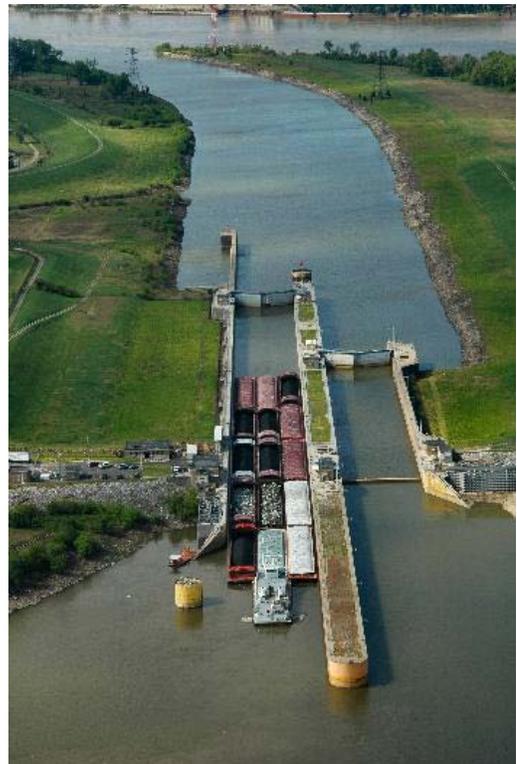


Fiscal Year 2011 Civil Works Program Performance Work Plan



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Overview

The United States Army Corps of Engineers (USACE) is comprised of two major programs: the Civil Works Program and Military Program. These financial statements represent the Civil Works Program only, as the Military Program is reported within the Army General Fund Financial Statements.

Mission

The Civil Works mission of the USACE is to (1) contribute to the national welfare and serve the nation with quality, responsive development, and management of the nation's water resources; (2) protect, restore, and manage the environment; (3) respond to disasters and aid in recovery; and (4) provide engineering and technical services. This multi-faceted mission is accomplished in an environmentally sustainable, economically and technically sound manner through partnerships with other government agencies and nongovernment organizations.

Developing and Managing Water Resources

The original role of the USACE in civil works, as it related to developing and managing water resources, was to support navigation by maintaining and improving federal navigation channels. Over the years, and through subsequent legislation, the Corps' role has expanded to include flood risk management, improvement of aquatic habitat, generation of hydroelectric power, creation of recreation opportunities, provision of water storage for municipal and industrial water supplies, regulation of discharges into navigable waters, and emergency planning and management.

Protecting, Restoring and Managing the Environment

The Rivers and Harbors Act of 1890 required the Corps to prevent the obstruction of navigable waterways. As environmental concerns grew in the late 20th century, the National Environmental Policy Act of 1969 and the Clean Water Act of 1972 greatly broadened the scope of the Corps' responsibility for regulating discharges into United States (U.S.) waters, including the country's wetlands. The civil works program's environmental responsibilities have continued to increase through legislation and now include aquatic ecosystem restoration, remedial activities at former defense sites, and overall stewardship responsibilities.

Responding and Assisting in Disaster Relief

Throughout the Corps' history, the United States has relied on the civil works program for help both in times of natural and man-made disasters. The Corps responds to natural disasters under the Flood Control and Coastal Emergency Act (Public Law (P.L.) 84-99, as amended) and to man-made disasters under the Robert T. Stafford Disaster Relief and Emergency Assistance Act (P.L. 93-288, as amended). The civil works program's primary role in emergency relief and recovery operations is to provide public works and engineering support.

Providing Engineering Support and Technical Services

In Titles 10 and 33 of the U.S. Code, Congress expresses its intent for the Corps to provide services on a reimbursable basis to other federal entities; state, local, and tribal governments; private firms; and international organizations. Additional authority to provide services to all federal agencies is found in Titles 15, 22, and 31, which includes providing services to foreign governments.

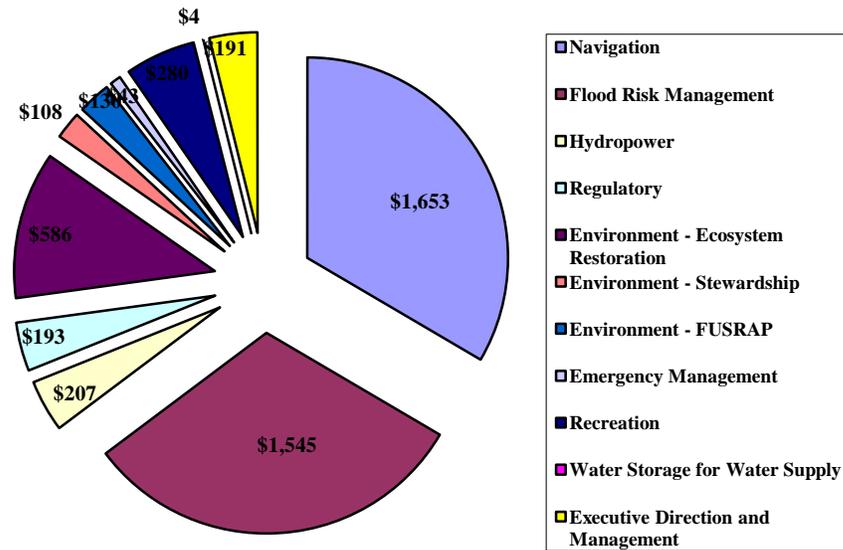
The Civil Works Program

The Corps operates multiple business lines to accomplish its mission. Each business line specifically addresses a single mission component, but may also contribute to one or more other business line missions. Figures 1 and 2 list the accounts and business lines that receive direct appropriations and the funds to be used for executive direction and management for fiscal year (FY) 2011.

Figure 1. FY 2011 Civil Works Budget by Account

APPROPRIATION ACCOUNT	In Millions
Investigations	\$ 104
Construction	\$1,690
Operation and Maintenance	\$2,361
Mississippi Rivers and Tributaries	\$ 240
Regulatory	\$ 193
Formerly Utilized Sites Remedial Action Program	\$ 130
Flood Control & Coastal Emergencies	\$ 30
Expenses	\$ 185
Office of the Assistant Secretary of the Army (Civil Works)	\$ <u>6</u>
Total	<u>\$4,939</u>

Figure 2. FY 2011 Civil Works Budget by Business Line



Navigation

Navigation is responsible for ensuring safe, reliable, efficient, and environmentally sustainable waterborne transportation systems for the movement of commercial goods, as well as for national security needs. The business line meets this responsibility through a combination of capital improvements and the operation and maintenance of existing infrastructure projects. The navigation business line is vital to the nation's economic prosperity: 99 percent of America's overseas international trade, by volume, and 64% of its trade by value, moves through its ports. Our nation's Marine Transportation System (MTS) encompasses a network of Corps-maintained navigable channels, waterways, and infrastructure as well as publicly- and privately-owned vessels, marine terminals, intermodal connections, shipyards, and repair facilities. The MTS consists of approximately 12,000 miles of inland and intracoastal waterways with 220 locks at 171 sites; approximately 300 deep draft and over 600 shallow draft coastal and Great Lakes channels and harbors, extending 13,000 miles, and including 21 locks; and over 900 coastal structures and 800 bridges that are maintained by the Corps.

In FY 2011 \$1.65 billion was budgeted for navigation, accounting for 33 percent of the civil works budget.

Flood Risk Management

The Flood Risk Management business line reduces the risk to human safety and property damage in the event of floods and coastal storms. The civil works program has constructed 8,500 miles of levees and dikes, 383 reservoirs, and more than 90 storm damage reduction projects along 240 miles of the nation's 2,700 miles of shoreline. Upon completion, with the exception of reservoirs, most infrastructure built under the auspices of flood risk management is transferred to the sponsoring cities, towns, and special use districts that own and operate the projects.

Over the years, the Corps' mission of addressing the causes and impacts of flooding has evolved from flood control and prevention to more comprehensive flood risk management. These changes reflect a greater appreciation for the complexity and dynamics of flood problems—the interaction of natural forces and human development—as well as for the federal, state, local, and individual partnerships needed to thoroughly manage the risks caused by coastal storms and heavy rains.

Risk management is the process of identifying, evaluating, selecting, implementing, and monitoring actions to mitigate levels of risk. Its goal is to ensure scientifically sound, cost-effective, integrated actions that reduce risks while taking into account social, cultural, environmental, ethical, political, and legal considerations. The Corps' approach to flood risk management relies on productive collaborations with partners and stakeholders; i.e., the Federal Emergency Management Agency, the Department of Housing and Urban Development, the National Oceanic and Atmospheric Administration, affected state agencies, sponsors and citizens. Effectively and efficiently, these collaborations heighten the nation's awareness of flood risks and consequences.

The Flood Risk Management business line has compiled an impressive record of performance, yielding a six-to-one return on investment; that is, the business line saves six dollars for each dollar spent. It has also helped reduce the risk to human safety by providing timely flood warnings that afford sufficient time for evacuation.

In FY 2011, the \$1.55 billion Flood Risk Management business line accounted for slightly more than 31 percent of the civil works budget.

