United States Government Accountability Office

Report to the Chairman, Subcommittee on Transportation and Infrastructure, Committee on Environment and Public Works, U.S. Senate

December 2016

ARMY CORPS OF ENGINEERS

Better Guidance Could Improve Corps' Information on Water Resources Projects Undertaken by Nonfederal Sponsors

Accessible Version

GAO-17-97

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GAO Highlights

Highlights of GAO-17-97, a report to the Chairman of the Subcommittee on Transportation and Infrastructure, Committee on Environment and Public Works, U.S. Senate

Why GAO Did This Study

Through its Civil Works program, the Corps designs, constructs, and maintains federal water resources projects, such as levees for flood risk management. Under certain authorities, nonfederal sponsors, such as states and local governments, may undertake studies or construct projects and may be eligible for reimbursement or credit for the federal share of costs.

GAO was asked to examine federal water resources projects undertaken by nonfederal sponsors. This report examines (1) the authorities enabling nonfederal sponsors to undertake studies or projects, (2) the extent to which such sponsors have undertaken federal projects and the information the Corps has about them, and (3) the Corps' and sponsors' views on lessons learned from projects. GAO reviewed federal laws and agency guidance; collected information about studies and projects led by nonfederal sponsors from 1986 through 2014 from all 38 Corps districts responsible for civil works; and interviewed Corps officials in 16 districts that have overseen at least one such study or project, as well as 20 nonfederal sponsors that have undertaken projects.

What GAO Recommends

GAO recommends that the Corps develop guidance for accurate recording of transactions and other relevant information about projects undertaken by nonfederal sponsors. The agency agreed with GAO's recommendation

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View GAO-17-97. For more information, contact Anne-Marie Fennell at (202) 512-3841 or fennella@gao.gov.

What GAO Found

Authorities that allow nonfederal sponsors to undertake federal water resources projects, including feasibility studies and construction projects, have been included in various federal statutes since 1968. Until June 2014, when Congress enacted the Water Resources Reform and Development Act, five federal statutory authorities allowed nonfederal sponsors to undertake studies or construction of federal water resources projects such as flood control projects. The 2014 act amended and consolidated prior statutory provisions authorizing water resources projects.

The number of federal water resources projects nonfederal sponsors have undertaken and the amounts they have been reimbursed for the federal share of these projects cannot be reliably determined. The U.S. Army Corps of Engineers (Corps) does not track this information at the headquarters level and has delegated the responsibility for tracking and overseeing such projects to the districts. While Corps headquarters collects information from the districts on reimbursements, the information that headquarters provided GAO did not match the information that the districts provided to GAO. For example, the number of reimbursed projects and the amount of reimbursements made to nonfederal sponsors were inconsistent in the two data sets. Corps headquarters officials could not fully explain why differences existed and could not identify any Corps policies or procedures that provide guidance to the districts on the type of information to collect and maintain on projects led by nonfederal sponsors. Federal standards for internal control call for all transactions and other significant events to be clearly documented, and for accurate and timely recording of transactions and events. Without documented guidance for districts regarding recordkeeping for projects led by nonfederal sponsors, the Corps does not have reasonable assurance that districts will consistently record information on such projects and that the information districts provide to headquarters on these projects will be accurate and reliable.

Corps district officials and nonfederal sponsors GAO interviewed identified several lessons learned from projects undertaken by nonfederal sponsors. For example, officials and nonfederal sponsors frequently cited enhanced partnerships and communication as areas that worked well on projects led by nonfederal sponsors. In contrast, both Corps district officials and nonfederal sponsors cited various challenges in existing Corps guidance. For example, officials noted that Corps guidance does not clearly establish roles and responsibilities for these projects, and nonfederal sponsors said the Corps does not have clear guidance on the project implementation process. The Corps issued implementation guidance for feasibility studies led by nonfederal sponsors in February 2016 in which it clarified that it is generally not authorized to provide assistance to nonfederal sponsors undertaking feasibility studies, except in certain circumstances in which the Corps is permitted to provide limited technical assistance to nonfederal sponsors. The Corps has also developed draft guidance for construction projects led by nonfederal sponsors, which it estimates it will issue later in 2016.

Contents

Tables

Figures

Abbreviations

Corps	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act
WRRDA 2014	Water Resources Reform and Development Act of 2014

U.S. GOVERNMENT ACCOUNTABILITY OFFICE
441 G St. N.W.
Washington, DC 20548

December 6, 2016

The Honorable David Vitter
Chairman
Subcommittee on Transportation and Infrastructure
Committee on Environment and Public Works
United States Senate

Dear Mr. Chairman:

The U.S. Army Corps of Engineers (Corps) is the world's largest public engineering, design, and construction management agency. Located within the Department of Defense, the Corps has both military and civilian responsibilities.[1] Through its Civil Works Program, in general, the Corps plans, designs, constructs, operates, and maintains a wide range of water resources projects. Congress typically authorizes these projects in water resources development legislation for various purposes, including constructing levees for flood risk management, deepening waterways for navigational purposes, and building structures to control invasive species for ecosystem restoration.

The Corps typically becomes involved in water resources projects when a local community perceives a need or experiences a problem that is beyond its ability to solve, and a nonfederal sponsor contacts the Corps for assistance. Nonfederal sponsors can be states, tribes, counties, local governments or agencies, or nonprofit entities.[2] Generally, water resources development legislation requires that the Corps and a nonfederal sponsor share the cost of the project, with the split of financial responsibilities varying by project purpose. The Corps usually manages these projects, which typically include a feasibility study—an assessment of whether a project is worth pursuing and how the problem should be

[1]The Corps' military program provides, among other things, engineering and construction services to the Army, Air Force, other U.S. government agencies, and foreign governments. This report focuses on the Civil Works Program.

[2]Section 2003(b) of the Water Resources Development Act (WRDA) of 2007 amended the definition of a nonfederal interest to include federally recognized Indian tribes and nonprofit entities with the consent of the affected local government that have full authority and capability to perform the terms of their agreements and to pay damages, if necessary, in the event of failure to perform. We refer to nonfederal interests as nonfederal sponsors in this report.

addressed—as well as construction. In managing projects, the Corps collaborates with the nonfederal sponsor, providing opportunities for the nonfederal sponsor to help define the scope of the feasibility study and contribute to project design to ensure that, to the extent possible, factors affecting sponsoring communities are addressed during the planning process.

Congress authorizes and appropriates funds for the Corps to conduct projects, but not every authorized project receives appropriations in a given year. The Corps includes a prioritized list of projects in the President's annual budget request because existing project authorizations exceed the agency's annual appropriations available for these projects. As we have previously reported,[3] as of June 2014, the Corps reported a backlog in its Civil Works Program of more than 1,000 authorized water resources construction projects that had not received federal funding.[4] According to the Congressional Research Service, to concentrate limited resources and move ongoing projects toward completion, Corps budget requests have focused on funding projects near completion and have limited new studies and projects.[5] Moreover, as the Corps' inventory of infrastructure ages and grows, an increasing share of the agency's appropriations is used for operations and maintenance. As a result, in recent years, funding for civil works construction projects has declined. For example, annual appropriations for the Corps' civil works construction projects, including new starts, have generally decreased from about $2.3 billion in fiscal year 2006 to $1.6 billion in fiscal year 2015.

When the Corps has been unable to conduct feasibility studies or to construct authorized water resources projects because of funding constraints and competing priorities, nonfederal sponsors have at times initiated the work under existing water resources legislation that allows nonfederal sponsors to undertake feasibility studies or construction projects. Under this legislation, when a nonfederal sponsor undertakes and completes a feasibility study, the sponsor may be eligible for credit toward its share of the cost of the construction of the project in the

[3]GAO, *Army Corps of Engineers: The Corps Needs to Take Steps to Identify All Projects and Studies Eligible for Deauthorization*, GAO-14-699 (Washington, D.C.: Aug. 21, 2014).

[4]Corps officials said the reported backlog does not include feasibility studies because the agency does not track that backlog.

[5]Congressional Research Service, *Army Corps of Engineers: Water Resource Authorizations, Appropriations, and Activities*, R41243 (Washington, D.C.: Feb. 2, 2015).

amount equal to the cost of the study had it been undertaken by the Corps. When a nonfederal sponsor undertakes a construction project or part of a construction project that has been authorized by Congress, it can request and may be eligible for credit toward its share of the larger project or reimbursement for the cost of the federal share of the project, provided that it meets the requirements and conditions established in the applicable water resources legislation. In general, the authorities allowing the Corps to reimburse nonfederal sponsors for construction projects provide that reimbursement is subject to the enactment of federal appropriations.

You asked us to examine water resources projects undertaken by nonfederal sponsors. This report examines (1) the authorities that enable nonfederal sponsors to undertake a feasibility study or construct a congressionally authorized water resources project, (2) the extent to which nonfederal sponsors have undertaken federal water resources projects and the information the Corps has about such projects, and (3) Corps officials' and nonfederal sponsors' views on the lessons learned from these projects.

To identify authorities that enable nonfederal sponsors to undertake feasibility studies or construction projects, we reviewed water resources development legislation enacted from 1968 to June 2014 and interviewed Corps headquarters officials. We identified five statutory provisions, as well as project-specific legislation from 1986 to 2014 under which nonfederal sponsors were authorized to undertake specific studies or construction projects with the assistance of Corps officials.

