

**ROUND 11 CAPITAL PROJECT NOMINATION FORM**  
**LAKE TAHOE FEDERAL SHARE EIP CAPITAL PROJECTS**  
**APPENDIX K**

<b>Project Name:</b>	Carnelian Hazardous Fuels Reduction & Healthy Forest Restoration	<b>EIP Number:</b> <i>(Required)</i>	10175
<b>Federal Agency Sponsor:</b> <i>(Required)</i>	USFS - LTBMU	<b>Contact:</b>	Scott Parsons
<b>Threshold:</b>	Vegetation	<b>Phone Number:</b>	(530) 543-2687
<b>Threshold Standard:</b>	Common Veg/Hazardous Fuels	<b>Email:</b>	sparsons@fs.fed.us
<b>FUNDING REQUESTED IN THIS ROUND:</b>		\$ 2,600,000	

**Federal Share EIP Consideration**

Select "yes" or "no" for each question. If you have a "yes" response, briefly describe. **Projects must meet one or more of these 5 items.**

- 1. Does the project involve federal land? Yes No**  
**If yes, is the federal land involved important to successful implementation of the project?**

This project is located solely on National Forest System lands within the Lake Tahoe Basin. This project can only be implemented on National Forest System land.

- 2. Is this project identified in the EIP? If yes, please ensure the EIP number is identified in the above project information box. If no, provide a description of the projects contribution to the EIP program. Yes No**

This project is listed in the EIP as number 10175.

- 3. Does the project involve the conservation of a federal or regional threatened, rare, endangered, or special interest species? Yes No**

Included in this project is the objective to protect or improve habitat for Forest Service Management Indicator Species (MIS) as well as sensitive species. Stands have been identified for reducing high fuel loads within California spotted owl and Northern goshawk Protected Activity Centers (PACs) - areas identified for nesting and foraging habitat. Using an active management approach for treating these PACs, small trees (less than 14" diameter at breast height) would be hand thinned and surface fuel loads treated to a level that would reduce predicted fire behavior so that treated stands would continue to provide optimal nesting and foraging habitat and likely survive a wildfire.

- 4. Does the project involve an identified federal interest such as the detection and eradication of non-native invasive species (aquatic or terrestrial)? Yes No**  
**If yes, identify the species?**

Field surveys were conducted to detect terrestrial invasive species. Based on these surveys, proposed hazardous fuels reduction treatments would be implemented to minimize the further spread of invasive species as well as project monitoring to ensure that if new locations are detected, control measures can be taken.

- 5. Does the project contribute to supporting implementation of capital projects in the EIP? Such projects that fulfill this function would include technical assistance, data management, and/or resource inventories? Yes No**

**Check all Capital Focus Area(s) that apply:**

- 1. **Watershed and Habitat Improvement**
- 2. **Forest Health**
- 3. **Air Quality and Transportation**
- 4. **Recreation and Scenic**

**Check 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 Fuels Reduction and Wildfire Prevention Strategy.**
- 2. **Continued implementation of projects approved in Rounds 5 through 10 which implement the EIP. Project proposal should clearly describe the phase/product being produced along with the consequence of not completing the project phase proposed for Round 10.**

***List Rounds and funding:***

SNPLMA White Pine Round 10 Hazardous Fuels Reduction and Wildfire Prevention Category for \$1,500,000 to accomplish 813 acres of treatment.
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- 3. **Project is consistent with and contributes toward TMDL pollutant reductions within the four source categories (atmospheric, urban & groundwater, forested uplands, and stream channel). *NOTE: If “yes”, then please respond to questions in the accomplishments section of the nomination proposal.***
- 4. **Control of aquatic invasive species and prevention and/or detection of new aquatic invasive species.**

## Project Nomination Proposal Outline

### **Project Summary (a brief summary which clearly describes the proposed project –maximum 200 words)**

- Summarize ONLY this Round 11 project.

Continue to implement hazardous fuel reduction and forest ecosystem health treatments on approximately 1,416 acres out of a total of approximately 3,400 acres of National Forest System lands on the north shore area of the Lake Tahoe Basin. Focus will be on the Wildland Urban Interface. Proposed treatments would be prepared for contract with agency crews and accomplished through the use of agency administered contracts, which may include the use of agreements with the Nevada Fire Safe Council and North Tahoe Fire Protection District. These treatments would reduce the level of hazardous fuels within the defense and threat zones and result in an improvement in the Fire Regime Condition Class within the landscape. This would be accomplished through the use of hand thin, pile, pile burn or biomass removal as well as mechanical thin and biomass removal contracts on both upland and riparian areas. This Round 11 proposal would provide funding for the second of three phases of implementation to complete fuel reduction treatments in the north shore area of Lake Tahoe. Included in project implementation is contract administration and project monitoring.

