

Chapter 1. Purpose of and Need for Action

Document Structure

The Forest Service has prepared this Environmental Impact Statement in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Impact Statement discloses the direct, indirect, and cumulative environmental impacts that would result from the proposed action and alternatives. The document is organized into four chapters:

- **Chapter 1.** Purpose and Need for Action: This chapter briefly describes the proposed action, the need for that action, and other purposes to be achieved by the proposal. This section also details how the Forest Service informed the public of the proposed action and how the public responded.
- **Chapter 2.** Alternatives, including the Proposed Action: This chapter provides a detailed description of the agency proposed action as well as alternative actions that were developed in response to comments raised by the public during scoping. The end of the chapter includes a summary table comparing the proposed action and alternatives with respect to their environmental impacts.
- **Chapter 3.** Affected Environment and Environmental Consequences: This chapter describes the environmental impacts of the proposed action and alternatives.
- **Chapter 4.** Consultation and Coordination: This chapter provides a list of preparers and agencies consulted during the development of the environmental impact statement.
- **Appendices:** The appendices provide more detailed information to support the analyses presented in the environmental impact statement.
- **Index:** The index provides page numbers by document topic.

Additional documentation, including more detailed analyses of project area resources, may be found in the project planning record located at Bass Lake Ranger District office in North Fork, California.

Background

The Sierra National Forest Land and Resource Management Plan (LRMP or Forest Plan) was amended in 2001 by the Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision (USDA-FS 2001a, 2004). Standards and guidelines for forest project planning were to focus on the modification of fire behavior through fuels treatments. These treatments were to have the highest priority in areas described as Wildland Urban Interface/Intermix (WUI). In 2004, a Supplement was written to the SNFPA and a Record of Decision (ROD) was signed (USDA-FS 2004). This ROD replaced the 2001 decision in its entirety. This decision recommended an ecosystem approach whereby the development and planning of projects would be not only based on fuels reduction treatments, but would create an overall approach by looking at all key elements within an ecosystem. WUI continued to be the highest priority area for treatments. In July 2005, the Bass Lake Ranger District completed the Fresno River Landscape Analysis. In this Landscape Analysis, the State Highway 41 Corridor with its high concentration of human habitation and activities, the Nelder Grove Historical Area of Giant Sequoias and declining health of forest stands was placed as an area with greatest departure from desired conditions and where

opportunity existed to move it closer to that desired condition. The Sugar Pine Adaptive Management Project is one of the State Highway 41 Corridor areas.

As part of the SNFPA ROD (USDA-FS 2004), an adaptive management and monitoring program designed to address high priority, key questions that relate to the uncertainties associated with management activities and their effects on wildlife habitat and modified wildfire behavior was to be initiated. In 2006, Region 5 (Pacific Southwest Region) of the Forest Service, as well as other Federal and State Agencies, entered into an agreement with the University of California whereby the university would act as a neutral third party to study the effects of management activities associated with the implementation of the SNFPA ROD (2004) in four key areas; wildlife (specifically Pacific fisher/California spotted owl), fire and forest health, water quality and quantity, and public participation. This adaptive management study is known as the Sierra Nevada Adaptive Management Project (SNAMP). The Sugar Pine Adaptive Management Project is one of two projects in the region where these key areas are to be studied.

