

**DEPARTMENT OF THE ARMY CORPS OF ENGINEERS  
OFFICE OF THE CHIEF OF ENGINEERS**

**DETAILED STATEMENT  
OF  
MAJOR GENERAL ROBERT H. GRIFFIN  
DIRECTOR OF CIVIL WORKS  
ON THE REMAINING ITEMS OF THE FISCAL YEAR 2003  
CIVIL WORKS BUDGET**

**PRESENTED BEFORE THE SUBCOMMITTEE ON  
ENERGY AND WATER DEVELOPMENT  
COMMITTEE ON APPROPRIATIONS  
OF THE HOUSE OF REPRESENTATIVES**

**February 27, 2002**

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**INTRODUCTION**

Mr. Chairman and members of the Subcommittee, I am honored to testify before you as Director of Civil Works.

I would like to note some highlights of the Fiscal Year (FY) 2003 budget for Remaining Items, which include the Army Corps of Engineers (Corps) nationwide programs and activities. These include the General Expenses appropriation, which provides for executive direction and management of the Civil Works program at the Corps Headquarters and the Division Offices.

**REMAINING ITEMS OVERVIEW**

The total for Remaining Items in the budget is \$732.565 million of which \$46.6 million is for General Investigations; \$123.230 million for Construction, General; \$109.735 million for Operation and Maintenance, General; \$151 million for Regulatory Program; \$141 million for Formerly Utilized Sites Remedial Action Program; and \$161 million for General Expenses.

**ACTIVITIES UNDER THE GENERAL INVESTIGATIONS APPROPRIATION**

**SPECIAL STUDIES**

National Shoreline. The budget includes the special study for FY 2003. The National Shoreline study is an interagency effort to determine the extent and cause of shoreline erosion on all the coasts of the United States and to assess the economic and environmental impacts of that

erosion. The study will analyze the appropriate levels of Federal and non-Federal participation and the advisability of using a systems approach to sediment management for linking the management of all projects in the coastal zone so as to conserve and efficiently manage the flow of sediment within littoral systems.

**COORDINATION WITH OTHER FEDERAL AGENCIES, STATES,  
AND NON-FEDERAL INTERESTS**

The budget for Coordination with Other Federal Agencies, States, and Non-Federal Interests is \$10.9 million, a decrease of \$3.3 million from the FY 2002 appropriation of \$14.1 million for these activities. Following is a comparison of the FY 2002 appropriation and the FY 2003 budget for activities under this program.

<u>Activity</u>	<u>FY 2002</u> <u>Appropriation</u>	<u>FY 2003</u> <u>Budget</u>
Planning Assistance to States	6,900,000	6,000,000
Special Investigations	3,790,000	2,200,000
Gulf of Mexico Program	100,000	100,000
Chesapeake Bay Program	100,000	100,000
Pacific Northwest Forest Case Study	100,000	100,000
Interagency Water Resources Development	1,400,000	1,100,000
Interagency and International Support	230,000	150,000
Inventory of Dams	450,000	300,000
National Estuary Program	100,000	100,000
North American Waterfowl Management Plan	100,000	100,000
Estuary Habitat Restoration Program	200,000	100,000
Coordination with Other Water Resources	450,000	300,000
CALFED	100,000	100,000
Lake Tahoe	100,000	100,000

Estuary Programs. The budget is \$100,000 to continue cooperation with Federal and State agencies in the U.S. Environmental Protection Agency's National Estuary Program. In addition, the budget is \$100,000 for the Estuary Habitat Restoration Program. Funds for this initiative would be utilized to support the interagency council established in the Estuary Restoration Act of 2000. The council has responsibilities to develop a national strategy for restoration of estuary habitat and soliciting, reviewing and evaluating project proposals.

Planning Assistance to States. The budget of \$6 million is a major portion of the Coordination with Other Federal Agencies, States, and Non-Federal Interests program. The FY 2003 budget would enable the Corps to provide much needed planning and technical assistance for a variety of water resource efforts to states, territories, and Federally recognized Indian Tribes. The assistance is in the form of 50% Federal, 50% non-Federal cost-shared reconnaissance level studies which provide information and guidance to help the non-Federal sponsors become more active and effective working partners with the Federal government in resolving water resource problems. The studies may address a wide variety of water resource issues including environmental conservation/restoration, wetlands evaluation, flood damage reduction, coastal zone management, and dam safety. In fiscal year 2001, 160 studies were performed for 43 states, as well as seven studies for Federally-recognized Indian tribes.

Special Investigations. Another major portion of the FY 2003 budget is \$2.2 million for Special Investigations. This program provides for the increasing interests in Corps capabilities and the continued growth in requests for investigations of nominal scope. The activities of this program include: special investigations and reports of nominal scope prepared pursuant to Congressional and other requests from outside the Corps of Engineers for information relative to projects or activities which have no funds; review of reports and environmental impact statements of other agencies; and review of applications referred to us by the Federal Energy Regulatory Commission for permits or licenses for non-Federal hydropower developments at, or affecting, Corps water resource projects.

Interagency Water Resources Development. The budget is \$1.1 million to conduct district activities, not otherwise funded, which require coordination effort with non-Federal interests. These activities include items such as meeting with City, County, and State officials to help solve water resources problems or to determine whether Corps programs are available and may be used to address the problems. This budget also provides \$450,000 for two American Heritage River Navigators who are supported by the Corps of Engineers. These River Navigators provide direct support to the Community Partners for the New River, which flows through NC, VA, and WV; and for the Upper Mississippi River above St. Louis, MO.

Gulf of Mexico Program. The budget of \$100,000 allows the Corps to continue involvement in this U.S. Environmental Protection Agency (EPA)-initiated program, which blends programs and resources of Federal, state, and local governments with the resources and commitments of business, industry, citizens groups and academia. The Gulf of Mexico Program is formulating and implementing creative solutions to economic and environmental issues with

Gulf-wide and national implications. Hypoxia/nutrient enrichment and nonindigenous species are focus areas, which are linked to authorized Corps missions in the five-state program area.

Chesapeake Bay Program. The budget of \$100,000 enables the Corps to continue participation in the EPA-initiated interagency program for the protection and restoration of the bay's natural resources. These natural resources have tremendous environmental and economic significance to the northeast region and to the Nation.

Pacific Northwest Forest Case Study. The budget of \$100,000 is for the Corps to continue participation in the interagency program initiated by the White House's Council of Environmental Quality for ecosystem management of the public lands in the Pacific Northwest within the range of the Northern Spotted Owl.

Interagency and International Support. The \$150,000 budget allows the Corps of Engineers to participate with other Federal agencies and international organizations to address problems of national significance to the United States. The Corps of Engineers has widely recognized expertise and experience in water resources, infrastructure planning and development, and environmental protection and restoration. In FY 2002, program funding includes support to the State Department on Middle East and other global water issues, the World Water Council, the Federal Emergency Management Agency and the Environmental Protection Agency on Brownfields.

Inventory of Dams. The \$300,000 budget is for the continued maintenance and publication of the National Dam Inventory. This ongoing inventory maintenance and publishing effort is a coordinated effort involving data for the Federal and non-Federal Dam Safety community in cooperation with the Interagency Committee of Dam Safety. This inventory is now required for use by the Director of Federal Emergency Management Agency (FEMA) and the National Dam Safety Review Board in the allocation of dam safety program assistance funds to the various States.

CALFED. The budget of \$100,000 allows the Corps to continue to play a role in the CALFED Bay-Delta process in FY 2003. The CALFED Bay-Delta Program is a three-phased solution process for the development of a long-term comprehensive plan that will restore ecological health and improve water management for beneficial uses of the Bay-Delta system. This program is a joint effort between local land management agencies, the state of California, and the Federal government.

Lake Tahoe. The budget of \$100,000 is to allow the Corps to continue the coordination efforts to protect the natural, recreational and ecological resources in the Lake Tahoe Region associated with the Presidential Executive Order “Federal Actions in the Lake Tahoe Region”.

The budget is \$300,000 for Coordination with Other Water Resource Agencies, including the Department of Agriculture and Regional Planning Commissions and Committees, and \$100,000 to continue cooperation with Federal and state agencies and non-Federal interests in support of the North America Waterfowl Management Plan administered by the U.S. Fish and Wildlife Service.

### **COLLECTION AND STUDY OF BASIC DATA**

The FY 2003 budget of \$13.25 million for Collection and Study of Basic Data is an decrease of \$3.8 million from the FY 2002 appropriation of \$17.05 million for these activities. Following is a comparison of the FY 2002 appropriation and the FY 2003 budget for activities under this program:

<b><u>Activity</u></b>	<b><u>FY 2002</u></b> <b><u>Appropriation</u></b>	<b><u>FY 2003</u></b> <b><u>Budget</u></b>
Flood Plain Management Services	9,500,000	7,500,000
Stream Gaging (U S Geological Survey)	700,000	500,000
Precipitation Studies (National Weather Service)	400,000	300,000
International Water Studies	500,000	400,000
Hydrologic Studies	500,000	400,000
Scientific and Technical Information Centers	100,000	100,000
Coastal Field Data Collection	3,200,000	2,500,000
Transportation Systems	700,000	500,000
Environmental Data Studies	100,000	100,000
Remote Sensing/Geographic Information System Support	300,000	200,000
Automated Information System Support - -Tri Service CADD/GIS Technology Center	650,000	450,000
Flood Damage Data	400,000	300,000

Flood Plain Management Services. The largest portion of the Collection and Study of Basic Data program FY 2003 budget is \$7.5 million for the Flood Plain Management Services program. This program continues to be one of the most prevalent non-project services that the Corps provides for Federally recognized Indian Tribes, states, and local governments. By working together with state, local, and tribal land management decision makers, we are able to alert them to various flood hazards, promote prudent use of the flood plains, and help mitigate future losses to life and property. The active involvement of land management decision makers is the key to sound flood plain management in the United States. Significant flood events over the past several years have raised public awareness and increased the demand for information and assistance for mitigating flood losses. The funding will provide flood plain management services to state, regional, local governments, Indian Tribes, and other non-Federal public agencies who, in turn, invest their own funds to avoid flood hazards and make good use of the flood plains. This not only mitigates future losses to life and property but also reduces the need for costly Federal flood control works as well as the demand for other Federal, state, and local services such as providing major disaster assistance before, during, and after floods. Under this program, we also participate with the FEMA, the National Weather Service, and local governments in conducting critical pre-disaster hurricane evacuation and preparedness studies for mobilizing local community responsiveness to natural disasters in high hazard coastal areas of states and counties along the Atlantic Ocean and the Gulf of Mexico.

