

# Crane Valley Dam

## Seismic Retrofit

N 37° 17' 33" W 119° 31' 12"



## Crane Valley Dam Seismic Retrofit Project

The Crane Valley Dam was built between 1902 and 1911 and at the time of construction little was known about seismic activity. Over the past many years, PG&E has worked with the Federal Energy Regulatory Commission (FERC) and California Department of Water Resources, Division of Safety of Dams (DSOD) to assess the seismic vulnerability of Crane Valley Dam and develop a retrofit project to strengthen the dam to meet state and federal dam safety standards. The dam seismic retrofit design will involve constructing large rock buttresses on both the upstream and downstream sides of the dam along sections susceptible to significant slumping. Bass Lake will remain open for all recreational uses throughout all months of the year during the seismic retrofit project. However, until the construction project is completed, DSOD, FERC, and PG&E recently agreed to maintain a lower water level at Bass Lake in order to reduce the risk of downstream flooding by a seismic event.

## Retrofit Project Start Date

The start date for the construction of the Crane Valley Dam Seismic Retrofit is dependent on completion of the federal National Environmental Policy Act (NEPA) and state California Environmental Quality Act (CEQA) environmental review processes, and securing all required permits from appropriate agencies. The current construction schedule anticipates a completion of the project in late 2010 or mid 2011. We are working diligently on the permit process so that we can complete the work as early as possible.

## Safety is Our Top Priority

PG&E has worked diligently with a board of consultants which includes internationally recognized experts to analyze Crane Valley Dam's ability to safely withstand seismic loads. The board concluded that the Crane Valley Dam is susceptible to liquefaction and slumping during a major earthquake, magnitude 8.0, on the San Andreas Fault, or by a magnitude 6.25 local seismic event. The analysis showed the west dam as the most vulnerable part of the Crane Valley Dam. Significant slumping due to an earthquake at the west dam could likely cause water to breach the dam, causing downstream flooding to the North Fork community. As a responsible owner of Crane Valley Dam and for public safety, PG&E needs to manage this risk during remediation.



### Crane Valley Dam facts:

- Located on the North Fork of Willow Creek about 40 miles northeast of Fresno, Madera County.
- 145 feet high and 1,800 feet long
- Built between 1902-1911
- Learn more at [www.cranevalleydam.com](http://www.cranevalleydam.com)

## Bass Lake Level Reduction Reduces Flood Risk

PG&E considers safety of downstream residents its highest priority, and also recognizes that Bass Lake is a recreation resource for tourists, homeowners and businesses. We performed a detailed risk assessment to establish the annual risk of uncontrolled rapid release of water (dam breach) for various lake levels. The analysis concluded lowering the lake water level to 10 feet under the maximum water level significantly reduced the chance for an uncontrolled release from Bass Lake. The study also showed further reduction of the lake level to 15 feet provided marginal benefit. With safety the top priority and after considering the data, PG&E, DSOD and FERC agreed to a lake elevation of 3366 (spillcrest), which is approximately 10 feet lower than normal summer operations, beginning 2009.

### Recreation

Recreation will remain open at Bass Lake during the dam retrofit construction, and the reservoir will provide plenty of opportunity for summertime use. We understand how important tourism is to the local community and PG&E will work with stakeholders to manage as much impact as possible to recreation facilities by allowing adjustments to boat docks where feasible and safe.

If you have questions regarding your facilities on Bass Lake, please contact Dan Clark, PG&E Land Planner, at 559-263-7385. If you have questions regarding the project in general, please contact Janet Walther at 530-896-4535.



### Difference in Surface Area of Lake Before and After Water Level Restriction

**1165 Acres**

Maximum Water Level

**Before**

**1096 Acres**

10 Feet Below Maximum

**After**

### Upcoming Community Meetings

**April 1, 2009**

6:00 - 8:00 PM

The Pines, Lakeside Room

54432 Road 432

Bass Lake, CA 93604

**April 2, 2009**

6:00 - 8:00 PM

North Fork Town Hall

33060 Road 228

North Fork, CA 93643

