

Appendix B-8

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

Project Name: Angora Fire Long Term Restoration: Aspen Planting Agency: USFS LTBMU
 Prepared by: Raul Sanchez Phone: 530.543.2679 EIP #: 985.01
 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.) \$ 2,500 5 %

2. FWS Consultation—Endangered Species Act \$ 0 0 %

3. Direct Labor (Payroll) to Perform the Project \$ 10,000 20 %

4. Project Equipment (tools, software, specialized equipment, etc.) \$ 2,500 5 %

5. Travel (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.) \$ 1,000 2 %

6. Official Vehicle Use (pro rata cost for use of Official Vehicles when required to carry out project) \$ 500 1 %

7. Cost of Contracts, Grants and/or Agreements to Perform the Project \$ 27,500 55 %

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) \$ 0 0 %

9. Other Necessary Expenses (See Appendix B-11) \$ 6,000 12 %

TOTAL: \$ 50,000 100 %

Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Aspen Seed Collection & Nursery Propagation Begin	August 15, 2011
Aspen Plantings Begin	August 15, 2012
Complete Aspen Plantings	September 30, 2014
Complete Analysis & Final Report	March 31, 2015
Final Project Completion Date (including project close-out)	December 31, 2015

Comments: None

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

Project Name: Angora Fire Long Term Restoration Project: Aspen Planting

Federal Agency Sponsor: USFS LTBMU

Contact: Raul Sanchez

Threshold: V-1, W-2, and SC-2

Phone Number: 530.543.2679

Threshold Standards:

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

Email Address: rsanchez@fs.fed.us

Funding Requested in this Round: \$50,000

Total Project Cost: \$50,000 (Round 10 only)

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? **YES**

➤ If so, is the federal land involved important to successful implementation of the project?

This project would occur on federal lands managed by the USFS Lake Tahoe Basin Management Unit. These federal lands are key components of the project.

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

The EIP does not identify federal funding for the Angora Fire. However, the EIP identifies Aspen Restoration, which would be accomplished by this project, under EIP# 10080.

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

This project would restore or create 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? **YES**

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.)? **YES**

This project provides technical assistance to capital projects in the EIP engaging in similar activities (e.g. technical assistance to the Aspen Community Restoration project in planting aspen at sites where they have been eliminated from the landscape).

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

- Watershed and Habitat Improvement
- Forest Health

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.

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):

The LTBMU strategy for post-fire rehabilitation of the 2007 Angora Fire includes three phases. The first and second phases (completed) involved fire suppression and Burned Area Emergency Rehabilitation (BAER), respectively. The third phase will provide additional rehabilitation involving a longer-term strategy and includes watershed and vegetation restoration practices. The LTBMU is currently in the NEPA planning process where a number of phase III post-fire restoration activities will be authorized for implementation. Aspen planting has been identified as a key long term restoration activity within the Angora Fire area.

The project would be designed to maintain or restore riparian hardwood and understory vegetation in burned areas along riparian corridors and meadow edges, and reduce conifer encroachment. Aspen planting would increase the quantity and distribution of aspen stands within the burned area and maintain or create wildlife habitat for the diverse range of species that utilize aspen for nesting, cover, or foraging. The LTBMU proposes to plant aspen seedlings and/or root stems along riparian corridor(s) and along meadow edge(s) within approximately eleven ¼-acre plots to establish new aspen stands in the burned area. This Round 10 proposal would provide funding for the proposed aspen planting activities.

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).

This project is part of the multi-round Angora Fire Long Term Restoration project. However, this specific project proposal is only for Round 10 specifically for this aspen planting project.

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).

Aspen tree planting will occur along riparian corridors that burned at high intensity to restore previously existing aspen stands. Aspen planting will also occur along riparian corridors and adjacent to meadow edges that burned at low to moderate intensity areas to create aspen stands where local site conditions (e.g. groundwater availability and soil type) are appropriate. Approximately eleven ¼-acre plots along riparian corridors and adjacent to meadow edges within the 2007 Angora Fire area will be planted with aspen.

