Congressional Research Service
Informing the legislative debate since 1914

Army Corps of Engineers: Water Resource Authorization and Project Delivery Processes

Updated September 25, 2018

Congressional Research Service
https://crsreports.congress.gov
R45185

CRS REPORT
Prepared for Members and
Committees of Congress

Summary

The U.S. Army Corps of Engineers (USACE) in the Department of Defense undertakes water resources development activities. Its projects maintain navigable channels, reduce flood and storm damage, and restore aquatic ecosystems. Congress directs USACE through authorizations and appropriations legislation. This report summarizes authorization legislation, project delivery, authorities for alternative project delivery, and other USACE authorities.

Authorization Legislation. Congress generally authorizes USACE water resource activities in authorization legislation prior to funding them through appropriations legislation. USACE's ability to act on an authorization often is determined by funding. Congress typically authorizes numerous new USACE site-specific activities and provides policy direction in an omnibus USACE authorization bill, typically titled a Water Resources Development Act (WRDA). Most project-specific authorizations in WRDAs fall into three general categories: project studies, construction projects, and modifications to existing projects. A few provisions in WRDA bills have time-limited authorizations; therefore, some WRDA provisions may be reauthorizing expired or expiring authorities.

As part of the effort to address investment in the nation's infrastructure, the 115th Congress is considering S. 3021, America's Water Infrastructure Act of 2018 (AWIA 2018), which passed the House by voice vote in September 2018. S. 3021 includes not only USACE-related provisions in Title I of the bill (titled as the Water Resources Development Act of 2018) but also provisions related to other agencies' water infrastructure programs and activities.

From 1986 through 2000, Congress often enacted a WRDA on a roughly biennial schedule. The pattern shifted after 2000; no WRDA bills were enacted in the 107th, 108th, and 109th Congresses. The 110th Congress enacted the Water Resources Development Act of 2007 (P.L. 110-114) in November 2007, overriding a presidential veto. The next omnibus USACE authorization bill, the Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121), was enacted in June 2014. In WRRDA 2014, Congress developed and used new processes for identifying site-specific studies and projects for authorization to overcome concerns related to congressionally directed spending (known as *earmarks*). The 114th Congress enacted the Water Infrastructure Improvements for the Nation Act (WIIN; P.L. 114-322); Title I of WIIN had the short title of Water Resources Development Act of 2016 (WRDA 2016) and focused on USACE programs and projects.

Standard and Alternative Project Delivery. The standard process for a USACE project requires two separate congressional authorizations—one for studying feasibility and a subsequent one for construction—as well as appropriations for both. Congressional authorization for project construction in recent years has been based on a favorable report by the Chief of Engineers (known as a *Chief's Report*) and an accompanying feasibility study. For most activities, Congress requires a nonfederal sponsor to share some portion of study and construction costs. For some project types (e.g., levees), nonfederal sponsors are responsible for operation and maintenance.

WRRDA 2014 and WRDA 2016 expanded the opportunities for interested nonfederal entities, including private entities, to have greater roles in project development, construction, and financing; S. 3021 also contains provisions to expand nonfederal opportunities (e.g., expansion of nonfederal entities advancing funds for USACE projects).

WRRDA 2014 also authorized, through the Water Infrastructure Finance and Innovation Act (WIFIA), a program to provide direct loans and loan guarantees for water projects, including those for navigation, flood risk reduction, and ecosystem restoration, among others. The portion of the WIFIA program administered by the U.S. Environmental Protection Agency is operational.

The USACE WIFIA program, which is focused on water resource projects, has not advanced into implementation. Congress has provided USACE with direction in appropriations report language (e.g., H.Rept. 115-929) to develop its proposal for WIFIA implementation.

Other USACE Activities and Authorities. Congress has granted USACE general authorities to undertake some activities without requiring additional congressional authorization, including emergency actions related to flooding and drought. Additionally, under the National Response Framework, USACE may be tasked with performing activities in response to an emergency or disaster, such as providing temporary roofing and emergency power restoration.

Contents

Introduction 1
Legislation in the 115th Congress 1
Scope of Report 2
Water Resources Development Acts 3
WRDA 1986 Through WRDA 2007 4
WRRDA 2014, WRDA 2016, and Post-WRDA 2016 Reports 5
Proposals on Reorganizing USACE Functions 6
Standard Project Delivery Process 7
Feasibility Study and Chief's Report 10
Preconstruction Engineering and Design 12
Construction and Operation and Maintenance 13
Changes After Construction Authorization 14
Deauthorization Processes and Divestiture 15
Projects 15
Studies 16
Alternative Project Delivery and Innovative Finance 16
Interest in Alterative Delivery 16
Expansion of Delivery Options 17
Water Infrastructure Finance and Innovation Act 18
Other USACE Authorities and Activities 19
Small Projects Under Continuing Authorities Programs 19
Technical Assistance and Tribal Programs 20
Natural Disaster and Emergency Response Activities 21
National Response Framework 21
Flood Fighting and Emergency Response 21
Repair of Damaged Levees and Other Flood and Storm Projects 22
Assistance for Environmental Infrastructure/Municipal Water and Wastewater 23

Figures

Figure 1. Major Steps in USACE Project Development and Delivery Process 9

Tables

Table 1. USACE Project Phases, Average Phase Duration If Fully Funded, and Federal Cost Share 10
Table 2. Cost Shares for Construction and Operation and Maintenance (O&M) 13
Table 3. Selected USACE Continuing Authorities Programs (CAPs) for Small Projects and Recent Enacted and Requested Appropriations 19
Table 4. USACE Technical Assistance Authorities 20

Appendixes

Appendix. Evolution of USACE Civil Works Responsibilities 25

Contacts

Author Information..... 27

Introduction

The U.S. Army Corps of Engineers (USACE) is an agency within the Department of Defense with both military and civil works responsibilities. For USACE's civil works mission, Congress directs the agency's water resource activities through authorizations legislation and appropriations. The agency's central civil works responsibilities are to support navigation, reduce riverine flood and coastal storm damage, and protect and restore aquatic ecosystems.[1]

USACE attracts congressional attention because its projects can have significant local and regional economic benefits and environmental effects. Unlike with federal funding for highways and municipal water infrastructure, the majority of federal funds provided to USACE are not distributed by formula to states or through competitive grant programs. Instead, USACE is directly engaged in the planning and construction of projects; the majority of its appropriations are used performing work on specific studies and projects authorized by Congress. USACE operates more than 700 dams; has built 14,500 miles of levees; and improves and maintains more than 900 coastal, Great Lakes, and inland harbors, as well as 12,000 miles of inland waterways.

The civil works program is led by a civilian Assistant Secretary of the Army for Civil Works, who reports to the Secretary of the Army. A military Chief of Engineers oversees the agency's civil and military operations and reports on civil works matters to the Assistant Secretary for Civil Works. A civilian Director of Civil Works reports to the Chief of Engineers. The agency's civil works responsibilities are organized under eight divisions, which are further divided into 38 districts.[2] The districts and divisions perform both military and civil works activities and are led by Army officers. The specific officer typically is in a district or division leadership position for three years. The Trump Administration has expressed renewed interest in the possibility of removing USACE from the Department of Defense;[3] for more information on the status of this proposal, see "Proposals on Reorganizing USACE Functions" later in this report.

Legislation in the 115th Congress

The 115th Congress is considering S. 3021, America's Water Infrastructure Act of 2018 (AWIA 2018). S. 3021 combines elements of two omnibus water authorization bills considered by the 115th Congress: H.R. 8, Water Resources Development Act of 2018 (WRDA 2018) and S. 2800, America's Water Infrastructure Act of 2018 (AWIA 2018). The House's WRDA 2018 focused on authorizing USACE water resource projects and activities; the Senate Environment and Public Works Committee's AWIA 2018 included not only USACE-related provisions but also provisions related to water-related programs of the U.S. Environmental Protection Agency (EPA) and a few provisions on water-related activities and authorities of the Department of the Interior.[4]

---

[1] The civil works mission of the U.S. Army Corps of Engineers (USACE) also includes the agency's regulatory activities pursuant to the Clean Water Act and the Rivers and Harbors Act of 1899 and the agency's administration of the Formerly Utilized Sites Remedial Action Program (FUSRAP). Through FUSRAP, USACE remediates radiological contamination at nonfederal sites that were used during the early years of the U.S. nuclear weapons program. Neither the FUSRAP program nor the USACE regulatory activities are addressed in detail in this report.

[2] A division map and district links are available at http://www.usace.army.mil/Locations.aspx.

[3] U.S. Executive Office of the President, Office of Management and Budget (OMB), *Delivering Government Solutions in the 21st Century: Reform Plan and Reorganization Recommendations*, June 21, 2018, at https://www.whitehouse.gov/omb/management/government-reform/.

[4] An overview of the House's Water Resources Development Act of 2018 (H.R. 8; WRDA 2018) and the Senate Environment and Public Works Committee's America's Water Infrastructure Act of 2018 (S. 2800; AWIA 2018) drafted as an amendment in the nature of a substitute to H.R. 8 (as it was posted on July 9, 2018, on the committee's

S. 3021, which was originally passed as a courthouse naming bill, was amended in the House to include provisions from both H.R. 8 and S. 2800, retitled as AWIA 2018, and passed by a voice vote in the House on September 13, 2018. The Senate received the House amendments to S. 3021 on September 17, 2018. Because S. 3021 was sent to the Senate in the form of a House amendment, the Senate can begin consideration of the text more quickly than it could if it was sent in the form of a House bill.[5] If the Senate agrees to the House amendments to the bill, without proposing any further changes, then the bill will be sent to the President for his signature. Otherwise, the two chambers can attempt to resolve their differences over the text of S. 3021 through a further exchange of amendments between the houses or through the creation of a conference committee.

