Chapter 1 – Purpose and Need

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Chapter 1- Purpose and Need

Introduction

The Purpose and Need for this project remains unchanged from the 2006 Final EIS. We have heavily revised the format and contents in this Draft to improve its readability. Most of the analysis and composition of Alternatives 1 through 3 is unchanged from the 2006 FEIS.

The Need for a New Draft

A new Draft Environmental Impact Statement was selected as the best option for this project. Significant new information has become available regarding Pacific fisher (*Martes pennanti*) that we believe has a direct bearing on project design and analysis.

The new information was generated from four sources:

1) *An Ecosystem Management Strategy for Southern Sierra Mixed-Conifer Forests* by North, M., P. Stine, K. O'Hara, W. Zielinski and S. Stephens; (in review)
2) *Final Report: Baseline Evaluation of Fisher Habitat and Population Status in the Southern Sierra Nevada* (Spencer 2007)
3) *Baseline evaluation of fisher habitat and population status, and effects of fire and fuels management on fishers in the southern Sierra Nevada* (Spencer et. al, 2008)
4) Recent unpublished study results from Kathryn Purcell, Craig Thompson, Pacific Southwest Experiment Station scientists who have been tracking radio collared fisher in and around the project area

This draft incorporates comments received from all previous versions of this proposal. Some common themes in comments and in discussions with appellants received on the 2007 FEIS include:

- The document is difficult to follow and is overly complex
- Protections designed to preserve fisher and other late seral species are inadequate
- The range of alternatives is too narrow and doesn't reflect options to leave larger trees
- The Forest Service refused to fully analyze a '20 inch dbh limit' alternative

New alternatives have been created to address these and other issues. Alternative 4 reflects a silvicultural strategy created by the Pacific Southwest Experiment Station (PSW) which has been combined with relevant aspects of a similar but separate strategy developed by a group representing various environmental and community interests for the Cedar Valley Project. The Cedar Valley strategy was subsequently modified during field visits in June of 2007 (Appendix H). The modified Cedar Valley strategy has been combined with the PSW strategy for Alternative 4. Alternative 5 is similar to Alternative 3, except the maximum allowable limit for fuels treatments would be 20 inches dbh. The intent is to make Alternative 5 compatible with the 2001 version of the Sierra Nevada Forest Plan Amendment.

Background

The Kings River Project was initiated as a landscape-scale experiment to test an uneven-aged management strategy first suggested by Verner et al. (1992) to better preserve the viability of the California spotted owl (*Strix occidentalis occidentalis*) and other species dependent on old forest conditions. Recently, another benefit of this approach has become apparent. This approach would create more open forest conditions, reflective of historic forests. Those conditions are thought to result in forests that are more resistant to insects, disease, drought and ultimately, more sustainable over time. Resiliency would be increased because individual tree health and vigor would be improved and wildfires would be less intense with lower risk to local communities. Also, forest conditions would be more variable, resulting in greater variation in fire effects. Greater variability in post-fire landscapes would result in a wider range of surviving habitat types and a wider range of surviving wildlife. More uniform stands are often uniformly susceptible to fire or insect attacks, which reduces their inherent resiliency and the sustainability of many of the forest's components. Sustainability is important in the Kings River Project area because the southern Sierra Nevada supports a small population of Pacific fisher, which is extremely vulnerable to a range of impacts, perhaps the most critical being the loss of habitat to wild fire. One of the key goals of any treatment is to protect and sustain this population.

Is climate change affecting Kings River?

The number, size and intensity of wildfires have been increasing in the southern Sierra (Hayhoe et al. 2004, Lenihan et al. 2003). This change appears to be in response to two factors: an increase in fuels that have resulted from suppression of wildfires during the last century; and hotter, drier summers. These factors increase the susceptibility of fuels to ignition. Regardless of the balance between those factors, reducing fuels is something that we can do at the local level to address the fire risk and protect the forests and the communities around and within them.

