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# INQUIRY SUBMITTAL FOR CALFED CATEGORY III FUNDING: YUBA RIVER FISHERIES HABITAT ENHANCEMENT PROJECT

## Submitted by:

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**1b. Project Description and Primary Biological/Ecological Objectives.** This inquiry submittal is to solicit input on a **major conceptual project to substantially enhance chinook salmon and steelhead trout spawning and rearing habitat in the lower Yuba River through side channel improvement in the Yuba Goldfields.** The Yuba Goldfields offers a **unique opportunity to increase and enhance** salmon and steelhead habitat through **channel modification and revegetation** of the extensive system of channels and ponds that currently exists in the Goldfields. Consequently, this project would focus on expanding the physical habitat currently available to salmon and steelhead without the need for additional flow.

Biological objectives include: **1) increasing natural production of chinook salmon and steelhead trout in the lower Yuba River by increasing and enhancing spawning and rearing habitat in the Yuba Goldfields, 2) increasing high-quality shaded riverine aquatic (SRA) cover and associated food production by establishing and maintaining riparian vegetation along selected side channels, and 3) improving water temperatures for chinook salmon and steelhead trout through use of existing groundwater discharge, increased shading by riparian vegetation, and channel modification.**

The project would take advantage of the existing subsurface flows and extensive network of channels and ponds in the Yuba Goldfields to expand and enhance fisheries habitat. Historically, salmon and steelhead production in the Yuba Goldfields has been limited by the presence of large mining dredge ponds, isolation of spawning and rearing habitats, the scarcity of riparian vegetation, and desires to exclude salmon from the Goldfields. This project addresses these limitations to exploit the full habitat enhancement potential of the Yuba Goldfields.

**1c. Approach/Tasks/Schedule.** The project would be conducted in two phases. Phase 1 would be a pilot project to demonstrate the feasibility, biological benefits, and cost-effectiveness of the project. The pilot project would entail a 3- to 5-year program to evaluate channel modifications, riparian vegetation establishment and growth, and fish production in a selected segment of the existing channel/pond system. Phase 2 would be guided by pilot project results and would expand habitat enhancement to the upper reaches of the Yuba Goldfields. Phase 1 tasks would include evaluating aerial photography, developing base maps and stereo-photographs, collecting baseline

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topographic and hydraulic data and groundwater profiles, evaluating planting substrates, developing channel enhancement plans, obtaining permits and environmental clearance, developing detailed design, constructing the pilot project, and monitoring.

**1d. Justification for Project and Funding by CALFED.** This project is directed at increasing riparian habitat that is currently a major limiting factor to salmon and steelhead production in the Yuba River. The project would implement general riparian-, habitat-, and temperature-related recommendations made in CALFED's ERPP, the USFWS's Revised Draft Anadromous Fish Restoration Program Plan, and DFG's Lower Yuba River Management Plan. The AFRP Plan designates this project as "high priority". The project meets all CALFED criteria. Other rationale for this project are that: 1) chinook salmon and steelhead have successfully spawned and reared in the Yuba Goldfields, 2) rearing habitat quality is greatly enhanced by the presence of overhead and instream cover provided by woody vegetation, 3) the value of side channel habitats for enhancing natural salmon and steelhead production is well documented, 4) existing Yuba River side channels support dense juvenile salmon populations, and 5) physical and hydraulic conditions in the Goldfields are conducive for riparian re-establishment.

**1e. Budget Costs and Third Party Impacts.** The total project cost for Phase 1 is estimated to be \$700,000. Phase 2 costs depend on Phase 1 results and the extent of restoration desired. YCWA would work with landowners to ensure that only willing landowners are affected by the project, thereby ensuring that there would not be any third-party impacts.

**1f. Applicant Qualifications.** YCWA has been involved extensively on Lower Yuba River water supply and fisheries resource management issues. The Agency has funded numerous studies of anadromous salmonids since 1991, including cost-sharing the annual chinook salmon spawning escapement surveys with DFG, conducting river water temperature monitoring and reservoir temperature profiling, participating in the inter-agency Yuba River Temperature Management Working Group, and rescuing juvenile salmon isolated from the main river channel during natural flow decreases. YCWA would also use respected and experienced consultants to assist in project planning, design, implementation, and monitoring.

**1g. Monitoring and Data Evaluation.** YCWA has funded base-line monitoring and data evaluation on the Yuba River for nearly 10 years and would continue to do so. Specific monitoring of the restored channels is over and above YCWA's standard monitoring, and the budget presented above includes funding for monitoring. YCWA would work with DFG and USFWS to develop and implement a specific monitoring plan for both phases of this project.

**1h. Local Support/Coordination with other Programs/Compatibility with CALFED objectives.** YCWA would seek to broaden support and coordination with all agencies and stakeholders interested in fisheries resources in the Lower Yuba River. The project would be designed and implemented in coordination primarily with DFG and USFWS, two agencies with a long-vested interest in increasing salmon and steelhead production in the Yuba River. PG&E and BLM have also shown interest.