

West Weaver Creek Channel and Floodplain Rehabilitation

TRINITY COUNTY RESOURCE CONSERVATION DISTRICT (TCRCD)



STATEMENT OF THE PROBLEM

West Weaver Creek is a branch of Weaver Creek, a headwater tributary to the Trinity River. West Weaver Creek lies just west of the town of Weaverville, Trinity County, California. It has good water quality and is ideal for supporting habitat for Coho and Steelhead. West Weaver Creek has a reach 1,000 feet upstream of its confluence with Grub Gulch, adjacent to Highway 299 and mostly within the Weaverville Community Forest, which has been degraded by historic hydraulic mining and recent fires. This reach has poor salmonid habitat, and supplies fine sediment to Trinity River downstream. Currently, the project reach is incised with prominent in-channel bedrock exposure, minimal in-channel cover, little substrate to support spawning and macroinvertebrate productivity, and no high-flow refugia.

PROJECT BUDGET

<i>IRWM funds:</i>	\$ 441,500
<i>Leveraged funds:</i>	\$ 266,700
TOTAL	\$ 708,200

BENEFITS

Economic

- Approximately \$2,907,414 over 50 years from passive-use value associated with increased salmon populations
- Approximately \$219 per year from avoided costs associated with reduced probability of sediment deposition
- Approximately \$1,398 over 50 years for ecosystem services provided by enhanced/increased riparian habitat

Water Quality

- Construction of complex fish habitat structures and riparian forest rehabilitation may increase groundwater recharge and help rebuild productive floodplain soils, potentially reducing evapotranspiration and groundwater heating

Watershed Rehabilitation

- Improved fish and wildlife habitat
- Improved instream habitat creates conditions for increased salmonid populations
- Technical modeling/monitoring and performance measures will potentially help guide future projects and reduce costs associated with future efforts

Cultural

- Increased salmonid populations have an intrinsic value outside the cultural framework and economic terms often imposed by western society

Jobs and Local Economy

- Over \$700,000 will be spent locally using local labor and supplies when possible, thus contributing to State goals for environmental justice and social equity
- 8 jobs created/maintained

NEXT STEPS & RECOMMENDATIONS

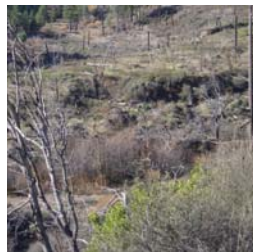
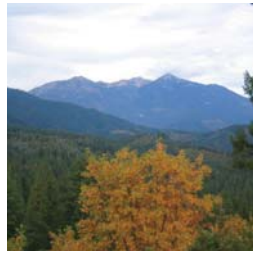
Trinity County will continue to seek funding for and implement projects to improve riparian and floodplain habitat, protect surface and groundwater quality, and preserve the agricultural heritage of the Trinity River watershed.

CONTACT

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Trinity County Resource Conservation District
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U. S. Forest Service Redwood Sciences Lab
ESA PWA (Environmental Science Associates)



PROJECT GOALS

1. Salmonid habitat improvement
2. Reduce sediment yield to Trinity River
3. Advance technical methodology for salmonid restoration project modeling/monitoring and performance measures

THE SOLUTION

TCRCD will implement creek rehabilitation on a degraded reach of West Weaver Creek, near Weaverville, Trinity County, California.

PROJECT IMPLEMENTATION AND ACCOMPLISHMENTS

The project involves pool and riffle construction, spawning gravel augmentation, and riparian planting to improve instream habitat though increased in-channel and floodplain sediment sorting and retention, decrease fine sediment yield, improve passage to upstream habitat, increase spawning and rearing habitat, increase colonization surfaces for macroinvertebrates, and increase high flow refugia. The project will reduce water temperature in Willow Creek by increasing hyporheic exchange from gravel augmentation.

Located in the Weaverville Community Forest, the project allows local stewardship of important natural resources and strengthens development of community-based conservation. The U. S. Forest Service's Redwood Sciences Lab will continue their fish population monitoring and modeling of the creek, and their pre- and post-project monitoring will document the fish population response and benefits of the project in relation to the wider region. Fish habitat and water quality improvements will also provide benefits to the downstream Trinity River, expanding the geographic influence of this restoration project.



NORTH COAST RESOURCE PARTNERSHIP