

Yuba IRWMP – TSF-01

Project Short Form¹

Please fill out the following information to the best of your ability/knowledge. Contact Keri Rinne with questions: keri.rinne@gmail.com

PROJECT SPONSOR INFORMATION

Lead Agency/Organization	The Sierra Fund
Name of Primary Contact(s)	Carrie Monohan
Mailing Address	204 Providence Mine Rd, Suite 214, Nevada City, CA 95959
Email Address	carrie.monohan@sierrafund.org
Phone (###) ###-####	(530) 265-8454
Project Partners/Collaborators	Mooretown Rancheria (fuels reduction, equipment work), Symbiotic Restoration (erosion-control structures), Restoration Fuels (biochar source)
YWA Liaison	JoAnna Lessard

GENERAL PROJECT INFORMATION

Project Title	Hydraulic Mine Restoration for Sustainable Infrastructure Management and Reliable Water Supply- Phase 1: Planning
Project Total Budget (Attach detailed budget, if available)	\$56M for Oregon Creek and Middle Yuba Watersheds (\$300,000 planning grant)
Budget Breakdown	Planning/Design Budget: Phase 1 \$300,000 Implementation Budget:
Project Funding Match , if any	25% match from BIL Funds for Mine Impacted Lands, SNC Grant, US Endowment for Forestry, Bay Area Council Grant, and SNC Grant
Total Project Funding Need	\$56M
Project Location (Attach map if available)	Oregon Creek and Middle Yuba Watersheds
Watershed/subwatershed	Oregon Creek and Middle Yuba Watersheds
Groundwater Basin (Select one)	<input type="checkbox"/> North Yuba Subbasin <input type="checkbox"/> South Yuba Subbasin <input checked="" type="checkbox"/> Not Applicable
Supports Yuba Groundwater Sustainability Plan (GSP)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Measurable Objective(s) Benefit (Answer If 'Yes' above) (check <i>all</i> that apply)	<input type="checkbox"/> Chronic lowering of groundwater levels <input type="checkbox"/> Reduction of groundwater storage <input checked="" type="checkbox"/> Degraded water quality <input type="checkbox"/> Land subsidence <input checked="" type="checkbox"/> Depletions of interconnected surface waters
Project Priority (Select one)	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
Project Type (check <i>all</i> that apply)	<input type="checkbox"/> Conceptual <input type="checkbox"/> Feasibility Study <input type="checkbox"/> Study/Assessment <input checked="" type="checkbox"/> Planning <input checked="" type="checkbox"/> Engineering/Design <input checked="" type="checkbox"/> Permitting

¹ Completed Project Short Forms should be sent via email to Keri Rinne at keri.rinne@gmail.com

	<input checked="" type="checkbox"/> CEQA/NEPA <input type="checkbox"/> Facility Construction <input checked="" type="checkbox"/> Restoration <input checked="" type="checkbox"/> Monitoring <input checked="" type="checkbox"/> Best Management Practices <input type="checkbox"/> Acquisition <input checked="" type="checkbox"/> Demonstration/Pilot Project
Legal Authority	Tahoe National Forest

Please select the **status** of the **CEQA/NEPA/Permitting** for this project:

CEQA (Select one)	<input type="checkbox"/> Exempt <input type="checkbox"/> Not Started <input type="checkbox"/> Initial Study <input type="checkbox"/> EIR <input type="checkbox"/> Determination <input checked="" type="checkbox"/> Unknown if Required
NEPA (Select one)	<input type="checkbox"/> Exempt <input type="checkbox"/> Not Started <input type="checkbox"/> Environmental Assessment if Required <input type="checkbox"/> EIS <input checked="" type="checkbox"/> Record of Decision <input type="checkbox"/> Unknown
Permitting (Select one)	<input type="checkbox"/> Not Required <input type="checkbox"/> Not started <input type="checkbox"/> Identified <input type="checkbox"/> Consultations Complete <input type="checkbox"/> Application Submitted <input type="checkbox"/> Complete <input checked="" type="checkbox"/> Unknown if Required

PROJECT DESCRIPTION

Write a narrative briefly describing the project components and/or characteristics (Suggest ~ 300 words).

This project will be implemented in phases. Phase 1 is described below and includes the planning for restoration of the hydraulic mines in the Oregon Creek and Middle Yuba watersheds that contribute significant amounts of sediment to the Log Cabin and Our House Dams. Restoring hydraulic mine sites in the Oregon Creek and Middle Yuba Watersheds includes: 1) fuels reduction, 2) erosion control treatments, 3) soil amendments (biochar), and 4) revegetation of these denuded sites.

This work significantly reduces the cost of maintaining water supply facilities because it will reduce the amount of sediment that aggrades behind these structures. It also reduces wildfire risk, is considered a nature-based solution to climate change because of the carbon sequestration components of soil amended with biochar, and improves water quality, soil health, and habitat. The planning work includes surveys for cultural and biological resources, site designs, state and federal environmental permits, and improving/coordinating site access to conduct the restoration with ongoing fuels reduction projects. (Hydraulic Mine restoration would be coordinated with surrounding fuels-reduction efforts to maximize efficiencies and reduce costs.)

Measurements and indicators to track impacts of this project include measuring changes in: 1) erosion rates, 2) water quality runoff, 3) soil infiltration rates and revegetation, and 4) forest stand density before and after restoration to quantify benefits of this work. The total cost to restore all 105 hydraulic mine sites and conduct monitoring to inform future efforts to expand this approach throughout the watershed is \$57 million. The restoration of all 105 sites would save Yuba Water Agency \$169 million in sediment removal costs at Log Cabin and Our House Dams over 30 years. This first phase of the project is to complete the planning for top priority sites in these watersheds to be able to leverage millions in federal funds for implementation.

PROJECT RATIONALE/ISSUES STATEMENT

Briefly describe the need for the project and the desired outcomes/deliverables (Suggest ~ 200 words). Include an explanation of benefits and how they would be evaluated.

Yuba Water Agency has spent approximately \$20 million in the last 5 years to remove sediment from behind Our House Dam. The Sierra Fund's sediment modeling indicates that more than 80% of the sediment behind Our House Dam and Log Cabin Dam (both operated by Yuba Water) is from upstream hydraulic mines. This sediment must be removed at the great expense of Yuba Water Agency to continue to operate these water supply facilities. A benefit-cost analysis done for the Yuba Water Agency (Yuba Water) by The Sierra Fund and World Resources Institute indicates there is a high return on investment remediating hydraulic mine sites in the contributing watershed to these facilities. Investing in hydraulic mine remediation for 105 identified abandoned mine sites in Oregon Creek and the Middle Yuba would generate substantial cost savings in the maintenance of Our House Dam and Log Cabin Dams. For every dollar it invests in hydraulic mine remediation, Yuba Water can expect \$2.9 dollars in benefits over an 11-year payback period. This equates to a return on investment (ROI) of 195%.






Additional benefits of this hydraulic mine remediation and watershed restoration approach include reduced wildfire risk, improved water quality, enhanced wildlife habitat, increased carbon storage (through the use of biochar and improved soil health) and other co-benefits to aquatic and terrestrial habitat. Benefits will be quantified by pre and post-restoration monitoring.

The deliverables specific to Phase 1 of this project are cultural and biological surveys, the necessary state and federal permits, and leveraging federal funds for implementation.

ATTACHMENTS:

- Map of project location

Hydraulic Mines Within Log Cabin and Our House Dam Contributing Watersheds

-  Oregon Creek Subwatershed
-  Log Cabin Dam
-  Middle Yuba River Subwatershed
-  Our House Dam
-  Hydraulic Mines