### **Project Description**

#### **Introduction**

- Provide project background which explains the situation and state the problem and how it will be addressed.

*Note: Focus needs to be the project in Round 11 not a history of an ongoing project or program.*

Effective fire suppression, repeated drought cycles, insect infestations, and tree diseases have combined to produce an area with dense brush understory, significant ladder fuels, over-stocked forest stands, expanding areas infected with dwarf mistletoe, extensive areas of down and standing dead trees and conifer-invaded aspen stands. These conditions and the lack of wild or prescribed fire can be characterized by a Fire Regime Condition Class (FRCC) of III, which represents a severe departure from historic fire return intervals and stand structure on over 50 percent of the landscape. Effects of this condition class can be seen in previous fires in the Lake Tahoe area have burned with devastating results, including the Angora and Washoe fires in 2007 that burned over 250 homes and 3,000 acres. Smaller human and lightning caused fires are also frequent in this area (Basin-wide occurrence of wildland fires from 1973 to 1996: 1,865 fires for 851 acres).

Carnelian Bay, Tahoe Vista, Kings Beach, Incline Village and Crystal Bay have been listed in the Federal Register as “Communities within the Vicinity of Federal Land That Are at Risk From Wildfire.”

Thinning and hazardous fuel reduction treatments in this project would cover the National Forest System lands on the north shore of Lake Tahoe from the Watson Lake area above Carnelian Bay to the California/Nevada Border above Agate Bay and focus on the Wildland Urban Interface (WUI). The treatments identified will improve the FRCC by moving from a severe departure to within historic mean (i.e., Class III towards Class II or I). The Carnelian project area was derived from priority areas as identified in the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy (Fuels Strategy). The Fuels Strategy is supported by the California and Nevada Tahoe Basin Fire Commission and their recommendations to the Governors of California and Nevada. Implementation would consist of either a stewardship or service contract package which would include whole tree removal utilizing ground based equipment such as mechanical harvesters and skidders or cut-to-length harvesters and log forwarders. Additional service work would also include hand thinning of smaller trees, piling and burning of ground fuels and mastication. Contract crews would be used to complete the projects. Hazardous fuel reduction treatments in this phase of the project would occur on approximately 1,416 acres.

- Describe what Round 11 is specifically funding; list the number of years the requested funding will cover; briefly describe how this project links into previous and future projects, and identify other round funding.

***NOTE:** Focus should be on finishing current/phased projects. If project is new in Round 11, clearly identify if the project is for planning or implementation and how it will be completed with Round 11 funds. Identify if Round 12 or other funds will be needed to complete the project. Please identify total non-SNPLMA funds that are being contributed/dedicated to the proposed Round 11 project and the source of those funds.*

This round of funding for this project would specifically cover hazardous fuels reduction treatments utilizing hand thinning, piling and pile burning or biomass removal on an estimated 306 acres. An additional estimated 1,110 acres of hazardous fuels reduction treatments utilizing mechanical equipment to thin trees remove material including biomass and masticate slash and brush. These treatments include additional forest health benefits in Stream Environment Zones, aspen stands, and both Spotted Owl and Northern Goshawk habitats.

The requested funding will cover six years to allow for the completion of hand and mechanical contract work, curing of slash piles for burning and the actual burning of slash piles.

This project links to SNPLMA Round 10 Carnelian Hazardous Fuels Reduction and Wildfire Prevention Project approved for \$1,500,000 which funds the first of three phases of project implementation. A third and final phase of project implementation will be proposed for funding for \$3,000,000 under SNPLMA Round 12 to accomplish approximately 1,171 acres of treatment and associated prescribed pile burning and underburning.

SNPLMA Lake Tahoe Rounds 7 and 8 (Fireshed Project) provided funding for the completion of the planning and NEPA for this project. The environmental analysis identified approximately 3,400 acres of National Forest System land for hazardous fuels reduction and forest health treatments.

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

The environmental analysis for this project is scheduled for completion in 2010. This project has been identified as a high priority project for the Lake Tahoe Basin Management Unit due to dense forest stands and high fuel loads within proposed treatment areas adjacent to urban core areas. The previous phase of this project could begin implementation late in 2010 while this phase (Round 11) of the project would begin in 2011.

- 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)

This project partners with the Tahoe Regional Planning Agency (TRPA), North Tahoe Fire Protection District, and the Lake Tahoe Basin Region of the Nevada Fire Safe Council and is consistent with the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy (Fuels Strategy).

