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Army Corps of Engineers: Water Resource Authorizations, Appropriations, and Activities

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Summary

The U.S. Army Corps of Engineers undertakes activities to maintain navigable channels, reduce flood and storm damage, and restore aquatic ecosystems. Congress directs the Corps through authorizations, appropriations, and oversight of its studies, construction projects, and other activities. This report summarizes congressional authorization and appropriations processes for the Corps. It also discusses agency activities under general authorities.

Omnibus Authorization Legislation. Congress generally authorizes numerous Corps activities and provides policy direction in an omnibus Corps authorization bill, typically called the Water Resources Development Act (WRDA). The most recent WRDA was enacted in 2007 (P.L. 110-114). WRDAs historically are omnibus bills including many provisions for site-specific activities. How to construct a WRDA bill that complied with House rules related to a moratorium on earmarks complicated WRDA consideration in the 112th Congress. Both chambers have developed and passed omnibus water resources legislation—H.R. 3080, the Water Resources Reform and Development Act (WRRDA), and S. 601, WRDA 2013 (which was later substituted by the Senate into H.R. 3080); conferees for H.R. 3080 were assigned in November 2013. Both bills would authorize new Corps construction projects and some modifications of existing authorizations. Both the bills also include numerous other provisions to address issues with the duration and cost of Corps projects, and would establish new procedures for using Harbor Maintenance Trust Fund monies, in an effort to expand spending above current levels.

Agency Appropriations. Federal funding for Corps civil works activities is provided in annual Energy and Water Development appropriations acts or supplemental appropriations acts. Annual Corps civil works appropriations have ranged from \$4.5 billion to \$5.5 billion in the last decade. An increasing share of the agency's appropriations is used for operations and maintenance. Another trend has been increasing emergency supplemental appropriations. From 1987 to 2013, Congress appropriated \$32.2 billion in Corps supplemental funding. Of this funding, \$30.8 billion came through acts passed between 2003 and 2013. This funding was more than half of the Corps' regular appropriations from 2003 through 2013 (\$55 billion). In part because of competition for funds and because Corps authorizations outpace appropriations, many authorized activities have not received appropriations. There is a backlog of more than 1,000 authorized studies and construction projects. In recent years, few new studies and new construction activities have been in either the President's budget request or enacted appropriations.

Standard Project Development. The standard process for a Corps project requires two separate congressional authorizations—one for investigation and one for construction—as well as appropriations. The investigation phase starts with Congress authorizing a study; if it is funded, the Corps conducts an initial reconnaissance study followed by a more detailed feasibility study. Congressional authorization for construction is based on the feasibility study. For most activities, Congress requires a nonfederal sponsor to share some portion of study and construction costs. These cost-sharing requirements vary by the type of project. For many project types (e.g., levees), nonfederal sponsors are responsible for operation and maintenance once construction is complete.

Other Corps Activities and Authorities. Although the project development process just described is standard, there are exceptions. Congress has granted the Corps some general authorities to undertake some studies, small projects, technical assistance, and emergency actions such as flood-fighting, repair of damaged levees, and limited drought assistance. Additionally, the Corps conducts emergency response actions directed by the Federal Emergency Management Agency.

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Army Corps of Engineers

The U.S. Army Corps of Engineers is an agency in the Department of Defense with both military and civil works responsibilities. Under its civil works program, it plans, builds, operates, and maintains a wide range of water resource facilities. Its civil works responsibilities are principally to support navigation, reduce flood and storm damage, and protect and restore aquatic ecosystems.¹ The agency attracts congressional attention because its projects can have significant local and regional economic benefits and environmental effects. The civil works program is led by a civilian Assistant Secretary of the Army for Civil Works. A military Chief of Engineers oversees the Corps' civil and military operations and reports on civil works matters to the Assistant Secretary for Civil Works. A Director of Civil Works reports to the Chief of Engineers. The Corps' civil works responsibilities are organized under eight divisions that are further divided into 38 districts.²

This report provides an overview of the Corps civil works program, including congressional authorization and appropriations. It reflects consideration of the Water Resources Development Act (WRDA) of 2013 in the Senate (S. 601) and the related Water Resources Reform and Development Act (WRRDA) in the House (H.R. 3080) during the 113th Congress. The report also covers the standard project development process for Corps projects and other Corps activities and authorities. For more on the financial challenges facing the Corps, see CRS Report R41961, *Army Corps Fiscal Challenges: Frequently Asked Questions*, by Nicole T. Carter and Charles V. Stern.

Corps Authorizations

The Corps must be authorized to undertake an activity; the authorization can be project-specific, programmatic, or general.³ While necessary, authorizations are usually insufficient for a Corps study or construction project to proceed; action on an authorization requires funding.

In recent decades, Congress has legislated on most Corps authorizations in omnibus Water Resources Development Acts.⁴ Authorizations at times have appeared in appropriations or supplemental appropriations legislation, especially in years when a WRDA is not enacted. If authorizations are included in an appropriations bill, they could be subject to a point of order on the floor for being non-germane.

¹ Other Corps responsibilities include flood emergency and natural disaster response, such as flood-fighting, repair to damaged levees, and emergency water supply assistance. Congress also has authorized Corps participation in select environmental infrastructure projects (e.g., municipal water and wastewater treatment systems) and other nontraditional activities. The **Appendix** provides more on the evolution of Corps civil works missions and authorities.

² A division map and district links are available at <http://www.usace.army.mil/about/Pages/Locations.asp>.

³ While most Corps authorizations are in legislation, many studies are undertaken under other authorities. Authorizing committees can authorize a study to reexamine a geographic area previously studied by the Corps for a similar purpose; this authority derives from §4 of the Rivers and Harbors Act of 1913 (37 Stat. 801, 33 U.S.C. §542). Similarly, some studies reviewing operations of completed projects proceed under general study authorizations without congressional action; this is pursuant to §216 of the Flood Control Act of 1970 (P.L. 91-611, 33 U.S.C. §549a).

⁴ WRDAs are distinguished from each other by referencing the year of enactment; that is, WRDA 1986 refers to the act passed in 1986. The authorizing committee generally develops a bill for introduction by the chairperson; alternatively, the Administration can propose a bill for congressional consideration. Once a committee of jurisdiction—the House Transportation and Infrastructure Committee or the Senate Environment and Public Works Committee—decides to consider a WRDA or similar legislation, Members of Congress often may request inclusion of particular provisions. If the Administration proposes a WRDA, Congress generally receives the proposal at the same time as the President's budget. More than a decade has passed since the last Administration-proposed WRDA bill.

WRDAs generally authorize Corps studies, projects, and programs and establish policies for Corps civil works activities (e.g., nonfederal cost-share requirements). A WRDA is not a reauthorization bill, but an authorization bill. That is, WRDAs generally authorize new activities which are added to the pool of existing authorized activities.⁵ Most project-specific authorizations in WRDAs fall into three general categories: project studies, construction projects, and modifications to existing project authorizations.

WRDAs do not appropriate funds for activities; project funding is provided typically through the annual appropriations process for the agency. That is, congressional authorizations make certain projects and activities eligible for receiving federal funding. While use of monies from trust funds associated with Corps activities generally requires congressional appropriations action (i.e., the funds are on-budget), a WRDA may be a legislative vehicle for altering trust fund collections and disbursement policies and procedures.

