

Appendix B-8

LAKE TAHOE RESTORATION PROJECTS ESTIMATED DIRECT COSTS & KEY MILESTONE DATES

Project Name: Upper Truckee River Restoration (Forest Service Lands) Agency: U.S. Forest Service
 Prepared by: T Tolley / C. Oehrli Phone: 530.543.2813/2681 EIP #: 908

SNPLMA Project #:

Identify estimated costs of eligible reimbursement expenses:

<p>1. Planning, Environmental Assessment and Research Costs (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)</p>	\$ <u>154,000</u>	<u>22</u> %
<p>2. Direct Labor (Payroll) to Perform the Project</p>	\$ <u>168,000</u>	<u>24</u> %
<p>3. Project Equipment (tools, software, specialized equipment, etc.)</p>	\$ <u>2,800</u>	<u>.4</u> %
<p>4. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)</p>	\$ <u>4,200</u>	<u>.6</u> %
<p>5. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project)</p>	\$ <u>7,000</u>	<u>1</u> %
<p>6. Cost of Contracts, Grants and/or Agreements to Perform the Project</p>	\$ <u>280,000</u>	<u>40</u> %
<p>7. Other Direct Costs (public awareness and environmental education)</p>	\$ <u>14,000</u>	<u>2</u> %
<p>8. Indirect Costs</p>	\$ <u>70,000</u>	<u>10</u> %
TOTAL:	\$ <u>700,000</u>	<u>100</u> %

Estimated Key Milestone Dates for this phase:

Milestones/Deliverables:	Date:
Continue NEPA/CEQA / continue pre-project surveys	Q1-FY08-Nov 2007
Contract for designs plans, specs to 100% level	Q2-FY08-June 2008
Begin project site prep	Q3-FY08-June 2008
Begin contracting process for construction contractor	Q4-FY08-Sept 2008

APPENDIX I

LAKE TAHOE CAPITAL PROJECT PROPOSAL

Project Name: Upper Truckee River Restoration
Capital Focus Area: Watershed Restoration and Habitat Improvement (WR/HI-11)
EIP #: 908

Lead Agency: U.S. Forest Service
Contact: C Oehrli

Threshold: WQ, SC, V, F, SR, R
Phone Number: (530) 543-2681

Threshold Standard: WQ1-6, SC2, V1, V4, F2-4, W1, SR3, R1
Email Address: coehrli@fs.fed.us

Is this a multi-year Project? Yes
Total Project Cost: \$4,131,000
Funding Request in this Round: \$ 700,000

(If “Yes”, describe in the Detailed Project Description below number of years or phases and which year the requested funding will cover)

Project Summary:

This project is Phase I of 3 to restore stream channel and floodplain form and function along this reach of the river. This project will coordinate the efforts with adjacent property owners who are also conducting restoration projects along the river. Specifically, this Phase will provide environmental documentation, design contract, pre-project surveys and the contractor selection process for construction.□□

Detailed Project Description:

The USDA Forest Service, Lake Tahoe Basin Management Unit (LTBMU) requests Southern Nevada Public Lands Management Act funding to implement this project and coordinate with adjacent property owners, conducting their own restoration projects along the river. This work is an important part of the effort overall, to restore stream channel and floodplain form and function along this reach of the river in a mix of Forest Service, California Tahoe Conservancy, City of South Lake Tahoe, and California State Park lands.

The Upper Truckee River is the largest, longest stream course, draining over 54 square miles into Lake Tahoe. As noted earlier, studies identified the Upper Truckee as a major pollutant source of sediment and nutrients flowing into Lake Tahoe. Over the past 150 years, environmental changes such as channel straightening, airport and road construction on filled floodplains, and conversion of moist and wet meadow into grazing meadows, golf courses, sewer infrastructure, and an airport. These activities negatively affect the natural functions of the Upper Truckee River. The valley reach of the Upper Truckee River today is a relatively

deep, wide, eroding channel with limited value to the ecosystem. It is now necessary to modify the way the river works by overhauling its physical form and relationship between the river and floodplain, in order to regain natural equilibrium and dynamic stability.

A three-phased approach is necessary due to the complexity of this project:

- ◆ Phase 1: environmental documentation, design contract, pre-project baseline surveys, construction contractor selection process, [and interagency coordination](#)
- ◆ Phase 2: Contractor selection, environmental permitting, and construction with oversight and construction practices monitoring
- ◆ Phase 3: Post construction maintenance and implementation/[performance monitoring](#)

This request covers activities shown in Phase 1. The funding request is for 700,000. This funding level is required to complete these tasks and keep pace with the timing of concurrent river restoration projects upstream and downstream of the work done on Forest Service land. The Forest Service will complete construction [of](#) this project by October 2011.

Describe the goals and objectives of the project:

The goals of this project are consistent with Aquatic Management Strategy (AMS) in the 2004 Sierra Nevada Forest Plan Amendment.