Coastal Field Data Collection. The FY 2003 budget for this activity is \$2.5 million to systematically acquire and assemble long-term baseline data for coastal regions. These data are necessary for adequate assessment of technical, economic, and environmental feasibility for a variety of Corps projects, including projects for coastal navigation, storm damage reduction, and mitigation of harbor entrance impacts on adjacent shores. Cost-effective mission accomplishment requires long-term and system/regional data that encompass winds, waves, currents, water levels, bottom configuration, sediment characteristics, and geomorphology. With 800 navigation projects to maintain and repair (25% are more than 50-years old), the costs attributable to having no data or poor data would be significant. Data to be collected either are unavailable in existing archives, are of uncertain or poor quality, or are too sparsely distributed temporally and/or spatially to have statistical value. The required data are regional in nature and not properly chargeable to authorized projects. It also takes many years of data to establish a statistically significant baseline to use in project studies. The value of program data and project-related data is maximized through the use of Corps-wide standards, routine updating of available data, utilization of a centralized data library on the world wide web, and dissemination over the Internet.

Automated Information System Support - Tri-Service CADD/GIS Technology Center.

The FY 2003 budget of \$450,000 for the Tri-Service CADD/GIS Technology Center represents the Civil Works share of the total \$3.341 million required to operate and maintain this important center of expertise. The bulk of the remainder of the total requirement is provided by the Navy, the Air Force, and from the Marines, in accordance with a 1992 agreement, establishing a Tri-Service center in order to minimize duplication of effort of the services. All phases of Corps work, including planning, real estate, design, construction, operations, maintenance and readiness benefit from CADD/GIS technologies.

Scientific and Technical Information Centers. Public Law 99-802, Federal Technology Transfer Act of 1986, requires technology transfer from Federal agencies to the private sector. The FY 2003 budget will be utilized to acquire, examine, evaluate, summarize, and disseminate newly published scientific and technical information generated within the Corps and other activities within the U.S. and abroad.

Flood Damage Data Collection. The FY 2003 budget includes \$ 300,000 to continue a program to improve the technical accuracy and quality of flood damage data including the relationship of flood characteristics to property damage. This program facilitates the timely collection of data when a damaging event occurs and the development of a national flood damage database to support local, state and Federal studies and research. Additionally, the program currently is developing generic flood damage and property valuation relationships that could be used Corps-wide. This will result in shorter, less-costly flood damage reduction studies.

## **RESEARCH AND DEVELOPMENT**

The FY 2003 budget for Research and Development (R&D) under General Investigations is \$22 million. The Civil Works R&D program is formulated to directly support the established business programs and strategic directions of the Civil Works Program including: Flood Damage Reduction, Inland and Coastal Navigation, Environment Restoration, Hydropower, Emergency Management, Water Supply and Regulatory. The Civil Works R&D requirements are primarily user driven and the effort is essentially a problem-solving process by which the Corps systematically examines new ideas, approaches, and techniques, with a view toward improving the efficiency of its planning, design, construction, operations and maintenance activities.

Results of this R&D effort are directly incorporated into practice within the Civil Works Program through the Civil Works Guidance Maintenance Program involving revisions or additions to Engineer Regulations, Engineer Manuals, Technical Guidance Manuals, Engineer

Technical Letters, or Guide Specifications. Numerous other means of technology transfer are also used such as formal training courses, workshops, INTERNET and technical publications. The Corps Civil Works R&D Program continues to provide practical end products and a high return on investment for the Corps and the Nation.

In order to most effectively use the limited R&D resources and to avoid unnecessary duplication of research effort, the Civil Works R&D Program maintains aggressive external technical exchange and technology transfer programs with other Federal agencies and state and local governments including the TVA, Bureau of Reclamation, Bonneville Power Administration, Western Power Administration, the Soil Conservation Service, EPA, the Fish and Wildlife Service, NOAA, USGS, DOT, the Navy. The Corps also participates extensively with the Transportation Research Board, the Water Science and Technology Board, the National Research Council, the National Oceanographic Partnership Program, and the Federal Acid Mine Drainage Technology Institution in coordinating and leveraging research activities.

The strategic emphases of the proposed FY 2003 GI R&D program include:

- Aquatic Ecosystem Management and Restoration
- Innovative Design and Construction of Navigation Projects
- Regional Sediment Management
- High-Performance Construction Materials & Systems
- Innovative Flood Protection Technologies
- Earthquake Engineering

The Aquatic Ecosystem Management and Restoration Research addresses the Corps' environmental compliance and restoration needs at the watershed level. The objective of this research effort is to develop state-of-the-science, user-oriented methods and procedures to restore and manage natural resources with application toward the total ecosystem at the watershed level. Research is also focused on environmental compliance technologies for a wide range of water resources management needs. The results of this research enable the Corps to meet the legal requirements of various Water Resources Development Acts, the National Environmental Policy Act, the Clean Water Act, and the Endangered Species Act.

The Innovative Design and Construction of Navigation Projects research includes studies to develop innovative construction methods such as float-in, lift-in, and underwater construction techniques for navigation projects. The results of these studies will provide the needed guidance for the implementation of innovative concepts that will result in rapid construction and modernization of navigation projects at a much-reduced cost and with little or no impact to navigation and the environment during construction. Development of cost-reducing design and

construction techniques will permit the construction and rehabilitation of more navigation projects within the funds appropriated from the Inland Waterways Trust Fund, reduce the potential for major disruptions in inland navigation, and decrease operating costs to the inland navigation industry.

Improved regional sediment management at navigation and flood damage reduction projects offers tremendous potential for future project cost reduction and environmental protection. Research in this area is focused on sedimentation prediction and control techniques, optimizing channel depths and dimensions including more cost-effective deep-draft channel design criteria to safely and efficiently accommodate future international shipping requirements, reduced dredging costs, increased navigation channel safety and reliability, and increased options and opportunities for beneficial uses of dredged sediment.

The research on high-performance construction materials and systems will evaluate and develop high-performance materials that will enable the Corps to construct more durable structures with significant reductions in project delivery times and construction costs associated with operation, maintenance, and rehabilitation of the existing Civil Works facilities. The results of this research will furnish the Corps with improved materials and technologies to ensure a continued high level of safety and reliability of Civil Works facilities and more economically design, construct, and rehabilitate Corps' Civil Works projects.

The innovative flood protection research addresses many of the present and emerging challenges for providing adequate flood protection for the Nation. New technologies and innovative application of existing technologies are needed to ensure the Corps is able to meet mission requirements of the future in this vital area. This research focuses on identifying, developing, and fielding innovative technologies for near real time monitoring and evaluation, flood fighting, and other emergency operations needs for levees and related flood protection infrastructure.

The earthquake engineering research program is developing well-verified, practical engineering tools to assess the safety of dams and reservoir control structures (such as intake towers, spillways and gated outlet works). These tools include advanced field-investigation techniques, comprehensive ground motion analysis system that incorporates the latest developments in seismology and geology, physical modeling of the failure processes of the dam-reservoir-foundation system during earthquakes, and guidance on liquefaction at depth beneath large embankment dams. Using the tools developed in this research program, the Corps will realize considerable cost savings on field investigation and remediation costs.

Research and Development Cross-Cut. The conference report, House Report number 102-177, accompanying the FY 1992 Energy and Water Development Appropriations Act stated the conferees' concern with the trend of spreading research related programs throughout several appropriation accounts in the Civil Works budget, and directed the Corps to work with the committees to address this issue. In response to this interest by the committees, the following table has been developed to provide a consolidated display of all Civil Works research and development activities for which there is funding in the FY 2003 budget.

<u>ACCOUNT AND ACTIVITY</u>	<u>FY 2002 APPROPRIATION</u>	<u>FY 2003 BUDGET</u>
<u>GENERAL INVESTIGATIONS</u>		
Research and Development	29,300,000	22,000,000
<u>CONSTRUCTION, GENERAL</u>		
Aquatic Plant Control	4,000,000	3,000,000
Shoreline Erosion Control Development and Demonstration Program	4,100,000 1/	8,000,000
<u>OPERATION &amp; MAINTENANCE, GENERAL</u>		
Coastal Inlet Research	2,750,000	2,750,000
Dredging Operations & Environmental Research	7,000,000	6,755,000
Management Tools for O&M	500,000	0
Aquatic Nuisance Control Research (formerly Zebra Mussel Control)	700,000	725,000
<b>GRAND TOTAL</b>	<b>48,350,000</b>	<b>43,230,000</b>

1/ General Investigations

## **ACTIVITIES UNDER THE CONSTRUCTION, GENERAL APPROPRIATION**

### **CONTINUING AUTHORITIES**

The FY 2003 budget for the nine Continuing Authorities funded under Construction, General is \$78.0 million. This is a decrease of \$35.37 million from the FY 2002 allocation. The budget covers funding of planning, design, and construction to continue ongoing projects that provide solutions to flood control and emergency streambank erosion problems under the Section 205 and Section 14 programs, navigation problems under the Section 107 program, shoreline damage problems under the Section 103 and Section 111 programs, clearing and snagging problems under the Section 208 program, and environmental problems under Section 204, Section 206 and Section 1135. Under our Continuing Authorities Program, projects are accomplished expeditiously and result in a high level of customer satisfaction. Continuing Authorities projects continue to be an important segment of our total water resources infrastructure investment program. No funds are requested for new starts.

