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Draft Land Management Plan

Part 1:

Southern California National Forests Vision



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Part 1-Southern California National Forests Vision

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Introduction

The land management plans for the southern California national forests describe the strategic direction and provide broad program-level direction for managing the land and its resources. Land management plans do not make project-level decisions, nor do they contain commitments to implement specific projects. Those decisions are made after more detailed analysis and further public comment. Site-specific project decisions must be consistent with the land management plan unless the plan is modified by amendment.

The land management plans were prepared according to the requirements of the National Forest Management Act (NFMA), the National Environmental Policy Act (NEPA), and other laws and regulations. The current land management plans for the southern California forests were approved between 1986 and 1989. NFMA regulations require that each land management plan be revised every 10 to 15 years (36 CFR 219.10). These revised plans have been prepared to meet that requirement.

The plans were developed to implement a preferred alternative in which the Cleveland National Forest selected alternative 2 and the Angeles, Los Padres, and San Bernardino National Forests selected alternative 4. In the accompanying Draft Environmental Impact Statement (DEIS), the preferred alternative describes the analysis used in formulating the revised land management plans.

Organization of the Land Management Plan

This forest plan presents a new format from those published previously, designed to accommodate the concept of adaptive management. It is based on a model being developed for national use and consists of three interrelated parts:

Part 1 is the vision for the southern California national forests. It describes the forests' uniqueness on a national and regional level. It describes the Forest Service national goals, the roles and contributions that the forests make (their niche), the desired conditions (36 CFR 219.11(b)) for the various landscapes within the forests, and finally, the evaluation/monitoring indicators (36 CFR 219.11 (d)) that will be used to assess the progress made toward accomplishing the desired conditions. Part 1 includes:

- **Niche:** Distinctive roles and contribution of the forests. The vision document begins with a description of the forest, including its distinctive roles and contributions to the local area, state, region, and nation. Through the course of public collaboration the niche for national forest lands has been identified.
- **Government Performance and Results Act (GPRA) Goals:** (36 CFR 219.12 (f)(6): In 1993, Congress passed the GPRA to increase the accountability of federal agencies by measuring progress toward achieving agency goals and objectives. This legislation requires preparing periodic strategic plans. In 2003, the Forest Service (USFS 2003) issued an updated draft version of the 2000 Strategic Plan for the agency. These long-term goals and objectives help guide the Forest Service's current actions and future plans.
- **Desired Conditions:** The desired condition describes the ecological, economic and social attributes that characterize or exemplify the outcome of land management. In short, this means how the forests are expected to look and function in the future when forest plan direction has been successfully implemented. Desired conditions can be measured now and over time through monitoring. Each forest desired condition contributes to the achievement of GPRA goals. Desired conditions are not commitments and may be achievable only over the long term.
- **Evaluation/Monitoring Questions:** Each of the desired conditions is linked to evaluation/monitoring questions. These questions are designed to evaluate the indicators of progress over time towards the desired conditions (outcomes). These, along with annual accomplishment indicators and implementation monitoring of design criteria, constitute the land management plan (LMP) monitoring plan.

Part 2 is the strategy. The strategy describes the objectives (36 CFR 219.11 (b)) that the Forest Service intends to implement in order to move the forests toward the vision described in Part 1. Part 2 identifies suitable uses

through land use zones (36 CFR 219.11(c)) that show allowable uses and opportunities by zone, including existing and recommended wilderness and other special area designations (36 CFR 219.17). Part 2 also presents a prospectus that describes past program performance, program priorities and objectives, and a discussion of performance risks, recent trends, and expectations regarding the levels of experiences, goods, and services supplied by the forests. The forests have been subdivided into geographic areas or places. The theme and desired condition and the multiple-use management focus for each place is described in Part 2.

Part 3 is the design criteria. The design criteria include the laws, the standards (36 CFR 219.11 (c), 219.13 through 219.27) and a reference to other applicable guidance that the Forest Service uses during project planning and implementation. Standards are mandatory requirements that come into play as site-specific activities are planned for implementation, and are designed to be consistent with achieving the objectives and desired conditions. The standards act as thresholds or constraints (the sideboards) for management activities or practices to ensure the protection of resources.

Purpose of the Revised Plan

The land management plans articulate management direction for the southern California national forests according to the hierarchy described below. The land management plans focus on outcomes achieved over time (desired conditions) rather than the outputs (products, goods, and services) that were the focus of the original plans.