To determine the extent to which nonfederal sponsors have undertaken federal water resource projects and the information the Corps has on them, we developed and administered an online data collection instrument to all 38 Corps districts with civil works responsibilities to identify water resources projects that nonfederal sponsors had undertaken from 1986 through 2014 under one or more of the statutory provisions we identified.[6] All 38 districts responsible for civil works responded to our data collection request, and we obtained information on each of the projects led by nonfederal sponsors (e.g., feasibility studies, construction of water resources projects, or separable elements of the

[6]We chose 1986 as our starting point because the enactment of the Water Resources Development Act (WRDA) of 1986 fundamentally changed the way the Corps planned and financed water resources projects.

projects) that the Corps districts identified through the data collection instrument.[7] We also compared information we collected from the Corps districts on reimbursements to nonfederal sponsors with information provided by Corps headquarters. In addition, we reviewed relevant agency guidance documents, such as Corps-issued engineer regulations and partnership agreements between the Corps and nonfederal sponsors, federal standards for internal control,[8] and leading practices for collaboration.[9]

To obtain views on lessons learned, we conducted telephone interviews with Corps officials in the 16 districts that oversaw at least one feasibility study or construction project undertaken by a nonfederal sponsor. We also interviewed 20 of 28 nonfederal sponsors who agreed to participate in our interviews about each of the projects they undertook and their views on the process for conducting nonfederal sponsor-led feasibility studies and construction projects. We conducted a content analysis on selected questions related to the advantages and disadvantages of nonfederal sponsor-led projects and lessons learned from the projects.

In June 2014, Congress enacted the Water Resources Reform and Development Act of 2014 (WRRDA 2014), which consolidated various authorities for nonfederal sponsors to undertake such projects, among other things.[10] Since our work was already under way when WRRDA 2014 became effective, and the Corps is in the process of developing implementing regulations, our review did not include projects authorized under this legislation. Appendix I provides further details on our scope and methodology.

[7]A separable element is a portion of a project that is physically separable from other portions of the project and that achieves hydrologic effects or produces physical or economic benefits that are separately identifiable from those produced by other portions of the project. For the purposes of this report, when we refer to projects undertaken by the nonfederal sponsors, we are also referring to the separable elements of projects in some of the cases.

[8]GAO, *Standards for Internal Control in the Federal Government*, GAO/AIMD-00-21.3.1 (Washington, D.C.: November 1999). This publication has been revised and reissued, effective October 1, 2015: GAO, *Standards for Internal Control in the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

[9]GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies,* GAO-06-15 (Washington, D.C.: Oct. 21, 2005) and GAO, *Managing for Results: Key Considerations for Implementing Interagency Collaborative Mechanisms,* GAO-12-1022 (Washington, D.C.: Sept. 27, 2012).

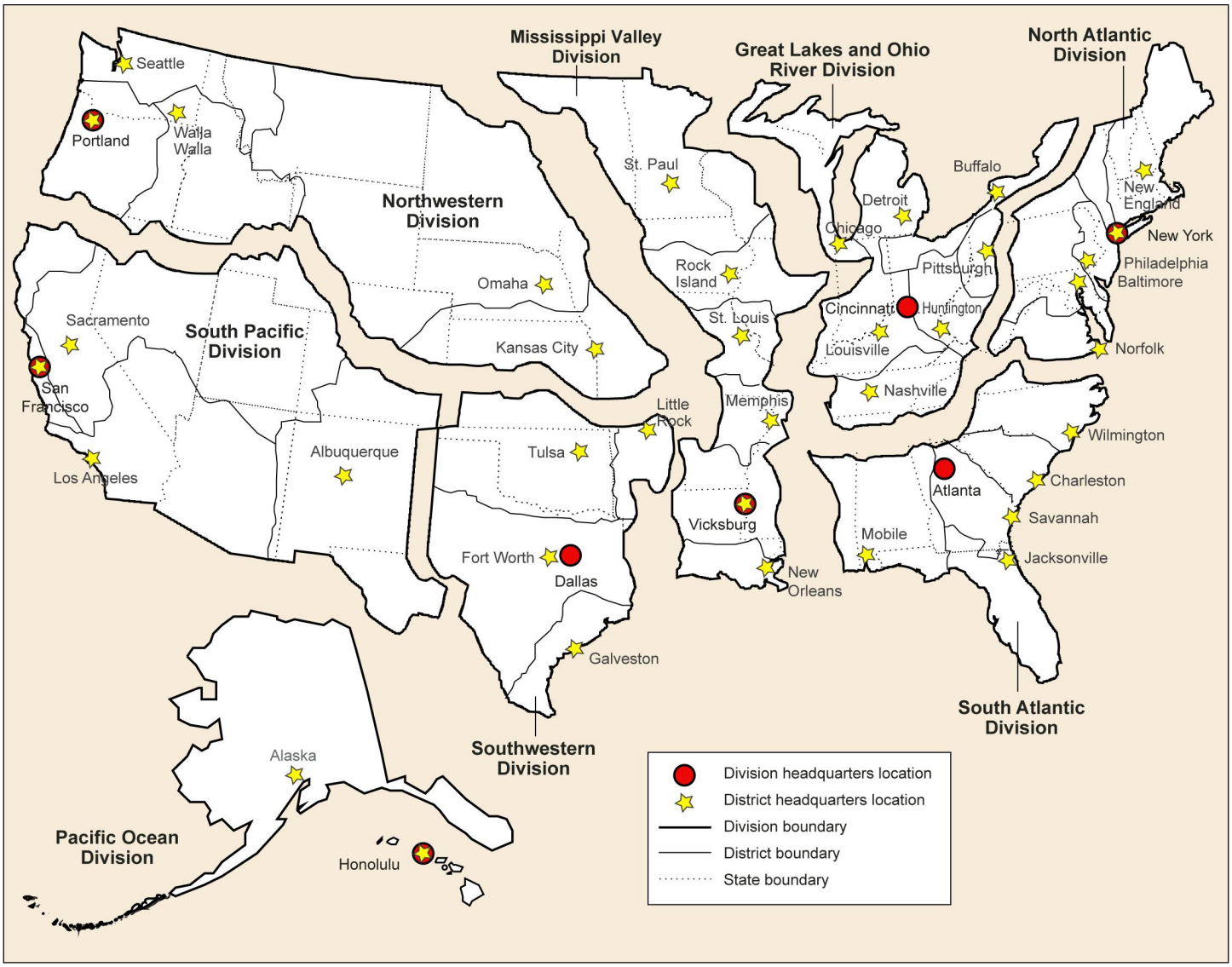
[10]Pub. L. 113–121, § 1014 (2014).

We conducted this performance audit from January 2014 to December 2016, in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

The Corps' Civil Works Program is organized into three tiers: headquarters, in Washington, D.C.; eight regional divisions that were generally established according to watershed boundaries; and 38 districts nationwide (see fig. 1).

Figure 1: Locations of U.S. Army Corps of Engineers' Civil Works Divisions and Districts



Sources: GAO representation of U.S. Army Corps of Engineers data; Map Resources (map). | GAO-17-97

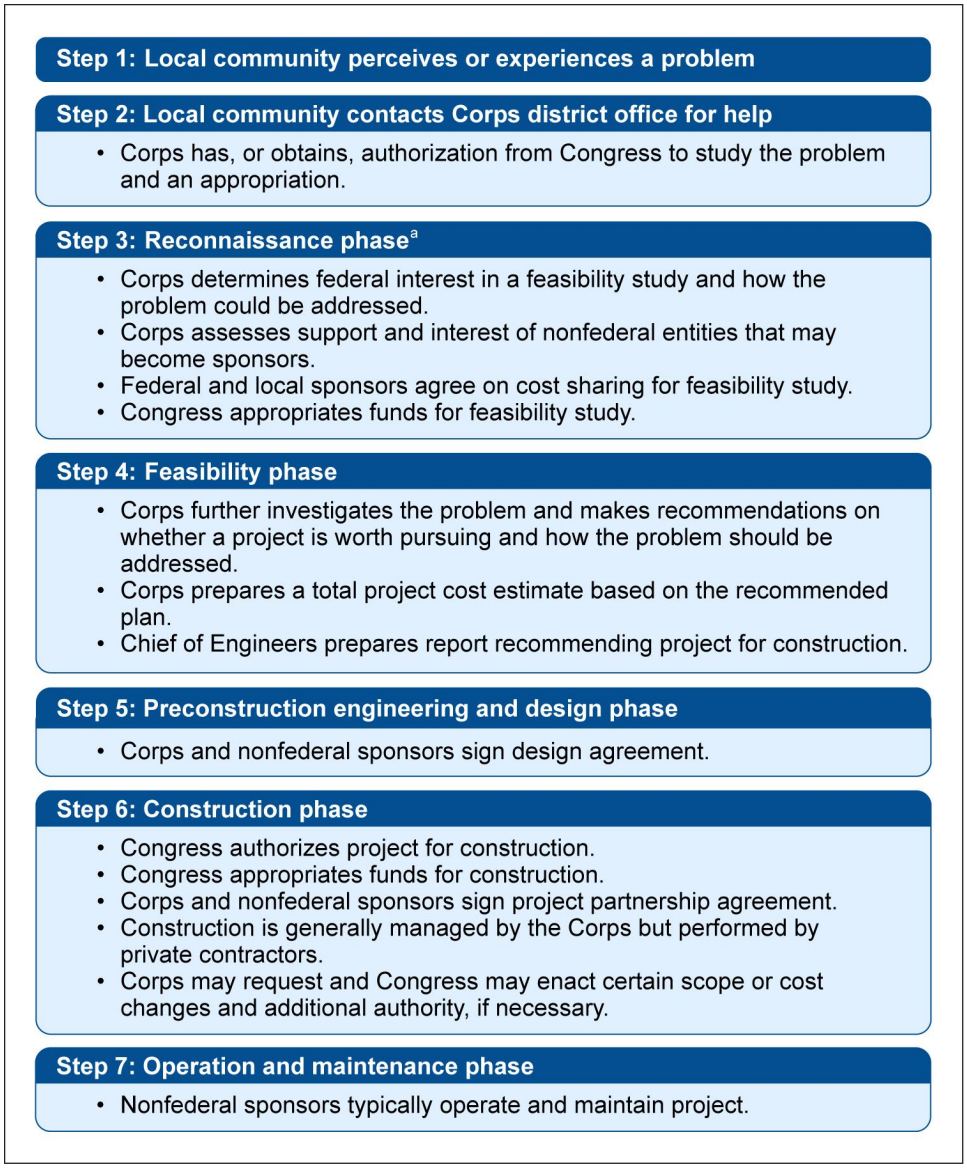
Corps headquarters primarily develops policies and guidance to fulfill agency responsibilities and plans the direction of the organization. The Assistant Secretary of the Army for Civil Works, appointed by the President, sets the strategic direction for the agency and has principal responsibility for the overall supervision of functions relating to the Civil Works Program, including supervising the Chief of Engineers' execution of the program. The Chief of Engineers, a military officer, is responsible

for the execution of the Corps' civil works and military missions. The Corps' divisions have the primary role of coordinating the districts' civil works projects and are commanded by military officers. The role of the districts, also commanded by military officers, is to plan and implement the studies and projects that Corps divisions and headquarters approve.