S. 3021 includes Title I, titled the Water Resources Development Act of 2018, which is focused on USACE activities and dam and levee safety programs (that also relate to authorities of the Federal Emergency Management Agency). Other titles of S. 3021 address EPA water programs, Department of the Interior water authorities, water and related infrastructure authorities related to tribes, and hydropower (including authorities of the Federal Energy Regulatory Commission).

Regarding USACE project authorizations, Title I of S. 3021 would authorize 12 new construction projects at a total cost of $5.6 billion ($3.7 billion federal and $1.9 billion nonfederal); modify 4 projects, increasing the projects' authorization of appropriations by approximately $1.3 billion ($1.1 billion federal and $0.2 billion nonfederal); and authorize project studies. Title I also would amend existing deauthorization efforts and authorities and establish a process to deauthorize $4 billion in construction projects previously authorized by Congress that have not been constructed.[6] In addition, Title I includes provisions requiring various reports from USACE and reports by the National Academy of Sciences.

Scope of Report

The remainder of this CRS report reflects USACE authorities under current statute and agency implementation practices. This report provides an overview of USACE water resource authorization and project delivery processes and selected related issues. The report discusses the following topics:

- USACE water resource authorization legislation, typically titled as a Water Resources Development Act (WRDA);
- the standard project delivery process for USACE water resource projects;
- interest in and authorities for alternative project delivery and innovative finance for water resource projects; and
- other USACE water resource authorities, including programmatic authorities (referred to as Continuing Authorities Programs, or CAPs), technical assistance, and emergency response authorities.

The **Appendix** describes the evolution of USACE water resource missions and authorities.

website and subsequently removed) is available in CRS Report R45212, Water Resources Development Act of 2018 and America's Water Infrastructure Act of 2018: An Overview, by Nicole T. Carter and Mary Tiemann.

[5] For more information, see CRS Report R41003, *Amendments Between the Houses: Procedural Options and Effects*, by Elizabeth Rybicki.

[6] For information on existing USACE construction project deauthorization efforts and authorities, see "Deauthorization Processes and Divestiture" later in this report.

Water Resources Development Acts

Congress generally authorizes USACE activities in an authorization bill prior to funding those activities through appropriations legislation. The authorization can be project-specific, programmatic, or general. Authorizations by themselves usually are insufficient for USACE to proceed with a study or construction project; agency action on an authorization typically requires funding. Authorization provisions at times have appeared in appropriations or emergency supplemental appropriations legislation.[7]

In recent decades, Congress has legislated on most USACE authorizations in WRDAs.[8] Congress uses WRDA legislation to authorize USACE water resource studies, projects, and programs and to establish policies (e.g., nonfederal cost-share requirements). WRDAs generally authorize new activities that are added to the pool of existing authorized activities. Most project-specific authorizations in WRDAs fall into three general categories: project studies, construction projects, and modifications to existing projects. WRDAs also have deauthorized projects and established deauthorization processes. A limited set of USACE authorizations expire; WRDAs also may extend these authorizations.

Federal funding for USACE civil works activities generally is provided in annual Energy and Water Development appropriations acts and at times through supplemental appropriations acts. Over the last decade, annual USACE appropriations have ranged from $4.7 billion in FY2013 to $7.0 billion in FY2019. An increasing share of the appropriations has been used for operation and maintenance (O&M) of USACE owned and operated projects. In recent years, Congress has directed more than 50% of the enacted annual appropriations to O&M and limited the number of new studies and construction projects initiated with annual appropriations.

The agency identified a $96 billion backlog of authorized construction projects;[9] for context, annual appropriations for construction funding in FY2018 and FY2019 were $2.1 billion and $2.2

[7] If authorization provisions are included in an appropriations bill, they may be subject to a point of order on the floor for being nongermane. For more information on congressional process, see CRS Report 97-865, Points of Order in the Congressional Budget Process, by James V. Saturno.

[8] Water Resources Development Acts (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. The House Transportation and Infrastructure Committee and the Senate Environment and Public Works Committee are the congressional committees of jurisdiction for USACE civil works activities. If the Administration proposes a WRDA, Congress generally receives the proposal at the same time as the President's budget. An Administration last proposed a WRDA bill almost two decades ago.

[9] Oral Testimony by General Ed Jackson at U.S. Congress, House Committee on Transportation and Infrastructure, Subcommittee on Water Resources and Environment, *America's Water Resources Infrastructure: Approaches to Enhanced Project Delivery*, 115th Cong., 2nd sess., January 18, 2018. The $96 billion estimate has not been updated since enactment of the Bipartisan Budget Act of 2018 (P.L. 115-123), which provided USACE with $15 billion in emergency supplemental construction funding for qualifying USACE flood control projects. Also, comprehensive cost estimates are not available for reinvestment and major rehabilitation for maintaining performance and safety for the full portfolio of USACE-owned and USACE-constructed water resource infrastructure. In March 2018, USACE released *A Summary of Risk and Benefits Associated with the USACE Levee Portfolio (*https://usace.contentdm.oclc.org/utils/getfile/collection/p266001coll1/id/6922*)*; the report states "The cost to address risk in the USACE levee portfolio ranges from $6.5 billion to $38 billion, with an expected cost of about $21 billion. The expected cost of $21 billion is broken down into approximately $13 billion for levee infrastructure improvements to mitigate risk drivers in levee performance before the levee overtops, approximately $8 billion in armoring of levees to mitigate risk drivers in levee performance when the levee overtops, and about $300 million to improve evacuation effectiveness within the leveed area." For information on levee safety, see CRS In Focus IF10788, *Levee Safety and Risk: Status and Considerations*, by Nicole T. Carter.

billion, respectively. Given that USACE is starting only a few construction projects using discretionary appropriations in a fiscal year (e.g., five using annual appropriations provided in FY2019), numerous projects authorized for construction in previous WRDAs remain unfunded. For more on USACE appropriations, see CRS In Focus IF10864, *Army Corps of Engineers: FY2019 Appropriations*, by Nicole T. Carter, and CRS In Focus IF10671, *Army Corps of Engineers: FY2018 Appropriations*, by Nicole T. Carter.

Beginning with WRDA 1986 (P.L. 99-662), Congress loosely followed a biennial WRDA cycle 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), 2000 (P.L. 106-541), and 2007 (P.L. 110-114). The Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121) was enacted in June 2014.[10] WRDA 2016, which was Title I of the Water Infrastructure Improvements for the Nation Act (WIIN; P.L. 114-322), was enacted in December 2016.[11]

WRDA 1986 Through WRDA 2007

WRDA 1986 marked the end of a stalemate between Congress and the executive branch regarding USACE 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 USACE civil works legislation since 1970.[12] Biennial consideration of USACE authorization legislation resumed after WRDA 1986 in part to avoid long delays between the planning and execution of projects. Interest in authorizing new projects, increasing authorized funding levels, and modifying existing projects is often intense, thus prompting regular WRDA consideration.

WRDA enactment was less consistent for a period. Controversial project authorizations and disagreements over the need for and direction of change in how USACE 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.[13]

---

[10] USACE has developed implementation guidance for most provisions in the Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121). The implementation guidelines are published at USACE, "WRRDA 2014 Implementation Guidance," at http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/LegislativeLinks/wrrda2014/wrrda2014_impguide.aspx.

[11] Although procedurally distinct from two WRDA 2016 bills considered earlier in the 114th Congress (i.e., S. 2848 and H.R. 5303), Title I of the Water Infrastructure Improvements for the Nation Act (WIIN; P.L. 114-322) contained many provisions similar to the two bills. Although the scope of WIIN was broad (e.g., including titles and provisions related to drinking water and Bureau of Reclamation), Title I of the bill—WRDA 2016—focused specifically on USACE water resource authorizations. USACE has developed implementation guidance for most provisions in WRDA 2016. The implementation guidelines are published at USACE, "WRDA 2016 Implementation Guidance," at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Legislative-Links/wrda2016/wrda2016_impguide/.

[12] USACE Institute for Water Resources, *Reshaping National Water Politics: The Emergency of the Water Resources Development Act of 1986*, IWR Policy Study 91-PS-1, October 1991, at http://www.iwr.usace.army.mil/Portals/70/docs/iwrreports/91-PS-1.pdf.

[13] A central issue in the debate over WRDA 2007 was how the bill was estimated to affect federal discretionary spending and add to the set of USACE authorized construction projects. For more information, see the President's veto message in the *Congressional Record* for November 5, 2007, at https://www.congress.gov/crec/2007/11/05/CREC-2007-11-05-pt1-PgH12458-10.pdf; the House floor debate on overriding the veto in the *Congressional Record* for November 6, 2007, at http://www.lis.gov/cgi-lis/query/R?r110:FLD001:H12789,H12797; and the Senate floor discussion in the *Congressional Record* for November 8, 2007, at http://www.lis.gov/cgi-lis/query/R?r110:FLD001:S14114,S14117. For more on WRDA 2007, see CRS Report RL33504, *Water Resources Development Act (WRDA) of 2007: Corps of Engineers Project Authorization Issues*, coordinated by Nicole T. Carter.

WRRDA 2014, WRDA 2016, and Post-WRDA 2016 Reports

No WRDA bill was enacted between WRDA 2007 and WRRDA 2014. With WRDA 2016, Congress returned enactment of USACE authorization legislation to a biennial time frame. WRRDA 2014 and WRDA 2016 attempted to address frustrations among some stakeholders with the pace of study and construction of USACE projects by allowing interested nonfederal entities, including private entities, to have greater roles in project development, construction, and financing.