What does resiliency mean?

Resiliency refers to a forest's capability to withstand short-term impacts without causing permanent changes in the system's overall ability to function. The present ecological system in the Kings River area has developed in response to change from timber harvest, urbanization, insect mortality, drought, and fire suppression.

Timber harvest over large areas began in the late 1800s, removing many of the largest trees and creating growing space for young trees. This resulted in the creation of dense stands of new trees. Suppression of wildfires began at the same time, which let those dense stands persist providing an abundant source of fuel for wildfires. The result has been a significant increase in the overall quantity of fuels, which makes large, stand replacing fires more likely. The proximity of houses to fuels creates an unacceptable risk to local residents. Stand replacing fires also erase the utility of the forest as habitat for many terrestrial and aquatic species. A more resilient forest would exhibit more controllable, smaller fires that would reduce the risk to life and property and preserve a

wider range of usable habitat, which would preserve dependent species. This simple premise creates the foundation for this project's purpose and need.

Why have we chosen to recreate a resilient landscape?

One logical option for managing the forest is to return the forest's structure and ecological functions to a range of conditions similar to historic conditions, because those conditions are believed to be more resilient to change. Our historic forests have changed mostly in response to timber harvest and fire suppression. The higher number of trees that our current forests exhibit; the different proportion of tree species; and their smaller size are all aspects of the forest that we can change. Returning the forest to a more resilient condition also has generally predictable outcomes because the system we are striving for has existed during the recent past, a time of written records and photographs (see Appendix A). Re-creation of the 1850s forest in a literal sense is impossible since the influence of all human development can not be undone; however, basic structures and processes contained in those forests can be closely duplicated. The Kings River Project; therefore, is an experiment to determine the validity of this desired future condition and to determine if this approach can provide the protection sought by local residents and forest managers from the undesirable effects of severe wildfire.

Why is the fisher (and other wildlife) so important?

The isolated population of Pacific fisher in the Kings River area has recently been estimated to be between 55 to 120 reproducing females (Spencer et al. 2008). This is a very small size to have sufficient individuals to weather unpredictable short-term impacts. This fisher population is clearly at risk from any number of potential sources. Fuels treatment and wildfire are commonly agreed to be the two prominent risks in this area. A solution is needed that protects fisher and other rare wildlife from these risks. Failure to adequately resolve these issues is likely to push fisher closer to extirpation in this area.

Why are fuels treatments proposed in fisher habitat?

A dilemma exists in the Kings River area. Wildfire poses an immediate and imminent threat to fisher survival. This threat can only be reduced by decreasing the quantity and distribution of fuels, in this case through mechanically based means in combination with prescribed fire. These treatments themselves pose a risk to fisher since they modify habitat, reducing its utility for an unknown time.

Are treatments to reduce fuels beneficial or harmful to the fisher population in the southern Sierra?

The Forest Service commissioned an independent investigation into this dilemma in 2006 and selected a team of experts to oversee the analysis. The results of that study were just completed in June of this year and several conclusions were made (Spencer et al. 2008).

First, the southern Sierra fisher population is small (160 to 360 individuals) and at risk of extirpation by stochastic events, including uncharacteristically large or severe wildfires.

Second, mechanical and prescribed fire treatments are effective in reducing the size and intensity of wildfire, and their effectiveness is more apparent if the intensity and acreage of wildfires is increasing.

Third, impacts to fisher habitat from treatments are short term and limited in their extent across the landscape. Even the most intensive treatments tested (greater than any of the alternatives presented in this proposal) resulted in a net benefit to fisher.

Fourth, the net result (given an increasing threat from wildfire) is that treated landscapes result in a net increase in fisher habitat compared to untreated landscapes. Treatment acreages need to approach 4 to 8 percent of the treatable landscape per 5 year period, to provide sufficient coverage to have a positive effect. More strategic placement of treatments may offer a lower acreage alternative in the future, although this is speculative at this time.