Process for Feasibility Studies and Construction Projects Led by the Corps

The Corps typically becomes involved in water resources projects when a local community perceives a need or experiences a problem that is beyond its ability to solve and contacts the Corps for assistance. Figure 2 illustrates the major steps in the typical process when the Corps leads a feasibility study or construction project.

Figure 2: Major Steps in Developing a U.S. Army Corps of Engineers (Corps) Civil Works Project Prior to April 2015



Source: GAO presentation of U.S. Army Corps of Engineers information. | GAO-17-97

[a]The Water Resources Reform and Development Act of 2014 (WRRDA 2014) eliminated the reconnaissance phase, and, in April 2015, the Corps issued guidance on section 1002 of WRRDA 2014, which implements the repeal language.

If it does not have current statutory authority to study the problem, the Corps needs congressional authorization before proceeding. Studies are authorized through legislation, typically a Water Resources Development

Act (WRDA), or in some circumstances, a resolution by an authorizing committee.[11] In addition to congressional authorization, the Corps needs an appropriation to conduct the study.

Prior to WRRDA 2014, after receiving authorization and an appropriation, the Corps conducted studies in two phases: reconnaissance and feasibility. Corps district offices conducted reconnaissance studies at full federal expense to determine if the problem warranted federal participation in a feasibility study and how the problem could be addressed. During the reconnaissance phase, the Corps also assessed the level of interest and support from nonfederal entities such as state, tribal, county, or local governments or agencies that might become sponsors. If the Corps determined that further study was warranted, the district office sought agreement from the local sponsor to share costs for a feasibility study.[12] WRRDA 2014 eliminated the reconnaissance phase to accelerate the study process and allow the Corps to proceed directly to the feasibility study.[13] The purpose of the feasibility study is to further investigate the problem and make recommendations on whether a project is worth pursuing and how the problem should be addressed. Generally, the cost of the feasibility study is split equally between the Corps and the nonfederal sponsor.[14] The district office conducts the study and documents the results in a feasibility study report that includes a total project cost estimate based on the recommended plan. The Chief of Engineers reviews the feasibility report and upon deciding to recommend the project for construction, signs the final decision document—called the Chief's Report—and transmits it through the Assistant Secretary of the Army for Civil Works and the Office of Management and Budget for review. The Office of Management and Budget recommends to the President whether to support or change the Corps' budget request, and the President's budget request is transmitted to Congress. Congress may then authorize the project's construction in a WRDA or other legislation.

[11]If the Corps has previously performed an evaluation in the geographic area for a similar purpose, a new study can be authorized by an authorizing committee resolution.

[12]Cost sharing for feasibility studies is required before the Corps may initiate a feasibility study. 33 U.S.C. § 2215(a).

[13]Pub. L. No. 113-121, § 1002(a)(2)(2014).

[14]Inland waterways feasibility studies, however, are entirely a federal responsibility. 33 U.S.C. § 2215(a)(2).

The purpose of the preconstruction engineering and design phase is to complete any additional planning studies and all of the detailed technical studies and designs needed to begin construction. During this time, the Corps pursues congressional authorization for the project and construction funding through the annual budget process. Under its budget formulation process, the Corps prioritizes projects that it determines have the highest expected returns for the national economy and the environment, as well as those that reduce risk to human life. When the Corps receives appropriations, which generally provide funding directly for individual projects in increments over the course of several years, the district enters into a cost-sharing agreement with a nonfederal sponsor.[15] The standard federal and nonfederal cost share percentages for construction projects can vary by the purpose of the project, as shown in table 1.

[15]Cost sharing refers to shared financial responsibility for a water resources project between the Corps and the nonfederal sponsor.

Table 1: Standard Federal and Nonfederal Cost Share Percentages for U.S. Army Corps of Engineers Water Resources Project Construction

Category	Sub Category	Project purpose	Maximum federal share of construction (percent)	Nonfederal sponsor share of construction (percent)
Navigation	Coastal ports	Less than 20 feet harbor depth	80	20
		20-50 feet harbor depth	65	35
		Greater than 50 feet harbor depth	40	60
	Inland waterways	Inland waterways	100	0
Flood and hurricane damage reduction	NA	Flood risk management	65	35[a]
	NA	Coastal storm risk management	65	35
	NA	Periodic beach renourishment	50	50
Aquatic ecosystem restoration	NA	Aquatic ecosystem restoration	65	35

Source: 33 U.S.C. §§ 2211-2213 and U.S. Army Corps of Engineers. | GAO-17-97

Note: Cost sharing refers to shared financial responsibility for a water resources project between the Corps and the nonfederal sponsor. These cost shares reflect cost-sharing requirements as of August 2016, but requirements have changed over time.

[a]The minimum nonfederal share of flood risk management projects is 35 percent, but it can increase to as much as 50 percent, depending on the nonfederal sponsor's land acquisition cost.

Typically, the Corps manages the construction process, contracting out the majority of construction work to private engineering and construction contractors. Throughout the construction phase, the Corps oversees the contractors' work, performing routine inspections to ensure it meets the Corps' design and engineering specifications. During construction, the Corps may request and Congress may enact scope or cost changes. When construction is complete, the Corps may operate and maintain the constructed project (e.g., navigation projects), or it may turn over operation and maintenance to the nonfederal sponsor (e.g., most flood damage reduction projects).

Process for Feasibility Studies and Construction Projects Led by Nonfederal Sponsors

Alternatively, when a nonfederal sponsor undertakes a feasibility study or construction project, the sponsor typically manages and funds the total cost of the feasibility study or construction project and may later seek reimbursement or credit for the federal share of the work it conducts. Reimbursement refers to the Corps' repayment to a nonfederal sponsor for the federal share of a construction project that the nonfederal sponsor incurs in undertaking such work. Credit is a noncash offset toward the local share of a feasibility study or construction project and is an alternate means for the Corps to compensate a nonfederal sponsor for the federal share of the costs it incurs when it undertakes such work.

In the case of feasibility studies, a nonfederal sponsor may independently undertake the study and submit a study report to the Secretary of the Army. The Assistant Secretary of the Army for Civil Works then forwards to Congress an assessment of whether the study report and process complied with applicable federal laws and regulations and any recommendation the Assistant Secretary has about the project. If Congress later authorizes the project for construction, the nonfederal sponsor may be eligible to receive credit for the federal share of the feasibility study toward the nonfederal share of the construction project costs.[16]

When a nonfederal sponsor undertakes construction of an authorized federal water resources project, or separable element thereof, it first enters into a partnership agreement with the Corps.[17] The agreements specify how the Corps and nonfederal sponsor will collaborate, generally stating their respective roles and responsibilities and the terms and conditions under which both parties will execute their responsibilities. The agreements also establish the requirements the nonfederal sponsor must

[16]In some instances, nonfederal sponsors may undertake a portion of a construction project as work-in-kind, for which they may receive credit toward their share of the larger project.

[17]According to the Corps, a project partnership agreement is a legally binding agreement between the government and a nonfederal sponsor for construction of a water resources project. These agreements have had various names over time, including Local Cooperation Agreements, Project Cooperation Agreements, and Project Partnership Agreements. For purposes of this report, we refer to all such documents more generally as agreements.

meet to be eligible for credit or reimbursement for the federal share of the construction costs. In general, to be eligible for credit or reimbursement, nonfederal sponsors are required to design and construct the project in accordance with applicable federal and state laws, regulations, standards, and policies. In addition, the nonfederal sponsor is responsible for all public and government agency coordination and for obtaining all necessary federal and state permits. However, the nonfederal sponsor can contract with the Corps to undertake these efforts at the nonfederal sponsor's expense if such work does not delay the completion of other Corps projects. Corps headquarters and district officials said that to be eligible for credit or reimbursement for the federal share of the construction of a project, nonfederal sponsors must meet the same requirements that the Corps would adhere to if it led the construction project, such as meeting the Corps' engineering and design standards. The Corps maintains an oversight role, performing inspections of the project as constructed and validating costs that the sponsor submits for reimbursement or credit. However, the Corps cannot guarantee reimbursement for the federal share of the costs because such reimbursement is subject to the enactment of appropriations, as is generally specified in the agreement between the Corps and nonfederal sponsor.

Nonfederal Sponsors May Conduct Feasibility Studies and Construct Water Resources Projects under Various Statutory Authorities

The authorities that allow nonfederal sponsors to undertake feasibility studies and construction projects have been included in various federal statutes since 1968. These authorities allow sponsors to take responsibility for and fund a study or project in its entirety and, upon completion of the project in accordance with Corps standards, request reimbursement for the federal portion of project costs under the relevant cost-sharing formula. We identified five federal statutory authorities that existed prior to changes enacted in WRRDA 2014 allowing nonfederal sponsors to undertake a feasibility study or construction of harbors or navigational improvements, shoreline protection projects, flood control projects, or generally authorized federal water resources projects (see table 2). The Corps confirmed that these are the relevant statutes that allow nonfederal sponsors to undertake federal water resources projects. In addition to these five broader statutory authorities, Congress may authorize projects led by nonfederal sponsors in separate, project-specific

legislation. For example, Congress authorized a flood damage reduction project in the 1993 Defense Appropriations Act.[18]

[18]Department of Defense Appropriations Act, 1993, Pub. L. No. 102-396 § 9159(b) (1992).

