The Civil Works Program of the Army Corps of Engineers: A Primer

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Summary

At the direction of Congress primarily through Water Resources Development Acts (WRDAs), the U.S. Army Corps of Engineers (an agency within the Department of Defense) undertakes water resources projects. The agency's civil works mission has expanded beyond its original responsibility of improving and maintaining navigable channels; the mission now includes flood control, emergency and disaster response, environmental restoration, municipal water infrastructure, and other activities. The non-federal sponsors and the federal government (primarily through the annual Energy and Water Development Appropriations Acts) share the cost of most Corps projects and activities. This report outlines the agency's organization, project development process, civil works appropriations, and evolution of its responsibilities.

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Corps of Engineers and Its Civil Works Program

The U.S. Army Corps of Engineers (Corps) is an agency in the Department of Defense that has military and civilian responsibilities. The military program provides engineering, construction, and environmental management services for Department of Defense agencies. Under its civil works program at the direction of Congress, the Corps plans, constructs, operates, and maintains a wide range of water resources projects. A military Chief of Engineers oversees the Corps' civil and military operations and reports on civil works matters to an Assistant Secretary of the Army for Civil Works. The Corps operates as a military organization with a largely civilian workforce (34,600 civilian and 650 military personnel). Nine divisions coordinate projects in field offices worldwide and 41 district offices.[1] Projects are largely planned at the district level and approved at the division and headquarters levels.

The Corps' oldest civil responsibilities are creating navigable channels and flood control projects. Navigation projects include river deepening, channel widening, lock expansion, dam operations, and dredged material disposal. Flood control projects are intended to reduce riverine and coastal storm damage; these projects range from levees and floodwalls to dams and river channelization. Many navigation and flood control projects are multi-purpose—that is, they provide water supply, recreation, and hydropower in addition to navigation or flood control.

In recent decades, Congress has given the Corps responsibilities in the areas of environmental restoration and infrastructure and other non-traditional activities, such as disaster relief and remediation of formerly used nuclear sites. Environmental restoration activities involve wetlands restoration and environmental mitigation activities for Corps facilities. Environmental infrastructure refers to municipal water and wastewater facilities. The agency's regulatory responsibility for navigable waters extends to issuing permits for private actions that might affect wetlands and other waters of the United States.[2] The economic and environmental impact of Corps projects and the agency's regulatory activities can be significant locally and regionally and at times are quite controversial.

Project Development Process

The Corps currently follows a two-phase planning process that is intended to determine if a water resources project warrants federal investment and inform congressional authorization decisions. Project development is directed by agency guidance and the *Principles and Guidelines for Water and Related Resources Implementation Studies* (P&G). The P&G were prepared by the Water Resources Council (WRC) in 1983 to guide federal water resource development.[3] Projects generally originate from a community (e.g., citizens or businesses) or local government entity requesting assistance with a water resource need that is beyond its capability to alleviate.

[1] Division and district maps available at http://www.usace.army.mil/divdistmap.html.

[2] Sections 10 and 13 of the Rivers and Harbors Act of 1899 (22 U.S.C. 407) require that a permit be obtained from the Corps for alteration or obstruction of and refuse discharge in U.S. navigable water. The Corps also has regulatory responsibilities under other laws, notably Section 404 of the Clean Water Act (33 U.S.C. 1344). Since the mid-1960s, court decisions and administrative actions have altered the jurisdictional reach of the Corps' regulatory program.

[3] WRC was established pursuant to the 1965 Water Resources Planning Act (42 U.S.C. 1962-b2); it is currently dormant due to a lack of funding.

The Corps generally requires two types of congressional authority to initiate a study—study authorization, then appropriations.[4] A study authority allows the Corps to investigate a problem and determine if there is a federal interest in proceeding further. If the Corps has performed a study in the geographic area before, a new study can be authorized by a resolution (known commonly as a "survey resolution") of either the House Transportation and Infrastructure Committee or the Senate Environment and Public Works Committee. If the Corps has not previously investigated the area, the study needs to be authorized in an act of Congress, typically a Water Resources Development Act (WRDA), which often are considered biennially.[5] The majority of Corps studies are currently authorized by survey resolutions.

Once authorized, appropriations for Corps studies are sought through the annual Energy and Water Development Appropriations Acts. The objective of Corps studies is to guide the decision to authorize a Corps project for construction. Early in the study process, the Corps assesses the level of interest and support of non-federal entities that may be potential sponsors. Non-federal sponsors generally are state, tribal, county, or local agencies (e.g., levee district) or governments that join the Corps in the effort.

