Chapter 1 • Proposed Action

Introduction

The Forest Service has prepared this Environmental Impact Statement (EIS) on the potential effects of management actions on national forest lands within the Kachina Village Forest Health Project area (Figure 1). Management actions will include the use of broadcast burning, thinning from below, and access and recreation management to address declining and poor forest health and high fire hazard conditions. Thinning from below results in the removal of smaller, unhealthy trees first, then progresses until the desired tree numbers are reached.

The project area is located south of Flagstaff, Arizona on the Mormon Lake and Peaks Ranger Districts of the Coconino National Forest. The project area is adjacent to the communities of Kachina Village and Forest Highlands and includes Pumphouse, Kelly, and James Canyons. The project area includes both private and state land, in addition to national forest land. The Forest Service will only make decisions for Forest Service lands.

This EIS discloses the direct, indirect, and cumulative environmental impacts and any irreversible or irretrievable commitment of resources that would result from the Proposed Action and alternatives.

The project is in compliance with the National Environmental Policy Act (NEPA) and other relevant Federal and state laws and regulations. This EIS is prepared according to the format established by Council on Environmental Quality (CEQ) regulations implementing NEPA (40 CFR 1500-1508). In addition to explaining the purpose and need for the Proposed Action, Chapter 1 discusses how the Kachina Village Forest Health Project relates to the Coconino National Forest Plan (Forest Plan). Chapter 1 also identifies the significant issues driving the EIS analysis. Chapter 2 describes and compares the Proposed Action, alternatives to the Proposed Action, and a no-action alternative. Chapter 2 also summarizes the environmental consequences by issue. Chapter 3 describes the natural and human environments potentially affected by the Proposed Action and the alternatives. Chapter 3 also discloses the potential effects that are anticipated. Chapter 4 contains the list of preparers, Chapter 5 contains the EIS distribution list, and Chapter 6 contains the literature cited. Appendices provide additional information on specific aspects of the proposed project. This EIS incorporates documented analyses by summarization and reference, where appropriate.

The interdisciplinary team used a systematic approach for analyzing the proposed project and its alternatives, estimating the environmental effects, and preparing this EIS. The planning process complies with NEPA and the CEQ regulations. Planning was coordinated with the appropriate Federal, state, and local agencies, and local, Federally-recognized tribes.

The Draft EIS is available online at http://www.fs.fed.us/r3/Coconino/nepa.shtml. Copies can be obtained from the Peaks Ranger District, 5075 N. Highway 89, Flagstaff, AZ 86001 or by calling (928) 527-8280. The comment period is 45 days and will begin when the notice of availability is published by the Environmental Protection Agency in the Federal Register.

Additional documentation, including more detailed analyses of project-area resources, may be found in the project planning record located at the Peaks Ranger District office. These records are available for public review.

Background

The following background information is from the Forest Service publication "Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy," October 2000.

> *The 2000 fire season was undoubtedly one of the most challenging on record. As of early October, more than 6.8 million acres of public and private lands burned—more than twice the 10-year national average. The magnitude of these fires is the result of two primary factors: a severe drought, accompanied by a series of storms that produced thousands of lightning strikes followed by windy conditions; and the long-term effects of almost a century of aggressively suppressing all wildfires that has led to an unnatural buildup of brush and small trees in forests and rangelands.*
>
> *On August 8, 2000, President Clinton asked Secretaries Babbitt and Glickman to prepare a report that recommends how best to respond to this year's severe fires, reduce the impacts of those fires on rural communities, and insure sufficient firefighting resources in the future. On September 8, 2000, President Clinton accepted their report Managing Impacts of Wildfires on Communities and the Environment.*

> *Operating principles directed by the Chief of the Forest Service in implementing this report include: firefighting readiness, prevention through education, rehabilitation, hazardous fuel reduction, restoration, collaborative stewardship, monitoring, jobs, and applied research and technology.*

The hazardous fuel reduction portion of this strategy called for: "Assign highest priority for hazardous fuels reduction to communities at risk, readily accessible municipal watersheds, threatened and endangered species habitat, and other important local features, where conditions favor uncharacteristically intense fires." The Kachina Village Forest Health project is proposed in response to the fuels reduction element of the Cohesive Strategy.