Table 2: Statutory Authorities Allowing Nonfederal Sponsors to Undertake Federal Water Resources Projects, 1968 Through 1996

Authority	Date enacted	Project types covered	Reimbursement or credit[a]
Section 215 of the River and Harbor Act of 1968, Pub. L. No. 90-483	8/13/1968	Water resources development projects[b]	The U.S. Army Corps of Engineers (Corps) may reimburse, subject to a statutory cap amount, or provide credit for nonfederal expenditures after the Chief of Engineers or designee has certified that the work has been performed in accordance with the agreement.
Section 203 of the Water Resources Development Act (WRDA) of 1986, Pub. L. No. 99-662	11/17/1986	Feasibility study of a proposed harbor or inland harbor project	If the project is authorized for construction, the Secretary of the Army shall credit toward the nonfederal share of the cost of construction the portion of the cost of developing the study that would have been the responsibility of the federal government.
Section 204 of WRDA 1986, Pub. L. No. 99-662	11/17/1986	Construction of navigational improvements in harbors or inland harbors	The Secretary of the Army is authorized to reimburse an amount equal to the federal share of the project if the Secretary of the Army approves construction plans, the nonfederal sponsor agrees to pay its share of operation and maintenance, and the project is accepted.
Section 206 of WRDA 1992, Pub. L. No. 102–580	10/31/1992	Construction of shoreline protection projects	The Corps may reimburse an amount equal to the federal share if the Secretary of the Army approves construction plans, enters into a written agreement with the nonfederal sponsor, and accepts the project.
Section 211 of WRDA 1996, Pub. L. No. 104-303	10/12/1996	Studies, design and construction of flood control projects	The Corps may reimburse an amount equal to the federal share, or provide credit for the nonfederal share, if the Chief of Engineers recommends and the Secretary of the Army approves the construction plans and accepts the project.

Source: GAO analysis of relevant statutory authorities. | GAO-17-97

[a]Reimbursement refers to the Corps' repayment of a nonfederal sponsor for the federal share of a feasibility study or construction project that the nonfederal sponsor incurs in undertaking such work. Credit toward the local share of a study or project is an alternate means for the Corps to compensate a nonfederal sponsor for the federal share of the costs it incurs when it undertakes such work. Under the terms of the agreements, funds for reimbursement or credit are subject to the enactment of appropriations to cover the reimbursement amount.

[b]According to Corps headquarters officials, projects led by nonfederal sponsors that are authorized under section 215 of the River and Harbor Act of 1968 are small portions of a larger Corps-led project, resulting most often in a work-in-kind credit for the nonfederal sponsor toward its cost share of the total project.

In June 2014, Congress enacted WRRDA 2014, which amended or replaced most of the authorities outlined in table 2 and consolidated them under two new provisions. Specifically, section 1014 of WRRDA 2014 amends sections 203 and 204 of WRDA 1986 to provide authority for nonfederal sponsors to undertake the study and construction of the full range of water resources projects.[19] Similar to prior authorities, WRRDA

[19]The 2014 law repeals section 206 of WRDA 1992 and section 211 of WRDA 1986 but provides new authority (under the amended sections 203 and 204) for activities previously covered by those repealed provisions.

2014 authorizes nonfederal sponsors to study, design, and construct water resources projects using their own funding, in accordance with Corps engineering and design standards. The act also authorizes nonfederal sponsors to receive credit or reimbursement for nonfederal funds expended on the federal share of the project upon determination by the Corps that the completed project adhered to federal law, regulations, and applicable standards and conditions, such as the Corps' engineering standards. A senior Corps headquarters official said that a significant difference between WRRDA 2014 and previous water resources development authorization acts is that WRRDA 2014 authorizes nonfederal sponsors to undertake construction projects that have not yet been authorized by Congress and to seek reimbursement for those projects if they are subsequently authorized. Prior legislation provided that Corps approval could occur and construction begin only after a project was authorized by Congress.[20]

The Number of Federal Water Resources Projects Undertaken by Nonfederal Sponsors and the Amounts Reimbursed to Them Cannot Be Reliably Determined

Corps headquarters could not provide the exact number of, or specific information about, projects undertaken by nonfederal sponsors because it has delegated the responsibility for overseeing such projects to the districts. In addition, the information that Corps headquarters collected from the districts on the number of such projects and reimbursements to nonfederal sponsors did not match the information that districts provided to us.

Responsibility for Overseeing Projects Undertaken by Nonfederal Sponsors Has Been Delegated to the Districts

Corps headquarters officials told us that they could not provide an exact number of, or specific information about projects undertaken by nonfederal sponsors, such as the number of each type of project (feasibility study or construction), completion status, and project costs,

[20]See Pub. L. No. 99-662, § 204(e)(1)(A).

because districts are responsible for overseeing these projects. Corps headquarters officials also said that the Corps does not have a comprehensive source of information about these projects at the headquarters level, but they estimated that nonfederal sponsors have undertaken "less than a handful" of feasibility studies or construction projects. Consequently, to identify the extent to which nonfederal sponsors have undertaken federal water resources projects, we requested information directly from all 38 district offices responsible for civil works. Corps district offices maintain a variety of information on such projects, which they provided in response to our request. The information they provided offers examples of the range of federal water resources projects undertaken by nonfederal sponsors. For example, Corps districts reported that from 1986 through 2014, 28 nonfederal sponsors undertook 32 water resources projects: 11 feasibility studies and 21 construction projects. Sixteen of the 38 Corps districts responsible for civil works projects oversaw these projects, which varied in geographic location and project type. According to the data Corps districts provided in response to our request, a majority (21) of the 32 water resources projects undertaken by nonfederal sponsors were located in California and the states along the Gulf of Mexico: Florida, Louisiana, Mississippi, and Texas. Other water resources projects were scattered across the United States. For instance, Georgia, Illinois, Kansas, Nebraska, Nevada, Oklahoma, Oregon, and Virginia each had one project led by a nonfederal sponsor, and Alaska had two projects.

In addition to geographic variation, nonfederal sponsors undertook projects for different project purposes and at different phases of the project, based on responses from Corps district offices. In total, nonfederal sponsors undertook 11 feasibility studies: 8 for navigation and 3 for flood damage reduction. They also undertook 21 construction projects: 4 for navigation, 16 for flood damage reduction, and 1 for ecosystem restoration. As of September 2014, the feasibility studies and construction projects nonfederal sponsors had undertaken were at various stages of completion, according to information provided by Corps district offices. Specifically, nonfederal sponsors had completed more construction projects than feasibility studies—14 of 21 construction projects and 3 of 11 feasibility studies. The Corps district offices reported that the total estimated costs of feasibility studies and construction projects for each project undertaken by nonfederal sponsors ranged from approximately $500,000 to just over $600 million and, overall, totaled approximately $4 billion. (See app. II for detailed information provided by the Corps districts.)

Information about Reimbursements to Nonfederal Sponsors from Corps Districts and Corps Headquarters Differed

As part of their response to our request, Corps districts provided information about reimbursements to nonfederal sponsors for the federal share of projects they undertook. In addition, Corps headquarters officials provided us with information they collected from the districts about reimbursements to nonfederal sponsors who undertook projects. The headquarters officials told us that approximately twice a year Corps headquarters collects information from the districts on planned and actual reimbursements to nonfederal sponsors to help ensure that the agency does not exceed annual statutory reimbursement limits.[21] However, these officials said they do not have a process for reviewing the information they receive from districts to ensure its accuracy and reliability.

We compared the reimbursement data that headquarters collected from the districts with the reimbursement data the districts provided to us and found the following areas of inconsistency:

- **Information on the total number of reimbursed projects was inconsistent.** According to information provided by Corps districts in response to our data request, the Corps reimbursed nonfederal sponsors for all or part of the federal share of 13 construction projects nonfederal sponsors undertook from 1986 through 2014. However, according to Corps headquarters data, the Corps reimbursed nonfederal sponsors for the federal share of 20 projects. When we compared the list of 13 projects we compiled from information provided by the districts with the list of 20 projects provided by Corps headquarters, we found only 5 projects led by nonfederal sponsors for which the Corps issued reimbursements that were common to both lists.
- **Information on the total amount of reimbursements was inconsistent.** Corps headquarters data on the total reimbursement amount were also inconsistent with the total reimbursement amount provided to us by the districts. According to information provided by Corps districts in response to our data request, the Corps reimbursed

[21]Reimbursements and credits are limited to $100 million per fiscal year. Energy and Water Development Appropriations Act, 2006, Pub. L. No. 109-103, § 102 (2005) (codified at 33 U.S.C. § 2221).

nonfederal sponsors approximately $266 million toward the federal share of construction projects undertaken by nonfederal sponsors from 1986 through 2014. However, according to Corps headquarters data, the Corps reimbursed nonfederal sponsors a total of just under $207 million for projects undertaken during the same period.

- **Reimbursed amounts for specific projects did not always match.** Of the five projects led by nonfederal sponsors that were common to both lists, the reimbursement amounts did not match for two of them. In one case, the district office reported a reimbursement of $5 million, and Corps headquarters reported a reimbursement of $15.6 million. For the second case, the district office reported a reimbursement of $142.8 million, and Corps headquarters reported a reimbursement of $25.7 million.