Fifth, the effectiveness of fuels treatments is greatest in the immediate vicinity of the treatments, and declines as you move away. The Conservation Biology Institute (CBI) report concluded that treatments should occur both *inside and outside* high value habitat in order to provide the greatest overall protection to the habitat.

How would fuels be reduced and what treatments are proposed?

Fuel loads would be reduced by physically removing a proportion of the trees and brush. This is done with a range of methods (depending on the situation) including hand treatments, mechanical harvesting with equipment, and prescribed burning (see Appendix E). Mechanical or hand treatment of fuels is often needed to reduce fuel loads to a level that would allow a controlled use of fire. Ultimately, the controlled reintroduction of fire is the desired treatment because it most closely replicates natural fire and is the most effective approach for reducing wildfire risk. Site-specific application of these tools determines the utility of the remaining habitat. Each alternative has been carefully designed to address the needs and sideboards described in the later part of this chapter.

Do differences among treatments exist that might reduce their short-term adverse effects to fisher?

The 2008 CBI report (Spencer et al. 2008) says yes, although the differences are minor compared to the overall benefits that fuel treatment has on fisher survival. Given a treatment's positive effect on reducing fire size or fire intensity, the treatment that minimizes adverse effects to spotted owl and fisher would usually be the most desirable. Project prescriptions, except for Alternative 5, follow a common theme of creating a heterogeneous forest that protects the most valuable components used by owls and fisher, such as den, rest, and roost trees. Alternative 4 uses a strategy developed for the Cedar Valley Project in 2007 that emphasizes the retention of clumpy groups of very high quality habitat. This strategy has been directly influenced by work done at the Pacific

Southwest Experiment station, and suggestions from stakeholders (see Appendix H). Alternative 5 also protects the most valuable components but does so by thinning from below which creates a homogenous forest. In addition, prescriptions vary in how prescribed fire is used within the wildland urban interface, and in the amount of growing space available to speed the growth of large trees and to improve forest health.

What are WUIs? How are they different from one another? What objectives are emphasized in each zone?

Wildland Urban Interface (WUIs) areas are places where human habitation is mixed with areas of flammable wildland vegetation. A WUI is comprised of two zones: the defense zone and the threat zone. The WUI Defense Zone is a buffer in closest proximity to communities and human infrastructure. WUI defense zones generally extend from the structures in a community out roughly 0.25 miles. Fire control is the primary objective in this zone. The WUI Threat Zone extends from the outer edge of the Defense Zone approximately an additional 1.25 miles. The objective for this area is to reduce wildfire spread and intensity and to maintain habitat functionality.

Why are adaptive management studies important?

Creating resiliency by recreating an uneven-aged forest landscape includes some short term impacts on the physical and biological environment. While impacts of fuels reduction and restoration treatments are not always highly predictable, the impacts of a stand-replacing wildfire generally are, and the risk of those impacts actually occurring is unacceptably high. Risks from treatment activities can be mitigated by observing the consequences of our treatments and changing to better meet our objectives. The risk to fisher is one example where uncertainty exists. The work done by CBI on fisher has been extremely useful in understanding the big picture and to answer the question whether fuels treatments are beneficial or harmful to their survival. Additional work such as the Sierra Nevada Adaptive Management Project (SNAMP), and ongoing Framework Carnivore monitoring would provide even more information and help reduce short-term impacts even further. Other species including the Yosemite toad and the California spotted owl also exhibit some uncertainty. Both species have ongoing monitoring and research projects established in the project area. The impacts of creating a more resilient forest on water quality and quantity is still another area. To address these questions the Kings River Experimental Watershed (KREW) has been established and has been collecting pre-treatment data for over seven years. Together, the information and knowledge gained from these studies would help to define our options for the future.