Environment

The Corps has three distinct business lines that are focused on the environment: aquatic ecosystem restoration; stewardship of Corps' lands; and the Formerly Utilized Sites Remedial Action Program (FUSRAP).

Aquatic Ecosystem Restoration. The Army's mission in aquatic ecosystem restoration is to help restore aquatic habitat to a more natural condition in ecosystems whose structures, functions, and dynamic processes have become degraded. The emphasis is on restoration of nationally or regionally significant habitats where the solution primarily involves modifying the hydrology and geomorphology. In FY 2011, Aquatic Ecosystem Restoration was budgeted at \$586 million, which translates to just under 12 percent of the civil works budget.

Environmental Stewardship. Environmental Stewardship focuses on managing, conserving, and preserving natural resources on 11.5 million acres of land and water at 456 multipurpose Corps' projects. Corps' personnel monitor water quality at Corps' dams and operate fish hatcheries in cooperation with state wildlife agencies. This business line encompasses compliance measures to ensure Corps' projects (1) meet federal, state and local environmental requirements; (2) sustain environmental quality; and (3) conserve natural and cultural resources. In FY 2011, Environmental Stewardship was expected to receive \$108 million, an amount comprising 2.2 percent of the total civil works budget.

FUSRAP. Under the FUSRAP, the Corps cleans up former Manhattan Project and Atomic Energy Commission sites, making use of expertise gained in cleansing former military sites and civilian hazardous waste sites under the Environmental Protection Agency's Superfund Program. In FY 2011, the FUSRAP anticipates receiving \$130 million, or approximately 2.6 percent of the budget.

Regulation of Aquatic Resources

In accordance with the Rivers and Harbors Act of 1890 (Sec. 10) and the Clean Water Act of 1972 (Sec. 404), as amended, the Corps' regulatory program regulates work in, over, and under navigable rivers and the discharge of dredged and fill material into U.S. waters, including wetlands. The Corps implements many of its oversight responsibilities by means of a permit process. Throughout the permit evaluation process, the Corps complies with the National Environmental Policy Act and other applicable environmental and historic preservation laws. In addition to federal statutes, the Corps also considers the views of other federal, tribal, state and local governments, agencies, and interest groups, as well as the general public when rendering its final permit decisions. Regulatory responsibilities include evaluating minor activities such as driveways for small landowners, as well as large water supply and energy project proposals which affect approximately \$220.0 billion of the nation's economy.

In FY 2011, the Regulatory appropriation, estimated at \$193 million, accounts for 3.9 percent of the civil works budget.

Emergency Management

Throughout the Corps' history, the United States has relied on the civil works program for help in times of national disaster. Emergency management continues to be an important part of the civil works program, which directly supports the Department of Homeland Security in carrying out the National Response Framework. It does this by providing emergency support in public works and engineering and by conducting emergency response and recovery activities under authority of P.L. 84-99. In a typical year, the Corps responds to more than 30 presidential disaster declarations, and its highly-trained workforce is prepared to deal with both man-made and natural disasters.

The Corps not only contributes to domestic emergency management efforts, but also plays a major role on the international stage through its participation in civil-military emergency preparedness. In support of the Department of Defense, the Corps shares emergency management knowledge and expertise with U.S. allies and partners in the former Soviet Republics and Eastern Europe. This

valuable program brings together key leaders and builds relationships among nations in direct support of the National Defense Strategy.

In FY 2011, Emergency Management was budgeted \$13.3 million in operations and maintenance funding - \$6.8 million for the National Emergency Preparedness Program which funds Continuity of Operations activities and non-natural disaster preparedness activities and \$6.5 million for Facility Protection. This \$13.3 million is less than 1 percent of the civil work budget and not related to the performance measures in this workplan. \$30 million was budgeted under the Flood Control and Coastal Emergencies account – this is also less than 1 percent of the budget.

Hydropower

The Corps' multipurpose authorities provide hydroelectric power as an additional benefit of projects built for navigation and flood control. The Corps is the largest owner-operator of hydroelectric power plants in the United States, and one of the largest in the world. The Corps operates 350 generating units at 75 multipurpose reservoirs, mostly in the Pacific Northwest; they account for about 24 percent of America's hydroelectric power and approximately 3 percent of the country's total electric-generating capacity. Its hydroelectric plants produce nearly 70 billion kilowatt-hours each year—sufficient to serve nearly 7 million households or roughly 11 cities the size of Seattle, Washington. Hydropower is a renewable source of energy, producing none of the airborne emissions that contribute to acid rain or the greenhouse effect.

In FY 2011, Hydropower accounts for approximately \$207 million, just over 4 percent of the civil works budget.

Recreation

The Corps is an important provider of outdoor recreation, which is an ancillary benefit of its flood prevention and navigation projects. The Corps' Recreation business line provides quality outdoor public recreation experiences in accordance with its three-part mission to (1) serve the needs of present and future generations; (2) contribute to the quality of American life; and (3) manage and conserve natural resources consistent with ecosystem management principles.

The Corps administers 4,488 recreation sites at 423 projects on 12 million acres of land. During fiscal year 2010, 10 percent of the U.S. population visited a Corps' project at least once. These visitors spent \$18 billion pursuing their favorite outdoor recreation activities, which, in turn, supported some 350,000 full- and part-time jobs.

In FY 2011, Recreation accounts for approximately \$280 million or 5.7 percent of the civil works budget.

Water Storage for Water Supply

Conscientious management of the nation's water supply is critical to limiting water shortages and lessening the impact of droughts. The Corps has an important role in ensuring that homes, businesses, and industries nationwide have enough water to meet their needs. It retains authority

for water supply in connection with construction; operation and modification of federal navigation; flood damage reduction; and multipurpose projects.

In FY 2011, this approximately \$4 million business line accounted for less than one tenth of 1 percent of the civil works budget.

Organizational Structure

The Workforce

The Corps employs approximately 37,000 people, including 650 military officers and 25,000 civilians who perform civil works duties. It is funded through the energy and water development appropriation and executes its missions through 8 of its 9 regional divisions and 38 of the Corps' 44 districts; the remaining districts are dedicated to military-related missions. The ninth division, the Transatlantic Division, and its three districts support operations in the Middle East.

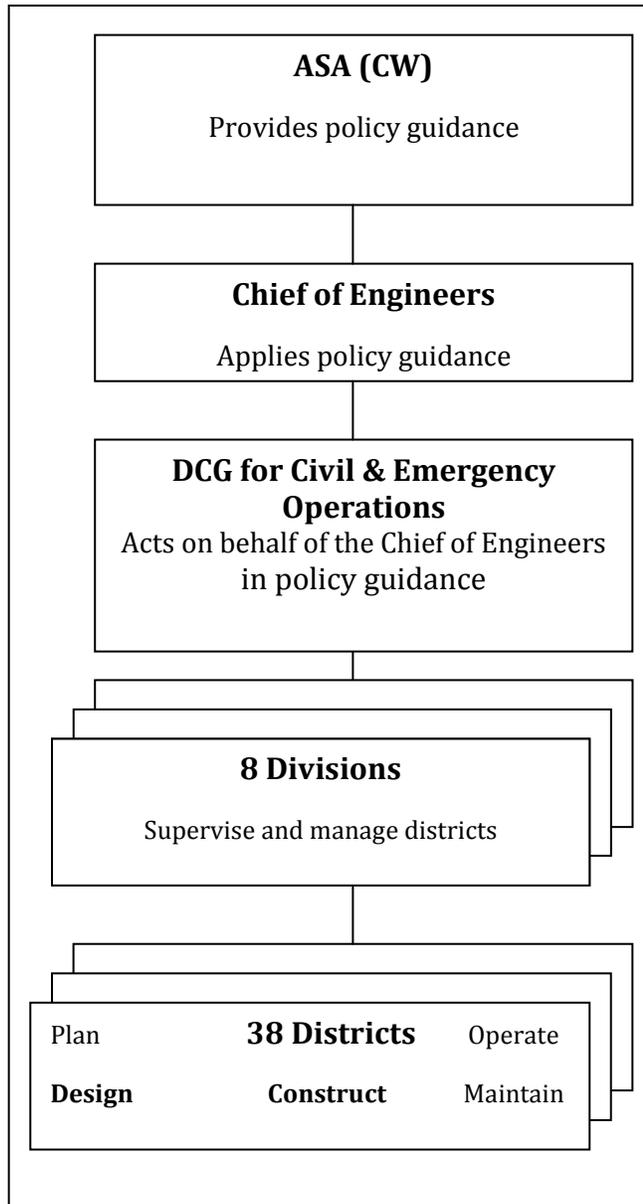
Figure 2 shows the division boundaries which are defined by watersheds and drainage basins and are reflective of the water resources nature of the civil works' mission. Through its Pacific Ocean and South Atlantic Divisions, the Corps also has civil works responsibilities in the Territory of American Samoa, the Territory of Guam, the Commonwealth of the Northern Mariana Islands, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands.