Based on the results of the study, the Chief of Engineers may sign a final recommendation on the project, known as the Chief's Report. In recent years, Congress has used a favorable Chief's Report as the basis for authorizing projects. Once authorized, federal funds for project construction can be sought through the annual Energy and Water Development Appropriations bills. For more information on the phases of the project development process, see CRS Report RL32064, *Army Corps of Engineers Water Resources Projects: Authorization and Appropriations*, by (name redacted) and (name redacted).

Project Cost-Sharing

How to allocate the cost of Corps projects among non-federal sponsors and the federal government has been debated for decades. WRDA 1986 significantly increased local cost-share requirements; some subsequent WRDAs made further adjustments in cost-sharing.[6] Under current requirements, reconnaissance studies are entirely a federal expense. Local sponsors pay 50% of the cost for feasibility studies, except for inland waterways (100% federal responsibility).[7] The division of federal and non-federal financial responsibilities for construction and operation and maintenance (O&M) vary by project purpose as shown in **Table 1**. In most cases, cost-sharing for pre-construction planning and engineering is determined using the construction requirements in **Table 1**.

[4] Technical assistance and some small projects can be conducted without obtaining a project specific authorization or appropriations., through the Corps' programmatic authorizations known as Continuing Authorities Programs,. These projects of limited size that have defined scope consistent with one of the programmatic authorization can be performed at the Corps' discretion based on the availability of program funds. The authorized programs include activities for beach erosion, navigation, flood control, streambank and shoreline protection, snagging and clearing, modifications to existing projects for the benefit of the environment, and ecosystem restoration.

[5] These acts are commonly distinguished from each other by including a reference to the year of enactment; for example, WRDA 1986 refers to the act passed in 1986.

[6] In addition to authorizing planning and construction projects, Congress uses WRDA to establish policies for the Corps' civil works projects, such as cost-sharing requirements.

[7] Local cost-sharing for the feasibility phase is not required for studies of navigation improvements to the inland waterway system (see 33 U.S.C. 2215 a[2]).

Table 1. Cost-Share Requirements for Corps Projects

Project Purpose	Maximum Federal Share of Construction	Maximum Federal Share of O&M
Commercial Navigation		
Coastal Ports—		
<20 ft. harbor	80%[a]	100%
20-45 ft. harbor	65%[a]	100%
>45 ft. harbor	40%[a]	50%
Inland Waterways	100%[b]	100%
Flood Control	65%	0%
Hydroelectric Power	0%	0%
Municipal and Industrial Water Supply	0%	0%
Agricultural Water Supply	65%[c]	0%
Recreation	50%	0%
Hurricane and Storm Damage Reduction (except Periodic [Beach] Nourishment)	65% (50%)	0% (0%)
Aquatic Plant Control	not applicable	50%
Environmental Restoration		
Congressionally Authorized Projects	65%	0%
Beneficial Uses of Dredged Material and Modification for Improvement of Environment	75%	0%

Source: 33 U.S.C. 2211-2215.

a. These percentages reflect that the non-federal sponsors pay 10% of the cost of the general navigation features of the project over a period not to exceed 30 years.

b. 50% is paid by federal appropriations, and 50% by the Inland Waterway Trust Fund.

c. For the 17 western states where reclamation law applies, irrigation costs are funded by the Corps but ultimately repaid by non-federal users.

Civil Works Appropriations

Congress provides federal appropriations to the Corps primarily for specific projects, rather than through programmatic authorizations.[8] Fiscal priorities and public attitudes in recent decades have produced a decline in federal funding for water resources development projects generally. For example from the mid-1970s to the mid-2000s, the annual funding for the Corps' construction account fell from an average of $4.5 billion to $1.8 billion (in 2004 dollars).[9] Another measure of

[8] In addition to the activities that the Corps performs using appropriations that it receives through direct federal appropriations, the Corps performs reimbursable work for Department of Defense agencies, other federal agencies (e.g., U.S. Environmental Protection Agency), local governments, tribes, U.S. territories, foreign governments, and international organizations. In FY2002, this work totaled $953 million. More information on the Interagency and International Program of the Corps is available at http://www.hq.usace.army.mil/cemp/cn/iishmpg.htm.