To understand these differences, we asked Corps headquarters to reconcile the list of projects and reimbursement amounts provided to us by the districts with the data they collected from the districts. Corps headquarters officials confirmed that the 13 projects the districts provided to us received reimbursement. Corps headquarters officials also identified an additional 13 projects led by nonfederal sponsors that received reimbursements but were not provided to us by the districts—increasing the total amount of reimbursements to nonfederal sponsors to just under $400 million.

Corps headquarters officials could not fully explain why differences existed between the number of projects and reimbursement amounts provided to us by the districts and the information they collected from the districts for the same time period. Initially, Corps headquarters officials said the differences may have resulted because the districts provided information to us at a different time than when they provided information to headquarters. However, because our data requests to both the districts and headquarters were for the same data (projects undertaken by nonfederal sponsors under certain authorities) covering the same time frame (1986 through 2014), the projects and reimbursement amounts should have matched. Subsequently, Corps headquarters officials said that a possible explanation for the differences in the data the districts provided to us and the data Corps headquarters collected from the districts pertained to when headquarters began collecting the information. Specifically, Corps headquarters officials said that they began collecting annual reimbursement data from district offices in 2006, when Congress

enacted annual reimbursement limits.[22] Corps headquarters officials said that, as a result, reimbursement information for projects led by nonfederal sponsors that had agreements signed before 2006 may be less reliable than the reimbursement information for projects with agreements signed after 2006. In addition, headquarters officials said that districts did not report projects authorized under a particular provision (section 206 of WRDA 1992) as we requested but included them when reporting reimbursement data to Corps headquarters.[23]

Corps headquarters officials stated they were not aware of Corps policies or procedures that provide guidance to the districts on the type of information to collect and maintain on projects led by nonfederal sponsors, in general, including what information to record; how, when, and where to record it; and how long to maintain it. Federal standards for internal control call for internal controls and all transactions and other significant events to be clearly documented in management directives, administrative policies, or operating manuals and for accurate and timely recording of transactions and events.[24] Without developing documented guidance for districts to have procedures for accurate recordkeeping for transactions and other relevant information related to projects led by nonfederal sponsors, the Corps does not have reasonable assurance that districts will consistently record information on such projects and that the information districts provide to headquarters on such projects will be accurate and reliable.

Corps District Officials and Nonfederal Sponsors Identified Several Lessons Learned Based on Their Experiences with Projects Led by Nonfederal Sponsors

Corps district officials and nonfederal sponsors we interviewed identified several lessons learned from feasibility studies and construction projects undertaken by nonfederal sponsors. These officials provided their views

[22]Pub. L. No. 109-103, § 102 (2005) (codified at 33 U.S.C. § 2221).

[23]Specifically, one district reported five projects authorized under Section 206 of WRDA 1992 to headquarters but did not report these projects in our data collection instrument.

[24]GAO/AIMD-00-21.3.1.

on what worked well on projects led by nonfederal sponsors and the advantages and disadvantages of nonfederal sponsors undertaking such projects, as well as challenges and opportunities for improvement related to these projects. (See table 4 in app. I for the interview questions we asked Corps districts and nonfederal sponsors to obtain this information.)

Corps District Officials and Nonfederal Sponsors Identified Partnerships and Communication As Areas That Worked Well on Projects Led by Nonfederal Sponsors

In discussing what worked well on projects led by nonfederal sponsors, Corps district officials and nonfederal sponsors we interviewed identified various factors. Corps district officials most frequently cited partnering with experienced nonfederal sponsors, while nonfederal sponsors most frequently cited regularly communicating with the Corps. Specifically, Corps officials from 6 of the 16 districts we interviewed said that nonfederal sponsors' prior experience partnering with the Corps on projects contributed to their success in conducting feasibility studies or construction projects in a timely manner. For example, Corps officials in one district said they have long been working with a particular nonfederal sponsor who was very familiar with the Corps' processes, which contributed to the nonfederal sponsor's ability to build a large, extensive flood damage reduction project in just 3 years. Corps officials from another district said that the key contact for a nonfederal sponsor that is conducting three separate flood control projects has a good understanding and knowledge of the Corps' processes and, as a result, is often called upon to assist other nonfederal sponsors. Similarly, three nonfederal sponsors said that learning the Corps' processes and procedures has helped their organizations grow and strengthen their relationship with the Corps and potentially benefit future collaboration.

While Corps district officials identified partnering with experienced nonfederal sponsors as a leading factor, nonfederal sponsors we interviewed most commonly (8 of 20) cited regular communication with the Corps as a factor that led to successful partnerships. According to these nonfederal sponsors, regular communication with the Corps—ranging from several times a week to quarterly—led to successful project implementation, including helping to ensure everyone was "rowing the boat in the same direction," meeting Corps standards, and adhering to project timelines. Another nonfederal sponsor said that in addition to holding quarterly meetings with the Corps, Corps district officials also attend the sponsor's board meetings, which has been helpful to the

partnership because it “keeps everyone on the same page.” These nonfederal sponsor views were also shared by officials from eight Corps districts we interviewed, who noted that early and frequent communication contributed to successful projects.

Corps District Officials and Nonfederal Sponsors Identified Several Advantages of Projects Led by Nonfederal Sponsors

Both Corps district officials and nonfederal sponsors we interviewed most commonly identified similar advantages of nonfederal sponsors undertaking feasibility studies or construction projects: that consistent nonfederal sponsor funding led to expedited project implementation and increased sponsor flexibility to address local priorities. Specifically, officials from most of the Corps districts with projects led by nonfederal sponsors (13 of 16) noted that consistently available funding from nonfederal sponsors was a key advantage of nonfederal sponsors undertaking federal water resources projects. One Corps district official characterized the authority for nonfederal sponsors to implement projects as “a very powerful tool to get projects done because the federal budget continues to be tight.” According to another district official, a nonfederal sponsor’s funding helped mitigate a delay completing a project for which the Corps expected an appropriation in fiscal year 2003 but did not receive until fiscal year 2007. In another district, the nonfederal sponsor’s funding for and implementation of a construction project enabled the sponsor and the Corps to complete a flood damage reduction project to construct a reservoir in accordance with a court-ordered deadline.[25]

Similarly, most nonfederal sponsors we interviewed (14 of 20) indicated that, in general, providing consistent funding has led to less costly or faster project implementation than when the Corps leads feasibility studies or construction projects. For example, a nonfederal sponsor estimated that sponsors can implement design and construction phases that are 25 to 30 percent less costly than Corps-led design and construction phases. Another nonfederal sponsor said that it completed the remaining 6 miles of an 8-mile channel improvement project in the time it took the Corps to complete the first 2 miles, at a cost of

[25]A consent decree specified the deadline by which the nonfederal sponsor had to complete the construction of a reservoir that was authorized by Congress as a Corps flood control project in WRDA 1988. Pub. L. No. 100-676 (1988).

approximately $25 million less than it would have cost if the Corps had continued to build the project. In addition to cost savings, another nonfederal sponsor said that it chose to lead a harbor deepening feasibility study and construction project for its port because it thought it could complete the work faster than if the Corps led the project. One nonfederal sponsor explained that expediting project completion is important because, in the case of flood control projects, a completed project can help save lives and reduce property damage. For navigation projects, expedited project completion may result in economic benefits, such as increased commerce and tourism from deeper-draft ships having the ability to enter ports that have been deepened, according to one nonfederal sponsor.[26] In 2013, we reported that, among other factors, less than optimal federal funding contributes to cost increases on Corps-led projects, which result from the need to break work into smaller segments and modify contracts to extend completion schedules.[27] Consistent with those findings and the views of nonfederal sponsors, officials from 15 of the 16 Corps districts we interviewed discussed the advantages of nonfederal sponsors' ability to act sooner and expedite project timelines, such as that the nonfederal sponsors' more consistent funding streams may help mitigate project delays and associated cost escalations and enable communities to realize the benefits of projects sooner.

Corps District Officials and Nonfederal Sponsors Identified Concerns about Reimbursement as the Main Disadvantage of Projects Led by Nonfederal Sponsors

Corps district officials and nonfederal sponsors identified nonfederal sponsors not receiving reimbursement for the federal share of water resources projects as a primary disadvantage of undertaking such projects. Specifically, Corps officials in 6 of the 16 districts we interviewed noted that construction projects may be authorized in legislation but may not receive appropriated funds, which may result in nonfederal sponsors not getting reimbursed for projects they undertook. Ten of the 20 nonfederal sponsors we interviewed cited the risk of not being reimbursed, especially given constrained federal budgets and the Corps'

[26]The nonfederal sponsor estimated that the cruise ship industry is growing at a rate of about 6 percent per year.

[27]GAO, *Army Corps of Engineers: Cost Increases in Flood Control Projects and Improving Communication with Nonfederal Sponsors,* GAO-14-35 (Washington, D.C.: Dec. 20, 2013).

funding priorities, as a primary disadvantage of and potential deterrent to undertaking projects.[28] Nonfederal sponsors said they understood that reimbursement from the Corps is subject to appropriated funds. However, one nonfederal sponsor said that others have been deterred from undertaking projects because of reimbursement concerns. That sponsor also said that it could be difficult in the longer term to maintain a collaborative partnership with the Corps if the likelihood of reimbursement remains low.

Relatedly, one nonfederal sponsor said that in addition to providing full financial support for the project it undertook, it also spent time and resources—estimated at nearly $600,000—to obtain its reimbursement from the Corps. In three other cases, nonfederal sponsors said the Corps did not conduct its final accounting and reimbursement in a timely manner, placing additional burdens on nonfederal sponsors. For example, in two cases, the Corps is conducting in 2016 the financial closeout for projects that the nonfederal sponsors completed in 2006. One of these nonfederal sponsors had to incur additional public debt to maintain the Corps' escrow requirements while the Corps completed its final accounting process.[29] In another case, a nonfederal sponsor said it took the Corps 6 years to reimburse them and 11 years to close out the project after the nonfederal sponsor completed it. Corps headquarters officials agreed that taking 10 years to perform the financial closeout for these projects was a long time. However, the officials said that outstanding reimbursement claims, contract modifications, and delays in validating documentation to support nonfederal sponsor credits were some of the reasons for the protracted time frame.