The distribution of civil works employees again highlights the civil works program's customer focus: 95 percent of employees work at the district level (in labs or field operating agencies) and demonstrate the fact that project management, operations, and maintenance activities are performed at the local (district) level. The program contracts out all of its construction and most of its design work to civilian companies. As many as 150,000 people are indirectly employed in support of civil works projects, and the Corps' contractual arrangements have served the nation well in times of emergency.

The Leadership

Oversight of civil works is provided through five levels of authority. As shown in Figure 3, the Assistant Secretary of the Army for Civil Works (ASA(CW)) (a Presidential appointee) is responsible for civil works policy. The Chief of Engineers is a military officer who reports to the ASA(CW) and is responsible for mission accomplishment. The Chief of Engineers delegates the management of this program to the Deputy Commanding General (DCG) for Civil and Emergency Operations who further delegates management of the civil works program to the Director of Civil Works. Through the DCG for Civil and Emergency Operations and the Director of Civil Works, the Chief of Engineers is responsible for the leadership and management of the civil works program and for ensuring that policies established by the ASA(CW) are applied to all phases of the mission. Corps divisions, commanded by division engineers, are regional offices responsible for the supervision and management of subordinate districts, to include oversight and quality assurance. Districts are the foundation of the civil works mission which is managing water resource development over a project's life cycle.

Figure 3. Civil Works Levels of Authority



Civil Works Performance Workplan

Civil works directly impacts America’s prosperity, competitiveness, quality of life and environmental stability. In March 2004, the Corps’ leadership published a strategic plan to provide a framework for enhancing the sustainability of America’s resources. The plan’s strategic goals supported the Corps’ strategic direction over the six-year period, FY 2004 – FY 2009. The USACE submitted its FY 2010 – FY 2014 plan in FY 2009 and the plan remains under Office of Management and Budget (OMB) review. Key performance measures, developed in conjunction with and approved by the OMB, are presented below.

Priority Goals

In the summer of 2009, federal agencies were asked to identify a limited number of ambitious, but realistic, high priority performance goals (HPPG) for the near term - FY 2010 and FY 2011. The USACE Civil Works Program has chosen to emphasize four goals which support the administration's broader policy priorities and have high direct value to the public. These goals are as follows:

Priority Goal 1 (Aquatic Ecosystem Restoration and Regulatory): Provide sustainable development, restoration, and protection of the nation's water resources by restoring degraded habitat on 10,300 acres during 2011 in the Aquatic Ecosystem Restoration business line. This will result in an increase equal to 17 percent of the total acreage estimated to have been restored during 2005-2010 and achieving no net loss of aquatic resource function through avoidance and mitigation in Regulatory.

Priority Goal 2 (Flood Risk Management): Reduce the nation's risk of flooding that damages property and places individuals at risk of injury or loss of life.

Priority Goal 3 (Inland Navigation): Help facilitate commercial navigation by providing safe, reliable, highly cost-effective, and environmentally-sustainable waterborne transportation systems.

Priority Goal 4 (Hydropower): Increase the Hydropower performance metric of average peak unit availability for 353 generating units from the FY 2009 level of 88 percent to 90 percent by FY 2011. This will move the Corps closer to the industry standard level, which is 98 percent. In the fall of 2010 a second metric was added: Meet or exceed the previous five year rolling average net generation measured in megawatt-hours for the Corps hydropower facilities marketed by the Southeastern, Southwestern, and Western Area PMAs.

The FY 2011 expected performance on these priority goals is discussed in the relevant business line sections.

Strategic Goal 1: Provide Sustainable Development and Integrated Management of the Nation's Water Resources.

Navigation

Objective: To invest in navigation infrastructure that is fully capable of supporting maritime requirements in environmentally sustainable ways where economically justified.

Funding History: The first row of Table 1 indicates the funding for the investigations, major rehabilitation and construction program.

Performance Indicators: To measure progress in meeting the Goal 1 objectives, the Corps uses performance indicators. These indicators relate to investigations and construction activities for inland and intracoastal waterways and coastal ports and harbors, as well as to the efficiency of the overall, combined navigation system. The indicators are described below and their measures are

shown in Table 1.

Construction measures for the navigation system

In FY 2008, the Corps instituted and began reporting using the following performance measures.

- **High-return investments.** The percentage of funding to rehabilitate, construct, or expand projects that is allocated to high-return investments. High-return investment projects are defined as those with a benefit-to-cost ratio (BCR) of 3.0 or greater.
- **Percentage of reports recommending projects reflecting watershed principles.** The percentage of Chief of Engineers' reports recommending projects for authorization that meet criteria for industry-accepted watershed principles. This measure expresses a long-term goal and assesses progress achieved in watershed-based planning.
- **Average annual benefits attributable to preconstruction engineering and design (PED) work completed in current fiscal year.** This is the total average annual benefits (present value) attributable to PEDs. This measure assesses the effectiveness of PED in enabling transportation savings.
- **Average annual benefits realized by construction projects completed in current fiscal year.** The total average annual benefits (present value) realized by construction projects completed. This measure assesses the effectiveness of the construction program in realizing transportation savings.
- **Percentage change in funds required to complete all programmed work.** This represents the percentage change in constant-dollar balance to complete programmed work on all ongoing, budgeted construction projects. This measure assesses progress in reducing the backlog of ongoing, budgetable construction projects.

Expected Performance—Construction and Investigations

Investigations funds of \$7.1 million will advance and complete reconnaissance, feasibility, and preconstruction engineering and design (PED) studies to deepen or improve 13 coastal and inland navigation projects throughout the nation to increase economic benefits and improve reliability. Funds will complete reconnaissance reports for Great Lakes Navigation System, MI, IL, IN, MN, NY, OH, & PA and North Carolina International Terminal, NC; complete feasibility studies for Lake Worth Inlet, FL and Mile Point, and Lake Montauk Harbor, NY; advance feasibility studies for Calcasieu Lock, LA, Missouri River Degradation, MO, KS, Upper Ohio River Navigation Study, PA, Tybee Island, GA, Brazos Island Harbor - Brownsville Channel, TX, and the Gulf Intracoastal Waterway (GIWW) – High Island to Brazos River Realignment; and advance PED for navigation improvements for Bayou Sorrel Lock, LA and Savannah Harbor Expansion, GA.

Construction funds will continue construction and major rehabilitation of 26 coastal and inland navigation projects throughout the nation to increase economic benefits and improve reliability, provide dredged material placement sites for deep draft navigation projects, and mitigate shoreline erosion due to the impacts of Federal navigation projects.

Construction funds for inland and intracoastal waterways will continue major rehabilitation of Lock & Dam 27, Mississippi River, IL and Markland Locks & Dam, Ohio River, KY; continue dam safety assurance, seepage control and static instability corrections at Emsworth Lock and Dam, Ohio River, PA; and continue construction and/or replacement of locks and dams at Olmsted Lock & Dam, Ohio River, IL; Kentucky Lock & Dam, Tennessee River, KY; J. Bennett Johnston Waterway, LA; Mississippi River Between the Ohio and Missouri Rivers (Regulating Works), MO; Locks & Dams 2, 3, & 4, Monongahela River, and Atlantic Intracoastal Waterway Bridge Replacement at Deep Creek, Chesapeake, VA. Construction funds for coastal navigation projects will be used to construct channel and harbor improvements at Akutan Harbor, AK, Oakland Harbor (50-Foot), CA, Sacramento Deepwater Ship Channel, CA, New York and New Jersey Harbor, NY, NJ, and Wilmington Harbor, NC; construct dredged material placement sites at Jacksonville Harbor, FL, Tampa Harbor, FL, Indiana Harbor Confined Disposal Facility, IN, and Norfolk Harbor Craney Island, VA; and to mitigate for shoreline damages caused by navigation projects at Delaware Bay Coastline, Roosevelt Inlet to Lewes Beach, DE; Brevard County, FL; Ft. Pierce Beach, FL, and Cape May Inlet to lower Township, NJ.

The ARRA of 2009 provided the Corps an additional \$4 million in investigation funds and \$741 million in construction funds which are being spent on inland and coastal navigation projects through FY 2011. Specifically, expenditures have been allocated for: (1) the advancement and completion of studies, (2) engineering and design, (3) construction, and (4) the major rehabilitation of navigation projects. The use of ARRA funds explains the discrepancy between target and actual figures for FY10 in Table 1 below.

Table 1. Navigation Construction and Investigation Performance Indicators

		FY 2008	FY 2009	FY 2010	FY 2011	
					Target	Actual
	Expenditures in millions of dollars	\$490	\$597	\$753	\$325	
Inland Waterways	Percentage of funds to high-return investments (BCR > 3)	59%	42%	76%	80%	
Coastal Ports and Harbors	Percentage of reports recommending projects reflecting watershed principles	100% ¹	0%	0% ³	Note 2	
	Average annual benefits attributable to PEDs completed in current FY in millions of dollars	\$28.1	\$7.9	\$0 ³	Note 2	
	Average annual benefits realized by construction projects completed in current fiscal year in millions of dollars	0	\$8.3	\$44.7	\$33	
	Percentage change in funds required to complete all programmed work.	Note 3				

Note 1: Represents the completion of one report.

