



## Decision Memo

### Upper Echo Lakes Hazardous Fuels Reduction

USDA Forest Service

Lake Tahoe Basin Management Unit

El Dorado County, California

### Background

The Upper Echo Lakes Fuels Reduction Project is located along the shores of Upper Echo Lake in Eldorado County, California within the Lake Tahoe Basin Management Unit (LTBMU). The project area is defined as the Wildland Urban Interface (WUI), approximately ¼ mile surrounding the Upper Echo Lake recreation residence cabins. The project is located in patchy, high elevation mixed conifer stands, brush fields, and aspen interspersed with granite rock slabs and out crops. There are approximately 60 cabins and outbuildings within the project area. This project's intent is to implement the recommendations described in the 2007 Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy for the project area.

The need for this project is to treat areas within the WUI defense zone to:

- Reduce the potential for a catastrophic wildland fire in the area by reducing wildland fire intensity and potential for sustained crown fire and long-range spotting.
- Provide for defensible space adjacent to communities in the project area where fire suppression operations can be safely and effectively conducted in order to protect homes and communities from wildfires.

In meeting this need, the following purposes would be achieved:

- Stands in proposed treatment areas would: (1) be fairly open and dominated primarily by larger, fire tolerant trees; (2) have surface and ladder fuel conditions such that crown fire ignition is highly unlikely (under 90th percentile fire weather conditions after thinning); and, (3) have crown fuels open and discontinuous both horizontally and vertically, resulting in very low probability of a sustained crown fire (SNFPA ROD 2004, p. 40).
- In project treatment areas the landscape would shift from Fire Regime Condition Class 2 and 3, toward 1 and 2, improving the overall resiliency of the forest to large scale disturbances.
- In the Riparian Conservation Areas (RCAs), treatment outcomes would (1) ensure water quality meets the goals of the Clean Water Act and Safe Drinking Water Act, and (2) ensure that species composition and structural diversity of plant and animal communities in riparian areas provide desired habitat conditions and ecological functions (SNFPA

ROD 2004, pp. 42-43), and (3) enhance or maintain physical and biological characteristics associated with aquatic- and riparian-dependent species (Riparian Conservation Objective #4, SNFPA ROD 2004, p. 33)).

- In the roadless area, treatments would reduce the risk of catastrophic wildfire and maintain or restore ecosystem composition and structure through hand treatments (e.g. cut, pile and burn; SNFPA ROD 2004, p. 41).

## **Decision**

Based on the analysis that is documented in the Upper Echo Lakes Project Record, I have decided to implement the Upper Echo Lakes project as described in attachment 1 to this decision.

The key considerations I used in making my decision include:

- This project will help attain the recommendations outlined in the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy for the project area (2007; pp. 9, 13-15). Accumulations of hazardous fuels will be reduced through first entry and maintenance treatments within the WUI.
- The project meets the purpose and need (noted above) and addresses site-specific resource concerns by employing Resource Protection Measures (noted in attachment 1) and Best Management Practices (noted in attachment 2). This project will remove ladder fuels and break up tree crown continuity which will reduce the wildland fire intensity and potential for sustained crown fire within these treatment areas. The vegetation treatments, along with reducing dead and down fuels to approximately 10 to 15 tons per acre will help provide defensible space where fire suppression operations can be safely and effectively conducted and allow the managed reintroduction of fire into these treatment areas. This is expected to improve the overall Fire Regime Condition Class on all 100 treatment acres in the project.
  - Condition Class within the treated landscape will change from a Condition Class 2 or 3 toward Condition Class 1 or 2.
  - Fire Regime Condition Class is defined in terms of departure from the historic fire regime. Condition class is determined by the number of missed fire return intervals with respect to the historic fire return interval, for the stand structure and tree species composition of any given vegetation type. Departure from historical fire regimes results in alteration of key ecosystem components such as species composition, structural stage, stand age, and canopy closure. The relative risk of fire-caused losses of key ecosystem components increases as Condition class numbers increase, with little or no risk at the condition class 1 level, and high risk for loss of key ecosystem components at condition class 3.
- The Upper Echo Lakes Recreation Residence tract is located immediately adjacent to the Pyramid Inventoried Roadless Area. Many private residences are close enough to the

Roadless area that they could not be effectively defended during a catastrophic wildfire. The project includes a total of approximately 4 acres of hand thin/pile burn treatment in the WUI defense zone within the Pyramid Inventoried Roadless Area. All treatment within the WUI defense zone in the Roadless area are part of the treatment areas proposed in the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy. The treatments within the Roadless area will reduce the risk of catastrophic wildfire and maintain and provide for defensible space to the adjoining recreation residence community through hand treatments while not impairing the Roadless character.

- The project is consistent with the LTBMU Land and Resource Management Plan, as amended. The consistency check is documented in the project planning record.
- As noted in the public involvement section of this document, public review and comment periods were provided for this project. All comments we received, supported the project. The Proposed Action and Resource Protection Measures were updated to respond to some of the concerns that were brought up during scoping.
- The process agreed to between the Forest Service and the Upper Lakes Homeowners Association for resolution of the objection to the South Shore Fuel Reduction and Healthy Forest Restoration Project will be applied to this project. The agreement includes coordination with homeowners on tree removal around cabins, notification of intent to start and implementation beginning after Labor Day.<sup>1</sup>

My conclusion to implement the Upper Echo Lakes Project is based on information presented in this document, my familiarity with the project area and the entirety of the project file. I also based my conclusion on a review of the project record that shows a review of relevant scientific information as referenced in the project record and specialist reports.

