

**DEPARTMENT OF THE ARMY  
U.S. ARMY CORPS OF ENGINEERS**

**COMPLETE STATEMENT  
OF**

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**DEPUTY COMMANDING GENERAL FOR  
CIVIL AND EMERGENCY OPERATIONS**

**BEFORE THE**

**COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE  
SUB-COMMITTEE ON WATER RESOURCES AND ENVIRONMENT**

**UNITED STATES HOUSE OF REPRESENTATIVES**

**On**

**“A Review of the U.S. Army Corps of Engineers Chief’s Reports”**

**June 5, 2013**

Mr. Chairman and distinguished members of the Subcommittee, I am Major General Michael Walsh, Deputy Commanding General for Civil and Emergency Operations – U.S. Army Corps of Engineers (Corps), and I am honored to be testifying before you today to discuss the planning process and Chiefs Reports for the Corps. My testimony will briefly describe the 21 reports that have completed Executive Branch review since enactment of the Water Resources Development Act (WRDA) 2007. These proposals fall within the main mission areas of the Corps (commercial navigation, flood and storm damage risk reduction, and aquatic ecosystem restoration). Also, I will address three other proposed projects that have reports by the Chief of Engineers but are still under review.

Before I discuss the planning process and the actual Chief's Reports, I would like to discuss the Corps' Civil Works Transformation initiatives. For the last several years, the Corps has been developing a strategy to address major challenges including ensuring the performance of the key features of the Nation's infrastructure, and responding to shifting demographics, changes in societal values, and climate variability. The intent is to better equip the Civil Works program to effectively meet current and future needs and ensuring decision makers are fully informed. This strategy is focusing on four main areas - planning modernization, budget development transformation, infrastructure strategy, and methods of delivery.

The Corps planning modernization effort emphasizes execution, instills accountability, and improves the organizational and operational model to produce quality products that address water resources priorities. Part of this modernization focuses on improving the knowledge and experience level of Corps planners through additional training, professional certification, and updated planning guidance. The current focus of our planning modernization effort is facilitating the timely completion of decision documents that appropriately address the increasingly complex water problems that plague communities and constrain economic activity. For decades, the Corps has seen a steady increase in the costs and time required to complete investigations. This trend delays the realization of benefits from the construction of a project. The Corps has recognized the need to modernize its approach, through an initiative that we call SMART Planning.

SMART stands for Specific, Measurable, Achievable, Risk-Informed and Timely. SMART Planning encompasses a new approach to investigations, accountability, and portfolio management. The new approach to investigations reduces resource requirements, both time and money, by appropriately focusing on the key drivers in resolving water resource problems while complying with all applicable laws and regulations.

The goal under SMART planning is to complete most feasibility studies within 3 years for \$3 million dollars or less. The end product is a decision document that has been fully coordinated by three levels of the organization (Corps headquarters, the Corps division office, and the Corps district office) from study inception to completion. As a shorthand, we are calling this goal "3x3x3". The Corps expects full implementation of

this new approach in FY 2014 and has been working with its Federal and non-Federal partners to use this new approach in evaluating water resources problems.

The Corps is prioritizing its current portfolio of planning studies and applying the 3x3x3 approach to new and ongoing studies; thus reducing the number of active studies in its portfolio and focusing efforts on completing these studies more effectively by prioritizing funding. The more timely completion of studies will allow the Corps to better use its investigation funding. Since enactment of the Water Resources Development Act (WRDA) of 2007, 21 reports on proposed projects have been forwarded to this Committee, 10 of which were completed in fiscal year 2012.

The Civil Works budget is performance based. In order to achieve budget transformation goals, we must continue to prioritize Federal funding on the highest performing projects and studies. We are working to ensure that the budget development process considers the entire portfolio of potential studies and projects. The funded projects will be completed more quickly, thereby facilitating the realization of benefits for those projects that offer the best return on investment for the Nation.

The Civil Works transformation links national objectives, strategic goals, and current and emerging needs using a systems-based watershed approach. When implemented, this new process will compare outcomes of competing studies and projects based on their returns. Collaboration with our customers, stakeholders, and the public (including input from the Congress) will enable us to successfully implementing this approach.

Ensuring the continued performance of the key features of our infrastructure is becoming more costly over time, in part because of the age of the components of some of our projects, but also due to increases in the cost to repair and rehabilitate them periodically. Operational demands have also grown and changed, particularly over the past 30 years, creating additional stress and we are working on an infrastructure strategy to address these growing needs. The infrastructure strategy incorporates four focus areas: an integrated approach to manage assets, managing the system over its life cycle, evaluating whether a project or group of related projects should remain a Federal responsibility prior to making a substantial further investment, and potential alternative financing mechanisms.