This Environmental Impact Statement includes the need to amend the Sierra National Forest Land and Resource Management Plan, SNFPA ROD (2004) for Alternative 2 (Proposed Action) of this project. In the SNFPA ROD (USDA-FS 2004) Standards and Guidelines for Pacific Fisher Den Sites, #86 states...“If areas within den site buffers must be treated to achieve fuels objectives for the urban wildland intermix zone, limit treatments to mechanical clearing of fuels. Treat ladder and surface fuels to achieve fuels objectives.” In 2008, three den sites were located within the project area where treatments are proposed to meet both fuels and forest health objectives. The ability to locate these den sites has been enhanced by the intensive tracking of Pacific fisher movement throughout the project area as part of the SNAMP Study. The rationale for the need to amend the SNFPA ROD (2004), specifically Standard and Guideline #86 is three-fold: 1) Den sites have been surveyed for and attempts made to locate these sites for past projects, with no success; 2) It is highly unlikely that surveys conducted for future projects will be able to locate den sites; 3) To measure the effects of management activities, as is being done through the SNAMP study, treatments would need to be implemented based on the type of information that would be available during normal project development and planning, which includes the low probability of locating fisher den sites. As such, in Alternative 2 treatments would be implemented, as proposed, meeting both fire/fuels and forest health objectives with the knowledge that treatments are within Pacific fisher habitat having the potential for use as denning sites. Information about den site locations will be utilized, for this alternative, only to develop a den site buffer whereby a Limited Operating Period from March 1 to June 30 will be implemented (S&G #85). The effects of such amendment are addressed in Chapter 3-Affected Environment and Environmental Consequences beginning on page 23.

Purpose and Need for Action

The underlying need(s) for this proposal include:

1. There is a need for fuel reduction (in the surface and ladder fuels) that protects human communities from moderate/high intensity wild fires as well as minimizes the spread of wildfires that might originate in urban areas into the forested lands. The reasons for this need are to increase the efficiency of firefighting efforts and reduce risks to firefighters, the public, facilities and structures, and natural resources from moderate/high intensity wild fires
2. There is a need for conifer stands to have improved resiliency to attack from insects, diseases, lower levels of yearly precipitation (drought conditions) and/or wildfire. The reasons for this need are conifer stands are well above what is considered normal stocking levels (stand densities) whereby creating a decline in growth, health and resiliency due to inter-tree

competition for sunlight, nutrients and water, thus increasing a stands potential for higher rates of mortality.

In meeting the aforementioned needs the action must also achieve the following purposes:

1. A purpose of this proposal is to reduce the intensity and spread of wildfires across the landscape and near communities. The reason for this purpose is to provide a buffer between developed areas and wildlands where fire suppression capabilities are enhanced by modified fire behavior inside the WUI zones as well as provide a safe and effective area for fire suppression activities to occur (USDA-FS 2001, page 9).
2. A purpose of this proposal is to reduce stand density, within the lower and mid-canopy layers of conifer stands, to such a level as to provide for increased stand resiliency, growth and vigor. The reason for this purpose is to increase the capability for forested stands to withstand fluctuations in temperature and precipitation, attacks from insects and diseases, and from wildfires by creating sustainable stand densities.

Proposed Action

The action proposed by the Forest Service to meet the purpose and need is:

- Treat surface and ladder fuels (live and dead) to interrupt wildfire spread and fire intensity levels. This is proposed to be completed utilizing thinning and biomass thinning of pre-commercial and commercial conifers, mastication and/or dozer piling and burning in order to improve the ability of firefighters to suppress and control wildfires and provide a better measure of safety for the public and personnel.
- Commercially thin from below and biomass thinning mixed conifer, white fir and pine stands as well as pre-commercially thin young conifer plantations and conifer reproduction to reduce stand densities. This is being accomplished to improve the vigor of the stands.
- Masticate brush/shrub patches to tie treatment areas together in strategic locations.
- Utilize prescribed fire as a tool to reduce natural and activity-generated fuels through pile burning, under story and/or broadcast burning.
- Use prescribed fire and/or manual methods to treat infestations of noxious weeds, with the goal of eradication and preventing their spread into areas treated.
- Replant conifers within specific sites of failed conifer plantations.

The proposed action is described in more detail in Chapter 2 under Alternative 2, page 7.

Decision Framework

Given the purpose and need, the deciding official will review the proposed action, other alternatives, and their environmental consequences, in order to determine whether to implement the proposed action as described, select a different alternative or take no action at this time.