New Construction Projects Awaiting Authorization

Although WRDAs consists of many elements, a common prominent feature is authorizing studied activities for construction. The universe of studied activities awaiting congressional authorization generally is increasing as additional reports are completed and transmitted from the Administration to Congress. The Corps has roughly 200 active feasibility studies; a number are completed or nearing completion. Between the most recent enactment of a WRDA in 2007 (P.L. 110-114) and January 2014, the Assistant Secretary of the Army (Civil Works) had transmitted to Congress 23 reports for congressional construction authorization. Another 7 reports were completed and awaiting transmittal to Congress, which would occur after a policy review by the Assistant Secretary of the Army and the Office of Management and Budget; these projects have completed reports with favorable recommendations by the agency's Chief of Engineers, referred to as a Chief's Report. Of these 30 completed studies, H.R. 3080 would authorize a fixed set of 23 new construction projects and project scope modifications at a total cost of \$13.0 billion (\$7.7 billion in federal costs and \$5.3 billion in nonfederal costs), and two project cost modifications. Instead of identifying specific projects for new construction authorizations and authorizations of modifications, §1002 of S. 601 would authorize any new construction project or project modification meeting specified criteria. As of early January 2014, 23 projects at a total cost of \$22.9 billion (\$14.1 billion federal and \$8.8 billion nonfederal) appeared to meet the criteria.⁶

Most Recent Developments in Omnibus Authorization Legislation

The 113th Congress is confronted with multiple Corps authorization and policy issues, some of which have been addressed in proposed WRDA bills in the House and the Senate. Recent WRDA consideration has been shaped by multiple factors, including congressional earmark debate,⁷ backlog of authorized but unconstructed projects, rate of project delivery, use and balance of navigation trust funds, opportunities for innovative financing, and nonfederal role in project delivery. Some stakeholders also are interested in returning to a more frequent enactment of WRDA, which was originally discussed as a biennial authorization bill.

⁵ Typically only a few projects are removed from the pool through legislation or the deauthorization processes.

⁶ When the Senate passed S. 601 on May 15, 2013, there were 19 projects representing \$10.8 billion (\$6.3 billion federal and \$4.5 billion nonfederal) in construction costs that appeared to meet the criteria in §1002.

⁷ Earmark moratoriums that apply not only to appropriations but also authorizations of site-specific projects have influenced recent congressional action related to the Corps.

Some stakeholders support enactment of a WRDA in order to address developments since WRDA 2007, including authorization of new construction projects and changes to authorized construction projects.⁸ Supporters of action on WRDA also point to the short-term employment and long-term economic and environmental benefits of water resources projects as a reason for WRDA action. Others argue that a typical WRDA may exacerbate rather than alleviate issues with the Corps, such as a growing backlog of authorized projects. These interests argue that if WRDA consideration is pursued, the bill should establish authorization and funding priorities, manage the backlog, and improve performance at the project and agency level.

Brief descriptions of House and Senate action on Corps omnibus authorization legislation are provided below. For more information, CRS Report R43298, *H.R. 3080 and S. 601: Side-by-Side Comparison of Selected Provisions*, by Nicole T. Carter et al., provides a more detailed discussion of a number of provisions in both bills.

WRDAs in Recent Decades

Beginning in 1986, a biennial WRDA cycle was loosely followed for a number of years. WRDAs were enacted in 1988 (P.L. 100-676), 1990 (P.L. 101-640), 1992 (P.L. 102-580), 1996 (P.L. 104-303), 1999 (P.L. 106-53), and 2000 (P.L. 106-541). WRDA 1986 marked the end of a stalemate between Congress and the executive branch regarding authorizations. It resolved long-standing disputes related to cost-sharing, user fees, and environmental requirements. Prior to 1986, disputes over these and other matters had largely prevented enactment of major civil works legislation since 1970. Biennial authorizations were resumed after WRDA 1986 to avoid long delays between the planning and execution of projects and so that Congress could review proposed projects on a regular basis. Pressure to authorize new projects, increase authorized funding levels, and modify existing projects is often intense, thus promoting a fairly regular biennial consideration of WRDA, although enactment has been less consistent. Controversial project authorizations and disagreements over the need for and direction of changes to the way the Corps plans, constructs, and operates projects contributed to WRDA bills not being enacted in the 107th, 108th, and 109th Congresses. The 110th Congress enacted WRDA 2007 in November 2007, overriding a presidential veto.

House Action

The House Transportation and Infrastructure (T&I) Committee marked up H.R. 3080, the Water Resources Reform and Development Act of 2013, in September 2013. The House passed the bill in October 2013, and began conference with the Senate on its Corps omnibus authorization bill in November 2013. The WRRDA title is in lieu of the more traditional WRDA. According to the committee's press release,

This legislation will contain no earmarks and will make major reforms to increase transparency, accountability, and Congressional oversight in reviewing and prioritizing future water resources development activities. WRRDA will cut federal red tape and bureaucracy, streamline the project delivery process, promote fiscal responsibility, and strengthen our water transportation networks to promote American competitiveness, prosperity, and economic growth.⁹

H.R. 3080 as passed by the House includes provisions to:

⁸ No estimate is publicly available of the total construction cost associated with post-authorization change studies of construction projects that require authorization modifications in order to proceed as a result of cost increase or significant project changes.

⁹ House Transportation and Infrastructure Committee, "Shuster and Gibbs Announce Plans for Committee to Consider Water Resources Reform Legislation in September," press release, August 2, 2013.

- authorize 23 specific new construction projects, which the bill identifies as totaling \$13 billion (almost \$7.7 billion in federal costs, and \$5.3 billion in nonfederal costs);¹⁰
- establish a deauthorization process that begins with the Secretary of the Army (Civil Works) identifying \$12 billion in authorized federal costs associated with pre-WRDA 2007 projects that meet certain criteria;
- alter the process by which Corps projects are studied and delivered (e.g., eliminating the reconnaissance study, altering the environmental review process);
- expand the authorities for nonfederal contributions and roles (e.g., maintenance of harbors);
- authorize a public-private project delivery pilot program for 15 projects;
- establish target appropriations levels from the Harbor Maintenance Trust Fund (HMTF), expand HMTF eligible activities (e.g., berth dredging, dredging of some contaminated sediment), and provide direction on the distribution of HMTF funds among different types of harbors;
- authorize modifications to inland waterways financing and project development, including alterations to the delivery process and cost-sharing requirements for one construction project, and a study of potential future revenue sources;¹¹
- authorize technical assistance for state levee safety programs (no authorized amount specified); and
- clarify crediting arrangement for work by nonfederal sponsors.

Senate Action

Senate consideration of its WRDA 2013, S. 601, began in March 2013; the bill was reported by the Senate Environment and Public Works (EPW) Committee with S.Rept. 113-13. S. 601 as passed by the Senate would authorize Corps activities and modifications of existing authorizations that meet certain criteria; the bill includes numerous other provisions as it attempts to address issues concerning the duration and cost of Corps projects. The bill also would establish new procedures for using HMTF monies, in an effort to expand spending above current levels. Among other things, S. 601 includes project-related provisions that

- authorize new Corps construction projects and a process for proceeding with modifications to existing authorizations;
- amend the process for environmental compliance for Corps activities;¹² and

¹⁰ The Subcommittee on Water Resources and Environment held a hearing on June 5, 2013, on water resources infrastructure projects; the hearing focused on Corps projects that had a completed Chief's Report and the process to develop these reports (U.S. Congress, House Transportation and Infrastructure, Water Resources and Environment, *A Review of the United States Army Corps of Engineers Chief's Reports* [video], 113th Cong., 1st sess., June 5, 2013, <http://transportation.house.gov/hearing/review-united-states-army-corps-engineers-chief%E2%80%99s-reports>). The projects discussed at the hearing are the basis for the projects included in the House-passed H.R. 3080.

