Appendix B.
Corps of Engineers Program Authorities

Appendix B. Corps of Engineers Program Authorities

B-1. Environmental Restoration

B-1.1. Aquatic Ecosystem Restoration (CAP)

B-1.1.1. Authorization

Section 206, WRDA 1996 (PL [public law] 104-303; 33 USC [U.S. Code] 2330), as amended.

B-1.1.2. Purpose

The Corps of Engineers may provide up to $5,000,000 in one locality, during any fiscal year, for projects to restore and protect aquatic ecosystems without specific authorization by Congress. Examples for projects under this authority include sediment removal for lake restoration; removal of low-head dams; and stream, wetland, riparian, and related upland restoration.

B-1.1.3. Requirements

Eligible partners: States, local, and tribal governments; non-profit organizations.

Federal funding ceiling: $25,000,000 per fiscal year, $5,000,000 per project.

Nonfederal costshare: 35%.

Nonfederal responsibilities: LERRD, O&M.

In-kind contributions possible? yes.

B-1.1.4. Application

According to information provided by the Chicago District, more than 95 projects are currently being considered in all three Great Lakes districts combined. From these, more than 35 entered the planning and design phase in the Chicago district alone.

Three projects recently entered the construction phase; all of which will correct erosion problems at sites along the Chicago River. The work consists of structural and non-structural erosion control, removal of invasive non-native species plant species, and fish habitat structures. The anticipated outcomes are improved water quality and enhanced habitat for native plant species and fish. Local sponsor: City of Chicago.

B-1.1.5. Funding

The total funding for this program has increased continuously from $21,200 for initial studies in FY 1998 to a level of $6,677,600 in FY 2002. A total of $9,210,400 was spent by FY 2002.

B-1.2. Aquatic Plant Control (CAP)

B-1.2.1. Authorization

The Aquatic Plant Control program is a continuing authority authorized by Section 104, RHA 1958 (PL 85-500; 33 USC 273), as amended, and Sections 103, 105, and 712 of the Water Resources Development Act 1986 (PL 99-662; 33 USC 2201 et seq.).

B-1.2.2. Purpose

The program originated from a project approach to control water hyacinths, alligator weed, and other obnoxious aquatic plant growths in navigable waters, tributary streams, connecting channels, and other allied waters in the southern coastal states of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas, in the combined interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health and related purposes including continuous research into efficient methods for aquatic plant control. Section 104, RHA 1962, expanded the program into a nationwide continuing authority. PL 89-298, Section 302 amended the program to include the control of Eurasian watermilfoil and other obnoxious aquatic plant growths.

B-1.2.3. Requirements

Federal funding ceiling: $5,000,000 per fiscal year.

Nonfederal costshare: 30%.

In-kind contributions possible? no.

B-1.2.4. Application

The authority has never been used in the Great Lakes basin.

B-1.2.5. Funding

None.

B-1.3. Beneficial Use of Dredged Material (CAP)

B-1.3.1. Authorization

The Beneficial Use of Dredged Material program is a continuing authority authorized by Section 204, WRDA 1992 (PL 102-580; 33 USC 2326)

B-1.3.2. Purpose

The Corps may carry out projects to protect and restore aquatic habitat, including wetlands, by using sediments dredged from federal navigation projects.

B-1.3.3. Requirements

Eligible partners: States, local, and tribal governments; non-profit organizations.

Federal funding ceiling: $15,000,000 per fiscal year.

Nonfederal costshare: 25%.

Nonfederal responsibilities: LERRD, O&M.

In-kind contributions possible? No.

B-1.3.3. Application

The Beneficial Use authority has never been used in the Great Lakes.

Several recent projects provide examples for the use of dredged sediments in habitat restoration projects. One example is the Point Mouillee CDF on the Rouge River, which was configured to restore and protect a coastal wetland that had been almost completely destroyed by erosion. Sediments dredged from navigation channels have also been used to restore nesting habitat for migratory waterfowl by constructing islands in coastal and backwater areas.

Two restoration projects are currently being considered with this authority. The first project is a wetland habitat restoration in the St. Louis Estuary near Duluth and the second is a restoration project for island habitats and landward wetlands on the Cat Island chain in the lower Green Bay in Wisconsin.

B-1.3.4. Funding

Between FY 1997 and FY 2002, $80,800 was used to fund two initial studies.

B-1.4. Ecosystem Restoration Projects

B-1.4.1. Authorization

The Chicago Sanitary and Ship Canal Dispersal Barrier is a specifically authorized local project with basin-wide significance. It was authorized by Section 1202, NISA 1996 (PL 104-332, 16 USC 4722(i)(3)).

B-1.4.2. Purpose

The purpose of the Chicago Sanitary and Ship Canal Dispersal Barrier project is a feasibility study to investigate and identify environmentally sound methods to prevent or reduce the dispersal of non-indigenous aquatic species between the Great Lakes and Mississippi River drainage basins.

B-1.4.3. Requirements

Nonfederal responsibilities: LERRD, O&M.

B-1.4.4. Application

An electric dispersal test barrier was established to demonstrate the prevention or reduction of the dispersal of non-indigenous aquatic nuisance species between the Great Lakes and Mississippi River basins through the Chicago Sanitary and Ship Canal. Construction of the barrier was completed in April 2002. A back-up generator was installed in FY 2003.

B-1.4.5. Funding

By 2002, the total project cost (FY 1997 – 2002) for the Chicago Sanitary and Ship Canal Dispersal Barrier was $2,481,000.

B-1.5. Environmental Dredging

B-1.5.1. Authorization

Section 312, WRDA 1990 (PL 101-640; 33 USC 1272).

B-1.5.2. Purpose

The objective of the Environmental Dredging program is the removal of contaminated sediments outside the boundaries of federal navigation channels and for the purpose of environmental enhancement and water quality improvement.

B-1.5.3. Requirements

Eligible partners: States, local, and tribal governments; nonprofit organizations.

Federal funding ceiling: $20,000,000 per fiscal year.

Nonfederal costshare: 35%.

Nonfederal responsibilities: LERRD, O&M

In-kind contributions possible? Yes.