WRRDA 2014, which was enacted on June 10, 2014, authorized 34 construction projects that had received agency review, had Chief of Engineers reports (also known as *Chief's Reports*),[14] and had been the subject of a congressional hearing, thereby overcoming concerns related to congressionally directed spending (known as *earmarks*). These 34 construction projects represented $15.6 billion in federal authorization of appropriations. WRRDA 2014 also altered processes and authorizations for project delivery options, including expanded opportunities for nonfederal entities to lead projects and for innovative financing, such as public-private partnerships.[15]

WRRDA 2014 created a new process for identifying interest in and support for USACE studies and projects. In Section 7001 of WRRDA 2014, Congress called for the Secretary of the Army to submit an annual report to the congressional authorizing committees—the House Transportation and Infrastructure Committee and the Senate Environment and Public Works Committee—of potential and publicly submitted study and project authorization proposals for Congress to consider for authorization.[16] USACE delivered to Congress a Section 7001 annual report in February 2015, February 2016, March 2017, and February 2018.[17] A notice requesting public submissions for consideration for the fifth Section 7001 annual report was published on April 20, 2018; USACE accepted submissions through August 20, 2018;[18] these submissions will be considered for inclusion in the annual report expected in February 2019.

---

[14] USACE maintains a website that provides access to many of the Chief's Reports signed in recent decades; it is available at https://planning.erdc.dren.mil/toolbox/library.cfm?Option=Direct&Group=Main&Item=Chief%20Report&Sub=None&Sort=Default.

[15] For more on WRRDA 2014 and how it evolved during congressional deliberations, see CRS Report R43298, *Water Resources Reform and Development Act of 2014: Comparison of Select Provisions*, by Nicole T. Carter et al.

[16] Although the Section 7001 annual reports may be used in the development of USACE authorization legislation, WRRDA 2014 did not change Congress's underlying responsibilities in authorizing USACE studies and construction projects. The Section 7001 report instead is a mechanism that assists in the identification of activities that meet the Section 7001 criteria and for which there exists nonfederal or Administration interest in congressional authorization.

[17] The Section 7001 annual reports are available at USACE, "Report to Congress on Future Water Resources Development," at http://www.usace.army.mil/Missions/CivilWorks/ProjectPlanning/LegislativeLinks/wrrda2014/wrrda2014_proposals.aspx. The Administration has indicated in the Section 7001 annual reports that inclusion in the body of the report does not represent Administration support for the proposals; inclusion represents that the proposal met the congressionally established criteria. According to Section 7001 of WRRDA 2014, the criteria for inclusion in the annual report are as follows:

> The Secretary shall include in the annual report only those feasibility reports, proposed feasibility studies, and proposed modifications to authorized water resources development projects and feasibility studies that—(i) are related to the missions and authorities of the Corps of Engineers; (ii) require specific congressional authorization, including by an Act of Congress; (iii) have not been congressionally authorized; (iv) have not been included in any previous annual report; and (v) if authorized, could be carried out by the Corps of Engineers.

[18] The April 20, 2018 notice in the *Federal Register* is available at https://www.federalregister.gov/documents/2018/04/20/2018-08292/proposals-by-non-federal-interests-for-feasibility-studies-and-for-modifications-to-an-authorized; more information on the Section 7001 submission process is available at http://www.usace.army.mil/Missions/Civil-Works/

WRDA 2016 authorized new USACE water resource studies (which were among those studies identified in the Section 7001 annual reports submitted in February 2015 and February 2016) and projects, as well as modifications to ongoing construction projects. Each of the construction authorizations for new projects had a Chief's Report. WRDA 2016 authorized 30 new construction projects at a federal cost of more than $10 billion. Various USACE provisions in WRDA 2016 related to how nonfederal sponsors may participate in the financing of water infrastructure activities.[19] For more on WRDA 2016 and the other titles of WIIN, see CRS In Focus IF10536, *Water Infrastructure Improvements for the Nation Act (WIIN)*, by Nicole T. Carter et al.

Various reports have informed development and deliberations on USACE authorization legislation in the 115th Congress. Since enactment of WRDA 2016, the authorizing committees have received the March 2017 and February 2018 Section 7001 annual reports. The authorizing committees also have received Chief's Reports completed since WRDA 2016; these Chief's Reports will have been transmitted both individually once they are finalized and as part of the Section 7001 annual reports. In addition, the authorizing committees have received annually a report required by Section 1002 of WRRDA 2014. The Section 1002 report identifies when USACE feasibility studies are anticipated to reach various milestones; the process for this report keeps project sponsors and authorizing committees informed of study timelines.[20] USACE currently has roughly 100 active feasibility studies. In addition to feasibility studies, Congress may be presented with other types of studies recommending actions that require congressional authorization. These studies include postauthorization change reports for modifying an authorized project prior to or during construction, reevaluation reports for a modification to a constructed project, and reports recommending deauthorization of constructed projects that no long serve their authorized purposes.

Proposals on Reorganizing USACE Functions

The Trump Administration has proposed to move the civil works activities from the Department of Defense to the Department of Transportation and the Department of the Interior to consolidate and align the USACE civil works missions with these agencies.[21] Although some Members of Congress have indicated support for looking at which USACE functions may not need to be in the Department of Defense,[22] the conference report that accompanied the USACE appropriations for FY2019 (H.R. 5895, signed by President Trump on September 21, 2018), H.Rept. 115-929, stated the following:

Project-Planning/WRRDA-7001-Proposals/.

[19] For example, Section 1111 in WRDA 2016 increased the federal construction cost share for harbor deepening that occurs between 45 feet and 50 feet. Other sections, such as Sections 1127, 1166, and 1171, changed authorities for crediting and reimbursing nonfederal entities for project-related expenditures.

[20] These reports are titled Report to Congress on Feasibility Study Milestones or may be referred to as Section 1002 reports; they are published at USACE, "Report to Congress on Feasibility Study Milestones (WRRDA 2014, Sec 1002," at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/WRRDA2014_Section1002/.

[21] U.S. Executive Office of the President, OMB, *Delivering Government Solutions in the 21st Century: Reform Plan and Reorganization Recommendations*, June 21, 2018, at https://www.whitehouse.gov/omb/management/government-reform/. For information on past efforts to reorganize USACE, including transferring USACE civil works responsibilities, see U.S. Government Accountability Office, *Army Corps of Engineers: Organizational Realignment Could Enhance Effectiveness, but Several Challenges Would Have to Be Overcome*, GAO-10-819, September 2010, at https://www.gao.gov/products/GAO-10-819.

[22] U.S. Congress, House Committee on Transportation and Infrastructure, *Examining the Administration's Infrastructure Proposal*, 115th Cong., 2nd sess., March 6, 2018.

> The conferees are opposed to the proposed reorganization as it could ultimately have detrimental impacts for implementation of the Civil Works program and for numerous non-federal entities that rely on the Corps' technical expertise, including in response to natural disasters.… Further, this type of proposal, as the Department of Defense and the Corps are well aware, will require enactment of legislation, which has neither been proposed nor requested to date. Therefore, no funds provided in the Act or any previous Act to any agency shall be used to implement this proposal.[23]

As previously noted, USACE's central civil works responsibilities are to support coastal and inland commercial navigation, reduce riverine flood and coastal storm damage, and protect and restore aquatic ecosystems in U.S. states and territories. Additional project benefits also may be developed, including water supply, hydropower, recreation, fish and wildlife enhancement, and so on. In addition, USACE performs certain regulatory responsibilities that Congress has assigned to the Secretary of the Army; these responsibilities include issuing permits for private actions that may affect navigation, wetlands, and other waters of the United States. As part of its military and civil responsibilities and under the National Response Framework, USACE participates in emergency response activities (see "Natural Disaster and Emergency Response Activities" section of this report). For more information on USACE civil works responsibilities, see the **Appendix**.

Standard Project Delivery Process

Standard USACE project delivery consists of the agency leading the study, design, and construction of authorized water resource projects. Nonfederal project sponsors typically share in study and construction costs, providing the land and other real estate interests, and identifying locally preferred alternatives. Since the 1950s, questions related to how project beneficiaries and sponsors should share in the cost and delivery of USACE projects have been the subject of debate and negotiation. Much of the basic arrangement for how costs and responsibilities are currently shared was established by Congress in the 1980s, with adjustments in subsequent legislation, including in recent statutes.

Congressional authorization and appropriations processes are critical actions in a multistep process to deliver a USACE project. This section describes the standard delivery process for most USACE projects. The standard process consists of the following basic steps:

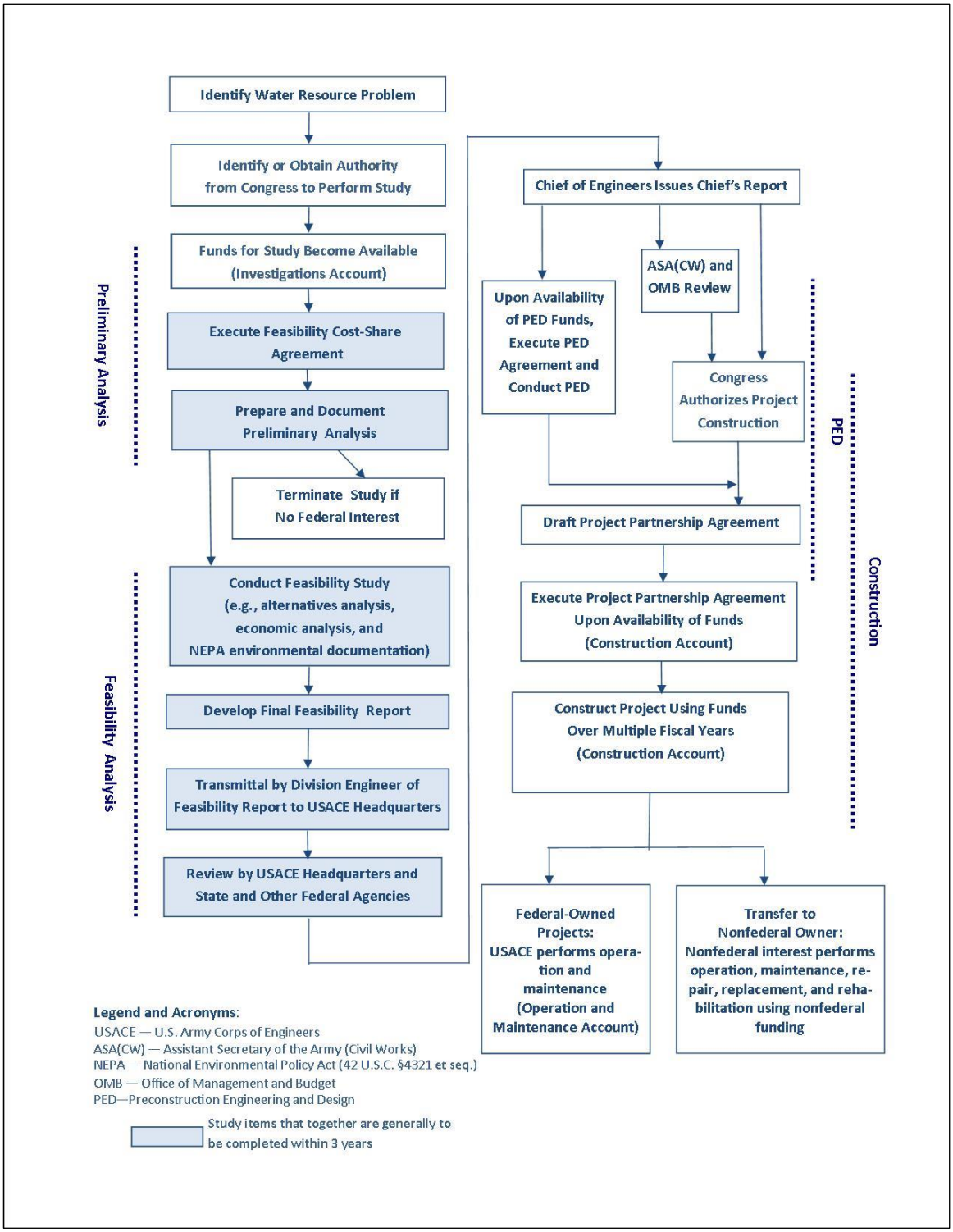
- Congressional study authorization is obtained in a WRDA or similar authorization legislation.[24]
- USACE performs a feasibility study, if funds are appropriated.
- Congressional construction authorization is pursued. USACE can perform preconstruction engineering and design while awaiting construction authorization, if funds are appropriated.
- Congress authorizes construction in a WRDA or similar authorization legislation, and USACE constructs the project, if funds are appropriated.

[23] H.Rept. 115-929, p. 89.

[24] Authorizing committees also may use a committee resolution to reexamine (sometimes referred to as a *restudy*) a geographic area previously studied by USACE for a similar purpose; this authority derives from Section 4 of the Rivers and Harbors Act of 1913 (37 Stat. 801, 33 U.S.C. §542). From 2010 to early 2016, neither authorizing committee acted on resolutions for USACE studies. On April 28, 2016, the Senate Environment and Public Works Committee approved six committee resolutions related to USACE studies. A resolution by one of the two authorizing committees is sufficient authorization for a study to reexamine a previous study if funded.

The process is not automatic. Appropriations are required to perform studies and construction; that is, congressional study and construction authorizations are necessary but insufficient for USACE to proceed. Major steps in the process are shown in **Figure 1**.

Figure 1. Major Steps in USACE Project Development and Delivery Process



Source: Congressional Research Service (CRS).

For most water resource activities, USACE needs a nonfederal sponsor to share the study and construction costs. Since WRDA 1986, nonfederal sponsors have been responsible for funding a portion of studies and construction, and they may be 100% responsible for O&M and repair of

certain types of projects (e.g., flood risk reduction and aquatic ecosystem restoration). Most flood risk reduction and ecosystem restoration projects are transferred to nonfederal owners after construction; many navigation and multipurpose dams are federally owned and operated.

Nonfederal sponsors generally are state, tribal, territory, county, or local agencies or governments. Although sponsors typically need to have some taxing authority, Congress has authorized that some USACE activities can have nonprofit and other entities as the nonfederal project sponsor; a few authorities allow for private entities as partners.

Table 1 provides general information on the duration and federal share of costs for various phases in USACE project delivery. Project delivery often takes longer than the combined duration of each phase shown in **Table 1** because some phases require congressional authorization before they can begin and action on each step is subject to the availability of appropriations.

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

	Feasibility Study	Preconstruction Engineering and Design (PED)	Construction	Operation & Maintenance
Avg. Duration, Once Congressionally Authorized and Funded[a]	3 years[b]	Approx. 2 years	Varies	Authorized project duration
Federal Share of Costs	50%[c] (except 100% for inland waterways)	Varies by project purpose[d]	Varies, see **Table 2**	Varies, see **Table 2**

Source: CRS.

a. Generally, projects take longer than the duration of the individual steps. Some steps require congressional authorization before they can begin, and action on each step is subject to availability of appropriations.

b. The Water Resources Reform and Development Act of 2014 (WRRDA 2014; P.L. 113-121) requires most feasibility studies to be completed within three years of initiation and to have a maximum federal cost of $3 million. It also deauthorizes any feasibility study not completed seven years after initiation.

c. Prior to WRRDA 2014, the preliminary analysis was included within a reconnaissance study that was produced at 100% federal expense.

d. Generally, PED cost shares are the same as construction cost shares shown in **Table 2**.

Feasibility Study and Chief's Report

A USACE water resource project starts with a feasibility study (sometimes referred to as an investigation) of the water resource issue and an evaluation of the alternatives to address the issue. The purpose of the USACE study process is to inform federal decisionmakers on whether there is a federal interest in authorizing a USACE construction project. USACE generally requires two types of congressional action to initiate a study—study authorization and then appropriations. Congress generally authorizes USACE studies in WRDA legislation.[25]

Once a study is authorized, appropriations are sought from monies generally provided in the annual Energy and Water Development appropriations acts. Within USACE, projects are largely planned at the district level and approved at the division level and USACE headquarters. Early in

[25] In addition to some restudies being approved through committee resolution (see footnote 24), some studies that review the operations of completed projects may proceed under general study authorizations without new project-specific congressional action, pursuant to Section 216 of the Flood Control Act of 1970 (P.L. 91-611, 33 U.S.C. §549a).

the study process, USACE assesses the level of interest and support of nonfederal entities that may be potential sponsors that share project costs and other responsibilities. USACE also investigates the nature of the water resource problem and assesses the federal government's interest.

If a nonfederal sponsorship is secured and USACE recommends proceeding, a feasibility study begins. The cost of the feasibility study (including related environmental studies) is split equally between USACE and the nonfederal project sponsor, as shown in **Table 1**. The objective of the feasibility study is to formulate and recommend solutions to the identified water resource problem. During the first few months of a feasibility study, the local USACE 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). (For more information on NEPA compliance and cost-benefit analyses, see the box "USACE Feasibility Studies: National Environmental Policy Act [NEPA] Compliance and Economic Analyses.") The evaluation of USACE water resource projects is governed by the 1983 *Principles and Guidelines for Water and Related Resources Implementation Studies* and by policy direction provided in WRDA bills and other enacted legislation.[26] 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).[27]

Once the final feasibility study is available, the Chief of Engineers signs a recommendation on the project, known as the Chief's Report. USACE submits the completed Chief's Reports to the congressional authorizing committees (33 U.S.C. §2282a) and transmits the reports to the Assistant Secretary of the Army for Civil Works and the Office of Management and Budget (OMB) for Administration review. Since the mid-1990s, Congress has authorized many projects based on Chief's Reports prior to completion of the project review by the Assistant Secretary and OMB.[28]

USACE Feasibility Studies: National Environmental Policy Act Compliance and Economic Analyses

NEPA Compliance. The National Environmental Policy Act of 1969 (NEPA; 42 U.S.C. §4321) requires federal agencies to fully consider a federal action's significant impacts on the quality of the human environment, and to inform the public of those impacts, before making a final decision. The U.S. Army Corps of Engineers (USACE) integrates its NEPA compliance process with the development of a feasibility study. That is, during the study process, USACE identifies impacts of potential project alternatives and any environmental requirements that may apply as a result of those impacts, and it takes action necessary to demonstrate compliance with those requirements. In Section 1005 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014;

[26] During FY2017, USACE planning activities remained under the 1983 *Principles and Guidelines*, pursuant to language in the explanatory statement accompanying the Energy and Water Development Appropriations title of the Consolidated Appropriations Act, 2016 (P.L. 114-113). As of June 2015, most other federal water resource investments are being developed and evaluated under a set of Administration documents known as the Principles, Requirements, and Guidelines; for more on these documents, see CRS In Focus IF10221, *Principles, Requirements, and Guidelines (PR&G) for Federal Investments in Water Resources*, by Nicole T. Carter and Charles V. Stern.

[27] For a discussion of the economic evaluations of USACE projects (including the discount rate used and the development of benefit-cost ratios) and the evolution of guidance for USACE project planning, see CRS Report R44594, *Discount Rates in the Economic Evaluation of U.S. Army Corps of Engineers Projects*, by Nicole T. Carter and Adam C. Nesbitt.

[28] For example, WRRDA 2014 authorized 34 new construction projects. Of these, 25 had been transmitted to Congress by the Assistant Secretary of the Army and 9 were awaiting transmittal to Congress by the Assistant Secretary when the bill was sent to the President; all 34 projects had a Chief of Engineers' report. At times Congress also has authorized construction of a small set of projects prior to the availability of informational copies of the report on the feasibility study; these construction authorizations generally are contingent on a favorable Chief's Report or a determination of feasibility by the Secretary of the Army.