¹¹ The Inland Waterway Trust Fund (IWTF) has a declining balance that appears to have limited waterway construction in recent years. H.R. 3080 would authorize changes to the inland waterways project delivery process. For more details on the IWTF and proposals for altering inland waterways financing arrangement, see CRS Report R41430, *Inland Waterways: Recent Proposals and Issues for Congress*, by Charles V. Stern. For additional information on the evolution and options for inland waterway financing, see CRS Report R43101, *Inland Waterways: Financing and Management Options in Federal Studies*, by John Frittelli

¹² CRS Report R43209, *Environmental Requirements Addressed During Corps Civil Works Project Planning*: (continued...)

- authorize an effort to review and possibly deauthorize activities approved by Congress prior to WRDA 1996.

S. 601 would change water resource project financing through provisions that

- expand crediting opportunities for nonfederal work on Corps projects and increase the opportunities for nonfederal roles in project management;¹³ and
- create new funding mechanisms for certain projects, such as a pilot program for the Corps and the U.S. Environmental Protection Agency (EPA) to provide financial assistance in the form of direct loans and loan guarantees for certain flood control and water supply projects.¹⁴

For navigation infrastructure, S. 601 would

- establish new procedures for using the Harbor Maintenance Trust Fund (HMTF) monies, in an effort to expand harbor maintenance spending above current levels;¹⁵ and
- authorize limited alterations to inland waterways financing and project development, including alterations to the delivery process for these projects and alterations to inland waterway cost-sharing for rehabilitation projects and one construction project.¹⁶

S. 601 would address flood infrastructure issues through provisions that

- expand Corps authorities for levee improvements and certifications (see box on “Limited Corps Role in NFIP Levee Data Certification” on page 20);¹⁷
- authorize federal support for the creation of state levee safety programs and grants for levee safety activities;¹⁸ and

(...continued)

Background and Issues for Congress, by Linda Luther, describes Corps projects and environmental compliance.

¹³ A CRS analysis of the proposed changes is available to congressional offices upon request (Congressional Distribution Memorandum: “Credit for Nonfederal Work on Army Corps Projects” by Nicole T. Carter, April 12, 2013).

¹⁴ While WRDA bills generally have been focused on Corps civil works activities, other agencies’ activities have been included when water resources actions are undertaken in collaboration or jointly with the Corps (e.g., FEMA’s role in the National Dam Safety Program). The new funding mechanism is among several proposals for financing water infrastructure; for a discussion of the legislative options for water infrastructure financing, see CRS Report R42467, *Legislative Options for Financing Water Infrastructure*, by Claudia Copeland, Steven Maguire, and William J. Mallett, and CRS Report R43315, *Water Infrastructure Financing: Proposals to Create a Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Claudia Copeland.

¹⁵ The HMTF has a growing balance. For more on the HMTF, see CRS Report R41042, *Harbor Maintenance Trust Fund Expenditures*, by John Frittelli.

¹⁶ S. 601 would authorize changes to the inland waterways project delivery process; alter cost-sharing for these projects so that the federal government is responsible for paying all rehabilitation costs less than \$20 million out of the General Revenue fund (previously the federal government only covered costs less than \$8 million); for more on the fund and its history and issues, see footnote 11.

¹⁷ For more on levee policy, a CRS memorandum is available to congressional offices upon request (Congressional Distribution Memorandum: “Levee Policy Development During the 113th Congress” by Nicole T. Carter, September 5, 2013).

¹⁸ The S. 601 national levee safety program is similar to recommendations by the National Levee Safety Committee established by WRDA 2007. It would promote establishment of state and tribal levee safety programs through a federal grant program, create a National Levee Safety Advisory Board to annually report on the program, and establish federal leadership in developing national levee safety standards and guidelines and the provision of technical assistance.

- reauthorize appropriations (which expired in September 2011) for and modify the National Dam Safety Program.

While S. 601 and H.R. 3080 provide authorization and congressional direction on a number of the same topics, they often propose different legislative solutions. S. 601 also includes a number of provisions with no counterparts in H.R. 3080 (e.g., Corps-EPA pilot program for loans, federal support for levee safety programs and related grants).

Administration Action

The Assistant Secretary of the Army (Civil Works) commented on the Administration's preferences for a WRDA bill in the 113th Congress in various letters sent to the Senate EPW, House T&I, and to the conference managers.¹⁹ For many of the topics raised in the letters, the approach taken in the bills and the Administration's desired direction for the Corps authorizations and policies do not appear to coincide. For example, the Administration raised concerns about both what is included in the bills (e.g., significant increases to federal spending for harbor maintenance, reduced nonfederal cost shares for some projects, and changes to environmental review of projects) and what was not included (e.g., Administration's proposal to raise more revenue for inland waterway construction financing). At the same time, the Administration has also expressed support for waterways improvements.

Other Corps Authorization Issues

While S. 601 and H.R. 3080 address a number of Corps authorization issues, several additional topics of interest to stakeholders may receive attention during the 113th Congress. Among the additional issues are those associated with legislation introduced in the 113th Congress, including:

- adjustments to the Inland Waterway Trust Fund that would further alter financing for these projects (H.R. 1149);
- barring the Corps from promulgating or enforcing regulations that prohibit possessing firearms, including assembled and functional firearms, at Corps water resources projects (H.R. 2046 and Section 113 of H.R. 2609; for more information see CRS Report R42602, *Firearms at Army Corps Water Resource Projects: Proposed Legislation and Issues for Congress*, by Nicole T. Carter);
- amending the Water Supply Act of 1958 (H.R. 2813; for more, see CRS Report R42805, *Reallocation of Water Storage at Federal Water Projects for Municipal and Industrial Water Supply*, by Cynthia Brougher and Nicole T. Carter);
- establishing policies for fees associated with Corps facilities on the Missouri River (H.R. 2741; see CRS Report R42836, *Federal and State Authority over Surplus Water Stored at Federal Water Projects*, by Cynthia Brougher); and
- altering the Corps recreational fee authorities (S. 400).

Energy and Water Development Appropriations

The rate of Corps authorizations exceeds the rate of the agency's annual appropriations. Consequently, only a subset of authorized activities are included in the President's budget request and funded by enacted appropriations. This results in competition for funds among authorized activities during the appropriations process. To concentrate limited resources and to move ongoing projects toward completion, budget requests by the George W. Bush and Obama

¹⁹ Letter from Jo-Ellen Darcy, Assistant Secretary of the Army, Civil Works, to Senator Barbara Boxer, Senator David Vitter, Representative Bill Shuster, and Representative Nick J. Rahall, II, December 11, 2013, http://www.eenews.net/assets/2013/12/12/document_daily_03.pdf.

Administrations have focused funding on projects near completion, and have limited new studies and projects. Both Administrations also have focused funds on projects within the Corps' primary missions of flood and storm damage reduction, navigation, and aquatic ecosystem restoration. While this report addresses Corps appropriations in general, the following CRS reports provide more detailed information and analysis of Corps funding issues:

- CRS Report R43069, *Energy and Water Development: FY2014 Appropriations, Preliminary Tables*, coordinated by Carl E. Behrens;
- CRS Report R42498, *Energy and Water Development: FY2013 Appropriations*, coordinated by Carl E. Behrens;
- CRS Report R41961, *Army Corps Fiscal Challenges: Frequently Asked Questions*, by Nicole T. Carter and Charles V. Stern; and
- CRS Report R42841, *Army Corps Supplemental Appropriations: Recent History, Trends, and Policy Issues*, by Charles V. Stern and Nicole T. Carter.

