

Highlights of [GAO-04-30](#), a report to congressional requesters

Why GAO Did This Study

In 1996 and 1999, Congress authorized the U.S. Army Corps of Engineers (the Corps) to strengthen sections of the American River and Natomas Basin levees that provide flood protection for Sacramento, California. In 2002, the Corps reported that the cost of this work, known as the Common Features Project, had increased significantly. GAO was asked to determine why costs increased, the extent to which the Corps analyzed and reported the potential cost increases to Congress in a timely manner, and whether the Corps correctly estimated economic benefits.

What GAO Recommends

To better inform Congress about the costs and benefits of flood protection for Sacramento, GAO recommends, among other things, that the Secretary of the Army

- improve the accuracy of the cost-benefit analysis for the not yet constructed American River levee improvements;
- improve the reporting of costs and benefits and analyze alternative flood protection measures for the Natomas Basin improvements; and
- arrange for a credible, independent review of the completeness and accuracy of the revised analyses.

The Army concurred with GAO's recommendations but took issue with the presentation of some information.

www.gao.gov/cgi-bin/getrpt?GAO-04-30.

To view the full product, including the scope and methodology, click on the link above. For more information, contact Anu Mittal at (202) 512-3841 or mittala@gao.gov.

CORPS OF ENGINEERS

Improved Analysis of Costs and Benefits Needed for Sacramento Flood Protection Project

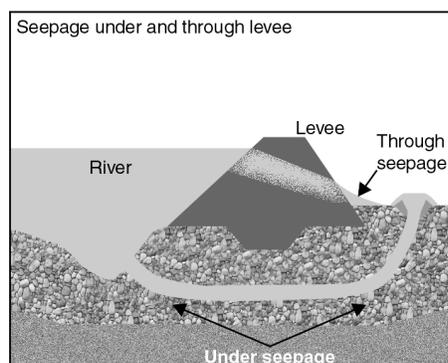
What GAO Found

Estimated costs for the Common Features Project rose from \$57 million in 1996 to between \$270 million and \$370 million in 2002—primarily because of design changes. For the American River, costs more than tripled from \$44 million to \$158 million in 2002, primarily due to changes such as deepening the walls built in the levees (cut-off walls) to prevent seepage and closing gaps in the walls at bridge crossings. Cost estimates for the Natomas Basin—still in planning—increased from \$13 million in 1996 to between \$112 million and \$212 million in 2002. The Corps has yet to analyze alternative flood protection approaches for the Natomas Basin that might be more cost-effective. Furthermore, it has not analyzed its exposure to potentially significant cost increases for the Natomas Basin work.

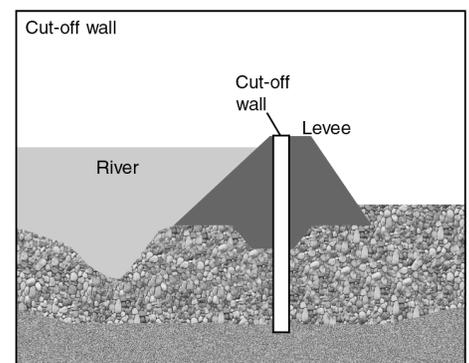
The Corps did not fully analyze, or report to Congress in a timely manner, the potential for significant cost increases for the American River levee improvements authorized in 1996. Specifically, a severe storm in the Sacramento area in January 1997 indicated some cut-off walls would need to be much deeper and therefore would be more costly. Corps guidance generally directs the Corps to seek new spending authority from Congress if it determines, before issuing the first contract, that it cannot complete the project without exceeding its spending limit. However, the Corps began construction in 1998 without analyzing or reporting potential cost increases. By 2003, it had committed most of the funding authorized for the entire Common Features Project to the 1996 American River work, leaving the additional 1999 work and the Natomas Basin improvements without funding.

In 1996, the Corps incorrectly estimated the economic benefits for the American River levee improvements by overcounting the residential properties to be protected. In 2002, it incorrectly estimated benefits for the 1999 improvements by, among other things, miscalculating the size of the area that the improvements would protect. The Corps' quality control process was ineffective in identifying and correcting these mistakes.

Reasons that levees fail



Levee improvement to prevent seepage



Source: U.S. Army Corps of Engineers.