P.L. 113-121), titled Project Acceleration, Congress directed USACE to expedite NEPA environmental documentation compliance for USACE studies. In March 2018, USACE issued implementation guidance for this provision. USACE published implementation guidance for the categorical exclusion portion of Section 1005 in August 2016; the provision called for the agency to survey its use of categorical exclusions and to identify and publish new categorical exclusion categories that merit establishment. USACE has not established new categorical exclusion categories pursuant to Section 1005 of WRRDA 2014.

For more information how USACE's study process is combined with its NEPA documentation compliance, see CRS Report R43209, *Environmental Requirements Addressed During Corps Civil Works Project Planning: Background and Issues for Congress*, by Linda Luther.

Economic Analyses. Congress established federal policy for evaluating USACE projects in the Flood Control Act of 1936 (49 Stat. 1570) by stating that a project should be undertaken "if the benefits to whomsoever they may accrue are in excess of the estimated costs" and if a project is needed to improve the lives and security of the people. For flood risk reduction projects and navigation projects, USACE performs a benefit-cost analysis (BCA) to compare the economic benefits of project alternatives to the investment costs of those alternatives. For ecosystem restoration projects, USACE performs a cost-effectiveness analysis to evaluate for each project alternative its associated costs and its anticipated environmental benefits. Disagreement persists about various aspects of these analyses, including the use of BCAs in decisionmaking, how (and which) benefits and costs are captured and monetized, and how to value future benefits and costs (which relates to the use of a *discount rate* to evaluate how future costs and benefits are valued in the present). The quality and reliability of BCAs shape federal decisionmaking and the efficacy of federal and nonfederal spending on federal water resource projects. Executive branch budget-development guidance for USACE over the last decade has used a benefit-cost ratio (BCR) threshold as one of the primary performance metrics for selecting which construction projects to propose for funding; that is, recent requests have included ongoing projects that have benefits that are 2.5 times the project costs (i.e., BCR>2.5) or address a significant risk to human safety. In contrast, the threshold for an Administration recommendation for construction authorization is typically that the benefits exceed the costs (i.e., BCR>1). An issue for Congress and nonfederal project sponsors is the uncertain prospects for construction for the suite of congressionally authorized projects that do not meet the budget-development BCR threshold.

Sources: USACE, Implementation Guidance for Section 1005(b) of the Water Resources Development Act (WRRDA) of 2014, Categorical Exclusions in Emergencies, memorandum, August 5, 2016, at https://planning.erdc.dren.mil/toolbox/library/WRDA/WRRDA2014IGSection1005b.pdf; see CRS Report R44594, *Discount Rates in the Economic Evaluation of U.S. Army Corps of Engineers Projects*, by Nicole T. Carter and Adam C. Nesbitt.

Preconstruction Engineering and Design

USACE preconstruction engineering and design (PED) of a project may begin after the Chief's Report subject to the availability of appropriations (33 U.S.C. §2287).[29] PED consists of finalizing the project's design, preparing construction plans and specifications, and drafting construction contracts for advertisement. USACE work on PED is subject to the availability of USACE appropriations. Once funded, the average duration of PED is two years, but the duration varies widely depending on the size and complexity of a project. PED costs are distributed between the federal and nonfederal sponsor in the same proportion as the cost-share arrangement for the construction phase; see **Table 2** for information on the cost-share requirements for construction.

[29] PED may begin on a project before it has obtained congressional authorization for construction. In general, PED begins after the Chief's Report, some USACE guidance indicates PED may be initiated after the Division Engineer's transmittal of the feasibility report to USACE headquarters.

Table 2. Cost Shares for Construction and Operation and Maintenance (O&M)

Project Purpose	Maximum Federal Share of Construction	Maximum Federal Share of O&M
Navigation		
Harbors and Coastal Channels		
improvements less than 20 ft. deep	80%[a]	100%[b]
improvements between 20 ft. and 50 ft. deep	65%[a]	100%[b]
improvements greater than 50 ft. deep	40%[a]	50%[b]
Inland Waterways	100%[c]	100%
Flood and Storm Damage Reduction		
Inland Flood Control	65%	0%
Coastal Hurricane and Storm Damage Reduction (except Periodic Beach Renourishment)[d]	65% (50%)	0% (0%)
Aquatic Ecosystem Restoration	65%	0%
Multipurpose Project Components		
Hydroelectric Power	0%[e]	0%
Municipal and Industrial Water Supply Storage	0%	0%
Agricultural Water Supply Storage	65%[f]	0%
Recreation at USACE Facilities	50%	0%
Aquatic Plant Control	Not Applicable	50%

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

a. Percentages reflect that nonfederal sponsors pay 10%, 25%, or 50% during construction and 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. For more on this trust fund, see CRS In Focus IF10020, *Inland Waterways Trust Fund*, by Charles V. Stern and Nicole T. Carter.

d. Congressionally authorized beach nourishment components of coastal storm damage reduction projects consist of periodic placement of sand on beaches and dunes; most nourishment activities remain in the construction phase for 50 years.

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 federally funded, then repaid by nonfederal water users.

Construction and Operation and Maintenance

Once the project receives congressional construction authorization, federal funds for construction are sought in the annual appropriations process. Once construction funds are available, USACE typically functions as the project manager; that is, USACE staff, rather than the nonfederal project sponsor, usually is responsible for implementing construction. Although some construction may be performed by USACE personnel and equipment, the majority of work typically is contracted out to private engineering and construction contractors. When USACE leads the construction, the agency typically pursues reimbursement of the nonfederal cost share

during project construction.[30] Postconstruction ownership and operations responsibilities depend on the type of project. When construction is complete, USACE may own and operate the constructed project (e.g., navigation projects) or ownership and maintenance responsibilities may transfer to the nonfederal sponsor (e.g., most flood damage reduction projects).

The cost-share responsibilities for construction and O&M vary by project purpose, as shown in **Table 2**. **Table 2** first provides the cost share for the primary project purposes of navigation, flood and storm damage reduction, and aquatic ecosystem restoration; next, it provides the cost shares for additional project purposes, which can be added to a project that has at least one of the three primary purposes at its core. WRDA 1986 increased local cost-share requirements; some subsequent WRDAs further adjusted cost sharing. Deviation from the standard cost-sharing arrangements for individual projects is infrequent and typically requires specific authorization by Congress.[31]

Changes After Construction Authorization

A project may undergo some changes after authorization. If project features or estimated costs change significantly, additional congressional authorization may be necessary. Congressional authorization for a significant modification typically is sought in a WRDA. Requests for such modifications or for the study of such modifications also are solicited through the Section 7001 annual report process. For less significant modifications, additional authorization often is not necessary. Section 902 of WRDA 1986, as amended (33 U.S.C. §2280), generally allows for increases in total project costs of up to 20% (after accounting for inflation of construction costs) without additional congressional authorization.

If nonfederal entities are interested in altering USACE civil works projects after construction, the entity generally must obtain permission from USACE. The agency's authority to allow alterations to its projects derives from Section 14 of the Rivers and Harbors Act of 1899, also known as Section 408 based on its codification at 33 U.S.C. §408. This provision states that the Secretary of the Army may "grant permission for the alteration or permanent occupation or use of any of the aforementioned public works when in the judgment of the Secretary such occupation or use will not be injurious to the public interest and will not impair the usefulness of such work." In 2015, USACE released new regulations for how the agency would process requests for Section 408 permissions—Engineer Circular (EC) 1165-2-216, *Policy and Procedural Guidance for Processing Requests to Alter US Army Corps of Engineers Civil Works Projects Pursuant to 33 USC 408*.[32] Pursuant to the regulations, USACE conducts a technical review of the proposed alteration's effects on USACE projects. At the end of the Section 408 process, USACE chooses to

[30] For many types of USACE projects, nonfederal payment during construction is established in statute (33 U.S.C. §2213). Congress also has provided the agency with the authority to allow nonfederal sponsors to repay construction costs over a term of up to 30 years with interest (33 U.S.C. §2213(k)). The interest rate is determined by the Secretary of the Treasury pursuant to statutory direction (33 U.S.C. §2216). This option has not been exercised often. It was used for some nonfederal costs related to USACE projects in Louisiana after Hurricane Katrina. Direction to allow for the extended repayments also has appeared in supplemental appropriations for the agency (e.g., P.L. 113-2, P.L. 115-123).

[31] Congress has established that cost shares shall be subject to the nonfederal sponsors' ability to pay (33 U.S.C. §2213(m)(2)); however, this authority is rarely employed. The most recent publicly available guidance on how USACE implements the ability-to-pay provision is from 1989; it does not reflect enacted changes in USACE authority, including those in Section 2019 of WRDA 2007 (USACE, *Flood Control Cost-Sharing Requirements Under the Ability-to-Pay Provision of Section 103(m) of* P.L. 99-662, ER 1165-2-121, at http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1165-2-121.pdf?ver=2013-09-08-233444-150).

[32] For more on this document and subsequent implementation guidance, see https://www.usace.army.mil/Missions/Civil-Works/Section408/.

approve or deny permission for the alteration; USACE may attach conditions to its Section 408 permission.

