

## Appendix B-8

### LAKE TAHOE RESTORATION PROJECTS ESTIMATED DIRECT COSTS & KEY MILESTONE DATES

Project Name: Lahontan cutthroat trout restoration Agency: U.S. Forest Service  
 Prepared by: Barak Shemai Phone: 530 543-2622 EIP #: 10125.1  
 SNPLMA Project#: \_\_\_\_\_

**Identify estimated costs of eligible reimbursement expenses:**

<p><b>1. Planning, Environmental Assessment and Research Costs</b> (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)</p>	\$ <u>15,000</u>	<u>10</u> %
<p><b>2. Direct Labor (Payroll) to Perform the Project</b></p>	\$ <u>60,500</u>	<u>55</u> %
<p><b>3. Project Equipment</b> (tools, software, specialized equipment, etc.)</p>	\$ <u>12,000</u>	<u>8</u> %
<p><b>4. Travel</b> (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)</p>	\$ <u>1,500</u>	<u>1</u> %
<p><b>5. Official Vehicle Use</b> (pro rata cost for use of Official Vehicles when required to carry out project)</p>	\$ <u>7,500</u>	<u>5</u> %
<p><b>6. Cost of Contracts, Grants and/or Agreements to Perform the Project</b></p>	\$ <u>16,500</u>	<u>11</u> %
<p><b>7. Other Direct Costs</b> (direct labor for agency personnel to do project procurements; COR; PI; personnel assigned as NEPA lead; personnel assigned to review contracted surveys, designs/drawings, reports, etc.; project manager and/or project supervisor; and contracted costs for project manager and/or project supervisor if contracted separately)</p>	\$ _____	_____ %
<p><b>8. Indirect Costs</b></p>	\$ <u>15,000</u>	<u>10</u> %
<b>TOTAL*:</b>	\$ <u>150,000</u>	<u>100</u> %

**Estimated Key Milestone Dates:**

Milestones/Deliverables:	Date:
Removal of brook trout from current LCT population	Oct. 2006
Completion of lake & stream expansion assessments	Dec. 2007
Initiate expansion (brook trout removal/stock LCT)	May 2008
<b>Project Completion</b>	<b>2012</b>

## APPENDIX I

### LAKE TAHOE CAPITAL PROJECT PROPOSAL

<b>Project Name:</b> Lahontan Cutthroat Trout Restoration	<b>Capital Focus Area:</b> Watershed Restoration and Habitat Improvement	<b>EIP #:</b> # 10125.1
<b>Lead Agency:</b> USFS	<b>Contact:</b>	Barak Shemai
<b>Threshold:</b> F	<b>Phone Number:</b>	530 543-2622
<b>Threshold Standard:</b> F4	<b>Email Address:</b>	bshemai@fs.fed.us
<b>Is this a multi-year Project?</b> Yes	<b>Total Project Cost:</b>	\$500,000
(If “Yes”, describe in the Detailed Project Description below number of years or phases and which year the requested funding will cover)	<b>Funding Request in this Round:</b>	\$150,000

#### **Project Summary (maximum 200 words):**

Lahontan cutthroat trout (LCT) were introduced to the headwaters of the Upper Truckee River in Meiss Meadows in the late 1980's and early 1990's. Non-native brook trout were removed from the Upper Truckee River prior to the LCT introduction. However, because of the extensive wet meadow conditions throughout the Meiss area, brook trout were able to escape from the initial removal effort. It is important to continue the brook trout removal, because of their impacts on the LCT population. The removal efforts will cover four miles of the Upper Truckee and approximately eight acres of Meiss Lake and Four Lakes and will continue over the next decade. In addition, stream and lake inventories and assessments will continue throughout the Upper Truckee River watershed to determine other appropriate areas for the reintroduction of LCT.

#### **Detailed Project Description:**

Lahontan cutthroat trout (LCT) was the only native salmonid species in Lake Tahoe Basin. The species was extirpated in the early 1900's by the actions of European immigrants. The LCT is a threatened species under the Endangered Species Act (ESA). The reintroduction of LCT in the Upper Truckee River headwaters in Meiss Meadow is critical to preservation and potential expansion of the species. The Meiss Meadow population will be one of the only high-elevation meadow populations of LCT in the Sierra-Nevada Mountain Range.