Desired Condition

The Forest Service wants to return the forest's structure and ecological functions to a range of conditions similar to historic conditions that would result in a more resilient forest. The Kings River Project is an experiment to determine the validity of this desired future, and to determine if this approach can provide the protection sought by local residents and forest managers from the undesirable effects of wildfire.

Proposed Action

The proposed action plans to return 13,757 acres of the forest landscape in the Kings River Project area to a more resilient condition, Figure 1-1. This action is deemed necessary to protect life and property and to protect sensitive wildlife and their habitat from loss to uncharacteristically severe wildfire. This action would be accomplished through use of hand and mechanical removal of brush and trees, and through the use of prescribed fire. In addition, we propose to improve the condition of degraded watersheds and remove infestations of noxious weeds through the limited use of hand applications of herbicides. Each action alternative is designed to protect the small population of fishers and spotted owls that live in the project area.

Pre-1850 Forests were often more open than today's forests because low intensity surface fires occurred frequently. These more open stands had fewer trees per acre, and often much larger trees. They were also characterized by significant variability as can be seen in this photograph (Figure 1-1), with snags and small groups of more dense vegetation.

Figure 1-1. Pre-1850 Forest Conditions

This photo was taken in the San Joaquin River drainage on the Sierra National Forest, near Horse Thief Creek, 1900.

Purpose and Need

The underlying purpose of the proposed action is to restore resilient forest conditions, similar to historic pre-1850 forests, across the Kings River landscape. This purpose and need is unchanged from the 2006 FEIS. Descriptions have changed somewhat in this draft to improve clarity.

Need for Action

The Background section of this chapter describes some of the context for this proposal used to establish four fundamental needs that the alternatives would be designed to address.

Those needs include the ability of the forest to absorb changes in climate, fire frequency, severity, and fire extent without impairing ecological function or components. Consequences of past timber harvest, fire suppression; urban encroachment; and apparent changes in climate have created a situation of high vulnerability. In other words, a need to create a more resilient forest exists. Resiliency includes:

- The need to increase the proportion of large trees across a landscape
- The need to increase the proportion of fire resistant species such as pines
- The need to reduce the overall quantity of biomass or fuel loads, especially surface fuels
- The need to reintroduce fire to the ecosystem
- The need to increase heterogeneity in distribution and age classes of vegetation
- The need to reduce tree density

The vulnerability of human communities to wildfire is well known. Greater safety for local residents is needed. WUI zones adjacent to communities are intended to reduce the threat of wildfire. Defensible Fuel Profile Zones (DFPZ) adjacent to WUIs are intended to contain wildfire within a single watershed.

Past management activity and natural events have left undesirable impacts in some areas. These impacts include eroding roads and stream crossings as well as landslides. The undesirable results of these impacts need to be corrected to meet Forest Service multiple use objectives and comply with State of California water quality standards. Watersheds need to be restored to a fully functional condition.

The ecological balance among forest species is threatened not only by fire, but also by invasive species. Noxious weeds in the project area include non-native vegetation. Noxious weeds are replacing native vegetation and subsequently affecting the food chain and overall habitat function. Noxious weeds can also reduce the resiliency of the forest by providing a ready seed source that can capitalize on wildfire, displacing native vegetation. An urgent need exists to control populations of noxious weeds before they become too widespread and difficult to effectively control.

Each alternative has been designed to address needs identified above. Each alternative has been designed within the bounds of the following objectives:

- Each action alternative should be designed to evaluate the consequences of implementation (PSW studies and monitoring should continue)
- Each alternative must respond to project needs in a way that preserves the southern Sierra Nevada population of Pacific fisher

Understand the consequences of creating a more resilient forest

A need exists to better understand how forests can be designed to increase their resiliency across a large landscape. Forest managers, private companies, and public interest groups have expressed interest in whether uneven-aged forest management can maintain long-term viability of California spotted owl, fisher and other wildlife populations; improve forest health; and develop a sustainable level of productivity (Verner and others 1992, USDA 1996; USDA 2004a).