Deauthorization Processes and Divestiture

Projects

Although WRDAs largely are authorization bills, Congress has used WRDAs to deauthorize projects and establish deauthorization processes. Authorizations of USACE construction projects generally are not time limited; however, there are processes for deauthorizing unconstructed projects and project elements. These include the following processes and requirements:

- WRDA 2016 in Section 1301 created a one-time process to deauthorize projects with federal costs to complete of at least $10 billion that are "no longer viable for construction."[33]
- Section 1302 of WRDA 2016 requires that any project authorized in WRDA 2016 be automatically deauthorized if after 10 years of enactment no funding had been obligated for its construction, unless certain conditions apply.
- Section 6003 of WRRDA 2014 requires that any project authorized in WRRDA 2014 be automatically deauthorized if after seven years of enactment no funding had been obligated for its construction.
- The Secretary of the Army is directed to transmit to Congress annually a list of authorized projects and project elements that did not receive obligations of funding during the last five full fiscal years (33 U.S.C. §579a(b)(2)).[34] 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 following fiscal year, the project or element is deauthorized.[35]

The bill-specific deauthorization processes and requirements and the general deauthorization process all exist in statute; USACE has not addressed uncertainties regarding how implementation of these authorities is to be coordinated.[36]

The deauthorization processes described are for unconstructed projects or project elements of congressionally authorized USACE construction activities. A separate divestiture process is used to dispose of constructed projects or project elements and other real property interests associated with civil works projects. Some divestitures also may require explicit congressional

[33] WRRDA 2014 created a one-time process to deauthorize projects with federal costs to complete of $18 billion; this deauthorization process is restricted to projects authorized prior to WRDA 2007. On March 25, 2016, USACE published a final deauthorization list identifying 143 potential projects or project elements for deauthorization, with a federal cost to complete estimated around $14.3 billion.

[34] Section 1175 of WRDA 2016 exempted from this deauthorization process certain projects that are authorized to receive funds from the Inland Waterways Trust Fund.

[35] Deauthorization of 57 projects and project elements was announced in the *Federal Register* on August 10, 2016.

[36] USACE indicated in its implementation guidance for Section 6003 that "Additional guidance will be provided" (USACE, Implementation Guidance for Sections 6001 and 6003 of the Water Resources Reform and Development Act of 2014—Deauthorization of Inactive Projects and Backlog Prevention, Memorandum for Distribution, February 23, 2015, p. 6, at http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/350). At a USACE website dedicated to WRDA 2016 implementation guidance (http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/738), USACE indicated that implementation guidance was not necessary for Section 1302 of WRDA 2016.

deauthorization. USACE divestitures historically either have been limited to projects or real property interests that no longer serve their authorized purposes (e.g., navigation channels that no longer have commercial navigation) or have been conducted pursuant to specific congressional direction. There currently is no formal authorized process for a nonfederal project sponsor to propose that an authorized project be deauthorized.[37] Congress has deauthorized unconstructed and constructed projects and project elements in WRDA legislation.

Studies

For studies, there are two deauthorization processes

- WRRDA 2014 required that any feasibility study that is not completed seven years after initiation is automatically deauthorized.
- The Secretary of the Army is directed to transmit to Congress annually a list of incomplete authorized studies that have not received appropriations for five full fiscal years (33 U.S.C. §2264). The study list is not required to be published in the *Federal Register*. Congress has 90 days after submission of the study list to appropriate funds for a study; otherwise, the study is deauthorized.

CRS has no data indicating that studies have been deauthorized through this process in recent years. USACE has indicated that the agency is reviewing its 5,600 study authorities to identify studies for deauthorization.[38]

Alternative Project Delivery and Innovative Finance

Interest in Alterative Delivery

As nonfederal entities have become more involved in USACE projects and their funding, they have expressed frustration with the time it takes USACE to complete studies and construction. Delayed completion of a water resource project can postpone some or all of the project's anticipated benefits. The impact of these delays varies by the type of project. Delayed investment in navigation projects may result in postponed transportation cost savings from improved efficiency and in greater reliance on road and rail transport. Delayed aquatic ecosystem restoration projects may result in missed opportunities to attenuate wetlands loss and realize related ecosystem benefits, such as those for water quality and fisheries. Delayed completion of flood risk reduction projects may prolong a community's vulnerability to certain coastal and riverine floods, thereby contributing to the potential cost of disaster response and recovery.

The Government Accountability Office (GAO) in a 2013 report summarized its findings regarding cost growth at USACE flood control projects.[39] GAO's detailed review of eight projects found that a factor contributing to cost increases at these USACE-led flood risk reduction

[37] Some nonfederal project sponsors have proposed deauthorizations through the annual report process established by Section 7001 of WRRDA 2014. The Administration has stated in its Section 7001 annual reports to Congress that the submitted deauthorization proposals do not qualify pursuant to the congressional direction in Section 7001(c)(1)(A) of WRRDA 2014 (33 U.S.C. §2282d(c)(1)(A)).

[38] Personal communication from USACE staff to Nicole T. Carter, March 2, 2018.

[39] U.S. Government Accountability Office (GAO), *Cost Increases in Flood Control Projects and Improving Communication with Nonfederal Sponsors*, GAO 14-35, December 20, 2013, at https://www.gao.gov/products/GAO-14-35.

projects was funding below the capability level; other factors included design changes, initial USACE cost estimates being lower than later cost estimates, and differences in contract estimates and actual contract costs. When testifying in 2013, USACE Deputy Commanding General for Civil and Emergency Operations Major General Michael J. Walsh noted that how much funding is put toward a project significantly impacts the duration of project delivery.[40]

Only a subset of authorized USACE construction activities is included in the President's budget request and funded annually by federal appropriations. Consequently, numerous authorized USACE projects or project elements have not received federal construction funding. Some $96 billion in authorized USACE construction projects and dam safety work are eligible for USACE construction appropriations,[41] which have averaged $1.9 billion annually in recent years.

Competition for USACE discretionary appropriations has increased interest in alternative project delivery and *innovative financing*, including private financing and public-private partnerships (P3s). In a June 21, 2017, memorandum, the agency's Director of Civil Works announced the initiation of a comprehensive review to identify opportunities to enhance project delivery, organizational efficiency, and effectiveness.[42] Congress, particularly in WRRDA 2014 and WRDA 2016, has authorized alternative ways to advance and deliver USACE studies and projects. To expand delivery options, Congress has increased the flexibility in the nonfederal funding of USACE-led activities, nonfederal leadership of USACE studies and projects, and P3s. It also has authorized new financing mechanisms for water resource projects. Some of these expanded delivery and financed options are discussed below.

Expansion of Delivery Options

WRRDA 2014 and WRDA 2016 expanded and consolidated the authorities for nonfederal entities to perform studies and construct projects (or elements of projects) that typically would have been undertaken by USACE. These statutes also provided that the costs of these nonfederal-led activities are shared by the federal government largely as if USACE had performed them. That is, nonfederal entities advancing water resource projects may be eligible to receive credit or reimbursement (without interest) subject to the availability of federal appropriations for their investments that exceed the required nonfederal share of project costs.[43] These authorities typically require that the nonfederal entity leading the project comply with the same laws and regulations that would apply if the work were being performed by USACE.

Private sector access to financing and expertise and experience with complex project management are all seen as potential advantages for the delivery of some types of public infrastructure. Interest has expanded in recent years in allowing private engagement in U.S. water resource projects, which would follow the models used in other U.S. infrastructure sectors, such as transportation, and in international examples of private provision of public infrastructure and related services.

---

[40] U.S. Congress, House Committee on Transportation and Infrastructure, *A Review of the United States Army Corps of Engineers Chief's Reports*, 113th Cong., 1st sess., June 5, 2013, at https://transportation.house.gov/calendar/eventsingle.aspx?EventID=351412.

[41] For source, see footnote 9. For information on U.S. dam safety broadly, see CRS In Focus IF10606, *Dam Safety: Federal Programs and Authorities*, by Charles V. Stern et al.

[42] Director of Civil Works, USACE, *Further Advancing Project Delivery Efficiency and Effectiveness of USACE Civil Works*, Memorandum for Major Subordinate Commands, and Districts, June 21, 2017, at https://planning.erdc.dren.mil/toolbox/library/MemosandLetters/17Jun21-AdvancingCWProjectDelivery.pdf.

[43] GAO found that the number of federal water resource studies and projects that nonfederal sponsors have undertaken, and the amounts they have been reimbursed, could not be reliably determined (GAO, *Better Guidance Could Improve Corps' Information on Water Resources Projects Undertaken by Nonfederal Sponsors*, December 2016, p. 26, at https://www.gao.gov/assets/690/681415.pdf).

WRRDA 2014 directed USACE to establish pilot programs to evaluate the effectiveness and efficiency of allowing nonfederal applicants to carry out certain authorized projects, including a P3 pilot program in Section 5014 of the bill. For a discussion of some of the issues that have impeded greater private-sector participation and P3 efforts for USACE and water resource projects (e.g., limitations on USACE entering into long-term contracts and challenges to assessing project-specific user fees) see CRS Testimony TE10023, *America's Water Resources Infrastructure: Approaches to Enhanced Project Delivery*, by Nicole T. Carter. In H.Rept. 115-929, which accompanied USACE FY2019 appropriations, congressional appropriators directed USACE to continue to develop its policy approach for public-private partnerships.

Under these authorities, additional nonfederal investments may, in the near term, achieve progress on some water resource projects, thereby potentially making federal funding available for other authorized USACE projects. However, additional nonfederal investment may have potential trade-offs for the federal government, including reduced federal influence over the set of studies and construction projects receiving, expecting, and eligible for federal support. A concern from the nonfederal perspective is the challenge of obtaining federal reimbursement.[44]

Water Infrastructure Finance and Innovation Act

WRRDA 2014 in Sections 5021 through 5035 authorized the Water Infrastructure Finance and Innovation Act (WIFIA), a program to provide direct loans and loan guarantees for identified categories of water projects. The WIFIA concept is modeled after a similar program that assists transportation projects: the Transportation Infrastructure Finance and Innovation Act, or TIFIA, program.

Congress established WIFIA with roles for both USACE and the Environmental Protection Agency (EPA).[45] WIFIA authorized both agencies to provide assistance in the form of loans and loan guarantees, and it identified each agency to provide that assistance for certain types of water projects. Under the WIFIA program, USACE is authorized to provide WIFIA support for a number of different project types, such as flood damage reduction projects, hurricane and storm damage reduction projects, environmental restoration projects, coastal or inland harbor navigation improvement projects, inland and intracoastal waterways navigation projects, or a combination of these projects. WRRDA 2014 included a number of project selection criteria that would affect whether individual projects are eligible to receive USACE WIFIA funding.