The goals of this project are:

- Restore ecosystem function to the Upper Truckee River in terms of water quality, riparian vegetation, ecological processes, and natural geomorphic processes that sustain channel morphology (AMS 1, 2, 3, 5, 6, 7, 9)
- Reduce local erosion and sedimentation rates to pre-disturbance levels to the extent possible: (AMS 8)
- Offset historic disturbances to ecosystem function to the extent possible, given desires of landowners and agencies, while providing a constructive basis for resolution of conflicts.

Objectives for this project overall include:

- Take the knowledge gained in the completed Assessments for both this reach and complete a NEPA/CEQA analysis.
- Develop designs, construction plans, and specifications; select a construction contractor; and conduct pre project environmental condition surveys.
- Secure environmental permits and implement the project; initiate post-project maintenance program and conduct post-project effectiveness surveys.

Describe the anticipated project accomplishments:

The project will reconnect the river channel to its floodplain, provide resistance and resilience to flooding, raise groundwater table, promote expansion and self perpetuation of riparian vegetation that supports diverse wildlife populations, significantly improve fish habitat, reduce sediment and nutrient transport to Lake Tahoe, and return the system to a state of dynamic equilibrium.

Describe the “readiness” of this project to move forward:

A Technical Advisory Group (TAG) has been planning restoration of the Mid Reach and Upper Reaches of the Upper Truckee watershed since 2001. The TAG includes representatives from Tahoe Resource Conservation District, City of South Lake Tahoe, El Dorado County, California Tahoe Conservancy, Tahoe Regional Planning Agency, US Forest Service, South Tahoe Public Utility District, California Department of Parks and Recreation, and Lahontan Regional Water Quality Control Board.

Watershed Assessments have been completed for both the Mid and Upper Reaches by Swanson Hydrology and Geomorphology. These assessments have identified impairments to ecosystem function and developed a range of conceptual alternatives to restore them. These assessments provide a solid scientific foundation for selection of preferred approach

Additionally, CDM Environmental Consultants completed an existing conditions environmental analysis of existing conditions downstream of the project. ENTRIX Environmental consulting is working on environmental analysis and design for river at the Forest Service / City of South Lake Tahoe property boundary currently. ENTRIX will complete an existing conditions analysis, NEPA / CEQA environmental analysis, and designs to the 30-percent level for the river on Forest Service and adjacent CTC lands in 2007. ENTRIX is currently under contract with California Tahoe Conservancy (CTC).

Describe partnerships for this project (include documentation):

No formal partnerships have been secured time; however, the complex property ownership situation (FIGURE 1), [plus the desire to restore natural river and floodplain dynamics](#), requires that some of this funding supports work done along and over adjacent property boundaries. The adjacent property owners are the California Tahoe Conservancy (CTC) and City of South Lake Tahoe. Other partners include the Tahoe Resource Conservation District, South Tahoe Public Utility District, and California Department of Parks and Recreation. [Moreover](#), the Forest Service is also working closely with the Lahontan Regional Water Quality Control Board, California Department of Fish and Game, and the United States Army Corp of Engineers, to insure that the project meets all state and federal environmental regulations. This level of coordination ensures that restoration of the Upper Truckee on Forest Service and adjacent properties will occur in a timely and seamless fashion.

Describe the project monitoring that will be implemented as part of this project including:

(1) The questions the monitoring approach overall, is designed to answer

- Are state sediment and turbidity standards being achieved during the first three years post construction for channel restoration projects
- [To what degree have restoration efforts been successful in restoring floodplain connectivity, stabilizing stream banks, and restoring the sediment transport regime](#)
- [What are the existing hydrological, geomorphic, and biological conditions of stream segments/floodplains targeted for restoration?](#)
- [To what extent has restoration been successful in restoring, to the extent feasible, the bio-geomorphic conditions that existed prior to Euro-American disturbances?](#)

(2) The monitoring approach

The restoration designs proposed for this project will be process based; therefore adaptive management is a fundamental component of their success. Monitoring and adaptive management plans will be developed describing how ecosystem functions will be evaluated and how adaptive management will be accomplished over the lives of the projects. Monitoring plans will track project effectiveness relative to trends of target physical and biological processes. The results of this continuous long-term monitoring will trigger project maintenance actions when predetermined goals are not met. The monitoring and adaptive management plans will focus on:

- channel and floodplain sediment storage
- groundwater elevations
- vegetative composition and cover
- channel complexity and diversity
- erosion and sedimentation within and from project areas
- terrestrial and aquatic habitat abundance and diversity

Monitoring activities for this phase: (NOTE: The funding secured in this round supports baseline, pre-project monitoring. Construction and post-project effectiveness monitoring will be accomplished with funding secured in future rounds)

- ◆ install piezometers and begin monitoring ground water elevations
- ◆ establish vegetation plots and trend transects
- ◆ conduct pre-project macro invertebrate surveys
- ◆ establish photo points and begin photo point monitoring
- ◆ fish population and age class surveys

(3) Whether this project monitoring fits in to a larger monitoring or research program?