### **INLAND WATERWAYS USERS BOARD**

Funds are budgeted for FY 2003 in the amount of \$230,000 for the Inland Waterways Users Board activity. Section 302 of WRDA 86 created this eleven-member advisory board of inland waterway users and shippers to make recommendations to the Secretary of the Army and the Congress regarding construction and rehabilitation priorities and spending levels for commercial waterway improvements. The Board members were initially appointed in late Spring of 1987. The Board has held forty meetings since it was created. The Board's recommendations are a valuable addition to our program and budget development process. We appreciate the contribution of the Board's chairman and its members to the efficient management and modernization of our inland waterways. We believe the Board provides an important advisory function to both the Secretary of the Army and the Congress.

### **SHORELINE EROSION CONTROL DEVELOPMENT AND DEMONSTRATION PROGRAM**

The FY 2003 Budget includes \$8,000,000 to plan, design, construct, and monitor projects to demonstrate and evaluate new shoreline protection technologies. To date, over \$6,000,000 has been used to develop program goals, establish criteria for selecting technologies and techniques to be tested, select sites and initiate construction of the first demonstration site at Cape May Point, New Jersey. The techniques developed under this program are expected to

yield up to \$150,000,000 of savings in future budgets by reducing erosion and/or lengthening the time between renourishments.

### **DAM SAFETY AND SEEPAGE/STABILITY CORRECTION PROGRAM**

Funds are budgeted for FY 2003 in the amount of \$5 million to continue ongoing Dam Safety and Seepage/Stability projects that were approved prior to FY 2003. The Dam Safety and Seepage/Stability Correction Program provides for modification of completed Corps of Engineers dam projects. While no Corps dams are in imminent danger of failure, some may have a higher dam-safety risk than originally anticipated based on new data or the likelihood of extremely large floods and seismic events. Seepage problems at Corp' dams are usually related to increased reservoir levels above the previous pool of record at a project. Static instability generally involves movement that starts at a slow rate and could result in massive displacement of large volumes of material if not corrected. Dam modification work is proceeding under existing authorities on projects where cost-effective risk reduction measures have been identified and approved.

### **AQUATIC PLANT CONTROL PROGRAM**

The FY 2003 budget includes funds in the amount of \$3 million for the Aquatic Plant Control Program authorized by Section 104 of the Rivers and Harbors Act of 1958, as amended. This is a decrease of \$1 million from the FY 2002 allocation. These funds will be used to continue research efforts for aquatic plant control technologies to support operation and maintenance of Corps Water Resources projects. Primary research efforts are focused on the non-indigenous submersed species, hydrilla and Eurasian watermilfoil, with emphasis on development of biological control agents.

### **DREDGED MATERIAL DISPOSAL FACILITIES PROGRAM**

Funds in the amount of \$9 million are budgeted for FY 2003 for ongoing projects in the Dredged Material Disposal Facilities Program. This is a increase of \$4 million from the FY 2002 allocation. Section 101 of WRDA 86, as amended by Section 201 of WRDA 96, established consistent cost sharing for construction of dredged material disposal facilities associated with Federal navigation projects, including disposal facilities for Federal project maintenance. These funds will be used for the Federal share of construction of applicable dredged material disposal facilities required for maintenance of existing projects or fee payments to private entities for the use of privately owned dredged material disposal facilities if such a facility is the least cost alternative to dispose of dredged material. All Federal costs for dredged

material disposal facilities associated with project maintenance will be financed from the Harbor Maintenance Trust Fund.

## **EMPLOYEES' COMPENSATION**

The FY 2003 budget includes \$20.0 million for transfer to the Department of Labor to repay the Employees' Compensation Fund for costs charged during the period July 1, 2000 through June 30, 2001 and for investigation of fraudulent claims for workers compensation benefits. This is the same as the FY 2002 allocation. The transfer to the Department of Labor is for payment of benefits and claims due to injury or death of persons under the jurisdiction of the Corps of Engineers civil functions.

## **ACTIVITIES UNDER THE OPERATION AND MAINTENANCE, GENERAL (O&M)** **APPROPRIATION**

### **AQUATIC NUISANCE CONTROL RESEARCH** (Formerly Zebra Mussel Research Program)

The Corps FY 2003 Operation and Maintenance, General, appropriation budget includes \$725,000 for the Aquatic Nuisance Control Research Program which is a redefinition of the previously funded Zebra Mussel Research Program (ZMRP). The program will now address all invasive species except for aquatic plants. Invasive species cost the public over \$11 billion annually. Authorized by the Nonindigenous Aquatic Nuisance Prevention and Control Act of 1990 (PL 101-646) this effort includes the only Federally funded R&D program directed at control of zebra mussels and their effects on public facilities. The development of strategies to apply control methods involves engineering design, operations, and maintenance of facilities and structures. Control strategies are being developed for (a) navigation structures; (b) hydropower and other utilities; (c) vessels and dredges; and (d) water treatment, irrigation, and other control structures.

Proposed operations in FY 2003 include expansion of as many as possible of the technologies developed under the ZMRP to address all invasive species. Methods including acoustical, UV light, pulse power plasma sparkers, hydraulic barriers, and shape burst thermal treatment will be applied in barrier configurations in channels and on tow vessels to demonstrate effective barriers and removal from vessel surfaces. State of the art systems will be used to identify range-limiting factors for zebra mussels at both the micro- and macro-scales. These studies will allow planners to predict precisely the geographical range of zebra mussel's colonization, which will mean a tremendous savings in resources by directing research and

control efforts only to those areas susceptible to infestation. In cooperation with state and federal agencies, a comprehensive database will be developed on zebra mussel and other aquatic densities and growth, water quality, and other pertinent habitat attributes.

Molluscivores (fish that consume mussels) have the potential to effectively control invasive mollusks such as Corbicula and zebra mussels. Statistical evaluations will be made among these variables to construct models predicting the effects of molluscivores on zebra mussel infestations and subsequent changes in habitat quality. These models will aid in allocation of control efforts. Secondary benefits will include information on population dynamics of native molluscivores in waterbodies infested by zebra mussels. This study will directly contribute to formulation of integrated control strategies to reduce or eliminate zebra mussels, and indicate the potential for long-term biological control by native fishes. Risk assessments will be conducted to determine potential impact to facilities and associated natural resources by new invading species. This information will allow the Corps to focus efforts on species and issues that present the greatest risk to the inland waterways infrastructure and natural resources.

### **AUTOMATED BUDGET SYSTEM**

The Civil Works Operation and Maintenance Automated Budget System (ABS), is an automated system used to enable Districts and Divisions to prepare, review and submit their Operations And Maintenance programs consistent with policy guidelines and priorities. The program is continuously evaluated for effectiveness to identify areas that require change in order to meet the needs of the overall Civil Works Operations and Maintenance program. It provides extraction of standard reports to support Division and Headquarters review and development of the Civil Works O&M program recommendation. ABS reports provide cost breakouts by business process, benefit codes, states, field units, navigation fee codes, joint cost percentages and numerous other groupings to support analysis, distribution, updates and performance monitoring. This system is available to all managers at all Corps of Engineer levels who have Operation and Maintenance management responsibilities. The FY 2003 Budget includes \$285,000 for this item.

### **COASTAL INLETS RESEARCH PROGRAM**

The FY 2003 budget includes \$2.75 million to fund the Coastal Inlets Research Program to increase Corps capabilities to cost-effectively design and maintain the over 100 inlet projects, which comprise the bulk of coastal O&M expenditures. Because of their complex nature, the behavior of inlets is poorly understood. This has resulted in the Corps spending a large portion

of its O&M allocations to maintain inlet projects. The Coastal Inlets Research Program studies functional aspects of inlets such as their short- and long-term behavior and their response to waves, tides, currents, and engineering modifications, given their regional geologic and oceanographic setting. As inlet behavior and the consequences of navigation projects are becoming better understood, sophisticated tools for management of inlets for navigation projects, such as models and empirical relationships, are becoming available. These new tools are leading to more efficient, cost-effective designs that have been shown to reduce O&M requirements and, consequently, costs.

With our FY 2003 allocations for this program we plan to: (a) focus Coastal Inlets Research Program R&D on deep-draft channels in support of Corps projects nation-wide with aim of developing tools for predicting dredging requirements and reducing associated O&M costs (b) validate the Inlet Modeling System, scour model, and morphology change models at deep-draft channels, including Cape Fear, NC; Humboldt Bay Entrance, CA; and Grays Harbor, WA (c) perform physical modeling studies on innovative jetty design to reduce dredging costs and improve navigation safety at deep-draft entrance channels (d) extend the long-term morphology modeling system to include the adjacent beaches, navigation channel, and flood shoal together with the ebb shoal, and validate and release the model to the public (e) acquire field data at inlet jetties to understand the beach and jetty interaction through rip currents and (f) conduct comprehensive technology-transfer workshops on all coasts of the U.S. to provide training to Corps personnel, private industry, and universities on techniques and models developed in the Coastal Inlets Research Program.