Preliminary efforts in this area include the development of a national inventory of Corps assets that includes the results of an assessment of the condition of each major infrastructure component. This will help us to develop a long term strategy to manage these assets and reduce risk, as well as help us determine where priority investments need to be made. End of life cycle decisions will be made regarding which projects to retain and recapitalize, which projects to repurpose, and which projects to recommend for de-authorization and decommissioning.

Transforming the way we deliver the Civil Works program requires state of the art processes and a highly skilled workforce that is capable of responding to current and future demands. The strategy is to have reliable and efficient methods of delivery by

linking technical capabilities to uniform national standards, maintaining core competencies, and having consistent methods, processes and approaches throughout the Corps. The desired end result is high quality and timely products and services delivered to our customers and stakeholders. To that end, for example, the Corps has established Centers of Expertise for major dam safety modifications, inland navigation design, and deep draft navigation economics.

The Army Corps of Engineers has a strong tradition of working collaboratively with non-Federal interests to plan and deliver products. The current transformation initiative is no different. Our transformation partners include states, tribes and local governments, non-governmental organizations, non-profit agencies, and the public. These partnerships are increasing and will likely continue to increase as we share a common goal of having reliable and resilient infrastructure for our Nation.

I would now like to describe the life cycle of a Corps project. Typically, a project begins with a reconnaissance study performed in accordance with Section 905 (b) of WRDA 1986. The purpose of the reconnaissance study is to determine if the water resources problem warrants Federal participation and warrants moving to the next step which is the initiation of a feasibility study. Upon completion of a favorable reconnaissance report by a Corps district, the district commander transmits the report to the Major Subordinate Command (MSC) for approval.

The district initiates negotiation of a feasibility cost share agreement and project management plan with a potential non-Federal sponsor upon approval of the reconnaissance report by the MSC Commander. These documents define the scope and cost of the feasibility study. The district concurrently develops the feasibility study and environmental documentation in accordance with applicable laws, policies, and regulations including the Nation Environmental Policy Act (NEPA). The primary purpose of a feasibility study is investigate and determine if there is a Federal interest in implementing the recommended solution to the identified water resource problem. The study must follow the six-step planning process which includes:

- Identifying the problem and opportunities
- Inventorying and forecasting conditions
- Formulating alternatives
- Evaluating alternative plans
- Comparing alternative plans
- Selecting a plan

Throughout the feasibility study there are several key checkpoints to ensure the planning process is being executed in a risk-informed and decision-focused manner transparently incorporating the full vertical Corps team, partners, and stakeholders. The first major checkpoint is to ensure alignment between all levels of the Corps and the non-Federal partners on the definition of the future without project conditions and the identification of the water resource problem(s) and solutions to be investigated during

the study. The next major checkpoint is to confirm that both the plan formulation and selection process leading to the identification of the tentatively selected plan is consistent with applicable laws, policies, regulations, and guidance. The district progressively documents decisions, risks, and analysis throughout the study process and this documentation and information feeds the main feasibility report. The district conducts a quality control review on the draft feasibility report and all other referenced or supporting documentation and data. The documentation and models produced will undergo agency technical review (ATR) and the Corps will initiate the independent external peer review (IEPR) process in accordance with Section 2034 of WRDA 2007.

The draft feasibility report must satisfactorily address issues identified during the checkpoints prior to initiating the 30-45 day NEPA public review, final ATR, IEPR, and a Corps Headquarters policy review. Upon completion of the review period and receipt of the review and legal certifications, the district commander transmits the feasibility report to the MSC. The district commander's transmittal includes a recommendation and a draft Finding of No Significant Impact (FONSI) or Record of Decision (ROD). The MSC commander performs a quality assurance review on the documents and transmits the final recommendation to Corps Headquarters, which then performs a 45-day policy review in advance of the Civil Works Review Board (CWRB). The CWRB meeting determines if the report is sufficient and ready to be released for a 30-day State and Agency Review in accordance with the Flood Control Act of 1944, as amended by 33 U.S.C. 701-1. Upon completion of State and Agency Review, the Report of the Chief of Engineers is finalized and processed and the final package includes the Agency responses to IEPR panel comments as required by Section 2034 of WRDA 2007. A signed Report of the Chief of Engineers transmits the recommendation to the Assistant Secretary of the Army for Civil Works ASA(CW), the chairpersons of the Senate Committee on Environment and Public Works, and the House of Representatives Committee on Transportation and Infrastructure. In accordance with Section 2033 of WRDA 2007 and upon receipt of the Report of the Chief of Engineers, the ASA(CW) shall review and provide any recommendations regarding the project to Congress within 120 days. The ASA(CW), prior to transmittal of a Chief's Report to Congress, is responsible for determining that the recommendations of the Chief of Engineers are compliant with Army policy, including applicable laws, Executive Orders, and regulations. This entails a review to ensure there are no unresolved issues and that the project being recommended is economically justified, environmentally and technically sound and that the proposed project was formulated and recommended in accordance with the Water Resource Council's "Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies" (Principles and Guidelines). In addition, the Office of Management and Budget (OMB), under Executive Order 12322, reviews the proposed project for consistency with the Principles and Guidelines and the policy and programs of the President.