Enacted annual Corps civil works appropriations (excluding supplemental appropriations) have remained steady or increased slightly over the last decade, ranging from \$4.5 billion to \$5.5 billion in recent years. As the agency's inventory of infrastructure grows and ages, an increasing share of the agency's appropriations is used for operations and maintenance.²⁰

Another trend has been increasing emergency supplemental appropriations for the agency. From 1987 to 2013, Congress appropriated \$32.2 billion in supplemental funding to the Corps.²¹ Of this funding, \$30.8 billion came through supplemental appropriations acts passed between 2003 and 2013. This funding was approximately half of the amount provided to the Corps for regular appropriations over this same period (\$55 billion).

Roughly 85% of the Corps budget is for geographically specified studies or projects. Funding for geographically specific studies or projects requested in the Administration's budget or identified in agency-developed work plans (which have been used for FY2011, FY2012, and FY2013, and for portions of the agency's FY2014 funding) are not considered congressional earmarks. Prior to FY2011 and the onset of congressional earmark moratoria, congressional appropriations to the Corps generally funded a larger set of studies, projects, and maintenance activities (e.g., dredging of low- and medium-use harbors) than proposed by the Administration. This makes the Corps a significant part of the debate over the impact and efficacy of earmarking (also referred to as congressionally directed spending).

Most recently, due in part to earmark moratoria, congressionally directed additions have largely been for broad categories of ongoing activities not included in the President's budget (e.g., additional funding for harbor maintenance), with the Corps responsible for selecting which projects are funded based on the direction provided by Congress.

²⁰ For more information, see U.S. Congress, Senate Energy and Natural Resources, Water and Power, *Hearing to Address Aging Water Resource Infrastructure in the United States* (video), 113th Cong., 1st sess., July 25, 2013, <http://www.energy.senate.gov/public/index.cfm/hearings-and-business-meetings?ID=59c93dec-c9da-4f94-a15f-be363706c1d4>.

²¹ This includes \$5.3 billion in supplemental funds provided for response and recovery related to Hurricane Sandy in P.L. 113-2.

Nonfederal Funding of and Action on Corps Projects

Nonfederal entities recently have shown interest in conducting the required studies and construction activities for Corps water resources projects and for augmenting the federal appropriations for specific Corps water resources projects. These authorities may receive some attention during the 113th Congress as nonfederal interests seek ways to move their water resources projects forward. These authorities include the following.

- 33 U.S.C. Section 701h allows the Secretary of the Army to accept contributed funds from states and their political subdivisions for work on any authorized Corps water resources development study or project in connection with federal funds when considered in the public interest by the Secretary.
- 33 U.S.C. Section 560 allows the Secretary to accept funds contributed by private parties for authorized work for public improvement of rivers and harbors if considered advantageous for navigation.
- 33 U.S.C. Section 701b-13 provides that a nonfederal interest may undertake flood control activities, including studies and construction, and later may be reimbursed (subject to the availability of federal funds) or credited for its portion of the work subject to the approval of the Secretary of the Army.
- 33 U.S.C. Section 2231 provides that a nonfederal interest may use its funds to undertake a study of a proposed harbor or inland harbor project and may be credited for its portion of the work subject to the Secretary's approval.
- 33 U.S.C. Section 2232 provides that a nonfederal interest may perform navigation construction activities for authorized projects with the Secretary's approval, and may be reimbursed for the nonfederal portion of the construction work if federal funds become available.

These authorities come with risks and challenges for nonfederal entities (e.g., slow or no federal reimbursement) and can require significant up-front financing by nonfederal interests. For example, Corps studies and construction projects must comply with applicable federal laws and regulations. Producing a compliant study or construction project may be a challenge for many nonfederal interests.

Few new Corps studies or projects have received funding in recent fiscal years. New activities or activities that have not recently received funding in Administration requests are often referred to as “new starts.” Since FY2011, Congress has included in enacted appropriations bills a provision that prohibits funding for all new starts. As a result, the majority of studies and construction projects authorized in WRDA 2007 remain without federal funding. The Consolidated Appropriations Act, 2014 (P.L. 113-76) would provide the Corps with limited authority and funding to initiate a maximum of nine new start studies and four new start construction projects.

Standard Corps Project Delivery Process

The congressional authorization and the appropriations processes are critical steps in a multi-step process to deliver a Corps project. This section describes the standard study and construction process for most Corps projects, and some exceptions to the standard process. The standard process consists of the following basic steps (also see **Table 1**):

- Study authorization is obtained in WRDA or a committee resolution.
- The Corps performs a reconnaissance study using appropriated funds.
- The Corps performs a feasibility study if the reconnaissance study is favorable and funds are appropriated.
- Construction authorization is pursued. The Corps can perform preconstruction engineering and design while construction authorization is being pursued.
- Congress authorizes construction, and the Corps constructs the project if funds are appropriated.

The process is not automatic. Appropriations are required to perform studies and undertake construction; that is, congressional study and construction authorizations are necessary but

insufficient for the Corps to pursue a project. For most activities, the Corps also needs a nonfederal sponsor to share the study and construction costs. Nonfederal sponsors generally are state, tribal, county, or local agencies or governments. Although sponsors typically need to have some taxing authority, some Corps activities can be cost-shared with nonprofit and other entities. Since WRDA 1986 (P.L. 99-662), nonfederal sponsors are responsible for a significant portion of the financing of studies, construction, and operation and maintenance (O&M) of most projects. Generally, projects take longer than the times shown to complete the steps shown in **Table 1** because they have to wait for appropriations or congressional authorizations.

Table 1. Corps Project Phases, Average Phase Duration If Fully Funded, and Federal Cost

	Reconnaissance	Feasibility	Preconstruction Engineering and Design (PED)	Construction	Operation & Maintenance
Avg. Duration (years), once congressionally authorized and funded	1	2-3	approx. 2	varies	authorized project duration
Federal Share of Costs	100%	50% ^a	varies by project purpose ^b	varies, see Table 2	varies, see Table 2

Source: CRS.

- a. Inland waterways feasibility studies are a 100% federal responsibility (33 U.S.C. §2215). These projects are not considered “local” by their nature.
- b. Generally PED costs shares are the same as construction cost-shares in **Table 2**.

Study Authority to Initiate a Corps Project

A Corps project starts with a study of the water resource issue and alternatives to address it. The purpose of the Corps study process is to inform federal decision-makers on whether there is a federal interest in authorizing a Corps construction project. The Corps generally requires two types of congressional action to initiate a study—study authorization and then appropriations. Interest in Corps assistance with a water resource need often originates with a request from a local or state government entity or community, business, or other local interests.

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.²² To be eligible for a resolution authorization, the new study must stay within the scope of the authorization of the original completed report. If the Corps has not previously investigated, Congress needs to authorize the study in legislation, typically WRDA.

Once a study is authorized, appropriations are sought through the annual Energy and Water Development appropriations acts. Within the Corps, projects are largely planned at the district level, and approved at the division and Corps headquarters. Early in the study process, the Corps assesses the level of interest and support of nonfederal entities that may be potential sponsors.