Note 2: Performance targets will be established in FY 2012, after 3 years of data have been collected.

Note 3: No Chief of Engineers Reports or PEDs were completed in FY2010.

Flood Risk Management

Objective: To invest in environmentally sustainable flood and coastal storm damage reduction solutions through the safe operation of flood reduction infrastructure when benefits exceed costs.

Funding History: The first row of Table 2 displays investigation and construction funding for flood risk management.

Performance Indicators: To measure its progress in meeting the Goal 1 objective, the Corps uses performance indicators related to the construction program for flood risk management. The construction indicators are described below and their measures are shown in Table 2.

Construction measures for flood risk management

- **Additional people protected.** The increase in total affected population, with reduced risk at project design, attributed to project completion in the current fiscal year.
- **Flood damage prevented.** The estimated annual dollars of property damage avoided through Corps' flood control projects completed during the fiscal year.
- **Ten-year moving average.** The 10-year moving average of actual flood-damage reduction benefits attributable to all completed Corps' flood control projects.

The following three measures have been replaced with similar measures that more accurately measure progress in a specific area.

- **DSAC I dams under study and/or remediation.**
- **DSAC II dams with completed issue evaluation studies.**
- **Screening portfolio risk assessments (SPRAs) completed.** The number of SPRAs completed in the applicable year

The following are the new performance measures for which data were collected in FY2010 and reporting begins in FY 2011.

- **DSAC I, II, III dams under study.** The number of DSAC I, II, III projects under dam safety & seepage/stability study.
- **DSAC I, II, III dams with completed studies.** The number of DSAC I, II, III projects with complete dam safety modification reports.
- **DSAC I, II, III dams under remediation.** The number of DSAC I, II, III projects under remediation construction.

Expected Performance—Construction

Funding for Investigations will be used to advance continuing flood risk management studies throughout the nation to continue the study and design of flood risk management projects to increase economic benefits of flood damages prevented and lives protected.

Construction funding will be used to continue construction at eight high risk dam safety projects and continue construction on 53 continuing flood risk management projects in order to bring these additional benefits online. A portion of the construction funds are targeted to complete the St. Louis Flood and West Sacramento Flood protection projects. Construction on these projects results in an additional 295,000 people with reduced risk and 13.2 million in damages prevented.

High Priority Performance Goal

The measures, targets, and results for the Flood Risk Management HPPG are shown in bold in the table below.

Table 2 Construction & Investigation – Flood Risk Management

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$1,107	\$1,343	\$2,767	\$966	
Additional people protected in thousands	0	645	37	295	
Flood damage prevented in millions of dollars	0	\$10.4	\$28.0	\$13.2	
Ten-year moving average in millions of dollars	\$22.3	\$23.1		Note 1	
SPRA assessments completed	185	66	93	Note 2	
DSAC I dams under study or remediation	7	13	12	Note 3	
DSAC II dams with completed Issue Evaluation Studies	Note 4	2	0	Note 5	
DSAC I, II, III dams under study	Note 6		28	45	
DSAC I, II, III dams with completed studies			2	5	
DSAC I, II, III dams under remediation			8	8	

Note 1: Data are collected from actual floods occurring throughout the year and data become available in March following the year of interest. The Corps makes no predictions or targets year-to-year; data are used for trend analysis only.

Note 2: 100% of SPRA assessments were completed by FY 2010 and this measure is being discontinued.

Note 3: The FY 2010 number represents 100% of those dams identified as DSAC I as of 1 Oct 2010. Reduction in total to 12 is due to Mill Creek Dam reclassification to DSAC II. Therefore this measure is no longer relevant past FY2010.

Note 4: This measure became effective in FY2009.

Note 5: This measure has been discontinued.

Note 6: Data collection for this measure began in FY 2010.

Hydropower

Objective: To invest in hydropower solutions when benefits exceed costs.

Performance Indicators: The availability of hydroelectric generating units during peak power-demand periods. Indicators of successful performance in meeting this objective are measured by generating capacity and forced outage rates.

Expected Performance: The Corps uses the same indicators as in Goal 3; please see Table 9.

Strategic Goal 2: Repair Past Environmental Degradation and Prevent Future Environmental Losses

Aquatic Ecosystem Restoration

Objective: Restore the structure, function, and process of significantly degraded ecosystems to allow them to revert to a more natural condition. Invest in restoration projects or features that positively contribute to the nation's environmental resources in a cost-effective manner.

Funding History: The first row of Table 3 displays the funding for aquatic ecosystem restoration.

Performance Indicators: The Corps has established four indicators to assess progress in meeting this objective. Data are shown in Table 3.

- **Acres of habitat restored, created, improved, or protected—annual.** The number of acres of habitat restored in degraded ecosystems.
- **Nationally significant acres of habitat restored, created, improved, or protected—annual.** The number of acres of habitat restored each year that have high quality outputs as compared to national needs.
- **Cost per acre to restore, create, improve, or protect nationally significant habitat.** The per-acre cost of projects that produce nationally significant acres in any given year. Over the long term, through efficiencies in project execution or other actions, the goal is to restore the most acres per dollar expended.
- **Number of projects or separate elements physically completed.** This represents the actual number of projects or separate elements physically completed in the current fiscal year. Performance of the other measures is directly dependent upon this performance factor.

Expected Performance

The AER budget for FY11 is \$586 million. Approximately \$180 million is included for continuing implementation of Everglades Restoration reflecting a continuing commitment

to implementation of this historic restoration effort. Among the projects funded are restoration of the Kissimmee River, South Dade County C-111 modification, Ten Mile Creek, West Palm Beach Canal and Indian River Lagoon South. Additionally funds have been provided for the Federal share of operation and maintenance of completed elements of this program. Approximately \$19 million will be used to initiate construction of several projects in the Louisiana Coastal Area.. Over 140 million dollars will be used to meet the requirements of a biological opinion at various projects on the Columbia River system and \$78 million will fund Missouri River Fish and Wildlife Recovery. Other projects receiving significant funding include restoration of Hamilton Airfield Wetlands, CA, Napa Salt Marsh, CA, Upper Mississippi River Restoration and the modifications to the Chicago Sanitary and Ship Canal to prohibit Asian Carp from entering the Great Lakes from the Mississippi. An estimated 13,000 acres are projected to be completed in FY11, approximately 82% of which are nationally significant. A significant number of studies exploring ecosystem restoration options in a variety of diverse ecosystems across the country also received funding, including slightly over \$16 million for studies and design efforts in the Louisiana coastal area.

High Priority Performance Goal

The measure for the Aquatic Ecosystem Restoration HPPG is shown in bold in the table below. The goal calls for 10,300 acres to be restored by the end of FY 2011.

Table 3. Aquatic Ecosystem Restoration Indicators

	FY2008	FY2009	FY2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$429	\$492	\$531	\$586	
Acres of habitat restored, created, improved, or protected (annual)	2,435	10,480	4,540	13,000	
Nationally significant acres of habitat restored, created, improved, or protected (annual)	1,986	1,380	3,760	10,600	
Cost per acre to restore, create, improve, or protect nationally significant habitat	\$6,700	\$6,600	\$9,600	\$8,400	
Number of projects/separable elements physically completing	Note 1	14	17	27	

Note 1: New performance measure for FY2009 which is the first year of reporting.

Regulatory

Objective: To execute the Regulatory mission in a manner that protects the aquatic environment

(ensures zero net loss of wetlands) while making timely, fair permit decisions.

Funding History: The first row of Table 4 displays the funding for Regulatory.

Performance Indicators: Table 4 lists eight measures that serve as performance indicators in determining progress in meeting this objective.

- **Individual permit compliance.** The percentage of all individual permits on which the Corps completed an initial compliance inspection; measures permits issued during the previous fiscal year when authorized work began.
- **General permit compliance.** The percentage of all general permits on which the Corps completed an initial compliance inspection; measures permits issued during the previous fiscal year when authorized work began.
- **Mitigation site compliance.** The percentage of field compliance inspections completed on active mitigation sites each fiscal year. Active mitigation sites are those authorized and monitored through the permit process, but which have not met final approval under the permit special conditions.
- **Mitigation inspections or audits.** This represents the percentage of compliance inspections or audits completed on active mitigation banks and in-lieu-of-fee programs.
- **Resolution of noncompliance issues.** The percentage of noncompliance issues identified during the fiscal year in which the Corps reached resolution. This addresses noncompliance with permit conditions.
- **Resolution of enforcement actions.** The percentage of pending enforcement actions, i.e., unauthorized activities identified during the fiscal year in which the Corps reached resolution.
- **General permit decisions.** The percentage of general permit application decisions made within 60 days.
- **Individual permits.** The percentage of general individual permit application decisions made within 120 days. This standard does not include individual permits with formal Endangered Species Act consultations.