When the Corps evaluates and formulates a proposed project, in comparing the costs and the economic benefits over time, it uses a discount rate that varies each year, as required under section 80 of the Water Resources Development Act of 1974 (Public Law 93-251). The Executive Branch uses a different discount rate for budgeting

purposes to measure the performance of Corps of Engineers construction projects whose primary purpose is to provide an economic return to the Nation. That interest rate is seven percent.

I will now provide a brief overview of the 21 proposed projects that have completed Executive Branch review since enactment of WRDA 2007. The Army has previously provided the results of those reviews along with the following project information to the Congress.

### **Mississippi River Gulf Outlet, St. Bernard Parish, Louisiana Deep Draft De-authorization Study**

In January 2008, the Chief of Engineers signed a report on the deauthorization of the Mississippi River - Gulf Outlet (MRGO) deep draft navigation channel in Louisiana. The report is a final response to the authority provided in the Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006 and Section 4304 of the U.S. Troop Readiness, Veterans' Care, Katrina Recovery, and Iraq Accountability Appropriations Act, 2007. Public Law 109-234 authorized a comprehensive plan at full Federal expense to deauthorize deep draft navigation on the MRGO extending from the Gulf of Mexico to the Gulf Intracoastal Waterway. Public Law 110-28 directed accelerated completion of the final report of the Chief of Engineers. Construction to close the MRGO was completed in July 2009.

### **Topeka Flood Risk Management Project, Topeka, Kansas**

In August 2009, the Chief of Engineers signed a report on flood risk management improvements on the Kansas River in the vicinity of Topeka, Kansas. The report is a response to authority contained in Section 216 of the Flood Control Act of 1970 to determine whether any modifications to the local flood risk management projects are advisable to improve the reliability and performance of the existing levee system.

The Report recommends modifications to the following four existing levee units:

- the South Topeka Unit: a control berm and modifications to the Kansas Avenue Pump Station and three manholes; and replacement of about 2,000 linear feet of floodwall.
- the Oakland Unit: a control berm, a stability berm, and pump station modifications.
- the North Topeka Unit: a control berm, a series of pumped relief wells, and the removal of an unused pump station.
- the Waterworks Unit: a stability berm.

The levee improvements would provide greater than 90 percent reliability against damages from the base flood, which has a 1 percent chance of occurrence in any given year (formerly referred to as the "100-year flood"). Based on October 2012 price levels, the estimated first cost of the project is about \$23.8 million and will be shared 65 percent Federal (\$15.5 million) and 35 percent non-Federal (\$8.3 million).

### **Mississippi Coastal Improvements Project, Hancock, Harrison, and Jackson Counties, Mississippi**

In September 2009, the Chief of Engineers signed a report on comprehensive water resources improvements associated with hurricane and storm damage reduction, flood risk management, and ecosystem restoration in the three coastal counties of Mississippi. The report is in response to the authority provided in the Department of Defense Appropriation Act, 2006.

The Mississippi Coastal Improvements Program (MsCIP) is a comprehensive, systems plan for reducing flood and storm damage risk that incorporates structural and nonstructural risk reduction approaches and environmental restoration features. To address the most critical needs, the report recommends 12 near-term elements which would restore over 3,000 acres of coastal forest and wetlands; restore about 30 miles of beach and dunes; and flood proof or acquire approximately 2,000 tracts within the 100-year floodplain. Based on October 2012 price levels, the estimated total first cost of the project is approximately \$1.2 billion, to be shared 65 percent Federal (\$815 million) and 35 percent non-Federal (\$439 million). However, in Public Law 111-32 (Supplemental Appropriations for the Fiscal Year ending September 30, 2009), the Congress appropriated all of the funds for the barrier island element of the project (\$439 million), at Federal full expense.

### **West Onslow Beach and New River Inlet (Topsail Beach), North Carolina**

In September 2009, the Chief of Engineers signed a report on hurricane and storm damage reduction along a five-mile reach of Atlantic Ocean shoreline at Topsail Beach, North Carolina. The report is a final response to the Energy and Water Development Appropriations Act for General Reevaluation Report of the West Onslow Beach and New River Inlet (Topsail Beach) Shore Protection Project and the remaining shoreline at Topsail Beach.