[28]Under its budget formulation process, the Corps uses performance metrics to evaluate projects' estimated future outcomes and gives priority to those with the highest expected returns for the national economy and the environment, as well as those that reduce risk to human life.

[29]U.S. Army Corps of Engineers, *Planning Guidance Notebook*, ER 1105-2-100 (Washington, D.C.: April 2000). According to the *Planning Guidance Notebook*, nonfederal sponsors may provide their share of project or study costs to the Corps in one of the following ways: a check, a deposit in an escrow or similar account with interest accruing to the sponsor, an irrevocable letter of credit, or an electronic funds transfer.

Corps District Officials and Nonfederal Sponsors Identified Challenges and Opportunities for Improvement

Corps officials and nonfederal sponsors we interviewed identified several challenges, as well as opportunities for improvement related to guidance and information sharing. Specifically, both cited challenges with the agency's guidance for nonfederal sponsors undertaking feasibility studies or construction projects related to the clarity of roles and responsibilities, as well as the project implementation process and necessary documentation.

Corps officials from three districts we interviewed said that it was challenging not to have guidance clearly defining each party's roles and responsibilities. Specifically, a district official said that in one case the district worked with an experienced nonfederal sponsor that paid the Corps $100,000 for oversight to help ensure that its project would be eligible for reimbursement. However, the nonfederal sponsor also hired its own contractors to manage quality control and assurance. The Corps district official and nonfederal sponsor said this created some tension between the Corps and nonfederal sponsor regarding what constituted a reasonable level of oversight for reimbursable projects. The Corps district official indicated that guidance clarifying roles and responsibilities and level of oversight may help avoid duplication of efforts and cost. Another district official stated that guidance on roles and responsibilities, as well as the range of work products expected—such as cost estimates—may help ensure a common understanding of expectations from the onset of a study. The official said that the district worked independently with the nonfederal sponsor to provide supplemental direction—specifying the type of reviews required and work products expected—to more clearly communicate the expectations involved in each step in the Corps' review process. In another district, the official said that the nonfederal sponsor became frustrated with delays in the Corps' review process and a lack of clarity regarding who within the Corps was responsible for communicating decisions to the nonfederal sponsor. According to officials from that district, the result was that the nonfederal sponsor bypassed them and communicated directly with the Assistant Secretary of the Army for Civil Works for action and information on its project.

In addition, both Corps district officials and nonfederal sponsors we interviewed experienced challenges with the Corps' project implementation process. Corps district officials from 7 of the 16 districts we interviewed said that it can be challenging to work with nonfederal

sponsors undertaking water resources projects who have limited experience partnering with the Corps since they tend to underestimate what it takes to implement projects. One Corps district official said it can be “very painful” and take a lot of effort to help less experienced sponsors understand the complexities of undertaking water resources projects because the detailed information they need is not available in guidance documents. In addition, officials from another district said that it is challenging to convey to nonfederal sponsors the Corps’ standards and criteria for reimbursement eligibility.

Nonfederal sponsors also shared similar views on challenges related to the Corps’ project implementation process. Eight of the 20 nonfederal sponsors we interviewed said the Corps does not have clear guidance on the project implementation process, which in some cases hindered the nonfederal sponsors’ ability to efficiently implement projects. As one nonfederal sponsor stated, “the Corps has no clear-cut guidance for nonfederal sponsors on how to navigate the process.” The sponsor also said that often projects were hampered by the Corps’ identification of requirements after the fact, or as a result of policy changes that occurred during the process, which affected both project time frames and cost. In addition, nonfederal sponsors said that the multiple, lengthy reviews within the Corps—at the district, division, and headquarters levels—contributed to confusion and delays and added costs during project implementation. For example, one nonfederal sponsor said it took nearly a year and a half, after submitting a letter indicating its interest in undertaking a project, to sign an agreement with the Corps enabling the sponsor to initiate the project. Two other sponsors noted that the process of making changes to a project’s design was cumbersome because of the number and levels of review required before reaching the Chief of Engineers in Corps headquarters.

Officials from more than half of the Corps districts we interviewed (10 of 16) said they do not rely on the agency’s guidance when collaborating with nonfederal sponsors conducting feasibility studies and construction projects. Instead, these officials indicated that they provide verbal direction to nonfederal sponsors as needed throughout the feasibility study or construction project for various reasons, including that the guidance is outdated, does not clearly establish the roles and responsibilities related to projects led by nonfederal sponsors, and does not provide the level of specificity that nonfederal sponsors need. For example, when we examined the guidance, we found that the Corps’ primary guidance—the *Planning Guidance Notebook*—has not been updated to reflect policy and process changes that the Corps has made

since its publication in 2000, such as information related to the Corps' planning process for feasibility studies.[30] In addition, the guidance does not delineate the specific roles and responsibilities of the Corps or nonfederal sponsors for projects led by nonfederal sponsors.

In February 2016, the Corps issued implementation guidance for feasibility studies led by nonfederal sponsors under WRRDA 2014.[31] In this guidance, the Corps clarified that it is generally not authorized to provide assistance to nonfederal sponsors undertaking feasibility studies, except in certain circumstances in which the Corps is permitted to provide limited technical assistance under the Intergovernmental Cooperation Act. In addition, the Corps has developed draft guidance for construction projects led by nonfederal sponsors, which a Corps headquarters official said is being reviewed and is estimated to be issued in 2016.

Conclusions

Nonfederal sponsors have played an important role in undertaking federal water resources projects when the Corps has been unable to do so because of funding constraints and competing priorities. However, the number of federal water resources projects undertaken by nonfederal sponsors and the amounts reimbursed to them cannot be reliably determined because the Corps does not have guidance for districts—which are responsible for overseeing such projects—on how to collect, record, and maintain accurate information about these projects. Without documented guidance for districts that result in consistent procedures for accurate recordkeeping for transactions and other relevant information related to projects led by nonfederal sponsors, the Corps does not have reasonable assurance that districts will consistently record information on such projects and that the information provided to headquarters on such projects will be accurate and reliable.

[30]In 2012, the Corps revised its approach to planning studies, emphasizing risk-based decision making and early vertical team engagement. As part of the revised approach, the Corps requires that, in general, studies be completed in 3 years or less, cost no more than $3 million and require three levels of vertical coordination. The Corps has created multiple resources to assist in conducting this planning approach, including a more streamlined project management plan, but these are not referenced in the *Planning Guidance Notebook*. Other guidance documents, such as engineer regulations, that Corps headquarters officials referred us to were issued in the late 1980s and early 1990s.

[31]U.S. Army Corps of Engineers, *Studies of Water Resources Development Projects by Nonfederal Interests*, ER 1165-2-209, February 2016.

Recommendation for Executive Action

To ensure that the U.S. Army Corps of Engineers has accurate information about federal water resources feasibility studies and construction projects led by nonfederal sponsors, we recommend that the Secretary of Defense direct the Secretary of the Army to direct the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers to establish documented guidance for accurate recording of transactions and other relevant information related to these projects.

Agency Comments

We provided a draft of this report for review and comment to the Department of Defense. In its written comments, reprinted in appendix III, the department concurred with our recommendation and stated that the Corps will establish documented guidance for accurate recording of transactions and other relevant information related to federal water resources studies and projects led by nonfederal sponsors within 18 months and distribute to the districts.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, and other interested parties. In addition, the report is available at no charge on the GAO website at http://www.gao.gov.
If you or your staff members have any questions about this report, please contact me at (202) 512-3841 or fennella@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix IV.

Sincerely yours,

Anne-Marie Fennell
Director, Natural Resources and Environment

Appendix I: Objectives, Scope and Methodology

This report examines (1) the authorities that enable nonfederal sponsors to undertake a feasibility study or construct an authorized water resources project, (2) the extent to which nonfederal sponsors have undertaken federal water resources projects and the information the Corps has about them, and (3) Corps officials' and nonfederal sponsors' views on the lessons learned from these projects.

To identify authorities that enable nonfederal sponsors to undertake feasibility studies or construction projects, we reviewed water resources development legislation enacted from 1968 to June 2014 and identified five statutory provisions. In addition, we identified project-specific legislation that authorized nonfederal sponsors to undertake specific water resources projects. We shared our list with Corps headquarters officials to ensure that we had identified all relevant statutes.

To determine the extent to which nonfederal sponsors have conducted federal water resources projects and the information the Corps has on them, we developed an online data collection instrument. We discussed the types of information available and terminology with Corps headquarters, division, and district officials. We used water resources development legislation from 1986 as the starting point for our data request because this legislation fundamentally changed the way the Corps planned and financed federal water resources projects. We pretested the data collection instrument with one district and made adjustments to the instrument on the basis of this pretest. We administered the data collection instrument to all 38 Corps districts responsible for civil works projects. Using this instrument, we asked each district to identify feasibility studies or construction projects from the enactment of the Water Resources Development Act of 1986 that nonfederal sponsors undertook in their districts under one or more of the statutory provisions we identified, or under a project-specific authorization. The data collection period was approximately May to September 2014. We achieved a 100-percent response rate. Using the data obtained with the instrument, we totaled the number of projects led by nonfederal sponsors that were reported by districts. We also produced descriptive information about these projects, including a summary of project locations, project purposes, project phases, completion status, and total estimated project costs using the answers to the following questions from the online data collection instrument shown in table 3.

