

CONSTRUCTION OF PCWA'S AMERICAN RIVER PUMP STATION



At the Historic Auburn Dam Site - 2003 through 2007



River canyon just prior to diversion through tunnel



Cofferdam failure in 1986

Construction of the American River Pump Station replaced a previous pump station completed with PCWA's Middle Fork American River Project in 1967. The river site was taken over and diverted through a 33 foot diameter tunnel in 1972 to make way for construction of an Auburn Dam. Construction of the dam was halted due to earthquake in 1975, and though the river channel and pump station have since been restored, the remnants of earth moving and foundation work for the dam are still evident.

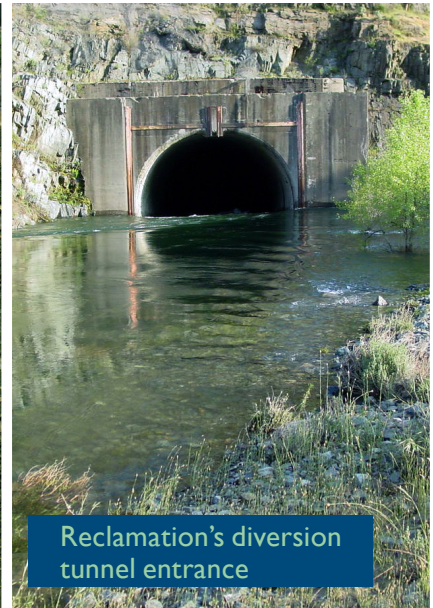


Alignment of diversion tunnel



Begin restored river reach

End restored river reach



Reclamation's diversion tunnel entrance



Blasting for new pump station



Overview of project construction

PROJECT FACILITIES

Highlights and Innovative Features



Pump Station The 2-level pump station was constructed partially below-grade to follow suit with other non-invasive project elements.



Pumping Well The pumping well was tunneled into bedrock 90-feet below the pump station and hidden from public view in the canyon wall.



Vertical Pump Shafts Seven 54-inch diameter vertical pump shafts were drilled approximately 75-feet into bedrock to set the pumps.



Whitewater Channel

Portage Path

Restoring the river channel reopened three miles of the American River closed to the public due to the diversion tunnel. The restored channel is a collaborative product of many stakeholders, from recreational interests to reliable water supply for PCWA.



Heavy equipment closing the diversion tunnel



Intake Facility

The intake structure, emergency and primary screens, are all components of the multi-use screened intake that do not have the invasive features associated with conventional side channel designs.



Whitewater Channel

Placing boulders in the whitewater channel. Boulders harvested from foundation/pumping well excavation were used with sizes varying from 2 to 8-feet in diameter.



Primary Fish Screens

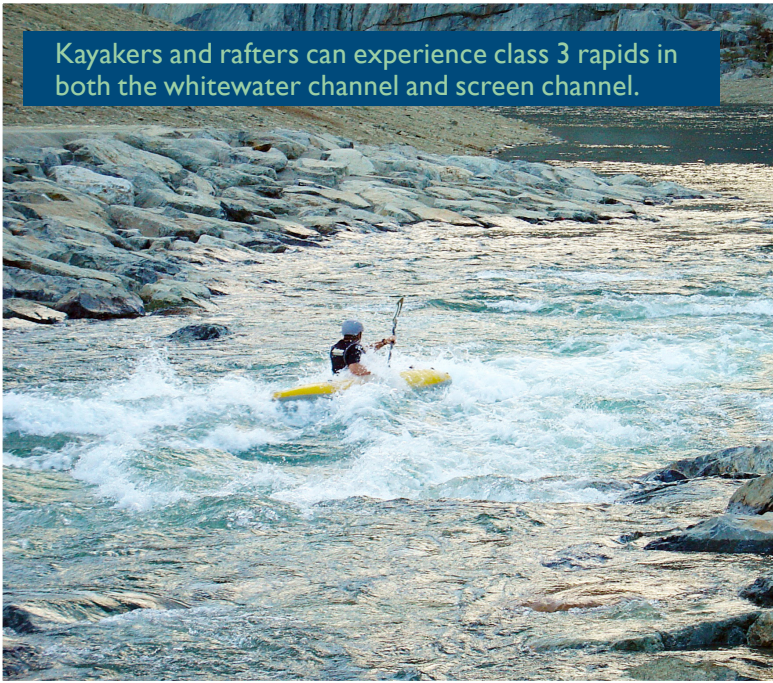
Tilted wire screens within a fast-moving chute. The innovative design minimizes sediment intrusion, eliminates cleaning equipment, and is safe for the fishery and boaters.

The pump station enables reliable, year-round access to water from PCWA's Middle Fork American River Project.



Photo credit: Protect American River Canyons (PARC)

Kayakers and rafters can experience class 3 rapids in both the whitewater channel and screen channel.



Innovative use of tilted wire screens on the river bottom use natural river current to self-clean.

The total project cost was \$76.4 million, with contributions from federal and state governments, along with a significant portion from PCWA. Key advocates included United States Bureau of Reclamation, Central California Area Office, State of California Department of Parks & Recreation, Gold Fields District, and Department of Fish & Game, Fisheries Branch, and local non-governmental agencies, including Friends of the River and Protect American River Canyons.

COST SUMMARY

PROJECT COSTS	
Environmental & Design	\$8,300,000
Construction	\$54,600,000
Construction Management	\$8,200,000
Administration	\$5,300,000
Total	\$76,400,000

PROJECT FUNDING	
Federal	\$44,400,000
State	\$4,000,000
PCWA	\$28,000,000
Total	\$76,400,000