The report recommends a locally-preferred plan that includes a 26,200 foot long dune and berm system including a dune three feet lower than the National Economic Development Plan and extends 400 feet southwest to include additional properties that are vulnerable to coastal storm damage. The ASA(CW) approved a policy exception in May 2008 allowing the Corps to recommend the locally preferred plan. The locally preferred plan cost approximately 24 percent less than the NED plan resulting in a cost saving of nearly \$11 million. The 400-foot extension costs an additional \$320,000 and would be funded entirely by the non-Federal sponsor. Based on October 2012 price levels, the total initial cost of the plan is estimated at \$47.9 million and will be cost shared 65 percent Federal and 35 percent non-Federal. The project also includes 50 years of periodic nourishment at \$264.7 million based on October 2012 price levels. This cost would be shared equally with the non-Federal sponsor.

**Central and Southern Florida Project, Comprehensive Everglades Restoration Plan, Caloosahatchee River (C-43) West Basin Storage Project, Hendry County, FL**

In January 2011, the Chief of Engineers signed a report on ecosystem restoration improvements for the Caloosahatchee Estuary as part of the larger Comprehensive Everglades Restoration Plan (CERP). The report recommends capturing and storing excess C-43 runoff and regulatory releases from Lake Okeechobee. The excess water captured and stored would be released to augment flows to the estuarine environment at the mouth of the Caloosahatchee River during the low flow seasons. The reservoir will provide environmental water supply benefits to the Caloosahatchee Estuary and water quality benefits that will reduce the salinity and nutrient impacts of runoff to the estuary. The project will also provide water supply benefits and some flood attenuation.

Based on October 2012 price levels, the total initial cost of the project is estimated at \$594.4 million and will be cost shared 50 percent Federal (\$297.2 million) and 50 percent non-Federal (\$297.2 million).

**Central and Southern Florida Project, Comprehensive Everglades Restoration Plan, C-111 Spreader Canal Western Project, Florida**

In January 2012, the Chief of Engineers signed a report on ecosystem restoration on the Spreader Canal located in the Everglades, one part of the larger Comprehensive Everglades Restoration Plan (CERP). The C-111 Spreader Canal Western Project, along with a follow-on Eastern Project, will modify the existing C-111 Canal to change the flow of ground and surface water as a first step in the restoration of the southeastern portion of the Everglades ecosystem. The project will create a nine-mile hydraulic ridge just east of Everglades National Park, designed to keep more of the natural rainfall and water flows within Taylor Slough. The hydraulic ridge will be created by two above ground detention areas—a 590-acre site at the Frog Pond area and a 2-mile modification of the Aerojet Canal. The detention areas will be fed by two 225 cfs pump stations and conveyance canals. Hydroperiods and hydropatterns within the wetlands of the Southern Glades and Model Lands will be improved by the construction of a new operable water control structure in the lower C-111 Canal, incremental operational changes at existing structure S-18C, changes in operations at the existing S-20 structure, construction of a plug at existing structure S-20A, and the installation of ten earthen plugs in the C-110 Canal. The project is essential to achieving the restoration of Taylor Slough and downstream areas of Florida Bay and Everglades National Park, helping to improve ecological conditions in approximately 252,000 acres of wetland and coastal habitat. The increased flows in Taylor Slough will also serve to return salinities to more natural levels in portions of Florida Bay and its associated estuaries. The detention areas and canal levees will also provide public recreational opportunities.

Based upon the October 2012 price levels, the total initial project cost for this project is \$177 million and will be cost shared equally (\$88.9 million).

**Biscayne Bay Coastal Wetlands, Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, Florida**

In May 2012, the Chief of Engineers signed a report for ecosystem restoration on Biscayne Bay located in the Everglades, as one part of the larger Comprehensive Everglades Restoration Plan (CERP). The Biscayne Bay Coastal Wetlands Project will modify the flow of freshwater to Biscayne Bay as a first step in the restoration of the southeastern portion of the Everglades ecosystem. The project purpose is to redistribute freshwater runoff from the watershed away from the existing canal discharges and into the coastal wetlands adjoining Biscayne Bay to provide a more natural and historic overland flow through existing coastal wetlands. This project will also help restore saltwater wetlands and the near-shore bay through the re-establishment of optimal salinity concentrations for fish and shellfish nursery habitat. The project will restore freshwater flows in Deering Estates, Cutler Wetlands, and wetlands adjacent to L-31E. This will be accomplished through a series of pumps, culverts, spreader canals and mosquito ditch plugs throughout the project area.

Based upon the October 2012 price levels, the total initial project cost for this project is \$192.4 million and will be cost shared equally (\$96.2 million).

**The American River Watershed (Common Features) Project, Natomas Basin, Sacramento and Sutter Counties, CA, Flood Risk Management Project**

In December 2010, the Chief of Engineers signed a report on flood risk management for the Natomas Basin portion of the American River Watershed in the vicinity of Sacramento, California. This report supplements the 29 June 1992 and 27 June 1996 reports of the Chief of Engineers, and the March 2002 (revised July 2002) Post-Authorization Change Report, and were prepared as an interim general reevaluation study of the American River Common Features Project. The present study was conducted specifically to determine if there is a Federal interest in modifying the currently authorized project features to address flood risk management issues related to levee seepage and stability in the Natomas Basin portion of the Common Features project area. The Common Features Project was authorized by Section 101(a)(I) of the Water Resources Development Act (WRDA) of 1996 (Public Law 104-303), as modified by Section 366 of WRDA 1999 (Public Law 106-53) and as further modified by Section 129 of the Energy and Water Development Appropriations Act, 2004 (Public Law 108-137); and as amended by Section 130 the Energy and Water Development and Related Agencies Appropriations Act, 2008 (Division C of Public Law 110-161).