Forest Plan Direction

The Proposed Action and alternatives are guided by the Sierra National Forest Land and Resource Management Plan (LRMP), as amended by the Sierra Nevada Forest Plan Amendment Record of Decision, 2004 (USDA-FS 2004). The Sierra National Forest is subdivided into land allocations (management areas) with established desired conditions and associated management direction

(standards and guidelines). Land allocations that apply to this proposal are shown on either individual maps for specific land allocations or on the Land Allocations-Map 4, in the Map Package in Appendix A and include:

- **Wildland Urban Interface/Intermix (both Defense and Threat Zones).** This land allocation encompasses 4,674 acres within the Sugar Pine Adaptive Management Project boundary. Of this acreage; 888 acres are designated as Defense Zone and 3,628 acres are designated as Threat Zone. There were no local site-specific adjustments made to these boundaries. There are Forest-wide standards and guidelines for this land allocation set forth in the SNFPA ROD (USDA-FS 2004). These forest-wide standards and guidelines were used to develop the purpose and need (USDA-FS 2004, pgs. 49-50).
- **Southern Sierra Fisher Conservation Area (SSFCA).** This land allocation encompasses the entire Sugar Pine Adaptive Management Project area. The SNFPA ROD (2004) has set forth standards and guidelines for this land allocation that address protection measures for fisher den sites as well as direction for projects proposed in SSFCA (USDA-FS 2004, pgs. 61-62). In these standards and guidelines it is left to wildlife biologist to develop design criteria that protect important habitat structures within fisher habitat. These design criteria have been developed and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.
- **California Spotted Owl Protected Activity Centers (PACs) and Home Range Core Areas (HRCAs).** This land allocation encompasses 4,700 acres of the project area as suitable nesting habitat and nearly the entire Sugar Pine Adaptive Management Project area is suitable foraging habitat. There are six PACs and associated HRCAs either entirely or partially within the project boundaries. The SNFPA ROD (2004) has set forth standards and guidelines for this land allocation that address mechanical treatments conducted to meet fuels management objectives in PACs located in the WUI defense zones and in threat zones where prescribed fire is not feasible and where avoiding PACs would significantly compromise the overall effectiveness of the landscape fire and fuels strategy (USDA-FS 2004, pgs. 59-61). These, as well as the remaining standards and guidelines for this land allocation are incorporated into design criteria and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.
- **Northern Goshawk Protected Activity Centers (PAC).** This land allocation encompasses 4,700 acres of suitable nesting habitat and nearly the entire Sugar Pine Adaptive Management Project area suitable foraging habitat. There are two PACs that either are entirely or partially within the project boundaries. The SNFPA ROD (2004) has set forth standards and guidelines for this land allocation which are similar to those for California spotted owl PACs (USDA-FS 2004, pgs. 59-61). The standards and guidelines for this allocation are incorporated into design criteria and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.
- **Old Forest Emphasis Areas.** This land allocation is designated in approximately 2,870 acres within the Sugar Pine Adaptive Management Project boundary. Mature forest habitat is described by California Wildlife Habitat Relationship (CWHR) types 4M, 4D, 5M, 5D, and 6) where outside of the WUI defense zones standards and guidelines are designed to maintain and enhance the structures associated with these forest types and the protection of the species habitat associated with these forest ecosystems. As such, standards and guidelines associated with wildlife species that prefer mature forest habitat are used as the standards and guidelines for this land allocation. These are incorporated into design criteria and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.

- **General Forest.** This land allocation is designated in approximately 742 acres within the Sugar Pine Adaptive Management Project boundary. The standards and guidelines associated with this land allocation are the same as those for Old Forest Emphasis Areas. As such, standards and guidelines associated with wildlife species that prefer mature forest habitat are used as the standards and guidelines for this land allocation. These are incorporated into design criteria and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.
- **Riparian Conservation Areas.** This land allocation encompasses the entire Sugar Pine Adaptive Management Project area because of the extensive stream network acres within the project boundary. The standards and guidelines, specifically the Resources Conservation Objectives from the SNFPA ROD (USDA-FS 2004), associated with this land allocation are incorporated into design criteria and are listed in Chapter 2, Design Criteria Common to All Alternatives starting on page 10.