Grand Canyon Forests Partnership

The Grand Canyon Forests Foundation (a nonprofit organization) and the Coconino National Forest have established a cooperative agreement to work together to demonstrate new forest management approaches in improving and restoring the ecosystem health of the ponderosa pine forest ecosystem where urbanized areas interface with national forest lands (Flagstaff Wildland-Urban Interface). This cooperative effort seeks to involve the greater Flagstaff community extensively to develop a community-based solution to local forest health problems. This cooperative project is called the **Grand Canyon Forests Partnership**.

The Kachina Village Forest Health Project Area is the second 10,000-acre area the Partnership has studied in detail. This area is located south of Flagstaff and directly adjacent to the communities of Kachina Village and Forest Highlands. The project was selected for five primary reasons:

- The threat of catastrophic fire to all the above mentioned communities and habitat that is important to wildlife, including the Federally threatened Mexican spotted owl;
- The density of the pine forest (concern for catastrophic wildfire, loss of plant species, and concern for loss of old-growth habitats for wildlife);
- The high recreation use and concerns for high fire risk;
- Declining forest health and loss of understory community; and
- The impact of a large wildfire on the Oak Creek Watershed.

This EIS is for the Kachina Village Forest Health Project area. Research and monitoring of the various treatments will be used to guide future projects.

The Kachina Village Forest Health Project analysis follows current Forest Plan direction. There is another planning effort called the Flagstaff Lake Mary Ecosystem Analysis (FLEA). The FLEA process will result in a Forest Plan amendment to update, change, or create new management direction for lands around Flagstaff. The wildland-urban interface will require many different treatments and management scenarios to lessen fire risk and fire potential and to provide for wildlife and human habitats.

Coconino National Forest personnel conducted resource inventories in 2000 and 2001. Detailed data documentation for each activity is located in files maintained by resource specialists at the Peaks and Mormon Lake Ranger District offices. Summaries of the data collected and all documentation of alternative development are located in the project record file maintained at the Peaks District office.

A Vision for the Future

The Partnership's vision is consistent with the Coconino National Forest Plan and generally follows management recommendations outlined in "A Vision for our Community - Flagstaff 2020" and the "Flagstaff Area Open Spaces and Greenways Plan."

> *"In the near future, the wildland-urban interface will be a mosaic of open, park-like forests containing scattered timber stands with higher densities, interspersed with natural parks which approximate—although do not duplicate—conditions present before Euro-American settlement. Forests and woodlands will be dominated by open growing clumps of large and/or old trees in a matrix of native bunchgrasses, wildflowers, and shrubs. Parks (meadows) will be dominated by native grasses and wildflowers. Periodic low-intensity fires will maintain open habitats, cycle nutrients, and keep wildland fuel levels low, reducing the hazard of catastrophic crown fires. The presence of introduced species will be greatly diminished and native wildlife species will occupy their original niches within the ecosystem, moving freely through*

established wildlife corridors. A broad spectrum of uses—based upon science and adaptive ecosystem management principles—will be enjoyed by northern Arizona residents and visitors. Although the majority of the landscape will be restored to more natural conditions, some will be retained in basically its current condition to address specific, well-defined management goals."

Proposed Action

A "proposed action" is defined early in the project-level planning process. A proposed action serves as a starting point for the interdisciplinary team (IDT) and gives the public and other agencies specific information on which to focus comments. The Proposed Action proposes thinning, prescribed burning, road and recreation management activities to improve declining forest health and reduce wildfire potential. Several thinning prescriptions are proposed to create a mosaic of resulting stand densities. The Coconino National Forest proposes the following actions:

- Thin approximately 4,800 acres;
- Broadcast burning and maintenance burning the entire project area, except for canyons and steep slopes, 6,229 acres;
- Reduce road density;
- Construct several new trails; and
- Designate dispersed camping areas and close high fire risk areas to camping.

The Proposed Action is described in detail in Chapter 2, "Actions Common to All Alternatives" and "Proposed Action (Alternative A)." Using comments received on the Proposed Action (see discussion of Significant Issues later in this chapter) and information from preliminary analysis, the interdisciplinary team then develops alternatives to the Proposed Action. These are discussed in detail in Chapter 2.