Other requirements: All environmental dredging actions are to be taken in consultation with the U.S. EPA.

B-1.5.4. Application

Section 312, WRDA 1990, was amended in 1996 to include five AOCs on the Great Lakes for priority consideration. The identified Great Lakes AOCs were Ashtabula River (OH), Buffalo River (NY), Grand Calumet River (IN), Saginaw River (MI), and Fox River (WI). A feasibility study on alternatives for removal of PCB-contaminated sediments from the Ashtabula River serves as the testing ground for Corps policy on the use of this authority. In addition, feasibility studies for Environmental Dredging projects were initiated at Detroit River (MI), Muskegon Lake (MI), White Lake (MI), Indiana Harbor (IN), and Rouge River (MI).

B-1.5.5. Funding

Feasibility studies in the Great Lakes began in FY 1998. From FY 1998 to FY 2002, six feasibility studies were conducted at a total cost of $716,100. Six additional feasibility studies were initiated in FY 2003.

B-1.6. Environmental Improvements (Restoration of Environmental Quality)(CAP)

B-1.6.1. Authorization

Section 1135, WRDA 1986 (PL 99-662; 33 USC 2309a).

B-1.6.2. Purpose

The construction, operation, and maintenance of certain civil works projects of the Corps--especially those with navigation or flood control purposes--may adversely impact the quality of the environment. In 1986, Congress authorized the Corps of Engineers to modify the structures or operations of Corps projects to restore or improve the quality of the environment and ecosystem functions impaired by these projects, as long as they do not conflict with the authorized project purposes. In 1996, Congress amended this authority to allow restoration in areas that are outside of Corps project lands but impacted by a particular Corps project. In 1999, Congress further directed that this authority could be used for the control of sea lamprey at sites throughout the Great Lakes.

B-1.6.3. Requirements

Eligible partners: States, local, and tribal governments; non-profit organizations.

Federal funding ceiling: $25,000,000 annually, $5,000,000 per project.

Nonfederal costshare: 25%.

Nonfederal responsibilities: LERRD, O&M

In-kind contributions possible? Yes.

B-1.6.4. Application

The authority has been used by the Detroit District in cooperation with the Great Lakes Fishery Commission to construct sea lamprey traps at the navigation locks at Sault Ste. Marie, MI. The Chicago district is currently completing work on a restoration project to restore the Indian Ridge Marsh between Lake Calumet and the Calumet River in Cook County, Illinois

In other regions of the nation, this authority has been used to modify dams and their operations to improve water quality and promote fish migration. Navigation structures might be modified to increase their habitat value or to protect and restore coastal wetlands.

Additional sea lamprey barriers for locations within the Detroit District are currently in the planning and design phase. Habitat restoration projects are considered for the Buffalo River in New York and East Harbor State Park in Ohio. Further planned is a water quality restoration project at Rochester Harbor in New York. The Chicago District is considering options to use this type of funding for a second dispersal barrier in the Chicago Sanitary and Ship Canal.

B-1.6.5. Funding

In the Great Lake basin, a total of twenty-six projects have been or are currently being considered. One project has been completed under this authority and an additional project is currently being completed. Funding for feasibility studies in the Great Lakes began in FY 1994. A total of $15,421,000 was spent by the end of FY 2002.

B-1.7. Environmental Infrastructure

B-1.7.1. Authorization

Section 219 of WRDA 1992 (PL 102-580) is the basis of Corps of Engineers support for local governments in the design and construction of a variety of environmental infrastructure. However, the program is not a CAP since individual projects need specific authorization by amendment to the legislation. Several environmental infrastructure projects in the Great Lakes are authorized under other legislation such as Department of Defense and Energy and Water Appropriations Acts. There are also continuing local authorities for environmental infrastructure projects in Ohio (Section 594, WRDA 1999), Northeastern Minnesota (Section 569, WRDA 1999), for Onondaga Lake (PL 101-596; Section 411, WRDA 1990; Section 573, WRDA 1999), and for the Calumet region in Cook County, Illinois (Section 502, WRDA 1999).

B-1.7.2. Purpose

Environmental infrastructure projects provide technical solutions to the alleviation of water-related problems on a local scale. Examples are water supply and storage facilities, wastewater routing and treatment, mitigation of combined sewer overflows, and acid mine drainage.

B-1.7.3. Requirements

Nonfederal costshare: 25% minimum.

Other requirements: Some project authorities can be used as grants or other reimbursement to sponsors.

B-1.7.4. Application

1) Under this program, the Corps has built four projects for the mitigation of combined sewer overflows, three in Southwest Michigan (Twelve Towns Drain Retention Treatment Facility; Genesee County Drain, Negaunee Drain) and one in the Calumet Region, IL.

2) In cooperation with the U.S. EPA and the State of New York, the Corps has developed a management plan for the restoration, conservation, and management of Onondaga Lake, NY (Section 411, WRDA 1990). The Corps has an additional authority (Section 573, WRDA 1999) to design, plan and construct projects in accordance with the Onondaga Lake Management Plan.

3) Congress has directed the Corps of Engineers to establish a pilot program to provide environmental assistance to nonfederal interests in northeastern Minnesota. This assistance may include design and construction assistance for water-related environmental infrastructure and resource protection.

4) A similar pilot program is under way in Ohio. The assistance provided by these pilot programs may include projects for wastewater treatment and related facilities; combined sewer overflow, water supply, storage, treatment, and related facilities; mine drainage; environmental restoration; and surface water resource protection and development.

B-1.7.5. Funding

In the 10-year period from FY 1992 to FY 2001, a total of $16,412,027 was spent on 10 Environmental Infrastructure projects in the Great Lakes basin.

B-1.8. Great Lakes Fishery and Ecosystem Restoration

B-1.8.1. Authorization

The Great Lakes Fishery and Ecosystem Restoration program is a continuing authority program with regional scope that has been authorized by Section 506 of WRDA 2000 (PL 106-541; 44 USC 1962d-22).