Table 3: Selected Questions from the Online Data Collection Instrument Used to Obtain Descriptive Information on Feasibility Studies and Construction Projects Led by Nonfederal Sponsors, 1986 Through 2014

Questions	Response options
Enter the location of the project or the specific separable element.	City, state
Select the entry that best describes the project's primary purpose.	Navigation, flood damage reduction, hurricane and storm damage reduction, ecosystem restoration, or other
Indicate the primary phase of the project or separable element undertaken by the nonfederal sponsor.	Study only, construction (includes study and design), construction only
Indicate the project or separable element's current status.	Complete, ongoing
Enter the percentage of the project that has been completed to date. (Enter percentage and indicate whether the entry is actual or estimated. Enter 100 percent if the project has been completed.)	Percent complete (100 percent if the project has been completed); note 'actual' or 'estimated'
Enter the estimated total federal cost of this project.	Dollar amount in millions
Enter the estimated total nonfederal cost of this project.	Dollar amount in millions

Source: GAO. | GAO-17-97

We clarified and confirmed data we obtained through the data collection instrument through follow-up interviews with Corps district officials. We also compared information we collected from the Corps districts on reimbursements to nonfederal sponsors with information provided by Corps headquarters on reimbursements to nonfederal sponsors. Through this process, we identified a number of discrepancies between the reimbursement information on projects led by nonfederal sponsors reported to us by Corps districts and the information provided by Corps headquarters. We interviewed Corps headquarters officials to understand the potential reasons for the discrepancies and asked them to reconcile the differences. They added 13 projects to the list we collected directly from the districts and modified some of the reimbursement amounts, but they did not provide satisfactory explanations for all of the changes. Therefore, the reimbursement data are reliable for reporting an estimated aggregate reimbursement amount to give a sense of magnitude, but they may not be accurate at the individual project level, as discussed in the report. We also reviewed relevant agency guidance documents, such as Corps-issued engineer regulations and policy documents that provide implementation guidance, as well as partnership agreements between the Corps and nonfederal sponsors, federal standards for internal control,[1] and leading practices for collaboration.[2]

[1]GAO-14-704G.

[2]GAO-06-15 and GAO-12-1022.

To obtain views on lessons learned from projects led by nonfederal sponsors, we conducted semistructured telephone interviews with Corps officials from 16 districts that reported overseeing at least one feasibility study or construction project undertaken by a nonfederal sponsor. We conducted similar semistructured telephone interviews with several of the nonfederal sponsors that undertook feasibility studies or construction projects to get their perspectives on the lessons learned from these projects. Specifically, we interviewed 20 of the 28 sponsors undertaking 32 projects. The remaining nonfederal sponsors either did not respond to our request for an interview or did not have a representative with direct knowledge of the project with whom we could speak. We analyzed the information from the interviews we conducted with district officials and nonfederal sponsors qualitatively, including conducting a content analysis on selected questions related to the advantages and disadvantages of projects led by nonfederal sponsors and lessons learned from these projects. Table 4 shows the questions we asked the Corps district officials and nonfederal sponsors to obtain their views on lessons learned.

Table 4: Selected Interview Questions and Follow-Up Probes Used to Obtain Corps District Officials' and Nonfederal Sponsors' Views on Lessons Learned from Feasibility Studies and Construction Projects Led by Nonfederal Sponsors, 1986 Through 2014

Selected questions and follow-up probes used in interviews with Corps district officials
Overall, what lessons were learned from these past experience(s), or what would you do differently when nonfederal sponsors take responsibility for project implementation?
a. What worked well?
b. What could be improved with the process of allowing nonfederal sponsors to implement projects?
c. How could working relationships with the nonfederal sponsors be enhanced?
d. Did the agreement between the Corps and the nonfederal sponsor work well?
e. Does the Corps have adequate guidance for this activity?
Based on your experience to date, what are the advantages and disadvantages of a nonfederal sponsor taking responsibility for project implementation?
Selected questions and follow-up probes used in interviews with nonfederal sponsors
Overall, what lessons did you learn from your experience(s) taking on the responsibility of implementing your water resources project?
a. What worked well?
b. What could be improved?
c. How, if at all, could the Corps enhance its working relationship with nonfederal sponsors?
Based on your experience to date, what are the advantages and disadvantages of a nonfederal sponsor taking responsibility for project implementation?

Source: GAO. | GAO-17-97

Note: We asked follow-up probes as needed of Corps district officials and nonfederal sponsors to assist interviewees in elaborating on their responses.

We conducted this performance audit from January 2014 to December 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Appendix II: Selected Information U.S. Army Corps of Engineers Districts Reported on Feasibility Studies and Construction Projects Led by Nonfederal Sponsors, 1986 Through 2014

In response to our data collection request, Corps districts provided a variety of information on federal water resources projects undertaken by nonfederal sponsors—specifically, feasibility studies and construction projects. Table 5 lists the project names, responsible districts, and project locations of federal water resources projects undertaken by nonfederal sponsors, 1986 through 2014, as reported by Corps district offices.

Table 5: Project Names and Locations of Feasibility Studies and Construction Projects Led by Nonfederal Sponsors, 1986 Through 2014, as Reported by U.S. Army Corps of Engineers District Offices

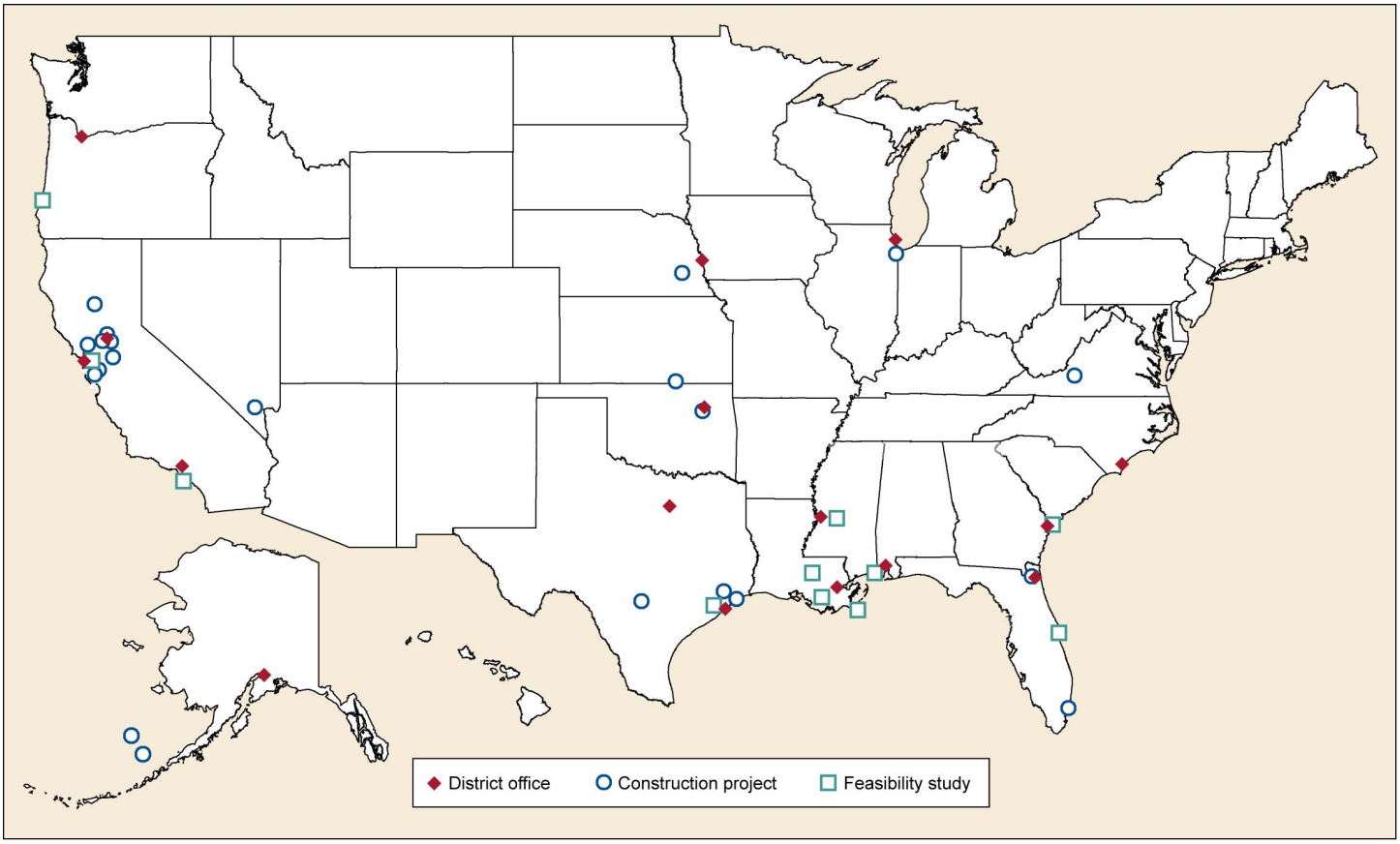
Corps district	Project name	Project city	Project state
Alaska	St. George Harbor	St. George	Alaska
Alaska	St. Paul Harbor	St. Paul Island	Alaska
Chicago	Thornton Reservoir	Thornton	Illinois
Ft. Worth	San Antonio Channel Improvement, Mission Reach	San Antonio	Texas
Galveston	Bray Bayou	Houston	Texas
Galveston	Hunting Bayou	Houston	Texas
Galveston	White Oak Bayou	Houston	Texas
Jacksonville	Canaveral Harbor	Canaveral	Florida
Jacksonville	Miami Harbor	Miami	Florida
Jacksonville	Buck Island Dredged Material Disposal Facility	Jacksonville	Florida
Los Angeles	Tropicana and Flamingo Washes	Las Vegas	Nevada
Los Angeles	Port of Los Angeles Channel Deepening	San Pedro	California
Mobile	Bayou Casotte Harbor Channel Improvement	Pascagoula	Mississippi
New Orleans	Houma Navigation Canal Deepening	Houma (Terrebonne Parish)	Louisiana
New Orleans	Baptiste Collette Deepening	Venice (Plaquemines Parish)	Louisiana
New Orleans	Amite River and Tributaries, Bayou Manchac	East Baton Rouge (Ascension Parish)	Louisiana
Omaha	Antelope Creek	Lincoln	Nebraska
Portland	Coos Bay	Coos Bay	Oregon
Sacramento	Sacramento River Bank Protection Project	Sacramento	California
Sacramento	American River Watershed	Natomas	California
Sacramento	The Upper Sacramento River Levee Restoration	Sacramento	California
Sacramento	Napa River/Napa Creek Flood Protection Project	Napa	California
Sacramento	Coyote and Berryessa Creeks	Milipitas	California
Sacramento	Guadalupe River Flood Control Project	San Jose	California
Sacramento	Glenn-Colusa Irrigation District Riverbed Gradient Facility	Hamilton City	California
Sacramento	Stockton Metropolitan Flood Control Reimbursement	Stockton	California

