



United States
Department of
Agriculture

Forest
Service

Lake Tahoe Basin Management
Unit

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File Code: 1950

Date: January 21, 2008

Dear Interested Participant:

The USDA Forest Service Lake Tahoe Basin Management Unit (LTBMU) is seeking comments on the attached proposal for the Lake Tahoe Ecosystem Underburn project. This letter will serve as the start of formal public scoping for the project. The project area extends into El Dorado, Placer, Carson City, Washoe and Douglas Counties of California and Nevada (see enclosed project area map).

Project Description:

The project encompasses approximately 3,200 acres of National Forest System land within the Lake Tahoe Basin. It includes forested stands previously treated by thinning and fuel reduction. Stands now require either an initial or follow-up prescribed burning treatment to meet desired fuel levels. Underburning is the application of surface fire below an overstory of trees, and is used to restore forest health and to mimic the historically common process of low-intensity fire. The treatment areas proposed in this project reside entirely within the wildland urban intermix (WUI), priority treatment areas recognized in the combined Community Wildfire Protection Plans (CWPPs) for the Lake Tahoe Basin (TRPA Plan, Holl 2007), and the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy (10-year plan).

Environmental Analysis:

Based on information gathered to date, I am moving towards NEPA analysis of the project as a categorical exclusion. A project may be categorically excluded from documentation in an environmental impact statement or environmental assessment if it is within a category listed in Section 31.2 of the Forest Service Handbook 1909.15 and there are no extraordinary circumstances related to the proposed action.

“Category 6- Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction” is the category that applies to this project. This category allows for prescribed burning for reducing natural fuel build-up and improving plant vigor.

Public Involvement:

Please provide any comments or concerns by February 20, 2007. Written comments may be submitted via mail, fax, or in person to Terri Marceron, at the Lake Tahoe Basin Management Unit Supervisors Office, 35 College Drive, South Lake Tahoe, CA 96150; FAX (530) 543-2693; or email comments-pacificsouthwest-ltbmu@fs.fed.us using Subject: Lake Tahoe Basin Underburning Project. Oral comments may be directed to project leader, John Washington at (530) 543-2652.

Sincerely,

TERRI MARCERON
Forest Supervisor

Enclosures: Proposal, Project Area Map



Proposal for the Lake Tahoe Ecosystem Underburn Project

USDA Forest Service Pacific Southwest Region
Lake Tahoe Basin Management Unit
El Dorado, Placer, Douglas, Washoe, and Carson City Counties, of California and Nevada

I. Project Area Description

The Lake Tahoe Ecosystem Underburn Project encompasses approximately 3200 acres of National Forest System lands throughout the Lake Tahoe Basin in forested stands that have been previously treated with thinning and fuel reduction, and require additional prescribed burning or did not receive underburning during the initial treatment. Underburning is the application of surface fire below an overstory of trees and is used to restore forest health and to mimic the historic process of low-intensity fire. The treatment areas proposed in this project reside entirely within the wildland urban intermix (WUI) and priority treatment areas recognized in the combined Community Wildfire Protection Plans (CWPPs) for the Lake Tahoe Basin (TRPA Plan, Holl 2007) and the Lake Tahoe Basin Multi-Jurisdictional Fuel Reduction and Wildfire Prevention Strategy (10 year plan).

II. Purpose and Need

There is a need for the following:

1. Re-introduce fire into a fire adapted ecosystem and;
2. Use prescribed underburning to reduce and maintain desired fuel loading conditions in the WUI

Prior to European settlement in the Lake Tahoe Basin, fires commonly occurred as a result of lightning and Native American burning practices. Fire is a component of forest health that can enhance tree and plant vigor and benefits wildlife through shaping vegetation, structure, composition, and landscape mosaics. In many instances, prescribed fire results in increased structural complexity and habitat heterogeneity (Pilliod et al. 2006). According to the Lake Tahoe Watershed Assessment (2000), prescribed burning is one of the most effective means of reducing surface fuels and is also critical in restoring fire as an important ecosystem process.