B-1.8.2. Purpose

The Great Lakes Fishery and Ecosystem Restoration provision authorizes $100 million for projects to enhance the management of Great Lakes fisheries. The goal of the program is to plan, design, and construct projects to support ecosystem restoration, fishery, and beneficial uses in the Great Lakes. In addition, a support plan is being developed to identify how the Corps of Engineers will help the fishery and ecosystem. Finally, an evaluation program is to be developed to evaluate the success of accomplished projects in meeting fishery and ecosystem restoration goals. Cooperation and coordination with other agencies and interests is emphasized in the legislature.

B-1.8.3. Requirements

Eligible partners: any, including non-profit organizations and private interests.

Federal funding ceiling: $100,000,000.

Nonfederal costshare: 35%.

Nonfederal responsibilities: The nonfederal partner may get credited for the value of LERRD

In-kind contributions possible? Up to 50%.

Other requirements: The evaluation program is to be conducted in consultation with the Great Lakes Fishery Commission and appropriate federal, state, and local agencies.

B-1.8.4. Application

In 2002, the Corps started to develop a support plan in cooperation with the signatories to the Joint Strategic Plan for Management of the Great Lakes Fisheries and other affected interests. The plan refers to and incorporates existing documents, such as LaMPs and RAPs. The support plan was to be developed within one year of full funding for the program and is nearing completion.

B-1.8.5. Funding

In FY 2002, the Corps received initial funding for this program at $146,000 to develop a plan for Corps activities to support Great Lakes fisheries management. In FY 2003, funding was continued at $176,000. The FY 2004 is $700,000 (CG) and $36,000 (GI).

B-1.9. Great Lakes Remedial Action Plans and Sediment Remediation

B-1.9.1. Authorization

Section 401 of WRDA 1990 (PL 101-640; 33 USC 2326b).

B-1.9.2. Purpose

The program authorizes the Corps to draw on its planning and engineering expertise to provide technical, planning, and engineering assistance to states and local governments and non-govenmental entities in implementing RAPs and to conduct pilot - and full scale sediment remediation projects using promising technologies. RAP support may include a variety of services, including physical and environmental monitoring, remedial planning and design, construction management, development of GIS, computer modeling and analysis, cost estimating, and public outreach support.

Through this program, the Corps may support RAP committees to implement RAPs in the 26 Great Lakes AOCs on the U.S. side of the Great Lakes basin. States, local governments, and nongovenmental entitites are eligible partners to apply for this type of support, which may include planning, technical, and engineering assistance.

B-1.9.3. Requirements

Eligible partners: States, local governments, and nongovenmental entitites.

Federal funding ceiling: $3,000,000 per fiscal year.

Nonfederal costshare: 35%.

Nonfederal responsibilities: LERRD, O&M (for construction projects)

In-kind contributions possible? Yes.

B-1.9.4. Application

Planning assistance under the Section 401 program has been used to plan and design RAPs. Technical assistance includes river sediment sampling and analysis, field surveys and watershed investigations to identify sedimentation and non-point source pollution problems, volume estimates of the extent of sediment contamination, and recommendations for restoration priorities and sediment remediation and disposal sites. The Corps' main "product line" of technical RAP support includes development of GIS, computer modeling and analysis, cost estimating, and public outreach support. Engineering assistance consists of pilot - and full scale sediment remediation projects applying new remediation technologies.

The Buffalo District has established a RAP coordination team with the purpose to improve the program's capability to meet regional needs. Buffalo's RAP coordination team uses $25,000 each year to coordinate the District's RAP program, develop stakeholder relationships, and draft agreements to address beneficial use impairments in AOCs.

B-1.9.5. Funding

Although the program never was part of the federal administration's budget request, it could be launched in FY 1994 and continued into the presence due to the relentless advocacy of the congressional Great Lakes Task Force. The program was initially maintained by congressional add-ons of $500,000 per year. From FY 1994 to FY 2003, appropriations for the program could be gradually increased from $10,000 to $1.5 million in FY 2003 (with the exception of a slump in FY 2001 to a level of $375,200). However, funding for this program has been perennially low in proportion to its capabilities. Currently, the Corps has signed support agreements with twenty-one of the 26 Great Lakes RAP committees. But as a result of the

chronic funding shortage for this program, the implementation of these agreements tends to be chronically delayed. For FY 2003, the Great Lakes Task Force recommendation was for $2 million and the appropriation was $1.5 million.

B-1.10. Research Programs

Aquatic Plant Control Research (APCR)

Dredging Operations & Environmental Research

Dredging Operations Technical Support

Water Operations Technical Support

B-1.10.1. Authorization

No information found.

B-1.10.2. Purpose

Aquatic Plant Control Research

The focus of this research program is on measures to control the spread and proliferation of nuisance aquatic plants. APCR is producing information on the growth and ecological requirements of problem aquatic plants and is producing new biological, chemical, and ecological technologies for their management. Research efforts are currently focused on the development of ecologically based, integrated plant management strategies for submersed aquatic plants (i.e., Eurasian watermilfoil). In addition, innovative technologies are being developed to prevent the initial introduction and spread of non-indigenous aquatic plant species, and to replace problem aquatic plants with native species; thereby enhancing aquatic habitat for fish and wildlife.

Dredging Operations & Environmental Research

DOER supports navigation O&M activities of the Corps. Research is designed to balance operational and environmental initiatives and to meet complex economic, engineering, and environmental challenges of dredging and disposal in support of the navigation mission. Research results will provide dredging project managers with technology for cost-effective operation, evaluation of risks associated with management alternatives, and environmental compliance. DOER is part of DOTS.

Dredging Operations Technical Support

DOTS provides engineering and environmental engineering support to the O&M mission of the Corps. DOTS provides an envelope structure for dredging-related research programs such as DOER and a platform for technology transfer from such programs to the O&M mission of the Corps.

Water Operations Technical Support

WOTS activities focus on technology transfer from environmental and water quality operational studies to address a wide range of water resource management problems related to reservoir and waterway projects and in river systems affected by project operations.

