



Name of Plant: Big Creek

Year in Service: Since 1913

Horsepower of Turbine: Four Turbines 77.8mw each

Equipment Used: Pelton Wheel

Annual Energy Gen.

Water Conditions: Big Creek

Bearings Used: Lignum-Vitae was and still is the bearing of choice

Longevity of Bearing: Lignum-Vitae used for decades

Information of Note:

The first order of business for Big Creek was a small railroad from Fresno. Completed in 157 days, it was necessary because the terrain was too rough for teams of mules or oxen.

Big Creek was by far the largest hydroelectric project in the world at the time and had the greatest vertical distance fall. Construction in the wild terrain was a constant challenge. Measurements required spring balances on the measuring tapes to ensure equal tension in determining distances. Corrections had to be made for temperature variations above and below 62°F. Once a day, surveyors used a steel tape calibrated in Washington by the Bureau of Standards to verify tapes used in the field.

The extremes between winter and summer temperatures brought inventive practices. During the winter of 1912-13, work with concrete continued by using steam pipes under canvas to keep the ambient temperature within workable ranges. Sections of penstock pipe, laid from the powerhouse up the steep incline to Huntington Lake, were filled with water as work progressed to stabilize pipes within the trench and to keep temperatures constant for welding. Without the expansion joints commonly used in construction today, the summer heat made pipelines crawl like snakes until they were buried.