This action is categorically excluded from documentation in an environmental impact statement or an environmental assessment. The authority for this decision is based on the Omnibus Appropriations Act 2009, Section 423. This authority, which is specific to the LTBMU, is applicable because treatment areas total 100 acres (less than the 5,000-acre limit). The project is also consistent with the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy, has no treatments in wilderness areas, and does not involve any new permanent roads.

### **Reasons for Categorically Excluding the Proposed Action**

This project's analysis process is based on legislation, signed on February 26, 2009, under the Omnibus Appropriations Act, 2009. Section 423 of this Act, Lake Tahoe Basin Hazardous Fuel Reduction Projects, which states:

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<sup>1</sup> A copy of the written agreement: RE- Resolution of Objection to South Shore Project, Echo Lakes Homeowners Association can be found in the project record.

- (a) Hereafter, subject to subsection (b), a proposal to authorize a hazardous fuel reduction project, not to exceed 5,000 acres, including no more than 1,500 acres of mechanical thinning, on the Lake Tahoe Basin Management Unit may be categorically excluded from documentation in an environmental impact statement or an environmental assessment under the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.) if the project:
- (1) is consistent with the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy published in December 2007 and any subsequent revisions to the Strategy;
  - (2) is not conducted in any wilderness areas; and,
  - (3) does not involve any new permanent roads.
- (b) A proposal that is categorically excluded under this section shall be subject to—
- (1) the extraordinary circumstances procedures established by the Forest Service pursuant to section 1508.4 of title 40, Code of Federal Regulations; and,
  - (2) an opportunity for public input.

The Upper Echo Lake Fuels Reduction Project meets all the criteria noted.

### **Extraordinary Circumstances**

I find that there are no extraordinary circumstances that warrant further analysis and documentation in an environmental assessment or environmental impact statement. I took into account resource conditions identified in agency procedures that should be considered in determining whether extraordinary circumstances might exist:

- 1. Federally listed threatened or endangered species or designated critical habitat, species proposed for Federal listing or proposed critical habitat, or Forest Service sensitive species.**

The potential effects of this proposed action on listed wildlife, fish, and plant species have been analyzed and documented in Biological Assessment (BA) and Biological Evaluations (BE)<sup>2</sup>. There is no critical habitat identified or proposed for federally-listed

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<sup>2</sup> Effects to aquatic and terrestrial species are discussed in the Aquatic and Terrestrial Species BA/BE found in the project record. Effects to sensitive plant species are discussed in the Botany BE found in the project record.

aquatic or terrestrial wildlife species on the LTBMU. Region 5 sensitive wildlife species are known to occur or have habitat within the project area. Most of these species habitats are associated with moderate to closed canopies, and larger diameter trees. There will be minor short-term, impacts expected to the habitat (e.g. denning habitat and noise); in most cases the treatment will have beneficial long-term impacts. These long term impacts include an increase in tree growth, size, and ultimately average diameter classes and less risk for stand replacing wildfire. In addition, several resource protection measures (resource protection measures 3-7) are incorporated into the project to minimize impacts. None of the expected minor impacts will constitute extraordinary circumstances for Forest Service sensitive wildlife species.

According to the project BE for plant species, there is no critical habitat for federally listed (threatened or endangered) plant species and no sensitive plant species were found. Therefore there will be no effect to threatened and endangered plant species or designated critical habitat. Implementation of this project will not constitute extraordinary circumstances.

## **2. Floodplains, wetlands, or municipal watersheds.**

Floodplains - Executive Order 11988's intent is to avoid adverse impacts associated with the occupancy and modification of floodplains. Floodplains are defined by this order as, ". . . the lowland and relatively flat areas adjoining inland and coastal waters include flood prone areas of offshore islands, including at a minimum, that area subject to a one percent [100-year recurrence] or greater chance of flooding in any one year." There are minor amounts of flood plain on the small streams within the project area. Resource protection measures (resource protection measures 8-16) and BMPs are incorporated into this pre-decisional memo. The effects from this project have been evaluated and will result in no impacts.

Wetlands - Executive Order 11990's intent is to avoid adverse impacts associated with destruction or modification of wetlands. Wetlands are defined by this order as, "areas inundated by surface or ground water with a frequency sufficient to support and under normal circumstances does or would support a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds." The project area does not have any mapped wetlands. This has been validated by map and site-review. However, a few small springs and seeps were noted within the treatment areas during field surveys. These can be defined as wetlands, but are too small to be noted on maps. To ensure that wetland-related impacts are minimized, project-specific resource protection measures and BMPs as noted above will be incorporated. These

include but are not limited to flagging and avoiding spring areas (resource protection measure 10) and exclusion buffers. The effects from this project have been evaluated and will result in no impacts.

**Municipal Watersheds:** There are no municipal watersheds located within the project area.

**3. Congressionally designated areas, such as wilderness, wilderness study areas, or national recreation areas.**

There are no congressionally designated areas such as wilderness, wilderness study areas or national recreation areas within the project area.