Based on public comment received to the Proposed Action, two slight modifications were made to the Proposed Action. The first is a clarification in language. There was concern about the description in the Proposed Action regarding "old trees" or "yellow-barked" trees and the age of these trees as described as 150 years or older. We have deleted from the Proposed Action language the descriptive words "150 years or older." The new language reads, "Retain all existing mature ponderosa pine trees or 'yellow-barked' trees."

The second modification of the Proposed Action is the addition of approximately 50 acres of treatment. This includes loction/site 335/04 (29 acres) adjacent to private land. The exclusion of this stand from the "Proposed Action" was a Geographic Information System (GIS) error. In addition, location/site 336/07 will be thinned by hand in selected areas (approximately 20 acres) to reduce ladder fuels immediately adjacent to private lands.

Decisions to Be Made

Based on the environmental analysis in this EIS, the Coconino National Forest Supervisor will decide whether and how to improve forest health conditions and reduce fuel loading in the Kachina Village Forest Health Project area in accordance with Forest Plan goals, objectives, and desired future conditions. This decision could include:

- The location, design, and scheduling of the activities, temporary road construction and reconstruction, silvicultural practices, prescribed burning and recreation management;
- The estimated timber volume, if any, to make available from the project area at this time (and the number and size of the timber sales/goods for services contracts);
- Access management measures; and
- Mitigation measures and monitoring requirements.

Project Area

The Kachina Village Project Area is located south of Flagstaff and continues south of the communities of Kachina Village and Forest Highlands (See Figure 1). Interstate Highway 17 (I-17) and U.S. Highway 89A (89A) border the project area on the east and west, respectively. The southern boundary is approximately one half mile south of James Canyon. Kelly Canyon, Pumphouse Wash, James Canyon, and Mexican Pocket are prominent features and locations within the project boundary. The boundary encompasses an area that has the potential to be affected by a wildfire within one to two burning periods following ignition during high and/or extreme burning conditions.

The entire project encompasses 10,417 acres: 2,377 acres of private land, 326 acres of State Trust Land (State), and 7,714 acres of Forest Service land. The

Forest Plan includes portions of the following Management Areas: MA3, MA4, MA6, MA9, MA12, MA15, and MA17. The project occurs predominately on MA3 lands that is ponderosa pine on slopes less than 40 percent. The other management areas cover steeper slopes, meadows, riparian, and developed recreation sites.