Aspen planting will occur at three sites (identified as first priority sites) previously determined to provide optimal conditions for aspen and at approximately eight sites (identified as second priority sites) that would likely support self-sustaining aspen stands, but require further verification of site conditions before planting (Figure 1). Four aspen planting methods were evaluated this past year in coordination with UC Berkeley to determine the ecological and/or economic feasibility to colonize new stands in the 2007 Angora Fire area. One or more (or a combination of) the following four planting methods will be used at each site:

- a) Directly plant seeds into the soil.

A large number of seeds must be planted because only a fraction of them will germinate and become successfully established.

- b) Plant aspen established from seeds germinated and grown in a nursery.

Seeds will be collected from female aspen tree(s) at sites with similar environmental conditions as the planting site. Due to the short period in which viable seeds may be collected and the number of seeds required, seeds may be planted in the year they were collected or stored and planted the following year.

- c) Plant aspen root cuttings taken from the forest

Aspen root cuttings will be collected in the fall and planted in the spring. They require a temperature-controlled environment and labor-intensive care during dormancy to develop into viable plantings. Volunteers may be used to assist in the work.

- d) Plant aspen root cuttings taken from nursery “mother boards.”

This process is similar to that for root cuttings taken from the forest except that nursery-grown aspen trees (and their “mother board” root systems) provide the root cuttings.

It may take six months to two years to establish aspen in the planting sites, depending on the method(s) utilized. The LTBMU intends to test each planting method to determine the viability and advantages of each.

How this project links to previous and future projects: On the afternoon of June 24, 2007, the human-caused Angora Fire began on National Forest System (NFS) land managed by the Lake Tahoe Basin Management Unit (LTBMU). The Angora Fire burned over 3,100 acres all within the Wildland Urban Intermix (WUI) Defense Zone and destroyed or damaged more than 250 structures on the South Shore of Lake Tahoe.

The LTBMU strategy for post-fire rehabilitation includes three phases. The first phase was fire suppression rehabilitation that occurred during the “mop-up” of the fire and was completed in November 2007. This was a series of immediate post-fire actions to rehabilitate hand and dozer fire lines, roads, safety zones, and portions of urban lots used during fire suppression efforts.

The second phase of rehabilitation of the area took place under the Burned Area Emergency Rehabilitation (BAER) process where erosion control measures were implemented in preparation for the initial storm events of the fall and winter. The BAER work also included noxious weed detection surveys of disturbed areas and subsequent weed abatement, seeding urban lots for erosion control, hand mulching, installing and armoring water bars, culvert maintenance, installing fencing and aerial hydromulching.

The third phase of rehabilitation is longer-term and includes two stages. The first stage addresses public safety within the burned area. This includes the removal of hazard trees on urban lots (completed in October 2007) and along system roads and trails. In March of 2008 the forest supervisor signed a Decision Memo for the Angora Hazard Tree Removal

Project authorizing hazard tree removal and mitigation along 256 acres of roads and trails. After awarding a contract, this work is scheduled to begin in November 2008 and last for a year to complete.

The second stage of the long term restoration project included a long term restoration package in which an interdisciplinary team of resource specialists addressed a comprehensive approach to restoring the burned landscape to meet desired social and ecological conditions into the future. From May through June 2008, the Forest Service invited initial input on restoration opportunities. Approximately 60 people attended a public open house and an additional 20 people submitted written comments or called with verbal input. Aspen was a desirable species recommended by the public to plant in the burned area.

Based on the direction found within LTBMU Forest Plan (as amended) and public input received, the Angora Restoration Long Term Project developed the following proposal for restoration: 1. WUI fuels treatment, 2. Reforestation, 3. Aquatic Habitat and Water Quality Restoration, 4. Road and Trail Restoration, and 5. Aspen and Meadow Restoration. Aspen planting is part of the Angora Fire Long Term Restoration Project which will have multi-sub-projects requesting funding in Rounds 10 and 11. This project is only requesting funding from Round 10. The other Round 10 project is the “Angora Fire – Stream Restoration” project.

