post Contract Award and Other Estimating Adjustments	\$8,100,000
Total	\$8,100,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement (EIS) was publicly reviewed and submitted as part of the Final Feasibility Report on 30 June 1992. The Record of Decision (ROD) was recorded by the Assistant Secretary of Army for Civil Works on 19 July 1995. The local sponsor completed the Environmental Impact Report in April 1995 which met California Environmental Quality Act requirements.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1992, and funds to initiate construction were appropriated in FY 1995.

The Federal Emergency Management Administration (FEMA) imposed mandatory flood insurance to residents within the area of Los Angeles County Drainage Area project causing financial hardship. At the request of the sponsor, the Corps of Engineers conducted a study to investigate what, if any, incremental protection is provided as the project is incrementally constructed. The study concluded that once certain key elements of the project were constructed, a large area would be protected against a 100-yr flood. Specifically, this area is the current 100-year flood plain along both sides of the Los Angeles River below Compton Creek on the west side, and below the Metropolitan Transit Authority bridge on the east side.

In a letter dated 19 September 1999, FEMA responded that once construction of key elements of the project were completed, a revision to the mandatory flood insurance would be warranted. Construction of the critical elements was completed in December 1999. A joint inspection visit performed by the Corps of Engineers and County of Los Angeles on 4 January 2000 determined that adequate protection was in place, lacking a few deficiencies that could be completed within two weeks. The sponsor submitted a "pre-certification" letter to FEMA on 7 January 2000. The final field inspection was completed and the final certification was submitted to FEMA. FEMA has lifted the mandatory flood insurance for the surrounding area.



APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Napa River, California (Continuing)

LOCATION: The project is located in the city and county of Napa, California. The Napa River drainage basin, comprising 426 square miles, is just north of San Pablo Bay and approximately 40 miles northeast of San Francisco, California.

DESCRIPTION: The project consists of channel modifications to provide the project area with 100-year level of flood protection from Napa River and Napa Creek. Channel modifications include overbank excavation, vertical walls, floodwalls, levees, bridges, pumping stations, and flowage easements. The project also includes recreation trails and major ecosystem restoration including restoration of over 730 acres of scarce San Francisco Bay estuary habitats.

AUTHORIZATION: Flood Control Acts of 1965 and 1976.

REMAINING BENEFIT-REMAINING COST RATIO: 3.08 to 1 at 7 percent.

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

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 7 percent (FY 2000).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation in the Final Supplemental General Design Memorandum, October 1998, at 1 October 1997 price levels. Incidental ecosystem restoration benefits are excluded in calculating the benefit cost ratios. The Final Supplemental General Design Memorandum was approved in May 1999.

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE	
Estimated Federal Cost		\$195,900,000	Entire Project	65	2016
Estimated Non-Federal Cost		\$168,700,000			
Cash Contributions	\$ 23,941,000				
Other Costs	144,759,000				
Total Estimated Project Cost		\$364,600,000			
Division: South Pacific		District: Sacramento			Napa River, California
		4 February 2008			

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST	PHYSICAL DATA
Allocations to 30 September 2005	\$60,535,000		Channel Modifications along Napa River from
Allocations for FY 2006	11,880,000		Highway 29 to Trancas Street - 6.9 miles:
Allocations for FY 2007	14,000,000		excavation - 1.63 Mil cy
Conference Allowance for FY 2008	10,824,000		widening - 16,900 ft
Allocation for FY 2008	10,824,000		vertical walls - 1,600 ft
Allocations through FY 2008	97,239,000	50	floodwalls - 13,200 ft
Allocation Requested for FY 2009	7,394,500	53	levees - 9,900 ft
Balance to Complete after FY 2009	91,226,500		training dikes - 7,000 ft
			bypass channel - 1,300 ft
			Channel Modifications along Napa Creek Main
			Street to Earl Street - 4,000 ft:
			excavation length - 1,100 ft
			Pumping stations 3 each
			Bridges
			roadway 6 each
			pedestrian 3 each
			Recreation Trails - 19,000 ft
			Flowage easement - 418.2 acres
			Ecosystem Restoration - 60 acres

JUSTIFICATION: The Napa River Basin, ranging from tidal marshes to mountainous terrain, is subject to severe winter storms and frequent flooding. In the lower reach of the river, flood conditions are aggravated by high tides from San Pablo Bay and local runoff. The population in the city of Napa was approximately 76,700 in January 2006. Many residential, business and industrial buildings are located by the Napa River within the City limits. Excluding public facilities, the present value of damageable property within the project floodplain is over \$500 million. Flooding in the Napa area has occurred in 1955, 1958, 1963, 1965, 1986 (flood of record), 1995 and 2005. The 1986 flood (estimated to be a 55-year event) resulted in 3 people dead, 27 injured, an estimated \$50-\$100 million in property damages throughout Napa County, and the evacuation of approximately 3,500 residents. The 1986 flood crested at 30.2 feet. The predicted crest for a 100 year flood is 32 feet. During the January 1995 flood (estimated to be a 50-year event) the Napa River crested at about 27 feet, and during the March 1995 flood the river crested near 31 feet. Although the March 1995 river crest was higher than the 1986 flood, fewer damages were incurred during the 1995 flood due to a rain stoppage three to four hours before the crest arrived, allowing the tributaries to partially subside. The damage assessments for the January and March 1995 floods report property damages of \$10 million and \$75 million, respectively. The floods resulted in 227 businesses and 843 residences being damaged

Division: South Pacific

District: Sacramento
4 February 2008

Napa River, California

JUSTIFICATION (Cont.):

county-wide. The project will provide 100-year level of flood protection. Ecosystem restoration includes the creation of tidal and seasonal wetlands and marshes, thus enhancing the San Francisco Bay estuary, which provides both nationally and regionally scarce habitat. Average annual benefits (October 1997 price levels) are as follows:

Annual Benefits	Amount
Flood Damage Prevention	\$15,453,000
Recreation	310,000
Ecosystem Restoration	3,293,000
Total	\$19,056,000

FISCAL YEAR 2008: Current year funds will be applied as follows:

Initiate Napa Valley Wine Train (NVWT) Relocation Contract	\$ 8,500,000
Engineering and Design	1,700,000
Construction Management	624,000
Total	\$10,824,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Continue construction of NVWT Relocation Engineering and Design	\$ 5,994,500
Construction Management	1,000,000
	400,000
Total	\$ 7,394,500

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 91,750,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project. (Includes section 215 credit for railroad bridge.)	53,009,000	
Pay 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	17,464,000	\$367,000
Pay one-half of the separable costs allocated to recreation (except recreational navigation) and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	6,477,000	45,000
Total Non-Federal Costs	\$168,700,000	\$412,000

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

STATUS OF LOCAL COOPERATION: The Napa County Flood Control and Water Conservation District is the local sponsor for both the flood control and recreation purposes of the project. In June 1999, the Napa County Flood Control and Water Conservation District indicated support for the project and intent to cost share both project purposes. In March 1998, the Napa County electorate passed "Measure A" which will fund the non-Federal share of the project. The Project Cooperation Agreement was executed in February 2000. The current non-Federal cost estimate of \$168,700,000, which includes a cash contribution of \$23,941,000, is an increase of \$14,900,000 from the non-Federal cost estimate of \$153,800,000 noted in the Project Cooperation Agreement, which includes a cash contribution of \$9,345,000. The sponsor agrees with current costs and continues to be financially able to support the project. An amendment to the PCA was executed 3 April 2007, which provided for the acceleration of non-Federal funds.

A Section 215 Agreement for construction of a portion of the authorized project by the local sponsor was executed on 16 January 2002. It limits Federal credit/reimbursement to no more than \$5,000,000, or 1 percent of total project costs, whichever is greater. In FY 2002, the local sponsor completed construction for a total cost of \$1.1 million. Initial reimbursement for \$500,000 was made 30 September 2003.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$195,900,000 is an increase of \$39,000,000 from the latest estimate (\$156,900,000) presented to Congress (FY 2008). This charge includes the following items.

Item	Amount
Price Escalation on Construction Features	\$ 3,000,000
Post Contracting Award and Other Estimating Adjustments	36,000,000
Total	\$39,000,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final EIS was filed with EPA on 18 December 1997. The Record of Decision was signed on 9 June 1999.

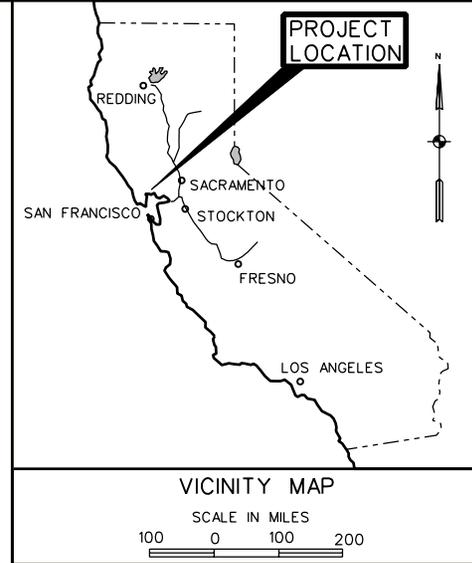
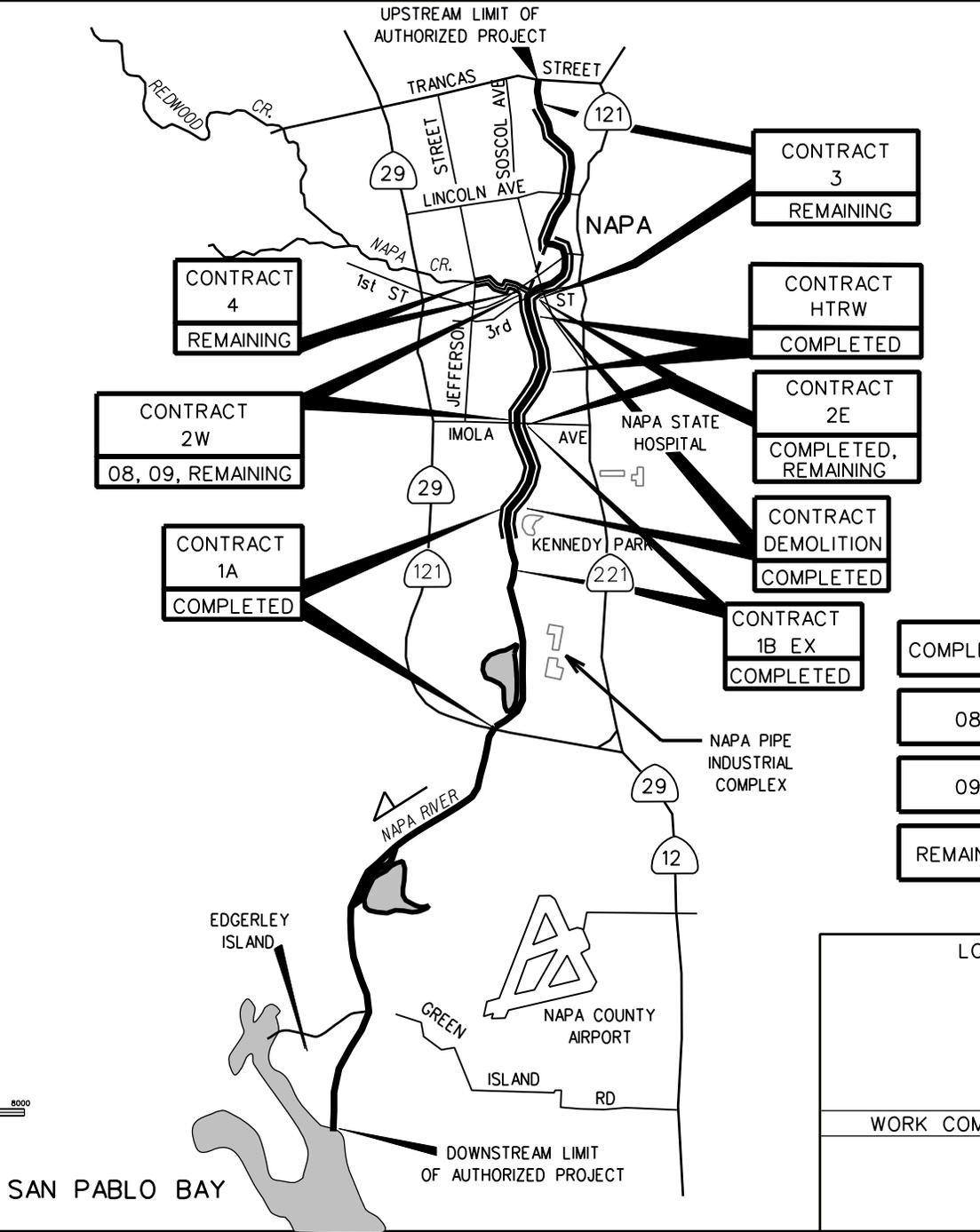
OTHER INFORMATION: Funds to resume preconstruction engineering and design were appropriated in Fiscal Year 1989. Funds to initiate construction were appropriated in Fiscal Year 2000.

On 31 December 2005, the City of Napa experienced flooding from both the Napa River and Napa Creek, causing extensive damage. The flood level experienced was second only to the record flood of 1986. Damages to the city, although estimated at \$40-50 million, did not reach the flood stages experienced in 1986. Partially completed project features downstream (flood terraces and raised bridges) are credited with reducing the flood damages.

ITEMS NOT SHOWN

ECOSYSTEM RESTORATION MITIGATION
 COMPLETED, 08, 09, REMAINING

NAPA VALLEY WINE TRAIN RAIL ROAD RELOCATION
 08, 09, REMAINING



WORK STATUS

COMPLETED	WORK COMPLETED AS OF 30 SEPTEMBER 2007
08	WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
09	WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
REMAINING	WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

LOCAL PROTECTION PROJECTS (FLOOD CONTROL)

NAPA RIVER CALIFORNIA

WORK COMPLETED, IN PROGRESS & PROPOSED

SACRAMENTO DISTRICT
 SOUTH PACIFIC DIVISION
 1 JANUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Rio Grande Floodway, San Acacia to Bosque del Apache Unit, New Mexico (Continuing)

LOCATION: The project is located in Socorro County, New Mexico along the Rio Grande, and extends from the upper end of the Rio Grande low-flow conveyance channel at the San Acacia diversion works to Tiffany Junction, approximately 11 miles upstream of Elephant Butte Reservoir.

DESCRIPTION: The plan of improvement consists of the reconstruction of approximately 44 miles of existing spoil bank levee which separates the Rio Grande low flow conveyance channel from the river. The level of protection is a discharge of approximately 20,000 cfs at Socorro, New Mexico, corresponding to the 100 year flood.

AUTHORIZATION: Flood Control Act of 1948 and Water Resources Development Act of 1992.

REMAINING BENEFIT - REMAINING COST RATIO: 2.6 to 1 at 7 percent.

TOTAL BENEFIT - COST RATIO: 2.3 to 1 at 7 percent.

INITIAL BENEFIT - COST RATIO: 2.9 to 1 at 7 percent (FY 1992).

BASIS OF BENEFIT - COST RATIO: Benefits are from the Appendix to the Project Decision Document dated December 1993 at October 1993 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM. PCT. OF EST. FED. COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$67,900,000	Entire Project	0	September 2017
Estimated Non-Federal Cost		9,700,000			
Cash Contribution	\$8,800,000				
Other Costs	900,000				
Total Estimated Project Cost		\$77,600,000			
			PHYSICAL DATA		
			Levees - 44 Miles		
Allocations to 30 September 2005		\$ 6,978,000			
Allocations for FY 2006		966,000			
Allocations for FY 2007		800,000			
Conference Allowance for FY 2008		749,000			
Allocation for FY 2008		749,000			
Allocations through FY 2008		9,493,000	14		
Division: South Pacific		District: Albuquerque			Rio Grande Floodway, San Acacia to Bosque del Apache Unit, NM
		4 February 2008			

SUMMARIZED FINANCIAL DATA (continued)

ACCUM.
PCT. OF EST.
FED. COST

Allocation Requested for FY 2009	\$ 800,000	15
Programmed Balance to Complete after FY 2009	57,607,000	

JUSTIFICATION: The project will provide protection from the 100-year flood with an estimated discharge of 20,000 cubic feet per second (cfs). The flood of record, in September 1929, produced a peak discharge of 60,000 cubic feet per second on the Rio Grande at the San Acacia gage. Irrigation and transportation facilities were either disrupted or destroyed. Over 90 percent of the irrigated farmland in a 60 mile reach of the Rio Grande was severely damaged, and the original villages of San Acacia, San Antonio, and San Marcial were destroyed. Damages sustained at that time were \$1,500,000; under current conditions and prices the damages would be \$280,000,000. The last major flood event occurred in 1965 with minor flooding in 1967, 1979 and 2005. The value of property within the 100-year flood plain is \$389,000,000. Residential property within the 100-year flood plain is worth \$53,000,000. The Rio Grande low-flow conveyance channel, built by the U.S. Bureau of Reclamation in 1961, is the primary damageable property in the project area. Cost to construct the low flow conveyance channel at October 2007 price levels is \$134,000,000. The United States Bureau of Reclamation estimates that following a flood severe enough to breach the spoil-bank levee separating the low-flow conveyance channel from the adjacent floodway, the low-flow conveyance channel would be obliterated and out of service for at least five years. As much as 455,000 acre-feet of water would be lost over such a five-year period, with an economic value of \$22,000,000. Loss of the channel would also have international significance, as the 1906 Treaty with Mexico requires the delivery of 60,000 acre-feet of water annually. Single occurrence damages from the one percent chance floods are \$269,000,000. Average annual damages without the project are \$9,202,400 and with the project are \$2,127,000. Average annual benefits are \$7,075,400, all flood risk management, based on October 2007 price levels. The project avoids long and short term impacts associated with the destruction or modification of wetlands; in fact, the project protects existing wetlands at Bosque del Apache National Wildlife Refuge.

FISCAL YEAR 2008: The current amount is being applied as follows:

Continue the Limited Reevaluation Report	\$ 749,000
Total	\$ 749,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete the Limited Reevaluation Report	\$ 300,000
Initiate plans and specifications	500,000
Total	\$ 800,000

Division: South Pacific

District: Albuquerque

Rio Grande Floodway, San Acacia to
Bosque del Apache Unit, NM

4 February 2008

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, and the Water Resources Development Act of 1992, PL 102-580, Section 102(S), the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Participate in Project Cooperation Team, conduct audits of non-Federal costs, and perform investigations of hazardous substances.	\$ 100,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	800,000	
Pay 11.3 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 12.5 percent, but no less than 5 percent of the costs allocated to flood control and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	8,800,000	\$230,000
Total Non-Federal Cost	\$ 9,700,000	\$230,000

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

STATUS OF LOCAL COOPERATION: The Middle Rio Grande Conservancy District supports the authorized levee project, as currently modified, to provide needed flood protection to the Middle Rio Grande Valley below San Acacia. By letter dated 28 July 1995, the New Mexico State Engineer indicated that funding for a portion of the non-Federal share of the project may be provided by the New Mexico Interstate Stream Commission from the Improvement of the Rio Grande Income Fund. The Project Cooperation Agreement is scheduled for execution in October 2009.

Division: South Pacific

District: Albuquerque

Rio Grande Floodway, San Acacia to
Bosque del Apache Unit, NM

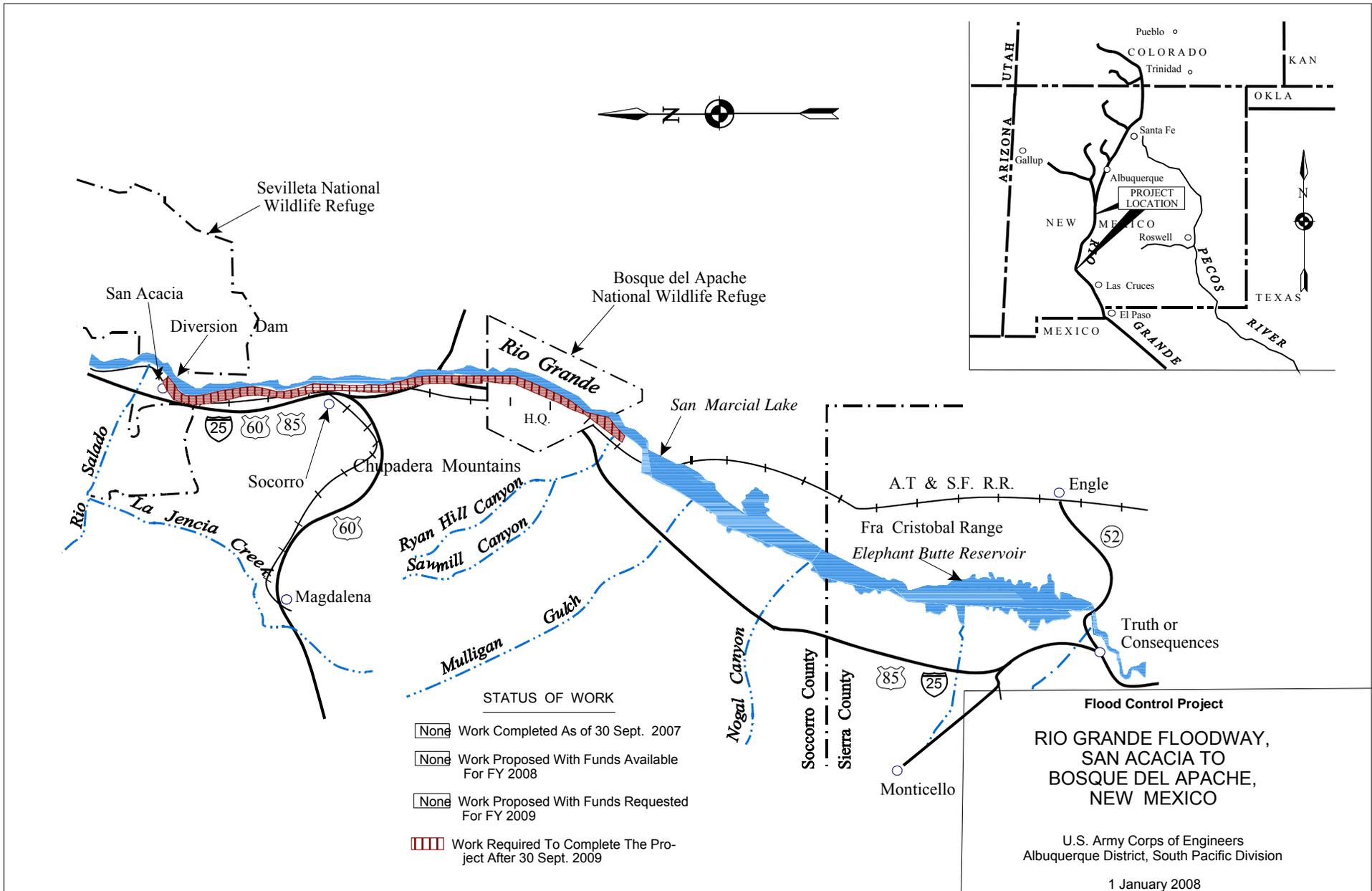
4 February 2008

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$67,900,000 (1 October 2007) is an increase of \$5,600,000 from the latest estimate (\$62,300,000) presented to Congress (FY 2007). This change includes the following items:

Item	Amount
Price Escalation on Construction Features	\$ 5,600,000
Total	\$ 5,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed in February 1992. A supplemental Environmental Impact Statement is scheduled to be filed with the Environmental Protection Agency in January 2009.

OTHER INFORMATION: Funds to initiate Preconstruction Engineering and Design were appropriated in Fiscal Year 1987, and funds to initiate construction were appropriated in Fiscal Year 1992. The final Limited Reevaluation Report (LRR) is scheduled for approval in December 2008. The Project Cooperation Agreement is scheduled for execution in October 2009. Continued funding is critical to ensure completion of the LRR.



4 February 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Sacramento River Bank Protection Project, California (Continuing)

LOCATION: The project is located in north-central California, along the Sacramento River and its principal tributaries from Sacramento River RM 0.0 at Collinsville to Chico Landing at RM 194. It is within the limits of the existing Sacramento River Flood Control Project levees and includes Butte Basin, Cache Slough, and a portion of the Sacramento-San Joaquin Delta slough. The project meanders through eight counties including Tehama, Glenn, Butte, Colusa, Sutter, Yolo, Solano, and Sacramento.

DESCRIPTION: The project provides a long-range program of bank protection to protect the levees within the limits of the Sacramento River Flood Control Project from erosion. It prevents undermining of levee sections and includes fish and wildlife mitigation features. Some recreational facilities have been provided along the river.

AUTHORIZATION: Flood Control Act of 1960; River Basin Monetary Authorization Act of 1974; Further Continuing Appropriations Act of 1983 and Water Resources Development Act of 1986.

REMAINING BENEFIT-REMAINING COST RATIO: 12.6 to 1 (See OTHER INFORMATION.)

TOTAL BENEFIT-COST RATIO: 22.2 to 1 (See OTHER INFORMATION.)

INITIAL BENEFIT-COST RATIO: Not Reported

BASIS OF BENEFIT-COST RATIO: (See OTHER INFORMATION.)

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

SUMMARIZED FINANCIAL DATA

Separable Element 1 (non-separable elements)		
Estimated Federal Cost		\$280,558,000
Estimated Non-Federal Cost		\$140,281,000
Cash Contribution	\$119,791,000	
Other Costs	20,490,000	
Total Separable Element 1		\$420,839,000

Separable Element 2 (Completed Fish & Wildlife Mitigation)		
Estimated Federal Cost		\$ 1,336,000
Estimated Non-Federal Cost		\$ 784,000
Cash Contribution	\$ 84,000	
Other Costs	700,000	
Total Separable Element 2		\$ 2,120,000

Separable Element 3 (LCA 41)		
Estimated Federal Cost		\$ 8,619,000
Estimated Non-Federal Cost		\$ 2,873,000
Cash Contribution	\$ 1,857,000	
Other Costs	1,016,000	
Total Separable Element 3		\$ 11,492,000

STATUS (1 JAN 2007)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Bank Protection	97	TBD
Recreation	100 1/	TBD
Entire Project	97	TBD

1/ 100% of identified recreation is complete.

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

SUMMARIZED FINANCIAL DATA (Continued)

Separable Element 4 (LCA 38B, 40, & 42)

Estimated Federal Cost		\$ 57,187,000
Estimated Non-Federal Cost		\$ 19,062,000
Cash Contribution	\$ 19,062,000	
Other Costs	0	
Total Separable Element 4		\$, 76,249,000

Project Summary

Estimated Federal Cost		\$347,700,000
Estimated Non-Federal Cost		\$163,000,000
Cash Contribution	\$140,794,000	
Other Costs	22,206,000	
Total Estimated Project Cost		\$510,700,000

		ACCUM PCT OF EST FED COST	PHYSICAL DATA
Allocations to 30 September 2005	\$124,767,000		Bank Protection: 835,000 lineal feet
Allocation for FY 2006	29,208,000		First Phase – 430,000 lineal feet
Allocation for FY 2007	21,000,000		Second Phase– 405,000 lineal feet
Conference Allowance for FY 2008	21,532,000		
Allocation for FY 2008	21,532,000		
Allocations through FY 2008	196,507,000	57	
Allocation Requested for FY 2009	18,350,000	62	
Balance to Complete after FY 2009	132,843,000		

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

JUSTIFICATION: 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 RM 0 near Collinsville to RM 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 insure that it will continue to furnish the designed degree of protection. 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, River Mile (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 comprise over one million acres in which about 50 communities are located; value of improvements (October 2003 prices) to be protected is about \$38 billion and about 2.3 million people live within the flood plain. 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 serious erosion is occurring and to prevent erosion from undermining additional levee sections in the future. In addition to assuring urgently needed flood protection, the project provides recreation facilities consisting of boat-launching facilities, campgrounds, and picnic areas needed along the river to meet a rapidly increasing public demand. Since the initial bank protection contract was let in June 1963, about 812,000 lineal feet of bank protection has been provided. Approximately 23,000 lineal feet of bank protection remains to be placed on the second phase of this project, and the local sponsor supports the addition of a third phase, which will require Congressional authorization.

FISCAL YEAR 2008: Current year funds will be used to:

Design and Construct Bank Protection and Mitigate For Habitat Loss for a 3,800 Foot Reach	\$ 19,100,000
Engineering and Design During Construction	1,095,000
Construction Management	1,337,000
Total	\$ 21,532,000

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

FISCAL YEAR 2009: The requested amount will be applied as follows:

Design and Construct Bank Protection and Mitigate For Habitat Loss at Six Sites	\$ 15,000,000
Continue PADD/EIR/EIS	1,350,000
Continue Offsite Mitigation	2,000,000
Total	\$ 18,350,000

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

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

	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 16,167,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	6,039,000	
Pay 28 percent of the costs allocated to flood control to bring the total non-Federal share of flood control costs to one-third for remaining work and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	119,791,000	\$ 1,174,000
Pay 4 percent of the total cost of separable element 2, fish and wildlife mitigation, to bring the total non-Federal share of costs of separable element 2 to 37 percent for work performed, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of this functional portion of the project.	84,000	
Pay 16 percent of the total cost of Separable Element 3 to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation and maintenance repair, rehabilitation and replacement of flood control facilities.	1,857,000	18,000
Pay 25 percent of the total cost of Separable Element 4 to bring the total non-Federal share of flood control costs to 25 percent and bear all costs of operation and maintenance repair, rehabilitation and replacement of flood control facilities.	19,062,000	187,000
Total Non-Federal Costs	\$ 163,000,000	\$1,379,000

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

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

STATUS OF LOCAL COOPERATION: Chapter 2188, Statutes of the State of California, approved by the Governor on 21 July 1961, established the State Reclamation Board as the agency to meet the requirements of local cooperation for the project. Assurances of local cooperation were accepted from the Board 5 February 1963. The Reclamation Board signed a Local Cooperation Agreement (LCA) satisfying the requirements of Section 221, Flood Control Act of 1970 (Public Law 91-611) for the remaining Second Phase work in May 1984. In accordance with provisions of the Water Resources Development Act of 1986 for separable project elements initiated after 30 April 1986, new LCAs were executed for separable element 41 on 15 August 1988 and for separable elements 38B, 40, and 42 on 7 December 1988. The LCA for the First Phase Mitigation was signed on 5 June 1990. The current non-Federal cost estimate of \$163,000,000 is an increase of \$32,278,000 from the estimate last presented to Congress (FY 2008). The local sponsor supports the increase and is financially positioned to provide their increased share of project costs.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$347,700,000 is a decrease of \$18,123,000 from the latest estimate of \$365,823,000 presented to Congress (FY2008). The change includes the following items:

Post Contract Award and Other Estimating Adjustments	- \$ 18,123,000
Total	- \$ 18,123,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A final Environmental Impact Statement (EIS) was filed on 15 June 1973. A SEIS for the Second Phase was filed in February 1989. A final EIS for additional work in Butte Basin, and an update submitted as Supplement 4, were signed in June 1988. An Environmental Assessment/Site Specific Report (EA/SSR) was prepared for Contract 42A and a Finding of No Significant Impacts (FONSI) was signed on 15 February 1994. An EA/SSR was prepared for Contracts Lower American River site 3 and 40D and FONSI were signed 2 July 1996 and 3 September 1997, respectively. A Supplemental Design Memorandum No. 8 was prepared for sites along the lower American River and the SEIS was completed in April 1998. Currently, an EA/SSR to meet both Federal and State of California requirements is approved prior to construction of each bank protection contract. A General Reevaluation Report (GRR) will be required to address remaining sites.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in FY 1962, and for construction in FY 1963. Construction of First Phase was completed in November 1974. Authority to proceed with additional bank protection works, Second Phase, was provided by Section 202, River Basin Monetary Authorization Act of 1974, Public Law 93-251. The Further Continuing Appropriations Act of 1983 extended the limits of the project to include bank protection along the Sacramento River to the upstream ends of the project levees to Chico Landing (Butte Basin area). The Water Resources Development Act of 1986 modified the First Phase of the project to include acquisition of lands for establishment and maintenance of wildlife habitat at a total cost of \$1,410,000 (\$2,120,000 inflated through construction). The last parcel was acquired in Fiscal Year 1997. Re-vegetation has been highly successful and is serving as a model for re-vegetation efforts by others. Monitoring of fish and wildlife habitat and engineering features continues at each site.

The U.S. Fish and Wildlife Service, by letter dated November 7, 1985, issued a Biological Opinion stating that the bank protection work along the Sacramento River from Chico Landing to Red Bluff and in the Butte Basin area would endanger the threatened valley elderberry longhorn beetle. The Service issued a revised opinion on 19 May 1987 that permitted limited rock revetment bank protection to be constructed in the Butte Basin. The potential impact to winter run salmon has also been a significant concern as the winter run salmon have experienced an alarming decline since 1969. National Marine Fisheries Service (NMFS) listed winter run salmon as a threatened species in November 1990. The winter run salmon biological data report was completed January 1991. NMFS Biological Opinion dated 28 October 1991 for the winter run salmon was non-jeopardy but lists recommended conservation measures. Winter run salmon along with bank

Division: South Pacific

District: Sacramento
4 February 2008

Sacramento River Bank Protection
California

OTHER INFORMATION (continued)

wallows and Swainson's Hawk are also State listed species and a Biological Opinion was received from California Department of Fish and Game on 18 November 1991 which also recommends conservation measures.

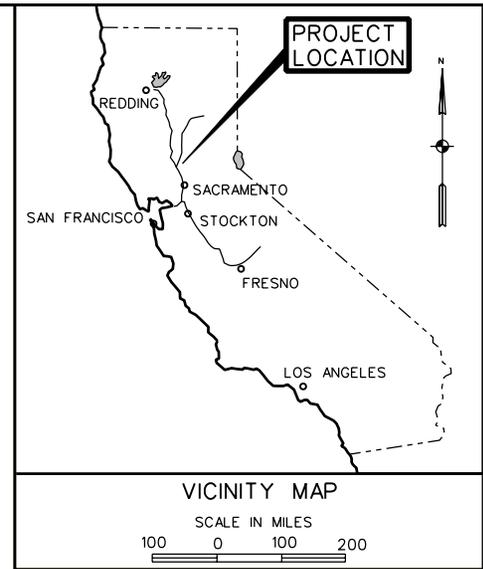
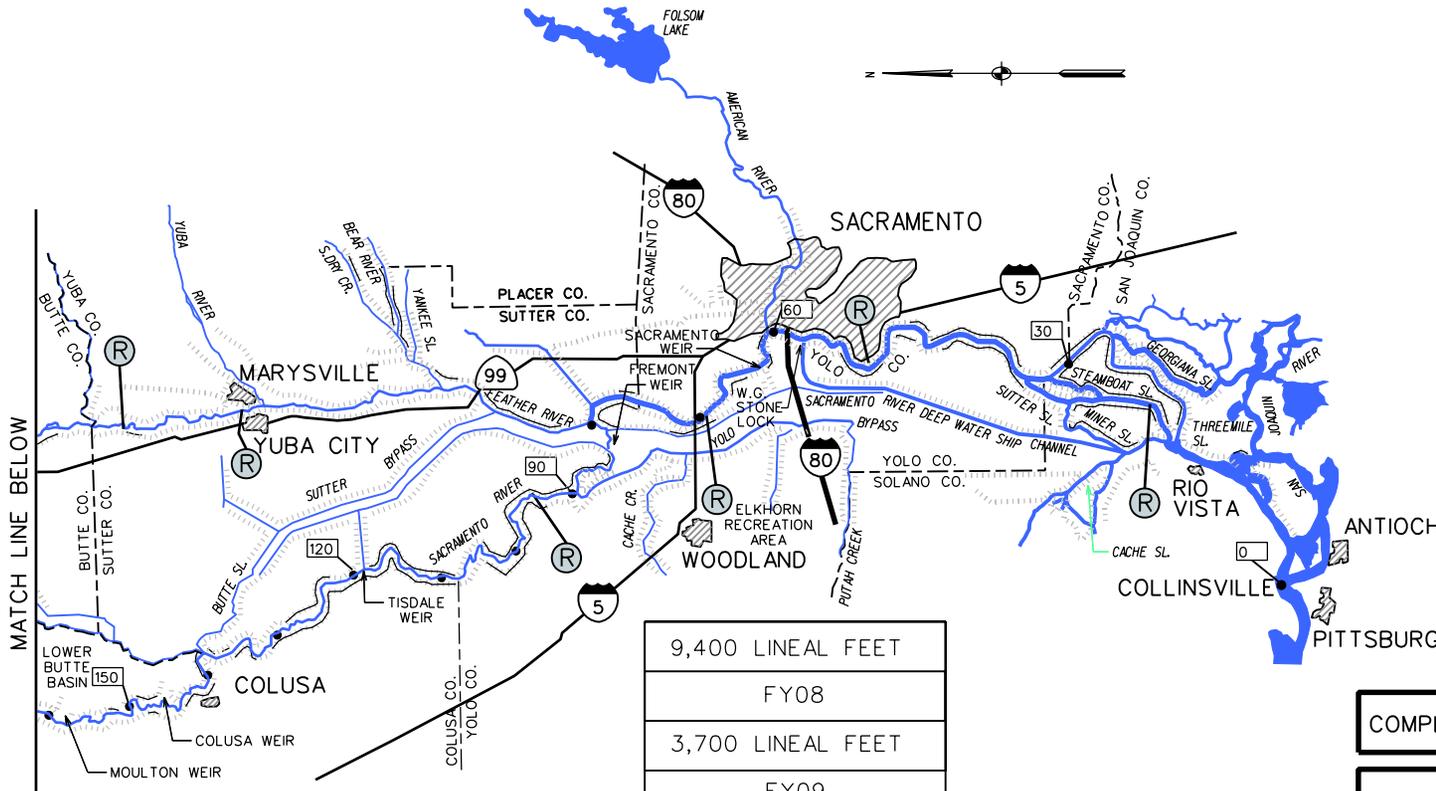
On August 23, 2001, the U.S. Fish and Wildlife Service issued its final Biological Opinion on the Sacramento River Bank Protection Project (SRBPP). The National Marine Fisheries Service released their opinion on September 27, 2001. Both opinions were virtually identical in terms of identifying the SRBPP's effects as jeopardizing the existence of five fish species (Delta smelt, Sacramento splittail, winter-run Chinook salmon, spring-run Chinook salmon, and Central Valley steelhead) listed under the Endangered Species Act in the Sacramento River. With recent collaborative efforts, most repair sites have been self-mitigating.

After the February 1986 flood, the Sacramento River System experienced below normal precipitation and flood flows. This led to a lower rate of erosion and a lowered need for expedited bank protection work. However, the storms of 1995 and 1997, plus the sustained high water in 2006 have caused substantial erosion damage and the urgency for bank protection is vital.

The 2005 and 2006 Erosion Inventory Reconnaissance report identified 57 Critical Erosion Sites which resulted in an emergency declaration by Governor Schwarzenegger. The Department of Water Resources (DWR) and the Corps repaired 33 sites in fiscal years 2006 completed in 2007. Currently there are 24 sites (10 DWR and 14 Corps led) under repair with scheduled completion during the first quarter of FY 2008. The State of California has advanced funds ahead of the cost share with the aid of a Local Cooperation Agreement amendment allowing the project to accept funds ahead of the cost share balance, so that work on the emergency sites may proceed unimpeded.

The Flood Control Act of 1960 included no quantitative language concerning the benefits or costs but authorized the rehabilitation of 430,000 lineal feet of levee. In 1974 language was added to increase the lineal feet by an additional 405,000 feet for a total of 835,000 lineal feet. The total base project cost is computed based on the current estimated total project cost expended to date, the remaining costs to date, an assumed spending stream throughout the 42 years of the project life, discounted to 1963 when the first appropriation was provided. Due to the language in the initial authorization stating that the benefits obviously exceeded the costs, the annual benefits are not available as they were absent from the original authorization and an economic reanalysis has never been performed. Remaining project cost is based on the current estimate of completing the last 25,000 lineal feet. The RBRCR of 12.6 was based on a sample of levee repairs currently studied on the Sacramento main stem. This is the lowest benefit value included in the analytical base and is considered a conservative estimate.

The fish and wildlife mitigation cost is estimated at \$31 million.



9,400 LINEAL FEET
FY08
3,700 LINEAL FEET
FY09

LEGEND

- LEVEE SYSTEM AS CONSTRUCTED BY THE CORPS OF ENGINEERS
- LOCATION OF BANK PROTECTION SITES ACCOMPLISHED UNDER FIRST PHASE OF THE SACRAMENTO RIVER BANK PROTECTION PROJECT
- RECREATION SITE
- RIVER MILES

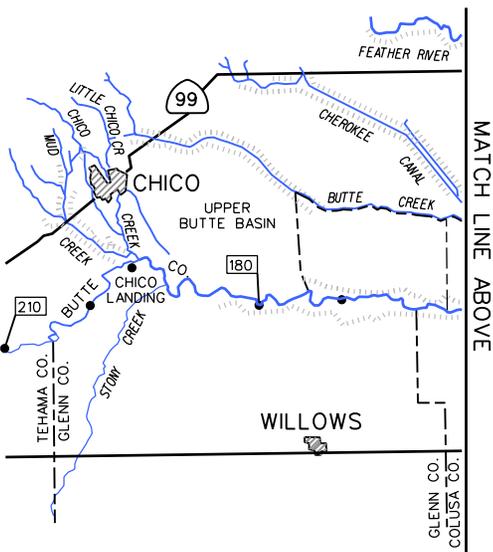
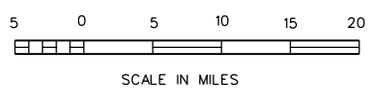
WORK STATUS

COMPLETED	WORK COMPLETED AS OF 30 SEPTEMBER 2007
08	WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
09	WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
REMAINING	WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

LOCAL PROTECTION PROJECTS (FLOOD CONTROL)

SACRAMENTO RIVER BANK PROTECTION PROJECT CALIFORNIA

SACRAMENTO DISTRICT
SOUTH PACIFIC DIVISION
1 JANUARY 2008



APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: Santa Ana River Mainstem, California (Continuing)

LOCATION: The project is located along a 75-mile reach of the Santa Ana River in Orange, Riverside, and San Bernardino Counties, southeast and adjacent to metropolitan Los Angeles, California.

DESCRIPTION: The plan of improvement provides for construction of the Seven Oaks Dam about 35 miles upstream of the existing Prado Dam, with a gross reservoir storage of 145,600 acre feet; flood plain management of the flood overflow area on the Santa Ana River between Seven Oaks Dam and the existing Prado Reservoir; enlargement of Prado Dam to increase the reservoir storage capacity from 217,000 acre-feet to 362,000 acre-feet; construction of 3.3 miles of channel modifications along Oak Street Drain in Corona; enlargement of the existing 2.4 miles of Mill Creek levee; construction of a detention basin and 2.0 miles of channel modifications along the Santiago Creek; and various means of flood control, including flood plain management, levees, and vertical walled concrete channels along the 30.5 miles of the Santa Ana River from Prado Dam to the Pacific Ocean. In addition, the plan includes recreational development and purchase of lands for mitigation and preservation of endangered species. A project for San Timoteo Creek was added to the Santa Ana River Mainstem project by the Energy and Water Development Appropriation Act of 1988. A special report was approved in May 1994; engineering and design was initiated in Fiscal Year 1991 with funds appropriated for that purpose and was completed in June 1994. Construction was initiated in Fiscal Year 1994. The project was modified by the Water Resources Development Act of 1990, which authorized the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas. These recreational features are not included in the current estimate pending development of plans and determination of costs.

AUTHORIZATION: Water Resources Development Act of 1986, Energy and Water Development Appropriation Act, 1988, Water Resources Development Act of 1990, Water Resources Development Act of 1996, and Water Resources Development Act of 2007.

REMAINING BENEFIT-REMAINING COST RATIO: 5.7 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 1.5 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 1.3 to 1 at 8 5/8 percent (FY 1988)

BASIS OF BENEFIT-COST RATIO: The benefit-cost ratio is based on the Phase II General Design Memorandum dated August 1988 at October 1987 price levels.

1/ The Remaining Benefit – Remaining Cost Ratio will require an update to include the SARI line.

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		\$ 1,169,800,000		Seven Oaks Dam	100	August 1999
Programmed Construction	\$1,168,800,000			Prado Dam	50	December 2013
Unprogrammed Construction	1,000,000			Santiago Creek	10	December 2013
Estimated Non-Federal Cost		\$ 699,900,000		Mill Creek	100	March 1992
Programmed Construction	\$ 698,900,000			Oak Street Drain	100	September 1994
Cash Contributions	94,000,000			Lwr SAR Rch 9 & SARI Line	35	December 2010
Other Costs	666,900,000			Lower Santa Ana Rch 1-8,10	96	December 2008
Reimbursements	(62,000,000)			Marsh	100	March 1991
Estimated Non-Federal Cost				San Timoteo	99	December 2012
Unprogrammed Construction	\$ 1,000,000			Total Project	80	December 2013
Cash Contributions	1,000,000					
Other Costs	0					
Total Estimated Programmed Construction Costs		\$ 1,867,700,000				
Total Estimated Unprogrammed Construction Costs		\$ 2,000,000				
Total Estimated Project Cost		\$ 1,869,700,000 <u>1/</u>				
Allocations to 30 September 2005		\$ 759,809,000				
Allocations for FY2006		57,103,000				
Allocations for FY2007		57,580,000				
Conference Allowance for FY 2008		20,664,000				
Allocation for FY 2008		20,664,000				
Allocations Through FY 2008		895,156,000	76			
Allocation Requested for FY 2009		8,100,000	77			
Programmed Balance to Complete after FY 2009		266,544,000				
Unprogrammed Balance to complete after FY 2009		1,000,000				

1/ Reflects \$39,500,000 to be reimbursed to judgment fund for Seven Oaks claim

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

PHYSICAL DATA:

SEVEN OAKS DAM:

Dam: Type - Impervious core
Height - 550 feet
Length - Crest Length 2,980 feet
Outlet Works: Gated conduit, 8,000 cfs maximum discharge
Basin Capacity: 145,600 acre-feet
Spillway: Type - Detached overflow, 500 ft wide, unlined
Embankment: Earth and Rock fill
Lands & Damages: Acres - 2,736 existing streambed and undeveloped (mountainous)
Water Quality Study

MILL CREEK

Levee repair: Type - Grouted riprap
Height - 10 feet maximum
Length - 12,500 feet (2.4 miles) of existing
13,600 feet (2.6 miles)
Lands & Damages: Acres – 1661 grazing, wildlife
Floodwall (Top of levee): Type – Concrete
Height - 7.5 feet maximum
Length - 12,600 feet (2.4 miles)

OAK STREET DRAIN:

Channel: Rectangular concrete 3.0 mile
Trapezoidal riprap 0.3 miles
Lands & Damages: 34 acres for rights-of-way

SANTIAGO CREEK:

Channel: Rectangular concrete 500 feet
Trapezoidal riprap 2.0 miles
Reservoir: Buttressed
Basin Capacity: Flood control 4,620 acre-feet (el. 274 to 298)
Lands and Damages: 281.5 acres, reservoir and channel

PRADO DAM:

Dam: Type - Impervious core
Height - 134 feet
Length - 3,050 crest length
Outlet Works: Gated conduits
30,000 cfs maximum discharge
Embankment: Rolled earth fill
Spillway: Type - Detached, overflow concrete, 1,000 feet wide,
578,000 cfs maximum design discharge.
Basin Capacity: 362,000 acre-feet

LOWER SANTA ANA RIVER:

Channel: - 200-450 feet wide,
34 bridges replaced or modified
Relocate sewage and brine line (SARI) Santa Ana River Interceptor Line
- 5.0 miles trapezoidal concrete
- 2.4 miles rectangular concrete
- 15.5 miles trapezoidal grouted riprap
- 0.8 miles rectangular concrete/soft bottom

Lands & Damages: Acres - 2,429.5 for channel (7.4 miles floodway)
Mitigation Lands: Acres - 92-marsh restoration

RECREATION FACILITIES:

LOWER SANTA ANA RIVER: Bicycle/equestrian trail - 32 miles

SANTIAGO CREEK: Trails - Bicycle and equestrian (1 mile)
Rest stop - Concrete bicycle wheel stops

SEVEN OAKS TO PRADO DAM: To be developed

SAN TIMOTEO CREEK – To be developed

SAN TIMOTEO CREEK:

Channel: 5.4 miles trapezoidal concrete
Basins: 18 in-channel and transition chute
Lands & Damages: 60.3 acres for rights-of-way

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

JUSTIFICATION: Construction of this project will primarily provide protection to lands and improvements within Orange County downstream of Prado Reservoir. A severe flood threat exists in this area, which could cause damages in excess of \$15 billion and could endanger and disrupt the lives of over three million people living or working in the floodplain. Damages upstream of Prado Reservoir could exceed \$450 million. The overflow area comprises 160 square miles of primarily urban development in 15 cities including San Bernardino, Riverside, Anaheim, Orange, Santa Ana, Fountain Valley, Costa Mesa, Huntington and Newport Beach. The greatest potential damage area is the Orange County floodplain below Prado Dam. The flood of 1938 is the largest that has been recorded since accurate stream gages were placed in the basin. With a peak flow at Riverside Narrows of approximately 100,000 cubic feet per second, the flood covered thousands of acres of then predominantly rural Orange County. Although the area was largely agricultural at the time, the flood caused \$4 million in damages (\$134 million at 2007 prices). Following this storm, Prado Dam was constructed at the head of the Santa Ana Canyon, providing effective control of floods for much of the downstream basin. In 1969, when communities upstream of Prado Dam suffered \$85 million in damages, Prado Dam prevented an estimated \$525 million in damages to downstream communities. With current development, damages for a similar flood would be approximately \$4.1 billion, at 2007 prices. Without the project, the level of protection downstream of Prado, primarily in Orange County, is approximately 70 years. With the project, the level of protection downstream of Prado would be increased to 190 years.

Average annual benefits are as follows:

Annual Benefits	Amount
Flood Damage Prevention	\$ 231,801,000
Recreation	282,000
 Total	 \$ 232,083,000

FISCAL YEAR 2008: Funds are being used to continue construction for the Prado Dam Embankment and Outlet works and the Seven Oaks Dam water quality study.

FISCAL YEAR 2009: The requested amount will be used to complete construction for the Prado Dam Embankment and Outlet works.

Embankment & Outlet contract	6,000,000
Planning, Engineering & Design	1,100,000
Construction Management	1,000,000
 Total	 \$ 8,100,000

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

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

	Payments During Construction And Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation and Replacement Costs
Requirements of Local Cooperation and Project Cooperation		
Santa Ana River Mainstem: Provide lands, easements, rights-of-way, and borrow, excavated or dredged material disposal areas.	\$ 156,900,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	160,000,000	
Pay 5 percent cash of the costs allocated to flood control to bring the total non-Federal share of flood control costs to 31 percent, and bear all cost of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	62,000,000	\$ 2,194,000
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	1,000,000	6,000
Reimburse 100 percent of the Federal funds, loaned to the sponsor, within a period of 30 years following the completion of the project, in accordance with section 103 (k) of the Water Resources Development Act of 1986.	6,000,000	
Prado Dam: Provide lands, easements, rights-of-way, and borrow, excavated or dredged material disposal areas.	328,000,000	
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	16,000,000	
Pay 5 percent cash of the costs allocated to flood control to bring the total non-Federal Share of flood control costs to 50 percent, and bear all costs of operation, maintenance, Repair, rehabilitation and replacement of flood control facilities.	32,000,000	200,000
Estimated reimbursement to local sponsor for LERRDS in excess of 45 percent of total project costs for flood control, subject to availability of funds.	(62,000,000)	

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

Total Non-Federal Costs	\$ 699,900,000	\$ 2,400,000
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The non-Federal sponsors have also agreed to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: Orange, San Bernardino, and Riverside Counties are the local sponsors. In accordance with Memorandum of Agreement executed on 6 December 1987, Orange County contributed \$3 million to assure the project design schedule was maintained. Orange County has received credit for those funds towards their share of the project costs during construction. In addition, Orange County worked with California Department of Transportation (CALTRANS) to relocate some key bridges in Fiscal Year 1988, in advance of project construction. On 14 December 1989, the Local Cooperation Agreement was executed in compliance with the requirements of the Water Resources Development Act of 1986. A supplemental Local Cooperation Agreement was executed on 1 July 1994 for San Timoteo Creek. A draft Local Cost Sharing Agreement for recreation on Santiago Creek has been reviewed and approved by the local sponsor, Orange County, and the Orange County Department of Harbors, Beaches and Parks. Schedules for executing a Project Cooperation Agreement and programming this work are being determined. On 30 June 1997, the Assistant Secretary of the Army (Civil Works) approved Prado Dam as a separable element. On 30 June 1997, direction was given by the Assistant Secretary of the Army (Civil Works) to proceed in accordance with Section 309 (Water Resources Development Act of 1996) to modify the existing Local Cost Sharing Agreement to reflect this determination and the non-Federal cost-sharing be modified in accordance with section 103(a) (3) of Water Resources Development Act of 1996. A Project Cooperation Agreement for Prado Dam was executed in February 2003.

The current non-Federal cost estimate of \$699,900,000, which includes a cash contribution of \$94,000,000, is an increase of \$171,900,000 from the non-Federal cost estimate of \$528,000,000 noted in the current amended Local Cooperation Agreement dated February 2003, which included a cash contribution of \$59,306,000. Analysis of the non-Federal sponsors' financial capability to participate in the project affirms that Riverside and San Bernardino Counties still have a reasonable plan for meeting their financial commitments. On 30 June 1997, the Assistant Secretary of the Army (Civil Works) approved Prado Dam as a separable element. On 30 June 1997, direction was given by the Assistant Secretary of the Army (Civil Works) to proceed in accordance with Section 309 (Water Resources Development Act of 1996) to modify the existing Local Cost Sharing Agreement to reflect this determination and the non-Federal cost-sharing be modified in accordance with section 103(a) (3) of Water Resources Development Act of 1996. Construction of this project will primarily provide protection to lands and improvements within Orange County downstream of Prado Reservoir.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$1,169,800,000 is an increase of \$3,800,000 from the latest estimate (\$1,166,000,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Post Contract Awards and other adjustments (including contingency adjustments)	\$3,800,000
Total	\$3,800,000

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Environmental Protection Agency in June 1989. The Records of Decision (ROD) for Prado Dam and San Timoteo Creek Reach 3B were executed in January 2002.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1979, and funds to initiate construction were appropriated in FY 1990.

An agreement with Fish and Wildlife Service on Section 7 consultations for endangered species (Eriastrum below Seven Oaks and Least Bell's Vireo at Prado Dam) was reached on the number of acres for mitigation. The final biological opinion necessary for formal conclusion of the consultation was received from Fish and Wildlife Service 22 June 1989.

Coordination with the U.S. Fish and Wildlife Service and the California Department of Fish and Game was initiated early in the planning of alternatives and completed 30 March 1989, which produced a Fish and Wildlife Service Coordination Act Report that was included in the Environmental Impact Statement. These agencies had a role in the determination of project associated impacts as well as mitigation needs and opportunities. Estimated fish and wildlife mitigation costs for Seven Oaks Dam are \$1,362,000 (\$1,266,000 Federal and \$96,000 non-Federal), for San Timoteo are \$2,743,000 (\$2,725,000 Federal and \$18,000 non-Federal) and for Lower Santa Ana are \$6,713,000 (\$6,537,000 Federal and \$176,000 non-Federal.)

An agreement was signed on 21 September 1989, in accordance with Section 215 of the Flood Control Act of 1968, to permit Orange County to undertake early partial construction of the Santiago Creek improvements in conjunction with other improvements they are planning for water supply, and to be credited for applicable project construction.

Section 104 of the Energy and Water Development Appropriation Act of 1988 authorized "...San Timoteo Creek in the vicinity of Loma Linda for construction as part of the Santa Ana River Mainstem including Santiago Creek Project... the benefits and costs of the San Timoteo project shall be included together with the benefits and costs of the Santa Ana Mainstem including Santiago Creek. The total costs for the Santa Ana Mainstem, including Santiago Creek, is to be raised by \$25,000,000." A special report was approved in May 1994; engineering and design was initiated in Fiscal Year 1991 with funds appropriated for that purpose. Construction was initiated in August 1994 with funds specifically identified in Act Language through 2006 for a total of \$78,400,000.

As a result of local sponsor activities to develop a more environmentally sensitive design for Reach 3, such as a soft-bottom channel, the remainder of the project has been redesigned as Reach 3A (extending to just upstream of Barton Road) and Reach 3B (the remainder of the channel and the in-channel debris control structures). The non-Federal Sponsor has agreed to continue with Reach 3A as per the original design.

Division: South Pacific

District: Los Angeles
4 February 2008

Santa Ana River Mainstem, California

The Corps with the local Sponsor developed an alternative plan for Reach 3B. Construction of the alternative plan for Reach 3B has been completed.

Section 103 (k) of Water Resources Development Act of 1986, authorized reimbursement with interest over time by the non-Federal sponsor over a period of not more than thirty years from the date of completion of the project. A supplemental local cooperation agreement concerning the San Timoteo Creek feature was approved in April 2001 and a total of \$6,000,000 has been loaned to date.

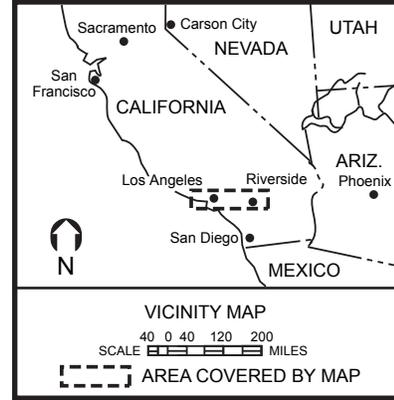
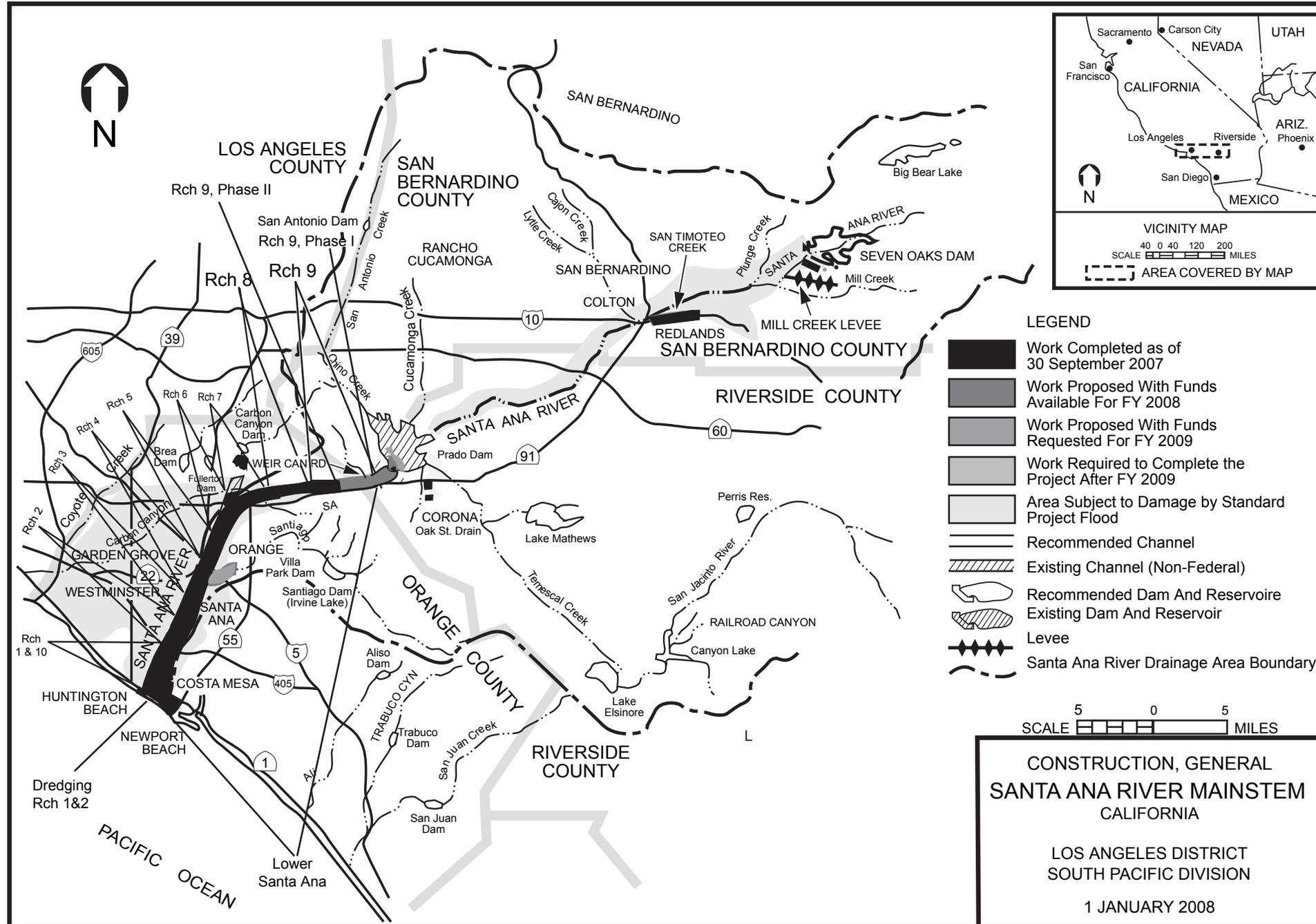
The project was modified by the Water Resources Development Act of 1990, which authorized the Secretary to develop recreational trails and facilities on lands between Seven Oaks Dam and Prado Dam, including flood plain management areas. These features are not included in the current estimate pending development of plans and determination of costs.

The project was modified by the Water Resources Development Act of 1996, which authorized the Secretary in coordination with the State of California, to provide technical assistance to Orange County, California, in developing appropriate public safety and access improvements associated with a portion of California State Route 71, which has been relocated for the Prado Dam project.

OTHER INFORMATION (Continued)

Total Lands, Easements, Rights of Ways, Relocations and Disposals (LERRD) for the Prado Dam project being estimated above 45 percent of the total project cost for flood control. Upon completion of the project and final accounting, the government, subject to availability of funds, shall reimburse the Non-Federal sponsor for any such value in excess of 45 percent of total project costs to bring the ultimate cost sharing to 50 percent Federal and 50 percent Non-Federal for the Prado Dam Project.

The full operation of Prado Dam at the designed release flow of 30,000 cubic feet per second will be contingent upon completing the relocation of the Santa Ana River Interceptor Line (SARI) and the lower river channel. Congressional language in the Water Resources Development Act of 2007 increased the total project cost to \$1,800,000,000 and included the SARI line as an authorized element of the project. The new authority increased the 902 maximum authorized total project cost sufficiently to cover the SARI line cost estimate of \$100,000,000 (100% non-federal).



LEGEND

- Work Completed as of 30 September 2007
- Work Proposed With Funds Available For FY 2008
- Work Proposed With Funds Requested For FY 2009
- Work Required to Complete the Project After FY 2009
- Area Subject to Damage by Standard Project Flood
- Recommended Channel
- Existing Channel (Non-Federal)
- Recommended Dam And Reservoir
- Existing Dam And Reservoir
- Levee
- Santa Ana River Drainage Area Boundary



CONSTRUCTION, GENERAL
 SANTA ANA RIVER MAINSTEM
 CALIFORNIA

LOS ANGELES DISTRICT
 SOUTH PACIFIC DIVISION

1 JANUARY 2008

APPROPRIATION TITLE: Construction - Local Protection (Flood Control)

PROJECT: South Sacramento County Streams, California (Continuing)

LOCATION: The South Sacramento County Streams drainage basin lies south and east of the city of Sacramento. Most of the basin is situated in the Sacramento Valley. The eastern-most parts of the basin are in the lower foothills of the Sierra Nevada. A portion of the basin lies within the Sacramento city limits, south of the city center.

DESCRIPTION: The selected plan would include the following principal flood control features: raising and extending the ring levee around the Sacramento Regional Water Treatment Plant (SRWTP); raising the Beach Stone Lakes and Morrison Creek levees; installing floodwalls (using sheet pile) on Morrison Creek, Elder Creek, Florin Creek and Unionhouse Creek, and retrofitting bridges to lower risk of failure due to flooding. Recreation features include a bicycle and pedestrian trail. Restoration of ecosystem at five sites would increase water quality to open water environments and enhance and expand wetlands, riparian vegetation, grasslands, and woodlands.

AUTHORIZATION: Water Resources Development Act of 1999

REMAINING BENEFIT-REMAINING COST RATIO: 4.22 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 5.19 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 3.9 to 1 at 6 5/8 percent (FY2002)

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation contained in the limited Reevaluation Report dated December 2004 (October 2003 price level)

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$61,100,000	Entire Project	30	2012
Estimated Non-Federal Cost	\$33,400,000			
Cash Contribution	\$20,766,000			
Other Costs	5,441,000			
Section 104 Credit	7,193,000			
Total Estimated Project Cost	\$94,500,000			

Division: South Pacific

District: Sacramento
4 February 2008

South Sacramento County
Streams, California

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST	PHYSICAL DATA
Allocations to 30 September 2005	\$ 7,282,800		
Allocations for FY 2006	10,812,000		
Allocations for FY 2007	13,500,000		Beach Stone Lakes
Conference Allowance for FY 2008	10,298,000		Floodwalls: .4 mile
Allocation for FY 2008	10,298,000		Levee Raising: 4.0 miles
Allocations through FY 2008	41,892,800	69	New Levee: 1.3 miles
Allocation Requested for FY 2009	12,000,000	88	Levee improvement: 2.0 miles
Programmed Balance to Complete After FY 2009	\$ 7,207,200		Morrison Creek
			Levee raising: .6 miles
			Levee improvement: 3.8 miles
			Floodwalls: 3.8 miles
			Florin Creek
			Floodwalls: 3.8 miles
			Elder Creek
			Levee improvement: 1.0 miles
			Floodwalls: 2.6 miles
			Unionhouse Creek
			Levee improvement: .9 miles
			Floodwalls: 2.0 miles
			Bridge Retrofits
			Ecosystem Restoration: 266 acres of emergent wetlands, riparian woodland, oak savannah woodland, and perennial grasslands.
			Recreation features: 4.5 mile paved bicycle and pedestrian trail with signs, fencing, and benches.

JUSTIFICATION: Significant portions of the area were flooded in 1952, 1955, 1962, 1963, 1967, 1969, 1973, 1982, 1986, 1995, and 1997. In January 1995, the most intense rainfall recorded in the watershed resulted in record flows on Morrison Creek, resulting in flows near or exceeding the 1 in 100 annual event. Levee failure along Morrison, Unionhouse, Elder, and Florin Creeks and the SRWTP and Beach Stone Lakes levees could result in flooding of more than 14,000 acres. Approximately 41,000 structures are within the 500-year floodplain with an estimated value of \$5.6 billion. Significant development has occurred in the upper basin,

Division: South Pacific

District: Sacramento
4 February 2008

South Sacramento County
Streams, California

JUSTIFICATION (Continued)

in the Elk Grove area, which is increasing the runoff and potential for flooding. The population of the area is over 100,000 and flooding could result in loss of lives, mainly by drowning from rapid inundation in some areas of the flood plain. Once the floodwaters recede, there would be other impacts on public health and safety. The levees along Morrison Creek and tributaries provide less than a 100-year level of flood protection. The selected plan, known as the Consistent High Protection Plan, would provide a high level of protection (1 in 500 annual event) to all index areas, including Morrison, Elder, Florin and Unionhouse Creeks and to the Beach Stone Lakes and SRWTP levees. A 1 in 100 annual event would result in nearly \$715 million in damages (existing conditions) and more than \$2 billion in damages for a 1 in 500 annual event.

The average annual benefits at October 2003 price levels are as follows:

Annual Benefits	Amount
Flood Control	\$23,600,000
Recreation	141,000
Environmental Restoration	0 1/
Total	\$23,741,000

1/ Ecosystem restoration benefits are not measured in dollars.

FISCAL YEAR 2008: Current year funds will be applied as follows:

Award Option to Construction Contract 1B2	\$ 7,150,000
Engineering and Design During Construction	2,648,000
Construction Management	500,000
Total	\$10,298,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Award Construction Contract 2A	\$9,000,000
Engineering and Design During Construction	1,750,000
Construction Management	1,250,000
Total	\$12,000,000

Division: South Pacific

District: Sacramento
4 February 2008

South Sacramento County
Streams, California

NON-FEDERAL COSTS: In accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, as amended by Section 202(a) of the Water Resources Development Act of 1996, the non-Federal sponsor must comply with the requirements listed below.

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and borrow and excavated or dredged material disposal areas.	\$ 4,270,000	\$
Modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	1,171,000	
Receive credit for prior work accomplished IAW section 104 of WRDAS 86	7,193,000	
Pay 21 percent of the costs allocated to flood control and environmental restoration to bring the total non-Federal share of flood control and environmental restoration costs to 35% and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of flood control and environmental restoration facilities.	19,926,000	413,000
Pay one-half of the separable costs allocated to recreation and bear all costs of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	840,000	42,000
Total Non-Federal Costs	\$ 33,400,000	\$ 455,000

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

Division: South Pacific

District: Sacramento
4 February 2008

South Sacramento County
Streams, California

STATUS OF LOCAL COOPERATION: The State of California Reclamation Board, in conjunction with the Sacramento Area Flood Control Agency (SAFCA), will act as the non-Federal sponsor for the flood control features of the project. The current non-Federal cost estimate of \$33,400,000 includes a cash contribution of \$20,766,000. As provided in Section 104 of the Water Resources Development Act of 1986 (PL 99-662), SAFCA applied for credit against their share of the design and construction cost of the project for work carried out after the reconnaissance phase consistent with the ultimately authorized plan. On September 12, 1996, the Assistant Secretary of the Army (Civil Works) approved potential credit for SAFCA, estimated at \$7.1 million. The Section 104 credit amount approved by ASA (CW) in Jan 2006 was \$7,193,252. On January 15, 1998, SAFCA passed a resolution adopting the Consistent High Protection Plan as the locally preferred plan and indicated their intent to participate as the non-Federal sponsor. This plan would provide a consistent level of protection throughout the study area. SAFCA, along with the State of California Reclamation Board, has established a fund to mitigate project-related hydraulic impacts downstream in the Beach Stone Lakes and Point Pleasant areas. This fund would be approximately \$2 million and be borne 100 percent by the non-Federal sponsor.

The Project Cooperation Agreement (PCA) for environmental restoration was signed 18 September 2003 and the PCA for flood control was signed 20 May 2005. The sponsor has a reasonable plan for implementation to meet its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$61,100,000 reflects an increase of \$1,600,000 from the latest estimate (\$59,500,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	\$1,600,000
Total	\$1,600,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement/Environmental Impact Report was filed with EPA on 15 May 1998. A finding of No Significant Impact regarding the revised design was signed 16 December 2004.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in FY 1998 and funds to initiate construction were appropriated in FY 2002. The initial construction contract (contract 1A) for the lower reaches of the project from the Union Pacific Railroad to the Sacramento River was awarded on June 14, 2005.

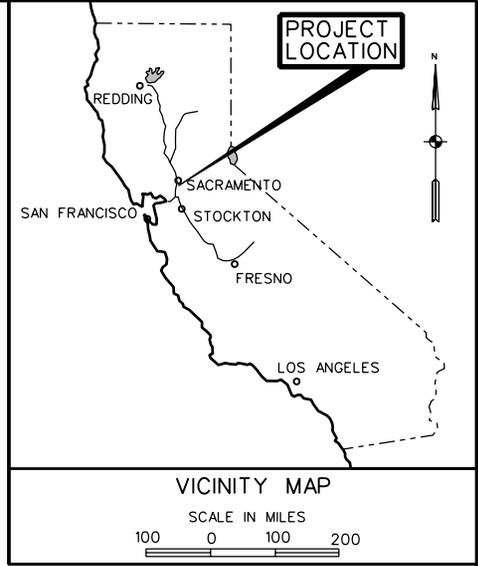
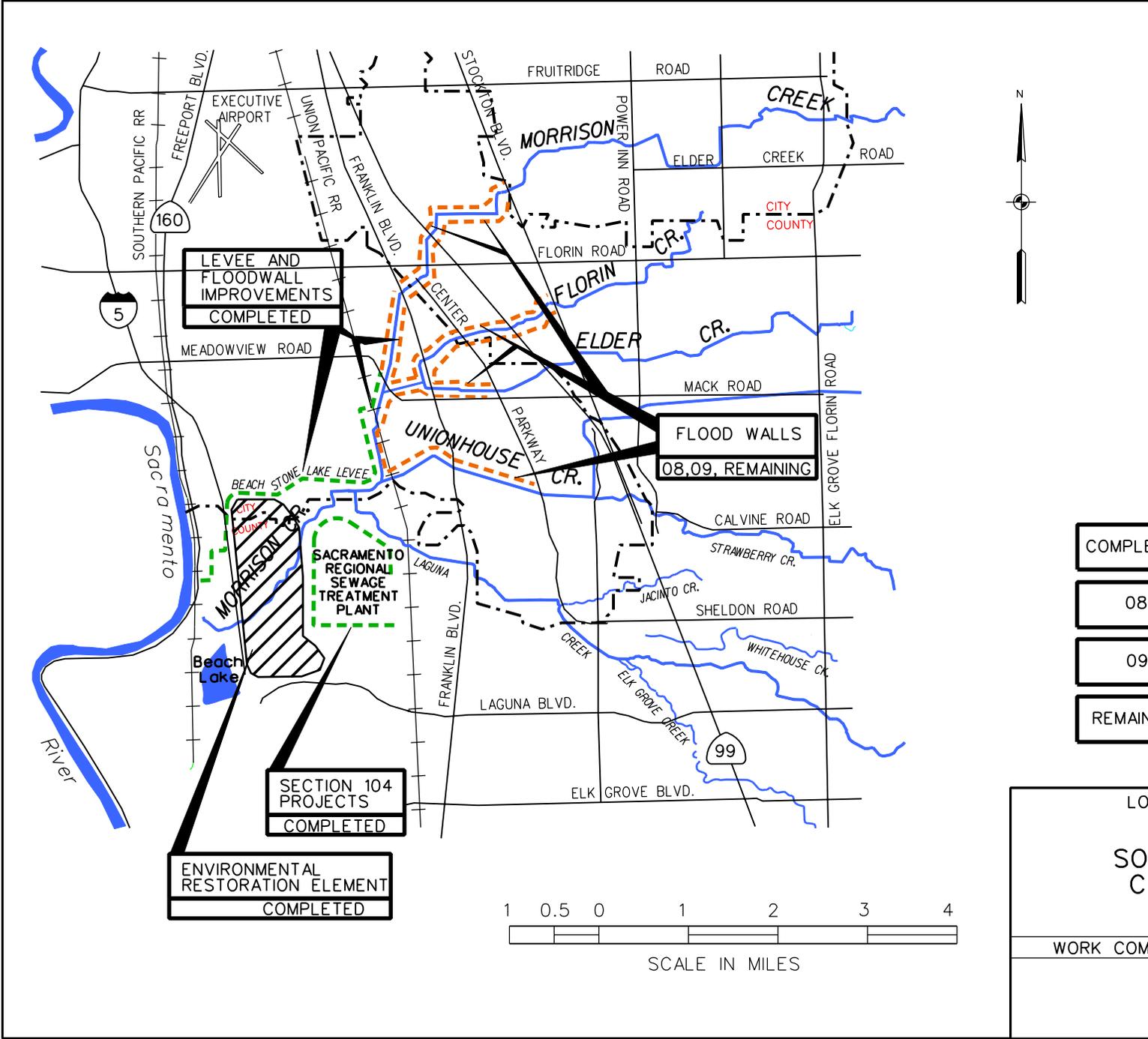
The restoration monitoring contract will continue through mid FY2008.

Fish and wildlife mitigation costs are currently estimated at \$1,497,000.

Division: South Pacific

District: Sacramento
4 February 2008

South Sacramento County
Streams, California



WORK STATUS

COMPLETED	WORK COMPLETED AS OF 30 SEPTEMBER 2007
08	WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
09	WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
REMAINING	WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

LOCAL PROTECTION PROJECTS
(FLOOD CONTROL)

SOUTH SACRAMENTO COUNTY STREAMS CALIFORNIA

WORK COMPLETED, IN PROGRESS & PROPOSED

SACRAMENTO DISTRICT
SOUTH PACIFIC DIVISION
1 JANUARY 2008

APPROPRIATION TITLE: Construction - Dam Safety Assurance

PROJECT: Success Dam and Reservoir, Tule River, California - Dam Safety Seismic Remediation (Dam Safety Assurance) (Continuing)

LOCATION: The project area is located in Tulare County within the 12,500 square-mile Tulare Lake Basin in the southeastern portion of the San Joaquin Valley about 60 miles north of the city of Bakersfield, California. The Tule River drains about 390 square miles into Success Lake and flows from the lake on to the valley through the city of Porterville, and continues another 25 miles through agricultural areas.

DESCRIPTION: A Dam Safety Assurance Program (DSAP) Evaluation Report recommends remedial treatment at Success Dam to prevent foundation liquefaction that could lead to a catastrophic failure of the dam.

AUTHORIZATION: Flood Control Act of 1944

REMAINING BENEFIT-REMAINING COST RATIO: N/A

TOTAL BENEFIT-COST RATIO: N/A

BASIS OF BENEFIT-COST RATIO: N/A

SUMMARIZED FINANCIAL DATA		STATUS (1 JAN 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirements (COE)	\$475,000,000	Entire Project	Not Started	2014
Future Non-Federal Reimbursement	6,800,000	PHYSICAL DATA		
Estimated Federal Cost (Ultimate)	468,200,000	Dam-earthfill		
Estimated Non-Federal Cost	6,800,000	Gated outlet conduit		
Cash Contribution	\$ 0	Uncontrolled spillway 200 feet wide		
Other Costs	0	Crest length 22.5 feet		
Reimbursements	6,800,000	Crest width 16.0 feet		
Total Estimated Project Cost	\$475,000,000			

SUMMARIZED FINANCIAL DATA (Continued)

ACCUM
PCT OF EST
FED COST

Allocations thru 30 September 2005	\$ 8,802,700	1/	
Allocation for FY 2006	7,920,000		
Allocation for FY 2007	20,000,000		
Conference Allowance for FY 2008	11,808,000		
Allocation for FY 2008	11,808,000		
Allocations through FY 2008	48,530,700		10
Allocation Requested for FY 2009	8,000,000		14
Programmed Balance to Complete after FY 2009	410,469,300	2/	

1/ Includes \$344,000 for PED funded under the Operations and Maintenance Appropriation.

2/ Non-federal sponsor has up to 50 years to repay their share of project costs, therefore appropriations for entire project cost must be programmed.

JUSTIFICATION: Success Dam and Reservoir is located on the Tule River about 5 miles east and upstream of the town of Porterville, Tulare County, California. Construction of the main dam and appurtenances was begun during October 1958. The project was certified complete and accepted by the Government for operation on 15 May 1961. The total first cost of the project is approximately \$14,247,000 (1961 dollars). The project lies within Seismic Zone 3 (major seismic hazard), and is operated and maintained under the jurisdiction of the US Army Corps of Engineers, Sacramento District. The main dam is a rolled earthfill structure with a maximum height of 142 feet and is 3,404 feet long.

A 1983 report, "Dynamic Analysis of Success Dam, Success Reservoir, Tule River, California" (US Army Corps of Engineers, Sacramento District, June 1983), concluded that Success Dam would perform adequately in the event of a Maximum Credible Earthquake as required by criteria in ER 1110-2-1806 (16 May 1983). During the review of the dynamic analysis report, it was noted that there was considerable uncertainty about the amount of actual deformation the dam would experience under seismic loading. However, the dam was deemed safe due to the available freeboard of 39 feet when the reservoir is at gross pool. In June 1992, a Technical Review Conference (TRC) reexamined the 1983 report and concluded that the 1983 study was representative of accepted engineering practices at the time of its completion. However, the TRC recognized that recent advances allowed better understanding of the alluvial soils present in the foundation of Success Dam and recommended further studies be performed to update the seismic evaluation.

These recent studies concluded that a Maximum Credible Earthquake would cause extensive loss of strength, slope instability, and deformation over a section of the Success Dam embankment. This damage may be sufficient to result in an uncontrollable loss of the reservoir pool through a breach in the embankment.

SUMMARIZED FINANCIAL DATA (Continued)

Similar damage levels may also result from lesser earthquake events. Any breach of the dam should be expected to result in loss of life and damages estimated at \$941 million (2004 prices).

The Lower Tule River Irrigation District has been identified as the primary non-Federal cost-sharing sponsor based on their conservation use of the project.

FISCAL YEAR 2008: Current year funds will be applied as follows:

Continue real estate appraisals	100,000
Planning, Engineering, and Design	11,708,000
Total	\$11,808,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Complete the DDR	\$500,000
Start and complete the 50% Plans and Specs	3,500,000
Start 90% Plans and Specs	600,000
Other Planning, Engineering, and Design	3,400,000
Total	\$8,000,000

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

	Payment During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Requirements of Local Cooperation		
Reimburse 15 percent of the costs of modification allocated to irrigation water supply (9.5% of total project cost) within a period of 30 years following completion of construction.	\$6,800,000	
Total Non-Federal Costs	\$6,800,000	

The non-Federal sponsor has agreed to reimburse its share of construction costs within a period of 30 years following completion of construction in accordance with Water Resources Development Act of 1986 and Public Law 98-404.

STATUS OF LOCAL COOPERATION: In accordance with the Water Resources Development Act of 1986 and Public Law 98-404 the sponsor is required to sign a Cost-Sharing Agreement with the Department of Interior prior to construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$475,000,000 is an increase of \$284,200,000 from the latest estimate (\$190,800,000) presented to Congress (FY 2008). The change includes the following item:

Item	Amount
Price Escalation on Construction Features	\$ 35,200,000
Design Changes	249,000,000
Total	\$284,200,000

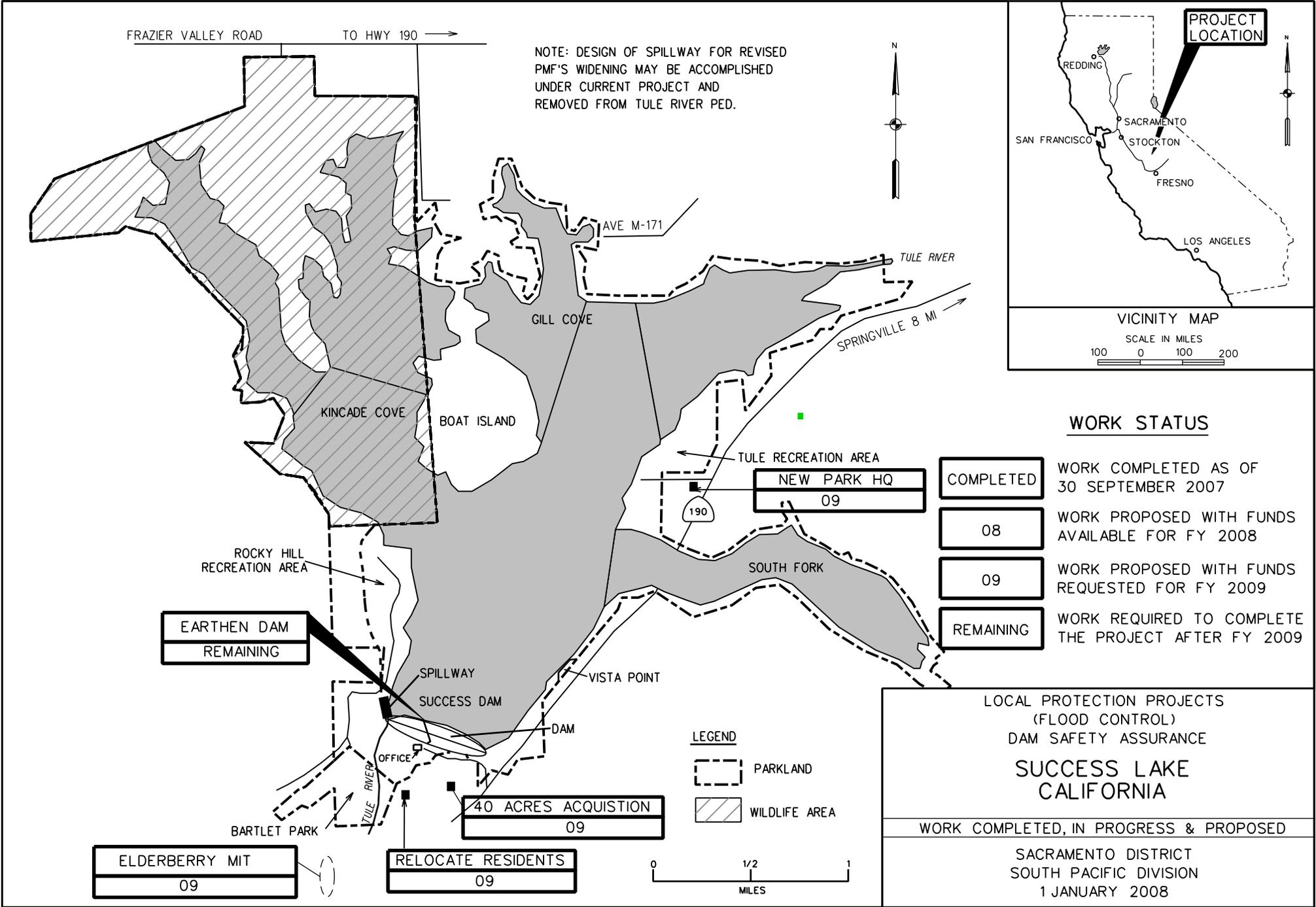
STATUS OF ENVIRONMENTAL IMPACT STATEMENT: A complete environmental assessment will be conducted prior to initiating remedial work.

OTHER INFORMATION: The Success Dam, Success Lake, Tule River, California Dam Safety Assurance Program Evaluation Report dated January 1999 was approved on 7 May 1999. Following approval of the report, preconstruction, engineering and design was initiated using Operations and Maintenance appropriation funding. Construction funds were initially appropriated in FY 2000.

In September 2004, a new roller compacted concrete dam (RCC) at the toe of the existing dam was chosen as the preferred alternative for remediation of Success Dam. A replacement dam was selected since removal of 75% of the existing dam would be necessary in order to expose and remove liquefiable material underlying the existing dam. Removal of the existing dam would result in the loss of flood protection and water storage to the downstream communities during the construction period.

In October 2005, foundation explorations conducted during the year indicated that subsurface conditions at the site would not support a concrete dam. Preliminary cost estimates indicate significant potential cost increases for the earthen dam alternative over the current project estimate. These additional costs result from increased environmental impacts, modifications to the existing outlet works, relocation of downstream residents, additional engineering costs, and the proximity and availability of borrow sites for the construction of the earthen dam.

In March 2007, total project costs were estimated based on the 50% Design Documentation Report. Those costs were estimated at \$471,500,000, which included construction mid-point escalation and OMB inflation costs. In July 2007, new deformation modeling results utilizing the URS and UBCSAND models determined a potential decrease in deformation at the toe and crest of the dam under an OBE event. These new results have the potential to scale back the project scope. Therefore, further examination of these models is warranted and will be completed, and a Letter Report submitted, by the end of October 2007. Continuing effort is dependent upon the approval of the Letter Report by Summer 2009, and the signing of the Record of Decision by Fall 2009.



NAVIGATION

CONSTRUCTION

APPROPRIATION TITLE: Construction - Channels and Harbors (Navigation)

PROJECT: Oakland Harbor, California (50-ft) (Continuing)

LOCATION: Oakland Harbor is located in the city of Oakland, California, on the eastern shore of central San Francisco Bay immediately south of the San Francisco-Oakland Bay Bridge.

DESCRIPTION: The project consists of deepening the 4 mile Inner Harbor and 3.4 mile Outer Harbor channels, including the respective turning basins, to 50 feet; widening of channels at various locations; and widening of the Inner and Outer turning basins. Approximately 12.8 million cubic yards of excavated dredged material will require disposal. The middle harbor enhancement area (MHEA) will use about 7 million cubic yards to create 190 acres of shallow water and sub-tidal habitat in an area no longer needed for navigation purposes; approximately 2.6 million cubic yards would be placed at the former Hamilton Army Airfield in Novato, California, as part of a separately authorized tidal wetlands restoration project; approximately 2.9 million cubic yards would be disposed at the existing Montezuma Wetlands Restoration Project (MWRP) in the northeast portion of Suisun Bay, and approximately 0.3 million cubic yards would be transported to the Vision 2000 upland site in the inner harbor. Previously authorized deepening of the 4 mile Inner Harbor and 3.4 mile Outer Harbor to 42 feet deep was completed in July 1998.

AUTHORIZATION: Water Resources Development Act of 1999.

REMAINING BENEFIT - REMAINING COST RATIO: 5.1 to 1.0 @ 7 percent.

TOTAL BENEFIT - COST RATIO: 7.9 to 1.0 @ 7 percent.

INITIAL BENEFIT - COST RATIO: 8.1 to 1.0 @ 7 percent.

BASIS OF BENEFIT - COST RATIO: Benefits are from the latest available evaluation included in the Chief of Engineer's report approved in April 1999 at 1998 prices.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Appropriation Requirement (COE)	\$237,862,000		Entire Project	65	To be determined
Estimated Appropriation Requirement (USCG)	300,000				
Estimated Total Appropriation Requirement	238,162,000				
Future Non-Federal Reimbursement	13,364,000				
Estimated Federal Cost (Ultimate)	224,798,000				
Estimated Non-Federal Cost	\$183,288,000				
Cash Contribution	\$83,165,000				
Other Costs	86,759,000				
Reimbursements	13,364,000				
Total Estimated Project Cost	\$421,450,000				
Allocation to 30 September 2005	64,178,000				
Allocation for FY 2006	49,370,000				
Allocation for FY 2007	50,000,000				
Conference Allowance for FY 2008	41,328,000 *				
Allocation for FY 2008	41,328,000 *				
Allocation through FY 2008	204,876,000	86			
Allocation Requested for FY 2009	25,092,000	97			
Programmed Balance to Complete after FY 2009	7,894,000				
Unprogrammed Balance to Complete after FY 2009	0				

PHYSICAL DATA

Channels: Deepen the 4 mile Inner Harbor and 3.4 mile Outer Harbor channels to 50 feet; Widen various locations.

Turning Basins: Widen Inner and Outer Basins and deepen to 50 feet.

Habitat: Create 190 acres of shallow water and sub-tidal habitat.

* Includes rescission.

JUSTIFICATION: The Port of Oakland services about 85 percent of all general cargo moving through the Golden Gate, 95 percent of which is containerized. The existing Federal navigation channel serving Oakland Harbor is inadequate for efficient shipping operations and vessel safety as a result of increased vessel traffic and large containerships. Cargo movement by larger vessels is hampered by the need to load to less than full capacity and to wait for high tides to avoid grounding hazards. Annual tonnage handled by the Port amounted to approximately 30 million tons in 2005. The Port terminals are considered to be state-of-the-art. The plan of improvement will provide for further development of the harbors to accommodate the new generation of containerships, improve safety of vessel traffic and provide maximum efficiency of Port operations. The majority of ships presently using the Port have design drafts greater than 35 feet. Sixth generation vessels are now coming on line with drafts of 46 feet or greater (up to 48 feet at the present time). The deep draft fifth and sixth generation container ships experience tidal delays, with the result being that many of the shipping lines either bring those ships into Oakland only partially loaded or choose to bypass Oakland altogether. Limited deepening of the Inner Harbor portion of the project to -38 feet was completed in December 1992 and deepening of the Inner and Outer Harbors to -42 feet was completed in July 1998. Vessels may now depart the Port with some additional cargo, but must still arrive light-loaded. The remainder of the project is needed to allow safe and efficient utilization of the Port. Average annual benefits, all commercial navigation, are estimated at \$175,122,000 based on 2005 prices. Depths of 50 feet are required for users to efficiently call at the Port of Oakland presently and in the future.

