

Appendix B-8

**LAKE TAHOE RESTORATION PROJECTS
ESTIMATED NECESSARY EXPENSES & KEY
MILESTONE DATES**

Project Name: Aspen Community Restoration Agency: USFS LTBMU
 Prepared by: Victor Lyon Phone: (530) 543-2749 EIP #: 10080
 SNPLMA Project #: _____

Identify estimated costs of eligible reimbursement expenses:

1. Planning, Environmental Assessment and Research Costs (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	\$ <u>20,000</u>	<u>10%</u>
2. FWS Consultation—Endangered Species Act	\$ <u>0</u>	<u>0%</u>
3. Direct Labor (Payroll) to Perform the Project	\$ <u>36,000</u>	<u>18%</u>
4. Project Equipment (tools, software, specialized equipment, etc.)	\$ <u>0</u>	<u>0%</u>
5. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	\$ <u>0</u>	<u>0%</u>
6. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project)	\$ <u>0</u>	<u>0%</u>
7. Cost of Contracts, Grants and/or Agreements to Perform the Project	\$ <u>120,000</u>	<u>60%</u>
8. Other Direct and Contracted Labor: Agency payroll for the Contracting Officer to do project procurement, COR, Project Inspector, Sec. 106 Consultation if required, NEPA Lead, Project Manager, Project Supervisor, and subject experts to review contracted surveys, designs/drawings, plans, reports, etc.; Also covered is the cost to contract for a Project Manager and/or Project Supervisor if contracted separately from other project contracts)	\$ <u>0</u>	<u>0%</u>
9. Other Necessary Expenses (See Appendix B-11)	\$ <u>24,000</u>	<u>12%</u>
TOTAL:	\$ <u>200,000</u>	<u>100%</u>

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Complete Aspen Treatments / Implementation	December 31, 2011
Effectiveness Monitoring Report	December 31, 2012
Final Completion Date: including project close-out	March 31, 2013

COMMENTS: None

ROUND 10 CAPITAL PROJECT NOMINATION FORM
LAKE TAHOE FEDERAL SHARE EIP CAPITAL PROJECTS
APPENDIX K

Project Name: Aspen Community Restoration

Federal Agency Sponsor: USFS LTBMU

Contact: Victor Lyon

Thresholds: V, W, and SC2

Phone Number: (530) 543-2749

Threshold Standards:

Email Address: vlyon@fs.fed.us

**V-1 Deciduous Riparian
W-2 Riparian Habitat, and
SC-2 Stream Environment Zones**

Funding Requested in this Round: \$200,000

Total Project Cost: \$2,565,000

Total Project Cost includes:	Round 5	\$215,000
	Rounds 6, 8, and 10	\$200,000 each
	Rounds 11 through 17	\$250,000 each

Federal Share EIP rationale (select and describe appropriate EIP criteria from 5 items below – projects must meet one or more of these 5 items):

1. Does the project involve federal land?
 - If so, is the federal land involved important to successful implementation of the project?

The Aspen Community Restoration project would continue to occur solely on federal lands managed by the USFS Lake Tahoe Basin Management Unit.

2. Does the EIP identify the federal funding for the EIP project (project #)?

The EIP identifies the Aspen Community Restoration project as EIP #10080.

3. Does the project involve the conservation of a federal or regional threatened, rare, endangered, or special interest species?

The Aspen Community Restoration project would continue to restore habitat for federal sensitive species and regional special interest species (e.g. nesting habitat for northern goshawk).

4. Does the project involve an identified federal interest such as the detection and eradication of noxious aquatic or terrestrial invasive species?

Aspen stands were identified in the Lake Tahoe Watershed Assessment (USDA 2000, Vol. 1, pp. 496-526) as Ecologically Significant Areas (ESA) for their exceptional biological diversity and rarity on the landscape.

5. Does the project otherwise directly support federal implementation of capital projects in the EIP (e.g. technical assistance, data management, resource inventories, etc.)?

The Aspen Community Restoration project provides technical assistance to capital projects in the EIP engaging in similar restoration activities (e.g. technical assistance to the Blackwood Creek Restoration project in removing encroaching conifers from aspen stands and relocating the felled conifers into the stream channel for use as large coarse woody debris, floodplain control features, and fish habitat).

List Capital Focus Area(s) (as described in the 2006 Federal Vision):

In terms of the four capital focus areas described in the 2006 federal vision, the Aspen Community Restoration project is both a “Watershed and Habitat Improvement” project and a “Forest Health” project.

Circle all that apply (must meet a minimum of one category):

1. Continued emphasis on forest ecosystem health/fuels reduction projects considering the LTBMU Stewardship Fireshed Assessment and Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy.