As directed by the Sierra Nevada Forest Plan Amendment Record of Decision (SNFPA) (2004) the desired fuel loading conditions for WUI under high fire weather conditions (90th percentile conditions) are for wildland fire behavior in treated areas to be characterized as follows: (1) flame lengths at the head of the fire are less than 4 feet; and (2) the rate of spread at the head of the fire is reduced to at least 50 percent of pre-treatment levels. WUI contains two primary sub-classifications, with the Defense Zone extending approximately ¼ mile from the capital improvements, and the Threat Zone extending approximately 1¼ miles beyond the Defense Zone.

Why Here:

Areas proposed for underburning are areas that reside within identified priority treatment areas recognized in Community Wildfire Protection Plans (CWPPs). These areas have accumulated sufficient fuel loads and ladder fuels that allow an unplanned ignition of fire to transition from a surface fire to a crown fire and for a fire to exceed SNFPA (2004) desired conditions for the WUI. A planned ignition as proposed with this project using prescribed underburning would allow surface fuel reduction to occur under favorable fuel moisture and weather conditions allowing for a safe treatment. According to First Order Fire Effects Modeling (v5.0, 2006) results shown in table 1, post underburning treatment conditions result in meeting desired condition for the WUI. Treating fuels through underburning would reduce flame lengths to approximately 2 feet, the rate of fire spread to approximately 7 chains per hour (1 chain equals 66 linear feet), the fire line intensity to approximately 27 btu/ft², and a transition to crown fire is not likely to occur. By limiting the crown fire potential, the potential spread of a wildfire to adjacent stands and certain wildlife habitat would be reduced significantly through the project.

Why Now:

The project is being proposed now to reduce and maintain the desired fuel loading following initial treatment and to re-introduce fire into a fire adapted ecosystem. As a result of previous vegetation thinning and fuel reduction treatments the stand conditions would allow prescribed underburning to take place with minimal risk of an escape occurring outside of control lines and a minimal risk for high fire severity to occur. A high severity fire has potential to jeopardize human life and property, destroy wildlife habitat, and increase erosion potential and sedimentation in watersheds that drain into Lake Tahoe. In addition, these areas have a historic fire return interval of 5-18 years as described in the Lake Tahoe Watershed Assessment (2000). A fire return interval of 5-18 years indicates that frequent low intensity fires are a common component of this ecosystem and introducing prescribed underburning now would help bring fire back into the ecosystem. As forest fuels accumulate with time, previously treated areas require maintenance using underburning to reduce surface and ladder fuel loading. These areas also require underburning because fire is an integral process and component of a healthy ecosystem.

Table 1. Fire Behavior Predictions using pre-treatment (current fuel loading) and post treatment (desired fuel loading) parameters (First Order Fire Effects (v5.0, 2006). Modeling for pre and post treatment scenarios was done under 90th percentile weather conditions.

Area 1 - El Dorado County		
Outputs	Pre-treatment	Post-treatment
Flame Length (ft)	7 ft	2 ft
Rate of Spread (chains per hour)	44 chains/hr	7 chains/hr
Fireline Intensity (btu/ft ²)	337 Btu/ft ²	27Btu/ft ²
Crown Fire Transition	Yes	No

Area 2, 3, and 4 - Placer, Carson City, Douglas and Washoe Counties		
Outputs	Pre-treatment	Post-treatment
Flame Length (ft)	10 ft	2 ft
Rate of Spread (chains per hour)	31 chains/hr	7 chains/hr
Fireline Intensity (btu/ft ²)	782 Btu/ft ²	27Btu/ft ²
Crown Fire Transition	Yes	No

III. Proposed Action

Who:

The USDA Forest Service, Lake Tahoe Basin Management Unit proposes the following:

What:

The project would reduce surface and ladder fuel accumulations and re-introduce fire into a fire adapted ecosystem on approximately 3200 acres of National Forest System lands. This would be accomplished by prescribed underburning 400-640 acres per year in stands that have been previously treated by hand and mechanical thinning, hand piling and pile burning. Underburning is the application of surface fire below an overstory of trees and is used to restore forest health and to mimic the historic process of low-intensity fire. The largest individual stand that would be underburned at any given time and location would be approximately 100 acres. Existing roads and trails would be utilized for control lines as available. Control lines are a comprehensive term for all constructed or natural fire barriers and treated edges used to control a fire. Control lines would be constructed with hand tools and no mechanized equipment would be used for this project except for chainsaws. All constructed control lines would be rehabilitated after project completion. Rehabilitation activities would include using hand crews and hand tools to rake in berms created from control lines, install water bars, and scatter downed wood where appropriate.

Where:

The proposed treatments would take place in five counties including El Dorado, Placer, Douglas, Washoe, and Carson City Counties (see attached maps). The acreage of proposed underburning in these areas are found in table 2 below. The total project acreage is approximately 3200 acres with the majority of underburning proposed in Placer and El Dorado Counties.

Table 2. General area locations and acreage of stands proposed for underburning

Area and County	Acres
Area 1 – El Dorado County	671
Area 2 - Placer County	1645
Area 3 - Carson City County	445
Area 4 - Douglas County	217
Area-5 Washoe County	215
Total	3193

The legal land locations for the project are the following:

- Area 1, El Dorado County: T 12N, R 18E, Sections 2, 10, 11, 14, 15, 21, 22, 28, 29, 33 and 36
- Area 2, Placer County: T 16N, R 16E, 17E, 18E, Sections 2, 14, 15, 16, 17, 19, 20, 21 and 23
- Area 3, Carson City County: T 15N, R 18E Sections 14, 26, 34, 35
- Area 4, Douglas County: T 14N, R18E, Sections 14, 36
- Area 5, Washoe County: T 16N, R18E, Sections 7, 8, 11, 14, 17, 18

When:

In order to meet state regulations for air quality and health and safety, project underburning would take place during permitted burn days, as required by California Air Resources Board, CARB and Nevada Division of Environmental Protection, NDEP. In addition, treating all five burn areas in this project could last between 5-8 years due to the number of burn days available and the amount of prescribed burning resources available.

Design Features

The following design features are elements of the project design that are applied in treatment areas. These features were developed to reduce or avoid environmental effects of the proposed action to forest resources.

Air Quality

- A burn plan would be prepared and reviewed by the Lake Tahoe Basin Management Unit Forest Fire Management Officer prior to implementation of any prescribed burning. This burn plan includes a Smoke Management Plan which is the basis for obtaining a burn

permit from the El Dorado, and Placer County Air Quality Boards, and the Nevada Division of Environmental Protection. In order to minimize the effects of prescribed burning on air quality; monitoring, mitigation and contingency measures would be identified in the Smoke Management Plan. Desirable meteorological conditions such as favorable mixing layer and transport wind speeds are required in the Smoke Management Plan to facilitate venting and dispersion of smoke from populated areas.

Soils/ Hydrology

- Direct fire ignition would not occur within stream environment zones (SEZs).
- Flame height would not exceed two feet within 50 feet of stream courses or on wetlands.
- Retardant foam would not be applied within SEZs.
- If drafting water from nearby water courses, use screening devices for water drafting pumps. Use pumps with low entry velocity to minimize removal of aquatic species, including juvenile fish, amphibian egg masses and tadpoles, from aquatic habitats. Locate water drafting sites to avoid adverse effects to in stream flows and depletion of pool habitat.
- Rehabilitate control lines using handcrews and handtools
- Install water bars as needed based on slope and connected length of control line. Water bar spacing would be determined on a site specific basis.