Substantial interest has always existed around reintroduction of fire into the Sierra Nevada ecosystem (Verner and others 1992, USDA 1996; USDA 2004a).

The Kings River Project was established in 2002 with an inter-agency Memorandum of Understanding (MOU) signed by both the Station Director (PSW) and Regional Forester (Forest Service) to explore these interests revolving around resiliency.

The historic pre-1850 forest condition is the inspiration for the resiliency prescription. The historic forest is described in detail in a paper included in Appendix A. This paper includes a description of the distribution of the number of trees by diameter class in the historic forest. The need to restore forests to a pre-1850 condition is based on the assumption that the pre-1850 forest was sustainable and resilient. Native plant and animal species present today occurred in varying numbers during those years. Approaches to creating resiliency have been discussed with Pacific Southwest Research Station.

Increase the Number of Large Trees

The number of large trees (greater than 35 inches dbh) needs to increase across the landscape. The removal of some suppressed or co-dominate trees would decrease the overall number of trees; reduce fuel loads to some extent; and would create tree densities similar to historic conditions. This would allow for faster growth for trees greater than 35 inches dbh (as well as the remaining trees less than 35 inches dbh) and would result in a stand that is less susceptible to stand replacing wildfire.

Large trees are an especially important component of habitat for many wildlife species such as spotted owl and fisher (Verner and others 1992). Maintaining an abundance of large trees on the landscape is one important factor of habitat suitability.

This objective can be accomplished by retaining large trees that would potentially make up the oldest third of the age classes in the stand. Their growth rate would be enhanced by thinning young and middle age classes to create growing space. Similar approaches for retaining large trees have been used in the southwest (Covington and others 1997). Model results using uneven-aged treatments in the Sierra Nevada have demonstrated the feasibility of maintaining the largest third of the diameter distribution to keep large trees in the landscape (Hollenstein and others 2001). Southern California Edison forest land has shown the feasibility of maintaining and growing large trees using uneven-aged prescriptions and prescribed fire.

Reduce Tree Density

Historic conditions were characterized by more open stands of pine and mixed hardwoods with fewer trees per acre. Reducing the number of trees in a stand is directly related to providing space for the growth of large trees. Removing unwanted vegetation allows the desired plants space to grow.

The increase in current tree densities across the Sierra Nevada has been noted by several researchers (Vancat and Major 1978, Bouldin 1999, North and others 2004, Taylor 2004). Work on the Teakettle Experimental Forest adjacent to the Kings River by North and others (2006) noted the encroachment of understory fir and incense cedar. These shade-tolerant species have probably increased due to the exclusion of natural fire. This increase in density and encroachment of shade-tolerant species has led to numerous ecological problems, including slower growth of individual trees and an increased risk of catastrophic fire and insect attack.

Increase the Proportion of Pines and Oaks

Understories within the Kings River Project are currently dominated by fir and incense cedar trees. These species are well adapted to establishment under tree shade in the absence of disturbance, reducing the establishment and growth of pine and oaks. This process creates denser stands dominated by species often less resistant to fire.

Increasing the proportion of shade-intolerant pine and oaks is needed. Pines are the most fire resistant trees in the mixed conifer forest. Creating conditions suitable for the establishment and growth of shade-intolerant species requires providing canopy openings large enough to increase growing space (York and others 2004) and access to sunlight. Openings create conditions suitable for the establishment of groups of new trees that would contribute to uneven-aged stand conditions. Uneven-aged stands are consistent with descriptions of the historic forest (Flintham 1904, Dunning and Reineke 1933, Bonickson and Stone 1982, North and others 2004). Reforestation groups, through newly established tree seedlings, provide the opportunity to alter species composition and increase the proportion of pine and oak, which require more direct sunlight.