Corps district	Project name	Project city	Project state
San Francisco	Oakland Harbor	Oakland	California
Savannah	Savannah Harbor Expansion Project	Savannah	Georgia
Tulsa	Arkansas City	Arkansas City	Kansas
Tulsa	Mingo Creek Local Flood Protection Project	Tulsa	Oklahoma
Vicksburg	Pearl River Watershed	Jackson	Mississippi
Wilmington	Roanoke River Upper Basin	Roanoke	Virginia

Source: Information provided by U.S. Army Corps of Engineers district offices. | GAO-17-97

Corps districts reported that from 1986 through 2014, 28 nonfederal sponsors undertook 32 water resources projects: 11 feasibility studies and 21 construction projects. Sixteen of the 38 Corps districts responsible for civil works projects oversaw these projects, which varied in geographic location and project type. According to the data Corps districts provided in response to our request, a majority (21) of the 32 water resources projects undertaken by nonfederal sponsors were located in California and the states along the Gulf of Mexico: Florida, Louisiana, Mississippi, and Texas. Other water resources projects were scattered across the United States. For example, Georgia, Illinois, Kansas, Nebraska, Nevada, Oklahoma, Oregon, and Virginia each had one project led by a nonfederal sponsor, and Alaska had two projects (see fig. 3).

Figure 3: Locations of U.S. Army Corps of Engineers District Offices and Feasibility Studies and Construction Projects Undertaken by Nonfederal Sponsors from 1986 Through 2014, As Reported by District Offices



Sources: U.S. Army Corps of Engineers; MapInfo (map and locations). | GAO-17-97

In addition to geographic variation, nonfederal sponsors undertook projects for different project purposes and for different phases of the project, based on responses from Corps district offices. In total, nonfederal sponsors undertook 11 feasibility studies: 8 for navigation and 3 for flood damage reduction. They also undertook 21 construction projects: 4 for navigation, 16 for flood damage reduction, and 1 for ecosystem restoration. As of September 2014, the feasibility studies and construction projects nonfederal sponsors had undertaken were at various stages of completion, according to information provided by Corps district offices. Specifically, nonfederal sponsors had completed more construction projects than feasibility studies—14 of 21 construction projects and 3 of 11 feasibility studies. The Corps district offices reported that the total estimated costs of feasibility studies and construction projects for each project undertaken by nonfederal sponsors ranged from

approximately $500,000 to just over $600 million, and overall, totaled approximately $4 billion. (See table 3 in app. I for the data collection instrument questions we asked Corps districts to obtain this information.)

Appendix III: Comments from the U.S. Army Corps of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

NOV 18 2016

Ms. Anne-Marie Fennell
Director
Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, D.C. 20548

Dear Ms. Fennell:

This is the Department of Defense (DoD) response to the GAO Draft Report GAO-17-97, "ARMY CORPS OF ENGINEERS: Better Guidance Could Improve Corps' Information on Water Resources Projects Undertaken by Nonfederal Sponsors," dated November 3, 2016 (GAO Code 361545).

The Department appreciates this opportunity to review the report. DoD concurs with the GAO report recommendation. The Department is providing an official written response for inclusion in the report.

Very truly yours,

for Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosure

Printed on Recycled Paper

GAO DRAFT REPORT DATED NOVEMBER 3, 2016
GAO-17-97 (GAO CODE 361545)

"ARMY CORPS OF ENGINEERS: BETTER GUIDANCE COULD IMPROVE CORPS' INFORMATION ON WATER RESOURCES PROJECTS UNDERTAKEN BY NONFEDERAL SPONSORS"

DEPARTMENT OF DEFENSE COMMENTS
TO THE GAO RECOMMENDATION

RECOMMENDATION: To ensure that the U.S. Army Corps of Engineers has accurate information about nonfederal sponsor-led federal water resources feasibility studies and construction projects, the GAO recommends that the Secretary of Defense direct the Secretary of the Army to direct the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers establish documented guidance for accurate recording of transactions and other relevant information related to nonfederal sponsor-led federal water resources projects.

DoD RESPONSE: Concur. The U.S. Army Corps of Engineers will establish documented guidance for accurate recording of transactions and other relevant information related to nonfederal sponsor-led federal water resources studies and projects within 18 months and will distribute it to all the districts.

Appendix IV: GAO Contact and Staff Acknowledgments

GAO Contact

Anne-Marie Fennell, (202) 512-3841 or fennella@gao.gov

Staff Acknowledgments

In addition to the contact named above, Vondalee R. Hunt (Assistant Director), Richard Burkard, Joanna Chan, John Delicath, Juli Digate, Mitchell Karpman, Stuart Kaufman, Jamie Meuwissen, John Mingus, Carl Ramirez, Anne Rhodes-Kline, and John Scott made key contributions to this report.

Appendix V: Accessible Data

Data Tables

Data for Figure 1: Locations of U.S. Army Corps of Engineers' Civil Works Divisions and Districts

Great Lakes and Ohio River Division

- Division headquarters location: Cincinnati
- District headquarters locations: Buffalo, Chicago, Detroit, Huntington, Louisville, Nashville, Pittsburgh

Mississippi Valley Division

- Division headquarters location: Vicksburg
- District headquarters locations: Memphis, New Orleans, Rock Island, St. Louis, St. Paul, Vicksburg

North Atlantic Division

- Division headquarters location: New York
- District headquarters locations: Baltimore, New England, New York, Norfolk, Philadelphia

Northwestern Division

- Division headquarters location: Portland
- District headquarters locations: Kansas City, Omaha, Portland, Seattle, Walla Walla

Pacific Ocean Division

- Division headquarters location: Honolulu
- District headquarters locations: Alaska, Honolulu

South Atlantic Division

- Division headquarters location: Atlanta
- District headquarters locations: Charleston, Jacksonville, Mobile, Savannah, Wilmington

South Pacific Division

- Division headquarters location: San Francisco
- District headquarters locations: Albuquerque, Los Angeles, Sacramento, San Francisco

Southwestern Division

- Division headquarters location: Dallas
- District headquarters locations: Dallas, Fort Worth, Galveston, Tulsa

Data for Figure 2: Major Steps in Developing a U.S. Army Corps of Engineers (Corps) Civil Works Project Prior to April 2015

Step 1: Local community perceives or experiences a problem

Step 2: Local community contacts Corps district office for help

- Corps has, or obtains, authorization from Congress to study the problem and an appropriation.

Step 3: Reconnaissance phase[a]

- Corps determines federal interest in a feasibility study and how the problem could be addressed.
- Corps assesses support and interest of nonfederal entities that may become sponsors.
- Federal and local sponsors agree on cost sharing for feasibility study.
- Congress appropriates funds for feasibility study.

Step 4: Feasibility phase

- Corps further investigates the problem and makes recommendations on whether a project is worth pursuing and how the problem should be addressed.
- Corps prepares a total project cost estimate based on the recommended plan.
- Chief of Engineers prepares report recommending project for construction.

Step 5: Preconstruction engineering and design phase

- Corps and nonfederal sponsors sign design agreement.

Step 6: Construction phase

- Congress authorizes project for construction.
- Congress appropriates funds for construction.
- Corps and nonfederal sponsors sign project partnership agreement.
- Construction is generally managed by the Corps but performed by private contractors.
- Corps may request and Congress may enact certain scope or cost changes and additional authority, if necessary.

Step 7: Operation and maintenance phase

- Nonfederal sponsors typically operate and maintain project.

Agency Comment Leter

Text of Appendix III: Comments from the U.S. Army Corps of Engineers

Page 1

Ms. Anne-Marie Fennell

Director

Natural Resources and Environment

NOV 18, 2016

U.S. Government Accountability Office

441 G Street, NW

Washington, D.C. 20548

Dear Ms. Fennell:

This is the Department of Defense (DoD) response to the GAO Draft Report GA0-17-97, "ARMY CORPS OF ENGINEERS: Better Guidance Could Improve Corps' Information on Water Resources Projects Undertaken by Nonfederal Sponsors," dated November 3, 2016 (GAO Code 361545).

The Department appreciates this opportunity to review the report. DoD concurs with the GAO report recommendation. The Department is providing an official written response for inclusion in the report.

Very truly yours,

(LACR)

For Ellen Darcy

Assistant Secretary of the Army (Civil Works)

Enclosure

Page 2

DEPARTMENT OF DEFENSE COMMENTS TO THE GAO RECOMMENDATION

RECOMMENDATION: To ensure that the U.S. Army Corps of Engineers has accurate information about nonfederal sponsor-led federal water resources feasibility studies and construction projects, the GAO recommends that the Secretary of Defense direct the Secretary of the Army to direct the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers establish documented guidance for accurate recording of transactions and other relevant information related to nonfederal sponsor-led federal water resources projects.

DoD RESPONSE: Concur. The U.S. Army Corps of Engineers will establish documented guidance for accurate recording of transactions and other relevant information related to nonfederal sponsor-led federal water resources studies and projects within 18 months and will distribute it to all the districts.

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