Program activities include developing new technologies to solve water quality and related environmental problems resulting from the presence of nonindigenous aquatic species. The program also examines water quality impacts of shoreline erosion control, reservoir sedimentation, and other project operations related to environmental and water quality issues.

Since its inception, the WOTS Program has provided environmental and water quality technological solutions to over 1,100 problems identified at projects from every Corps District. The program annually publishes and distributes user manuals, information bulletins, technical notes, and technical reports. In addition, the program annually conducts specialty workshops, training personnel on the latest environmental and water quality management techniques.

B-1.10.3. Requirements

Aquatic Plant Control Research

None specified.

Dredging Operations & Environmental Research

None specified.

Dredging Operations Technical Support

None specified.

Water Operations Technical Support

None specified.

B-1.10.4. Application

Aquatic Plant Control Research

Numerous non-indigenous, problem-causing aquatic plant species have infested the Great Lakes region and their number is growing. Eurasian watermilfoil (*Myriophyllum spicatum*) and purple loosestrife (*Lythrum salicaria*) are two of the most notorious non-indigenous aquatic plant species in the region. These and other aquatic nuisance plants, with no natural enemies in the Great Lakes region, rapidly choke native aquatic plants. They have a very low value to fish and wildlife and contribute significantly to water quality problems. Nuisance plants also interfere with navigation, flood control, hydropower production, and waterborne recreational uses. The development, transfer, and implementation of aquatic plant management technologies by APCR is beneficial to users in the Corps, as well as other federal, state, and local agencies in the Great Lakes region.

Dredging Operations & Environmental Research

*R*esearch results will provide dredging project managers in the Great Lakes region with technology the evaluation of risks associated with management alternatives for dredged material and for environmental compliance.

Dredging Operations Technical Support

See DOER.

Water Operations Technical Support

No Great Lakes-specific information found

B-1.10.5. Funding

Aquatic Plant Control Research

The FY 2002 appropriation was $500,000.

Dredging Operations & Environmental Research

In FY 2001 and FY 2002, the total program funding was $7,000,000.

Dredging Operations Technical Support

In FY 2001 and FY 2002, the total program funding was $1,500,000.

Water Operations Technical Support

In FY 2001 and FY 2002, the total program funding was $700,000.

B-1.11. Riverine Ecosystem Restoration and Flood Hazard Mitigation (CAP)

B-1.11.1. Authorization

The Riverine Ecosystem Restoration and Flood Hazard Mitigation program is a continuing authority program that has been authorized by Section 212 of WRDA 1999 (PL 106-53; 33 USC 2332).

B-1.11.2. Purpose

The program has the goal to coordinate local flood damage reduction or riverine and wetland restoration studies with projects that conserve, restore, and manage hydrologic and hydraulic regimes and restore the natural functions and values of floodplains. Studies and projects under this authority are intended to emphasize, to the maximum extent practicable and appropriate, nonstructural approaches to preventing or reducing flood damages.

B-1.11.3. Requirements

Eligible partners: States, local, and tribal governments.

Federal funding ceiling: None.

Nonfederal costshare: 35%.

Nonfederal responsibilities: LERRD, O&M

B-1.11.4. Application

So far, this new program has not been used for projects in the Great Lakes basin. Funding under this authority is sought for a project in the Rouge River watershed, where combined sewer overflows are causing water quality problems.

B-1.11.5. Funding

In FY 2002, a study on the Rouge River watershed was funded with $200,000.

B-2. Flood Damage Reduction and Shoreline Erosion Prevention

B-2.1. Emergency Streambank and Shoreline Protection (CAP)

B-2.2. National Shoreline Erosion Control Development and Demonstration Program (research program)

B-2.3. Shore Damage Mitigation (CAP)

B-2.4. Shore Protection (CAP)

B-2.5. Small Flood Control Projects (CAP)

B-2.6. Snagging and Clearing (CAP)

B-2.1. Emergency Streambank and Shoreline Protection (CAP)

B-2.1.1. Authorization

The Emergency Streambank and Shoreline Protection program (33 CFR [Code of Federal Regulations] 263.25) is a continuing authority authorized by Section 14 of the Flood Control Act of 1946 (PL 79-526; 33 USC 701c et seq.).

B-2.1.2. Purpose

This CAP program provides emergency streambank and shoreline erosion protection to public infrastructure such as highways and bridges or public facilities such as churches, hospitals, and schools.

B-2.1.3. Requirements

Eligible partners: states, local, and tribal agencies.

Federal funding ceiling: $15,000,000 per fiscal year, $1,000,000 per project.

Nonfederal costshare: 35% of design and construction, after the first $40,000 at full federal cost.

Nonfederal responsibilities: LERRD.

B-2.1.4. Application

Typical uses of this authority include the construction of soil retention walls, seawalls, or stone walls to curb streambank or shoreline erosion problems.

Example 1: By use of the authority, the Buffalo District constructed a retaining wall for the Trinity Episcopal Church in Seneca Falls, New York. The church is located on the banks of the Cayuga/Seneca Canal and was threatened by streambank erosion in the Canal. Implementation costs (1995) were $243,000 (federal share $182,200).

Example 2: In 1997, the City of Escanaba requested the Detroit District to plan and design for approximately 1,400 feet of a shoreline erosion problem threatening the City of Escanaba's water treatment plant in Delta County, MI. The project was complete in FY 2001.

Example 3: In 1998, the City of Detroit requested the Detroit District to provide for approximately 1,100 feet of shoreline protection along the Detroit River, to protect an island park on Belle Isle from further damage. Planning and design analysis was initiated in FY 2001.

Example 4: the Detroit District constructed combination stone and seawall project to protect facilities at Grand Valley State College on the Lake Michigan shoreline in FY 2002

Example 5: the Chicago District has used Section 14 funding to stabilize and protect sewer lines in several locations in the North Shore suburban Chicago area.

B-2.1.5. Funding

In the period from FY 1992 to FY 2002, the Corps has used this program extensively in the region: 87 projects were studied, of which 24 entered construction. Total expenditures for the program in the Great Lakes basin for this period were $11,509,000.