Expected Performance

FY 2011 Regulatory funds will be utilized to maintain the current level of staffing across the nation, which will be challenging. The Regulatory program will continue to strive toward a more transparent, clear and consistent process for the American public. Regulatory will continue to make advancements using the best available technology and will work to place the necessary tools in the hands of our field staff in order for them to continue to provide exceptional service to our stakeholders while accomplishing our mission of protecting the aquatic environment. Overall workload is projected to increase in FY 2011 due to several Administration initiatives being developed to strengthen environmental protection of the Nation's aquatic resources. Despite

sluggish residential and commercial development pressures, the program expects to see an influx of permit applications of increasing complexity. The nation's priority on developing alternative energy (e.g., wind, nuclear, hydropower) and traditional energy resources (coal, hydropower, oil and gas) will continue. These projects involve multiple regulatory agencies and associated reviews/approvals and involve substantial public interest. Energy will continue to be a focus for the Regulatory program as the nation balances the need for energy with aquatic resource protection. The Regulatory program performance measure targets for FY 2011 will remain the same as they were in FY 2010. Districts will continue targeted efforts to balance performance both locally and regionally in efforts to deliver a more transparent, clear and consistent process. The Regulatory Program will continue to use the watershed approach to inform decisions. In areas where permit application workload is affected by the national economy, districts are increasing their efforts for compliance monitoring for actions taken in the past 5 years and balancing performance across the program.

High Priority Performance Goal

The regulatory portion of the Corps' HPPG is no net loss of aquatic resource function through avoidance and mitigation. The measure, target, and results are shown in bold in the table below. Achievement of this portion of the goal is evaluated by the permittee's compliance with the permit. The target was established based on the number of permits issued requiring compensatory mitigation in the previous fiscal year.

Table 4. Regulatory Indicators

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$176	\$190	\$209	\$193	
Percentage of compliance inspections on individual permits	22%	25%	26%	10%	
Percentage of compliance inspections on general permits	7%	11%	13%	5%	
Percentage of active mitigation sites inspected	18%	37%	10%	5%	
Percentage of compliance inspections on active mitigation banks	39%	44%	34%	20%	
Percentage of resolution on noncompliance with permit conditions or mitigation requirements	28%	38%	40%	20%	
Percentage of resolution on pending enforcement actions	34%	37%	38%	20%	
Percentage of general permit application decisions made within 60 days	82%	88%	92%	75%	
Percentage of standard permits and letter of permission permit decisions made within 120 days	51%	64%	67%	50%	

Environmental Remediation (Formerly Utilized Sites Remedial Action Program-FUSRAP)

Objective: To achieve the cleanup objectives of the FUSRAP, the Corps uses three outcome measures to indicate progress: (1) minimize risk to human health and the environment, (2) maximize the cubic yardage of contaminated material disposed in a safe and legal disposal facility, and (3) return the maximum number of affected individual properties to beneficial use.

Funding History: The first row of Table 5 displays funding for environmental remediation.

Performance Indicators: The measures listed in Table 5 serve as indicators to help Corps' personnel determine progress in meeting this objective. In addition to the indicators explained below, the Corps has begun to measure both the cumulative percentage of FUSRAP funding expended on actual cleanup activities, as well as the total cost of disposing of contaminated material.

- **Number of records of decision (ROD) signed.** As studies are completed and best alternatives for cleanup activities are decided, the number of RODs increases. A final ROD establishes the final cleanup standard which controls the actual estimate of the remaining environmental liability for each site.
- **Number of remedial investigations (RI) completed.** The RI establishes the baseline risk assessment whereby the level of risk to human health and the environment is identified.
- **Number of action memorandums signed.** When warranted by risk or other limiting factors, action memoranda allow the Corps to move toward reducing risk more rapidly than through production of a ROD. No action memoranda are presently identified.
- **Cubic yardage of contaminated material disposed.** Target-soil amounts are dependent on previous year funding and scheduled activities.
- **Individual properties returned to beneficial use.** Number of properties released for general use following remediation.
- **Number of remedies in place or response complete.** As select portions of sites or complete sites meet their remedial action goals, risks to human health and the environment are reduced to within acceptable levels. Properties may be used within a community without fear of increased cancer risk or further degradation of the environment.
- **Percentage of funding expended on cleanup.** The cumulative percentage of FUSRAP funding expended on cleanup activities rather than on studies. The baseline for this measure was established in FY2004; results are reported every three years.
- **Remediation of contaminated material.** The cost to dispose of contaminated material as measured in cubic yards. Data for this measure will not be reported again until FY 2013.

Expected Performance

Fiscal Year 2011 funds will be used to continue remedial activities at the Linde, Maywood,

Shpack, St. Louis Vicinity Property, St. Louis Downtown, Iowa Army Ammunition Plant (IAAAP), Hazelwood Interim Storage Site/Latty Ave, and W.R. Grace sites. Remedial activities at the Shallow Land Disposal Area site are scheduled to begin in the summer of 2011. A remedial investigation is scheduled to be completed at the St. Louis Downtown site inaccessible soils operable unit. Feasibility studies are scheduled to be completed for operable units at the IAAAP and Dupont sites. Record of Decision documents (RODs) are scheduled to be signed for the W.R. Grace site RWDA operable unit and the Harshaw IA-6 soils operable unit. Approximately 119,000 cubic yards of contaminated material is scheduled to be removed and 16 (108 cumulative) properties are scheduled to be returned to beneficial use. Remedial investigation activities will continue at all other FUSRAP sites.

Table 5. Remedial Action Indicators

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$132	\$127	\$166	\$130	
Number of RODs signed	2	1	1	2	
Remedial investigations completed	2	1	2	1	
Action memos signed	0	0	0	0	
Contaminated material removed in thousand cubic yards	154	143	212	119	
Individual properties returned to beneficial use	40	61	92	108	
Remedies in place or response complete	0	0	1	1	
Percentage of funding expended on cleanup	84%	Note 1		85%	
Cost of remediation of contaminated material per cubic yard	Note 2	\$496	Note 3	Note 3	

Note 1: This was a new measure for FY2008. The measure is cumulative and data will be reported every third year.

Note 2: Data collection on this measure begins in FY2009.

Note 3: Results for this measure will not be reported again until FY2013.

Strategic Goal 3: Ensure that Projects Perform to Meet Authorized Purposes and Evolving Conditions

Navigation

Objective: Improve the efficiency and effectiveness of existing Corps' water resource projects by maintaining justified levels of service to commercial traffic of high-use infrastructure, e.g., waterways, harbors, and channels.

Objective: Address the operation and maintenance (O&M) backlog on all operating projects by funding high priority operations and maintenance projects.

Funding History: The first row of Table 6 displays funding for the operations and maintenance portion of Navigation.

Performance Indicators: To measure progress in meeting Goal 3 objectives, the Corps uses performance indicators that (1) relate to O&M activities for inland and intracoastal waterways, coastal ports, and harbors; and (2) relate to the efficiency of the overall, combined navigation system. Indicators are described below and their measures are shown in Table 6.

Operation and maintenance measures for inland and intracoastal waterways

- **Ton-miles.** The sum total of movement of cargo on a specific waterway; this measure is a roll-up of tons of cargo transported by a vessel multiplied by the miles that vessel traveled on the particular inland or intracoastal waterway. Although there is no specific Corps-generated target, this indicator is used for trend analysis.
- **Segment availability.** The number of hours over 24 that mechanical-driven failure or shoaling results in the closure of all or part of a high or moderate commercial-use segment. The measure includes only failures on the main chamber of a lock (rather than an auxiliary chamber) and on shoaling due to inadequate dredging (rather than low water levels from droughts or channels closed due to floods). It also tracks closures of more than one week. The two measures that were developed for the Navigation HPPG, preventable lock closures over 24 hours and over 7 days, are proxies for this measure.
- **Total funds expended per segment ton-mile (five-year rolling average).** Total O&M funds expended per segment ton-mile averaged over a five-year period, including major rehabilitations.
- **Efficiency measure.** This measures the O&M costs per ton of cargo shipped. It assesses the efficiency of the commercial navigation system at a particular coastal port or harbor.

The Corps developed new performance measures and began data gathering in FY 2008. Data has not been reported until FY 2010.

- **Channel availability, high-use projects.** This measures the percentage of time that inland and intracoastal waterway segments with high commercial activity are available when customers want to use them. The focus is to minimize vessel draft restrictions due to shoaling of the channels and to minimize local closures due to mechanical failures.
- **Percentage of high-use segments with a good service level.** This represents the percentage of high commercial-use segments with sufficient preventive maintenance to achieve a good level of service. High-use segments are the upper and lower Mississippi; the Illinois, Ohio, and Tennessee Rivers; and the Gulf Intracoastal Waterway.

Operations and maintenance measures for coastal ports and harbors, including major repairs

- **Tons of cargo.** Total sum of cargo in tons moved in and out of coastal ports and harbor systems. This measure indicates system use; data collected are for the purpose of trend

analysis. No specific target is generated by the Corps.

- **Channel availability, high-use projects.** This represents the percentage of time that high commercial traffic navigation channels are available to commercial users. There are a total of 59 high-use projects, defined as those that pass 10 million or more tons of cargo per year.

In FY 2008, the Corps instituted new performance measures and began gathering data. Data will be reported beginning in FY 2011.