The project is one of four significant restoration projects planned for this section of the Upper Truckee. Therefore, it is crucial that monitoring be consistent with monitoring efforts at the other projects sites along the river. Furthermore, the Forest Service is coordinating with CTC in developing a comprehensive monitoring approach for all projects along this section of the river. Additionally, this project is included in the Forest Service Adaptive Management 5-Year Monitoring Plan.

Describe how the project results will be communicated and made-available to the public.

The information created from this project will be disseminated to three audiences: 1) the general public, 2) other resource agencies, and 3) the broader scientific community. The audiences will be informed respectively through the USFS website, public/interagency meetings, and peer-reviewed publications.

Additionally, the results and accomplishments will be summarized in the Annual Forest Monitoring Program Report, as well as project specific monitoring reports. Project specific monitoring reports will be 1 to 5 years post project implementation, depending on variables being monitored and questions to be answered.

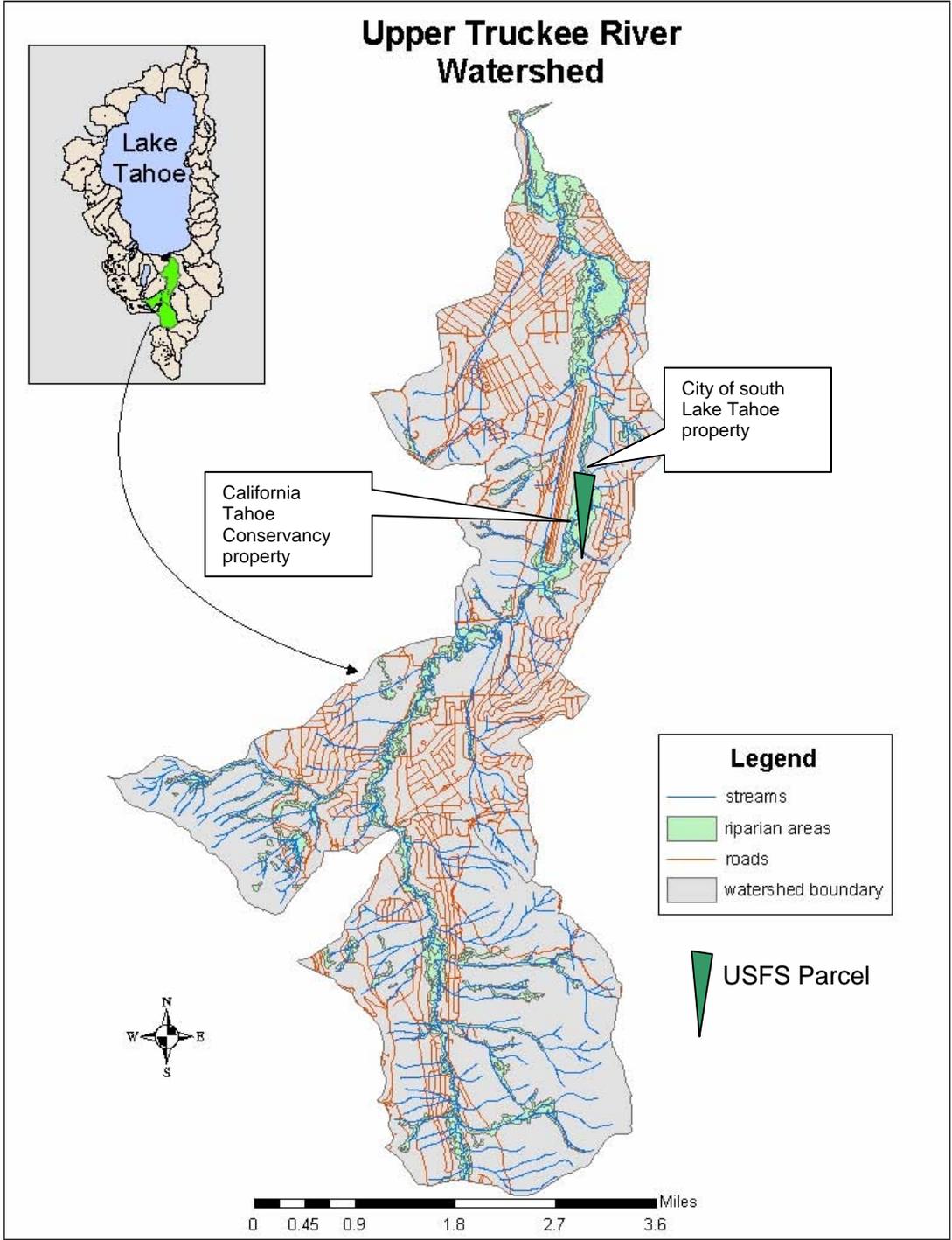


FIGURE 1