B-2.2. National Shoreline Erosion Control Development and Demonstration Program

B-2.2.1. Authorization

The National Shoreline Erosion Control Development and Demonstration Program is authorized by Section 227, WRDA 1996 (PL 104-303; 33 USC 426h).

B-2.2.2. Purpose

Section 227 provides a vehicle by which shore protection devices, designs, and methods can be constructed, monitored, and evaluated. The Section 227 Program is geared toward innovative solutions advancing the state-of-the-art in coastal shoreline protection.

B-2.2.3. Requirements

None specified.

B-2.2.4. Application

The program is being implemented at two demonstration sites in the Great Lakes basin. In FY 2000, a 10-mile reach of bluff along Lake Michigan in Allegan Co., MI, was selected for project development. Through a research partnership with the State of Michigan and Western Michigan University, this project looks at dewatering of shoreline bluffs as a method to control erosion and prevent bluff recession. The objective of a second project is to protect Sheldon Marsh, a coastal wetland preserve on Lake Erie near Huron, OH. The project looks at a design to stabilize the barrier beach that protects the marsh from erosion by waves and currents.

B-2.2.5. Funding

No information was provided.

B-2.3. Shore Damage Mitigation (CAP)

B-2.3.1. Authorization

Section 111, RHA 1968 (PL 90-483; 33 CFR 263.27), as amended.

B-2.3.2. Purpose

The purpose of this program is to prevent or mitigate shore damage that is caused by federal navigation structures built by the Corps of Engineers. The mitigation target is the reduction of erosion or accretion to the level that would have existed without the influence of navigation works, at the time such navigation works were accepted as a federal responsibility.

B-2.3.3. Requirements

Eligible partners: States, local, and tribal agencies.

Federal funding ceiling: $2,000,000 per project.

Nonfederal costshare: The nonfederal partner must cost share 50 percent of the feasibility study, after the first $100,000 at full federal cost. The cost sharing formula for design and construction is based on the cost share of the responsible navigation project.

Nonfederal responsibilities: LERRD.

B-2.3.4. Application

One example for the use of this authority is the continuous beach nourishment (O&M) in South Haven Harbor, MI, to mitigate for shore erosion damage resulting from federal navigation structures in the harbor. No new projects went into construction since FY 1992.

B-2.3.5. Funding

No information was provided.

B-2.4. Shore Protection (CAP)

B-2.4.1. Authorization

Section 103, RHA 1962 (PL 87-874; 33 CFR 263.26), as amended.

B-2.4.2. Purpose

The purpose of this program is to reduce storm damage risks to public lands and facilities.

B-2.4.3. Requirements

Eligible partners: States, local, and tribal agencies.

Federal funding ceiling: $30,000,000 per fiscal year, $2,000,000 per project.

Nonfederal costshare: 35%.

Nonfederal responsibilities: LERRD.

B-2.4.4. Application

This program has been used for beach restoration and protection projects.

B-2.4.5. Funding

In the period from FY 1992 to FY 2002, 8 projects were studied costing a total of $1,195.000. None entered construction.

B-2.5. Small Flood Control Projects (CAP)

B-2.5.1. Authorization

Section 205, FCA 1948 (PL 80-858; 33 CFR 263.23).

B-2.5.2. Purpose

To construct small flood control projects.

B-2.5.3. Requirements

Eligible partners: States, local, and tribal governments.

Federal funding ceiling: $50,000,000 per fiscal year, $7,000,000 per project.

Nonfederal costshare: After the first $100,000 of full federal funding, the nonfederal partner must cost share 50% of the feasibility study and 35% of design and construction for structural flood control projects or 50% for nonstructural projects.

Nonfederal responsibilities: LERRD.

B-2.5.4. Application

Applications of the authority include non-structural and structural solutions to alieviate flooding in Great Lakes communities.

B-2.5.5. Funding

In the period from FY 1992 to FY 2002, the Corps Great Lakes districts studied 43 projects under this authority, of which three entered construction. Total program expenditures for this time period amount to $13,060,000. The level of funding was ranging between $520,300 (FY 1992) and $2,599,200 (FY2001).

B-2.6. Snagging and Clearing (CAP)

B-2.6.1. Authorization

The Snagging and Clearing program is a continuing authority authorized by Section 208, FCA 1954 (PL 83-780; 33 CFR 263.24), as amended.

B-2.6.2. Purpose

The program provides for emergency clearing and snagging (i.e. removal of debris) for flood control purposes.

B-2.6.3. Requirements

Eligible partners: States, local, and tribal governments.

Federal funding ceiling: $7,500,000 per fiscal year, $500,000 per project.

Nonfederal costshare: After the first $40,000 of full federal funding, the nonfederal partner must cost share 35 % of planning, design, and construction.

Nonfederal responsibilities: LERRD.

B-2.6.4. Application

There have been no uses in the Great Lakes basin since 1992.

B-2.6.5. Funding

In FY 2000, $44,000 was spent on preliminary studies.

B-3. Navigation

B-3.1. Great Lakes Navigation System (feasibility study)

B-3.2. Small Navigation Projects (CAP)

B-3.3. Soo Lock Replacement Project (specifically authorized project)

B-3.1. Great Lakes Navigation System

B-3.1.1. Authorization

Section 456, WRDA 1999 (PL 106-53).

B-3.1.2. Purpose

This is a feasibility study of undertaking modifications to improve commercial navigation on the Great Lakes navigation system, including locks, dams, harbors, ports, channels, and other related features from Duluth to the St. Lawrence Seaway.

B-3.1.3. Requirements

None specified.

B-3.1.4. Application

The study serves as a review of the recommendations made in the 1985 Great Lakes Connecting Channels and Harbors Report. The Corps conducts the feasibility study in consultation with the St. Lawrence Seaway Development Corporation.

B-3.1.5. Funding

The Corps received full funding for the study at $500,000 in FY 2001 and FY 2002.

B-3.2. Small Navigation Projects (CAP)

B-3.2.1. Authorization

Small Navigation Projects is a continued authority program authorized by Section 107, RHA 1960 (PL 86-645; 33 CFR 263.21), as amended.