2. Continued implementation of projects approved in Rounds 5 through 9 which implement the EIP. Project proposal should identify the applicable project(s) from Rounds 5 through 9 and clearly describe the phase/product being produced along with the consequence of not completing the project phase proposed for Round 10.

Round 5 – Aspen Community Restoration: \$215,000

Round 6 – Aspen Community Restoration: \$200,000

Round 8 – Aspen Community Restoration: \$200,000

No funding requested in Rounds 7 or 9

Round 10 – Aspen Community Restoration: \$200,000

[Please see narrative below for consequences of not completing the project phase proposed for Round10.]

3. Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel). List source category being addressed and integrate into the project nomination the following TMDL considerations (*see attached TMDL references – page 6). Source Category:

a) Describe whether, and how, the project demonstrates advanced, alternative, or innovative practices.

b) If project includes project level monitoring, describe ability of proposed monitoring strategy to contribute to the state of TMDL knowledge. Also describe if purpose of the capital project is to conduct data collection and/or analysis related to Lake Tahoe clarity.

c) Describe treatment approach for reducing pollutants, and/or measures to address connectivity between pollutant sources and Lake Tahoe or its tributaries. Identify target pollutants, and, to the degree feasible, provide quantitative estimates of project effectiveness at reducing pollutant loads (and/or a commitment to provide post-project estimates).

d) If appropriate, describe whether, and how, the project can be combined or coordinated with other TMDL implementation projects.

4. Control of aquatic invasive species and prevention and/or detection of new aquatic invasive species.

Provide an overall Project Summary (maximum 200 words): (describe ONLY this Round 10 project):

Aspen were identified in the Lake Tahoe Watershed Assessment (USDA 2000) as Ecologically Significant Areas (ESAs) because “they have an exceptionally diverse array of associated species,” (DeByle and Zasada 1980; Verner 1988) yet aspen occupy less than two percent of the landscape on the Lake Tahoe Basin Management Unit. The Round 10 Aspen Community Restoration project would move aspen stands determined to be at moderate, high, or higher risk of loss from the landscape on Forest System lands within the Lake Tahoe Basin toward the desired condition where 1) the upper canopy is dominated by aspen; 2) conifers comprise less than 25% of the canopy; and 3) aspen regeneration is vigorous. Treated aspen stands would be expected to regenerate and mature toward a low or negligible risk of loss during the estimated 20-year lifespan of the treatments. Treatments may include (1) conifer removal to reduce or eliminate conifer encroachment, (2) aspen removal to promote root stimulation and stand regeneration, (3) aspen root separation, and/or (4) prescribed fire.

Please provide clear and concise written responses to each of the items below. Please state “not applicable” if you believe the item or question is not applicable to your project.

Is this project proposed as a multi-round project (previous or future)? (If yes, for previous or future projects describe in the Detailed Project Description below number of years or phases and which year the requested funding will cover).

The Aspen Community Restoration project is a multi-round project. Round 5 SNPLMA Aspen Community Restoration funds and funds from a federal partner (USDI, Bureau of Reclamation) were used to map and assess the condition of aspen stands on Forest System lands within the Lake Tahoe Basin, develop a General Technical Report in partnership with Rocky Mountain Research Station (USDA Forest Service 2006, RMRS-GTR-178, Ecology, Biodiversity, Management, and Restoration of Aspen in the Sierra Nevada), and accomplish stand restoration treatments (estimated 61 acres). The Round 6 SNPLMA Aspen Community Restoration project is currently developing environmental documentation (to be completed winter 2008-9) in coordination with local agencies and the public to support programmatic restoration of aspen stands. The Round 6-funded programmatic environmental documentation will permit the restoration of aspen stands located outside other project areas, allowing the LTBMU to restore aspen stands to meet

aspen-specific purposes and needs. The Round 6 project will fund the first of these aspen-specific restoration treatments (estimated 10 acres in summer 2009).

The Round 8 SNPLMA Aspen Community Restoration project will restore approximately 70 acres during summer 2009 and continue a very modest, but informative monitoring program begun in SNPLMA Rounds 5 and 6.

Implementation of the Round 10 SNPLMA Aspen Community Restoration project would begin in 2010. Contracts let in 2010 may not be completed until 2011 as contractors would have two seasons to complete the treatments to allow for mill closures and similar economic considerations.

A Round 11 SNPLMA proposal would start new contracts in 2011 that would be completed in 2012 for treatments in aspen stands not funded by previous rounds. In this way, the Forest proposes to restore aspen stands by letting contracts each year, though the contracts may overlap the subsequent proposal cycle.

Detailed Project Description (focuses on what Round 10 is funding; list the number of years the requested funding will cover; briefly describe how this project links into previous and future projects).