- **Channel availability, moderate-use projects.** This represents the percent of time that moderate commercial traffic navigation channels are available to commercial users. There are a total of 100 moderate-use projects that are defined as those passing 1-10 million tons of cargo per year.
- **Channel availability, low-use projects.** The percentage of time that low commercial-use channels, harbors, and ports are available to all current users. There are about 1,000 low-use projects that are defined as those passing less than 1 million tons of cargo per year.

Expected Performance

This business line continues to be successful in providing significant navigation benefits to the nation; however, it faces significant challenges in its efforts to maintain the reliability of the inland and intracoastal waterways and coastal navigation system. The system's aging infrastructure requires more repairs than the Corps can accomplish given the historical level of program appropriations. Over one half of the Corps' locks have exceeded their 50-year service life and are requiring increased maintenance to keep them functioning. These same funding shortfalls, coupled with increased costs in dredging operations and construction, are affecting the Corps' ability to properly maintain its infrastructure and channels. There has been a 27 percent increase in dredging costs in recent years, which corresponds to the near doubling of fuel purchasing costs and similarly significant increases in steel and labor costs. Also, many of the new channel deepenings require additional maintenance. In addition, new environmental requirements that require the construction of new, more distant dredged material placement sites have increased the cost of dredging our channels. Although other factors may limit or control channel availability, the ability to maintain an acceptable waterway width and depth through dredging operations has, by far, the greatest impact.

Expected Performance —Operations and Maintenance

Operations & Maintenance (O&M) funds will be used to fund continued operation and maintenance of 241 locks at 195 locations and maintenance dredging of critical and high commercial use reaches of the 11,000 miles of inland and intracoastal waterways. Not all waterways will be maintained to authorized dimensions, many locks and dams will forego all but the most critically needed maintenance, and some locks, dams, and waterways will only be maintained in caretaker status. The overall condition of the inland and intracoastal waterways is expected to decline and projects will continue to experience lock closures due to mechanical breakdowns and failures. The O&M funds will also enable maintenance dredging of high use,

commercially important coastal ports, harbors, and channels, critical harbors of refuge, and subsistence harbors. Only about 30 percent of the Corps navigation projects will receive funding. Many moderate and low commercial use harbors and channels will not be dredged and continue to shoal, further limiting vessel drafts. For the 59 highest use coastal ports and harbors, channel conditions are expected to continue to decrease due to the large increase in the costs of doing business, particularly fuel, steel, and labor. Dredging costs have increased an estimated 27 percent over the past three years. For these projects, authorized channel depths were only available approximately 35% of the time for the center half of the channel during fiscal years 2005-2007. The condition of moderate and lower use inland and intracoastal waterways, and coastal ports and harbors is expected to continue to decline.

High Priority Performance Goal

The measures, targets, and results for the Inland Navigation HPPG are shown in bold in the table below. The targets are based on the median annual number of closures over the previous five years. The instances and hours of scheduled and unscheduled lock closures due to mechanical failures have been increasing since FY 2000. The Corps anticipates these lock closures will continue to increase over the next several years and anticipates the five-year median target will increase accordingly. The Corps is prioritizing its annual funding and is completing repairs and maintenance work on locks with Recovery Act investments which will help arrest the increase in lock closures. These factors, together with anticipated higher targets in the future, will increase our ability to achieve the goal.

Table 6. Navigation, Operations and Maintenance Activities Performance Indicators

		FY 2008	FY 2009	FY 2010	FY 2011	
					Target	Actual
	Expenditures in millions of dollars	\$1,296	\$1,653	\$2,281	\$1,342	
Inland waterways	Segment Availability – closures over 24 hours in thousands of hours	16	11.1	19.6	19	
	Total O&M funds expended per segment ton-mile (5 year rolling average)	\$0.0019	\$0.0021	Note3	\$0.0021	Note 4
	Ton-miles in billions of ton – miles by fiscal year	268	222	Note 3	Note 1	
	Efficiency – Cost per ton	\$0.97	\$0.83	Note 3		
	Channel availability, high-use projects	Note 2				
	Percentage of high-use segments with a good service level					
	Preventable lock closures over 24 hours	42	37	61	38	
	Preventable lock closures over 7	28	19	37	21	

	days					
Coastal ports and harbors	Tons of cargo in billions of tons	2.037	1.807	Note 3	Note 1	Note 4
	Channel availability, high use projects	32%		Note 3	35%	
	Channel availability, moderate use projects	Note 2				
	Channel availability, low use projects					

Note 1: The Corps does not set targets for these measures.

Note 2: Data collection during FY2008-2010; no targets will be set on these measures until FY2011.

Note 3: Waterborne Commerce Statistics Center data for FY2010 will not be available until late spring 2011..

Note 4: Waterborne Commerce Statistics Center data for FY2011 will not be available until late spring 2012.

Flood Risk Management

Objective: To reduce the risk to public safety and risk of damages due to flooding and coastal storms through the safe operation of flood damage reduction projects, as authorized.

Funding History: The first row of Table 7 presents O&M funding for flood risk management.

Performance Indicators: To measure progress in meeting Goal 3 objectives the Corps uses performance indicators that relate to O&M activities for flood risk management. The indicators are described below and their measures are shown in Table 7.

Operations and maintenance measures for Flood Risk Management

- **Operating projects in zones 21-25 (High Risk).** This measures the percentage of operating projects (dams, levees, channels, flood gates) in zones 21-25 of the relative risk ranking matrix.
- **Operating projects in zones 1-6 (Low Risk).** This measures the percentage of operating projects (dams, levees, channels, flood gates) in zones 1-6 of the relative risk ranking matrix.
- **Marginal cost of operations.** The marginal cost of O&M for all operating projects (dams, levees, channels, flood gates) relative to damages prevented; shown as a percentage, i.e., the cost of O&M divided by the cost of damages prevented.

Expected Performance

FY2011 funds will be used to operate and maintain federal projects, inspect federal projects turned over to local sponsors and support coordination of federal reservoir operating schedules with private/non-federal reservoirs within basins. It is expected that funding levels for operations & maintenance at federal projects will sustain the target number of projects operating within their relative risk zones. Funding will also support necessary dam safety monitoring and evaluation

functions at all dams and implementation of necessary interim risk reduction measures at high risk dams.

Table 7. Operations and Maintenance – Flood Risk Management

		FY 2008	FY 2009	FY 2010	FY 2011	
					Target	Actual
	Expenditures in millions of dollars	\$678	\$858	\$887	\$579	
Operations & Maintenance	Operating projects in zones 21-25 (High Risk)	96	50	80	85	
	Operating projects in zones 1-6 (Low Risk)	49	74	85	90	
	Marginal cost of operations	1.25%	3.70%	2.30%	2.10%	

Environmental Stewardship

Objective: To improve the efficiency and effectiveness of existing Corps water resources projects.

Objective: To ensure healthy and sustainable lands and waters and associated natural resources on Corps lands in public trust to support multiple purposes.

Objective: To protect, preserve, and restore significant ecological resources in accordance with master plans.

Objective: To ensure the operation of all civil works facilities and management of associated lands—including out-granted lands—complies with the environmental requirements of relevant federal, state, and local laws and regulations.

Objective: To meet the mitigation requirements of authorizing legislation or applicable Corps authorization decision documents.

Funding History: The first row of Table 8 shows the funding for environmental stewardship.

Performance Indicators: To measure success in attaining the objectives above, the Corps developed seven performance indicators. Data on these indicators may be found in Table 8.

- **Mitigation compliance.** A percentage of the acres of designated Corps-administered mitigation lands that meet mitigation requirements, divided by the total number of acres of designated Corps-administered mitigation lands. The measure can also be the number of pounds of fish (or the number of individual fish) produced in a mitigation hatchery, divided by the number of fish required to be produced at a mitigation hatchery in order to meet the mitigation requirement.
- **Endangered species protection.** The percentage of Corps operating projects with Endangered

Species Act responsibilities that meet those responsibilities.

- **Cultural resources management.** This measures the percentage of Corps operating projects that meet federally mandated cultural resource management responsibilities in relation to the number of projects with such responsibilities.
- **Healthy and sustainable lands and waters.** The number of Corps fee-owned acres classified in a sustainable condition, divided by the total number of Corps fee-owned acres. Sustainable is defined as being healthy and viable, not significantly impacted by any unmanageable factors and not requiring intensive management to maintain health. The acreage also meets operational goals and objectives established in applicable management documents.
- **Level-one natural resources inventory completion index.** This measures the Corps' efforts in completing basic, level-one natural resource inventories required by USACE Environmental Regulation 1130-2-540, *Environmental Stewardship Operations and Maintenance Policies*. These inventories are necessary to effect sound resource management decisions and strategy development. The percentage of acres for which level-one inventories are necessary and completed is used to evaluate the relative performance in this measure.
- **Master plan completion.** A master plan is completed, per regulation, to foster an efficient and cost-effective project for natural resources, cultural resources, and recreational management programs. This measure demonstrates the Corps' commitment to fully integrate environmental stewardship in the management of operating projects. The measure is expressed as a percentage derived by dividing the number of required master plans in compliance with regulation by the total number of required master plans.
- **Efficiency.** This concept is represented by costs recovered in cents-on-the-dollar. The objective is to manage projects in an efficient manner. This measure is an assessment of federal costs avoided in relation to the business line cost. Revenue recovered each year, equivalent to the federal costs avoided, will vary due to the nature and extent of the sustainability practices implemented. The emphasis, however, is on resource sustainability as opposed to revenue generation.