²² To request a study’s inclusion in a resolution, a Member of Congress may send a letter to the chairman of the House T&I Committee or the Senate EPW Committee. The number of studies authorized by resolution varies by Congress. The 108th Congress authorized 63 studies via survey resolutions; the 109th Congress authorized 29.

The reconnaissance study, feasibility study, and preconstruction engineering and design are conducted under a single congressional study authorization. The length of each phase varies by project, with larger and more complex projects typically requiring a longer process.

Reconnaissance Study

The reconnaissance study investigates the nature of the water resources problem and assesses the federal government's interest. The reconnaissance study also examines the interest of nonfederal sponsors, who generally are involved in all phases of project delivery. Corps policy is to complete most reconnaissance studies within 12 months. The costs of reconnaissance studies and their related project study plans generally are limited to \$100,000 at full federal expense. Around one-third of reconnaissance studies eventually lead to feasibility studies; some 16 of every 100 reconnaissance studies lead to constructed projects.²³

Feasibility Study and Construction Authorization

If a nonfederal sponsorship is secured and the Corps recommends proceeding, a feasibility study begins. The cost of the feasibility study (including related environmental studies) is split equally between the Corps and the nonfederal project sponsor, as shown in **Table 1**. The objective of the feasibility study is to formulate and recommend solutions to the water resources problem identified in the reconnaissance phase. During the first few months of a feasibility study, the local Corps district formulates alternative plans, investigates engineering feasibility, conducts benefit-cost analyses, and assesses environmental impacts under the National Environmental Policy Act of 1969 (NEPA, 42 U.S.C. §4321).²⁴ The evaluation of federal water resources projects, including Corps activities, is governed by the 1983 *Principles and Guidelines for Water and Related Resources Implementation Studies*, written by the Water Resources Council, and policy direction provided in WRDA bills and other enacted legislation.²⁵ An important outcome of the feasibility analysis is determination of whether the project warrants further federal investment (i.e., whether it has sufficient national economic development benefits).

The feasibility phase ends when the Chief of Engineers signs a final recommendation on the project, known as the Chief's Report. The Corps sends an "informational copy" of the Chief's Report to Congress when it transmits the report to the Assistant Secretary and the Office of Management and Budget (OMB). Since the mid-1990s, Congress has authorized a significant number of projects based on these informational copies, prior to the projects receiving a full review by the Assistant Secretary and OMB. Congress also has authorized construction of a small set of projects prior to the availability of informational copies of feasibility studies; these construction authorizations generally are contingent on a favorable Chief's Report or a determination of feasibility by the Secretary of the Army.

Once construction is authorized and funds appropriated, the Corps typically functions as the project manager; that is, Corps staff typically are responsible for implementing construction.

²³ General Robert B. Flowers, Army Corps Chief of Engineers, oral statement, *Reforms to Address the Corps of Engineers Feasibility Studies*, hearing before Senate EPW Subcommittee on Transportation and Infrastructure on March 15, 2001, available at http://epw.senate.gov/stml_107.htm. More recent statistics are not publicly available.

²⁴ CRS Report R43209, *Environmental Requirements Addressed During Corps Civil Works Project Planning: Background and Issues for Congress*, by Linda Luther, discusses in detail how the Corps study process is combined with its NEPA compliance process.

²⁵ Available at <http://www.usace.army.mil/CECW/Pages/pgr.aspx>. Pursuant to WRDA 2007, the Administration is updating the *Principles and Guidelines*; information on the revision process is available at <http://www.whitehouse.gov/administration/eop/ceq/initiatives/PandG>.

While some construction may be performed by Corps personnel and equipment, the majority of work is contracted out to private engineering and construction contractors. Post-construction ownership and operations responsibilities depend on the type of project. When construction is complete, the Corps may own and operate the constructed project (e.g., navigation projects), or ownership may transfer to the nonfederal sponsor (e.g., most flood damage reduction projects).

Cost Shares for Construction and Operation and Maintenance

The feasibility study also evaluates how construction costs will be split between the federal government and the nonfederal sponsor. The cost-share responsibilities for construction and O&M varies by project purpose, as shown in **Table 2**. Corps projects generally have primary purposes of navigation, flood and hurricane storm damage reduction, and/or aquatic ecosystem restoration. The agency also has the authority to undertake activities with other purposes as part of multi-purpose projects. **Table 2** lists these additional project purposes, which can be added to a project that has at least one of the three primary purposes at its core.

How to allocate the construction and O&M costs of Corps projects among nonfederal 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. The waiving of cost-share requirements for individual projects is infrequent and typically requires specific authorization by Congress. Congress has established that the cost shares shall be subject to the nonfederal sponsors' ability to pay (33 U.S.C. §2213(m)(2)).²⁶ Which contributions should be credited toward the nonfederal cost share—for example, in-kind services and work performed prior to the signing of a construction agreement—has also been debated; Section 2003 of WRDA 2007 (42 U.S.C. §1962d-5b) provided congressional direction on this subject.

Engineering and Design

The study phase—preconstruction engineering and design—that follows the feasibility analysis takes two years, on average, and is conducted while pursuing congressional authorization for the project and construction funding (33 U.S.C. §2287). Preconstruction costs are distributed between the federal and nonfederal sponsor in the same proportion as the cost-share arrangement for the construction phase. Once the project receives congressional authorization, federal funds for construction are sought in the annual Energy and Water Development Appropriations Act. The federal cost share for construction varies by project purpose. Nonfederal parties are responsible for all operation and maintenance expenses, absent a few exceptions, mainly for harbors and inland waterways.

Changes After Construction Authorization

A project is likely to undergo some changes after authorization. If project features or the estimated cost change significantly, additional congressional authorization may be necessary. Authorization for a significant modification is typically sought in a WRDA. For less significant modifications, additional authorization is often not necessary. Section 902 of WRDA 1986 (33 U.S.C. §2280) allows for increases in total project costs of up to 20% without additional authorization for modifications that do not *materially* change the project's scope or function.

²⁶ The most recent publicly available guidance on how the Corps implements the ability to pay provision is from 1989, which is available at <http://140.194.76.129/publications/eng-regs/er1165-2-121/toc.htm>. It does not reflect enacted changes in the Corps authority, including those in Section 2019 of WRDA 2007.

Table 2. Standard Cost-Shares for Construction and Operation of New Corps Projects

Project Purpose	Maximum Federal Share of Construction	Maximum Federal Share of O&M
Navigation		
Coastal Ports—		
<20 ft. harbor	80% ^a	100% ^b
20-45 ft. harbor	65% ^a	100% ^b
>45 ft. harbor	40% ^a	50% ^b
Inland Waterways	100% ^c	100%
Flood and Hurricane Damage Reduction		
Inland Flood Control	65%	0%
Coastal Hurricane and Storm Damage Reduction except Periodic Beach Renourishment	65%	0%
Repair of Damaged Flood and Coastal Storm Projects		
Locally Constructed Flood Projects	not applicable	80% ^d
Federally Constructed Flood and Coastal Projects	not applicable	100% ^d
Aquatic Ecosystem Restoration	65%	0%
Multi-Purpose Project Components		
Hydroelectric Power	0% ^e	0%
Municipal and Industrial Water Supply Storage	0%	0%
Agricultural Water Supply Storage	65% ^f	0%
Recreation at Corps Facilities	50%	0%
Aquatic Plant Control	not applicable	50%
Environmental Infrastructure (typically municipal water and wastewater infrastructure)	75% ^g	0%

Source: 33 U.S.C. §§2211-2215, unless otherwise specified below.