### **CULTURAL RESOURCES (NAGPRA/CURATION)**

The FY 2003 budget includes \$1.545 million to fund the Cultural Resources (NAGPRA/Curation) Program. Enacted on 16 November 1990, the Native American Graves Protection and Repatriation Act (NAGPRA) is a complex act that addresses the recovery, treatment, and repatriation of Native American and Native Hawaiian cultural items by Federal agencies and museums. As defined by the Act, cultural items are human remains, associated funerary objects, unassociated funerary objects, sacred objects, and objects of cultural patrimony. In FY 1994, the Corps of Engineers began the process of inventorying human remains and associated funerary objects and completing summaries as mandated by the legislation. In addition, the Corps is responsible for curation of cultural resource materials collected from its flood control projects. These collections are extensive and are located at a variety of curation facilities across the Nation. The costs of the program are to accomplish NAGPRA work and to fund centralized curation support to the districts. Curation of these materials, which have the

largest volume among all federal agencies responsible for this activity, is required by a number of public laws.

In FY 2003 the Corps will continue the process of inventorying Native American and Native Hawaiian human remains and associated funerary objects and complete summaries of unassociated funerary objects, sacred objects, and objects of cultural patrimony as mandated by the legislation. Information will be made available to interested individuals and groups through notices in the Federal Register. Districts will continue to be engaged in formal consultation with tribes and organizations for the legislated purpose of repatriating cultural objects for which there are legitimate claims. We will continue in the pivotal role of assisting in the development and implementation of an agency-wide, long-term plan for the curation of Corps archeological collections (heritage assets). We will continue to fulfill our charter activities to include an inventory of all DoD and Corps heritage assets and participate in the development of standards and guidelines for archeological collection rehabilitation. Work will continue on the development and implementation of final guidelines and procedures for field collection of archeological materials and the long-term treatment of those collections. Finally, leadership will be provided in the development of a training curriculum on the treatment of heritage assets and working in consultation with all stakeholders, take initial steps to make this training available to appropriate managers and decision makers.

### **DREDGE WHEELER READY RESERVE**

The FY 2003 budget includes \$8 million to cover the cost of keeping the dredge WHEELER fully operational in FY 2003 while in Ready Reserve status in accordance with Section 237 of the Water Resources Development Act of 1996 (WRDA 96). Section 237 contains a provision requiring the Corps hopper dredge to be placed in a ready reserve status. The section requires that no individual project funds may be used to fund the dredge in its ready reserve status unless the dredge is specifically used in conjunction with a project. In FY 1998, the WHEELER was placed in a ready reserve status as required by WRDA 96. The hopper dredge WHEELER, in a ready reserve status, is required to be able to perform emergency dredging work, but may not be assigned any scheduled hopper dredging work. The dredge may be placed in an active status in order to perform work that private industry fails to submit a responsive or responsible bid for advertised dredging, or where industry has failed to perform under an existing contract. In light of this criteria, the WHEELER is being kept at the dock, with sufficient crew to respond to any unforeseen requirement within 72 hours, and be able to work for approximately 3 weeks. The dredge is being maintained in a fully operational state and periodically will perform routine dredging operations to test equipment and keep the crew trained and prepared. In FY 1998, FY 1999 and FY 2000, the WHEELER was called out of

ready reserve status to perform urgent dredging to assist industry dredges in restoring navigation channels and waterways.

## **DREDGING DATA AND LOCK PERFORMANCE MONITORING SYSTEM**

The Dredging Data and Lock Performance Monitoring System budget of \$1.18 million supports a continuing nationwide collection and analysis program of dredging data essential for the Corps efficient and effective management of the nation's deep and shallow draft navigation projects. These efforts are necessary to provide data for efficient management of Congressionally authorized navigation projects, as well as to respond to specific public laws, including P.L. 96-269 (Minimum Dredge Fleet) and P.L. 100-656 (Small Business Set-Aside).

Data include dredging costs and quantities, equipment used, and disposal site documentation. This data facilitates nationwide and regional analysis and management for Corps performed and contracted dredging for both channel deepening and maintenance categories of work. The program also supports assessments on the technological changes of vessels within the world fleet, which is necessary for estimating the nation's future maintenance dredging requirements. Up-to-date information on world fleets, commodity flows, vessel routing through Corps channels and assessment of underkeel clearances all contribute to the identification of U.S. channels with the greatest safety and piloting problems. The lock monitoring provides managers at 230 lock sites and their regional and national offices with nationally consistent operational and management data. Collectively, these data systems support continuing evaluation of local conditions and performance measures throughout the navigation system and, in-turn, facilitate nationwide control and critical management decisions. These data are critical for effectively monitoring and executing the overall navigation program.

## **DREDGING OPERATIONS AND ENVIRONMENTAL RESEARCH PROGRAM (DOER)**

The FY 2003 budget includes \$6.755 million for the Dredging Operations and Environmental Research Program (DOER). The DOER program is an extremely important effort that combines engineering, operational and environmental components of waterway management to address issues impacting our ability to maintain a safe, reliable, environmentally sustainable, and economically efficient navigation system. The program has validated the nearshore placement of mixed grain sediments that coupled with the recently developed knowledge of chronic turbidity on fishery resources will allow for environmentally acceptable aquatic disposal of dredged material at minimal cost and positive impacts. Using DOER research results and in conjunction with the National Research Council, guidance was prepared to help lessen the negative impacts

of environmental windows (seasonal restrictions) through a thorough knowledge of various impact categories and use of operational guidelines. Guidance is being developed to fully assess bioremediation, solids separation and phytoreclamation of contaminated dredged material in traditional confined disposal facilities for beneficial reuse of the material. A PC-based human health and ecological risk assessment program was completed that provides a quick and accurate decision support tool for evaluating dredged material disposal and management alternatives. Innovative dredging and placement technology and operations and management techniques that will reduce cost, take less time, and are environmentally friendly (e.g., silt wing, super dust pan dredges and telescoping wiers) are being demonstrated at typical navigation projects.

Research continues in six areas to address the navigation dredging and environmental protection mission as follows: (a) Contaminated Sediment Characterization, Management and Treatment (reduce costs, increase options), (b) Dredge Instrumentation to Improve Efficiency (includes contract and environmental compliance), (c) Nearshore/Aquatic Placement of Dredged Material (in coastal, estuarine, and river waters), (d) Environmental Windows for Dredging Operations (assure environmental sensitivity as well as realistic controls based on facts), (e) Cost-effective Application of Innovative Technologies (includes contracting and other dredging activities), and (f) Environmental Risk Assessment and Management for Dredged Sediments (factors economics, engineering, human health, and ecological and comparative risk)

In FY 2003, we plan to produce guidelines for the environmentally acceptable methods for aquatic placement of mixed (fine and coarse grained) sediments along with a database of dredged material geotechnical properties that can be used for modeling and related design. Significantly improved models for accurately predicting sediment resuspension at different dredges will be completed and will be an integral component of the Corps' dredged material management and regulatory program. The program will complete research on field validation of chronic/sublethal testing, Combined Disposal Facility (CDF) effluent treatment, manufactured soil, biomarker analyses, runoff test, environmental effects in CDF's and biomarker analyses leading to more efficient and acceptable dredged material management. Environmental windows research will emphasize collaborative interagency studies of physical monitoring of suspended and settled sediments and associated effects on sensitive biota in support of science-based determination of windows for effective protection while maintaining necessary navigation in an economically efficient manner. We will complete risk assessment PC based decision support tools for all environments for rapid automated field use and complete theoretical bioaccumulation potential uncertainty analyses. These will be an integral component of the Corps' operations and regulatory program as well as in negotiation with State environmental agencies. Innovative (off the shelf) technologies that can be applied to Corps navigation projects will be pursued from all quarters. Alternatives to traditional dredging will be evaluated to

determine the feasibility of extending periods between required channel maintenance. Innovative dredging and placement equipment, operations, and management techniques that will reduce costs, take less time, and are environmentally friendly will be high priorities. Lastly, instrumentation research will be initiated on developing improved sensors to measure dredged material loads removed by hopper dredges, and silent inspection for scows and barges will be completed. These will be routinely available cost reducing components of the navigation dredging program.

### **DREDGING OPERATIONS TECHNICAL SUPPORT (DOTS) PROGRAM**

The FY 2003 budget includes \$1.545 million for continuation of the Dredging Operations Technical Support (DOTS) Program. The DOTS program fosters the one-door-to-the-Corps concept through providing comprehensive and interdisciplinary technology transfer, technology application, and necessary engineering, operational and environmental training of all stakeholders for all Corps navigation dredging projects. DOTS houses the Corps' technology and information database and is managed from a centralized program to maximize cost effectiveness and implement National policies, laws, and complex technical requirements on a consistent basis. The DOTS is fully accessible through the Internet and has received thousands of visits from navigation stakeholders. The DOTS Program is a storehouse focusing on application of state-of-the-art technology and research results to field problems. Emerging scientific approaches sometimes cause uncertainty in administration of the Corps navigation dredging program. As such, DOTS provides a consistent technology base and ready response, and training on technical issues through a readily accessible technology transfer capability and generic technology application to other projects with similar problems. Short-term work efforts to solve generic Corps-wide technical problems for maintaining navigable waterways are major features of the DOTS Program. Technology transfer of new and emerging techniques for application at Corps and stakeholder navigation maintenance projects is an important DOTS activity. In response to new research results and continuing staff reductions the DOTS program will continue to expand to provide technology transfer to all O&M navigation projects and be fully responsive to stakeholder needs.