B-3.2.2. Purpose

The Corps may use this authority to study and build new projects or make modifications to existing infrastructure to improve navigation in rivers and harbors without specific authorization by Congress. The Corps can use this authority to address both commercial and recreational navigation needs of federal interest in the Great Lakes.

B-3.2.3. Requirements

Federal funding ceiling: $35,000,000 per fiscal year, $4,000,000 per project.

Nonfederal costshare: 50% of the costs for small boat harbor projects and 25% of the costs for inland waterways.

Nonfederal responsibilities: LERRD.

B-3.2.4. Application

Since its authorization, Section 107 has supported 51 projects in the Great Lakes basin. The program was used to build or modify both commercial and recreational navigation projects. The appropriations for the latter were almost exclusively brokered through congressional add-ons, since the federal administration has continuously opposed federal spending for new recreational navigation projects.

Since 1992, Section 107 was used to build three projects, all of which are serving primarily recreational boating purposes: 1) Toussaint River, OH: a navigation channel at the mouth of the river to Lake Erie, 4ft below LWD (low-water data). The project was completed in 1996 at a total cost of $724,500 with a federal share of $347,500. The channel is used by recreational and commercial fishing boaters as well as security boat patrols for the adjoining nuclear power plant. Local sponsor: Carroll Township, OH. 2) Lake Erie – Cooley Canal, Lucas,

OH: two breakwaters and dredging of a shallow-draft navigation channel 4ft below LWD in Cooley Canal on Ohio's south shore of Lake Erie. The project was completed in 2001 at a total cost of $2,441,100 with a federal share of $2,197,000. Local sponsor: Lucas County, OH. 3) Taconite Harbor, MN: a harbor of refuge for small boats navigating the north shore of Lake Superior. The project was completed in FY 2001 at a total cost of $3,852,000 and a federal share of $1,500,000. Local sponsor: State of Minnesota.

B-3.2.5. Funding

In the period from FY 1992 to FY 2002, 29 projects were appraised, of which three entered construction. A total of $8,715,800 was spent.

B-3.3. Soo Replacement Lock

B-3.3.1. Authorization

Section 1149, WRDA 1986.

B-3.3.2. Purpose

To construct a new lock adjacent to the existing Poe Lock at the Soo Locks complex in Sault Sainte Marie, MI.

B-3.3.3. Requirements

The cost-sharing formula requires the Great Lakes states to share 23.8% of the project construction costs, approximately $50 - $55 million, and allows it to be paid over 50 years, interest-free. The Great Lakes Commission has agreed to become the nonfederal project sponsor responsible for coordinating the payment of the cost share.

B-3.3.4. Application

The project has not proceeded to the construction phase and the starting date has not been set.

B-3.3.5. Funding

By the end of FY 2002, total federal expenditures for preconstruction planning and design amounted to $5.6 million dollars. In FY 2002, the administration appropriated $3 million toward construction. The FY 2003 appropriation was adjusted to $2.5 million in construction funds.

B-4. Sediment Transport Analysis and Management Planning

B-4.1. Great Lakes Sediment Transport Models (Great Lakes program)

B-4.2. Regional Sediment Management Demonstration Program (research program)

B-4.1. Great Lakes Sediment Transport Models

B-4.1.1. Authorization

Section 516(e), WRDA 1996 (PL 104-303; 33 USC 2326b(e)).

B-4.1.2. Purpose

The Corps is directed to develop sediment transport models for tributaries to the Great Lakes that discharge to federal navigation channels or AOCs. These models are being developed to assist sate and local resource agencies across the basin in evaluating alternatives for soil conservation and nonpoint source pollution prevention in the tributary watersheds. The ultimate goal is to support state and local measures that will reduce the loading of sediments and pollutants to navigation channels and AOCs, and thereby reduce the costs for navigation maintenance and sediment remediation.

B-4.1.3. Requirements

None specified.

B-4.1.4. Application

A strategy for implementing this authority was developed in 1997 in cooperation with the Great Lakes Commission. The strategy includes four major activities: a technical workshop; a user's workshop; selection of tributaries for model development; and public outreach. The Great Lakes Commission. facilitated coordination with the Great Lakes states, developed an outreach program, and assisted in organizing the technical and user's workshop. The selection of tributaries for model development was coordinated with the Great Lakes states. In its first few years, the Great Lakes Tributary Modeling program has made substantial progress in supporting the needs of Great Lakes states, conservation districts, and local agencies and groups related to soil conservation and non-point pollution prevention.

Based on the priorities established by Great Lakes states, the Corps has focused 1998 and 1999 program efforts on model development at three tributaries (Maumee River, OH/IN; Saginaw River, MI; and Nemadji River, MN/WI). The models for these tributaries were completed by 2002 but are still being expanded and refined.

The model developed for the Maumee River provided baseline data for this largest Great Lakes tributary, which is also the largest contributor of sediment to Lake Erie. In 2002, $450,000 were added to the program budget to expand the modeling effort in order to identify agricultural best management practices that may lower sedimentation in the basin. The model developed for the Nemadji River is being utilized by the State of Minnesota and local soil conservation districts to evaluate the efficacy of various timber harvesting practices on soil and streambank erosion. The model of the Grand Calumet River is being used to support the State of Indiana's

development of TMDLs for the river with supplementary funds from the Corps' RAP Program (Section 401, WRDA 1990), contributions from the state, and a grant from U.S. EPA.

In 2002, the Corps has begun to develop models for five additional tributaries (Grand Calumet River, IN; Buffalo River, NY; Mill and Cascade creeks, PA; and Menomonee River, WI). The “prototype” of the Buffalo River AOC model is already being utilized by Erie County, NY and local soil conservation districts to evaluate the efficacy of various BMPs and land-use planning decisions. In 2003, the Buffalo District initiated two additional modeling efforts at Genesee River, NY; and Black River, OH. The Genesee River model will identify BMPs to slow the flow and thus reduce shoreline erosion and sediment deposition downstream in the navigation channel at the river’s mouth in Rochester, NY. The Black River model supports Ohio's development of TMDLs for the river.