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

The goal of this project is to maintain or restore riparian hardwoods and understory vegetation in burned areas along riparian corridors and meadow edges, and reduce conifer encroachment. The objectives of aspen plantings are to increase the quantity and distribution of aspen stands within the burned and maintain or create wildlife habitat for the diverse range of species that utilize aspen for nesting, cover, or foraging.

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

The anticipated accomplishment is to successfully establish approximately 11 new aspen stand(s) in the 2007 Angora Fire area.

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

This project is currently being prepared for the NEPA planning process beginning in January of 2009 with an anticipated decision to be made in late fall of 2009 and/or completed in 2010 as part of the Angora Long Term Restoration project.

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):

A UC Davis graduate student is currently studying the feasibility of planting aspen collected from the burned area and replanting aspen into another site location in the

burned areas using one planting method on California Tahoe Conservancy land. Aspen plots chosen for the replanting site were located in one of the high fire intensity burned areas in a reestablished stand. These aspen shoots are being planted in the fall of 2008 before dormancy in the new site(s). This information will aid us in understanding alternative aspen planting methods in the Angora Fire Burned Area, and it will help us refine our methods of planting in the Angora fire area.

The Lake Tahoe Basin Management Unit has also submitted a SNPLMA Round 10 proposal, the Aspen Community Restoration project in coordination with the University of Nevada, Reno. Implementation of the Aspen Community Restoration Project is synergistic: each will inform the other. The Aspen Community Restoration Project will inform this Angora Fire Aspen Planting Project on the potential to thin conifer encroached aspen stands as a viable method of restoring stands in the Lake Tahoe Basin. Conversely, this Angora Fire Aspen Planting Project will inform the Aspen Community Restoration Project on the viability of using planting to help restore aspen stands.

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

Not planting aspen will increase the probability of conifer encroachment into SEZs / riparian corridors, making it undesirable for riparian associated species to flourish.

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:

- a. 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.
- b. 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. A project-specific monitoring plan will be developed during NEPA. Monitoring parameters would likely include photo points, COR inspections, BMP implementation and effectiveness evaluations, and

wildlife monitoring. The monitoring program would use existing data (pre-and post-implementation) from previous SNPLMA Rounds 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

- a. 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

- a. 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.

