

Chronology of Auburn Dam (1920-1989)

- 1920's Auburn Dam included in State water planning.
- 1940 MR=5.7 earthquake in Chico/Oroville area.
- 1944 Congress authorized Folsom Dam & Reservoir with 450,000 acre feet of storage.
- 1948 Congress increased Folsom Reservoir storage size to 1,000,000 acre feet.
- 1955 Folsom Dam was completed at cost of \$94 million. This dam prevented damage in the Sacramento area from the Christmas flood of the same year exceeding this cost. This Christmas flood helped initiate the need for additional flood protection studies and the Auburn Dam solution.
- 1963 Congressman Bizz Johnson introduced legislation to authorize the Auburn-Folsom South unit of the American River Division of the Central Valley Project.
- 1965 (July) Congress authorized the Auburn-Folsom South Unit for construction (PL 89-161). Acquisition of land and construction began in 1967.
- 1965 Another Christmas flood was minimized in the Sacramento area due to Folsom Dam. This again saved the capital area from flood damage which far exceeded the cost of Folsom Dam
- 1966 MR=4.6 earthquake in Chico/Oroville area.
- 1972 California State Water Resources Control Board established Directive-1400 to be implemented when Auburn Dam is completed. Until completion, Directive-893, requiring 250 & 500 cubic feet per second flows would continue as required flow levels in the Lower American River.
- 1974 (May 13) United States Bureau of Reclamation awards contract for foundation excavation and treatment of Auburn Dam to the Auburn Contractors (Ball, Atkinson & Arundel)
- 1975 (Aug 1) MR=5.7 earthquake occurs near Oroville; 50 miles north of Auburn.
- 1975 (Aug 11) A United States Bureau of Reclamation (USBR) engineers and geologists task force start internal reviews of Foothills fault system and the potential EQ activity at the Auburn Dam site. Task force members were R. Farina, A. Viksne, L. Cast, & J. Gilbert.
- 1975 (Nov) USBR task force recommends studies of the Foothills fault system and potential EQ activity.
- 1976 (May 5) USBR contracts with Woodward Clyde Consultants (independent geological consultants) to study seismicity of region around Auburn Dam site.
- 1976 (Jun 9) Failure occurred of USBR's newly completed earth and rockfill Teton Dam in Idaho.
- 1976 (July) USBR hires five-member board of independent geological and engineering consultants to guide and review the investigations and findings. They include: **Drs C. Allan**-California Institute of Technology, **Ray Clogh**- University of California, Berkeley; **R. Johns**- Stanford University; **L. Johnson**- University of California, Berkeley; and **L. Serafim**- Portugal.
- 1976 (Sept 1) California Department of Water Resources advises USBR that earthquake design parameters used for Auburn Dam were inadequate.
- 1976 (Dec 3) USBR sponsors geologic tours of Auburn Dam site to review status of seismic investigations. They included: United States Geologic Service; USCB (?); California Division of Mines & Geology, and California Department of Water Resources.
- 1977 (Feb 22) President Carter reveals he will cut \$39.7 million from fiscal year 1978 Auburn Dam budget along with eliminating some 18 other water projects in the western United States.
- 1977 (Jun 28) Woodward-Clyde revealed their findings and recommended earthquake design criteria: MR=6.5, FM=0.8 ft.
- 1977 (mid) California retained a consulting board of eminent geologists, seismologists & design engineers. The six members included: **G. Housner, J. Blum, D. Cambell, A. O'Neil, and H. Seed.**

- 1977 (Aug) President Carter approves the \$39.7 million for Auburn Dam. USBR releases their 3 volume Report on Auburn seismic evaluation.
- 1978 (Jan 17) Woodward-Clyde (after 16 months of study) deliver their final volume of an 8 volume seismic report: "Earthquake Evaluation of the Auburn Dam Area".
- 1978 (Jul 13) United States Geologic Services presents their technical review of Woodward-Clyde's study and recommends: MR=6.5-7.0, FM=3.0 ft.
- 1978 (Jul 28) USBR releases a 6 volume supplemental report of the earthquake study, and the findings of the 5 independent Auburn consultants.
- 1978 (Sept 14) USBR proposed design criteria as: MR=6.5 (2 miles from dam site), FM=1.0 inch.
- 1979 (Jan 4) California Department of Water Resources: Consulting Board for Earthquake Analysis, recommended: MR=6.5, FM=5.0 inches.
- 1979 (Jan 25) Secretary of the Interior, C. Andrus says Auburn Dam will have to be redesigned because of earthquake hazards.
- 1979 (Mar 5) California Department of Water Resources: Consulting Board for Earthquake Analysis, recommended: MR=6.5, FM=5.0 inches minimum and 9.0 inches preferred.
- 1979 (Jul 30) Secretary Andrus approved the earthquake design parameters: MR=6.5, FM=9.0 & Ground Response Acceleration (GRA) =0.5 g in the one second portion of the spectrum.
- 1980 (Aug 11) Feasibility level designs were completed for a rockfill and curved gravity alternatives for Auburn Dam.
- 1980 (Dec 30) Andrus announces a safe dam can be built at Auburn but we must resolve the Lower American River controversy. Selection of the alternate dam was 'Curved Gravity-3' with 600 megawatt power plant.
- 1984 President Reagan announced a new national policy calling for non-federal cost sharing for financing water projects. A Federal-State Auburn Dam Task Force was established to find ways to accomplish this.
- 1985 Bechtel International hired to determine a less costly option to Curved Gravity-3, such as Rolled Compacted Concrete.
- 1986 (Feb) Record runoff floods demonstrate that Sacramento Metropolitan area is extremely vulnerable to flooding from the American River. Folsom Dam was hours away from losing control.
- 1987 (July) USBR released the "Auburn Dam Alternative Study" which evaluated five alternative sizes. Purpose was to assist in making informed judgments on the level of flood protection needed.
- 1987 (Sept) After 3 Congressional hearings, U. S. Corps of Engineers initiated a 'dry dam' study for the Auburn Dam site.
- 1988 (Sept) American River Authority (ARA) informed USBR that it could contribute \$700 million to cost-share water and power costs for the 2.3 million acre feet multipurpose dam.
- 1988 (Sept) Interior Department's Assistant Secretary announced an Auburn dam cost-sharing negotiating team to negotiate with interested California parties and in particular, the ARA.
- 1989 (Dec) The Central Valley Project Water Association passed a resolution to oppose integration of Auburn Dam into the Central Valley Project.
- 1989 (Apr) ARA, San Joaquin County and Sacramento area water agencies said they'd support funds for water supply.

Abbreviations: MR = Magnitude on Richter Scale
FM = Foundation (horizontal) Movement

Acknowledgements:

This chronology was compiled by Mike Schaefer for his presentation to the Auburn Dam Council on (10/2/05), and to the American River Authority on (6/17/06).

Most of the information came from USBR's geolog consultant Wendel Carlson's report: "**INTERIM CONSTRUCTION GEOLOGY REPORT, AUBURN DAM**" (November 1990).