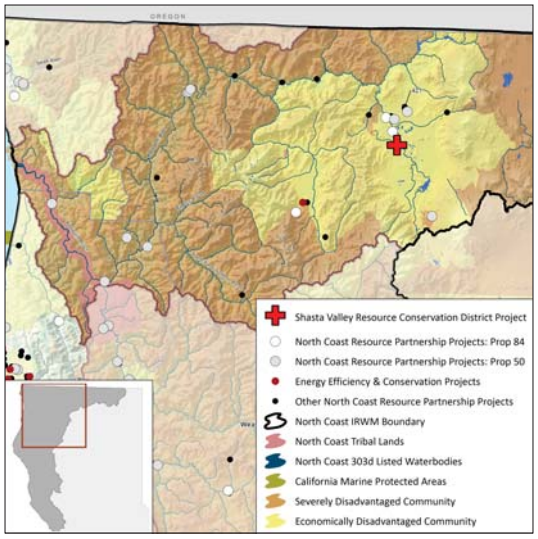
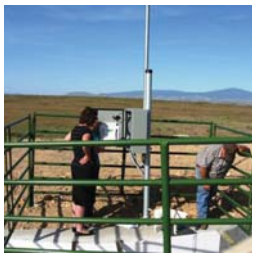
Shasta River Drought Response and Irrigation Efficiency Project

SHASTA VALLEY RESOURCE CONSERVATION DISTRICT





COMPLETION DATE

September 30, 2019

STATEMENT OF THE PROBLEM

The Shasta River receives little precipitation, and snow is an essential component of the watershed's hydrography. A reduction in the snow-pack due to the persistent drought conditions has reduced the amount of cold water delivered to the Shasta River. According to the Southern Oregon Northern California Coho Recovery Plan, the impact of climate change overall threat rank is 'high' for the Shasta River coho population due to increasing temperatures, changes to the hydrograph, agricultural water use, and impacts to water quality (NMFS 2012). The Shasta River is 303 (d) listed for high temperature and low dissolved oxygen, and agricultural activities (livestock impacts and irrigation) have been identified as the main source of these impairments.

PROJECT GOALS

- Improve instream water quality in the Shasta River
- Improve economic vitality in the Shasta River Valley
- Increase community capacity through education and project implementation

THE SOLUTION

This project will help landowners to control irrigation efficiency and address the concerns of the Shasta River TMDL by improving water conveyance infrastructure, replacing inaccurate flow measuring equipment, and providing water efficiency monitoring and advisory support to help landowners achieve water conservation improvements.

PROJECT IMPLEMENTATION

Project planning, design, and permitting have been completed. Construction activities began during the summer of 2016 and will be completed during the summer of 2019.

PROJECT BUDGET

IRWM funds:	*$ 347,092*
Leveraged funds:	*$ 444,000*
TOTAL	**$ 791,092**

BENEFITS

Economic benefits

- An estimated $14,482 in benefits from increased water supply for agricultural purposes
- Approximately $14,391 in benefits from increased instream flow for environmental purposes
- About $3,140 per year in avoided electrical costs from less pumping
- Decreased operations and maintenance costs from system improvements

Water Supply

- About 254 acre-feet per year increased agricultural water supply
- About 180 acre-feet per year left instream for environmental beneficial uses during critical summer months

Habitat and Ecosystem function benefits

- Species protection for (*Oncorhynchus kisutch*), steelhead (*Oncorhynchus mykiss*), and Chinook (*Oncorhynchus tshawytscha*) due to increased flow during critical summer months
- Habitat improvement due to decreased water temperature and increased Dissolved Oxygen due to increased instream flow

Cultural benefits

- Conflict reduction in a part of California known for disputes among competing water interests
- Community resilience to climate change challenges through education and implementation of projects that store excess winter rains for summer use and improve irrigation efficiencies

Jobs and Local Economic Benefits

- Nearly $800,000 spent locally using local supplies and labor when possible
- About 6 jobs created/maintained

NEXT STEPS

The Shasta Resource Conservation District will continue to assist landowners to adapt to changing weather patterns and protect working lands and natural resources in the Shasta Valley.

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NORTH COAST RESOURCE PARTNERSHIP