- a. These percentages reflect that the nonfederal sponsors pay 10%, 25%, or 30% during construction and an additional 10% over a period not to exceed 30 years.
- b. Appropriations from the Harbor Maintenance Trust Fund, which is funded by collections on commercial cargo imports at federally maintained ports, are used for 100% of these costs.
- c. Appropriations from the Inland Waterway Trust Fund, which is funded by a fuel tax on vessels engaged in commercial transport on designated waterways, are used for 50% of these costs.
- d. 33 U.S.C. §701n. Repair assistance is restricted to projects eligible for and participating in the Corps' Rehabilitation and Inspection Program and to fixing damage caused by natural events.
- e. Capital costs initially are federally funded and are repaid by fees collected from power customers.
- f. For the 17 western states where reclamation law applies, irrigation costs initially are funded by the Corps but repaid by nonfederal water users.
- g. Most environmental infrastructure projects are authorized with a 75% federal cost share; a few have a 65%.

Study and Project Deauthorization

Although WRDA largely is an authorization bill, Congress at times has used WRDA to reauthorize activities that would soon expire under established deauthorization processes or that were already deauthorized. Authorizations of Corps construction projects generally are not time-

limited; however, there are processes to begin deauthorization of studies and projects that have not been funded for five years. Congress has established two deauthorization processes, one for Corps studies and one for projects, unless congressional appropriations action is taken.

Under 33 U.S.C. Section 579a(b)(2), the Secretary is directed to annually transmit to Congress a list of authorized projects and project elements with no obligations of funding during the last full five fiscal years. The project deauthorization list is published in the *Federal Register*. If funds are not obligated for the planning, design, or construction of the project or element during the next fiscal year, the project or element is deauthorized. The Secretary last transmitted a new list of construction projects eligible for deauthorization in 2007; those deauthorizations became final in 2009. Without a secretarial transmittal of a list, the deauthorization process is not initiated. There have been no deauthorizations under this authority since 2009.

Under 33 U.S.C. Section 2264, every year the Secretary of the Army is directed to transmit a list to Congress of incomplete authorized studies that have not received appropriations for five full fiscal years. The study list is not published in the *Federal Register*. Congress has 90 days after submission of the study list to appropriate funds; otherwise the study is deauthorized. CRS has no data indicating that studies have been deauthorized through this process in recent years.

Other Corps Activities and Authorities

Although the project delivery process described above is standard, there are exceptions. The Corps has some general authorities to undertake small projects, technical assistance, and emergency actions. Congress also has specifically authorized the Corps to undertake numerous municipal water and wastewater projects. These exceptions are described herein.

Small Projects Under Continuing Authorities Programs

The Corps' authorities to undertake small projects are called Continuing Authorities Programs (CAPs). Projects under these authorities can be conducted without obtaining a project-specific study or construction authorization or project-specific appropriations; these activities can be performed at the discretion of the Corps. For most CAP authorities, Congress has limited the size and scope of the projects, as shown in **Table 3**.²⁷ The CAPs are typically referred to by the section number in the bill where the CAP was first authorized.

In recent years, Congress has reduced the Corps' discretion in managing the CAPs by directing funds to particular CAP projects. Congress also increasingly has authorized specific CAP projects. Some of these project-specific authorizations under the CAPs are used to apply special rules to a project or to ensure that a project is considered eligible under a particular CAP. Demand for CAP projects has increased in recent years, although at the same time, Congress has criticized Corps planning for CAP projects and considered reduced funding for some of these projects.²⁸

Table 3 shows the backlog of projects competing for CAP funding.

²⁷ There is also an authority under 33 U.S.C. §610 for the Corps to control noxious aquatic plant growths at a 70% federal - 30% nonfederal cost share; the authority is capped at \$15 million annually. This authority has not been operated as a CAP. Most, but not all, of the work under this authority has been for research.

²⁸ For instance, enacted appropriations for FY2011 (P.L. 112-10, Section 1457) rescinded \$100 million from prior year CAP balances. Additional reductions and a freeze on new CAP projects were proposed but not enacted in FY2012.

Table 3. Select Corps Continuing Authorities Programs (CAP) for Small Projects

(in \$ millions)

Common Name of the CAP Authority	Eligible Activities	Max. Federal Construction Cost Share	Per-Project Federal Limit	Annual Federal Program Limit	FY2012 Work Plan	FY2013 Work Plan	FY2014	Est. Federal Backlog of Active Projects ^a	Est. Federal Backlog of Un-started Projects ^b
§14	Streambank and shoreline erosion of public works and nonprofit services	65%	\$1.5	\$15.0	\$3.9	\$10.1	\$4.0	\$66.1	\$19.1
§103	Beach erosion/ hurricane storm damage reduction	65%	\$5.0	\$30.0	\$0.9	\$0	\$2.5	\$42.1	\$2
§107	Navigation improvements	Commercial navigation varies (see Table 2); 50% for recreational	\$7.0	\$35.0	\$2.9	\$0	\$4.7	\$119.3	\$39.4
§111	Prevention/mitigation of shore damage by federal navigation projects	Same as the project causing the damage	\$5.0	Not Applicable	\$2.9	\$0.5	\$1.3	\$48.6	\$0.1
§204, §207, §993	Regional sediment management/beneficial use of dredged material	65%	\$5.0	\$30.0	\$3.9	\$3.8	\$7.0	\$65.2	\$3.2
§205	Flood control	65%	\$7.0	\$55.0	\$18.7	\$10.5	\$15.0	\$312.4	\$206.0
§206	Aquatic ecosystem restoration	65%	\$5.0	\$50.0	\$7.9	\$19.7	\$8.0	\$422.6	\$142.0
§208	Removal of obstructions, clearing channels for flood control	65%	\$0.5	\$7.5	\$0	\$0	\$0	\$0.4	\$1.4
§1135	Project modifications for improvement of the environment	75%	\$5.0	\$40.0	\$7.9	\$10.4	\$10.5	\$166.6	\$84.6

Source: CRS, compiled from H.Rept. 111-278; Corps Work Plans for FY2012 and FY2013; Rules Committee Print 113-32 accompanying Consolidated Appropriations Act, 2014 (P.L. 113-76); and other Corps documents, including Appendix F of Planning Guidance Notebook, Engineering Regulation 1105-2-100, and Corps-provided data to CRS in November 2011.

- a. Federal share of active CAP projects (i.e., projects that have received some CAP funds in the last four fiscal years) as of the end of FY2011.
- b. Federal share of un-started CAP projects (i.e., nonfederal sponsors have approached the Corps but the project had received no CAP funding as of the end of FY2011).

Technical Assistance

Congress has also granted the Corps some general authorities to provide technical assistance. The Corps does not need project-specific authority to undertake activities that are eligible under the authorities listed in **Table 4**.

Table 4. Corps Technical Assistance Authorities
(in \$ millions)

Program	Activities Authorized	Max. Federal Cost Share	Federal Share Per-Project Limit	Annual Federal Program Limit	FY2012 Work Plan	FY2013 Work Plan	FY2014
Planning Assistance to States	Technical assistance to states and communities for regional water resources planning	50%	\$0.5 annually per state	Not Applicable	\$5.284	\$6.077	\$4.0
Flood Plain Management Service	Technical assistance on flood and floodplain issues	100% for eligible activities	Not Applicable	\$15.0	\$9.110	\$14.187	\$8.0
Tribal Partnership Program	Studies of water projects that benefit Indian tribes	50% ^a	\$1.0	Not Applicable	\$0.957	\$0.698	\$1.0

Source: CRS, compiled from H.Rept. 111-278; Corps Work Plans for FY2012 and FY2013; Rules Committee Print 113-32, accompanying Consolidated Appropriations Act, 2014 (P.L. 113-76); and other Corps documents, including Appendix G of Planning Guidance Notebook, Engineering Regulation 1105-2-100.