The report recommends modification of the authorized Common Features project to include a comprehensive plan to reduce the systemic risk associated with seepage and stability for the ring levee system surrounding the Natomas Basin. The principal features of the recommended modifications include widening of about 41.9 miles of existing levee, installation of about 34.8 miles of soil bentonite cutoff wall and about 8.3 miles of seepage berms, and bridge remediation at State Route 99. In addition, mitigation features pursuant to the Endangered Species Act are recommended, including creation of 75 acres of canal habitat and up to 200 acres of marsh habitat, creation of up to 60 acres of landside woodlands, creation of 1,600 linear feet of tree

plantings, and establishment of a monitoring program for assessing mitigation performance.

Based on October 2012 price levels, the total project cost of the project is estimated at \$1.42 billion and will be cost shared 65 percent Federal (\$943.3 million) and 35 percent non-Federal (\$479.5 million).

### **Louisiana Coastal Area (6)**

In December 2010, the Chief of Engineers signed a report recommending ecosystem restoration in coastal Louisiana. The report identifies six separable elements that consist of diversions, marsh creation, and shoreline restoration. There are six specific projects covered under the December 2010 report signed by the Chief of Engineers. Based on October 2012 price levels, the total project cost for the 6 projects is estimated at \$1.46 billion and will be cost shared 65 percent Federal (\$954.4 million) and 35 percent non-Federal (\$513.9 million).

**Amite River Diversion Canal Modification:** The primary purpose of this project is to stabilize and restore the natural hydrology of the Maurepas Swamp ecosystem, one of the largest remaining cypress swamps in coastal Louisiana. It provides habitat to threatened and endangered species and buffers Lake Maurepas from the highly developed I-10 corridor. Based on October 2012 price levels, the total project cost for this project is estimated at \$8.4 million and will be cost shared 65 percent Federal (\$5.5 million) and 35 percent non-Federal (\$2.9 million).

**Convey Atchafalaya River Water to Northern Terrebonne Marshes:** The primary objective of this project is to reduce the current trend of marsh degradation in the project area that is a result of subsidence, sea level rise, erosion, saltwater intrusion and lack of sediment and nutrient deposition by utilizing fresh water and nutrients from the Atchafalaya River and Gulf Intracoastal Waterway. Based on October 2012 price levels, the total project cost for this project is estimated at \$290.9 million and will be cost shared 65 percent Federal (\$189.1 million) and 35 percent non-Federal (\$101.8 million).

**Houma Navigation Control Lock:** The purpose of this project is to provide multipurpose operation of the proposed canal lock, if and when constructed, to achieve the project purposes previously described in Convey Atchafalaya River Water to Northern Terrebonne Marshes. Based on October 2012 price levels, the total project cost for this project is estimated at \$1.54 million and will be cost shared 65 percent Federal (\$998,000) and 35 percent non-Federal (\$538,000).

**Small Diversion at Convent/Blind River:** The purpose of this project is to reintroduce the periodic flooding by the Mississippi River to the Maurepas Swamp and Blind River area. This will restore not only freshwater, but also nutrients and sediment from the River, improving water distribution and hydrology, and improve habitat for many fish and wildlife species. Based on October 2012 price levels, the

total project cost for this project is estimated at \$120.5 million and will be cost shared 65 percent Federal (\$78.3 million) and 35 percent non-Federal (\$42.2 million).

**Terrebonne Basin Barrier Shoreline Restoration:** The purpose of this project is to reintroduce vital sediment into the coastal sediment transport system in the vicinity of Isles Dernieres and Timbalier Islands. This reintroduction of sediment will restore geomorphic and hydrologic conditions need to support essential habitat for fish, migratory birds and other wildlife species. The recommended plan includes beach, dune, and marsh restoration of Raccoon, Whiskey, and Trinity Islands. While additional authority is needed to raise the total project cost to allow implementation of the entire recommended plan, the Whiskey Island component of the recommended plan was identified be implemented under the existing authority provided in Section 7006(e)(3) of WRDA 2007. The Whiskey Island component includes renourishment every 20 years to maintain the constructed features. Based on October 2012 price levels, the total project cost for this project is estimated at \$673.4 million and will be cost shared 65 percent Federal (\$437.7 million) and 35 percent non-Federal (\$235.7 million).

