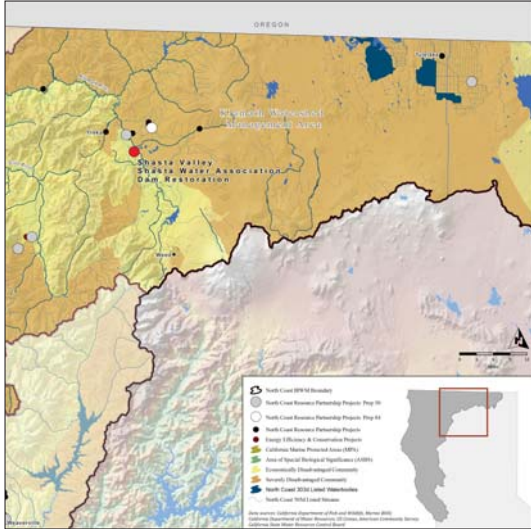


Shasta Water Association Dam Restoration

SHASTA VALLEY RESOURCE CONSERVATION DISTRICT



STATEMENT OF THE PROBLEM

Flashboard dams were used in the main-stem Shasta River each summer to divert water to irrigate agricultural lands. Operation of these dams resulted in either complete or partial barriers to fish passage during the irrigation season, April 1–October 1. Additionally, these dams were identified in the Shasta River TMDL as major contributors to poor water quality conditions in the river.

PROJECT GOALS

The goal of the project was to implement a project that meets fish passage and water quality objectives while conforming to state regulations and maintaining economically viable agricultural operations.

THE SOLUTION

Project construction began in summer 2008. This included installation of the boulder weir, construction of the fish screen and installation of pipelines. Instream construction occurred during the hot summer months when salmonids were least likely to be present. Instream construction activities were largely completed October 2008. Pipeline construction efforts began in November 2008 and were completed by April 2009.

PROJECT IMPLEMENTATION AND ACCOMPLISHMENTS

June 2007–October 2008

- Pre-project monitoring (years one & two)

July 2008

- Temporary water supply lines installed.
- Channels built to bypass river for construction in channel.
- Preliminary construction of pipelines associated with pump station

August 2008

- Begin dewatering upper project area. Conduct necessary fish rescue exercises.
- Begin construction of fish screen.
- Begin construction of boulder riffles.
- Dam removal

October 2008

- Placement of the Shasta River back into its natural channel.
- Demolition of pump station.

December 2008

- Installation of shade structure over pump station.
- Installation of electrical panels.

January 2009

- Continue working on pump station to make it operable prior to April 1.

- Revegetation of streambanks with willows.

April–October 2009, 2010, 2011, 2012 & 2013

- Post project monitoring

January 2012–November 2013

- Implement on-farm efficiency and riparian protection projects: water conservation, tail water reduction, riparian sensing, and off-stream live-stock systems.

COMPLETION DATE

April 2009: Dam restoration activities

December 2013: On-farm efficiency and riparian protection projects

PROJECT BUDGET

IRWM funds: \$ 878,275

Leveraged funds: \$2,017,337

Total cost: \$2,895,612

BENEFITS

Economic

- Reduced costs of irrigation water for Water District members of about \$1,679,890
- Avoided project costs of about \$7,081
- Avoided maintenance costs of about \$285,920
- Avoided energy costs of about \$499,870

Water Supply

- A more reliable water supply will protect against agricultural losses
- Improved water use management

Habitat and Ecosystem Function

- Reduction in surface area of water impounded
- Year-round fish passage

Cultural

- Protection of the watershed's agricultural heritage

Jobs and Local Economic Benefits

- The project cost \$4,802,000 which was spent using local labor and supplies when possible, contributing to State goals for environmental justice and social equity

NEXT STEPS & RECOMMENDATIONS

Continue to modify agricultural operations to limit impacts on water quality and salmonid habitat in the Shasta River to protect salmonid populations and the area's agricultural heritage.

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NORTH COAST RESOURCE PARTNERSHIP