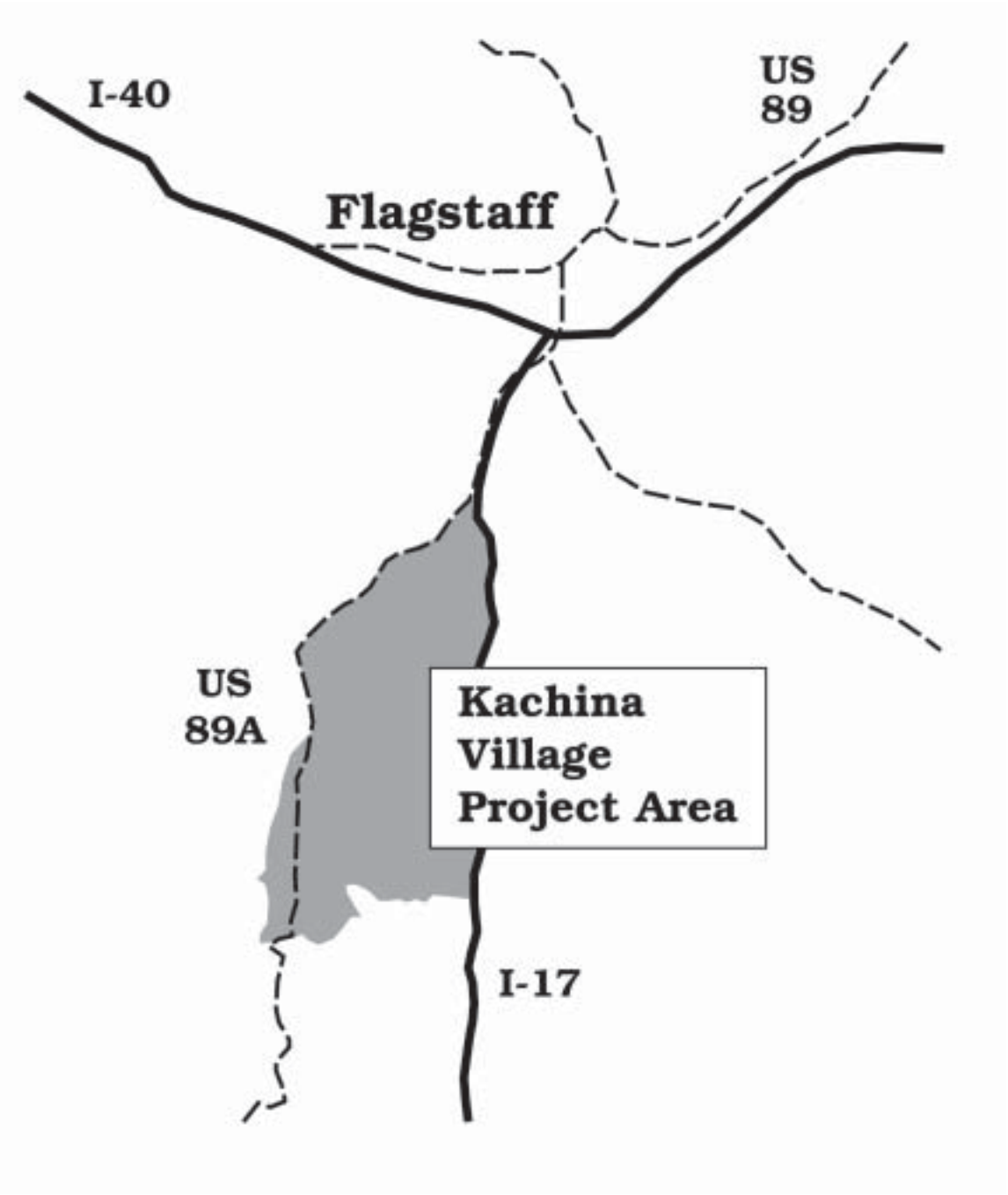

Figure 1. The Kachina Village Forest Health Project Area, Coconino National Forest, Arizona.

Purpose and Need

The Kachina Village Forest Health Project is currently proposed in response to the Grand Canyon Forests Partnership Cooperative Project, the National Fire Plan, and the implementation of the Coconino National Forest Plan. The goals and objectives of these plans are to improve forest health and to help move the project area toward desired future conditions described in the plans. The Forest Plan includes forest-wide goals and objectives and goals, objectives, and desired future conditions specific to management areas. The goals and objectives of the Kachina Village Forest Health Project are listed below and additional detail is provided in the Project Area Existing Conditions, Desired Conditions and Needs that follow.

- Manage forest fuels and fire risk to reduce the potential for a large, stand-replacing fire in the Wildland-Urban Interface and to create forest conditions from which a crown fire would be unlikely to originate under moderate fire weather.
- Address and correct historical causes of ecosystem degradation to increase overall forest ecosystem resilience to disturbance events, including fire, drought, and insects.
- Protect habitat for all Threatened, Endangered, and Sensitive species, including Mexican spotted owls and northern goshawks, by reducing the probability of stand-replacing fire in forested habitats and through integrated measures to protect wildlife habitat.
- Protect black bear, turkey, Abert squirrel, and other wildlife species associated with dense habitat by incorporating special design features and to continue to provide habitat for these species in the project area, including important wildlife habitats such as cover areas and movement corridors.
- Protect and enhance the quality of the Oak Creek Watershed by reducing the probability of stand-replacing fire.
- Improve and enhance understory productivity, which has been negatively impacted by increased overstory densities.
- Retain, enhance, and recruit mature or "old yellow" ponderosa pine and Gambel oak, which are declining in longevity and frequency.
- Create the conditions necessary for the reintroduction of fire to the ecosystem.
- Increase the diversity of age classes within the forest to provide northern goshawk habitat[1].
- Manage access, road networks, and recreation to decrease fire starts, maintain fire suppression access, and to better balance the needs of people with wildlife habitat and watershed and soil conditions.
- Restore and protect riparian habitats.

Additional goals and objectives that apply to the Kachina Village Project and are incorporated into the design of the project include:

- Research and demonstrate key ecological, economical, and social dimensions of forest health improvement efforts;
- Protect cultural sites[2]; and
- Provide access for the proposed treatments.