**4. Inventoried roadless areas or potential wilderness areas.**

No potential wilderness areas exist within the project area, per the LTBMU Land and Resource Management Plan, as amended.

A small, 4 acre portion of the Pyramid Inventoried Roadless Area (IRA) is within the southern portion of the project area. This IRA is displayed in the Forest Service Roadless Area Conservation, Final Environmental Impact Statement, Volume 2, dated November 2000.

No temporary roads and no new classified forest roads are proposed within the IRA. Based on the project design, location of treatments within the WUI, and use of existing infrastructure (trails and boats for access) the roadless character of the IRA will not be altered or impaired.

On October 2, 2009, the Secretary of Agriculture delegated authority to the Forest Service for the cutting, sale, or removal of generally small diameter timber when needed for several purposes including maintaining or restoring the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects within the range of variability that would be expected to occur under natural disturbance regimes of the current climatic period.

This project falls within the delegation of authority to the Forest Service and is consistent with the purpose above. The proposed project treatments will begin to restore the characteristics of ecosystem composition and structure, such as to reduce the risk of uncharacteristic wildfire effects within the WUI. As noted above, no road construction or reconstruction will take place within the Pyramid Roadless Area.

**5. Research natural areas.**

There are no research natural areas within the project area.

## **6. American Indians and Alaska Native religious or cultural sites.**

Surveys were conducted for Native American religious or cultural sites and prehistoric archaeological sites. These sites will not be affected as they are to be flagged and avoided as a project resource protection measure (resource protection measures 17, 18, 19). Alaskan sites do not apply to California.

## **7. Archaeological sites, or historic properties or areas.**

Surveys were conducted for archaeological sites and historic properties. No listed historic properties occur within the project area. As noted in the resource protection measures, eligible and unevaluated cultural resources will be avoided during all project activities (resource protection measure 17, 18, 19). Fire-sensitive sites with flammable artifacts or features will be treated through a variety of techniques to avoid adverse effects during any burning activities associated with the project (resource protection measure 18).

## **Public Involvement**

The Upper Echo Lakes project was designed based on the collaboration that occurred through the local Community Wildfire Protection Plans and Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy.

The LTBMU listed the proposed action on the Internet web page's Schedule of Proposed Actions (SOPA) beginning on January 1, 2011 and every quarter since. A scoping letter and project area map were mailed to 14 agencies, individuals and organizations on July 15, 2011 seeking public comments. In addition, a news release about the project was posted on the LTBMU website and was sent out to the local media on July 15, 2011. There were a total of seven written comments that were received in response to the mailing and press release.

The overall scoping response from the public was supportive of the project. In response to comments received, minor changes were made to the proposed action to clarify and further describe project activities, monitoring, and resource protection measures. These specifically include additional descriptions of the treatment prescriptions, when and where brush would be thinned, clarification of SEZ pile burning, including further coordination with cabin owners and the Pacific Crest Trail Association, and including conifer removal from an aspen stand located within the project boundary.

On July 27, 2012, pursuant to the March 19, 2012 order issued by the U.S. District Court of California in Case No. CV F11-679LJO DLB, a legal notice was published in the Tahoe Daily Tribune for a 30 day comment period on the Pre-Decisional Memo for the Implementation of the Upper Echo Lakes Hazardous Fuels Reduction Project.

One comment was received during the comment period from the Pacific Crest Trail Association (PCTA). The PCTA requested two additional Resource Protection Measures be added to the

project. First, that slash piles not be placed within view of the Pacific Crest Trail (PCT). The placement of slash piles near the PCT has already been addressed (see Resource Protection Measure #20). Additionally a large portion of the project area is visible from the PCT, including many of the cabins this fuels reduction project is designed around, making the proposed Resource Protection Measure unfeasible to implement. Second, that cut trees (rather than leave trees) be marked. This is a non-issue as the Forest Service will not be implementing a leave tree mark during the implementation of this project. All cut trees will be either marked (within 100 feet of a cabin) or will be designated by description (more than 100 feet from a cabin).

### **Findings Required by Other Laws**

National Forest Management Act - Forest Plan Consistency - This Act requires the development of long-range land and resource management plans (Plans). The Lake Tahoe Basin Management Unit Land and Resource Management Plan was approved in 1988 as required by this Act. It has been amended several times, including the Sierra Nevada Forest Plan Amendment (2004). The amended plan provides for guidance for all natural resource management activities. The Act requires all projects and activities are consistent with the Plan. The Plan has been reviewed in consideration of this project. The purpose and need and proposed action are responsive to guiding direction contained in the Plan. The proposed action is consistent with the standards and guidelines contained in the Plan.<sup>3</sup> As a part of Forest Plan Consistency, the Forest Management Indicator Species (MIS) list was reviewed to determine species applicable for this project. A MIS report was completed for this project, which analyzed effects to MIS species.<sup>4</sup> MIS species will not be significantly affected by this project.

Endangered Species Act – Threatened and endangered species and critical habitat are addressed under the extraordinary circumstances section of this document.

Clean Water Act - This Act is to restore and maintain the integrity of waters. The Forest Service complies with this Act and the TRPA Water Quality Management Plan for the Tahoe Basin by implementing Best Management Practices. The proposed action incorporates Best Management Practices and resource protection measures to ensure protection of soil and water resources (See Attachment 1).