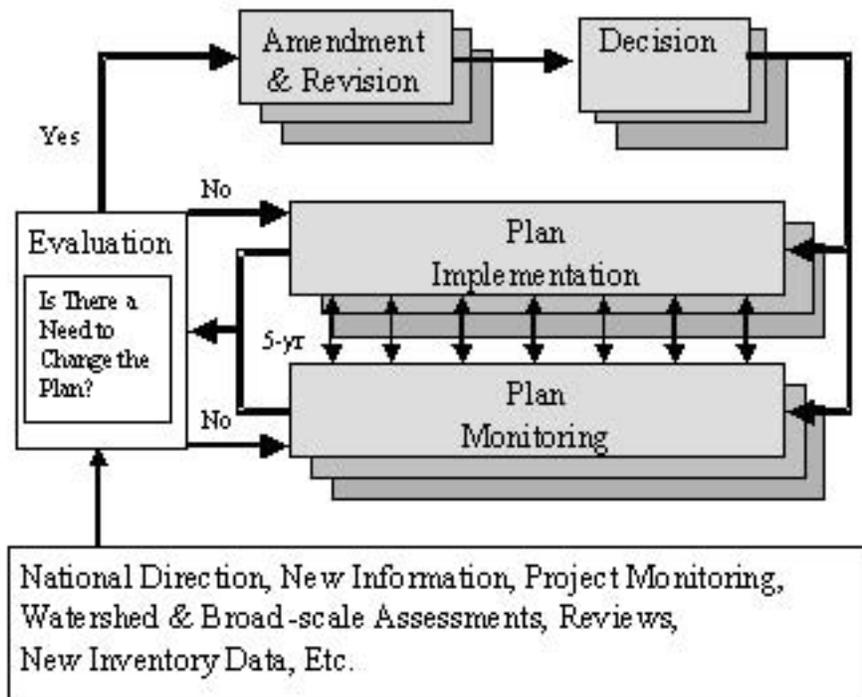
The purpose of a land management plan is to set a context for project development. Projects may be proposed to respond to demands by the public, or as part of a Forest Service program (see Part 2, Strategies). A project might be needed because of a discrepancy between current conditions and desired conditions (see Part 1, desired conditions).

When a project is proposed, it is first checked against the suitable use and use strategy descriptions (see Part 2). If the project is an allowable use, appropriate and relevant design criteria (see Part 3, standards) are incorporated. The proposed action is then analyzed using appropriate NEPA procedures. If the project is inconsistent with plan direction, the project may be redesigned or rejected, or a plan amendment may be considered.

A plan is intended as a component of a cycle of adaptation that provides a framework guiding future management decisions and actions. As such, a plan does not create, authorize, or execute any ground-disturbing activity. A plan in and of itself does not grant, withhold, or modify any contract, permit, or other legal instrument, does not subject anyone to civil or criminal liability, and creates no legal rights. A plan by itself is not an action-forcing document and therefore is not a major federal action having a significant effect on the quality of the human environment.

The cycle of adaptation is incorporated through monitoring and evaluation requirements that are found in each of the three parts of the plan. Part 1 identifies outcome level performance measures for each desired condition. These are long-term measures of movement toward the respective desired condition. Part 2 lists the program level measures currently based on the budget evaluation and formulation system performance indicators. Project level adaptation, triggered by annual reviews of selected projects, is focused on the effectiveness of project design criteria (spelled out in part 3 of the plan). The annual monitoring and evaluation report evaluates all three levels of monitoring at the appropriate time cycle. The figure below illustrates how the adaptive cycle is used to trigger amendment of the land management plan if necessary.

The Three Parts of a Plan in the Adaptive Cycle



Forest Niche, Management Challenges and Vision

General Location

The national forests of southern California include over 3.5 million acres of federally managed public land extending from Big Sur to the north and the international border with Mexico to the south.

The Angeles National Forest is located within Los Angeles, San Bernardino and Ventura Counties. The Forest Supervisor's office is located in Arcadia and there are Ranger District offices in Glendora, Tujunga, and Saugus.

The Cleveland National Forest is located within Orange, Riverside and San Diego Counties. The Forest Supervisor's office is located in Rancho Bernardo and there are Ranger District offices in Alpine, Ramona, and Corona.

The Los Padres National Forest is located within Kern, Monterey, Santa Barbara, San Luis Obispo, Ventura, and Los Angeles Counties. The Forest Supervisor's office is located in Goleta and there are Ranger District offices in King City, Santa Maria, Santa Barbara, Ojai, and Frazier Park.

The San Bernardino National Forest is located within San Bernardino and Riverside Counties. The Forest Supervisor's office is located in San Bernardino and there are Ranger District offices in Skyforest, Fawnskin, Lytle Creek, Mentone, and Idyllwild.