Special emphasis is placed on transfer of technology developed by the Corps and others to include proven international technology that deal with maintenance and management of navigation structures and navigable waterways. Typical technology transfer and training includes management of contaminated dredged material, application of innovative risk-based technologies to contaminated dredged material, maintenance of coastal inlets and adjacent shorelines, shoreline stabilization and river training activities, assessment and management protocols for beneficial uses of dredged material, channel realignments, protection of endangered

species, equipment selection, rational application of dredging windows, lock and dam maintenance needs, channel and harbor maintenance activities and ship simulation activities.

A key feature of the program includes effective annual face-to-face and internet on-line training of Corps staff, navigation stakeholders, and others who have regulatory authority over Corps navigation maintenance activities on the latest environmental and engineering techniques associated with maintaining navigable waterways. The program also supports joint Corps and USEPA activities dealing with environmental aspects of the national navigation program.

### **EARTHQUAKE HAZARDS REDUCTION PROGRAM FOR BUILDINGS AND LIFELINES**

The Earthquake Hazards Reduction Program is included in the FY 2003 budget in the amount of \$300,000 to respond to the requirements of Public Law 101-614, National Earthquake Hazards Reduction Program (NEHRP) and Executive Order (EO) 12941, Seismic Safety of Existing Federal Buildings. The objective of PL 101-614 is to establish and initiate for buildings and lifelines a systematic approach to reducing loss of life, injuries, and economic costs resulting from earthquakes in the United States. The EO directs all Federal departments and agencies to develop an inventory of their owned and leased buildings and an estimate of the cost of mitigating unacceptable seismic risks in their buildings. Lifelines are defined as public works and utility systems.

We are legally responsible to develop a plan to mitigate these vulnerabilities. In addition, FEMA is pursuing the possibility of requiring agencies to develop mitigation plans for their deficient buildings. The funds requested will be used to help finalize the details of the Corps mitigation plan and provide the tools for implementation of the program, provide assistance to districts in the development of mitigation concepts and designs, provide support to Corps Headquarters in oversight and management of the mitigation program, provide technical support to Corps HQ, maintain technical seismic expertise, develop guidance for additional lifeline systems not previously covered in commercially available standards or existing Corps guidance, develop guidance for operations personnel, develop a mitigation plan for the Corps lifelines, and update and maintain the database. The development and updating of guidance for the seismic evaluation and risk mitigation of lifeline facilities will continue as well.

### **FACILITY PROTECTION – HOMELAND DEFENSE**

On 11 September 2001, our nation suffered a loss of unimaginable proportions, with terror attacks in New York, Washington and the skies over rural Pennsylvania. These events

have emphasized the resolve of terrorists to weaken our nation by inflicting massive casualties and destroying vital elements of our infrastructure. The Corps manages a major portion of this infrastructure, including 75 hydroelectric power projects, 456 major lakes and reservoirs with 385 million annual visitors, 237 locks, 4,000 recreation areas, 12 million acres of public land, 25,000 miles of commercially navigational channels, 926 shallow and deep draft harbors, and \$1.2 billion in research and development facilities.

The Corps currently is conducting detailed assessments of over 300 facilities identified as “critical.” The evaluations include assessing the risks and alternatives and recommending protective procedures from acts of terrorism at each of our facilities. In the near future, the Corps will conduct an operations project workshop involving team members familiar with security, operations and design of our projects. Vulnerabilities will be explored along with potential high threat targets, risks, short term improvements, long term project design changes, and changes in operational procedures.

The Corps is undertaking other measures as well. Locking procedures can be put in place immediately for locking barges carrying toxic or hazardous materials. In cooperation with the U.S. Coast Guard, procedures will be implemented to track these barges along the waterway. Studies will be undertaken to determine effective siting, acquisition and installation of sensors and training of personnel in awareness and detection. Coordination with state and local water treatment operations agencies, and other agencies involved with potential usage of Corps facilities will be required.

Protection of the Corps critical infrastructure incorporates the elements of detection, protection, and response. Detection includes increased surveillance and awareness and a crime watch program. Protection entails immediate protection measures, screening to prioritize facilities, and detailed assessments at over 300 Corps dams identified as medium to high consequence. Response involves local law enforcement support and local guard forces.

The FY 2002 Emergency Supplemental provided \$139 million for protection of critical Civil Works infrastructure. Of this amount, \$133 million will fund 24-hour guards, equipment, and security infrastructure improvements. The remaining \$6 million will fund the vulnerability assessments to identify the need for any additional security measures at critical facilities in light of the new threat environment. The Administration will evaluate the need for additional security measures based on the conclusions of the facility vulnerability assessments.

The FY 2003 budget includes \$64 million to continue the Corps of Engineers Civil Works Homeland Defense -- Facility Protection effort, including continuation of existing

security levels and maintaining guard positions and electronic monitoring systems at critical facilities.

### **GREAT LAKES SEDIMENT TRANSPORT MODELING**

The Great Lakes Sediment Transport Modeling Program is included in the FY 2003 budget in the amount of \$1.0 million. Section 516(e) of the Water Resources Development Act of 1996 authorizes development of sediment transport models for tributaries to the Great Lakes that discharge to Federal navigation channels or Areas of Concern (AOCs). The Great Lakes Sediment Transport Modeling program is intended to use sediment transport models to target areas for preventive measures to control sediment movement to navigation projects and AOCs. The program strategy includes four major activities: (a) a technical workshop to assess what models already exist, the types of questions these models can address, and the data requirements and costs for sediment transport model application; (b) a user's workshop to bring together interests who might use the sediment transport models for management of sediments, soil/water resources, Remedial Action Plans, or other applications; (c) selection of tributaries for model development; and (d) public outreach.

Continuing through Fiscal Year 2003, the value of this program will grow as model development becomes more integrated with watershed planning, total maximum daily load evaluations and Lakewide Management Plans. Models initiated in Fiscal Year 2002 will be completed and new applications initiated in areas such as the Genesee River, New York; St. Joseph River, Minnesota; East River, Wisconsin; and Sanduske River, Ohio.

### **HARBOR MAINTENANCE FEE DATA COLLECTION**

Public Law 103-182 authorizes up to \$5 million to be used annually for the administration of the Harbor Maintenance Trust Fund. For FY 2003, the U.S. Customs Service is budgeting \$3 million to support its Harbor Maintenance fee collection activities. The Corps FY 2003 budget includes \$675,000 for this activity. The Corps is required to collect data on domestic and foreign shippers of waterborne commerce subject to the Harbor Maintenance Tax (HMT) and provide it to Customs for enforcement. Analysis of HMT revenues and transfers is required to validate the adequacy of the HMTF in light of the uncertainty over the legal and international challenges to the HMT, and to document the operation of the trust fund in the *Annual Report to Congress*. Analysis of waterborne commerce shipments and vessel movement data is also needed to respond to legal questions to the HMT; to analyze alternative funding options; and to assess the economic and competitiveness impacts of other potential funding sources. Therefore the Corps requires a portion of the administrative funding. The recent

transfer of the Foreign Waterborne Transportation Statistics Program to the Corps requires the data processing system to be expanded to include validation of users engaged in foreign trade, in addition to domestic users. The budgeted amount will be needed in FY 2003 to operate and enhance the system to analyze, enforce, collect and validate harbor usage information required by the Customs Service for auditing HMT collections.

## **INLAND WATERWAY NAVIGATION CHARTS**

In 1994, a barge on the inland water struck a bridge pier in poor visibility caused an AMTRAK derailment accident near Mobile, Alabama. Consequently, the National Transportation Safety Board recommended that the Chief of Engineers begin to promote use of electronic charts for safety of navigation on inland waterways. The first part of that recommendation was to extend the coastal Differential Global Positioning System (DGPS) into the inland waterways. That work is now about 90 percent complete. The second part is this effort to provide accurate and current electronic navigation chart (ENC) data necessary to allow the commercial system to be used to improve safety and efficiency. The American Waterway Operators have also stated a need for consistent Corps channel data for inland waterway electronic charts, and the recent Marine Transportation System study recommended that electronic chart coverage be extended into inland waterways and the addition of hydrographic survey information. National Oceanographic Atmospheric Administration (NOAA) is also developing ENC products for their coastal charts, which require use of source data – including Corps channel information. The Water Resources Development Act, 2000, Section 558, requires Corps of Engineers districts to provide digital hydrographic survey data to the NOAA in an agreed upon format not later than 60 days after completion of a survey. The U.S. Coast Guard also has plans for implementation of vessel traffic systems (VTS) in New Orleans and other areas and merging of its Aids to Navigation into the ENC datasets provided by other federal agencies such as the Corps and NOAA is necessary. VTS data could be extremely useful to vessels using the waterway, although an electronic chart is needed for display of the information.

This effort provides ENC for all inland waterways and other federal navigation channels maintained by the Corps of Engineers to be used by commercial Electronic Chart Systems (ECS), which, when combined with the existing DGPS, will improve the safety and efficiency of marine navigation in both inland and coastal waterways of the United States. On inland waterways, the Corps will collect more accurate survey and mapping data than is currently on its paper charts. Accuracies of about 2 meters are necessary to match the positional accuracy of the DGPS signal, which when combined in the commercial ECS will greatly improve the safety and efficiency of navigation. This will allow safe navigation through bridge openings during fog and other bad weather conditions as well as during heavy traffic situations.