FISCAL YEAR 2008: Current year funds will be used to:

Continue Dredging Phase 3E	\$38,328,000
Planning, Engineering and Design	500,000
Construction Management	2,500,000
Total	\$41,328,000

FISCAL YEAR 2009: The requested amount of \$25,092,000 will be applied as follows:

Complete Phase 3E	23,092,000
Planning, Engineering and Design	500,000
Construction Management	1,500,000
Total	\$25,092,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and dredged material disposal areas.	\$16,198,000	N/A
Modify or relocate utilities, roads, bridges (except railroad bridges) and other facilities, where necessary for the construction of the project.	10,000,000	N/A
In-Kind Credit for 50% of Section 203 expenditures for Feasibility Study and Project Coordination Team to be reimbursed during construction as detailed In Water Resources Development Act of 1986.	10,127,000	
Pay 25 percent of the costs allocated to general navigation features for deepening to 45 feet, and 50 percent of the costs allocated to general navigation features for deepening greater than 45 feet during construction, and pay 50 percent of the costs of incremental maintenance below 45 feet below mean low water.	65,607,000	\$694,000
Pay 25 percent of the costs for beneficial use of dredged material in accordance with Section 204 of the Water Resources Development Act of 1992.	28,759,000	N/A
Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 years following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights-of-way, relocations, and dredged material disposal areas provided for commercial navigation.	3,237,000	N/A

Division: South Pacific

District: San Francisco
7 August 2007

Oakland Harbor, California (50-ft)

Pay 100% of the costs for local service facilities and berthing facilities.	49,360,000	N/A
Total Non-Federal Costs	\$183,288,000	\$694,000

Requirements of Local Cooperation (Continued)

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

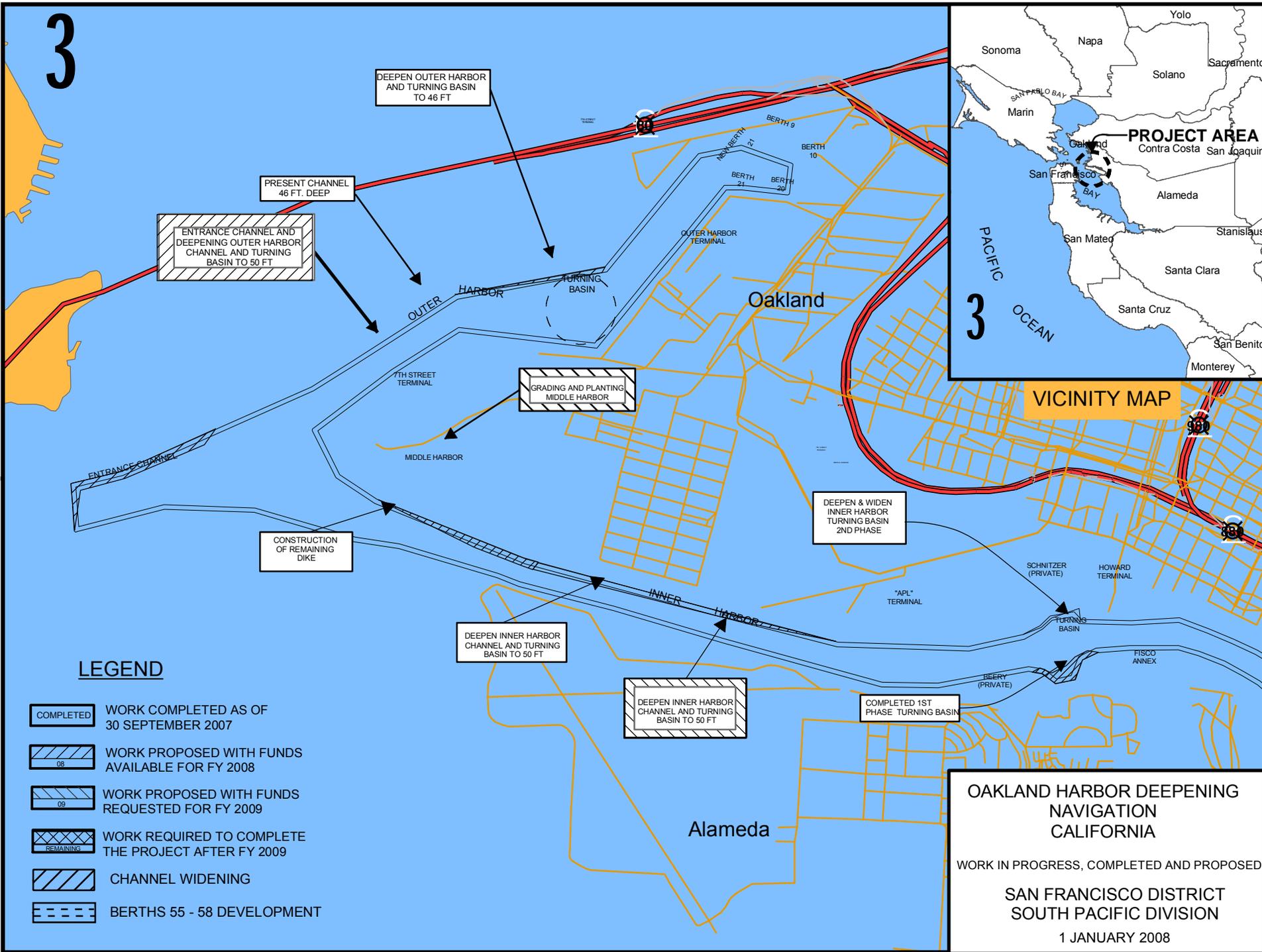
STATUS OF LOCAL COOPERATION: The non-Federal sponsor, the Port of Oakland, contributed full funding for the feasibility study of the 50 feet deepening of the Inner and Outer Harbor, under the authority of Section 203 of the Water Resources Development Act of 1986. The design agreement was executed on 24 March 1999. The Project Cooperation Agreement was executed on 24 May 2001. The current non-Federal cost estimate of \$183,288,000 which includes a cash contribution of \$83,165,000 is approximately \$50,963,000 more than the amount reflected in the Project Cooperation Agreement. The non-Federal sponsor has indicated it is financially capable and willing to contribute to the non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$224,798,000 is an increase of \$4,083,000 from the latest estimate presented to Congress (FY 2008). This change includes the following items:

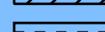
Item	Amount
Contract Award and Other Estimating Adjustments (including contingency and cost share adjustments)	\$4,083,000
Total	\$4,083,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with EPA in May 1998.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1999. Funds to initiate construction were appropriated in Fiscal Year 2001. The initial construction contract was awarded on 27 September 2001. The Oakland Harbor PCA amendment package for acceptance of additional local funds was executed February 2005. The local sponsor has contributed additional funds to the project in FY 2006 to maintain the schedule. Due to the increase in project cost, all project features will not complete as originally forecasted in FY09; however, the navigation channel will complete in FY09. The remaining maintenance and monitoring of the Middle Harbor Habitat will continue until 2016.



LEGEND

-  **COMPLETED** WORK COMPLETED AS OF 30 SEPTEMBER 2007
-  **08** WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
-  **09** WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
-  **REMAINING** WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009
-  CHANNEL WIDENING
-  BERTHS 55 - 58 DEVELOPMENT

OAKLAND HARBOR DEEPEENING NAVIGATION CALIFORNIA

WORK IN PROGRESS, COMPLETED AND PROPOSED

SAN FRANCISCO DISTRICT SOUTH PACIFIC DIVISION

1 JANUARY 2008

APPROPRIATION TITLE: Construction - Channels and Harbors (Navigation)

PROJECT: Sacramento River Deep Water Ship Channel, California (Continuing)

LOCATION: The project is located on the Sacramento River between Collinsville and the Port of Sacramento, a distance of about 43 miles, in the counties of Sacramento Contra Costa, Solano, and Yolo, California.

DESCRIPTION: The project was authorized in 1989 to deepen the existing 30 feet Sacramento River from N.Y. Slough to the Port of Sacramento, a distance of about 43 miles, to 35 feet. Project provides for establishment of wetland habitat and upland habitat to mitigate losses. Construction was initiated in 1989, but stopped at the sponsor's request in 1990. Renewed interest by the Port of Sacramento initiated the Limited Reevaluation Report (LRR) in 2002, and their recent partnership with the Port of Oakland supports the early completion of the LRR and the construction of the deeper channel.

AUTHORIZATION: Supplemental Appropriations Act of 1985; Water Resources Development Acts of 1986, 2000, and 2007.

REMAINING BENEFIT - REMAINING COST RATIO: 11.26 @ 7 percent

TOTAL BENEFIT - COST RATIO: 8.35 @ 7 percent

INITIAL BENEFIT-COST RATIO: 2.5 to 1 @ 8 1/8 percent

BASIS OF BENEFIT - COST RATIO: Benefits are from the latest available evaluation in the General Design Memorandum, March 1986, approved in May 1987 at 1 Oct 1985 price levels. A Limited Reevaluation Report (LRR) is currently underway to verify the economic and environmental feasibility of continuing the authorized and partially constructed deepening project.

Division: South Pacific

District: San Francisco

Sacramento River Deep Water Ship Channel, California

COMPLETION SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost (COE)	\$ 27,980,000		Entire Project	16	To be determined
Estimated Federal Cost (USCG)	300,000				
Estimated Total Appropriation Requirement	28,280,000				
Estimated Federal Cost (Ultimate)	27,980,000				
Estimated Non-Federal Cost	\$ 29,060,000				
Cash Contribution	\$ 9,330,000				
Other Costs	19,730,000				
Total Estimated Project Cost	\$57,340,000				
Allocations to 30 September 2005	9,304,000				
Allocation for FY 2006	0				
Allocation for FY 2007	0				
Conference Allowance for FY 2008	816,000				
Allocation for FY 2008	816,000				
Allocation through FY 2008	10,116,000	36			
Allocation Requested for FY 2009	900,000	40			
Programmed Balance to Complete after FY 2009	16,964,000				
Unprogrammed Balance to Complete after FY 2009	0				

PHYSICAL DATA

Channels:

Deepen existing 30 feet Sacramento River from N.Y. Slough to the Port of Sacramento, a distance of about 43 miles, to 35 feet.

Fish and Wildlife Areas:

Deposit dredged material at Prospect Island to aid in development of wetland and upland habitat for fish and wildlife mitigation and enhancement purposes

Division: South Pacific

District: San Francisco

Sacramento River Deep Water Ship Channel, California

JUSTIFICATION: Inadequate channel depths and widths produce serious detriments to deep-draft commercial vessel traffic. Since the existing channel was completed in 1963, tonnages have increased as a result of increased productivity of the agricultural industry in the northern and central portions of California, increased exports of forest products from this region, and increased foreign demand for agricultural products. Imports, including nitrogenous fertilizers, bulk commodities, and general cargo have also increased during this period. In addition, the channel has provided deepwater access for industries in the service area. New shipping techniques and modern terminal development have been necessary to accommodate this increased commerce. New or prospective trade policies point to the expansion of United States trade opportunities. This trade is significant to the Port of Sacramento since the Port's service area produces large quantities of rice, other grains, wood chips, and other dry bulk products required in the economy along the Pacific Rim, In 1992, 1,360,000 tons of commodities moved through the Port of Sacramento. With the increase in the shipping industry, vessel sizes have also increased accordingly. Currently these larger vessels must carry only a partial load going to or from the Port of Sacramento because of the channel depth restriction (only 20% of the world's fleet can currently load to full design draft.) To remain competitive with other western ports, the channel deepening is vital to the Port of Sacramento. Once deepened, the Port will be able to accommodate 70% of the world's fleet at full design draft. Average annual benefits at 1 October 1985 price level are \$10,620,000, all navigation.

FISCAL YEAR 2008: The request will be applied as follows:

Planning, Engineering and Design	816,000
Total	\$ 816,000

FISCAL YEAR 2009: The requested amount will be applied as follows:

Planning, Engineering and Design	900,000
Total	\$900,000

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

Requirements of Local Cooperation	Payments During Construction And Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and dredged material disposal areas.	\$ 10,365,000	N/A
Modify or relocate utilities, roads, bridges (except railroad bridges) and other facilities, where necessary for the construction of the project.	9,365,000	N/A
Pay 25 percent of the costs allocated to general navigation facilities during construction and pay 50 percent of the costs of incremental maintenance below 45 feet below mean low water.	9,330,000	
Total Non-Federal Costs	\$ 29,060,000	N/A

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

STATUS OF LOCAL COOPERATION: The authorized project, to deepen the existing channel from a depth of 30- to 35-feet, was initiated in 1989 but work was suspended in 1990 at the request of the sponsor, the Port of Sacramento, due to their inability to continue financing their share of project costs. In 1998 Congress directed the Corps to perform a re-evaluation of the project that would serve as the basis for possible recommendation to resume construction. This re-evaluation was initiated in 2002; however, in 2005 the Port requested that the study be suspended until they could solidify their financial situation. Recently, the Port of Oakland has agreed to expand their operational model and help operate the Port of Sacramento. Both Ports fully support the deepening study, considered critical to the continued existence of the Port and vital to ensuring the safe navigation within the channel.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal estimate of \$27,980,000 is the same as last presented to Congress (FY 2008).

Division: South Pacific

District: San Francisco

Sacramento River Deep Water Ship Channel, California

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement was filed on 8 May 1981; the Supplemental Environmental Impact Statement was filed on 2 January 1987. An Environmental Assessment addressing the environmental impacts of changes in design due to deleting portions of planned widening was completed 1 May 1988, and a Finding of No Significant Impact was signed 1 August 1988.

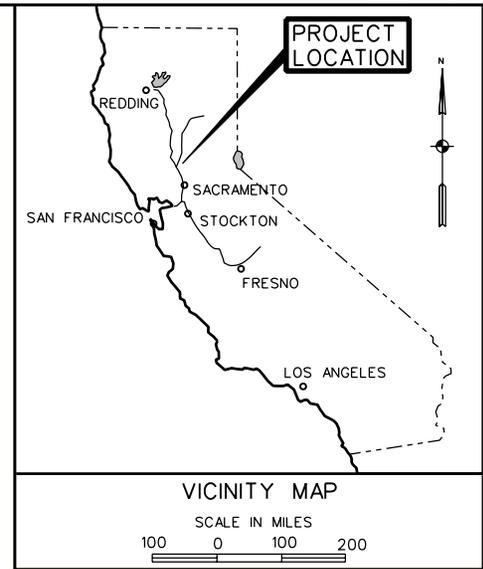
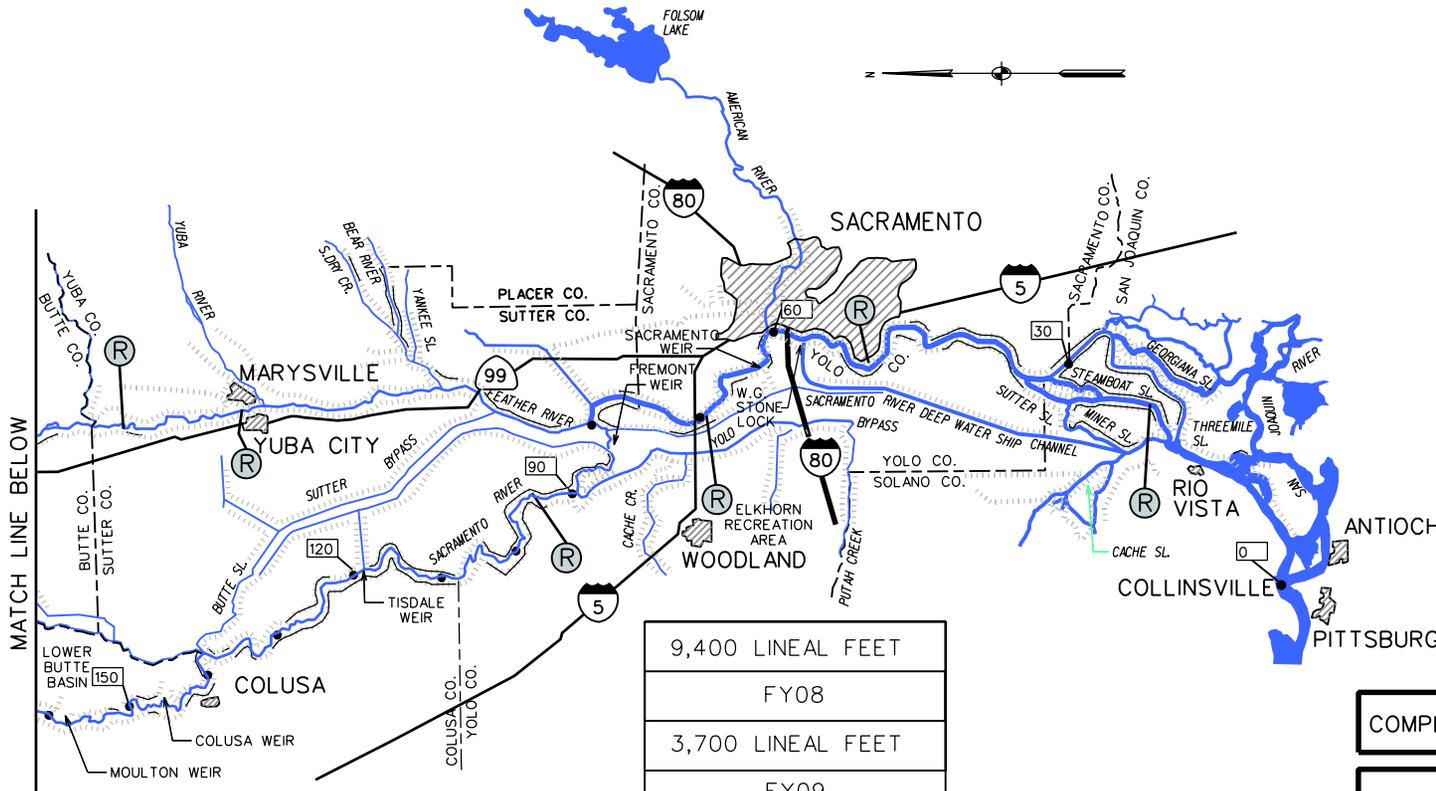
OTHER INFORMATION:

Funds to initiate preconstruction planning were appropriated in FY 1982 and to initiate construction in the FY 1985 Supplemental Appropriations Act. The first construction contract for deepening was awarded in February 1989.

The local sponsor requested a delay in construction during fiscal years 1993 and 1994 in order to resolve utility relocations issues and pursue the establishment of an assessment district and/or the sale of lands as a means of meeting their remaining financial responsibility for project completion.

The Water Resources Development Act of 1990 includes language directing the Corps to enforce Section 10 authority for relocation of utility lines on a reimbursable basis. However, the Port requested the Corps not pursue enforcement and expects to solve differences with the utility company through litigation procedures.

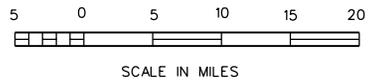
The Water Resources Development Act of 2007 directed the Corps to credit the local sponsor for planning and design work carried out by the local sponsor prior to the date of the partnership agreement.



9,400 LINEAL FEET
FY08
3,700 LINEAL FEET
FY09

LEGEND

- LEVEE SYSTEM AS CONSTRUCTED BY THE CORPS OF ENGINEERS
- LOCATION OF BANK PROTECTION SITES ACCOMPLISHED UNDER FIRST PHASE OF THE SACRAMENTO RIVER BANK PROTECTION PROJECT
- RECREATION SITE
- RIVER MILES



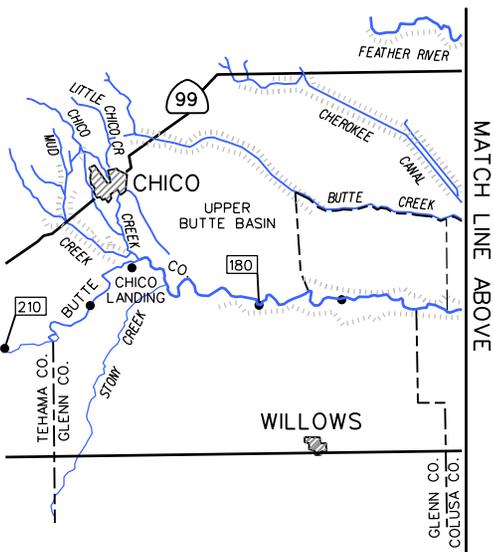
WORK STATUS

COMPLETED	WORK COMPLETED AS OF 30 SEPTEMBER 2007
08	WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
09	WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
REMAINING	WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009

LOCAL PROTECTION PROJECTS (FLOOD CONTROL)

SACRAMENTO RIVER BANK PROTECTION PROJECT CALIFORNIA

SACRAMENTO DISTRICT
SOUTH PACIFIC DIVISION
1 JANUARY 2008



AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

ILLUSTRATION A-2.2
COST-SHARED FEASIBILITY STUDY

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Pima County Los Angeles District	3,717,000	2,645,000	547,000	250,000	0	275,000	0

The study area is located in Pima County and encompasses the metropolitan area of Tucson, the second largest city in Arizona, Town of Marana and unincorporated Pima County. The study will investigate water resources development opportunities including environmental programs, incorporation of historical cultural features, flood control, and recreation. The study will also address environmentally degraded flood prone areas in conjunction with the Sonoran Desert Conservation Plan completed in October 1998. This plan consists of six elements: ranch conservation, historic and cultural preservation, riparian restoration, mountain parks, habitat, biological and ecological corridor conservation, and critical and sensitive habitat preservation. Organizations such as Defenders of Wildlife, Sierra Club, and civic groups support the conservation plan. Government agencies from local, state and Federal entities are also supportive of this effort. Pima County, City of Tucson and Town of Marana, the local sponsors, signed the Feasibility Cost Sharing Agreement in September 2001.

Fiscal Year 2007 carryover funds are being used to continue the feasibility phase of the study. Funds requested for Fiscal Year 2009 will be used to complete the feasibility phase of the study. The estimated cost of the feasibility phase is \$7,184,000, which is to be 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	\$7,309,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	3,592,000
Feasibility Phase (Non-Federal)	3,592,000

The reconnaissance phase was completed in September 2001. The feasibility study is scheduled for completion in September 2009.

ILLUSTRATION A-2.4
PRECONSTRUCTION ENGINEERING AND DESIGN

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: South Pacific

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES - (Continuing)							
Va Shly-Ay Akimel Salt River Los Angeles District	3,750,000	110,000	385,000	900,000	676,000	658,000	1,021,000

The Va Shly-Ay Akimel (pronounced va sha lay akmel) project area involves approximately 8 miles of the Salt River in Arizona. The project area encompasses about 17,435 acres of the river between the Granite Reef Dam and the Pima Freeway (SR101). Most of the project area is on the Salt River Pima Maricopa Indian Community. The City of Mesa borders the south side of the area. The area along the river is severely degraded and has sustained a very large loss of riparian habitat. A feasibility report was completed in September 2004 and the Chief of Engineer's Report was signed January 2005. The recommended project, estimated to cost \$162.1M. The project includes restoring and improving 1,485 acres of habitat including four nationally significant habitat types; Cottonwood-Willow, Wetlands including River Bottom, Mesquite, and Sonoran Desert Shrub, one grade control structure, water delivery systems, and re-grading of the river for revegetation. The plan provides restoration benefits of 1,006 average annual functional capacity units (AAFCU), which results in an average annual cost per AAFCU of \$10,100. The project will provide benefits to the habitat for important bird species including the Yuma clapper rail, southwestern willow flycatcher, cactus ferruginous pygmy owl, California brown pelican, and bald eagle. The Salt River Pima Maricopa Indian Community and the City of Mesa, the local sponsors, signed the cost-sharing agreement in September 2006. Preconstruction engineering and design will ultimately be cost shared at the rate for the project to be constructed, but will be financed through the preconstruction engineering and design 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	\$5,000,000	Total Estimated Preconstruction Engineering and Design Costs	\$5,000,000
Initial Federal Share	3,750,000	Ultimate Federal Share	3,250,000
Initial Non-Federal Share	1,250,000	Ultimate Non-Federal Share	1,750,000

The project was authorized for construction in the Water Resources Development Act of 2007. Funds requested for Fiscal Year 2008 will be used to continue preconstruction engineering and design. Funds requested for Fiscal Year 2009 will be used to continue preconstruction engineering and design.

A completion date is being determined for the preconstruction engineering and design phase.

CONSTRUCTION

APPROPRIATION TITLE: Construction – Environmental Restoration

PROJECT: Hamilton Airfield Wetlands Restoration, California (Continuing)

LOCATION: Hamilton Airfield Wetland Restoration Project is located 4 miles east of the city of Novato, on San Pablo Bay, Marin County, California.

DESCRIPTION: The project includes a 988-acre parcel consisting of a former military runway and adjacent California State Lands Commission areas. The site, currently protected by levees, has subsided below the elevation of surrounding properties including the tidal wetlands immediately adjacent to San Pablo Bay. This condition has resulted in the loss of valuable habitat for various waterfowl, fish and other wetland dependent species of plants and animals including at least two threatened and endangered species. The project allows for the beneficial reuse of 10.6 million cubic yards of dredged material, including approximately 2.6 million cubic yards from the Oakland Harbor, CA (50-ft) deepening project to restore nearly 1,000 acres of wetland habitat. The project promotes the long term management strategy for placement of dredged material in the San Francisco Bay region.

AUTHORIZATION: Water Resources Development Act of 1999; Water Resources Development Act of 2007, Section 3018.

REMAINING BENEFIT - REMAINING COST RATIO: Not applicable.

TOTAL BENEFIT - COST RATIO: Not applicable.

INITIAL BENEFIT – COST RATIO: Not applicable

BASIS OF BENEFIT - COST RATIO: Project justification is based on nonmonetary benefits for aquatic ecosystem restoration.

SUMMARIZED FINANCIAL DATA		STATUS (1 Jan 2008)	PERCENT COMPLETE	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$ 171,100,000	Entire Project	40	To be determined
Estimated Non-Federal Cost	\$ 57,000,000			
Cash Contribution	\$ 47,900,000			
Other Costs	9,100,000			
Total Estimated Project Cost	\$ 228,100,000			
		PHYSICAL DATA		
		Placement of 10.6 million cubic yards of dredged material; Breach tidal levee; Construction of 9,400 ft of perimeter levee; and Wetland Restoration of 988 acres		
Division: South Pacific	District: San Francisco 5 February 2007			Hamilton Airfield Wetlands Restoration, California

SUMMARIZED FINANCIAL DATA (Continued)

		ACCUM PCT OF EST FED COST
Allocation to 30 September 2005	15,004,000	
Allocation for FY 2006	10,870,000	
Allocation for FY 2007	10,000,000	
Conference Allowance for FY 2008	8,512,000 *	
Allocation for FY 2008	8,512,000 *	
Allocation through FY 2008	44,386,000	26
Allocation Requested for FY 2009	4,900,000	29
Programmed Balance to Complete after FY 2009	\$ 121,814,000	
Unprogrammed Balance to Complete after FY 2009	0	

* Includes rescission.

JUSTIFICATION: The Hamilton Airfield Wetland Restoration project area, currently protected by levees, has subsided below the elevation of surrounding properties, including the tidal wetlands immediately adjacent to San Pablo Bay. This condition has resulted in the loss of valuable habitat for various waterfowl, fish and other wetland dependent species of plants and animals including at least two threatened and endangered species. The principal purpose of the project is restoration of wetland habitat via beneficial use of dredged material from San Francisco Bay dredging projects. The project is also consistent with the local reuse plan for the airfield that was closed in 1974.

FISCAL YEAR 2008: Current year funds of \$8,512,000 will be used to:

Construction Mods to N2 contract	\$ 1,300,000
Initiate Complete O&M Dredge Material Placement Cost	1,700,000
Initiate and Complete Building Demo Contract	1,500,000
Initiate study of Plant Propagation	500,000
Construction Management	1,000,000
Planning, Engineering and Design	2,512,000
Total	\$8,512,000

FISCAL YEAR 2009: The requested amount of \$4,900,000 will be applied as follows:

Initiate Plans & Specs of Aquatic Transfer Facility	\$ 900,000
O&M Dredge Material Placement Cost	1,000,000
Plant Propagation Nursery	500,000
Planning, Engineering and Design	1,500,000
Construction Management	1,000,000
Total	\$4,900,000

Division: South Pacific

District: San Francisco
5 February 2007

Hamilton Airfield Wetlands
Restoration, California

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repairs, Rehabilitation, and Replacement Costs
Provide lands, easements, rights of way, and dredged material disposal areas.	\$ 5,500,000	N/A
Modify or relocate utilities, roads, bridges (except railroads bridges), and other facilities, where necessary for the construction of the project.	3,600,000	N/A
Pay 21 percent of the construction costs allocated to fish and wildlife restoration/beneficial use of dredged material in cash to bring the non-Federal share of the project to 25 percent in accordance with Section 101(b) of the Water Resources Development Act of 1999.	47,900,000	\$ 228,000
Total Non-Federal Costs	\$ 57,000,000	\$ 228,000

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

STATUS OF LOCAL COOPERATION: The California Coastal Conservancy, the local sponsor, supports the project. The Project Design Agreement was executed in September 1999. The current non-Federal cost estimate of \$57,000,000, which includes a cash contribution of \$47,900,000, is an increase of \$47,580,000 from the estimate reflected in the Project Cooperation Agreement, which was signed in April 2002. The non-Federal sponsor has indicated it is financially capable and willing to contribute the non-Federal share. Our analysis of the non-Federal sponsor's financial capability to participate in the project affirms that the sponsor has a reasonable and implementable plan for meeting its financial commitment. The Project Cost Agreement amendment to accept advanced funds from the local sponsor was approved by the Assistant Secretary of the Army (Civil Works) on 21 January 2005.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$171,100,000 is an increase of \$122,200,000 from the latest estimate (\$48,900,000) presented to Congress (FY 2008):

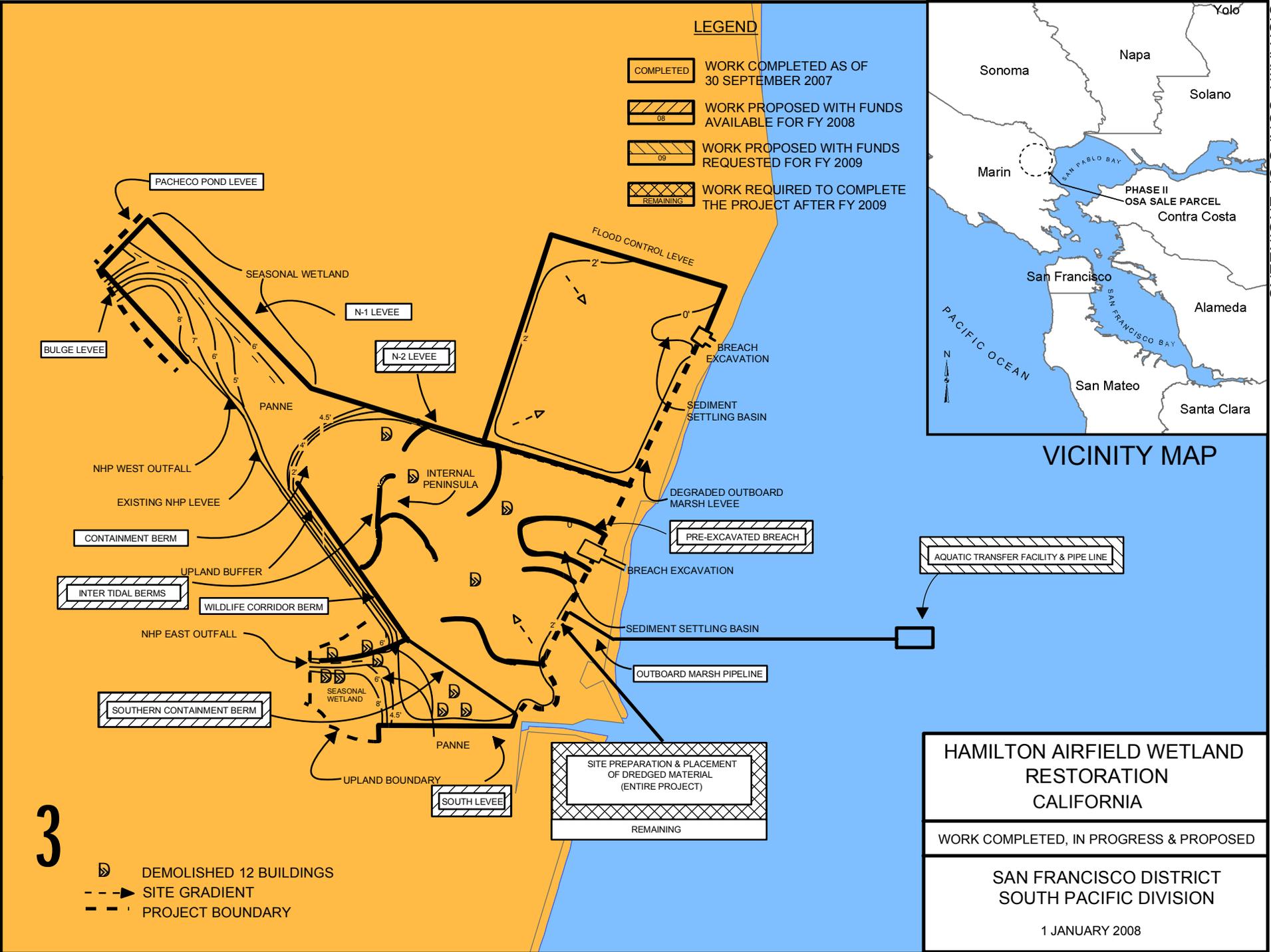
Item	Amount
Reauthorization to include Bel Marin Key V and Price Escalation on Construction Features	\$122,200,000
Total	\$122,200,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement was filed with EPA in February 1999.

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were reprogrammed to the project with Congressional approval in Fiscal Year 1999. Funds to initiate construction were appropriated in Fiscal Year 2001.

A General Reevaluation Report (GRR) and Supplemental Environmental Impact Report/Environmental Impact Statement for Bel Marin Keys Unit V Expansion of the Hamilton Wetland Restoration Project were completed in April 2003. The GRR recommends the inclusion of the Bel Marin Keys and also provides a new estimate for the costs of the authorized Hamilton Wetlands Restoration Project. Total project first cost (October 2003 prices) reflected in the GRR, including the Bel Marin Keys increment, is estimated at \$192,900,000. The Chief's Report was signed 19 July 2004. Inclusion of the Bel Marin increment and the new overall project cost was authorized in WRDA 2007. The Hamilton PCA amendment package for acceptance of additional local funds was executed February 2005. The local sponsor has contributed additional funds to the project in FY 2005 to maintain the schedule.

Army Base Realignment And Closure (BRAC) transfer of the Hamilton Airfield parcel to the State of California occurred in September 2003.



LEGEND

- COMPLETED WORK COMPLETED AS OF 30 SEPTEMBER 2007
- WORK PROPOSED WITH FUNDS AVAILABLE FOR FY 2008
- WORK PROPOSED WITH FUNDS REQUESTED FOR FY 2009
- WORK REQUIRED TO COMPLETE THE PROJECT AFTER FY 2009



VICINITY MAP

AQUATIC TRANSFER FACILITY & PIPE LINE

HAMILTON AIRFIELD WETLAND RESTORATION CALIFORNIA

WORK COMPLETED, IN PROGRESS & PROPOSED

SAN FRANCISCO DISTRICT SOUTH PACIFIC DIVISION

1 JANUARY 2008

3

- DEMOLISHED 12 BUILDINGS
- SITE GRADIENT
- PROJECT BOUNDARY

SOUTHWESTERN DIVISION

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FLOOD AND COASTAL STORM DAMAGE REDUCTION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

	Total Estimated Federal Cost \$	Allocation Prior To FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
PRECONSTRUCTION ENGINEERING AND DESIGN ACTIVITIES (PED) – Flood & Coastal Storm Damage Reduction							
Dallas Floodway Upper Trinity River Basin, Texas Fort Worth District	2,250,000	0	0	0	98,000	207,000	1,945,000

The project area is located in metropolitan Dallas, Texas. The existing floodway extends along the Trinity River upstream from the abandoned the Atchison, Topeka and Santa Fe (AT&SF) Railroad Bridge at Trinity River Mile 497.37, to the confluence of the West and Elm Forks at River Mile 505.50, then upstream along the West Fork for approximately 2.2 miles and upstream along the Elm Fork approximately 4 miles. Of the 22.6 miles of levees within this project, the East Levee is 11.7 miles in length and the West Levee is 10.9 miles in length. In addition to the existing levees, the floodway includes a modified channel within the existing reach and structures including six pumping plants, five pressure conduits, and seven drainage structures. The original Dallas Floodway levees and interior drainage improvements were completed between 1928 and 1931 by the city of Dallas and the Dallas County Levee Improvement District. The Trinity River was rerouted by constructing a channel within the leveed floodway. The original channel was either filled or used for sump storage. In the mid 1940's, major floods compounded by continued upstream urbanization in the watershed overflowed the floodway system and resulted in severe flooding. Subsequently, several Corps of Engineers improvements to the Dallas Floodway were completed in 1959. The improvements included reinforcing and raising the levees to provide conveyance of the Standard Project Flood (SPF) within the floodway, plus 4-feet of freeboard. To improve interior drainage, additional pump stations were constructed and the channel within the floodway was further excavated to an average depth of 25 feet with a 50-foot bottom width, to provide the design capacity of 13,000 cubic feet per second (cfs). The existing Dallas Floodway project removed approximately 10,500 acres from the floodplain, most of which is now highly developed industrial property. The current Dallas Floodway Federal Flood Damage Reduction project prevented approximately \$250 Million in damages during the June 2007 flood event.

Major floods occurred in 1989 and 1990 in the Upper Trinity River Basin. Subsequent studies of the existing floodway levees within the project reach estimated their current level of protection to be approximately a 300-year frequency instead of the original SPF plus 4-feet of freeboard level of protection, due to changed hydrologic and hydraulic conditions resulting from increased upstream development and the availability of additional rainfall data. Given that the Dallas Central Business District alone would incur damages of over \$7 billion if an overtopping event were to occur, this level of risk is considered to be too great to accept by the sponsor, the city of Dallas. The authorized project consists of raising the existing levees to provide the SPF level of protection, as originally authorized. Additionally, ecosystem features (channel meanders and tree reestablishment) and linear recreation features will be added to the existing project. The sponsor passed a bond election on 2 May 1998 to fund their portion of project costs and other improvements to the Trinity River within the city. 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 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.

4 February 2008

Dallas Floodway, Upper Trinity River Basin, Texas (continued)

Total Estimated Preconstruction		Total Estimated Preconstruction	
Engineering and Design Costs	\$3,000,000	Engineering and Design Costs	\$ 3,000,000
Initial Federal Share	\$ 2,250,000	Ultimate Federal Share	\$ 1,950,000
Initial Non-Federal Share	\$ 750,000	Ultimate Non-Federal Share	\$ 1,050,000

The project was authorized for construction in the Water Resource Development Act of 2007, Public Law 110-114, Section 5141 at a total project cost of \$459,000,000 with an estimated Federal share of \$298,000,000 and an estimated non-Federal share of \$161,000,000. The project consists of raising the existing east and west levees to restore the authorized level of protection, removing the abandoned AT&SF Bridge, constructing ecosystem restoration features (wetland development), constructing recreation facilities (trails), and improving interior drainage (sumps) within the project limits. The cost sharing for construction of the project will be in accordance with the Water Resources Development Act of 1986 as amended. Local interests will be required to provide lands, easements, rights-of-way, borrow and excavated or dredged material disposal areas, modify or relocate utilities, roads, bridges (except railroad bridges), and other facilities where necessary in the construction of the project; contribute an additional amount in cash or credit to bring the total non-Federal share of costs to 35 percent of the costs of the project; and bear all costs of operation, maintenance, repair, replacement, and rehabilitation for the project.

Fiscal Year 2008 funds will be utilized to continue the studies to determine if the non-Federal sponsor's plan is technically sound and environmentally acceptable. Fiscal Year 2009 funds will be used to continue preparation of the Environmental Impact statement and Technical Sufficiency documentation for the project. The schedule for completion of Preconstruction Engineering and Design is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Lower Colorado River Basin, TX Fort Worth/Galveston Districts	9,679,000	5,529,000	544,000	500,000	439,000	425,000	2,242,000

The Lower Colorado River basin encompasses a geographic area of approximately 21,000 square miles, and includes portions of the following counties in central and south Texas: Bastrop, Blanco, Burnet, Colorado, Fayette, Hays, Lampasas, Llano, Matagorda, Mills, San Saba, Travis and Wharton. The northernmost reaches of the study area include the Highland Lakes upstream of Austin, while the southernmost boundary is the Gulf of Mexico. The study area is bounded by the Guadalupe, Lavaca, and Colorado-Lavaca basins on the west, and the Brazos and Brazos-Colorado basins on the east. The major metropolitan areas within the study boundaries are Austin, Bastrop, Bay City, Columbus, LaGrange, Marble Falls and Wharton. In October 1998, widespread flooding and related damages occurred throughout the Lower Colorado River basin and served as the impetus for initiating this study in 1999. Subsequently, basinwide flooding has occurred in 2002, 2004, and most recently in June 2007, when the area around the city of Marble Falls received over 19 inches of rainfall within a 24-hour period. A major watershed in the basin is the Onion Creek watershed, which originates in Blanco County, continues through Hays County, and then into Travis County, where the creek flows into the Colorado River. Onion Creek is the largest creek within the rapidly growing urban area of Austin, with a drainage area of 343 square miles, collecting flows from Williamson, Slaughter, Bear, Little Bear, Rinard, South Boggy, Marble and Cottonmouth Creeks and their tributaries. The creek has a long history of flooding, dating back to 1869 and most recently in 1981, 1991, 1998, 2001, 2002 and 2004. Onion Creek, Shoal Creek, Walnut Creek, Bastrop County, the Highland Lakes, and the city of Wharton have experienced increased flooding and alterations to wildlife habitat. An Information Paper, dated October 2003, documented the studies that were conducted to identify the problems, needs and opportunities of the basin. The study identified approximately 34,000 structures in the Lower Colorado River floodplain with over \$25 million in expected average annual damages. The study also identified 25 potential sites for ecosystem restoration. While most of the problem areas will be addressed in specific interim feasibility studies, there are sites which await the identification of a cost sharing sponsor. Interim feasibility studies of Onion Creek and the city of Wharton were completed in December 2006 and were authorized in the Water Resources Development Act of 2007 (Public Law 110-114). Interim feasibility studies for Walnut Creek, Williamson Creek, Bastrop County, and the Highland Lakes are currently underway. The Lower Colorado River Authority is the local sponsor for the Lower Colorado River Basin Study and acts on behalf of the local interests for the various interim studies.

Fiscal 2008 funds are being used to continue the Interim Feasibility Studies for the Highland Lakes, Williamson Creek, Walnut Creek, and Bastrop County, and to initiate an interim study for Shoal Creek. The Fiscal Year 2009 funds will be used to complete the Williamson Creek study, and continue the other Interim Feasibility studies within the basin.

Lower Colorado River Basin, TX (continued)

The estimated cost of the overall feasibility study is \$19,108,000, which is to be 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	\$ 19,233,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	9,554,000
Feasibility Phase (Non-Federal)	9,554,000

The completion date for the Williamson Creek Interim Feasibility Study is September 2009. The completion date for the Highland Lakes Interim Feasibility Study is to be determined. The completion date for the Walnut Creek Interim Feasibility Study is to be determined. The completion date for the Bastrop County Interim Feasibility Study is to be determined. The completion date for the Shoal Creek Interim Feasibility Study is to be determined. The completion date for the overall feasibility study is to be determined.

CONSTRUCTION

APPROPRIATION TITLE: Construction - Local Protection (Flood & Coastal Storm Damage Reduction)

PROJECT: Brays Bayou, Houston, Texas (Continuing)

LOCATION: The project is located in the metropolitan area of Houston, in Harris County, Texas.

DESCRIPTION: The authorized project provided for 3 miles of channel improvements, 3 flood detention basins, 7 miles of stream diversion, and recreation features including hike-and-bike trails, picnic facilities, sports fields, comfort stations and parking areas. As stated in the Water Resources Development Act of 1996, Section 211, subject to the approval of the Secretary of the Army, the non-Federal interest may design and construct an alternative to the diversion (downstream) component. The recommended plan developed by the sponsor includes all the features of the authorized plan with an alternative to the diversion (downstream) component that consists of 15.7 miles of earthen channel modifications, replacement and/or lengthening of 27 bridges, and 1,900 acre-feet of storm water detention on a tributary (Willow Waterhole).

AUTHORIZATION: Water Resources Development Act of 1990.

REMAINING BENEFIT-REMAINING COST RATIO: 11.8 to 1 at 7 percent for Upstream Component (2.6 to 1 at 7 percent for Downstream)

TOTAL BENEFIT-COST RATIO: 3.84 to 1 at 7 percent for Upstream Component (2.12 to 1 at 7 percent for Downstream)

INITIAL BENEFIT-COST RATIO: 2.97 to 1 at 7 5/8 percent for total project (FY 1998).

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest economic analysis included in the comprehensive Feasibility Report for Buffalo Bayou and Tributaries, dated July 1990 with October 1989 price levels.

Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2009)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	346,050,000		Upstream Component	88%	To Be Determined
			Downstream Component	5%	To Be Determined
Estimated Non-Federal Cost	181,030,000				
Cash Contributions	29,520,000		Entire Project	45%	To Be Determined
Other Costs	151,510,000				
Total Estimated Project Cost	\$527,080,000				
Allocations to 30 September 2005	32,044,000		(Upstream Component)		
Allocation for FY 2006	10,832,000		Brays Bayou – 3.7 miles		
Allocation for FY 2007	16,237,000		Detention Basins - 3		
Conference Allowance for FY 2008	13,453,000		(Downstream Component)		
Allocation for FY 2008	13,453,000		Detention Basins - 1		
Allocations through FY 2008	72,566,000	21%	Brays Bayou – 15.7 miles		
Allocation Requested for FY 2009	5,382,000	23%	Bridge replacements/modifications – 27		
Programmed Balance to Complete after FY 2009	65,727,000		Recreation facilities Hike-and-bike trails with picnic facilities, sports fields, and other day-use facilities.		
Unprogrammed Balance to Complete after FY 2009	202,375,000 <u>1/</u>				

1/ Unprogrammed balance is for Downstream Component.

JUSTIFICATION: Brays Bayou drains about 137 square miles in the south-central portion of the Buffalo Bayou watershed. The area is subject to rainstorms throughout the year and urban flooding is a common occurrence. About 53,400 homes and businesses are currently subject to flooding by the Standard Project Flood (SPF), and about 25,000 of these properties would be subject to flooding by a 100-year frequency flood. On an average annual basis, stream flooding could cause nearly \$46,000,000 in damages per year to existing properties. The plan would reduce the existing 100-year frequency floodplain area by about 97 percent. Average annual flood damages would be reduced by about 95 percent. The recreational development will partially satisfy existing demand in the area. Average annual benefits, annualized at a 7-3/8% interest rate and based on October 1989 prices are as follows:

Annual Benefits	Amount
Flood Damage Prevention	\$ 87,268,400
Recreation	1,623,700
Total	\$ 88,892,100

Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008

FISCAL YEAR 2008: The requested amount of \$13,453,000 will be used to reimburse the Harris County Flood Control District (non-Federal Sponsor) for the Federal share of construction work performed during fiscal year 2008 in accord with Section 211 (f) of the Water Resources Development Act of 1996 and the associated Engineering and Design and Construction Management costs as follows.

Upstream Construction:

Reimbursement for completed FY08 work for DS #24	
Arthur Storey Park	\$1,600,000
Partial Reimbursement for completed FY08 work for DS#17	
Eldridge Road Basin	11,733,000
Federal Oversight	120,000
Total	\$13,453,000

FISCAL YEAR 2009: The requested amount of \$5,382,000 will be used to reimburse the Harris County Flood Control District (non-Federal Sponsor) for the Federal share of construction work performed during fiscal year 2009 in accord with Section 211 (f) of the Water Resources Development Act of 1996 and the associated Engineering and Design and Construction Management costs as follows.

Upstream Construction:

Partial Reimbursement for completed FY09 work for DS#16	
Eldridge Road Basin	5,262,000
Federal Oversight	120,000
Total	\$5,382,000

NON-FEDERAL COST & REQUIREMENTS: Brays Bayou has been identified as a demonstration project by Section 211(f) of the Water Resources Development Act of 1996 (P.L. 104-303). This Act authorized the non-Federal sponsor to accomplish the work and be subsequently reimbursed for the Federal share of completed discrete segments, in accordance with the cost sharing and financing concepts reflected in the Water Resources Development Act of 1986, as listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Upstream Component		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	58,560,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	1,630,000	
Pay one-half of the separable costs allocated to recreation and bear all cost of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	2,885,000	300,000
Pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	10,580,000	247,480

Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008

Requirements of Local Cooperation (cont'd)	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Downstream Component		
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	44,150,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	47,170,000	
Pay one-half of the separable costs allocated to recreation and bear all cost of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	625,000	57,300
Pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	15,430,000	371,220
Total Non-Federal Costs	181,030,000	976,000

The non-Federal sponsors must also agree to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The sponsor for the flood damage reduction project is Harris County, acting through the Harris County Flood Control District. The Project Cooperation Agreement (PCA) for the flood control portion of the Upstream (Detention) Component was executed on March 3, 2000, and included the provision of Section 211, WRDA 96. The current non-Federal cost estimate of \$73,410,000 for this portion is an increase of \$3,230,000 from the non-Federal cost estimate of \$70,180,000 noted in the PCA. In accordance with Section 211(f) of the Water Resources Development Act of 1996, the sponsor is investigating the Downstream (Diversion) Component in an effort to find an alternative to the authorized project. The results of this effort are scheduled to be submitted to the ASA(CW) for approval in fiscal year 2008. An amendment to the existing PCA will be executed prior to initiation of reimbursements for completed discrete segments of work for the Downstream Component. There is currently no sponsor for the recreation features of the project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$346,050,000 is an increase of \$13,020,000 from the latest estimate (\$333,030,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Price Escalation on Construction Features for Upstream Component	(+) \$1,092,000
Price Escalation on Construction Features for Downstream Component	(+) \$11,928,000
 Total	 (+) \$13,020,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Environmental Impact Statement was filed with the Environmental Protection Agency in September 1988. The Environmental Assessment (EA) for the Detention Component was completed on 3 April 1998 with the signing of the Finding of No Significant Impacts (FONSI).

OTHER INFORMATION: Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1990, and funds to initiate construction were appropriated in Fiscal Year 1998.

The Brays Bayou project is divided into two separable elements, an upstream and a downstream component. The upstream component has undergone design, and construction was initiated in FY 98. The downstream component is not supported by the Sponsor or the homeowners in the area, so an alternative must be identified to provide a level of protection to this portion of the Houston area. The Harris County Flood Control District (HCFCD), the local sponsor, is currently conducting reformulation studies, and has proposed an alternative to the downstream component consisting of 15.7 miles of earthen channel modifications, replacement and/or lengthening of 27 bridges, and 1,900 acre-feet of storm water detention on a tributary (Willow Waterhole). Approval of the General Reevaluation Report containing the recommended plan is scheduled for fiscal year 2008.

The project was included in the Water Resources Development Act of 1996 (Section 211(f)(6)) as a demonstration project to show advantages and effectiveness of non-Federal interests to undertake planning, design, and construction of Federal Flood Control projects. The HCFCD will receive reimbursement upon completion and approval of discrete segments of the authorized project. Each discrete segment's work will be audited prior to reimbursement. Funds being appropriated will be used to reimburse the sponsor and to pay Corps oversight costs. Section 102 of Public Law 106-60, the Fiscal Year 2000 Energy and Water Development Appropriations Act placed a limitation on credits and reimbursements for certain agreements proposed for execution after the date of enactment of Public Law 106-60.

Harris County experienced a major flooding event on October 15 through 16th, 2006. Harris County Flood Control District reported that completed discrete segments of the Brays Bayou project (3 regional detention basins) located upstream of the Sam Houston Tollway stored more than 3,500 acre-feet of water (equivalent to 1.1 billion gallons of water or 2.2 Astrodomes), which reduced residential and commercial flooding within the watershed.

UPSTREAM ELEMENT:

Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		\$ 143,675,000
Estimated Non-Federal Cost		73,655,000
Cash Contributions	13,465,000	
Other Costs	60,190,000	
Total Estimated Costs for Upstream		\$ 217,330,000

REMAINING BENEFIT-REMAINING COST RATIO: 11.8 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 3.84 to 1 at 7 percent.

DOWNSTREAM ELEMENT:

SUMMARIZED FINANCIAL DATA

Estimated Federal Cost		\$ 202,375,000
Estimated Non-Federal Cost		107,375,000
Cash Contributions	16,055,000	
Other Costs	91,320,000	
Total Estimated Costs for Downstream		\$ 309,750,000

REMAINING BENEFIT-REMAINING COST RATIO: 2.6 to 1 at 7 percent.

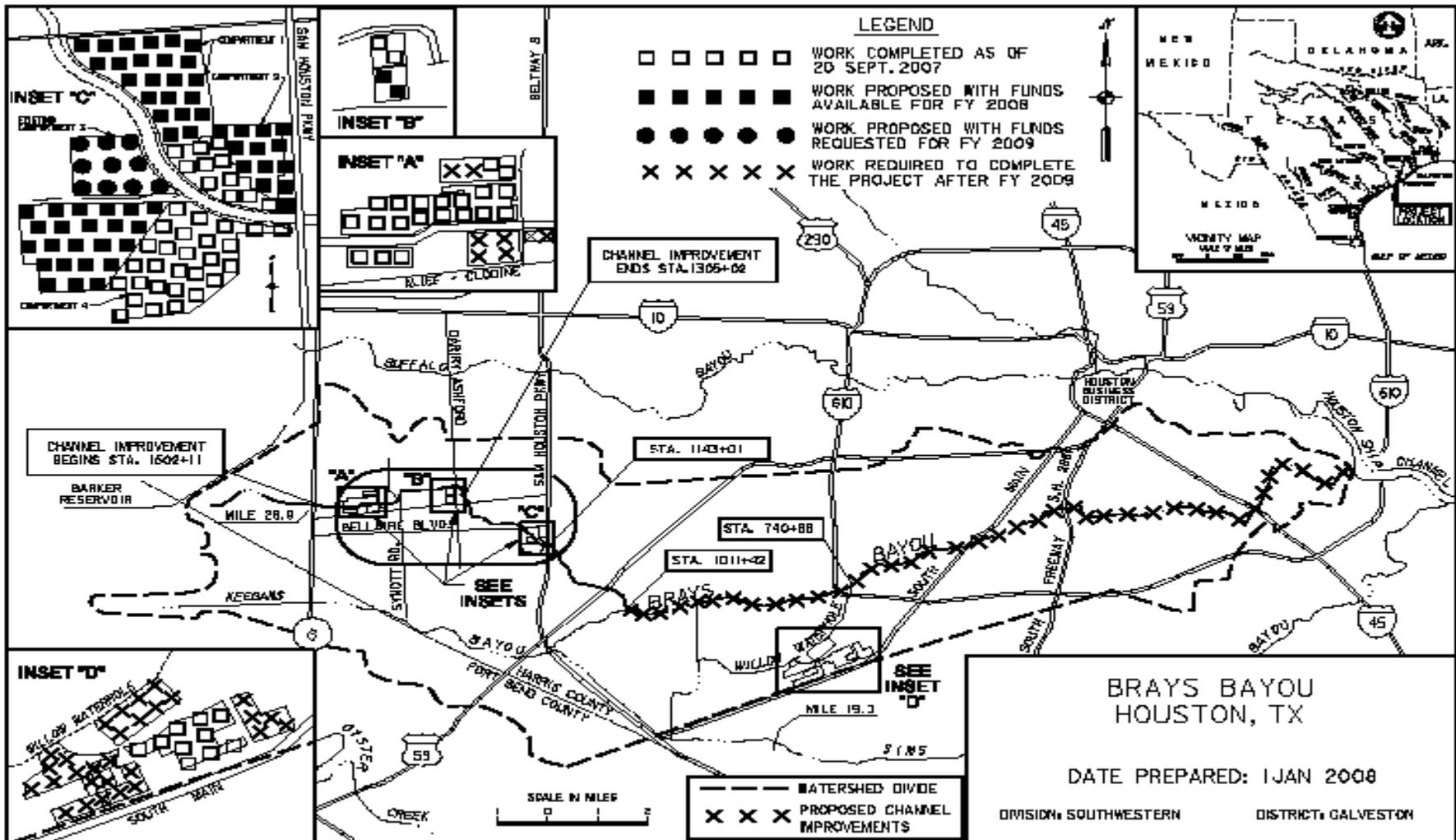
TOTAL BENEFIT-COST RATIO: 2.12 to 1 at 7 percent.

Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008



Division: Southwestern

District: Galveston

Project: Brays Bayou, Houston, Texas

4 February 2008

APPROPRIATION TITLE: Construction, General - Dam Safety Assurance.

PROJECT: Canton Lake, Oklahoma, (Dam Safety), (Continuing)

LOCATION: The project is located on the North Canadian River about 2 miles north of Canton in Blaine County, Oklahoma.

DESCRIPTION: Construction of the project was completed in May 1948. The dam consists of a rolled earth fill embankment with a gate controlled, concrete gravity chute-type spillway located in the right abutment. The outlet works consist of three sluices through the spillway weir, which are controlled by broome-type gates. The recommended plan for resolution of the dam safety deficiencies consists of anchoring the existing spillway to improve sliding stability, relocation of Highway 58A, constructing an auxiliary spillway to increase the discharge capacity required during a probable maximum flood event and placing the excavated material from the spillway excavation at the toe of the earthen dam to resolve the seismic and seepage deficiencies as an additional benefit.

AUTHORIZATION: Flood Control Act of 1938.

REMAINING BENEFIT-REMAINING COST RATIO: Not applicable.

TOTAL BENEFIT-COST RATIO: Not applicable since the project is a dam safety assurance project.

INITIAL BENEFIT-COST RATIO: Not applicable since the project is a dam safety assurance project.

BASIS OF BENEFIT-COST RATIO: Not applicable since the project is a dam safety assurance project.

Division: Southwestern

District: Tulsa

Project: Canton Lake, Oklahoma
(Dam Safety)

4 February 2008

SUMMARIZED FINANCIAL DATA

Original Project

Actual Federal Cost	\$ 11,210,000
Actual Non-Federal Cost	\$ 0
Cash Contributions	0
Total Original Project Cost	\$ 11,210,000

Remedial Works or Project Modification

Estimated Total Appropriation Requirement	\$ 79,300,000	
Future Non-Federal Reimbursement	1,759,000	
Estimated Federal Cost (Ultimate)	77,541,000	
Estimated Non-Federal Cost	1,759,000	
Reimbursements	\$1,580,000	
Water Supply Storage	\$1,759,500	
Total Estimated Remedial or Modification Cost	79,300,000	
Total Estimated Project Cost	\$ 90,510,000	
Allocations to 30 September 2005	3,565,000 ^{1/}	
Allocation for FY 2006	5,940,000	
Allocation for FY 2007	6,000,000	
Conference Allowance for FY 2008	17,023,000	
Allocation for FY 2008	17,023,000	
Allocations through FY 2008	32,805,000	41%
Allocation Requested for FY 2009	21,200,000	68%
Programmed Balance to Complete	25,572,000	
Unprogrammed Balance to Complete after FY 2009	0	

^{1/} Funds of \$750,000 provided in the FY 2002 Construction, General Appropriation, Dam Safety and Seepage Program line item for the Dam Safety Report are not included in the project cost.

Division: Southwestern

**ACCUM.
PCT. OF EST.
FED. COST**

**STATUS
(1 Jan 2007)**

**PERCENT
COMPLETE**

**PHYSICAL
COMPLETION
SCHEDULE**

Entire Project 14% To be Determined

PHYSICAL DATA

Anchor Stabilization – Installation of 64 post tensioned tendons with significant subsurface dam instrumentation- **COMPLETED**. Award fuse gate coordination contract and modeling contract, Award cofferdam slurry trench contract. – FY07

Auxiliary Spillway – Construction of a fused gated structure with new channel approach and spillway weir – FY08 FY09 and FY10

District: Tulsa

**Project: Canton Lake, Oklahoma
(Dam Safety)**

4 February 2008

JUSTIFICATION: The Dam Safety Assurance Report, approved in 2002, indicated two serious and interrelated hydrologic deficiencies occurred at the existing Canton Lake. The deficiencies included inadequate factors of safety against spillway sliding and uncontrolled embankment overtopping by the Probable Maximum Flood. In 2005 Canton was included in Screening Portfolio Risk Assessment which indicated that Canton was within the top ten percent highest at risk dams with regard to failure by uncontrolled seepage. In 2005 a Seismic Safety Review was conducted which indicated that the embankment could move during a seismic event. The population at risk is 60,000 people with potential economic losses estimated between \$1.75 and \$2.64 Billion.

FISCAL YEAR 2008: The requested amount of \$17,023,000 will be applied as follows:

Initiate and Complete Roadway Relocation Contract	\$ 2,500,000
Initiate and Complete Utilities Relocation Contract	500,000
Initiate and complete Project Office Renovation Contract	400,000
Initiate construction on the excavation of the auxiliary spillway, spoil placement and ground water control	10,000,000
Engineering and Design	2,323,000
Construction Management	<u>1,300,000</u>
Total	\$17,023,000

FISCAL YEAR 2009: The requested amount of \$21,200,000 will be applied as follows:

Continue construction on the excavation of the auxiliary spillway, spoil placement ground water control, and cutoff wall	18,000,000
Engineering and Design	1,660,000
Construction Management S&A	<u>1,540,000</u>
Total	\$21,200,000

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

Division: Southwestern

District: Tulsa

Project: Canton Lake, Oklahoma
(Dam Safety)

4 February 2008

Requirements of Local Cooperation	Payments During Construction	Annual Operation, Maintenance, Repair Rehabilitation and Replacement Costs
Pay 15 percent of cost assigned to project purposes in accordance with the cost allocation in effect for the project at the time of initial project construction. Water supply storage is 25.5 percent of the joint-use costs.	\$ 3,033,225	0
Total Non-Federal Costs	\$ 3,033,225	0

The non-Federal sponsor will reimburse its share of construction costs over a period not to exceed 30 years following completion of construction.

STATUS OF LOCAL COOPERATION: The city of Oklahoma City has 100 percent of the water supply storage under contract. Water supply storage is 25.5 percent of the joint-use costs. Reimbursement payments will be initiated at the completion of construction.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$79,300,000 is an increase of \$16,100,000 from the last estimate presented to Congress (FY 2007). Increase in the estimate is due to developing a more refined estimate which includes changing the location of the auxiliary spillway from the left side embankment to the right side embankment because of inadequate foundation material. As an additional benefit the project now remedies the seismic and seepage deficiencies. The project now addresses all project deficiencies to include stability, hydrologic, seepage and seismic issues.

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: Not required. The provisions of Section 404 of the Clean Water Act do not apply because the project improvements do not involve the placement of fill material or the discharge of dredge material in the waters of the United States.

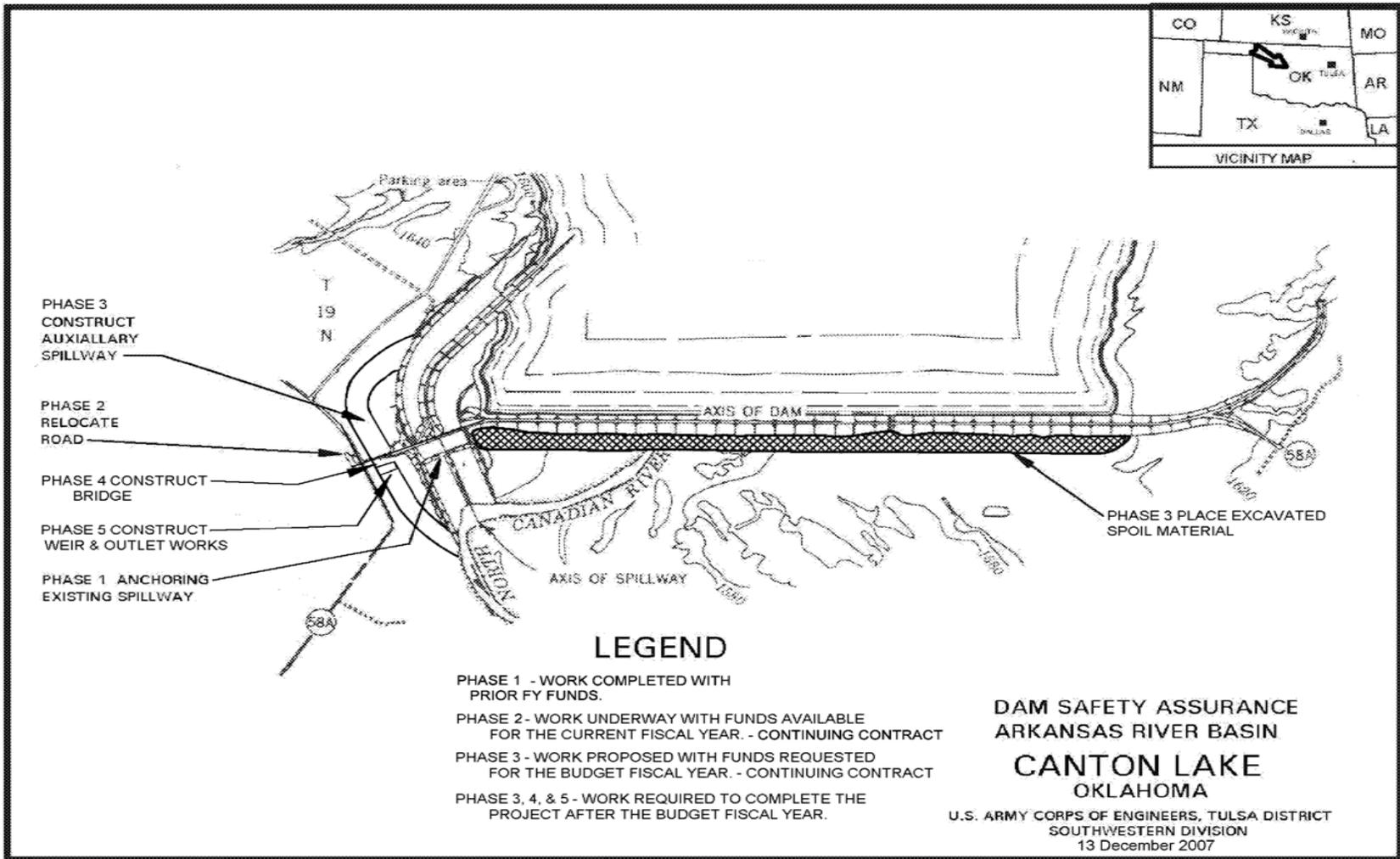
OTHER INFORMATION: A Dam Safety Assurance Program Evaluation Report was approved in March 2002. Construction funds were first appropriated for this project in Fiscal Year 2003. During FY06 a seismic and seepage study was performed in addition to the Design Document Report (DDR), which required the relocation of the auxiliary spillway from the Left Abutment to the Right Abutment areas of Canton Dam due to foundation issues.

Division: Southwestern

District: Tulsa

**Project: Canton Lake, Oklahoma
(Dam Safety)**

4 February 2008



Division: Southwestern

District: Tulsa

Project: Canton Lake, Oklahoma
(Dam Safety)

4 February 2008

APPROPRIATION TITLE: Construction – Replacement (Reservoirs)

PROJECT: Clearwater Lake Replacement, Missouri (Continuing)

LOCATION: Clearwater Lake is located on the Black River in Wayne and Reynolds Counties in southeast Missouri.

DESCRIPTION: The project provides for the construction of a concrete cutoff wall along the entire length of the dam, through the impervious core trench, and into bedrock to prevent seepage and piping of materials through and under the dam. The project purpose is flood damage reduction and 100% of storage is for this purpose.

AUTHORIZATION: Flood Control Act of 1938 (Public Law 761, 75th Congress, 3rd Session).

REMAINING BENEFITS-REMAINING COST RATIO: Not Applicable.

TOTAL BENEFIT-COST RATIO: Not Applicable.

INITIAL BENEFIT-COST RATIO: Not Applicable

BASIS OF BENEFIT-COST RATIO: Benefits are from the latest available evaluation, approved in June 2007 at 2007 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost	\$175,131,000		Entire Project	12%	To Be Determined
Estimated Non-Federal Cost	0				
Total Estimated Project Cost	\$175,131,000				
Allocations to 30 September 2005	1,200,000				
Allocation for FY 2006	18,825,000				
Allocation for FY 2007	24,650,000				
Conference Allowance for 2008	24,600,000				
Allocation for FY 2008	24,600,000				
Allocations through FY 2008	69,275,000	40%			
Allocation Requested for FY 2009	25,000,000	54%			
Programmed Balance to Complete after FY 2009	80,856,000				
Unprogrammed Balance to Complete after FY 2009	0				

Division: Southwestern

District: Little Rock

Project: Clearwater Lake Replacement

4 February 2008

JUSTIFICATION: Clearwater Dam has experienced seepage related issues, extending back to shortly after completion of original construction. Over the course of the dam's history, various methods have been employed to remediate or reduce seepage related issues. In spite of all these efforts and expenditures, the problem has worsened. A sinkhole developed in the upstream face of the dam in January 2003, calling into question the integrity of the dam embankment and potentially the clay core. Continuing to defer a long-term solution to the seepage problem increases the risk of a dam failure. Noteworthy is the fact that conditions of earth dams have the potential to deteriorate quickly, with little evidence. Continuing to utilize O&M funding to monitor and band-aid the problem is no longer viable. The area that would be affected by a dam failure primarily extends from the dam downstream to Poplar Bluff, MO. If dam failure occurs, there would be very little warning time before Piedmont, MO is cutoff and inundation begins; adverse impacts to Poplar Bluff, MO would occur within one day. The limited state highways follow the valley where flooding will occur, making egress and response assistance to the population at risk very difficult. Many smaller towns affected by flooding have only one egress route. The rural nature of the area makes emergency notification difficult. Failure of Clearwater Dam would negate the benefits for which the project was originally approved. The risk-based economic analysis indicates property damages of up to \$200,000,000 and potentially 369 deaths. Clearwater Lake is an important economic resource for the area, primarily through recreational usage. Failure of the dam and loss of the lake would result in the loss of its economic value to the area. Though residents might return to salvage their property following a failure, decreased property values, loss of jobs, income losses, and loss of wealth due to flood induced expenses would have negative economic effects. Average annual benefits are as follows:

<u>Annual Benefits</u>	<u>Amount</u>
Emergency Action	\$ 162,500
Flood Damage	2,563,900
Foregone Recreation	82,500
Dam Repair	4,363,900
Traffic Delay	-330,978
Total	\$6,841,822

FISCAL YEAR 2008: The allocated amount of \$24,600,000 will be applied as follows:

Initiate Construction of Cutoff Wall – Phase II	\$22,500,000
Continue Seismic Study	500,000
Planning, Engineering, and Design	600,000
Construction Management	1,000,000
Total	\$24,600,000

FISCAL YEAR 2009: The requested amount of \$25,000,000 will be applied as follows:

Continue Construction of Cutoff Wall – Phase II	\$23,000,000
Complete Seismic Study	400,000
Planning, Engineering, and Design	600,000
Construction Management	1,000,000
Total	\$25,000,000

Division: Southwestern

District: Little Rock

Project: Clearwater Lake Replacement

4 February 2008

NON-FEDERAL COST: This replacement project is 100% federally funded.

STATUS OF LOCAL COOPERATION: There are no cost sharing or repayment requirements applicable to this project.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$175,131,000 is an increase of \$ 76,787,000 from the latest estimate (\$98,344,000) presented to Congress (FY 2007). This change includes the following items.

Item	
Price Escalation on Construction Features	\$ 9,535,000
Design Changes	60,474,000
Authorized Modifications	793,000
Other Estimating Adjustments	5,985,000
Total	\$76,787,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment of the project was completed in May 2004, with signature of the Finding of No Significant Impact in June 2004.

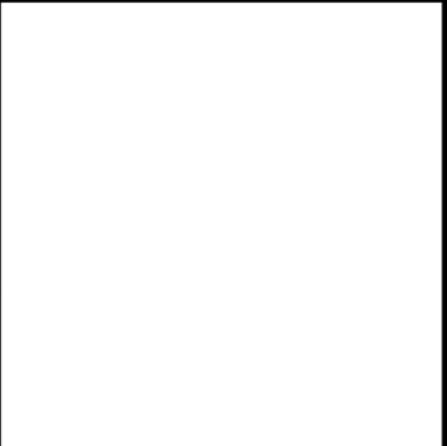
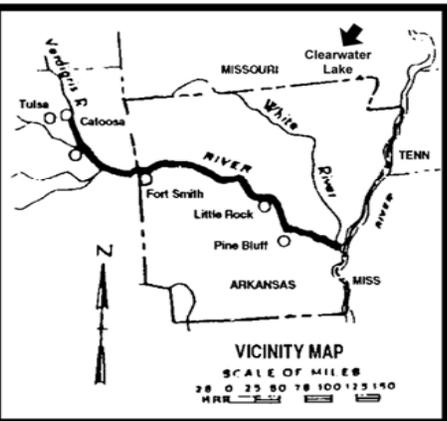
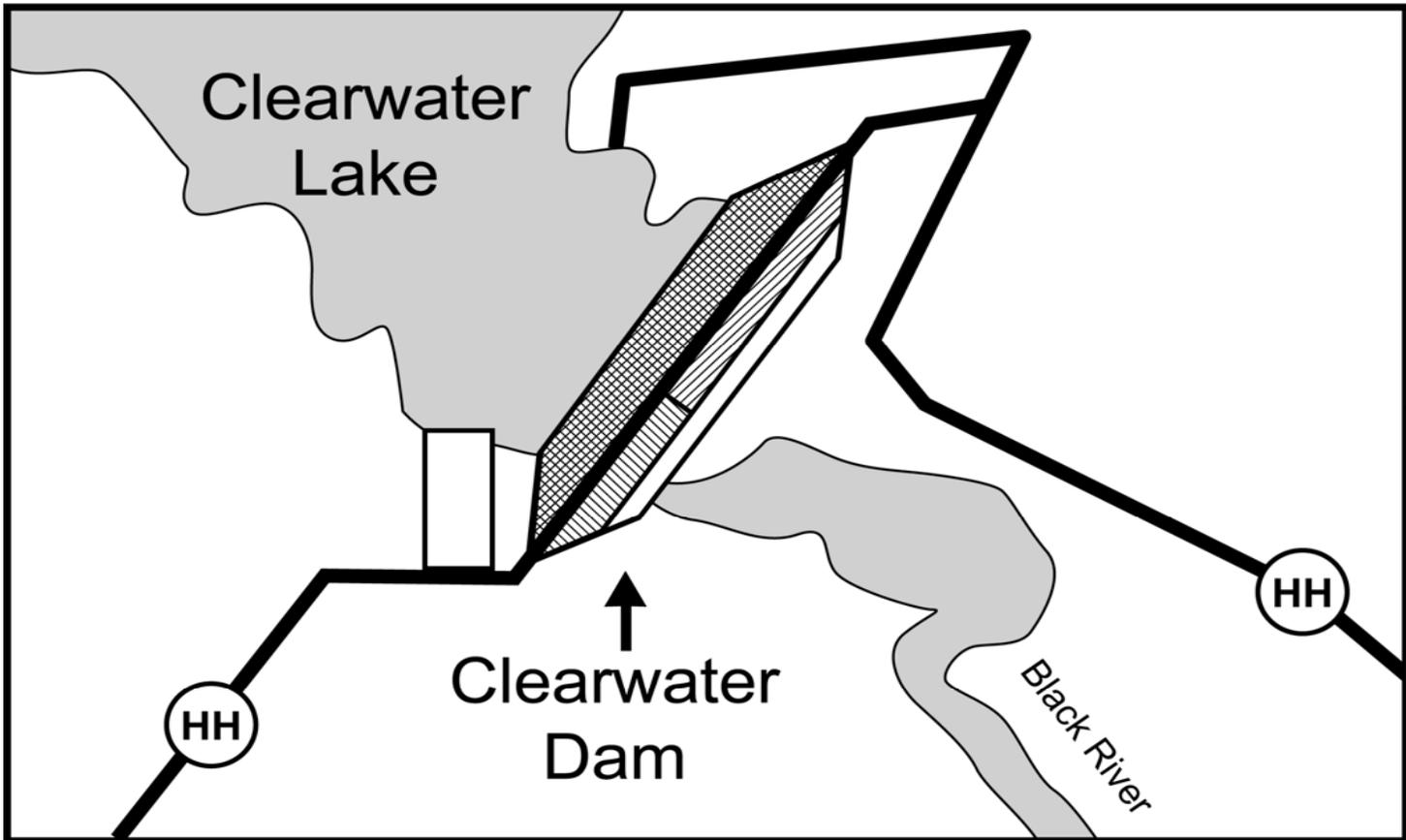
OTHER INFORMATION: The Replacement Report was submitted in June 2004 and approved by the Assistant Secretary of the Army for Civil Works in August 2004. Funds to initiate construction were appropriated in Fiscal Year 2006. The on-going construction phase of the project consists of a Phase I drilling and grouting program to identify and treat subsurface features that would ultimately impact construction of the cutoff wall, as well as refine the parameters of the cutoff wall. The Phase I contract was awarded in January 2006, and completed in October 2007. A second Phase I contract, Phase Ib – Completion of Exploratory Drilling and Grouting, was awarded in August 2007 with NTP in October 2007. Phase II of the project will consist of construction of the cutoff wall, and the contract is expected to be awarded in September 2008. Fiscal year 2007 funds were used to award the Phase Ib contract, initiate additional seismic evaluation and monitoring of the dam, and conduct interim risk reduction measure planning. A preliminary seismic evaluation of the dam for the operating basis earthquake was conducted during the design of Phase I. Additional evaluation of the dam for the maximum credible earthquake is necessary to determine if the dam meets Corps dam safety criteria. Fiscal year 2008 funds will be used to continue construction of Phase Ib, award the Phase II contract, implement interim risk reduction measures, and continue additional seismic evaluation of the dam. Fiscal year 2009 funds will be used to continue construction of Phase II, implement interim risk reduction measures, and complete additional seismic evaluation of the dam. Completion of the project is currently scheduled for fiscal year 2013.

Division: Southwestern

District: Little Rock

Project: Clearwater Lake Replacement

4 February 2008



-  Work complete as of Jan 2007
-  Work proposed with funds available for FY 2008
-  Work proposed with funds available for FY 2009
-  Work required to complete the project after 2009

Continue Cutoff Wall Construction - Phase I
 Initiate Phase IB-Exploratory Drilling & Grouting
 Initiate Seismic Study

Continue Phase II Construction
 Complete Seismic Study

Complete Phase I Construction
 Complete Phase IB - Drilling & Grouting
 Continue Seismic Study
 Initiate Phase II Construction

COMPLETE REHAB
 CONSTRUCTION

WHITE RIVER BASIN
 CLEARWATER LAKE
 MISSOURI
 (MAJOR REHAB)
 U.S. ARMY ENGINEER DISTRICT LITTLE ROCK
 U.S. ARMY ENGINEER DIVISION, SOUTHWESTERN
 1 JANUARY 2008

Division: Southwestern

District: Little Rock

Project: Clearwater Lake Replacement

4 February 2008

APPROPRIATION TITLE: Construction General - Local Protection (Flood & Coastal Storm Damage Reduction)

PROJECT: Sims Bayou, Houston, TX (Continuing)

LOCATION: The project is located in Harris County, in the southern portion of Houston, Texas.

DESCRIPTION: The project provides flood damage reduction and consists of 19.3 miles of channel enlargement, rectification, and erosion control measures. Environmental quality measures, riparian habitat improvements, and recreational features are also included in the project.

AUTHORIZATION: Water Resources Development Act (WRDA) of 1986, Energy and Water Development Appropriations Act of 1990, and WRDA of 1992.

REMAINING BENEFIT-REMAINING COST RATIO: 65.2 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: 8.5 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: 9.3 to 1 at 8 5/8 percent (FY 1990).

BASIS OF BENEFIT-COST RATIO: Benefits are from Supplement 1 to the General Design Memorandum dated May 1993 at October 1992 price levels. Costs are based on the GDM Supplement 1 at October 1992 price levels.

SUMMARIZED FINANCIAL DATA			ACCUM PCT OF EST FED COST	STATUS (1 Jan 2009)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Federal Cost		253,980,000		Entire Project	77%	To Be Determined
Estimated Non-Federal Cost		124,670,000				
Cash Contribution	22,260,000					
Other Costs	102,410,000					
Total Estimated Project Cost		378,650,000				
Allocations to 30 September 2005		155,716,000				
Allocations for FY 2006		17,820,000				
Allocations for FY 2007		22,400,000				
Conference Allowance for FY 2008		20,075,000				
Allocation for FY 2008		20,075,000				
Allocations through FY 2008		216,011,000	85%			
Allocation Requested for FY 2009		23,465,000	94%			
Programmed Balance to Complete after FY 2009		14,504,000				
Unprogrammed Balance to Complete after FY 2009		0				

PHYSICAL DATA

Channels:
 Sims Bayou - 19.3 miles
Relocations:
 Railroad bridges
Utilities
 Roads
Recreation facilities:
 Hike-and-bike trails with picnic and
 other day-use facilities

JUSTIFICATION: The project will reduce stream flooding from 14,800 acres of urban lands and beneficially affect nearly 78,000 persons living in 29,000 homes. The 100-year flood plain would be reduced to 2,300 acres outside the required rights-of-way. The recreational development will partially satisfy existing demand in the area. Average annual benefits, annualized at an 8-5/8% interest rate and based on October 1992 prices are as follows:

Annual Benefits	Amount
Flood Damage Prevention	219,344,700
Recreation	945,300
Total	220,290,000

FISCAL YEAR 2008: The requested amount of \$20,075,000 will be applied as follows:

Initiate and complete construction of Reach 7b Robin Boulevard to Bathurst Drive	\$ 15,300,000
Initiate construction of Reach 8a (within the Bathurst Drive to Croquet Reach)	2,605,000
Planning, Engineering, and Design	1,170,000
Construction Management	<u>1,000,000</u>
Total	\$20,075,000

FISCAL YEAR 2009: The requested amount of \$23,465,000 will be applied as follows:

Complete construction of Reach 8a (within the Bathurst to Croquet Reach)	\$ 16,500,000
Initiate and complete construction of MLK Boulevard Plug removal	3,765,000
Planning, Engineering, and Design	1,800,000
Construction Management	<u>1,400,000</u>
Total	\$23,465,000

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

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	44,760,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	57,320,000	
Pay one-half of the separable costs allocated to recreation and bear all cost of operation, maintenance, repair, rehabilitation and replacement of recreation facilities.	3,700,000	139,000
Pay 5 percent of the costs allocated to flood control, and bear all costs of operation, maintenance, repair, rehabilitation and replacement of flood control facilities.	18,560,000	331,000
Credit for preparation of the dredged material disposal area for the Mouth to PTRR reach and completed miscellaneous engineering and design activities.	330,000	
Total Non-Federal Costs	124,670,000	470,000

The non-Federal sponsors must also agree to make all required payments concurrently with project construction.

STATUS OF LOCAL COOPERATION: The sponsor for the flood control project is Harris County. The current non-Federal cost estimate of \$124,670,000 for flood control, which includes a cash contribution of \$22,260,000, is an increase of \$38,070,000 from the non-Federal cost estimate of \$86,600,000 noted in the Local Cooperation Agreement (LCA), which reflected a cash contribution of \$13,800,000. In a letter dated 19 September 1991, the non-Federal sponsor indicated that it is financially capable and willing to contribute the increased non-Federal share. Analysis (dated 31 October 1991) of the non-Federal sponsor's financial capability to participate in the project reaffirms that the sponsor has a reasonable and implementable plan for meeting their financial commitment as expressed in the LCA. In 1993, the City of Houston indicated its desire to sponsor the recreation features for the project. In April 1999 the City provided a letter indicating its renewed interest in sponsorship. The recreational features have been developed and compiled in a Limited Reevaluation Report (LRR), which underwent an Independent Technical Review (ITR) in June 2005. The LRR is anticipated to be approved in March 2008.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$253,980,000 is an increase of \$3,530,000 from the latest estimate (\$250,450,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Price Escalation on Construction Features	(+) \$ 800,000
Post Contract award and other Estimating Adjustments	(+) \$ 2,730,000
Total	(+) \$ 3,530,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The final Environmental Impact Statement was filed with the Environmental Protection Agency in September 1983.

OTHER INFORMATION: Funds to initiate preconstruction planning were appropriated in Fiscal Year 1986 and funds to initiate construction were appropriated in Fiscal Year 1990.

The Assistant Secretary of the Army for Civil Works has approved the sponsor's request for credit for work performed by the local sponsor. This credit is currently estimated at \$20,070,000, exclusive of lands and is being reimbursed during the period of construction. The project authorization was amended by the Energy and Water Development Appropriations Act of 1990 as the project cost estimate exceeded the maximum cost growth as described in Section 902 of the Water Resources Development Act of 1986. The authorization has been further modified by WRDA '92, Section 102 (66), to include, to the extent practicable, measures to improve environmental quality and riparian habitat.

Reach 7b, Robin to Hiram Clarke, originally scheduled in the FY07 budget has been delayed due to utility and bridge relocations, which were not initiated by the Sponsor. The projected award and completion of the utility and bridge relocations is 2008. The funds originally scheduled for Reach 7b were used to do sediment removal and channel repairs downstream of Cullen Boulevard to the Mouth; remove the Swallow Street sheet pile wall; and channel repairs from Mykawa to Scenic Drive. These repairs are required in order to turn these reaches over to the Local Sponsor.

The previously approved recreation plan as presented in the General Design Memorandum of 1989 is being revised to reflect revisions to the plan requested by the Local Sponsor. A Limited Reevaluation Report (LRR) is being prepared and the updated plan includes 12.3 miles of new multipurpose trails along the banks of the channel with trails connecting to six existing park sites and a future biking facility. Additional features in parks will serve as rest stops and activity nodes for the greenbelt trail system. The LRR is scheduled to be approved in January 2008. The Sponsor, the City of Houston, has indicated their desire to cost-share in the recreation features.

Upon approval of the LRR, and appropriation of funds specified for Recreation, a Project Cooperation Agreement will be executed.

Harris County experienced excessive rainfall over a 12-24 hour period October 15th through 16th, 2006. Harris County Flood Control District reported that channel conveyance improvements virtually completed from State Highway 225 upstream to State Highway 288 helped reduce residential and commercial flooding along Sims Bayou.

HYDROPOWER

CONSTRUCTION

APPROPRIATION TITLE: Construction - Replacement, (Multiple Purpose, including Power).

PROJECT: Ozark Powerhouse Replacement, Arkansas (Continuing).

LOCATION: Ozark Powerhouse is located at Ozark Jeta-Taylor Lock & Dam on the Arkansas River in Franklin County, Arkansas.

DESCRIPTION: Replace the five turbines at the Ozark Powerhouse. The project is part of the McClellan-Kerr Arkansas River Navigation System.

AUTHORIZATION: River and Harbor Act of 1946.

REMAINING BENEFIT-REMAINING COST RATIO: 5.2 to 1 at 7 percent

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

INITIAL BENEFIT-COST RATIO: 2.1 to 1 at 5.125 percent (FY 2003)

BASIS OF BENEFIT-COST RATIO: Benefits are from the Ozark Powerhouse Replacement Amendment to Project Benefits, dated June 2006, at 2006 price levels.

SUMMARIZED FINANCIAL DATA		ACCUM PCT OF EST FED COST	STATUS (1 Jan 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Estimated Total Appropriation Requirement		\$68,270,000	Entire Project	29%	To Be Determined
Future Non-Federal Reimbursement		\$68,270,000 <u>1/</u>			
Estimated Non-Federal Cost		88,370,000			
Cash Contributions	20,100,000 <u>2/</u>				
Other Costs	0				
Reimbursements	68,270,000				
Hydropower	68,270,000				
Total Estimated Project Cost		\$88,370,000			

PHYSICAL DATA
Replace existing five turbines
with new turbines.

Division: Southwestern

District: Little Rock

Project: Ozark Powerhouse Replacement, Arkansas

4 February 2008

SUMMARIZED FINANCIAL DATA	ACCUM PCT OF EST FED COST	STATUS (1 Jan 2007)	PCT CMPL	PHYSICAL COMPLETION SCHEDULE
Allocations to 30 September 2005	5,365,000			
Allocation for FY 2006	0 <u>3/</u>			
Allocation for FY 2007	0 <u>4/</u>			
Conference Allowance for FY 2008	22,632,000			
Allocation for FY 2008	22,632,000			
Allocations through FY 2008	27,997,000	41%		
Allocation Requested for FY 2009	17,300,000	66%		
Programmed Balance to Complete after FY 2009	22,973,000			
Unprogrammed Balance to Complete after FY 2009	0			

1/ In accordance with the cost sharing and financing concepts reflected in the Flood Control Act of 1944, hydropower rehabilitation is funded upfront 100% Federal, with 100% non-Federal payback with interest from Southwestern Power Administration's sale of power over a 50-year period starting at completion of construction.

2/ Funding provided by the Customers in advance of the required reimbursement through the Southwestern Power Administration (SWPA).

3/ FY 2006 work was funded by the Customers through SWPA.

4/ FY 2007 work was funded by the Customers through SWPA.

JUSTIFICATION: One Ozark Powerhouse unit is permanently disabled. Extensive cost and effort is currently required to maintain the remaining four (4) units in operation. Annual unit availability from 2001 through 2005 averaged 47%. Annual loss of revenue is impacting the hydropower customer's rate base. Replacement of the turbines with improved design turbines will allow for more efficient generation of power, restore power benefits, and extend the useful life of this feature. This project will remove the existing five turbines and replace them with "state of the art" turbines. Average annual benefits of \$12,400,000 are all hydropower, and based on 2007 price levels.

FISCAL YEAR 2008: Funds in the amount of \$22,632,000 will be used as follows:

Continue Construction of Turbines	\$20,332,000
Planning, Engineering, and Design	750,000
Construction Management	1,550,000
Total	\$22,632,000

Division: Southwestern

District: Little Rock

Project: Ozark Powerhouse Replacement, Arkansas

4 February 2008

FISCAL YEAR 2009: The requested amount of \$17,300,000 will be utilized for the ongoing turbine replacement contract, which was awarded in May 2005. The requested amount will be applied as follows:

Continue Construction of Turbines	\$15,500,000
Planning, Engineering, and Design	750,000
Construction Management	1,050,000
Total	\$17,300,000

NON-FEDERAL COST: In accordance with the cost sharing and financing concepts reflected in the Flood Control Act of 1944, the non-Federal sponsor must comply with the requirements listed below:

Requirements of Local Cooperation	Payments During Construction and Reimbursements	Annual Operation, Maintenance, Repair, Rehabilitation, and Replacement Costs
<u>Reimburse</u> all of the construction costs allocated to hydropower and bear all costs of operation, maintenance, repair, rehabilitation, and replacement of hydropower facilities.	\$88,370,000	0
Total Non-Federal	\$88,370,000	0

The non-Federal sponsor will reimburse construction costs over a period not to exceed 50 years following completion of construction.

STATUS OF LOCAL COOPERATION: Initially, this project was to be 100 percent federally funded with payback from the Southwestern Power Administration's sale of power. Due to the unavailability of Federal funds, the non-Federal sponsor provided \$20,100,000 in FY 2006 and FY 2007 to continue the turbine contract. Reimbursement payments for the remaining construction costs will be initiated at the completion of construction.

Division: Southwestern

District: Little Rock

Project: Ozark Powerhouse Replacement, Arkansas

4 February 2008

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal cost estimate of \$88,370,000 is an increase of \$3,793,000 from the latest estimate (\$84,577,000) presented to Congress (FY 2007). This change includes the following items:

Item	Amount
Price Escalation or De-escalation on Construction Features	\$ 270,000
Authorized Modifications	1,288,000
Other Estimating Adjustments	<u>2,235,000</u>
	\$3,793,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT COMPLIANCE: An environmental assessment of the project was completed in January 1999. A Finding of No Significant Impact was signed 13 January 1999.

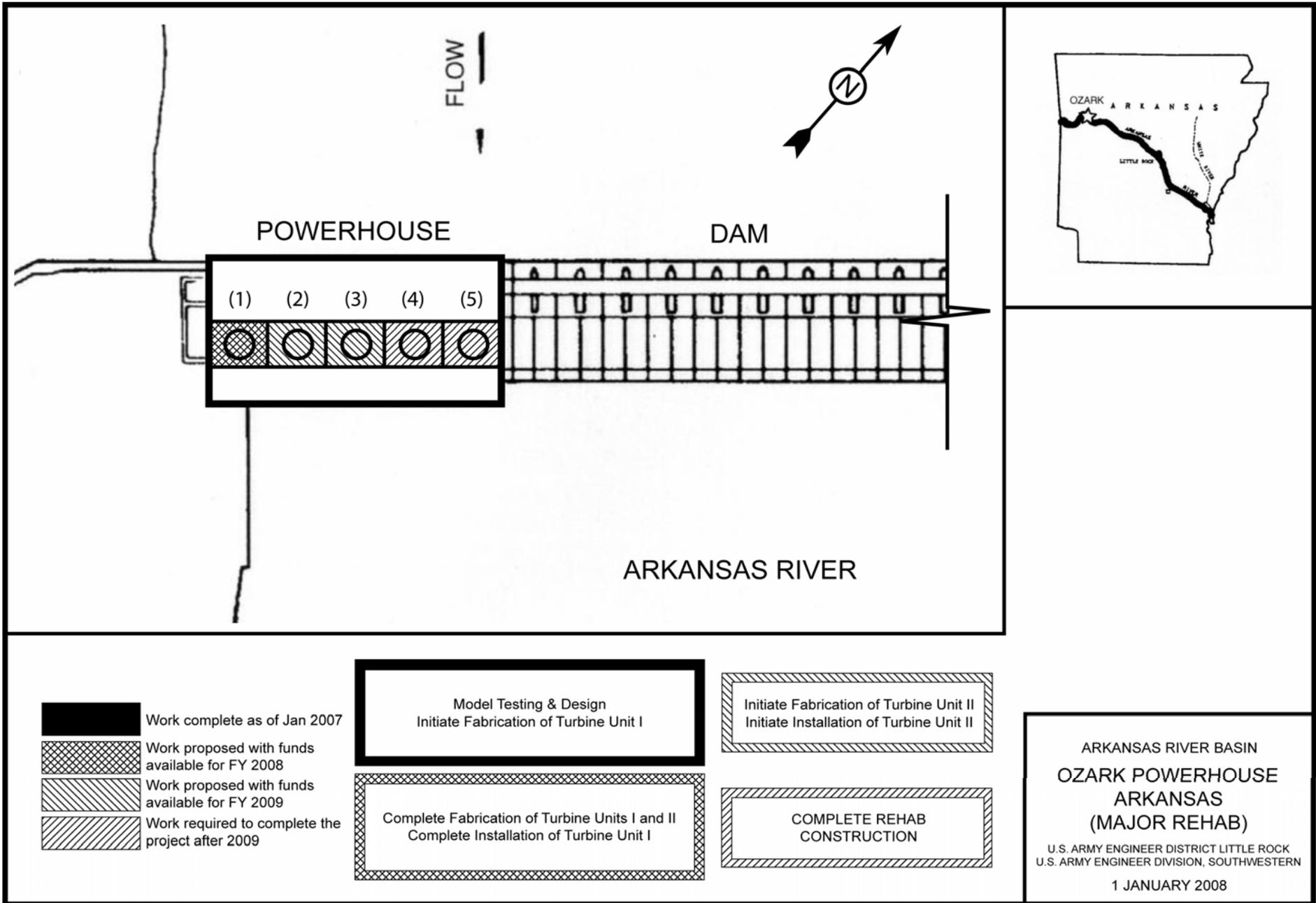
OTHER INFORMATION: The Major Rehabilitation Report was approved in July 1999, with an amendment to project benefits completed in June 2006.