Approximately 2,500 acres of aspen exist on National Forest system lands in the Lake Tahoe Basin. Of those, an estimated 1,600 acres are at moderate, high, or higher risk of loss from the landscape. Risk of loss is an assessment of the probability that an aspen stand may not persist on the landscape based on stand conditions such as conifer encroachment and aspen regeneration. An estimated 1,115 acres of aspen are located outside other project areas and/or Wilderness Areas. Less than 150 acres of aspen on Forest System lands have been treated or are currently funded for treatment. The Round 10 Aspen Community Restoration project would restore stands identified in SNPLMA Round 5, analyzed in Round 6, but not treated in Round 8 (due to limited funding relative to the number of acres requiring restoration). Round 10 would contribute toward restoration of the 1,115 acres of aspen described above and continue an essential portion of the wildlife and vegetation monitoring informing implementation of this and future rounds.

The Round 10 Aspen Community Restoration project would restore approximately 75 acres (dependent upon cost per acre at the time of implementation) of aspen as described in the overall project summary above. Implementation would begin in summer 2010 and would be completed by winter 2011. Implementation and effectiveness wildlife and vegetation monitoring would occur during summer 2010 and 2011.

Describe the specific goals and objectives of the project and describe how fulfilling those objectives will contribute to the achievement of one or more environmental thresholds (air quality, water quality, soil conservation, vegetation, fisheries, wildlife, scenic, noise, recreation).

The Aspen Community Restoration Project will contribute to V1, W-2, and SC-2 thresholds through the following goals, objectives, and resources benefits:

The goal of the Aspen Community Restoration Project is to restore aspen stands that are assessed to be at moderate, high, or highest risk of loss from the landscape on National

Forest System lands within the LTBMU. Objectives for restored aspen stands include the following:

1. Aspen dominate the upper canopy for the next 20 years;
2. Conifers comprise less than 25% of the canopy for the next 20 years;
3. Aspen regeneration is vigorous (i.e., ≥ 500 stems/acre) within three years;
4. Aspen stand expansion is initiated within three years;
5. Aspen stands regenerate and mature toward a low or negligible risk of loss during the 20 years following treatment; and
6. Aspen and associated deciduous tree, shrub, and herbaceous habitats are improved and benefit the biological diversity and ecological condition of the forest.

Secondary benefits anticipated to result from the restoration of aspen stands include:

1. Aspen stand resilience to wildfire will be improved and wildfire behavior within and adjacent to treated stands will be moderated through conifer removal.
 - a. Wildland fire burn severity and duration within treated aspen stands will be reduced;
 - b. Risks to heritage resources and visual resources from wildland fire will be reduced; and
 - c. Aspen stands in the desired condition will act as natural fire-breaks on the landscape.
2. Aspen community health and vigor will be improved as sunlight and subsurface water become more readily available to aspen and associated understory plant communities (i.e., mountain pennyroyal and California corn lily).
 - a. Greater availability of subsurface water will improve the ability of aspen to repel insects and diseases, especially during periods of drought;
 - b. Resistance to conifer invasion will be improved in treated stands where reduced transpiration rates lead to increased subsurface water, as conifers generally prefer drier soils than aspen do; and
 - c. Infiltration and hydrologic function will improve in treated stands with healthy aspen understory plant communities.
3. The composition, species richness, and function of forested areas and associated wildlife and plant communities will be improved.
4. Visual resources will be improved as treated aspen stands regenerate and mature.

Describe the anticipated project accomplishments (i.e. products or identifiable environmental benefits being produced or implemented under this project):

Approximately 75 acres of aspen stands would be restored (dependent upon cost per acre at the time of implementation). More acres would be restored if funds allow. Specialist surveys (e.g. wildlife, botany, heritage, hydrology, soils, and engineering) would occur prior to implementation as needed to meet the design features of the environmental documentation supporting implementation. Implementation and effectiveness monitoring for wildlife and vegetation would continue as described above.

Describe the “readiness” of this project to move forward (urgency, capacity, capability, environmental documentation, interagency agreements, etc.):

Given modern land management practices such as fire suppression, aspen continue to disappear from the landscape. Yet, the Lake Tahoe Basin Management Unit is uniquely

poised to capitalize on several years of prior collaboration (University of Nevada Reno, University of Arizona, Texas A&M, University of California Berkeley, Rocky Mountain Research Station) and investment (USFS, SNPLMA, and Bureau of Reclamation) to translate funding dollars into restoration treatments on the ground using programmatic environmental documentation. The project would also benefit from pre-existing local interagency coordination on earlier restoration implementations; reducing time spent acquiring permits and similar agency process requirements.