Niche

On a global and national scale, the forests:

- constitute four of the most urban-influenced forests in the total National Forest System. They serve as an open space, visual backdrop, recreation destination, and natural environment for a diverse, urban population of over twenty million people who live within an hour's drive of any one of the four forests.
- continue to be recognized as one of the world's "biodiversity hotspots" (areas where exceptional concentrations of endemic species are undergoing exceptional loss of habitat). They provide habitat for 31 federally listed threatened and endangered animals, 29 federally listed threatened and endangered plants, 34 Forest Service sensitive animals and 134 Forest Service sensitive plants.
- provide the opportunity for scenic driving on National Forest Scenic Byways and Scenic Highways, including Highway 1, an All-American Road.
- continue to provide a high-quality recreation setting for a large portion of the Pacific Crest National Scenic Trail (over 400 miles) and several National Recreation Trails, as well as three designated Wild and Scenic Rivers.
- manage 69 National Register of Historic Places sites, 13 State Historic Landmarks, and over 400 sites that are eligible to be included on the National Register.
- manage 21 nationally designated wildernesses, covering approximately 1.1 million acres of National Forest System land.
- cooperatively manage a large portion of the Santa Rosa and San Jacinto Mountains as a national monument.

On a regional scale, the forests:

- continue to offer a variety of outdoor recreation opportunities in settings ranging from coastal shoreline to rugged canyon and mountain areas.

- play an important regional role in maintaining large blocks of wildland habitat. Combined with a mix of local, state, federal, and private lands, they form a regional system of open space and habitat preserves within one of the most highly urbanized landscapes in the United States.
- contain diverse habitats important to maintaining well-distributed populations of native and desired nonnative plant, fish and animal species.
- contain areas that are the only remaining habitat "refugia" for species imperiled by the loss or degradation of habitat off-forest.
- provide some of the only remaining available spawning habitat for stocks of southern steelhead trout.
- include areas that can be cooperatively managed with communities and other agencies for more effective wild land fire protection to reduce the threat of wildfire and the floods that often follow wildfires. The forests were originally established to protect the health of watersheds from erosion damage and flooding that follow wildfires.
- serve as quality, low-cost, local source of water consumed by the urban population of southern California. The forests continue to serve as a recharge area for numerous reservoirs and groundwater basins that provide water for numerous communities, and for agricultural and industrial uses.
- provide opportunities for research and education in Research Natural Areas, Special Interest Areas, and the San Dimas Experimental Forest.
- provide postcard landscapes that serve as scenic backdrops for highly developed urban areas, and some of the last vestiges of vast, natural-appearing landscape panoramas.
- sustain the historic use of the national forest for urban infrastructure, considering technological advances to reduce the impacts on the natural environment in the future.

Management Challenges

Maintaining healthy sustainable forests in southern California is challenged by a complex set of factors, including population growth, urbanization, recreation use, access, drought, disease, tree mortality, fire, and wildlife. For the sake of brevity, the factors are addressed in three categories: urbanization, fire, and wildlife and plants. The health of the four southern California national forests depends on our ability to reconcile these challenges to forest and community sustainability.

Urbanization

The rapidly increasing population of southern California, and the resulting effects on the forests, is one of the main challenges the Forest Service faces. The Angeles and San Bernardino National Forests are virtually surrounded by urban development. The level of development adjacent to the Cleveland and Los Padres National Forests continues to grow at a steady pace. Southern California's population has grown substantially over the last two decades to over 20 million people. The ethnic diversity of the population has increased so that approximately 30 languages are used in the area. These challenges will continue to increase as the population grows by another 35% over the next two decades. (Management Recommendations from Socioeconomic Assessment, 2002, Draft)

A highly adaptive approach to recreation management is needed to meet the challenges of new forms of outdoor recreation and the changing demographic profile of visitors. Conservation education programs are needed to teach forest visitors what is expected of them when they come to the forests, and the potential effects their presence can have without realizing it. Forest staff will be challenged to develop partnerships and seek the assistance of volunteers to accommodate higher levels of use and to accomplish recreation objectives. Additional challenges follow as increased visitation, urban influences, and a healthy-lifestyle trend create the demand for convenient forest access, improvements to facilities, environmental safeguards, and engaging conservation education programs.

The challenge of urbanization manifests itself in many ways and can be summarized by asking the question:

"How will managers sustain the character of the national forests and maintain or improve forest ecosystems, while accommodating the demands of an increasing number of users in a large and growing urban area?"