[9] CRS updated Information provided by the Corps to Senator Voinovich at his request; available in Senator George V. Voinovich, "Statement," *Corps of Engineers Mission and Backlog of Projects*, Hearing before Subcommittee on (continued...)

the decreased emphasis on water resources development is that the agency's civil works budget fell from more than 1% of federal discretionary spending in the mid-1970s to between 0.6% and 0.5% since 2000.[10]

Funding for the civil works program has often been a contentious issue between the Administration and Congress, with final appropriations typically providing more funding than requested regardless of which political party controls the White House and Congress. The Corps generally maintains strong congressional support because of the direct water resource benefits and indirect economic and political benefits of its projects.

Evolution of Civil Works Mission

Navigation and Flood Control (1802-1950s)

In the 19th Century, the Corps' mission evolved into civil and military building for the nation. In 1824, Congress passed legislation using military engineers for planning roads and canals to move goods and people. In 1850, Congress directed the Corps to engage in its first planning exercise—flood control for the lower Mississippi River. The modern era of federal flood control emerged with the Flood Control Act of 1936 (P.L. 74-738), which declared flood control as a "proper" federal activity and in the national interest. During the 1920s, Congress expanded the Corps' ability to incorporate hydropower into multi-purpose projects and authorized the agency to undertake comprehensive surveys to establish river-basin development plans. The 1944 Flood Control Act (33 U.S.C. 708) significantly augmented the Corps' involvement in large multi-purpose projects. The Flood Control Act of 1950 (33 U.S.C. 701n) began the Corps' emergency operations through authorization for flood preparedness and emergency operations.[11] The Water Supply Act of 1958 (43 U.S.C. 390b) gave the Corps authority to include storage for municipal and industrial water supply in reservoir projects at 100% local cost.

Changing Priorities (1960-1986)

By the late 1960s, construction of major water works had declined. Changing national priorities and local needs, increasing construction costs, and completed projects at most prime locations decreased the attractiveness of water projects. Water supply for traditional off-stream uses, such as domestic, commercial, industrial, and agricultural uses, was increasingly in direct competition with in-stream uses, such as recreation, fisheries, and wildlife habitat. From 1970 to 1985, Congress authorized no major water projects, scaled back several authorized projects, and passed laws that altered project operations and water delivery programs to protect the environment. The 1970s marked a transformation in Corps project planning. The1969 National Environmental Policy Act and the Endangered Species Act of 1973 (16 U.S.C. 1531) required the Corps to consider environmental impacts, increase public participation in planning, and consult with other

(...continued)

Transportation and Infrastructure, Senate Committee on Environment and Public Works, May 16, 2000.

[10] Office of Management and Budget, *Historic Tables, Budget of the United States, Fiscal Year 2006* (Table 5.5), at http://www.whitehouse.gov/omb/budget/fy2006/pdf/hist.pdf.

[11] Emergency response activities are also conducted under the Disaster Relief Act of 1974 (42 U.S.C. 5121), also known as the Stafford Disaster and Emergency Assistance Act.

federal agencies. Executive orders (EO 11988 and EO 11990) united the goals of reducing flood losses and environmental damage by recognizing the value of wetlands and required federal agencies to evaluate potential effects of actions on flood plains and to minimize impacts on wetlands.

Environmental Mission and Local Responsibility (1986-present)

Congress fundamentally transformed the ground rules for Corps water project planning and funding through WRDA 1986 (33 U.S.C. 2211) by establishing new cost-share formulas, resulting in greater financial and decision-making roles for local stakeholders. WRDA 1986 reestablished the tradition of a biennial omnibus authorization bill. Congress has since enacted WRDAs in 1988, 1990, 1992, 1996, 1999, and 2000. WRDA 1986 also provided the Corps with authority to determine if changes can be made in existing structures or operations to improve environmental quality. WRDA 1990 (33 U.S.C. 1252, 2316) explicitly expanded the Corps' mission to include environmental protection and increased the Corps' responsibility for contamination cleanup, dredged material disposal, and hazardous waste management. WRDA 1992 (33 U.S.C. 2326) authorized the Corps to use the "spoils" from dredging in implementing projects for protecting , restoring, and creating aquatic and ecologically-related habitats, including wetlands. WRDA 1996 (33 U.S.C. 2330) gave the Corps the authority to undertake aquatic ecosystem restoration projects. While the Corps has been involved with numerous environmental restoration projects in recent years, WRDA 2000 approved a restoration program for the Florida Everglades that represented the agency's first multi-year, multi-billion dollar effort of this type. These legislative changes have given the Corps environmental responsibility beyond its traditional water resources development projects.

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