Division: Southwestern

District: Little Rock

Project: Ozark Powerhouse Replacement, Arkansas

4 February 2008



Division: Southwestern

District: Little Rock

Project: Ozark Powerhouse Replacement, Arkansas

4 February 2008

NAVIGATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Brazos Island Harbor, Texas Galveston District	3,508,000	125,000	767,000	500,000	394,000	400,000	1,322,000

The Port of Brownsville is located on the south Texas coast near the US-Mexican border. The study area encompasses the entire Brazos Island Harbor and surrounding region. The entrance channel is located offshore of Cameron County, Texas, in the Gulf of Mexico and ends at the Port of Brownsville Main Harbor in the City of Brownsville. The existing channel is 42-feet deep (plus 2-feet over-depth) by 300-feet wide entrance channel for a distance of 2.5 miles converging to a natural water depth of 44-feet in the Gulf of Mexico; a 42-feet deep by 250-feet wide by 14.8 miles long channel within the inland segment of the waterway; a 42-feet deep by widths varying from 325 to 400 feet at the turning basin for a length of 5,200 feet; and the final segment of the Brownsville Turning Basin at a depth of 36 feet and a width of 1,200 feet. The most recent deepening was authorized by the Water Resources Development Act of 1986. Project construction was completed in 1996. The proposed study will address the feasibility of deepening the entrance and jetty channel (2 miles) to 48 feet, deepen the lower 9 miles of main channel to 48 feet and deepen the upper 7 miles of main channel and turning basin to 45 feet. Benefits are expected to be obtained from reduced transportation costs due to more fully loaded vessels, increased efficiencies associated with serving the U.S. offshore rig industry, and the restoration of up to 6,500 acres of tidal marsh habitats. Brownsville is primarily a bulk commodity port covering both liquid and dry cargo handling. It is an important in-transit port for trade to and from Mexico. In 2002, Brownsville was the nation's second largest in-transit harbor by volume. Total tonnage on the Brazos Island Harbor increased from 1,829,000 tons in 1992 to 4,741,000 tons in 2002; a difference of 2,912,000 tons. In addition to traditional vessel traffic, there is a need for increased channel dimensions in order to serve offshore rigs presently operating in the U.S. Gulf Coast. The operational draft of the newer rigs ranges from 45 to 63 feet. The project will contribute to the restoration of over 6,500 acres of tidal marsh habitats, as well as brush habitat with the Bahia Grande in collaboration with federal and state agencies. This entire marsh was destroyed by the mid-20th Century due to loss of tidal connection by surrounding development. Marsh restoration associated with the project will provide feeding, breeding, and wintering habitat for colonial and migratory water birds, and provide connective habitat to the Atascosa National Wildlife Refuge. The non-Federal Sponsor for the project is the Brownsville Navigation District. The Feasibility Cost Sharing Agreement (FCSA) was executed in June 2006. Prior to the start of feasibility, the Consolidated Appropriations Act, 2003, (PL 108-7), Section 113 (credit for wetlands restoration), authorized the Secretary of the Army to provide credit to the non-Federal Sponsor for work performed to restore the wetlands at Bahia Grande, Lower Laguna Madre, and Vadia Ancha as environmental mitigation for project impacts.

Fiscal Year 2008 funds are being used to conduct more detailed environmental, economic, engineering, and real estate reviews of the alternatives. Fiscal Year 2008 funds will also be used on necessary modeling (ship simulation, currents, sediment) studies and various engineering surveys and borings necessary to analyze alternatives. Fiscal Year 2009 funds will be used to develop the National Economic Development (NED) plan and to select and complete analysis of the Recommended plan, to initiate draft feasibility study report, draft Environmental Impact Statement, and Engineering Appendix.

Brazos Island Harbor, TX (Continued)

The preliminary estimated cost of the feasibility phase is \$6,721,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the study cost is as follows:

Total Estimated Study Cost	\$6,868,000
Reconnaissance Phase (Federal)	147,000
Feasibility Phase (Federal)	3,361,000
Feasibility Phase (non-Federal)	3,360,000

The reconnaissance phase was completed in June 2006 with the execution of the Feasibility Cost Sharing Agreement. The scheduled completion date of the feasibility phase of the study is to be determined.

4 February 2008

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Project	Total Estimated Federal Cost	Allocation Thru FY 2005	Allocation FY 2006	Allocation FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
	\$	\$	\$	\$	\$	\$	\$

PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES - Navigation Channels and Harbors

Corpus Christi Ship Channel, TX Galveston District	1,551,000	954,000	297,000	150,000	0	150,000	0
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The Corpus Christi Ship Channel is a federally constructed deep-draft navigation project serving the ports at Harbor Island, Ingleside, and Corpus Christi in Nueces County. The existing project consists of approximately 35 miles of channels: a jettied entrance channel 45 to 47 feet deep and 600 to 700 feet wide from the Gulf of Mexico; the Corpus Christi Ship Channel with a depth of 45 feet and a width of 400 feet; and a branch channel referred to as the La Quinta Channel with a depth of 45 feet and a width of 300 feet to 400 feet. Tonnage transported on the Corpus Christi Ship Channel totaled approximately 77 million tons in 2003 and averaged 64 million tons over the past five years. The existing 45-foot project was designed to accommodate 59,000 dead weight ton (DWT) vessels with a loaded draft of 41 feet; however, large vessels of 100,000 DWT and greater, regularly use the channel. These larger vessels could be loaded to greater depths, offering substantial reductions in vessel operating costs if additional channel depth and width were available. Channel widening would allow for more efficient vessel movements, resulting in reduced traffic delays and increased traffic safety. The feasibility report was completed in April 2003 and the Chief's of Engineer's Report was signed in June 2003.

The project was authorized in the Water Resources Development Act of 2007. The recommended project, estimated to cost \$191.9 million with an estimated Federal cost of \$89.9 million and an estimated non-Federal cost of \$102 million, includes deepening the main channel to 52 feet and widening to 530 feet; and extending the La Quinta Channel one and a half miles at a depth of 39 feet and a width of 400 feet. The average annual benefits amount to \$53.7 million. The benefit-cost ratio is 2.14 to 1 at 7% interest rate, based upon the latest economic analysis dated June 2003. The non-Federal sponsor for the project is the Port of Corpus Christi Authority. Preconstruction Engineering and Design (PED) will ultimately be cost shared at the rate for the project to be constructed and 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.

Total Estimated Preconstruction Engineering and Design Costs	\$2,068,000	Total Estimated Preconstruction Engineering and Design Costs	\$2,068,000
Initial Federal Share	\$1,551,000	Ultimate Federal Share	\$1,551,000
Initial Non-Federal Share	\$ 517,000	Ultimate Non-Federal Share	\$ 517,000

Fiscal Year 2008 funds are being used to complete the first set of plans and specifications for extending La Quinta Channel, dredging of barge lanes across Corpus Christi Bay, construction of two rock breakwaters for habitat protection, and initiate a Limited Reevaluation Report to update the economics of the project. Fiscal Year 2009 funds will be used to complete the Limited Reevaluation Report, therefore completing the Preconstruction Engineering and Design Phase. The scheduled completion date for Preconstruction Engineering and Design is September 2009.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Freeport Harbor, Texas Galveston, TX	3,184,000	1,080,000	495,000	500,000	709,000	400,000	0

The Freeport Harbor project is located along the mid to upper Texas coast, and is formed by the improvement of the Brazos River, Texas, from the mouth about 6 miles upstream to Freeport, Texas. It provides for a 47 foot deep, 400 foot wide entrance channel; 45 foot deep, 400 foot wide main channel; 45 foot deep, 750 foot diameter turning basin; a 45 foot deep, 1000 foot diameter Brazos Port Turning Basin; a 45 foot deep, 1200 foot diameter Upper Turning Basin, 36 foot deep, 200 foot wide Brazos Harbor channel; and 36 foot deep, 750 foot diameter Brazos Harbor turning basin. The local sponsor, the Brazos River Harbor Navigation District, is interested in examining the feasibility of improvements to the existing deep draft navigation channel and to determine the Federal interest in expanding the reach of the navigation channel to the Stauffer Channel and turning basin. Freeport Harbor is an important port for imported petroleum products, exported petrochemicals, and general cargo. The existing channel is not sufficiently deep to fully load the existing tanker fleet serving Freeport Harbor. Further, the 400-foot wide entrance and main channels limit Freeport Harbor to one-way traffic for all vessels and daylight-only operation for larger vessels. The light-loading, one-way traffic and daylight-only operation result in significantly higher cost to users than would be experienced if the harbor were enlarged and deepened. Average annual benefits due to the improved efficiency of using larger vessels are currently estimated at over \$20 million from deepening the channel and over \$4 million for widening the channel. The Brazos River Harbor Navigation District signed a Feasibility Cost Sharing Agreement (FCSA) in July 2003. The recommended plan, estimated to cost \$244 million, includes deepening the Entrance Channel to 59 feet, extending the Entrance Channel approximately 5,000 feet into the Gulf in order to reach the -59-foot contour, deepening the Jetty Channel to 57 feet, deepening the Main Channel to 55 feet from the Lower Turning Basin to the Brazosport Turning Basin, deepening the Main Channel to 52 feet from the Brazosport Turning Basin to the Upper Turning Basin, deepening the lower 3,600 feet of the Stauffer Channel to 50 feet by 300-foot wide, deepening the upper Stauffer Channel to it's authorized 30 feet by 200-foot width, and enlarging the Brazosport Turning basin to 1,350 feet. The benefit-cost ratio is 2.2 to 1 based on the latest economic analysis. Freeport Harbor is an existing Federally authorized navigation channel. For safety reasons, the Port is seeking a permit to expedite widen the channel prior to the completion of the Federal project to provide for safe passage of large Liquefied Natural Gas (LNG) ships that are expected to use the Port as soon as ongoing construction of a LNG processing facility is complete, The Port Freeport is pursuing assumption of maintenance under Section 204(f) of Water Resources Development Act of 1986 for a proposed improvement to the Freeport Harbor Channel

Fiscal Year 2008 funds are being used to continue feasibility phase of the study to include preparing engineering appendix; real estate gross appraisal; environmental impact analysis; draft feasibility report; conduct an Independent Peer Review and hold an alternatives formulation briefing. Fiscal Year 2009 funds will be used to complete the final feasibility report, including the environmental impact statement, the associated public and Washington reviews.

Freeport Harbor, Texas (continued)

The cost of the feasibility phase is \$6,118,000, which is to be shared on a 50-50 percent basis by Federal and non-Federal interests. A summary of the study cost is as follows:

Total Estimated Study Cost	\$ 6,243,000
Reconnaissance Phase (Federal)	125,000
Feasibility Phase (Federal)	3,059,000
Feasibility Phase (Non-Federal)	3,059,000

The reconnaissance phase was completed in July 2003. The feasibility study is scheduled to be completed in April 2009.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Project	Total Estimated Federal Cost \$	Allocation Thru FY 2005 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY09 \$
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PRECONSTRUCTION ENGINEERING AND DESIGN (PED) ACTIVITIES- Navigation (Channels and Harbors)

Gulf Intracoastal Waterway - High Island to Brazos River, Texas Galveston District	703,000	185,000	368,000	0	0	150,000	0
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This reach of the Gulf Intracoastal Waterway (GIWW) includes approximately 43 miles of channels in Galveston and Brazoria Counties, from Rollover Pass at GIWW Mile 330 to West Bay at Mile 373. Commerce transported along this section of the GIWW totaled nearly 50 million tons in 1994, with petrochemicals as the major commodity shipped. An interim feasibility study, the GIWW – High Island to Brazos River Interim Feasibility Study, recommended several improvements to the waterway between Rollover Pass and West Bay. The recommended project includes a sediment basin at Rollover Pass, widening the channel area an additional 75 feet for a length of 1400 feet at Sievers Cove, widening the channel at the Texas City Wye, setting back existing mooring facilities by 80 feet at Pelican Island, establishing a mooring basin at Greens Lake, and protecting existing open channels from wave action at the West Bay washout.

The project was authorized for construction by WRDA 2007. The estimated cost for the recommended plan is \$15,700,000. The average benefit to cost ratio is 2.17 to 1 based on the latest economic analysis dated December 2002. The GIWW is designated as part of the Inland Waterway System. Construction costs for inland navigation improvements will be cost shared 50-50 from the Inland Waterway Trust Fund. The State of Texas is the non-Federal sponsor of the GIWW and continues to maintain a high interest in the waterway because of their responsibility to provide dredged material disposal areas.

Fiscal Year 2009 funds will be used to complete the first set of plans and specifications for the Pelican Island Moorings and Texas City Wye modifications, and to complete the Environmental Assessment for the long term dredge material management plan. The completion date for Preconstruction, Engineering and Design is September 2009.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Gulf Intracoastal Waterway - High Island to Brazos River (Realignments), Texas Galveston District	2,255,000	172,000	49,000	17,000	0	200,000	1,817,000

The study area includes approximately 85 miles of the Gulf Intracoastal Waterway (GIWW) in Galveston and Brazoria Counties, from High Island, Texas, to the Brazos River. Tonnage transported along this section of the GIWW totaled nearly 50 million tons in 1994, with petrochemicals as the major commodity shipped. Some of the problems identified by users along this reach include difficulties negotiating the two 90-degree bends west of the Highway 124 bridge at High Island causing steerage problems for tows, making it difficult for even one way traffic; high shoaling rates and associated transit delays at Rollover Pass; the area at Sievers Cove experiences periods of high wind and current causing navigation problems due to the limited clearance between the GIWW and placement area #41, limiting the barges ability to compensate for the wind and current; and problems arise at the Texas City Channel (west wye) due to width restrictions and defective channel markers. Waterway users often continue to the intersections of the Texas City Channel and the GIWW before turning towards Texas City creating an unsafe condition due to currents as tows maneuver a 120 degree turn into a congested area used by ocean-going, deep draft vessels; the cut through Pelican Island provides the last protected area for eastbound traffic before crossing the Galveston causeway. Tows often stop during fast moving tides and high winds, causing congestion at this mooring facility as vessels wait for safe passage through the Galveston causeway. Additionally moored barges often extend out into the channel making passing through the area difficult requiring extreme care. Additional moorings are needed west of the Galveston causeway, as during periods of high winds, tows must push onto the bank in the sheltered area near Greens Lake and wait, sometimes for several days. The four miles between Cow and Halls bayous are areas of serious erosion where shoaling often reduces the channel width, limiting traffic to one way. The problem is compounded by cross currents. The GIWW is designated as part of the Nation's Inland Waterway System, and qualifies for 50-50 cost sharing from the Inland Waterways Trust Fund for construction of navigation improvements. An initial appraisal of the entire 423-mile Texas Section of the GIWW was completed in November 1989. The GIWW - High Island to Brazos reconnaissance study, completed in February 1995, concluded that modifications to the existing GIWW were economically feasible from reduction in delay benefits. Investigations to identify potential solutions to resolve the navigation issues along this reach of the GIWW have been divided into two interim feasibility studies. The GIWW – High Island to Brazos River, Texas study was completed in the FY2003, and authorized in the Water Resources Development Act of 2007. The study addressed potential improvements to the waterway between Rollover Pass and West Bay. The second interim study, the GIWW – High Island to Brazos River Realignments Interim Feasibility, includes evaluation of navigation improvements in negotiating two 90-degree bends near High Island; difficulties negotiating a double “S” curve near Freeport the intersection with the Chocolate Bayou Channel; and developing long range disposal plans.

Fiscal Year 2009 funds will be used to continue the Interim Feasibility Study. The study team will conduct detailed economic, engineering, and environmental analysis to execute a Feasibility Scoping Meeting and prepare for an Alternative Formulation Briefing. The feasibility study is scheduled for completion is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Gulf Intracoastal Waterway - Port O'Connor to Corpus Christi Bay, TX Galveston District	4,262,000	3,180,000	332,000	400,000	0	350,000	0

The study area includes approximately 79 miles of the Texas section of the main channel of the Gulf Intracoastal Waterway (GIWW), extending from Port O'Connor to the Kennedy Causeway at Corpus Christi Bay. Tonnage transported along this section of the GIWW totaled nearly 16.6 million tons in 2001. Navigational difficulties caused by frequent shoaling at various locations within this reach, traffic congestion, and the lack of navigational aids and mooring facilities have been previously identified by users as areas of concern. Thirty-one (31) miles of this reach of the waterway are within the critical habitat of the endangered whooping crane and were addressed under a separate feasibility study for the Aransas National Wildlife Refuge, and is therefore excluded from consideration. The purpose of this study is to evaluate operational problems (vessel traffic congestion) along this reach of the waterway. The proposed plan would be to authorize alternate channels across Corpus Christi Bay to relieve vessel traffic congestion at the intersection of the Corpus Christi Ship Channel and the GIWW and relocating the mooring facilities near Port O'Connor for holding vessels during inclement conditions. Estimated total project costs for proposed plan is \$5,000,000. The preliminary benefit-cost ratio is 1.5 to 1 at 7% interest rate.

The State of Texas is the non-Federal Sponsor of the GIWW and continues to maintain a high interest in the waterway because of the economic importance of the waterway to the State and their responsibility to provide dredged material placement areas. The GIWW is designated as part of the Nation's Inland Waterway system, and therefore qualifies for 50-50 cost sharing from the Inland Waterways Trust Fund for construction of navigation improvements. Any potential environmental restoration projects identified by this study will require a cost sharing sponsor. No Feasibility Cost Sharing Agreement is required, and all study costs are 100 percent Federal.

Fiscal Year 2009 funds will be used to complete the feasibility phase of the study, focusing on two distinct elements for navigation improvements: (1) proposed moorings at Port O'Connor, just south of the Matagorda Ship Channel; and (2) an alternate route at Corpus Christi Bay, Texas. The scheduled completion date for the feasibility phase of the study is September 2009.

4 February 2008

CONSTRUCTION

APPROPRIATION TITLE: Construction - Channels and Harbors (Navigation)

PROJECT: Houston-Galveston Navigation Channels, TX (Continuing)

LOCATION: The project is located in the Galveston Bay system in Harris and Galveston Counties, Texas.

DESCRIPTION: The total project provides for a 45-foot project by enlarging the Houston Ship Channel to a depth of 45 feet and a width of 530 feet, and the Galveston Channel to a depth of 45 feet over a width which varies between 650 and 1112 feet, and deepening the entrance channel to the Galveston Harbor and Channel to 47 feet over its original 800-foot width and 10.5 mile length, and extending the channel an additional 3.9 miles to the 47-foot bottom contour in the Gulf of Mexico along the existing alignment. Dredged material from the bay will be used for construction of environmental restoration sites to include 4,250 acres of marsh, and 6 acres of Bird Island. One hundred seventy two (172) acres of oyster cultch (118 acres for the Main Channel and 54 acres for the Barge Lanes) have been placed as a mitigation feature to provide substrate for oysters to grow.

The deepening and widening of the Houston Ship Channel has been completed and the initial marsh cell creation and bird island construction have been completed. The first maintenance dredging cycles for the reaches within the Houston Ship Channel, the Galveston Channel improvements and the Environmental Restoration features which are construction of future beneficial use cells for maintenance material, remain to be constructed.

AUTHORIZATION: Water Resources Development Act (WRDA) of 1996. Energy and Water Development Appropriations Act, 2001, as enacted by Section 1(a)(2) of P.L. 106-377 (Barge lanes).

REMAINING BENEFIT- REMAINING COST RATIO: Houston Ship Channel: 3.2 to 1 at 7 percent; Galveston Harbor and Channel: 1.7 to 1 at 7 percent.

TOTAL BENEFIT-COST RATIO: Entire project: 1.9 to 1 at 7 percent (Authorized Project with Barge Lanes); Galveston Harbor and Channel: 1.6 to 1 at 7 percent.

INITIAL BENEFIT-COST RATIO: Entire Project: 1.8 to 1 at 7 5/8 percent (FY 1996)

BASIS OF BENEFIT-COST RATIO: For the Houston Ship Channel, benefits and costs are from the Limited Reevaluation Report and Supplemental Environmental Statement dated May 1996. The Galveston Harbor and Channel benefits and costs are based on the Limited Reevaluation Report dated May 2007, approved June 2007.

Division: Southwestern

District: Galveston

Project: Houston-Galveston
Navigation Channels, Texas

4 February 2008

SUMMARIZED FINANCIAL DATA			ACCUM. PCT. OF EST FED. COST	PHYSICAL STATUS (1 Jan 2009)	PERCENT COMPLETE	COMPLETION SCHEDULE
Estimated Appropriation Requirement (CoE)		574,570,000		Houston Ship Channel Const.	95 %	To be Determined
Programmed Construction	574,570,000			Galveston Channel Const.	20 %	Sep 2009
Unprogrammed Construction	0			Ecosystem. Restoration	34 %	To be Determined
Estimated Appropriation Requirement (OFA)		7,203,000		Entire Project	85 %	To be Determined
Programmed Construction	7,203,000			PHYSICAL DATA – Total Project		
Unprogrammed Construction	0			Channels:		
Estimated Appropriation Requirement		581,773,000		Houston Ship Channel – 39.2 miles (complete)		
Programmed Construction	581,773,000			Galveston Channel – 3.8 miles		
Unprogrammed Construction	0			Galveston Harbor Channel–14.4miles complete)		
Future Non-Federal Reimbursement		40,404,000		Barge Lanes – 26 miles (complete)		
Programmed Construction	40,404,000			Beneficial use of Dredged Material		
Unprogrammed Construction	0			Marsh – 4,250 acres		
Estimated Federal Cost (Ultimate) (CoE)		541,369,000		Bird Island – 6 acres (complete)		
Programmed Construction	541,369,000			Redfish Island – 6 acres (complete)		
Unprogrammed Construction	0			Offshore Underwater Berm (complete)		
Estimated Non-Federal Cost		200,587,000		Mitigation (Oyster Cultch)		
Programmed Construction	200,587,000			Main Channel – 118 acres (complete)		
Cash Contributions	166,483,000			Barge Lanes – 54 acres (complete)		
Other Costs:						
Berthing Facilities	10,518,000					
Lands and Relocations	1,188,000					
Credit	22,398,000					
Unprogrammed Construction	0					
Cash Contributions	0					
Other Costs	0					
Total Estimated Programmed Construction Cost		782,360,000				
Total Estimated Unprogrammed Construction Cost		0				
Total Estimated Project Cost		782,360,000				

Division: Southwestern

District: Galveston

**Project: Houston-Galveston
Navigation Channels, Texas**

4 February 2008

SUMMARIZED FINANCIAL DATA (Continued)

**ACCUM.
PCT. OF EST
FED. COST**

Allocations to 30 September 2005	293,700,000	
Allocation for FY 2006	29,957,000 <u>1/</u>	
Allocation for FY 2007	43,076,000	
Conference Allowance for FY 2008	15,730,000	
Allocation for FY 2008	15,730,000	
Allocations through FY 2008	382,463,000 <u>1/</u>	66%
Allocation Requested for FY 2009	21,700,000	70%
Programmed Balance to Complete after FY 2009	170,407,000	
Unprogrammed Balance to Complete after FY 2009	0	

1/ Includes \$4,217,000 Hurricane Supplemental funds received in FY06.

JUSTIFICATION: The total project will include environmental restoration (4,250 acres of marsh) and will provide transportation savings from using larger or more efficient vessels, reduction in vessel casualties, and reduction of vessel delays. The average annual benefits for the Houston-Galveston project are \$87,300,000, all commercial navigation, based on October 1994 price levels.

Annual Benefits	Amount
Navigation	\$ 87,300,000
Total	\$ 87,300,000

FISCAL YEAR 2008: Funds in the amount of \$15,730,000 will be used in FY 08 as follows:

Initiate construction of deepening Galveston Channel	\$ 9,140,000
Complete construction at Atkinson placement Marsh areas:	
Grass Planting Cells 5 & 6	2,385,000
Ditching Cells 1 – 2 & 4	2,385,000
Planning, Engineering and Design	1,000,000
Construction Management	<u>820,000</u>
Total	\$ 15,730,000

FISCAL YEAR 2009: Funds in the amount of \$21,700,000 will be used in FY 09 as follows:

Complete construction of deepening Galveston Channel	\$ 10,860,000
Complete construction of additional capacity at Beltway 8 placement area	9,140,000
Planning, Engineering and Design	700,000
Construction Management	<u>1,000,000</u>
Total	\$ 21,700,000

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

Requirements of Local Cooperation	Annual Operation, Payments During Construction and Reimbursements	Maintenance, Repair, Rehabilitation, and Replacement Costs
Provide lands, easements, rights-of-way, and borrow and excavated or dredged material disposal areas.	\$ 1,123,000	
Modify or relocate, utilities, roads, bridges (except railroad bridges), and other facilities, where necessary for the construction of the project.	65,000	
Local service facilities necessary to realize benefits of the general navigation features	10,518,000	
Pay a percentage of the costs allocated to navigation improvements, to mitigate the project's adverse environmental impacts, and to pay a portion of the cost of operation, maintenance, and replacement of the project.	188,881,000	\$604,000
General Navigation Features - Deep Draft	\$100,235,000	
General Navigation Features - Shallow Draft	1,321,000	
Environmental Restoration	31,601,000	
Environmental Restoration - Deferred Const.	55,724,000	
Reimburse an additional 10 percent of the costs of general navigation features allocated to commercial navigation within a period of 30 year following completion of construction, as partially reduced by a credit allowed for the value of lands, easements, rights of way, relocations, and dredged or excavated material disposal areas provided for navigation.	40,404,000	
Total Non-Federal Costs	\$240,991,000	\$604,000

STATUS OF LOCAL COOPERATION: The Project Cooperation Agreement with the Port of Houston Authority was executed on 10 June 1998, and covered the Houston Ship Channel and the Entrance Channel segment of the Galveston Harbor and Channel. Houston and Harris County voters approved a \$130 million Port of Houston bond issued on 7 November 1989, by a 63 percent to 37 percent margin. The City of Galveston expressed their support for the total project by letters dated January 1987 and 30 October 1995. The Project Cooperation Agreement with the Port of Galveston was executed 21 June 2007.

COMPARISON OF FEDERAL COST ESTIMATES: The current Federal (Corps of Engineers) costs estimate of \$574,570,000 is an increase of \$86,232,000 from the latest estimate (\$488,338,000) presented to Congress (FY 2008). This change includes the following items.

Item	Amount
Repairs to Placement Areas from Hurricane Rita damage	4,217,000
Increase for Additional Capacity for Placement Areas	33,338,000
Adjusted Cost Estimate for Galveston Channel from LRR	5,980,000
Adjustment to Contract costs	9,019,000
Price Escalation on Construction Features	33,678,000
Total	\$ 86,232,000

STATUS OF ENVIRONMENTAL IMPACT STATEMENT: The Final Environmental Impact Statement (FEIS) was filed with the Environmental Protection Agency in 25 November 1988. A supplement to the FEIS has been prepared and was listed in the Federal Register on 24 November 1995. A Post Authorization Change Report was completed and identified that 54 acres of oyster reef were impacted by the barge lanes construction and equal amounts of reef were constructed. An updated environmental analysis has been prepared as part of the Limited Reevaluation Report for the deepening of the Galveston Channel.

OTHER INFORMATION: The total project as authorized by WRDA 96 included channel deepening of the Galveston Entrance Channel, Galveston Harbor and Channel and the Houston Ship Channel to Boggy Bayou in Houston, Texas. Funds to initiate preconstruction engineering and design were appropriated in Fiscal Year 1990. Funds to initiate construction were appropriated in Fiscal Year 1998.

The 45-foot depth of the Houston Ship Channel is complete, but dredging requirements continue for the participation in the first maintenance of the channel reaches in accordance with the Project Cooperation Agreement. Construction of the Environmental Restoration features will continue over the 50-year economic life of the project starting from the completion date of the 45-foot depth, therefore the completion date is 2054. Environmental restoration costs include the costs for additional pumping distance to 3 environmental sites (Atkinson Island, Mid Bay and Bolivar) in the Galveston Bay, construction of the levees for additional capacity at these sites, and creation of the marshes, which include ditching and grass planting.

The upper, mid bay and lower bayou reaches of the Houston Ship Channel have experienced an increase in shoaling, which led to modifications to FY 2005 dredging contracts and depleted the 20-year capacity of the upland dredged material placement areas, as well as the placement areas in the upper part of Galveston Bay (Placement Areas 14 and 15). The depletion of this capacity has led to a change in the scope of work for Fiscal Year 2006 and 2007. Currently the upland placement areas' capacity at all upland sites is being increased to re-establish a 20-year capacity at each site. The capacity of these placement areas must be increased in order for the Houston Ship Channel to be maintained at the authorized depth.

Construction for Beltway 8 additional placement area capacity, originally scheduled to be awarded in FY 07, continues to be delayed due to a problem with environmental clearances and potential hazardous toxic waste in the area. FY08 funding for Beltway 8 will be used to initiate deepening the Galveston Harbor. In FY09 part of the funds for Galveston Harbor will be used to initiate Beltway 8 construction. Remaining construction of Beltway 8 after FY09 will be funded by the Operations and Maintenance appropriation.

The Remaining Benefit - Remaining Cost Ratio for the Houston Ship Channel is currently 3.2 to 1 at 7% interest rate because the construction features associated with dredging the placement areas are not complete, therefore constraining the full realization of benefits. The Remaining Benefit – Remaining Cost Ratio for Galveston Channel is currently 1.7 to 1 at 7% interest rate.

AQUATIC ECOSYSTEM RESTORATION

INVESTIGATIONS

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Guadalupe and San Antonio River Basins, Texas Fort Worth/Galveston Districts	7,577,000	2,098,000	495,000	620,000	793,000	223,000	3,348,000

The study area of the Guadalupe and San Antonio River basins intersects the Edwards Plateau ecological region in south central Texas and extends approximately 110 miles southeasterly from the headwaters in Kerr and Bandera Counties, to the Gulf of Mexico in Refugio and Calhoun Counties. The Guadalupe basin has a drainage area of 6,700 square miles, and the San Antonio River basin 4,180 square miles. Flooding within various portions of the Guadalupe and San Antonio River basins was severe in 1972, 1978 and 1997 when portions of the river basins were declared disaster areas. Major flood events also occurred in 1998, 2000, and 2002. In October 1998, one of the largest of all recent flood events within the region accounted for at least 31 deaths and caused damages estimated at \$800 million. Many communities experienced inundation to rooftop levels, with water velocities great enough to completely demolish brick homes. The July 2002 event was estimated to be near the 500-yr event in certain portions of the watershed. Nine deaths occurred and more than 45,000 homes were damaged or destroyed by floodwaters, with property damage estimates of \$1 billion. During the most recent flood event in June 2004, another three lives were lost. The flooding also had a negative impact on the tourism industry, a major source of income along the Guadalupe River. The study consists of an investigation of the Guadalupe and San Antonio River basins to address improvements in the interest of flood and coastal storm damage reduction (flood risk management), ecosystem restoration, water quality, water supply, recreation and other allied purposes. In response to Texas Senate Bill 1 (1997), alternatives to enhance water supply would include recharge to the Edwards Aquifer. Such alternatives, if adopted, could provide dual benefits of ecosystem restoration and water supply. Both structural and nonstructural solutions are being investigated. There are currently four on-going interim feasibility studies (Cibolo Creek, Leon Creek, Salado Creek, and Alamo Heights) under the Guadalupe-San Antonio River Feasibility Study. The Cibolo Creek, Leon Creek, and Salado Creek Interim Feasibility Studies are multipurpose studies addressing flood and coastal storm damage reduction (flood risk management), ecosystem restoration, water quality and water supply. The Alamo Heights Interim Feasibility Study is focused on flood and coastal storm damage reduction (flood risk management), with a secondary interest in ecosystem restoration. A fifth study under the Guadalupe and San Antonio River Basin authority, the Lower San Antonio River Basin (Tri-County), Texas, study is budgeted under its own line item.

Fiscal Year 2008 funds are being used to complete the plan formulation phase for the Cibolo Creek Interim Feasibility Study, initiate the plan formulation phase for the Leon Creek Interim Feasibility Study, and complete the existing conditions phase for the Alamo Heights Interim Feasibility Study. Fiscal Year 2009 funds would be used to complete the draft interim feasibility report for the Cibolo Creek Interim Feasibility Study, complete the plan formulation phase of the Leon Creek Interim Feasibility Study, and initiate the plan formulation phase of Alamo Heights Interim Feasibility Study. The preliminary estimated cost of the overall feasibility study is \$14,082,000, which is to be 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	\$14,618,000
Reconnaissance Phase (Federal)	536,000
Feasibility Phase (Federal)	7,041,000
Feasibility Phase (Non-Federal)	7,041,000

Guadalupe and San Antonio River Basins, Texas (continued)

The completion date for the Cibolo Creek Interim Feasibility Study is to be determined. The completion date for the Leon Creek Interim Feasibility Study is to be determined. The completion dates for the Alamo Heights and Salado Creek Interim Feasibility Studies is to be determined. The completion date for the overall Guadalupe and San Antonio River Basins, Texas, feasibility study is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Nueces River and Tributaries, Texas Fort Worth and Galveston Districts	6,001,000	599,000	495,000	400,000	461,000	250,000	3,796,000

The Nueces River basin lies in the southern part of Texas. The Nueces River basin has an overall length of approximately 235 miles, a maximum width of 115 miles, and a total drainage area of 17,075 square miles. The Nueces River flows in a southeasterly direction and enters Nueces Bay near Corpus Christi, Texas. The Frio River is a principal tributary and drains the northeast portion of the Nueces River basin. The watershed includes portions of three major aquifers – the Edwards, Carrizo-Wilcox, and Gulf Coast. The Edwards Aquifer is the major source of water for the San Antonio and Bexar County metropolitan areas. This aquifer accounts for about 20 percent of the basin and is recognized to have high potential for groundwater recharge. The watershed also crosses many political, jurisdictional, and geographical boundaries and pits groundwater systems management against surface water systems management within the same basin. Historic land use practices, drought and poor water resource management have resulted in significant environmental degradation. The lack of fresh-water inflows into the Nueces Bay has resulted in hyper-saline conditions that have severely diminished the habitat suitability of approximately 20,000 acres of the Nueces delta area. Additionally, existing surface and groundwater sources are not sufficient to assure an adequate water supply to fulfill future needs. Floods in 1998, 2002 and 2007 resulted in significant property and infrastructure damages. The 905(b) reconnaissance report, completed in December 2002, identified a Federal interest in evaluating opportunities for ecosystem restoration, water quality, water supply, flood and coastal storm damage reduction (flood risk management), and recreation. The study sponsors are the Nueces River Authority, San Antonio Water System, San Antonio River Authority, Guadalupe-Blanco River Authority and the city of Corpus Christi, Texas. The Feasibility Cost Sharing Agreement was signed on 24 September 2004.

Fiscal Year 2008 funds are being used to document existing conditions, complete updates to existing hydrologic and hydraulic models for the upper basin and initiate development of a hydrodynamic routing model for the Nueces delta and new hydrologic and hydraulic models for the mid and lower basin. Fiscal Year 2009 funds will be used to continue the development of the mid and lower basin hydrologic and hydraulic models and initiate development of ecological models in coordination with local, state, and Federal resource agencies. The estimated cost of the feasibility phase is \$11,602,000, which is to be 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	\$11,802,000
Reconnaissance Phase – Federal	200,000
Feasibility Phase – Federal	5,801,000
Feasibility Phase - non-Federal	5,801,000

The completion date for the Nueces River and Tributaries, Texas, feasibility study is to be determined.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Division: Southwestern

Study	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Tentative Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Rio Grande Basin, Texas Fort Worth/Galveston Districts	1,107,000	216,000	148,000	120,000	219,000	100,000	304,000

The Rio Grande basin is located in the states of Colorado, New Mexico and Texas, and encompasses an area of over 160,000 square miles, from the headwaters of the Rio Grande in central Colorado to its mouth on the Gulf of Mexico near Brownsville, Texas. The study area includes the Rio Grande basin within the State of Texas. The reconnaissance study identified ecosystem degradation, flooding, and water conveyance and delivery as major issues in the basin. River flow regulation by two major international dams, Falcon and Amistad, for flood control and water delivery on the main stem has changed the historical flow regime of the Rio Grande. The overall basin study will evaluate current conditions and make recommendations for improving water management in the Rio Grande basin in order to restore aquatic habitat, improve water quality and reduce flood damages. Additionally, there is a need to improve reliability of future municipal, industrial, and agricultural water supplies in accordance with international treaty requirements, and a need to dedicate water for items such as low flow releases, restoration of fish and wildlife habitat, and protection of endangered species such as ocelot, jaguarondi, bald eagle, least interior tern, brown pelican and peregrine falcon. The study will identify ways to integrate the programs, policies, and resources of all concerned agencies into a multi-objective water resources plan. This study is being closely coordinated with the International Boundary and Water Commission and the stakeholder members of the Consortium of the Rio Grande, in accordance with the Memorandum of Agreement signed with Federal agencies and the Consortium of the Rio Grande, as part of the American Heritage Rivers Initiative. The city of Laredo in Webb County is a major port of entry for international trade and tourism between the United States and Mexico. A Feasibility Cost Sharing Agreement with the city of Laredo was signed on 29 September 2004, for an interim feasibility study to be conducted by the Fort Worth District. This interim study is focusing on the Chacon Creek watershed where development has caused significant changes in the basin hydrology, resulting in an increased flood risk for approximately 554 homes and 71 commercial and public structures along Chacon Creek. The study is evaluating significant and recurrent flooding along the creek from Casa Blanca Lake to the confluence with the Rio Grande. Ecosystem restoration, passive recreation, and water management opportunities within the Chacon Creek watershed will also be evaluated. Fiscal Year 2008 funds are being used to complete plan formulation and conduct the Alternative Formulation Briefing. Fiscal Year 2009 funds will be used to initiate preparation of the draft Interim Feasibility Report. The estimated cost of the Laredo Interim Feasibility Study is \$1,880,000, which is to be 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	\$2,047,000
Reconnaissance Phase (Federal)	167,000
Feasibility Phase (Federal)	940,000
Feasibility Phase (Non-Federal)	940,000

The completion date for the Laredo Interim Feasibility Study is to be determined.

System Codes and Names

ACF	Apalachicola-Chattahoochee & Flint Rivers (KAS	Kaskaskia River	RED	Red River
AKS	Alaska System	KAW	Kanawha River	RGR	Rio Grande System
AMR	Alabama - Mississippi Basin	LCB	Lower Chesapeake	SCA	Southern California System
AMS	Allegheny and Monongahela Rivers	LCO	Lower Colorado System	SEC	Southern East Coast
ARK	Arkansas River	LDR	Lower Delaware	SNE	Southern New England
BRA	Brazos River System	LGC	Louisiana Gulf Coast	SPR	Susquehanna and Potomac
BSG	Big Sandy River	LHL	Lower Hudson - Long Island	TCR	Tennessee and Cumberland Rivers
COL	Columbia River System	LMS	Lower Mississippi River	TGC	Texas Gulf Coast
CRS	Colorado River System	MOR	Missouri River	TRI	Trinity River System
EGC	Eastern Gulf Coast	MUS	Muskingum River	UAR	Upper Arkansas River
FLB	Florida Basins	NCA	Northern California System	UCB	Upper Chesapeake
GBS	Great Basin System	NCB	North Carolina Basins	UCO	Upper Colorado System
GLS	Great Lakes	NEC	Neches System	UDR	Upper Delaware
GRB	Green and Barren Rivers	NNE	Northern New England	UHL	Upper Hudson and Lake Champlain
GSB	Georgia - South Carolina Basins	OBL	Ouachita-Black Rivers	UMS	Upper Mississippi River
HAS	Hawaii System	OHI	Ohio River	URR	Upper Red River
ILW	Illinois Waterway	PEL	Pearl River	WAB	Wabash River
JAM	James River	PNW	Pacific Northwest System	WHT	White River

APPROPRIATION TITLE: Operation and Maintenance, FY 2009

SUMMARY BY SYSTEM			
ACF - Apalachicola-Chattahoochee and Flint Rivers	36,392	MUS - Muskingum River	10,471
AKS - Alaska System	24,024	NCA - Northern California System	67,926
AMR - Alabama - Mississippi Basin	78,172	NCB - North Carolina Basins	51,183
AMS - Allegheny and Monongahela Rivers	45,799	NEC - Neches System	8,555
ARK - Arkansas River	61,577	NNE - Northern New England	5,272
BRA - Brazos River System	28,483	OBL - Ouachita-Black Rivers	27,800
BSG - Big Sandy River	12,569	OHI - Ohio River	154,206
COL - Columbia River System	238,642	PEL - Pearl River	193
CRS - Colorado River System	2,386	PNW - Pacific Northwest System	58,182
EGC - Eastern Gulf Coast	42,539	RED - Red River	17,633
FLB - Florida Basins	22,841	RGR - Rio Grande System	10,316
GBS - Great Basin System	1,004	SCA - Southern California System	37,892
GLS - Great Lakes	104,725	SEC - Southern East Coast	72,438
GRB - Green and Barren Rivers	17,804	SNE - Southern New England	38,911
GSB - Georgia- South Carolina Basins	32,029	SPR - Susquehanna and Potomac	16,548
HAS - Hawaii System	1,396	TCR - Tennessee and Cumberland Rivers	83,496
ILW - Illinois Waterway	39,466	TGC - Texas Gulf Coast	101,571
JAM - James River	5,689	TRI - Trinity River System	23,352
KAS - Kaskaskia River	15,389	UAR - Upper Arkansas River	43,320
KAW - Kanawha River	15,173	UCB - Upper Chesapeake	28,614
LCB - Lower Chesapeake	17,402	UCO - Upper Colorado System	648
LCO - Lower Colorado System	3,098	UDR - Upper Delaware	3,290
LDR - Lower Delaware	45,352	UHL - Upper Hudson and Lake Champlain	2,730
LGC - Louisiana Gulf Coast	39,472	UMS - Upper Mississippi River	185,910
LHL - Lower Hudson - Long Island	34,293	URR - Upper Red River	35,734
LMS - Lower Mississippi River	72,337	WAB - Wabash River	11,465
MOR - Missouri River	179,913	WHT - White River	32,968
		Subtotal	2,348,590
		Remaining Items	126,140
		Grand Total for O&M	2,474,730

System: ACF - Apalachicola-Chattahoochee and Flint Rivers

ALABAMA

WALTER F GEORGE LOCK AND DAM, AL & GA

FLORIDA

JIM WOODRUFF LOCK AND DAM, LAKE SEMINOLE, FL, AL & GA

GEORGIA

APALACHICOLA, CHATTAHOOCHEE AND FLINT RIVERS, GA, AL & FL

BUFORD DAM AND LAKE SIDNEY LANIER, GA

WEST POINT DAM AND LAKE, GA AND AL

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	4,215
Environmental Stewardship	1,915
Flood and Coastal Storm Damage Reduction	1,081
Hydropower	17,112
Recreation	12,069
Total	36,392

System: AKS - Alaska System

ALASKA

- ANCHORAGE HARBOR, AK
- CHENA RIVER LAKES, AK
- DILLINGHAM HARBOR, AK
- HOMER HARBOR, AK
- INSPECTION OF COMPLETED WORKS, AK
- NINILCHIK HARBOR, AK
- NOME HARBOR, AK
- PROJECT CONDITION SURVEYS, AK

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	20,741
Environmental Stewardship	236
Flood and Coastal Storm Damage Reduction	2,692
Recreation	355
Total	24,024

System: AMR - Alabama - Mississippi Basin

ALABAMA

ALABAMA - COOSA COMPREHENSIVE WATER STUDY, AL
 ALABAMA RIVER LAKES, AL
 BLACK WARRIOR AND TOMBIGBEE RIVERS, AL
 INSPECTION OF COMPLETED WORKS, AL
 SCHEDULING RESERVOIR OPERATIONS, AL
 TENNESSEE - TOMBIGBEE WATERWAY WILDLIFE MITIGATION, AL & MS
 TENNESSEE - TOMBIGBEE WATERWAY, AL & MS

GEORGIA

ALLATOONA LAKE, GA
 CARTERS DAM AND LAKE, GA

MISSISSIPPI

EAST FORK, TOMBIGBEE RIVER, MS
 INSPECTION OF COMPLETED WORKS, MS
 OKATIBBEE LAKE, MS

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	35,808
Environmental Stewardship	5,752
Flood and Coastal Storm Damage Reduction	2,435
Hydropower	16,639
Recreation	17,163
Water Supply	375
Total	78,172

System: AMS - Allegheny and Monongahela Rivers

NEW YORK

INSPECTION OF COMPLETED WORKS, NY

PENNSYLVANIA

ALLEGHENY RIVER, PA
 CONEMAUGH RIVER LAKE, PA
 CROOKED CREEK LAKE, PA
 EAST BRANCH CLARION RIVER LAKE, PA
 INSPECTION OF COMPLETED WORKS, PA
 JOHNSTOWN, PA
 KINZUA DAM AND ALLEGHENY RESERVOIR, PA
 LOYALHANNA LAKE, PA
 MAHONING CREEK LAKE, PA
 MONONGAHELA RIVER, PA
 PUNXSUTAWNEY, PA
 TIONESTA LAKE, PA
 UNION CITY LAKE, PA
 WOODCOCK CREEK LAKE, PA
 YOUGHIOGHENY RIVER LAKE, PA AND MD

WEST VIRGINIA

ELKINS, WV
 INSPECTION OF COMPLETED WORKS, WV
 STONEWALL JACKSON LAKE, WV
 TYGART LAKE, WV

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	18,950
Environmental Stewardship	434
Flood and Coastal Storm Damage Reduction	23,606
Hydropower	95
Recreation	2,654
Water Supply	60
Total	45,799

System: ARK - Arkansas River

ARKANSAS

BLUE MOUNTAIN LAKE, AR
 DARDANELLE LOCK & DAM, AR
 INSPECTION OF COMPLETED WORKS, AR
 MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM, AR
 NIMROD LAKE, AR
 OZARK - JETA TAYLOR LOCK AND DAM, AR

COLORADO

JOHN MARTIN RESERVOIR, CO
 TRINIDAD LAKE, CO

NEW MEXICO

CONCHAS LAKE, NM

OKLAHOMA

HEYBURN LAKE, OK
 MCCLELLAN-KERR ARKANSAS RIVER NAVIGATION SYSTEM, OK
 WEBBERS FALLS LOCK AND DAM, OK
 WISTER LAKE, OK

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	36,370
Environmental Stewardship	1,827
Flood and Coastal Storm Damage Reduction	6,012
Hydropower	6,710
Recreation	10,618
Water Supply	40
Total	61,577

System: BRA - Brazos River System

TEXAS

- AQUILLA LAKE, TX
- BELTON LAKE, TX
- GRANGER DAM AND LAKE, TX
- NORTH SAN GABRIEL DAM AND LAKE GEORGETOWN, TX
- PROCTOR LAKE, TX
- SOMERVILLE LAKE, TX
- STILLHOUSE HOLLOW DAM, TX
- TEXAS WATER ALLOCATION ASSESSMENT, TX
- WACO LAKE, TX
- WHITNEY LAKE, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	1,443
Flood and Coastal Storm Damage Reduction	14,769
Hydropower	1,430
Recreation	10,495
Water Supply	346
Total	28,483

System: BSG - Big Sandy River

KENTUCKY

BIG SANDY HARBOR, KY
 DEWEY LAKE, KY
 FISHTRAP LAKE, KY
 INSPECTION OF COMPLETED WORKS, KY
 PAINTSVILLE LAKE, KY
 YATESVILLE LAKE, KY

VIRGINIA

JOHN W FLANNAGAN DAM AND RESERVOIR, VA
 NORTH FORK OF POUND RIVER LAKE, VA

WEST VIRGINIA

INSPECTION OF COMPLETED WORKS, WV
 R D BAILEY LAKE, WV

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	1,250
Environmental Stewardship	271
Flood and Coastal Storm Damage Reduction	7,870
Recreation	3,141
Water Supply	37
Total	12,569

System: COL - Columbia River System

IDAHO

ALBENI FALLS DAM, ID
 DWORSHAK DAM AND RESERVOIR, ID
 INSPECTION OF COMPLETED WORKS, ID
 LUCKY PEAK LAKE, ID
 SCHEDULING RESERVOIR OPERATIONS, ID

MONTANA

LIBBY DAM, MT

OREGON

BLUE RIVER LAKE, OR
 BONNEVILLE LOCK AND DAM, OR & WA
 COLUMBIA & LWR WILLAMETTE R BLW VANCOUVER, WA & PORTLAND, OR
 COLUMBIA RIVER AT THE MOUTH, OR & WA
 COLUMBIA RIVER BETWEEN VANCOUVER, WA AND THE DALLES, OR
 COLUMBIA RIVER FISH MITIGATION, WA, OR & ID
 COTTAGE GROVE LAKE, OR
 COUGAR LAKE, OR
 DETROIT LAKE, OR
 DORENA LAKE, OR
 FALL CREEK LAKE, OR
 FERN RIDGE LAKE, OR
 GREEN PETER - FOSTER LAKES, OR
 HILLS CREEK LAKE, OR
 INSPECTION OF COMPLETED ENVIRONMENTAL PROJECTS
 INSPECTION OF COMPLETED WORKS, OR
 JOHN DAY LOCK AND DAM, OR & WA
 LOOKOUT POINT LAKE, OR
 MCNARY LOCK AND DAM, OR & WA
 PROJECT CONDITION SURVEYS, OR

OREGON, continued

SCHEDULING RESERVOIR OPERATIONS, OR
 SKIPANON CHANNEL, OR
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, OR
 WILLAMETTE RIVER TEMPERATURE CONTROL, OR
 WILLAMETTE RIVER AT WILLAMETTE FALLS, OR
 WILLAMETTE RIVER BANK PROTECTION, OR
 WILLOW CREEK LAKE, OR

WASHINGTON

CHIEF JOSEPH DAM GAS ABATEMENT, WA
 CHIEF JOSEPH DAM, WA
 COLUMBIA RIVER AT BAKER BAY, WA & OR
 COLUMBIA RIVER BETWEEN CHINOOK AND SAND ISLAND, WA
 ICE HARBOR LOCK AND DAM, WA
 INSPECTION OF COMPLETED WORKS, WA
 LITTLE GOOSE LOCK AND DAM, WA
 LOWER GRANITE LOCK AND DAM, WA
 LOWER MONUMENT LOCK AND DAM, WA
 LOWER SNAKE RIVER FISH & WILDLIFE COMPENSATION, WA, OR & ID
 MILL CREEK LAKE, WA
 MT ST HELENS SEDIMENT CONTROL, WA
 THE DALLES LOCK AND DAM, WA & OR

WYOMING

INSPECTION OF COMPLETED WORKS, WY
 JACKSON HOLE LEVEES, WY

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	89,871
Environmental Restoration	43
Environmental Stewardship	16,233
Flood and Coastal Storm Damage Reduction	44,317
Hydropower	70,312
Recreation	15,456
Water Supply	2,410
Total	238,642

System: CRS - Colorado River System

TEXAS

HORDS CREEK LAKE, TX

O C FISHER DAM AND LAKE, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	114
Flood and Coastal Storm Damage Reduction	1,482
Recreation	766
Water Supply	24
Total	2,386

System: EGC - Eastern Gulf Coast

ALABAMA

GULF INTRACOASTAL WATERWAY, AL
 MOBILE HARBOR, AL
 PROJECT CONDITION SURVEYS, AL
 WATER/ENVIRONMENTAL CERTIFICATION, AL

FLORIDA

ESCAMBIA AND CONECUH RIVERS, FL
 MANATEE HARBOR, FL
 PANAMA CITY HARBOR, FL
 PENSACOLA HARBOR, FL
 PROJECT CONDITION SURVEYS, FL
 TAMPA HARBOR, FL
 WATER/ENVIRONMENTAL CERTIFICATION, FL

MISSISSIPPI

GULFPORT HARBOR, MS
 PASCAGOULA HARBOR, MS
 PROJECT CONDITION SURVEYS, MS
 WATER/ENVIRONMENTAL CERTIFICATION, MS

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	42,539
Total	42,539

System: FLB - Florida Basins

FLORIDA

CENTRAL & SOUTHERN FLORIDA, FL
 INSPECTION OF COMPLETED WORKS, FL
 OKEECHOBEE WATERWAY, FL
 REMOVAL OF AQUATIC GROWTH
 SOUTH FLORIDA EVERGLADES ECOSYSTEM RESTORATION, FL

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	8,475
Environmental Restoration	357
Environmental Stewardship	906
Flood and Coastal Storm Damage Reduction	11,558
Recreation	1,545
Total	22,841

System: GBS - Great Basin System

NEVADA

INSPECTION OF COMPLETED WORKS, NV
PINE AND MATHEWS CANYONS LAKES, NV

UTAH

INSPECTION OF COMPLETED WORKS, UT
SCHEDULING RESERVOIR OPERATIONS, UT

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	52
Flood and Coastal Storm Damage Reduction	952
Total	1,004

System: GLS - Great Lakes

ILLINOIS

CALUMET HARBOR AND RIVER, IL & IN
CHICAGO HARBOR, IL
CHICAGO RIVER, IL
INSPECTION OF COMPLETED WORKS, IL
LAKE MICHIGAN DIVERSION, IL
PROJECT CONDITION SURVEYS, IL
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, IL
WAUKEGAN HARBOR, IL

INDIANA

BURNS WATERWAY HARBOR, IN
INDIANA HARBOR, CONFINED DISPOSAL FACILITY, IN
INDIANA HARBOR, IN
INSPECTION OF COMPLETED WORKS, IN
PROJECT CONDITION SURVEYS, IN
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, IN

MICHIGAN

CHANNELS IN LAKE ST CLAIR, MI
CHARLEVOIX HARBOR, MI
DETROIT RIVER, MI
GRAND HAVEN HARBOR, MI
GRAYS REEF PASSAGE, MI
HOLLAND HARBOR, MI
INSPECTION OF COMPLETED WORKS, MI
KEWEENAW WATERWAY, MI
LUDINGTON HARBOR, MI
MONROE HARBOR, MI
MUSKEGON HARBOR, MI
ONTONAGON HARBOR, MI
PRESQUE ISLE HARBOR, MI
PROJECT CONDITION SURVEYS, MI
ROUGE RIVER, MI
SAGINAW RIVER, MI
SEBEWAING RIVER, MI
ST CLAIR RIVER, MI
ST JOSEPH HARBOR, MI
ST MARYS RIVER, MI
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, MI

MINNESOTA

DULUTH - SUPERIOR HARBOR, MN & WI
INSPECTION OF COMPLETED WORKS, MN
PROJECT CONDITION SURVEYS, MN
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, MN
TWO HARBORS, MN

NEW YORK

BLACK ROCK CHANNEL AND TONAWANDA HARBOR, NY
BUFFALO HARBOR, NY
INSPECTION OF COMPLETED WORKS, NY
LITTLE SODUS BAY HARBOR, NY
MOUNT MORRIS DAM, NY
PROJECT CONDITION SURVEYS, NY
ROCHESTER HARBOR, NY
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, NY

OHIO

ASHTABULA HARBOR, OH
CLEVELAND HARBOR, OH
CONNEAUT HARBOR, OH
FAIRPORT HARBOR, OH
HURON HARBOR, OH
INSPECTION OF COMPLETED WORKS, OH
LORAIN HARBOR, OH
PROJECT CONDITION SURVEYS, OH
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, OH
TOLEDO HARBOR, OH

PENNSYLVANIA

INSPECTION OF COMPLETED WORKS, PA
PROJECT CONDITION SURVEYS, PA
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, PA

System: GLS - Great Lakes, continued

WISCONSIN

FOX RIVER, WI
 GREEN BAY HARBOR, WI
 INSPECTION OF COMPLETED WORKS, WI
 MILWAUKEE HARBOR, WI
 PROJECT CONDITION SURVEYS, WI
 STURGEON BAY HARBOR AND LAKE MICHIGAN SHIP CANAL, WI
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, WI

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	89,286
Environmental Stewardship	282
Flood and Coastal Storm Damage Reduction	12,297
Hydropower	1,840
Recreation	1,020
Total	104,725

System: GRB - Green and Barren Rivers

KENTUCKY

BARREN RIVER LAKE, KY
 GREEN AND BARREN RIVERS, KY
 GREEN RIVER LAKE, KY
 GREEN RIVER, KY
 INSPECTION OF COMPLETED WORKS, KY
 NOLIN LAKE, KY
 ROUGH RIVER LAKE, KY

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	2,683
Environmental Stewardship	603
Flood and Coastal Storm Damage Reduction	12,117
Recreation	2,361
Water Supply	40
Total	17,804

System: GSB - Georgia- South Carolina Basins

GEORGIA

HARTWELL LAKE, GA & SC
 INSPECTION OF COMPLETED ENVIRONMENTAL PROJECTS
 INSPECTION OF COMPLETED WORKS, GA
 J STROM THURMOND LAKE, GA & SC
 RICHARD B RUSSELL DAM AND LAKE, GA & SC
 SAVANNAH RIVER BELOW AUGUSTA, GA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	333
Environmental Restoration	63
Environmental Stewardship	2,704
Flood and Coastal Storm Damage Reduction	677
Hydropower	17,612
Recreation	10,415
Water Supply	225
Total	32,029

System: HAS - Hawaii System

HAWAII

BARBERS POINT HARBOR, HI
INSPECTION OF COMPLETED WORKS, HI
PROJECT CONDITION SURVEYS, HI

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	537
Flood and Coastal Storm Damage Reduction	659
Recreation	200
Total	1,396

System: ILW - Illinois Waterway

ILLINOIS

FARM CREEK RESERVOIRS, IL
ILLINOIS WATERWAY, IL & IN
INSPECTION OF COMPLETED WORKS, IL

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	37,215
Environmental Stewardship	225
Flood and Coastal Storm Damage Reduction	1,345
Recreation	681
Total	39,466

System: JAM - James River

VIRGINIA

GATHRIGHT DAM AND LAKE MOOMAW, VA
JAMES RIVER CHANNEL, VA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	3,667
Flood and Coastal Storm Damage Reduction	2,022
Total	5,689

System: KAS - Kaskaskia River

ILLINOIS

CARLYLE LAKE, IL
 KASKASKIA RIVER NAVIGATION, IL
 LAKE SHELBYVILLE, IL
 REND LAKE, IL

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	1,553
Environmental Stewardship	1,823
Flood and Coastal Storm Damage Reduction	4,527
Recreation	7,333
Water Supply	153
Total	15,389

System: KAW - Kanawha River

WEST VIRGINIA

BLUESTONE LAKE, WV
 INSPECTION OF COMPLETED WORKS, WV
 KANAWHA RIVER LOCKS AND DAMS, WV
 SUMMERSVILLE LAKE, WV
 SUTTON LAKE, WV

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	9,310
Environmental Stewardship	119
Flood and Coastal Storm Damage Reduction	3,813
Recreation	1,911
Water Supply	20
Total	15,173

System: LCB - Lower Chesapeake

VIRGINIA

- ATLANTIC INTRACOASTAL WATERWAY - ACC, VA
- ATLANTIC INTRACOASTAL WATERWAY - DSC, VA
- CHINCOTEAGUE HARBOR OF REFUGE, VA
- CHINCOTEAGUE INLET, VA
- HAMPTON RDS, NORFOLK & NEWPORT NEWS HBR, VA (DRIFT REMOVAL)
- INSPECTION OF COMPLETED WORKS, VA
- LYNNHAVEN INLET, VA
- NORFOLK HARBOR, VA
- PROJECT CONDITION SURVEYS, VA
- RUDEE INLET, VA
- WATER/ENVIRONMENTAL CERTIFICATION, VA
- WATERWAY ON THE COAST OF VIRGINIA, VA
- YORK RIVER, VA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	16,612
Flood and Coastal Storm Damage Reduction	790
Total	17,402

System: LCO - Lower Colorado System

ARIZONA

ALAMO LAKE, AZ
 INSPECTION OF COMPLETED WORKS, AZ
 PAINTED ROCK DAM, AZ
 SCHEDULING RESERVOIR OPERATIONS, AZ
 WHITLOW RANCH DAM, AZ

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	134
Flood and Coastal Storm Damage Reduction	2,921
Recreation	43
Total	3,098

System: LDR - Lower Delaware

DELAWARE

DELAWARE BAY COASTLINE, ROOSEVELT INLET TO LEWES BEACH, DE
 INTRACOASTAL WATERWAY, DELAWARE R TO CHESAPEAKE BAY, DE & MD
 INTRACOASTAL WATERWAY, REHOBOTH BAY TO DELAWARE BAY, DE
 MISPILLION RIVER, DE
 MURDERKILL RIVER, DE
 PROJECT CONDITION SURVEYS, DE
 WILMINGTON HARBOR, DE

NEW JERSEY

BARNEGAT INLET, NJ
 CAPE MAY INLET TO LOWER TOWNSHIP, NJ
 COLD SPRING INLET, NJ
 DELAWARE RIVER AT CAMDEN, NJ
 DELAWARE RIVER, PHILADELPHIA TO THE SEA, NJ, PA & DE
 DELAWARE RIVER, PHILADELPHIA, PA TO TRENTON, NJ
 INSPECTION OF COMPLETED WORKS, NJ
 LOWER CAPE MAY MEADOWS, CAPE MAY POINT, NJ
 MANASQUAN RIVER, NJ
 NEW JERSEY INTRACOASTAL WATERWAY, NJ
 SALEM RIVER, NJ

PENNSYLVANIA

BLUE MARSH LAKE, PA
 INSPECTION OF COMPLETED WORKS, PA
 SCHUYLKILL RIVER, PA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	42,516
Environmental Stewardship	300
Flood and Coastal Storm Damage Reduction	826
Recreation	1,710
Total	45,352

System: LGC - Louisiana Gulf Coast

LOUISIANA

- BARATARIA BAY WATERWAY, LA
- BAYOU LAFOURCHE AND LAFOURCHE JUMP WATERWAY, LA
- BAYOU SEGNETTE WATERWAY, LA
- BAYOU TECHE AND VERMILION RIVER, LA
- CALCASIEU RIVER AND PASS, LA
- FRESHWATER BAYOU, LA
- GULF INTRACOASTAL WATERWAY, LA
- HOUMA NAVIGATION CANAL, LA
- MERMENTAU RIVER, LA
- WATERWAY FROM EMPIRE TO THE GULF, LA
- WATERWAY FROM INTRACOASTAL WATERWAY TO B DULAC, LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	39,165
Flood and Coastal Storm Damage Reduction	256
Recreation	51
Total	39,472

System: LHL - Lower Hudson - Long Island

NEW JERSEY

NEWARK BAY, HACKENSACK AND PASSAIC RIVERS, NJ
 PROJECT CONDITION SURVEYS, NJ
 RARITAN AND SANDY HOOKS BAYS, LEONARD, NJ
 RARITAN RIVER TO ARTHUR KILL CUT-OFF, NJ
 RARITAN RIVER, NJ
 SHARK RIVER, NJ
 SHOAL HARBOR AND COMPTON CREEK, NJ
 SHREWSBURY RIVER, MAIN CHANNEL, NJ

NEW YORK

BRONX RIVER, NY
 BUTTERMILK CHANNEL, NY
 EAST RIVER, NY
 EAST ROCKAWAY INLET, NY
 EASTCHESTER CREEK, NY
 FIRE ISLAND INLET TO JONES INLET, NY
 FLUSHING BAY AND CREEK, NY
 GREAT SOUTH BAY, NY
 HUDSON RIVER CHANNEL, NY
 INSPECTION OF COMPLETED WORKS, NY
 JAMAICA BAY, NY
 JONES INLET, NY
 LAKE MONTAUK HARBOR, NY
 LONG ISLAND INTRACOASTAL WATERWAY, NY
 MATTITUCK HARBOR, NY
 MORICHES INLET, NY
 NEW YORK AND NEW JERSEY CHANNELS, NY
 NEW YORK HARBOR, NY
 NEW YORK HARBOR, NY & NJ (DRIFT REMOVAL)
 NEW YORK HARBOR, NY & NJ (PREVENTION OF OBSTRUCTIVE DEPOSITS)
 NEWTOWN CREEK, NY
 PORTCHESTER HARBOR, NY
 PROJECT CONDITION SURVEYS, NY
 SHINNECOCK INLET, NY
 WESTCHESTER CREEK, NY

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	33,998
Flood and Coastal Storm Damage Reduction	295
Total	34,293

System: LMS - Lower Mississippi River

ARKANSAS

HELENA HARBOR, PHILLIPS COUNTY, AR
 INSPECTION OF COMPLETED WORKS, AR
 OSCEOLA HARBOR, AR
 PROJECT CONDITION SURVEYS, AR
 YELLOW BEND PORT, AR

ILLINOIS

INSPECTION OF COMPLETED WORKS, IL
 PROJECT CONDITION SURVEYS, IL

KENTUCKY

ELVIS STAHR (HICKMAN) HARBOR, KY
 INSPECTION OF COMPLETED WORKS, KY
 PROJECT CONDITION SURVEYS, KY

LOUISIANA

ATCHAFALAYA RIVER AND BAYOUS CHENE, BOEUF & BLACK, LA
 BAYOU TECHE, LA
 INSPECTION OF COMPLETED WORKS, LA
 LAKE PROVIDENCE HARBOR, LA
 MADISON PARISH PORT, LA
 MISSISSIPPI RIVER OUTLETS AT VENICE, LA
 MISSISSIPPI RIVER, BATON ROUGE TO THE GULF OF MEXICO, LA
 REMOVAL OF AQUATIC GROWTH

MISSISSIPPI

CLAIBORNE COUNTY PORT, MS
 INSPECTION OF COMPLETED WORKS, MS
 MOUTH OF YAZOO RIVER, MS
 PROJECT CONDITION SURVEYS, MS
 ROSEDALE HARBOR, MS
 YAZOO RIVER, MS

MISSOURI

CARUTHERSVILLE HARBOR, MO
 INSPECTION OF COMPLETED WORKS, MO
 NEW MADRID HARBOR, MO
 PROJECT CONDITION SURVEYS, MO

TENNESSEE

INSPECTION OF COMPLETED WORKS, TN
 PROJECT CONDITION SURVEYS, TN
 WOLF RIVER HARBOR, TN

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	69,706
Flood and Coastal Storm Damage Reduction	2,631
Total	72,337

System: MOR - Missouri River

COLORADO

BEAR CREEK LAKE, CO
CHATFIELD LAKE, CO
CHERRY CREEK LAKE, CO
INSPECTION OF COMPLETED WORKS, CO

IOWA

INSPECTION OF COMPLETED WORKS, IA
MISSOURI R FISH AND WILDLIFE RECOVERY, IA, KS, MO, MT, NE, ND & SD
MISSOURI RIVER - KENSLERS BEND, NE TO SIOUX CITY, IA
MISSOURI RIVER - SIOUX CITY TO THE MOUTH, IA,KS,MO & NE
RATHBUN LAKE, IA

KANSAS

CLINTON LAKE, KS
HILLSDALE LAKE, KS
KANOPOLIS LAKE, KS
MELVERN LAKE, KS
MILFORD LAKE, KS
PERRY LAKE, KS
POMONA LAKE, KS
TUTTLE CREEK LAKE, KS
WILSON LAKE, KS

MISSOURI

HARRY S TRUMAN DAM AND RESERVOIR, MO
INSPECTION OF COMPLETED WORKS, MO
LITTLE BLUE RIVER LAKES, MO
LONG BRANCH LAKE, MO
POMME DE TERRE LAKE, MO
SCHEDULING RESERVOIR OPERATIONS, MO
SMITHVILLE LAKE, MO
STOCKTON LAKE, MO

MONTANA

FT PECK DAM AND LAKE, MT
INSPECTION OF COMPLETED WORKS, MT
SCHEDULING RESERVOIR OPERATIONS, MT

NEBRASKA

GAVINS POINT DAM, LEWIS AND CLARK LAKE, NE & SD
HARLAN COUNTY LAKE, NE
INSPECTION OF COMPLETED WORKS, NE
PAPILLION CREEK, NE
SALT CREEK AND TRIBUTARIES, NE

NORTH DAKOTA

BOWMAN HALEY, ND
GARRISON DAM, LAKE SAKAKAWEA, ND
INSPECTION OF COMPLETED WORKS, ND
PIPESTEM LAKE, ND
SCHEDULING RESERVOIR OPERATIONS, ND

SOUTH DAKOTA

BIG BEND DAM, LAKE SHARPE, SD
COLD BROOK LAKE, SD
COTTONWOOD SPRINGS LAKE, SD
FORT RANDALL DAM, LAKE FRANCIS CASE, SD
INSPECTION OF COMPLETED WORKS, SD
OAHE DAM, LAKE OAHE, SD & ND
SCHEDULING RESERVOIR OPERATIONS, SD

System: MOR - Missouri River, continued

WYOMING

INSPECTION OF COMPLETED WORKS, WY
 SCHEDULING RESERVOIR OPERATIONS, WY

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	29,890
Environmental Stewardship	11,221
Flood and Coastal Storm Damage Reduction	52,554
Hydropower	67,048
Recreation	19,109
Water Supply	91
Total	179,913

System: MUS - Muskingum River

OHIO

DILLON LAKE, OH
 INSPECTION OF COMPLETED WORKS, OH
 MASSILLON LOCAL PROTECTION PROJECT, OH
 MUSKINGUM RIVER LAKES, OH
 NORTH BRANCH KOKOSING RIVER LAKE, OH
 ROSEVILLE LOCAL PROTECTION PROJECT, OH

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	57
Flood and Coastal Storm Damage Reduction	10,016
Recreation	398
Total	10,471

System: NCA - Northern California System

CALIFORNIA

- BLACK BUTTE LAKE, CA
- BUCHANAN DAM, HV EASTMAN LAKE, CA
- COYOTE VALLEY DAM, LAKE MENDOCINO, CA
- DRY CREEK (WARM SPRINGS) LAKE & CHANNEL, CA
- FARMINGTON DAM, CA
- HIDDEN DAM, HENSLEY LAKE, CA
- HUMBOLDT HARBOR AND BAY, CA
- INSPECTION OF COMPLETED WORKS, CA
- MARTIS CREEK LAKE, CA & NV
- MERCED COUNTY STREAMS, CA
- NEW HOGAN LAKE, CA
- NEW MELONES LAKE, DOWNSTREAM CHANNEL, CA
- OAKLAND HARBOR, CA
- PROJECT CONDITION SURVEYS, CA
- RICHMOND HARBOR, CA
- SACRAMENTO RIVER (30 FOOT PROJECT), CA
- SACRAMENTO RIVER AND TRIBUTARIES (DEBRIS CONTROL), CA
- SACRAMENTO RIVER SHALLOW DRAFT CHANNEL, CA
- SAN FRANCISCO BAY, DELTA MODEL STRUCTURE, CA
- SAN FRANCISCO HARBOR AND BAY, CA (DRIFT REMOVAL)
- SAN FRANCISCO HARBOR, CA
- SAN JOAQUIN RIVER, PORT OF STOCKTON, CA
- SAN PABLO BAY AND MARE ISLAND STRAIT, CA
- SCHEDULING RESERVOIR OPERATIONS, CA
- SUISUN BAY CHANNEL, CA
- YUBA RIVER, CA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	42,273
Environmental Stewardship	2,861
Flood and Coastal Storm Damage Reduction	11,668
Recreation	11,124
Total	67,926

System: NCB - North Carolina Basins

NORTH CAROLINA

ATLANTIC INTRACOASTAL WATERWAY, NC
 B EVERETT JORDAN DAM AND LAKE, NC
 CAPE FEAR RIVER ABOVE WILMINGTON, NC
 FALLS LAKE, NC
 INSPECTION OF COMPLETED WORKS, NC
 MANTEO (SHALLOWBAG) BAY, NC
 MASONBORO INLET AND CONNECTING CHANNELS, NC
 MOREHEAD CITY HARBOR, NC
 NEW RIVER INLET, NC
 PROJECT CONDITION SURVEYS, NC
 ROLLINSON CHANNEL, NC
 SILVER LAKE HARBOR, NC
 W KERR SCOTT DAM AND RESERVOIR, NC
 WILMINGTON HARBOR, NC

VIRGINIA

JOHN H KERR LAKE, VA & NC
 PHILPOTT LAKE, VA & NC

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	25,955
Environmental Stewardship	1,511
Flood and Coastal Storm Damage Reduction	5,587
Hydropower	10,572
Recreation	7,558
Total	51,183

System: NEC - Neches System

TEXAS

SAM RAYBURN DAM AND RESERVOIR, TX
 TOWN BLUFF DAM, B A STEINHAGEN LAKE, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	657
Flood and Coastal Storm Damage Reduction	2,812
Hydropower	2,796
Recreation	2,232
Water Supply	58
Total	8,555

System: NNE - Northern New England

MAINE

DISPOSAL AREA MONITORING, ME
 INSPECTION OF COMPLETED WORKS, ME
 PORTLAND HARBOR, ME
 PROJECT CONDITION SURVEYS, ME
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, ME

NEW HAMPSHIRE

BLACKWATER DAM, NH
 EDWARD MACDOWELL LAKE, NH
 FRANKLIN FALLS DAM, NH
 HOPKINTON - EVERETT LAKES, NH
 INSPECTION OF COMPLETED WORKS, NH
 PROJECT CONDITION SURVEYS, NH

VERMONT

INSPECTION OF COMPLETED WORKS, VT

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	2,350
Environmental Stewardship	332
Flood and Coastal Storm Damage Reduction	2,223
Recreation	367
Total	5,272

System: OBL - Ouachita-Black Rivers

ARKANSAS

BLAKELY MT DAM, LAKE OUACHITA, AR
 DEGRAY LAKE, AR
 NARROWS DAM, LAKE GREESON, AR
 OUACHITA AND BLACK RIVERS, AR AND LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	6,763
Environmental Stewardship	788
Flood and Coastal Storm Damage Reduction	3,018
Hydropower	7,509
Recreation	9,722
Total	27,800

System: OHI - Ohio River

ILLINOIS

INSPECTION OF COMPLETED WORKS, IL

INDIANA

BROOKVILLE LAKE, IN
INSPECTION OF COMPLETED WORKS, IN

KENTUCKY

BUCKHORN LAKE, KY
CARR CREEK LAKE, KY
CAVE RUN LAKE, KY
GRAYSON LAKE, KY
INSPECTION OF COMPLETED WORKS, KY
KENTUCKY RIVER, KY
MARKLAND LOCKS AND DAM, KY & IN (MAJOR REHAB)
OHIO RIVER LOCKS AND DAMS, KY, IL, IN & OH
OHIO RIVER OPEN CHANNEL WORK, KY, IL, IN & OH
TAYLORSVILLE LAKE, KY

OHIO

ALUM CREEK LAKE, OH
BERLIN LAKE, OH
CAESAR CREEK LAKE, OH
CLARENCE J BROWN DAM, OH

OHIO, continued

DEER CREEK LAKE, OH
DELAWARE LAKE, OH
INSPECTION OF COMPLETED WORKS, OH
MICHAEL J KIRWAN DAM AND RESERVOIR, OH
MOSQUITO CREEK LAKE, OH
OHIO-MISSISSIPPI FLOOD CONTROL, OH
PAINT CREEK LAKE, OH
TOM JENKINS DAM, OH
WEST FORK OF MILL CREEK LAKE, OH
WILLIAM H HARSHA LAKE, OH

PENNSYLVANIA

OHIO RIVER LOCKS AND DAMS, PA, OH & WV
OHIO RIVER OPEN CHANNEL WORK, PA, OH & WV
SHENANGO RIVER LAKE, PA

WEST VIRGINIA

BEECH FORK LAKE, WV
BURNSVILLE LAKE, WV
EAST LYNN LAKE, WV
INSPECTION OF COMPLETED WORKS, WV
OHIO RIVER LOCKS AND DAMS, WV, KY & OH
OHIO RIVER OPEN CHANNEL WORK, WV, KY & OH

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	112,355
Environmental Stewardship	1,819
Flood and Coastal Storm Damage Reduction	32,030
Hydropower	5
Recreation	7,765
Water Supply	232
Total	154,206

System: PEL - Pearl River

MISSISSIPPI

PEARL RIVER, MS & LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	193
Total	193

APPROPRIATION TITLE: Operation and Maintenance, FY 2009

System: PNW - Pacific Northwest System

OREGON

APPLEGATE LAKE, OR
 CHETCO RIVER, OR
 COOS BAY, OR
 COQUILLE RIVER, OR
 DEPOE BAY, OR
 LOST CREEK LAKE, OR
 PORT ORFORD, OR
 ROGUE RIVER AT GOLD BEACH, OR
 SIUSLAW RIVER, OR
 TILLAMOOK BAY & BAR, OR
 UMPQUA RIVER, OR
 YAQUINA BAY & HARBOR, OR

WASHINGTON

EDIZ HOOK, WA
 EVERETT HARBOR AND SNOHOMISH RIVER, WA
 GRAYS HARBOR AND CHEHALIS RIVER, WA
 HOWARD HANSON DAM ECOSYSTEM RESTORATION, WA
 HOWARD HANSON DAM, WA
 INSPECTION OF COMPLETED ENVIRONMENTAL PROJECTS
 INSPECTION OF COMPLETED WORKS, WA
 LAKE WASHINGTON SHIP CANAL, WA
 MUD MOUNTAIN DAM, WA
 NEAH BAY, WA
 PROJECT CONDITION SURVEYS, WA
 PUGET SOUND AND TRIBUTARY WATERS, WA
 QUILLAYUTE RIVER, WA
 SCHEDULING RESERVOIR OPERATIONS, WA
 SEATTLE HARBOR, WA
 STILLAGUAMISH RIVER, WA
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, WA
 TACOMA, PUYALLUP RIVER, WA
 WILLAPA RIVER AND HARBOR, WA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	29,107
Environmental Restoration	70
Environmental Stewardship	5,627
Flood and Coastal Storm Damage Reduction	21,674
Recreation	1,603
Water Supply	101
Total	58,182

System: RED - Red River

ARKANSAS

DEQUEEN LAKE, AR
 DIERKS LAKE, AR
 GILLHAM LAKE, AR
 MILLWOOD LAKE, AR

LOUISIANA

BAYOU BODCAU RESERVOIR, LA
 BAYOU PIERRE, LA
 CADDO LAKE, LA
 J BENNETT JOHNSTON WATERWAY, LA
 WALLACE LAKE, LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	9,356
Environmental Stewardship	458
Flood and Coastal Storm Damage Reduction	3,905
Recreation	3,891
Water Supply	23
Total	17,633

System: RGR - Rio Grande System

COLORADO

SCHEDULING RESERVOIR OPERATIONS, CO

NEW MEXICO

ABIQUIU DAM, NM
 COCHITI LAKE, NM
 GALISTEO DAM, NM
 INSPECTION OF COMPLETED WORKS, NM
 JEMEZ CANYON DAM, NM
 SANTA ROSA DAM AND LAKE, NM
 SCHEDULING RESERVOIR OPERATIONS, NM
 TWO RIVERS DAM, NM
 UPPER RIO GRANDE WATER OPERATIONS MODEL STUDY, NM

TEXAS

INSPECTION OF COMPLETED WORKS, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	1,024
Flood and Coastal Storm Damage Reduction	8,192
Recreation	1,100
Total	10,316

System: SCA - Southern California System

CALIFORNIA

CHANNEL ISLANDS HARBOR, CA
 INSPECTION OF COMPLETED WORKS, CA
 ISABELLA LAKE, CA
 LOS ANGELES COUNTY DRAINAGE AREA, CA
 MARINA DEL REY, CA
 MOJAVE RIVER DAM, CA
 MORRO BAY HARBOR, CA
 OCEANSIDE HARBOR, CA
 PINE FLAT LAKE, CA
 PORT HUENEME, CA
 PROJECT CONDITION SURVEYS, CA
 SANTA ANA RIVER BASIN, CA
 SANTA BARBARA HARBOR, CA
 SCHEDULING RESERVOIR OPERATIONS, CA
 SUCCESS LAKE, CA
 TERMINUS DAM, LAKE KAWEAH, CA
 VENTURA HARBOR, CA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	21,370
Environmental Stewardship	830
Flood and Coastal Storm Damage Reduction	12,320
Recreation	3,372
Total	37,892

System: SEC - Southern East Coast

FLORIDA

CANAVERAL HARBOR, FL
 EVERGLADES AND SOUTH FLORIDA ECOSYSTEM RESTORATION, FL
 FERNANDINA HARBOR, FL
 INTRACOASTAL WATERWAY, JACKSONVILLE TO MIAMI, FL
 JACKSONVILLE HARBOR, FL
 MIAMI RIVER, FL
 PALM BEACH HARBOR, FL
 PROJECT CONDITION SURVEYS, FL
 SCHEDULING RESERVOIR OPERATIONS, FL
 WATER/ENVIRONMENTAL CERTIFICATION, FL

GEORGIA

ATLANTIC INTRACOASTAL WATERWAY, GA
 BRUNSWICK HARBOR, GA
 PROJECT CONDITION SURVEYS, GA
 SAVANNAH HARBOR, GA

PUERTO RICO

ARECIBO HARBOR, PR

SOUTH CAROLINA

ATLANTIC INTRACOASTAL WATERWAY, SC
 CHARLESTON HARBOR, SC
 COOPER RIVER, CHARLESTON HARBOR, SC
 FOLLY BEACH, SC
 GEORGETOWN HARBOR, SC
 INSPECTION OF COMPLETED WORKS, SC
 PROJECT CONDITION SURVEYS, SC

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	71,943
Environmental Restoration	400
Flood and Coastal Storm Damage Reduction	95
Total	72,438

APPROPRIATION TITLE: Operation and Maintenance, FY 2009

System: SNE - Southern New England

CONNECTICUT

BLACK ROCK LAKE, CT
 COLEBROOK RIVER LAKE, CT
 HANCOCK BROOK LAKE, CT
 HOP BROOK LAKE, CT
 INSPECTION OF COMPLETED WORKS, CT
 LONG ISLAND SOUND DMMP, CT
 MANSFIELD HOLLOW LAKE, CT
 NORTHFIELD BROOK LAKE, CT
 PROJECT CONDITION SURVEYS, CT
 STAMFORD HURRICANE BARRIER, CT
 THOMASTON DAM, CT
 WEST THOMPSON LAKE, CT

MASSACHUSETTS

BARRE FALLS DAM, MA
 BIRCH HILL DAM, MA
 BOSTON HARBOR, MA
 BUFFUMVILLE LAKE, MA
 CAPE COD CANAL, MA
 CHARLES RIVER NATURAL VALLEY STORAGE AREA, MA
 CONANT BROOK LAKE, MA
 EAST BRIMFIELD LAKE, MA
 HODGES VILLAGE DAM, MA
 INSPECTION OF COMPLETED WORKS, MA
 KNIGHTVILLE DAM, MA

MASSACHUSETTS, continued

LITTLEVILLE LAKE, MA
 NEW BEDFORD FAIRHAVEN AND ACUSHNET HURRICANE BARRIER, M.
 PROJECT CONDITION SURVEYS, MA
 TULLY LAKE, MA
 WEST HILL DAM, MA
 WESTVILLE LAKE, MA

NEW HAMPSHIRE

OTTER BROOK LAKE, NH
 SURRY MOUNTAIN LAKE, NH

RHODE ISLAND

BLOCK ISLAND HARBOR OF REFUGE, RI
 INSPECTION OF COMPLETED WORKS, RI
 POINT JUDITH HARBOR OF REUGE, RI
 PROJECT CONDITION SURVEYS, RI

VERMONT

BALL MOUNTAIN, VT
 INSPECTION OF COMPLETED WORKS, VT
 NORTH HARTLAND LAKE, VT
 NORTH SPRINGFIELD LAKE, VT
 TOWNSHEND LAKE, VT
 UNION VILLAGE DAM, VT

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	20,279
Environmental Stewardship	1,619
Flood and Coastal Storm Damage Reduction	12,034
Recreation	4,979
Total	38,911

APPROPRIATION TITLE: Operation and Maintenance, FY 2009

System: SPR - Susquehanna and Potomac

DISTRICT OF COLUMBIA

INSPECTION OF COMPLETED WORKS, DC
 POTOMAC AND ANACOSTIA RIVERS, DC (DRIFT REMOVAL)
 PROJECT CONDITION SURVEYS, DC
 WASHINGTON HARBOR, DC

MARYLAND

CUMBERLAND, MD AND RIDGELEY, WV
 INSPECTION OF COMPLETED WORKS, MD
 JENNINGS RANDOLPH LAKE, MD & WV
 SCHEDULING RESERVOIR OPERATIONS, MD

NEW YORK

ALMOND LAKE, NY
 ARKPORT DAM, NY
 EAST SIDNEY LAKE, NY
 INSPECTION OF COMPLETED WORKS, NY
 SOUTHERN NEW YORK FLOOD CONTROL PROJECTS, NY
 WHITNEY POINT LAKE, NY

PENNSYLVANIA

ALVIN R BUSH DAM, PA
 AYLESWORTH CREEK LAKE, PA
 COWANESQUE LAKE, PA
 CURWENSVILLE LAKE, PA
 FOSTER JOSEPH SAYERS DAM, PA
 INSPECTION OF COMPLETED WORKS, PA
 RAYSTOWN LAKE, PA
 SCHEDULING RESERVOIR OPERATIONS, PA
 STILLWATER LAKE, PA
 TIOGA - HAMMOND LAKES, PA
 YORK INDIAN ROCK DAM, PA

VIRGINIA

INSPECTION OF COMPLETED WORKS, VA
 PROJECT CONDITION SURVEYS, VA

WEST VIRGINIA

INSPECTION OF COMPLETED WORKS, WV

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	928
Environmental Stewardship	1,077
Flood and Coastal Storm Damage Reduction	9,902
Recreation	4,557
Water Supply	84
Total	16,548

System: TCR - Tennessee and Cumberland Rivers

ALABAMA

INSPECTION OF COMPLETED WORKS, AL

KENTUCKY

BARKLEY DAM AND LAKE BARKLEY, KY & TN

INSPECTION OF COMPLETED WORKS, KY

LAUREL RIVER LAKE, KY

MARTINS FORK LAKE, KY

MIDDLESBORO CUMBERLAND RIVER BASIN, KY

WOLF CREEK DAM, LAKE CUMBERLAND, KY

TENNESSEE

CENTER HILL LAKE, TN

CHEATHAM LOCK AND DAM, TN

CHICKAMAUGA LOCK, TENNESSEE RIVER, TN

CORDELL HULL DAM AND RESERVOIR, TN

DALE HOLLOW LAKE, TN

INSPECTION OF COMPLETED WORKS, TN

J PERCY PRIEST DAM AND RESERVOIR, TN

OLD HICKORY LOCK AND DAM, TN

TENNESSEE RIVER, TN

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	33,829
Environmental Stewardship	3,069
Flood and Coastal Storm Damage Reduction	5,510
Hydropower	27,103
Recreation	13,760
Water Supply	225
Total	83,496

System: TGC - Texas Gulf Coast

TEXAS

BARBOUR TERMINAL CHANNEL, TX
 BAYPORT SHIP CHANNEL, TX
 BRAZOS ISLAND HARBOR, TX
 BUFFALO BAYOU & TRIBUTARIES, TX
 CANYON LAKE, TX
 CHANNEL TO PORT BOLIVAR, TX
 CORPUS CHRISTI SHIP CHANNEL, TX
 FREEPORT HARBOR, TX
 GALVESTON HARBOR AND CHANNEL, TX
 GIWW, CHANNEL TO VICTORIA, TX
 GIWW, CHOCOLATE BAYOU, TX
 GREENS BAYOU, TX
 GULF INTRACOASTAL WATERWAY, TX
 HOUSTON SHIP CHANNEL, TX
 INSPECTION OF COMPLETED WORKS, TX
 MATAGORDA SHIP CHANNEL, TX
 PROJECT CONDITION SURVEYS, TX
 SABINE - NECHES WATERWAY, TX
 TEXAS CITY SHIP CHANNEL, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	95,077
Environmental Stewardship	202
Flood and Coastal Storm Damage Reduction	4,411
Recreation	1,849
Water Supply	32
Total	101,571

System: TRI - Trinity River System

TEXAS

- BARDWELL LAKE, TX
- BENBROOK LAKE, TX
- GRAPEVINE LAKE, TX
- INSPECTION OF COMPLETED WORKS, TX
- JOE POOL LAKE, TX
- LAVON LAKE, TX
- LEWISVILLE DAM, TX
- NAVARRO MILLS LAKE, TX
- RAY ROBERTS LAKE, TX
- SCHEDULING RESERVOIR OPERATIONS, TX
- WALLISVILLE LAKE, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	1,478
Flood and Coastal Storm Damage Reduction	13,632
Recreation	7,968
Water Supply	274
Total	23,352

System: UAR - Upper Arkansas River

COLORADO

INSPECTION OF COMPLETED WORKS, CO

KANSAS

COUNCIL GROVE LAKE, KS
 EL DORADO LAKE, KS
 ELK CITY LAKE, KS
 FALL RIVER LAKE, KS
 JOHN REDMOND DAM AND RESERVOIR, KS
 MARION LAKE, KS
 PEARSON - SKUBITZ BIG HILL LAKE, KS
 TORONTO LAKE, KS

OKLAHOMA

BIRCH LAKE, OK
 COPAN LAKE, OK
 FORT GIBSON LAKE, OK
 GREAT SALT PLAINS LAKE, OK
 HULAH LAKE, OK
 KAW LAKE, OK
 KEYSTONE LAKE, OK
 OOLOGAH LAKE, OK
 PENSACOLA RESERVOIR, LAKE OF THE CHEROKEES, OK
 ROBERT S. KERR LOCK AND DAM AND RESERVOIR, OK
 SKIATOOK LAKE, OK
 TENKILLER FERRY LAKE, OK

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	3,147
Environmental Stewardship	1,436
Flood and Coastal Storm Damage Reduction	20,296
Hydropower	8,291
Recreation	9,968
Water Supply	182
Total	43,320

System: UCB - Upper Chesapeake

DELAWARE

PROJECT CONDITION SURVEYS, DE

MARYLAND

ASSATEAGUE, MD
BALTIMORE HARBOR AND CHANNELS (50 FOOT), MD
BALTIMORE HARBOR, MD (DRIFT REMOVAL)
OCEAN CITY HARBOR AND INLET AND SINEPUXENT BAY, MD
POPLAR ISLAND, MD
PROJECT CONDITION SURVEYS, MD
TWITCH COVE AND BIG THOROFARE RIVER, MD
WICOMICO RIVER, MD

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	28,614
Total	28,614

System: UCO - Upper Colorado System

COLORADO

INSPECTION OF COMPLETED WORKS, CO
SCHEDULING RESERVOIR OPERATIONS, CO

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Flood and Coastal Storm Damage Reduction	648
Total	648

System: UDR - Upper Delaware

NEW JERSEY

INSPECTION OF COMPLETED WORKS, NJ
PASSAIC RIVER FLOOD WARNING SYSTEMS, NJ

PENNSYLVANIA

BELTZVILLE LAKE, PA
FRANCIS E WALTER DAM, PA
GENERAL EDGAR JADWIN DAM AND RESERVOIR, PA
PROMPTON LAKE, PA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	205
Flood and Coastal Storm Damage Reduction	3,085
Total	3,290

System: UHL - Upper Hudson and Lake Champlain

NEW YORK

HUDSON RIVER, NY (MAINT)
HUDSON RIVER, NY (O & C)

VERMONT

NARROWS OF LAKE CHAMPLAIN, VT & NY

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	2,730
Total	2,730

System: UMS - Upper Mississippi River

ILLINOIS

INSPECTION OF COMPLETED ENVIRONMENTAL PROJECTS
 INSPECTION OF COMPLETED WORKS, IL
 LOCK AND DAM 27, MISSISSIPPI RIVER, IL (MAJOR REHAB)
 MISS RIVER BTWN MO RIVER AND MINNEAPOLIS (MVR PORTION), IL
 MISS RIVER BTWN MO RIVER AND MINNEAPOLIS (MVS PORTION), IL

IOWA

CORALVILLE LAKE, IA
 INSPECTION OF COMPLETED WORKS, IA
 LOCK AND DAM 11, MISSISSIPPI RIVER, IA (MAJOR REHAB)
 RED ROCK DAM AND LAKE RED ROCK, IA
 SAYLORVILLE LAKE, IA

MINNESOTA

BIGSTONE LAKE - WHETSTONE RIVER, MN & SD
 INSPECTION OF COMPLETED WORKS, MN
 LAC QUI PARLE LAKES, MINNESOTA RIVER, MN
 MINNESOTA RIVER, MN
 MISS RIVER BTWN MO RIVER AND MINNEAPOLIS (MVP PORTION), MN
 ORWELL LAKE, MN
 PROJECT CONDITION SURVEYS, MN
 RED LAKE RESERVOIR, MN
 RESERVOIRS AT HEADWATERS OF MISSISSIPPI RIVER, MN
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, MN

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	147,357
Environmental Restoration	65
Environmental Stewardship	8,454
Flood and Coastal Storm Damage Reduction	13,337
Hydropower	1,818
Recreation	14,757
Water Supply	122
Total	185,910

MISSOURI

CLARENCE CANNON DAM AND MARK TWAIN LAKE, MO
 INSPECTION OF COMPLETED WORKS, MO
 MISS RIVER BTWN THE OHIO AND MO RIVERS (REG WORKS), MO & IL
 SOUTHEAST MISSOURI PORT, MISSISSIPPI RIVER, MO
 UNION LAKE, MO

NORTH DAKOTA

HOMME LAKE, ND
 INSPECTION OF COMPLETED WORKS, ND
 LAKE ASHTABULA AND BALDHILL DAM, ND
 SOURIS RIVER, ND
 SURVEILLANCE OF NORTHERN BOUNDARY WATERS, ND

SOUTH DAKOTA

LAKE TRAVERSE, SD & MN

WISCONSIN

EAU GALLE RIVER LAKE, WI
 INSPECTION OF COMPLETED WORKS, WI
 PROJECT CONDITION SURVEYS, WI

System: URR - Upper Red River

KANSAS

INSPECTION OF COMPLETED WORKS, KS
 SCHEDULING RESERVOIR OPERATIONS, KS

OKLAHOMA

ARCADIA LAKE, OK
 BROKEN BOW LAKE, OK
 CANTON LAKE, OK
 EUFAULA LAKE, OK
 FORT SUPPLY LAKE, OK
 HUGO LAKE, OK
 INSPECTION OF COMPLETED WORKS, OK
 OPTIMA LAKE, OK
 PINE CREEK LAKE, OK
 SARDIS LAKE, OK
 SCHEDULING RESERVOIR OPERATIONS, OK
 WAURIKA LAKE, OK

TEXAS

ARKANSAS - RED RIVER BASINS CHLORIDE CONTROL - AREA VIII, TX
 DENISON DAM, LAKE TEXOMA, TX
 ESTELLINE SPRINGS EXPERIMENTAL PROJECT, TX
 FERRELLS BRIDGE DAM, LAKE O' THE PINES, TX
 INSPECTION OF COMPLETED WORKS, TX
 JIM CHAPMAN LAKE, TX
 LAKE KEMP, TX
 PAT MAYSE LAKE, TX
 SCHEDULING RESERVOIR OPERATIONS, TX
 WRIGHT PATMAN DAM AND LAKE, TX

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	25
Environmental Stewardship	4,350
Flood and Coastal Storm Damage Reduction	14,940
Hydropower	4,608
Recreation	11,316
Water Supply	495
Total	35,734

System: WAB - Wabash River

ILLINOIS

INSPECTION OF COMPLETED WORKS, IL

INDIANA

CAGLES MILL LAKE, IN
 CECIL M HARDEN LAKE, IN
 INSPECTION OF COMPLETED WORKS, IN
 J EDWARD ROUSH LAKE, IN
 MISSISSINEWA LAKE, IN
 MONROE LAKE, IN
 PATOKA LAKE, IN
 ROUSH RIVER MAJOR REHAB REPORT, IN
 SALAMONIE LAKE, IN

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	465
Flood and Coastal Storm Damage Reduction	10,719
Recreation	266
Water Supply	15
Total	11,465

System: WHT - White River

ARKANSAS

BEAVER LAKE, AR
 BULL SHOALS LAKE, AR
 GREERS FERRY LAKE, AR
 NORFORK LAKE, AR
 WHITE RIVER, AR

MISSOURI

CLEARWATER LAKE, MO
 INSPECTION OF COMPLETED WORKS, MO
 TABLE ROCK LAKE, MO & AR

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	52
Environmental Stewardship	2,001
Flood and Coastal Storm Damage Reduction	7,006
Hydropower	12,101
Recreation	11,766
Water Supply	42
Total	32,968

APPROPRIATION TITLE: Mississippi River and Tributaries (Maintenance) FY 2009

SUMMARY BY SYSTEM	
LGC - Louisiana Gulf Coast	703
LMS - Lower Mississippi River	155,027
OBL - Ouachita-Black Rivers	4,434
WHT - White River	1,039
Subtotal	161,203
Remaining Items (Mapping)	1,488
Grand Total for MR&T	162,691

System: LGC - Louisiana Gulf Coast

LOUISIANA

BONNET CARRE, LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Environmental Stewardship	234
Recreation	469
Total	703

System: WHT - White River

ARKANSAS

WHITE RIVER BACKWATER, AR

Flood and Coastal Storm Damage Reduction	1,039
Total	1,039

System: LMS - Lower Mississippi River

ARKANSAS

DREDGING, AR
 HELENA HARBOR, PHILLIPS COUNTY, AR
 INSPECTION OF COMPLETED WORKS, AR
 LOWER ARKANSAS RIVER, NORTH BANK, AR
 LOWER ARKANSAS RIVER, SOUTH BANK, AR
 MISSISSIPPI RIVER LEVEES, AR
 REVETMENTS, AR

ILLINOIS

INSPECTION OF COMPLETED WORKS, IL

KENTUCKY

INSPECTION OF COMPLETED WORKS, KY

LOUISIANA

ATCHAFALAYA BASIN, FLOODWAY SYSTEM, LA
 ATCHAFALAYA BASIN, LA
 BATON ROUGE HARBOR, DEVIL SWAMP, LA
 BAYOU COCODRIE AND TRIBUTARIES, LA
 BONNET CARRE, LA
 DREDGING, LA
 INSPECTION OF COMPLETED WORKS, LA
 MISSISSIPPI DELTA REGION, CAERNARVON, LA
 MISSISSIPPI RIVER LEVEES, LA
 OLD RIVER, LA
 REVETMENTS, LA

MISSISSIPPI

DREDGING, MS
 GREENVILLE HARBOR, MS
 INSPECTION OF COMPLETED WORKS, MS
 MISSISSIPPI RIVER LEVEES, MS
 REVETMENTS, MS
 VICKSBURG HARBOR, MS
 YAZOO BASIN, ARKABUTLA LAKE, MS
 YAZOO BASIN, BIG SUNFLOWER RIVER, MS
 YAZOO BASIN, ENID LAKE, MS
 YAZOO BASIN, GREENWOOD, MS
 YAZOO BASIN, GRENADA LAKE, MS
 YAZOO BASIN, MAIN STEM, MS
 YAZOO BASIN, SARDIS LAKE, MS
 YAZOO BASIN, TRIBUTARIES, MS
 YAZOO BASIN, WILL M WHITTINGTON AUX CHAN, MS
 YAZOO BASIN, YAZOO BACKWATER AREA, MS
 YAZOO BASIN, YAZOO CITY, MS

MISSOURI

INSPECTION OF COMPLETED WORKS, MO
 MISSISSIPPI RIVER LEVEES, MO
 ST FRANCIS BASIN, AR & MO
 WAPPAPELLO LAKE, MO

TENNESSEE

DIKES, TN
 DREDGING, TN
 INSPECTION OF COMPLETED WORKS, TN
 MEMPHIS HARBOR, MCKELLAR LAKE, TN
 REVETMENTS, TN

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Commercial Navigation	29,224
Environmental Stewardship	4,160
Flood and Coastal Storm Damage Reduction	107,112
Recreation	14,531
Total	155,027

System: OBL - Ouachita-Black Rivers

LOUISIANA

LOWER RED RIVER, SOUTH BANK LEVEES, LA
TENSAS BASIN, BOEUF AND TENSAS RIVERS, AR & LA
TENSAS BASIN, RED RIVER BACKWATER, LA

Based on current estimates, the Corps would allocate the funding requested for operation, maintenance, and rehabilitation in the system by business line as follows (dollars in thousands):

Flood and Coastal Storm Damage Reduction	4,434
Total	4,434

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**OTHER BUSINESS PROGRAMS
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OPERATION AND MAINTENANCE (TAB U)

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REGULATORY

APPROPRIATION TITLE: Regulatory Program, FY 2009

AUTHORIZATION: Rivers and Harbors Act of 1899, Sections 9, 10 and 13
Clean Water Act, Section 404
Marine Protection, Research and Sanctuaries Act, Section 103

SUMMARIZED FINANCIAL DATA:

Budget Request for Fiscal Year 2009	\$180,000,000
Budget Request for Fiscal Year 2008	\$180,000,000
Proposed Increase in FY 2009 over FY 2008	\$0

JUSTIFICATION:

Background. The Corps of Engineers has been regulating specific activities in the Nation's waters since 1890. The Corps' Regulatory program is highly decentralized with most of the authority for administering the program delegated to District and Division Commanders. Scrutiny on the Corps' regulatory program has increased as development pressures mount and public awareness of the aquatic environment and the involvement of state and Federal resource agencies continue to grow. Sensitivity to wetlands has resulted in greater direct input from the public and environmental interest groups, leading to greater scrutiny and controversy in the review of permit proposals. While this tends to add time to the permit review process, it insures balance in the overall review. Interagency cooperation in the management and protection of the nation's wetlands has greatly improved over the last ten years, resulting in improved efficiency and effectiveness of the Corps Regulatory program. The Corps has worked to implement program changes to enhance efficiency, enabling more timely response to permit applicants while improving its ability to ensure protection of the aquatic environment. The Corps works with state, tribal, and local governments to develop mechanisms that give them greater responsibility for aquatic resources including wetland regulation. This is achieved primarily through programmatic and regional general permits, designed to reduce Federal regulation of activities with only minimal adverse impacts on the aquatic environment. Strategies also include joint federal-state permit applications and processing procedures as well as work-sharing agreements to eliminate duplication of effort with state and local governments. State Programmatic General Permits are becoming an increasingly effective mechanism for giving states a greater role in administering minor permit actions over large areas, thus freeing up Corps resources for more complex permit actions. States may assume Section 404 authority (in non-navigable waters) where the state or local regulatory program is able to implement appropriate regulatory controls. Since 1984, only Michigan and New Jersey have chosen to assume this aspect of the program. The Corps is working to improve inter-agency coordination in efforts to share resources and spatial data. Since 2002, the Corps has cooperated with the other agencies to improve all aspects of mitigation managed by the program.