Applicable National Fire Plan goals and objectives include:

- Reducing the number of small fires that become large;
- Restoring natural ecological systems to minimize uncharacteristically intense fires;
- Creating new jobs in both the private and public sectors;
- Improving the capabilities of state and volunteer fire organizations; and
- Reducing the threat to life and property from catastrophic wildfire.

Goals, objectives and desired future conditions of the management areas within the project area are described in the following section.

Relationship to Forest Plan

National forest planning occurs at several levels, including the national, regional, forest, and project level. The Kachina Village Forest Health Project EIS

[1] Desired conditions for northern goshawk habitat are described in Amendment 11 of the Forest Plan.

[2] Protection refers to management activities and also damage from wildfire.

is a project-level analysis. The scope of the EIS is confined to addressing the significant issues and possible environmental consequences of the project. It does not attempt to address decisions made at higher levels. It does, however, implement direction provided at those higher levels.

The Forest Plan embodies the provisions of the National Forest Management Act, its implementing regulations, and other guiding documents. The Forest Plan sets forth, in detail, the direction for managing the land and resources of the Coconino National Forest. Where appropriate, the Kachina Village Forest Health Project EIS tiers to the Forest Plan FEIS, as encouraged by 40 CFR 1502.20.

The Forest Plan uses management areas to guide management of the national forest lands within the Coconino National Forest. Each management area provides for a unique combination of activities, practices, and uses. The Kachina Village Forest Health Project area includes many management areas. Goals, objectives, and desired future conditions of each management area are described in the Forest Plan and subsequent Amendments. In addition, the Forest Plan (Chapter 4) contains a description of each management area.

Project Area Existing Conditions, Desired Conditions and Needs

This section describes in more detail how the current conditions specific to the Kachina Village project area differ from desired conditions. This comparison results in a description of where there is a need for action to progress toward desired conditions. The desired conditions described for the Forest Plan management areas, in conjunction with the other Forest Plan directions outlined above, provide the parameters for identifying and defining project-specific desired conditions. The following desired conditions will help guide management of the project consistent with the Forest Plan, the significant issues (described below), and the ecological conditions of the project area.

Existing and desired conditions are compared below. The resulting purpose and need for action are written in bolded italics. Chapter E of the Project Record File and specifically PRD 49 clarifies the desired condition, as developed by the Partnership, the public, and the IDT working on this project.

Fire Risk and Fire Potential: Existing forest conditions include continuous canopies, high stand densities over 120 Basal Area[3], and unnaturally high fuel loads. The current forest conditions are conducive to future catastrophic wildfires. Current high recreational use increases the risk of a fire starting from escaped campfires, inappropriate disposal of cigarettes, and catalytic converters. Unlike the low intensity ground fires of the past, fires will likely travel through the tree tops (crown fires), resulting in greater intensity fire and increased destruction. The potential losses from such fires are high. The communities of Kachina Village, Forest Highlands, and Flagstaff are located north and upwind of the project area. Other values at risk from fire include threatened Mexican spotted owl habitat, northern goshawk habitat, and areas that provide recreation opportunities for the public. Existing conditions show that stands within the project area will produce flame lengths of 5.7 to 7.2 feet resulting in a high likelihood of producing and supporting running crown fires that are difficult, or more likely impossible, for firefighters to control. The desired condition is a forest with low to moderate fire potential with reduced flame lengths below 4 feet.

Changes in camping locations and camping closures are important in reducing the risk of human-caused fires. Associated benefits of designated camping are reduced fire risk and improved watershed, soil, and recreation management.

> *Need to change flame lengths of 5.7 to 7.2 feet (existing condition) to flame lengths of 4 feet or less (desired condition) in an arrangement that creates discontinuous canopies across the project area. The risk of, and potential for, catastrophic wildfire is achieved by creating discontinuous tree canopies, removing ladder and fuels on the forest floor, and, in general, creating conditions that were prevalent prior to the disruption of natural ecosystem processes. Camping closures and the designated camping areas will change the distribution and location of human-caused fires to improve and lower fire risk.*

Plant and Animal Diversity: Today, the landscape within the Kachina Village Project area is 99 percent forested, with only 1 percent of the area in openings. Very little understory grasses, forbs, and shrubs currently exist. Additionally, only a small portion of

[3] Basal area is a measure used to describe tree density. Basal area can be visualized as the amount of ground that is covered in wood. Higher basal areas mean more trees are left (higher densities) than lower basal areas (lower densities).