Management challenges related to urbanization include:

- increasing numbers of people coming to the forests for a growing number of activities. There are increased demands for a variety of high quality year-round recreation opportunities, especially day-use activities including picnicking, driving, and trail use, as well as access to dispersed areas where people recreate.
- retaining the opportunity for solitude in the face of the increasing population. As development of private areas continues, we anticipate a greater dependence on the forests for this type of value. Solitude defines itself and is becoming an increasingly rare opportunity in many areas of the national forests.
- accommodating the demand for an increasing variety of forest products due to the diversity of the surrounding populations and the demand for products used for weaving, floral displays, medicinal, or other uses. Managers are also challenged to effectively communicate with diverse populations of people in order to understand the ways they would like to use the forests.
- access to national forest land. Access is a complex problem that has many forms. For example, traditional points of access to the forests are lost as land is developed. New landowners are often reluctant to accommodate access across their land. At the same time, the people living adjacent to the forests want convenient access, often resulting in the development of unplanned roads and trails. Roads are another form of the access challenge. Most of the forests road system was constructed in the 1930s for fire protection and are narrow and steep with few, if any, turnouts or other safety features. Maintenance backlogs, road reconstruction or relocation, access for modern fire fighting equipment and the decommissioning of roads are just a few of the challenges facing our transportation planners.
- infrastructure for community support. There are numerous facilities already located on the forests including utility corridors, communication sites, electronic sites, dams, diversions, and highways. The role of the forests and how they are used to accommodate additional facilities while retaining the character of the landscapes is a significant challenge.
- accommodating the demand for a wide variety of water uses with a limited supply of water in one of the driest climates in the United States. The demand for water for community, commercial, or private use has resulted in numerous impoundments, diversions and wells. Finding the delicate balance between peoples' need for water and the water necessary to sustain healthy riparian and wetlands in the forests will continue to be a challenge. Healthy, stable, and resilient watersheds absorb rain, refill aquifers, cool and cleanse water, slow storm runoff, reduce flooding, and provide important habitat for fish and wildlife. Water users include people, who are particularly attracted to water because of hot temperatures and the arid climate, downstream cities and communities that use the water for municipal water supplies, as well as the numerous plants and animal species that depend on water for their survival. The demand for water can only increase as the population increases. Water is a complex challenge as the existing above ground sources may be fully used and subsurface (groundwater) supplies are at least heavily tapped for municipal or private water or for commercial uses (water bottling). Maintaining the quality of water is a challenge because of the intense levels of human use, air pollution, or natural events such as landslides, flooding and post-fire erosion. Managers are challenged to improve impaired watersheds by 20% over the next five years.
- understanding and protecting the historic and cultural sites that are abundant in the four southern California forests. Numerous tribes live adjacent to or near the forests. Managers are challenged to develop government-to-government relationships with the tribes in order to protect resources, to resolve access issues, supply resources and to continue the important traditional or cultural uses of the forests.
- law enforcement. Forest staff will continue to be challenged by growing urban populations and a vast number of illegal or inappropriate activities.

Fire

Wildland fire may be the biggest challenge facing forest managers and the public over the next couple of decades.

Fire is a fact of life in southern California. Fire is not a question of if, rather, it is a question of when and how much. Fire staff have concluded that under the right conditions, any fire started anywhere on any of the forests may be a threat to adjacent communities. The four southern California forests include approximately 3.6 million acres with thousands of structures in or around their borders that are threatened by wildfire. The forests are located in one of the driest, most fire-prone areas in the United States. The situation is compounded by decades of fire suppression practices that have resulted in the development of unnaturally dense stands of trees and the accumulation of brush and other flammable fuels in many areas. Housing and other development adjacent to forest boundaries are increasing at a rapid rate without adequate provision for the development of a 'defensible' space around them. Further compounding the complexity of the situation is the recent drought and insect infestation that is centered on the San Bernardino National Forest but may be spreading toward the Angeles and Cleveland National Forests. Dead trees in and around communities and homes are an immediate challenge.

Finally, managers are challenged to offer a safe forest environment in potentially dangerous situations. Human safety (public and private) is always the first priority of forest managers. The Forest Service faces a huge challenge in southern California and most of the western United States to emphasize fuel treatments that result in defensible space in the wildland-urban interface.