Clean Air Act - Under this Act areas of the country were designated as Class I, II, or III air sheds for Prevention of Significant Deterioration purposes. This project is within and will affect a Class II airshed. Eldorado County Air Quality Management District regulates prescribed burning in the state in accordance with the State Implementation Plan (SIP). Prescribed burning in the proposed action will be coordinated with the County and follow the SIP to protect air resources; including, obtaining and following air quality permits.

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<sup>3</sup> Documentation on Plan consistency is on file in the project record located at the LTBMU Supervisor's Office.

<sup>4</sup> The Wildlife MIS Report is on file in the project record.

National Historic Preservation Act - Section 106 of the National Historic Preservation Act requires federal agencies to take into account the effect of a project on any district, site, building, structure, or object that is included in, or eligible for inclusion in the National Register. Section 106 of the National Historic Preservation Act (P.L. 89.665, as amended) also requires federal agencies to afford the State Historic Preservation Officer a reasonable opportunity to comment. As noted under the Decision section of this document, in the discussion of extraordinary circumstances, surveys were conducted for Native American religious or cultural sites, archaeological sites, and historic properties or areas that may be affected by the proposed action. This project falls within Stipulations III (D)(3) of the Programmatic Agreement (PA) for Compliance with Section 106 of the National Historic Preservation Act for Undertakings in the Pacific Southwest Region PA.

National Environmental Policy Act - This Act requires consideration of potential environmental effects. The entirety of documentation for this project (project planning record) supports compliance with this Act and is available for public review.

Wetlands (Executive Order 11990) – Wetlands are addressed under the extraordinary circumstances section of this document.

Floodplains (Executive Order 11988) – Floodplains are addressed under the extraordinary circumstances section of this document.

Noxious Weeds (Executive Order 13112) – Executive Order 13112's intent is to prevent the introduction of invasive species and provide for their control and to minimize the economic, ecological, and human health impacts that invasive species cause. A weed assessment was completed for the project<sup>5</sup> and resource protection measures were included in the proposed action to reduce the potential introduction and/or spread in invasive plant species within the project area.

### **Administrative Review (Appeal) Opportunities**

A comment period for the Pre-Decisional Memo was provided pursuant to the March 19, 2012 order issued by the U. S. District Court for the Eastern District of California in Case No. CV F11-679LJO DLB. Only those who provided comments during this comment period are eligible to appeal the decision pursuant to 36 CFR 215. Individuals and organizations wishing to appeal must meet the information requirements of 36 CFR 215.6.

Two comments were received, which are eligible for appeal according to 36 CFR 215 (see public comments section). The appeal period is 45 days from the date of the legal notice in the newspaper of record, the Tahoe Daily Tribune.

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<sup>5</sup> The Weed Risk Assessment is on file in the project record (Tab 9b)

## **How to File an Appeal**

This decision is subject to administrative review (appeal) pursuant to 36 CFR Part 215. Individuals or organizations who provided comments or otherwise expressed interest in the proposal by the close of the comment period are eligible to appeal the decision pursuant to 36 CFR part 215 regulations. The notice of appeal must meet the appeal content requirements at 36 CFR 215.14.

The appeal must be filed (regular mail, fax, email, hand-delivery, or express delivery) with the Appeal Deciding Officer at:

Randy Moore, Regional Forester  
USDA Forest Service  
Pacific Southwest Region  
1323 Club Drive  
Vallejo, CA 94592  
Email: [appeals-pacificsouthwest-regional-office@fs.fed.us](mailto:appeals-pacificsouthwest-regional-office@fs.fed.us)  
Phone: (707) 562-8737  
Fax: (707) 562-9091

The office business hours for those submitting hand-delivered appeals are: 7:30 AM to 4:00 PM Monday through Friday, excluding holidays. Electronic appeals must be submitted in a format such as an email message, plain text (.txt), rich text format (.rtf), or Word (.doc) to the email address listed above. In cases where no identifiable name is attached to an electronic message, a verification of identity will be required. A scanned signature is one way to provide verification.

Appeals, including attachments, must be filed within 45 days from the publication date of this notice in the Tahoe Daily Tribune, the newspaper of record. Attachments received after the 45 day appeal period will not be considered. The publication date in the Tahoe Daily Tribune, newspaper of record, is the exclusive means for calculating the time to file an appeal. Those wishing to appeal this decision should not rely upon dates or timeframe information provided by any other source.

## **Implementation Date**

It is anticipated the project will be completed in approximately 6 years due to the need for multiple hand treatment entries in the treatment units. Project implementation cannot begin until after the 45 day appeal period is over. In order to coordinate with the Echo Lakes HOA, it is anticipated that tree marking around cabins would begin in the fall of 2012, allowing for consultation and discussion the Echo Lakes HOA prior to implementation of thinning, which is anticipated to begin in late summer of 2013.

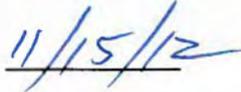
**Contact Person**

For additional information concerning the project, contact:

Brian Garrett  
Lake Tahoe Basin Management Unit  
35 College Drive  
South Lake Tahoe, CA 96150.  
Phone: (530) 543-2600.



