## Project Overview

The Joint Federal Project is a $962-million cooperative effort between the U.S. Army Corps of Engineers and the U.S. Department of the Interior, Bureau of Reclamation, that serves as one piece of a larger plan to help the Sacramento region achieve a 200-year level of protection, meaning a one-in-200 chance for flooding in any given year.

Limitations of the existing flood control system and the urgent need to address flood risk and dam safety issues at the Folsom facility led to this unprecedented partnership in 2005.

With cooperation from state and local partners, the team integrated the planning, design and implementation of enhanced flood risk management measures with dam safety risk reduction under the single Joint Federal Project.

The JFP is primarily the construction of an auxiliary spillway, consisting of:

1. A control structure containing six submerged tainter gates;
2. A 3,000 foot long spillway chute and a stilling basin that acts as an energy dissipator; and
3. An 1,100 foot long approach channel.

By working together the Corps and Reclamation will be able to complete the project faster and more cost effectively than if performed as separate projects.

07-11

## Project Partners

Bureau of Reclamation
Central Valley Flood Protection Board
California Dept. of Water Resources
Sacramento Area Flood Control Agency

## Contact

**U.S. Army Corps of Engineers**
**Sacramento District**

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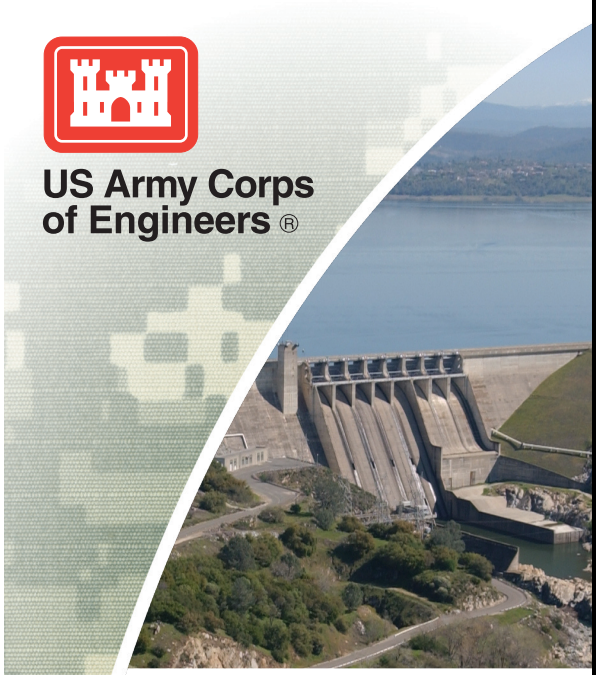
## For More Information

**Joint Federal Project Web page**
www.spk.usace.army.mil/Missions/CivilWorks/JointFederalProject.aspx

**Sacramento District Homepage**
www.spk.usace.army.mil

**U.S. Army Corps of Engineers Homepage**
www.usace.army.mil

US Army Corps of Engineers ®



BUILDING STRONG®

# FOLSOM DAM JOINT FEDERAL PROJECT

## The Way Ahead

Representatives from each of the four partnering agencies convened in early 2011, creating a task force, to develop a realistic and attainable construction schedule for completing the spillway.

After weighing a number of options, the task force developed a schedule that would complete the auxiliary spillway in October 2017.

While control structure construction is well underway; civil, structural and geotechnical investigations push forward in support of spillway design on future components.

Additionally, the Folsom Dam Permanent Operation Study and the Folsom Dam Raise Project are also moving forward in association with the auxiliary spillway.

The operation study will develop a water control manual for operating and maintaining the new auxiliary spillway in conjunction with the main dam. Completion of the study and the manual are essential to utlizing the dam's newest feature.

The dam raise project will primarily raise multiple dikes at the facility by as much as 3.5 feet in addition to other upgrades.

## Control Structure Underway

Granite Construction Company of Watsonville, Calif., was awarded a $125.9 million contract in Sept. 2010 to complete the excavation of more than 300,000 cubic yards of earth and construction of the control structure.

With six 23-foot-wide by 34-foot-high submerged tainter gates (*below*) designed to rotate on radial arms to open and close the gates, the control structure will work similar to the main dam and will be operated in conjunction with existing spillway gates on Folsom Dam to manage flood flows from Folsom Reservoir.

The control structure and spillway are designed to release up to 312,500 cubic feet of water per second, about twice the capacity of the downstream channel, if the main dam is in danger of overtopping during an extreme event.

Control Structure to be complete in October 2014.

## A Phased Approach

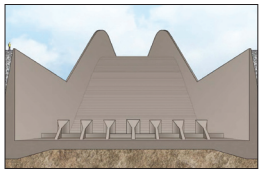
The Folsom Dam Joint Federal Project is being constructed in a phased approach.

Phases one and two were completed by the Bureau of Reclamation in Jan. 2011. These phases included extensive excavation at the site.

Construction of the spillway's control structure is currently underway as part of the project's third phase.

Excavation of the 1,100-foot approach channel makes up the project's fourth phase. It will include the excavation of nearly one million cubic yards of earth and rock, construction of concrete approach walls and the placement of a rock trap upstream of the spillway to reduce the probability of rocks passing through the control structure. This phase is expected to wrap up by January 2016.

The chute and stilling basin component represents the project's final phase and will construct a concrete rectangular channel approximately 3,027 linear feet long.



The stepped spillway and stilling basin (*at right*) reduce flow velocities to levels that will not cause damage to the downstream levees along the American River. These features will be completed by March 2017.