



Raising Pine Flat Dam

Resiliency Project

Issue

Funding is needed to support a 12-foot raise of Pine Flat Dam to increase storage capacity in Pine Flat Reservoir and mitigate the effects of climate variability by increasing flood protection, enhancing drought resilience, increase water supply reliability, enhance carbon-free electric power generation, and improve water storage management.

OVERVIEW

Pine Flat Dam is located in the Kings River watershed approximately 25 miles east of Fresno, California. Completed in 1954, it is owned, operated, and maintained by the U.S. Army Corps of Engineers. The principal purpose of Pine Flat Dam is for flood control. Conservation and recreation are ancillary uses. Approximately 1,000,000 Californians live and work in the geographic area served by the Kings River. The river's water supply is used to irrigate over a million acres of farmland, supply municipal drinking water, and replenish a groundwater supply that serves rural residents and over 100 disadvantaged communities.

Need & Status

Funding Need: Estimated capital cost: \$638 million – potential cost range \$480 million to \$960 million

Raising Pine Flat Dam has been evaluated in the past by KRCD and other entities, including most recently in a Storage Appraisal Study completed by KRCD in 2020 (2020 Study). The 2020 Study re-evaluated the cost effectiveness of Raising Pine Flat Dam by updating existing cost estimates, developing the irrigation and power benefits, and monetizing these benefits based on updated water and energy pricing. KRCD is further advancing the 2020 Study to improve the analysis by: Refining the existing operations model and incorporating the effects of climate change on hydrology and operations and increased flood protection benefits.



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How It Works

Projected climate change in the Kings River watershed would alter the volume and timing of inflows to Pine Flat Reservoir and affect the availability of water supply for the many downstream uses including municipal, agricultural, rural communities and energy generation. The raising of the dam 12 feet would add an additional 120,700 total acre feet of storage. This increased storage capacity at Pine Flat Reservoir will improve water storage management, especially during the climate extremes of extended droughts and intense floods.

Major Project Components

- Modifications of dam spillway, tainter gates, power plant intakes, and reinforcement of downstream face
- Modification of PG&E Kings River Powerhouse
- Relocation of bridges and portions of a roadway

Project Benefits



increased flood protection



groundwater sustainability



municipal, industrial water supply including disadvantaged communities



recreation



river ecosystem improvement



conserve, develop water and carbon-free power resources