Management challenges related to fire include:

- working with other agencies, communities, and property owners to develop 'community defense zones' that allow fire-fighters to stay on the ground and more safely defend homes and property. The challenge is a long term one that will require years of work to do the vegetative treatments necessary to defend the communities. Another facet of the same challenge is to maintain the defensible conditions over time.
- reconciling the need to manage areas at risk where threatened, endangered, proposed, candidate, sensitive (TEPCS) species live.
- increased fire frequency (most often the result of human causes) that has resulted in the loss of native plant species or conversion to an unnatural mix of vegetation.
- increased erosion potential and downstream flooding from burned areas.
- dead trees within surrounding towns. Entire communities, with a combined population of over 100,000 people, are at risk of loss from fire. Based on the severity of the situation, the U.S. Congress recently placed the Angeles, Cleveland, and San Bernardino National Forests on the nation's 10 most fire-threatened forests list.
- allowing fire to play a more natural role in an unnatural environment. The use of fire under the right conditions is an effective tool for vegetative treatment of the forests.

Wildlife and Plants

The four southern California national forests are included in the list of the world's biodiversity 'hotspots'. The problem is best illustrated by the fact that there were 17 listed threatened and endangered species in 1986 and now there are 62. The forests include several unique ecological communities, based on unusual soil or geological properties, such as pebble plains that are found nowhere else in the world.

Management challenges related to wildlife and plants include:

- balancing the demands of people with conserving habitat for imperiled species. The primary challenge is to neutralize or even reverse the trend toward listing any species.
- finding solutions to problems in freshwater aquatic habitats and montane meadows that are relatively uncommon in southern California and have been substantially modified by dams and diversions. These are the areas on the forests that support a relatively large number of imperiled species as well as places where people like to play because of water, shade, and cooler temperatures.
- developing education programs so that people learn that the simplest of activities, such as walking up a creek, may threaten an extremely rare or vulnerable species that may live there.

- sustaining water resources for riparian areas and wetlands where many of the streams are impounded or diverted for human use.
- working in nontraditional formats to collaborate with local communities and governments to help restore linkages between the forests. Similarly, many people are recognizing the challenge for communities and government organizations to work together to restore riparian connectivity along the streams running from the forests through communities and eventually to the ocean.
- arresting the spread or eradicating invasive nonnative plant and animal species that displace, prey upon, or otherwise harm native species that live in terrestrial or aquatic habitat.

In the end, the fundamental challenge is for the communities of southern California to collaborate to find 'urban' solutions to 'forest' problems. The challenge manifests itself in the ability of people to work together in a nontraditional, coordinated, collaborative network of tribes, communities, government agencies, groups, organizations, and individuals to sustain the presence of our southern California national forests for the future; for our children and their children. The challenge includes working together to define the place of the forests as the backdrop to, and respite from, the urbanized web of communities that surround them.

Vision

The national forests of southern California provide a balanced and sustainable flow of goods and services for a growing diverse population while ensuring long-term ecosystem health, biological diversity and species recovery.

Forest watersheds are managed to provide many benefits including flood protection and quality drinking water for downstream communities, as well as protection of urban-wildland interface areas from wildfire. They offer a haven for all plants and animals, and provide unique and irreplaceable habitat for threatened, endangered and sensitive species.

The national forests offer an escape from busy urban life by providing much needed open space and a wide variety of recreation opportunities. They serve as an outdoor classroom, a "living laboratory" for learning about our natural and cultural heritage and the importance of conservation.

Strategic Goals

Government Performance and Results Act Priority Goals

The GPRA priority goals for the Forest Service are provided in the Forest Service National Strategic Plan (2003 Revision). The priority goals embody the Forest Service's many areas of responsibility, as captured in the agency's mission statement: "The mission of the USDA Forest Service is to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations." Land management plans further refine these goals by developing desired condition statements and forest-specific objectives. The land management plan identifies the role each forest plays in working toward these national goals.

Goal 1: Reduce the risk from catastrophic wildland fire [USDA Objectives 5.1 and 5.2]

Outcome: Reduced risk to communities and the environment from catastrophic wildland fire by improving the health of the nation's forests and grasslands.

"A Collaborative Approach for Reducing Wildland Fire Risks to Communities and the Environment: 10-Year Comprehensive Wildland Fire Strategy" (Department of Interior and Department of Agriculture, 2001) describes the need to reduce the risk of wildland fire to communities and the environment because:

- increased population growth in the wildland-urban interface place more citizens and property at risk;
- many of the traditional approaches to land management and suppression of wildland fire have resulted in dense, diseased or dying forests, which has contributed to severe fires and increased threats to communities and ecosystems; and
- post-fire ecosystem health problems from insects, pathogens, and invasive species are increasing.

Miles of rural landscape once buffered urban areas from the effects of wildland fire. Now forests are increasingly part of the wildland-urban interface, creating a greater challenge for fire protection. Recent research has identified 73 million acres of National Forest System lands and 59 million acres of privately-owned forestland at high risk of ecologically destructive wildland fire (condition classes 2 and 3, Fire Regime I and II) (Schmidt et al., 2002).