Expected Performance

Comparing budgeted levels to actual expenditures can be confusing, as expenditures typically exceed budget. This is due to funds provided to the Corps from other agencies, such as the Bonneville Power Authority; also, ARRA funding increased expenditures in FY2010.

Regular appropriations funding levels for Corps Divisions essentially remain the same and will be used for essential activities that provide many of the priority performance outputs identified by the indicators above. FY2011 funds contribute to achieving Stewardship's goal of healthy and sustainable lands and waters. This outcome is in direct support of the Civil Works strategic plan goal to "ensure that projects perform to meet authorized purposes and evolving conditions."

Program funding has remained basically flat in recent years, and combined with the effects of inflation this has reduced the capability to meet overall target performance objectives. Critical natural resources management activities will be continued on Corps lands and waters such that

the FY 2010 achievement levels may be maintained. Due to significant increases in threats from invasive and exotic pests and high demand and use of facilities, maintaining desired healthy landscape conditions are more challenging. Therefore, for FY 2011 funding placed higher priority on meeting the basic stewardship and maintenance of natural resources to prevent further loss of resources. This shift which began in FY 2010, reduces funding to fully meet all mitigation compliance and endangered species protection requirements and will place highest priorities on legal and mandated requirements. Continued flat or declining funding trends, will result in constrained management and maintenance for all performance areas as significant natural resource threats continue to emerge.

Table 8. Environmental Stewardship Indicators

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$134	\$150	\$212	\$108	
Mitigation compliance	100%	100%	76%	79	
Endangered species protection	100%	100%	61%	65	
Cultural resource management	72%	67%	53%	55	
Healthy and sustainable acreage	24%	38%	45%	50	
Level-one natural resources inventory completed	46%	59%	74%	100	
Master plans completed	27%	27%	28%	34	
Efficiency in cents-on-the-dollar	\$0.11	\$0.11	\$ 0.17	Note 1	

Note 1: In order to ensure that revenue generation is not emphasized at the expense of sustainability, the Corps does not set annual efficiency targets. This indicator is used for trend analysis.

Hydropower

Objective: To improve the efficiency and effectiveness of existing Corps water resource projects. The Corps seeks to maintain a high level of reliability and peak availability of hydroelectric power-generating capability at multipurpose reservoir projects.

Funding History: The first row of Table 9 shows O&M expenditures for the Hydropower business line over the past three-year period.

Performance Indicator: Performance indicator results and targets for the year are displayed in Table 9.

- **Percentage of time units are available to produce power.** The amount of time during a given year that hydroelectric generating units are available to the Power Marketing Administration's (PMA) interconnected system.
- **Percentage of time available during periods of peak demand.** This measures the amount of time during designated peak demand periods that hydroelectric generating units are available to the PMA's interconnected system.
- **Percentage of forced outages.** The percentage of time generating units are in an unscheduled or unplanned outage status. The lower the forced outage rate, the more reliable and less expensive the electrical power provided to the customer.
- **Electrical reliability standards met.** The percentage of Federal Energy Regulatory Commission (FERC) approved electric reliability standards that are met or exceeded. FERC has no direct jurisdiction over the Corps' hydropower production; however, the Corps takes reliability seriously and has voluntarily chosen to comply with all applicable FERC electric reliability standards, subject to the availability of resources.

The following measure was developed in late FY2010; FY2011 will be the first year to report data:

- **Net generation.** Five year rolling average net generation measured in megawatt-hours for the Corps hydropower facilities marketed by the Southeastern Power Marketing Administration, Southwestern Power Marketing Administration, and the Western Area Power Administration. This measure does not include facilities that are directly funded for operations and maintenance, including recapitalization, by the Bonneville Power Administration.

Expected Performance

The FY 2011 Hydropower Program continues to focus on key performance metrics of increasing peak unit availability and reducing unit forced outages. These key performance metrics have been below industry standards and program targets for the past eleven years due primarily to no new capital investments in modernizations and reliability improvements and flat or declining O&M budgets. In the FY 2011 program, two power plant major rehabilitations are budgeted for in the Construction account; they are John H. Kerr Dam & Reservoir, VA & NC (Replacement) in the amount of \$6.0M and Garrison Dam in the amount of \$11.1M. The John H. Kerr major rehab project is scheduled for completion in this fiscal year. The return of this 7-unit powerhouse with an additional 40 MW capacity increase will improve program reliability and availability marginally. Performance improvements in peak availability and forced outages are expected to show no significant improvements over previous years until new capital investments are made in major rehab projects and these projects completed. If the Corps had been allowed to go forward with major rehabilitation (MR) of power plants for which we have approved MR reports, we would be able to enhance the future reliability of our Ft. Randall, Allatoona, and Ozark plants in the next budget year (in particular, Ozark has been notoriously unreliable for a number of years).

The FY 2011 O&M account continues to provide minimum level funding for critical routine O&M activities to avoid plant closures and maintain safe and reliable plant operations. Major maintenance projects will continue to be deferred until funding is available. FY 2010 was the first

year data was available to measure performance relative to meeting the electric reliability requirements of the National Electric Reliability Corporation (NERC). NERC was given the responsibility by the Federal Energy Regulatory Commission to enforce mandatory electric reliability standard for the Nation’s bulk power system. The Corps’ Hydropower Program takes electric reliability seriously and will voluntarily comply with all NERC reliability standards as a measure of program performance as funds are available to do so.

Revenue generated by the Corps’ Hydropower Program exceeds \$4 billion annually. This revenue stream performance can be increased significantly with prudent investments in clean, renewal hydropower energy.

In FY 2010, Corps hydropower assets generated 23.7 million mwh of renewable energy. This is enough clean energy to avoid about 17 million metric tons of CO2 equivalent greenhouse gases. Given similar water conditions across the USA, hydropower production for FY 2011 will not increase significantly over FY 2010.

High Priority Performance Goal

The measure for the Hydropower HPPG is shown in bold in the table below; the goal is 90 percent peak availability by the end of FY 2011. Regionally, when funding has been made available for major rehabilitations, peak availability has shown improvement; however, total peak availability has decreased over the years due to problems related to aging infrastructure. Additionally, taking equipment out of service for major rehabilitations has resulted in a lowering of peak availability while the work is being accomplished.

Table 9. Hydropower Indicators

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$237	\$299	\$352	\$207	
Percentage of time units are available	85.86%	86.35%	84.80%	85%	
Percentage of time available during periods of peak demand	86.13%	87.83%	86.82%	90%	
Net Generation (millions of kWh)	Note 1			18	
Percentage of time units are out of service due to unplanned outage	5.08%	4.27%	4.29%	4.20%	
Electric reliability standards met	Note 2		85.3%	90%	

Note 1: This measure was added in late FY2010; FY2011 will be the first year to report data.

Note 2: This measure was added during FY2007 and developed during FY2008 and FY2009; FY2010 will be the first year to report data.

Recreation

Objective: To provide justified outdoor recreation opportunities in an effective and efficient manner at all Corps-operated water resources projects.

Objective: To provide continued outdoor recreation opportunities to meet the needs of present and future generations.

Objective: To provide a safe and healthful outdoor recreation environment for Corps' customers.

Funding History: The first row of Table 10 shows the funding for the Recreation business line.

Performance Indicators: The measures listed in Table 10 determine progress in meeting the Corps' recreation efficiency, service, and availability objectives. These indicators are explained below.

- **Total National Economic Development (NED) benefits.** NED¹ benefits are estimated using the unit day-value method which was originally developed by the Water Resources Council.
- **Benefit-to-cost ratio.** This is the ratio of NED benefits to actual expenditures or budget.
- **Cost recovery.** This measures the percentage of total recreation receipts to the recreation budget.
- **Park capacity.** This measures the capacity of facilities to provide recreation opportunities, expressed in millions of days/nights that recreation units were available for use.
- **Number of visitors.** This measures total number of visitors to Corps-managed parks, expressed in millions of people.
- **Visitor health and safety services.** This measure is expressed as a percentage of visitors to Corps-managed recreation areas who reported acceptable service.² Activities that impact this measure (facility cleaning, mowing, visitor assistance, ranger patrols, park hosts, reservation services, and repairs), have been externally validated with visitors, partners, and other stakeholders.
- **Facility service.** The percentage of visitors served at a Corps-managed recreation area with a facility condition score of 4 or better³, who indicate their experience was fair to good. The

¹ NED benefits arising from recreation experiences are measured in terms of willingness to pay for each increment of supply or type of recreation opportunity. The unit-day-value method relies on expert or informed opinion and judgment to approximate the average user's willingness to pay for federal or federally-assisted recreation resources. The unit-day-value is estimated at the park (recreation area) level by evaluating each park according to a set of published criteria. By applying a carefully thought-out and adjusted unit-day-value to estimated use, an approximation can be obtained for use as an estimate of project recreation benefit (i.e., NED benefits = Unit Day Value X Recreation Use in Visitor Days).