Under WIFIA, EPA and USACE each are authorized for a total of $175 million in appropriations over five years (beginning with $20 million for each agency in FY2015 and increasing to $50 million each in FY2019) to provide assistance. Implementation of WIFIA requires congressional appropriations for administrative expenses (i.e., "start-up" costs) as well as subsidy costs (i.e., the presumed default rate on loans) for that agency's WIFIA program. Each agency also must promulgate regulations for the implementation of its WIFIA program. EPA has received funds and is implementing its WIFIA authority.[46] In contrast, the Administration had not requested to fund USACE for its WIFIA start-up costs. In H.Rept. 115-929, congressional appropriators directed USACE to continue to develop its WIFIA proposals for future budget submissions and to allow for WIFIA proposal development expenses to be funded through the USACE Expenses account. For a discussion of issues related to USACE implementation of WIFIA, see CRS Testimony

[44] For information on a related GAO report, see footnote 43.

[45] P.L. 113-121, Title V, Subtitle C, §§5021-5035.

[46] For more information, see CRS Report R43315, *Water Infrastructure Financing: The Water Infrastructure Finance and Innovation Act (WIFIA) Program*, by Jonathan L. Ramseur and Mary Tiemann.

TE10023, *America's Water Resources Infrastructure: Approaches to Enhanced Project Delivery*, by Nicole T. Carter.

Other USACE Authorities and Activities

There are exceptions to the standard project delivery process described above. USACE has some general authorities to undertake small projects, technical assistance, and emergency actions. Congress also has specifically authorized USACE to undertake numerous municipal water and wastewater projects. These exceptions are described below.

Small Projects Under Continuing Authorities Programs

The agency's authorities to undertake small projects are called Continuing Authorities Programs (CAPs). Projects under these authorities can be conducted without project-specific congressional study or construction authorization and without project-specific appropriations; these activities are performed at USACE's discretion. For most CAP authorities, Congress has limited the project size and scope as shown in **Table 3**.[47] The CAPs typically are referred to by the section number in the bill in which the CAP was first authorized. WRRDA 2014 requires the Assistant Secretary of the Army to publish prioritization criteria for the CAPs and an annual CAP report.[48]

Table 3. Selected USACE Continuing Authorities Programs (CAPs) for Small Projects and Recent Enacted and Requested Appropriations

(in millions of dollars)

Common Name of CAP Authority	Eligible Activities and U.S. Code Citation	Max. Federal Cost Share	Per-Project Federal Limit	Annual Federal Program Limit	FY2018, FY2017, and FY2016	FY2019
§14	Streambank and shoreline erosion of public works and nonprofit services; 33 U.S.C. §701r	65%	$5.0	$20.0	$8.0 $5.0 $2.0	$8.0
§103	Beach erosion/hurricane storm damage reduction; 33 U.S.C. §426g	65%	$10.0	$30.0	$3.0 $0.5 $.5	$4.0
§107	Navigation improvements; 33 U.S.C. §577	Varies (see **Table 2**); 50% for recreational	$10.0	$50.0	$7.5 $8.5 $7.0	$8.0
§111	Prevention/mitigation of shore damage by federal navigation projects; 33 U.S.C. §426i	Same as the project causing the damage	$10.0	Not Applicable	$0.5 $0.5 $0.5	$8.0

[47] There also is an authority under 33 U.S.C. §610 for USACE to control noxious aquatic plant growth at a 70% federal and 30% nonfederal cost share; the authority is capped at $15 million annually. This authority has not been operated as a Continuing Authorities Program. Most, but not all, of the work under this authority has been for research.

[48] No *Federal Register* publication or annual report was available as of early June 2018.

Common Name of CAP Authority	Eligible Activities and U.S. Code Citation	Max. Federal Cost Share	Per-Project Federal Limit	Annual Federal Program Limit	FY2018, FY2017, and FY2016	FY2019
§204	Regional sediment management/beneficial use of dredged material; 33 U.S.C. §2326	65%	$10.0	$50.0	$1.5 $1.0 $0.5	$10.0
§205	Flood control (including ice jam prevention); 33 U.S.C. §701s	65%	$10.0	$55.0	$8.0 $8.0 $8.0	$8.0
§206	Aquatic ecosystem restoration; 33 U.S.C. §2330	65%	$10.0	$50.0	$8.0 $8.0 $8.0	$12.0
§208	Removal of obstructions, clearing channels for flood control; 33 U.S.C. §701g	65%	$0.5	$7.5	$0 $0 $0	$0
§1135	Project modifications for improvement of the environment; 33 U.S.C. §2309a	75%	$10.0	$40.0	$4.0 $3.0 $3.0	$8.0

Source: CRS.

Technical Assistance and Tribal Programs

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

Table 4. USACE Technical Assistance Authorities

(in millions of dollars)

Program	Activities Authorized	Max. Federal Cost Share	Per-Project Federal Limit	Annual Federal Program Limit	FY2018, FY2017, and FY2016	FY2019
Planning Assistance to States	Technical assistance to states, communities, water resources planning, and eligible levee system evaluations of federally authorized levees; 42 U.S.C. §1962d-16	Varies	$5.0 annually per state for state assistance	$30.0 for state assistance $15.0 for technical assistance	$8.0 $6.75 $6.0	$9.0
Flood Plain Management Service	Technical assistance on flood and floodplain issues; 33 U.S.C. §709a	100% for eligible activities	Not Applicable	$50.0	$15.0 $15.3 $15.0	$17.0

Program	Activities Authorized	Max. Federal Cost Share	Per-Project Federal Limit	Annual Federal Program Limit	FY2018, FY2017, and FY2016	FY2019
Tribal Partnership Program	Studies and construction of water resource development projects that benefit Indian tribes; 33 U.S.C. §2269	50% for construction; 50% for water-related planning, except 75% for watershed and river basin assessments	$10.0	Not Applicable	$1.5 $1.75 $1.5	$2.5

Source: CRS.

Natural Disaster and Emergency Response Activities

National Response Framework

For assistance for presidentially declared disasters pursuant to the Stafford Act (P.L. 93-288), USACE may be tasked with performing various response and recovery activities. These activities are funded through the Disaster Relief Fund and performed at the direction of the Federal Emergency Management Agency (FEMA) and the President and at the request of the governor of a state or territory with an affected area. Under the National Response Framework, USACE coordinates emergency support for *public works and engineering*. This support includes technical assistance, engineering, and construction management as well as emergency contracting, power, and repair of public water and wastewater and solid waste facilities.[49] USACE also assists in monitoring and stabilizing damaged structures and in demolishing structures designated as immediate hazards to public health and safety. In addition, the agency provides technical assistance in clearing, removing, and disposing of contaminated and uncontaminated debris from public property and in establishing ground and water routes into affected areas; contaminated debris management is coordinated with EPA.[50]

Flood Fighting and Emergency Response

In addition to work performed as part of the National Response Framework, Congress has given USACE its own emergency response authority. This is commonly referred to as the agency's 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). The act authorizes USACE to perform emergency response and disaster assistance.[51] It also authorizes disaster preparedness, advance measures, emergency operations (disaster response and postflood response), rehabilitation of

[49] In Puerto Rico after the 2017 hurricane season, USACE is not only restoring emergency power but also leading initial grid repair. USACE leadership in grid repair as part of domestic disaster recovery is a novel development. For more on this work, see CRS Report R45023, *Repair or Rebuild: Options for Electric Power in Puerto Rico*, by Richard J. Campbell, Corrie E. Clark, and D. Andrew Austin.

[50] For more on USACE's deployable emergency resources and expertise, see CRS Report R43560, *Deployable Federal Assets Supporting Domestic Disaster Response Operations: Summary and Considerations for Congress*, coordinated by Jared T. Brown.

[51] USACE 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).

certain damaged flood control works, protection or repair of certain 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). USACE also has some authorities to assist with selected activities during drought.[52]

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

Repair of Damaged Levees and Other Flood and Storm Projects

In P.L. 84-99, Congress authorized USACE 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. 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.[53] 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.[54] As of early 2018, RIP included around 14,000 miles of levees.

For locally constructed projects, 80% of the cost to repair the damage is paid using federal funds and 20% is paid by the levee owner. For federally constructed projects, the entire repair cost is a federal responsibility (except the nonfederal sponsor is responsible for the cost of obtaining the sand or other material used in the repair). For damage to be repaired, USACE must determine that

[52] USACE has authority to assist in the provision and transport of emergency water supplies when state resources have been exceeded and an imminent public health threat exists. Although USACE is authorized to assist political subdivisions, farmers, and ranchers with nonirrigation water, this authority largely has been used for assisting tribes with drinking water supplies. The agency can construct wells and transport water to provide emergency drinking water during drought conditions in the U.S. states and territories. USACE assistance is provided only to meet minimum public health and welfare requirements that cannot be met in the immediate future by state or local actions or through reasonable conservation measures. Transport expenses are nonreimbursable expenses (i.e., 100% federal); the purchase or acquisition of the water and the storage facility at the terminal point and permanent water facilities are reimbursable expenses. This authority cannot be used for the provision of water for livestock, irrigation, recreation, or commercial/industrial use. Eligible entities are limited to drought-distressed political subdivisions, farmers, and ranchers. A governor, his/her representative, or the governing body of a tribe must make a written request for USACE assistance. USACE makes the determination that an area has an inadequate water supply causing, or likely to cause, a substantial threat to the health and welfare of the inhabitants of the area. Funding is provided through the agency's Flood Control and Coastal Emergencies account. USACE has authority to reprogram its civil works funds to accomplish work under this authority. The agency also has authority to participate in temporary contracts to provide limited quantities of water (if available) for municipal and industrial purposes (33 U.S.C. §708).