Types of Activities Regulated by the Corps.

- a. Construction and other work in waters of the United States including wetlands;
- b. Construction of fixed structures and artificial islands on the outer continental shelf;
- c. Discharges of dredged or fill material, including those associated with construction and land-clearing activities, into the waters of the United States, including wetlands;
- d. The transportation of dredged material for the purpose of disposal in ocean waters.

APPROPRIATION TITLE: Regulatory Program, FY 2009 (continued)

Evaluation Criteria. The decision whether to issue a permit is based on an evaluation of the probable impacts of proposed activities on the aquatic environment, including wetlands, and other aspects of the public interest. In order to issue a permit, District Commanders must determine that activities are not contrary to the public interest. In addition, for Section 404 permits, the Corps must determine compliance with the Clean Water Act, Section 404 (b)(1) guidelines. Corps permit must also be in compliance with other federal laws, including the Endangered Species Act and National Historic Preservation Act.

ACCOMPLISHMENTS: In FY 07, the Corps authorized more than 95,000 activities in writing and completed more than 100,000 jurisdiction determinations. Of the approximately 95,000 permits, more than 90 percent were authorized by Regional and Nationwide general permits with the remaining by the more complex individual permits. The Corps continues to depend on its nationwide permit program to help manage its regulatory workload. Without regional and nationwide general permits, all activities would have to be evaluated by the time consuming individual permit process. Although the evaluation process for an individual permit is typically greater than that for a general permit, most general permit authorizations also involve substantive evaluation and determination of necessary mitigation. The Corps reissued the Nationwide permits in FY 2007.

The Corps has been a driving force in the inter-agency group working to improve the success of compensatory mitigation. This effort began with the Regulatory Guidance Letter RGL 02-02 which led to the multi-agency Mitigation Action Plan (MAP). The MAP, led by the Corps and EPA along with 4 other federal agencies, proposes to improve the ecological performance of compensatory mitigation under the Clean Water Act and related programs. The Corps and EPA also issued the draft Mitigation Rule in FY 2006 specifically to implement a watershed approach to mitigation and decrease the time to reach a decision on proposed mitigation banks. Approximately 12,000 comments were received on the draft rule and we plan to issue a final rule in March 2008.

The Corps continues to protect the nation's aquatic environment, while working to provide fair and equitable decisions in a reasonable period of time. Because of a nearly 50-percent increase in the total number of written permit authorizations over the last ten years as well as increasing program review requirements and legal challenges, the Corps has not been able to maintain its evaluation time for the more complex permit actions. In FY 07, 80% of all General Permits were authorized in less than 60 days, a slight reduction of the general permit performance from FY 2006. Performance in evaluating the more complex projects that require individual permits has continued to decline. With nationwide and regional general permits authorizing most actions, only the most difficult permits are left to be handled through standard permits. In FY 07, 53% of individual permits were completed within 120 days, compared to 61% in FY 06 and 50% in FY 05. Standard permits represent approximately 8% of all permits in numbers but utilize almost a third of all Corps man-days expended on permit actions. The environmental review of all standard permits continues to be extensive and time consuming, as proposed projects that are large and have significant impacts on the aquatic environment have a more stringent review under the National Environmental Policy Act (NEPA) and a higher probability of involving endangered species, historic resources, and compensatory mitigation. The impact of these problems increases each year as development pressure persists or increases and applicants are forced to consider building in or near higher value aquatic areas, including wetlands. For these reasons, more permit decisions, whether issued or denied, are resulting in litigation. The potential for litigation increases the need for more-in-depth review and documentation on complex permits.

Uncertainty about the program's jurisdiction has been a major theme in the program since the 2001 Supreme Court decision (SWANCC) on non-navigable, intrastate, isolated waters. This has been exacerbated by a second Supreme Court decision in June 2006 on two cases, Carabell and Rapanos. This complex decision led to publication of interagency guidance in 2007 that requires more extensive documentation for the majority of the more than 100,000 jurisdictional determinations made by the Corps each year. This unplanned additional workload has had dramatic negative impacts on permit processing times and strain an already overburdened workforce. Funds are being shifted to permitting and the Corps is evaluating a number of options to avoid increasing permit delays and maintain current permit processing times without reducing environmental protection of aquatic resources (including wetlands).

APPROPRIATION TITLE: Regulatory Program, FY 2009 (continued)

FISCAL YEAR 2009: The request of \$180 million is equal to the FY 08 budget. The funding amount will allow the Corps to provide some of the new documentation required for jurisdictional determinations and should enable the Corps to maintain processing times at or near the current levels for standard permits and General Permits. Funds will be allocated for compliance inspections of permitted activities, including monitoring of compensatory mitigation. The Corps has been criticized by the National Academy of Sciences and others for inadequate compliance monitoring. The change to improve the management of compliance is part of an overall initiative to demonstrate program improvements through new performance standards developed in cooperation with the Office of Management and Budget using the Program Assessment Rating Tool. Enforcement funding has been separated from compliance funding and will remain at current levels.

In FY 08, the Corps will implement the mitigation rule and develop accompanying guidance on the evaluation of impacts and mitigation based on a holistic watershed approach. The watershed approach will enable consideration of impacts and compensatory mitigation within entire aquatic ecosystems to help expedite permit actions and manage aquatic resources in sensitive areas. Where watershed studies and evaluations of the impacts of future permits in an aquatic system are undertaken, more permit decisions can be made faster with better environmental review and documentation. The watershed approach will enable the Corps to work cooperatively with other federal agencies, state and local governments, regional and local nongovernmental organizations, private property owners and other stakeholders to ensure sound use of watershed aquatic resources. As part of this effort, the Regulatory program will actively seek state partners to develop State Programmatic General Permits that will utilize these watershed data and streamline the permit process.

Other program management efforts will continue, including specialized training of Corps personnel and technical assistance to Corps districts by the Engineer Research and Development Center (ERDC). For FY 2009, approximately \$500,000 would be allocated to ERDC for its direct technical assistance with complex and sensitive permit cases. ERDC is also producing a series of regional wetland delineation manuals that will improve decision-making and consistency in wetland delineations by taking into account regional variations in wetlands. In addition, a similar funding amount may be allocated to the Institute for Water Resources to address special program management issues such as studies of mitigation banking, improvement of the ORM data system to track program workload and wetland acreage, and assessment of impacts due to program changes. The new spatial database, ORM-2 (installed in FY 07), will track workload statistics and program performance and significant information on mitigation including habitat type and success information, critical for insuring the “no net loss” of wetlands goal. The database will also have spatial data on all permits, which will be made available to the public and our state and local partners. Funds also will be used to pay for the review of environmental impact statements (EIS’s); some districts are now dealing with unusually large and controversial projects requiring EIS’s. Examples of complex permit applications include port expansion projects in Los Angeles and Charleston, “windfarms” in New England, surface coal mining in Appalachia, and programmatic EIS’s in south Florida.

The \$180 million will be applied as follows:

Permit Evaluation and Jurisdictional determinations	\$149,000,000
Enforcement & Resolution	\$ 13,000,000
Administrative Appeals	\$ 1,000,000
Studies (SPGP’s) and Wetlands Technical Support	\$ 6,000,000
Environmental Impact Statements	\$ 1,000,000
<u>Compliance for Authorized Activities & Mitigation</u>	<u>\$ 10,000,000</u>
TOTAL	\$180,000,000

ENVIRONMENT

FORMERLY USED SITES REMEDIAL ACTION PROGRAM

(FUSRAP)

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009
(\$000)

State	Allocated	FY 2009	Remaining Requirement	
Project Name	through FY 2008	Request	Low Estimate	High Estimate
Connecticut				
CE, Windsor, CT	9,977	250	0	0
Iowa				
Iowa Army Ammunition Plant, Middletown, IA	4,025	1,000	TBD	TBD
Maryland				
W. R. Grace, Baltimore, MD	12,893	750	28,327	42,317
Massachusetts				
Shpack Landfill, Norton, MA	32,019	10,000	1,400	1,400
Missouri				
Downtown, St. Louis, MO	184,077	18,000	22,040	22,040
Latty Avenue, St. Louis, MO	99,828	15,000	72,008	72,008
St. Louis Airport Vicinity Properties, St. Louis, MO	54,928	6,000	46,029	46,029
St. Louis Airport, St. Louis, MO	305,681	500	2,783	2,783
New Jersey				
Dupont Chambers Works, Deepwater, NJ	18,790	1,000	2,420	9,840
Maywood, NJ	367,163	35,000	490,837	500,837
Middlesex, NJ	112,059	1,000	0	2,000
New York				
Colonie, NY	190,614	1,000	1,820	10,716
Guterl, Lockport, NY	5,335	2,500	TBD	TBD
Linde Air Products, Tonawanda, NY	225,445	23,210	4,745	4,745
Niagara Falls Storage Site, NY	51,993	3,500	263,727	370,127
Seaway Industrial Park, Tonawanda, NY	9,465	100	29,790	79,895
Sylvania Corning, Hicksville, NY	4,870	3,000	TBD	TBD
Ohio				
Former Harshaw Chemical Company, Cleveland, OH	13,545	1,350	24,075	37,055
Luckey, OH	15,866	1,500	41,564	41,564
Painesville, OH	28,500	200	200	200
Pennsylvania				
Shallow Land Disposal Area, Parks Township, PA	11,090	4,000	50,920	50,920
Superior Steel, Scott Township, PA	215	40	TBD	TBD
Potential Sites	2,674	1,100	TBD	TBD
	1,761,052	130,000		

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

CONNECTICUT

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Combustion Engineering Windsor, CT New England District	10,227,000	9,177,000	300,000	250,000	250,000	250,000	0

The Combustion Engineering (CE) site is a 600-acre area in Windsor, Connecticut. CE, under contract to the Atomic Energy Commission (AEC), fabricated nuclear fuel assemblies using highly enriched uranium (HEU) from 1958 to 1961. CE also conducted licensed commercial nuclear activity on the site from the early 1960's to 1993. Although the commercial nuclear fuel fabrication ceased in 1993, CE is still licensed by the Nuclear Regulatory Commission (NRC) for other commercial nuclear activities and the facility is still operating today. HEU is the primary radiological contaminant of concern at the site, which may be addressed by Formerly Utilized Sites Remedial Action Program (FUSRAP). Only limited site characterization work had been performed when FUSRAP was transferred from the Department of Energy (DOE) to the Corps for execution. Since then, the Corps has performed a gamma survey of the site, completed site characterization (SI), completed an investigation action at the "Rapaport Building", completed a Remedial Investigation Report and completed a draft Feasibility Study.

In FY 2007, the Corps continued work on the Feasibility Study. CE requested an expansion of their NRC license in FY07. The Corps shifted their efforts to work with NRC to facilitate the consideration of this request to allow cleanup by CE under an expanded license. The CE request was approved and CE will now be responsible for addressing any FUSRAP waste as part of their site decommissioning efforts.

In FY 2008 funds are being used to monitor CE's actions at the site. The schedule for completion of site remediation is unknown at this time. The Corps will continue to monitor activity at the site and expects to prepare a no further action decision document upon CE completing their site decommissioning.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Mississippi Valley Division

IOWA

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Iowa Army Ammunition Plant Middletown, IA St. Louis District	TBD*	925,000	400,000	1,000,000	1,700,000	1,000,000	TBD*

The Iowa Army Ammunition Plant (IAAAP) is a secured, operational, Army-owned facility located on approximately 19,100 acres near Burlington in Des Moines County, in southeastern Iowa. During its use as an Army facility, portions of the IAAAP were occupied by tenant organizations including the Atomic Energy Commission (AEC). From 1947 to 1975, the AEC operated areas of the plant as the Burlington Atomic Energy Commission Plant (BAECP). In 2002 a Preliminary Assessment was completed for the BAECP and the IAAAP was included in FUSRAP. The Preliminary Assessment included a review of AEC historical documents, site visits, examination of the results of an indoor radiological survey, and performance of a limited radiological walkover survey at two firing site areas. Evidence of a release was found and additional investigation to determine the nature and extent of AEC associated contamination was recommended. It is believed that approximately 1,600 acres within the IAAAP may have been potentially impacted by AEC operations. Limited survey data and existing sampling data (from other Army activities) indicate radiological (primarily depleted uranium), chemical, and explosives contamination exists. The nature and extent of this contamination will be investigated and defined during the Remedial Investigation (RI), which is the next step in the planning process. The primary regulators/stakeholders include the Environmental Protection Agency Region VII, Iowa Department of Public Health, Iowa Army Ammunition Plant (Army) and the IAAAP Restoration Advisory Board. The site was placed on the National Priority List in 1990.

In FY 2007, the Corps completed the fieldwork (i.e. sampling) for the Remedial Investigation and began writing the draft Remedial Investigation report. Coordination with the U.S. Environmental Protection Agency, the Iowa Department of Public Health, local stakeholders and the Army installation at the plant continued.

In FY 2008, the Corps is issuing the draft Remedial Investigation report to the regulators for review, finalizing the document and beginning the Feasibility Study. FY 08 funds are also being used to excavate explosives contaminated soils from Line 1 and the West Burn Pad South areas and to dispose of the soils in the onsite Army Inert Disposal Area.

FY 2009 funds will be used to complete the Feasibility Study of the Site.

The schedule for completion of site remediation is to be determined.**

*A preliminary cost estimate for site remediation will be determined during the Feasibility Study phase.

**The completion schedule will depend on the cleanup standards established for this site and on overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

MARYLAND

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
W.R. Grace Site Baltimore, MD Baltimore District	41,970,000– 55,960,000*	10,947,000	496,000	700,000	750,000	750,000	28,327,000- 42,317,000*

The W.R. GRACE site is situated within a 260-acre property owned by W.R. Grace-Davidson Chemical Manufacturing Company (GRACE) and located in south Baltimore City on an industrialized peninsula. Currently, GRACE manufactures and produces specialty chemicals at this facility. Contamination at the site is located in two separate and distinct areas of concern. The first is located in the southwestern corner of Building 23 which housed the thorium extraction process and has contaminated surfaces which were impacted by this process. The second area is the approximately 7-acre Radioactive Waste Disposal Area (RWDA) located east of the plant proper. This area received the process byproducts and spent monazite sand and gangue from the thorium extraction process. The Department of Energy (DOE) conducted radiological surveys at the site; however, no characterization or remediation had been performed. The Corps has finalized the remedial investigation/feasibility study (RI/FS) and Record of Decision (ROD) for Building 23.

In FY 2007 the funds were used to complete the Feasibility Study at RWDA.

In FY 2008, funds are being used to complete the RWDA Proposed Plan.

FY 2009, funds will be used to complete the Proposed Plan and Record of Decision for RWDA and the Building 23 Remedial Design.

The schedule for completion of site remediation is to be determined. **

* The total cost will depend upon the specific cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site is approved in a Record of Decision, it will be possible to provide a more definitive estimate.

** The completion schedule will depend on the cleanup standards established for this site and on overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

MASSACHUSETTS

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Shpack Landfill Norton/Attleboro, MA New England District	43,419,000	10,260,000	5,759,000	6,000,000	10,000,000	10,000,000	1,400,000

The Shpack site is an 8-acre abandoned domestic and industrial landfill, which operated from 1946 to 1965. It is located along the Norton/Attleboro town boundary line with approximately 5.5 acres in Norton and 2.5 acres in Attleboro. The Town of Norton and Attleboro Landfill, Inc. owns the property. FUSRAP-related radioactive contamination is believed to have come from Metals and Controls, Inc. (now Texas Instruments), which had used the landfill to dispose of trash and other materials from 1957-1965. The General Plate Division of Metals and Controls began to fabricate enriched uranium foils at their Attleboro plant in 1952. In 1959 it merged with Texas Instruments, which continued the operations until 1981, using enriched and natural uranium for the fabrication of nuclear fuel for the U.S. Navy and commercial customers. The site was also listed on the National Priority List (NPL) in 1986, primarily to address other contaminants on site. The Environmental Protection Agency (EPA) has signed an Administrative Order by Consent with a group of Settling Parties (which includes Texas Instruments) for the performance of a remedial investigation/feasibility study (RI/FS). This study was completed in FY04 and a Record of Decision (which addressed the radiological contamination) was signed on 30 September 2004. The Corps has completed a gamma walk-over survey, site characterization, and potentially responsible party (PRP) investigations and completed a draft Engineering Evaluation/Cost Analysis (EE/CA). In FY 2005, the Corps initiated the remedial action in accordance with EPA's Record of Decision. Quantities of contaminated soil have increased significantly over those in the Record of Decision requiring a significant increase in funding to complete the project

In FY 2007 funds were used to continue the remedial action.

In FY 2008 funds are being used to continue the remedial action.

In FY09 funds will be used to continue the remedial action which is now scheduled for completion in FY 2010 depending upon the availability of funds.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Mississippi Valley Division

MISSOURI

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
St. Louis Downtown Site St. Louis, MO St. Louis District	225,117,000	138,377,000	13,300,000	15,400,000	17,000,000	18,000,000	23,040,000

The St. Louis Downtown Site and vicinity properties are located in St. Louis, Missouri. The site is comprised of an operational chemical manufacturing facility (Mallinckrodt Inc.) and 36 surrounding properties used by a variety of interests for industrial and commercial purposes. The primary contaminants of concern are radium-226, thorium-230, uranium-238, progeny, metals, and organic compounds. The extent of contamination includes 17 acres where contaminated soils are accessible for remediation (17 buildings, subsurface soil, and vicinity properties). The primary regulators/stakeholders include the U.S. Environmental Protection Agency Region VII, Missouri Department of Natural Resources, and the St. Louis Oversight Committee. In 1998, a Record of Decision (ROD) for Accessible Soils was signed to allow the removal of approximately 87,000 cubic yards of contaminated soils. The total estimated Federal cost shown above does not reflect possible costs of addressing contamination in inaccessible soils.

In FY 2007, in accordance with the Record of Decision, the Corps completed the response action for one Mallinckrodt plant area and two vicinity properties and began remedial activity for the PSC Metals vicinity property. A total of 22,170 cubic yards of contaminated soils was removed. In addition, the Corps initiated the Remedial Investigation fieldwork for the inaccessible areas at the St. Louis Downtown Site and completed the design for the Plant 6West area.

In FY 2008, the Corps is continuing the Remedial Investigation field work for inaccessible soils, remediating approximately 20,000 cubic yards at the Plant 6 West area and two vicinity properties.

FY 2009 funds will be used to remediate approximately 20,000 cubic yards from the Plant 6 West and another plant area and to complete the Remedial Investigation for inaccessible soils.

The completion schedule will depend on the overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Mississippi Valley Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Latty Avenue Properties/Hazelwood Interim Storage Site, Berkeley, MO St. Louis District	186,836,323	66,255,000	1,873,000	16,700,000	15,000,000	15,000,000	72,008,323

The Latty Avenue Properties site is comprised of several different tracts of land in North St. Louis County, Missouri. The project includes an 11-acre site, encompassing the Hazelwood Interim Storage Site (HISS) and Futura Coatings on Latty Avenue, and the Latty Avenue Vicinity Properties, which are at various nearby locations. The Hazelwood Interim Storage Site and Futura Coatings were placed on the National Priority List in 1989. The primary contaminants of concern are radium-226, thorium-230, and uranium-238. Surface and subsurface soils are known to be contaminated at levels which pose an unacceptable human health risk based on projected future land use scenarios. The primary regulators/stakeholders include the Environmental Protection Agency Region VII, Missouri Department of Natural Resources, and the St. Louis Oversight Committee.

In FY 2007, the Corps began designs for the HISS/Futura property and one vicinity property. Approximately 27,000 cubic yards of contaminated soil were removed and shipped from two of the Latty Avenue Vicinity Properties.

In FY 2008, the Corps is completing the design and remediation of one property and beginning the remediation of the HISS/Futura property. Approximately 20,000 cubic yards of contaminated soil is being remediated.

FY 2009 funds will be used to excavate and ship approximately 27,000 cubic yards of contaminated soil. Remedial action will be completed on one vicinity property.

The completion schedule will depend on overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Mississippi Valley Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
St. Louis Airport Site, Vicinity Properties, St. Louis, MO St. Louis District	106,957,504	41,639,000	1,634,000	4,655,000	7,000,000	6,000,000	46,029,504

The St. Louis Airport Site (SLAPS) Vicinity Properties consists of 78 properties in North St. Louis County, Missouri. The contaminated sites include former ball fields (located directly north of SLAPS), areas along haul roads, and Coldwater Creek. The primary contaminants of concern are radium-226, thorium-230, and uranium-238. Dispersion of radioactive material occurred by direct migration from SLAPS via air or water, or through vehicular distribution along the roadways. (This is the case for most of the roadway, shoulder, and ditch contamination.) The properties are used for residential, commercial, industrial, recreational and transportation (road easement) purposes. The primary regulators/stakeholders include the Environmental Protection Agency, Region VII, Missouri Department of Natural Resources, and the St. Louis Oversight Committee. The Record of Decision for this site was finalized in FY 2005. A Potentially Responsible Party investigation is underway.

In FY 2007, funds were used to complete designs for three properties, initiate designs for three additional properties and complete remediation of one property. A total of 7,150 cubic yards of contaminated soil was shipped.

In FY 2008, the Corps is remediating two properties by removing and shipping approximately 8,000 cubic yards, beginning design work on two properties, and issuing final status survey documents which will release five vicinity properties.

FY 2009 funds will be used to complete two designs and initiate removal of contaminated material on one vicinity property. Approximately 6,000 cubic yards will be removed and shipped off site for disposal.

The completion schedule will depend on overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Mississippi Valley Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
St. Louis Airport Site, St. Louis, MO St. Louis District	308,964,000	268,056,000	30,180,000	6,945,000	500,000	500,000	2,783,000

The St. Louis Airport Site (SLAPS) consists of 21.7 acres north of Lambert International Airport in North St. Louis County, Missouri. The site contamination is bordered by McDonnell Boulevard on the north and east, Coldwater Creek on the west, Banshee Road and Norfolk and Western Railway on the south. The ditches immediately adjacent to the north and south of SLAPS are considered part of this location. The primary contaminants of concern are radium-226, thorium-230, and uranium-238. The St. Louis Airport Authority owns the property. The primary regulators/stakeholders include the U.S. Environmental Protection Agency Region VII, Missouri Department of Natural Resources, and the St. Louis Oversight Committee. A Potentially Responsible Party Investigation is underway. The site was placed on the National Priority List in 1989.

In FY 2007, in accordance with the 2005 Record of Decision, the Corps removed and shipped approximately 16,000 cubic yards of contaminated soil. This completed the excavation required at the project in accordance with the Record of Decision.

In FY 2008, the Corps is preparing a report documenting the remedial action for closeout. The report is being drafted and circulated with the State of Missouri and the US Environmental Protection Agency for review. Post remedial action groundwater monitoring is beginning.

FY 2009 funds will be used to perform groundwater monitoring and long term management activities in accordance with the Record of Decision.

Please note that the total estimated Federal cost has been reduced by \$2,000,000. This reflects completion of the excavation activities under budget.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

NEW JERSEY

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
DuPont Chambers Works Deepwater, NJ Philadelphia District	22,210,000 – 29,630,000*	14,603,000	1,487,000	1,700,000	1,000,000	1,000,000	2,420,000 – 9,840,000*

The DuPont Chambers Works site is a 700-acre active chemical plant located in Pennsville and Carneys Point Townships on the southeastern shore of the Delaware River, north of the I-295 Delaware Memorial Bridge, and adjacent to the residential community of Deepwater, N.J. The plant is owned and operated by E.I. DuPont de Nemours & Company. Operations involving uranium at the Chambers Works site began in 1942. As part of its work on the Manhattan Engineer District (MED) Program, DuPont worked on developing a process for converting uranium oxide to produce uranium tetrafluoride and small quantities of uranium metal. The major contaminant is U-238 found in both soil and water samples. Through FY2004, the Corps continued site characterization and Remedial Investigation / Feasibility Study (RI/FS) activities for soil contamination and investigation of possible groundwater contamination, conducted Technical Project Planning sessions with the stakeholders including the New Jersey Department of Environmental Protection, held Restoration Advisory Board Meetings, conducted extensive coordination with the landowner, and completed work-plans for on-site investigations and completed soil sampling and well installation.

In FY 2006 and 2007, the Corps completed the final Intrusive Site Soil Contamination Investigation and analysis on Operable Unit #3. The Corps began incorporating this data into the Site-Wide remedial investigation and risk assessment. The groundwater investigation was continued.

In FY 2008, the Corps completes the Draft RI and Risk Assessment reports for Regulator review and comment and initiates the Site-Wide Feasibility Study.

Requested funds for 2009 will be used to complete the Site-wide Feasibility Study and initiate the Proposed Plan.

The schedule for completion of site remediation is to be determined. **

*The total cost will depend upon the specific cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a Record of Decision, it will be possible to provide a more definitive estimate. Current project completion schedules and cost estimates do not include any remedial design or remediation action for potential ground-water contamination.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Maywood Site Maywood, N.J. New York District	893,000,000- 903,000,000*	277,633,000	29,530,000	30,000,000	30,000,000	35,000,000	490,837,000- 500,837,000*

The Maywood site is included on the Environmental Protection Agency Superfund National Priorities List. The Corps is currently working under the Federal Facilities Agreement (FFA) signed by DOE and EPA, while we negotiate a Corps/EPA FFA. Site consists of 140 acres of residential, commercial and industrial property totaling 88 commercial and residential properties, located 20 miles north of Newark adjacent to Interstate 80 and State Route 17. There are approximately 281,000 cubic yards of subsurface contaminated material containing thorium-232, radium-226, and uranium-238. The United States owns 11.7 acres of the site, which is being used as a staging area during cleanup operations. The Stepan Company occupies part of the site and operates a chemical factory processing a patented product. Sears operates a large central distribution warehouse (leased) on the site. In the mid-1980's, 25 residential vicinity properties were remediated. In 1994 an Engineering Evaluation/Cost Analysis (EE/CA) by the Department of Energy approved a further interim removal action to remediate an additional 39 vicinity properties. As of the end of FY 00, all of the 39 vicinity properties included in the 1994 EE/CA have been remediated, including 23 completed by the Corps (15 in FY 98, 7 in FY99, and 1 in FY00). Additionally, the Corps has completed a Remedial Investigation/Feasibility Study/Proposed Plan, Record of Decision, Remedial Design (RI/FS/PP/ROD/RD) for soils and buildings on the remainder of the site, prepared an EE/CA for an interim removal action involving 10 commercial properties impacted by New Jersey Department of Transportation projects, initiated remedial action for the remainder of soils and completed potentially responsible party (PRP) negotiations through the Department of Justice with the Stepan Company. A complete review of the cost estimate prepared in 2003 has identified inconsistencies with what we presently know. A new cost estimate has been prepared and the funding information above has been revised accordingly.

In FY 2007, funds were used to continue remedial action for the remainder of the soils. In addition, the Corps continued to develop the groundwater feasibility study and proposed plan.

In FY 2008, the Corps continues the remedial action under the soils ROD, completes the feasibility study and proposed plan and initiates the groundwater ROD.

In FY 2009, funds will be used to continue the remedial action under the soils ROD and to complete the groundwater ROD.

The schedule for completion of site remediation is to be determined.**

*The total cost will depend upon the specific groundwater cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a groundwater Record of Decision, it will be possible to provide a more definitive estimate.

**The completion schedule will depend on the groundwater cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Middlesex Sampling Plant Middlesex, NJ New York District	112,059,000- 115,059,000*	79,709,000	4,900,000	16,700,000	10,750,000	1,000,000	0 - 2,000,000*

The Middlesex site is a Federal government-owned site located in Middlesex, NJ. There are also 36 Vicinity Properties (VPs). Primary contaminants are Uranium-232, Radium-226, and Thorium-232. The Manhattan Engineer District (MED) established the Middlesex Sampling Plant (MSP) in 1943 for use in sampling, storage, and shipment of uranium, thorium, and beryllium ores. MED operations ended in 1955, and the Atomic Energy Commission (AEC) later used the site for storage and performed limited sampling of thorium residues. In 1967, the AEC terminated activities at the MSP and decontaminated onsite structures to meet criteria then in effect. From 1969 to 1979, the site served as a US Marine Corps training center. In 1980, the MSP was returned to the Department of Energy (as AEC's successor), which designated it for clean up under FUSRAP. MSP was used for interim storage of two piles of radioactively contaminated soils removed from the vicinity properties (VPs) and from the Middlesex Municipal Landfill (MML). The Middlesex site was added to the Environmental Protection Agency Superfund National Priorities List (NPL) in FY 1999. Through the end of FY 2001, the Corps has removed and disposed of the MML pile and the VP pile. Additionally, the Corps has completed a Remedial Investigation/Feasibility Study/Proposed Plan, Record of Decision, Remedial Design (RI/FS/PP, ROD/RD) for soils on the remainder of the site. Coordination with Federal and state agencies, and local communities is continuing.

In FY 2007, the Corps continued the soils remediation and the Groundwater Feasibility Study and Proposed Plan.

In FY 2008, the Corps completes the soils remediation, the Groundwater Feasibility Study and Proposed Plan and initiates a Groundwater ROD. Additionally, the Corps completes the work with USEPA Region 2 to develop a Federal Facilities Agreement.

FY 2009 funds will be used to complete the Groundwater ROD.

The schedule for completion of site remediation is to be determined.**

* The total cost will depend upon the specific cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a Record of Decision, it will be possible to provide a more definitive estimate.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

NEW YORK

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Colonie Site Colonie, NY New York District	193,434,000 – 202,330,000*	172,579,000	10,525,000	7,010,000	500,000	1,000,000	1,820,000- 10,716,000*

The Colonie site consists of a total area of 11.2 acres plus 56 vicinity properties (VPs). The primary site was owned and operated by National Lead Industries (NL) from 1937-1984. The facility was used for electroplating and manufacturing various components from uranium and thorium. Radioactive materials released from the plant exhaust stacks spread to site buildings, portions of the grounds, and the 56 commercial and residential VPs. NL also dumped contaminated casting sand into the former Patroon Lake. By order of a New York State Court the NL plant shut down in 1984. Coordination is ongoing with the New York State Department of Environmental Conservation, and local leaders. The transfer of the property from NL to the Federal government in 1984 contained “hold harmless” language, which precludes holding NL as a PRP. At the time of transfer of FUSRAP execution to the Corps, the Department of Energy (DOE) had completed remediation of the vicinity properties; and in 1995 finalized an Engineering Evaluation/ Cost Analysis (EE/CA), authorizing a removal action to address soils contamination at the former NL property itself. Through FY 2002, the Corps disposed, off-site, stockpiled materials and excavated contaminated soils, in accordance with the DOE EE/CA; completed a reevaluation of the DOE EE/CA and issued an amended EE/CA and revised action memorandum; and continued the groundwater investigations. Additionally, the Corps has completed the removal action under the revised Action Memorandum.

In FY 2007, funds were used to complete the removal action under the revised Action Memorandum and prepare a draft groundwater Feasibility Study/Proposed Remedial Action Plan for the main site.

In FY 2008, the Corps completes the groundwater Feasibility Study/Proposed Remedial Action Plan and prepares a combined soil and groundwater Record of Decision (ROD).

FY 2009 funds will be used to complete a combined Soil and Groundwater ROD.

The schedule for completion of site remediation is to be determined.**

* Once a final groundwater proposed plan for the site has been approved, it will be possible to provide a more definitive estimate.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Guterl Specialty Steel Lockport, NY Buffalo District	TBD*	565,000	300,000	2,720,000	1,750,000	2,500,000	TBD*

The former Guterl Specialty Steel site, a.k.a. Simmonds Saw and Steel Corporation, comprises about 70 acres in the City of Lockport, New York, approximately 20 miles north of Buffalo, New York. The site is bordered by residential and commercial properties to the north, State Route 93 to the west, and the New York State Barge Canal to the south. An active steel plant adjacent to the site is currently being operated by ALLVAC, a business unit of the Allegany Technologies, Inc. Currently, employment is approximately 60 people. The site was used to perform rolling mill operations on about 35-million pounds of uranium metals and 40-thousand pounds of thorium metals between 1948 and 1955 under contracts issued by the Atomic Energy Commission (AEC). The buildings used to support the AEC process encompass about 9 acres, and are abandoned. The site also includes a 9-acre landfill. The Guterl project is being coordinated with the New York State Department of Environmental Conservation.

FY 2007 funds were used to initiate field sampling activities associated with the Remedial Investigation (RI).

In FY 2008, the Corps completes field sampling and testing and continues activities required to prepare the RI Report.

FY 2009 funds will be used to complete the RI report and initiate feasibility studies of remedial alternatives to clean up the contaminants of concern.

The schedule for completion of site remediation is to be determined.**

*A preliminary cost estimate for site remediation will be developed during the Feasibility Study phase.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Linde Air Products Tonawanda, NY Buffalo District	253,400,000	159,970,000	20,280,000	16,950,000	28,245,000	23,210,000	4,745,000

The Linde site is located in the Town of Tonawanda, a suburb north of Buffalo, NY.

The project consists of two distinct areas: the original Linde site that is now owned and occupied by Praxair, Inc.; and a designated vicinity property, the Tonawanda Landfill and Mudflats area that is located about 1.5 miles north of Praxair. The Linde site is a former industrial complex in an urban area that now serves as the worldwide research and development facility for Praxair. Currently, employment is approximately 1,400 people. A public elementary school and numerous residential properties adjoin the property. Radioactive contamination generated by former Manhattan Engineering District activities, in the soils, buildings, and groundwater at the Linde site are being evaluated and remediated, as required under CERCLA. The principal radionuclides of concern are radium, thorium, uranium, and their decay products. Project activities are coordinated with the New York State Department of Environmental Conservation, the New York State Department of Health, and the U.S. Environmental Protection Agency. Since last reported, project costs have increased (\$7,500,000) due to increased volume estimates and additional Real Estate acquisitions required to complete the project.

The Tonawanda Landfill and the Mudflats Area is a separately designated vicinity property located about 1.5 miles north of the Linde site. Remedial investigations of this property have been completed. As a result of public and elected official response to the Proposed Plan (PP), the Corps is re-evaluating the baseline risk assessment and the determination of Federal liability.

FY 2007 funds were used to continue Linde soils remedial action, complete the Record of Decision on the Linde Groundwater Operable Unit, and complete the Proposed Plan for the Tonawanda Landfill and Mudflats vicinity property.

In FY 2008, work continues on the Linde soils remedial action and addressing concerns related to the Tonawanda Landfill and Mudflats Vicinity Property.

FY 2009 funds will be used to continue the soils remedial action, and activities on the Tonawanda Landfill and Mudflats Vicinity Property.

The schedule for completion of site remediation is to be determined.**

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Niagara Falls Storage Site Lewiston, NY Buffalo District	319,220,000 – 425,620,000*	42,817,814	3,150,000	2,775,000	3,250,000	3,500,000	263,727,186 - 370,127,186**

The Niagara Falls Storage Site (NFSS) is a 191-acre Federally-owned site with: a below ground interim waste containment structure (IWCS) for radioactive residues and waste; several buildings, one of which contains isolated areas of fixed, low activity radioactive contamination; and several vicinity properties (VPs). It is located in Lewiston Township, 19 miles northwest of Buffalo, NY. Material stored in the IWCS includes 234,770 cy of low activity radioactive waste and 14,390 cy of high activity radioactive residues. The IWCS is covered with an interim cap designed to retard radon emissions and rainwater infiltration. The Corps is performing the Remedial Investigation (RI) and Feasibility Study (FS) to: determine the nature and extent of contamination; determine risk and develop cleanup criteria; and develop alternatives to remediate the site. Yearly fixed costs cover cap maintenance and site monitoring and security. The NFSS project is being coordinated with the New York State Department of Environmental Conservation, New York State Department of Health, and U.S. Environmental Protection Agency.

FY 2007 funds were used to continue progress on the RI report and FS, complete the draft RI report, and continuation of site maintenance, monitoring and surveillance activities. The Corps also continued its community outreach.

In FY 2008, the Corps finalizes and releases the final RI report, and continues the FS. Maintenance, monitoring and surveillance activities continue to assure integrity of the waste containment structure, and community outreach continues.

FY 2009 funds will be used to conclude the FS study and release the final FS Report; initiate work on the Proposed Plan (PP); continue maintenance, monitoring, and surveillance activities; and community outreach.

*The total cost will depend upon the specific cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a Record of Decision, it will be possible to provide a more definitive estimate. The current cost estimate assumes that some action will be taken to address the entire site. The Feasibility Study will also evaluate a number of options, including the feasibility of leaving the containment structure intact for transfer to DOE for Long-term Stewardship under the MOU between the Corps and DOE. Selection of this alternative would likely result in a lower overall cost for the FUSRAP completion.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Seaway Site Tonawanda, NY Buffalo District	39,054,500 – 89,460,200*	8,280,000	385,000	400,000	400,000	100,000	29,489,500 – 79,895,200**

The Seaway Site, a closed sanitary landfill, is a privately owned 93-acre site in the Town of Tonawanda, 10 miles north of downtown Buffalo, New York. The Seaway Site is contaminated, principally on 16 acres, with radiological waste, including thorium, uranium and radium. The waste that was disposed of at the site originated from the Linde Air Products plant, where uranium ore was processed. There are six areas associated with the Seaway Site; Areas A, B, C, D, and Seaway Southside and Seaway Northside. Cleanup of accessible (i.e., outside of the landfill) Area D soils was included in the Record of Decision (ROD) for the remediation of the Ashland 1 and 2 Sites. During remediation of the Ashland 1 and 2 Sites contamination was identified that extends beyond the fence line to the north and south sides of the Seaway Site that is considered as part of the Seaway Site. The Seaway project is being coordinated with the New York State Department of Environmental Conservation, the New York State Department of Health, and the U.S. Environmental Protection Agency.

FY 2007 funds were used to continue preparation of the Feasibility Study Addendum (FSA), and begin preparation of the Proposed Plan.

In FY 2008, the Corps completes the FSA, and Proposed Plan, and begins work on the ROD.

FY 2009 funds will be used to complete the ROD.

*The total cost will depend upon the specific cleanup standards established for this site, taking into account input from Federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a Record of Decision, it will be possible to provide a more definitive estimate. The low end of the range is based on a containment alternative (closing the landfill), while the upper limit is based on an estimate for partial excavation of FUSRAP-contaminated materials. Total estimated costs are based on the current FSA estimates.

** The completion schedule will depend on the cleanup standards for the site established in the Record of Decision and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

North Atlantic Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Sylvania Corning Plant Hicksville, NY New York District	TBD*	220,000	1,250,000	1,500,000	1,900,000	3,000,000	TBD*

The Hicksville site consists of a total area of 10.5 acres divided into three separate properties located at 70, 100, and 140 Cantiague Rock Road. The Verizon entities, current owners of the 140 and 70 properties and lessees of the 100 property, are the corporate successors to the Atomic Energy Commission's (AEC) contract operator. The facility was used for two distinct but similar operations. The first operation (1952-1965) was under contracts with the AEC for research, development and production primarily in support of the Government's nuclear weapons program. The other operation (1952-1967) was AEC licensed work primarily for the production of reactor fuel, and other reactor core components. Radioactive materials, metals and volatile organic compounds were discharged to the plant sumps, which contaminated site soils and groundwater. Coordination is ongoing with the New York State Department of Environmental Conservation, and Verizon entities.

In FY 2007, funds were used to continue a Remedial Investigation and Baseline Risk Assessment and to coordinate with stakeholders.

In FY 2008, the Corps continues a Remedial Investigation and Baseline Risk Assessment and stakeholder coordination.

FY 2009 funds will be used to complete the Remedial Investigation and Baseline Risk Assessment.

*Study costs only, a preliminary cost estimate for site remediation, if necessary, will be determined during the development of the Feasibility Study. The completion schedule will depend on the cleanup standards for the site established in the Record of Decision and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

OHIO

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY 2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional to Complete After FY 2009 \$
Former Harshaw Chemical Company Cleveland, OH Buffalo District	38,970,000 – 51,950,000 *	8,245,000	1,900,000	1,950,000	1,450,000	1,350,000	24,075,000 – 37,055,000

The former Harshaw Chemical Company is a privately owned, 40-acre site located approximately 5 miles southwest of downtown Cleveland, Ohio. The area is predominately an industrial setting bordering the on Cuyahoga River. From 1944 through 1959, the Manhattan Engineering District (MED) and the Atomic Energy Commission (AEC) contracted Harshaw for the purpose of supporting the Nation's early atomic energy program. Various forms of uranium were produced for shipment to Oak Ridge, Tennessee, for isotopic separation and enrichment. In 1960, the site was released for unrestricted use by the AEC, following decontamination efforts by Harshaw, under the guidance of the AEC. The Harshaw project is being coordinated with the Ohio Environmental Protection Agency, the Ohio Department of Health, and the U.S. Environmental Protection Agency.

FY 2007 funds were used to complete the Remedial Investigation (RI) Report and Historic Aerial Photograph Analysis and to award the Potentially Responsible Party (PRP) Analysis contract.

In FY 2008, the Corps completes a technical addendum to the RI Report and PRP Analysis, disposes of Investigative Derived Waste from the RI field activities, initiates the Feasibility Study (FS), and prepares the No Further Action Proposed Plan (PP) for Investigative Area (IA) 06.

FY 2009 funds will be used to continue the FS, conduct an annual safety assessment of Building G1, complete the Record of Decision (ROD) for IA 06, and conduct planning and cost estimation for interim removal actions at Building G1.

The schedule for completion of the site remediation is to be determined.**

*The total cost will depend upon the specific cleanup standards established for this site, taking into account input from federal, state, and local regulators, the general public, and other stakeholders. Once a final cleanup plan for the site has been approved in a Record of Decision, it will be possible to provide a more definitive estimate.

** The completion schedule will depend on the cleanup standards established for this site and overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Luckey Site Luckey, OH Buffalo District	58,929,700	14,466,000	500,000	500,000	400,000	1,500,000	41,563,700*

The Luckey Site is a privately owned 40-acre site located approximately 22 miles southeast of Toledo, Ohio. FUSRAP contamination on site consists of both radiological and chemical wastes. The primary radiological contaminants at the site include radium, uranium and thorium. The primary chemical contaminants at the site are beryllium and lead. In 1949, the Atomic Energy Commission constructed a beryllium production facility at the site. The waste solutions and sludge from the beryllium production operations were stored in lagoons on the plant property. Waste solutions were also discharged into Toussaint Creek. In 1951 and 1952, the site operator purchased 1,000 tons of radiologically contaminated scrap steel from the Lake Ontario Storage Area. The scrap steel is believed to be the source of the radiological contamination. In 1958, beryllium production operations ceased. The Luckey project is being coordinated with the Ohio Environmental Protection Agency, Ohio Department of Health, and the U.S. Environmental Protection Agency.

FY 2007 funds were used to begin the Record of Decision (ROD) for the Groundwater Operable Unit and conduct annual groundwater sampling.

In FY 2008, the Corps completes the ROD for the Groundwater Operable Unit, conducts annual groundwater sampling, and begins remedial design.

FY 2009 funds will be used to continue remedial design and conduct annual groundwater sampling.

* The completion schedule will depend on overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

Great Lakes and Ohio River Division

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Painesville Site Painesville, OH Buffalo District	28,900,000	10,250,000	5,950,000	6,300,000	6,000,000	200,000	200,000*

The Painesville Site is a privately owned 30-acre site located approximately 22 miles northeast of Cleveland, Ohio. In the early 1940's, the Defense Plant Corporation financed construction of a magnesium production facility on property acquired by the Federal Government. The Diamond Magnesium Company received approximately 1,650 tons of FUSRAP-related radiologically contaminated scrap steel from the Lake Ontario Storage Area, which resulted in contamination of the site. The site is contaminated with radiological waste, including uranium, radium, thorium, and their natural decay products. This site is currently owned by Chemtura, Inc. Uniroyal Rubber Co., Inc., a predecessor to Chemtura, closed this facility in July 1999. The plant has been demolished and the owner is performing environmental remediation for chemical contamination. 1,330 cubic yards of contaminated soils were removed from the site in the fall of 1998 under an Engineering Evaluation/Cost Analysis (EE/CA) and Action Memorandum. Circumstances did not permit complete removal of radiological contamination under the EE/CA so the Corps initiated a focused Remedial Investigation/Feasibility Study (RI/FS) to determine the extent of additional contamination and establish the final cleanup criteria. The Corps completed the Proposed Plan in 2005, and the Record of Decision was signed in 2006 establishing the remedy of excavation and off site disposal of radiological contaminants exceeding the cleanup criteria. The Painesville site is being coordinated with the Ohio Environmental Protection Agency, the Ohio Department of Health, and the U.S. Environmental Protection Agency. Additional soil contamination has been found during remediation, so that the total estimated volume of contaminated soil has increased from 5,800 cubic yards (cy) to 9,600 cy. This has required an increase of \$5,800,000 to complete site remediation.

FY 2007 funds were used to complete the remedial design and initiate site remediation.

In FY 2008, the Corps completes the site remediation and transport/disposal of contaminated soils.

FY 2009 funds will be used to prepare closure reports and begin transition of the site to the Department of Energy.

*The completion schedule will depend on the overall funding constraints.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009
Division

Great Lakes and Ohio River

PENNSYLVANIA

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Shallow Land Disposal Area (SLDA) Parks Township, PA Pittsburgh District	66,010,000*	7,430,000	1,410,000	1,000,000	1,250,000	4,000,000	50,920,000

The Shallow Land Disposal Area (SLDA) site encompasses 44-acres of land located in Parks Township, Pennsylvania located about 23 miles northeast of Pittsburgh, Pennsylvania. A nuclear fuel production facility located in Apollo, Pennsylvania generated wastes that were emplaced into a series of 10 trenches at the Shallow Land Disposal Area (SLDA) from the period 1960 to 1970. The contamination is believed to consist primarily of uranium and thorium associated with production of nuclear materials at the Apollo facility. The 10 trenches occupy an area of about 1.2 acres of the 44-acre Shallow Land Disposal Area. The site is currently owned by BWX Technologies and operates under a Nuclear Regulatory Commission (NRC) license. Any future U. S. Army Corps of Engineers (USACE) activities at the site will be consistent with the Memorandum of Understanding (MOU) between the USACE and the NRC for coordination on cleanup and decommissioning of the FUSRAP sites with NRC-licensed facilities, dated July 5, 2001. This project is being coordinated with Pennsylvania Department of Environmental Protection, Pennsylvania Department of Health and USEPA.

FY 2007 funds were used to complete the Proposed Plan (PP), the Record of Decision (ROD) and initiate remediation work plans.

In FY 2008, funds will be used to continue the remediation work plans.**

FY 2009, funds will be used to complete work plans and initiate site remediation.

*Based on cost estimate for site remediation contained in the ROD (September 2007) plus the administrative cost developed in December 2007.

**Delay in initiation of site remediation to FY2009 caused by lower than anticipated FY2009 Program budget.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009
 Division

Great Lakes and Ohio River

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Superior Steel Scott Township, PA Buffalo District	TBD*	0	205,000	10,000	0	40,000	TBD

The Former Superior Steel site was designated eligible for inclusion in FUSRAP by the Department of Energy in 2006. The site consists of five interconnected warehouse buildings (designated as Building 23) with uranium-contaminated building surfaces and approximately 12 cubic yards of investigation-derived waste (IDW) resulting from previous investigation and remediation efforts performed by the Nuclear Regulatory Commission (NRC) and the site owner. A portion of the site, currently owned by Superbolt, Inc., was used under contract with the Atomic Energy Commission (AEC) from 1952 to 1957 for the handling and milling of uranium metal. This processing consisted of a combination of salt bathing, rolling, brushing, shaping, cutting, stamping, and coiling, depending on the desired final product. In addition to the work performed for the AEC, Superior Steel Corporation was licensed by the AEC in 1956 to "...receive possession of and/or title to unlimited quantities of thorium metal for rolling and cutting;" this license expired in 1958. A Preliminary Assessment and a Preliminary Legal Liability Analysis were completed in FY07. These documents and a recommendation to include the site in the FUSRAP are being routed through HQ, ASA, OMB, and Congress. This project is being coordinated with Pennsylvania Department of Environmental Protection, Pennsylvania Department of Health and USEPA.

FY 2007 funds were used complete a Preliminary Assessment following the CERCLA process, as well as a Preliminary Legal Liability Analysis.

In FY 2008, project will be included in FUSRAP.

FY 2009 funds will be used to initiate a remedial investigation.

*Total cost and schedule for completion of site remediation to be determined.

APPROPRIATION TITLE: Formerly Utilized Sites Remedial Action Program, Fiscal Year 2009

NATIONAL

Site	Total Estimated Federal Cost \$	Allocation Prior to FY 2006 \$	Allocation FY 2006 \$	Allocation FY2007 \$	Allocation FY 2008 \$	Requested Allocation FY 2009 \$	Additional To Complete After FY 2009 \$
Potential Sites	TBD*	\$1,774	800	0	100	1,100	TBD*

The Department of Energy (DOE) considered several hundred sites in the public and private sectors for the potential for residual radioactive contamination as a consequence of work accomplished in support of nuclear energy technology development that began in the early 1940s by the Manhattan Engineer District (MED). Of these considered sites, a limited number initially were designated for remediation under FUSRAP and the others were eliminated from further consideration at that time. Thereafter, the DOE notifies the Corps of new information changing the status of eliminated sites to that of eligible according to FUSRAP criteria.

FY2009 funds will be used to complete preliminary assessments at a number of sites referred by DOE, and if necessary, site inspections or other activities to determine if there is a release or threat of a release of a hazardous substance into the environment that will present an imminent and substantial danger to public health or welfare, and whether the site should be added to FUSRAP for further study and remediation.

*To Be Determined (TBD). Any new sites added to FUSRAP as a result of the preliminary assessment/site inspection performed with these funds will be included in future budgets.

RECREATION

EMERGENCY MANAGEMENT

APPROPRIATION TITLE: Flood Control and Coastal Emergencies (FCCE), FY 2009

SUMMARIZED FINANCIAL DATA:

Annual Appropriation FY 2004	\$	0
Emergency Supplemental FY 2004	\$	0
Annual Appropriation FY 2005	\$	0
Emergency Supplemental FY2005	\$	348,000,000
Annual Appropriation FY 2006	\$	0
Emergency Supplemental FY2006	\$	5,407,989,000
Budget for FY 2007	\$	0
Emergency Supplemental FY2007	\$	1,561,000,000
Budget for FY 2008	\$	0
Budget for FY 2009	\$	40,000,000

DISASTER PREPAREDNESS: This activity consists of functions required to ensure that USACE activities are ready to respond to a broad range of disasters and emergencies. It includes coordination, planning, training, and the conduct of response exercises with key local, state and federal stakeholders/partners under the Corps' statutory authorities and in support of the Federal Emergency Management Agency, Department of Homeland Security. It also allows the Corps to purchase and stockpile critical supplies and equipment and support facilities (Emergency Operations Centers), including the purchasing and upgrading deployable tactical operations systems (DTOS). DTOS allows USACE to provide immediate emergency aid to a disaster stricken community; these upgrades will be undertaken over a 3-year period. These activities ensure USACE personnel assigned to emergency assistance are trained and equipped to accomplish their missions. This includes, but not limited to, personnel assigned to Emergency Operations Centers, Crisis Management Teams, Crisis Action Teams, Regional Response Coordination Centers, Planning and Response Teams, Special Cadres, Levee Inspection Teams and general response personnel.

Major preparedness efforts include reviewing and updating response plans based on lessons learned from recent disasters; training of personnel and teams to develop critical skills which enhance the capability to respond under adverse conditions; procuring and prepositioning critical supplies and equipment (i.e., sandbags, pumps) which likely would be otherwise unavailable during the initial response stages; periodic exercises to test and evaluate plans, personnel, and training; inspection of non-Federal flood control projects to ensure their viability to provide flood protection and assess their eligibility for post-flood rehabilitation; laboratory support for field operations; serving as a liaison to state and local governments and other federal agencies; and effective management to ensure workable, coordinated efforts to meet the needs of disaster victims. The funding identified under All-Natural Hazards Preparedness Activities reflects expanded national and regional planning, training and coordination to support response to all natural disasters that includes disasters under the umbrella of the National Response Plan.

FISCAL YEAR 2009: The Budget funds this program at \$40 million for preparedness, only. This represents an increase of about 25 percent in preparedness funding compared to the FY 2007 budget. The decision to seek this increase is partially an outcome of an analysis using the Program Analysis Rating Tool (PART), which recommended that planning and preparedness funding should be sought as part of the regular budget process, instead of relying on emergency supplementals.

WATER SUPPLY

EXPENSES

Justification of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 2009
(\$000)

APPROPRIATION TITLE: Expenses

	<u>FY 2008</u> <u>Appropriation</u>	<u>FY 2009</u> <u>Request</u>	<u>Change</u> <u>FY 2008-2009</u>	<u>Percent</u> <u>Change</u>
1. Executive Direction and Management				
a. Headquarters, U.S. Army Corps of Engineers				
Base level Operating Expenses	\$ 72,900	\$ 74,500	\$ 1,600	2.2%
Civil Works Program Account	<u>11,900</u>	<u>12,400</u>	<u>500</u>	<u>4.2%</u>
Total	\$ 84,800	\$ 86,900	\$ 2,100	2.5%
b. Major Subordinate Commands	\$ 72,400	\$ 72,100	\$ -300	-0.4%
2. Executive Direction and Management Support Activities				
a. Humphreys Engineer Center Support Activity (HECSA)	\$ 6,800	\$ 6,000	\$ -800	-11.8%
b. Institute of Water Resources (IWR)	4,400	4,600	200	4.5%
c. U.S. Army Engineer Research & Development Center (ERDC)	400	300	-100	-25.0%
d. USACE Finance Center (UFC)	900	800	-100	-11.1%
e. USACE Logistics Activity	3,200	3,500	300	9.4%
f. Army Corps of Engineers – Information Technology (ACE-IT)	<u>2,100</u>	<u>2,800</u>	<u>700</u>	<u>33.3%</u>
	\$ 17,800	\$ 18,000	\$ 200	1.1%
TOTAL:	\$175,000	\$177,000	\$ 2,000	1.1%

The Expenses account funds Executive Direction and Management (ED&M) activities for civil works functions. The account provides for the expenses necessary for general administration and related civil works functions in the Headquarters, U.S. Army Corps of Engineers and in major subordinate commands, and the costs of those elements of field operating activities providing direct support to those functions. ED&M activities include the exercise of command and control of USACE civil works operations; development, coordination and issuance of policy that guides regional and field execution and operations; program management in developing, defending and executing all major Civil Works programs; national and regional level coordination with elements of the Administration, Congress, and other agencies and national stakeholders; and quality assurance to ensure that the civil works program is being executed in accordance with law, regulation and policy.

The FY 2009 Budget of \$177 million is \$2 million more than FY 2008 of \$175 million. The increase, \$2 million is to fund price level changes of about one (1) percent for labor and other cost factors in the Corps of Engineers Executive Direction and Management (ED&M) function.

1. Executive Direction and Management

The FY 2009 Budget will provide for a total ED&M staffing level for the U.S. Army Corps of Engineers of 865 Full Time Equivalents (FTE) that is spread across the Headquarters, Major Subordinate Commands (MSC), and ED&M Support Activities. ED&M is the command and control, policy formulation, program management, national and regional coordination, and quality assurance of the Civil Works Program. This mission is decentralized across the Corps of Engineers in 37 districts, eight (8) MSCs, several field operating activities (FOA), two (2) technical Centers and one (1) Engineering Research and Development Center made up of seven (7) laboratories. The Budget will enable the Corps to accomplish its priority objectives for ED&M, such as management efficiency programs, CFO audits, asset management, and e-Government initiatives.

- a. Headquarters, U.S. Army Corps of Engineers
- (1) Base level Operating Expenses:
- (2) Civil Works Program Account:

FY 2009
<u>Request</u>
\$ 74,500
<u>12,400</u>
\$ 86,900

The Headquarters, U.S. Army Corps of Engineers is responsible for providing policy, guidance, and oversight of a comprehensive Civil Works Program. The headquarters assists the field command by providing command and control, policy formulation, national programs management, national coordination, quality assurance, preparation of the annual budget and legislative submission, national and international interface, resource distribution and oversight of execution, and performance measurement.

The amount requested for the headquarters for FY 2009 consists of two components: the base-level operating expenses of \$74,500 and the Civil Works Program Account amounting to \$12,400. The headquarters has an active program to manage its personnel resources. Positions have been prioritized and, as opportunities arise, least important positions are eliminated and new positions are being created to respond to evolving challenges. Through this prioritization process, the headquarters is planning to strengthen its future capabilities in contract management, asset management, program management for development, defense and execution of the Civil Works program, and the execution of project cooperation agreements.

The Program Account provides for initiatives essential to supporting the Civil Works mission that are deemed appropriate for direct-funding from the Expenses account and benefits HQ, MSCs and FOAs. The initiatives funded in the Program Account for FY 2009 consist of the Civil Works Strategic Planning and Campaign Goals \$1.26M, Management of the Planners Improvement Course \$0.40M, Community of Practice and Professional Development \$1.14M, Contract support for Asset Management \$1.0M, Program Management Business Practice Assessment \$0.31M, Guidance Update Maintenance Program \$ 2.53M, Corps-wide Efficiency Initiatives \$1.0M, E-Government \$0.202M, IM/IT Initiatives \$3.23M and Other initiatives \$1.32M.

Civil Works Strategic Planning and Campaign Goals (\$1.26M): Under the Government Performance and Results Act (1993), federal agencies (department level) are to prepare strategic and performance plans and submit them to the Congress. The Corps submitted its Strategic Plan for Fiscal Years 2004-2009 in March 2004, but is currently working on the next draft for submission. Strategic Planning for the Civil Works program is part of the corporate strategy planning effort within USACE. Water Resources management is the purpose of the Civil Works program and water resources is one of the five corporate mission areas. The Corps will continue to use the strategic planning process for the development of the next Civil Works Strategic Plan for Fiscal Years 2009-2015 to ensure that the plan's goals, objectives and strategies are designed to meet the program's future strategic direction. The Campaign Goals provide efficient and effective implementation of needed public engineering services for the Armed Forces and the Nation, while enhancing our flexibility and responsiveness to homeland and national security contingencies. The programs that support the goals direct USACE and its subordinate elements in the planning, preparation, and execution of experiments and exercises that in turn support preparation for Army, FEMA, national and international missions and with the integration of existing relevant capabilities.

Management of the Planners Improvement Course (\$0.40M): Allows the Corps to update lesson plans and course objectives keeping the Planners Improvement course current with the latest technology and community of practice.

Community of Practice and Professional Development (\$1.14M) supports developmental assignments at the HQUSACE to support such programs as the Civil Military Emergency Preparedness/Emergency Management International (CMEP/EMI) Program, Emergency Management CoP Leader and Career Program-18. The CMEP/EMI program supports activities such as project planning and development, project and program management, financial management and coordination with multiple stakeholders including Army, the Defense Security Cooperation Agency and partners from OCONUS emergency management agencies. The Emergency Management CoP Leader supports preparedness to respond to disasters under USACE and DHS authorities. This program fosters team member development on a continuing basis to meet both the immediate and long-range USACE requirements. Career Program-18 provides civilian professional development as part of the Army's Career Program 18, Engineers & Scientist (Construction). This program expands the civilian professional's knowledge and abilities to prepare them for future advancement as future leaders in the Army organization.

Contract support for Asset Management (\$1.0M) will allow the Corps to engage in the execution of an asset management program that will merge the agency's vision for performance and efficiency along its business line missions with a proactive lifecycle investment strategy. The funds provided in the Program Account will be utilized to reconcile and close all data gaps and performance measures and provide continual data validation of the asset inventory; support the condition assessment methodology development and implementation across portfolio of infrastructure assets; develop metrics, identify best management practices and benchmarks to develop a risk-based process for prioritizing maintenance and capital improvement investments; continue to meet OMB requirements and monitor progress by updating the quarterly scorecard.

Program Management Business Practice Assessment (\$0.31M): Over that past several years, the Corps has invested in standardizing our business processes Corps-wide which in effect will also centralize and consolidate our legacy Automated Information Systems (AIS) and the management of data from an enterprise perspective. The FY 2009 investment will allow us to implement best practices/innovations, making use of knowledge management tools and improving the Corps' Corporate business process manual. Funds would be used for aligning our business processes to such initiatives such as the centralized Quality Management System (QMS), the Enterprise Data Warehouse (EDW), and refinements/clarifications/implementation guidance to the overarching Business Process Regulation, ER 5-11-1.

Guidance Update Maintenance Program (\$2.53M) is a necessary part of developing and updating technical guidance, design and construction standards and criteria documents critical to our Civil Works mission. The average age of these documents is 12 years. This funding pays for labor of Corps subject matter experts who are normally project funded for the period of time they are working to benefit the Corps as a whole by updating the documents.

Corps-wide Efficiency Initiatives (\$1.0M) will allow the Corps to engage in innovative organizational modernization in order to select the most appropriate areas for improvement using techniques such as High Performing Organization (HPO), among others.

E-Government: (\$0.202M) There are three investments that support the Corps share of the Federal Line of Business Initiatives: \$50K for the Corps' share of Recreation-One Stop, \$95K for Budget Formulation and Execution and \$57K for Geospatial Line of Business. At the direction of OMB, NRRS and Volunteer.gov, the funding that has been invested in Recreation One-Stop is funding Corps NRRS management costs, Forest Service for administering the NRRS contract and operating the NCMO, Corps NRRS contract satellite service support and Volunteer.gov, an interagency website coordinating volunteer activities among government agencies.. The Budget Formulation and Execution is an agreement between the U.S. Department of Education and the Corps in support of the OMB implementation of the Program Management Office operations. This program focuses on building the "budget of the future" by promoting information sharing across government agency budget offices. Geospatial Line of Business provides cost efficient acquisition, processing and access to geospatial data and information. This program will eventually provide a more coordinated approach to producing, maintaining, and using geospatial data, and will ensure sustainable participation from Federal partners to establish a collaborative model for geospatial-related activities and investments.

IM/IT Initiatives: \$3.23M provides civil funds to match military funding for USACE internal governance of e-government initiatives which includes information assurance, privacy, quality management, test and evaluation, architecture, infrastructure, records management, and portfolio management. Governance includes management of the transition to the Residual Effective Organization or Continuing Government Organization as the IM/IT competitive sourcing competition ends. Business cases for the major IT investments are located at <http://www.usace.army.mil/itips/omb300.html>

Other initiatives (\$1.32M) consist of several programs such as Corps Dam Safety Program, Science and Engineering Technology Program and Unified National Program for Floodplain Management. These programs provide guidance for the operations, maintenance and rehabilitation of the more than 600 Corps dams; establishment of common science and engineering policies, practices and tools across Regional Business Center via Communities of Practice; and development of a certification program for floodplain managers and support of the Administration's objectives for improving floodplain management.

The Headquarters staffing level for FY 2009 is 355 civilian FTE and reimburses Department of Army for 44 civil funded uniformed military spaces. The breakout of costs for the Headquarters by major category is shown below.

\$ 50,000	Civilian Personnel Compensation and Benefits
18,000	Fixed Costs (Rent, utilities, training, travel, communication, critical support services, etc)
6,500	Variable Costs (Transportation, printing, supplies and equipment)
<u>12,400</u>	Program Account (see above)
\$ 86,900	

b. Major Subordinate Commands

FY 2009
Request
\$ 72,100

Eight Major Subordinate Commands provide command and control, program management, regional coordination, quality assurance and technical oversight of subordinate district offices. In addition, the MSCs are responsible for program coordination among district offices to ensure the most efficient program execution, establishment and oversight of technical centers of expertise, and workload and workforce planning. The civilian FTE staffing level for FY 2009 in the MSCs is 391

and reimburses Department of Army for 16 civil uniformed military positions. The civilian ED&M FTE level for each MSC varies from 50 to 61 based upon the scope of their Civil Works responsibilities, with the exception of Pacific Ocean Division which has 15 FTE.

\$ 52,400	Civilian Personnel Compensation and Benefits
13,200	Fixed Costs (Rent, utilities, training, travel, communication, critical support services, etc)
<u>6,500</u>	Variable Costs (Transportation, printing, supplies and equipment)
\$ 72,100	

FY 2009
Request
\$18,000

2. Executive Direction and Management Support Activities

Executive Direction and Management support activities include the following FOAs: the Humphreys Engineer Center Support Activity (HECSA) which provides administrative support to Corps tenants of the Humphreys Engineer Center and to Corps Headquarters; the Institute for Water Resources (IWR) which provides a variety of water management functions such as conducting and managing national studies, special studies in support of the Civil Works mission, data collection and distribution, and technical support to other Corps offices in matters dealing with water resources management; the Engineering Research and Development Center (ERDC) which provides support to the Coastal Engineering Research Board (CERB); the U.S. Army Corps of Engineers Finance Center (UFC) which provides centralized finance and accounting activities; the US Army Corps of Engineers Logistics Activity (ULA) responsible for centralized management of logistics operations; and the US Army Corps of Engineers – Information Technology (ACE-IT) that provides information technology services to the Corps. The FOAs have 119 civilian (no uniformed military positions) FTE in FY 2009.

\$ 14,200	Civilian Personnel Compensation and Benefits
2,900	Fixed Costs (Rent, utilities, training, travel, communication, critical support services, etc)
<u>900</u>	Variable Costs (Transportation, printing, supplies and equipment, and contract support)
\$ 18,000	

Account Summary:

	HQ	MSC	FOA	TOTAL
Civilian Personnel Compensation and Benefits	\$ 50,000	52,400	14,200	\$123,700
Fixed Costs (Rent, utilities, training, travel, communication, critical support services, etc)	\$ 18,000	13,200	2,900	\$ 27,000
Variable Costs (Transportation, printing, supplies, etc)	\$ 6,500	6,500	900	\$ 13,900
Civil Works Program Account	<u>\$ 12,400</u>			<u>\$ 12,400</u>
Total	\$ 86,900	72,100	18,000	\$177,000

Justification Of Estimates for Civil Functions Activities
Department of the Army, Corps of Engineers
Fiscal Year 2009
(\$000)

APPROPRIATION TITLE: Office of the Assistant Secretary of the Army (Civil Works)

	FY 2008 Allocation	FY 2009 <u>Request</u>	Change <u>FY 2008-2009</u>	Percent <u>Change</u>
Policy Direction and Oversight	\$ 4,500	\$ 6,000 *	\$ 1,500	33.3%

* Increase is due in part to finance costs associated with filling positions which have been vacant for 2+ years within the office.

JUSTIFICATION:

The Office of the Assistant Secretary of Army for Civil Works (OASA(CW)), in accordance with 10 USC 3016(b)(3), the ASA (CW) has the principal responsibility for overall policy direction and supervision of DA functions relating to all aspects of the Civil Works Program, including all reimbursable work performed by the U.S. Army Corps of Engineers (USACE) on behalf of Federal and non-Federal entities.

Specific responsibilities of the ASA(CW), assigned by statute and/or Army General Orders, include the following:

A. Managing and supervising the DA Civil Works Program, including:

1. Developing, defending, and directing the execution of DA Civil Works policy, legislative activities, and financial programs and budget.
2. Developing policy and guidance for, and administering the DA regulatory program to protect, restore, and maintain the waters of the United States in the interest of the environment, navigation, and national defense, pursuant to the Rivers and Harbors Appropriations Act of 1899, the Federal Water Pollution Control Act (Clean Water Act), as amended, and the Marine Protection Research and Sanctuaries Act of 1972.
3. Developing the DA position on USACE civil works studies and projects, including coordination with OMB under E.O. 12322, and transmission of the Secretary's recommendations to Congress.
4. Serving as congressional liaison on civil works matters, including serving as the DA point of contact for House and Senate Authorization and Appropriations Committees charged with oversight of the DA Civil Works Program.

B. Overseeing the development, coordination, and implementation of policy for USACE programs in support of other Federal and non-Federal entities, except those activities that are exclusively in support of U.S. military forces.

C. Formulating and overseeing the program and budget of the Arlington National Cemetery and the Soldiers' and Airmen's Home National Cemetery, including proposals for placement of monuments and the administration, operation and maintenance of the cemeteries, except for interment/inurnment policy.

D. The OASA-CW also, in coordination with the Army's Deputy Chief of Staff, G-3, develops policy for and directing the foreign activities of the USACE, except for those foreign activities that are exclusively in support of U.S. military forces overseas.

DESCRIPTION:

The budgeted amount will be used to finance costs sub-allocated to the OASA(CW) by the Department of the Army, including the costs of 20 FTE and indirect and overhead costs consistent with those funded in recent appropriations. Over the past two years the OASA-CW has been forced to use borrowed manpower from USACE in order to fulfill workload requirements of the short-staffed office. Increased requirements associated with Supreme Court's Rapanos decision and WRDA 2007 implementation will place additional requirements on the OASA(CW) during FY 2008 and 2009. In addition, cost increases are anticipated to pending facility upgrades, renewed training effort, and additional FTE requirements to support increased support for others mission.

SUMMARIZED FINANCIAL DATA:

	<u>FY 2009</u>
Personnel Compensation and Benefits (fully fund authorized staff to accomplish mission)	\$ 3,000,000
Support Services (Space, utilities, communications, ADP, etc)	\$ 1,900,000
Other (Travel, transportation, training, printing, supplies and equipment)	<u>1,100,000</u>
Total FY 2009 amount:	\$ 6,000,000

REVOLVING FUND

APPROPRIATION TITLE: Revolving Fund- Plant Replacement and Improvement Program (PRIP)

1. Explanation of Revolving Fund. The Revolving Fund, established by Congress in 1953 (P.L. 83-153, 67 Stat. 199), replaced the Plant Allotment Account authorized by the Secretary of War, on 13 December 1934, which had in turn replaced the Plant Program - Appropriation Basis that was used prior to 1934. Prior to the establishment of the Revolving Fund, accounting procedures necessitated by the two previous systems were cumbersome and resulted in a distorted picture of costs when plant was transferred from one appropriation to another.

a. Essentially, P.L. 83-153 provided that the Revolving Fund assumed the total capital value of \$127.9 million in 1953, consisting of the unexpended cash balance (\$25.3 million) and the net value (\$102.6 million) of the assets and liabilities of the plant accounts. The Revolving Fund would finance all future services as a separate entity within its own resources. The Plant Replacement and Improvement Program of the Revolving Fund (PRIP), has proven to be an effective means of providing equipment and materials needed on more than one project. Some advantages of the system are: (1) Simplifies funding and accounting procedures; (2) Provides consideration for plant replacement costs and inflation; (3) Eliminates distorted project costs when plant is used on multiple projects throughout its economic life; and (4) Permits plant availability on a timely basis to meet requirements.

b. The Revolving Fund operates within its own resources rather than from recurring annual appropriations. The Fund owns land, structures, dredges, floating plant, aircraft, fixed and mobile land plant, tools, office furniture, special equipment, computers and automated systems, which serve two or more, projects or appropriations. In order for the Revolving Fund to acquire and replace assets, plant or equipment items, it is necessary that the user, project, or appropriation be charged a fee when equipment or services are consumed. This fee consists of operating and fixed costs. The operating costs are reimbursed without a surcharge. The fixed costs include straight-line depreciation and a PRIP surcharge to provide for price growth and inflation. When planned expenditures exceed the income producing capability of the Fund, additional direct appropriations are requested.

c. When the Revolving Fund was established, Congress authorized a capital fund limitation or ceiling of \$140.0 million. The capital fund value or corpus is the total assets, less liabilities and reserves. The initial corpus ceiling was adequate until 1965, when rising workload and inflation forced the Corps of Engineers to begin requesting annual increases of the corpus. These requests were generally granted, because the ceiling limited the income generating capability, which in turn, adversely affected the overall management of the Fund. Therefore, the Corps recommended and Congress granted the request in FY 1979, that annual capital-expenditure ceilings be substituted for the corpus ceiling. Then in FY 1985, expenditure ceilings were replaced by expenditure estimates. Starting in FY 1994, the Corps replaced the estimate of expenditures with an estimate of obligations in accordance with recommendations by the General Accounting Office.

2. The Revolving Fund accounts for facilities, payroll, and operations throughout the U.S. Army Corps of Engineers at its divisions, districts, separate field offices, and laboratories including its Engineer Research and Development Centers. The fund incurs expenses for acquisition, rehabilitation, operation, and maintenance of multiple use structures such as warehouses, shops and garages, as well as, general-purpose plant, such as dredges, tugs, launches, trucks, cranes, bulldozers, drill rigs and other construction equipment. Also, it provides for reimbursement of the general and administrative expenses of District offices.

3. The Corps Revolving Fund, PRIP, includes ten New Major Items for FY 2009 and 54 Continuing Major Items from FY 2008. Six Continuing Major Items have revised cost estimates above that previously reported in excess of ten percent. The following tables provide cost estimates for the New Major Items and the revised cost estimates in excess of ten percent for the Continuing Major Items.

APPROPRIATION TITLE: Revolving Fund- Plant Replacement and Improvement Program (PRIP)

FY 2009 New Major Items	Page	Total Estimated Cost (\$000)
1. Energy Improvements District HQ, POD/POA	5	2,051
2. Coastal Mapping SHOALS System, SAM	5	2,000
3. Dredge Potter Pump Replacement (2769), MVD/MVS	9	2,258
4. Dredge Potter Control System (2767), MVD/MVS	9	1,500
5. Crane for Cranebarge Veler (2782), LRD/LRE	13	1,840
6. Crane Replacement for IWW– Manitowoc (3900), MVD/MVR	13	3,500
7. Motor Vessel Strong Replacement (2730), MVD	13	12,000
8. Muscatine Replacement (2687), MVD/MVR	13	12,000
9. Mobile Crane Replacement – Ft Miflin District, NAD/NAP	14	1,000
10. 110 Ton Crawler Crane, SWD/SWL	14	920
		39,069

Continuing Major Items with Revised Cost Estimates in Excess of 10%	Page	Previous Estimated Cost (\$000)	Revised Estimated Cost (\$000)	Total Cost Increase (\$000)
1. Port Arthur Boat Basin Breakwater, SWD/SWG, (Letter Submitted)	5	1,131	1,925	794
2. Dredge Potter Texas Deck Rehab (2738), MVD/MVS, (Letter Submitted)	6	3,300	5,500	2,200
3. Dredge WHEELER Repowering, (2620)	7	19,255	23,850	4,595
4. Dredge ESSAYONS Repowering (2548), (Letter Submitted)	8	27,500	31,100	3,600
5. Survey Boat M/V Blackburn, (Letter Submitted)	10	700	836	136
6. Deck Barges (2629), LRD/LRN, (Letter Submitted)	11	2,189	3,650	1,461

<u>PRIP Category</u>	<u>Page</u>
Land and Structures	3
Dredges	5
Other Floating and Mobile Land Plant	10
Fixed Land Plant and Automated Systems	14
Tools, Office Furniture and Equipment	15

APPROPRIATION TITLE: Revolving Fund- Plant Replacement and Improvement Program (PRIP)

4. FY 2008 and FY 2009 (Items costing \$750,000 or more)

a. Land and Structures:

(1) Addition and Betterment to Field Research Facility – Engineering Research and Development Center (Continuing). This project entails improvements to the Field Research Facility located near the town of Duck, North Carolina. The facility was established in 1977 to support the Corps coastal engineering mission. It includes a research pier that extends into the Atlantic Ocean, instrumentation and support facilities needed to conduct a wide variety of coastal studies involving weather, waves, currents, tides, sediment transport and beach erosion. The Corps is planning to convert a garage area into administrative space for the ten-person staff of computer specialists, technicians, and oceanographers. The cost estimate for the conversion was initially \$585,000; however, the estimate was raised to \$796,695, primarily due to the need to reinforce the building to protect it from hurricane damage. Total estimated cost: \$796,695. FY 2007 and Prior years: \$731,050. FY 2008: \$65,645.

(2) Ship/Tow Simulator Building – Engineering Research Development Center (Continuing). The Coastal and Hydraulics Laboratory (CHL) in Vicksburg, Mississippi, was formed in FY97 through the merger of two of the Army Engineer Research and Development Center (ERDC) laboratories, the Hydraulics Laboratory and the Coastal Engineering Research Center. Within the CHL mission of supporting the Corps water resources related needs of the Department of Defense, an ever increasing level of sophistication, integration, and comprehensiveness in technical tools and solutions is required. The CHL Navigation Branch operated the only Corps vessel simulator. This simulator is the Corps primary means to evaluate and optimize proposed changes to Federal navigation channels. With the ability to function as a ship, towboat, or small craft, it can be used for deep and shallow draft projects and small boat harbors. The simulator operates in real time and is used by actual mariners to help finalize Corps channel designs. This building is required to house the new ship/tow simulators which are scheduled to be built at the lab. Total estimated cost: \$1,550,000. FY 2008: \$1,550,000. This project requires special authorization before any funds can be expended.

(3) Ship/Tow Simulator System – Engineering Research Development Center (Continuing). The Coastal and Hydraulics Laboratory (CHL) in Vicksburg, Mississippi, was formed in FY97 through the merger of two of the Army Engineer Research and Development Center (ERDC) laboratories, the Hydraulics Laboratory and the Coastal Engineering Research Center. Within the CHL mission of supporting the Corps water resources related needs of the Department of Defense, an ever increasing level of sophistication, integration, and comprehensiveness in technical tools and solutions is required. The CHL Navigation Branch operated the only Corps vessel simulator. This simulator is the Corps primary means to evaluate and optimize proposed changes to Federal navigation channels. With the ability to function as a ship, towboat, or small craft, it can be used for deep and shallow draft projects and small boat harbors. The simulator operates in real time and is used by actual mariners to help finalize Corps channel designs. This building is required to house the new ship/tow simulators which are scheduled to be built at the lab. Total estimated cost: \$5,300,000. FY 2008: \$5,050,000. FY2009: \$250,000. This project requires special authorization before any funds can be expended.

(4) New Gate and Access Road – Engineering Research Development Center (Continuing). The purpose of this project is to provide direct, internal roadway access to the Information Technology Laboratory (ITL) site from the remainder of the Army Engineer Research Development Center in Vicksburg, Mississippi. The ITL presently can only be accessed by utilization of a public street system. Among the four laboratories at the site, the ITL is the only one separated from the others by a public road. With the increase in the security posture of the facility, some gates were closed permanently and guards were posted at the others. Travelers now have to exit the main facility and enter another gate just to move between the labs. A new gate and access road will allow secure access among all four facilities. Total estimated cost: \$2,000,000. FY 2008: \$2,000,000. This project requires special authorization before any funds can be expended.

(5) Additions and Betterment to Information Technology Lab – Engineering Research Development Center (Continuing). Additions and betterments are needed to expand the Information Technology Lab (ITL) to accommodate the scheduled delivery of a Department of Defense purchased supercomputer in mid FY2007. The Engineering Research Development Center (ERDC) examined all of its requirements for computer acquisitions in the next five years in order to determine the new building requirements. Along with the building expansion, extensive increases in power and cooling requirements are included in the project. The design of the addition to the facility will also allow employees who currently work in adjoining trailers to move into the building. Total estimated cost: \$27,500,000. FY2007: \$14,300,000 to initiate

APPROPRIATION TITLE: Revolving Fund- Plant Replacement and Improvement Program (PRIP)

construction. FY 2008: \$1,000,000. FY 2009: \$12,200,000. Note: Congressional authorization received per H.R. 2764 – 100 Section 107 for the use of PRIP funds to construct a new Environmental Laboratory and provide improvements to the Information Technology Laboratory.

(6) Mississippi River Project Office – Rock Island District (Continuing). Construct a Mississippi River Project Office to accommodate office and administrative staff currently housed in two separate buildings located at the LeClaire Service Base. Building #1 is an antiquated 1920's era concrete walled warehouse converted 25 years ago for office use while Building #2 houses office staff in the attic of a large motor shop which was built in 1953 and modified in 1981 to accommodate the five people who made up the staff at that time. There are significant safety and health issues associated with both buildings. Building # 1 is located at the back of the service base complex requiring staff, visitors, and the general public to travel through a dangerous construction area utilized by maintenance crews and heavy equipment involved in repair of lock and dam structures and components. Serious blind spots and hazards exist for both pedestrian and vehicular traffic that must have access to this office. This office is also located immediately adjacent to the sandblasting and painting operation. Building #1 is in on the verge of condemnation and will be demolished as soon as a new office is constructed. Building # 2 became severely overcrowded in 1995 when Operations Division reorganized under a nationwide mandate to consolidate functions, and the office staff increased from 5 to 13 people. The only interior access to this upstairs office is by stairway from the open motor shop where maintenance and repair of heavy equipment takes place daily. Several employees have developed respiratory problems due to the diesel, welding, and paint fumes which rise up and constantly enter the upstairs office space. Both of the existing buildings lack adequate office space and are not compliant with the Americans with Disabilities Act (ADA). The new Mississippi River Project Office will serve to bring all staff together in a central location while providing the necessary and accessible focal point for our customers and stakeholders. It will provide needed space for files, supplies, office equipment, and room to hold meetings and training. Most importantly it will eliminate the serious health and safety problems associated with the existing configuration. Total estimated cost: \$3,275,003. FY 2007: \$2,408,793. FY 2008: \$846,210 to continue construction. FY 2009: \$20,000 to complete construction.

(7) Renovate Docks A and B – U.S. Moorings - Portland District (Continuing). Refurbishing Docks A and B would bring it up to modern load bearing standards. The U.S. Government moorings facility, Docks A and B has been in existence since 1903 to provide berthing during the winter repair period for minimum fleet hopper dredges ESSAYONS and YAQUINA. The last major refurbishment of the docks was in 1964. Since then, the dock surfaces have been re-decked and shear piles replaced periodically due to normal wear and tear. The stringers have rotted and several pile cap timbers have extensive dry rot up to four feet back from the exposed ends. **Total estimated cost: \$6,200,000.** This project is currently on hold. No money has been committed or obligated in FY 2006 or FY 2007. An environmental cleanup is required at the site and a number of options are currently being considered. One of the options would require removal of the docks. As a result, refurbishment of the docks is on hold until a decision has been made.

(8) Environmental Laboratory Building – Waterways Experiment Station (Continuing). New building is required to enable consolidation of the staff in a central location to maximize efficient operations of the Environmental Laboratory. The Environmental Laboratory is currently dispersed throughout several buildings at four different locations within the Waterways Experiment Station. Management, administration, and coordination of research activities are difficult and inefficient under the present arrangement. Renovation of existing buildings was investigated, however, it was found that force protection measures which are now required made the addition and betterment option cost prohibitive when compared to new building construction. **Total estimated cost: \$11,500,000.** FY2008: \$10,500,000 to design and initiate construction. FY2009: \$1,000,000 to complete construction. Note: Congressional authorization received per H.R. 2764 – 100 Section 107 for the use of PRIP funds to construct a new Environmental Laboratory and provide improvements to the Information Technology Laboratory.