A need to release tree seedlings from competing vegetation exists. Controlling competing vegetation creates conditions suitable for the growth of conifers and oaks; creates uneven-aged stands; and replaces brush-dominated openings with trees. Competing vegetation includes bear clover (*Chamaebatia foliolosa*), white leaf manzanita (*Arctostaphylos viscida* spp.), green leaf manzanita (*Arctostaphylos patula),* deer brush (*Ceanothus integerrimus*), and grass. Brush species sprout and are very competitive with tree seedlings for sunlight, soil moisture and nutrients. They have deep root systems and grow in dense stands, preventing tree seedlings from being established. Competing vegetation needs to be reduced to less than 20 percent crown closure around pine and oak seedlings for a period of two to five years following planting (McDonald and Oliver 1984). Without vegetation control, failure of reforestation is highly probable.

Reintroduce Fire to the Ecosystem

Throughout the west, historic frequent low-intensity fires, have been replaced by large stand replacing wildfires as an unintended consequence of vigorous fire suppression. Today we understand the need to reintroduce fire as an ecosystem process. Fire can help to control and maintain the landscape in fire regime condition Class 1 (low risk from uncharacteristic wildfire effects) keeping the landscape within the historic range of variability for fire frequency and intensity.

Protect Adjacent Landowners from Wildfire

Reducing fuels in the WUI is needed. A large portion of the Kings River project area includes National Forest System lands adjacent to private property. A majority of these private lands have existing dwellings or plans for improvements. The local Highway 168 FireSafe Council has expressed a strong interest in protecting local communities from the effects of wildfire.

The concern about increasing accumulation of fuel in western national forests including those in the Sierra Nevada has grown during the last two decades. A 1990 Government Accounting Office (GAO) report stated, "... the most extensive and serious problem related to the health of national forests in the interior west is the over-accumulation of vegetation." A growing urban intermix zone abuts the national forest. The population surrounding the Sierra Nevada mountain range doubled between 1970 and 1990, increasing from approximately 236,000 to over 559,000. The Sierra Nevada population is expected to increase to over 1.3 million people by 2040.

A comprehensive federal fire policy for the Departments of Interior and Agriculture was drafted in 1995 in response to a significant number of wildfire related fatalities and a growing recognition of fire problems caused by fuel accumulation. The Federal Wildland Fire Management Policy and Review provided a broad philosophical and policy foundation for federal fire management programs and outlined a strategic direction for a broad range of fire management activities. The policy was founded on the principles that:

- Firefighter and public safety is the first priority in every fire management activity
- Ecological processes and natural change agents would be incorporated into the planning process
- Fire management plans, programs, and activities would support land and resource management plans and their implementation
- Fire management plans and activities would incorporate public health and environmental quality considerations

The Secretaries of the Interior and Agriculture requested a review of the Federal Fire Policy and its implementation in the aftermath of the Cerro Grande prescribed burn (May 2000) near Bandolier National Monument in central new Mexico. Damages to private property as well as to the Los Alamos National Laboratory were estimated at one billion dollars (USGAO 2000). Conclusions indicated the fire situation in the wildland urban interface is more complex and extensive than previously realized and conditions of fire-adapted ecosystems continue to deteriorate because of fire exclusion.

The Forest Service began to address the problems of fuel accumulations and the impacts of growth in the urban intermix with a cohesive strategy titled *Protecting People and Sustaining Resources in Fire Adapted Ecosystems* in 2000 (USDA 2000a). This report was prepared in response to Congressional direction for a 10-year Comprehensive Strategy (Public Law 106-291) to reduce wildland fire risk and restore forest ecosystem health in the interior west. Recognizing the magnitude of the fire management problem from the conclusions of this report, federal land management agencies drafted planning actions to mitigate the situation through the implementation of The National Fire Plan (USDA 2001c).