NANCY J. GIBSON  
Forest Supervisor



Date

Attachment 1, Project Description

Attachment 2, BMPs

## **Attachment 1**

### **Upper Echo Lakes Project Decision Memo Upper Echo Lakes Hazardous Fuels Reduction Project Description**

#### **Proposed Action**

In response to the purpose and need and desired conditions, this project proposes fuel reduction treatment on up to 100 acres which are within the defense zone of established cabins and improvements at Upper Echo Lakes. This includes a treatment area directly adjacent to recreation residence cabins and improvements and extending to approximately 300 feet out. Where Aspen stands exist with moderate to heavy conifer encroachment, conifer removal and fuels reduction treatments would also occur. See attached project map for the entire treatment area.

Fuel reduction activities consist of thinning upper montane brush species and conifer trees up to approximately 16" in diameter, hand piling cut material and then burning the piles approximately 2-4 years later once fuels are dry and atmospheric conditions allow for prescribed burning. Where available, the larger sized thinned trees would be stacked for fuelwood use.

Post treatment (thinning and prescribed burning) conditions will range between 70-120 trees per acre, with an average of less than 10 tons per acre of surface fuels. Within Aspen stands, encroaching conifers will be removed. All thinning of vegetation will be accomplished by hand using chainsaws or other hand tools. USFS Best Management Practices (BMPs) will be applied for prescribed burning activities. In addition, piles will not be placed or burned within 50' of the shore line of Upper Echo Lake. Based on field surveys, placing piles within stream environment zones (SEZs) will be necessary in many areas. Where piling within SEZs occurs, the SEZ piling/burning specifications described under the Resource Protection Measures section will be implemented.

A portion of the project is within the Pyramid Roadless Area. The proposed treatments in the Roadless area (~4 acres) are within 300 feet of cabin structures and are therefore included in the project in order to meet the purpose and need as well as desired conditions in the defense zone. Because there is no road construction or reconstruction in this project and treatments include hand thinning and prescribed burning, it is not expected that the roadless character of the Pyramid Roadless Area would be affected nor would this constitute an extraordinary circumstance.

Thinning treatments adjacent to the Pacific Crest Trail will occur in order to meet the purpose and need and desired conditions. Impacts to the trail and users are minimized with the implementation of the Scenic and Recreation Resource Protection (RPM) Measures described below. Due to the presence of heavy surface and ladder fuels adjacent to the trail it is not feasible to prohibit thinning and piling of fuels nor would it be safe or effective during prescribed burning to prohibit treatments up to the trail edge. No piles will be placed on the trail and the goal of locating piles away from the trail will be implemented according to RPM # 20. Prior to

and during treatments, trail users will be notified of the timing and location of project activities including the posting of signs and notification to the Pacific Crest Trail Association.

