



ISABELLA DAM SAFETY MODIFICATION PROJECT – NEXT STEPS

U.S. ARMY CORPS OF ENGINEERS

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Dam Safety Modification Study (DSMS) Process

The primary purposes of the Isabella DSMS are the determination of the baseline (existing) risk of dam failure, and identification, evaluation, justification, and recommendation of long-term risk reduction measures. There are several documents that have to be completed as part of the DSMS. The Dam Safety Modification Report (DSMR) is the decision document that approves the recommended plan for construction. An environmental impact statement (EIS) evaluates and discloses potential effects of the project and culminates in an official document defining impacts of the project and a mitigation plan.

August 10, 2012



Overview of the Study

Isabella Reservoir is located forty miles northeast of Bakersfield, Kern County, California, and consists of an earthfill main dam and auxiliary dam across Kern River and Hot Springs Valley, respectively. The dam was authorized under the Flood Control Act of 1944 and construction was completed in 1953. The reservoir provides flood-risk management, irrigation and recreational benefits. With more than 300,000 people living and working below the dams, primarily in the town of Lake Isabella and the city of Bakersfield, the U.S. Army Corps of Engineers (USACE) began a dam safety modification study (DSMS) in 2006 to address seismic, hydrologic (potential overtopping during an extreme flood event) and seepage issues at the dams.

Interim Risk Reduction Measures

An operating restriction is currently in place, limiting the lake's normal storage capacity, to reduce the risk of the seepage and seismic concerns while a permanent solution is investigated. USACE has implemented increased surveillance and monitoring; stockpiling of emergency materials; warning sirens in the town of Lake Isabella; installation of additional instrumentation for monitoring; and continued public outreach with Kern County and the local public.

Tentatively Selected Plan

USACE has tentatively selected a plan for addressing the dam safety issues at the project while minimizing downstream risk. This plan is not final and is still undergoing review; however, the plan includes the following features:

- ❖ Main Dam
 - Crest raise up to 16-feet to prevent overtopping during extreme flood events. Shoreline will not change.
 - A full height filtering and drainage system to safely control seepage.
- ❖ Auxiliary Dam
 - Modification to increase stabilization and reduce risk during a seismic event.
 - Crest raise up to 16-feet to prevent overtopping during extreme flood events. Shoreline will not change.
 - A full height filtering and drainage system to safely control seepage, and increase seismic and fault rupture performance.

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1325 J ST. – SACRAMENTO, CA 95814

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- ❖ Existing Spillway
 - Lining and treatment of the chute to protect against erosion during high outflow events.
- ❖ Addition of an Emergency Spillway (approximately 900-ft wide)
 - Increases the spillway capacity to safely pass extreme flood events and prevent the dams from overtopping. The emergency spillway will operate independently from the existing spillway and will only operate during extreme rain flood events.
- ❖ Borel Canal Realignment Through a Tunnel in the Right Abutment of the Auxiliary Dam
- ❖ Relocation of Highway 155 and 178 to Accommodate the Main and Auxiliary Dam Modifications
 - Approximately one mile (highway 155) and less than one mile (highway 178) total relocations.

Estimated Cost: \$400 - \$600 million

Potential Impacted Areas: Boat Launch 19, Engineers Point recreation area, Auxiliary Dam recreation area, Highway 155 and 178, Main Dam Campground, Pioneers Point Campground, and Slippery Rock.

Schedule of Events (Tentative – SUBJECT TO CHANGE)

The next step in the process of the Isabella DSMS is to finalize the decision documents needed for USACE approval to begin preconstruction, engineering, and design (PED). Once the Sacramento District gets approval for PED it will take approximately three years to complete the design plans and receive approval for construction.

First Step: Finalize Documents for Approval

- Dam Safety Modification Report – October 2012
- Environmental Impact Statement (EIS) Record of Decision – December 2012
- Approval to Begin PED – December 2012

Second Step: Preconstruction, Engineering and Design (PED) – Subject to Change

- Begin PED – December 2012 (Pending Approval)
- Estimated Public Comment Period for Real Estate Environmental Assessment (EA) – July 2013
- Real Estate EA – September 2013
- Estimated Public Comment Period for Fisheries and Recreation Plan – April 2013
- Fisheries and Recreation Management Plan – Late 2013
- Finalize PED and Approval – Mid 2016

Third Step: Construction

- Begin Construction – 2015 (Pending Approval)
- Construction Completion – 2022 (Subject to Change)

Points of Contact: Carlos Lazo
carlos.j.lazo@usace.army.mil
 Public Affairs Specialist
 916-557-5158

Project Website - <http://www.spk.usace.army.mil/Missions/CivilWorks/IsabellaDam.aspx>

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