Wildlife

- Group 1
 - Implement Limited Operating Periods (LOPs) (see Appendix A.) based on the most current wildlife survey data. In order to determine activity, field surveys would be conducted prior to burning. An LOP may be waived at the discretion of the forest biologist.
 - Any sightings of threatened, endangered, sensitive, management indicator, or special interest species, or of nests or dens of these species would be reported to the Forest Biologist. These species would be protected in accordance with management direction for the Lake Tahoe Basin Management Unit.
- Group 2 – Within a California spotted owl PAC, northern goshawk PAC or California spotted owl HRCA
 - All features from Group 1 plus the following:
 - Maintain a mosaic of coarse woody debris (at least 10 dbh on the larger end) on average of 10 tons per acre within a HRCA and 15 tons per acre within a PAC, where possible, with emphasis on the larger size classes and decay classes 1, 2, and 3, within the constraints of acceptable fuel loads for WUI defense and threat zones (S&G 10).
 - In stands with overstory trees 11 inches dbh or greater, flame lengths should average 4 feet or less (S&G 76).
- Group 3 – Aspen Stands
 - Avoid prescribed fire ignition within aspen stands.
 - Fire may be allowed to creep into an aspen stand as long as average flame lengths are less than 2 feet and intensity is less than 20 btu/ft/s. If these conditions cannot be maintained within a stand then the stand would be flagged and avoided.

- Where feasible, units containing aspen stands should be burned in the spring or late fall when ambient temperatures are lower and aspen are more likely to be dormant.

Botany

- Flag and avoid project burning within known *Meesia triquetra* (meesia moss) areas. The area would be monitored during implementation to prohibit prescribed underburning from encroaching into the area.
- Flag and avoid underburning within known *Lepidium latifolium* (whitetop) infestations.
- Prior to implementation, survey for sensitive plants, communities and noxious weeds. If any new occurrences are identified, additional design features and mitigations will be created.
- Clean all vehicles coming from known weed infested areas before moving to other Forest Service system lands. Equipment will be considered clean when visual inspection does not reveal soil, seeds, plant material, or other such debris.
- Staging areas for equipment, materials, or crews would not be sited in identified weed infested areas.
- LTBMU Noxious Weed Coordinator would be notified prior to project implementation so known weed infestations that are within the project area or along travel routes near the project area will be hand treated by pulling or “flagged and avoided” according to the species present and project constraints.

Cultural Resources

- Flag and avoid identified cultural resource areas within the Area of Potential Effect.

Recreation

- Provide advanced notice to public to ensure that the public is aware of proposed burning. Post signs in project areas near public access points to highlight the proposed action, ecological and stewardship benefits, and impacts to public access.
- Initiate temporary forest closure only during management activity period to ensure public safety. Closure should be as limited as possible to reduce restrictions to public access.
- Mitigate any hazard trees near recreation areas that result from underburning management activities.

Visual Quality

- Protect trees desired for retention from scorching within 100 feet on either side of travel routes (100% protection is not feasible. 5-15% of trees within project area may receive scorch). Travel routes include residential roads.
- Design underburn to result in a mosaic of burn effects, with an average of 5% per acre of understory vegetation to remain unburned.

IV. Implementation

Project implementation is planned for the spring of 2008. It is expected that treating all five project areas could last between 5-8 years, with approximately 400-640 acres burned per year. This is due to the number of burn days available and the amount of prescribed burning resources available. Implementation of project underburning would not influence the priority or rate of pile burning occurring in other projects.

VI. Decision Framework

This project is being planned under Forest Service Handbook (FSH 1909.15) Chapter 31.2- Categories of Actions Excluded from documentation in an EA or EIS for which a Project File and Decision Memo are required. The category used would be Category 6 - Timber stand and/or wildlife habitat improvement activities which do not include the use of herbicides or do not require more than one mile of low standard road construction. This category allows for prescribed burning for reducing natural fuel build-up and improving plant vigor. The decision to be made by the Forest Supervisor is to implement the proposed action, meet the purpose and need for action through another combination of activities, or take no action at this time.