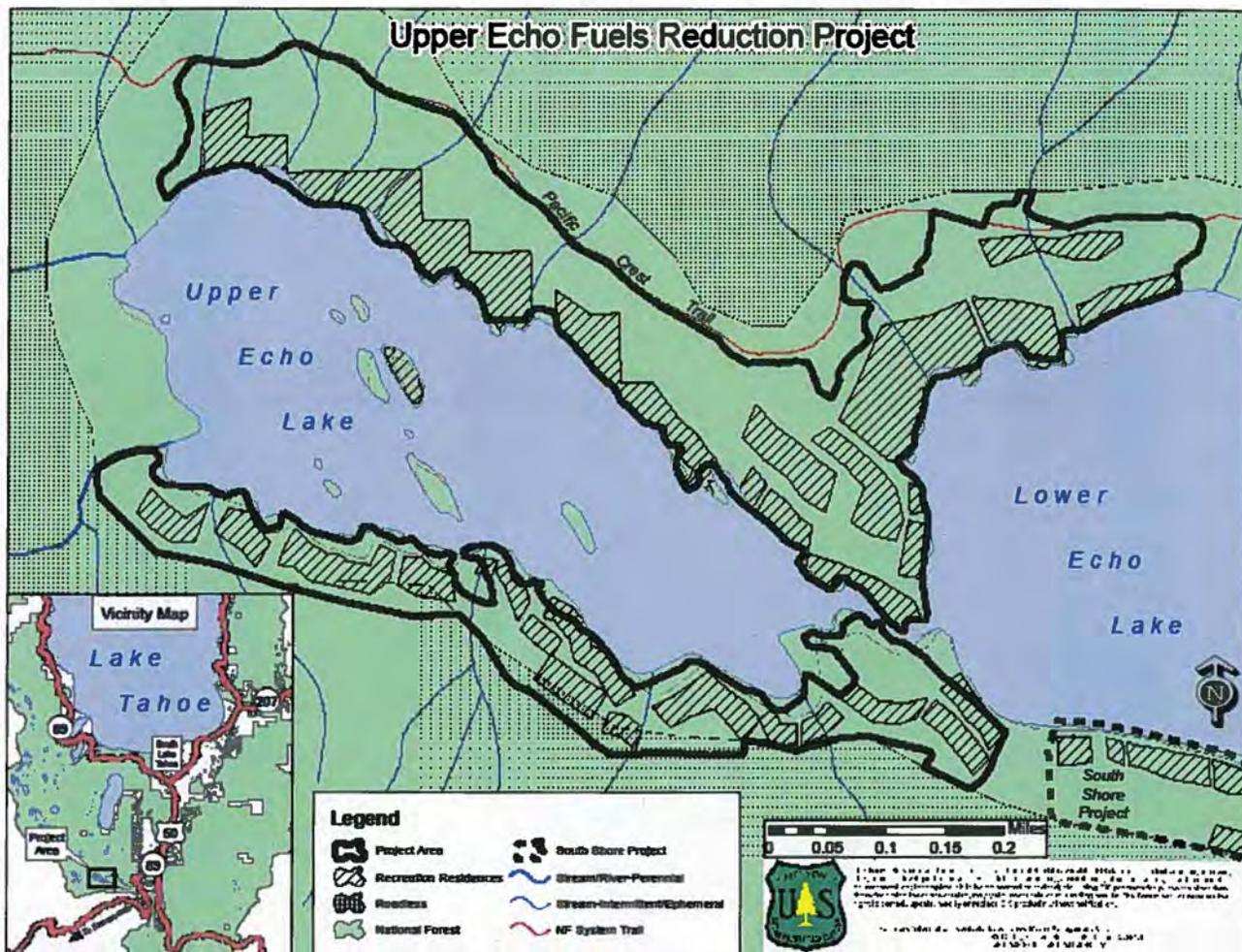


Figure 1

### Treatment Prescriptions

To address the purpose and need and public comments, the LTBMU developed three general treatment prescriptions for the units within the project area WUI. While laying out the project units for implementation purposes, there could be minor changes based upon more detailed field review and operational feasibility (e.g. topographical considerations of slope and rock outcrops).

1. Within all treatment units, if applicable:
  - Live trees larger than 16 inches DBH will be retained. Exception will be made for any trees identified as a safety concern (hazard trees).
  - All dead trees will be removed except snags retained to meet minimum habitat requirements as described in Resource Protection Measure #6. Snags will not be

located within 100 feet of a cabin, will not be located in high use areas and will not pose a potential hazard to cabins or infrastructure.

- Thinning from below will occur to remove ladder fuels and break up crown continuity with a target of retaining variable stand densities of less than 120 trees per acre (basal area of approximately 100 – 150 square feet per acre), removing primarily small (suppressed crown class) understory and intermediate crown class trees.
  - Trees designated for removal within 100 feet of a recreation residence will be marked by the Forest Service; trees to be removed beyond 100 feet of a recreation residence will be designated by description.
  - Hand pruning of branches on remaining trees, up to 8 feet, may be performed, as necessary to remove ladder fuels.
  - Limbs and tops of cut trees up to 4 inches in diameter will be piled for burning. Remaining treated material will be either bucked into moveable pieces and decked for fuelwood utilization or left intact as downed logs. Downed logs for habitat and soil protection will not be left within 100 feet of a cabin.
  - Existing dead and downed surface fuels will be bucked and piled for burning. To meet habitat and soil protection requirements as described in Resource Protection Measure #5, some downed logs may be retained provided that post treatment fuels conditions do not exceed 10 tons per acre.
  - Piled material for burning will be located and designed to minimize tree scorch and mortality of trees retained after treatment and to the extent possible be located away from recreation residences, associated infrastructure (water lines, etc...) and existing trails.
  - To the extent possible, piles to be burned will be placed outside of SEZ's. Some examples where this is not possible include areas with the highest amounts of surface and ladder fuels, and areas where piling locations are limited due to exclusion buffers and/or the proximity to cabins.
2. Within Aspen treatment areas:
- For aspen stands where lodgepole pine and other conifer species are encroaching, the prescribed treatment will include the removal of live conifers to increase the amount of hardwoods and other meadow vegetation that currently exists.
  - The general prescription includes removing all live conifers up to 16" DBH and removing all dead conifers up to 16" DBH. All dead and downed conifers will be removed up to 20" in diameter.
  - Piled material for burning within aspen stands will be located and designed to minimize tree scorch and damage to aspen roots, SEZ piling specifications as described in Resource Protection Measures 10 through 16) apply.
3. Within treatment units with an upper montane brush component:

- Where brush is present and there is a contiguous fuel bed such that fire could carry through the brush across the landscape, to adjoining structures or into the canopy of trees (ladder fuels), brush will be thinned.
- The general prescription includes removing all brush taller than 1 foot in height from within 15 feet of a leave tree and 30 feet of a recreation residence. In areas of contiguous brush cover generally larger than .5 acres (unless in close proximity to recreation residences) brush taller than 1 foot in height will be thinned in a mosaic pattern where clumps of brush will be retained, with a minimum distance of 2 times the average height of the brush between remaining brush clumps (e.g. 3 foot tall brush cover = 6 foot clearance between remaining brush clumps after thinning) and where at least 30-50% of existing brush cover is retained.
- Cut brush will be piled for burning.

### **Project Duration**

The anticipated timeframe to complete the project is 3-6 years, depending on funding and availability of burn days. Project implementation may begin with hand thinning trees and brush as early as the fall of 2012 based on completion of National Environmental Policy Act (NEPA) analysis, decision and biological surveys. Once initial thinning and surface fuel treatments are complete, prescribed burning would occur. The implementation of prescribed burning generally occurs 2-4 years after thinning.