**Medium Diversion at White Ditch:** The purpose of this project is to restore the supply and distribution of freshwater and sediment. It is a key component to demonstrating both the ability to stem or reverse the coastal land loss trend and provide a mechanism to combat relative sea level rise in coastal Louisiana. Based on October 2012 price levels, the total project cost for this project is estimated at \$373.6 million and will be cost shared 65 percent Federal (\$242.8 million) and 35 percent non-Federal (\$130.8 million).

### **Surf City and North Topsail, North Carolina**

In December 2010, the Chief of Engineers signed a report on hurricane and coastal storm damage reduction along a ten mile reach of Atlantic Ocean shoreline near Surf City and North Topsail Beach, North Carolina. The report recommends constructing a sand dune at an elevation of 15 feet and a berm with a crown width of 50 feet and a top elevation of seven feet above NGVD over approximately ten miles of shoreline.

Based on October 2012 price levels, the total initial project cost for this project is \$125.4 million and will be cost shared 65 percent Federal (\$81.5 million) and 35 percent non-Federal (\$43.9 million). The project also includes 50 years of periodic nourishment at \$212.4 million based on October 2012 price levels. This cost would be shared equally with the non-Federal sponsor.

### **Cedar River, Cedar Rapids, Iowa**

In January 2011, the Chief of Engineers signed a report on flood risk management improvements on the Cedar River. The report recommends constructing concrete floodwalls, earthen levees, closure structures and pump stations. Concrete floodwalls comprise approximately two thirds of the total alignment length totaling 2.17 miles. The remainder of the alignment length includes 0.75 miles of earthen levee and a total length of 0.23 mile for all closure structures.

Based on October 2012 price levels, the total initial project cost for this project is \$103.4 million and will be cost shared 65 percent Federal (\$67.2 million) and 35 percent non-Federal (\$36.2 million).

### **Sabine-Neches Waterway, Southeast and Southwest, Texas**

In July 2011, the Chief of Engineers signed a report on navigational improvements along the Sabine-Neches Waterway (SNWW). The waterway currently consists of a jettied entrance channel, 42 feet deep and 500 to 800 feet wide, from the Gulf of Mexico; a channel 40 feet deep and 400 feet wide to Beaumont via the Neches River; and a channel 30 feet deep and 200 feet wide to Orange via the Sabine River. When the channel was completed in 1960, it was common for crude oil tankers to average 40,000 dead weight tons (DWT) with loaded drafts of 36 feet. Today, vessels over 90,000 DWT are now used routinely for crude oil imports to both Beaumont and Port Arthur. The recommended plan consists of navigation improvements in seven phases:

- 1) Deepening the SNWW from 40 to 48 feet and offshore channel from 42 to 50 feet in depth from offshore to the Port of Beaumont Turning Basin;
- 2) Extending the 50-foot-deep offshore channel by 13.2 miles, increasing the total length of the channel from 64 to 77 miles;
- 3) Decreasing the width of the Sabine Bank Channel from 800 to 700 feet;
- 4) Tapering and marking the Sabine Bank Channel from 800 feet wide (Station 23+300) to 700 feet wide (Station 25+800 through the end of the channel);
- 5) Deepening and widening of Taylor Bayou channels and turning basins;
- 6) Easing selected bends on the Sabine-Neches Canal and Neches River Channel; and
- 7) Constructing new and enlarging/deepening existing turning and anchorage basins on the Neches River Channel.

Based upon the October 2012 price levels, the total cost for all phases of the project is \$1.1 billion with Federal cost share requirement of \$779.4 million and non-Federal cost share requirement of \$359.2 million.

### **Fargo-Moorhead Metropolitan Area, North Dakota and Minnesota**

In December 2011, the Chief of Engineers signed a report on flood risk management improvements in the vicinity of Fargo-Moorhead Metropolitan area. The recommended project consists of constructing a diversion channel in North Dakota, tie-back levees, a staging area, and a storage area to reduce the existing and future flood risk and damages to public and private infrastructure in the metropolitan area. The locally preferred plan (LPP) is the plan that provides the locally desired level of benefits and follows the locally preferred alignment in North Dakota. The LPP includes: a 36-mile, 20,000 cubic feet per second (cfs) diversion channel; a 50,000 acre-feet storage area; a 150,000 acre-feet staging area; 10 miles of tie-back levees; control structures on the Red and Wild Rice Rivers and Wolverton Creek; aqueduct and spillway structures on

the Sheyenne and Maple Rivers; drop structures on the Lower Rush and Rush Rivers; and non-structural mitigation for impacts in the storage area.

Based on October 2012 price levels, the total initial project cost for this project is \$1.8 billion with a Federal cost share requirement of \$801.5 million and a non-Federal share of \$979.8 million. The local sponsor is responsible for paying 100% of the cost associated with the LPP above the selected NED plan.