In 2003, additional models are planned for the Grand River in Michigan and the Cuyahoga and Sandusky rivers in Ohio.

B-4.1.5. Funding

Congress has provided $500,000 for the Great Lakes Tributary Models in each FY 1998, 1999 and 2001, $1.25 million in FY 2002, and $2.5 million in FY 2003.

B-4.2. Regional Sediment Management Demonstration Program

B-4.2.1. Authorization

No information found.

B-4.2.2. Purpose

RSM has the objective to increase collaboration and to improve decision-making regarding issues of planning, development, damage reduction, and resource management in coastal regions with a focus on sediments. RSM is further intended to provide improved information on environmental, economic, and social consequences of proposed actions and a better understanding of potential tradeoffs. RSM is expected to result in management plans to guide decisions, actions, and programs, as well as leveraging partner resources. RSM efforts encompass not only geophysical, but also ecological, economic, and institutional components. To successfully conduct RSM, an understanding of regional and local processes is necessary and may require the compilation of sediment budgets, computation of longshore transport rates, and development of comprehensive GIS databases.

B-4.2.3. Requirements

None specified.

B-4.2.4. Application

The Great Lakes region has been designated as one of the demonstration sites for the RSM Program. The region being studied is a 172-mile stretch of the eastern coast of Lake Michigan from Ludington, Michigan at the north end, to Michigan City, Indiana at the south. The goals of the Great Lakes demonstration project are to identify key stakeholders who have a

role in sediment management for the Southeast Lake Michigan Region; collect available coastal data and develop a centralized web page and GIS database for use by all regional stakeholders; improve current coastal programs and Corps operations and maintenance performance by linking navigation, dredging, disposal, and beach nourishment projects; and, to implement regional sediment management practices for the southeast region of Lake Michigan. These results will have direct ties to the operation of Section 111 beach nourishment projects as well as several other Corps studies and projects (National Shoreline Management Study, Lake Michigan Potential Damages Study, National Erosion Control Development and Demonstration Program).

B-4.1.5. Funding

This is new program. In FY 2002, the program was fully funded at $1,500,00.

B-5. Planning Assistance and Technical Support Programs

B-5.1. Floodplain Management Services

B-5.2. Great Lakes Remedial Action Plans and Sediment Remediation (GL program)

B-5.3. Planning Assistance to States

B-5.4. Tribal Partnership Program

B-5.1. Flood Plain Management Services

B-5.1.1. Authorization

Section 206, FCA 1960 (PL 86-845; 33 USC 709a).

B-5.1.2. Purpose

This program enables the Corps to provide technical assistance to states, counties, and cities in planning the prudent use of land subject to flooding from streams and lakes. The service is available to state and local governments without charge, within the limits of available appropriations. It is also available to other federal agencies and private individuals on a fully reimbursable basis. Upon request, the program provides a full range of technical services and planning guidance on floods and flood plain issues within the broad umbrella of flood plain management.

The program authorizes the Corps to compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies, and general criteria for guidance of federal and nonfederal interests and agencies in the use of flood plain areas; and to provide advice to other federal agencies and local interests for their use in planning to ameliorate the flood hazard. Upon request, surveys and guides are made available for states and their political subdivisions. The program is used in coordination with FEMA as well as other federal agencies to ensure that flood control projects and plans are complementary and integrated to the extent practicable and appropriate.

B-5.1.3. Requirements

Federal funding ceiling: $15,000,000 per fiscal year.

B-5.1.4. Application

Generally, this authority is used to answer public or municipal inquiries on floodplain issues. In the Great Lakes basin, the program has been used to provide software training to local governments including state, county, and township representatives and their contractors as well as regional Native American Indian tribes. In addition, the Corps is using the program to conduct meetings for water resources managers across Indiana, Michigan, and Wisconsin to discuss and present best management practices to address agricultural and urban stormwater problems.

B-5.1.5. Funding

In the period from FY 1992 to FY 2002, the program has supported 100 projects in the Great Lakes basin. A total of $5,245,200 was spent.

B-5.2. Great Lakes Remedial Action Plans and Sediment Remediation

See Section B-1.9.

B-5.3. Planning Assistance to States

B-5.3.1. Authorization

Section 22, WRDA 1974 (PL 93-251; 33 USC 2201 et seq.), as amended.

B-5.3.2. Purpose

The program gives the Corps of Engineers a general authority to provide planning assistance to states for the development, utilization, and conservation of water and related land resources. WRDA 1996 has expanded the original authority to include ecosystem and watershed studies. Support under this program can be provided to states and tribal governments. Some municipalities have received support under this authority through agreements with their respective states.

B-5.3.3. Requirements

Eligible partners: States and tribal governments.

Federal funding ceiling: $10,000,000 per fiscal year.

Nonfederal costshare: 50%.

B-5.3.4. Application

Examples of products from this authority include designs of artificial reefs in Lake Michigan to enhance fish habitat and spawning for the Wisconsin DNR, and the screening and assessment of potential brownfield sites in the city of Chicago. The authority is further being

used to study flood damage potential at the smaller tributary level to assist the State of Illinois in establishing priorities.

B-5.3.5. Funding

In the period from FY 1992 to FY 2002, the program has supported 59 projects in the Great Lakes basin. A total of $3,891,200 was spent.

B-5.4. Tribal Partnership Program

B-5.4.1. Authorization

Section 203, WRDA 2000 (PL 106-541; 33 USC 2269).

B-5.4.2. Purpose

To provide planning assistance to Indian tribes for water resources use, development and conservation.

B-5.3.3. Requirements

Nonfederal costshare: 35%.

B-5.3.4. Application

The program is relatively new and has never been used in the Great Lakes basin

B-5.3.5. Funding

Funded in FY 2003 for $2,000,000.

B-6. Water Level Control Activities

B-6.1. International Water Studies

B-6.1.1. Authorization

No specific information found; U.S. obligations under provisions of the boundary water treaties and other international agreements.

B-6.1.2. Purpose

Under the International Water Studies program, the Corps supports the IJC in a wide variety of technical and scientific studies and technical support roles.

B-6.1.3. Requirements

None specified.