*Note: The form requests information about project goals, objectives, accomplishments, and questions the program is designed to answer across several different sections. These issues are closely linked and your individual responses should provide a cohesive description.*

**Goal – Purpose and Need (“larger” statement of future expected outcome – usually not measurable)**

The goals of this project are to restore fire dependent healthy forest ecosystems, enhance fire suppression capabilities, and protect life and property.

**Objectives (specific measurable statements of action which when completed will move towards achieving the goal)**

*Note: Objectives will form the basis for the milestones/deliverables to be identified in Appendix B-8*

- Describe how fulfilling objectives will contribute to the achievement of one or more environmental thresholds (air quality, water quality, soil conservation, vegetation, fisheries, wildlife, scenic, noise, recreation). Provide measures if applicable. For example: acres treated, miles of stream restored for each objective.

The objectives are to reduce standing and down fuel loads and thin dense forest stands through approximately 1,416 acres of hand thin/pile and burn, mechanical thin, biomass remove and mastication contracts. Upon completion of these contracts, the vegetation condition will be improved through the creation of forest stand structure that has the fire resistance, species richness, abundance and pattern identified for the Common Vegetation Threshold. Forest stands will be treated so that older and larger trees are maintained so that the time required for these stands to develop into late seral/ old growth ecosystems will be accelerated for the Late Seral/Old Growth Ecosystems Threshold. Forest Stands within the wildland urban interface that support spotted owl and goshawk habitat will be treated to improve the forest structure (amount of down fuels and stand density) needed to sustain needed habitat over time for the Wildlife Threshold. Design criteria would be included when contracts are implemented to protect water quality and soil conservation. Project implementation would reduce the risk of water quality and soil degradation should the area be affected by a wildfire. Modeled fire behavior indicates that flame lengths and fire intensity are reduced after stand treatments similar to the ones proposed for this project as supported by the conclusions documented in “An Assessment of Fuel Treatment Effects on Fire Behavior, Suppression Effectiveness, and Structure Ignition on the Angora Fire”, August 2007. When completed the Fire Regime Condition Class would be improved from Class III. This project would help maintain the Water Quality and Soil Conservation Thresholds should a wildfire affect this area.

- Describe the estimated environmental risks from unintended consequences of the proposed project (if applicable).

There are no estimated risks from unintended consequences, however, the Carnelian Project Decision Notice identifies design features to reduce environmental risks from unintended consequences to levels determined to be acceptable through inter- and intra-agency review and public comments.

## Accomplishments

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

*Note: Differentiate between direct and/or primary project effects and secondary and/or overall watershed effects.*

Complete both hand and mechanical hazardous fuels reduction contracts within defense and threat zones to reduce fuel loads and improve forest health over approximately 1,416 acres of National Forest System lands.

The primary benefits of project implementation include the following:

- Reduction in stand densities and fuel loads to provide for defensible space adjacent to private property from wildfires;
- Reduction in stand densities to reduce stress from drought and competition for nutrients, which subjects them to widespread forest dieback from insects and diseases;
- Restoration of meadows and aspen stands through the removal of encroaching conifers in order to reduce the potential for catastrophic wildfire to spread through these areas, to promote maintenance of meadows and aspen stands consistent with the TRPA and Pacific Southwest Research Station “Aspen Community Mapping and Condition Assessment Report” (USDA FS, PSW-GTR-185), and to provide wildlife habitat for species that are dependent on meadows and/or aspen.

Secondary benefits anticipated to result from project implementation include:

- The composition, species richness, and function of forested areas and associated wildlife and plant communities will be improved;
- Forests will be in a condition that are fairly open and dominated primarily by larger, fire tolerant trees within the WUI defense zone;
- The risk of adverse effects from wildfire to soil productivity and water quality will be reduced;

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

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 you checked “yes” for the project being consistent with and contributes to TMDL pollutant reductions please consider and integrate the following in the project description:

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

This project proposes to use hand treatments and low impact innovative technology equipment within streamzone areas of the project to treat hazardous fuel loads that are above desired levels and where conifer encroachment is displacing native riparian species such as aspen, alder and willow. Low impact innovative technology equipment will minimize the disturbance to soil hydrologic functions.

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.

This project does not propose specific monitoring to contribute to the state of TMDL knowledge.

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).