The Corps will also establish a common format and content for these charts. This format will closely follow commercial international standards for navigation charts, and will be closely coordinated with the U.S. Coast Guard and NOAA. The Corps will also establish a common production and dissemination process among districts and divisions to ensure consistent quality and availability across the inland system. The Corps will seek evaluation and feedback from navigation users and ECS vendors to ensure maximum benefit of their ENC data. In coastal waterways, the Corps will convert its highly accurate digital survey and engineering data and related information that it uses for channel design, construction and maintenance operations to adhere to international chart standards, and will seek to supplement or enhance available NOAA ENCs. The resulting inland and coastal ENS data will be available to the public through internet access, or other hard media if required. Highly accurate information for construction and maintenance of U.S. navigation channels is routinely collected by the Corps of Engineers, but is not easily available for vessel navigation. Such digital survey and engineering information could greatly benefit both the safety and efficiency of navigation, if the data were structured for electronic chart applications and supplemented with other data. The FY 2003 Budget includes \$4,120,000 for Inland Waterway Navigation Charting.

### **MONITORING OF COMPLETED NAVIGATION PROJECTS**

The FY 2003 budget includes \$1.750 million for the Monitoring of Completed Navigation Projects (MCNP). This continuing program monitors project performance, evaluates the performance against pre-construction projections, and transfers the lessons learned into guidance for Districts. Sediment transport patterns, water depths, currents, waves, flushing characteristics, tidal stages, and other hydrodynamic phenomena together with associated environmental impacts are changed by the construction of navigation projects. Information gained from monitoring navigation projects, including the magnitude and rate of these changes, is required to verify design expectations, determine benefits, and evaluate operational and maintenance efficiencies. Information collected from monitored navigation projects will be used by the local Districts to improve project performance. Additionally, this information will be collected and analyzed on a national basis to document successful designs, disseminate lessons learned on projects with problems, and provide upgraded field guidance that will help reduce life-cycle costs on a national scale.

In FY 2003, additional Coastal and Hydraulic Engineering Technical Notes will be published and disseminated to the field immediately with improved/corrected design guidance. Technical Reports regarding findings and conclusions of periodic inspections of coastal structures previously monitored by this program will be published. The periodic data sets are

used to improve understanding in the design, construction, and maintenance of both existing and future structural projects, and will help avoid past design deficiencies that failed and/or resulted in high maintenance projects. A technical report of a unique (all-concrete armor unit) breakwater protecting Ofu Harbor, American Samoa, will be completed. Monitoring of Tedious Creek Harbor, MD, will be continued to validate expected hydrodynamic, sedimentation, structural, environmental, and geotechnical conditions at the site. Monitoring of the Tom Beville Lock and Dam, AL, will continue to evaluate river flows in the upper lock approach and alternatives that may alleviate adverse cross-current conditions. Monitoring of upper Mississippi River training structures will continue to study optimal riverine hydrodynamics and sediment transport processes for minimizing dredging. In addition, monitoring of Aguadilla Bay Harbor, Puerto Rico, will continue to study coastal hydrodynamics, sediment transport, and structural conditions at the site. Monitoring of additional navigation projects will be initiated. Included is monitoring of bendway weirs at the Greenville River Bridge reach of the Mississippi River to determine their navigation and structural effectiveness. Ship motion data obtained for vessels in existing and improved reaches of the Houston Ship Channel will be analyzed and used to validate/enhance ship simulation models. Finally, monitoring will be initiated for “pocket wave absorbers” used to reduce wave action in vertical, parallel-wall harbor entrances and mooring areas.

#### **NATIONAL DAM SAFETY PROGRAM (NDSP)**

The National Dam Safety Program Act (Public Law 92-367 as amended) designates FEMA as lead agency in all efforts to enhance national dam safety. The National Dam Safety Program is coordinated through the Interagency Committee of Dam Safety (ICODS). The Chief, Engineering Division, Directorate of Civil Works, represents the Department of Defense as a member of ICODS. The Corps and FEMA signed a Memorandum of Understanding for the purpose of establishing responsibilities for management and administration assistance in the implementation of the National Dam Safety Program. FEMA acting through ICODS will provide support in development of Federal guidelines for dam safety, promotion of public awareness programs, publications, training materials, the National Performance of Dams Program, and workshops. The budget includes \$45,000 to continue this participation in FY 2003.

#### **NATIONAL DAM SECURITY PROGRAM**

The budget includes \$30,000 for the National Dam Security program in FY 2003. The Interagency Committee on Dam Safety (ICODS) has recognized terrorism as one of the major threats to dams in the United States. Of all the agency members of ICODS, the Department of Defense acting through the Corps has the most unique and in depth knowledge in the area of

antiterrorism program development and execution. This program uses the Army's experience in antiterrorism planning and building design as the basis for developing a program for safeguarding Corps dams and for export to the other Federal agencies through ICODS. Training under this program is designed for the dam operator and field manager in order to improve their awareness of the potential threat and to establish lines of communications to minimize damage if and when a threat is received. The program also provides for the exchange of information on threats received and the establishment of a database to review trends in the pattern of threats. The Corps and other Federal agencies established a task group to study the extent of the problem of internal terrorism against dams and other natural resource facilities and to determine the proper level of security awareness required for these facilities.

### **NATIONAL EMERGENCY PREPAREDNESS PROGRAM (NEPP)**

The FY 2003 budget of \$4.120 million will enable the Corps of Engineers to be prepared to accomplish its continuity of operations and continuity of government responsibilities during national/regional crises. This entails support of civil government through coordinated execution of federal agency plans and the planning/conducting of exercises to test readiness to provide such support. This includes responsibility for development of comprehensive national level preparedness plans and guidance for response to all regional/national emergencies, whether caused by natural phenomena or acts of man, plans for response(s) to acts of terrorism, and the local preparedness necessary to support Corps continuity of operations. The Corps provides engineering and construction support to state and local governments in response to catastrophic natural/technological disasters. Rapid response to disasters of a regional/national magnitude requires that extensive pre-emergency planning and preparedness activities be conducted to assure the availability of a work force capable of shifting from routine missions to crisis operations and the organizational command and control structure(s) necessary to provide a coordinated and comprehensive response in the critical early stages of a catastrophic disaster.

This program provides the activities necessary to prepare for response to catastrophic natural and technological disasters requiring major Federal support of state and local governments overwhelmed by a disaster event, and for national level emergency water planning. The preparation requires the development of plans, training of employees, conducting of training exercises, including support to Federal Emergency Management Agency (FEMA) exercises, and coordination within DOD and with other Federal agencies and state and local governments. Unlike the Corps' Civil Works programs related to individual project planning, development and operations and maintenance, the NEPP requires the development of an integrated command planning and response capability. Corps divisions have a key role in the planning, coordination and operational control of multi-district response(s) and the integrated preparedness effort

required for accomplishing this response. Preparation also includes the Headquarters sponsored Corps-wide programs necessary to provide the capabilities and operational command and control required by Corps field commands in order to accomplish their NEPP responsibilities, both routinely and in specific emergency response situations.

The FY 2003 program will provide for continuing the implementation of the National Emergency Preparedness Program. Lessons learned from events such as the Midwest Floods of 1993, Hurricanes Hugo, Andrew and Iniki, the Loma Prieta and Northridge earthquakes and the evolving New Madrid earthquake scenario, clearly indicate that the Federal Response Plan, while a solid system, does not contain enough detail to provide for a response to catastrophic disasters that is sufficiently timely or comprehensive. To overcome this, the Corps initiated a program that uses the deliberate planning process to develop scenario specific catastrophic disaster plans. This will result in more detailed planning and should provide for a more comprehensive response to national catastrophic disasters. More extensive coordination with Federal, state and local entities will be incorporated into plan development. Specific plans for response to 7 different earthquake and hurricane events, to include the New Madrid Earthquake, are currently being developed. Exercising and refining plans and development of additional plans will be the focus during FY 2003. We will continue the process of catastrophic disaster planning and exercising to enable the Corps to rapidly respond to a broad spectrum of emergencies, with emphasis on natural disaster events that have national implications.

#### **NATIONAL LEWIS AND CLARK COMMEMORATION COORDINATOR**

With a Fiscal Year 2003 Budget of \$310,000, we plan to continue coordination of all Corps of Engineer activities relating to Lewis and Clark Commemoration. The bicentennial commemoration of the Lewis and Clark Expedition will begin in 2003 and will continue through 2006. A National Bicentennial Council has been established, and Federal, State, Tribal, and local governmental entities are planning the roles they will play in the commemoration. By virtue of its role as administrator of large stretches of public land along the trail route and of the Army heritage of exploring and mapping of the western United States, the Corps will play a significant leadership role in the observance of the Bicentennial. The nature of this event will involve large numbers of the public traveling through numerous Corps local jurisdictions. The Lewis and Clark Coordinator is responsible for ensuring consistent agency wide information on safety, traversing navigation structures (locks), historic facts, and the geographic location of the Expedition's route. The Coordinator is also responsible for a consistent agency position in coordination activities with the large number of states, local communities and tribes planning local events either on or in close proximity to Corps projects.

These funds will also provide for procurement of basic interpretive materials and fund the Corps portion of two interagency Lewis and Clark brochures. In addition, a brochure detailing safety issues that will address water boating safety, boating safety around barge traffic, and safety information for traversing the many navigation structures (locks and/or dams) along the entire route.

### **PERFORMANCE BASED BUDGETING SUPPORT PROGRAM (PBBSP)**

The Government Performance and Results Act of 1993 (GPRA) requires that the Corps, implement performance based budgeting for the Civil Works Operation and Maintenance, General Program. The Performance Based Budgeting Support Program (PBBSP) addresses this requirement by seeking new methods for linking performance to annual budget requests and for analyzing the potential economic impact of budget requests on business processes.