Appendix A:

Limited operating periods applicable to the Lake Tahoe Ecosystem Underburn Project.

REASON FOR RESTRICTIONS	LIMITED OPERATING PERIOD (LOP) AND IMPACTED ACTIVITY	ADJUSTMENTS ALLOWED
California Spotted Owl PAC	March 1 through August 15 (USDA 2006) - no vegetation treatments (e.g., timber thinning, prescribed fire, restoration projects, or road or trail building) within approximately ¼ mile of the activity center, unless surveys confirm that California spotted owls are not nesting.	SNFPA Standard and Guideline # 77 & # 78
Northern Goshawk PAC	February 15 through September 15 (SNFPA 2004) - no vegetation treatments (e.g., timber thinning, prescribed fire, restoration projects, or road or trail building) within approximately ¼ mile of the nest site; and no habitat manipulation within ½ mile of each nest site, unless surveys confirm that northern goshawks are not nesting (SNFPA 2004 and TRPA Code of Ordinances, Ch. 78).	SNFPA Standard and Guideline # 77 & # 79 and approval by TRPA
Bald Eagle Wintering Areas - At designated wintering sites (Baldwin/Taylor Marsh, Pope Marsh)	October 15 through March 15 – restricted recreational access and management activities (LRMP); and no habitat manipulation within mapped wintering habitat (TRPA Code of Ordinances, Ch. 78).	None, with the exception of emergency situations
Bald Eagle Nest Site	March 1 through August 31 - no habitat manipulation within ½ mile of the nest site (TRPA Code of Ordinances, Ch. 78), unless surveys confirm that bald eagles are not nesting.	Surveys confirming no nesting or occupancy by adults or juveniles allow LOP to be adjusted.
Osprey Nest Site	March 1 through August 15 - no habitat manipulation within ¼ mile of the nest site (TRPA Code of Ordinances, Ch. 78), unless surveys confirm that osprey are not nesting.	Surveys confirming no nesting or occupancy by adults or juveniles allow LOP to be adjusted.
Willow Flycatcher Nest Site	June 1 Through August 31 - no timber thinning, prescribed fire, restoration projects, grazing, utilities work, or road or trail building within suitable habitat surrounding active nest.	SNFPA Standard and Guideline # 58
Marten Den Site	May 1 through July 31 (SNFPA 2004) - no vegetation treatments (e.g., timber thinning, prescribed fire, restoration projects, or road or trail building) within 100 acres (or 359 m buffer).	SNFPA Standard and Guideline # 88
Fisher Den Site	March 1 through June 30 (SNFPA 2004) - no vegetation treatments (e.g., timber thinning, prescribed fire, restoration projects, or road or trail building) within 700 acres (or 950m buffer).	SNFPA Standard and Guideline # 85
Great Grey Owl PAC	March 1 through August 15 (SNFPA 2004) - no vegetation treatment and road construction within ¼ mile of an active great gray owl nest stand.	SNFPA Standard and Guideline # 83
Peregrine Falcon Nest Site	April 1 through July 30 (LTBMU Forest Plan) - restricted recreational activity (e.g., rock climbing) on nesting cliffs (LRMP); and no habitat manipulation within ¼ mile of nests (TRPA Code of Ordinances, Ch. 78); unless surveys confirm that peregrine falcons are not nesting.	TRPA Code of Ordinances, Ch. 78
Golden Eagle Nest Site	March 1 through July 31 (CWHR 2005) - no habitat manipulation within ¼ mile of nests (TRPA Code of Ordinances, Ch. 78); unless surveys confirm that golden eagles are not nesting.	TRPA Code of Ordinances, Ch. 78
Yosemite Toad Sites	Not yet determined; this species has not been detected within the Lake Tahoe basin.	Not Determined