This project would protect soils and stream environment zones (SEZ), which includes riparian and wetland areas, through incorporating best management practices as a contract requirement. Best management practices would include road maintenance and reconstruction to provide road surface stabilization, proper road drainage through installation of waterbars or rolling dips, maintenance or upgrading of drainage structures, ripping/subsoiling of temporary roads, limiting operating periods to dry soil conditions, protection of unstable lands, streamcourse and meadow protection, control of tractor skidding and log landing location, erosion prevention and control measures, and erosion control on skid trails. Where riparian vegetation within SEZs is being displaced by conifer encroachment, treatments would remove conifers using innovative technology vehicles and hand treatments to avoid or minimize the impact to soils and native vegetation. Conifer removal would enhance and restore native riparian vegetation (e.g., aspen restoration) to provide optimal water quality and enhance wildlife habitat. These measures would reduce the likelihood of fine sediments from entering waterways.

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

N/A

## Monitoring

- 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 ( $\leq 3$  yrs post project). Long term project effectiveness monitoring ( $>3$  yrs 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.

- List the questions the monitoring program is designed to answer.

Were soil and water quality protection BMPs implemented as planned/designed and are they effective at protecting soil and water quality? What are the effects of fuels reduction practices on soil and water quality?

- Describe any coordination with, or input from, the science community on monitoring and adaptive management that has occurred on the development of this nomination and what changes (if any) to the project were made as a result of this input.

Monitoring protocols were developed with input from USFS researchers. No input solicited or received for this project nomination.

- 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.*)

BMP monitoring will be conducted using Region 5 USFS BMPEP protocols, and a BMP implementation checklist. The BMPEP protocols walk the reviewer through a set of questions to evaluate whether BMPs were implemented as planned/designed and whether they were successful at protecting soil and water quality based on visual observations of erosion and sediment transport processes. The answers to these questions are then scored using a “rule set” imbedded within the database used to store the data, which rates the BMP evaluation as either successful or unsuccessful, for both implementation and effectiveness. The BMPEP data is input into a regional database to provide a statistically robust sample for each suite of BMPs across the region. The data provided is qualitative in nature, relying on visual observations rather than quantitative measurements. BMPEP monitoring is funded through USFS appropriated funds and not through this project.

The implementation checklist identifies all the BMPs identified in the NEPA document for the project, and evaluates whether the BMPs were implemented as described.

The soil quality monitoring program is conducted on a programmatic basis, i.e. not every unit or project is monitored. However units are selected for monitoring that represent either a unique management practice or soil characteristics, not previously monitored. Soil quality measurements include Ksat, bulk density, and soil cover. These data are then input into the WEPP model to estimate runoff and erosion response from the management practice on that unit (see previous analysis utilizing these protocols on the LTBMU website for the Ward and Heavenly SEZ projects). It has not been determined at this time whether specific units from this project will be selected for this more in depth soil quality monitoring.