(9) Ouachita-Greenson-DeGray Project Management Office - Vicksburg District (Continuing). The need for the new Ouachita-Greenson-DeGray Project Management Office building has evolved around the three Arkansas Lake and power plant projects and their associated mission-essential operational facilities. Today, there are 155 Government employees and 74 contract employees working out of this office. The existing facility space being utilized is not adequate for current staff, essential employee training purposes or joint meeting requirements. Employees are required to attend joint meetings, training courses, and conference sessions several times annually. Personnel are left with no adequate facility available for these purposes based on the remote location of these projects. The building currently occupied by the Ouachita Project Management Office will be turned over to the contractor for their use; shop personnel will utilize the building currently occupied by the Lake Ouachita Field Office. All other shop and maintenance space will continue to be used as is. Ouachita Project Management Office and Lake Ouachita Field Office personnel will use the new facility as office space. The Ouachita Project Management Office and its subordinate Lake Field Offices and Power Plants will also use the facility for conferences,

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meetings, and classroom/training space. The new facility will conform to employee space utilization/requirements specified in AR 405-70, provide space for all employees to meet in a central location, fill ongoing need for classroom/training space, provide storage for supplies and equipment, and meet current technological requirements for communications and electrical systems that can be upgraded in the future. Total estimated cost: \$4,970,000. Prior Years: \$656,545 for design. FY 2008: \$4,145,130 to initiate construction. FY 2009: \$168,325 to complete construction.

(10) Port Arthur Boat Basin Bulkhead and Breakwater, Galveston District (Continuing). Replace the Port Arthur boat basin bulkhead and construct a new breakwater. The 51-year-old structure is used to provide docking and mooring facilities for the Port Arthur Residence Office floating plant whose primary mission is to maintain the Sabine-Neches Waterway. The bulkhead was constructed with salvage sheet piling, which has become corroded and has severe lamination over much of its surfaces. Holes in the sheet piling have allowed water intrusion and have caused sinkholes behind the bulkhead. In addition, a new breakwater is needed to prevent wave action from coming into the basin. **Total estimated cost: \$1,925,409** Prior Years: \$907,659 FY 2009: \$907,659. FY2010: \$110,091 to complete construction.

(11) Energy Improvements District HQ, Alaska District (New). The District Headquarters building complex consists of 86,000 square feet of office space. The building is made up of two main structures, the original 69,000 SF wood frame structure and a newer 17,000 SF Annex separated by an atrium. The original structure was constructed in 1946 while the Annex was occupied in 2000. The windows and siding on the original structure were replaced in 1977-78 while the interior was renovated in the mid-1980s. This project is to improve the overall energy efficiencies of the Headquarters office building complex by reducing energy losses, lessening heat gains due to solar energy, replacing outdated steam heating systems with more efficient heated glycol systems, modifying the building's ventilation systems, and connecting all of the energy systems with a centralized Building Energy Management System. All of the activities are part of an integrated approach to reduce energy consumption and improve the quality of life within the building while at the same time improving the life expectancy of the building structure. The bulk of the activities will be performed within the original office structure rather than within the newer Annex. Total estimated cost: \$2,051,000. FY2009: \$1,916,000. FY2010: \$120,000. FY2011: \$15,000.

(12) Coastal Mapping SHOALS System, Mobile District (New). The SHOALS airborne lidar survey system operated from 1994 to 2003 conducting coastal mapping in support of Corps navigation and shore protection projects. In 2003, in partnership with the US Navy (and funded by the US Navy) SHOALS was retired and the new sensor, named CHARTS, began operation in support of mission requirements. The Joint Airborne Lidar Bathymetry Technical Center of Expertise was established through a Memorandum of Agreement between the Corps and Navy with a mission to conduct coastal mapping and charting. The existing CHARTS system has significant demand on it 12 months per year and as the system ages this frequency of use cannot be maintained. It has been determined that dividing the work between two systems will significantly improve operational ability to meet schedules, provide for growth, and respond to National emergencies. Navy has programmed \$2,000,000 for FY08 and FY09 to fund half the purchase cost of a new SHOALS-like system. PRIP funds are requested in the amount of \$2,000,000 to match the Navy funds to purchase a system that has a one year build time. These funds will be paid back through use of the system by the Mobile District. Total estimated cost: \$2,000,000. FY2009: \$1,800,000. Future Years: \$200,000.

b. Dredges:

(1) Dredge YAQUINA Repowering – MDC Project 2507 Portland District (Continuing). The dredge YAQUINA entered service in 1981. It is based in Portland, Oregon, and is part of the Corps hopper dredge fleet. The dredge operates on the West Coast keeping navigation channels clear. The main engines and ancillary systems have been in continuous service for 25 years. The main engines are no longer manufactured and it is becoming increasingly difficult to locate and procure replacement parts. Replacement of the main engines and ancillary systems is required in order to assure continued operation of the vessel. In addition, due to the ever increasing stringent emission standards the engines should be replaced with more efficient marine diesels. Total estimated cost: \$11,236,000. FY 2007: \$50,000. FY 2008: \$4,205,000. FY2009: \$5,180,000. Future years: \$1,801,000.

(2) Dredge YAQUINA Ship Service Generator Replacement MDC Project 2726 – Portland District (Continuing). The dredge YAQUINA entered service in 1981. It is based in Portland, Oregon, and is part of the Corps hopper dredge fleet. The dredge operates on the West Coast keeping navigation channels clear. The ship service

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generator engines and ancillary systems have been in continuous service for 25 years. The engines are no longer manufactured and it is becoming increasingly difficult to locate and procure replacement parts. Replacement of the generator engines and ancillary systems is required in order to assure continued operation of the vessel. In addition, due to the ever increasing stringent emission standards the engines should be replaced with more efficient marine diesels. Total estimated cost: \$1,432,000. FY 2007: \$50,000. FY 2008: \$450,000. FY 2009: \$807,000. Future years: \$125,000.

(3) Dredge YAQUINA Dredging System Improvement MDC Project 2727 – Portland District (Continuing). The dredge YAQUINA entered service in 1981. It is based in Portland, Oregon, and is part of the Corps hopper dredge fleet. The dredge operates on the West Coast keeping navigation channels clear. The dredge pump engines, reduction gears, dredge pumps, hopper distribution system, and ancillary systems have been in continuous service for twenty five years. The dredge pump engines are no longer manufactured and have been rebuilt several times. It is becoming increasingly difficult to locate and procure replacement parts. Replacement of the dredge pump engines and ancillary systems is required in order to assure continued operation of the vessel. The hopper distribution system is dated and will require redesign in order to maximize the settling and loading times from the new engine and more efficient dredge pump combinations. In addition, due to the ever increasing stringent emission standards the engines should be replaced with more efficient marine diesels. Total estimated cost: \$4,726,000. FY 2007: \$75,000. FY 2008: \$1,860,000. FY 2009: \$2,510,000 Future years: \$281,000.

(4) Dredge YAQUINA Drag Arm Winches Replacement MDC Project 2676 – Portland District (Continuing). The dredge YAQUINA entered service in 1981. It is based in Portland, Oregon, and is part of the Corps hopper dredge fleet. The dredge operates on the West Coast keeping navigation channels clear. The winches, winch motors, drives, controls, and ancillary systems have been in continuous service for twenty five years. These pieces of equipment are no longer manufactured and it is becoming increasingly difficult to locate and procure replacement parts. Replacement of the winches and associated systems is required in order to assure continued operation of the vessel. Total estimated cost: \$1,828,000. FY 2007: \$700,000. FY 2008: \$850,000. FY 2009: \$278,000.

(5) Dredge POTTER Flexible Discharge – MDC Project 2717 St. Louis District (Continuing). This project entails the purchase of a flexible discharge floating pipeline, a spill and store barge, and handling gear for the Dredge POTTER. The new floating pipeline will provide the ability to better perform environmental dredging on the Mississippi River. Environmental dredging requires the use of fixed point discharge equipment in order to place dredge materials in specific locations to build beaches, islands, and underwater islands. Total estimated cost: \$6,000,000. FY 2007: \$50,000. FY 2008: \$5,900,000. FY 2009: \$50,000.

(6) Dredge McFARLAND Asbestos/Lead Abatement MDC 2603 – Philadelphia District (Continuing). Abate asbestos and red lead paint to achieve current occupational safety standards in active crew spaces: forward and aft crew quarters (pilothouse, galley etc.); aft engine and machinery rooms; and the forward dredge pump rooms. The dredge McFarland was built in 1967 when both asbestos and red lead paint were in wide use. Asbestos is present throughout the McFarland in the fireproof crew space joinery (sheathing, ceiling, and paneling); pipe insulation; and structural fireproof insulation on steel bulkheads. Red lead paint was used throughout the ship as the corrosion resistant base primer coat on all interior hull and steel. The aged vessel has asbestos fragments lodged in inaccessible areas behind the joinery panels. The vessel and its crew of 60 have two missions: (1) emergency and national defense dredging worldwide and (2) planned dredging in commercial waterways, mainly federal navigation projects along the Atlantic and Gulf Coasts. Total estimated cost: \$3,500,000. Prior Years: \$221,000. FY 2008: \$2,160,000 to initiate construction. FY 2009 : \$1,119,000 to complete construction.

(7) Dredge POTTER Texas Deck Rehab MDC2738 – St. Louis District (Continuing). This project entails the refurbishment of the forward quarters and pilot house for the Dredge POTTER. The dredge is a 2,400 horsepower dustpan dredge which performs work on 300 miles of the Mississippi River. The work will provide for more usable and habitable crew space and remove all lead based paint and asbestos. The pilot house has become crowded with all of the new electrical and electronic equipment, controls, and navigation aids that are required for modern day dredging and navigation. The present pilot house is of a 1932 vintage design and is very narrow. The captain and crew have to go outside during operations in order to avoid hitting obstructions in inclement weather. The Texas Deck is also of the 1932 vintage and it is where the offices are on the dredge. The Second Deck is where the messing area and bunkrooms are located. The contaminants need to be removed from this area for the health and safety of the crew. Total estimated cost: \$5,500,000. Prior Years: \$500,000. FY 2008: \$3,000,000. FY 2009: \$2,000,000

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(8) Dredge ESSAYONS Hopper Distribution System (MDC 2615) – Portland District (Continuing). The Dredge ESSAYONS is scheduled to have improved excavator style drag heads installed as a separate project with installation scheduled for FY2010. It is therefore imperative that the existing hopper distribution system be redesigned in order to maximize the retention of the increased amount of material being placed in the hoppers. Installation of the new distribution system will result in increased retention and reduced loading time. A further benefit will be the reduction in annual maintenance costs for the new system by virtue of the use of highly abrasion resistant materials now coming into use in the dredging industry. Total estimated cost: \$960,000. Through FY 2007: \$34,400. FY2008: \$480,000. FY2009: \$410,000. Future Years: 35,600.

(9) Dredge ESSAYONS Drag head Improvements and Jetting System Modification MDC Project 2542 – Portland District (Continuing). The excavator type drag heads produce much greater specific gravities over the California type currently in use. This equates to an increase in the total solids transported which will boost the production of the dredge ESSAYONS. Excavator drag heads have been on the market for several years and are a proven technology. The new drag heads will be put into service in FY2010, at which time the dredge will have twenty four years of remaining life. Modifications to the jetting system will also be required in order to take full advantage of the new style drag heads as well as improve hopper jetting and reduce dumping times. Total estimated cost: \$2,315,000. FY 2007 and Prior years: \$65,608. FY2008: \$1,850,000. FY 2009: \$320,000. Future Years: \$79,392.

(10) Dredge WHEELER Repowering MDC Project 2620 – New Orleans District (Continuing). Repowering by installing four replacement diesel engines is considered an addition and betterment to the WHEELER, due to the anticipated increase in fuel efficiency and the lowering of exhaust emissions for the vessel. A horsepower increase for propulsion is feasible. The engines currently in service are aged and recurring component wear and failure problems with these engines, combined with the manufacturer inability to provide replacement spare parts in a timely manner have warranted their replacement. If the WHEELER is not repowered, the engines currently in service are likely to suffer catastrophic damages as they have in the past. The high maintenance and high fuel consumption for the engines will continue. If one of the engines should become unserviceable, the vessel would likely be out of service for a period of three years in order to affect such major repairs. The vessel is primarily to support the navigation mission by dredging on the Mississippi River, Southwest Pass, and other USACE waterways. An increase in total project cost of \$4,595,400 is required to add the Instrumentation Control Monitoring System (ICMS). The ICMS is to be added in FY2009. The current system is obsolete and many of the electronic components are unsupportable with regard to repair or direct replacement. The benefits of repowering the WHEELER would be significantly reduced if the current ICMS is not replaced due to the decreased reliability of the vessel. Total estimated cost: \$23,850,000 Prior Years: \$138,900 FY2008: \$10,000,000. FY2009: \$12,900,000. Future Years: \$811,100.

(11) Dredge FRY Shallow Draft Dredge Replacement (MDC2609) - Wilmington District (Continuing). Purchase a new shallow-draft hopper dredge is needed in order to maintain shallow coastal inlets along the Atlantic coast while adhering to environmental restrictions on side cast dredges. The dredge FRY was built in 1944 as a U.S. Navy seaplane wrecking derrick and converted to a side-casting dredge in 1972 when acquired by the Corps. Theoretically, the FRY has a remaining useful life of 9 years but in reality, it is virtually worn out and does not meet current environmental standards. Regulatory agencies have restricted its use due to the disturbance created by the discharge of dredged materials. In 2002, the dredge crane failed resulting in emergency maintenance and more downtime. Alternatively, a crane replacement (estimated at \$2 million) and a propulsion system upgrade (estimated at \$1.8 million) would require lengthy shipyard work. The economic analysis supports purchasing a new shallow-draft hopper dredge with a Net Present Value of replacement being \$17.1 million and the Net Present Value of maintaining the FRY is \$19.7 million. **Total estimated cost: \$11,076,000.** Through FY 2007: \$866,000. FY 2008: \$9,500,000. FY 2009: \$500,000. Future Years: \$210,000.

(12) Dredge ESSAYONS – Replacement of Engine Room Instrumentation, Control, and Monitoring System (MDC 2651) - Portland District (Continuing). Replace the engine monitoring and control system during the current overhaul effort in order to properly monitor the new power plant being installed. The existing control and monitoring system on the dredge ESSAYONS is becoming unsupportable due to non-availability of spare parts. The dredge ESSAYONS is being repowered in 2008. Without the system in operating order, the dredge ESSAYONS will not be able to carry out its mission. **Total estimated cost: \$2,003,700.** Through FY 2007: \$1,778,700. FY 2008: \$200,000. FY2009: \$25,000.

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(13) Dredge JADWIN MDC Project 2618 – Pontoon Pipeline Replacement - Vicksburg District (Continuing). Acquire floating discharge pipeline pontoon barges to replace the discharge pipeline originally furnished with the dredge JADWIN. The dredge JADWIN was built in 1933 and works on the Mississippi River. This pipeline is over 70 years old with maintenance and repair costs increasing to keep it serviceable; the normal economic life of a pipeline is 25 years. **Total estimated cost: \$4,501,500.** Prior Year: \$4,331,500. FY 2008: \$150,000. FY 2009: \$20,000 to complete construction.

(14) Dredge JADWIN MDC Project 2619 – Anchor Barge Replacement - Vicksburg District (Continuing). Acquire a new anchor barge to provide the same handling services but operate more efficiently, with less maintenance, and comply with safety requirements. The existing barge is 75 years old, far exceeding its normal economic useful life of 40 years. The new barge will be used to support the dredge JADWIN on the Mississippi River. **Total estimated cost: \$1,351,900.** Prior Years: \$1,276,600. FY 2008: \$20,300. FY 2009: \$55,000 to complete construction.

(15) Dredge ESSAYONS Bow Discharge System Replacement MDC 2576 – Portland District (Continuing). Replace the Bow Discharge System on the dredge ESSAYONS to improve the mission capability, expand its usefulness, allow for safer operations and more efficiently support the full range of current and future dredging projects. The original side-mounted pump-ashore connections on the dredge ESSAYONS are no longer the industry standard to conduct pump-ashore projects. The existing connection system is not suitable for safe operations in areas exposed to wave action, such as Benson Beach at the mouth of the Columbia River, or beach replenishment projects of southern California. Modern hopper dredges use over the bow pump-ashore connections that are safer and more efficient for working in all conditions. There are pump-ashore projects being developed in Portland, Seattle, San Francisco and Los Angeles, which will require the dredge ESSAYONS. Benefit/Cost ratio is 25.5 to 1. **Total estimated cost: \$795,000.** Prior Years: \$55,400. FY 2008: \$10,000. FY 2009: \$10,000 complete design. Future Years: \$719,600 for construction.

(16) Dredge ESSAYONS Repowering MDC 2548 - Portland District (Continuing). Install new, more efficient, low emission diesel engines to save fuel, reduce the crew size and lower permitting (air resources board) cost. The original engines have been in service for 20 years, rebuilt numerous times, and are near the end of their economic lives. The engines do not lend themselves to effectively decrease exhaust emissions and to comply with emission standards. The engines will fail and the dredge would be removed from service without the repowering. The dredge ESSAYONS is one of four seagoing hopper dredges that comprise the minimum fleet, authorized by public law 95-269 and a U.S. Coast Guard certified vessel capable of going anywhere in the world. During the dredging season, the vessel operates 24 hours per day, seven days per week with primary mission dredging harbors and coastal regions along the West Coast of the United States, Alaska, and Hawaii. It would take approximately three years to repower the existing engines at a loss of revenue equal to \$46.9 million as compared to new engines at a cost of \$21 million. Benefit/Cost Ratio is 2.23 to 1. **Total estimated cost: \$31,100,000.** Through FY2007: \$ 25,076,354. FY 2008: \$5,523,646. FY2009: \$500,000 to complete construction.

(17) Dredge POTTER Floating Pipeline Replacement MDC 2515 – St. Louis District (Continuing). Replace 19 pontoons carrying a floating pipeline, each with a 54-foot length of 32-inch-diameter dredge discharge pipe, for up to 1,000 feet, used to transfer dredged materials outside the navigation channel. The pontoons provide transport and support of the pipe during operations of the dredge POTTER along the Mississippi River. The pontoons are 50 years old and in poor condition requiring annual dry-docking to maintain river worthiness because their hull plating is thin due to wear and age. The pontoons have been replated at least once and above water portions have deteriorated. Repair costs are expected to increase. The economic analysis showed replacement to be the least cost alternative with a Net Present Value of \$4.6 million compared to a Net Present Value of \$5.6 million for repairing and maintaining. Total estimated cost: \$2,525,900. Through FY2007: \$2,375,900 FY 2008: \$150,000 to complete construction.

(18) Dredge WM. A. THOMPSON Replacement MDC 2457– St. Paul District (Continuing). Replace existing plant with a component system consisting of dredge, towboat, quarters barge, and other attendant plant to reduce operating costs and downtime. The aging cutter head dredge WM. A. THOMPSON was built in 1937 and repowered in 1966. This unique self-propelled vessel has consistently proven itself the most cost-effective method of maintaining the 9-foot Mississippi River navigation channel in accordance with PL95-269. Dredge THOMPSON is used primarily for hydraulic dredging maintaining 284 miles of the Upper Mississippi River from the head of navigation at Minneapolis, Minnesota, to Guttenberg, Iowa. The dredge WM. A. THOMPSON has won competitive sourcing six times from 1979 to 2001 and continues to

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save more than three million dollars annually. Spare parts are becoming increasingly scarce and critical for major machinery components. Although repowering the vessel would extend the asset life another 30 years, it would not eliminate the eventual need for updating structure and habitability items. In Dec 2001, an analysis of dredging requirements determined the THOMPSON be replaced with a component system made up of the replacement dredge, a towboat, and a quarters barge. The quarters barge is being treated as a separate project. **Total estimated cost: \$18,476,810** . Through FY 2006: \$17,906,800 for design and to initiate construction. FY 2007: \$570,000 to complete construction. FY2008: \$10,000 for warranty work.

(19) Dredge Wm. A. THOMPSON Quarters Barge MDC 2652 – St. Paul District (Continuing). Build a quarters barge to accommodate crewmembers onboard; daily shift rotations can be made on schedule thereby reducing overtime; sick leave adjustments are readily adapted to; and there is no risk that the government will not be able to find the necessary rooms in small communities. Galley services will also provide for well-balanced nutritious meals at the same or less cost than the travel order alternative. The dredge Wm. A. Thompson performs maintenance dredging along the Upper Mississippi River from Minneapolis, Minnesota, to St. Louis, Missouri. The Corps of Engineers Most Efficient Organization (MEO) is to dredge 24 hours per day, 7 days a week. This requires crewmembers to work 12-hour shifts for 7 days followed by 7 days off while replacement crews work their 7-day duty. An economic analysis considered two alternatives for providing lodging and meals to crewmembers as follows: (a) put the crew on travel orders and let them stay in commercial facilities, or (b) build a quarters barge. The analysis showed the costs were virtually the same over a 30-year period with the quarters barge providing significantly better management and personnel conveniences to the dredge operations. The quarters barge alternative would cost \$36,058,046 (net present value), while the travel order alternative would cost \$37,058,462. Total Cost: \$15,155,600. Prior Years: \$14,686,100. FY 2008: \$459,500. FY 2009: \$10,000.

(20) Dredge Ladder Extension for the HURLEY, MDC 2450 - Memphis District (Continuing). Make modifications to increase the dredge depth of the HURLEY from 40' to 75'. This involves lengthening the existing dredge ladder, extending the hull to accommodate the longer ladder, and modifying the ladder hoisting mechanism. As presently equipped, the HURLEY can effectively be utilized only to dredge the shallow draft channel of the Mississippi River. The ladder extension will allow the HURLEY to be used to maintain the deep draft channel from Baton Rouge to New Orleans, extending its useful dredge season to about 250 days per year. Additional ladder hoisting and forward hull propulsion and maneuverability requirements associated with the longer hull form are included. Modifications will be accomplished during the lay up period, which normally runs from December to June. Total estimated cost: \$13,500,000. Prior Years: \$6,030,700 for design and initiate construction. FY 2008: \$7,400,000 to continue construction. FY 2009: \$50,000. Future years: \$19,300 to complete construction.

(21) Procurement of POTTER Dredge Pump, MDC 2769, St. Louis District (New) - This project consists of the design, manufacture, delivery, and installation of a new dredge pump to improve the performance, dredging efficiency, and maintenance costs of the Dustpan Dredge POTTER. The purpose of the new dredge pump will be to: a. Minimize maintenance required on the dredge pump. b. Increase dredging efficiency by reducing fuel consumption and increasing suction performance. c. Permit longer discharge pipelines. The existing dredge pump consists of a 1932 casing design with a 1999 impeller and suction liner design. The casing is in three pieces, which inherently causes issues with the mating surfaces/flanges after hard facing or repair. The three-piece casing also allowed the pump to be disassembled into smaller pieces of less weight, requiring lighter capacity lifting gear in the pump room. The modern pumps are all designed with single-piece hard white-iron castings, and require much less labor to maintain or handle during routine maintenance. The alternatives considered in this analysis are as follows: 1. Continue operating and maintaining the Dredge Potter with the existing 1932 three-piece casing design pump system. 2. Replace with a modern and efficient dredge pump system designed with single-piece hard white iron casting, with minimized maintenance requirement, lower fuel consumption and reliable operation for longer discharge pipelines. The project cost estimate is \$2,258,000. FY2008: \$50,000. FY2009: \$1,708,000. FY2010: \$500,000

(22) Dredge POTTER Instrumentation, Control, and Monitoring System (ICMS), 2767, St. Louis District (New). The current system is obsolete and unreliable and no longer supported. The owner of the rights to the software is Sperry, Inc. and Sperry has not responded to recent requests for support. Converting this ICMS to a supportable platform and software is critical to maintaining long term reliability and will minimize maintenance. Total estimated cost: \$1,500,000. FY2008: \$50,000. FY2009: \$1,400,000. FY2010: \$50,000.

c. Other Floating and Mobile Land Plant:

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(1) Replacement of the Towboat STEPHENSON MDC Project 2729 – Kansas City District (Continuing). The towboat STEPHENSON provides operational support to the Kansas City District's operations and maintenance mission on the lower Missouri River as well as construction general mitigation projects. The primary function of the vessel is towing and free running service. The towboat is nearing the end of its useful life and needs to be replaced by a newer, larger, and more powerful towboat which can handle the larger barges which have been acquired in recent years. A more powerful towboat would allow the operator to experience less difficulty in stopping a loaded barge. The continued use of the aged towboat is a serious safety concern, especially when working around bridges and rock pile dikes. The STEPHENSON was placed in service in 1971 and has not had an overhaul since. Even with a major overhaul the life of the boat would only be extended another fifteen years. Total estimated cost: \$4,250,000. FY 2007: \$5,000. FY 2008: \$3,865,000. FY 2009: \$185,000. Future Years: \$195,000.

(2) Replacement of 135 Ton Crane and Barge Modification – Tulsa District (Continuing). This crane is the Tulsa District marine fleet 135 Ton mobile crane which is barge mounted and used for lifting purposes to execute routine operations and maintenance, major maintenance, and emergency repairs along the Arkansas River navigation channel. The crane has exceeded its service life and no longer meets OSHA or Corps safety standards for a full lifting capacity. The barge has also exceeded its service life and will require repair and modification to meet stability criteria. A cost comparison indicates that the widening and reskinning of the bottom is the most efficient alternative. Total estimated cost: \$1,700,000. FY 2007: \$1,399,550. FY 2008: \$300,450 to complete project.

(3) Revetment Crane Barges (2) MDC Project 2690 – Memphis District (Continuing). The existing barges are of a 1958 series and are leaking badly and beyond repair. The crane barges are a vital part of the revetment operation on the Mississippi River where articulated concrete mats are placed on the banks of the river during low water to prevent scour and erosion. This operation has gone on for about a hundred years now. One of the cranes is used for the land clearing operation prior to the placement of the mats. The other crane is used for placement of gravel. Existing 100-ton capacity cranes will be mounted on the barges once they are constructed. The barges typically have a pilothouse for shelter and a storage hold. As well as providing a work platform, the barges are used to transport equipment and debris to and from the work sites. Total estimated cost: \$10,000,000. Prior Years: \$31,900. FY 2008: \$9,445,000. FY 2009: \$300,000 Future Years: \$223,100.

(4) M/V GRIZZLY Replacement – San Francisco District (Continuing). The debris boat GRIZZLY has the mission to accomplish drift removal, hydrographic surveys, project condition surveys, water and sediment sample collection, project inspections, site visits, wreck and channel obstruction location and marking, and to support District dive missions within the San Francisco Bay and delta areas. Previous studies and reports on drift removal operations have included recommendations to gain efficiency by replacing the Grizzly, a fifty five foot tugboat, with a larger, faster vessel. The size, slow speed and age of the 46 year old Grizzly are the reasons for the replacement of the vessel. Critical to the drift removal mission is the efficient extraction of floating hazards to navigation. While imperative to ships, it is increasingly important for the newer, fast ferries and other vessels, which traffic is increasing on the Bay. Due to the new ferries higher speed capabilities, their points of origin are also increasing in distance from the San Francisco terminals. Total estimated cost: \$6,580,000. FY2008: \$6,580,000.

(5) M/V BLACKBURN Replacement – Galveston District (Continuing). A new aluminum hydrographic survey boat is required to replace the existing boat which was placed into service in 1974. The existing boat originally supported land survey crews by ferrying them to locations only reachable by water. It was also used to enable government inspectors and project engineers to visit pipeline dredge operations. The boat was converted to a hydrographic survey boat in the 1980s with some modifications. The boat has exceeded its 30 year life and is in need of a complete overhaul to continue in service. An economic analysis has indicated that replacement is far superior to making the necessary repairs to the vessel. The customers of the Galveston District are some of the busiest ports and channels in the Nation, and the equipment is needed to carry out the considerable navigation mission. Total estimated cost: \$836,000. FY2008: \$821,000. FY 2009: \$15,000

(6) Aircraft Replacement – Northwestern Division (Continuing). This item was submitted and approved as a FY02 Major Item New Start, however, a more detailed analysis of the requirement was undertaken, and the estimated cost has increased more than ten percent since that time. The project is for the replacement of the aircraft currently in use by the Northwestern Division (NWD). The current NWD aircraft is a 34 year old Fairchild, Merlin IV. It was purchased new in 1971 at a cost of \$652,829, and will accommodate ten passengers. The most recent Justification and Economic Analysis of USACE NWD Aircraft by Conklin & Decker (July 2004) recommends acquisition of a used (5 year old) King Air 350 for \$2,950,000. A new King Air 350 was priced at \$5,832,660. An aircraft is critical to the effectiveness of the Northwestern

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Division. It is used to satisfy those requirements which cannot be met by scheduled air carriers, charter, or military air. These requirements include support to natural and national disasters, visits to remote sites, time constrained missions, mobilization exercises, and support to the missions of the Federal Emergency Management Agency under the auspices of the Department of Homeland Security. The special value of an aircraft to NWD is due to the large size and unique nature of the region for which the Division is responsible. The Civil Works mission responsibilities in the Missouri River Basin alone comprise one sixth of the land area of the contiguous 48 states. Total estimated cost: \$3,000,000. Through FY 2007: \$2,222,162, purchased used plane. FY 2008: \$777,838 for addition of avionics and radios to bring plane up to Army Standard.

(7) Construction of Deck Barges MDC Project 2629 – Nashville District (Continuing). Four barges of like design support maintenance activities on 19 locks and 1170 miles of navigation channel within the Nashville District. The barges are used as floating work platforms and to transport equipment and components related to lock and dam maintenance activities, such as mobile cranes, generators, air compressors, sheet piling, lock closure structures, and mooring cell templates. The four barges currently in use are in need of replacement and have been in service since 1954. Further use of these vessels would require maintenance expenditures that would exceed the value of the barges. Use of flat deck barges is vital to the accomplishment of the district mission of maintaining navigable waterways on the Tennessee and Cumberland Rivers and their tributaries. The barges used in this district are smaller than the industry standard but they are preferred for their flexibility and exceptional service for the maintenance fleet. Alternatives were studied for continued use, rent/lease, and contracting for deck space. Fabrication and purchase of new barges was found to be the best alternative. Total estimated cost: \$3,650,000. Prior Years: \$2,035,000. FY 2008: \$1,500,000. FY2009: \$115,000.

(8) M/V W-46 Replacement MDC 2586 - New Orleans District (Continuing). Replace the Motor Vessel W-46 that is used for hydrographic surveying of navigable waterways. Due to the age of this vessel that was acquired from the U.S. Customs Department in used condition, maintenance costs are escalating because it has exceeded its 30 years of useful life. The vessel was not designed as a survey vessel and is not well suited for its present mission. The economic analysis shows replacement of the motor vessel to be the least cost alternative with a Net Present Value of \$6.2 million compared to repairing and maintaining at a Net Present Value of \$6.4 million or Net Present Value of \$7.2 million for lease. Total estimated cost: \$1,172,200. Through FY 2007: \$1,146,137 to complete design and initiate construction. FY2008: \$26,063 to complete construction.

(9) Survey Boat RODOLF Replacement MDC 2440 – Portland District (Continuing). Replace the Survey Boat RODOLF because the vessel will not support the upcoming Columbia River deepening project. This surface effect ship (SES), placed in service in 1980, has become less reliable. The engines are nearing the end of their economic useful life and will require replacement in the next several years. The rubberized components that make up the SES capability of the vessel are expensive and available solely from the original manufacturer. In fact, some of these specialized and proprietary components no longer are manufactured due to the low demand. The RODOLF performs surveys of the Columbia and lower Willamette Rivers up to the Bonneville Dam for the dredges ESSAYONS and YAQUINA, and commercially contracted dredges. Total estimated cost: \$3,300,000. Through FY 2007: \$55,500 for design. FY2008: \$2,720,000 for construction. FY 2009: \$494,500 to continue construction. FY 2010: \$30,000 to complete construction.

(10) Survey Boat HICKSON Replacement MDC 2441 – Portland District (Continuing). Replace the Survey Boat HICKSON, placed in service in 1968, because the engines and ancillary machinery are increasingly unreliable and at the end of their economic useful life. The 36-year old, two-stroke engines lack adequate exhaust conditioning to reduce emissions and greenhouse gases. The hull of the vessel will require extensive repairs in a few years. The HICKSON performs ocean port surveys and other surveys for dredging along the Oregon coast and is the only survey vessel in the Corps with size and power to transit rough seas among Pacific ports. Total estimated cost: \$3,300,000. Through FY 2007: \$84,700 for design. FY 2008: \$2,700,000 for construction. FY 2009: \$485,300 to continue construction. FY 2010: \$30,000 to complete construction.

(11) Peoria Rock Barges (2) Replacement MDC 2584 - Rock Island District (Continuing). Acquiring two rock barges will replace three (a 1959 barge and two 1973 barges), which are used to remove dredged material and to replace rock protection on the Illinois River from Chicago to Beardstown. The decks of these barges are badly cupped and deteriorated from the many years of loading and unloading. In addition, the container boxes are bowed and will need extensive work. **Total estimated cost: \$1,706,400** Through FY 2007: \$1,412,316. FY 2008: \$294,084.

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(12) M/V PEORIA Replacement MDC 2567 - Rock Island District (Continuing). Replacing the M/V PEORIA, a 40-year-old towboat constructed in 1963, is a safety issue, for without power the vessel could be swept over a dam, or into another vessel, dam or structure. In addition, the thinning hull will need to be re-skinned. Its mission is to tow repair fleet on the Illinois and other inland waterways. This single crew boat is used to position crane barges for lock and gate work at eight locks and dams. The engine, replaced in 1976, will soon need to be replaced again. Should the engine fail, the PEORIA has no means to maneuver, and is undersized and underpowered for towing the newer barges and cranes. Total estimated cost: \$5,928,000. Through FY 2007 \$5,429,168. FY 2008: \$448,832 . FY2009: \$50,000 to complete construction.

(13) Towboat PATOKA Replacement MDC 2573 – Mobile District (Continuing). Replace the 46-year-old PATOKA towboat because the mission has changed due to replacement of the crane barge with a new 35-ton capacity crane barge @ 50-foot radius. The new mission of the towboat includes maintaining the nine locks and spillways on the Black Warrior and Tombigbee and Alabama River systems. Repairs have kept the towboat operating but have not addressed the age of the hull, piping systems and electrical distribution system. Repowering the PATOKA from the present 680 horsepower to the maximum 900 horsepower would only provide half the horsepower needed to safely support the new crane barge and attendant plant. The PATOKA is used to provide crew quarters and mobility support for navigation channel maintenance on the Gulf Intracoastal Waterway from Pensacola, Florida, east to Apalachicola Bay at the East Pass (Destin), Escambia River, Bayou Chico, and Scipio Creek and on the Apalachicola-Chattahoochee-Flint River system projects in Florida. An economic analysis favors replacement by acquisition with a Net Present Value of \$5.2 million, which was the least costly alternative as compared to lease option with NPV \$11.1. Total estimated cost: \$6,567,200 Through FY2007: \$6,522,200 for design and to initiate construction. FY 2008: \$45,000 to complete construction effort.

(14) Crawler Crane, MDC 2643 – Nashville District (Continuing). This large capacity mobile crane replaces Derrick Boat No. 10 in order to meet the growing workload and heavy lift requirements on the 1,170 miles of navigable channels and at 14 navigation locks. The new crane will support construction and maintenance activities and operate from the new shop/crane barge (MDC 2559) currently under construction. Two aged derrick boats that see extensive utilization have inadequate lifting capacities of less than 75,000 pounds at a fifty-foot radius. Derrick Boat No. 10 frequently makes lifts that exceed 90 percent of its rated lifting capacity causing abnormal wear on machinery and components resulting in higher maintenance cost and increased downtime. Serious damage to the Derrick boat and the possibility of injury to employees could occur. Total estimated cost: \$2,325,497. Through FY 2007 \$2,272,797. FY 2008: \$52,700.

(15) Maintenance Gate Barge and Spare Gates MDC 2492 – Rock Island (Continuing). Acquire spare gate barges to be available to return a lock to service. The age of the lock structures, over 60 years old, combined with heavy usage, results in both sets of spare gates on hand being in use most of the time. In the event of the failure of an additional structure and without additional spare gate replacement capability, there would be none available to return a lock to service. In that event, without the rapid replacement of a damaged gate, commercial traffic on the Mississippi River could be delayed due to a lock shut down creating a substantially negative economic impact. It is estimated that the economic cost to the region would be approximately \$10,000,000 over the next 40 years, the estimated life of the gate barge. Total estimated cost: \$6,091,100. Through FY 2007: \$6,081,100. FY 2008: \$10,000. This project was forwarded for an out-of-cycle approval for higher obligation authority because of the potential for having to pay a contract claim. Subsequent negotiations have resulted in settlement of the claim for a lesser amount than the original estimate.

(16) Crane Barge KEWANEE Replacement MDC 2481 – Rock Island (Continuing). Replace the KEWANEE crane barge, which is 88 years old, because it has suffered corrosion combined with normal wear and tear that has deteriorated it to the point where repairs are no longer feasible. A breakdown of the KEWAUNEE crane barge causes costly delays to accomplishment of the mission. The KEWANEE is used to support the Quad Cities crane barge during gate changes and to provide daily support to structural maintenance gate repairs. The cranes and barges are vital to the operation of the maintenance unit for repairs to the miter gates. The barge, constructed in 1913, was converted to a crane barge in 1981. The crane is near the end of its life. Total estimated cost: \$9,706,000. Prior Years: \$9,238,800. FY 2008: \$250,000. FY 2009: \$127,200 to complete construction.

(17) Towboat M/V LIPSCOMB Replacement MDC 2520 – Vicksburg District (Continuing). The proposed replacement would have more horsepower and a modernized hull design for increased towing and operational efficiency. The new vessel would require a smaller crew. The M/V LIPSCOMB is used to support revetment construction and maintenance along about 1,000 miles of navigable channels on the Mississippi, Atchafalaya and Red Rivers, and Channel Patrol on the Mississippi River.

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The M/V LIPSCOMB was built in 1958 and has outlived its normal economic life by 2-1/2 years. Furthermore, the LIPSCOMB has no compartment flood ability that is a major safety issue for crew and passengers. The Corps standard is one-compartment damage stability for this type vessel. The updated economic analysis shows the replacement of the LIPSCOMB is more cost effective, with a Net Present Value of \$57.8 million, 17% less than the alternative of maintaining and repairing the existing vessel. Total estimated cost: \$10,397,500. Through FY 2007: \$10,327,500 for design and construction. FY 2008: \$70,000 to complete construction effort.

(18) Crane for Cranebarge VELER 2782, Detroit District (New): This crane is essential to the obstruction removal operations in the connecting channels and other critical channel maintenance activities of the Detroit District. The crane is mounted onboard the cranebarge VELER and is the primary tool for removing rock obstructions in the hard bottom channels in the Detroit and St. Clair Rivers. The existing 100 ton Manitowoc 3900 crane onboard the Cranebarge VELER was built in 1961 and was placed on the VELER in 1991. Previously it was on the Cranebarge MICHIGAN, which was fully depreciated and disposed of in 1991. The crane has been heavily utilized in various operations for 46 years. Due to the age of the existing crane, the maintenance and repair challenges have increased and impacted productivity. Lost time and adverse impact on obstruction removal operations will increase as the crane is beyond its estimated operational life. Safety issues will also become critical if the crane is not replaced in the near future. Total estimated cost: \$1,840,000. Prior Year: \$40,000. FY2009: \$1,800,000.

(19) Crane Procurement for Illinois Waterway, 2707, Rock Island District (New). Crane will be used on Crane Barge 9 for lifting work at the 8 Locks and Dams on the IWW. The crane will enable the crew to work in and around the lock chambers and dams doing major repair and maintenance work in a safe and efficient manner. This project entails development of crane technical specifications and GSA procurement of a crane to meet the operational requirements of lifting 100,000 pounds fully rotating at 38'. The crane will be replacing an aging 1989 Manitowoc M-80 crawler crane 915C (BC 08356) that is obsolete and no longer made. Repair costs are mounting and parts are getting harder to find. The control levers are worn causing sloppy operations, the load indicator needs to be replaced, the machine needs to be repowered, the crane cab is rusting out, and the electrical wiring is outdated and becoming a fire hazard. The crane has 7456 hours on it and the crane is increasingly down for repairs. Total estimated cost: \$3,500,000. Prior years: \$10,000. FY2009: 3,440,000. FY2010: 45,000. FY2011: \$5,000.

(20) M/V STRONG Replacement, 2730, Memphis District, (New). The M/V Strong has been called on various occasions to assist the Revetment Unit, Mat Sinking Unit, and Dredge Hurley in towing of plant because of emergency conditions or equipment breakdown during the Revetment Season. The exact timing for any one of these missions is virtually impossible because they are dependent on river levels and/or breakdown of other government or leased vessels. In the aftermath of Hurricane Katrina, the availability of motor vessels and barges for lease has become much more difficult. The increased horsepower and height of the new vessel will allow it to more safely and effectively respond to the needs of the Memphis District. The project includes development of a suitable progression of design and construction of one self-propelled towboat. Total estimated cost: \$12,000,000. Prior year: \$25,000, FY 2008: \$50,000. FY2009: \$11,165,000. FY2010: \$360,000. Future Years: \$400,000.

I (21) M/V MUSCATINE Replacement, 2687, Rock Island District (New). The towboat is used to push maintenance barges for strike removal, rock placement, and repairs to structures. The towboat will replace the MV Muscatine, which was placed in service in 1976. The propulsion system and other major components have reached the end of their service where maintenance requirements are expected to ramp up in order to keep the vessel in operation. The new towboat will be based on an existing design, which was used for the MV DAVENPORT. The towboat is an essential component required to achieve mission responsibilities. Strike removal and repairs to control structures in the Rock Island District reaches of the Mississippi River require maneuvers in areas where strong currents can jeopardize the safety of the operation. The vessel is at times required to operate in perilous conditions near dams and other control structures where reliability and performance is mandatory to minimize risk to crews and other floating plant. The current design developed by the Marine Design Center has proven to meet the requirements of our activities. The "state of art" design takes advantage of modern hull design and engine refinements which will reduce operating costs and simultaneously improve performance. Total estimated cost: \$12,000,000. Prior Years: \$16,100. FY2008: \$50,000. FY2009: \$11,165,000. FY2010: \$360,000. Future Years: \$408,900

(22) Mobile Crane Replacement, Ft. Mifflin Distribution Center, Philadelphia District (New). Funding is required to replace the existing mobile crane with a state of the art, structurally sound and safer piece of equipment. The intent is to procure a crane with increased capacity, from the current 60 ton to a 90-100 ton rating. The boom length also will be increased from the existing 100 feet to 160-180 feet in length. These upgrades would enable a greater and safer lifting capacity on very heavy and critical lifts such as heavy castings, propellers, shafts, pump cases, spuds, trunnions, and elbows. The increased capacity will also enable reaches to the Port side of the Dredge McFarland when docked to assist with critical repairs. The crane would also be able to reach high enough to clear the side-cast boom of the dredge with parts and

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materials, which would greatly enhance the support to the vessel. The increased capacity will also allow the crane to reach areas of the floating plant which are currently inaccessible and be capable of making out-of-water lifts for repairs to larger survey vessels which can then be performed without having to rent or lease a crane and will save the expense of a drydock facility. Total estimated cost: \$1,000,000. FY2009: \$1,000,000.

(23) 110 Ton Crawler Crane, Russellville Project Office, Little Rock District (New). The new crane is needed to replace a 110 Ton crawler crane (originally project owned) that was surplused several years ago for safety reasons. Since that time a smaller mobile crane (vintage 1968, rehabbed in 1999, American 62 Ton mobile) loaded onto a barge has been used to perform the day-to-day work. The current crane has limited use and cannot handle larger jobs, which must be deferred until the River Fleet (Shorty Baird) is available. The current crane does not comply with the latest standards (especially critical for making personnel hoists) and has become more unreliable with breakdowns happening more frequently. Repairs are costly and require leasing a temporary crane costing between \$8,000 and \$10,000 per month plus delivery fees (approx \$10,000). Total estimated cost: \$920,000. FY2009: \$920,000.

d. Fixed Land Plant and Automated Systems:

(1) Real Estate Management Information System (REMIS) – Corpwide (Continuing). The U.S. Army Corps of Engineers is the responsible agent for the acquisition and disposition of real estate for the Army Civil Works and Military projects and for the Air Force. REMIS is the tool that the Corps uses to administer and manage property that is out-granted at civil projects, Army bases and Air Force installations. REMIS is the official, auditable database of record for the Corps Civil Works Real Property Inventory (RPI) of public lands, buildings and structures. REMIS supports e-Gov as the official database of record for the real property inventory of Army and Air Force land holdings. Base Realignment and Closure (BRAC) actions are administered by USACE and recorded in REMIS. REMIS serves as a Chief Financial Officer compliant subsidiary ledger to CEFMS (Corps of Engineers Financial Management System), and provides annual accountability reports to the GSA (General Services Administration). The current version of REMIS has performance gaps relating to: full compliance with the DoD Real Property Inventory Requirements (RPIR), DoDI 4165.14 Instructions, DoD Real Property Unique Identification Registry (RPUIR), and Geographic Information System (GIS) capability, Graphical User Interface, Data Sharing, Document Administration and Disposal. Closure of these performance gaps will enable REMIS to become a more competent USACE tool for life-cycle accountable asset management. PRIP funds are being used since 60 percent of the support provided by the system is for Civil Works activities. Military funding sources will be used to recoup the portion of the capital investment that is for military projects, through user charges. Total estimated cost: \$6,900,000 FY 2007: \$1,000,000 FY 2008: \$3,000,000 FY 2009: \$2,900,000

(2) P2: Corps of Engineers Programs and Project Management System – Corpwide (Continuing). This project includes scope and cost changes to the Corps of Engineers automated information management system, P2. The P2 project was completed and deployed in 2004. It was designed to support the business processes of Programs and Project Management for all districts, divisions, and the Corps headquarters. P2 currently uses two primary commercial off the shelf applications, which include Oracle Projects and Primavera software. There is also software which provides an interface between the two systems. Since deployment the system has experienced performance and reliability problems and is highly maintenance intensive. The Corps commissioned studies which resulted in the recommendation for an upgraded version of the system. Due to advances in commercial software it was found that with some additional programming Primavera could stand alone. This will simplify the system resulting in lower license fees, faster and more efficient response time, and greater system security. The user interface will be less complex resulting in greater productivity and provide a more useful tool. Total estimated cost: \$29,945,000. Through FY 2007: \$25,800,000. FY 2008: \$2,749,000. FY 2009: \$1,351,000. Future Years: \$45,000.

(3) Facilities and Equipment Maintenance System (FEMS) – Corpwide (Continuing). FEMS is a Department of Defense migratory Computerized Maintenance Management System (CMMS). The Joint Logistics Systems Center (JLSC) developed the system to meet the needs of DoD maintenance organizations. This system was designated as a DoD migratory system in 1995. FEMS is the Corps tailored version of MAXIMO Enterprise Base Systems (MRO Software, Inc.), which is a Commercial-Off-The-Shelf-System (COTS) package. FEMS is deployed at the Corps' two consolidated data processing centers, and integrates O&M business processes into a cost-effective asset management program. It supports and consolidates functions within each O&M business line providing the capability to track life cycle costs of all assets. FEMS was deployed in FY05/FY06 within the Northwestern Division. Development is ongoing to meet the requirements of E.O.13327 for asset management and to

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update the COTS product to web-based applications. This maintenance management system is the keystone to the development of a Sustainable Infrastructure Program for all Corps assets. Aging locks and dams and flood damage reduction structures, as well as coastal structures such as jetties, breakwalls and groins are in need of rehabilitation, repair and increased maintenance to prevent failure or major breakdown of navigation and flood protection systems. The FEMS will establish optimal preventive maintenance criteria to effectively reduce risk and improve reliability. Total estimated cost: \$13,300,000. Through FY 2006: \$9,255,000 for development. FY 2007: \$ 1,805,000 to begin implementation. FY 2008: \$2,240,000 to complete implementation.

(4) Corps of Engineers Automation Plan (CEAP) (Continuing). The capital acquisition portion of CEAP, renamed Corps of Engineers Enterprise Infrastructure Services (CEEIS) was created to replace the Corps mainframe computing hardware consisting of leased Honeywells at the division level and Corps-owned Harris computers at the district level. The Corps awarded a contract to the Control Data Systems, Inc., in October 1989 for hardware/software acquisition and support services. The contract was structured for maximum flexibility, not committing the Corps beyond the first year but providing the Corps with 10 annual renewal options. The contract also provided for a pilot test at the Southwestern Division, the Waterways Experiment Station, and the former Headquarters' Engineer Automation Support Activity. Based on pilot and stress test results and a cost comparison of various deployment scenarios, the Corps redeployed pilot test equipment to two large regional processing sites, one in Portland, Oregon and the other in Vicksburg, Mississippi. To maintain a viable corporate-wide system at these two regional sites, the Corps has invested in additional mainframe processing capacity, operating software, additional storage capacity, communications devices, and associated processors to link all Corps sites to the two regional centers. Total estimated cost: \$112,440,000. Through FY 2006: \$99,240,000. FY 2007: \$3,300,000. FY 2008: \$3,300,000. Future Years: \$3,300,000.

e. Tools, Office Furniture, and Equipment

(1) Furnish Renovated Bolling Federal Building – Kansas City District (Continuing). The Kansas City District office is scheduled to relocate within the Bolling Federal Building. The furniture is required to accommodate the newly renovated space. The current furniture is over ten years old and cannot be used in the renovated space due to condition, age, and the variation in sizes. The new furniture will provide for standardized workstations for all employees. The funding will provide for 492 individual workstations, 33 private offices, and 9 conference rooms. Total estimated cost: \$3,700,000. FY 2008: \$3,700,000.

(2) Systems Furniture Replacement – St. Louis District (Continuing). Project objective is the acquisition of new systems furniture for the St. Louis District office in order to meet mandated space requirements, technological enhancements in the future, and meet safety standards associated with ergonomics. Space reduction guidelines have been issued command-wide in order to bring rental costs in line with projected budgets. The new product will allow for an ease of expansion over the initial 450 workstations, and make realignments of the organization much less disruptive. Present system is in disrepair, and has exceeded its ten year expected life. Affordability analysis shows that the ten year payback period is feasible. Total estimated cost: \$3,895,274. FY 2008: \$3,895,274.

(3) Zorinsky Building GSA Leasehold Improvement and Furniture - Omaha District (Continuing). The Edward Zorinsky Federal Building, a GSA owned building is currently undergoing a complete building renovation. To accommodate the renovation, the Omaha District has temporarily moved its Headquarters to three temporary locations. During the GSA renovation of the building, the district is responsible for communications wiring for workstations to the local area network (LAN), a computer room, an audio visual equipment and control system in the Executive Conference Room and installation of a communications data center switch and an uninterrupted power supply. In addition, the plans include purchase of modular/systems furniture for about 830 employees. The existing furniture used at the temporary locations, moved from the Zorinsky Building, range from 7-year-old systems furniture to 20-year-stand-alone furniture with conditions ranging from good to unserviceable. This furniture requires an average of 190 square feet per person. The purchase of new system/modular furniture will reduce the average space utilization to 160 square feet per person, thus reducing the footprint by 30 square feet per employee. Upon completion of the renovation of the Zorinsky Bldg, GSA anticipates the rent will be at least \$25.00 per sq foot. Saving 30 square feet per person with 830 employees is a cost avoidance or savings of \$622,500 per year in rent. Total estimated cost is \$7,645,000. Through FY 2007: \$6,628,324 for leasehold improvement and furniture purchase. FY2008: \$1,016,675 for procurement of audio visual/video teleconference equipment and final installation of all components. Completion projected for May 2008.

REMAINING ITEMS

REMAINING ITEMS
INVESTIGATIONS

Coordination Studies With Other Agencies

Other Coordination Programs

a. The CALFED request is \$100,000, which is a portion of the CALFED coordination funds cited in section 103(f)(4)(A) of PL 108-361, the CALFED Act. The funds will be used to continue program support, coordination, and USACE representation efforts in the Federal and State CALFED process in Fiscal Year 2009. The CALFED Record of Decision named the Corps and State of California as implementation co-managers of the CALFED Levee System Integrity program. As stated in section 103(f)(4)(A) of PL 108-361, the CALFED Act, the Corps requests funds for program management, oversight, and coordination. Activities stated in the Act include: program support; program-wide tracking of schedules, finances, and performance; multi-agency oversight and coordination of program activities to ensure program balance and integration, development of interagency cross-cut budgets and a comprehensive finance plan to allocate costs in accordance with the Record of Decision; coordination of public outreach and involvement, including tribal, environmental justice, and public advisory activities in accordance with the Federal Advisory Committee Act; and development of annual reports.

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Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(b) Chesapeake Bay Program. The amount of \$75,000 is requested to continue, increase, and invigorate activities initiated under Special Investigations. The Chesapeake Bay Program (CBP) is an interagency program, initiated by the US Environmental Protection Agency (EPA), for the protection and restoration of the bay's natural resources. These natural resources have tremendous environmental and economic significance to the northeast region and to the Nation. Following extensive Corps of Engineers investigations and EPA studies in the 1970's and early 1980's, it became increasingly clear that the Chesapeake Bay as a system was under intense pressure from development and overuse and was undergoing degradation in water quality, living resources and other ecological indicators. With the funds requested, the Baltimore and Norfolk Districts will continue participation and provide leadership involvement in the CBP Implementation Committee; the Federal Agencies Subcommittee; the Living Resources, Monitoring, Modeling and Toxics Subcommittee; and numerous workgroups addressing various subjects such as regional sediment management, wetlands, submerged aquatic vegetation, and land stewardship.

ASA(CW) was among seventeen Federal agency signatories to commit to a "Resolution to Enhance Federal Cooperative Conservation in the Chesapeake" in October 2006. Through this agreement the Corps rededicated itself to cooperative conservation in support of the Chesapeake Bay Program Partnership and will: 1) strengthen shared goals within mutual strategic areas of restoration under the Chesapeake 2000 Agreement, 2) cooperate with the Chesapeake Bay Watershed Assistance Network, 3) provide advise to the Chesapeake Executive Council on Federal support of the CBP, identify restoration, management or monitoring initiatives of mutual Federal interest, and to identify geographic areas of targeted action, 4) broaden cooperative conservation activities, and 5) improve communication.

ASA(CW) was a signatory on a Special Tributary Strategy for Federal Lands in the District of Columbia agreement that commits the Corps to develop stormwater pollution prevention and nutrient management plans. The Baltimore and Norfolk Districts will play a key role on this Special Tributary Strategy as well as initiate activities to enhance stewardship of Corps-owned land within the Bay watershed. Many of these actions affect Corps authorized missions in the Chesapeake Bay.

As a direct consequence ASA(CW) recommitment of USACE to cooperative conservation with other Federal agencies working in the Bay region, the Baltimore and Norfolk Districts, along with the North Atlantic Division, have increased their commitment and involvement in Chesapeake Bay activities. This includes taking the lead on an interagency initiative on Regional Sediment Management and participating in a similar one on oyster restoration, taking an active role on numerous ad-hoc strategic interagency planning meetings on Bay matters, and planning, organizing and participating in Chesapeake Bay meetings at the Regional Administrator level. All of these activities require considerable time, effort, and coordination. The benefit of these activities is an increased profile of USACE as a primary Federal player in Chesapeake Bay restoration, increased and meaningful collaboration of USACE programs with other Federal agencies so that priority issues can be tackled using the combined resources and expertise of many rather than a few, and a unity in purpose in the Federal community in addressing Chesapeake Bay restoration.

February 2008

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(c) The Coordination with Other Water Resources Agencies request is \$200,000. Cooperation with the Department of Agriculture (USDA) is under the Watershed Protection and Flood Prevention Act of 1954 (Section 5 of PL 566-83), as amended; the Flood Control Act of December 22, 1944 (Section 1 of PL 534-78), as amended; and the National Environmental Policy Act of 1969 (PL 91-190). Executive Order No. 10913, dated 18 January 1961, requires that cognizance be taken of constructed and contemplated upstream and downstream USDA works, and that plans be submitted to the Secretary of the Army for review and comment prior to their transmission to the Congress through the President. As the agency responsible for the flood control features of basin program, the Corps of Engineers must provide the Department of Agriculture with information on proposed Corps projects, including their effect on contemplated watershed programs. The Corps is also required by Section 102 (2)(c) of the National Environmental Policy Act of 1969 to review the environmental impacts that would result from installation of USDA project features. Cooperation with the Bureau of Reclamation of the Department of the Interior includes preparation of estimates of flood control requirements, and benefits, and reservoir operating criteria for storage reservoirs to be constructed with Federal funds, in accordance with Sections 1 and 7 of PL 534-78 and Section 7 of PL 984-84, as amended. Studies made by the Bureau of Reclamation of the flood control features of proposed reclamation projects are submitted to the Corps of Engineers for review and determination of the flood control benefits. The Corps of Engineers uses the data collected by the Bureau but makes an independent evaluation of the project. The Secretary of the Interior uses the report of the Chief of Engineers in making allocation of project costs to flood control. Corps representation is required for cooperation with Federal and state agencies such as River Basin Compact Commissions; Interstate River Basin Compacts; and Regional Planning Commissions in authorized, but unfunded investigations.

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(d) The request is \$100,000 for FY 2009 to continue the CORPS' participation in the Gulf of Mexico Program (GMP). A Corps staff member serves as liaison to the GMP Office (GMPO). Funds are used to support participation by Corps personnel from the 5 Gulf districts and three Gulf divisions in the Ocean Action Plan: Gulf of Mexico Alliance - Governor's Action Plan. The GMP, administered by EPA, is a long-established collaborative partnership of state representatives from the five Gulf States, several Federal agencies, non-Government organizations, business, academia, as well as citizen and local government interests. The GMP responds to action issues identified by the five Gulf States. In conjunction with its business, education and project linkages with the Coastal America (CA) partnership, the GMP and CA partnership use a cross-cutting approach to formulate and implement creative, place-based, non-regulatory solutions to economic and environmental issues with Gulf-wide and national implications. From the GMP/CA venue, the Corps is readily able to engage and advance the restoration and stewardship components of the Corps Environmental Mission relative to evolving Administration (eg, Ocean Action Plan) and Gulf of Mexico regional priorities as stipulated in the Gulf of Mexico Alliance - Governor's Action Plan (particularly, wetland restoration and regional sediment management). Alliance, GMP/CA outputs include advancing regional sediment management, coastal habitat restorations and enhancements, community awareness, reductions of hypoxia/nutrient enrichments, reductions of water quality impairments, and improved public health, all complimented by education and outreach efforts. The Corps staff member also serves as Co-chair, CA - Gulf Regional Implementation Team (CA-GRIT), alternate Corps representative to the GMP Management Committee, alternate DoD representative to the GMP Policy Review Board and member/local coordinator of Corps participation in the Governor's Action Plan. These administrative functions position the Corps to support participation in the Governor's Action Plan, influence the projects, policies and activities of the GMP and CA partnerships, and identify, activate and coordinate added value roles for staff from the five Gulf districts affiliated with the Southwestern, Mississippi Valley and South Atlantic Major Subordinate Commands. The requested funds will ensure the continued participation of the Corps in the GMP and CA partnerships and the Gulf Alliance/Governors Action Plan.

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(e) The Interagency Water Resources Development request is \$1,005,000. This amount provides \$750,000 for Corps of Engineers district activities, not otherwise funded, that require coordination effort with non-Federal interests. These activities include items such as meeting with City, County and State officials to help them solve water resources problems when they have sought advice or to determine whether Corps programs are available and may be used to address the problems. This will also cover costs of meeting with potential study sponsors before studies are budgeted to insure they understand study cost sharing and to obtain an indication of their interest in participating in a future study. It also provides \$50,000 for two American Heritage River Navigators who are supported by the US Army Corps of Engineers, based upon Executive Order 13061, dated 11 September 1997. These River Navigators provide direct support to the Community Partners for the New River, which flows through NC, VA and WV; and for the Upper Mississippi River above St. Louis, MO. The navigators assist the individual communities and community partners in accessing a variety of Federal programs to achieve the goals in the river workplans. Funds are also included to contribute to the Coastal America Partnership, including \$25,000 to assist in supporting the national office and up to \$80,000 in support of the regional teams. This request also includes \$100,000 to sustain the benefits of the Great Lakes Habitat Initiative to continue multi-jurisdictional coordination, enhance decision-support capability, improve and advance monitoring.

(f) The Interagency and International Support request is \$450,000 of which \$200,000 will allow the Corps of Engineers to support other Federal agencies, international organizations and foreign governments to address problems of national significance to the United States under the authority of Section 234, WRDA 1996. The Corps of Engineers has widely recognized expertise and experience in water resources, infrastructure planning and development, and environmental protection and restoration. Other Federal agencies, particularly the State Department, the Agency for International Development, and international organizations, can benefit from use of the Corps talents in addressing problems of importance to the United States. In many cases the Corps abilities to perform its civil works mission, promote opportunities in the U.S. private sector, promote national security interests and contribute to the Global War on Terror are also enhanced. The program funds will be used to support the State Department on international water issues, the World Water Council, USACE involvement on various interagency and international task forces, assisting US Embassies with strategic interactions with foreign governments, and other initiatives of national importance.

(1) Funds of \$50,000 will support the Corps' technical coordination and management of the hydrologic science and integrated water resources management (IWRM) related activities of the US National Commission for UNESCO, scientific interaction with UNESCO's National University Centers, including those for which the Corps has Memorandum of Understanding (MOU): the Center for Arid and Semi-Arid Zones in Latin America and the Caribbean (CAZALAC); the Institute for Water Education (IHE); the International Center Hazards and Risk Management (ICHARM) and other IHP initiatives.

(2) Funds of \$150,000 will support Corps collaboration with the Netherlands Rijkswaterstaat to continue to gain knowledge from the Dutch in a number of areas. This exchange initiated in FY 2005 has been particularly useful in the wake of our coastal hurricanes and the Dutch have been quite responsive and helpful to us. The following are thrust areas that have been mutually identified. Dredging: The Dutch have extensive experience in this area and we stand to benefit greatly from their technologies and lessons learned. Sample targeted areas for sharing include: Re-suspension of sediments due to dredging; contaminated sediments: risk assessment, remediation options, confined disposal, and beneficial use; and methods to reduce dredging costs through contracting and market forecasting. Coastal Zone Management: The Dutch have devised an extensive range of structural and non-structural approaches related to coastal zone management. Their Room for the River process involves a number of innovative techniques designed to improve floodplain management. They have built an impressive network of storm surge barriers, flood gates, reinforced levees and flood walls. Risk and Reliability: The Dutch have worked closely with us on

APPROPRIATION TITLE: Investigations, FY 2009

post-Katrina support and they have developed a unique approach to addressing flood and storm safety. The two nations have much to share in terms of taking the notion of risk and reliability to a higher level. The exchange includes the New Orleans and Sacramento Districts to focus on initiatives useful to their interests. FY09 products will include the 5th Technical Workshop to showcase progress on the pilot projects, completing and publishing the Dutch-US study on water resources decision-making processes, completing a strategic plan for the partnership and fostering closer relationships with the Netherlands Water Partnership and Deltares, and meetings with senior managers and leadership to review the effectiveness of the relationship.

(3) Funds of \$50,000 will be used to continue our water resources technical exchange of information with Japan's Ministry of Land, Infrastructure and Transport (MLIT). Under the terms of the 2003 agreement on cooperation, USACE and MLIT alternate with annual visits to each agency. FY 2009 funds will be used to host a Japanese delegation in the US, probably in the Columbia basin to address MLIT's interest in environmental impacts of water development. The agreement has not only fostered the exchange of water resources technical and management information, but also may be considered part of the growing relationship on cooperation on addressing large scale disasters, improving water conditions that lead to country stability, and the overall US-Japan relationship so important to our security interests in Asia.

APPROPRIATION TITLE: General, FY 2009

Coordination Studies with Other Agencies

Other Coordination Programs (Continued)

(g) National Dam Inventory

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$ 750,000
Appropriation for FY 2008	177,000
Allocation Requested for FY 2009	400,000
Increase of FY 2009 over FY 2008	223,000

AUTHORIZATION: Section 215 of the Water Resources Development Act of 1996 (Public Law 104-303) authorized \$500,000 to be appropriated each fiscal year for the maintenance and publication of the National Dam Inventory. This authorization was continued in the Dam Safety Act of 2006 (Public Law 109-460) increased the authorization for fiscal year 2009 to \$750,000.

JUSTIFICATION: The Inventory was initially compiled in 1975 has been periodically updated to reflect construction of new dams, ownership changes, major modifications to existing dams, decommissioning and removal of dams, and improvements in the accuracy and completeness of the data. The current update includes over 80,000 dams, and focuses on current technology, integrating computer software into the inventory package to improve the ease of use, accuracy, and accessibility of the data. Annual funding is used to implement improved information flow and data quality control processes, to greatly enhance the state of knowledge management for dam safety. The importance of continued maintenance and publication of the National Dam Inventory has increased. The inventory is now required for use by the Secretary of Homeland Defense and the National Dam Safety Review Board in the allocation of dam safety program assistance funds to the various States in proportion to the number of dams in the state. Inventory data is also included in the biennial report to Congress on the National Dam Safety Program. The Inventory also plays an important role in the identification of infrastructure in risk due to terrorist activities. The ongoing maintenance and publishing of the Inventory is a coordinated effort involving data from the Federal and non-federal Dam Safety community in cooperation with the Interagency Committee on Dam Safety (ICODS) and the Association of State Dam Safety Officials (ASDSO).

PROPOSED ACTIVITIES FOR FY 2009: These funds will be used for continued maintenance and publication of the National Dam Inventory. During 2009 a request will be made to the state dam safety agencies and Federal dam owning agencies to update the data in the inventory to include the inclusion of an analysis of the condition of dams for at least 50% of the dams under their jurisdiction in accordance the Dam Safety Act of 2006. Inclusion of an analysis of the remaining dams will be scheduled for FY 2010. The inventory will continue to be improved utilizing rapidly evolving technology including enhanced World Wide Web access, a Geographic Information System (GIS) interface, and integration with other dam safety resources. Funding at this level will not provide for inclusion of the assessment of dams in the National Inventory of Dams during FY2009. Additional efforts are also required to ensure data security in response to Homeland Defense directives. Integration of the National Inventory of Dams with the Dam Security and Analysis System to identify terrorist threats to dams will be delayed until future fiscal years.

APPROPRIATION TITLE: General, FY 2009

Coordination Studies with Other Agencies

Other Coordination Programs (Continued)

(g) National Dam Inventory (Continued)

ACCOMPLISHMENTS IN PRIOR YEARS: An updated inventory was published during 2008. This inventory was based on data provided by the state and Federal agencies during 2007 and replaced the published data that was collected in 2005. The National Dam Safety Review Board adopted the classification codes to be used for the analysis of dam condition during the next submission of data for the inventory. Routine maintenance continued on the inventory along with providing an internet based inventory available to all Federal, state, and local government agencies and the public. During calendar 2007 there were over 100,000 inquiries to the inventory on the internet.

APPROPRIATION TITLE: General Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(h) The Corps' FY 2009 request for Lake Tahoe is \$100 000. This funding is required to continue work associated with the Lake Tahoe Federal Interagency Partnership as directed in Executive Order 13057. The Federal Interagency Partnership is working with state and local agencies and public interest groups to arrest further deterioration of Lake Tahoe while maintaining a viable economic climate. FY2009 activities will include: \$100,000 for full active participation in Partnership Activities (includes working with local and state agencies, public advisory committees, SNPLMA program participation, and staff work to support District, Division and HQ executive level involvement).

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(i) The National Estuary Program request is \$50,000. These funds will be used to participate with Federal and State agencies in the National Estuary Program (NEP) administered by the Environmental Protection Agency under the Water Quality Act of 1987 (Section 320 of PL 100-4). The NEP is an interagency planning program to develop management plans for nationally significant estuaries designated by the EPA. To date, the following 28 estuaries have been designated under the program: Puget Sound, WA; Delaware Estuary, DE, NJ & PA; and Delaware Inland Bays, DE; New York/New Jersey Harbor, NY-NJ; Sarasota Bay, FL; Santa Monica Bay, CA; San Francisco Bay, CA; Galveston Bay, TX; Albermarle/Pamlico Sound, NC; Buzzards Bay, MA; Narragansett Bay, RI; and Long Island Sound, CT-NY, NY; Massachusetts Bay, MA; Barataria/Terrebonne Bays, LA; Indian River Lagoon, FL; Casco Bay, ME; Tampa Bay, FL; San Juan Bay, PR; Corpus Christi Bay, TX; Tillamook Bay, OR; Peconic Bay, NY, Barnegat Bay, NJ; Charlotte Harbor, FL; Lower Columbia River Estuary, OR & WA; Maryland Coastal Bays, MD; Mobile Bay, AL; Morro Bay, CA; and New Hampshire Estuaries, NH. Because of extensive Corps involvement with Federal water resources projects in the nation's estuaries and other responsibilities in waters of the U.S., the Corps has been asked to participate on the management and technical advisory committees of those NEP estuaries being studied. The requested funds would be used to cover costs of Corps field office meeting attendance, field reconnaissance, and data transfer.

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(j) The North American Waterfowl Management (NAWMP) request is \$50,000. These funds will be used to continue cooperation with Federal and State agencies, and non-Federal interests in support of the NAWMP administered by the Department of the Interior, Fish and Wildlife Service. The NAWMP is an international program designed to reverse downward trends in North America's waterfowl populations by protecting and improving waterfowl habitats nationwide, particularly in 34 areas within the United States identified as being critical to meeting NAWMP goals and objectives. Department of the Army support to the NAWMP is set forth in an agreement signed with the Department of the Interior on January 23, 1989. The Corps of Engineers has broad water resources development responsibilities and authorities and has stewardship responsibilities for over seven million acres of water and land. Many Corps of Engineers projects contribute directly or indirectly to the habitat base for the nation's waterfowl, and other wetland species. Current and future Corps of Engineer projects are expected to play an even greater role, particularly during years of low rainfall. Also, the Corps of Engineers has recognized extensive environmental engineering and technical expertise and experience that can contribute greatly toward meeting the NAWMP waterfowl habitat improvement goals and objectives. The requested funds would be used to cover costs of Corps of Engineers field office participation in the field trips, interagency coordination meetings, and information transfer in response to conditions set forth in the agreement between the Department of the Interior and the Department of the Army.

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(k) The Pacific Northwest Forest Case Study request is \$50,000. The Northwest Forest Plan (NFP) is an interagency program, initiated by the White House's Council of Environmental Quality, for ecosystem management of watersheds within the public lands in the Pacific Northwest within the range of the Northern Spotted Owl (24,000,000 acres). The NFP institutes an interagency approach for restoring and protecting animal and plant species on public lands and restoration of environmental habitats. In FY 1999, the Corps of Engineers became an official signatory agency to the NFP Memorandum of Understanding. However, due to reduced funding over the past several years, the Corps did not resign the new MOU in 2003. With the funds requested, The Corps will participate in NFP activities as an adjunct representative to the various regional executive and management committees on a part-time basis. NFP participants are presently concentrating on further refining the scopes of agency participation and contributions with the goal of streamlining the implementation of timber and restoration activities within its watershed-scale ecosystem management strategies. Many of these strategies and programs involve, and will benefit from, the Corps authorized missions throughout the western states. The NFP presents the best outreach opportunity for the Corps to expand its involvement with the other agencies of the Federal and State communities to use all of our engineering and environmental capabilities to address many of government's missions.

APPROPRIATION TITLE: Investigations, FY 2009

Coordination Studies With Other Agencies

Other Coordination Programs (Continued)

(I) The Special Investigations request is \$1,600,000. The amount of \$100,000 provides for the review of preliminary permit and licenses applications for non-Federal hydroelectric power development either at or affecting Corps water resource projects. The amount of \$1,500,000 provides for (1) special investigations and reports of nominal scope prepared pursuant to Congressional and other requests from outside the Corps of Engineers for information relative to projects or activities which have no funds; (2) similar work of detailed scope, as specifically authorized by the Chief of Engineers; and (3) review of reports and environmental impact statements of other agencies. Among the investigations paid for from these funds are investigations of nominal scope of flooding potential and flood damages, drainage, harbor improvements, anchorages, and development of navigation channels.

APPROPRIATION TITLE: Investigations -- Fiscal Year 2009

Coordination Studies With Other Agencies

Committee on the Marine Transportation System

SUMMARIZED FINANCIAL DATA:

Estimated Study Cost	Continuing
Allocation Requested for FY 2009	\$100,000

AUTHORIZATION: Established as directed by the President in the *Ocean Action Plan – The Bush Administration’s Response to the U.S. Commission on Ocean Policy* – 17 December 2004.

JUSTIFICATION: The Committee on the Marine Transportation System (CMTS) was elevated to an interagency Cabinet-level committee by the President’s Ocean Action Plan, December 2004. The CMTS held its first meeting in July 2005 and continues to meet 2-3 times per year. The Assistant Secretary of the Army (Civil Works) has been named as the Department of Defense (DOD) representative to the CMTS. The Chief of Engineers was selected to be the initial chair of the CMTS Coordinating Board, which advises and implements directives of the CMTS. An interagency Executive Secretariat supports the day to day activities of the CMTS on behalf of the Coordinating Board. The Corps is providing a full-time GS-15 liaison to the CMTS Executive Secretariat. This position reports to the Chief of Operations, HQUSACE, and HQ Operations has had the lead in CMTS coordination. The Corps has also been tasked by the CMTS to lead an interagency team to conduct an Assessment of the Current and Future State of the U.S. Marine Transportation System. This Assessment was initiated in FY 07 using reprogrammed UFR funds in the amount of \$175,000 and interagency contributions, but the principal activities are being conducted in FY 08 and FY 09. CMTS funds will also be used to support the DOD share of other initiatives requested by the Committee, including development of an MTS National Strategy, MTS Data and Information Portal, and MTS Emergency Response Coordination. Dedicated funding to support Corps participation in the CMTS is essential if the Corps and DOD are to be full participants with other Cabinet Departments and agencies in Committee activities and initiatives. Corps participation in CMTS is a priority for the ASA(CW), the Chief of Engineers and the Director of Civil Works.

PROPOSED ACTIVITY FOR FY 2009:

- Coordinate with other Departments and agencies participating in CMTS and provide support for studies and initiatives requested by the Cabinet-level CMTS.

Coordination Studies With Other Agencies

Planning Assistance to States

SCOPE: This Corps of Engineers program stems from Section 22 of the Water Resources Development Act of 1974, as amended, which authorizes the Secretary of the Army to assist States, local governments, Indian tribes, and other non-Federal entities in the preparation of comprehensive plans for the development, utilization, and conservation of water and related land resources. The studies are cost-shared on a 50% Federal, 50% non-Federal basis. The program can encompass many types of studies dealing with water resources issues, including environmental conservation/restoration, wetlands evaluation, water supply and demand, water quality, flood damage reduction, coastal zone management, and dam safety.

SUMMARIZED FINANCIAL DATA:

Allocation Requested for FY 2009	\$7,000,000
Allocation for FY 2008	\$6,396,000
Change in FY 2009 from FY 2008	\$ 604,000

JUSTIFICATION: The Planning Assistance to States program has continued to evolve into a highly effective tool for providing technical and planning assistance to states, local governments, and Indian tribes. These customers recognize the need to develop locally directed solutions to their water resources problems. Interest from states, regional and local governments, Indian tribes, and other non-Federal public agencies in this highly efficient and effective Program continues to grow. The FY 2008 amount will enable the Corps to provide much needed planning and technical assistance to aid them in a wide variety of water resource efforts, including environmental restoration studies, watershed planning, and flood plain management planning. Currently, there are ongoing studies that require additional funds to complete, and a number of unfunded studies that have been identified by states, communities, and Indian Tribes as high priority studies. The FY 2009 request will allow the Corps to continue and complete ongoing studies, and initiate additional high priority studies.

ACCOMPLISHMENTS: In fiscal year 2008, the Corps of Engineers had hundreds of studies underway in almost every State and the pacific and caribbean Islands, and Federally-recognized Indian tribes. These studies provided technical and planning assistance for a full range of water resources issues. Significant efforts involved studies to assist local communities in restoring urban river environments, and accomplishing wetlands identification and mapping studies. In addition, efforts were undertaken to assist states and local governments in ecosystem restoration, drinking water supply and demand, water quality, and flood damage reduction.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Automated Information Systems Support - Tri-Service CADD/GIS Technology Center

<u>SUMMARIZED FINANCIAL DATA:</u>	<u>Funding</u>
Estimated Five-Year (FY 2009-2013) Program Cost	\$1,750,000
Civil Allocation Requested for FY 2009	350,000
Balance to Complete Five-Year Program After FY 2009	1,400,000
Allocation for FY 2008*	344,000
Change in FY 2009 from FY 2008	0,000
Average Annual Allocation for FY 2004-2008	\$400,000

(* Assumed allocation. Final, actual allocations yet to be determined.)

SCOPE: This effort provides technical support to engineers and scientists utilizing Computer Aided Design (CAD), Geographic Information Systems (GIS), Building Information Modeling (BIM), and facility management technologies in the planning, design, construction, operation and maintenance of Corps projects. The Center is jointly funded by Military, Civil Works, and other agencies and provides technical support across all sectors. Benefits are accrued by individual USACE districts/projects in the conduct of its Civil Works mission.

In 1992, the former Army Corps of Engineers' Computer Aided Design and Drafting (CADD) Center, located in the Army Engineer Waterways Experiment Station (WES), was expanded to an Army, Navy, Air Force (Tri-Service) center, including the addition of Geographic Information Systems (GIS) technology, by a joint agreement between the Corps, the Naval Facilities Engineering Command, and the Air Force Civil Engineer. Its purpose was to reduce duplication of effort between the three services in the management of CADD/GIS technology for facilities and environmental engineering. Since that time, the Defense Logistics Agency (DLA), the General Services Administration (GSA), USGS, FBI, Smithsonian Institution, National Capital Planning Commission, U.S. Marine Corps, U.S. Coast Guard, National Institute of Building Sciences, National Geospatial-Intelligence Agency (NGA), EPA, and NASA have joined this effort. As a result, this Center is a multi-agency vehicle to set standards, coordinate CADD/GIS systems uses, promote system integration, support centralized acquisition, and provide assistance for the installation, training, operation, and maintenance of CADD/GIS systems within the DoD facilities and environmental communities, including the Corps districts. All Corps districts that use BIM, CADD and GIS in mapping, planning, real estate, design, construction, operations, maintenance, and homeland defense and readiness benefit from the Center's efforts.

In FY08, the Center was re-chartered to focus its activities on the needs of the Tri-services and the Office of the Secretary of Defense (OSD). This change reverses the trend towards adding other federal agencies. The focus continues on CAD and adds Building Information Modeling (BIM) to the Center's activities and developing standard GIS data models that address the Civil Works business domains.

The \$350,000 requested for FY09 will support over 2,000 users of BIM/CADGIS and facility management technologies for Civil Works projects.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Automated Information Systems Support - Tri-Service CADD/GIS Technology Center (continued)

JUSTIFICATION: All Corps districts use CAD and GIS computer systems for Civil Works engineering, design, mapping, planning, and facility management. Many have begun the use of BIM as an engineering and O&M tool. All engineering drafting tables have been replaced with CAD platforms or computer mapping systems and most Corps environmental and natural resource analysis are being performed on GIS platforms. The geospatial data standard efforts of the Center were coordinated with the American National Institute of Standards to develop a National GIS Standard which was approved in November 2001 and includes civil works and homeland defense features. Standards and productivity enhancement tools developed by the Center are used for both in-house and contractor produced drawings, maps and analyses, which assure that all Corps offices have the ability to exchange their work among themselves and with others, including the private sector. The Center is actively coordinating its CAD standards 3.0. with the National Institute of Building Sciences and has created a National CAD Standard, thus reducing the redundancy with the private sector and reducing cost for both government and the private sector. In 2006, the Center began coordination and developmental support for the US National BIM Standard. The BIM standard addresses the latest building information model technology within the US building and construction industry. The Center ensures that the Corps obtains the maximum return on its investment in BIM, CAD and GIS by coordinating development efforts and distributing end products to Corps offices. The BIM, CAD and GIS systems at field offices can achieve maximum productivity when they take advantage of the economies of scale offered by sharing the development and use of common data standards, procedures, and applications. This sharing is accelerated through a concerted effort by the Center, working with various field working groups, to draw from field expertise and dissemination of this knowledge in the form of lessons learned and standards to benefit all Corps users. Comprehensive data standards supported by the Center permit government and industry users to produce equivalent designs, maps and analysis on a variety of computer systems using commercial off-the-shelf BIM, CADD and GIS software.

PLANNED ACCOMPLISHMENTS IN FY 2009

1. Updated contract language for BIM deliverables will be distributed to partnering organizations.
2. Workspace configurations and corporate datasets for BIM and CAD applications will be released.
3. ProjectWise interoperability tool will be updated to address new technology in vendor applications.
4. BIM to GIS training classes will be conducted.
5. Updated releases of the SDSFIE, A/E/C CAD Standard, and the BIM Standard will be released.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Automated Information Systems Support - Tri-Service CADD/GIS Technology Center (continued)

ACCOMPLISHMENTS IN FY 2008:

1. Release 4.0 of the A/E/C CAD Standard (both document and software tools) were released via the web. The A/E/C CAD Standard now incorporates Building Information Modeling Standard (BIM) requirements. A Tri-service corporate dataset for BIM applications was released in FY08. Software updates to implementation applications were incorporated in the new release. The A/E/C CAD Standards content was revised to make it compatible with the latest released version of the National CAD Standard and National BIM Standard. A BIM Manager's Workshop has been developed and conducted in FY08 for Civil Works Districts.
2. The GIS Spatial Data Standard for Facilities, Infrastructure, and Environment (SDSFIE) Release 3.0 was completed. The SDSFIE was transferred to the Topographic Engineering Center for further development to address ACSIM and OSD requirements.
3. The Center administered the Enterprise License Agreement (ELA) it negotiated with Bentley Systems Inc. on behalf of the US Army Corps of Engineers in late CY2005. The ELA provides access to all of Bentley's software applications and meets the Corps' Science and Engineering Technology program goals to reduce software acquisition costs. FY08 is the final year of the initial three-year agreement.
4. The Center continued its development of BIM expertise. The FY07 BIM Road Map and Implementation Guide was updated and released. Release of PCM 2.0 was initiated for delivery in mid-FY08.
5. The Center continued its deployment role for the collaborative engineering tool ProjectWise within USACE.
6. SDSFIE web site was enhanced to provide additional capabilities and meet user needs.
7. Contract language for MILCON Transformation was released (for standard RFP, Design/Build, and Design/Bid/Build).

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Coastal Field Data Collection

SUMMARIZED FINANCIAL DATA:

<u>PROGRAM ITEM</u>	<u>FY09</u>
1. Wave Information Study \$ 220,000	
2. Field Wave Gauging	200,000
3. Field Research Facility	895,000
4. Participation in the National Ocean Observing System	30,000
5. Southern California Beach Profile Study 15,000	
6. Pacific Islands Land Ocean Typhoon (PILOT) experiment 30,000	
7. Surge Wave Island Modeling Studies (SWIMS)	<u>10,000</u>
Total \$ 1,400,000	

Program totals

Estimated Five Year (FY 2009-2013) Program Cost - \$ 7,000,000	
Allocation Requested for FY 2009	1,400,000
Allocation for FY 2008*	4,428,000
(* Assumed allocation. Final, actual allocations yet to be determined.)	
Change in FY 2009 from FY 2008	0
Average Annual Allocation for FY 2004 - 2008	\$ 4,150,000

SCOPE:

Inaccurate and insufficient observation data results in project design errors for coastal navigation and storm damage reduction. For example, wave data with a 20% error that are used to design a coastal rock structure will yield a 70% error in the stone size used to build the structure. Oversized stone makes initial construction costs much higher and undersized stone results in early failure and higher than necessary life-cycle repair costs. Similarly, a 5-10 degree error in wave direction can result in an error, or even reversal, in predicted sediment transport compromising the success of a regional sediment management strategy. Cost-effective mission accomplishment requires accurate and complete data. Long-term data are required to determine climatic changes that may impact Corps' projects. This program systematically measures, analyzes, and assembles the data Corps field offices use to accomplish the Corps mission in coastal navigation and storm damage reduction including winds, waves, currents, water levels, and bottom configuration, sediment, and geomorphology. Some of these data are nationwide or regional supporting many projects at once. Any one project would not have the funding to develop and maintain these types of high-quality, extended datasets.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Coastal Field Data Collection (Continued)

The Coastal Field Data Collection Program provides required baseline data for all coastal projects, both federal and non-federal. The data is developed and maintained through seven significant activities: 1) National coastal wave history for project design, 2) Coastal wave measurement for validation & verification of simulated data and real-time use, 3) Coastal observatory for long-term coastal measurements to improve our project design capabilities, 4) Participation in the Interagency Integrated Ocean Observing System or IOOS, (5) Regional beach processes study in Southern California, (6) Measurements of Typhoon winds, waves and storm surges in island and reef environments, which provides data to (7) the Surge Wave Island Modeling Studies (SWIMS) effort to model island storm surges.

AUTHORITY: The basic authority for the Coastal Field Data Collection Program is 33 USC 426a which originated with the River and Harbor Act of 1945, which originated in the River and Harbor Act of 1930. The latest Engineering Regulation governing the program is ER 1110-2-1406 dated 1990.

JUSTIFICATION

1. National Coastal Wave Histories. Also known as *Wave Information Studies* or WIS, computer simulations generate historic wave climate based on historic weather information for all of the Nation's coasts including the Great Lakes. Most historic measured wave data does not include the direction waves are traveling which is critical in the project design process. Also, measured datasets are typically limited in length and are therefore inadequate for use in design and for long-term project performance studies. The simulated datasets provide all wave characteristics including wave direction, and are computed hourly for locations every few miles along the coast. The goal is to generate at least 20 years of data for all coasts. These datasets are routinely used by the Corps, the coastal engineering community, and the public for coastal studies. The data are easily accessible through a website which receives over 600 monthly requests for data downloads (<http://frf.usace.army.mil/wis/>). Accomplishments for FY08 include completion of 9 additional years of Pacific Basin regional Hindcasts. The 10 years of recently completed Pacific Basin information has already been an invaluable source of directional wave information for areas with no measured wave information. This information has been used for projects in Oahu, Maui and American Samoa to select historic wave events, determine wave climates, establish storm wave conditions, and provide directional wave information for sediment studies and harbor design. The Great Lakes Hindcast effort was started. FY09 activities include completion of Great Lakes hindcasts, website product enhancements to support Corps' system-wide requirements, and an initiative to examine climatic changes in storm frequency and how it might impact Corps Projects.

2. Coastal Wave Measurements. This program of *Field Wave Gauging*, or FWG, is the only Federal program with the objective of providing high-quality shallow-water wave observations nationwide. It is a primary Corps contribution to the *Integrated Ocean Observing System* (IOOS) as outlined by the Administration's Ocean Action Plan and approved by the Joint Subcommittee on Ocean Science and Technology (JSOST). Waves deliver energy to the coast, and real-time wave observations are imperative for operational guidance of dredging, navigation, maintenance, and emergency operations. High quality, wave observations are also required for the design of beach and navigation projects and to implement Regional Sediment Management strategies. Gauging efforts are coordinated with the National Data Buoy Center (NDBC) of NOAA, and with the Coastal Data Information Program (CDIP) operated by the Scripps Institution of Oceanography through the State of California (<http://cdip.ucsd.edu>). The data are analyzed and made available online in real-time to the Corps, our partners and the public. Nearshore gauging is conducted cooperatively through agreements with other states and agencies and regional observing systems of the IOOS. FWG supports directional sensors in 15 NDBC buoys and partially or fully supports 27 CDIP nearshore gauges. The popularity of the program is evident from the

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Coastal Field Data Collection (Continued)

usage/data downloads of CDIP information. They typically record 200,000 daily hits (600,000 during storms) and over 4 gigabytes of daily data downloads. Usage has been increasing 20-30% per year. Observations are currently concentrated on the west coast, but the long-term goal is to expand the program to 70 locations

and to provide coverage over large reaches of the East and Gulf Coasts and Great Lakes where observations are urgently needed. For example, there were no deepwater directional wave measurements along the east coast of Florida during the 2004 hurricanes which could have been used to alert Corps and other emergency operation officials during the events, and for post-storm assessments. The same was true for Hurricane Katrina and the central Gulf Coast in 2005, a fact that hampered post-Katrina diagnostic efforts. To help alleviate this situation, 3 sites around Florida were added in FY07. A National *IOOS Operational Wave Observation Plan* was developed in FY08 by the USACE in collaboration with the NOAA IOOS program office. Under this plan, the Corp is responsible for coastal wave measurements. Activities in FY09 will be to maintain the existing measurements sites and to begin implementing the National Plan.

3. Coastal Observatory for long-term observations. Critical to measuring, analyzing and providing useful coastal data products for Corps Districts is the collection of intensive, long-term, high-resolution data for improving project design and performance. The Field Research Facility in Duck, North Carolina (<http://frf.usace.army.mil/>), is a unique real-world coastal facility that collects a comprehensive suite of wave, current, meteorological, bathymetric, and topographic data, typically required, but often unavailable at any Corps project site. The facility is used to: evaluate oceanographic measurement techniques and equipment, collect high-resolution data during storms, conduct large interagency field experiments, and collect spatially and temporally intensive long-term measurements required to better understand complex coastal processes. These data are made available online and in real time to engineers and scientists in the Corps, other agencies (NOAA, NSF, Navy, USCG, USGS, NASA), universities, and the private sector for researching coastal processes and for developing and verifying numerical models and coastal engineering tools that predict wave environments and sediment movement affecting coastal projects, navigation safety, dredging quantities and project impacts. They are also crucial for evaluating and improving the data products produced by other program sub-items. As a unique coastal observatory, the FRF is a significant Corps contribution to the Integrated Ocean Observing System (IOOS) as specified in the President's Ocean Action Plan. Future activities include continuing an initiative, with NOAA, to create an interagency center for testing coastal oceanographic field instrumentation. In addition the facility is becoming a testbed for developing and evaluating coastal numerical models. Several numerical schemes are running now in real-time (SWAN and STWAVE, both wave models) with real-time performance statistics relative to observations are available from the facility's popular website. Additional models and supporting observations will be added.

4. Participation in the Integrated Ocean Observing Program (IOOS). This activity supports the annual Corps participation in the IOOS through active participation and financial support of Ocean.US, the interagency office for ocean observation (<http://ocean.us>). The Corps is a signature member of the Ocean.US Memorandum of Understanding. Other participating agencies are Navy, NASA, NSF, NOAA, USGS, EPA, OSTP, Homeland Security, MMS. Corps participation in Ocean.US and IOOS workshops and meetings helps to insure that the IOOS is serving Corps requirements and that Corps districts and divisions are both contributing to, and benefiting from the IOOS. The IOOS is important to the Corps because when implemented, it will make available to the Corps, a wide range of new real-time coastal data for use in planning, operations, environmental assessment, climate change and emergency response.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Coastal Field Data Collection (Continued)

5. Regional beach processes study in Southern California. Planning for Regional Sediment Management (RSM) activities (shoreline protection, beach maintenance, coastal inlet dredging and related engineering activities) requires an understanding of the coastal processes and sediment budget over regions extending tens of miles up and down coast. In this *Southern California Beach Processes Study* (SCPBS), coastal processes are monitored along a 110-mile-long littoral cell extending from the Mexican border to Long Beach in Southern California (<http://cdip.ucsd.edu/SCBPS/homepage.shtml>), with concentration on the reach between Dana Point and La Jolla. The monitoring began in FY02 and continues as a unique long-term program. The region being monitored is characterized by narrow continental shelves, swell-dominated wave climates and cliff-backed beaches. Though environmentally and economically important, there are few data in existence that document long-, and short-term changes to the area. Monitoring activities involves semi-annual airborne Lidar mapping and other techniques for determining seasonal beach and cliff variation combined with wave measurements (collected under the FWG sub-item) and modeling to quantify the impact of coastal storms and El Nino events over multiple years. Lidar mapping has proven to be of significant value in the study of recent coastal hurricane impacts, and this study is providing a unique complement to East and Gulf coast data. The comprehensive nature of this monitoring, permit an analysis of the potential risk associated with the use of a less-comprehensive monitoring program for application to other regions of the country. This effort contributes new insight to ongoing RSM research activities and the data are critical to effective sand management in Southern California. Data collected to date are very popular with some 150,000 web hits/month (an increase of 235%) and the database framework developed is used by, and has been adopted by the Corps Los Angeles district to distribute their coastal data.