### **Resource Protection Measures**

The following resource protection measures are included as part of this project to minimize environmental impacts and ensure Forest Plan consistency:

#### **Noxious Weeds, Forest Service Sensitive and Special Interest Plant Species**

No noxious weeds or Forest Service sensitive or special interest plant species were found to exist within the project area.

1. Discovery of new populations of noxious weeds or Forest Service sensitive or special interest plant species found before or during project implementation will require flagging and avoiding. The Forest Botanist will be notified of the discovery and will develop any additional resource protection measures needed to protect sensitive or special interest plants and prevent spread of noxious weeds.
2. Thinning and burning crews will insure that all equipment used on the project is weed free and that crews are weed free when working in the project area. This includes cleaning of chainsaws, brushing off clothing, chaps and boots, and cleaning of other tools or equipment that could contain noxious weed seed prior to entering the project area.

### **Special Status Wildlife and Fisheries**

Current surveys have not detected special status wildlife or fisheries within the project analysis area. Portions of the analysis area contain potential habitat for California Spotted Owl, Northern Goshawk, Bald Eagle and American Marten. However, no dens or nesting sites have been found in the project area. Resource protection measures are included to provide for protection in the event of detection between the time the project decision is made and the time the project is implemented.

3. During project implementation, any detections of threatened, endangered, sensitive or special interest animal species, or nests or dens of these species, should be reported to the Forest Wildlife Biologist. Known nests or dens would be protected in accordance with the Forest Plan and Tahoe Regional Planning Agency (TRPA) Environmental Threshold Carrying Capacities (ETCCs) for the Lake Tahoe Region.
4. The applicable Limited Operating Period (LOP) would be implemented if den or nesting sites are detected in this area prior to or during project implementation.
5. Retain approximately 10 tons of coarse woody debris (CWD) per acre larger than 20 inches in diameter (at the large end) and of variable decay classes. These conditions would be met where possible, otherwise as closely as possible, provided that fuel reduction objectives are not compromised.
6. A minimum of three of the largest snags per acre would be maintained across the project area. Snags would be clumped and distributed irregularly across the project area vs. maintaining individual snags scattered throughout each acre. Snags that present a hazard to summer cabins or high use areas will not be retained to meet this resource protection measure.
7. Implementation of the measures described under Hydrology/Water Quality/Soils (below) would protect fish, waterfowl, and aquatic wildlife habitat. These measures are designed to reduce disturbance and sediment deposition in riparian zones while protecting riparian resources including wildlife habitat.

### **Hydrology/Water Quality/Soils**

Watershed resources and water quality will be maintained and protected during Project activities through the employment of project-specific resource protection measures and best management practices (BMPs) described in the USFS *Water Quality Management Handbook (R5 FSH 2509.22 Chapter 10) (2011)*. Proposed activities shall adhere to riparian conservation objectives (RCOs) for management of Riparian Conservation Areas (RCAs) and management activities within Stream Environment Zones (SEZs).

The RCA designation is used for regional planning. RCAs are a SNFPA defined buffer for streams, special aquatic features and other hydrological depressions (USFS 2004). The buffer

width is dependent on the stream or feature type (perennial, intermittent, ephemeral) rather than soils or vegetation present in the area. Activities within RCAs will be consistent with RCOs as described in the SNFPA 2004 ROD.

The SEZ designation is used by the LTBMU and TRPA to define biological communities that owe their characteristics to the presence of surface water or a seasonally high groundwater table. The criteria for defining SEZs include indicators of vegetation, hydrology, and/or soil type (TRPA 1988). Treatment activities may be limited within SEZs.

8. SEZ boundaries will be flagged during treatment unit layout and marking; a watershed specialist will be consulted if there is a question about SEZ boundary location.
9. Trees will be felled away from perennial and intermittent stream channels.

#### Hand piling and burning in SEZs

Resource Protection Measures for pile burning in SEZ's may be modified based upon ongoing relevant monitoring and research studies specific to SEZ pile burning. The intent of this is to provide the most up to date and current standards for meeting resource protection objectives. Below are the current RPMs for pile burning, reflecting information from previous monitoring efforts and professional field survey.

10. Maintain a 50 ft. buffer (no piling or burning) along perennial or intermittent streams and Echo Lakes. Slash would not be piled in springs and seeps, flag and avoid these areas.
11. Permit piling and burning up to 10 feet from the edge of ephemeral channels.
12. Allow fire to creep between piles and into these buffers, maintaining a burn intensity that will protect soil and water resources. Do not allow fire in flagged areas with sensitive plant occurrences and noxious weeds.
13. Where feasible, place piles in a non-linear pattern within each unit, maximizing the distance between piles such that average pile spacing is 10 feet.
14. No more than 15 percent of any SEZ acre may be piled in a given year, with an average pile diameter of 10 feet.
15. After initial ignition of piles, but while still burning, allow each pile to be re-piled once (i.e., place unburned pieces back into the burning pile). Additional re-piling will be allowed if necessary to achieve 80 percent consumption of the piled material.
16. Hot piling of burn piles will not be utilized within SEZs. (i.e., don't feed one pile with the material from other piles or ground material).

#### **Heritage Resources**

17. Heritage sites within the project area will be flagged and avoided from any project related disturbing activities. In the event that any new sites are discovered during project implementation, the Forest Archaeologist would be notified and the procedures outlined in Section 800.13 of the Advisory Council on Historic Preservation's regulations 36CFR 800 would be implemented.