[53] 33 U.S.C. §701n. For more on the Rehabilitation and Inspection Program (RIP), see USACE, Engineer Regulation 500-1-1, *Emergency Employment of Army and Other Resources Civil Emergency Management Program*.

[54] The USACE-maintained National Levee Database has information on the RIP status of levees; the database is available at http://nld.usace.army.mil/egis/f?p=471:1. An aspect of RIP implementation receiving attention is the agency's guidance on vegetation on levees. Some levee owners are having difficulty conducting regular maintenance and emergency repairs while complying with environmental laws, such as the Endangered Species Act (16 U.S.C. §1531). In some areas, the vegetation on and near levees provides species habitat and other environmental benefits. In Section 3013, WRRDA 2014 provided congressional direction regarding updating and content of guidance associated with vegetation on levees; the implementation guidance for this provision is available at http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/1213. This and other environmental issues associated with levee maintenance are beyond the scope of this report.

repair has a favorable benefit-cost ratio.[55] Local sponsors assume any rehabilitation cost for damage to an active project attributable to deficient maintenance. WRDA 2016 allows that in conducting repair or restoration work under RIP, an increase in the level of protection can be made if the nonfederal sponsor pays for the additional protection.

Assistance for Environmental Infrastructure/Municipal Water and Wastewater

Since 1992, Congress has authorized and provided for USACE assistance with design and construction of municipal drinking water and wastewater infrastructure projects. This assistance has included treatment facilities, such as recycling and desalination plants; distribution and collection works, such as stormwater collection and recycled water distribution; and surface water protection and development projects. This assistance is broadly labeled *environmental infrastructure* at USACE.

Most USACE environmental infrastructure assistance is authorized for a specific geographic location (e.g., city, county, multiple counties) 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 selected Energy and Water Development Appropriations acts. The nature of USACE's involvement (e.g., a grant from USACE to the project owner or USACE acting as the construction project manager) and nonfederal cost share vary according to the specifics of the authorization. Most USACE environmental infrastructure assistance requires cost sharing, typically designated at 75% federal and 25% nonfederal; however, some of the assistance authorities are for 65% federal and 35% nonfederal cost sharing. Under Section 219, USACE performs the authorized work; for environmental infrastructure projects authorized in other provisions, USACE often can use appropriated funds to reimburse nonfederal sponsors for work they perform.

Since 1992, Congress has authorized USACE to contribute assistance to more than 400 of these projects and to state and regional programs, with authorizations of appropriations totaling more than $5 billion. WRRDA 2014 expanded authorizations and authorization of appropriations for specific environmental infrastructure activities in multiple states. In WRDA 2016, Congress expanded the Section 7001 process, allowing nonfederal entities to propose modifications to existing authorities for environmental infrastructure assistance through the process.

Although no Administration has included environmental infrastructure in a USACE budget request since the first congressional authorization in 1992,[56] Congress regularly includes USACE environmental infrastructure funds in appropriations bills. Congress provided $44 million for USACE environmental infrastructure assistance in FY2014, $50 million in FY2015, $55 million in each of FY2016 and FY2017, $70 million in FY2018, and $77 million in FY2019. These funds are part of the "additional funding" provided by Congress in enacted appropriations bills. After enactment of an appropriations bill, the Administration follows guidance provided in the bill and

[55] Section 3029(a)(1) of WRRDA 2014 authorized USACE to include among eligible repair activities modifications to address major deficiencies or to implement nonstructural alternatives to repair. Implementing guidance for Section 3029(a)(1) is available at http://cdm16021.contentdm.oclc.org/utils/getfile/collection/p16021coll5/id/265.

[56] Environmental infrastructure assistance at times has been called out by various Administrations and others as a low priority for USACE, in part because other federal and state agencies have programs for which these projects may be eligible (e.g., U.S. Environmental Protection Agency's state revolving funds); for example, see National Commission on Fiscal Responsibility, *CoChairs' Proposal: $200 Billion in Illustrative Savings, Draft Document*, November 12, 2010, at http://www.fiscalcommission.gov/news/cochairs-proposal.

accompanying reports to direct its use of these funds on authorized environmental infrastructure assistance activities. The selected environmental infrastructure assistance activities are identified in the agency's work plan for the fiscal year, which is typically available within two months after enactment of appropriations.[57] Recent funds have been used to continue ongoing environmental infrastructure assistance; limitations on initiating new USACE activities in appropriations bills and accompanying reports appear to be curtailing initiation of USACE funding for the environmental infrastructure activities that do not have a broad geographic scope.

Because environmental infrastructure activities are not traditional USACE water resource projects, they are not subject to USACE planning process (e.g., a benefit-cost analysis and feasibility study are not performed). USACE environmental infrastructure assistance activities, however, are subject to federal laws, such as NEPA.

[57] Environmental infrastructure assistance is funded through the agency's Construction account. The USACE work plans for recent fiscal years are published at http://www.usace.army.mil/Missions/Civil-Works/Budget/.

Appendix. Evolution of USACE Civil Works Responsibilities

The civil responsibilities of the U.S. Army Corps of Engineers (USACE) began with creating and regulating navigable channels and later 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 USACE projects are multipurpose—that is, they provide water supply, recreation, and hydropower in addition to navigation or flood control. USACE environmental activities involve wetlands and aquatic ecosystem restoration and environmental mitigation activities for USACE facilities. The agency's regulatory responsibility for navigable waters extends to issuing permits for private actions that might affect navigation, wetlands, and other waters of the United States.

Navigation and Flood Control (1802-1950s)

The agency's civil works mission developed in the 19th century. In 1824, Congress passed legislation charging military engineers with planning roads and canals to move goods and people. In 1850, Congress directed USACE to engage in its first planning exercise—flood control for the lower Mississippi River. In 1899, Congress directed the agency to regulate obstructions of navigable waters (see box titled "USACE Regulatory Activities: Permits and Their Authorities). During the 1920s, Congress expanded USACE's 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 agency's 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 agency's emergency operations through authorization for flood preparedness and emergency operations.[58] The Water Supply Act of 1958 (43 U.S.C. §390b) gave USACE authority to include some reservoir storage for municipal and industrial water supply in reservoir projects at 100% nonfederal cost.

USACE Regulatory Activities: Permits and Their Authorities

The U.S. Army Corps of Engineers (USACE) has several 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 USACE for alteration or obstruction of navigation and refuse discharge in U.S. navigable waters. USACE 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 agency's regulatory program. USACE also regulates and authorizes disposal of materials into the ocean under the Marine Protection Research and Sanctuaries Act (33 U.S.C. §§1401-1455).

For more information, see CRS In Focus IF10125, *Overview of the Army Corps and EPA's Rule to Define "Waters of the United States" (WOTUS) and Recent Developments*, by Laura Gatz; CRS Report 97-223, *The Army Corps of Engineers' Nationwide Permits Program: Issues and Regulatory Developments*, by Nicole T. Carter; and CRS Report RS20028, *Ocean Dumping Act: A Summary of the Law*, by Claudia Copeland.

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

Changing Priorities (1960-1985)

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 USACE project planning. The 1969 National Environmental Policy Act (42 U.S.C. §4321) 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 decreasing environmental damage by recognizing the value of wetlands and by requiring federal agencies to evaluate potential effects of actions on floodplains and to minimize wetlands impacts.

Environmental Mission and Local Responsibility (1986-2000)

Congress changed the rules for USACE water projects and their funding through the 1986 Water Resources Development Act (WRDA 1986; 33 U.S.C. §2211). WRDA 1986 established new cost-share formulas, resulting in greater financial and decisionmaking roles for local stakeholders. It also reestablished the tradition of biennial consideration of an omnibus USACE water resource authorization bill. WRDA 1990 (33 U.S.C. §§1252, 2316) explicitly expanded the agency's mission to include environmental protection and increased its responsibility for contamination cleanup, dredged material disposal, and hazardous waste management. WRDA 1992 (33 U.S.C. §2326) authorized USACE 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 USACE limited programmatic authority to undertake aquatic ecosystem restoration projects. Although USACE 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.

Evolving Demands and Processes (2001-present)

The agency's aging infrastructure and efforts to enhance the security of its infrastructure from terrorism and natural threats have expanded USACE activities in infrastructure rehabilitation, maintenance, and protection. WRDA 2007 continued the expansion of the agency's ecosystem restoration activities by authorizing billions of dollars for these activities, including large-scale restoration efforts in coastal Louisiana and the Upper Mississippi River. USACE also redirected its flood control activities to incorporate concepts of flood risk management and, more recently, flood resilience. The regularity with which USACE has received congressional appropriations for natural disaster response has increased attention to its role in emergency response, infrastructure repair, and postdisaster recovery and to the potential for nature-based flood risk reduction measures. WRRDA 2014 expanded opportunities for nonfederal public and private participation in project delivery and financing and aimed to improve the efficiency of USACE planning activities. WRDA 2016 authorized projects within the agency's primary mission areas, and it continued or expanded USACE involvement in regional restoration efforts in various locations across the nation.

Author Information

Nicole T. Carter
Specialist in Natural Resources Policy

Disclaimer

This document was prepared by the Congressional Research Service (CRS). CRS serves as nonpartisan shared staff to congressional committees and Members of Congress. It operates solely at the behest of and under the direction of Congress. Information in a CRS Report should not be relied upon for purposes other than public understanding of information that has been provided by CRS to Members of Congress in connection with CRS's institutional role. CRS Reports, as a work of the United States Government, are not subject to copyright protection in the United States. Any CRS Report may be reproduced and distributed in its entirety without permission from CRS. However, as a CRS Report may include copyrighted images or material from a third party, you may need to obtain the permission of the copyright holder if you wish to copy or otherwise use copyrighted material.