Goal 2: Reduce the impacts from invasive species [USDA Objectives 5.1 and 5.2]

Outcome: Improve the health of the nation's forests and grasslands by reducing the impacts from invasive species.

Invasive species, particularly insects, pathogens, plants, and aquatic pests, pose a long-term risk to the health of the nation's forests and grasslands. These species interfere with natural and managed ecosystems, degrade wildlife habitat, reduce the sustainable production of natural resource-based goods and services, and increase the susceptibility of ecosystems to other disturbances such as fire and flood. Rampant population growth and impact often occurs when new organisms are introduced into ecosystems and their natural enemies do not follow. Habitat fragmentation (the division of forest and grassland habitat into smaller, more isolated patches) limits containment and eradication of invasive species.

Economic impacts to forests and grasslands from invasive species currently exceeds \$4 billion per year, without considering the cost of environmental consequences, such as loss of native fauna and flora in large areas. The best

defense against invasive species is either preventing their introduction or aggressively eradicating newly detected pest species. The Forest Service accomplishes both courses of action by implementing the National Invasive Species Management Plan in cooperation with other USDA agencies, other federal departments, States, tribes, and private sector partners.

Goal 3: Provide outdoor recreation opportunities [USDA Objective 5.1]

Outcome: Provide high-quality outdoor recreational opportunities on forests and grasslands, while sustaining natural resources, to help meet the nation's recreation demands.

By mid-century our nation's population is projected to increase by nearly 50%. Simultaneously, public access to privately-owned forestland is expected to continue to decline. This situation will increase the pressure on public lands to provide additional recreation opportunities. If public lands are to continue to provide additional recreation benefits without experiencing unacceptable impacts to resources, emphasis must be placed on effective management solutions. In particular, it is critical that we improve management of off-highway vehicle access and use on National Forest System lands to preserve high-quality experiences for all recreational users.

Goal 4: Help meet energy resource needs [USDA Objective 5.1]

Outcome: Consider opportunities for energy development and the supporting infrastructure on forests and grasslands to help meet the nation's energy needs.

The nation's forests and grasslands play a significant role in meeting America's need for producing and transmitting energy. Unless otherwise restricted, National Forest System lands are available for energy exploration, development, and infrastructure occupancy (e.g., well sites, pipelines, and transmission lines).

Goal 5: Improve watershed condition [USDA Objectives 5.1 and 5.2]

Outcome: Increase the area of forest and grassland watersheds in fully functional and productive condition.

An estimated 3,400 towns and cities currently depend on National Forest System watersheds for their public water supplies. Our national forests and grasslands contain more than 3,000 public water supplies for campgrounds, administrative centers, and similar facilities. Communities that draw source water from national forests and grasslands provide water to 60 million people, or one-fourth of the nation's people. Although most forested watersheds are in fully functioning or satisfactory condition, many streams on National Forest System lands do not meet State water-quality standards. Some municipal watersheds, especially in the West, are at risk from catastrophic wildland fire and from impacts due to excessive use. These problems are compounded by land parcelization. The loss of valuable corridors connecting National Forest System land with other undisturbed tracts of land increases the difficulty of effectively managing watershed conditions. Sustaining functional watershed conditions over time maintains the productive capacity of our land and water.

Goal 6: Mission related work in addition to that which supports the agency goals [USDA Objectives 5.1 and 5.2]

Outcome: Improve the productivity and efficiency of other mission-related work and support programs.

The Forest Service provides direction for natural resource stewardship through direct land management practices, indirect management under partnership agreements, and research and development programs. The agency also provides many goods and services such as recreational opportunities, clean water, and wood products to the American people. We consistently strive to maintain the organizational structure and capacity to deliver the necessary mission work.

Desired Conditions

The following section helps paint a picture of what national forest resource conditions are expected to look like as management activities are implemented over the life of the land management plan. These desired conditions are statements of how the national forests of southern California can support progress toward the goals of the National Strategic Plan as well as those goals that are unique to the southern California environment.

Resource Management

Fish, Wildlife and Plant Habitat

Habitats for federally listed species are conserved, and listed species are recovered. Habitats for sensitive species and other species of concern are managed to prevent downward trends in populations or habitat capability and to prevent federal listing. Habitat conditions are stable or improving over time as indicated by the status of management indicator species. Flow regimes in streams that provide habitat for TEPCS aquatic and riparian dependent species are sufficient to allow the affected species to persist and complete all phases of their life cycles.

Desired Condition: Vegetation condition is managed toward the desired conditions identified for each habitat grouping listed under Restoration of Forest Health and Riparian and Aquatic Habitat Conditions.