6. Measurements of Typhoon winds, waves and storm surges in island and reef environments. Tropical cyclones and hurricanes affect Pacific and Caribbean islands differently than the continental United States. Consequently, existing wave and storm surge forecast models, cyclone intensity scales, and design tools for cyclone conditions are inappropriate or unproven for use in the islands. The objective of the Pacific Islands Land Ocean Typhoon (PILOT) experiment is to provide quality and timely data required to more accurately document characteristic cyclonic effects in the islands. The objectives specifically address requirements developed by the Corps' and FEMA's *Islands Task Force*. A unique series of measurements are being made across reefs by the Corps in partnership with the University of Hawaii and the Scripps Institution of Oceanography. The measurements are being made both on the Island of Guam, because of its high likelihood of typhoon passage, and also in Hawaii. Observations acquired to date suggest that storm waves propagating across island reefs are attenuated far greater than on typical continental beaches and greater than existing wave transformation models accommodate. Moreover, the data also confirm that waves on reefs are extremely sensitive to even small changes in the mean water level. Because wave conditions, even though distantly generated, are affected by local winds, the program is developing in partnership with the University of Hawaii, a technique for observing low-level winds using standard weather observation radars. FY08 activities included the establishment of a new monitoring site in the US Virgin Islands, and continued monitoring in the Pacific. This sub-item takes advantage of the expertise available in other program sub-items and collected data will support the long-term IOOS data requirements in the islands.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Coastal Field Data Collection (Continued)

7. Surge Wave Island Modeling Studies (SWIMS). This activity is developing numerical models and techniques appropriate for typhoon surge simulation and forecast in the islands. Typically, islands are mountainous with narrow coasts and a reef shield that offers protection from storm waves. However, typhoons can greatly raise water levels and waves resulting in coastal inundation, damage, and loss of life. Methodologies for analyzing hurricane/typhoon waves and their interaction with island coasts, including fringing coral reefs, have not received attention commensurate with the importance and complexity of the processes. A next generation island coastal storm surge and wave model will be developed using data collected under the PILOT sub-item. The model will also be applied and evaluated for longer, irregular reaches of coastline, using coastal inundation data on Kauai after Hurricane Iniki and with data from physical hydraulic model tests. Once developed, the modeling methodology will be applied initially to selected Hawaiian Island sites with exceptional importance for coastal inundation planning. In FY08, new data from Typhoon Man Yi in 2007 when the waves reached 23 ft will be modeled, a physical model of reef inundation was used to test key model assumptions, a first version of the 2-D model was run. In FY09 we will begin to look at the Caribbean reef data and will expand testing and evaluation of the numerical model.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Environmental Data Studies

JUSTIFICATION: The Environmental Data Studies Program request is \$75,000. Funds will be used to continue development of an Environmental Database System, to support collection and sharing of environmental information and to support the development of performance measures for the Environmental Business Program.

ACCOMPLISHMENTS FOR FISCAL YEAR 2008: Develop database specifications and develop a conceptual prototype.

OBJECTIVES FOR FISCAL YEAR 2009: Develop and test a working prototype.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Flood Damage Data Program

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Costs	\$1,820,000
Allocation Requested for FY 2009	220,000
Balance to Complete Five-Year Program after FY 2009	1,600,000
Allocation for FY 2008	\$216,000
Change in FY 2009 from FY 2008	\$0
Average Annual Allocation for FY 2004-2008	\$245,600

SCOPE: The Flood Damage Data Program is required to facilitate the collection and maintenance of basic flood damage data to support Corps field offices in accomplishment of flood damage reduction studies. Planning and evaluation of flood damage reduction projects requires knowledge of actual damages caused to various types of properties. The relationships between flood depth, flood duration and velocity, value and type of property, and the amount of damage are essential to making accurate and supportable estimates of the value of projects. The distributions of damages resulting from the various factors involved are needed for the risk analysis framework adopted for water resource studies. Damage data are obtained in rare instances when a damaging event occurs and funded studies are underway. However, in most instances when flooding occurs there are no current studies in the area or other funding mechanism to collect the requisite data to be used in future analysis or to report and accurately record the damages incurred and account for the effect of the factors that caused the damages. Previously no centralized flood damage data source existed which retrieved basic data for research efforts and for specific project studies. The major purpose of the program is to improve the technical quality and accuracy of flood damage data, to improve the understanding of the interrelationships of the characteristics of flooding on property damage, to improve the formulation of flood damage reduction projects, and reduce the costs of feasibility studies. Coastal damage data collection will be needed to adapt to new coastal protection policies and to respond to concerns from the Office of the Assistant Secretary of the Army (Civil Works) in the review of recent coastal protection projects. The activities of the program are to: (1) conduct actual flood damage surveys following flood events for riverine and coastal events; (2) develop, maintain, and improve the economic database for flood damage reduction projects; (3) calculate flood depth-damage functions for riverine and coastal flooding based on actual damage data; (4) collect data and derive damage relationships for roads, public building and facilities, and other public costs of flooding; (5) develop and maintain a floodplain inventory application that would be used to apply flood damage estimation models to feasibility, reconnaissance, and continuing authority studies; and (6) provide information to communities of hazard mitigation plans and grant applications.

APPROPRIATION TITLE: Investigations, FY 2009

JUSTIFICATION: The \$220,000 requested in FY 2009 for Flood Damage Data would be used to develop and maintain data collection survey forms and data collection techniques, to collect post-flood damage data, to employ the flood damage database to estimate a National model where regional or local flood characteristics can be specified to estimate flood damage relationships, to update and maintain a new geospatial computer application for applying flood damage models to floodplain inventory data, and to develop generic business flood damage relationships. Funds would be used to monitor data collection, to collect damage data for riverine and coastal flood events, and data analysis and the development of generic damage relationships, including associated flooding costs which might be appropriate to National Economic Development procedures, and to test the effectiveness of flood warning and flood proofing procedures. Funds would also be used to enhance a website to share results of the analysis. The results of damage function calculations would be particularly useful to communities applying for FEMA mitigation grants.

ACCOMPLISHMENTS:

In FY 2007

1. A flood damage survey was completed and analyzed for approximately 150 businesses in the New Orleans area that were damaged by Hurricane Katrina.
2. Generic business damage functions and vehicle damage functions have been computed.
3. A geospatial floodplain inventory application has been released for Corps-wide use for both residential and nonresidential properties. The application will be used for collection and processing of information needed based on building characteristics and county-specific building costs. The model has incorporated batch-processing of structure and content value estimation, when used in conjunction with off the shelf software and structure and content damage for a comprehensive array of structure types, foundation types, exterior building material, quality, and period of construction. The model has been released to Corps districts for integration with the HEC-Flood Damage Analysis Package for evaluation of flood damage reduction benefits. Training for the use of the model has been conducted for Corps districts.
4. Work was initiated on development of procedures for estimating flood damage to roads and traffic delay costs.
5. A white paper has been drafted, describing emergency costs that might be relevant for NED analysis and the possible procedures and data procedures for estimating these costs.

Planned for FY 2008

1. Data collection for damages to nonresidential properties and roads in south central New York
2. Development of procedures for use of secondary data for estimating public costs, based on the magnitude of the event
3. Technical support and training initiated for floodplain inventory tool
4. Develop procedures for estimating emergency and other nonphysical damages
5. Preliminary release of model for estimating flood damage to roads and traffic delay costs
6. Work with FEMA to used preliminary nonresidential damage curves in an expert elicitation to develop generic nonresidential damage functions to be used by both the Corps and FEMA.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Flood Plain Management Services

SCOPE: This Corps of Engineers program stems from Section 206 of the 1960 Flood Control Act (PL 86 645), as amended, which authorizes the Secretary of the Army to compile and disseminate data on floods and flood damage potential and to provide guidance in their use in flood related planning to State and local agencies. This information and guidance has long supported planning and implementing actions that reduce the flood hazard through wise use of flood plains. The lessons of the gulf coast disasters and the concerns about the Sacramento levees have heightened concern and interest in increasing our focus on flood risk and developing more robust outreach the better to communicate the risks we face in flood prone areas. As we better understand the risks we are facing, the need for providing accurate and timely flood hazard information, interpretation, and guidance for coping with these risks and conveying the nature of flood hazards and to foster public understanding of the options for dealing with flood hazards are severely taxing our available financial resources. The Corps also participates with the Federal Emergency Management Agency and local governments in the conduct of pre disaster hurricane evacuation and preparedness studies for mobilizing local community responsiveness to natural disasters in high hazard coastal areas.

SUMMARIZED FINANCIAL DATA:

Allocation Requested for FY 2009	\$8,000,000
Allocation for FY 2008	\$8,856,000
Change in FY 2009 from FY 2008	\$-856,000

JUSTIFICATION: The funds requested for FY 2009 will enable states and local communities to become more involved in the application of flood plain management measures. It will provide them site-specific flood and flood plain data and assistance; assist with efforts to identify flood hazards in smaller communities under growth pressures; facilitate special studies that concentrate on the prevention of future flood damages, giving increased emphasis to the application of non-structural measures; and enable critical pre-disaster hurricane evacuation and preparedness studies for states and counties along the Atlantic and Pacific Oceans, the Gulf of Mexico, and US islands in the Caribbean and Pacific.

ACCOMPLISHMENTS: The Corps worked on over 200 studies in responses to requests from Federal and non-Federal agencies, communities, Indian Tribes and individuals for flood-related information, interpretation, and guidance. These requests continue to number into the tens of thousands and involve property valued at billions of dollars. The Corps participated in pre-disaster hurricane evacuation and preparedness studies for high-hazard areas in coastal states and territories; provided support for updating and improving mathematical models of flood plain hydrology and hydraulics; developed training programs in flood plain hydrology and hydraulics; and prepared flood-proofing studies.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Hydrologic Studies

SCOPE: The scope of activities under this item is determined annually based on the requests from USACE Commands and Laboratories to meet high-priority needs. These items are not covered under regular Civil Works GI and O&M funding programs. Major activities to be undertaken in the program generally include the collection of basic hydrologic data and the studies of these data for major storm events or certain special hydrologic processes. The information to be derived from this program will improve hydrologic engineering techniques for the planning, design, construction, and operation of water resources projects. The program consists of four sub-items: Storm Studies, General Hydrologic Studies, Sedimentation Studies, and Stream Flow and Rainfall Data.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$ 1,250,000
Allocation Requested for FY 2009	250,000
Balance to Complete Five-Year Program after FY 2009	1,000,000
Allocation for FY 2008	250,000
Change in FY 2009 from FY 2008	0
Average Annual Allocation for FY 2004-2009	333,000

JUSTIFICATION:

1. Storm Studies: The Storm Studies Program is a continuing investigation of major storms for the purpose of accumulating comprehensive rainfall data. These data are used to refine the regional hydrometeorological information throughout the nation. The up-to-date hydrometeorological information is essential for design of new projects as well as for safety assessment of existing projects. We have substantial need for hydrologic data for initiation and completion of water resources studies. These data are required in the evaluation of flood-producing potentials of river basins, and constitute the major portion of the basic data used in probable maximum precipitation determinations. Funds in the amount of \$50,000 will be required in FY 2008 to work on several storm studies. Storm data gathered in study of the storms occurring in FY 2005 and 2006 in the Manoa Valley in Hawaii that feeds into the Ala Wai Canal over the Big Island of Hawaii will be input into numerical hydrological programs to develop models critical to flood damage reduction studies in Hawaii. The need and capability in this area exceeds the requested budget amount.

2. General Hydrologic Studies: Studies under this sub-item include needed improvement in the analysis of rainfall-runoff relationships, flood frequency, snowmelt studies, hydrograph development and routing at selected watersheds, model calibrations in urban areas, analyses of past floods, methods for the hydraulic analysis of non-gaged streams, and other studies of related hydrologic nature. Also included are planned upgrades to the internal Corps system of accounting for gages used largely both of control of water resources projects and also for studies of major hydrologic events. Studies of new techniques to improve the accuracy of hydrologic modeling require additional resources. New radar applications in rainfall-runoff forecast is an ongoing need. Funds in the amount of \$100,000 in FY 2009 will be required to continue this sub-item at a level to insure proper and orderly progress. The need and capability in this area exceeds the requested budget amount.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Hydrologic Studies (Continued)

3. Sedimentation Studies: The program is a continuing effort in which funds are used for conducting non-project sedimentation studies, and for the Corps share of an interagency sediment investigation program. The sedimentation studies include: promoting and supporting the standardization and development of equipment, criteria and methodology for the collection, analysis of suspended and bedload sediment characteristics of natural streams; and laboratory studies. The Hydraulics Laboratory, Waterways Experiment Station is sponsored by the Federal Interagency Sedimentation Committee (members from 18 agencies) and constitutes the major work effort under this sub-item. Funds in the amount of \$50,000 in FY 2009 will be required to support the Federal Interagency Sedimentation Project (FISP) located at the Waterways Experiment Station. The need and capability in this area exceeds the requested budget amount.

4. Streamflow and Rainfall Data: This is a continuing program in which funds are used for installation and operation of hydrometeorology gages of non-project nature that are needed by the Corps in addition to the stations in the cooperative programs conducted by the U.S. Geological Survey and the National Weather Service for the Corps. Additionally, gages are needed to observe historical high water marks for validation of hydrologic models. An amount of \$50,000 in FY 2009 is required to continue the establishment and operation of these special-purpose gages, and to determine historical flooding in urban sites. The need and capability in this area exceeds the requested budget amount.

ACCOMPLISHMENTS

1. Storm Studies: During the period, Corps offices have gathered data on several major storms, reviewed the scope and interim results of ongoing studies by NWS on development of standard project and probable maximum storms at various basins throughout the United States and territories.
2. General Hydrologic Studies: Examples of some of the more important studies accomplished under this program are: determination of rainfall-runoff relationship in urban areas; general hydraulic model calibration; snow cover surveys; and adaptation of hydrologic programs to CADD equipment. Work was completed on the regional frequency studies for Hawaii and data collection was initiated for the State of California. Significant work was also accomplished in assessing the effects of debris in hydrological modeling, particularly in the fire-prone western states.
3. Sedimentation Studies: All of the funds allotted to this sub-item assisted in financing the Corps share of the cooperative Interagency Sedimentation Project at the Hydraulics Laboratory, Waterways Experiment Station.
4. Streamflow and Rainfall Data: Stations funded under this sub-item are generally established and operated several years prior to anticipated authorization for project-type activities, in order to provide a background of observed data on which to base the planning and design of projects. Progress continued at these gage sites to collect hydrometeorological data in flood prone areas to document historical flood and calibration of hydrologic models. Recent improvements in the gaging network in Hawaii enabled the Corps to capture key data from two significant storm events in 2005.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Hydrologic Studies (Continued)

COORDINATION: The storm studies are prepared by USACE commands and are reviewed by the National Weather Services in the preparation of probable maximum precipitation estimates for the Corps. The Interagency Sedimentation Project is conducted cooperatively, and jointly funded, by eight Federal agencies. Information concerning streamflow and rainfall data collection by the Corps under this activity is made available to the U.S. Geological Survey and the National Weather Service.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

International Waters Studies

SCOPE: The Boundary Waters Treaty of 1909, the Niagara River Treaty of 1950, the Columbia River Treaty of 1961, and other less formal agreements between the Governments of the United States and Canada are concerned with the regulation, control, and use of boundary waters. Under the Boundary Waters Treaty of 1909, the International Joint Commission (IJC) was established and empowered to establish local boards, which conduct investigations and assure adherence to orders of approval pertaining to use of boundary waters issued by the Commission. Corps of Engineers representatives serve on and chair the U.S. Sections of the following IJC Boards: Saint Croix River, Champlain-Richelieu, Lake Champlain, St. Lawrence River, Niagara, Lake Superior, Lake of the Woods, Rainy Lake, Souris-Red Rivers Engineering, Souris River Control, Kootenay Lake, and Osoyoos Lake. Under separate treaties, Corps representatives serve on and chair the U.S. Sections of the Columbia River Treaty Permanent Engineering Board, the Permanent Engineering Board Committee, the Columbia River Treaty Entities, the Columbia River Treaty Operating Committee, the International Niagara Committee, and the International Lake Memphremagog Board. These Boards and Committees hold joint meetings, review report drafts and correspondence, make field inspections, obtain, collect, and analyze hydrologic and hydraulic data, and report their findings to the establishing parties. The degree of study activity varies depending upon the requirements of the Commission or Treaty under which they were established. These efforts assure better control, use, and orderly development of the jointly controlled water resources, and are of importance in attempting to meet water demands resulting from an expanding economy along the United States-Canadian border. Studies are closely related to the Corps of Engineers' Civil Works program and are summarized in the Assistant Secretary of the Army for Civil Works' Annual Report.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$1,000,000
Allocation Requested for FY 2009	200,000
Balance to Complete Five-Year Program after FY 2009	800,000
Allocation for FY 2008	197,000
Change in FY 2009 from FY 2008	0
Average Annual Allocation for FY 2004-2008	297,000

JUSTIFICATION:

The amount requested for FY 2009 will fund Corps of Engineers participation in assisting the U.S. Government meet its obligations under provisions of boundary water treaties and other international agreements between the United States and Canada. CELRD provides support for implementation of the Niagara Treaty of 1950 that governs the split of Niagara River Waters between the U. S. and Canada, and between the uses of the waters.

Northwestern Division engages in activities associated with implementation of the Columbia River Treaty and the Kootenay Lake and Osoyoos Lake Boards of Control. CENWD, together with Bonneville Power Administration and British Columbia Hydro annually develop the Assured Operating Plan and the Detailed Operating Plan for the Columbia River Treaty storage projects. Funds also are used to support the work of the Columbia River Treaty Permanent Engineering Board, including publication of its annual report to the Governments. North Atlantic Division is engaged in support of the Saint Croix River Board of Control and

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

International Waters Studies (continued)

the Gulf of Maine Council on the Marine Environment. Work in the Saint Croix R. Basin involves retrieval and analysis of water data to assure compliance with IJC rules and annual inspection of dams and fish passage facilities.

The Corps will continue to carry out its multiple responsibilities to the various IJC Boards of Control and to the several Treaty entities, boards and committees. During FY 2009, additional flow data will be obtained and used to update the rating curve used to verify compliance with Niagara Treaty requirements. In addition, pursuant to the October 1999 Plan of Study for Lake Ontario regulation improvements, the IJC established the Lake Ontario-St. Lawrence River Study Board. Investigations are continuing as the fifth year of a 5-year effort. A Plan of Study for evaluating the Lake Superior regulation criteria outflows is being developed for approval by Governments. A basin-wide hydrologic and regulation model will be implemented. Special studies related to international impacts of evaluation of endangered species compliance related to Columbia River Treaty projects will be continued by CENWD. CENAD will continue normal work in support of the Saint Croix Board of Control and the Gulf of Maine Council on the Marine Environment. Discussions are ongoing with the IJC on expansion of the IJC's mission to include environmental objectives, as described in the report entitled "The IJC and the 21st Century". The Corps will be supporting the IJC as it executes the reference from the governments regarding investigating the feasibility of establishing a demonstration watershed board and its implementation of the reference on diversion, consumption and transfer of international waters. The need and capability in this area exceeds the requested budget amount.

ACCOMPLISHMENTS:

The Corps Division and District commanders and their staffs met all of their many and diverse responsibilities in representing the United States on the previously listed IJC Boards of Control and Treaty entities, boards and committees. The IJC-sponsored special flood damage reduction study of the Red River Basin was closed without completing the full scope of the planned work because of lack of funds from the United States. CEMVD worked with the International Red River Board on the biota assessment for the Devils Lake basin and also supported an interagency modeling and review effort on the Red River of the North mainstem. CELRD has been very active in multiple Great Lakes IJC boards. CENWD continues to coordinate operations of Libby Dam under the 2001 Libby Coordination Agreement. CENWD participated as part of the U.S. Entity to prepare all Columbia River Treaty required Assured Operating Plans (AOP) and resultant Determinations of Downstream Power Benefits (DDPB). The U.S. Entity finalized the annual Detailed Operating Plan (DOP) that may produce results more advantageous to both countries for the current operating year.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Precipitation Studies (National Weather Service)

SCOPE: This is the Hydrometeorological Studies Program conducted for the Corps of Engineers by the National Weather Service (NWS). The NWS performs analyses of storm rainfall and other meteorological data required to develop hydrologic criteria for use by the Corps in planning, design and water control management of flood control and water resources development projects, and in floodplain management studies. The Corps transfers funds to the NWS to pay for the work.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY2009-2013) Program Cost	\$ 1,125,000
Allocation Requested for FY 2009	225,000
Balance to Complete Five-Year Program after FY 2009	900,000
Allocation for FY2008	221,000
Change in FY 2009 from FY2008	0
Average Annual Allocation for FY 2004-2008	258,000

JUSTIFICATION: The scientific services provided by the National Weather Service under this program consist of: (1) review of the meteorological aspects of storm data compiled under the Hydrologic Studies Program conducted by the Corps; (2) precipitation depth-duration-frequency estimates for regions and the nation; (4) development of meteorological parameters pertaining to hurricanes, northeasters and other wind phenomena; and (5) other studies necessary to accomplish the Corps mission. Funds in the amount of \$225,000 will be required in FY 2009 to continue the program at a level consistent with Corps needs. The entire cost of the Corps hydrometeorological studies program is funded under this budget item.

With the technology and systems for updating precipitation frequency demonstrated, we now stand ready to update precipitation frequency estimates for the rest of the U.S. and its dependencies. With expected funding of \$225K, efforts in FY 2009 will be to continue the update and revision of the precipitation frequency estimates for the portion of California not already included in NOAA Atlas 14 Volume 1. Additionally, the NWS maintains the Precipitation Frequency Data Server web portal and prepares an annual report on nationwide flooding.

ACCOMPLISHMENTS: With limited funding of \$225,000 in FY08, the NWS completed the update of precipitation frequency estimates for the State of Hawaii and initiated updates and revision of precipitation frequency estimates for the State of California. Also, the Precipitation Frequency Data Server (PFDS) web portal was maintained with high availability. PFDS serviced over 50,000 requests for precipitation frequency estimates in FY07. The annual report on nationwide flooding and associated assessment of damages was prepared and delivered.

COORDINATION: This program is fully coordinated with the National Weather Service, Office of Hydrologic Development. For the precipitation-frequency study of the Ohio River basin region, the Corps assisted the NWS to obtain significant cost-sharing from the states in the region. The Corps will attempt to obtain cost sharing from the states and other federal agencies for the remaining states.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Remote Sensing Systems Support

This item supports the overall technology transfer requirement of the Corps Civil Works Program for Remote Sensing systems, which is the responsibility of the Cold Regions Research and Engineering Laboratory (CRREL) through its Remote Sensing/Geographic Information Systems (GIS) Center of Expertise.

SUMMARIZED FINANCIAL DATA

Estimated Five-Year (FY2009-2013) Program Cost	\$1,500,000
Appropriation Requested for FY 2009	\$150,000
Balance to Complete Five-Year Program after FY2009	\$1,200,000
Appropriation for FY 2008 (*Assumed allocation. Final actual allocations yet to be determined)	\$148,000
Increase of FY 2009 from FY 2008	0

JUSTIFICATION:

The Remote Sensing/GIS Center is the Corps' Center of Expertise for Civil Works Remote Sensing and GIS technologies, providing mission essential support as part of the USACE 2012 organization. Through centralized management of this function, the Center provides cost-effective support through technology transfer and applications development for Corps mission responsibilities in all business practice areas: navigation, flood and coastal storm damage reduction, hydropower, regulatory, environment, emergency management, recreation, water supply, and work for others. An enterprise GIS approach is an essential component of this support. Continuing interaction with other researchers and practitioners throughout the Corps, government, the private sector, and academia assures that state-of-the-art and state-of-the-practice knowledge of evolving trends that are relevant to USACE activities are available for the Corps and that duplication of effort is avoided.

Declines in manpower require working smarter, better, and faster. Contributing to this effort, the Center develops approaches for the integration of data from the disparate sources necessary for system wide land and water resources management including: regional sediment management, regional water management, and ecosystem processes and assessment; basin studies; water control; support to emergency management; and compliance with the attendant environmental regulations and related policies. The Center maintains cognizance of state-of-the-art sensors, data collection, analysis, and storage systems, commercial software, and bridging software that integrates these with operational technologies and delivers them to the Corps' divisions, districts, and other agencies' activities. Technology is transferred through telephone and short, no cost assistance to the field. The existence of the Center ensures that the necessary support can be rapidly directed toward solving operational problems that require specialized expertise. The PROSPECT training program in remote sensing and GIS, managed by Center staff, provides another avenue for the transfer of knowledge to those who are, or soon will be, using these technologies. Training also is conducted in the field through workshops, conferences, and distance learning. White papers, pilot projects, Corps and other publications, including Engineering Letters, Circulars, and Manuals, and the Internet, also are used to transfer procedures and lessons learned to end users.

Collection and Study of Basic Data

Remote Sensing Systems Support (Continued)

PROJECTED ACCOMPLISHMENTS IN FY 2009:

1. As the Center of Expertise, served as key resource and technology point of contact for the Corps of Engineers for Civil Works remote sensing and GIS.
2. Provided guidance and technical support to the Corps' Geospatial Community of Practice (COP).
3. Supported one-stop service requests from Corps districts and divisions.
4. Provided technical support to Corps District offices for the development of implementation plans for Geospatial data.
5. Provided leadership and technical support to strategic and enterprise USACE geospatial initiatives.

ACCOMPLISHMENTS IN FY 2008:

1. As the Center of Expertise, served as key resource and technology point of contact for the Corps of Engineers for Civil Works remote sensing and GIS. The team of geospatial experts at the Remote Sensing/GIS Center provided access to required expertise to meet the needs of USACE personnel with questions about imagery or Geographic Information Systems.
2. Provided guidance and technical support to the Corps' Geospatial Community of Practice (COP) and provided leadership to the remote sensing, hydrology, hydraulics and coastal and emergency sub-COPs. A number of the COPs in USACE have technical issues that are related to the geospatial technologies. The Remote Sensing/GIS Center of Expertise funds staff to participate in the activities of the COPs to assure that appropriate linkage to the geospatial technologies is available.
3. Supported one-stop service requests from Corps districts and divisions. The Remote Sensing/GIS Center provides no cost support to USACE elements having problems that can be solved in less than three days.
4. Provided leadership and technical support to strategic and enterprise USACE geospatial initiatives: District and Division E-GIS support; National Levee Database development and execution; Missouri River Restoration Project; Geospatial Operations and Maintenance Business Interlink (gORM) development and implementation; System Wide Water Resources Research Program; Emergency Management Remote Sensing, GIS, and Modeling Group; and Hydrology and Hydraulics modeling software development and support team member.
5. Provided technical support to Corps District offices for the development of implementation plans for Geospatial data management including development of enterprise of geospatial data approaches. Conducted frequent geospatial technology web-seminars for Corps offices. This supports includes discussions with district personnel concerning current and desired approaches, consideration of what is occurring in all divisions in the district, and enterprise issues.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Scientific and Technical Information Centers

SCOPE:

Five information analysis centers (coastal engineering, cold regions engineering, concrete technology, hydraulic engineering, and soil mechanics) located at the U. S. Army Engineer Research and Development Center provide the major interface between the Corps of Engineers and the public and private sectors to gather and disseminate information as required by PL 99-802, Federal Technology Transfer Act of 1986. The function of each center is to acquire, examine, evaluate, summarize, and disseminate newly published scientific and technical information generated within the Corps of Engineers and other activities in the U.S. and abroad.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$400,000
Allocation Requested for FY 2009	\$50,000
Balance to Complete Five-Year Program After FY 2009	\$350,000
Allocation for FY 2008*	\$49,000
Change in FY 2009 from FY 2008	0
Average Annual Allocation for FY 2004-2008	\$67,000

JUSTIFICATION:

Public Law 99-802, Federal Technology Transfer Act of 1986, requires technology transfer from Federal agencies to the private sector. In addition, both the Department of Defense and the Department of the Army have objectives of supporting the information needs of engineers and scientists and eliminating unnecessary duplication of R&D. The specified information centers, supported by their host laboratories, critically evaluate and summarize the technical validity and merits of published and unpublished research and technical publications on design, construction, or other technology utilization. User communities have been well established and distribution lists for technology transfer are continuously updated. Electronic media including the World Wide Web are used where appropriate. The effectiveness of activities and services is evaluated on a continuing basis, and technology transfer products and methodology are revised when appropriate. Priority for services will be given to deployed troops, Corps of Engineers staff, and other government personnel.

These centers are a major technology transfer resource between the public, the US scientific and engineering community, and academia for results of over 75 years of research results conducted by the ERDC laboratories in the fields of soil mechanics and foundation engineering, cold regions engineering, concrete technology, hydraulic engineering, and coastal engineering. Each center is supported by multi-disciplinary technical staff and has a comprehensive library of materials that have been published over the years. In a typical year, each Center responds to hundreds of information requests on subjects within its purview. These services are free to the users. In addition, services such as literature research, information synthesis, publication location, research reviews, and methodology comparisons on subjects of mutual interest to ERDC laboratories and other interested parties are available on a cost-reimbursable basis.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Collection and Study of Basic Data

Scientific and Technical Information Centers (Continued)

ACCOMPLISHMENTS IN FY 2008:

The Corps has made wide use of the Internet for technology transfer. The Internet is widely accessible by both the public and private sectors and provides rapid transfer, at significant cost savings, of technical data, general information on ongoing studies, technical notes, and ultimately technical reports. Several thousand technical inquires are received annually, with the internet playing a major role in answering those inquires. Inquires are received from Federal, state, and local government activities, universities, private sector engineers and scientists, and citizens. Responses ranged from furnishing a copy of a report, arranging to speak with an expert, furnishing generalized technical advice, or giving updates on technical developments. The Centers also digitized older ERDC research reports of significant technical value and placed them on the internet for access by the public.

<u>Information Analysis Centers</u>	<u>FY 2009</u>
Coastal Engineering	\$10,000
Cold Regions Engineering	10,000
Concrete Technology	10,000
Hydraulic Engineering	10,000
Soil Mechanics	<u>10,000</u>
	\$ 50,000

COORDINATION:

The Information Analysis Centers and their host Laboratories distribute reports, technical notes, computer programs, GIS data, abstracts, information bulletins, and other scientific and technical information to the Defense Technical Information Center (DTIC), Corps libraries, depository libraries, and identified user communities to ensure wide circulation and availability. Homepages are maintained on the Internet for public accessibility. Reports are also available for searching through the Corps Library Program's computer system LS/2000. DTIC publicizes reports through its own DOD database and forwards the reports to the National Technical Information Service (NTIS), Department of Commerce. NTIS places reports into a compendia of Selected Water Resources Abstracts and an annual cumulative edition, with conveniently indexed and cross referenced identification of what is being or has been done in water resources research and related scientific and engineering fields by whom, where, and when.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Stream Gaging (U.S. Geological Survey)

SCOPE: The Corps of Engineers cooperates with the U.S. Geological Survey in this effort, and contributes funds for all or part of the cost of the operation and maintenance of about 2,500 stations that are of special importance to the Corps mission. The Corps established this continuing, cooperative program in March 1928, so that streamflow data would be available to meet special needs concerning the Corps water resources responsibilities.

SUMMARIZED FINANCIAL DATA:

Estimated Five-year (FY 2009-2013) Program Cost	\$3,000,000
Allocation Requested for FY 2009	600,000
Balance to Complete Five-year Program after FY 2009	2,400,000
Allocation for FY 2008	590,000
Change in FY 2008 from FY 2007	0
Average Annual Allocation for FY 2004-2008	593,000

JUSTIFICATION: The Corps of Engineers makes extensive use of streamflow records in the planning, design, construction, and operation of water resources projects. The Basic network of stream gaging stations operated by the Geological Survey under its normal functions without support from the Corps is inadequate to meet all the special needs of the Corps water resource development responsibilities. Accordingly, a cooperative program was established under which funds are transferred to the Survey to cover, partially, the cost of operating specific stations. In the optimum development and management of water resources, it is essential that continuous records of streamflow be maintained at specific sites over a long period of years to provide a reliable measure of water resources available for various uses. This budget item covers only the non-project portion of the cooperative program. To continue the operation of stations of special interest to the Corps, an estimated total of \$16,200,000 will be required by the U.S. Geological Survey during FY 2009, exclusive of funds received from other cooperative sources. The operation and maintenance cost of these stations will be financed from three sources, as follows: (1) \$560,000 appropriated directly to the U.S. Geological Survey for special Corps stations; (2) \$600,000 from this budget item for stations not directly attributed to the Corps projects; and (3) approximately \$15,000,000 from Corps funds budgeted elsewhere for authorized projects and studies. The basic program will remain at the same level as in previous years. The need and capability in this area exceeds the requested budget amount.

ACCOMPLISHMENTS: Records for the streamflow stations supported by transfer of funds are used primarily to operate Federal flood reduction projects. In the past ten years these projects have reduced flood damages by an average of \$21 billion annually. Not only are these gages used by the Corps, but 100 percent of the data are used by the National Weather Service as the basis for its public flood forecasts. In addition, the data are published on the Internet by the Corps and/or in a regular series of reports by the U.S. Geological Survey and provide valuable information for many Federal and state agencies and the public.

COORDINATION: This program is fully coordinated with the U.S. Geological Survey. Costs for conducting the work are compiled by representatives of the Survey to identify a basis for the transfer of funds to that agency.

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Transportation Systems

SCOPE: The Transportation Systems Program supports USACE Corps Districts and Headquarters personnel in accomplishing their navigation project planning and evaluation responsibilities through the provision of integral information components and technical support. The process of planning improvements for waterway system and harbor navigation projects necessitates consideration of needs, opportunities, benefits, and economic costs associated with placement of project improvements within the context of the project-specific areas as well as within context of the overall national transportation system. The Transportation Systems Program is managed by CECW-P and technically supported by CEIWR and is a continuous, on-going effort to ensure the development of viable and practical analytical techniques, sources of information, tools and methods including the development of deep draft and shallow draft vessel operating and replacement cost data which can be applied by District offices; the provision of timely information regarding world deep draft vessel fleet, commodity, and cargo flow forecasts; the publication of reports documenting the results of research associated with the Transportation System Analysis Program and relevant areas of the NETS Program; the provision of technical services and support to District and Division offices and Headquarters personnel. The goals of the Transportation System Program are as follows: (1) to improve the technical quality and accuracy of navigation planning studies as well as provide for consistency in analytical procedures and technical basis for review across the wide array of planning conditions encountered by District personnel; (2) to improve the strategic planning of navigation system(s) improvements; and (3) to reduce the costs of analysis, planning, and operation of waterborne navigation systems. These goals are accomplished by providing District and headquarters analysts with useful and consistent information, analytical tools, and procedures which result in end products which reflect responsible and prudent investment of Federal civil works funds.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$ 3,025,000
Allocation Requested for FY 2009	350,000
Balance to Complete Five-Year Program after FY 2009	2,675,000
Allocation for FY 2008	344,000
Change in FY 2009 from FY 2008	6,000
Average Annual Allocation for FY2003-FY2007	\$425,000

APPROPRIATION TITLE: Investigations, FY 2009

Collection and Study of Basic Data

Transportation Systems (Continued)

JUSTIFICATION: Funding for the Transportation Systems program has been reduced each year since FY 04, resulting in a loss of technical resources to support the program. The requested increase in FY 09 funding is necessary to restore lost technical support and to obtain viable vessel operating cost and trade data on an annual basis that is essential for ongoing Corps planning purposes. The \$350,000 requested in FY 2009 for Transportation Systems would be used to update vessel cost and trade models and analyses used for planning and evaluation of ports, harbors, coastal waterways, inland waterway systems, and maintenance or modernization of planning methods and associated computer models to support District navigation studies nationwide. Funds would be used to continue to develop, improve, and provide inland and ocean-going vessel operating costs used to estimate transportation cost reductions or efficiencies (i.e., benefits) for Corps navigation studies; to continue to develop and provide commodity and fleet forecasts of waterborne traffic for deep and shallow draft navigation projects from recognized industry forecasting sources, update deep draft vessel characteristics for use by Corps field planners; provide rail, barge and truck models for use in estimating origin-destination transportation cost savings attributable to Corps projects; and to provide consulting and technical support services to Corps District and Division offices.

ACCOMPLISHMENTS: FY 2007 and 2008 accomplishments are: Completed update and distribution of shallow and deep-draft vessel operating costs guidance including investigation of life-cycle hull asset costing procedures and practices; updated bunkering costs with posting to HQUSACE Homepage; continued activities for drafting a deep-draft vessel operating cost applications manual; secured and distributed macroeconomic & transportation forecast information from Global Insight and Informa Economics, Inc.

ACTIVITIES FOR FY2009: FY2009 funds will be used to provide ongoing updates and publication of deep-draft and inland vessel operating costs that were comprehensively updated in FY2008; ongoing update of fuel costs; distribute world trade and commodity flow forecasts (Trade Navigator), integration of the vessel characteristics database; renew contractor subscription materials from Global Insight and Informa Economics, including barge and rail operating cost models, and renew acquisition of databases from Lloyd's Register of Shipping & Clarkson's Research Services.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development

The Corps must pursue an aggressive R&D effort to take advantage of rapidly developing technologies and techniques that will promote significant monetary savings and greater reliability, safety, enhanced efficiency, and environmental sustainability in planning, design, construction, operations and maintenance of civil works activities.

The Civil Works R&D program is formulated to directly support the established Business Lines of the Civil Works Program including: flood and coastal storm damage reduction, inland and coastal navigation, environment (including natural resources, compliance, mitigation, restoration, and stewardship), water supply, hydropower, recreation, emergency management, and regulatory. The Civil Works R&D needs and requirements are identified based on the current Civil Works Program Strategic Plan, Corps divisions and district input, and the existing WRDA authorities. The R&D effort is a problem-solving process by which the Corps systematically examines new ideas, approaches, and techniques and develops field-ready products. The request for \$16,892,000 of General Investigations funds for the FY 2009 program would accomplish the very highest priority R&D needs. This will include \$2,000,000 for Environmental Benefits Assessment, \$1,125,000 for Navigation Economic Technologies (NETS), and \$1,000,000 for coastal storm and hurricane engineering modeling as recommended by the Chief of Engineers 12 Actions for Change, and \$1,590,000 for Facility Condition Indexing distributed within the Navigation and the Flood and Coastal Storm Damage Reduction research areas. Other R&D recommendations developed through the 12 Actions for Change include an initiative to develop Flood and Coastal Storm Economic Models within the FY 2009 program. In FY 2008, a new Basic Research program was initiated.

Results of the Corps' GI R&D effort are directly incorporated into practice within the Civil Works Program through revisions or additions to Engineer Regulations, Engineer Manuals, Technical Guidance Manuals, Engineer Technical Letters, or Guide Specifications. Numerous other means of technology transfer are also used such as training courses, workshops, demonstrations, and other professional contacts. The Corps Civil Works R&D Program provides essential Product Lines with field ready end products and a high return on investment for the Corps, other Federal agencies and the Nation.

The Corps is currently developing facility condition index and asset management tools for Navigation, Flood Damage Reduction, Recreation, and Hydropower projects. The state of development varies per business line, however an integrated Water Resources Infrastructure Research Area has been developed and is coordinating activities across business lines and R&D programs. Some work has been undertaken through Research and Development programs and focused performance based budgeting efforts. Recreation has developed a web-based condition indexing tool as part of its RECBEST budgeting process. Hydropower has begun to implement HydroAMP, an interagency effort focusing on various component condition index tools. Navigation has work units focused on lock and dam condition evaluations and coastal structures asset management decision tools. Flood And Coastal Storm Damage Reduction has Risk and Uncertainty and Dam Safety Risk Assessment Portfolio R&D efforts focused on developing probabilistic models for quantifying seepage and piping, reliability of gates and other operating components, and uncertainties for breaching parameters of embankment dams. We will continue to develop the tools for condition indices for all Corps assets, and expect these tools to be applied to all business lines.

AUTHORIZATION: Authorization for ERDC to conduct R&D is codified in 10 U.S.C. 2358 ("The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that are necessary to the responsibilities of such Secretary's department in the filed of research and development.")

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

COORDINATION:

The Corps conducts Civil Works R&D through the U. S. Army Engineer Research and Development Center (ERDC) and the Institute for Water Resources (IWR). The ERDC consists of seven research laboratories:

- Coastal and Hydraulics Laboratory, Vicksburg, MS
- Cold Regions Research and Engineering Laboratory, Hanover, NH
- Construction Engineering Research Laboratory, Champaign, IL
- Environmental Laboratory, Vicksburg, MS
- Geotechnical & Structures Laboratory, Vicksburg, MS
- Information Technology Laboratory, Vicksburg, MS
- Topographic Engineering Center, Alexandria, VA.

The IWR is located in Alexandria, VA, and its Hydrologic Engineering Center (HEC) in Davis, CA. Policy guidance and executive oversight are provided by the Civil Works R&D Steering Committee comprised of Deputy Director of Civil Works, CW division chiefs, and the Director of Research and Development. The Director of Research and Development is responsible for developing the annual program. The Directors of ERDC and IWR are responsible for execution of the CW R&D program.

In order to most effectively use the limited R&D resources and to avoid unnecessary duplication of research effort, the Civil Works R&D Program maintains external technical exchange and technology transfer efforts with other Federal and major water resource agencies including the TVA, Bonneville Power Administration, Western Area Power Administration, EPA, NSF, Department of Agriculture (NRCS), Park Service, NOAA, DOI (USBR, Forest Service, FWS, USGS, DHS (USCG, FEMA, US Border Patrol), DOT (FHWA, FAA, MARAD), NASA, International Boundary Water Commission, International Joint Commission, DOE (NRC, FERC), the Navy, and state and local governments.

Corps researchers also maintain contact with the research activities of universities and industry through regular membership in such organizations as the American Society of Civil Engineers, the Civil Engineering Research Foundation, the American Concrete Institute, the American Society of Testing and Materials, the International Conference on Coastal Engineering, the American Association of Port Authorities, the American Society for Photogrammetry and Remote Sensing, Society of Environmental Toxicology and Chemistry, the Coastal Society, the Offshore Technology Conference, International Society of Soil Mechanics and Foundation Engineering, U.S. Society of Dams, and International Committees on Large Dams, the International Association for Hydraulic Research, the Association of American Geographers, Western Dredging Association and the International Navigation Association. The Corps also participates extensively with the Transportation Research Board, the Water Science and Technology Board, and the National Research Council in coordinating and leveraging research activities.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

SUMMARIZED FINANCIAL DATA:

Estimated Five Year (FY 2009 - FY 2013) Program Cost	\$125,000,000
Allocation Requested for FY 2009	16,792,000
Balance to Complete Five Year Program after FY 2009	108,208,000
Allocation for FY 2008	29,520,000
Change in FY 2009 from FY 2008	-12,728,000
Average Annual Allocation for FY 2004-FY 2008	26,580,000

The proposed FY 2009 R&D Program is structured to directly support the Civil Works Business Lines, their mission requirements and established performance objectives at project, watershed or river basin scales. The technical foundation of the R&D program includes:

- a. Navigation (including Hydropower)
- b. Flood and Coastal Storm Damage Reduction (including Emergency Management, Water Supply, and Recreation)
- c. Environmental (including Regulatory)
- d. System Wide Water Resources

Navigation (including Hydropower)

The Corps provides inland and coastal navigation critical to the national economy and defense. Navigation research delivers environmentally sustainable products that improve efficiency, reliability, and capacity of this complex, aging transportation/power network. The research framework integrates infrastructure engineering, power physics, economics, innovative construction, coastal and riverine hydrodynamics and processes, monitoring and sensing technologies, operations research, environmental solutions, and emerging technologies to create effective solutions in concert with the multiple demands, requirements, and constraints of real world commodity transport and power production problems. Research efforts target navigation channels, locks, jetties, breakwaters, harbors, dams and power plants to optimize among life-cycle and reliability trade-offs, assure defensible economic assessment, and provide better investment decision tools for predicting performance and deterioration with time, and for scheduling and prioritizing maintenance and repairs balanced with the consequences of delays. Essential to this effort is the development of tools for determining the condition of infrastructure components to make risk-based prioritizations for funding. R&D efforts for development of condition index products include: Developing a standardized method and associated computer program for life-cycle engineering analysis of coastal rubble mound breakwaters, Improved Condition Indexing for Coastal Structures, Monitoring of Concrete Navigation Structures, Inspection and Condition Assessment of Steel Hydraulic Structures, and Condition Monitoring and Predictive Maintenance for Infrastructure.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

Flood and Coastal Storm Damage Reduction (including Emergency Management, Water Supply, and Recreation)

Corps projects across the Nation prevent flooding and storm damage. In the daily and seasonal operation of hundreds of Corps projects, national requirements for water supply and opportunities for recreation and environmental stewardship are also balanced. The Nation expects the Corps to guarantee that its existing projects maximize efficiency and effectiveness, and that new projects incorporate the most advanced knowledge and capabilities in planning, design, construction, operation, and maintenance. Through R&D, the Corps develops technology that optimizes daily operations of water resources projects to meet multiple objectives, including water supply and environmental stewardship. Through R&D, the Corps creates new solutions to challenging engineering problems in building, maintaining, upgrading, and operating the Nation's water resources infrastructure such as dams, locks, spillways, and channels. Through R&D, the Corps provides guidance and tools to understand the natural setting of water resource projects, to incorporate environmental & economic objectives, to manage flood risk, to assess alternative solutions, and to make optimal decisions. The technological requirements of emergency management are addressed to make possible the most rigorous planning and preparedness and the most efficient and effective response and recovery. Improved Condition indexing of Flood and Coastal Storm Damage Reduction facilities includes technologies for risk-based evaluation of structural components such as dams, gates, levees, dunes, dikes, and walls. This work is conducted in collaboration with the National Dam Safety - Portfolio Risk Assessment and the National Flood Project Inventory Programs. Advancements in understanding the role of geotechnical properties, hydrodynamic loading, material fatigue, structure aging, and life-cycle O&M in contributing to dam and flood management safety, performance, and reliability will be developed. These will be coupled with improved methodologies for inspection and condition evaluation as well as a need to develop better methods for determining the reliability of flood management systems.

Environmental (including Regulatory)

The Corps has ecosystem restoration and environmental stewardship & management responsibilities on more than 11 million acres of land and water resources. Due to the enormous scope of this mission, it is imperative that Corps field personnel be able to apply the latest technologies for ecosystem restoration and natural resource inventory. The scale of these activities ranges from large projects such as the Everglades down to much smaller, local wetlands/stream restoration projects. The broad scope of these environmental activities (as well as the frequent changes to the legislative mandates that govern them) demands sound research and development to address these critical needs. The goal of this R&D is to provide cost-effective/innovative technologies for project planning, design, engineering/construction and operation/maintenance. Product lines include: Ecosystem Restoration, Ecosystem Functional Assessment (with an emphasis on Environmental Benefits Analysis) and Environmental Stewardship and Management. Products are concise, how-to guidance documents that provide rapid/low-cost technologies and methods for high priority field needs. This technology is critical to the success of the Corps' Ecosystem Restoration business line.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

System-Wide Water Resources

The goal of System-Wide Water Resources R&D is to provide the Corps of Engineers and its partners the capabilities to balance human development activities with the natural system in a sustainable manner through regional management and restoration of the Nation's water resources over broad temporal and spatial scales. The capabilities provided include science-based water resource management methodologies, implementation guidance, computational frameworks and technologies, and decision support. These capabilities are built from sound scientific principles reflecting an improved understanding of inter-relationships among key system attributes such as hydrology, hydraulic processes, geomorphology, chemistry, ecology, and socioeconomic. Capabilities will be served via a seamless, integrated architecture allowing projects to be considered at multiple scales during project planning, design, construction, operation, and maintenance. Current R&D emphasis in this area is on urban flood damage reduction and stream restoration technologies, regional sediment management, aquatic ecosystem management, assessment and restoration technologies, and regional and corporate frameworks for data collection, management and analysis. Each of these efforts is being pursued through extensive partnering and collaboration with federal and state resource management agencies, academia, and the private sector.

Basic Research

The objective of the Civil Works Basic Research area is to gain greater knowledge and understanding of the fundamental aspects of phenomena related to water resources. This effort will consist of farsighted and higher risk research with the potential for broad applications. Basic Research in Civil Works (BR) is structured to provide physical, engineering, environmental, social, and life sciences support to the major Corps of Engineers missions of reducing flood and coastal storm risk; facilitating navigation; and restoring and sustaining the environment.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

PROJECTED CIVIL WORKS R&D FUNDING ALLOCATIONS (FY 08-09))

<u>BY RESEARCH AREA</u>	<u>FY 2008 ALLOCATION</u>	<u>FY 2009 CEILING</u>
a. Navigation (including Hydropower)	\$ 5,925,000	\$ 4,220,000
b. Flood and Coastal Storm Damage Reduction (including Emergency Management, Water Supply, and Recreation)	\$ 7,206,000	\$ 2,924,000
c. Environmental (including Regulatory)	\$ 3,814,000	\$ 2,388,000
d. System Wide Water Resources	\$12,025,000	\$ 6,090,000
e. CW Basic Research	\$ 550,000	\$ 1,170,000
	<u>\$ 29,520,000</u>	<u>\$16,792,000</u>

<u>BY CW BUSINESS LINE</u>	<u>FY 2008 ALLOCATION</u>	<u>FY 2009 CEILING</u>
a. Navigation	\$ 8,625,000	\$ 6,930,000
b. Flood & Coastal Storm Damage Reduction	\$12,681,000	\$ 5,079,000
c. Environmental	\$ 8,214,000	\$ 4,783,000
	<u>\$ 29,520,000</u>	<u>\$16,792,000</u>

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

a. Commercial Navigation

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$31,400,000
Allocation Requested for FY 2009	4,220,000
Balance to Complete After FY 2009	27,180,000
Allocation for FY 2008	5,925,000
Change in FY 2009 from FY 2008	-1,705,000

JUSTIFICATION:

The Corps' commercial navigation mission facilitates commercial navigation through investments in waterborne transportation systems (channels, harbors, and waterways) that are cost-effective and environmentally sustainable. The U.S. Marine Transportation System (MTS) consists of over 300 ports, 1,000 harbor channels, and 25,000 miles of navigation channels. The MTS is already operating at near-full capacity in many areas and is being challenged by new vessel designs and traffic loads that exceed its channel, harbor, and lock capacities. Over 50 percent of the Corps' 191 lock sites (240+ locks) have been in service for more than 50 years. Research and development (R&D) can help reduce the costs associated with delays due to closures for both scheduled and unscheduled repairs, as well as reduce the risk of catastrophic failure of a major infrastructure component.

This R&D area provides advanced and innovative tools and technology for the Corps to improve navigation functional performance, reduce unit costs, and improve safety. The Corps is expected to apply robust, reliable, and comprehensive capabilities to assess the economics and effects of alternative plans for projects and to select the most balanced and sustainable solutions. R&D delivers efficient and effective capabilities to plan, design, construct, operate, maintain, and upgrade transportation projects in inland and coastal locations and in all climates, from warm to ice-affected. Capabilities to improve system reliability are needed in an asset management framework to extend project life and reduce life cycle costs. Engineering, economics, and environmental aspects are integrated in the development of processes and design models, economic models and decision support software, infrastructure condition assessment techniques, and economic and risk analysis frameworks, infrastructure and design guidance, and innovative monitoring, operation and maintenance technologies.

Navigation area economic R&D provides the framework and analytical tools that are key to quantifying problems, evaluating alternative competing solutions, and making informed investment decisions. Risk analysis provides a framework for organizing and quantifying underlying uncertainties in and management of existing facilities. Navigation Economic Technologies (NETS), which provides enhanced and standardized evaluation tools and methods for shallow and deep draft navigation project life-cycle analyses, will be completed in FY09. Peer reviewed procedures will be developed to improve traffic forecasts, economic benefits, and uncertainties in major improvement projects.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

a. Commercial Navigation (continued)

FY 2009 PROPOSED ACTIVITY:

- Improve the accuracy of engineering formulation/methodologies to design flexible approach walls through the interpretation of the Full-Scale barge impact tests conducted in FY08 and thereby reduce design and construction costs.
- Reduce installation time and construction costs of float-in concrete structures through the development and refinement of fluid/structure interaction models of actual float-in structures to be placed at navigation improvement projects.
- Develop more rigorous computational methods for rapid evaluation at a much lower costs (tens of thousands instead of hundreds of thousands of dollars) of hydraulic structure design alternatives with emphasis on lock filling and emptying components.
- Advance ship/tow simulator capabilities by coupling pilot response with vessel effects on the flow field which will provide a more realistic tool for developing functional and reliable navigation channels.
- Validate, implement, and document new response amplitude operator (RAO) technology in the Ship Tow Simulator to provide information that will help quantify risk and uncertainty and cost for the design of navigation structures as well as assess safety for deep-draft vessels.
- Improve computational modeling capability for turbulence near free surfaces, moving vessels, and navigation structures so more complex design and operational guidance can be available for life cycle management and risk informed decisions.
- Complete comparison of simple and complex reliability/life-cycle analysis methods and associated reports for coastal structures to provide project management with the information necessary to plan long term operation and maintenance requirements.
- Continue to improve methods for justifying improvements to federal navigation projects by providing the ability to address issues of competition among the different transportation modes (barge, rail, truck) with the finalization and certification of the Regional Routing Model that will be used to identify annual quantities of commodities from various origins and routes used to satisfy forecasted demand at each destination.
- Complete the production version and certification of the Navigation System Simulation Model that will provide the Corps with the ability to conduct system optimization over time while considering reliability.
- Continue improving inland federal navigation project economic justification procedures by providing the Corps with the ability to perform commodity forecast which accounts for competition between producers, consumers and alternative modes of transportation by generalizing the techniques demonstrated in the Global Grain Model into a certified planning tool.

FY 2008 ACCOMPLISHMENTS:

- Improved accuracy in assessing environmental impacts of navigation on inland waterways modeling vessel-generated currents and sedimentation required to estimate channel erosion and off-channel deposition.
- Developed algorithm to provide predictive capabilities for maintenance decisions at Lock 27 on the Chain of Rocks Canal; lock 27 is near the entrance to the Upper Mississippi River and therefore is critical for the vast majority of the tonnage on the Upper Miss.
- Developed computational modeling capability for coupled vessel motion and two-phase Reynolds-Averaged Navier-Stokes flows to predict vessel and vessel-generated dynamics to provide decision support for selecting project design alternatives that will serve both project and environmental needs.

Research and Development (Continued)

a. Commercial Navigation (continued)

- Improved lock approach wall design and construction, with reduced costs, by expanding the newly developed structural design methodology with additional types of flexible reinforced concrete walls to accommodate different foundation soil conditions.
- Improved methods for justifying improvements to federal navigation project by providing the ability to address issues of multimodal (barge, rail, truck) competition with the finalization of the beta version of the Regional Routing Model.
- Completed the beta version of the Navigation System Simulation Model that provides the Corps with the ability to conduct system optimization over time while considering reliability.
- Modified the Ohio River Navigation Investment Model (ORNIM) to incorporate shipper response into the ORNIM suite as a beta testing version as suggested by the National Academy of Science to enhance regional planning of lock improvements.
- Improved economic justification procedures for inland navigation projects by providing the Corps with the ability to perform commodity forecasts which account for competition between markets and alternative modes of transportation by generalizing in a beta version the techniques demonstrated in the Global Grain Model.
- Developed computational modeling capability for wave/structure interaction to aid in design of coastal and hydraulic structures, including wave breaking on flexible and porous structures to provide the most functional and low cost design alternatives.
- Completed a series of controlled Barge Impact Experiments on an instrumented flexible approach wall system to obtain experimental information that provided empirical data on the demand (impact force time history); and the response (relative motion) of the structural elements making up the flexible wall system so that reliable designs can be developed at the lowest cost.
- Developed method to assess rapid closure of locks and dams during emergency situations to reduce navigation closures and insure project safety.
- Completed Navier-Stokes computer program and user's manual for wave-structure interaction on complex structures such as stepped faces and seawalls to provide field offices with tools to develop effective and reliable coastal structure designs.
- Conducted ship motion study with Port Everglades "Project of Opportunity" to improve the Corp's underkeel clearance designs for Post-Panamax vessels and to demonstrate and validate the improved methodology in squat and underkeel predictions which provide the information necessary to design safe and functional deep draft channels.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

b. Flood and Coastal Storm Damage Reduction

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$20,000,000
Allocation Requested for FY 2009	2,924,000
Balance to Complete after 2009	17,076,000
Allocation for FY 2008	7,206,000
Change in FY 2009 from FY 2008	-4,282,000

JUSTIFICATION:

The Corps of Engineers is responsible for more than 600 dams, operates over 400 major lakes and reservoirs, maintains 8,500 miles of levees, and has over 100 coastal storm-damage reduction and related projects associated with its Flood and Coastal Storm Damage Reduction mission. Flooding that occurs in the United States costs about \$4 billion annually. Without the Nation's investment in flood and coastal storm damage reduction infrastructure through the Corps, that cost would be many times higher. Over the years, Corps flood protection projects have prevented an estimated \$706 billion in damages, most of that within the last 25 years. The cumulative cost of building and maintaining these projects to date is \$119 billion; therefore, every dollar spent on flood protection has prevented more than six dollars in damage. Despite this protection, annual damages in flood plains continue to rise due to changes in land use and urban development. In addition, the 2000 census showed that more than 50% of the US population lives within 50 miles of a coast and is therefore vulnerable to dangerous coastal storms and costly flooding. Consequently, over the past several years, Federal shore protection expenditures increased to more than \$100 million per year to protect the public and related economic investments.

The Corps manages existing water resources projects around the country to maintain a flood-protection infrastructure for the public's welfare. Simultaneously, the Corps balances requirements for hydropower, water supply, environmental stewardship, and recreation. As enabling technologies are developed, the Corps must upgrade and improve water resource projects, use the most advanced capability to assess the risk of alternative operational scenarios, and apply robust, reliable, and comprehensive capabilities to assess the economic and environmental effects of alternative plans for projects and to select the most balanced and sustainable solutions. R&D delivers efficient and effective capabilities to plan, design, construct, operate, maintain, and improve water resource projects in all climates and settings, from warm to ice-affected, and from inland to coastal.

Capabilities that prevent loss of life, minimize property damage, and reduce the life-cycle costs of projects are critical. These capabilities include advanced processes and design models, economic models and decision support software, infrastructure condition and risk assessment tools, infrastructure design guidance, innovative operation and maintenance technologies, flood-alert instrumentation and expedient emergency response capabilities, and the capability to take advantage of new real-time data sources (e.g. precipitation radar) to accurately forecast real-time flow and stages. Other research needs specific to Flood and Coastal Storm Damage reduction, identified through the Chief of Engineers' 12 Actions for Change will be incorporated into the R&D program.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

b. Flood and Coastal Storm Damage Reduction (continued)

This R&D component provides advancements in hydrologic and hydraulic simulation, water resources project optimization, tools for effective alternative analyses for solutions, infrastructure safety, structural design and performance, and assessment of the risk and uncertainty associated with project designs. This R&D component also improves the technology available to emergency managers for emergency planning, preparedness, response, recovery, and assessment.

FY 2009 ACTIVITY:

- Reduce potential for life loss and flood damage by field demonstration, evaluation and documentation of expert system project monitoring technologies early warning systems
- More accurately economically evaluate FDR projects by developing and validating a road damage model for coastal flooding
- Improve efficiency of the planning process by creating a web-accessible catalog of non-structural FDR project alternatives and guidance for alternatives evaluation
- Improve formulation of multipurpose projects by providing capability to determine risk and uncertainty associated with environmental restoration project alternatives
- Improve formulation and operation of flood control projects by incorporating probabilistic event-based flood damage analysis for evaluation and optimization of project lifecycle performance
- Reduce uncertainty associated with water allocation projects by implementing enhanced post processor for water supply project operation models
- Expand hydrologic statistical analysis tools and provide guidance for hydrologic risk assessment to better characterize project design and operation parameters
- Improve accuracy of watershed, floodplain and dam break studies by integrating advanced and improved hydrologic, hydraulic and sediment transport and ecosystem function models
- Continue to provide interim guidance for traditional and non-traditional grade control and bank stabilization designs that are cost effective and environmentally sustainable
- Improve efficiency of evaluation of riverine structural alternatives by providing a cost effective prototype model for assessing project performance over a 50 year hydrograph at level a level sufficient to determine ecological impacts
- Provide technical support to final phase of dam screening portfolio risk assessment (final 30% of Corps dams)
- Continue developing project component risk assessment modules and integrating in the dam safety Portfolio Risk Assessment Toolbox

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

b. Flood and Coastal Storm Damage Reduction (continued)

FY 2008 ACCOMPLISHMENTS:

- Provided ability to evaluate the reliability of dams through continued development and tech transfer of risk-based tools for evaluation of failure of concrete and embankment dams, spillway gate failure and spillway erosion
- Developed improved design guidance for dam tainter gate anchorages
- Optimized evaluation of complex inland and coastal flood damage reduction measures and project justification by improvement of standardized risk-based economic models
- Integrated advanced geospatial methods for mapping hydrologic, hydraulic and sediment transport processes and improving hydrologic frequency analysis that improve efficiency of watershed, floodplain and dam break studies
- Improved formulation and operation of flood control projects in cold regions by providing the capability to better assess impacts of river ice and by providing guidance for stream restoration in ice environments
- Improved efficiency of grade control & stream bank protection projects by providing interim guidance for traditional and non-traditional structural designs are cost effective and environmentally sustainable
- Reduced potential for life loss and damage element loss by enhancing near real time system-scale monitoring, evaluation and data management capability for flood control project infrastructure
- Integrated operational snow database with computational and analytical methods for water supply project operation, real-time performance evaluation and probabilistic forecasting that reduce uncertainty associated with water allocation
- Improved formulation procedures by providing the capability to determine the level of services provided by ecosystem restoration alternatives and non-structural flood proofing measures
- Developed road damage model for inland flooding for more accurate economic evaluation of service provided by flood damage reduction projects
- Provided guidance for interoperable method for performing embankment dam and levee seepage and piping risk assessment
- Expanded guidance related to Corps response to climate variability for operation of existing and design of future water resources projects
- Coupled standardized 1-D hydraulic and groundwater processes models to improve efficiency characterization of project design and operational parameters
- Reduced uncertainty and improved efficiency of studies by developing generalized hydrologic and hydraulic model parameter optimization methods
- Evaluated remote sensing method for identifying micro-crack in steel hydraulic structures to enhance capability to assess structural reliability

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

c. Environmental

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2008-2012) Program Cost	\$14,100,000
Allocation Requested for FY 2009	2,388,000
Balance to Complete after FY 2009	11,712,000
Allocation for FY 2008	3,814,000
Change in FY 2009 from FY 2008	-1,426,000

JUSTIFICATION:

Since the Water Resources Development Act of 1986, there have been dramatic increases in authorized ecosystem restoration studies, projects and programs. At the same time, the Corps has continued to operate and maintain 25,000 miles of inland and coastal navigation waterways, 5,500,000 surface acres of reservoirs, 237 navigation locks, over 1300 ports and harbors, 75 hydropower projects, 879 flood control projects, and thousands of acres of adjacent lands as part of its water resource mission. Wide-ranging environmental compliance, management, and restoration efforts have become crucial parts of the Corps water resource management mission. The Corps must consider environmental issues related to the operation and maintenance of its existing projects as well as the restoration of degraded ecosystems. In addition, the Corps must proactively address potential negative environmental impacts resulting from proposed activities. This research area addresses the Corps' highest priority environmental issues through the development and application of state-of-science, cost-effective, time-saving technologies including: 1) engineering & biological technologies for the quantitative assessment of aquatic resources, 2) guidance for improved restoration techniques of rivers, streams and riparian zones, 3) standardized design criteria for wetlands and special aquatic site restoration projects, and 4) standardized natural resource inventory technologies for use on all Corps projects. These user-oriented products will provide scientifically-defensible / field-validated solutions to the Corps' highest priority environmental problems. They will also reduce unnecessary regulatory burdens, provide environmental benefits, and maintain a high return on taxpayer investment.

Quantifying the environmental benefits / ecological outputs of proposed Corps ecosystem restoration projects is essential for decision makers to be able to select those projects that will yield the highest social, economic and environmental services. The scientific community has criticized current state-of-the-science assessment approaches regarding the underlying model assumptions, oversimplified relations, excessive data requirements, complexities in integrating impacts, and the lack of meaningful metrics to permit biologically-effective decisions. Moreover, current assessments are static and frequently insensitive to important system dynamics, not applicable across multiple scales, and incapable of predicting future conditions. Corps decision makers need robust assessment tools that incorporate modern ecosystem principles, are easy to apply, offer significant user flexibility to meet individual project requirements, and that provide output quantifiable relevant to the Corps' Performance Measures. These environmental benefits analysis tools will be provided in brief user-focused technical guidance documents, web-based decision support systems, classroom & CD/internet based training, and product technical support as required.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

c. Environmental (continued)

FY 2009 ACTIVITY:

- Develop links between physical process models and environmental analysis tools (e.g., hydrogeomorphic) for ecosystem restoration projects.
- Develop a suite of ecosystem assessment tools and conceptual models that allow project comparisons
- Develop environmental benefits metrics for planning and prioritizing ecosystem restoration projects.
- Provide lessons learned from post-project surveys of environmental benefits from ecosystem restoration projects in large watersheds
- Develop guidelines for articulating risk and uncertainty in ecosystem restoration projects
- Develop basic ecological output standards for evaluating ecosystem restoration projects
- Develop tools to predict/assess stream equilibrium (with regard to physical processes) in conjunction with ecosystem restoration projects

FY 2008 ACCOMPLISHMENTS:

- Developed conceptual framework for a non-monetary metric to measure environmental benefits on Corps ecosystem restoration projects
- Completed data collection & analysis of post-project environmental benefits for large watersheds.
- Provided techniques for conducting Level One & Level Two inventories on Corps operational projects
- Evaluated innovative techniques for revegetating large-scale special aquatic sites.
- Provided a PC-based GIS tool for integrating and displaying results from environmental benefits analysis models.
- Provided literature review of state-of-the-practice tools for quantifying ecological services

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

d. System-Wide Water Resources.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$59,500,000
Allocation Requested for FY 2009	6,090,000
Balance to Complete after FY 2009	53,410,000
Allocation for FY 2008	12,025,000
Change in FY 2009 from FY 2008	- 5,935,000

JUSTIFICATION:

In view of the importance of sustainability in water resources management, the Corps is adopting a watershed or basin-wide approach, which adds a system-wide perspective to project planning, design, operations and maintenance activities. This spatially expanded perspective is necessary because water resources projects and resultant changes in land/water use have consequences well beyond project footprints. Key to sustainability is the balance among environmental, economic and societal concerns. The System-Wide Water Resources component of the Civil Works GI R&D Program is designed to provide the Corps with the technical capabilities required to meet its mission responsibilities at project, watershed, and large basin scales, while effectively engaging stakeholders and decision makers with potentially competing interests (e.g., environmental vs. economic).

Wide-ranging proactive environmental compliance, management, and restoration efforts are an integral part of the Corps responsibilities in water resources management. Recent U.S. figures have estimated \$16 billion per year in damages caused by point- and non-point-source pollution, with up to 1 billion tons per year of eroded soils and industrial and agricultural contaminants being deposited in the Nation's waterways. These impacts are severely affecting multiple project uses, impeding navigation, impeding ecosystem restoration efforts, and negatively affecting human and ecological health. An integral part of the Corps' mission is to ensure that project planning, construction, operation, and maintenance activities solve critical environmental problems, while ensuring economic viability and societal acceptance. The System-Wide Water Resources component is providing, at a regional scale, scientifically proven and demonstrated solutions to the Corps' highest priority environmental problems, reducing unnecessary regulatory burdens, and providing environmental benefits, while maintaining a very high return on taxpayer investment. The broadened focus of this research, which addresses systemic water resource management issues, will enable the Corps to more effectively meet legal requirements such as the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA).

Maintaining navigable waterways and flood channels in the face of continuing sediment deposition consumes a substantial portion of the Corps' budget. More effective sediment management on a regional scale can reduce dredging costs and potentially adverse environmental impacts by diverting sediment from channels and into deposition zones. Sediment and associated nutrients/contaminants also have important effects on the environment. Thus, a better understanding of sediment processes in an environmental context is critical in relation to habitat and water quality concerns regionally. Also, attention to sediment processes in the Corps O&M program will improve cost effectiveness in planning and designing navigation projects, estimating channel shoaling, locating optimum dredged-material placement, and assessing the impact of navigation projects and structures on adjacent waters, shorelines, and downstream areas.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

d. System-Wide Water Resources (Continued).

Decision makers both within the Corps and among stakeholder organizations require accurate and reliable data for the effective planning, design, construction, operation, maintenance, and rehabilitation of projects. Annual expenditures for collection, analysis, and management of geospatial data alone are estimated to average almost \$200 million. This component of the overall Program will provide significant savings, owing to the development of more effective and efficient data collection, management, and exploitation technologies. To further reduce costs, a new framework approach is being developed to integrate and manage data and decision support software in a consistent, corporate manner. The developed information framework will integrate many of the data, technologies, models, and decision support tools across the Corps' business activities for the many different communities of practice that support regional water resource management activities. The framework will include all aspects of informatic development, including but not limited to automated information systems, information security, enterprise GIS, metadata standards, model/decision support tool interoperability, data visualization, and knowledge management.

As new and innovative technologies and methodologies are developed in this component, it will be critical to transfer information concerning these innovations to the Corps, other Federal, state, and local agencies, and to the public as quickly and efficiently as possible so that they can be effectively applied. It will be equally important to validate the applicability of the innovative technologies through demonstrations, which are a key element of this component. Examples include innovative use of remote sensing for environmental monitoring and satellite linked GIS/GPS laptops to assist with onsite environmental analyses that can be connected quickly on a system scale.

The System-Wide Water Resources component of the Program will continue to develop and deliver technology to support decisions that are scientifically, technically, and economically sound in formulating and executing watershed projects. The products of this component serve a wide variety of needs and interests, ranging from decision makers to technical specialists to stakeholders and partners. New technologies are being delivered to users via the Internet in a consistent, yet personalized, web-based format, together with tutorials explaining their characteristics and use. Analytical tools provided by this component serve a range of needs, ranging from screening level assessment capabilities to detailed numerical models. Many tools will be interconnected with standard linkages. The scientific rigor of these tools continues to increase with gains in scientific knowledge, as part of the continued maintenance and upgrading of capabilities. . Research needs specific to an integrated and comprehensive systems approach as identified through the Chief of Engineers' 12 Actions for Change will be incorporated into the R&D program. This includes work on Flood and Coastal Storm Economic Models and also on improved Coastal Storm risk/engineering Models.

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

d. System-Wide Water Resources.

FY 2009 ACTIVITIES

- Demonstrate storm surge modeling for risk assessments with the coastal morphological modeling system (MORPHOS).
- Develop capabilities for ecosystem assessments in conjunction with coastal protection activities.
- Develop alternative analysis methods for efficient sequential design and placement of ecosystem restoration projects for multi-project and large-scale systems (e.g., coastal Louisiana, Upper Mississippi River, Everglades).
- Demonstrate data management tools for large-scale complex and multi-dimensional hydrodynamic model applications.
- Expand agent-based ecological modeling for selected key species of biota (e.g., sturgeon, oysters, and submerged aquatic vegetation).
- Demonstrate tiered approach for ecohydrology and ecohydraulics applications in large river systems for assessing operations and management activities.
- Demonstrate sediment transport in rivers associated with episodic events (e.g., dam removal and watershed fires).
- Incorporate 3-dimensional surface water and ground water interactions for wetting and drying dynamics and nutrient cycling and transport.
- Deploy 1-dimensional framework (Water Analysis Tool).
- Develop nested watershed modeling approach for integrating issues of scale and complexity.
- Demonstrate multi-dimensional hydrodynamic and gridded stream habitat restoration assessment tool for river restoration design.

FY 2008 ACCOMPLISHMENTS

- Initial development of MORPHOS, a coastal storm and hurricane engineering model, and applied to coastal LA.
- Demonstrated tiered approach to ecological assessments in complex river and coastal systems for system-wide assessments with various levels of available information.
- Demonstrated prototype decision support system for efficacy analysis of ecosystem restoration project alternatives in complex river systems (e.g. the Upper MS River Basin).
- Demonstrated large-scale data acquisition tools for complex watershed studies (e.g. Western States, arid region).
- Continued refinement of 1, 2, and 3 D material transport models to predict biological response in rivers, reservoirs, and estuaries (e.g Upper MS River, Columbia/Snake River systems, MS Sound).
- Demonstrated data fusion technologies (combined sensors) for large scale ecological assessments for estuarine, and coastal areas and impacts related to water resource management activities (e.g. New England coast).
- Continued refinement of coupled multi-dimensional hydrodynamic models and ecological response models for more accurate forecasting of near-term and future conditions as a result of water resource management and ecosystem restoration alternatives (Pool 5 Upper MS River).
- Developed applications of multi-dimensional hydrodynamic models that quantify nutrient and sediment transport at multiple spatial scales in watersheds (e.g., Eau Galle, WI and Auglaize, OH).
- Demonstrated standardized data acquisition and management techniques for more efficient watershed and aquatic systems assessments (e.g. the Everglades and coastal Louisiana).
- Demonstrated coupled hydraulic and fish model for sturgeon habitat assessment in the Mississippi River.
- Demonstrated coupled multi-dimensional surface water, groundwater, and vegetation modeling in complex watershed (Cibola River Basin, Texas).

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

e. Basic Research.

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY 2009-2013) Program Cost	\$10,000,000
Allocation Requested for FY 2009	1,170,000
Balance to Complete after FY 2009	8,830,000
Allocation for FY 2008	550,000
Change in FY 2009 from FY 2008	620,000

JUSTIFICATION:

Initiated in FY 2008 at the recommendation of Civil Works business area managers and R&D managers, the Civil Works Basic Research program was structured to fill needs not being met by the current overall R&D structure. The Corps R&D structure emphasized applied research and demonstration activities. The objective of the Civil Works Basic Research program is to gain greater knowledge and understanding of the fundamental aspects of phenomena related to water resources. This effort will consist of farsighted and higher risk research with the potential for broad applications. Basic Research in Civil Works (BR) is structured to provide physical, engineering, environmental, social, and life sciences support to the major Corps of Engineers missions of reducing flood and coastal storm risk; facilitating navigation; and restoring and sustaining the environment. Successful investigations could lead to subsequent applied research and technology advancement and improved functional capabilities in water resources science and engineering. The laboratories will conduct basic research that challenges accepted theory or empirical assumptions. The BR program began modestly in FY2008 with \$550,000. Three activities were started in FY08 specific to the fundamental nature of how the dynamics of currents and waves interact with vegetation, social cognitive modeling and risk analysis related to flood risk management, and electrokinetic transport in concrete. The BR program intends to commit \$1,170,000 (or 7% of the R&D budget) for basic research in FY 2009. It is expected that a research work package will last no more than 3 years.

Focus areas for Civil works Basic Research are listed below and will form the basis for soliciting and prioritizing proposals for basic research activities performed by the laboratories and centers.

1. **Computational and Information Sciences.** Basic research in the computational and information sciences could support the Corps' full range of water resource management disciplines and activities. The supported disciplines include surface water and groundwater hydrology, open channel hydraulics, coastal hydrodynamics, sediment and constituent transport, geotechnical and structural engineering, and environmental science and engineering. The central themes addressed in this focus area include, but are not limited to 1) human/computer interface design optimization, 2) intelligent problem solving techniques and environments, 3) temporally- and spatially-variable model integration, 4) novel approaches to reduce computational burdens in discrete- and continuum-based process models, 5) defining and bounding uncertainty across water resource.

Research and Development (Continued)

e. Basic Research (Continued).

2. **Human Dimensions of Water Resources Management and Decision Making.** The most challenging problems facing the Corps' Civil Works program are the result of a complex web of science, engineering, and human factors. While significant emphasis has historically been given to resolving the science and engineering questions at the heart of these problems, it is increasingly apparent that limitations in our understanding of how people conceptualize, interpret, and respond to problems represents a significant impediment to successfully resolving water resource problems. In addition, social processes including human behavior and economic trends will affect and be affected by our projects and their performance. The human dimensions of water resource management and decision-making includes basic research in 1) the cognitive science of decision making, 2) interpretation and use of multi-attribute risk information in problem solving, 3) risk perception and communication, 4) cognitive barriers to human acceptance of new technology, 5) governance and public involvement in decision making, 6) human interactions with technology to facilitate public decision processes, 7) conflict avoidance and resolution, 8) economic/demographic impacts on water resources.
3. **Material and Transport Processes.** The Corps capability to analyze, plan, engineer, and operate its water resource projects is depends on the extent of knowledge of the physics of material and transport processes. In this context, *materials* include fluids (e.g., air, water, and ice), sediment, soil, chemicals, temperature, biomatter, and others. This focus area is concerned with investigations into material processes both locally and in transport. Local material processes are independent of material movement. Examples of local process are: ice formation, sediment consolidation, and changing water chemistry. Transport processes depend on material movement. Examples of transport processes are ice and debris movement, vegetation impacts on hydraulics, water quality of watershed, erosion processes, and deposition of biomatter. Material interactions are considered as well where one material interacts with another such as in air-sea interaction; surface water-groundwater interaction; terrain response to physical processes, and ice-soil interaction.
4. **Ecological Processes.** Ecological processes span the entire spectrum of interactions between the biological, physical and chemical components of the ecological community. This basic research focus is on formulating and quantifying the underlying theories necessary to explain and predict the long term sustainability of land and water resources through relatively short term tests and observations. The principles of data integration and assessment technologies to accommodate a variety of spatial and temporal scales from multiple land use and management activities are additionally of concern. Potential areas of interest include but not limited to: Physio-Chemical Impacts on Biological Systems, Species Interactions and Requirements (particularly Threatened and Endangered), Ecological Simulation Technologies, Environmental Recovery, Organism Behavior and Physiology, and Nutrient Cycling.
5. **Structures and Infrastructure Systems.** This focus area is concerned with fundamental processes that cause the deterioration of construction and geological materials (e.g., steel, concrete, and soils) and component elements of major structural features (e.g., locks, dams, breakwaters, and other water control structures). As these structures age, static and dynamic loadings, corrosion, biological and other forces (e.g., ice, waves, vibrations, and object impacts) reduce the strength of the materials and the resistance of the structure to service and extreme loads. Because the population of existing projects exceeds our ability to conduct major rehabilitation, the primary emphasis is on rapidly detecting, arresting and remediating deterioration of our infrastructure. Of particular interest at this time are basic research proposals relating to the impact of piping and seepage and vegetation in compromising or deteriorating the condition of levees and/or dams.

Variability and Change in Water Resource Systems. Watersheds and coastal systems are spatially and temporally dynamic and variable. This includes the influences of scale, changing climatic, geographic, environmental, and anthropologic drivers. The interconnectivity and changing balance of natural and modified water systems will impact future water resource science and engineering management. Basic research is needed in the sensitivity and

APPROPRIATION TITLE: Investigations, Fiscal Year 2009

Research and Development (Continued)

e. Basic Research (Continued).

interrelationship of those physical and human systems as they impact the performance and sustainability of USACE mission functions. Specific areas of potential research relate to, changing patterns in precipitation, snow cover, and coastal storms, water quality and quantity stressors, meteorological contributions to landscape evolution, and ecological and human interactions. Basic research proposed under this focus area should not be redundant of the wealth of scientific research being conducted on the causes of or documenting climate change, but rather directed toward the effect of change to water resource management.

FY 2009 ACTIVITIES:

- Solicit and select up to three new Basic Research program projects in the focus areas described above.
- Continue a basic research project to determine the fundamental nature of how the dynamics of currents and waves interact with vegetation. The goal of this project is to significantly improve the “state-of the art” in the physics-based theoretical foundation for wetland-wind-wave-surge-risk interactions. This work will investigation/evaluate several existing empirical theories and, if successful, should provide a marked improvement in our understanding of governing principles for these interactions.
- Continue a basic research project on social cognitive modeling and risk analysis related to flood risk management. It is expected that a formal characterization of analysts, decision makers, and stakeholder views and risk perceptions will facilitate the development of better management alternatives and foster effective communications and training about flood risks and their management.
- Continue a basic research project to develop a quantitative understanding of the physics of electrokinetic transport in concrete. Of particular interest is the transport of ions, particles and fluid through hardened concrete that could mitigate or reverse its deterioration by various processes.

FY 2008 ACCOMPLISHMENTS:

- Initiated Basic Research program proposal selection process.
- Initiated a basic research project to determine the fundamental nature of how the dynamics of currents and waves interact with vegetation. The goal of this project is to significantly improve the “state-of the art” in the physics-based theoretical foundation for wetland-wind-wave-surge-risk interactions. This work will investigation/evaluate several existing empirical theories and, if successful, should provide a marked improvement in our understanding of governing principles for these interactions.
- Initiated a basic research project on social cognitive modeling and risk analysis related to flood risk management. It is expected that a formal characterization of analysts, decision makers, and stakeholder views and risk perceptions will facilitate the development of better management alternatives and foster effective communications and training about flood risks and their management.
- Initiated a basic research project to develop a quantitative understanding of the physics of electrokinetic transport in concrete. Of particular interest is the transport of ions, particles and fluid through hardened concrete that could mitigate or reverse its deterioration by various processes.

Appropriation Title: Investigations – Fiscal Year 2009

Actions for Change to Improve Investigations

SUMMARIZED FINANCIAL DATA:

Study	Total Estimated Federal Cost	Allocation Prior to FY 2007	Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
Actions for Change to Improve Investigations	30,600,000	2,175,000	3,100,000	2,000,000	\$23,325,000

SCOPE:

USACE has embarked on an ambitious program for quickly incorporating the lessons learned from Hurricane Katrina into “Twelve Actions for Change”. The goals of the 12 Actions for Change are to improve public safety and the Nation’s water resources infrastructure by providing expert and professional services to the Nation, to include collaboration with public and private interests through mutually supporting integration of skills, resources, and programs to make the necessary changes. The 12 Actions are interrelated and interdependent, and will be fully integrated for execution. Specifically, through the Investigations funding of the 12 Actions, USACE will improve its ability to conduct and evaluate investigations by employing an integrated, comprehensive, and systems-based approach that employs risk-based planning; developing planning and engineering tools to support improved understanding of the hydrologic system within which a proposed project will perform as well as the local and regional implications of alternative concepts for achieving project goals; providing capability for cumulative impacts analyses using a flexible and adaptive systems approach to allow continuous adjustment as new knowledge emerges and new planning and engineering practice is developed; update software for risk-based planning; addressing national policy on tolerable risk levels; expanding policy and methods to support planning of flexible adaptive systems that include environmental and ecosystem lessons learned, improve hydrologic frequency methods; and advancing the understanding of meteorological and oceanographic interactions as storms propagate from the ocean across complex terrain to support science-based planning and evaluation of hurricane protection and coastal storm damage reduction systems.

FY 2009 funding builds upon work accomplished to respond to critical needs identified by the Interagency Performance Evaluation Task Force (IPET), Hurricane Protection Decision Chronology (HPDC), the National Academy of Science, the American Society of Civil Engineers’ External Review Panel, and others in the wake of Hurricane Katrina. The Corps will incorporate strategies and processes used to conduct and evaluate investigations in its Continuing Authorities Program, the Inspection of Completed Works Program, which is funded in the Flood Control and Coastal Emergencies fund, and in the National Dam Safety Program, which is funded in the Operation and Maintenance account.

JUSTIFICATION:

Using the Program Assessment Rating Tool, an assessment of the USACE Flood and Storm Damage Reduction Program determined that there exists a need to evaluate how completed flood and coastal storm damage reduction projects help reduce the Nation’s overall flood damages; provide greater coordination between USACE, FEMA, and other federal, state, and local agencies that set floodplain and coastal zone management policies; and improving risk communication and public involvement in risk reduction strategies. A related assessment of the USACE Emergency Management Program determined that USACE lacked a comprehensive database to evaluate the performance of flood and storm protection projects that it regularly inspects and maintains; IPET noted that cumulative impacts analyses are an integral part of the evaluation process. A related assessment of the Regulatory Program noted that the USACE should do more watershed (system) planning in advance of development and less project-based planning. The 12 Actions for Change will provide the methods, processes, and technologies for USACE to implement a water resources systems approach, with a balanced, multidisciplinary, multi-objective, and multi-stakeholder evaluation framework at appropriate scales of space and time.

Appropriation Title: Investigations – Fiscal Year 2009

FY 2008 Accomplishments

FY 2008 funding enabled USACE to expedite development of a peer reviewed engineering model for coastal storms; continue developing methods and tools to support comprehensive evaluation of incremental changes to Corps projects over time; continue developing and testing a method for including the effects of climate variability, relative sea level rise and other effects in adaptive planning and engineering systems; improving our methods for communicating the significance of flooding risks to the public, and also increasing public involvement in evaluating alternatives and making decisions; and expedite development of a method used to construct stage and flow frequency relationships to include the physical limits of the basin.

FY 2009 Activities

In FY09, Actions 2, 5, and 12 (Employ Risk-based Concepts in Planning, Design, Construction, Operations and Major Maintenance; Employ Adaptive Planning and Engineering Systems; and Invest in Research, respectively) will be emphasized, and the output of these Actions is strongly linked to successfully executing the FY08 program in these Actions and the FY08 and FY09 programs in Actions 1, 3, 9, and 10 (Employ an Integrated Comprehensive Systems-Based Approach; Continuously Reassess and Update Policy for Program Development, Planning Guidance, Design and Construction Standards; Effectively Communicate Risk; and Establish Public Involvement Risk Reduction Strategies, respectively). Fiscal Year 2009 funding will be used to continue development of a peer reviewed engineering model for coastal storms; further develop methods and tools to support comprehensive evaluation of incremental changes to Corps projects over time; prepare guidance on incorporation of relative sea level rise and climate variability in USACE systems; evaluate a pilot study on communicating the significance of flooding risks to the public; begin a pilot on increasing public involvement in evaluating alternatives and making decisions; and prepare guidance for the new method used to construct stage and flow frequency relationships to include the physical limits of the basin.

APPROPRIATION TITLE: General Investigations, FY 2009

Independent Peer Review

Study	Allocation for FY 2007	Allocation for FY 2008	Tentative Allocation FY 2009
External Peer Review	0	0	1,000,000

SCOPE:

The funds requested will be used to implement the independent (external) peer review (EPR) requirements as authorized in Section 2034 of the Water Resources Development Act (WRDA) of 2007 (PL 110-114). EPR requirements apply to pre-authorization feasibility studies and various other applicable studies as defined in WRDA 2007, the Information Quality Act, and associated Corps guidance. EPR costs are 100 percent Federal and generally will not exceed \$500,000 per review. EPR is required for studies that will recommend projects exceeding \$45 million in total costs, as well as studies where there is substantial risk to public safety, which employ novel methods, engender controversy, or meet other conditions as described in the legislation and regulations.

JUSTIFICATION:

Independent (or External) Peer Review is a statutory requirement.

APPROPRIATION TITLE: General Investigations, FY 2009

FEMA/ Map Mod Coordination

Study	Total Estimated Federal Cost	Allocation Prior to FY 2008	Tentative Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
FEMA/ Map Mod Coordination	Annual Program	700,000	1,476,000	1,500,000	1,500,000 Annual Program

SCOPE:

This effort continues a set of ongoing activities coordinating the U.S. Army Corps of Engineers (USACE) Flood Risk Management Program with the Department of Homeland Security Federal Emergency Management Agency's (FEMA) Map Modernization Program (MapMod). MapMod is a program to digitize and update Flood Insurance Rate Maps (FIRMs). After the initial phase of MapMod is complete (projected to be 2010), the program will transition into a maintenance program with the objective of keeping FIRMs updated. Strong interdependencies between USACE flood risk management activities and MapMod create a critical need for close collaboration between the two agencies throughout both the initial and maintenance phases of MapMod to establish and maintain a regular cycle of FEMA flood hazard map updates that is coordinated with ongoing USACE levee inspections, certifications and updates to the USACE levee inventory and database. Additionally, agency coordination is necessary to maintain, update, and communicate flood hazard information so the public can make informed floodplain management decisions. Finally, this collaboration is needed to ensure compatibility between USACE and FEMA programs and thus improve program implementation for the non-Federal flood risk management community.

Fiscal Year 2009 funding and beyond will continue to build on work accomplished in FY 2006, 2007 and 2008, using approximately \$2,200,000 in funds drawn from multiple sources. Specifically, the range of continuing activities involved in this effort includes,

- implementing risk communication measures to effectively inform the public and decision makers of the risk information generated by the Map Modernization Program, particularly targeting densely populated areas subject to high residual risk,
- coordinating the sharing of hydrologic and hydraulic information previously developed for USACE studies for Map Modernization purposes,
- collaborating to reduce flood risk in areas where Map Modernization reanalysis has identified increased risks,
- improving Federal inspection, monitoring and enforcement of levee operation and maintenance,
- coordinating the development of levee certification guidance for USACE districts and FEMA regions,
- supporting the work of the National Levee Policy Committee to review levee policy and recommend warranted changes, and
- sustaining the activities of the Interagency Flood Risk Management Committee to allow senior leaders from FEMA and USACE to meet on a regular basis to coordinate agency flood risk-related policies and programs.

The entire effort will be carried out as an integral element of the USACE Flood Damage Reduction Program – an ongoing umbrella program directed by USACE Civil Works (CECW) and managed and executed through the USACE Institute for Water Resources (IWR). The Flood Damage Reduction Program functions to integrate and synchronize the flood damage reduction projects, programs and authorities of the US Army Corps of Engineers with counterpart projects, programs and authorities of FEMA, other Federal agencies, state organizations, and regional and local agencies. Priorities across the multiple activities included in this scope will be set by the USACE Institute for Water Resources, in collaboration with USACE Senior Executives comprising the Steering Committee for the Flood

Damage Reduction Program and FEMA. Input from key stakeholder groups, such as the Association of State Floodplain Managers (ASFPM) and the National Association of Flood and Stormwater Management Agencies (NAFSMA), will be taken into consideration when setting these priorities.

APPROPRIATION TITLE: General Investigations, FY 2009

JUSTIFICATION:

FEMA has embarked on a billion dollar, 5-year, "Map Modernization Program" (MapMod) to digitize and update the nation's Flood Insurance Rate Maps (FIRMs). The program is then intended to transition into a maintenance program for the purpose of maintaining updated FIRMs. Updating and maintaining FIRMs is critical to effective flood hazard management. They serve as the primary Federal tool for communicating flood risk, as well as the basis for setting flood insurance premiums and designating Special Flood Hazard Areas (areas subject to the 1%-annual-chance flood) where building code restrictions and mandatory flood insurance purchase requirements are in effect.

The progress of the MapMod Program is integrally tied to the USACE Flood Risk Management (FRM) and Rehabilitation and Inspection Programs (RIP) because the location, condition and performance of levees plays a significant role in determining what areas will be mapped into flood hazard areas on the FEMA maps. As such, USACE levee policy affects both the progress and the quality of the outputs from the FEMA Map Modernization program.

Likewise, the performance of the USACE FRM and RIP programs are affected by the new flood risk information generated by MapMod, and the resulting demand for further Federal investment in flood risk management projects. Additionally, the MapMod process has created a critical need for USACE data and technical expertise to evaluate levee conditions and performance for the purposes of "certification"; that is, determining that a levee provides sufficient protection against the 1%-annual-chance flood such that the protected area behind the levee will not be mapped into a Special Flood Hazard Area.

Because of these interdependencies between USACE programs and MapMod, there is a critical need for close collaboration between USACE, FEMA, and state and local governments both during and after MapMod to maintain, update, and communicate flood hazard information so the public can make informed floodplain management decisions.

This effort will continue to build on the coordination work that has already taken place between FEMA and USACE to ensure consistent FEMA-USACE communication to the public on the MapMod Program and related flood risk issues and to leverage resources when working on similar activities or within the same geographic area.

FY 2007 & 2008 Accomplishments:

Throughout Fiscal Years 2007 and 2008, USACE has and will continue to actively support the MapMod Program, through a variety of means including:

- Working with FEMA to develop and initiate a plan to notify owners of levees within USACE programs and that are of immediate concern because they clearly pose a threat to public safety based on inspection results. USACE and FEMA coordinated efforts to contact the owners of levees of concern, inform them of the levee conditions and of the options available to remediate the levee or otherwise address the resulting public safety hazards,
- Contributing to FEMA's development of a Provisionally Accredited Levee policy to protect public safety, while still providing levee owners the time needed to verify levee certifications as part of the MapMod process,
- Working with FEMA to coordinate and develop levee certification guidance for USACE districts and FEMA regions,
- Conducting quarterly meetings of FEMA and USACE leadership to ensure that the two agencies maintain complementary policies and practices as the FEMA MapMod Program and USACE Flood Risk Management Program move forward,
- Providing input to the development of the National Levee Inventory to ensure that the inventory is the central location of the most current information to be utilized by USACE, FEMA, and others for activities including risk assessments, levee certification determinations, project inspections and future efforts to update flood hazard maps,

APPROPRIATION TITLE: General Investigations, FY 2009

- Developing recommendations improving national levee policy through a report prepared by the Interagency Levee Policy Committee, and
- Providing ongoing support of both FEMA regions and levee owners at the USACE district level by providing data for the mapping studies and information to communities affected by the MapMod Program.