FY 2003 efforts will center on the refinement of corporate performance principles and program and project level performance measures that focus on anticipated performance and output at different levels of funding, in accordance with the revised finance and accounting cost codes that now align with the five O&M business processes - navigation, hydropower, flood damage reduction, recreation and environmental stewardship. These measurements, at different organizational levels, provide the analytical basis to make adjustments in priorities both at the program and project levels concerning efficiency of facilities or services. Comparison of measurements among projects at all levels helps focus management attention on corrections of program or project deficiencies.

With a budget of \$815,000, FY 2003 efforts are aimed at refinement of a performance based budget process and analytical tools to set priorities for O&M work packages with the Automated Budget System (ABS). Corps O&M budgeting personnel have successfully used ABS to rank work packages, but need an improved evaluation process to determine budget priorities based on performance and/or expected benefits resulting from funding and accomplishment of the maintenance work. The process is based on work package performance and incremental analysis and will allow for evaluation of work packages with ABS. Funding will allow work packages to be “scored” based on performance indicators and relative outputs to help select a set of work packages for the O&M budget. The new performance based budget process and tools will be incorporated within the existing ABS process.

## **PROTECTING, CLEARING AND STRAIGHTENING CHANNELS**

Section 3 of the 1945 River and Harbor Act (as amended by Section 915 (g) of the 1986 Water Resources Development Act) provides continuing authority for limited emergency clearing of navigation channels not specifically authorized by Congress. A limit per project is not specified; however, in any given year, a maximum of \$1,000,000 may be used nationwide. Work pursuant to this authority is undertaken as emergency measures to clear or remove unreasonable obstructions to navigation in navigable portions of rivers, harbors and other waterways of the U.S., or tributaries thereof, in order to provide existing traffic with immediate and significant benefit. The FY 2003 budget of \$50,000 is an estimate based on historical experience. If actual requirements are more than estimated, funds will be reprogrammed to meet demonstrated needs.

## **RECREATION MANAGEMENT SUPPORT PROGRAM (RMSP)**

The FY 2003 budget for the Recreation Management Support Program (RMSP) is \$1.545 million. This program supports the Corps recreation business program by funding activities of the Recreation Leadership Advisory Team (RLAT).

The RLAT is composed of representatives from the division, district and project levels of the Corps natural resources management program. It meets on a regular basis and provides input, advice and support to the Corps strategic planning activities for the recreation business program. The RMSP, under the leadership of the RLAT, serves to identify Corps national recreation program priorities and address those priorities through valid management studies, management support, and information transfer.

In FY 2003, the RMSP will study the benefits of recreation, meeting the outdoor recreation needs of various ethnic groups, and customer satisfaction with Corps operated recreation sites and facilities. It will track recreation trends and support various tools to provide information to local managers to assist in operating the recreation program at their projects. Information obtained through RMSP and RLAT activities is critical to the Corps recreation business program strategic planning.

## **REGIONAL SEDIMENT MANAGEMENT DEMONSTRATION PROGRAM**

Authorized by Section 516 of WRDA 96, the Regional Sediment Management Demonstration Program (RSM) is included in our FY 2003 Operation and Maintenance, General budget in the amount of \$1.545 million. The goal of this program is to demonstrate that, by

managing our O&M navigation channel maintenance dredging, construction of shore protection projects and environmental restoration and beneficial uses of dredged material in tandem, we can reduce the total costs of all the projects within a given coastal system and ultimately increase the economic and environmental benefits throughout the nation's coastal navigation system.

Our accomplishments to date include initiation of the National RSM Demonstration program in for the region extending from Alligator Point, FL to the AL/MS border and extension of the region to cover 345 miles of shoreline from the St. Mark's River, FL through the Pearl River, MS. At Perdido and East Pass Inlets, dredging practices have been modified to minimize rehandling of dredged material and save O&M costs. State and local cost-sharing partners have been engaged in the RSM projects. Other demonstrations have been initiated, or are planned at St. John's River Entrance, FL; Cape May Inlet, NJ; Sea Bright, NJ; Jones Inlet, NY; and at sites in California and on the Great Lakes.

With funding in fiscal year 2003 we will expand on the demonstrations to engage more of the Corps overall mission areas and demonstrate methods for saving O&M costs. Methods, policies, and economic benefits for RSM will be transferred to other field offices. For example, RSM will extend through the watershed. Disposal sites for dredged sediment along the Apalachicola River, located near the eastern boundary of the region are full, and the RSM demonstration project will evaluate transporting this sediment to the coast for beach nourishment and/or environmental enhancement.

### **RELIABILITY MODELS PROGRAM FOR MAJOR REHABILITATION**

Our FY 2003 budget includes \$675,000 for the Reliability Models Program For Major Rehabilitation. The purpose of this program is to respond to yearly needs of Districts and Divisions, which are preparing Major Rehabilitation reports for the upcoming fiscal year. The objective is to provide reliability models for project features or components that are being considered for Major Rehabilitation, or to provide procedures to consider the impact of various chemical, environmental or physical processes in a reliability analysis.

Reliability models and other analytical tools have been provided in support of Major Rehabilitation reports on numerous navigation and hydropower projects. In addition, 18 rehabilitation workshops have been conducted in the last ten years to provide assistance to the Districts as they prepare their reports. These workshops offer guidance in conducting reliability and risk analyses, and provide the opportunity for interdisciplinary teams from the Districts to discuss their particular project with Corps Headquarters and other Districts personnel. A report is in the process of being prepared to show the progress of the preparation of reliability models in

support of the FY 2000 rehabilitation reports and a similar report will be prepared for the FY 2001 and FY 2002 work.

The funds will be used to prepare reliability models and collect data for reliability analyses anticipated to be required by several Districts. Reliability models and/or data are anticipated to be needed for the following: Collection of data and performing tests on navigation lock and dam gates electrical and mechanical operating equipment; instrumentation of dam gates to determine performance modes and verify load cycles used in reliability analyses and electrical/mechanical systems reliability models for navigation locks and flood control dams. Updating of the existing concrete reliability models to current standards is also anticipated. Reliability analysis procedures for selected hydropower equipment will be provided. It is also anticipated that two rehabilitation workshops would be conducted. The makeup of these units is subject to the needs of the respective Districts and Divisions.

### **REMOVAL OF SUNKEN VESSELS**

Removal of sunken vessels, or other similar obstructions, is governed by Sections 15, 19, and 20 of the River and Harbor Act of 1899, as amended. Primary responsibility for removal belongs to the owner, operator, or lessee. If the obstruction is a hazard to navigation and removal is not undertaken promptly and diligently, the Corps may obtain a court judgement requiring removal, or remove the wreck and seek reimbursement for the full cost of removal and disposal. Determinations of hazards to navigation and Federal marking and removal actions are coordinated with the Coast Guard in accordance with a memorandum of understanding between the two agencies dated 16 October 1985. Removal procedures are outlined in 33 CFR 245. The FY 2003 budget includes \$500,000 for this program. If removal requirements are more than estimated, funds will be reprogrammed to meet actual needs.

### **WATER OPERATIONS TECHNICAL SUPPORT (WOTS) PROGRAM**

The Corps FY 2003 budget includes \$725,000 for the Water Operations Technical Support (WOTS) Program. The WOTS Program provides effective environmental and water quality engineering technology to address a wide range of water resource management problems at Corps reservoir and waterway projects, and in the river systems affected by project operations nationwide. WOTS provides technical support to the Corps' mission related project responsibilities, with special emphasis on the transfer of technology. The program ensures that the technologies developed by the Corps and other Federal agencies are current and readily available to all Corps field offices. The effective use of technologies is secured through rapid direct technical assistance, field demonstrations, specialty workshops, publication of information

exchange bulletins, technical notes, executive notes, technical reports, miscellaneous papers, instruction reports, videos, meetings, seminars, and briefings at field offices.

Since its inception in FY 1985, WOTS has provided environmental and water quality technological solutions to over 1,000 problems identified at projects from every Corps District. The program annually publishes and distributes numerous copies of manuals, bulletins, notes, and reports. WOTS annually conducts specialty workshops, training personnel on the latest environmental and water quality management techniques. In FY 2001, the WOTS program successfully responded to 20 direct technical assistance requests from 12 Corps Districts, conducted six technology demonstration efforts to verify management strategies and techniques, four training workshops on environmental and water quality management techniques, and prepared 10 technical publications for distribution to the field.

### **WATERBORNE COMMERCE STATISTICS**

The Corps of Engineers serves as the Federal Central Collection Agency, and is the sole U.S. Government source, for U.S. domestic and foreign waterborne commerce and vessel statistics in conformance with the River and Harbor Act of 1922 as amended. Activities supporting this national statistics mission include: (a) collecting and reporting of water transportation statistical data; (b) automated systems development and operation, processing, compiling, and publishing statistical data and information on waterborne commerce and vessels moving on the internal U.S. waterways, the Great Lakes, and through all U.S. ocean channels and ports; and (c) compiling and publishing the official U.S. documentation of U.S. vessels engaged in commerce, and their principal trades and zones of operation. The data provide essential information for navigation project investment analyses, including accurate benefit-cost analyses; for annual funding prioritization for operation and maintenance of existing projects; for computation of performance measures; for input into the U.S. National Accounts; and for regulatory and emergency management decisions. The budget includes \$4.745 million for FY 2003.

