

CALIFORNIA ENERGY COMMISSION
Peak Load Reduction Program
Spillway Modification
Berrenda Mesa Water District Project Summary

Project Description:

The project permanently increased the height of the spillway on the Berrenda Mesa Reservoir. The existing 100 foot-wide spillway was raised 15 inches to accommodate an additional 15 acre-feet of storage capacity. The Berrenda Mesa Water District, serving 57,000 acres, is located in the southern part of the San Joaquin Valley near Bakersfield. It receives water from the State Water Project.

The additional water is now stored in the reservoir during the off-peak period and delivered for irrigation during the peak period. This reduces the need to pump water during peak. One-third (5 inches) of the proposed spillway is used for water storage, while the other two-thirds (10 inches) provide a cushion to avoid spill associated with wind, fetch, and operational variations.



15-inch increase in reservoir height increased storage capacity by 15-acre feet

Project Results:

Time-of-use meters were used to verify the peak load reduction, comparing the peak period electrical use of the 2002 season with that of the 2000 season. The average reduction in pumping equates to 30 cubic feet per second, or 770 kilowatts.

Total Project Cost	\$43,200
Total Grant Award	\$28,080
Actual Kilowatt Reduction	770
Grant Payment per Kilowatt Reduction	\$36.67

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