18. Sites that are flammable would also be avoided and protected during prescribed pile burning.

19. If any newly found pre-historic artifacts are located in the project area, any operations that could disturb the site(s) would cease and the LTBMU archaeologist would contact the Washoe Tribe of Nevada.

### **Scenic Resources, Recreation, and Improvements**

20. Where feasible, within the immediate foreground (up to 30 ft.) of highly visible areas (i.e. Pacific Crest Trail and recreation residences) remove slash and do not pile. Some examples where this is not feasible include areas with the highest amounts of surface and ladder fuels, limited openings for piling due to exclusion buffers or the proximity to cabins, and long carrying distances (> ~100 feet).

21. Identify cabin utility lines for gas and water prior to thinning to avoid piling slash on top of these lines. Coordination with cabin owners will be facilitated between the Forest Service and the Echo Lakes Association prior to project implementation. This will be done using the same process agreed upon by the Echo Lakes Association and the Forest Service during the completion of the South Shore Project.

22. Recreation Staff and/or the Forest Landscape Architect will be consulted during layout design, and prior to the conclusion of thinning activities near forest system trailheads, recreation residences, and the Pacific Crest Trail to ensure the retention Visual Quality Objective is met in the immediate foreground.

23. Stump heights will not exceed approximately six inches measured from the uphill side.

### **Agency Coordination**

This project qualifies under the Memorandum of Understanding between TRPA and Forest Service (2009) regarding Fuels Reduction and Forest Health Projects. TRPA's involvement will be guided by the conditions set forth in the TRPA-FS MOU.

CEQA applies to discretionary projects to be carried out or approved by public agencies. The Lahontan Regional Water Quality Control Board's (Water Board) process to grant a conditional waiver of waste discharge requirements on NFS lands is a discretionary act subject to CEQA. This project qualifies under Category 6 of the Conditional Waiver for Timber Harvest and Vegetation Management Activities. An application for Category 6 of the Timber Waiver will be submitted to the Lahontan Water Board as part of this project and conditions of the waiver will apply. It is expected that a Lahontan Basin Plan Prohibition Exemption will be needed for prescribed burning within SEZs.

Permits would be required from the El Dorado Air Quality Management District prior to prescribed burning.

## **Monitoring**

The following is a preliminary list of monitoring activities for this project.

1. Each year, the LTBMU completes evaluations for the Best Management Practices Evaluation Program (BMPEP), as part of the Pacific Southwest Region's effort to evaluate the implementation and effectiveness of BMPs used for protecting soil and water resources associated with timber, engineering, recreation, grazing, and revegetation activities. During the spring/summer, fuel treatment units that were treated the previous field season are evaluated for BMP implementation and effectiveness. The Project BMPs for prescribed burning would be included in the pool for random BMP evaluation (F25, Prescribed Burning) under the BMPEP program.
2. Implementation monitoring in fuels treatment areas would include completing a checklist of the BMPs and resource protection measures in the NEPA, permit, and contract documents. Implementation monitoring would also include ensuring that SEZ flagging remains in place during project activities.

**Attachment 2** to Upper Echo Lakes Decision Memo  
 Summary of Upper Echo Lakes Hazardous Fuels Project,  
 Best Management Practices (BMPs)

**Summarized from USFS Water Quality Management Handbook (R5 FSH 2509.22 Chapter 10) (2011).**

| <b>Best Management Practice</b>  | <b>Description</b>  |
|--|---|
| PSW Region<br>BMP 5-5:<br>Disposal of Organic Debris                                       | The project IDT will determine the methods of debris disposal and/or placement of debris after treatment. Methods of disposal include: prescribed burning, chipping, mastication, lop and scatter, and fuelwood.  |
| PSW Region<br>BMP 6-1: Fire and Fuel Management Activities                                 | To reduce public and private losses and environmental impacts that result from wildfires and/or subsequent flooding and erosion, measures including the use of prescribed fire or mechanical methods will be used to achieve defensive fuel profile zones, fuel reduction units, and fire suppression activities.   |
| PSW Region<br>BMP 6-2:<br>Consideration of Water Quality in Formulating Fire Prescriptions | To ensure water quality protection while achieving management objectives through the use of prescribed fires, prescription elements will include, but not be limited to, factors such as fire weather, slope, aspect, soil moisture, and fuel moisture. The prescription will include at the watershed and subwatershed level the optimum and maximum burn block size, aggregated burned area, acceptable disturbance for contiguous and aggregate length for the riparian/SMZ, and maximum expected area covered by water repellent soils. |
| PSW Region<br>BMP 6-3:<br>Protection of Water Quality from Prescribed Burning Effects      | Implementation of techniques to prevent water quality degradation, maintain soil productivity, and minimize erosion from prescribed burning. These techniques include: constructing water bars in fire lines, reducing fuel loading in drainage channels, and retaining or re-establishing ground cover as needed to keep erosion of the burned site within the limits of the burn plan.  |
| PSW Region<br>BMP 7-8:<br>Cumulative Off-Site Watershed Effects                            | Cumulative Watershed Effects (CWE) analyses are used to protect identified beneficial uses of water from the combined effects of multiple management activities.  |