### **Marsh Lake, Appleton, Minnesota Ecosystem Restoration Project**

In December 2011, the Chief of Engineers signed a report on ecosystem restoration for the Marsh Lake area. The purpose of the project is to restore of the habitat structure, form and function of Marsh Lake. The report recommends restoring the Pomme de Terre River to its natural channel; modifying the dam with a fishway for fish passage; constructing a drawdown water control structure; breaching a dike to restore connectivity to an abandoned fish rearing pond adjacent to the dam; installing gated culverts at Louisburg Grade Road to maintain pool elevations in upper Marsh Lake; and providing compatible recreation features, including shoreline fishing access, picnic facilities, canoe access and a pedestrian bridge over the dam.

Based upon the October 2012 price levels, the total initial project cost for this project is \$10 million and will be cost shared 65 percent Federal (\$6.4 million) and 35 percent non-Federal (\$3.6 million).

### **San Clemente Shoreline, California**

In April 2012, the Chief of Engineers signed a report on coastal storm damage reduction along the San Clemente shoreline in California. The primary objective of the project is to reduce shoreline erosion and protecting coastal infrastructure from storm-induced wave attack. The infrastructure includes the Los Angeles to San Diego railroad corridor, which is a vital link for passenger and freight service and has been designated as a Strategic Rail Corridor by the Department of Defense.

The recommended plan identifies initial construction of a 15-meter (50-foot) wide beach nourishment project along a 1,040-meter (3,412-foot) long stretch of shoreline using 192,000 cubic meters (251,000 cubic yards) of compatible sediment, with periodic renourishment on the average of every 6 years over a 50-year period of Federal participation, for a total of 8 additional nourishments.

Based upon the October 2012 price levels, the total initial project cost for this project is \$11.5 million and will be cost shared 65 percent Federal (\$7.5 million) and 35 percent non-Federal (\$4.0 million). The project also includes 50 years of periodic nourishment at \$86.8 million based on October 2012 price levels. This cost would be shared equally with the non-Federal sponsor.

### **Jacksonville Harbor (Mile Point) Navigation Project, Duval County, Florida**

In April 2012, the Chief of Engineers signed a report on navigational improvements at the confluence of the St. John's River and the Intracoastal Waterway (IWW) known as the Mile Point area. Due to crosscurrents there is a navigational restriction on the ebb tide that affects all vessels that have a transit draft greater than 33 feet inbound and 36 feet outbound, inhibiting the free movement of vessel traffic. The crosscurrents at Mile Point are also of concern for erosion on the Mile Point shoreline. Great Marsh Island and the Mile Point Training Wall divide Chicopit Bay, which is located to the south of the Mile Point erosion area. The recommended plan consists of removal of approximately 3110 feet of existing training wall; construction of a new relocated 2050-foot eastern leg of training wall; construction of a new 4250-foot western leg of training wall at Great Marsh Island with the creation of up to 53 acres of salt marsh restoration through the beneficial use of dredged material; and construction of a flow improvement channel in Chicopit Bay to restore the historic channel through Chicopit Bay and offset any adverse effects of closing off Great Marsh Island.

Based upon the October 2012 price levels, the total initial project cost for this project is \$36.9 million and will be cost shared 65 percent Federal (\$27.8 million) and 35 percent non-Federal (\$9.1 million).

### **Ohio River Shoreline, Paducah, Kentucky**

In May 2012, the Chief of Engineers signed a report on flood risk management improvements along the Ohio River in Paducah, Kentucky. The primary purpose of the project is to minimize the risk of loss of life and damages to public and private infrastructure through the reconstruction of existing levees and floodwalls completed in 1949. Many of the original major components are still in use well beyond their normal expected service life. As system components continue to age, without reconstruction, the risk of project failure continues to increase. The primary features of the recommended plan include: rehabilitation of pumps, motors, motor control systems, and major pump plant; components and other miscellaneous items at each of the 12 existing pumping plants; construction of a new pumping plant at Station 111+67A; slip-lining 37 existing deteriorated corrugated metal pipes; and bank protection.

Based upon the October 2012 price levels, the total initial project cost for this project is \$19.8 million and will be cost shared 65 percent Federal (\$12.9 million) and 35 percent non-Federal (\$6.9 million).

### **Broward County Water Preserve Area, Central and Southern Florida Project, Florida**

In May 2012, the Chief of Engineers signed a report on ecosystem restoration for Broward and Miami-Dade County Florida. The project will contribute to the environmental restoration of south Florida by providing regional water storage that will reduce demands on the Everglades and Lake Okeechobee for water supply. Anticipated fish and wildlife habitat benefits of the project include reduction of withdrawals of water

from Lake Okeechobee and Everglades wetlands, reestablishment of natural hydro-patterns within existing natural areas, and improvement of water quality in Water Conservation Area 3. The report recommends construction of two above-ground impoundments and associated pumps and water control structures: the C-11 Impoundment with an effective interior storage of 1,068 acres and two wetland marsh mitigation areas north of the C-11 Impoundment with 488 acres of wetland marsh; the C-9 Impoundment with an effective interior storage of 1,641 acres and two wetland marsh mitigation areas north of the C-9 Impoundment with 339 acres of wetland marsh; canal conveyance improvements to connect the two impoundments; and an approximately 4,633 acre seepage management area east of the Water Conservation Areas.