the area is in old-growth conditions, with most of the ponderosa pine stands in small and medium pole timber stages (trees 5 to 16-inches dbh). There are few seedlings/saplings or mature "yellow" pine trees. The overwhelming majority of plant biological diversity is in the understory community. The diversity of understory plants, in turn, comprises the essential habitat for many species of native fungi, soil microorganisms, arthropods, mammals, and birds. Currently, the lack of fire in the understory is another factor that limits plant diversity and vigor. Per northern goshawk Amendment 11 of the Forest Plan, the desired condition is to return, in part, to ponderosa pine ecosystems that are more open, with grassy openings comprising 10 percent of the area. Additionally, the desired condition is for a mix of tree sizes and ages described in the Forest Plan that represents a more even representation of each size class and a greater percentage of large old trees on the landscape. This desired condition is a better balance of ponderosa pine age and size classes and a greater component of grasses, shrubs, and forbs are required to meet biological needs. Another desired condition is recurring, low-intensity fire that recycles nutrients and maintains forest understory health in ponderosa pine ecosystems.

Need to change from 1 percent openings to 10 percent openings across the area. Need to move from 60 percent young forest (VSS3) to 20-30 percent young forest, to achieve long-term goals of 40 percent mature and old forest (VSS 5 & 6) to 40 percent mature and old forest. There is a need to reintroduce recurring, low-intensity fire.

Old-growth: Historically, old-growth ponderosa pine in the Flagstaff area ranged in density from 0 to greater than 100 trees per acre, with an average of 26 old-growth trees per acre. Today, the density of old-growth trees is very different. Across the entire project area, the average density of old-growth trees is 4 per acre. There are 0 to 2 old-growth trees per acre on 38 percent of the area; 2 to 4 old-growth trees per acre on 23 percent of the area; 5 to 7 old-growth trees per acre on 20 percent of the area; and 8 and greater old-growth trees per acre on 19 percent of the area. The vigor and longevity of existing old-growth trees is variable depending on a particular site, and competition from surrounding younger trees. The desired condition is 20 to 30 old-growth trees per acre or 40 percent of the project area in mature or very old trees (VSS 4 and 5). The desired condition is to maintain the current old-growth trees for as long as possible given the relatively low number and length of time until other trees can grow to replace them.

Need to promote future old-growth trees to replace existing trees in the future and add to the overall amount of old-growth trees. Need to reduce competition between trees immediately surrounding old-growth trees to promote the vigor of existing old-growth trees, thus increasing their resistance to insects and disease and increasing longevity.

Recreation and Roads: Many people enjoy the forest roads or travel cross-country on foot, mountain bikes, and motorcycles. Recreation use in this area is very high. Recreation monitoring has documented approximately 400 dispersed recreation sites and numerous transient camps across the entire project area. Furthermore, there are approximately 4 miles of open Forest Service system roads per section (640 acres). This current road density is two times greater than the desired condition suggested by the Forest Plan. In addition, there are numerous unofficial roads created by hunters and recreationists, as indicated by the presence of 2-track dirt depressions. As a result, there are few places where a person can gain a sense of solitude and enjoy nature. The entire road network allows a great deal of mobility throughout the area. However, Forest Service road budgets do not allow for maintenance of all the current system roads and there is no maintenance of unofficial roads.

Heavy recreational use occurs in the Mexican Pocket area, above Sterling Canyon, and along the Forest Roads (FR's) 237 and 535. A substantial number of non-system (social) trails are located south of Kachina Village. These trails are often poorly located and receive no maintenance. Some social trails have resulted in conflicts between users. Forest Service trail budgets do not allow for maintenance of all the current system trails and there is no maintenance of unofficial trails.

The desired condition is a well designed system of roads and trails that balances road and trail systems with demands for access for recreation and fire suppression, as well as overall watershed productivity and long-term needs for wildlife populations near urban areas.

Need to reverse deleterious trends in recreation, road, and trail use. Need to reduce road densities. Need to change camping uses in highly impacted areas. Need to locate a road and trail system that meets desired conditions.

Wildlife Movement: There is an important wildlife travel corridor within the project area that provides an important connection between the canyons in the Kachina Village area and Woody Ridge. This corridor is impacted by high numbers of camping sites and is at risk of crown fire, which could severely impact the corridor for several decades. The desired condition is to maintain the ability of wildlife to use this travelway.