Public Involvement

A Notice of Intent (NOI) to prepare an Environmental Impact Statement for the Sugar Pine Adaptive Management Project was published in the Federal Register on October 12, 2007. The notice asked that comments on the proposed action be received by October 31, 2007. In addition, as part of the public involvement process, the Forest Service sent scoping letters to residents within 1.5 mile radius of the project area, to members and groups in the Native American community and to publics expressing interest in the project through scoping opened during the project posting in the Sierra National Forest Schedule of Proposed Action. These scoping letters were sent on August 31, 2007. On September 5, 2007, the Forest Service held a public meeting in Oakhurst, California, as well as a public field trip to the project area on September 29, 2007. Letters inviting interested publics were mailed to each individual that had been sent an initial scoping letter as well as electronically mailed to individuals participating in the Sierra Nevada Adaptive Management Project (SNAMP). A news release announcing the public meeting was sent to the Sierra Star (local newspaper) on September 3, 2007. The public meeting and public field trip were attended by approximately 30 individuals from the local community, local fire safe council, and environmental community. In addition to comments received during the public meeting and field trip, five comment letters on the proposed action were received.

As part of the public participation portion of the SNAMP study of this project, a group of stakeholders designated as the Integration Team, was formed. Throughout the planning process the Integration Team has held several open forums with the SNAMP team and the Forest Service, Bass Lake Ranger District Interdisciplinary Team to discuss project planning, modifications to the proposed action, updates on base information collection and potential effects based on most recent information collected by SNAMP. In conjunction with the written comments received during the scoping period and the issues associated within written comment (see below), recommendations and items of concern at these meetings have been brought forward into this analysis and led to the development of Alternatives 3 and 4 and are discussed in detail in Chapter 2 starting on page 8.

Issues

Comments from the public and other agencies were used to formulate issues concerning the proposed action. There were no comments received from members or groups from the Native American community. The Forest Service separated the issues into two groups: significant and non-significant. Significant issues were defined as those directly or indirectly caused by implementing the proposed action. Non-significant issues were identified as those: 1) outside the

scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations explain this delineation in Sec. 1501.7, "...identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)...". A list of non-significant issues and reasons why they were found non-significant may be found in the project record located at Bass Lake Ranger District Office in North Fork, CA.

The Forest Service identified the following significant issue during scoping:

Issue: The issue is the proper balance between where forest functionality and susceptibility can be improved and human habitations (WUI) susceptibility to wildland fire can be reduced while retaining important species habitat elements. Specifically, retention of important habitat elements for Pacific fisher, California spotted owl, Northern goshawk and Management Indicator Species as measured by:

- High canopy cover (average in a stand should not drop below 50% and significant portions of the treated stands should be at 60% or greater canopy cover),
- Especially in larger [>20 inch diameter] sized trees,
- Relatively high basal areas,
- Understory structure (provide for understory diversity),
- Adequate large snags and downed wood, and
- Available movement corridors linking to suitable habitat outside of project area (habitat connectivity).

These indicators are first addressed in design criteria common to all alternatives. The design criteria include standards and guidelines directly from the LRMP, SNFPA ROD (USDA-FS 2001a, 2004) and additional criteria developed to address the indicators above as well as those developed to minimize the potential environmental impacts of management activities on any given resource. The design criteria that are specific to retention of important habitat elements, as those listed in this issue, and are incorporated into Chapter 2, Alternatives Including the Proposed Action, starting on page 7 with the environmental consequences of this issue addressed in Chapter 3, Affected Environment and Environmental Consequences starting on page 23.

Two alternatives to the Proposed Action (Alternatives 3 and 4) were developed to address this issue and the indicators listed. The description of the alternatives can be found in Chapter 2, Alternatives Including the Proposed Action, starting on page 7 which includes how each addresses these indicators. These indicators are used as a means by which to compare the alternatives. The environmental consequences of changes in the level of treatments are addressed in Chapter 3, Affected Environment and Environmental Consequences starting on page 23.