Phase I (Round 6 \$70,000): This portion of the project will conduct the brook trout removal from the current restoration site (4 miles of the upper Truckee, and 8 acres of Meiss and Four Lakes). Additionally, phase I will coordinate closely with CDF&G to explore the potential for expansion of the population downstream. This will include the collection of existing habitat data, conducting downstream brook trout population data, and testing the effectiveness of physical removal downstream (shocking, netting).

Phase II (Round 7 \$170, 500): This portion of the project will complete the necessary work to determine the maximum potential expansion area, without posing a threat to the current population conditions. Implementation will begin with extensive physical removal of brook trout between know barriers. The effectiveness of the removals will be examined before supplementary LCT stocking occurs. If removal efforts are found not to be complete brook trout removal will continue into round 8.

Phase III (Round 8 \$150,000): This rounds funding will initiate physical removal of brook trout below Meiss meadow in reaches that have been identified for population expansion. Artificial barriers that were put in place to facilitate the initial restoration will be evaluated for removal. Removal of these barriers will provide connectivity and establish gene flow necessary to establish a viable, self-sustaining population of Lahontan cutthroat trout. Additionally, where complete brook trout removal is successful Lahontan cutthroat trout (Independence strain) will be stocked to facilitate the population expansion.

**Describe the goals and objectives of the project:** The goals of the project are to establish and preserve the LCT population in the Upper Truckee River Watershed from Meiss Meadow downstream. The project objectives are to provide potential for the expansion of the Meiss Meadow population, remove the non-native brook trout, and monitor the progress and attainment of LCT preservation.

**Describe the anticipated project accomplishments:** The project accomplishments will be the establishment and preservation of LCT in Meiss Meadow, and the removal of brook trout from this area. The removal of brook trout from Meiss Meadow will decrease competition for habitat and prey, thereby providing for an increase in available habitat and survivability. Additionally, this project will examine the potential for expansion and where feasible facilitate the expansion through brook trout removal and LCT stocking.

**Describe the “readiness” of this project to move forward (Environmental documentation, etc.):** The first reintroduction efforts of LCT in Meiss Meadow began in 1990. The removal of brook trout and monitoring of LCT has occurred annually, since 1990. Trail improvement projects through Meiss Meadow have decreased erosion and resultant sedimentation to the Upper Truckee River. Assessments, inventories, and monitoring of the aquatic habitat were completed in the 1990’s. Stream monitoring has continued, with the establishment of a stream condition inventory (SCI) monitoring and assessment reach. Importantly, aquatic and riparian habitat in Meiss Meadow has been improved by the discontinuance of livestock grazing in Meiss Meadow.

**Describe partnerships for this project. (Include documentation):** The U.S. Fish and Wildlife Service, California Dept. of Fish and Game, and Trout Unlimited have been partners in this project.

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

(1) The questions the monitoring program is designed to answer

1. To what extent has nonnative brook trout removal in the Upper Truckee drainage been successful in reducing brook trout population numbers and improving Lahontan cutthroat trout population numbers?

## **(2) The monitoring approach**

Determine the effectiveness of brook trout removal in Upper Meiss stream system on Lahontan cutthroat trout recovery. Monitoring results will be applied to future Lahontan Cutthroat Trout management strategies and recovery efforts. Our removal and restoration efforts are monitored annually to ensure effectiveness.

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

Part of LTBMU Forest Plan monitoring program, as described in LTBMU 5 Year Plan, 2006

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

Results/accomplishments summarized in Annual Forest Monitoring Program Report, as well as project-specific monitoring reports. Project-specific monitoring reports will be produced one to five years after project implementation, depending on the variables being monitored and the questions to be answered.

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 project results will be communicated to the public through local and regional newspapers as well as the LTBMU and CDF&G websites. Project results will also be communicated by way of presentations to interested conservation (i.e. Trout Unlimited) and scientific (i.e. Western Chapter of American Fisheries Society) organizations.

Include an 8 1/2 X 11 map depicting the project.