FY 2009 Activities:

Fiscal Year 2009 funding will be used to expand upon previous FEMA and USACE coordination activities to support the implementation of the MapMod Program. Specifically, Fiscal Year 2009 activities will include:

- Implementing risk communication measures to inform the public and decision makers of the risk information generated by the Map Modernization Program, particularly targeting densely populated areas subject to high residual risk. These risk communications measures will be coordinated with and guided by the larger, USACE risk communication strategy developed under the National Flood Risk Management Program and referenced in the National Flood Risk Management Program J-sheet.
- Sustaining vital coordination activities at the USACE district level, including leveraging information and data from past and ongoing USACE studies to support MapMod studies, conducting meetings with local communities to explain the impacts of the FEMA MapMod Program, and, in cases where MapMod results in a levee decertification, assisting communities in assessing the next steps available to them.
- Continuing quarterly meetings of FEMA and USACE leadership to maintain tight coordination between the two agencies as MapMod is carried out, and to jointly develop new policy that improves flood risk management.
- Continuing implementation of the plan initiated in Fiscal Year 2006 to notify and inform owners of levees that pose an immediate threat to public safety, based on inspection results.
- Collaborating to reduce flood risk in areas where Map Modernization reanalysis has identified increased risks.
- Continue joint efforts with FEMA, with the input from key stakeholder groups such as ASFPM / NAFSMA, to develop field guidance and establish new policies needed to ensure consistency between the two agencies in implementing the Flood Risk Management Program, including engineering and planning guidance relating to levee certification.
- Contributing to efforts to improve Federal inspection, monitoring and enforcement of levee operation and maintenance.
- Conduct policy studies examining options for mitigating flood risks, with a focus on California, particularly in areas where MapMod has highlighted a sizable residual risk brought to light by levee decertifications.

Priorities across the multiple activities included in the scope will be set by the USACE Institute for Water Resources, in collaboration with USACE Senior Executives comprising the Steering Committee for the Flood Risk Management Program and FEMA. Input from key stakeholder groups, such as the Association of State Floodplain Managers (ASFPM) and the National Association of Flood and Stormwater Management Agencies (NAFSMA), will be taken into consideration when setting these priorities. The Silver Jackets Program will be an essential tool in accomplishing these coordination activities.

APPROPRIATION TITLE: Investigations, FY 2009

Water Resources Priorities Study

Study	Total Estimated Federal Cost	Allocation Prior to FY 2008	Tentative Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
Water Resources Priorities Study	TBD	0	0	2,000,000	TBD

SCOPE: This investigation, authorized by Section 2032 of the Water Resources Development Act of 2007, will culminate in a report on the Nation's vulnerability to damage from flooding. The investigation will be divided into two elements. The first is a technical element, which will provide background for the second part of the report. This technical section will examine the risk to human life, the risk to property, and the comparative risks faced by different regions of the United States. It will provide examples to explain why the risk of flooding is greater in some floodplain and some coastal locations than in others, and why and how the risk is changing over time. It will assess existing information on: (1) the number of people who live or work in places where they are potentially at risk of flooding; (2) the value of the property that is potentially at risk of flooding; and (3) actual flood-related losses (e.g., the frequency and magnitude of large losses, and where such losses have been occurring), in order to identify possible nationwide trends. This section of the report will also explore the extent to which existing programs may be encouraging development and economic activity in flood-prone areas

The second element will focus on public policy. This section of the report will assess the extent to which existing programs operate (individually and together) to address flood risk reduction priorities; develop recommendations for improving the effectiveness, efficiency, and accountability of these programs; and propose a strategy to implement those recommendations.

The report will look at not only programs of the Corps of Engineers, but at a broad array of Federal, state, and local programs, including flood insurance, local land use planning, emergency response and recovery, disaster assistance, and economic development programs.

Fiscal Year 2009 activities will include:

- Assembling an interagency policy group.
- Developing scopes of work for both elements of the effort.
- Determining the best way to complete the technical and policy elements.
- Initiate work on the technical element.

Fiscal Year 2010 activities will include:

- Complete work on the technical element.
- Policy officials will develop recommendations and an implementation strategy for improving existing programs.
- The compilation/preparation of a final report for submittal to Congress.

JUSTIFICATION: This investigation could lead to significant improvements in existing Federal programs, authorities, and roles.

National Shoreline

Study	Total Estimated Federal Cost	Allocation Prior to FY 2008	Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
National Shoreline	7,000,000	2,074,000	615,000	375,000	4,551,000

SCOPE:
 The study is an interagency effort to describe the extent and cause of shoreline erosion on all the coasts of the United States and describe the economic and environmental impacts of that erosion. The study will analyze and recommend the appropriate level of Federal and non-Federal participation in shore protection and beach nourishment, and the advisability of using a systems approach to sediment management for linking the management of all (shore protection, navigation channel dredging, and environmental restoration and preservation) projects in the coastal zone so as to conserve and efficiently manage the effects of erosion.

ACCOMPLISHMENTS:
 The study was initiated with FY2002 funding. The Fiscal Year FY2008 efforts included:

- 1) A study assessment was drafted for interagency review and coordination. The assessment was conducted to recommend study changes as a result of accomplishments to date, and significant events since 2002 that are shaping National shore management policies and paradigms. The significant events include the public release of the PEW and National Ocean Commission reports in 2000, flooding of New Orleans and Gulf Coast Hurricane Disasters in 2004, the continuing recovery of the Gulf Coast, formation of regional coastal state alliances, and the Coastal Zone Management Act reauthorization forums.
- 2) The study continued to support Corps participation in the systematic approach to sediment management reflected in the Corps Regional Sediment Management (RSM) process, regional coastal coalitions from which coastal policies are evolving and emerging, and Corps studies and participation in USGS and NOAA studies describing the state of the Nation's shores, describing systematic movement of sand along the Gulf Coast, and incorporate of the shoreline metadata into the National Coastal Databank.
- 4) A NOAA agency role analysis framework was used by the Corps to prepare an agency role assessment model for interagency consultation and agency role analysis input.
- 5) The study supported Corps participation in shore technical and policy forums in an effort to identify and build collaborative and cooperative shore management framework and shared data collection, analysis and distribution.
- 6) A one time earmark of \$240,000 was used to initiate a systems approach to the operations and maintenance of existing Corps coastal protection projects in the North Atlantic region.

JUSTIFICATION:
 FY 2009 funding would continue work on this study. The Fiscal Year 2009 efforts include:

1. \$75,000 to continue Corps participation in the various Federal and non-Federal Regional Sediment Management and coastal alliances around the nation.
2. \$75,000 to assess the application of a systems approach to shore protection project management
3. \$150,000 to complete analysis of Federal and non-Federal agency roles and levels of participation in shore management
4. Section 215 of the Water Resources Development Act of 1999 provides the authority for conducting this study. Completion presently scheduled for 30 Sep 2020 at present rate of funding.

APPROPRIATION TITLE: Investigations, FY 2009

Planning Support Program (PSP)

SCOPE: The U.S. Army Corps of Engineers Civil Works Program requires a strong planning program to address the full range of complex water resource problems within its mission responsibilities. A strong planning program, which strengthens the capabilities of the Corps' planners, provides the framework that leads to quality decision documents to support the water resources needs of the Nation. This program is the link to our ability to be that world-class technical leader and world-class public engineering organization of our Civil Works Strategic Plan. The fundamental role of the Corps planning function is the development of technically sound and policy compliant decision documents. The three major components of the program, Planner Capability and Training; Planning Models Improvement, and the National Planning Centers of Expertise improve the long term capabilities within the Planning Community. The need to maintain a strong planning program was emphasized by Congress in the Water Resources Development Act (WRDA) of 1986 (P.L. 99-662, Sec. 936) that states, "The Secretary shall study and evaluate the measures necessary to increase the capabilities of the United States Army Corps of Engineers to undertake the planning and construction of water resources projects on an expedited basis and to adequately comply with all requirements of law applicable to the water resources program of the Corps of Engineers." Later in Section 216 of the Water Resources Development Act of 2000, Congress asked the National Academies to review Corps' planning and project review practices. The National Research Council (NRC) recognized the many challenges and water resource planning and management controversies that the Corps faces. The NRC recommendations are among those being used to shape the Corps in the 21st Century. The Planning Support Program enables the Corps to move forward in response to the recommendations. The Water Resources Development Act (WRDA) of 2007, General Provisions, includes numerous sections related to Corps' planning activities that impact planner capability improvement.

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for the Planning Support Program	\$3,970,000
Appropriation for FY 2008	\$2,460,000
Allocation Requested for FY 2009	\$2,100,000
Decrease of FY 2009 over FY 2008	(\$ 360,000)

JUSTIFICATION: The Planning Community of Practice, encompassing all planners throughout the Corps, supports the civil works mission by establishing and maintaining the necessary planning and policy capabilities, programs and initiatives in traditional and emerging mission areas to effectively utilize Corps capability in addressing national water resource and environmental problems. The main focus of the FY09 request is support to the Planner Capability and Training component of the overall program by continued funding of the Planning Associates (PA) Program. This is an advanced training opportunity for Corps' water resource planners at the journeyman level. The goals of the PA program are to broaden the journeyman planner's competencies in solving complex water resources problems; to strengthen their leadership skills, and to retain critical planner capability within the Corps. The PA program has a long history and was reestablished in its current format in 2003. It is approximately 20 courses delivered in 1-3 week TDY periods spread over 11 months. In the past five years, 54 planners have completed the program. Developing the next generation of planning leaders is necessary to fulfill the commitments to improving planning capability required by Section 216 and Corps

APPROPRIATION TITLE: Investigations, FY 2009

reform recommendations. The amount of \$2,100,000 will be used to centrally fund a class of 10 or 12 students and to support the instructor and other field related expenses necessary to deliver this quality program.

ACCOMPLISHMENTS IN FY 08

This was a new program in FY 2008 to integrate various initiatives in response to Section 216 recommendations; Corps reform initiatives; the Chief's Actions for Change; and the planning related provisions of WRDA 2007. The program has retained its priority but has received only limited funding to support the three components. The Planning Associates Program of 2008 is underway and 12 members will complete the program in September 2008. Future success of the overall Planning Support Program requires a sustained and reliable source of funding.

APPROPRIATION TITLE: Investigations, FY 2009

Tribal Partnership Program (Sec. 203, WRDA 2000)

SUMMARIZED FINANCIAL DATA:

Estimated total (FY 2000-2008)	7,100,000
Allocation for FY 2005	3,850,000
Allocation for FY 2006	750,000
Allocation for FY 2007	2,320,000
Allocation FY 2008	984,000*
Allocation request for FY 2009	1,000,000**

* Assumed allocation. Final, actual allocations yet to be determined.

** Initial General Investigations request. All previous appropriations under Construction.

AUTHORIZATION: Section 203 of WRDA 2000 authorizes the study of flood damage reduction, environmental restoration and restoration and protection, preservation of cultural and natural resources, and “such other projects as the Secretary, in cooperation with Indian Tribes and the heads of other Federal agencies, determines to be appropriate.” Projects follow the standard Civil Works planning process – a reconnaissance report, fully Federally funded, and a feasibility report, cost shared 50/50 with in-kind contributions allowed. Section 203 was reauthorized in WRDA 2007. The Secretary is now authorized to carry out water-related planning activities in addition to studying the feasibility of various issues. Also, language specifically allows studies on Indian lands in the State of Oklahoma. Added to the list of ‘matters to be studied’ are watershed assessments and planning studies.

JUSTIFICATION: Section 203, Tribal Partnership Program, was enacted to provide Tribes with various opportunities to partner with the Corps. This authorization acknowledges the Federal Trust responsibility to Tribes as governmental entities, and allows the Corps to fulfill this responsibility during the course of carrying out its essential missions. Its reauthorization in WRDA 2007 has expanded its scope. Because the scope is so broad, various types of projects may be considered – floodplain mapping, water control management, self-reliance and economic capacity building, technical capacity building, erosion control, comprehensive planning, emergency management, water quality, water supply, community infrastructure, HTRW assessment and clean up, and a host of other projects. Section 203 is the only authorization the Corps has that specifically targets Tribes nationwide as partners, thus identifying opportunities to work with over 560 Federally recognized Tribal Nations that otherwise might not be reached. With the growing awareness of the program, other Tribes have begun to approach the Corps to participate in these studies. Tribes showing interest in the Program for new studies include the Flandreau, Lower Brule Sioux, Cheyenne River Sioux, Bad River Tribe, Maliseets, Isleta Pueblo, Santa Clara Pueblo, St. Regis Mohawk and Fond du Lac.

PROPOSED ACTIVITIES FOR FY 2009: Albuquerque District will complete 203 studies and initiate new studies with various Pueblos and Tribes. Omaha District will complete a study for the Lower Brule Sioux Tribe. New England District will initiate at least two reconnaissance studies for Tribes in Maine. Funds will also be allotted to other Districts to initiate studies that have been proposed by Tribes.

APPROPRIATION TITLE: Investigations, FY 2009

Tribal Partnership Program (Sec. 203, WRDA 2000) (continued)

ACCOMPLISHMENTS IN PRIOR YEARS: Since its enactment, the majority of Section 203 funds have gone to Alaska to study erosion, including the feasibility of moving coastal villages inland. A major coastal erosion study and technical assistance to several Alaskan Villages have been funded in part by Sec. 203 monies. The Corps is currently studying the options of erosion control versus moving the villages inland. This effort has gone on for some time due to its complexity and will likely continue for several years to come. Villages under study include Bethel, Newtok, Dillingham, Shishmaref, Kaktovik, Kivalina and Unalakleet.

Other Districts have now had the opportunity to utilize Section 203 funding. Buffalo, Detroit, New England Omaha, Albuquerque and Sacramento Districts submitted several proposals. Omaha, Albuquerque and Sacramento received earmarks for reconnaissance studies with the Lower Brule and Cheyenne River Sioux, as well as the Shoshone-Bannock (Omaha); the Pueblos of Santa Ana, San Juan, San Ildefonso, Santa Clara, Santo Domingo, and Zuni, as well as the Jicarilla Apache (Albuquerque); and the Washoe (Sacramento). Several positive 905(b) reports have been submitted to date – San Ildefonso Watershed Study and Pleasant Point (Passamaquoddy) Ecosystem Restoration, Little River Band of Ottawa Indians ecosystem restoration and cultural resources preservation project, Chippewa Community Ecosystem Restoration Study, and the Little River Band of the Ottawa Nation Ecosystem Restoration and Cultural Resources Study. Negative 905(b) reports include cultural resources studies for the Tuscarora and Wampanoag Nations. Several studies in Pueblos in New Mexico (San Ildefonso, Santo Domingo, Santa Ana and Jemez) are proceeding to the feasibility stage. These studies include environmental restoration and flood damage assessment studies. Tribes thus far involved have stated that even if their project does not proceed to feasibility, the program is still valuable because an issue has been studied and there is a report pulling together a great deal of information that would otherwise not have been available.

REMAINING ITEMS

CONSTRUCTION

APPROPRIATION TITLE: Construction, FY 2009

Aquatic Plant Control (APC) Program

Allocation FY 2008

\$3,936,000

Tentative Allocation FY 2009

\$3,500,000

AUTHORITY: The APC program is authorized by the River and Harbor Act of 1958 (P.L.85-500) as amended by Section 104 of the River and Harbor Act of 1962 (P.L. 87-874), Section 302 of the River and Harbor Act of 1965 (P.L. 89-298), Sections 103, 105, and 941 of the Water Resources Development Act of 1986 (P.L. 99-662), Section 225 of the Water resources Development Act of 1996 and Section 205 of the Water Resources Development Act of 1999 (P.L. 106-53). The APC program has an annual statutory spending limit of \$15,000,000.

GENERAL: The Aquatic Plant Control Research Program (APCRP) is the nation's only federally authorized research program providing the technology to manage invasive aquatic plant species. The APCRP is developing cost-effective, environmentally compatible aquatic plant control capabilities, including biological, chemical, ecological, and integrated control methods. The information obtained through this research continues to greatly improve the efficacy and diversity of management options, while minimizing adverse effects on the environment. Funding will ensure continued development of the new technologies needed for cost-effective aquatic plant control for existing and new invasive aquatic plant species for government entities across the nation. Language in the FY 06 budget conference report strongly encouraged the Corps to reestablish its Aquatic Plant Control cost share program. Nearly 75 million navigable aquatic acres nationwide are now infested with invasive aquatic plants in navigable waterways across the nation. Failure to control the infestations will result in an escalating threat to the national economy by impacting the ability of commercial navigation to move through navigable waterways and increase the risk of state and regional economies being impacted because of impeded commercial navigation, a loss of capacity for flood control storage, decreases in potable water quality that threaten public health, increase risk to endangered species, losses of volume for water storage for agricultural irrigation, and negative impacts to fish and wildlife habitat. These infestations have also spread to Corps projects and are impacting the ability to store water for flood control and impact the ability to generate hydroelectricity. Funding will also ensure Corps capability to demonstrate new cost efficient and environmentally friendly control technologies on limited field sites to government entities across the nation.

BUDGET REQUEST: The \$3,500,000 requested for Fiscal Year 2009 will be used for continued research efforts to further development of ecologically based, integrated plant management strategies for invasive aquatic plant (i.e., Eurasian watermilfoil, hydrilla, etc); control technologies for preventing the initial introduction and spread of invasive aquatic plant species over large acreages; replacing problem invasive aquatic plants with native species (providing much-improved aquatic habitat for fish and wildlife); and, continuing research work on biological and chemical control technologies. New work is also proposed for development of control technologies for giant salvinia and calerpa. These new technologies will be a significant asset in implementing clean water initiatives by restoring aquatic systems harmed by invasive aquatic plant species. The U.S. Army Engineer Research and Development Center will transfer this new technology to government entities quickly and efficiently. R&D done with nationwide benefits will be 100% federally funded. In recent years the APCRP has received approval and provided for the release of 12 insect biological control agents on four target plants (waterhyacinth, hydrilla, water lettuce, and alligatorweed). Guidance on rearing, release, and establishment procedures that are critical to the utilization of the above insect biological control agents have been developed. The APCRP has played a major role, in cooperation with industry, in the USEPA registration and re-registration of seven chemicals; assisted industry in the development and evaluation of improved, environmentally compatible and user-safe formulations and carriers for three aquatic herbicides; and assisted industry in the development of bioassays for determining effectiveness of aquatic herbicides under field conditions. An aquatic herbicide manual that provides guidance on the safe and effective use of all registered products was produced and distributed. PC-based simulation models for operationally proven systems and biological control techniques for aquatic plant and growth models were also developed.

APPROPRIATION TITLE: Construction, FY 2009

Actions for Change to Improve Construction

Total Estimated Federal Cost	Allocation Prior to FY 2008	Allocation FY 2008	Tentative Allocation FY 2009	Additional to Complete After FY 2009
72,700,000	725,000	0	4,600,000	68,100,000

SCOPE:

USACE has embarked on an ambitious program for quickly incorporating the lessons learned from Hurricane Katrina into “Actions for Change”. The 4 Themes in the Actions for Change are interrelated and interdependent, and will be fully integrated for execution. Construction General activities are:

CG - Theme 2 – Risk Informed Decision Making (225,000)

Will emphasize integrated risk management to use risk and reliability concepts in planning, design, construction, operations and major maintenance and to improve its review of completed works program. Conduct workshops to communicate residual risk associated with levees and demonstrate performance of levee certifications using Risk Analysis, HEC-FDA, and other appropriate tools. Develop training materials for multiple disciplines including H&H, geotechnical, and structural engineers. Update guidance for levee assessment, certification, and residual risk communication.

CG - Theme 3 – Communication of Risk to the Public (1,075,000)

Will emphasize clear and candid communication of risk both internally and externally, supporting risk-informed decision making. Specifically, develop new ways to characterize and communicate public health and safety and infrastructure risk. Conduct detailed review and revision of existing planning, engineering and operations guidance to include risk communications. Apply new system framework for multipurpose projects that incorporates public involvement in risk reduction strategies.

CG - Theme 4 – Professional and Technical Expertise (3,300,000)

Will emphasize professionalism and technical competence to provide responsible and competent public service professionalism, with life safety as a fundamental driver. Specifically, update flood control infrastructure guidance and expedite transfer of new guidance to Districts; infuse independent review process; develop system of accountability and process for periodic assessment and review of organizational behavior at each level of the organization; improve technology transfer, infusion. Develop mandatory training program for all technical professionals requiring certification. Expedite R&D related to IPET identified deficiencies and develop and implement a balanced investment approach between basic and applied research and demonstrations.

JUSTIFICATION:

USACE must improve its ability to provide safe, reliable projects working together as a system with increased economic and environmental benefits through an integrated, comprehensive and systems based approach that places the highest priority on protection of public health and safety. A systems and risk-based approach to capture the impacts of incremental changes that result from natural processes and human activities throughout the lifecycle, combined with the planned organizational changes and Dynamic Independent Review, will allow USACE to more fully address risks due to flooding and coastal storms in their decision-making. USACE will increase emphasis on aligning Federal, state, and local projects, programs and authorities for risk management; on making decisions collaboratively; on improving communication about residual risk, and on explaining the public’s roles and responsibilities.

FY 2008 Accomplishments:

FY 2008 funding enabled USACE to update planning and engineering guidance to incorporate safety and resilient safeguard measures that will preclude rapid formation of failure mechanisms in local protection systems; conducting workshops to expedite updating engineering and planning guidance (obtaining rapid feedback on critical issues and transferring changes into practice); improving professionalism and accountability in decision making by developing certification requirements for critical engineering services and products; develop new methods for communicating the significance of residual risks. Begin improving the understanding and capability of the engineering workforce to reduce residual risks of proposed alternatives, to design effective modifications required for safety, and to assess the safety and reliability of completed local protection systems. Expedite R&D capability to make emergency repairs and accounting for all realistic failure mechanisms by investing in innovative solutions. FY 2008 activities were accomplished as a component of various line items.

FY 2009 Activities:

FY 2009 funding builds upon work accomplished to respond to critical needs identified by the Interagency Performance Evaluation Task Force (IPET), Hurricane Protection Decision Chronology (HPDC), the National Academy of Science, the American Society of Civil Engineers' External Review Panel, and others in the wake of Hurricane Katrina. USACE will incorporate the new methods in programs and activities funded in the Operation and Maintenance account. FY 2009 funding will be used to infuse the methods, technologies, and processes developed in FY 2008 to USACE Districts and major stakeholders; will update planning and engineering systems guidance to reflect recommendations made by IPET and related groups; continue R&D for innovative methods to rapidly characterize levee, dike, dam, and floodwall stability and provide sustainable protection from erosion by waves and overtopping, as well as sustainable emergency repair; pilot regionalization of technical specialties, regional Risk Managers, and district Principal Engineers; develop a plan for periodic organizational reviews; continue to improve the understanding and capability of the engineering workforce to reduce residual risks of proposed alternatives, to design effective modifications required for safety, and to assess the safety and reliability of completed local protection systems; and pilot improved risk communication methods that increase public involvement in risk reduction. Begin developing new ways to involve the public in evaluating alternatives, making decisions, and preparing for flood emergencies.

APPROPRIATION TITLE: Construction, FY 2009

Aquatic Ecosystem Restoration (CAP Section 206)

Appropriation for FY 2008	\$29,520,000
Allocation Requested for FY 2009	\$10,296,000

GENERAL: Section 206 of the Water Resources Development Act of 1996 (PL 104-303), as amended, authorizes up to \$50,000,000 annually to carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest and are cost-effective. Non-Federal interests shall provide 35 percent of the cost of construction including provision of all lands, easements, rights-of-way, and necessary relocations. Non-Federal interests pay 100 percent of the cost of operation, maintenance, replacement and rehabilitation. Not more than \$5,000,000 in Federal funds may be allocated to a project at a single locality.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 206 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
EUGENE D PONDS, OR	OR
AQUATIC ECOSYSTEM RESTORATION FOR ROSE BAY, VOLUISIA CO., FL	FL
ARKANSAS RIVERS FISH HABITAT	CO
ORLAND PARK, IL	IL
VENTURA MARSH	IA
JACKSON CREEK	GA
STORM LAKE, IA	IA
STEPHENVILLE WWTP	TX
CARPENTER CREEK, WA	WA
ST. HELENA-NAPA RIVER PROJECT	CA
GOOSE CREEK, CO	CO
MALDEN RIVER ECO RESTORATION	MA
HOFMANN DAM, IL	IL
EUGENE FIELD, IL	IL
DRAYTON DAM, ND	ND
CHRISTINE/HICKSON DAMS	ND
CONCORD STREAMS RESTORATION	NC
DENTS RUN, PA	PA
NORTHWEST BRANCH, MD	MD
WILSON BAY RESTORATION	NC
COORDINATION SECTION 206	US

4 February 2008

APPROPRIATION TITLE: Construction, FY 2009

Emergency Streambank and Shoreline Protection (CAP Section 14)

Appropriation for FY 2008	\$9,840,000
Allocation Requested for FY 2009	\$2,301,000

GENERAL: Section 14 of the Flood Control Act of 1946 (PL 79-526), as amended, authorizes up to \$15,000,000 annually for the construction of emergency bank protection works to prevent flood damages to highways, bridge approaches, public works, churches, hospitals, schools, and other non-profit public services. Each project selected must be economically justified and complete within itself. Federal participation under this authority is limited to a cost of not more than \$1,500,000 at any single locality.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 14 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
WESTFIELD RIVER AGAWAM, MA	MA
WESTFIELD RIVER CUMMINGTON, MA	MA
SHOTWELL CREEK, MO	MO
STRANGER CREEK, AT K-32, KS	KS
ARGOSY ROAD BRIDGE, MO	MO
WHORTON BEND, ETOWAH CO, AL	AL
SOUTH BR. RAHWAY RIVER, NJ	NJ
QUODDY NARROWS, LUBEC, ME	ME
IOWA RIVER, JOHNSON COUNTY, IA	IA
CAULKS CREEK, MO	MO
SACANDAGA RIVER, WELLS, NY	NY
RANSOM CREEK, HOPKINS ROAD	NY
BARNES CTY, KATHRYN, ND	ND
PLATTE RIVER BRIDGE, MO	MO
GOLDEN EAGLE BANK EROSION	KS
LIDY CREEK, PA	PA
WEST FORK RIVER, WESTON, WV	WV
FOX RVR, KAHOKA	MO
BEAR CREEK, IA	IA
COORDINATION SECTION 14	US

APPROPRIATION TITLE: Construction, FY 2009

Flood Control (CAP Section 205)

Appropriation for FY 2008	\$42,312,000
Allocation Requested for FY 2009	\$2,617,000

GENERAL: Section 205 of the Flood Control Act of 1948 (PL 80-858), as amended, authorizes up to \$55,000,000 annually for construction of flood control projects where such construction is not already specifically authorized by Congress. Projects are designed to provide the same complete project and same degree of protection provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation is limited to \$7,000,000 per project at a single locality.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 205 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
BRISTOL, TN	TN
BLACKSNAKE CREEK, ST. JOSEPH	MO
WHITE SLOUGH, CA	CA
STEELE CREEK, NY	NY
PLATTE RIVER, FREMONT, NE	NE
MAD CREEK	IA
SALISBURY, MA	MA
KEOPU-HIENALOLI STRM, HI	HI
WV STATEWIDE FLOOD WARNING SYSTEM	WV
WYNNE, AR	AR
BEN HILL COUNTY, GA	GA
PECAN CREEK	TX
RIO GUAMANI-GUAYA	PR
POPLAR BROOK, NJ	NJ
RIO DESCALABRADO	PR
WAILELE STRM, OAHU, HI	HI
FARMERS BRANCH, TX	TX
LITTLE R DIVERSION, MO	MO
DUCK CREEK FLOOD WARNING SYSTEM, OH	OH
LIVINGSTON, MONTANA	MT
COORDINATION SECTION 205	US

4 February 2008

APPROPRIATION TITLE: Construction, FY 2009

Navigation Improvements (CAP Section 107)

Appropriation for FY 2008	\$7,380,000
Allocation Requested for FY 2009	\$559,000

GENERAL: Section 107 of the River and Harbor Act of 1960 (PL 86-645), as amended, authorizes up to \$35,000,000 annually for construction of navigation projects where such construction is not already specifically authorized by Congress. Projects are designed to provide the same complete navigation project that would be provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation cannot exceed \$7,000,000 per project.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 107 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
KAHOOLAWE SBH, HI	HI
MACKINAC ISLE. HARBOR BREAKWALL	MI
BUCKS HBR, MACHIASPORT, ME	ME
WOODS HOLE HBR FALMOUTH, MA	MA
RHODES POINT, SOMERSET CO.	MD
NASSAWADOX CREEK, VA	VA
CHARLESTOWN BREACHWY, RI	RI
SAVOONGA HARBOR	AK
COORDINATION SECTION 107	US

APPROPRIATION TITLE: Construction, FY 2009

Project Modifications for Improvement of the Environment (CAP Section 1135)

Appropriation for FY 2008	\$29,520,000
Allocation Requested for FY 2009	\$6,544,000

GENERAL: Section 1135 of the Water Resources Development Act of 1986 (PL 99-662), as amended authorizes review of Corps water resources projects to determine the need for structural or operational modifications for the purpose of improving the quality of the environment in the public interest; to determine if the operation of such projects has contributed to the degradation of the quality of the environment; and to carry out a program of such modifications that are feasible and consistent with authorized project purposes. Up to \$40,000,000 may be appropriated annually. The non-Federal share of the cost of any modifications will be 25 percent. Not more than \$5,000,000 in Federal funds may be expended on any single modification or measure pursuant to Section 1135.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 1135 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
RATHBUN LAKE HABITAT RESTORATION	IA
LOWER COLUMBIA SLOUGH	OR
LOWER KINGMAN ISLAND	DC
GREEN RVR DAM, MOD	KY
PRISON FARM, ND	ND
BLOOMINGTON STATE PARK, MO	MO
BLUE VALLEY WETLANDS, JACKSON	MO
SHORTY'S ISLAND	WA
AQUATIC HABITAT RESTORATION	NM
BRAIDED REACH	WA
SAND HILL RIVER, MN	MN
INDIAN RIDGE MARSH CHICAGO, IL	IL
KAUNAKAKAI STR, MOLOKAI	HI
EAGLELAND ECOSYS	TX
GERRITSEN CREEK, NY	NY
TAPPAN LAKE, OH	OH
KANAHA POND, MAUI, HI	HI
DUCK CREEK, MO	MO
COORDINATION SECTION 1135	US

APPROPRIATION TITLE: Construction, FY 2009

Shore Protection Projects (CAP Section 103)

Appropriation for FY 2008	\$4,428,000
Allocation Requested for FY 2009	\$8,000

GENERAL: Section 103 of the River and Harbor Act of 1962 (PL 87-874), as amended, authorizes up to \$30,000,000 annually for development and construction of hurricane and storm damage protection measures along the Nation's shorelines where not already specifically authorized by Congress. Projects under this authority are formulated to provide the same complete project and degree of protection provided under regular authorization procedures. Each project selected must be economically justified and complete within itself. Federal cost participation is limited to \$3,000,000 per project.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 103 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
COORDINATION SECTION 103	US
LINCOLN PARK BEACH SEATTLE	WA
MARSHFIELD, MA	MA
VETERAN'S DRIVE SHORELINE, ST.THOMAS, U.S.V.I.	VI
UNALAKLEET STORM DAMAGE REDUCTION, UNALAKLEET, AK	AK
PHILADELPHIA SHIPYARD, PA	PA
NANTASKET BEACH	MA
ATHOL SPRINGS, LAKE ERIE	NY
FT SAN GERONIMO	PR
LASALLE PARK, BUFFALO, NY	NY
OLD LAKESHORE ROAD	NY
CHESAPEAKE BAY SHORELINE, HAMPTON	VA
LAKE ERIE AT PAINESVILLE	OH

APPROPRIATION TITLE: Construction, FY 2009

Snagging and Clearing for Flood Damage Reduction (CAP Section 208)

Appropriation for FY 2008	\$0
Allocation Requested for FY 2009	\$8,000

GENERAL: Section 208 of the Flood Control Act of 1954, as amended, authorizes measures to reduce nuisance flood damages caused by debris and minor shoaling of rivers. Work under this authority is limited to clearing and snagging or channel excavation and improvement with limited embankment construction by use of materials from the channel excavation. Projects implemented under this authority have the same project cost sharing requirements as structural flood damage reduction projects implemented under specific congressional authorization. The non-Federal sponsor is responsible for a minimum of 35 percent of total project costs to a maximum of 50 percent of total project costs during the design and implementation period. Federal participation limit is \$500,000 per project.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 208 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
COORDINATION SECTION 208	US
ORAN, MO	MO
BLACKWELL LAKE, BLACKWELL, OK	OK
MUSCATATUCK R LOG JAM, SCOTT C	IN

APPROPRIATION TITLE: Construction, FY 2009

Dam Safety and Seepage/Stability Correction Program

Allocation FY 2008	\$38,376,000	Tentative Allocation FY 2009	\$48,650,000
Evaluation Studies	\$28,376,000	Evaluation Studies	\$34,150,000
Post-Evaluation Work	\$10,000,000	Post-Evaluation Work	\$14,500,000

GENERAL: The Dam Safety and Seepage/Stability Correction Program provides for studies and modification of completed Corps of Engineers dams. There are over 700 dams under the Corps jurisdiction. While no Corps dams are in imminent danger of failure, some have been identified as having a higher risk of a dam safety incident than originally anticipated based on new data or the likelihood of extremely large floods and seismic events. The Corps has started the implementation of a Portfolio Risk Analysis program and has completed screening over 65% of the Corps dams. The evaluation studies funded under the Dam Safety and Seepage/Stability Correction Program are for dams identified with very high risks of a dam-safety incident (Dam Safety Action Classification I or II). Dam Safety Assurance modifications are made to provide for passage of the maximum probable flood (PMF) based on changes in the climate of the area. Other dam safety assurance modifications are designed to insure that the dam retains the reservoir during and after a major earthquake. Seepage problems at USACE dams are usually related to increase reservoir levels above the previous pool of record at a dam. Other seepage problems arise due to water seeping through the contact between the dam and bed rock. Static instability generally involves movement that starts at a slow rate and could result in massive displacement of large volumes of material if not corrected. Seepage/stability correction projects are classified as major rehabilitations for dam safety. Dam modification work is proceeding under existing authorities on projects where cost effective risk reduction measures have been identified in accordance with national priorities.

BUDGET REQUEST: The \$48,650,000 requested for Fiscal Year 2009 will be used (1) for high priority studies (\$34,150,000) and (2) to continue post-evaluation work (\$14,500,000) on high risk dam safety assurance, seepage control, and static instability correction projects.

(1) Evaluation Studies \$34,150,000 is requested. The Corps Screening Portfolio Risk analysis has identified 37 Dam Safety Action Class I and II critical projects for studies during Fiscal Year 2009. These are the highest priority projects where studies have not been completed in prior years. These studies were previously budgeted under the Operations and Maintenance appropriation prior to Fiscal Year 2008

Dam Safety Assurance Studies

Cherry Creek Dam, CO
Dworshak Dam, ID
Isabella Dam, CA

John Day Lock & Dam, OR & WA
Mississippi Lock & Dam 25, MO
Martis Creek Dam, CA & NV

Seepage/Stability Correction Major Rehabilitation Studies

Addicks Dam (Buffalo Bayou), TX
Ball Mountain Dam, VT
Beach City Dam, OH
Bolivar Dam, OH
East Branch, Clarion River, Dam, PA

Lake Shelbyville Dam, IL
Lewisville Dam, TX
Mansfield Hollow Dam, CT
Mohawk Dam, OH
Montgomery Locks and Dam, PA

Seepage/Stability Correction Major Rehabilitation Studies (continued)

Green River Lake Dam, KY
Hidden Dam, CA
Hop Brook Dam, CT
J. Edward Roush Dam, KY
Keystone Lake Dam, OK

Nolin Lake Dam, KY
Rough River Lake Dam, KY
Salamonie Lake Dam, KY
Whittier Narrows Dam, CA
Zoar Levee (Dover Dam), OH

(2) For Post-Evaluation Work \$14,500,000 is requested for Fiscal Year 2009. These funds will be used to continue post-evaluation work on high risk dam safety assurance, seepage control, and static instability correction projects, once their evaluation reports are approved.

APPROPRIATION TITLE: Construction, FY 2009

Employees Compensation (Payments to the Department of Labor)

Allocation FY 2008	\$20,664,000	Tentative Allocation FY 2009	\$21,000,000
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GENERAL: Public Law 94-273, approved April 21, 1976, 5 USC 8147b, provides that each agency shall include in its annual budget estimates a request for an appropriation equal to costs previously paid from the Employees Compensation Fund on account of injury or death of employees or persons under the agency's jurisdiction.

BUDGET REQUEST: The \$21,000,000 requested for Fiscal Year 2009 represents the total costs of benefits and other payments made from the Employees Compensation Fund during the period July 1, 2006, through June 30, 2007, due to injury or death of persons under the jurisdiction of the Corps of Engineers civil functions and also includes \$1,200,000 for the investigation of fraudulent claims for workers' compensation benefits.

APPROPRIATION TITLE: Construction, FY 2009

Navigation Projects

Inland Waterways Users Board

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$350,000
Work Plan for FY 2007	300,000
Appropriation for FY 2008	221,000
Allocation Requested for FY 2009	300,000
Change in FY 2009 from FY 2008	79,000

AUTHORIZATION: The Inland Waterways Users Board was established by Section 302 of the Water Resources Development Act of 1986, (PL 99-662) and pursuant to the Board's charter, approved by the Secretary of the Army on March 3, 1987. The Board is an advisory committee subject to the requirements of the Federal Advisory Committee Act (PL 92-463).

JUSTIFICATION: The \$300,000 requested for Fiscal Year 2009 is to support, operations and expenses of the Inland Waterways Users Board, established by Section 302 of the Water Resources Development Act of 1986, (PL 99-662) and pursuant to the Board's charter, approved by the Secretary of the Army on March 3, 1987. The Board is an advisory committee subject to the requirements of the Federal Advisory Committee Act (PL 92-463).

(1) Funds in the amount of \$50,000 are requested to meet the estimated expenses of the eleven-member Board for its travel, meeting, and other needs to meet the requirements of the Charter. Board member travel expenses have increased from prior years due to inflation, primarily for airfares.

(2) Funds in the amount of \$250,000 are requested for Corps of Engineers expenses related to its responsibilities as an advisory committee sponsor and to facilitate reevaluation of the financial structure of the Inland Waterways Trust Fund. The Director of Civil Works has been designated Executive Director to the Board, and he has designated staff members to provide continuing Board support. Corps expenses will include personnel costs for administrative Board meeting support, including staff travel, clerical, printing, and related materials. Additionally, increased staff time is anticipated due to the need to reevaluate the financial basis of the Inland Waterways Trust Fund, which falls under the advisory purview of the Board. The fund is rapidly approaching insolvency. The Office of Management and Budget (OMB) and the Office of the Assistant Secretary of the Army (Civil Works) (ASA(CW)) have directed that alternatives to the current Inland Waterways fuel tax be developed. Legislative and administrative changes to the fund will begin to be implemented during FY 08. Proposed alternatives will require intensive coordination with the Board.

ACTIVITIES IN FY 2008: The FY 2007 Work Plan included \$300,000 for these activities. FY 2008 activities include Corps personnel costs to coordinate, attend, and provide analytical support for three scheduled meetings of the Inland Waterways Users Board pursuant to their charter. Support also includes Board meeting logistics, including staff travel, clerical, printing, and related materials. Additional staff time is supporting a reevaluation the financial basis of the Inland Waterways Trust Fund, which falls under the advisory purview of the Board. The fund is rapidly approaching insolvency. Corps personnel are working with the OMB and ASA (CW) to develop alternatives to the current Inland Waterway fuel tax.

PROPOSED ACTIVITIES FOR FY 2009: FY 2009 proposed activities include Corps personnel costs to coordinate, attend, and provide analytical support for up to three anticipated meetings of the Inland Waterways Users Board pursuant to their charter. Support will also include Board meeting logistics, including staff travel, clerical, printing, and related materials. Additional staff time will be required to support legislation and implementation of alternatives to the current Inland Waterways fuel tax, as directed by ASA(CW) and OMB. Proposed alternatives will require intensive coordination with the Board and inland navigation stakeholder groups.

APPROPRIATION TITLE: Construction, FY 2009

Estuary Restoration Program (Title I of P.L. 106-457)

Allocation FY 2008

0

Allocation FY 2009

\$5,000,000

AUTHORIZATION AND PROGRAM DESCRIPTION: The Estuary Restoration Act of 2000, Title I of P.L. 106-457, as amended, authorizes the Secretary to carry out estuary habitat restoration projects recommended for implementation by the Estuary Habitat Restoration Council and meeting various criteria. Each project must address restoration needs identified in an estuary habitat restoration plan, be consistent with the estuary habitat restoration strategy developed under the Act, include a monitoring plan that is consistent with the standards for monitoring developed under the Act and include satisfactory assurance from the non-Federal interests proposing the project that the non-Federal interest will have the capability to carry out items of local cooperation, including maintenance. Except when innovative technology is involved the Federal share may not exceed 65 percent of the cost of the project. Non-Federal interests shall provide lands, easements, rights-of-way and relocations and are responsible for all costs associated with operating, maintaining, replacing, repairing, and rehabilitating the projects.

ACTIVITIES: One project completed in FY 2007 and another project will complete in FY 2008. Ten additional projects are in various stages of implementation. Examples include a small dam removal on a tidal stream on the Eastern Shore of Maryland, removal of invasive species and revegetation with native species in Florida estuaries, and reconnecting an oxbow near the mouth of a tributary to Lake Erie. The quality of the proposals received continues to improve but the absence of an FY 2008 appropriation constrained the ability to initiate new projects in FY 2008.

A new solicitation will be issued and FY 2009 funds will be used to support new projects selected from the proposals received. Healthy estuaries play an important role in the life cycles of many aquatic species with high commercial value from blue crabs to salmon. Healthy estuarine wetlands contribute to improved water quality and may aid in the reduction of flood risks. Recognizing the critical importance of estuaries for healthy coasts and the continued pressure increasing coastal populations place on these resources, the Act set an ambitious target of restoring 1,000,000 acres of estuary habitat by 2010. This funding will contribute to efforts towards achieving that goal.

BUDGET REQUEST: The \$5,000,000 requested for Fiscal Year 2009 is to continue the program of estuary habitat restoration, primarily initiation of new projects.

REMAINING ITEMS

OPERATION AND MAINTENANCE

Appropriation Title: Operation and Maintenance – Fiscal Year 2009

Asset Management and Facilities Equipment Maintenance (FEM)

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$ 4,750,000
Appropriation for FY 2008	\$ 3,739,000
Allocation Requested for FY 2009	\$ 4,750,000
Change in FY 2009 Over FY 2008	\$ 1,011,000

AUTHORIZATION: EO 13327, “Federal Real Property Asset Management,” Feb 2004; DOD (ASD (C³I)) memorandum, 10 Jul 95, selecting the FEM system as a DoD migration system for Commercial Maintenance Management System [CMMS].

JUSTIFICATION:

Asset Management -- The goal of the EO 13327 Real Property initiative is to ensure that property inventories are maintained at the right size, cost, and condition to support Corps of Engineers missions and objectives. Agencies are required to meet standards within three broad categories; develop Asset Management Plan, maintain Accurate and Current Inventory, and identify and implement Real Property Performance Measures. In addition to meeting Chief Financial Officers Act requirements, the new and evolving data and performance requirements will require further integration between automated information systems and aggressive data QA/QC and validation. Federal agencies are required to report annually to the Federal Real Property Profile (FRPP). Based on the FY2006 FRPP submission, Corps Civil Works assets have a total Property Replacement Value of \$200 billion. A robust national inventory of assets is essential for communicating best practices, assessing the overall condition of the portfolio, prioritizing investment decisions and disposal of property that is not needed. Asset Management supports the PMA initiatives of e-government and sharing best practices among other federal agencies such as National Park Service, DoD, GSA, NASA, as well as the Corps corporate strategic vision and campaign goal of life cycle infrastructure management.

Facilities and Equipment Maintenance (FEM) system is an enabler for life cycle asset management, providing critical data and information required to meet real property performance measures related to “right” cost and condition of assets. FEM provides cost and condition values and variances for similar categories of assets. FEM allows management to make decisions to improve effectiveness of O&M strategies; crew utilization; equipment replacement decisions and funding decisions. Further, FEM provides corporate level information identifying best performers by cost and labor use, as well as sharing best practices. FEM is a Department of Defense migratory CMMS as designated in 1995. The Joint Logistics Systems Center (JLSC) developed the system to meet the needs of DoD maintenance organizations. Under NAVSEA, the Naval Systems Support Group serves as the FEM Program manager and provides DOD-wide oversight and best practices to utilize FEM among the services. FEM is the Corps tailored version of MAXIMO Enterprise Suite (formerly MRO Software, Inc., now IBM), which is a Commercial-Off-The-Shelf-System (COTS) package. FEM is hosted at the Corps’ Western Processing Center and integrates O&M business processes into a cost-effective asset management program. It supports and consolidates functions within each O&M business line providing the capability to manage work by type and duration, resulting in the ability to track life cycle costs of managed assets. FEM was deployed in FY05/FY06 within the Northwestern Division and will be fully deployed nationally by FY10.

Appropriation Title: Operation and Maintenance – Fiscal Year 2009

Funding Profile

	Actual FY07	FY08	FY09
Asset Management (AM)	2,000,000	2,000,000	2,750,000
Facilities and Equipment Maintenance (FEM)	2,000,000	2,000,000	2,000,000

PROPOSED ACTIVITIES FOR FY 2009:

Asset Management – Continued operation and maintenance of real property performance measures in REMIS database and system. Reconcile and close all data gaps and performance measures and provide continual data validation QA/QC. Improve inventory system quality and reporting capabilities to ensure ability to meet current inventory reporting requirements as well as new ones from Department of Defense. Continue integration with necessary automated information systems. Support the condition assessment methodology development and implementation across portfolio of infrastructure assets. Continue development and implementation of the asset management framework. Continue to meet OMB requirements and monitor progress by updating quarterly scorecard. Develop metrics, identify best management practices and benchmarks to develop a risk based process for prioritizing maintenance and capital improvement investments.

FEM – FEM deployment will start in residual Field Operating Activities (FOAs). Five Regional Business Center deployments will conclude. Resolution of procurement, inventory and timekeeping interface requirements with CEFMS and other corporate legacy systems will conclude. Compliance with security requirements such as DIACAP, FISMA, and business investment certifications under OMB 300, and DOD Business Enterprise Architecture compliance under the National Defense Authorization Act of FY05. Ongoing development of performance metrics to be accomplished. Ongoing development of best business processes within O&M business lines and integration with other Corps AIS while leveraging capability from other Services. Enhancement planning such as mobile technology to support UID, RFID, GIS, and reliability centered maintenance starting.

ACCOMPLISHMENTS IN FY 2008:

Asset Management – Expanded Real Estate Management Information System (REMIS) to meet new and evolving performance data requirements; implement a sustainable QA/QC process for monitoring and collecting real property asset data; assessed and reconciled data gaps; initiated development of training for Real Property Accountability Officers regarding performance measures; identified data integration requirements with other automated information systems (AIS), including Business Line specific hierarchy and work breakdown structures in FEM, update Asset Management Plan consistent with USACE Strategic plan, submitted annual real property inventory data in accord with FRPP guidelines.

FEM - Completed FEM pilot deployment in SWD and MVD; initiated pilot deployment in NAD, SPD, SAD, and LRD; completed reconfiguration to web based applications; completed business process development for two O&M business lines; stood-up four regional FEM teams; completed DIACAP recertification for web-based version; completed support data definitions and interface with REMIS to support DoD RPIR.

Appropriation Title: Operation and Maintenance – Fiscal Year 2009

Aquatic Nuisance Control Research

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$2,000,000
Appropriation for FY 2008	\$ 646,000
Allocation Requested for FY 2009	\$ 690,000
Increase of FY 2008 from FY 2009	\$ 44,000

AUTHORIZATION: The Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (PL 101-646).

JUSTIFICATION: Invasive species cost the public over \$137 billion annually. It is now estimated that over 100 nuisance species are introduced into U.S. waters annually – many of which adversely impact operations and maintenance on Corps' facilities - as well as threaten valued natural resources. Zebra mussel impacts alone cost the public over \$1billion annually. Methods of prevention and more effective, inexpensive methods of control of invasive species must be developed to prevent impacts to public facilities and protect valuable natural resources.

Research efforts have been expanded under the Aquatic Nuisance Species Research Program (ANSRP) to address invasive aquatic species that impact the nations' waterways infrastructure and associated resources. Methods for prevention, control, and restoration of natural resources will be developed. Control strategies are being developed for: (a) navigation structures, (b) hydropower and other utilities, (c) vessels and dredges, and (d) water treatment, irrigation, and other water control structures.

Research studies include: 1) The evaluation of potential control/barrier methods for Asian carps moving up the Mississippi River to the Great Lakes, 2) new techniques for control of Zebra and Quagga Mussels moving westward past the 100th meridian, 3) Improved control methods for harmful algal blooms through new chemicals and life cycle sensitivity analysis, 4) Corps personnel training in recognition and control methods of ANS on Corps lands/waters, 5) Web-based regional lists of aquatic invasive species on Corps projects, and 6) Methods to reduce invasive species impacts to threatened and endangered species and restore natural habitat.

PROPOSED ACTIVITIES FOR FY 2009:

1. Provide an evaluation of control / barrier methods for Asian carps moving up the Mississippi River into the Great Lakes
2. Provide regional lists of aquatic invasive species on Corps projects
3. Develop new techniques for the detection and control of Zebra and Quagga Mussels in the western U. S.
4. Develop training modules for better recognition and control methods of aquatic nuisance species on Corps lands/waters
5. Develop guidance on the efficacy of using barriers to restrict fish movement on navigable waterways

ACCOMPLISHMENTS IN FY 2008:

1. Evaluated the effectiveness of electrical barriers on preventing Asian Carp movement into Lake Michigan
2. Developed long-term management and control strategies for silver and bighead carp in big river field studies
3. Developed chemical and biologically-based control and screening criteria for harmful algal blooms
4. Developed assessment techniques to measure the impacts of new introductions of ANS
5. Developed a hybrid Internet-CD aquatic nuisance species information system for economically / environmentally important ANS species in North America.

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Budget/Management Support for O&M Business Programs

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$5,865,000
Appropriation for FY 2008	\$5,015,000
Allocation Requested for FY 2009	\$5,865,000
Change in FY 2009 from FY 2008	\$ 850,000

Performance Based Budgeting Support Program

AUTHORIZATION: The Government Performance and Results Act of 1993 (GPRA) and under general authorities contained in various laws.

JUSTIFICATION: The President's management agenda and GPRA requires that the Corps implement performance based budgeting for the Corps of Engineers (Corps) Civil Works Operation and Maintenance (O&M) program. The Performance Based Budgeting Support Program addresses this requirement by the collection, management and distribution of data; seeking new methods for linking performance to annual budget requests; and for analyzing the potential economic impacts on customers of varying budget levels.

a. Civil Works Business Function Information: Provides critical data and information related to Civil Works project inventories, outputs and performance measures; and for the operational and strategic management of Corps' projects, programs, budget development and studies that directly support the Navigation, Hydropower, Recreation, Environment (Stewardship & Compliance), and Flood Risk Management Business Line missions. This information supports the Corps O&M program and is the sole source for the Corps, other Federal agencies, partners, stakeholders, and the public. These funds include supporting the database management, integration, standardization, operation, enhancement, quality control, user assistance, training, compliance with security requirements and CEEIS services. Without this item, the Corps will be unable to have any performance measurement for budgeting, management and the PART.

b. Civil Works Performance Measurements: Work includes improvement of performance measurements to be incorporated into the budget decision-making process; support for the Office of Management and Budget's Performance Assessment Rating Tool (PART) initiative; and support for the future Corps budget preparation process. Efforts focus on the refinement of corporate performance principles; and program and project level performance measures that focus on anticipated performance and output at different levels of funding in accordance with the revised finance and accounting cost codes that now align with the O&M business processes - navigation, hydropower, flood risk management, recreation and environmental stewardship. These measurements, at different organizational levels, provide the analytical basis to identify the incremental return on investment in Corps programs at various funding levels and to make adjustments in priorities both at the program and project levels concerning efficiency of facilities or services. Comparison of measurements among projects at all levels helps focus management attention on corrections of program or project deficiencies.

c. Civil Works Business Analysis: This task analyzes data using statistical and other analytical techniques and tools to uncover relationships among budget, expenditures and performance within and between Corps business processes. The relationships and statistics drawn from the data may provide evidence to support an increase in expenditures to improve performance. This task will also develop effective graphics to explain relationships found in the data and allow decision-makers to visualize cause and effect. This task links the data gathering, collection and distribution, and use of data in the decision-making process.

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PROPOSED ACTIVITIES FOR FY 2009: Requested FY 2009 funds will provide continuing support of Civil Works O&M integrated information systems; centrally distributed performance measures, outputs and system inventory information; and evaluation of new measures. FY 2009 funds will also support enhanced development of output-oriented performance measures of the incremental return on investment in Corps Civil Works program areas, including acquisition and training in decision-making software. Additional business lines of water supply and enhanced support to flood risk management (FRM).

ACCOMPLISHMENTS IN PRIOR YEARS: Included were newly fielded centralized natural resource collection system and user's training in Operations and Maintenance Business Information Link (OMBIL) data entry and access. The One-stop access for much of Civil Work's budget performance information was expanded for budget submittals in lieu of separate data calls. Funds will be used to continue the activities associated with the Civil Works Business Function Information through mid-year. The Performance Measurements and Business Analysis efforts are not being undertaken in FY 2007.

Recreation Management Support Program (RMSP)

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: The Recreation program serves almost 400 million recreation visitors and generates about \$40 million in revenue annually. Visitors spend over \$12 billion annually to engage in recreation at Corps projects; over 500,000 full and part time jobs are associated with this spending.

The RMSP supports the recreation program through the conduct of focused management studies to improve operational efficiencies and the provision of technical assistance, to include technology transfer and technology support and maintenance for recreation specific automated information systems. The RMSP supports strategic planning for and performance monitoring of the Corps recreation business program, subject to the Government Performance and Results Act (GPRA).

The RMSP has three major components, which together provide comprehensive support to the Corps Recreation Business Program:

1. **Focused Management Studies.** RMSP provides focused management studies and reports to acquire and analyze information about recreation trends, accessibility, emerging issues, user conflicts, visitor diversity, use fee impacts and similar elements affecting the Corps recreation program. Analyses are conducted to support the recreation area modernization program, implementing facility and service standards, and in similar product delivery improvement efforts. Information and technology transfer pursuant to these studies is funded by the RMSP. Ongoing trends analysis provides valuable data on which to base decisions about necessary short and long term adjustments to the program to meet public needs.
2. **Management/Technical Assistance.** RMSP provides technical assistance to the Recreation Community of Practice in the development of management tools, which quantify recreation program outputs and relate them to customer needs and budget allocations for the purpose of measuring performance. This includes gathering and analyzing information about customer satisfaction with the Corps recreation program. RMSP assures the field workforce is equipped with "state-of-the-art" skills and knowledge to deal with a rapidly changing public. RMSP provides technical support and maintenance of performance based budgeting tools, visitation monitoring and analysis systems, fee collection and reporting, economic analysis, facility inventory and condition assessment, and similar automated information programs. RMSP provides short-term assistance to projects in solving specific technical problems.
3. **Support to Recreation Program Strategic Planning.** Funding to support the activities of the Recreation Leadership Advisory Team (RLAT) is included in this program. The RLAT is composed of representatives from the division, district and project levels of the Corps natural resources management program. It provides input, advice and support to the Corps strategic planning for the recreation business program.

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PROPOSED ACTIVITIES FOR FY 2009: The Recreation Budget Evaluation System (RecBEST) will be refined to increase the capability to monitor and report Recreation performance measures and evaluate and prioritize budget submissions in response to OMB guidance. The Recreation module of the Natural Resource Management Gateway will be further developed to address high priority needs. Demonstrations will be conducted to identify and communicate the benefits of the Corps recreation program and improve effectiveness in addressing the needs of ethnic minority visitors. Emphasis will be placed on improving recreation use monitoring procedures that will be incorporated into recreation performance measures. Customer satisfaction survey methods and benchmarking capabilities will be refined and fully integrated into program performance measures. Technical support will be provided to field staff to implement improved procedures. Support will be provided to standing NRM committees and task forces including: Recreation Program Performance Improvement Initiative, Recreation Entrance Fee Policy Development, Partnerships Demonstration Program, Water Safety, Career Development, etc. Support will be provided to Headquarters Recreation program staff regarding strategic planning, development of program evaluations and other high priority Headquarters initiatives. If funded at capability: Accelerate development of tools for field managers (e.g. the Recreation Status Report) to implement the Recreation Modernization Program and accelerate support for the recreation program and park ranger Communities of Practice through the NRM Gateway.

ACCOMPLISHMENTS IN PRIOR YEARS: Past products include Recreation Budget Evaluation System (RecBEST), visitation estimation methodology and data collection and reporting tools, economic impact methodology and analysis tools, customer satisfaction survey and benchmarking tools implemented at all Corps projects, studies on recreation preferences of ethnic groups including cross-cultural communication issues, and support for development of a strategic context as a foundation for transitioning to a performance based environment, to include performance based budgeting. The Natural Resources Management Gateway was developed as a knowledge management tool for the NRM community and is compatible with other Corps KM and Community of Practice initiatives. The Corps Lakes Gateway was developed and provides information to millions of visitors annually on recreation opportunities at Corps projects. The Corps Lakes Gateway also delivers Corps recreation information to the interagency RecreationOneStop project in support the Administration's E-GOV initiative. Guidance and appropriate tools were developed to improve interpretive services associated with the Corps recreation program that advance the public's understanding of the environment and the Corps Environmental Operating Principles. Support to Headquarters was provided to refine the recreation business program strategic plan, utilizing input from the RLAT and stakeholders. Goals and objectives were refined, and actions identified to achieve them. Innovative partnership approaches were developed and field guidance prepared to improve stakeholder participation. Stakeholder outreach was conducted to develop partnerships for strategic initiatives.

Stewardship Support Program

AUTHORIZATION: This program is conducted under the authority of ER 1130-2-540, Chapter 7.

JUSTIFICATION: The Stewardship Support Program was established in FY 2002 to provide broad support to Environment-Stewardship function at operating projects by assisting in the identification of national program needs, the development of new national program activities, strategic program planning, and the recommendation of national stewardship program funding priorities. Support will be provided in refining the Environment-Stewardship business program strategic plan and goals, and budget processes, to address the targeted outcomes of the overall Corps Civil Works Strategic Plan, using input from the Stewardship Advisory Team, other associated Corps business programs and stakeholders. Goals and objectives will be refined, and actions will be identified to achieve them. Funding this program from a single source reflects the nationwide application and supports standardization in program direction and outputs.

The Stewardship Support Program (SSP) supports the Environment-Stewardship program by addressing issues or initiatives that have a broad applicability to many Corps Civil Works projects. The three basic components of the SSP are:

1. Focused Management Actions and Studies. These activities are to implement a course of action or practice within field office activities, a region, or nationwide. Examples of management actions might include developing/ assembling an array of management practices for establishing riparian habitat, or creating a forum to

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share common experiences, build teams, and disseminate information. Examples of management studies might include the riparian corridors research or conducting studies on management of threatened and endangered species.

2. Policy Guidance and Management Support. Such activities relate to the development and/ or implementation of guidance. Examples of policy guidance included facilitating cooperative agreements with stewardship non-governmental organizations, or amending the annual Budget Engineer Circular to provide emphasis on conducting inventories of regionally or nationally significant resources.

3. Information Exchange. These activities are designed to build, integrate, and share our knowledge base to support greater understanding of the environment and the impacts of program work.

PROPOSED ACTIVITIES FOR FY 2009: The SSP will conduct focused management action studies and recommend guidance to address high priority program efficiency and effectiveness concerns, including responses to findings that result from an independent assessment of the stewardship business program area. Efforts will continue in support of performance based budgeting including further development of performance measures, development of strategies to improve program outputs and outcomes, and refinement of E-S BEST and related guidance to monitor program performance. The SSP will continue support of the Environment-Stewardship Community of Practice (CoP) including further development of the NRM Gateway for information and technology exchange. These activities will provide benefits in increased program effectiveness through implementation of assessment recommendations. Improved program performance will be facilitated through increased CoP access to best practices and policy guidance, and effective development and execution of performance based budgets.

ACCOMPLISHMENTS IN PRIOR YEARS: The allocation of project operations and maintenance funds to conduct specified nationwide (multiple project) activities to improve the efficiency and cost effectiveness of the Environment-Stewardship business program has been employed, with subcommittee staff knowledge and concurrence, since the late 1990s for activities similar to those identified for FY 2009. Past products of the Stewardship Support Program include the initial set of Environment-Stewardship program performance measures, which are in accord with the Government Performance and Results Act and used to measure and monitor priority program outputs and outcomes; the Stewardship module of the Operations and Maintenance Business Information Link (OMBIL), which receives and stores selected data concerning the stewardship of project natural resources, and which provides for retrieval of that information by all levels of the Corps; the pilot version of the Environment-Stewardship Budget Evaluation System (E-S BEST) used to assist in developing budget scenarios and ranking budget proposals. Components of the Environment-Stewardship portion of the Natural Resources Management (NRM) Gateway, a knowledge management tool for the NRM community, have been completed and others are underway. Support to Headquarters was provided to develop and refine; the Environment-Stewardship business program strategic plan and 5-year development plan, the program management plan for the Environment-Stewardship Community of Practice, and the annual Environment-Stewardship program development guidance.

Optimization Tools for Navigation (OTN) Program

AUTHORIZATION: Related efforts are necessary to provide practical quantitative and predictive tools and data for minimizing and optimizing the costs of dredging of Federal navigation projects, leveraging development and improvement of channel design criteria across the Corps, the U.S. Navy, and other government/academic institutions. These efforts are essential to providing data and analysis for efficient and effective management of critical national waterborne navigation infrastructure.

JUSTIFICATION: To maintain the Nation's Federal navigable waterways, nearly 260 million cubic yards of material are dredged in the U.S. annually. In addition, the national "2020" plan for deeper and wider channels to support emerging commercial cargo vessel designs brings great uncertainty on credible prediction of maintenance requirements. Changing political, engineering, environmental, and demographic factors will increasingly influence project costs. Technological

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change and emerging vessel hull configurations in the shipping industry require prudent foresight and ongoing efforts to adequately plan for future maintenance dredging activities. Many channel design and dredging requirements related to underkeel clearance and other safety margins have been based on dated physical models and conservative “rules of thumb” on the part of waterway users. New technologies for more precise measurements suggest that current channel design guidance and general rules may be notably overstating vessel clearance needs, resulting in costly and unneeded dredging. IWR is conducting a vessel hull modeling activity jointly with ERDC and the U.S. Naval Academy (USNA) that with further development of the CADET (Channel Analysis Design Evaluation Tool) computerized program will render advanced technologies for methods of analysis and compilation of new physical and numerically-generated data sets descriptive of vessel movement and response within confined waterways. Resulting datasets and analytical procedures will in turn be practically applied to more accurately determine channel dimension requirements associated with evolving or foreseeable vessel designs. This vessel hull modeling effort will also generate essential data on hull designs, vessel dynamics and channel configuration in order to optimize and minimize ongoing and future maintenance dredging requirements. Another component known as the Operation and Management Assessment System (OMPAS) is being developed with the Waterborne Commerce Statistics Center (WCSC). This component will use domestic and foreign trade data to determine and analyze the loaded drafts of vessels of all recorded vessel calls for individual harbors and channels and will provide for estimation of transportation cost benefits foregone with reduction or absence of maintenance and will offer the potential to optimize maintenance dredging requirements for individual channel reaches and across much of the overall Corps dredging program.

PROPOSED ACTIVITIES FOR FY 2009: Work will include continuing physical model hull construction and testing in collaboration with ERDC, NAVSEA-CARDERO, the USNA, and for the coordination and technical support for vessel motion research with completion of the analysis being undertaken regarding U.S. Naval vessel requirements. FY 2009 funds will support continued work of ERDC, CARDERO, and IWR activities for improvements to CADET. Funds will be used to support efforts by the WCSC to further develop bridging software programs to link foreign trade and vessel characteristics databases.

ACCOMPLISHMENTS IN PRIOR YEARS: Funds in FYs 2007 and 2008 funds were used to initiate the vessel hull modeling effort in conjunction with ERDC, the USNA and NAVSEA-CARDERO. Work was initiated under the Remaining Items program for Dredging Data and Lock Performance Monitoring System. FYs 2007 and 2008 activities included scoping the effort, agreement on task delegation among participants, securing funding and participation from the Navy, evaluating physical model basin requirements and preparation by ERDC, and initiation of model vessel hull construction in conjunction with improvements to the computerized application known as CADET. Related to OMPAS, work was initiated by the WCSC to scope requirements for development of software programs to link foreign trade databases with vessel characteristics databases. This effort was delayed in late FY 2005 through early FY 2007 by impacts of Hurricane Katrina on WCSC staff. The program helped support the physical modeling and design for bulbous bow modifications for the Corps Dredge ESSAYONS with objectives of reduction in annual operating costs for maintenance dredging plant activities. The remainder of FY 2008 will see further advancements in CADET, vessel hull modeling, and the beginning of technical development for OMPAS. Proof-of-concept has been completed for OMPAS combined with identification of needed data fields and data sources, and initial scoping for development of computer source code for data and transportation cost tableau compilation.

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Actions for Change to Improve Operation and Maintenance

Total Estimated Federal Costs for Program	\$62,000,000
Allocation Prior to FY 2008	\$ 2,700,000
Appropriation for FY 2008	\$ 2,481,000
Allocation Requested for FY 2009	\$ 7,737,000
Change in FY 2009 from FY 2008	\$ 5,256,000
Balance to Complete after FY 2009	\$49,082,000

SCOPE: The Corps of Engineers (Corps) has embarked on an ambitious program for quickly incorporating the lessons learned from Hurricane Katrina into “Actions for Change”. The four themes in the Actions for Change are interrelated and interdependent, and will be fully integrated for execution. Operation and Maintenance activities are:

Theme 1 - Comprehensive Systems Approach. Will emphasize an integrated, comprehensive and systems based approach incorporating anticipatory management to remain adaptable and sustainable over time that places the highest priority on protection of public health and safety. Specifically, develop the system toolset to provide analyses and decision support across projects; develop processes to enhance multi-objective decision making for post-construction evaluation of project outcomes; provide methods and guidance to incorporate adaptive management into decision making; streamline Post-Authorization Change process; implement nationwide datum and subsidence standard method; implement risk-based asset management framework; consolidate and expand policies, methods, and technologies to achieve long-term sustainability.

Theme 2 – Risk Informed Decision Making. Will emphasize integrated risk management to use risk and reliability concepts in planning, design, construction, operations and major maintenance and to improve its review of completed works program. Update methods, models guidance to assess engineering and operational reliability of local protection systems; fully develop risk analyses concepts, including social and environmental impacts; update levee certification guidance; upgrade the Inspection of Completed Works (ICW) and Rehabilitation and Inspection Program (RIP); apply innovative modeling methods used in Interagency Performance Evaluation Task Force (IPET) to identify failure causes due to soil conditions for other regions with levees of concern; develop capability to model the risk and reliability effects of surge and overtopping including any dynamic effects.

Theme 3 – Communication of Risk to the Public. No O&M activities under this item.

Theme 4 – Professional and Technical Expertise. Will emphasize professionalism and technical competence to provide responsible and competent public service professionalism, with life safety as a fundamental driver. The O&M portion of this theme will include investment in research and development to improve project operations. Specifically, we will design water level and wave gages for survivability under extreme events in collaboration with other agencies and industry and pilot test the gages.

JUSTIFICATION: The Corps must improve its ability to provide safe, reliable projects working together as a system with increased economic and environmental benefits through an integrated, comprehensive and systems based approach that places the highest priority on protection of public health and safety. A systems and risk-based approach to capture the impacts of incremental changes that result from natural processes and human activities throughout the lifecycle, combined with the planned organizational changes and Dynamic Independent Review, will allow the Corps to more fully address risks due to flooding and coastal storms in their decision-making. The Corps will increase emphasis on aligning Federal, state, and local projects, programs and authorities for risk management; on making decisions collaboratively; on improving communication about residual risk, and on explaining the public’s roles and responsibilities.

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FY 2008 Accomplishments: FY 2008 funding enables the Corps to improve the methods for Inspection of Completed Works (ICW) to include an assessment of engineering safety and operational adequacy based on the results of IPET and the Hurricane Protection Decision Chronology (HPDC); begin to link or upgrade existing O&M databases to be capable of tracking incremental changes in the watershed and infrastructure; develop guidance for levee certification; improve the methods and technology for gage survivability during major coastal storms; improve the engineering reliability models of levees and floodwalls due to the effects of surges and overtopping; begin developing the methods for incorporating adaptive and asset management and sustainability into decision making (particularly a nationwide standard that accounts for changes in the vertical geodetic datum and subsidence); and update guidance.

FY 2009 Activities: FY 2009 activities build upon work accomplished to respond to critical needs identified by the IPET, HPDC, the National Academy of Science, the American Society of Civil Engineers' External Review Panel, and others in the wake of Hurricane Katrina. The Corps will incorporate the new methods in programs and activities funded in the Operation and Maintenance account. Funding will be used to continue updating policy and guidance for operations and maintenance; continue development of supporting technologies to improve the effectiveness of post-authorization evaluations and assessments of incremental change; enhance the use of adaptive management in project operation and maintenance; begin to implement the nationwide datum and associated subsidence standards and certification; develop framework for Learning Watersheds and conduct workshops to infuse sustainability into practice; develop supporting methods and technologies to support the transformation of ICW from project element inspection to a risk-based system assessment; advance the understanding of risk and reliability modeling of surge and overtopping; and continue progress on gage survivability.

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Coastal Inlets Research Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$4,000,000
Appropriation for FY 2008	\$2,313,000
Allocation Requested for FY 2009	\$2,475,000
Change in FY 2009 from FY 2008	\$ 162,000

AUTHORIZATION: Authorization for the Corps of Engineers Engineer Research and Development Center (ERDC) to conduct R&D is codified in 10 U.S.C. 2358 (“The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that are necessary to the responsibilities of such Secretary’s department in the filed of research and development.”)

JUSTIFICATION: In FY 2006, the Corps spent approximately \$670 million in maintenance dredging of 180 million cubic yards from Federal navigation channels. Adjusted for inflation, dredging costs have increased approximately \$5.6 million/year from FY 1963 through FY 2006 with increases in number, length, and depth of navigation channels (<http://www.iwr.usace.army.mil/ndc/dredge/ddhisMsum.pdf>). For the same period, also adjusted for inflation, dredging costs have increased from \$1.53 to \$3.18 per cubic yard and are likely to further increase in the future due to energy demands and increasing fuel prices. To be competitive, harbors and ports must deepen and widen navigation channels to accommodate larger, more advanced vessels. Dredging in and around the more than 500 coastal inlets and harbor channels is a significant portion of this cost, as the age of stabilization and sediment-retaining structures such as jetties, interior revetments, and jetty spurs exceeds 100 years. Changes in coastal inlet channels and jetties can have a profound effect on the adjacent beaches and estuary. Demand for environmental enhancement and mitigation for engineering activities includes wetland restoration and creation, which modify hydrodynamics and sediment infilling in navigation channels. Thus, navigation project O&M, beach integrity, wetland health, environmental enhancement projects, and implications of ongoing and future dredging actions must be considered within a sediment-sharing inlet system. The Corps needs knowledge and tools to better forecast future channel shoaling, design solutions to reduce dredging magnitudes and costs, while improving navigability of the nation’s waterways, sustaining the environment, and maintaining the integrity of beaches and estuaries adjacent to coastal inlets. This applied research and development is necessary to provide quantitative predictive tools and data for reducing the cost of dredging Federal navigation projects, maintaining inlet jetties, and mitigating for engineering activities related to navigation channels, and supporting national security efforts to protect waterways and ports.

PROPOSED ACTIVITIES FOR FY 2009:

- Develop a quantitative prioritization tool to assist the decision process in allocation of limited O&M funds for coastal inlet structure maintenance and repair. Metrics considered include commercial tonnage, supported/protected port facility infrastructure, commercial fishing, and passenger ferries and cruise liners.
- Extend the Coastal Modeling System (CMS), which simulates coastal inlet waves, current, and sediment transport, to wetlands and submerged aquatic vegetation in vicinity of navigation projects, and test at sites of national interest. The new CMS wetland module will allow O&M decisions to be quantified in terms of environmental benefits and minimize design cost.
- Develop statistical approach for simulating long-term morphologic change (decades) through Rapid Assessment of Morphology (RAM) technique in the CMS. RAM will reduce PC calculation time by an order of magnitude for multi-year simulations, allowing rapid examination of O&M alternatives in hours on District desk-tops.

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- Conduct tech-transfer workshops for Corps, consulting engineering companies, and academia on efficient coastal inlet channel design, wetland design as a beneficial use, possible impacts of wetland change on inlet O&M, advanced wave modeling for vessel transit and structure stability, and long-term morphology prediction of inlet O&M and navigation project modification for adjacent beaches and estuaries.
- Distribute beta version of advanced wave predictive model (Boussinesq) technology that will address design, maintenance and repair needs of the Corps' aging coastal and navigation structures. The advanced wave model is essential for characterizing complex water-structure interactions, reducing reliance on expensive physical models.
- Test CMS technology on nearshore berms (dredged material disposal), including new feature of wave asymmetry. Potential movement of nearshore berms towards shore cannot be modeled without consideration of wave asymmetry, limiting evaluation of regional sediment management alternatives, and nearshore berm creation is usually a least-cost disposal method.
- Release beta channel sedimentation toolbox to address shoaling caused by faster and deeper-draft ships moving along navigation channels. The ship sedimentation toolbox will give guidance on thresholds for ship size and speed to reduce channel shoaling and erosion of critical environmental habitat along the channel.
- Refine GoogleEarth™ interface to include overlays showing coastal inlet structure dimensions, economic information such as commercial fish landings, cruise and ferry traffic, and recreational use, and color-coding to help convey structure condition and maintenance needs for decision makers. 9) Supply analysis tools, guidance, and model pre-and post-processing of tide, wave, and wind data used as forcing for CMS simulations. This toolbox will reduce time in creating model input data sets and analyzing output.

ACCOMPLISHMENTS IN FY 2008: The CIRP successfully completed all project requirements and produced the following products:

- Identified coastal inlet structure data sources for 100 locations and gathered statistical information on economic activity supported by these structures, with emphasis placed on the most economically critical structures. This database provides a means to prioritize repairs of critical infrastructure with limited Federal funding.
- Significantly advanced the CMS for numerically simulating waves, current, sediment transport, morphology change, and salinity. CMS is rapidly becoming the Corps' work-horse for evaluating coastal inlet O&M alternatives and assessing environmental benefits.
- Conducted seven technology-transfer workshops on Coastal Inlets Research Program products, covering numerical models, engineering guidance, and field measurement. Published numerous peer-reviewed articles and technical reports.
- Developed and tested channel sedimentation toolbox Ship-Sed to estimate the contribution of ship-induced wakes to channel sediment shoaling as a function of vessel dimensions, speed, and channel characteristics. Applied to an east coast and west coast site, assessing the implications of ship size and speed to shoaling and erosion of adjacent environmental habitat.

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- Investigated and compiled historical channel shoaling database on CIRP website, based on channel shoaling data from the 1800s through 2005. The relationship between channel dimensions and O&M requirements from the database allows the Corps to realistically assess the long-term regional sediment management and cost implications of channel modifications.
- Formulated and tested an unstructured-grid version of the finite volume Boussinesq wave modeling system to provide reliable prediction of non-linear waves, currents and water levels related to design, dredging and rehab of structures, navigation channels, inlets, ports and harbors. This improvement brings advanced wave modeling to the District engineer and readily allows extension of predictive capability.
- Released wave run-up and overtopping toolbox for submerged and surface-piercing coastal jetties and breakwaters, and applied to San Francisco Bay, California. This toolbox facilitates rapid calculation of storm-induced run-up and overtopping as a function of structure stone type, elevation, and storm characteristics, an essential analysis for prioritizing repair of aging infrastructure.
- Released the Infra-gravity Wave Toolbox for coastal inlets and harbor projects. This toolbox couples two advanced wave models for a rapid assessment of the impacts of long-period gravity waves (periods of 30 to 600 sec), ship transit, and harbor oscillations, effectively reducing a complex modeling effort to a readily-applied desk-top tool for the District engineer, and eliminating need for costly physical model studies for most applications.
- Developed GoogleEarth™ interface presenting information related to economic and engineering functions of coastal inlet structures. Conducted East Coast and West Coast workshops and released beta version for District testing.
- Developed and implemented new specialized formulas for unified calculation of sediment transport at and around coastal inlets, and published technical report. This research will produce more reliable and robust predictions of sediment transport, channel infilling, and morphology change.

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Beneficial Uses of Dredged Material (CAP Sections 145, 204, 207)

SUMMARIZED FINANCIAL DATA:

Appropriation for FY 2008	\$5,292,000
Allocation Requested for FY 2009	\$2,278,000

AUTHORIZATION: Section 204 of the Water Resources Development Act (WRDA) of 1992 Public Law (PL) 102-580, Section 207 of PL 102-580, and Section 145 of WRDA of 1976 (PL 94-587), as amended by Section 933 of PL 99-662, Section 35 of PL 100-676, Section 207 of PL 102-580, Section 217 of PL 106-53, and Section 111 of PL 106-541.

JUSTIFICATION: Section 204 authorizes projects for the protection, restoration, and creation of aquatic and ecologically related habitats, including wetlands, in connection with dredging for construction, operation, or maintenance of an authorized navigation project. Section 204 total program limit is \$15,000,000. Non-Federal interests are required to share in a minimum of 25 percent of the cost of each project. Section 207 modified Section 204 by authorizing disposal in any manner for which the environmental benefits outweigh the added costs. Section 145, as amended, authorizes placement of dredged material from Federal navigation projects on adjacent beaches if the state or a political subdivision of the state agrees to pay 35 percent of the incremental costs of such placement over the alternative least-cost, environmentally acceptable method of disposal. Policy for beach nourishment with dredged material limits Federal participation in such projects to one-time nourishment at each site.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTIONS 145, 204, 207 PROJECTS OR ACTIVITIES IN PRIORITY ORDER</u>	<u>STATE</u>
WANCHESE MARSH CREATION	NC
BLACKHAWK BOTTOMS	IA
ISLE AUX HERBES	AL
21ST AVE WEST CHAN., DULUTH, MN	MN
MAUMEE BAY RESTORATION	OH
WYNN ROAD CDF	OH
CALC RV, MI 5-14 KS	LA
RESTORATION OF CAT ISLANDS	WI
NJIWW BENEFICIAL USE	NJ
SHELL ISLAND PASS	LA
COORDINATION SECTIONS 145, 204, 207	US

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Navigation Mitigation Projects (CAP Section 111)

SUMMARIZED FINANCIAL DATA:

Appropriation for FY 2008	\$4,796,000
Allocation Requested for FY 2009	\$5,325,000

AUTHORIZATION: Section 111 of the River and Harbor Act of 1968 (PL 90-483), as amended, authorizes the construction of projects for the prevention or mitigation of shore damages attributable to Federal navigation works.

JUSTIFICATION: The cost of installation is cost shared in the same manner as the costs for the project causing the shore damage were shared. The cost of operation and maintenance is borne by the non-Federal sponsor. Projects first cost shall not exceed \$5,000,000 without specific authorization by Congress.

PROPOSED ACTIVITIES FOR FY 2009: Projects for use of the requested funds in order of priority:

<u>SECTION 111 PROJECT OR ACTIVITY IN PRIORITY ORDER</u>	<u>STATE</u>
MOBILE PASS, AL	AL
CAMP ELLIS, SACO, ME	ME
VERMILLION, OH	OH
FAIRPORT HARBOR	OH
MATTITUCK HARBOR, NY	NY
TYBEE ISLAND CHANNEL IMPACTS	GA
COORDINATION SECTION 111	US

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Cultural Resources (NAGPRA/Curation)

SUMMARIZED FINANCIAL DATA:

Estimated Total (FY 1994 - 2020) Program cost	\$44,000,000
Appropriation for FY 2008	\$ 1,402,000
Allocation Requested for FY 2009	\$ 1,500,000
Change in FY 2009 from FY 2008	\$ 98,000

AUTHORIZATION: The Native American Graves Protection and Repatriation Act (NAGPRA) enacted on 16 November 1990 contains data gathering, reporting, consultation, repatriation, and permitting provisions that have near-term and long-term implications for Corps of Engineers (Corps) Civil Works programs and projects.

JUSTIFICATION: The Native American Graves Protection and Repatriation Act (NAGPRA) addresses the recovery, treatment, and repatriation of Native American and Native Hawaiian cultural items by Federal agencies and museums. As defined by the Act, cultural items are human remains, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony. In FY 1994, the Corps began the process of inventorying human remains and associated funerary objects and completing summaries as mandated by the legislation. In addition, the Corps is responsible for curation of cultural resource materials collected from its water resources development projects. A Mandatory Center of Expertise (MCX), located at the St. Louis District, provides overall management of the Corps NAGPRA programs and serves as an information source and a centralized base for curation compliance and contracting. The MCX will facilitate the assurance of consistent nationwide program implementation and operation. The Corps is responsible for the curation of at least 46,255 cubic feet of artifacts collected from its water resources development projects and at least 3,511 linear feet of associated records. Curation of these materials, the largest volume of all federal agencies responsible for this activity, is required by a number of public laws with implementing guidance in 36 CFR Part 79. Corps collections represent over 80 percent of the total DoD collections. These extensive collections are located in hundreds of curation facilities across the nation. The costs are to accomplish NAGPRA work and to fund MCX curation support to the districts. The MCX, in providing NAGPRA inventories, will assist in establishing the extent of Corps holdings. Associated with efforts to complete NAGPRA and because of the fragile nature of many of the artifact and record collections, the MCX is seeking to accelerate the process of effectively managing the Corps curation efforts. Funding this item will ensure full Corps compliance with NAGPRA legislation and expedite the stabilization, proper storage, and curation support to all districts.

PROPOSED ACTIVITIES FOR FY 2009: The MCX and Corps Commands will continue the process of inventorying Native American and Native Hawaiian human remains and associated funerary objects and complete summaries of unassociated funerary objects, sacred objects, and objects of cultural patrimony as mandated by the legislation. Information will be made available to interested individuals and groups through notices in the Federal Register. Through MCX provided funding, districts will continue to be engaged in formal consultation with tribes and organizations for the legislated purpose of repatriating cultural objects for which there are legitimate claims. The MCX will continue to fulfill its chartered activities in support of other military services and DoD, lead in the implementation of an agency-wide, long-term plan for the curation of Corps archeological collections (heritage assets). The MCX will also continue to work closely with Corps commands on the implementation of final guidelines and procedures for field collection of archeological materials and the long-term treatment of those collections. In this regard, the MCX will act as a source of expertise for processing and rehabilitation of Corps collections. Finally, the MCX will provide leadership in the development of a training curriculum on the treatment of heritage assets and working in consultation with all stakeholders, take initial steps to make this training available to Corps and other appropriate DoD managers and decision makers. As Corps compliance with NAGPRA Sections 5 – 7 approaches completion, the MCX will place staffing and other resources in a position to accelerate the rehabilitation and long-term management of archeological artifacts

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collections and associated records that are assessed to be at the greatest risk of deterioration or damage. MCX-CMAC will implement the initial phases of the curation task plan, which involves addressing the rehabilitation needs of the Corps' most critical archeological collections.

ACCOMPLISHMENTS IN PRIOR YEARS: A Mandatory Center of Expertise (MCX), located at the St. Louis District, was established to provide overall management of the Corps NAGPRA programs and has served as an information source, a centralized base for curation compliance and contracting. The MCX has facilitated the assurance of consistent nationwide program implementation and operation. The MCX, in providing NAGPRA inventories, has assisted in establishing the extent of Corps holdings. Associated with efforts to complete NAGPRA, the MCX began the process of effectively managing the Corps curation efforts. Corps reporting compliance with NAGPRA will approach approximately 80% by the start of FY 2008. A phased task plan for curation has been developed.

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Dredge Wheeler Ready Reserve

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$12,000,000
Allocation for FY 2008	\$ 7,478,000
Allocation Requested for FY 2009	\$12,000,000
Increase of FY 2009 over FY 2008	\$ 4,522,000

AUTHORIZATION: Section 237 of the Water Resources Development Act of 1996 (WRDA '96) contained a provision requiring the Corps Hopper Dredge WHEELER to be placed in a ready reserve status.

JUSTIFICATION: Section 237 requires that no individual project funds may be used to fund the dredge in its ready reserve status unless the dredge is specifically used in conjunction with a project. Prior to Fiscal Year (FY) 1998, the costs for operation of the WHEELER had been charged to benefiting projects funds from the Operation and Maintenance, General appropriation, and subsequently charged to the Harbor Maintenance Trust Fund account as eligible navigation costs subject to reimbursement. In FY 1998, the WHEELER was placed in a ready reserve status as required by the above referenced section of WRDA '96.

PROPOSED ACTIVITIES FOR FY 2009: The Hopper Dredge WHEELER, will remain in ready reserve status, and will be required to be able to perform emergency dredging work, but will not be assigned any scheduled hopper dredging work. The dredge will be placed in an active status in order to perform work in those instances when private industry fails to submit a responsive or responsible bid for advertised dredging, or where industry has failed to perform under an existing contract. Dockside overhaul is scheduled for the first quarter of FY09.

ACCOMPLISHMENTS IN PRIOR YEARS: The WHEELER was kept at the dock, with sufficient crew to respond to any unforeseen requirement within 72 hours and to work for approximately three continuous weeks. The dredge was maintained in a fully operational state and periodically performed routine dredging operations to test equipment and keep the crew trained and prepared. The WHEELER performed approximately 60 days of training during the year. In every year but one, since being placed in ready reserve status in 1998, the WHEELER was called out to perform urgent dredging to assist industry dredges in restoring navigation channels and waterways.

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Dredging Data and Lock Performance Monitoring System

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$1,595,000
Appropriation for FY 2008	\$ 993,000
Allocation Requested for FY 2009	\$1,062,000
Change in FY 2009 over FY 2008	\$ 69,000

AUTHORIZATION: These efforts are necessary to provide dredging and lock data for efficient management of Congressionally authorized navigation projects, to meet the performance requirements of the Presidents Management Agenda (PMA), to supply data for programs that are rated by the Program Assessment Rating Tool (PART) as well as to respond to specific public laws, including PL 96-269 (Minimum Dredge Fleet), PL 100-656 (Small Business Set-Aside), for meeting the Government Paperwork Elimination Act (GPEA) and Clinger-Cohen/IT Management Reform Act.

JUSTIFICATION:

a. **Dredging Data and Lock Performance Monitoring System.** The dredging and lock data collection and processing programs provide information for the Corps of Engineers (Corps) operational and strategic management decisions; for performance indicators of the navigation projects and programs; for the budget formulation process; and input for improvement studies in direct support to the Navigation Business Line mission. Information includes Corps performed and contracted dredging (location, quantity, cost, etc.); all lock activities (barges and tons of commodities, chamber unavailability, processing times, delays, etc.), and physical descriptions of all the Corps owned/operated locks. The funds support the database management, operation, enhancement, quality control, user assistance, training, compliance with security requirements and CEEIS services. Both systems are the sole source of dredging and lock data/information for the Corps, Federal government and industry. These databases are transactional systems within the Corps centralized Operations and Maintenance corporate information system. They are reported under OMBIL-Plus in ITIPS and the OMB 300b submittal accounting for \$783,000 of the overall OMBIL-Plus costs.

b. **Future National Dredging and Port Requirements.** Technological change in the shipping industry is a continual process requiring ongoing analytical efforts to estimate the nation's future maintenance dredging needs. Update of current and future vessel characteristics, channel dimensions, commodity origins-destinations, vessel cost parameters, and other shipping data are needed to support the Corps maintenance dredging program. Tasks include updating of the world trade and vessel fleet forecasts; analysis of current and projected trade patterns; assessing capability of planned and underway channel improvements to meet current and future demand, and the collection and associated analysis of dredging information and performance data in support of Civil Works Navigation program decisions and budget priorities.

PROPOSED ACTIVITIES FOR FY 2009: Continue to support the Corps Navigation Business Line responsibilities and be responsive to changing data needs by maintaining the Lock and Dredging information systems, providing essential upgrades, security and user support; developing additional data warehouse reports to support emerging data requirements for the performance based budget process; and work with the Navigation Locks High Performing Organization (NavLocks HPO) as the implementation plan is executed. Complete the pilot project of implementing the automated real time lock data collection at the remaining locks in the New Orleans District. Update forecasts for the world

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vessel fleet, commodities and trade; develop voyage ports-of-call information for containerships; initiate an assessment of marine transportation system current and future channel and infrastructure requirements for coastal harbors and inland waterways. Provide dredging and lock analytical, technical, and data support for Corps Headquarters, division and district offices.

ACCOMPLISHMENTS IN PRIOR YEARS: Provided lock and dredging data and information critical for navigation performance measures, the assessment of dredge bidding competition, national and regional trends in dredging costs and quantity, the annual small business reports for SADBUs, and lock availability and performance. Performed operations, maintenance, system upgrades, security and user support for dredging and lock data systems. Initiated a program to automatically collect real-time lock data of timing events to significantly improve data quality while providing the lock operator more time to perform the primary function of safely locking vessels. Conducted in-depth review of Dredging Information System and implemented changes in response to the GAO study of benefits and effects of the Corps dredge fleet. An overview of the status of U.S. harbor improvement projects was completed, including funding and project schedules. World trade forecasts were updated and world fleet database was obtained. Technical and analytical assistance provided on channel and navigation infrastructure needs to Corps Headquarters and field offices.

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Dredging Operations and Environmental Research (DOER) Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$7,000,000
Appropriation for FY 2008	\$5,684,000
Allocation Requested for FY 2009	\$6,080,000
Change in FY 2009 from FY 2008	\$ 396,000

AUTHORIZATION: The Water Resources Development Acts of 1986, 1988, 1990, 1992, 1996, and 1999 contained provisions addressing contaminated sediments in navigation channels, dredged material management, and beneficial uses that mandates a continuing need for innovative and enhanced technology.

JUSTIFICATION: The last comprehensive research effort on contaminated sediments and dredged material management was completed in 1978 under PL 91-611. More recent Water Resources Development Acts contained provisions addressing contaminated sediments in navigation channels, dredged material management, and beneficial uses that mandate a continuing need for innovative and enhanced technology. Contaminant detection limits are now so low that sub-trace levels of toxic substances are identified. High profile contaminants continue to plague numerous Federal and permitted dredging projects. Traditional upland disposal areas have reached or are approaching capacity with few opportunities for new facilities. Aquatic placement is under increased scrutiny due to habitat degradation concerns and expanded listings of aquatic threatened and endangered species such that this economically preferable alternative is contested by increased litigation and substantially higher costs. Environmental standards and controls for all dredged material placement alternatives are increasingly restrictive and continue to grow in number. An incomplete understanding of dredging management practices (e.g., deployment of silt curtains in unsuitable hydrodynamic conditions) can be costly and ineffective. Performance standards and guidance for existing and improved practices are critical needs. Risk-based assessments and management have gained acceptance; unfortunately the Corps' corporate technology base is diminishing and must be maintained. Beneficial use/reuse of dredged material is a priority and environmental resource protection is a mandate; however, costs are increasing due to the constraints noted above. Continued economic viability and security of the Nation will depend upon our ability to remove, manage and beneficially reuse dredged material in a cost-effective and environmentally responsible manner. Continued engineering and environmental innovation will be essential to keep costs within budget constraints.

The DOER Program is an integral and highly beneficial component of the Corps' navigation dredging and environmental protection missions. Dredging and disposal must be accomplished within a climate of increased dredging workload, fewer placement sites, increased environmental constraints, and decreasing fiscal and manpower resources. Balancing environmental protection with critical economic needs while accomplishing dredging activities is a major challenge. The DOER program has validated innovative technologies for managing high profile contaminants and developed risk-based assessments that will significantly reduce testing costs at virtually all harbors. Methods for reclamation and reuse of contaminated sediments from upland disposal areas for beneficial purposes as well as increased capacity are key components of the program that will result in significant fiscal, manpower and time resource savings.

Major focus areas of DOER include: (1) operations technologies, (2) environmental resource protection, (3) dredged material management, and (4) risk.

PROPOSED ACTIVITIES FOR FY 2009:

1. **Operations Technologies:** Expand Silent Inspector capability to provide near-real-time monitoring of dredging operations by quantifying uncertainty associated sediment volume and density. Complete development of condition assessment methods for assessing status and performance of navigation channels. Demonstrate application of Innovative Adoption Process (IAP) to encourage and manage the introduction of innovative technologies and procedures in the

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navigation program that can increase the efficiency of operations (i.e., reduce cost and time requirements). Demonstrate innovative dredging equipment to meet operational and environmental requirements.

2. Environmental Resource Protection: Expand evaluations of efficient protection measures for Threatened and Endangered Species to minimize costs and time delays associated with achieving regulatory compliance. Conduct field investigations of effectiveness of silt curtains as a navigation dredging management practice. Publish results of studies related to habitat management and protection of bird species. Demonstrate new technologies for detection of protected sturgeon species in the vicinity of O&M dredging projects to optimize project performance. Publish findings of environmental benefits of open-water dredged material disposal options for providing fish habitat enhancement.

3. Dredged Material Management: Advance current models that are used to design dredging operations to ensure that efficient operations (i.e., that minimize cost) can be conducted within regulatory limits. Improve models used to describe fluidized mud spread during barge or pipeline placement operations. Enhance Surface-water Modeling System (SMS) features for incorporating GIS data and large-domain hydrodynamic and wave models into dredged material fate models. Release guidance document for Confined Disposal Facility fast-track siting and approval planning. Release new model for describing dredged material deposition, sedimentation, and consolidation after open-water placement. Release new nearshore placement model for beneficial use of dredged material. Nearshore placement is often the lowest cost beneficial use option.