² A typical park in peak season for the region provides cleaning five days a week, two to three ranger patrols and visitor contacts daily, contract law enforcement, periodic public safety programs, and ability to correct urgent repairs within one to three days.

³ A facility condition score of 4 means the facility requires no more than routine maintenance (e.g., painting, caulking, asphalt patching, filling cracks) to reduce visitor health and safety risks and environmental degradation.

quality of a visitor's experience and satisfaction with Corps' facilities is directly related to the facility condition.

Expected Performance

Recreation funding in the regular civil works appropriation continues a flat budget and steadily declining acceptable levels of services provided to visitors. This amount provides health and safety services at acceptable levels to 47% of existing visitation.

Funding at this level will result in reduced visitor health and safety services affecting all Corps-managed areas nationwide; services affected include reductions in cleaning of restrooms, shower/toilet buildings; mowing areas around buildings, facilities, sites, beaches, playgrounds; reduced uniformed Corps rangers patrols; decrease in volunteer, contractor or Corps employee staffing a gate on site during peak months of visitation; and reduced ability to make urgent repairs within 1 to 3 days to correct problems that render a site or park unusable or unsuitable for use.

At this level of funding, out of 2,500 Corps-managed parks, 820 parks may be operated at acceptable health and safety services and 995 parks may be operated at acceptable facility condition standards.

Table 10. Recreation Indicators

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$309	\$380	\$557	\$280	
Total NED benefits in millions of dollars	\$1,452	\$1,500	\$1,610	\$1,182	
Benefit-to-cost ratio	4.70	4.30	3.00	4.18	
Cost recovery	16%	15%	8%	16%	
Park capacity in millions of days	74	74	74	74	
Number of visitors in millions of visits	137	134	135	132	
Visitor health and safety services	48%	48%	47%	47%	
Facility service	47%	47%	51%	51%	

Water Storage for Water Supply

Objective: To provide municipal and industrial (M&I) water supply storage in a cost-efficient and an environmentally and socially responsible manner in partnership with nonfederal water management plans, consistent with law and policy.

Funding History: The first row of Table 11 displays funding for water storage for water supply.

Performance Indicator: To assist in gauging progress, the Corps uses measures relating to the acre-feet of water stored and cost-recovery measures. These are shown in Table 11.

- **Acre-feet available.** Of the total acre-feet of water stored in a reservoir, this number represents the total acre-feet available for water supply.
- **Acre-feet under contract.** Of the acre-feet available for water supply, this number represents the total number of acre-feet, for present and future use, under contract with state and local interests.
- **Percentage under contract.** The percentage of the acre-feet of water supply storage space under contract compared to the acre-feet of space available for water storage.
- **Capital cost available for recovery.** The Corps seeks proportional reimbursement of capital costs for that portion of the reservoir allocated for water supply. Cost available for recovery is the total estimated capital cost of water supply allocations.
- **Capital cost recovered.** Capital costs assigned to the water supply storage space that has been, or is, in the process of being recovered through repayment agreements. This indicator was modified for FY 10 to “costs actually recovered” in lieu of the previous “recovered or in the process of being recovered.”
- **Percentage capital cost recovered.** The percentage of capital cost available for recovery compared to cost recovered.
- **Annual principal collected.** The actual payments on principal collected during the year.
- **Annual interest and operation and maintenance costs recovered.** The actual payments of interest and operation and maintenance expense collected during the year.
- **Administrative yearly cost.** This measures the annual cost-to-collect fees and administer the water supply agreements.
- **Administrative yearly cost (input) per dollar collected (output).** This efficiency measure describes the cost-to-provide water storage versus the revenues collected and returned to the U.S. Treasury.

Expected Performance

A continuation of normal billing and collection procedures is expected in FY11. While perhaps a mundane operation, this program is expected to return \$26 million to the U.S. Treasury in the fiscal year at a cost to collect of about \$2 million. The National Portfolio for Reallocations will produce reports on sedimentation, water quality and water management of our reservoir projects as well as continue to provide a current list of projects most promising for reallocation should legislation be provided and approved for alternative funding arrangements for reallocation studies. The study will also provide results at select sites on measures to improve the health of our rivers by changing operations of reservoirs through the Sustainable Rivers Project. The development of the water

supply module of OMBIL will continue to advance, providing a more accurate and timely picture of the Corps of Engineers' municipal and industrial water supply program.

The current funding level provides the minimum amount necessary to continue the water supply program on a caretaker basis. It does not commit the funds required to generate the benefits that could be produced with adequate funding. For example, funds are not available to conduct required sedimentation surveys, yield analysis studies to assess the effect of recent droughts, or conduct studies of water supply reallocation possibilities. These studies would help solve the water supply needs in many communities across the nation, and in the case of reallocations, return even more dollars to the U.S. Treasury over and above dollars expended.

Table 11. Water Storage for Water Supply

	FY 2008	FY 2009	FY 2010	FY 2011	
				Target	Actual
Expenditures in millions of dollars	\$3	\$7	\$6	\$4	
Acre-feet available in millions of acre-feet	9.2	11.1	9.7	9.8	
Acre-feet under contract in millions of acre-feet	8.9	10.5	9.2	9.3	
Percentage under contract	96.7%	94.6%	94.8%	94.9%	
Total capital costs available for recovery in millions of dollars	\$1,285.2	\$1429.0	\$1428	\$1430	
Total capital costs recovered in millions of dollars	\$932.2	\$836.2	\$803	\$843	
Percentage of capital cost recovered	72.2%	56.4%	56.2%	59%	
Annual principal collected in millions of dollars	\$14.6	\$14.7	\$50.1	\$15	
Annual interest and operation and maintenance costs recovered in millions of dollars	\$6.8	\$11.5	\$35.4	\$11	
Administrative yearly cost in millions of dollars	\$1.2	\$1.0	\$2.8	\$2	
Administrative yearly cost per dollar collected	\$0.06	\$0.04	\$0.03	\$0.08	

Strategic Goal 4: Reduce Vulnerabilities and Losses to the Nation and the Army from Natural and Man-Made Disasters, Including Terrorism

The purpose of this goal is to manage the risks associated with all types of hazards and to increase the civil works emergency management responsiveness to disasters in support of federal, state, and local emergency management efforts. Disaster preparedness and response capabilities are not only limited to water-related events, but also draw on the Corps' engineering skills and management capabilities in responding to a broad range of natural disasters and national emergencies. The Corps is mindful that emergency readiness contributes to national security.

Objective: To attain and maintain a high, consistent state of preparedness.

Objective: To provide a rapid, effective, and efficient all-hazards response.

Objective: To ensure effective and efficient long-term recovery operations.

Funding History: The first row of Table 12 indicates funding for emergency preparedness and response and recovery operations.

Performance Indicators: The four primary measures, listed in Table 12, assist in determining progress toward meeting the Corps' emergency management objectives. Indicators are explained below.

- **Planning response team readiness.** The Corps established designated planning and response teams (PRTs) that are organized to provide rapid emergency response within a specific mission area. This measure is calculated as a percentage of time during the fiscal year that PRTs are fully staffed, trained, and ready to deploy.
- **Project inspection performance.** The Corps performs inspections of flood control works operated and maintained by public sponsors to ensure and assess their O&M condition. This measure is determined by the percentage of scheduled inspections completed during the fiscal year.
- **Damaged project restoration.** The Corps repairs flood control projects damaged by floods or storms under authority of P.L. 84-99. This measure is the percentage of projects damaged during a fiscal year and repaired prior to the next flood season.
- **Project condition ratings.** Under the Corps' rehabilitation and inspection program, inspected projects are given condition ratings characterizing their state of maintenance. This measure is the percentage of total projects inspected during the fiscal year that received a rating of at least minimally acceptable.

Expected Performance

Corps Divisions and districts coordinate, plan, and conduct response exercises with key local, state and federal stakeholders/ partners under USACEs' statutory authorities to maintain a consistent preparedness level. Under Public Law 84-99 the Corps conducts flood fighting, rehabilitation and inspection of eligible projects, advance measures with an imminent threat of unusual flooding, and hazard mitigation.

The Corps maintains 43 national planning and response teams. These teams train to deploy into a disaster area and provide assistance for temporary power, temporary housing, debris management, water and ice commodities, temporary roofing and infrastructure assessment.

Table 12 Emergency Preparedness Indicators

	FY 2008 ¹	FY 2009 ¹	FY 2010 ¹	FY 2011	
				Target ²	Actual
Expenditures in millions of dollars	\$847	\$1,405	\$1,515	\$30	
Planning response team readiness	85%	83%	87%	85%	
Project inspection performance	58%	67%	77%	70%	
Damaged project restoration	90%	14%	61%	35%	
Project condition ratings	79%	79%	67%	70%	

Note 1: Funding was provided in supplemental appropriations to repair projects damaged by coastal storm and flooding.

Note 2: The funding target for FY2011 was to fund preparedness activities.