B-6.1.4. Application

Funds are used to provide consulting engineering support to IJC boards including the International Lake Superior Board of Control, the ISLRBC and its Working Committee, the International Niagara Board of Control and its Working Committee, and the International Niagara Committee. Funds are further used to provide support for the District Commander's roll as the U.S. Chair of the International St. Lawrence and Niagara Working Committees, the U.S. Regulation Representative to the ISLRBC, the U.S. Chair of the St. Lawrence Committee on River Gauging, and the U.S. On-Site Representative of the International Niagara Committee. Additional support is provided to the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data.

Support to these boards includes providing technical information on the recommendations of regulated flow releases and other routine activities and special studies as directed by the above International Boards and Committees. Coordination with the Canadian counter part (Marine Navigation Services of the Canadian Coast Guard) is a key element of these activities. The routine activities include: gathering and compiling data on water levels, flow releases, and water supplies to the basin; monitoring and coordinating data on the hydropower projects on the Lake Ontario outflow; publication of the St. Lawrence River bulletin; responding to the media, the public and congressional representatives on water levels inquiries; and providing technical expertise to the Boards, Committees and other international groups. The Corps also provides support for and attends semi-annual meetings of the Boards of Control in the spring and fall as well as Committee meetings and information meetings with local communities and agencies.

Project tasks include: regulation of Lake Ontario outflow; diversion monitoring; monitoring the installation and removal of the Niagara river ice boom; collection and dissemination of hydraulic and hydrologic data; data analyses and coordination; water level and flow monitoring; participation in discharge measurements and associated studies; winter and ice monitoring; regulation studies; hydraulic and hydrologic investigations and modeling; participation in various international committees; emergency operations; and performance of all tasks related to water control management, control systems, and control data systems.

B-5.1.5. Funding

In the period from FY 1994 to FY 2002, annual funding for the program has ranged between $288,000 (FY 1999) and $625,700 (FY 1995). The total funding amount for this 9-year period was $3,445,700. Program funding is provided through O&M and GI appropriations.

B-6.2 Lake Michigan Diversion Accounting

B-6.2.1. Authorization

Section 1142, WRDA 1986 (PL 99-662; 33 USC 426k(b)).

B-6.2.2. Purpose

The objective of the program is, in cooperation with the State of Illinois, to make flow measurements, gauge records, make hydraulic and hydrologic computations, including periodic field investigations and measuring device calibrations, necessary to compute the amount of water diverted from Lake Michigan by the State of Illinois and its municipalities, political subdivisions, agencies, and instrumentalities, not including water diverted or used by federal installations.

B-6.2.3. Requirements

Results are to be coordinated with “downstate” interests in Illinois.

B-6.2.4. Application

During the late 1900’s, Chicago Experienced serious water sanitation and flooding problems. As a solution to the problems, the Chicago Sanitary and Ship Canal was built. The construction drastically altered the region’s hydrologic regime by reversing the flow direction of the Chicago River. Since then, water has been diverted from Lake Michigan. Historically, the direct diversion by the Metropolitan Water Reclamation District of Greater Chicago was intended to protect the drinking-water supply from Lake Michigan by carrying treated sanitary wastewater away from the lake and to provide for navigation by allowing barge traffic on the Illinois River between the Mississippi River and Chicago. Currently, the direct diversion is used for water-quality improvement and navigation in the Chicago Sanitary and Ship Canal. Due to a series of lawsuits, the Supreme Court issued a decree in 1967 limiting the amount of Lake Michigan waters to be diverted. The Corps of Engineers is responsible for computing the diversion by the State of Illinois, and the State is responsible for allocating the diverted water.

An accounting report for Water Year (WY) 1995 was completed during WY 1998 and certified in WY 1998. The report came to the conclusion that the State of Illinois was in violation of the Supreme Court decree. The average diversion for WY 81-95 was 3,439 cfs while the decree calls for 40 year average of 3,200 cfs (cubic feet per second). The cumulative deviation, the volume of water diverted over the 3,200 cfs annual limit, is 3,586 cfs-years while the limit is 2,000 cfs-years. The state exceeded the 2,000 cfs-years limit in WY 1988. The State of Illinois is limited to two years with annual average diversion over 3680 cfs. WY 1993, at 3,841 cfs, was the third year to exceed the limit. Also WY 1993 exceeded the absolute diversion of 3,840 cfs.

The Great Lakes states and the Department of Justice have signed a Memorandum of Understanding (MOU) to potentially change the calculation of the diversion flow. The MOU calls for runoff set to a negotiated number instead of using the hydrologic model. The MOU also calls for moving the canal flow measurements from Romeoville to the lakefront structures. In FY 1999, the Corps received funding to perform measurements and studies to evaluate the possible move to lakefront accounting.

B-6.2.5. Funding

Funding information is available from FY 1997 to FY 2000. The annual funding level for the program in this period ranges between $500,397 (FY 2001) and $1,076.336 (FY 1999).

B-6.3. Surveillance of Northern Boundary Waters – IL, IN, MI, MN, NY, OH, PA, WI

B-6.3.1. Authorization

No specific information found; U.S. obligations under provisions of the boundary water treaties and other international agreements.

B-6.3.2. Purpose

This program funds the Corps of Engineers to support international activities and the IJC through various engineering and scientific assignments and to support the IJC boards of control, working committees, and study boards.

B-6.3.3. Requirements

None specified.

B-6.3.4. Application

The Corps uses program funding to 1) support the Coordinating Committee on Great Lakes Basin Hydraulic and Hydrologic data pertaining to coordination of basic data with the Canadian authorities; 2) provide a range of water management products for the Great Lakes system, including water levels, meteorological data, and geographic information systems, water supply forecasts, and water level forecasts; and 3) conduct hydraulic flow measurements throughout the Great Lakes connecting channels and St. Lawrence River system.

B-6.3.5. Funding

In the period from FY 1994 to FY 2002, annual funding for the program has ranged between $3,334,775 (FY 1996) and $4,910,714 (FY 2001). The total funding amount for this nine year period was $41,414,109.