

GAO Highlights

Highlights of [GAO-15-660](#), a report to congressional committees

Why GAO Did This Study

The Corps plans, designs, and constructs water resources infrastructure, such as dams and levees. According to the U.S. Global Change Research Program, the frequency and intensity of extreme weather events are increasing. Much of the Corps' infrastructure was built over 50 years ago and may not be designed to operate within current climate patterns, according to the U.S. Geological Survey.

The Water Resources Reform and Development Act of 2014 included a provision for GAO to study the Corps' management of water resources in preparation for extreme weather. This is the first in a series of reports GAO is issuing on this topic. GAO's other reports will examine operations and dam and levee safety, which GAO plans to issue in fiscal year 2016. This report explores (1) how the Corps prepares for and responds to extreme weather events in its planning and operation of water resources projects, and (2) the extent to which the Corps has assessed whether existing water resources infrastructure is prepared for extreme weather events. GAO reviewed Corps guidance on planning, operations, and assessments, and interviewed Corps officials from headquarters and eight districts—selected, in part, on number of projects.

What GAO Recommends

GAO previously recommended that the Corps work with Congress to develop a more stable funding approach. The Corps has not taken action, but GAO continues to believe the recommendation is valid. Agencies had no comments on a draft of this report.

View [GAO-15-660](#). For more information, contact Anne-Marie Fennell at (202) 512-3841 or fennella@gao.gov

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ARMY CORPS OF ENGINEERS

Efforts to Assess the Impact of Extreme Weather Events

What GAO Found

The U.S. Army Corps of Engineers (Corps) considers the potential impact of extreme weather events in its planning and operations of water resources infrastructure projects by, among other things, updating and developing guidance on how to incorporate different extreme weather scenarios in its planning of projects. For example, in 2014, the Corps issued guidance on how to evaluate the effects of projected future sea level change on its projects and what to consider when adapting projects to this projected change. In addition, Corps districts prepare water control manuals, guidance outlining project operations. The Corps can approve deviations from the manuals to alleviate critical situations, such as extreme weather events. For example, in December 2014, the Corps approved a deviation from operations at a southern California dam, which allowed the Corps to retain rainwater to help respond to the state's extreme drought conditions.

The Corps has assessed certain water resources infrastructure projects to determine whether they are designed to withstand extreme weather events. Specifically, the Corps has national programs in place to perform risk assessments on dams and levees, as required by law. Unlike the requirements for dams and levees, the Corps is not required to perform systematic, national risk assessments on other types of existing infrastructure, such as hurricane barriers and floodwalls and has not done so (see table). However, the Corps has been required to assess such infrastructure after an extreme weather event in response to statutory requirements, as it did in November 2013 and in January 2015, after Hurricane Sandy. Also, the Corps has performed initial vulnerability assessments for sea level rise on its coastal projects and has begun conducting such assessments at inland watersheds.

U.S. Army Corps of Engineers' Systematic, National Infrastructure Risk Assessments, 2006-June 2015

Type of infrastructure	Number of projects	Number of assessments
Dams	707	706
Levees (in segments)	2,887	1,232
Other ^a	^b	0

Source: GAO analysis of Corps data. | GAO-15-660

^aOther includes infrastructure, such as hurricane barriers and floodwalls.

^bThe Corps has not yet completed an inventory of other types of infrastructure.

Unlike federal agencies that have budgets established for broad program activities, most Corps civil works funds are appropriated for specific projects. However, the Corps has not worked with Congress to develop a more stable funding approach, as GAO recommended in September 2010, which could facilitate conducting risk assessments. The Corps partially concurred with this recommendation, stating that it would promote efficient funding. As the frequency and intensity of some extreme weather events are increasing, without performing systematic, national risk assessments on other types of infrastructure, such as hurricane barriers and floodwalls, the Corps will continue to take a piecemeal approach to assessing risk on such infrastructure.