- a. Section 203 of WRDA 2000 (P.L. 106-541) states that cost sharing shall be subject to the ability of the nonfederal entity to pay. A draft “Ability to Pay” rule is under development. If finalized, this rule would apply to these studies. Until then, reductions in nonfederal costs are not to be applied.

Natural Disaster and Emergency Response Activities

National Response Framework Activities Under FEMA

The Stafford Act (42 U.S.C. §5170b) authorizes the Federal Emergency Management Agency (FEMA) to direct the Department of Defense to provide assistance for a major disaster or under an emergency declaration by the President. Under the National Response Framework, the Corps coordinates emergency support for *public works and engineering*. This includes technical assistance, engineering, and construction management as well as emergency contracting, power, and repair of public water and wastewater and solid waste facilities. The Corps also assists in monitoring and stabilizing damaged structures and demolishing structures designated as immediate hazards to public health and safety. It also provides technical assistance in clearing, removing, and disposing of contaminated and uncontaminated debris from public property, and establishing ground and water routes into affected areas; contaminated debris management is coordinated with the U.S. Environmental Protection Agency. The Corps’ funding for these activities is provided through FEMA appropriations, often through supplemental appropriations.

Flood-Fighting and Emergency Response

In addition to work performed as part of the National Response Framework, Congress has given the Corps its own emergency response authority. This authority is commonly referred to as the Corps' P.L. 84-99 authority, based on the act in which it was originally authorized, the Flood Control and Coastal Emergency Act. P.L. 84-99 (33 U.S.C. §701n) authorizes the Corps to perform emergency response and disaster assistance.²⁹ P.L. 84-99 authorizes disaster preparedness, advance measures, emergency operations (disaster response and post-flood response), rehabilitation of flood control works threatened by floods, protection or repair of federally authorized shore protection works threatened by coastal storms, emergency dredging, and flood-related rescue operations. These activities are limited to actions to save lives and protect improved property (public facilities/services and residential or commercial developments). The Corps also has some authorities to assist with select activities during drought.³⁰

Most of the Corps disaster response work performed (including the repair program described below) generally is funded through supplemental appropriations provided directly to the Corps. Until supplemental appropriations are provided, Congress has provided the Corps with authority in 33 U.S.C. Section 701n to transfer money from ongoing Corps projects to emergency operations.

Repair of Damaged Levees and Other Flood and Storm Projects

In P.L. 84-99, Congress also authorized the Corps to rehabilitate damaged flood control works (e.g., levees) and federally constructed hurricane or shore protection projects (e.g., federal beach nourishment projects) and to conduct related inspections.³¹ This authority is referred to as the Rehabilitation and Inspection Program (RIP). To be eligible for rehabilitation assistance, the project must be in active status at the time of damage by wind, wave, or water action other than ordinary nature.³² Active RIP status is maintained by proper project maintenance as determined during an annual or semiannual inspection and by the correction of deficiencies identified during periodic inspections.³³ Approximately 14,000 miles of levees participate in RIP—2,250 miles of locally constructed and operated levees; 9,650 miles of Corps-constructed, locally operated levees; and 2,100 miles of federally operated levees.³⁴

²⁹ The Corps also has other limited authorities related to emergency response (e.g., an Emergency Streambank and Shoreline Erosion Protection program) and recovery (e.g., a Snagging and Clearing for Flood Control program).

³⁰ For more information on the Corps' drought related authorities and actions, see CRS Report RL34580, *Drought in the United States: Causes and Issues for Congress*, by Peter Folger, Betsy A. Cody, and Nicole T. Carter.

³¹ For more information on the roles of the Corps and other federal agencies in levees, see CRS Report R41752, *Locally Operated Levees: Issues and Federal Programs*, by Natalie Keegan et al.

³² 33 U.S.C. §701n. For more on RIP, see U.S. Army Corps of Engineers, Engineer Regulation 500-1-1, *Emergency Employment of Army and Other Resources Civil Emergency Management Program*.

³³ An aspect of RIP implementation receiving attention is the Corps' guidance on vegetation on levees. Some levee owners are having difficulty conducting regular maintenance and emergency repairs while also complying with environmental laws, such as the Endangered Species Act. In some areas, the vegetation on and near levees provides species habitat and other environmental benefits. This and other environmental issues associated with levee maintenance are beyond the scope of this report.

³⁴ Corps data provided to CRS on April 30, 2010. In January 2009, the Corps published a temporary extension of RIP to locally operated levees with deficient conditions if the owner is making system-wide improvements. It is available at <http://www.iwr.usace.army.mil/nfrmp/docs/HQS-ECOPY3150-Exchange-01132009-162045.pdf>.

For locally constructed projects, 80% of the cost to repair the damage is paid using federal funds and 20% by the levee owner (as shown in **Table 2**). For federally constructed projects, the repair cost is entirely a federal responsibility (except for cost of obtaining the sand or other material used in the repair). For damage to be repaired, the Corps must determine that repair has a favorable benefit-cost ratio. Local sponsors assume any rehabilitation cost for damage to an active project attributable to deficient maintenance.

A common issue under RIP is that nonfederal sponsors often are interested in not only repairing but also making modifications and improvements to provide more protection, which is prohibited under RIP. The Corps' authority is expressly restricted to repair or restoration to the pre-disaster level of protection; no betterments or levee setbacks are allowed under this authority. The RIP program is not designed to evaluate the federal interest in investments to further reduce the flood risk at a location. If federal participation is sought in increasing protection, the typical route would be to pursue a Corps flood damage reduction study, thus triggering the previously described standard Corps project delivery process and the related cost-sharing.

Environmental Infrastructure/Municipal Water and Wastewater Projects

Since 1992 Congress has authorized and provided the Corps with funds to assist with design and construction of municipal drinking water and wastewater infrastructure projects (including treatment facilities such as recycling and desalination plants, and distribution and collection facilities such as stormwater collection and recycled water distribution) and surface water protection and development projects. These projects are broadly labeled *environmental infrastructure*. Although no Administration has included environmental infrastructure in a Corps budget request since the first authorization in 1992, Congress regularly includes Corps environmental infrastructure funds in appropriations bills. Environmental infrastructure projects repeatedly have been called out by various Administrations as a low priority for the agency and by the co-chairs of the National Commission on Fiscal Responsibility and Reform.³⁵

Most Corps environmental infrastructure projects are authorized for a specific geographic location (e.g., city or county) under Section 219 of WRDA 1992 (P.L. 102-580), as amended; however, other similar authorities, sometimes covering regions or states, exist in multiple sections of WRDAs and in select Energy and Water Development appropriations acts. Management of the Corps and nonfederal financing varies according to the specifics of the authorization. Under Section 219, the Corps performs the authorized work; for environmental infrastructure projects authorized in other provisions, the Corps often can use appropriated funds to reimburse nonfederal sponsors for work they perform.