Monitoring and Evaluation: See the monitoring and evaluation section for each habitat group listed under Restoration of Forest Health and Riparian and Aquatic Habitat Conditions. Management indicator species will be monitored as shown below.

Table 1.1 Monitoring Management Indicator Species

Management Indicator Species (MIS)	Sensitivity To Management Activities	Monitoring Method	Measure
Big-cone Douglas-fir	One or more planning cycles	Forest Inventory and Analysis (FIA)	Trend in abundance and demography
Spotted owl	Multiple planning cycles	R5/F&G protocol	Occupied territories
White fir	One planning cycle	FIA	Trend in abundance and demography
Black oak	One or more planning cycles	FIA	Trend in abundance and demography
Coulter Pine	One or more planning cycles	FIA & aerial photomonitoring	Trends in age class distribution
Song sparrow	Less than one planning cycle	Riparian Bird Point Count Protocol	Trends in abundance and occupancy
Arroyo toad	One planning cycle	Monitoring of selected locations	Egg masses
Mountain lion	More than one planning cycle	In cooperation with California DF&G	Trend in abundance and demography
Blue oak, Valley oak, Engelmann oak	One or more planning cycles	FIA	Trend in abundance and demography
Mule deer	One or more planning cycles	In cooperation with California DF&G	Trend in abundance and demography

Fish and Game Habitat

Habitat conditions sustain healthy populations of native and desired nonnative game and fish species. Wildlife habitat functions are maintained or improved, including primary feeding areas, winter ranges, breeding areas, birthing areas, rearing areas, migration corridors, and animal concentration areas.

Desired Condition: Vegetation conditions are managed toward the desired conditions described for each habitat grouping listed under Restoration of Forest Health.

Monitoring and Evaluation: See the monitoring and evaluation sections under Restoration of Forest Health.

Restoration of Forest Health

The present condition of the vegetation on the four southern California national forests has been influenced by a century of fire management (mostly fire suppression) as well as by other land use practices such as grazing and mining. Because north-to-south and east-to-west changes in climate act in concert with complex geology and topography, there are an astonishing variety of vegetation types represented in the four forests. The variability and integrity of nearly all southern California plant communities are under the direct control of several dominant fire regimes. In this section we address how these plant communities, and the wildlife habitats they provide, are affected by past and future changes in fire regimes.

Over the long term, the desired condition is to perpetuate plant communities by maintaining or reintroducing fire regimes that are appropriate to each type while protecting human communities from destructive wildfires. For example, remote conifer forests can be managed using a fire regime that may be considerably different from the one that has been imposed by fire suppression. The montane conifer forests that burned frequently in the past because of seasonal lightning storms now burn rarely because fire suppression has been successful at stopping fires when they are small. One way to return these forests to a less flammable condition with better representation of tree species is to use prescribed burns at shorter intervals.

In contrast to this regime, vegetation near the wildland-urban interface needs to be managed more intensively with community protection as the primary goal. In these areas, portions of chaparral and coastal sage scrub must be managed more frequently than their natural fire regime.

Natural habitat conditions support viable populations of native species. Management actions move or maintain habitat conditions toward a desired range of variability and maintain or improve conditions for wildlife and plant species. The variety (number) and distribution of all native plant communities are retained. An appropriate mixture of age classes and/or succession stages is maintained for each of the key vegetation types (e.g. chaparral, coastal sage scrub, mixed conifer forest). Species composition for all native plant communities falls within the natural range of variations as described in local quantitative plant community classifications such as the Manual of California Vegetation.

Montane Conifer Forests (378,414 acres)

These habitats support 30 animal and 38 plant species of concern.

Over the last century, fire suppression has altered fire regimes in the montane conifer forests of southern California. Because of the success of fire suppression, most of these areas have missed several cycles of low to moderate intensity wildfires that would have thinned the forests and reduced the accumulation of understory fuels that naturally develop between fires.