4. Risk: Initiate development of a high resolution model to predict the long-term, far-field movement of sediment and contaminants suspended into the water column during dredging operations. Results of this exposure modeling will be combined with existing approaches to assess environmental impacts of sediment and contaminant transport to evaluate and manage the environmental risks associated with dredging operations. Initiate development of innovative treatment technologies for contaminated dredged material to reduce the operational and long-term costs of managing contaminated dredged material. Finalize development of faster/cheaper analytical methods for evaluating contaminant movement from sediment to water and within food webs. Expand on the development of risk-informed decision making methods to manage operational and environmental risks associated with navigation dredging.

ACCOMPLISHMENTS IN FY 2008: The DOER Program successfully completed all of the project requirements and completed the following products:

1. Operations Technologies: Completed evaluations of a diesel fuel additive designed to reduce emissions, provide fuel savings, and reduce stack gas temperatures for increased engine life. Completed development of overdepth analyses tools to provide operations managers timely information to monitor the amount of overdepth dredging taking place during dredging to improve planning for disposal sites with limited capacity. Completed evaluation of bed levers for “turtle friendly” cleanup operations to reduce amount of time (and money) that hopper dredges are required at the site. Initiated development of navigation channel condition indices calculations of key performance measures related to navigation channel asset management and reliability.

2. Environmental Resource Protection: Developed cost-effective guidance for application of risk assessment-based methods for negotiation of objective environmental windows that restrict dredging operations. Published results of lab and field studies that identify effective protection measures for Threatened and Endangered Species that pose major conflicts with O&M navigation projects. Demonstrated new technologies for determination of critical habitat functions and calculation of population consequences of incidental takes of natural resources. Conducted field studies and documented assessments of fish habitat enhancements linked to open-water dredged material disposal alternatives. Documented results of evaluations of selected dredging best management practices for protection of the environment.

3. Dredged Material Management: Published guidance for Confined Disposal Facility sediment recycling to extend the life of existing facilities, reducing the need for costly new construction. Completed guidance document for quantifying sediment and contaminant release during dredging to reduce the need for using overly conservative assumptions that inflate operational costs. Released version 1 of a predictive model for dredge-related impacts on water quality that will result in

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improved prediction accuracy and lower operational costs. Completed, documented, and published methods to predict sediment plume decay and sedimentation for material released into the water column during dredging operations. Released updated version of SMS dredge modeling interface to include dredge look-up tables, additional dredging models and improved GIS capabilities; enhanced capability results in significantly broader user-base for models.

4. Risk: Enhanced sediment transport models through addition of contaminant partitioning and transport algorithms to provide more accurate estimates of contaminant exposure during dredging operations for regulatory compliance. Released guidance and models for conducting contaminant pathway and screening-level risk assessments for upland confined disposal. Published case studies documenting the use of risk and decision analysis to efficiently resolve complex dredged material management problems. Completed and published a comprehensive review and analysis of the applicability and value (in terms of lower operational costs) of current and emerging contaminated sediment treatment technologies for the navigation program. Developed and published a strategy for sustainable use of upland confined disposal facilities that details approaches for optimizing the management of these valuable assets to the national navigation program.

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Dredging Operations Technical Support (DOTS) Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$1,391,000
Appropriation for FY 2008	\$1,300,000
Allocation Requested for FY 2009	\$1,391,000
Change in FY 2009 from FY 2008	\$ 91,000

AUTHORIZATION: Authorization for the Corps of Engineers Engineer Research and Development Center (ERDC) to conduct R&D is codified in 10 U.S.C. 2358 (“The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that are necessary to the responsibilities of such Secretary’s department in the filed of research and development.”)

JUSTIFICATION: Maintenance of the nation’s navigation infrastructure requires compliance with numerous complex environmental statutes and Presidential Executive Orders. The Dredging Operations Technical Support (DOTS) Program fosters a “one-door-to-the-Corps” clearinghouse for access to comprehensive information on technology related to navigation O&M functions, including technology demonstrations and training essential to all stakeholders involved in Federal and permitted navigation projects. DOTS is structured as a centralized source for technology transfer that maximizes cost effectiveness and facilitates expeditious and consistent implementation of national policies and laws based on complex technical requirements. The DOTS Program fosters application of state-of-the-art technologies and ongoing research results for high priority problems identified by field offices. Emerging environmental concerns often cause uncertainty and unanticipated difficulties in the administration of the Corps’ navigation dredging program. The DOTS program’s technology transfer function provides access to an extensive, up-to-date, consistent technology base whereby timely, proactive responses to technical issues can be made as they emerge. This approach promotes networking and solutions to common problems confronting the navigation dredging community. DOTS supports knowledge-based exchange of information throughout the interagency coordination process. Short-term work efforts to address generic Corps-wide technical problems encountered during maintenance of navigable waterways and infrastructure are major features of the DOTS Program. Technology transfer and demonstration of new techniques with potentially high returns on investment for management of Corps navigation maintenance projects are critical DOTS functions. By disseminating technically sound knowledge to field offices constrained by staff reductions and limited resources, the DOTS Program will continue to perform a critical technology transfer role in support of all O&M navigation projects. DOTS fosters productive relationships with other federal agencies with missions relevant to navigation, particularly the US Environmental Protection Agency, and academic institutions, including the National Academy of Sciences.

PROPOSED ACTIVITIES FOR FY 2009:

- Renewed emphasis will be placed on effective transfer of technology developed by the Corps and others engaged in maintenance and management of navigation structures and navigable waterways. Typical technology transfer topics include: management of Confined Disposal Facilities; management of contaminated dredged material; application of innovative risk-based technologies to assess contaminated dredged material; maintenance of coastal inlets and adjacent shorelines; shoreline stabilization and river training methodologies; assessment and management protocols for beneficial uses of dredged material; channel realignments; protection of threatened or endangered species; equipment selection; operational measures for protection of Threatened and Endangered Species; rational application of environmental windows and alternative best management practices; lock and dam maintenance needs; channel and harbor maintenance activities; ship simulation applications; and numerical modeling methods for resolution of engineering and environmental issues.
- A trend for increasing need for technical responses, evidenced by consistent growth in requests submitted by field offices on an annual basis, coincides with expansion of the DOTS mission to cover all navigation-related issues in addition to dredging and dredged material disposal.

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- Personnel turnover due to retirement and attrition within the Corps and other regulatory agencies has created a growing demand for training in diverse technological areas. DOTS-sponsored training of Corps staff, personnel with regulatory authority over Corps navigation maintenance activities, and other stakeholders will convey the latest findings on environmental and engineering techniques associated with maintaining navigable waterways. Training topics include dredging and dredged material disposal; coastal and inland channel maintenance needs; water quality and related aquatic environmental issues; new and emerging techniques for accurate determination of compliance with environmental protection statutes regarding management of dredged material and other features of navigation projects; development and preparation of manuals jointly with the EPA that implement the inland and ocean disposal programs; and short-term work efforts to address generic Corps-wide technical dredging and dredged material management problems related to navigation projects. DOTS continues to support development of training materials on compliance with the Endangered Species Act for Corps field offices on a regional basis.
- DOTS will continue to fill a long-standing void with respect to outreach, providing a broad spectrum of educational materials related to the Corps' navigation mission. Relying on internet resources, this activity has rapidly become an extremely effective means of conveying comprehensive, accurate information to a broad audience, including students, educators, and the general public as well as professionals.

ACCOMPLISHMENTS IN PRIOR YEARS: In FY 2008, the DOTS program successfully met all of its goals established for technical support, technology transfer, and outreach.

- Technical questions, from Federal and state agencies and private concerns dealing with implementation of the inland and ocean testing manuals, continued to be addressed. As mandated by the 1972 London Convention, the DOTS program annually compiles data and produces reports on ocean dumping activities to the EPA and the International Maritime Organization.
- DOTS has conducted 27 sediment management seminars since 1991 that have been attended by over 5,400 personnel from Corps districts, federal, state, and local agencies, industry, and environmental protection groups. Instruction focused on state-of-the-science techniques in regulating, testing, and managing dredged material.
- DOTS continues to support communication among Corps field offices and numerous agencies engaged in development of regional strategies to promote assessment and protection of threatened and endangered species associated with navigation projects. Examples include extensive coordination and renewed effort to minimize take of sea turtles by hopper dredges, and involvement of the American Bird Conservancy in the search for resolution of conflicts between the conduct of navigation projects and Piping Plover and Interior Least Tern populations.
- Under DOTS, a joint Corps/EPA task force made significant progress toward formulation of a combined, generic ocean and inland disposal implementation manual. This effort fosters consistency in dredged material testing and management between the Clean Water and Marine Protection, Research and Sanctuaries Acts. This builds upon and serves as a companion to the completed final version of the Upland Testing Manual.
- Through DOTS, expansion, maintenance and updating of several web-based databases provided enhanced access to important sources of information, such as the Environmental Residue and Effects Database (ERED), which continued to be critical for successful implementation of the CE/EPA Ocean and Inland testing manuals for dredged material disposal. Additional databases that extend accessibility to related resources, including upland plant toxicology and tools for risk assessment applications were brought online and refined. A new database providing a comprehensive clearinghouse of information pertinent to protection of Threatened and Endangered Species (<http://el.erdc.usace.army.mil/tessp/index.cfm>) has been added to the website, and has been extensively accessed by the conservation community. An associated website, titled the Sea Turtle Data Warehouse (<http://el.erdc.usace.army.mil/seaturtles/index.cfm>) has become an extremely effective means of coordinating incidental take limits of sea turtles among multiple Corps Divisions and Districts.

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- The DOTS Program continues to be an exceptionally successful conduit for navigation and dredging-related information, as evidenced by the distribution of thousands of technical manuals, bulletins, technical notes and reports currently found on the DOTS website (<http://el.erdc.usace.army.mil/dots>).
- The DOTS website provides a comprehensive information retrieval system for all R&D products related to regulating, maintaining, and managing the nation's navigable waterways. For example, the DOTS-sponsored Educational Outreach site (<http://education.wes.army.mil>) has become one of the most active of all Corps websites, visited by over three million users in its first year of operation, and experiences continued growth.

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Earthquake Hazards Reduction Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$ 270,000
Appropriation for FY 2008	\$ 253,000
Allocation Requested for FY 2009	\$ 270,000
Change in FY 2009 from FY 2008	\$ 17,000

AUTHORIZATION: This program is being conducted under the authority of P.L. 101-614, November 1990, National Earthquake Hazards Reduction Program Re-authorization Act and individual project authorizations for maintaining safety of personnel and emergency response capability.

JUSTIFICATION: The purpose of this program is to respond to the requirements of P.L. 101-614, National Earthquake Hazards Reduction Program (NEHRP) and Executive Order (EO) 12941, Seismic Safety of Existing Federal Buildings. The EO directs all Federal departments and agencies to develop an inventory of their owned and leased buildings and an estimate of the cost of mitigating unacceptable seismic risks in their buildings. The objective of P.L. 101-614 is to establish and initiate for buildings and lifelines a systematic approach to reducing loss of life, injuries, and economic costs resulting from earthquakes in the United States. Lifelines are defined as public works and utility systems.

PROPOSED ACTIVITIES FOR FY 2009: Continue development of mitigation program options to meet the Executive Order requirements and the legal opinion concerns, refine the develop technical seismic building evaluation criteria, refine the develop programmatic seismic criteria, refine the develop guidance or the seismic evaluation and risk mitigation of lifeline facilities, and development of building and powerhouse mitigation plan options, improve information transfer by use of videoconference calls and development of a seismic web site, and develop reports on selected study items. The Corps of Engineers (Corps) has a legal opinion that indicates that once we have identified seismically vulnerable structures we are legally responsible to develop a plan to mitigate these vulnerabilities. The requested funds will be used to improve seismic information and requirement transfer, adjust the agency specific mitigation plan (if necessary), provide the tools for implementation of the program that would lead to supportable, defensible mitigation decisions, provide assistance to districts in the development of mitigation concepts and designs, provide support to Corps Headquarters in oversight and management of the mitigation program, provide technical support to Corps Headquarters, maintain technical seismic expertise, identify potential cost savings areas for study, develop guidance for additional lifeline systems not previously covered in commercially available standards or existing Corps guidance, develop guidance for operations personnel, develop a mitigation plan for the Corps lifelines, update and maintain database. The development and updating of guidance for the seismic evaluation and risk mitigation of lifeline facilities will continue as well.

ACCOMPLISHMENTS IN PRIOR YEARS: Over 12,000 owned buildings and powerhouses were inventoried and data collected, seismic screenings of over 700 buildings in all seismic regions, seismic evaluations were performed on over 200 buildings and powerhouses in various geographic regions primarily in high and moderate seismic regions, development of reports for FEMA to be forwarded to Congress on both buildings and powerhouses, development of seismic evaluation guidance for buildings and lifelines: building evaluation criteria, powerhouse evaluation criteria, lifeline criteria for intake towers, navigation locks, and powerhouses, two seismic evaluation seminars for district personnel, technical support to the districts in accomplishing the evaluations, over 30 rehabilitation case studies including seismic mitigation cost estimates (rehabilitation, replacement, or demolition) for buildings, over 25 rehabilitation cost estimate studies for structural or nonstructural powerhouse

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deficiencies, inventory of Corps owned buildings including powerhouse superstructures, inventory of Corps leased buildings with estimated populations and recommendations for leasing procedures, development of mitigation program options to meet the Executive Order requirements and the legal opinion concerns, develop technical seismic building evaluation criteria, develop programmatic seismic criteria, develop guidance for the seismic evaluation and risk mitigation of lifeline facilities, develop associated costs studies to include asbestos and lead based paint costs associated with rehabilitation, adapt the building and powerhouse inventory database to an Oracle system compatible with the Operations and Maintenance Business Information Link (OMBIL) program and revise building report to reflect the new criteria.

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Critical Infrastructure Security Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$ 12,000,000
Appropriation for FY 2008	\$ 11,218,000
Allocation Requested for FY 2009	\$ 12,000,000
Increase of FY 2009 Over FY 2008	\$ 782,000

AUTHORIZATION: The Energy and Water Development Appropriations Act, 2002 (PL 107-66), Consolidated Appropriations Resolution 2003 (PL 108-7), Energy and Water Development Appropriations Act 2004 (PL 108-137), Consolidated Appropriations Resolution 2005 (PL 108-447), Energy and Water Development Appropriations Act 2006 (PL 109-103), and the President's Budget proposes similar authorization for FY 2007.

JUSTIFICATION: In January 2002, the U.S. Army Corps of Engineers (USACE) established the Critical Project Security Program (CPSP) to assess and improve the security posture of Corps water resource infrastructure. This program represented the first phase of the current Critical Infrastructure Security Program (CISP), and focused on the development of a risk-based prioritization of Corps portfolio of projects (dams and locks) to support the implementation of physical security upgrades to protect them against man-made hazards. In FY 2002, the Risk Assessment Methodology for Dams (RAM-D) was used at over 350 potentially critical Corps projects to assess site specific threat, vulnerabilities and consequences and to prioritize funding for risk reduction mitigation measures. All USACE MSCs were required to use this procedure and establish a ranking of all critical projects. Using additional considerations, 263 Corps facilities were identified as critical from a security standpoint and a prioritized ranking was established. Supplemental funding was provided to USACE by Congress for these efforts. In FY 2003, through a combination of additional Supplemental funding provided by Congress and USACE Operations and Maintenance, General (O&M) account funding the design and construction of RAM-D physical security upgrades was initiated at 85 critical projects. In FY 2004, the CPSP evolved into the current CISP to encompass all USACE infrastructure including administration and laboratory buildings. A program pause was conducted to assess the impacts of RAM-D physical security upgrade costs associated with the 85 initial projects. In March 2004, a Baseline Security Posture (BSP) strategy aimed at establishing a baseline level of risk reduction against a criminal/vandal threat was adopted as an alternative to completing RAM-D security upgrades at all remaining critical projects. The implementation of these efforts continued through FY 2006. Funding also supported Research and Development (R&D) initiatives, Corps Mandatory Centers of Expertise technical support, and increased security guard requirements resulting from changes to the Nation's security levels. In FY 2005 the Corps initiated the design and implementation of security improvements to administration facilities and laboratories.

PROPOSED ACTIVITIES FOR FY 2009:

- Implement initiatives for quantification of current security posture at all USACE critical projects. Develop "Comprehensive Facility Reports", in collaboration with Dams Sector security partners and Department of Homeland Security (DHS) Dams Sector Specific Agency, that include a description of physical security measures implemented at all USACE critical projects.
- Implement protection as part of a regional framework with a system-based approach and recognize importance of interdependencies. Participate in the development of watershed basin analysis studies to analyze cascading economic impacts associated with an interruption on the inland waterway system.

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- Recognize that effective protection requires a multi-objective interagency framework. Develop integrated performance metrics that incorporate dam safety/dam security requirements; develop a rational approach to understand development of consequence information and inherent assumptions.
- Recognize consequence mitigation as an important form of protection. Achieve a sensible balance between our responsibility to inform (communicate safety risks) while also protecting the public by safeguarding sensitive information involving critical infrastructure.
- Conduct a joint Emergency Action Plan (EAP) exercise between USACE/AMREN to address interoperability challenges affecting publicly and privately owned dams located along the same river basin.

ACCOMPLISHMENTS IN FY 2008:

- Initiated the development of a risk assessment and management framework for projects.
- Developed and implemented a risk assessment and management framework for administrative facilities and laboratories.
- Continued risk assessments and implementation of physical security upgrades at administrative facilities and laboratories.
- Continued improvement of predictive damage assessment tools of water-backed embankment dams from explosive loading using data from full-scale and reduce-scale experiments
- Conducted a full-scale embankment dam experiment subject to waterside blast loading.
- Collaborated in interagency effort on interdependent consequence analysis on the inland navigation system.
- Continued interagency collaboration with the DHS Dams Sector-Specific Agency and other Dams Sector stakeholders.
- Coordinated with DHS to implement the Buffer Zone Protection (BZP) Grants Program at USACE projects. The BZP Program distributes grants to state and local government offices and local law enforcement jurisdictions to bolster protective measures in the immediate vicinity of national critical infrastructure and key resources (CI/KR) facilities, and enhance response capabilities of local law enforcement to terrorist attacks.

Appropriation Title: Operation and Maintenance – Fiscal Year 2009

Great Lakes Tributary (Sediment Transport) Model

SUMMARIZED FINANCIAL DATA:

Estimated Total Program Cost	\$12,500,000
Appropriation for FY 2008	\$ 841,000
Allocation Requested for FY 2009	\$ 900,000
Change in FY 2009 from FY 2008	\$ 59,000

AUTHORIZATION: Section 516(e), Water Resources Development Act of 1996, as amended by Section 334, Water Resources Development Act of 2000.

JUSTIFICATION: Under Section 516(e) of the Water Resources Development Act of 1996, the Corps of Engineers (Corps) is directed to develop sediment transport models for tributaries to the Great Lakes that discharge to Federal navigation channels or Areas of Concern (AOCs). These models are being developed to assist state and local resource agencies evaluating alternatives for soil conservation and nonpoint source pollution prevention in the tributary watersheds. The ultimate goal is to support state and local measures that will reduce the loading of sediments and pollutants to navigation channels and AOCs, and thereby reduce the costs for navigation maintenance and sediment remediation. This program supports the goals of Executive Order 13340 for Great Lakes Restoration, signed by the President in May 2004 and the recommendations of the Great Lakes Regional Collaboration created under this Executive Order.

PROPOSED ACTIVITIES FOR FY 2009: FY 2009 funds will be used to continue or complete development of models at tributaries (Waukegan River, Illinois; St. Louis River, Minnesota; Grand River, Ohio; Cattaraugus Creek, New York; Niagara River, New York; Kinnickinnic River, Wisconsin, and; Fox River, Wisconsin) and continue development of Internet-based modeling tools that may be utilized by local agencies and stakeholders for sub-watershed evaluations. Districts will provide limited, follow-up technical support to state and local partners that are using models developed under this program to reduce loadings of sediments and contaminants to Great Lakes tributaries, thereby reducing future dredging requirements at Federal navigation channels and promoting the restoration of beneficial uses at Great Lakes Areas of Concern.

ACCOMPLISHMENTS IN PRIOR YEARS: Models and related watershed planning tools have been completed or will be initiated at the following tributaries (Waukegan River, Illinois; Grand Calumet River, Indiana; Trail Creek, Indiana; Burns Waterway, Indiana; Saginaw River, Michigan; St. Joseph River, Michigan; Clinton River, Michigan; Grand River, Michigan; Nemadji River, Minnesota/Wisconsin; St. Louis River, Minnesota; Buffalo River, New York; Genesee River, New York; Niagara River, New York; Cattaraugus Creek, New York; Grand River, Ohio; Augleize River, Ohio; Black River, Ohio; Mill and Cascade Creeks, Pennsylvania; Menomonee River, Wisconsin; Kinnickinnic River, Wisconsin, and; Fox River, Wisconsin). Models are being utilized by state and local governments to support decision making on: agricultural and forestry practices; development of Total Maximum Daily Loads (TMDLs) for nonpoint source pollution control; prioritization of conservation practices; management of urban development, and; design of stream restoration projects. This program has enhanced the capabilities of state and local governments to manage programs that reduce the loading of sediments and levels of contaminated in tributaries to the Great Lakes.

APPROPRIATION TITLE: Operation and Maintenance – Fiscal Year 2009

Independent Assessment for Stewardship Program

SUMMARIZED FINANCIAL DATA:

Appropriation for FY 2008	\$0
Allocation Requested for FY 2009	\$500,000
Change of FY 2009 from FY 2008	\$500,000

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: One way to measure the effectiveness of program performance is to perform independent evaluations that are on a regular, or as needed basis, to fill gaps in performance information. The last such comprehensive evaluation for the Environmental Stewardship program was completed in 1984 by a blue ribbon panel. This independent panel found that the demands for available natural resources were increasing substantially; soil erosion is a major challenge; there should be clear authority to intensively manage natural resources for public purposes; and the Corps should develop and maintain natural resource management plans that are based on current inventories. The FY05 PART assessment concluded that a new assessment could be useful. A new independent assessment will seek evaluation and recommendations to improve program performance and increase program efficiency. It will assess the environmental stewardship program with due regard for budget constraints and the fact that the Corps has strong demands on its limited resources for completing its three main mission areas: commercial navigation, flood and storm damage reduction and aquatic system restoration. The Environment-Stewardship program evaluation will examine the Environmental Stewardship program management strategies, program management practices, adequacy of current regulations, performance measurement and improvement recommendations, including mechanisms to increase receipts that may be implemented consistent with the resource protection and conservation mission of the stewardship program. Budgetary resources are expected to be very tight for the foreseeable future; consequently the report will attempt to set priorities indicating what work needs to be done first and what can be done later. The program assessment would be completed in one year and provide a report the Corps can use for setting priorities for managing this program.

PROPOSED ACTIVITIES FOR FY 2009: An independent entity would be contracted with to perform the evaluation and provide recommendations to the Corps for improving program effectiveness and efficiency.

ACCOMPLISHMENTS IN FY 2009: Updated the PART assessing this program.

APPROPRIATION TITLE: Operation and Maintenance – Fiscal Year 2009

Inland Navigation Safety Initiative

SUMMARIZED FINANCIAL DATA:

Estimated Total Program Cost	\$3,500,000
Appropriation for FY 2008	\$ 0
Allocation Requested for FY 2009	\$3,000,000
Change in FY 2009 from FY 2008	\$3,000,000
Balance to complete after FY 2009	\$ 500,000

AUTHORIZATION: The Corps of Engineers' (Corps) interest in navigation stems from the Commerce Clause of the Constitution and subsequent Supreme Court Decisions and Congressional Acts that define the Corps' authority to regulate commerce and navigation and to provide navigation improvements.

JUSTIFICATION: The Corps' navigation mission is to provide safe, reliable, efficient and environmentally sustainable waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs and recreation. The waterways of the United States are a vital link in the commercial trade of the Nation. Rivers and intracoastal waterways comprise a significant part of the navigation system that provide an efficient means of transporting commerce within the United States and to and from foreign countries. The development and maintenance of these waterways are essential to the continued economic health of the Nation.

The Inland Navigation Safety Initiative will address inland navigation safety at our locks and dams. Over 1,000 accidents involving towboat and barge allisions with our lock and dam structures and components occurred during the 2002-2007 timeframe. These incidents occurred across 21 waterways and 17 Districts. The allisions range from minor impacts with no appreciable damage, to major damage requiring repair or replacement of components and repair to towboats and barges. The allisions resulted in projects being down from minutes to months to assess and repair damages, and resulted in lost revenue and downtime for operators, shippers, waterway users, and other stakeholders. The damages have resulted in increased wear and tear on facilities and components, premature failure, and repair costs have ranged from \$0 to \$15 million (but resulted in closure time of at least one hour as damage was assessed). This does not include delay costs to the towing industry and other stakeholders while repairs are made. The study would review lock operational procedures and perform a literature search of infrastructure protective systems, assess systems currently in use or being designed, select a system(s), and implement demonstration projects to evaluate effectiveness.

PROPOSED ACTIVITY FOR FY 2008: When and if resources become available, Engineering Research and Development Center, in collaboration with Corps field elements, will review lock operational procedures and perform a literature search of infrastructure protective systems, assess systems currently in use or being designed, review existing designs for energy absorbing and deformable structural systems concepts, and determine initial estimate of forces involved in barge allisions with lock approach bull nose. Real Time Current Velocity systems will be installed at critical locks. If resources are not available in FY 2008 these activities will be performed in FY 2009.

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PROPOSED ACTIVITY FOR FY 2009: Engineering Research and Development Center, in collaboration with Corps field elements, will select a system(s), develop a design for deformable structural system and select project sites to finalize system design and develop plan for performance demonstration to evaluate effectiveness.

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Inland Waterway Navigation Charts

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$4,000,000
Appropriation for FY 2008	\$3,467,000
Allocation Requested for FY 2009	\$3,708,000
Increase in FY 2009 from FY 2008	\$ 241,000

AUTHORIZATION: PL 85-480, approved 2 July 1958, authorizes the Commander, US Army Corps of Engineers (Corps) to publish information pamphlets, maps, brochures, and other material on river and harbor, flood control, and other civil works activities, including related public park and recreation facilities that may be of value to the general public.

JUSTIFICATION: This effort provides Corps' Electronic Navigational Chart (ENC) data for all inland waterways and other federal navigation channels maintained by the Corps to be used by commercial Electronic Chart Systems (ECS), which, when combined with the existing Differential Global Positioning System (DGPS), will improve the safety and efficiency of marine navigation in both inland and coastal waterways of the United States. On inland waterways, the Corps will collect more accurate survey and mapping data than is currently on its paper charts, and produce Inland Electronic Navigation Charts (IENCs) in accordance with navigation users and ECS vendors. When combined in the commercial ECS, the technology will greatly improve the safety and efficiency of navigation. This will allow safe navigation through bridge openings during fog and other bad weather conditions as well as during heavy traffic situations, and provide an accurate display for other systems such as radar and Automatic Identification Systems. The Corps will use the S-57 international data format, the electronic data transfer standard prepared by the International Hydrographic Organization committee. The S-57 format is consistent with electronic chart products produced by the National Oceanic and Atmospheric Administration (NOAA), and the chart products produced by the two agencies will be coordinated for compatibility in adjoining areas. The Corps will also coordinate with the U.S. Coast Guard for aids to navigation information and collaboration on rules for chart carriage by waterway users. In coastal and Great Lakes areas, the Corps will produce standardized channel condition chart products that will provide consistent and reliable information to NOAA for chart updates, in accordance with Water Resources Development Act of 2000, Section 558. Similar channel chart products will be provided to navigation users, and these coastal and Great Lakes channel condition chart products will also follow the S-57 format. Such ENC development and publication activities are in accordance with National Transportation Safety Board recommendations to the Corps, and subsequent commitments made by the Chief of Engineers.

PROPOSED ACTIVITIES FOR FY 2009: Begin initial chart development for the Alabama River – 305 river miles; complete development of chart coverage for the Missouri River – 650 miles; update features for the Mississippi, Ohio, Illinois, Red, Arkansas, Atchafalaya, Cumberland, Tennessee, Monongahela, Kanawha, Green, Tenn-Tom, and Black Warrior-Tombigbee Rivers – 6,100 miles; continue cooperative charting program with U.S. Power Squadron; investigate addition of new features and technology.

ACCOMPLISHMENTS IN FY 2008: Continued development of chart coverage for the Missouri River – 650 river miles; completed development for Tennessee River – 650 miles; updated features for the Mississippi, Ohio, Arkansas, Black Warrior-Tombigbee, Cumberland, Tenn-Tom, Illinois, Kanawha Rivers – 4,500 miles; completed channel framework development for 50% of coastal and Great Lakes areas; established standard for paper charts; began data reporting and compilation process with U.S. Power Squadron.

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Inspection of Completed Federal Flood Control Projects (ICW)

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY2008-2013) Program Cost	\$ 10,000,000
Appropriation for FY 2008	\$ 1,664,000
Allocation Requested for FY 2009	\$ 1,780,000
Increase of FY 2009 over FY 2008	\$ 116,000

AUTHORIZATION: Inspection of Completed Flood Damage Reduction Projects are governed by Engineer Regulation 1130-2-530 and are essential to insure that Federally authorized flood control projects that are operated and maintained by non federal sponsors are properly maintained and operated and are functioning as constructed and intended to protect life and property and obtain the maximum intended benefits.

JUSTIFICATION: The Corps has constructed over 400 flood control reservoirs and over 9,000 miles of levee and flood wall systems in this country, which account for a major portion of the projects protecting communities across the nation. Many of these structures protect highly urbanized areas, and all of them require continued maintenance (either by the Federal government or Non-federal interests) after construction in order to provide the intended level of protection.

Operation and maintenance of completed Federal flood control projects and systems is a non-Federal responsibility with oversight provided by the Corps Inspection of Completed Works Program. The Corps conducts periodic inspections of completed Federal flood control works and notifies appropriate parties of the results of such inspections. The Corps' inspections are designed to determine, from visual inspections, if proper maintenance has been accomplished and that there are no obvious deficiencies. These inspections currently do not address hydrologic, hydraulic, or geotechnical issues or assess the current risk associated with the projects conditions that may require more detailed investigations or analyses to insure safe reliable protection from flood risks to public safety.

Coordination between the Corps and other Federal, state, and local agencies is essential for proper accomplishment of this program. In addition to satisfying Corps' requirements, the improved inspection results will be made available on the National Levee Inventory Database and will be of great value to local, State, and other Federal agencies tasked with the development and implementation of state and local Levee Safety Programs.

PROPOSED ACTIVITIES FOR FY 2009: Activities will include implementation of improved, standardized national inspection criteria and standards for inspections of completed projects to insure uniform, consistent evaluation and assessment of operations and maintenance activities performed by local project sponsors. More robust technically focused periodic inspections will be performed on approximately 10% of the federal project inventory beginning in FY 2009 which will provide better information on project performance trends and information concerning project deficiencies and future maintenance and improvements needed by the public sponsors to insure the project perform as intended. FY 2009 will require \$1,780,000 to continue implementation of these inspection program improvements.

ACCOMPLISHMENTS IN PRIOR YEARS: Implementation of improved, standardized national inspection criteria and standards for inspection ratings of both federal and non-federal flood damage reduction projects have been established to ensure nationally consistent evaluation and assessment of operations and maintenance activities performed by local project sponsors. Development of a more robust technical inspection

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process and risk assessment methodology will provide improved assessment of the projects performance trends, deficiencies and improvements necessary to insure that projects will perform as intended. Completed detailed technical assessment of over 31 miles of federal projects (119) with I-wall construction to ensure I-wall stability and reliability based on lessons learned from the performance of I-wall in New Orleans during Hurricane Katrina. Conducted intensified notification and coordination with project sponsors for all federal projects that have received an unacceptable rating during the projects last inspection to insure that sponsors address and correct project deficiencies. Coordination with FEMA regions were increased to ensure that federal project conditions were properly identified and considered in FEMA's Map Modernization effort. Conducted routine maintenance inspections of approximately 50% of the federal project inventory on an annual basis through FY 2008.

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National Coastal Mapping Program

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$8,500,000
Appropriation for FY 2008	\$8,856,000
Allocation Requested for FY 2009	\$7,000,000
Change in FY 2009 over FY 2008	(\$1,856,000)

AUTHORIZATION: These efforts are essential to providing data for efficient and effective management of critically important National water resources. Regional Sediment Management (RSM) activities are authorized by Section 516 of WRDA 96.

JUSTIFICATION: This is the only Federal coastal mapping program that produces regional, operational data along the coast on a recurring basis. Regional Sediment Management requires regional measuring and monitoring to provide engineering, environmental, and economic data and information for decision makers and managers. There are approximately 7,500 miles of sandy coastline in the continental US and no other program in the Corps of Engineers (Corps) (or other Federal agencies) provides consistent, recurring, regional data to measure and monitor physical, environmental, and economic conditions, and their changes over time. It is the quantification of regional conditions and changes that will lead to improved management practices of entire regions and projects within those regions. Without these data, the Corps cannot fulfill its goal of a systems approach to coastal management, including navigation and coastal flood risk reduction projects. In FY 2009, an increase is necessary to move the Coastal Zone Mapping Imaging and Lidar (CZMIL) development program to this Remaining Item (formerly under the RSM item).

The CZMIL program portion of the National Coastal Mapping Program continues development of a new integrated sensor capability to measure and monitor coastal zone engineering, environmental, and economic conditions on a regional scale. Certain aspects of our existing sensor design and operational methodology have been found to impose fundamental limitations on the production of high resolution information and arise from the basic issue that our lidar sensor was designed to excel in the measurement of a single variable, depth, in the deepest possible water. This project is an effort to advance the state-of-the-art in the three major areas of algorithms, software, and hardware. The CZMIL project is intended to provide a sustained focus and collaboration among academia, industry, and federal government to review and refine existing capabilities for the measurement of additional regional coastal information, and to design and build a new generation of hardware and software wherein known limitations are addressed, and a wider range of engineering, environmental, and economic information is produced over a broader range of operating environments. While the measurement of depth under operational conditions is still of primary importance, improvements in data quality target resolution, bottom classification, sediment transport detection, coastal change detection, and land use are desired and will be addressed.

PROPOSED ACTIVITIES FOR FY 2009: The program will complete any remaining mapping from FY 2008 on the Pacific coast and move operations to the Gulf of Mexico to continue mapping along the US coast. Beginning in Texas, upon reaching Mississippi we will have succeeded in the first complete survey of the US coast and will begin mapping the coast for the second time. The first coverage provides the first-ever inventory of Federal Navigation projects and coastal shore protection projects. The second survey will begin to provide information and knowledge on change and rates of change, sediment transport and erosion of sandy coasts, change in wetlands or sea grass, and change in land use and coastal development and resiliency. Quantification of change can only be determined from repetitive mapping, which is the information needed most for management of navigation projects. The CZMIL effort under the National Coastal Mapping Program will enter into its fabrication and integration phase of airborne sensor development. Components will be purchased or developed, tested and integration will occur at the component level. These include the lasers, array receivers, scanner, airborne computer and controller, hyperspectral imager, data storage devices, GPS and IMU. The data fusion software will continue its development and evolution to extract information from the passive and active sensors that comprise CZMIL.

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ACCOMPLISHMENTS IN PRIOR YEARS: In 2004 the first year of the Corps national coastal mapping effort, a total of 1,300 miles of the sandy coasts of Mississippi, Alabama, Florida, Georgia, South Carolina and North Carolina were surveyed to support Regional Sediment Management (RSM) practices using airborne lidar and photogrammetry systems. The Corps coordinated with other Federal agencies (Navy, NASA, USGS, and NOAA) to eliminate duplication and leverage programs to maximize survey coverage. This coordination was very successful and has resulted in very close and continuing coordination since 2004. The RSM survey covers from the waterline landward 500 m using topographic lidar and from the waterline seaward using hydrographic lidar. The same area is covered concurrently with very high resolution imagery. Products included seamless digital elevations of the coastal zone, orthorectified imagery, a shoreline position vector, and metadata. These data were distributed to the Corps Wilmington, Charleston, Savannah, Jacksonville, and Mobile Districts. Data were also provided to several States, academia, and industry and to USGS and NOAA where it remains available for download through Federal data archives. This first mapping effort was completed six weeks prior to the first storm of the 2004 hurricane season. These data provided the most complete regional data ever collected, including Federal navigation and shore protection projects, immediately prior to four major hurricanes striking Florida and Alabama. As a result of the multi-agency coordination we produced pre-storm surveys and post-storms surveys coordinated with Navy, NASA and USGS to eliminate duplication. These data were used to assess regional and project hurricane impacts and provided necessary data for planning, engineering, construction and operations. Approximately \$200 million was spent reconstructing shore protection projects based on results determined from these RSM coastal mapping data. State, local, industry and academic organizations are using these data for many coastal management applications, projects and programs.

In 2005 approximately 1,000 miles of the sandy beaches bordering the Atlantic Ocean were mapped, including Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Delaware, Maryland, and Virginia with the same approach, producing a variety of digital elevation products for regional sediment management actions. A few new standardized products were created based on lessons learned from the 2004 season and use of the data by the Corps, including bare earth models and extraction of building footprints, both needed to assess the impacts of hurricanes and coastal storms. These data are available through the Corps, USGS, and NOAA. The NOAA lidar data website alone has recorded 770 downloads totaling 11 billion points. These data are not only supporting the Corps, but other Federal, State, and local governments, academia, and industry.

In 2006 approximately 1,000 miles of open lake coasts were mapped with the same approach used in prior years, producing the same standardized products and information for regional sediment management actions and Federal project O&M. The surveys covered Lake Erie and the Pennsylvania, Ohio, and Michigan shores; Lakes St. Clair and Huron; and about 200 miles into Lake Michigan and additional Michigan shore. In addition to the physical conditions previously described, new techniques were developed by teaming with NAVO, USGS, NOAA, industry, and academia that yield information about the environment. For the first time, a hyperspectral imager has been fused with a lidar bathymeter and used operationally to quantify wetlands, submerged aquatic vegetation, sea-bottom type, water quality parameters, and land use. This is the first year where standardized environmental products are being produced for measuring and monitoring regional environmental impacts and changes from our regional sediment management practices. These capabilities were used immediately following Hurricane Katrina to assess the impact of the National Disaster and to baseline conditions for both physical and wetland recovers. These data were also used in the Corps IPET study to aid in analysis. The CZMIL program was initiated (through the RSM program) and several technical workshops were conducted with government, industry and academia to produce a detailed scope for the program. In addition, work was initiated on the CZMIL Conceptual Design.

In 2007 the National Coastal Mapping Program completed mapping the Great Lakes, surveying in Wisconsin, Illinois, Indiana, Michigan, Ohio, Pennsylvania, and New York along, Lake Ontario, a portion of Lake Erie, the remainder of Lake Michigan and Lake Superior, approximately 1,000 miles. The same standard products were produced and disseminated to the Corps districts as well as to NOAA and USGS for dissemination nationally. The National Coastal Mapping Program continued very close coordination with other Federal agencies collecting these types of data, both through the program and as a Co-Chair on the Interagency Working Group for Ocean and Coastal Mapping (IWG-OCM) under the JSOST. As of November 2006, there had been 1,394 individual downloading of over 100 Gigabytes of data from the National Coastal Mapping public distribution website. The CZMIL Conceptual Design was completed along with a number of technical reports detailing data needs for the future system. These reports included: Report: Potential Application of Parallelization Techniques to CHARTS Lidar

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Data Processing Architecture; Report: Potential Application of Artificial Intelligence to Lidar Data Processing and Development of Smart Algorithms; Report: Optimizing Visualization of CHARTS Lidar Data and Derivative Products; Report: Field Test Plans and Environmental Baselines; Report: System Requirements; Report: System Test Requirements; Report: Laboratory Test Plan; Report: Conceptual Design; Report: Project Risk Mitigation and Management Plan; Report: CZMIL Technical Workshop 2006, Proceedings and Results; CRADA for the USACE and The University of Southern Mississippi; Active website and sample educational outreach materials; Equipment Acquisition Plan detailing the major equipment acquisitions to support the CZMIL project; Report: Feasibility of Raytracing Individual Image Pixels to the Seafloor; Report: Optimization of Algorithms for Benthic Classification in CHARTS; Report: and Feasibility for Extraction of Hydrographic and Environmental Parameters from Sea Surface Measurements.

In 2008 the National Coastal Mapping operations will move to the Pacific coasts of Washington, Oregon, and California to collect hydrographic lidar, topographic lidar, RGB imagery and hyperspectral imagery to produce digital elevation models of the coastal zone, orthometric imagery, bare earth DEM's, shoreline position and classification, sea bottom reflectance, building locations and dimension attributes, and land use classifications. We are coordinating with Federal coastal mapping programs and State sponsored activities in Oregon and California to optimize the survey areas and leverage these complementary programs. Nominally, we will survey from the waterline landward 500 meters and from the waterline seaward 1,000 meters. CZMIL will conduct the detailed design phase and complete the final design by the end of the fiscal year. This will position the program to begin the fabrication and construction phase in FY 2009. In addition to the detailed design of the airborne sensor, development of algorithms to fuse active data (topo & hydro lidar) with passive imagery (hyperspectral) will continue to support CZMIL and on-going operations to the extend possible.

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National Dam Safety Program – Portfolio Risk Assessment

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$15,000,000
Appropriation for FY 2008	\$ 9,348,000
Allocation Requested for FY 2009	\$15,000,000
Increase of FY 2009 over FY 2008	\$ 5,652,000

AUTHORIZATION: Dam safety legislation PL 92-367 and PL 99-662, and the National Dam Safety Program Act (Section 215 of PL 104-303), the Dam Safety and Security Act of 2002 (Public Law 107 - 310) and the Dam Safety Act of 2006 (Public Law 109-460).

JUSTIFICATION: The Federal Guidelines for Dam Safety provides a framework for safe construction, operation, and maintenance of Corps dams. Dams in the United States must be constructed, operated, and maintained in accordance with sound engineering practices to prevent failure and avoid potential loss of life and destruction of property. This National Dam Safety Program (NDSP) account consists of two parts: (1) the operation of the NDSP including participation with other agencies; and (2) implementation of a portfolio risk analysis program for all 610 of the Corps dams, including recurring mapping and interim risk reduction work.

(1) The NDSP was established to enhance national dam safety. These funds support the activities under the NDSP, in the interests of the Corps and the citizens of the Nation. The National Dam Safety Program Act strengthens the NDSP, whose purpose is to reduce risks to life and property from dam failure in the United States. The Act also codified the Interagency Committee of Dam Safety (ICODS) to coordinate the Federal actions under the NDSP. The Chief, Engineering and Construction, Directorate of Civil Works (USACE, Dam Safety Officer), or his representative, represents the Department of Defense as a member of ICODES. The Corps also provides a representative to the National Dam Safety Review Board for the Secretary of Defense. The National Dam Safety Program Act expanded the scope of previous dam safety legislation and the requirements for ICODES participation with various states to improve dam safety in the United States. Through ICODES, the NDSP provides support in development of federal guidelines for dam safety, promotion of public awareness programs, publications, training materials, and workshops. The Act also provides for archival research that is supported by Federal dam owning agencies through ICODES and the National Performance of Dams Program. The Dam Safety Act of 2006 extended the National Dam Safety Program Act appropriation authorization for five years.

(2) While no Corps dams are in imminent danger of failure, many of them have a high dam-safety risk due to the likelihood of extremely large floods, seismic events, seepage and piping problems, and other damages and/or deterioration problems. The need to prioritize budget activities requires that the Corps uses risk assessment as a central part of the decision-making process to direct funding to those dam safety issues presenting the greatest risk and to those rehabilitation actions that result in the greatest risk reduction for their cost. For each dam in the portfolio, the risk assessment provides estimates of the probability of failure and consequences by each initiating event. In addition, risk reduction measures are formulated and their cost and effectiveness estimated. The results arrayed by risk level and risk reduction cost effectiveness provide a risk ranking for the portfolio of dams. The portfolio risk assessment (PRA) process has demonstrated its value during Fiscal Years 2005, 2006, and 2007 by a number of dams with high risks. In order to expedite completion of the initial screening of all Corps projects and to ensure that the results of the regional and districts portfolio provide a consistent basis for setting national priorities, special teams (or cadres) were established and have been conducting a screening level PRA since FY 2005. These cadres are composed of six Corps members (geotechnical, H&H, structural, mechanical, operations, and economist) who will lead, facilitate, and help train the regional group that is doing the PRA. The

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members of each cadre are technical experts within their discipline and are experienced in dam safety, risk analysis, and the application of probability methods to civil works infrastructure. Screening PRA's were completed on 30% of the dams through FY 2007 with an additional 30% of the dams being screened during FY 2008 to bring the total percentage of the dams screened to 60%. With 13 cadres working in FY 2009, the screening level assessments will be completed with the requested funding. The requested funding will also support the activities to move forward with an in-depth portfolio analysis of the dams that present the greatest risk.

PROPOSED ACTIVITIES FOR FY 2009:

(1) The NDSP account provides effective coordination of dam safety activities across the various regions of the Corps and provides for Corps participation at national dam safety events. The account also provides for District participation on the National Dam Safety Management Team, which advises the Corps Dam Safety Officer on safety of dams policy. The NDSP supports Corps membership and participation in various national and international dams organizations including the Association of State Dam Safety Officials (ASDSO), the US Society on Dams (USSD) and the Dam Safety Interest Group (DSIG). The USSD along with its international counterpart, the International Committee on Large Dams (ICOLD) supports technical knowledge concerning the benefits, engineering, design, and construction of dams. The DSIG is an international group of dam owners involved in research and development of dam engineering. Participation with the DSIG allows the Corps to leverage Civil Works research and development funds.

(2) Thirteen USACE PRA cadres and a national PRA manager will manage the Corps-wide PRA efforts. During FY 2009 the cadres will complete the initial screening level PRA of all Corps dams. The procedures for moving to the next level of analysis will be completed and a detail PRA will be completed on the highest risk dams as previously identified by the screening level PRA's. The results of the screening PRA's will be used in the development of study plans for inclusion in the regular budget cycles and the same results will be used in prioritizing requests for remediation. The districts are responsible for collecting appropriate project data, assisting in the analysis of data gaps, using expert judgment to estimate for missing parameters, coordinating meetings, correspondence, and site visits, if required, updating essential plan, studies, or reports, and participating in training on risk analysis and probability methods. The database of information from the PRA will be linked to the existing Dam Safety Program Management Tools (DSPMT) and the Operations & Maintenance Budget Information Link (OMBIL) to maximize the use of the information developed. Additional emphasis will be placed on the completion of inundation mapping and interim risk reduction measures at all DSAC I and II dams.

ACCOMPLISHMENTS IN PRIOR YEARS:

(1) The NDSP account provided Corps presentations at the United States Society of Dams (USSD) conference and the Association of State Dam Safety Officials (ASDSO) during FYs 2006 and 2007. This account also supported the Corps response to the 9-11 events in the dam safety area. The NDSP account provided field participation in preparing responses to the recommendations of the Corps Peer Review of the Dam Safety Program. Additional funds provide for continued development of the Dam Safety Program Management Tools (DSPMT) and the Dam Safety Program Performance Measures (DSPPM). Both programs are being developed along with the Interagency Committee on Dam Safety (ICODS) to improve both Federal and State safety of dams programs.

(2) Portfolio Risk Assessment portion of this account has provided initial work in the development of overall procedures for the continuing analysis of the portfolio of dams. During FY 2005 through FY 2008, this work included the selection and training of regional PRA cadres and the screening of 60 percent of the Corps dams. The results of this work are already being used in prioritizing the remediation of dams.

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National Emergency Preparedness Program (NEPP)

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$7,000,000
Appropriation for FY 2008	4,674,000
Allocation Requested for FY 2009	6,000,000
Change in FY 2009 from FY 2008	1,326,000

AUTHORIZATION: Executive Orders 10480 and 12656, which cite several acts including The Stafford Act.

JUSTIFICATION: The budget request will enable the Corps to be prepared to accomplish its continuity of operations and continuity of government responsibilities during national/regional crises. This entails support of civil government through coordinated execution of federal agency plans and the planning/conducting of limited exercises to test readiness to provide such support. Executive Orders 10480 and 12656 and the Department of Homeland Security (DHS), Federal Emergency Management Agency (FEMA) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 USC 5121 et seq. are the basis of the National Response Plan/Framework. The cited executive directives assign significant responsibilities for such preparation (planning, training, research and testing) to the Corps. This includes responsibility for development of comprehensive national level preparedness plans and guidance for response to all regional/national emergencies, whether caused by natural phenomena or acts of man, plans for response(s) to acts of terrorism, and the local preparedness necessary to support Corps continuity of operations. The Corps provides engineering and construction support to state and local governments in response to catastrophic natural/technological disasters. Rapid response to disasters of a regional/national magnitude requires that extensive pre-emergency planning and preparedness activities be conducted to assure the availability of a work force capable of shifting from routine missions to crisis operations and the organizational command and control structure(s) necessary to provide a coordinated and comprehensive response in the critical early stages of a catastrophic disaster.

This program provides the activities necessary to prepare for response to catastrophic natural and technological disasters requiring major Federal support of state and local governments overwhelmed by a disaster event, and for national level emergency water planning. The preparation requires the development of plans, training of employees, conducting training exercises, including support to FEMA exercises and coordination within DOD and with other Federal agencies and state and local governments. Unlike the Corps Civil Works programs related to individual project planning, development and operations and maintenance, the NEPP requires the development of an integrated command planning and response capability. Corps divisions have a key role in the planning, coordination and operational control of multi-district response(s) and the integrated preparedness effort required for accomplishing this response. Preparation also includes the Headquarters sponsored Corps-wide programs necessary to provide the capabilities and operational command and control required by Corps field commands in order to accomplish their NEPP responsibilities, both routinely and in specific emergency response situations. NEPP also provides USACE with the ability to engage and coordinate readiness with other agencies at the National level on programs of Federal primacy or interests.

The NEPP is complementary to the Flood Control and Coastal Emergencies (FCCE) appropriation. Although both programs are related to emergency situations, there is a distinct separation of responsibilities. The NEPP provides for the planning, training, and testing activities necessary to develop the capability to meet essential requirements associated with local continuity of operations and response(s) to scenario specific national/regional crises. The FCCE, on the other hand, provides preparedness and response related to emergency flood fighting, post-

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flood repair and restoration of flood and shore protection works damaged or destroyed by floods, hurricanes or wave action and Corps preparedness associated with National Response Plan/Framework mission requirements.

PROPOSED ACTIVITIES FOR FY 2009: The FY 2009 program will provide for continuing the implementation of the National Emergency Preparedness Program. The FY 2009 program will continue the process of catastrophic disaster planning and exercising to enable the Corps to rapidly respond to a broad spectrum of emergencies, with emphasis on natural disaster and terrorists' events that have regional and national implications, such as the Homeland Security Council's National Planning Scenarios. An effort will be made to satisfy increasing demands on the program to support multi-agency (Federal, state, and local government) requests to exercise plans focusing on regional catastrophic natural and man made disasters. Increasingly, Federal, state and local agencies are looking to the Corps in this area. Lessons learned from events such as Senior Leader Seminars, the National Capitol Region workshops, Hurricane Katrina, and the evolving New Madrid earthquake scenario, clearly indicate that the current system does not adequately provide for a response to catastrophic disasters that is timely enough or comprehensive. The Corps has initiated a program that uses the deliberate planning process to develop scenario specific catastrophic disaster plans. This will result in more detailed planning and should provide for a more comprehensive response to national/regional catastrophic disasters to include terrorist attacks. More extensive coordination with Federal, state and local entities will be incorporated into plan development. In this regard, following FEMA's program focus, USACE will continue to play a key role in national security planning such as supporting Homeland Security strategic planning efforts, development of the National Capitol Region Response Plan and other plans as the New Madrid Earthquake, the South Florida Hurricane, the Southern California Earthquake, the New Orleans Hurricane and other contingencies with national implications. Additional efforts will focus on continuing to strengthen COOP readiness and conducting exercises, aligned with the highest national priorities, within the scope of available funding during FY 2009, improved catastrophic disaster response planning and emergency management technical assistance program for technology support, development and transfer of knowledge.

ACCOMPLISHMENTS IN PRIOR YEARS: The Corps continued to emphasize a program that uses the deliberate planning process to develop scenario specific catastrophic disaster plans. Detailed planning was provided preparing for a more comprehensive response to national/regional catastrophic disasters to include terrorist attacks. Extensive coordination with Federal, state and local entities has been incorporated into plan development. In this regard, following FEMA's program focus, USACE has continued to play a key role in national security planning such as supporting Homeland Security strategic planning efforts, development of the National Capitol Region Response Plan and other plans such as the New Madrid Earthquake, the New Orleans Hurricane, the Los Angeles Earthquake and other contingencies with national implications, such as the fifteen national planning scenarios developed by the Homeland Security Council. Additional efforts focus on continuing to strengthen COOP readiness. Exercises, involving federal, state and local officials, have contributed to a more timely and effective execution of Corps responsibilities during disasters that have national impacts. In FY 2007, USACE made a concerted effort to assist NORTHCOM in preparing for timely, effective and comprehensive engineering support in response to potential disasters. In 2007 Pacific Ocean Division hosted a Regional Exercise incorporating cold weather impacts for an Anchorage Earthquake CDRP event. Objectives, which were met, were to prepare USACE to respond to a no-notice cold weather event and capture lessons learned to improve future responses. Urban Search and Rescue (US&R) Training was conducted in 2007 to recertify cadre members to advanced Structures Specialists, to provide US&R-level weapons of mass destruction training to meet FEMA requirements, to prepare and conduct a new recruit Structures Specialist training course and to purchase associated equipment for the support teams. Seminars, workshops, and exercises, such as mentioned above, have strengthened partnerships and promoted mutual understanding of the roles, responsibilities and interests of USACE, FEMA, other Federal agencies, and State and local governments involved in natural disasters and terrorists' responses. They have provided an excellent opportunity to examine contingency plans, capabilities, and communications at federal, state and local levels. Also, region-specific issues have been identified and addressed at exercises such as Ardent Sentry. FY 08 accomplishments will be addressed later this year.

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National Inventory of Flood/Storm Damage Reduction Projects and Levee Safety Program

SUMMARIZED FINANCIAL DATA:

Estimated Total Program Cost	\$ TBD
Allocation Prior to FY 2008	\$30,000,000
Appropriation for FY 2008	\$ 0
Allocation Requested for FY 2009	\$10,000,000
Change in FY 2009 from FY 2008	\$10,000,000

(Supplemental funding appropriated under PL 109-148 included an allocation of \$30 million in the flood Control and Coastal Emergencies account to initiate work on the national inventory. The Levee Safety Program, authorized by Title IX of the Water Resources Development Act of 2007, broadened the authority under which the Corps of Engineers (Corps) conducts the levee inventory program and is incorporated into the ongoing program.)

SCOPE: The national levee inventory is an interagency effort to improve management of the nation's flood and storm damage reduction infrastructure. Specifically, the Corps will coordinate with Federal Emergency Management Agency (FEMA) as well as non-Federal entities to conduct an inventory of the Nation's vast collection of flood and storm damage reduction structures to include Federally operated & maintained projects, Federally authorized locally operated & maintained projects and non-federal projects; to create and populate a central database to house and maintain critical information on these structures and projects; and to complete development and test a methodology for assessing the structural and /or operational integrity and associated risk of these existing projects. The results of the national project inventory and risk-based project assessments will be linked to FEMA's ongoing flood mapping program as well as the Corps levee rehabilitation and inspection program, which is funded under the Flood Control and Coastal Emergencies account. Title IX of the Water Resources Development Act of 2007 established a Levee Safety Committee and expands authority to perform levee inventories, inspections, and consequence assessment for inclusion in a national levee database.

FY 2009 funding continues the effort and builds upon work accomplished using 2006 emergency supplemental appropriations. This activity will dovetail with continuing work under the National Dam Safety Program. Initial work will focus on levees and floodwalls, though eventually the inventory and methodologies will address all flood and coastal storm damage reduction projects. FY 2009 funding also funds the travel expenses to attend meetings and administrative cost of the Committee, as required by Title IX, for the 14 members to be appointed to the Levee Safety Committee.

JUSTIFICATION: Using the Program Assessment Rating Tool, an assessment of the Corps Emergency management program determined that there exists a need for a comprehensive database for tracking the maintenance and performance of the Nation's flood and storm protection projects, many of which the Corps regularly inspects under its Rehabilitation and Inspection Program. This information is necessary to ensure flood/storm damage reduction projects perform well during floods and storms and to improve state and local accountability for maintaining and repairing flood and storm protection projects.

To date, the Corps has constructed over 400 flood control reservoirs and over 9,000 miles of levee and flood wall systems in this country, which account for only a portion of the total number of projects protecting communities across the Nation. Many of these structures protect highly

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urbanized areas, and all of them require continued maintenance (either by the Federal government or non-Federal interests) after construction in order to provide the intended level of protection.

Maintenance of completed levee/floodwall projects and systems is typically a non-Federal responsibility with oversight provided by the Corps Rehabilitation and Inspection Program. The Corps conducts periodic inspections of completed Federal and non-Federal flood control works and notifies appropriate parties of the results of such inspections. The Corps' inspections are designed to determine, from visual inspections, if proper maintenance has been accomplished and that there are no obvious deficiencies. They currently do not address hydrologic, hydraulic, or geotechnical issues or the risk associated with the projects conditions that may require more detailed investigations or analyses to insure safe reliable protection from flood risks to public safety.

Additionally, there may be insufficient communication of the results of these inspections to appropriate parties, such as the national Flood Insurance Program and FEMA's map modernization program, although the Corps has improved coordination with the latter recently. The need for improved inspections and communication of those inspection results is great, as the failure to maintain a levee/floodwall system in sound condition may result in withdrawal of certification that such systems meet the FEMA base-flood (100-year) - allowing property owners behind levees to avoid mandatory flood insurance purchase requirements. However, the analyses used to certify these levees may understate the true flood risk, if sufficient hydrologic, hydraulic and geotechnical factors are not evaluated.

There currently exists no single, comprehensive national database on these and other flood/storm damage reduction projects and their location, condition, owners/operators, and other factors relevant to the performance of these projects.

The Levee Safety Committee is charged with developing a Strategic Implementation Plan for a National Levee Safety Program. Title IX directs that the Committee be made up of the Secretary of the Army or his designee, as Chairperson; the Administrator of FEMA or his designee; and levee experts as follows: eight representatives of state levee safety agencies, one from each of the Corps of Engineers regions; two representatives from local and regional governments; two representatives from private industry; and two representatives from Indian Tribes.

PRIOR YEARS ACCOMPLISHMENTS:

FY 2006 funding initiated work on this study. Work in Fiscal Years 2007 and 2008 included continuing the Geospatial inventory, population of the database with available information, collection of GIS data for all federally authorized projects, and development and pilot testing of an assessment methodology specific to levees and floodwalls. Additionally, the Corps and FEMA worked collectively on issues such as residual risk communication and the Corps inspection program revisions and coordinated national efforts for flood map modernization.

FY 2009 ACTIVITIES:

FY 2009 funding will be used to continue development of the inventory of both federal and non-federal projects with an interim target of complete GIS information on 100 percent of the Federally-constructed levee/floodwall systems and 100% of non-GIS information on non-federal projects and begin GIS information on 10 percent of non-federal projects. Additionally, the Corps will work collaboratively with FEMA to complete development of a risk assessment methodology, begin identification of "high risk" levees and begin risk assessments of high risk levees. After appointment of the 14 members of the Levee Safety Committee, FY 2009 funding will be used to cover travel expenses and administrative cost for the members to attend meetings of the Committee, as required by Title IX.

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Nationwide (Multiple Project) Natural Resources Management Activities

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$3,326,000
Appropriation for FY 2008	\$3,081,000
Allocation Requested for FY 2009	\$3,326,000
Change in FY 2009 from FY 2008	\$ 245,000

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: On December 10, 1996, House and Senate appropriations subcommittee staff determined it was appropriate to allocate a portion of the Corps of Engineers (Corps) Civil Works projects appropriated funds to conduct certain, specified operations and maintenance activities that benefit all or a majority of operating Civil Works projects. This determination was formalized in appropriations language in FY 2002. Funding these multiple project activities as single entities, rather than on a project-by-project basis, is efficient and cost effective, reducing administration costs and providing for efficient management and oversight. An example of such an activity is the procurement of park ranger uniforms through a contract administered by the National Park Service (NPS). Providing a nationwide funding source for centralized procurement of these items used by all operating projects having a natural resources management program precludes the need for funds to be transferred by each project or district to a single procurement agent, a savings of from 60 to 300 transactions a year.

PROPOSED ACTIVITIES FOR FY 2009:

Nationwide (multiple-project) activities that will be accomplished in FY 2009 with these funds include the following activities:

- Environmental Management System (EMS) Implementation. The EMS has been implemented at 42 designated projects. Funding this as a nationwide activity will allow Corps auditors to review and validate EMS implementation completion at required facilities without transferring funds from each project to a central source. The development of case studies and outreach materials for lessons learned provide initiative and support for other facilities/projects wishing to implement EMS in FY 2009 and future years.
- Natural Resources Management Career Development/Training Support and Material Development. Funds are used to address training and career development issues for the Natural Resources Management (NRM) Community. The needs of all 2,000 NRM field staff in the Corps are served through the development of numerous products, including a number of exportable training courses to meet established training requirements. Funding this as a nationwide activity is appropriate because all NRM field staff benefit equally from the work accomplished.
- Park Ranger/Manager Uniforms. The Corps purchases uniforms for field personnel through an inter-agency contract administered by the National Park Service. Funding this as an inter-agency effort and as a nationwide activity reduces the administrative costs by eliminating the requirement to transfer funds from each individual project to the NPS. Significant economies of scale have been achieved through this arrangement since 1984. Costs include the authorized employee allowance funds (including an HQ-approved increase in replacement allowance), NPS contract administration costs, buy out of discontinued items, program management/committee support, and the purchase of required emblems.

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- Printing and Publishing - Printing of forms, brochures, and similar materials used by all Corps projects achieves economies of scale and reductions in total administrative and procurement costs. Materials include Annual Day Use Passes and Brochures. Printed materials are stored at the Corps Publications Depot for distribution to all projects upon request.
- Sign Standards Manual and Software Update and MCX Operation. A Mandatory Center of Expertise provides technical support and assistance to all projects in the operation of the Corps Sign Standards Program, through the maintenance of the Sign Standards Program Manual and software and providing technical assistance to field users. These efforts allow the Corps to maintain a consistent image that we present to the visiting public. Funding this as a nationwide activity assures competent and timely assistance to users, which increases the consistency, effectiveness and efficiency of the sign program.
- Volunteer Clearinghouse Operation. The Volunteer Clearinghouse is operated under contract with Goodwill Industries to support volunteer efforts at all Corps projects. Funding this as a nationwide activity achieves economies of scale through the use of a single contract and reduces administrative costs by eliminating the need to transfer funds from all projects to the single contracting element.
- Water Safety Products. The Corps Water Safety National Operating Center produces and distributes water safety products and programs to all Corps projects. Products educate and inform visitors of the dangers associated with water-oriented recreation. Significant economies of scale have been realized through the centralized administration of this program that assures current and critical topics are covered, using effective media targeted to high-risk groups. Drownings and associated lawsuits have been reduced significantly since the implementation of this program in the mid 1980's. Current command emphasis is requiring an even further reduction of fatalities during the next two years.
- Other Nationwide NRM Activities. The following additional NRM Activities are recommended for funding to achieve cost efficiencies at the national level. Challenge Partnership Seed Funds; Critical Incident Stress Management (CISM) Program; Natural Resources Management Awards; Operations CoP Gateway; Partnership Advisory Committee; Property Protection Program; RecBEST Coach, Assist and Train Team; Recreation Facilities and Customer Service Standards National Operations Center; Visitor Center Initiative/Corps Story; Bilingual Support Team.

ACCOMPLISHMENTS IN PRIOR YEARS: The allocation of project operations and maintenance funds to conduct specified nationwide (multiple-project) activities to improve the efficiency and cost effectiveness of the Corps NRM program has been employed, with subcommittee staff knowledge and concurrence, since the early 1990s for activities similar to those identified for FY 2009.

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Portfolio Assessment for Reallocations

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program (for 2 years)	\$ 580,000
Appropriation for FY 2008	\$ 280,000
Allocation Requested for FY 2009	\$ 300,000
Change in FY 2009 from FY 2008	\$ 20,000

AUTHORIZATION: Specific project authorizations; Section 216 of the River and Harbor and Flood Control Act of 1970.

JUSTIFICATION: The National Portfolio Assessment is an appraisal of the portfolio of existing Corps of Engineers (Corps) multipurpose projects and will be used as a screening tool to identify the best candidates for opportunities for operational changes and/or reallocation opportunities. The Corps currently manages approximately 380 major dams and reservoirs, providing significant flood control, recreation, water supply, environmental and hydropower benefits to all regions of the country. Some of these reservoirs, however, may use operating plans that no longer reflect the best comparative net economic and environmental returns for the nation. In addition, project hydrology may have changed due to modifications in land use as well as climatic conditions since the project was originally designed and built.

The goal of the assessment is to guide future basin-specific or project-specific funding decisions to insure existing Corps reservoirs contribute to enhance economic and ecosystem values as water demands evolve. The assessment would be used as a screening tool to examine more productive ways to operate the reservoirs and to use the storage in the best possible manner in recognition of potential changes flowing from global warming as new evidence, new science, or better understanding of these changes are determined as well as an increase in appreciation of environmental values since the projects were constructed, many of them decades ago. The assessment will also enable the Corps to determine the feasibility of alternate funding arrangements. Where opportunities are identified, specifically funded follow-up assessments will be proposed for the particular watershed, system of projects or project.

PROPOSED ACTIVITIES FOR FY 2009: Requested funding will be used to complete the assessment. The inventory developed in FY 08 will be scrubbed to focus on those projects most likely to provide operational changes and/or reallocation opportunities. This reduced inventory will also focus on identifying those beneficiaries willing to fund follow-up assessments under the cost sharing arrangements identified in the first year's effort.

ACTIVITIES IN FY 2008: Appropriated funds will be used to initiate the assessment. An initial inventory and assessment of a portfolio of Civil Works reservoirs will be prepared. A methodology will be prepared for more intensive analysis and screening of projects in future years, in order to enable identification of the best opportunities for site-specific reallocation assessments. The methodology will also include identification and assessment of alternate funding arrangements that rely on program beneficiaries to provide the funding for any follow-up assessments.

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Monitoring Completed Navigation Projects (MCNP)

SUMMARIZED FINANCIAL DATA:

Estimated Five-Year (FY2009-2013) Program Cost	\$10,000,000
Appropriation for FY 2008	\$ 1,472,000
Allocation Requested for FY 2009	\$ 1,575,000
Change in FY 2009 over FY 2008	\$ 103,000

AUTHORIZATION: Authorization for the Corps of Engineers Engineer Research and Development Center (ERDC) to conduct R&D is codified in 10 U.S.C. 2358 (“The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that are necessary to the responsibilities of such Secretary’s department in the filed of research and development.”)

JUSTIFICATION: These monitoring efforts, governed by **Engineer Regulation 1110-2-8151**, are essential for providing data for efficient and effective management of critically important Federal shallow- and deep-draft navigation projects for both national economic and military sealift security reasons. The Corps operates and maintains more than 800 navigation projects encompassing more than 25,000 miles of waterways. The Corps requires a national program to identify the best navigation project practices, and to use them to improve all other navigation projects’ performance. Optimizing Civil Works project’s performance requires that they be monitored upon completion, evaluated against preconstruction and present needs, and lessons learned translated into proactive management guidance for Corps Districts. Information gained from the MCNP program, including changes in sediment transport, water levels, currents, waves, flushing, river flows, structure deterioration, and other coastal and river hydraulic phenomena with associated environmental impacts, will be used to verify design expectations, determine benefits, and identify operational and maintenance efficiencies. Information collected will significantly improve projects’ performance, and optimize opportunities for environmental enhancement. Information of a national basis documents successful designs, disseminates lessons learned on projects with problems, and provides upgraded field guidance for solutions that will reduce life-cycle costs on a national scale.

Both shallow- and deep-draft navigation projects located in ports, harbors, rivers, reservoirs, lakes, estuaries, and in the coastal zone are included in this program. Projects that provide maximum cost savings are identified, and those that best address high-priority life-cycle O&M project cost savings are selected for monitoring and evaluation. Monitoring plans are developed jointly by Corps districts and the Engineer Research and Development Center.

Coordination between the Corps and other Federal, state, and local agencies is essential for proper accomplishment of this program. In addition to satisfying Corps’ requirements, the data are made available through publications and electronic technology transfer, and will be of great value to local, State, and other Federal agencies with navigation management policies. Results are communicated immediately to other member agencies of the Marine Transportation System (MTS).

PROPOSED ACTIVITIES FOR FY 2009: All monitored projects were nominated by Corps division and district offices for inclusion in this MCNP program.

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- At **Kaumalapau Harbor, HI**, breakwater where the largest CORE-LOC units ever used by the Corps (35 ton) were used to rehabilitate the structure, data analyses for in-situ wave measurements, wave hindcasts, and wave transformations will be completed, and will correlate breakwater settlement and armor unit movement with forcing functions. This study will provide valuable information for design and installation of CORE-LOC armor units at other high wave energy locations.
- At **J. T. Meyers Locks and Dam, KY**, monitoring will continue of damage progression at sections not repaired, and where steel wall armor may become hazardous to navigation. Repaired concrete sections using expedient material armor strips at both horizontal and vertical damaged sections will be intensely monitored to ascertain effectiveness of repair techniques. Armor strips are critical to protect lock walls. This study will provide significantly improved techniques for rehabilitating existing deteriorating lock walls with minimal disruption of navigation.
- At **John Day Lock and Dam, OR**, all field monitoring data acquisition will be completed. Data reduction and analysis will be performed; causes of hazardous current conditions at downstream lock entrance will be determined. Recommendations for flood bay releases and power plant discharges will be ascertained to minimize hazardous navigation currents.
- At **Great Lakes Armor Stone Deterioration Study at Burns Harbor, IN; Cleveland Harbor, OH; and Keweenaw Waterway, MI**, three rounds of field monitoring of deterioration of scaled-size test index armor units will be conducted. Present Corps testing methods, and ASTM protocols, are not appropriate for multi-ton stone units. Upon completion, this study will provide new protocols for armor stone selection criteria more appropriate to large rubble mound stone breakwater armor units.
- **Periodic Inspections** will continue as a significant partner in the National Coastal Mapping Program by collecting coastal structure topographic LIDAR data and incorporating into the National Coastal Structure Database. Will publish report for west coast structures, and monitor selected unique stone and man-made armor structures in Alaska. This is the only systematic study providing progressive deterioration data of both natural stone and man-made armor units on Corps coastal navigation structures. This knowledge is essential for life-cycle rehabilitation.
- **Montgomery Point Lock and Dam, AR**, experiences difficult and hazardous navigation conditions during both very low and very high water conditions. Will continue collecting pertinent velocity, current flows, water surface elevations, and river topography to ascertain dangerous situations. Upon completion, this study will determine causes of hazardous low- and high-flow conditions, and make recommendations regarding changed release rates for various river elevations at the lock and dam to improve navigation safety.

ACCOMPLISHMENTS IN FY 2008: In FY 2008, 2 Technical Reports (TR) and 4 Coastal and Hydraulic Engineering Technical Notes (CHETN) were published and disseminated to Corps Field Operating Activities, with improved, updated, and enhanced design guidance.

- At **Kaumalapau Harbor, HI**, breakwater structure monitoring and data collection were continued, including a follow-up repetition tripod-lidar survey of the CORE-Loc armor units. Upon completion, this study will provide valuable information for design and installation of CORE-LOC at other high wave energy locations.
- At **J. T. Myers Locks and Dam, KY**, damage surveys were conducted to document any additional damage, and performance of the FY07 repairs to the vertical lock wall armor. Innovative wall armor repair techniques were developed and applied to the horizontal strip damaged sections without. Armor strips are critical to protect lock walls. Upon completion, this study will provide significantly improved techniques for rehabilitating existing deteriorating lock walls with minimal disruption of navigation.

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- At **John Day Lock and Dam, OR**, continued to monitor navigation conditions in the lower lock approach using video. Upon completion, this study will determine causes of hazardous current conditions at downstream lock entrance. Recommendations for flood bay releases and power plant discharges will be ascertained to minimize hazardous navigation currents.
- At **Great Lakes Armor Stone Deterioration Study at Burns Harbor, IN; Cleveland Harbor, OH; and Keweenaw Waterway, MI**, monitoring data were obtained and analyzed 3 times at these divergent structure locations to evaluate effects of freeze/thaw and wet/dry conditions on scaled-size test index armor units. Evaluated present Corps testing methods, and ASTM protocols. Upon completion, this study will determine breakwater armor stone acceptance methodology more appropriate to large stone units.
- **Periodic Inspections:** Continued as a significant partner in the National Coastal Mapping Program by collecting coastal structure LIDAR topographic data and incorporating into National Coastal Structure Database (NCSD), and made processed data available to Corps through NCSD and Google Earth Interface. This is the only systematic study providing progressive deterioration data of both natural stone and man-made armor units on Corps coastal navigation structures. This knowledge is essential for life-cycle rehabilitation and management of such structures.
- At **Montgomery Point Lock and Dam, AR**, very high, and very low, flow on the White River results in hazardous navigation conditions at the lock and dam. Began collecting pertinent data by appropriate methods in the Montgomery Point pool, tailrace, and White River entrance to the Mississippi River. Upon completion, this study will determine causes of hazardous low- and high-flow conditions, and make recommendations regarding release rates for various river stages at the lock and dam to improve navigation safety.

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Program Development Technical Support

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$300,000
Appropriation for FY 2008	\$280,000
Allocation Requested for FY 2009	\$300,000
Change in FY 2009 from FY 2008	\$ 20,000

AUTHORIZATION: The Automated Budget System (ABS) has supported gathering, analyzing and submitting project funding requests to respond to all authorized missions within the Corps of Engineers Operation and Maintenance program. A new automated information system, P2, has replaced ABS for budget development processes. The transition to P2 from ABS has aligned all Civil Works budget requests within one automated information system.

JUSTIFICATION: The new AIS, P2 provides the program development capability previously provided by ABS. The transition to P2 from ABS for program development began in FY 2007 and continued in FY 2008. Work under this activity for FY 2009 will ensure that all relevant business processes and rules are incorporated into P2, as well as continuing to refine the data requirements to meet the needs of the budgeting process without creating an undue administrative burden. There will likely be changes needed to adjust P2 to support the O&M program development based on the initial experiences with the new system. This activity will identify needed changes and recommend steps to implement the changes within P2. The technical support for O&M program development will continue to be provided using P2 rather than ABS tools. The deployment of P2 will shift the efforts here towards development of methods and procedures for setting priorities for all civil works activities and analysis of the entire Civil Works program.

PROPOSED ACTIVITIES FOR FY 2009: Assist O&M program development as supported by P2 for the 2010 and 2011 budget submissions. Identify needed changes and recommend steps to implement changes in P2. Develop program development procedures to support the entire Civil Works program development.

ACCOMPLISHMENTS IN PRIOR YEARS: Maintained and updated the software systems, provided new tools to generate reports, provided training and support to managers. Developed program development tools within P2.

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Protection of Navigation (Four Items)

- Protection, Clearing, and Straightening of Channels**
- Removal of Sunken Vessels**
- Waterborne Commerce Statistics**
- Harbor Maintenance Fee Data Collection**

SUMMARIZED FINANCIAL DATA:

Estimated Annual cost of Continuing Program	\$5,546,000
Appropriation for FY 2008	\$5,184,000
Allocation Requested for FY 2009	\$5,546,000
Change in FY 2009 over FY 2008	\$ 362,000

AUTHORIZATION:

Protection, Clearing, and Straightening of Channels - Section 3 of the 1945 River and Harbor Act (as amended by Section 915 (g) of the 1986 Water Resources Development Act) provides continuing authority for limited emergency clearing of navigation channels not specifically authorized by Congress.

Removal of Sunken Vessels - Removal of sunken vessels, or other similar obstructions, is governed by Sections 15, 19, and 20 of the River and Harbor Act of 1899, as amended.

Waterborne Commerce Statistics - The Corps of Engineers (Corps) serves as the Federal Central Collection Agency, and is the sole U.S. Government source for U.S. domestic and foreign (U.S. foreign waterborne commerce statistics mission transferred to the Corps from Census in FY 1999) waterborne commerce and vessel statistics in conformance with the River and Harbor Act of 1922 as amended.

Harbor Maintenance Fee Data Collection - PL 103-182.

JUSTIFICATION: The budget estimate provides for carrying out the following work:

- a. Protection, Clearing, and Straightening of Channels - Work is undertaken as emergency measures to clear or remove unreasonable obstructions to navigation in navigable portions of rivers, harbors and other waterways of the U.S., or tributaries thereof, in order to provide existing traffic with immediate and significant benefit. The amount requested is an estimate based on historical experience. If actual requirements are more than estimated, funds will be reprogrammed to meet demonstrated needs.
- b. Removal of Sunken Vessels - Primary responsibility for removal belongs to the owner, operator, or lessee. If the obstruction is a hazard to navigation and removal is not undertaken promptly and diligently, the Corps may obtain a court judgment requiring removal, or remove the wreck and seek reimbursement for the full cost of removal and disposal. Determinations of hazards to navigation and Federal marking and removal actions are coordinated with the United States Coast Guard in accordance with a memorandum of understanding between the two agencies dated

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16 October 1985. Removal procedures are outlined in 33 CFR 245. If removal requirements are more than estimated, funds will be reprogrammed to meet actual needs.

c. Waterborne Commerce Statistics - The data provide essential information for navigation project investment analyses and annual funding prioritization for operation and maintenance of existing projects; as project output information for computation of performance measures; for input into the U.S. National Accounts; and for regulatory, emergency management decisions, and homeland defense. Activities supporting this national statistics mission include: (1) collecting and reporting (includes enforcement role) of water transportation statistical data; (2) automated systems development and operation (transactional systems within Operation and Maintenance corporate information system), processing, compiling, and publishing statistical data and information on waterborne commerce and vessels moving on the internal U.S. waterways, the Great Lakes, and through all U.S. ocean channels and ports; and (3) compiling and publishing the official U.S. documentation of U.S. vessels engaged in commerce, their principal trades and zones of operation.

d. Harbor Maintenance Fee Data Collection - Up to \$5 million is authorized to be used annually for the administration of the Harbor Maintenance Trust Fund. Most of these funds are used by U.S. Customs and Border Protection (CBP). The Corps is required to collect data on domestic and foreign shippers of waterborne commerce subject to the Harbor Maintenance Tax (HMT) and provide it to CBP for enforcement and audit purposes. Analysis of Harbor Maintenance Trust Fund (HMTF) revenues and transfers is required to validate the adequacy of the HMTF in light of the uncertainty over the legal and international challenges to the HMT, to document the operation of the trust fund, and to prepare and distribute the *Annual Report to Congress on the Status of the Harbor Maintenance Trust Fund*. Analysis of waterborne commerce shipments and vessel movement data is also needed to respond to legal questions to the HMT; to analyze alternative funding options; and to assess the economic and competitiveness impacts of other potential funding sources. Therefore the Corps requires a portion of the administrative funding. Funds will also be used to modify computer programs to begin receiving CY 2009 waterborne import data from CBP's new Automated Commercial Environment.

<u>FUNDING PROFILE</u>	<u>Appropriation FY 2008</u>	<u>Allocation FY 2009</u>
(a) Protection, Clearing, and Straightening of Channels	\$ 47,000	\$ 50,000
(b) Removal of Sunken Vessels	\$ 467,000	\$ 500,000
(c) Waterborne Commerce Statistics	\$3,992,000	\$4,271,000
(d) Harbor Maintenance Fee Data Collection	\$ 678,000	\$ 725,000
TOTAL	\$5,184,000	\$5,546,000

PROPOSED ACTIVITIES FOR FY 2009: Provide enhanced navigation project output data for FY 2011 budget formulation. Perform operations, maintenance and necessary enhancements of nation's waterborne commerce, vessel and shipper data and statistics programs. Finalize plans for the new real-time domestic electronic data collection system and modify Corps computer systems to accept this new data stream. Begin receiving CY 2009 import data from CBP's new Automated Commercial Environment.

ACCOMPLISHMENTS IN FY 2008: Maintained FY 2007 data quality and completeness. Provided enhanced navigation project output data for FY 2010 budget formulation. Worked with Federal partners, such as CBP, and with industry to ensure data continuity. Emphasized automation of domestic data reporting. Worked with other Federal agencies and industry to design a new modern, comprehensive automated domestic waterborne data collection system. Necessary systems modifications made to receive import data from CBP's new Automated Commercial Environment.

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RecreationOneStop (R1S) – National Recreation Reservation Service (NRRS)

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$1,130,000
Appropriation for FY 2008	\$1,057,000
Allocation Requested for FY 2009	\$1,130,000
Change in FY 2009 from FY 2008	\$ 73,000

AUTHORIZATION: This program is conducted under the general authority of PL 78-534, the Flood Control Act of 1944 (58 Stat. 887).

JUSTIFICATION: At the direction of Office of Management and Budget (OMB), NRRS and Volunteer.gov was combined and is now under the umbrella of RecreationOneStop, a priority Egov initiative on the President's Management Agenda. Also, at OMB's direction, a new NRRS contract was awarded to provide comprehensive services for RecreationOneStop to include a portal for public recreation information services, trip planning and reservations. The USDA Forest Service administers the contract, which services the needs of the Forest Service, the Corps and the Department of Interior (DOI) agencies. The DOI serves as the Managing Partner for RecreationOneStop.

PROPOSED ACTIVITIES FOR FY 2009: Funding the costs for RecreationOneStop, include (1) Corps NRRS management costs, comprising appropriate salary, travel and per diem for Corps COTR, CATT Coordinator, Team leaders and members and Resource Management assistance, (2) NRRS Contract Management Office (NCMO) costs, funds paid to the Forest Service for administering the NRRS contract and operating the NCMO, (3) Corps NRRS contract satellite service and support, and (4) Volunteer.gov, an interagency website coordinating volunteer activities among government agencies.

ACCOMPLISHMENTS IN PRIOR YEARS: The NRRS has been providing reservation services for the Corps and the Forest Service since 1999. Launched website, Recreation.gov in FY07. The website allows the public to view information on over 4,000 Corps recreation sites and activities, reserve and make payment on line. The website supports the National Recreation Reservation Service (NRRS) which brings together the capability to reserve sites managed by the Army Corps of Engineers, National Park Service, Bureau of Land Management, US Fish and Wildlife Service, and the Forest Service. In FY 2007 this program provided management oversight of NRRS contract with the NRRS processing over \$41 million in gross fee revenue for the Corps.

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Regional Sediment Management Program (RSM)

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost of Continuing Program	\$5,000,000
Allocation for FY 2008	\$2,702,000
Allocation Requested for FY 2009	\$1,391,000
Decrease of FY 2009 from FY 2008	\$1,311,000

AUTHORIZATION: Section 516 of WRDA 96 authorizes the development of long-term strategies for the management and control of sediments through studies and operational activities.

JUSTIFICATION: The RSM Program is a “systems-based approach” that solves sediment related problems by designing solutions that fit within the context of a regional strategy. The RSM Program objectives are to establish regional management strategies that link the sediment management actions at authorized Corps of Engineers (Corps) projects with one another, and to coordinate management activities with other Federal agencies, State, and local governments. RSM is the integrated management of littoral, estuarine, and riverine sediments to achieve balanced and sustainable solutions to sediment related needs. This approach provides opportunities to achieve greater effectiveness and efficiency and to realize significant cost savings relative to traditional project management practices. Cost savings may be realized from reduced re-handling of material, extended dredging cycles and combined equipment mobilization and demobilization for linked projects (e.g., dredging and shore protection). Costs may also be reduced by sharing information and reduced duplication of field data collection, or by reducing duplication in model and tool development.

The short-term goal of the RSM Program is to provide individual districts with the opportunity to identify initiatives that will facilitate implementation of regional sediment management strategies and produce sustainable project management cost savings. Initiatives that support regional strategies include: coordinate navigation channel maintenance with flood and coastal storm damage reduction projects; link sediment availability with sediment needs within the system based on suitable, quantity, quality, and timing, in the context of regional strategies for sediment management; and accommodate navigation channel maintenance material placement needs and concurrently strive to maintain natural sediment transport processes for ecosystem restoration and storm protection considerations. The long-term goal of the RSM Program is to promote technology transfer and lessons-learned in individual district regional sediment management strategies in order to maximize cost savings through sustainable project management practices.

PROPOSED ACTIVITIES FOR FY 2009: Continue implementation of RSM through support to Districts and Divisions to include:

- Develop calibrated regional sediment budgets for the Mississippi Gulf coast and coastal Louisiana, the lower Mississippi River, the coast of Long Island, Morehead City Harbor and vicinity, North Carolina and the Niobrara River Basin. The sediment budget is a primary RSM tool because it provides an understanding of the sediment transport patterns and pathways, the cumulative impact of multiple projects, and identifies sediment sources and sinks, or sediment needs, over the region.

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- Expand the proof-of-concept Life Cycle Multi-objective Systems Optimization for channel maintenance alternatives model developed for Memphis Harbor to the implementation phase at multiple channel locations. The effort involves RSM planning software development, with linkage to an enabling GIS database and other supporting analytical / numerical tools for problem characterization and alternatives evaluation.
- Perform a systems study for the management of fine-grain sediment generated by the Arana Gulch Watershed and received by Santa Cruz Harbor and transfer lessons learned to other fine-grain sediment systems.
- Conduct sediment transport modeling of the lower Green River and areas near Howard Hanson Dam, to predict regional redistribution of sediments and environmental benefits and impacts due to experimental reservoir drawdowns. This information has potential application to reservoir drawdowns, dam breaching, and dam operations to move sediments through projects.
- Formulate a RSM plan in Palm Beach County, in the vicinity of the Lake Worth Inlet with the objective of: 1) investigating the inter-relationship between the authorized Federal navigation project, the inlet sand-bypassing plant, and the adjacent beaches including the shore protection project south of the inlet on Palm Beach Island, and 2) developing a proactive sand management strategy to provide for a safe and efficient navigation program while minimizing impacts on the adjacent beaches.

ACCOMPLISHMENTS IN FY 2008:

- All Corps Division Offices (within the U.S.) continued implementation of regional sediment management initiatives at the Division level and through their respective District offices and formalized processes through Program Management Plans. The program continued to foster stakeholder relationships and educating through online knowledge sharing and technology access.
- Gulf of Mexico Alliance – Gulf Region Sediment Management Master Plan –The Governors' Action Plan identifies development of a Gulf Region Sediment Management Master Plan as an implementation action for the Conservation and Restoration Workgroup. The Corps and the USGS are the co-leads and have developed a Gulf Regional Sediment Management Master Plan that links sources of sediment with sediment needs, provides a basis for assessing competing needs for sediment, and fosters more cost effective sediment management.
- The RSM program developed a marketing strategy for dredged material in the Great Lakes to address an unmet need for regional spatial data defining dredged sediment sources that can be combined with other GIS data to develop linkages between the supply of dredged sediment, other residual sediments and potential demands for their use. This central site for the Great Lakes region allows end users to easily locate dredging resource sites and local sources of more specific information and encourage the beneficial reuse of dredged sediments.
- The program developed comprehensive regional sediment management strategies to guide investment decisions and present the economic, environmental, and social benefits achieved through RSM. Information and capabilities were disseminated via online training, onsite workshops, and websites.

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Reliability Models Program For Major Rehabilitation and Asset Management

SUMMARIZED FINANCIAL DATA:

Estimated Annual Cost for Continuing Program	\$ 650,000
Appropriation for FY 2008	\$ 569,000
Allocation Requested for FY 2009	\$ 608,000
Change in FY 2009 from FY 2008	\$ 39,000

JUSTIFICATION: The purpose of this program is to respond to yearly needs of districts and divisions that are preparing Major Rehabilitation reports for the upcoming fiscal year. The objective of the program is to provide reliability models for project features or components that are being considered for Major Rehabilitation, or to provide procedures to consider the impact of various chemical, environmental or physical processes in a reliability analysis.

PROPOSED ACTIVITIES FOR FY 2008: The requested funds will be used to prepare reliability models and collect data for reliability analyses anticipated to be required by several Districts. Reliability models and/or data are anticipated to be needed for the following: Testing of a reliability model for seepage through embankment dams and levees will continue; Begin testing of a reliability model for floodwall stability; Continue evaluation of data collected on performance of dam gates, to determine performance modes and verify load cycles used in reliability analyses, and electrical/mechanical systems model for locks and dams. Begin collecting data for reliability models for timber piles and crib walls for navigation structures. Provide reliability analysis procedures for additional selected hydropower equipment. It is also anticipated that two rehabilitation workshops would be conducted. The makeup of these units is subject to the needs of the respective districts and divisions. Continue to provide support and consultation for development of reliability model for Asset Management for Navigation and Flood/Coastal business line projects.

ACCOMPLISHMENTS IN PRIOR YEARS: Reliability models and other analytical tools have been provided in support of Major Rehabilitation reports on numerous navigation and hydropower projects. In addition, 18 rehabilitation workshops have been conducted in the last 10 years to provide assistance to the districts as they prepare their reports. These workshops offer guidance in conducting reliability and risk analyses, and provide the opportunity for interdisciplinary teams from the districts to discuss their particular project with Corps Headquarters and other districts personnel. In FY05 the Concrete Deterioration model for Lock Walls and the economic consequences will be finalized through a series of expert elicitation workshop which began in late FY04. These models will be applied to a district lockwall to aid in the Major Rehabilitation Program justification. Two rehabilitation workshops were conducted. Expert Elicitation was conducted for the mechanical and electrical system for navigation locks. The consultation has been provided to districts on reliability model for major rehabilitation report on Wolf Creek and Center Hill dams. Computer programs – design of T-wall and Sheetpiling –were modify to run reliability models for leave/wall system (Kansas City and New Orleans Districts projects).

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Water Operations Technical Support (WOTS)

SUMMARIZED FINANCIAL DATA:

Funding

Estimated Annual Cost for Continuing Program	\$1,500,000
Appropriation for FY 2008	\$ 610,000
Allocation Requested for FY 2009	\$ 653,000
Change in FY 2009 from FY 2008	\$ 43,000

AUTHORIZATION: Authorization for the Corps of Engineers Engineer Research and Development Center (ERDC) to conduct R&D is codified in 10 U.S.C. 2358 (“The Secretary of Defense or the Secretary of a military department may engage in basic research, applied research, advanced research, and development projects that are necessary to the responsibilities of such Secretary’s department in the filed of research and development.”)

JUSTIFICATION: Maintaining the high quality environmental and water quality conditions at 562 Corps reservoirs (5,500,000 surface acres), 237 navigation locks, 926 harbors, 75 hydropower projects, and 25,000 miles of inland and coastal waterways requires compliance with numerous statutes and state standards. Providing the technology and knowledge base necessary to broadly address environmental requirements in accordance with laws and regulations can best be accomplished through a comprehensive centralized program that will maximize cost effectiveness, and ensure broad dissemination and implementation of technology and information.

PROPOSED ACTIVITIES FOR FY 2009: The WOTS Program is expanding as environmental conditions at Corps project sites continue to deteriorate. The program will continue to provide effective environmental and water quality management technologies to address a wide range of issues at Corps reservoir and waterway projects, and in river systems nationwide. The program will provide technology to address: problems caused by aquatic invasive species; water quality impacts of land use, sediment and nutrient loadings, erosion, and reservoir sedimentation; tailwater fisheries concerns at pump-back hydropower projects; and project operations related to environmental and water quality issues. WOTS will provide technical support to the Corps' mission related project responsibilities, with special emphasis on the transfer of technology. The program will ensure that the technologies developed by the Corps and other Federal agencies are current and readily available to all Corps field offices. The effective use of technologies will be secured through direct technical assistance, specialty workshops, information bulletins, technical notes, executive notes, technical reports, miscellaneous papers, instruction manuals, videos, meetings, seminars, briefings, congressional testimony, and the Internet.

ACCOMPLISHMENTS IN FY 2008: Since its inception in FY 1985, WOTS has provided environmental and water quality technological solutions to over 1,550 problems identified at projects from every Corps District. The WOTS program annually conducts specialty workshops, training personnel on the latest environmental and water quality management techniques; and publishes and distributes numerous copies of manuals, bulletins, notes, and reports. In FY 2008, the WOTS program successfully responded to over 50 direct technical assistance requests from 29 Corps Districts, conducted six training workshops on environmental and water quality management techniques, conducted two technology demonstration efforts to verify management strategies and techniques, and prepared three technical publications for distribution to the field. A continual endeavor of the WOTS program is coordination with water quality and environmental elements of other Federal agencies such as the Environmental Protection Agency, U.S. Department of Agriculture, Bureau of Reclamation, Fish and Wildlife Service, U.S. Geological Survey, Tennessee Valley Authority, and the Bonneville Power Administration. These efforts have involved problems related to the introduction and spread of aquatic invasive species, watershed management activities, environmental impacts of hydropower facilities, and impacts of water releases in tailwater areas on fisheries.