Need to reduce the risk of, and potential for, catastrophic wildfire around this corridor. Need to change from moderate to high levels of human disturbance to wildlife to low to moderate levels. Need to undertake a more active management of roads and dispersed recreation.

Goshawks: A northern goshawk Post Fledgling-Family Area (PFA) is located within the project area. Most of the project area provides either PFA or foraging habitat for the goshawk. The desired condition is to maintain habitat for goshawks per the appropriate Forest Plan standards and guidelines. The existing forest structure is different from the desired forest structure described in the Forest Plan. Currently the PFA is lacking the number of large trees recommended for PFA's in the Forest Plan.

Need to improve northern goshawk habitat by creating a better balance of forest structures. See additional information under plant and animal diversity paragraph above.

Mexican Spotted Owls: Forest Plan standards and guidelines for the Mexican spotted owl apply where habitat for the Mexican spotted owl has been designated or defined as "restricted" for this species. The desired condition is to maintain occupied habitat and to progress restricted habitat toward conditions suitable for nesting roosting. The desired condition is to lessen the risk of catastrophic fire moving into these habitats from surrounding areas.

Need to retain some portions of the project area as dense, multi-storied forest to maintain current Mexican spotted owl habitat. Need to reduce the potential for loss of Mexican spotted owl habitat due to catastrophic wildfire to lessen the possibility of losing the habitats and the species in this area. See the fire risk and fire potential discussion above for more information.

Riparian: Current conditions at Kelly Seep include bare ground, erosion, little plant reproduction or diversity. The desired condition is lush vegetation with little bare ground, good plant reproduction and diversity, and water that percolates into the soil rather that running over the ground. Riparian habitats are very important for plant, bird, and animal species dependent on these wet environments.

Need to restore the Kelly Seep riparian site.

Public Involvement

The Council on Environmental Quality (CEQ) defines scoping as "...an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a Proposed Action'' (40 CFR 1501.7). Among other things, the scoping process is used to invite public participation, to help identify public issues, and to obtain public comment at various stages of the EIS process. Although public participation is to begin early, it is really an iterative process that continues until a decision is made. In addition to the following specific activities, the Kachina Village Forest Health Project has been listed on the Coconino National Forest Schedule of Proposed Actions since December 15, 2000, which is mailed to approximately 500 persons, organizations, and agencies. The Proposed Action was mailed to approximately 100 addresses. To date, the public has been invited to participate in the project in the following ways.

Notice of Intent (NOI): A Notice of Intent to prepare an EIS was published in the Federal Register on March 9, 2001 (PRD 31).

Public Meetings: Public meetings were held in February, March, and April of 2001 to provide project area information, develop the desired future condition, and discuss local concerns and interests that should be addressed in the Kachina Village Forest Health Project analysis. Over 50 people attended the meetings.

Public Mailing: In June 2001, a letter providing information and seeking public comment was mailed to approximately 100 individuals and groups. This included Federal and state agencies, Native American groups, municipal offices, businesses, interest groups, and individuals. A total of 12 responses to this initial mailing were received (PRD 93, Proposed Action Mailing List).

Local News Media: Announcements regarding the project were printed in the *Arizona Daily Sun* on March 30, 2001 (PRD 53).

Meetings with Agencies, Communities, Native Groups, and Others: In October 1999, a field trip involving the Grand Canyon Trust (GCT), U.S. Fish and Wildlife Service (USFWS), Native American Enterprises, and the Arizona Game and Fish Department (AGFD) reviewed proposed projects for the 2001 fiscal year. Six interdisciplinary team meetings occurred in February, March, and April 2001, involving the Coconino Natural Resources Conservation District, the Southwest Forest Alliance, USDA Forest Service Rocky Mountain Research Station, AGFD, the Ecological Restoration Institute (ERI) of Northern Arizona University (NAU), the USFWS, the Grand Canyon Forests Foundation, the GCT, Flagstaff Fire Department, the Society of American Foresters, the Highlands Fire Department, and the Arizona State Land Department. The purpose of these meetings was to work toward the Proposed Action through development of a desired future condition. Two field trips in April 2001 with the Grand Canyon Forest Partnership discussed wildlife habitat, specifically cover and movement corridors, thinning to enhance yellow pines, roads, and fuels reduction. In April 2001, an open house was held for the residents of Kachina Village to identify issues and concerns related to the project. Also in April 2001, AGFD, the Grand Canyon Forest Foundation, and the ERI of NAU made a Mexican spotted owl field visit. In May, July, and August 2001, the GCFP held meetings to review the planning process and recommendations to the Forest Service. A field trip in July 2001 with AGFD was conducted to discuss the proposed treatments in relation to game species habitat. Two field trips in September 2001 with AGFD and USFWS discussed fuels treatments within Mexican spotted owl PAC's.

