

GAO Highlights

Highlights of [GAO-19-19](#), a report to congressional requesters

Why GAO Did This Study

In February 2017, components of California's Oroville Dam failed, leading to the evacuation of nearly 200,000 nearby residents. FERC is the federal regulator of the Oroville Dam and over 2,500 other dams associated with nonfederal hydropower projects nationwide. FERC issues and renews licenses—which can last up to 50 years—to dam operators and promotes safe dam operation by conducting safety inspections and reviewing technical engineering studies, among other actions.

GAO was asked to review FERC's approach to overseeing dam safety. This report examines: (1) how FERC collects information from its dam safety inspections and the extent of its analysis, and (2) how FERC evaluates engineering studies of dam performance to analyze safety, among other objectives. GAO analyzed documentation on a non-generalizable sample of 42 dams associated with projects relicensed from fiscal years 2014 through 2017, selected based on geography and hazard classifications, among other factors. GAO also reviewed FERC regulations and documents; and interviewed FERC staff associated with the selected projects and technical consultants, selected based on the frequency and timing of their reviews.

What GAO Recommends

GAO recommends that FERC: (1) develop standard procedures for recording information collected as part of its inspections, and (2) use inspection information to assess safety risks across FERC's portfolio of dams. FERC agreed with GAO's recommendations.

View [GAO-19-19](#). For more information, contact Andrew Von Ah at (202) 512-2834 or vonaha@gao.gov.

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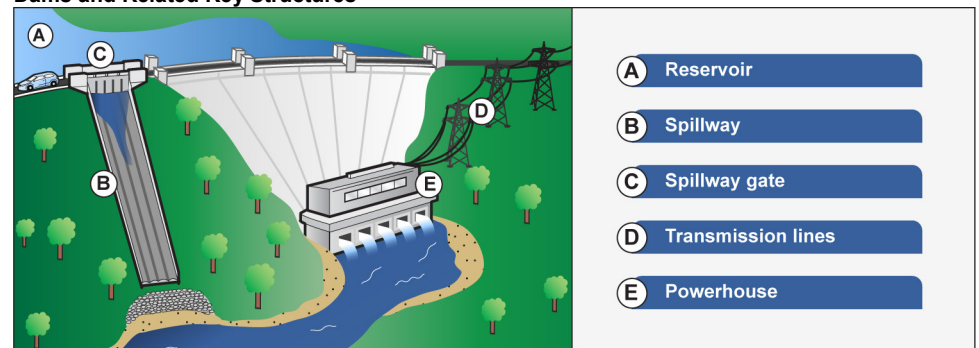
DAM SAFETY

FERC Should Analyze Portfolio-Wide Risks

What GAO Found

The Federal Energy Regulatory Commission's (FERC) staff generally followed established guidance in collecting safety information from dam inspections for the dams GAO reviewed, but FERC has not used this information to analyze dam safety portfolio-wide. For these 42 dams, GAO found that FERC staff generally followed guidance in collecting safety information during inspections of individual dams and key structures associated with those dams. (See figure.) However, FERC lacks standard procedures that specify how and where staff should record safety deficiencies identified. As a result, FERC staff use multiple systems to record inspection findings, thereby creating information that cannot be easily analyzed. Further, while FERC officials said inspections help oversee individual dam's safety, FERC has not analyzed this information to identify any safety risks across its portfolio. GAO's prior work has highlighted the importance of evaluating risks across a portfolio. FERC officials stated that they have not conducted portfolio-wide analyses because officials prioritize the individual dam inspections and response to urgent dam safety incidents. However, following the Oroville incident, a FERC-led initiative to examine dam structures comparable to those at Oroville identified 27 dam spillways with varying degrees of safety concerns, on which FERC officials stated they are working with dam licensees to address. A similar and proactive portfolio-wide approach, based on analysis of common inspection deficiencies across the portfolio of dams under FERC's authority, could help FERC identify safety risks prior to a safety incident.

Dams and Related Key Structures



Source: GAO. | GAO-19-19

FERC staff follow agency guidance and apply professional judgment to assess engineering studies on key aspects of dam performance and safety. Licensees and their consultants develop engineering studies that assess dam performance and safety in consideration of expected conditions—as related to hydrology and seismicity, for example—and that FERC staff then use to inform their safety determinations. FERC has established policies, such as requiring multi-layered reviews, to ensure the accuracy of these studies. For example, FERC's *Engineering Guidelines* provide a framework for the review of engineering studies, though the *Guidelines* recognize that each dam is unique and allow for flexibility and exemptions in its use. FERC staff use the studies to inform other components of their safety approach, including the analysis of dam failure scenarios and their review of safety to determine whether to renew a license.