Describe partnerships for this project. (If applicable, project should identify committed/secured partner funding and/or other partner contributions (describe) and how it is integrated into the project):

The Lake Tahoe Basin Management Unit has also submitted a SNPLMA Round 10 proposal, the Angora Fire: Aspen Restoration Planting Project, in collaboration with the University of California, Berkeley. Implementation of the Angora Fire project and the Aspen Community Restoration Project is synergistic: each will inform the other. The Angora Fire Long-term Restoration: Aspen Planting Project will inform the Aspen Community Restoration Project on the potential to include aspen planting as a viable method of restoring stands in the Lake Tahoe Basin. Conversely, the restoration project will inform the planting project in regards to the response of wildlife to a suite of aspen restoration methods, including planting.

Describe the estimated environmental risks from unintended consequences of the proposed project:

The programmatic environmental documentation provided for by the SNPLMA Round 6 Aspen Community Restoration Project mitigates environmental risk for the SNPLMA Round 10 project as directed by law and in coordination with local agencies. The estimated environmental risks from unintended consequences for the proposed project are very limited to negligible due to project design features.

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

The monitoring to be implemented in this proposal addresses short term implementation and effectiveness. Long term effectiveness monitoring (>3 years post project) for all LTBMU projects and programs will be addressed through either 1) the Forest Above-Project Level Monitoring Program funded through the USFS SNPLMA NEPA Resources Surveys Project, 2) LTBMU base appropriated funds for Forest Plan Monitoring, or 3) TSC-coordinated research projects.

1) The questions the monitoring program is designed to answer

From the 5-Year LTBMU Monitoring Plan:

- Above-Project Level: #1 Regional BMPEP Implementation and Effectiveness Monitoring – Determine degree soil and water quality protection BMPs are implemented as designed and are effective in protecting water quality throughout the LTBMU.
- Project-Level: Forest Health and Wildlife Monitoring – #4 What is the biological response to aspen restoration treatments using different vegetation management practices?

- 2) **Describe the methods and strategies (i.e. monitoring, research, or both) that will be used to verify whether the project goals and objectives have been met? (Note, a detailed monitoring plan and/or research plan is not required, however, enough detail must be provided to allow someone that is unfamiliar with the project to understand and evaluate the proposed methods and strategies)**
 - A project-specific monitoring plan will be developed during NEPA. Monitoring parameters will likely include photo points, COR inspections, BMP implementation and effectiveness evaluations, and wildlife monitoring. Wildlife monitoring will likely occur at proposed treatment sites (pre-implementation data) and at sites treated 3 or more years ago. The monitoring analysis and reporting would use existing data (pre-and post-implementation) from previous rounds of Aspen Community Restoration and be designed to answer the questions identified above.
- 3) **Describe whether the monitoring or research associated with this project fits into or is part of a larger monitoring or research program**
 - This project monitoring is part of the Project-Level LTBMU 5-Year Plan, which outlines the strategy for monitoring projects within the various LTBMU program areas. The LTBMU project-level monitoring strategy is to determine the success of LTBMU projects in meeting design features, project specifications, design measures (implementation monitoring), and, when possible, whether projects were effective in achieving short term environmental goals.
- 4) **Describe how information from the monitoring and/or research will be used to improve the continued performance of the proposed project or future similar projects**
 - Project-level monitoring results will be used in the short term to determine whether maintenance or corrective actions are needed to meet design goals and specifications. Project-level monitoring results will be periodically assessed in a comprehensive evaluation of results to evaluate overall success of design approaches with the Biological Sciences program.

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

This proposal will remain posted on LTBMU's "SNPLMA website" and interested parties will use the project contact information supplied herein to communicate directly with the LTBMU contact. Significant interim accomplishments may be reported out as they occur, by posting to LTBMU's website. Discussion of project particulars may periodically occur during meetings of TSACC (Tahoe Science Agency Coordinating Committee), as well.

Monitoring activities and results will be summarized in the LTBMU Forest Monitoring Program Annual Report. Project and program specific monitoring reports will be produced within one to five years after project implementation, depending on the variables being monitored and the questions to be answered. In addition, the LTBMU will periodically produce a Comprehensive Five Year Evaluation Report as part of the Forest Plan Monitoring Requirement. All monitoring reports will be posted on the

LTBMU external website. The audiences (public, agencies, and research community) will be informed through appropriate email lists, and public and interagency meetings.

If applicable, include an 8 ½ X 11 map depicting the project.

Figure 1. Aspen Community Restoration Project Map. The project includes aspen stands (indicated as green dots) on Forest Service lands (shown as the shaded green area) within the Lake Tahoe Basin. Aspen stand conditions not indicated on map due to scale.