The National Fire Plan focuses on operational and implementation activities and intends to:

- Reduce the risk and consequence of stand replacing wildfire while insuring public and firefighter safety
- Improve the resilience and sustainability of forests and rangelands, and conserve and enhance species through the implementation of fire management activities
- Protect communities and restore fire adapted ecosystems while protecting the hydrological and biological components associated with fire adapted ecosystems
- Propose fuels management treatments through prescribed fire and mechanical treatments of up to three million acres nationally each year

Improve Watershed Condition

Watershed restoration is needed where State water quality standards are not being met or where our analysis indicates that soils may be susceptible to erosion. The primary purpose for watershed restoration is to mitigate impacts from past activities and from foreseeable disturbances to protect the designated uses, which usually are instream fish and wildlife. The secondary purpose for watershed restoration is to improve watershed condition in sub-watersheds that do not meet desired conditions as described in the Draft Landscape Analysis Plan for the Kings River Project (USDA 1995b). Past disturbances have resulted in accelerated erosion in some timber harvest areas and along roads. Some areas where past logging occurred has resulted in gully erosion and compacted soils. A number of roads on sensitive soils are insloped, unrocked and/or have relief culverts that are causing erosion. Eroded soil is entering channels where it is transported through the fluvial system, adversely affecting instream fauna.

An interdisciplinary team identified sites in need of treatment within the Bear Meadow Creek, Providence Creek, and Rush Creek sub-watersheds. Restoration of these sites is included in each action alternative.

Conduct Research and Monitoring Studies

Implementation of the Kings River Experimental Watershed (KREW) study will require changes to some standards, guidelines and treatments differing from those generally applied to an uneven-aged silvicultural strategy. Stands within the KREW study area would receive treatment combinations that are intended to address several questions posed in the SNFPA 2004 Record of Decision (Hunsaker 2004). Similarly, the California Spotted Owl Study is designed to treat some protected activity centers in the Kings River

Project area using management direction for the defense zone of the WUI from the SNFPA Record of Decision of 2001.

Decisions to be Made

The Responsible Official for this Project is the Sierra National Forest Supervisor who will decide which alternative or combination of alternatives will be implemented. The Responsible Official will also decide on appropriate mitigation, monitoring, and adaptive management actions to include in the project if an action alternative is selected.

Decision Criteria

The Forest Supervisor will be the official that selects the alternative or combination of alternatives to be implemented. The Criteria he or she will employ are likely to include the following:

- Which alternative creates the most resilient forest?
- Which alternative best protects human life and property?
- Which alternative returns the most area to proper functioning (aquatics) condition?
- Which alternative best addresses the risks posed by invasive plants?
- Which alternative best ensures the survival of Pacific fisher?
- Which alternative creates the greatest learning about uneven-aged silviculture and the consequences of creating a resilient forest?

Kings River Area and the Sierra Nevada Framework EIS

The Kings River project was originally designed and guided by management direction in the Sierra National Forest Land and Resource Management Plan (approved in 1991). This plan was amended in 1993 by standards and guidelines developed for the interim direction for California Spotted Owl conservation. This early direction was the basis for many of the treatments implemented in the late 1990s.

The 2001 Sierra Nevada Forest Plan Amendment (SNFPA) Record of Decision (ROD) provided additional management direction for Old Forest Ecosystems and associated species. The 2001 decision recognized the ongoing Kings River Project; allowed projects that were approved at the time of the decision to be implemented; and provided that variances from standards and guides could be granted for administrative studies conducted in conjunction with the Pacific Southwest Research Station.

The 2004 Sierra Nevada Forest Plan Amendment Record of Decision provided the most recent direction applicable to the project when it replaced the 2001 decision. The 2004 ROD recognized the ongoing nature of the larger Kings River Project, and allowed those projects that were approved at the time of the decision to be implemented. A list of the direction from the 2004 ROD that applies to the activities in the eight management units is on file at the High Sierra Ranger District and is incorporated by reference.