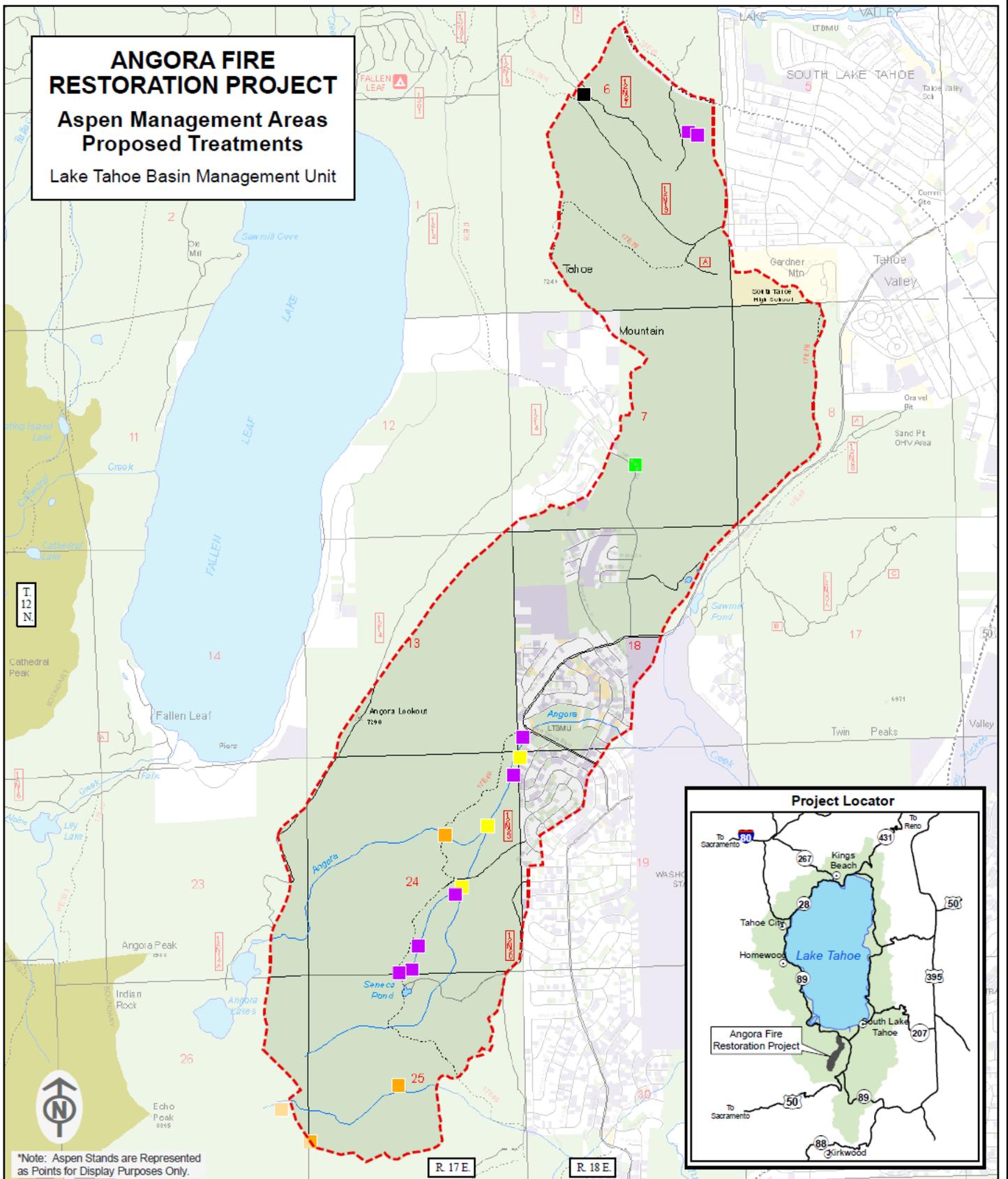
Monitoring activities and results will be summarized in the LTBMU Forest Monitoring Program Annual Report. Project and program specific monitoring reports will be produced within one to five years after project implementation, depending on the variables being monitored and the questions to be answered. 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.
(See next page)**

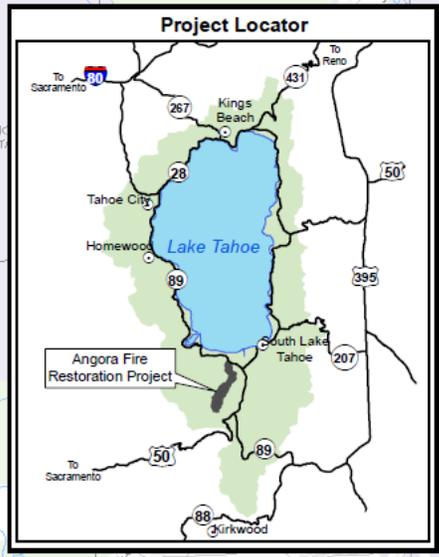
ANGORA FIRE RESTORATION PROJECT

Aspen Management Areas Proposed Treatments

Lake Tahoe Basin Management Unit



*Note: Aspen Stands are Represented as Points for Display Purposes Only.



- Aspen Management Areas - Proposed Treatments***
- Plant Aspen - Priority 1
 - Plant Aspen - Priority 2
 - Thin
 - Leave
 - South Shore Treatment

- Angora Fire Restoration Project Area
- Stream
- Waterbody

- Land Status**
- USFS - LTBMU
 - USFS Wilderness
 - State
 - County
 - Other Gov't Entity
 - Private

- Transportation System**
- Highway
 - Arterial Local
 - USFS System Road
 - Local Road
 - USFS System Trail



For more information, contact: Lake Tahoe Basin Management Unit
35 College Drive, South Lake Tahoe, CA 96150
(530) 543-2600 (530) 541-4036 TTY



Map by LTBMU GIS Staff 11/2008