### **ACTIVITIES UNDER THE REGULATORY PROGRAM APPROPRIATION**

The budget for the Regulatory Program is \$151 million, which includes \$7 million for full funding of Federal retiree costs. Therefore, the FY 2003 program amount comparable to the FY 2002 appropriation amount is \$144 million, a \$17 million increase from the FY 2002 appropriation. A substantial increase is necessary. With the requested funds, the Corps will be able to reduce the average review time for standard permit applications by about 40 days, to a

new average of 120 days, by FY 2004. Standard permits are the most difficult and complex of all Corps permit actions. Standard permit applications usually involve impacts to the aquatic environment that require mitigation or other special conditions, and that extends the time needed to issue a permit. Additional requirements by other Federal agencies, as well as a growing workload, have caused application evaluation times to increase since the late 1990's. The Corps will continue to work to ensure that the Regulatory Program is fair, reasonable and responsive.

To help manage the permit workload, the Corps continues to rely on general permits, which consist of regional and nationwide permits. In FY 2000, the Corps revised its nationwide permit program to ensure protection of the aquatic environment. In January 2002, the Corps announced additional nationwide permit changes. These latest changes refine some requirements and, in particular, increase environmental protection for some activities with greater potential for aquatic impacts, such as coal mining. The recent changes also streamlined the approval process for some applicants.

In FY 2001, out of 83,000 activities authorized in writing, 90 percent were authorized by regional and nationwide permits. The remainder was authorized by individual permits, including standard permits. Although the evaluation process for an individual permit is typically longer and more complex than that for a general permit, most regional and nationwide authorizations now involve substantive evaluation and determination of necessary mitigation. In addition to the permit process, the Corps continues to make over 60,000 jurisdiction determinations a year.

In its June 27, 2001, report on compensating for wetland losses under the Clean Water Act, the National Research Council of the National Academy of Sciences concluded that the Corps needs to improve its oversight of wetlands compensatory mitigation activities. We agree. The requested funding will allow more inspections of completed projects to ensure compliance with permit conditions and mitigation requirements.

Finally, to be more responsive to the regulated public, the Corps also needs to conduct more studies of environmentally sensitive aquatic areas that are undergoing development. The information from these studies will assist developers and property owners when they plan projects and apply to the Corps for permits. Included in the FY 2003 request is \$3 million in additional funds for new Special Area Management Plans and other watershed approaches. This needed investment will help us to expedite permit actions and manage aquatic resources in sensitive aquatic areas in partnership with States and local communities. It also will help applicants to meet mitigation requirements within a watershed context, which the National Research Council found to be more responsive to aquatic needs.

**ACTIVITIES UNDER THE FLOOD CONTROL AND COASTAL EMERGENCIES**  
**APPROPRIATION**

The Corps continues to provide leadership in response to natural disasters and, therefore, must maintain a preparedness program that meets the needs of the Nation. In order to execute an effective FY 2003 program, to include an aggressive levee inspection program, continued response planning, and all-hazards preparedness activities in support of the Federal Response Plan, funds in the amount of \$22 million are requested, of which \$2 million is for full funding of Federal retiree costs. Therefore, the FY 2003 program amount comparable to the FY 2002 appropriation amount is \$20 million for preparedness and fixed operational costs.

The Corps responsibility for emergency response requires that its engineering, construction, and emergency operations capabilities be maintained. When a disaster strikes, people's lives, livelihood and property are at stake. Therefore, the level of funding requested is the minimum sufficient to support an organization capable of responding to both natural and man-made disasters: hurricanes, floods, earthquakes, and other disasters, such as contaminated public water supplies and terrorist acts.

In addition to the preparedness program, the account funds emergency activities in response to natural disasters, as authorized by Public Law 84-99. Since we cannot predict the timing and magnitude of disasters, emergency transfers may be made from other flood control related appropriations amounts and supplemental appropriations may be requested when the need arises.

Activities include: the review and updating of response plans to maintain readiness; training to ensure our capability to respond under adverse circumstances; procurement and pre-positioning of critical equipment and supplies such as sandbags and pumps, which are not likely to be available during initial stages of a response; periodic exercises to test and evaluate plans, personnel and adequacy of training; emergency facilities needed for rapid, effective response to disaster areas; inspection of non-Federal flood control projects to ensure their viability to provide flood protection; laboratory support for field operations; and the overall management of the response program to ensure workable, coordinated efforts are undertaken in a timely manner.

Work continues on comprehensive interagency response planning activities. These activities support, under the Stafford Act, the Federal Response Plan by providing engineering and construction support following major disasters such as Tropical Storm Allison; the Nisqually earthquake; West Virginia flooding; and the terrorist attacks on the Pentagon and World Trade Center. Mission assignments in support of FEMA's disaster response and recovery activities

have included: emergency debris removal; temporary housing; emergency water; restoration of infrastructure; temporary power; construction management; and other support which uses Corps engineering, contracting, and construction expertise.

### **ACTIVITIES UNDER THE FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM (FUSRAP)**

The Corps has completed remediation at 3 sites, issued 6 records of decision, and completed 6 interim removal actions through the end of FY 2001. The Corps expects to complete remedial activities at 2 sites in FY 2002, and issue 5 records of decision and complete one interim removal action in FY 2003. The FUSRAP budget for FY 2003 will fund work at 20 sites in the states of Connecticut, Maryland, Massachusetts, Missouri, New Jersey, New York, Ohio and Pennsylvania.

### **ACTIVITIES UNDER THE GENERAL EXPENSES APPROPRIATION**

The General Expenses (GE) appropriation provides for the executive direction and management of the overall Civil Works program by the Headquarters and the regional Division Offices. The primary purpose of the GE account is to provide definitive policy guidance, program management, regional and national interface, and quality assurance and oversight for all Corps activities toward execution of a comprehensive Civil Works program. The Fiscal Year (FY) 2003 budget for the GE account is \$161 million, which includes \$6 million contingent adjustment for full funding of Federal retiree costs. The GE program amount comparable to the FY 2002 appropriation amount is \$155 million, a \$2 million increase.

The GE account also funds full-time equivalents (FTE) at the Humphreys Engineer Center Support Activity (HECSA), which provides administrative support to the Headquarters and the Humphreys Engineer Center at Fort Belvoir; the Institute for Water Resources, which provides water resource support functions, such as conducting and managing national studies, special studies, data collection and distribution, and technical support to other Corps offices on water resource management matters; and the Corps of Engineers Finance Center, which was established in 1996 in Memphis, TN, to centralize finance and accounting activities Corps-wide. These activities represent 122 FTE of the total GE staffing of 1,087 FTE.

The FY 2003 program of \$155 million consists of approximately 77 percent labor, 10 percent fixed costs such as rent, utilities, communications, and the Plant Replacement and Improvement Program (PRIP) paybacks, and 13 percent for such discretionary costs, as travel,

training, supplies & equipment and other contractual services. The budget incorporates savings from reducing the number of division offices, which has been phased over several years, and other downsizing efficiencies. The GE account also funds the studies being conducted by the National Academy of Sciences, as directed in Section 216 of the Water Resources Development Act of 2000.

The Corps downsizing efforts implemented from 1989 through 2001 reflect reductions realized through focusing on appropriate roles and missions and eliminating duplication of effort, reducing the number of division offices from 11 to 8, and continual process reviews to achieve additional savings through efficiencies. The FY 2003 budget is the second year of a flat staffing level in the headquarters, with 420 FTE both in FY 2002 and in FY 2003.

The division restructuring plan, implemented in FY 1997 with full implementation phased-in over five years, was based on realigning missions and increasing authority at the Division level. The standard average civil staffing level proposed for continental U.S. division offices by FY 2002 was changed from 73 FTE to 75 FTE, and 20 FTE for the Pacific Ocean Division, which has a primarily military mission. The total division staffing will be reduced to 546 FTE by FY 2003, 131 FTE (or 19%) down from the 11 division office staffing level of 677 FTE and a 15 FTE (or 3%) decrease from the FY 2001 level of 561 FTE.

In the Summer of 2000, the Corps relocated its headquarters to the General Accounting Office (GAO) building at 441 G St. NW, Washington, D.C. The PRIP payback for this cost is occurring over a five-year period. In FY 2003, the GE payback amounts to approximately \$2.3 million.

The FY 2003 program will support the projected staffing level of 1,087 FTE for all General Expenses activities, which is a reduction of 19 FTE from the FY 2001 level of 1106 FTE. These executive direction and management activities, which provide oversight of the entire Civil Works mission, represent less than 5 percent of the total Civil workforce, with the headquarters staff of 420 FTE making up less than 2 percent of the total Civil workforce.

### **PLANT PLACEMENT AND IMPROVEMENT PROGRAM**

The FY 2003 Plant Replacement and Improvement Program (PRIP) obligations under the Revolving Fund for items designed to improve productivity, increase efficiency, modernize, improve the Corps equipment and operational capabilities, and increase safety are estimated at \$58.8 million. This amount includes estimated FY 2003 obligations of \$32.4 million for 9 new

major items and \$17.3 million for 41 continuing major items. Major items are those assets costing more than \$700,000.

### **SUPPORT FOR OTHERS**

In FY 2003, the Corps will provide reimbursable engineering, environmental remediation, construction management, emergency response and other technical support to more than 60 Federal agencies. The estimated dollar value of the Corps efforts is \$800 million. The actual program size depends on several factors: the requesting agency's appropriation (which often is not known until the first quarter of the fiscal year), the requesting agency's final decisions on how their program will be executed, and the number, nature and magnitude of national and international emergencies which the Corps will be requested to respond.

### **CONCLUSION**

This concludes the detailed statement of Major General Robert H. Griffin on Remaining Items of the Fiscal Year 2003 Civil Works Budget.