Public Involvement

A Notice of Intent (NOI) was published in the Federal Register on September 22, 2004. A revised NOI was published on December 20, 2004. The NOI asked for public comment on the proposal to be received by January 24, 2005. A Notice of Availability (NOA) was published in the Federal Register on January 27, 2006 announcing the availability of the Kings River Project Draft EIS. The FEIS was released October 6, 2006 and the Forest Supervisor signed the Record of Decision on December 20, 2006. A Notice of Intent to prepare a supplement to the Environmental Impact Statement was published by the Federal Register on February 28, 2008.

The Forest Service conducted a field trip to the Kings River Project area on September 14, 2004 as part of the public involvement process. The agency began the field trip in the office, providing maps, presenting written information, showing geographic information system (GIS) mapping, presenting research study information, and answering questions. The field trip continued into the Sierra National Forest with stops at five locations.

Several other presentations or field trips were conducted for interested parties. A record of these presentations is filed at the High Sierra Ranger District Office.

The interdisciplinary team developed a list of issues to address using the comments from the public, other agencies, and Native American groups.

Issues

The Forest Service separated Kings River Project issues into two groups: significant and non-significant issues. Significant issues were defined as points of disagreement with the proposed action based on anticipated adverse effects, 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 regarding their categorization as non-significant may be found at High Sierra Ranger District Office in the record.

The Forest Service identified three significant issues during scoping. These issues are used to measure consequences between alternatives in Chapter 3.

<u>Issue#1 – The effects of large tree removal to old forest dependent wildlife species.</u>
Forest Service Response: This issue would be tracked as an alternative considered in Chapter 2 and addressed in Chapter 3 under environmental consequences to vegetation and wildlife. Factors used to measure consequences include:

- Stem area of trees (basal area) greater than 35 inches
- Number of trees before/after
- Potential wildfire and prescribed fire severity

Issue#2 - The effects of the use of herbicides/surfactant on people and wildlife. Forest Service Response: This issue would be tracked as an alternative considered in Chapter 2 and addressed in Chapter 3 under environmental consequences to aquatic species, human health and safety and wildlife. Factors used to measure consequences include:

- Hazard to people and wildlife
- Comparison of past treatments on other projects

Issue#3 - The effects the action alternatives would have on the viability and habitat of the spotted owl, marten, fisher, and goshawk and the short-term risks to aquatic management. Forest Service Response: This issue would be addressed in Chapter 3. Factors used to measure consequences include:

- Spotted owl - canopy cover and suitable habitat
- Goshawk - canopy cover and suitable habitat (i.e. CWHR classes by acres)
- Fisher - canopy cover and suitable habitat
- Marten - canopy cover and suitable habitat
- Aquatic management - canopy cover, water temperature, large woody debris, and indicators of habitat quality (i.e. Sediment Index "V*")

The Sierra National Forest developed and considered alternatives to the proposed action based on comments received. Refer to the discussion in Chapter 2 under Alternatives Considered but Eliminated.

Comments on the EIS

The Forest Service released the Draft EIS for public comment on January 27, 2006. Seventeen comments were received in response to the release. After considering comments on the Draft EIS, the Forest Service included the "Reduction of Tree Harvest Size" alternative for detailed analysis in the Final EIS. This alternative was fully described as Alternative 3. The Forest Service also improved and modified the analysis of effects in Chapter 3. The Forest Supervisor decided to distribute the FEIS and allow comment before signing a Record of Decision because the Forest Service had added another alternative to be analyzed in detail and modified analysis disclosed in Chapter 3 of the DEIS.

The FEIS was released October 6, 2006 and the Forest Supervisor signed the Record of Decision on December 20, 2006.

The Forest Supervisor withdrew his decision after a review of new information regarding Pacific fisher on February 11, 2008.

A Notice of Intent to prepare a supplement to the Environmental Impact Statement was published by the Federal Register on February 28, 2008.

All comments received on previous versions of this project have also been considered during the creation of the alternatives in addition to these comments.