Since 1992, Congress has authorized the Corps to contribute to more than 400 of these projects and programs, with authorized appropriations totaling more than \$5 billion. The Corps received \$140 million for environmental infrastructure projects in FY2010 and \$200 million in the American Recovery and Reinvestment Act of 2009 (P.L. 111-5). The Administration did not fund any environmental infrastructure activities in its FY2013 work plan. Congress recommended \$44 million for these projects in Rules Committee Print 113-32, accompanying the Consolidated Appropriations Act, 2014 (P.L. 113-76).

³⁵ National Commission on Fiscal Responsibility, *CoChairs' Proposal: \$200 Billion in Illustrative Savings, Draft Document*, November 12, 2010, <http://www.fiscalcommission.gov/news/cochairs-proposal>.

Because environmental infrastructure activities are not traditional Corps water resources projects, they are not subject to the Corps planning process (e.g., a benefit-cost analysis is not performed), or to the deauthorization process previously described. The projects, however, are subject to federal laws, such as the National Environmental Policy Act. As indicated in **Table 2**, most Corps environmental infrastructure financing is 75% federal and 25% nonfederal.

Appendix. Evolution of the Army Corps Civil Works Mission

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 disposal of dredged material. 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 Corps projects are multipurpose—that is, they provide water supply, recreation, and hydropower in addition to navigation or flood control. Its environmental activities involve wetlands and aquatic ecosystem restoration and environmental mitigation activities for Corps 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.

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 charging military engineers with 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. During the 1920s, Congress expanded the Corps' ability to incorporate hydropower into multipurpose projects and authorized the agency to undertake comprehensive surveys to establish river-basin development plans. The modern era of federal flood control emerged with the Flood Control Act of 1936 (49 Stat. 1570), which declared flood control a “proper” federal activity in the national interest. The 1944 Flood Control Act (33 U.S.C. §708) significantly augmented the Corps' involvement in large multipurpose projects and authorized agreements for the temporary use of surplus water. The Flood Control Act of 1950 (33 U.S.C. §701n) began the Corps' emergency operations through authorization for flood preparedness and emergency operations.³⁶ The Water Supply Act of 1958 (43 U.S.C. §390b) gave the Corps authority to include some 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 waterworks 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. The 1969 National Environmental Policy Act and the Endangered Species Act of 1973 (16 U.S.C. §1531) required federal agencies to consider environmental impacts, increase public participation in planning, and consult with other federal agencies. Executive orders (E.O. 11988 and E.O. 11990) united the goals of reducing flood losses and environmental damage by recognizing the value of wetlands and

³⁶ 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.

required federal agencies to evaluate potential effects of actions on floodplains and to minimize impacts on wetlands.

Corps Regulatory Activities: Permits and Their Authorities

The Corps has several different regulatory responsibilities and issues several different types of permits. 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 waters. The Corps also has regulatory responsibilities under other laws, notably Section 404 of the Clean Water Act (33 U.S.C. §1344), which requires a permit for dredging or filling activities into waters of the United States. Since the mid-1960s, court decisions and administrative actions have altered the jurisdictional reach of the Corps' regulatory program. For more information on the Corps' Clean Water Act authorities, see CRS Report 97-223, *The Army Corps of Engineers' Nationwide Permits Program: Issues and Regulatory Developments*, by Claudia Copeland and CRS Report RL33483, *Wetlands: An Overview of Issues*, by Claudia Copeland. The Corps also regulates and authorizes disposal of materials into the ocean under the Marine Protection Research and Sanctuaries Act; for more information, see CRS Report RS20028, *Ocean Dumping Act: A Summary of the Law*, by Claudia Copeland.

Environmental Mission and Local Responsibility (1986-2000)

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, 2000, and 2007. 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 multiyear, multibillion-dollar effort of this type. These legislative changes have given the Corps an aquatic ecosystem restoration and environmental protection mission.

Evolving Demands (2001-present)

The agency's aging infrastructure and efforts to enhance the security of its infrastructure from terrorism and natural threats have expanded Corps activities in infrastructure rehabilitation, maintenance, and protection. WRDA 2007 continued the expansion of the Corps' ecosystem restoration activities by authorizing billions of dollars for ecosystem restoration activities, including large-scale efforts in coastal Louisiana and in the Upper Mississippi River. The Corps also retooled its long-standing flood control mission to use a flood risk management approach. This was undertaken in response to congressional direction in WRDA 2007 and disasters like Hurricanes Katrina, Rita, and Ike and the significant floods in the Midwest. This approach emphasizes a greater appreciation and accountability for the shared responsibilities across levels of government for managing flood. The regularity with which the Corps has received significant congressional appropriations for natural disaster response has increased attention to its role in emergency response, infrastructure repair, and post-disaster recovery.

Limited Corps Role in NFIP Levee Data Certification

The Corps currently has a limited role in the steps leading up to levee accreditation by the Federal Emergency Management Agency (FEMA) for FEMA's floodmaps for the National Flood Insurance Program (NFIP). Levee accreditation determines how the levees are shown on the NFIP maps which are used to determine flood insurance premiums and mandatory purchase requirements. Since late 2005, FEMA has increased the amount of information it requires to accredit a levee as providing protection for the 1% chance (100-year) flood. In particular, it requests more information on the structural integrity of the levee and the hydrology and hydraulics to which the levee is exposed (44 C.F.R. 65.10 (b)).

Preparing NFIP levee accreditation packages, including data certifications, is the responsibility of the levee owner. Local owners of some levees previously accredited by FEMA are having trouble obtaining and paying for accreditation. They face a lack of readily available data on their levees' construction, materials, and structural integrity and are confronting assessments indicating a lower level of protection than previously thought. Prior to 2006, FEMA often had accepted the Corps' inspection of levees for its Rehabilitation and Inspection Program (RIP) as sufficient for the data certification used as the basis for FEMA's levee accreditation. Since 2005, Corps RIP inspections are insufficient to meet the additional information sought by FEMA for levee accreditation. In Section 100226 of P.L. 112-141 (Biggert-Waters Flood Insurance Reform Act of 2012), Congress called for the creation of a Flood Protection Structure Accreditation Task Force. Among its duties is the development of a process to better align the data collected by the Corps RIP inspections with the FEMA requirements. The task force released an interim report in January 2013. The act required the task force to transmit to Congress a final report, which was delivered in November 2013. The report identified a number of actions to improve data exchange and methodologies of the two agencies, while also stressing that the two agencies and their programs are fundamentally different authorities with different purposes, which ultimately limits their alignment.

Some levee owners have looked to the Corps to assist with levee data certification. The Corps does perform data certification for federally operated levees, for locally operated levees that are part of a larger ongoing Corps study or project, and at the request of another federal agency. The Corps currently has no general authority to perform NFIP-compliant data certifications using discretionary appropriations for locally operated levees and is restricted from performing FEMA data certification on a reimbursable basis for nonfederal entities if the work can be provided by the private sector. This restriction is established for all Corps civil works activities of Section 211 of WRDA 2000 (P.L. 106-541, 31 U.S.C. §6505), commonly known as the Thomas Amendment. Whether the Corps should be authorized to perform NFIP levee data certifications for locally operated levees (as provided for in S. 601) and who would bear or share the costs, are matters of active debate.

It is unknown whether the cost for the Corps to perform the certification would be less than if a private sector firm performed the certification. The Corps may be able to perform the data certification at a lower cost if it already has some of the data (e.g., for Corps-constructed projects) and if the private sector's cost is significantly influenced by liability protection.

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