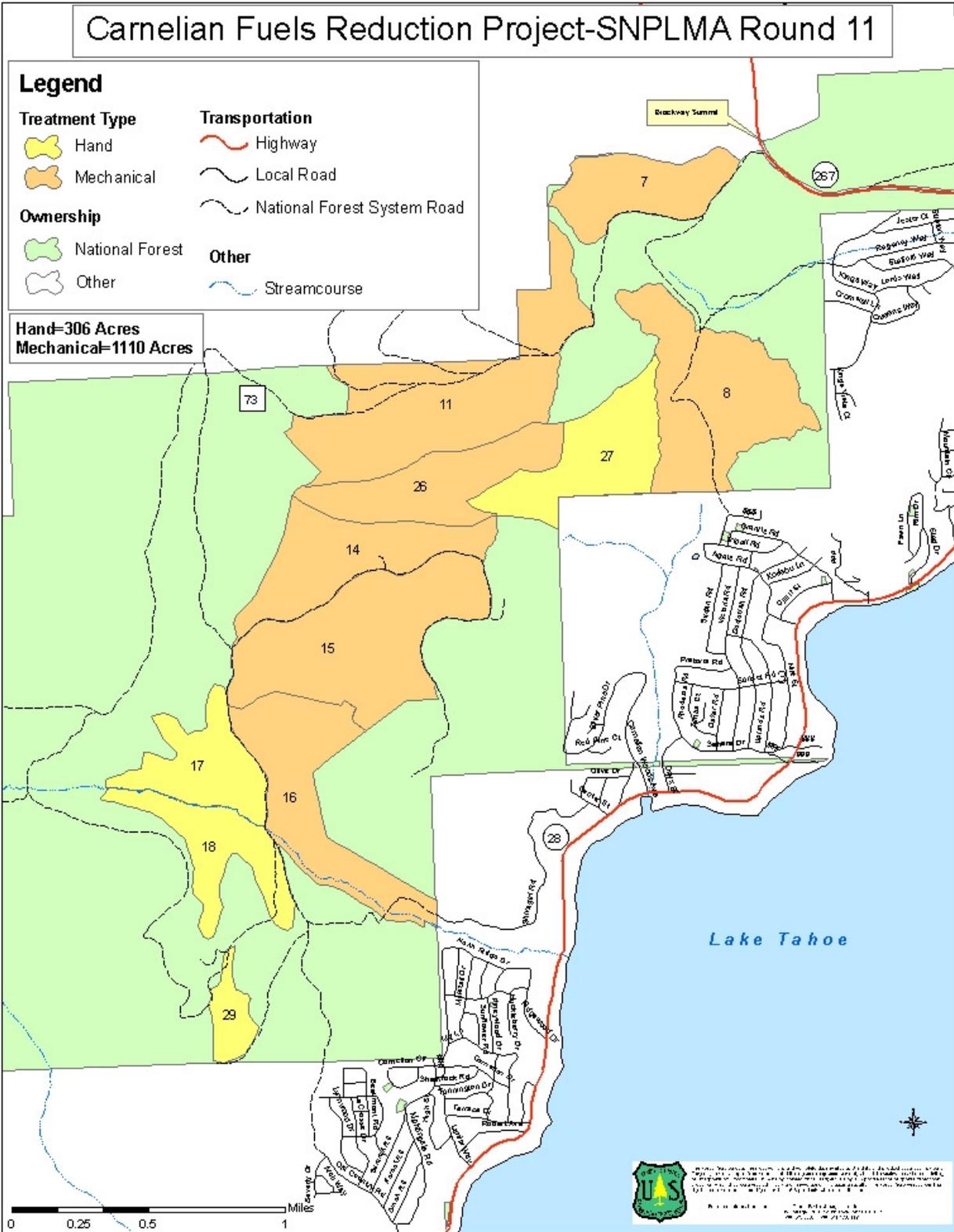
- Describe whether the monitoring or research associated with this project fits into or is part of a larger monitoring or research program.

The BMPEP is part of a Regional Monitoring Program within the Forest Service, and may be adopted nationally. All protocols are part of the large Soil and Water Quality Monitoring Program at the LTBMU.

- 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.

In the short term BMP information collected is used to fix or redesign individual project BMPs that are rated as unsuccessful. In the long term, BMP information is used at both the local and regional level to develop solutions to chronic problems identified in either implementation or effectiveness of BMPs. Information from the soil quality monitoring program will be used to validate whether and under what conditions different fuels reduction management practices can be utilized with the Tahoe Basin without causing adverse impacts to soil or water quality.

Figure 1, Project Area



## Appendix B-8

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

Project Name:	Carnelian Hazardous Fuel Reduction & Forest Health Project	Agency:	USDA Forest Service
Prepared by:	Scott Parsons	Phone:	530-543-2687
SNPLMA Project #:		EIP #:	10175

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

<b>1. Planning, Environmental Assessment and Research Costs</b> (specialist surveys, reports, monitoring, data collection, analysis, NEPA, etc.)	\$ 10,000	<1 %
<b>2. FWS Consultation – Endangered Species Act</b>	\$ 0	0 %
<b>3. Direct Labor (Payroll) to Perform the Project</b>	\$ 170,000	6 %
<b>4. Project Equipment</b> (tools, software, specialized equipment, etc.)	\$ 8,000	<1 %
<b>5. Travel</b> (including per diem where official travel status required to carry out project, such as serve as COR, experts to review reports, etc.)	\$ 6,000	<1 %
<b>6. Official Vehicle Use</b> (pro rata cost for use of Official Vehicles when required to carry out project)	\$ 16,000	<1 %
<b>7. Cost of Contracts, Grants and/or Agreements to Perform the Project</b>	\$ 2,060,000	79 %
<b>8. Other Direct and Contracted Labor:</b> 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)	\$ 20,000	1 %
<b>9. Other Necessary Expenses</b> (see Appendix B-9)	\$ 310,000	12 %
<b>TOTAL:</b>	\$ 2,600,000	100 %

#### Estimated Key Milestone Dates:

Milestones/Deliverables:	Date:
Prepare Field Work, Advertise and Award Contracts	12/1/2011
Complete Hand Contract Work Including Contract Administration and Inspections	11/1/2013
Complete Pile Burning Work	6/1/2016
Complete Mechanical Contract Work Including Contract Administration and Inspections	6/1/2016
Begin Project Close-out	7/1/2016
<b>Final Completion Date:</b> 12/31/2016	