Other Sources: Public comment received to the Flagstaff/Lake Mary Ecosystem Analysis in response to "Ideas Change for the Flagstaff/Lake Mary Analysis" were reviewed by team members when developing the Proposed Action.

Issues

Significant issues for the Kachina Village Forest Health Project were identified through public scoping. Similar issues were combined into one statement, where appropriate. The following issues were determined to be significant and within the scope of the project decision. These issues are addressed in the Proposed Action and alternatives to the Proposed Action. Additional concerns were considered but determined to be non-significant in relation to the current project. These concerns are discussed separately in "Significant and Non-Significant Issues," located in Appendix A, "Scoping Comment Analysis."

Issue 1: 16-Inch Diameter Limit Issues

Cutting trees greater than 16-inch diameter would affect future old-growth in the area, resulting in fewer acres being able to qualify as old-growth forest structure in the future.

Issue 2: 18-Inch Diameter Limit Issue

All project objectives could be met with an 18-inch diameter limit and request that a quantitative analysis be provided.

Issue 3: "Intensive Zone"

The Proposed Action does not reduce fuels sufficient to protect the immediate wildland-urban interface. An "intensive treatment zone" around private land is requested for evaluation.

Issue 4: Lighter Thinning Methods

Thinning north of Kelly Canyon as described in the Proposed Action goes beyond what is needed to reduce fire risk. A lighter treatment of 60 to 120 basal area and a 9-inch thinning limit (where a temporary road is needed) is requested for evaluation.

Issue 5: Road Issues

Temporary roads lead to increased soil compaction, transport of exotic weeds, and have long-lasting impacts on forest structure, therefore, we request that no new temporary roads be created even if only for the duration of the project.

Issue 6: Mechanized Equipment

Mechanized equipment and excessive thinning will increase soil compaction and cause disturbance to wildlife in areas south of Kelly Canyon. The area south of Kelly Canyon should only be treated with hand thinning and was requested for evaluation.

Other Concerns Raised by the Public

Following public scoping, other questions, concerns, and comments related to various resource areas were raised and considered in the analysis of significant issues. However, they were determined to be non-significant issues in that they would not drive alternatives. All comments received were addressed. There are three sections of Appendix A that show how various comments, questions, concerns, and issues were addressed. Some have already been addressed through other processes, in the Forest Plan, or their resolution is beyond the scope of this project (see Appendix A).

Applicable Laws and Executive Orders

Shown below is a partial list of Federal laws and executive orders pertaining to project-specific planning and environmental analysis on Federal lands. While most pertain to all Federal lands, some of the laws are specific to Arizona. Disclosures and findings required by these laws and orders are contained in Chapter 2 of this EIS.

- Multiple-Use Sustained-Yield Act of 1960
- National Historic Preservation Act of 1966 (as amended)
- Wild and Scenic Rivers Act of 1968, (as amended)
- National Environmental Policy Act (NEPA) of 1969 (as amended)
- Clean Air Act of 1970 (as amended)
- Endangered Species Act (ESA) of 1973 (as amended)
- Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974 (as amended)
- National Forest Management Act (NFMA) of 1976 (as amended)
- Clean Water Act of 1977 (as amended)
- American Indian Religious Freedom Act of 1978
- Archeological Resource Protection Act of 1980
- Cave Resource Protection Act of 1988
- Executive Order 11593 (cultural resources)
- Executive Order 11988 (floodplains)
- Executive Order 11990 (wetlands)
- Executive Order 12898 (environmental justice)
- Executive Order 12962 (aquatic systems and recreational fisheries)
- Executive Order 13186 (Migratory Bird Treaty Act)