Based upon the October 2012 price levels, the total initial project cost for this project is \$866.7 million and will be cost shared equally (\$433.4 million).

#### **Louisiana Coastal Area – Barataria Basin Barrier Shoreline Restoration Project, Lafourche, Jefferson, and Plaquemines Parishes, Louisiana**

In June 2012, the Chief of Engineers signed an ecosystem restoration report to restore and protect Barataria Basin Barrier Shoreline. The Barataria Basin Barrier Shoreline is approximately 55 miles south of New Orleans, Louisiana, and is a key component in regulating estuary hydrology and slowing the rate of wetland loss. Caminada Headland, forming the western portion of the barrier shoreline, has experienced some of the highest rates of shoreline retreat on the Gulf coast. Shell Island forms the eastern portion of the barrier and has disintegrated into several smaller islands and shoals and is gradually converting to a series of bays directly connected to the Gulf of Mexico. The report recommends dredging and placing 5.1 million cubic yards (mcy) of sand to restore and create about 880 acres of dune at Caminada Headland; placing 5.4 mcy of material landward of the dune to restore and create approximately 1,186 acres of marsh; restoration of Shell Island to its pre-Hurricane Bob (1979) single island configuration using about 5.6 mcy of sand to build approximately 317 acres of dunes. Approximately 2.1 mcy of sediment would be placed to restore about 466 acres of marsh. The Caminada Headland restoration will be implemented using Section 7006 of WRDA 2007. Implementation of Shell Island Restoration will require additional authorization.

Based upon the October 2012 price levels, the total initial project cost for this project is \$436.3 million and will be cost shared 65 percent Federal (\$283.6 million) and 35 percent non-Federal (\$152.7 million).

#### **Savannah Harbor Expansion Project, Savannah, Georgia**

In August 2012, the Chief of Engineers signed a report on navigation improvements within the Savannah Harbor. The general reevaluation report satisfies the statutory requirements in WRDA 1999 to develop a mitigation plan as well as providing a basis for raising the authorized total project cost. The selected plan includes dredging 31 miles of the existing navigation channel and one existing turning basin (Kings Island Turning Basin at Stations 98+500 to 100+500) 5 feet deeper (to an authorized

navigation depth of 47-feet), deepening eight berths at the Garden City Terminal, constructing three bend wideners, constructing two meeting areas, and constructing an approximately 38,000 foot (7.1 mile) long extension to the existing ocean bar channel. Mitigation is proposed for unavoidable impacts to significant resources such as loss of shortnose sturgeon and striped bass habitat, conversion of tidal freshwater, brackish and salt marsh in the project area, and changes in dissolved oxygen levels in the inner harbor.

Based upon October 2012 price levels, the total initial project cost for this project is \$662 million with the Federal share totaling \$461 million and the non-Federal share totaling \$201 million.

### **Freeport Harbor Channel Improvement Project, Brazoria County, Texas**

In January 2013, the Chief of Engineers signed a report on navigation improvements within the Freeport Harbor Channel in Brazoria County, Texas. The project will improve the existing Freeport Harbor Channel that provides a deep-draft waterway from the Gulf of Mexico to the City of Freeport through the original mouth of the Brazos River. The Freeport Harbor Channel and the Brazos River are completely separated due to diversion dams resulting in an entirely tidal system. The report recommends the locally preferred plan which consist of deepening the Outer Bar Channel in the Gulf of Mexico to -58 feet mean lower low water (MLLW); the outer end of the jetties in the Gulf of Mexico to the Lower Turning Basin to -56 feet MLLW; the Upper and Lower Turning Basin near Brazos port Turning Basin to -56 feet MLLW; and deepening and widening the lower 3,700 feet of the Stauffer Channel to -51 feet and 300 feet wide respectively. The remainder of Stauffer Channel will be deepened to -26 feet MLLW.

Based upon October 2012 price levels, the total initial project cost for this project is \$237 million with the Federal share totaling \$121 million and the non-Federal share totaling \$116 million.

There are three other proposed projects with reports by the Chief of Engineers that the ASA and Office of Management and Budget are in the process of reviewing. These are Mississippi River Gulf Outlet Ecosystem Restoration; Canaveral Harbor; and Neuse River Basin.

Mr. Chairman, this concludes my statement. Again, I appreciate the opportunity to testify today. I would be pleased to answer any questions you may have.