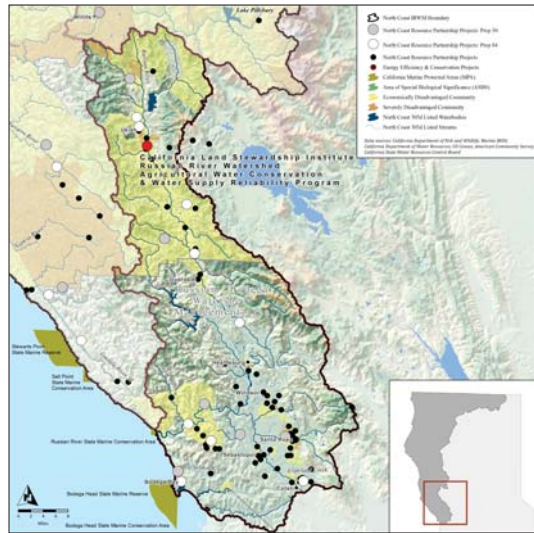


Russian River Watershed Agricultural Water Conservation and Water Supply Reliability Program

CALIFORNIA LAND STEWARDSHIP INSTITUTE



STATEMENT OF THE PROBLEM

Some farmers on the Russian River and its tributaries divert water for frost protection during spring months and these diversions can rapidly reduce water flows to levels that are harmful to federally listed fish populations. This is especially problematic in dry years and climate change may increase the frequency and severity of these conditions. In 2009, NMFS proposed a moratorium on using stream diversions for frost control (NMFS 2009) and the SWRCB developed regulations that would regulate these diversions in 2011, but they were invalidated by the California court system in 2012. It is uncertain what will happen next, but the issue is ongoing.

The City of Ukiah's wastewater treatment plant (WWTP) produces effluent that is discharged into the Russian River. The City's permit from the NCRWQCB restricts the timing and amount of effluent discharged. Discharge needs often exceed the limits of the permit, especially when flows in the Russian River are low. The City has invested in a system to treat the water to standards acceptable for agricultural use. It has developed a 20-year plan to find beneficial uses for the effluent and frost protection is a potential use.

PROJECT BUDGET

<i>IRWM funds:</i>	\$ 523,500
<i>Leveraged funds:</i>	\$ 960,899
TOTAL	\$ 1,494,399

BENEFITS

Economic

- Approximately \$14,399 per year from increased instream flow to enhance water quality, ecosystems, and salmonid populations

Watershed Rehabilitation

- Improved fish and wildlife habitat
- Reduction in withdrawals for frost control is expected to increase salmonid survival

Cultural and Social

- Reduce conflict associated with frost control withdrawals
- Protection of salmonids has a benefit outside of the cultural framework and economic values often imposed by western society

Jobs and Local Economy

- Nearly \$1.5 million will be spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity
- Reduce costs of unauthorized wastewater discharges
- Reduce costs to City of Ukiah of conducting effluent impact studies
- Reduce costs for downstream users by limiting pollutant discharge and maintaining instream flows
- Use of treated wastewater will protect scarce water supplies
- Agricultural sustainability through enhanced reliability of water supplies for frost protection

NEXT STEPS & RECOMMENDATIONS

California Land Stewardship Institute will continue to participate in the Russian River Frost Program and seek funding for and implement projects that protect ecosystem services, salmonid populations, and agricultural sustainability in the Russian River watershed.

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PROJECT GOALS

1. Reuse municipal treated water for agricultural frost protection and irrigation
2. Improve recovery of listed salmonids
3. Reduce water-related conflicts
4. Address critical water supply and quality needs of the disadvantaged community Ukiah
5. Agricultural climate adaptation

THE SOLUTION

This project will construct Phase 1 of the City of Ukiah's Master Plan Recycled Water Project, including a storage pond at the treatment plant, distribution lines to farms, a new pump station at the plant, and two storage ponds and pump systems on private land.

PROJECT IMPLEMENTATION

This project includes several components:

1. Implementation of a municipal recycled water system for agricultural frost control and irrigation to replace direct diversions,
2. Two water storage projects to replace direct diversions
3. Construction of Phase 1 of Ukiah's Master Plan Recycled Water Project and a storage pond at the treatment plant, a distribution line from the plant to the farms, and a new pump station at the plant