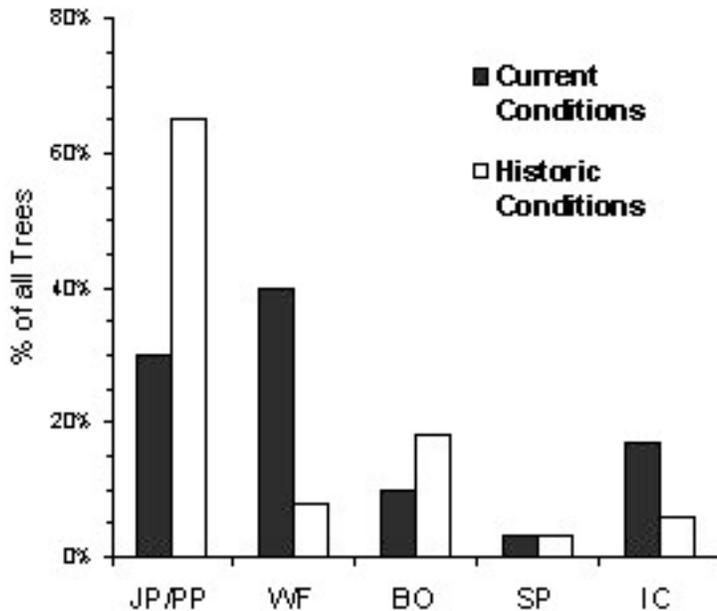
Currently, many forested areas have stand densities that are much higher than they ever were historically. Stand overcrowding has accelerated and aggravated drought-caused mortality making the forests susceptible to widespread insect and disease outbreaks ultimately setting the stage for large-scale, stand-replacing wildfires. The recent historic five-year drought triggered bark beetle infestations that killed drought-weakened trees over thousands of acres of forested vegetation, especially in the San Bernardino, San Jacinto and Palomar Mountains. The drought also effected hundreds of thousand of acres of normally drought-tolerant chaparral.

In October 2003, strong, dry Santa Ana winds pushed several wildfires across southern California,

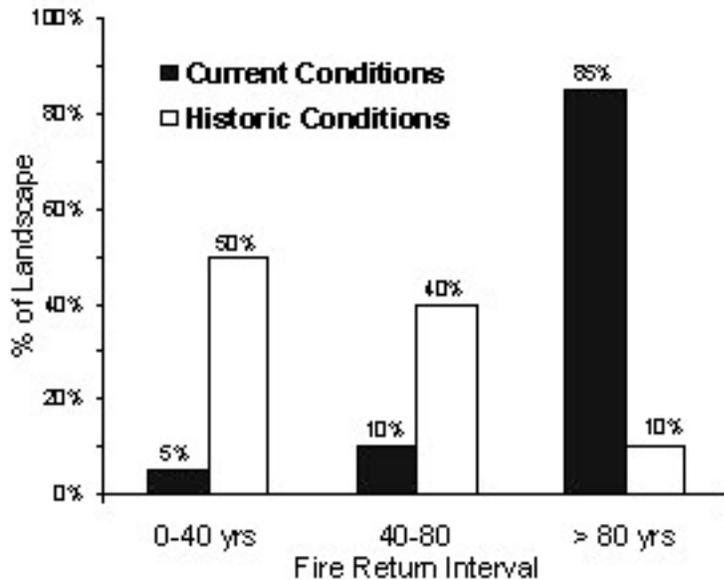
consuming over 700,000 acres in a one-week period. Many southern California rural and suburban communities were devastated by loss of life and property and the disruption of the lives of many thousands of individuals.

Montane conifer ecosystems were severely disrupted by these fires. Wildfires have always played a role in forest ecosystems of southern California, but in terms of size and severity, recent fires are well outside the pre-suppression range of variability. Dead trees, accumulated understory fuels and overly dense stands resulted in crown fires that cut wide swaths through both public and private lands.

In addition to severely burned forests, mountain resort communities that provide southern California with much needed relief from the pressures of urban life were heavily impacted by these extensive crown fires. For example, fires in Lake Arrowhead in the San Bernardino Mountains and in Cuyamaca Rancho State Park destroyed much of the recreational infrastructure along with the forests that attract so many visitors.



Desired Condition: As destructive as the October 2003 fires were, many other areas of montane forests remain at risk from similar fires. Over 90% of the drought-affected or "dead tree" forests were not burned in October 2003 and remain at high risk of producing future catastrophic wildfires. A major focus of National Forest management will be to mitigate these risks through an active vegetation management program. Further, restoration of severely burned forest ecosystems is also a key management objective. Long term management goals for the remaining unburned forestland will be (1) to create forests that are more resistant to the effects of drought, insect and disease outbreaks and stand-killing crown fires, (2) to encourage a stand structure that emphasizes large-diameter trees, and (3) to encourage tree recruitment that maintains a better mix of species.



On more productive, moist growing sites forests need to provide dense canopy cover since many wildlife species, including the spotted owl (MIS species, also see species management guide), require these high-cover conditions. However, the general direction of forest management will be toward more open, less dense forests than exist today. The interval between fires will be shortened so that stand-threatening ladder and ground fuels do not become excessive. The complete elimination of stand replacing fires, however, is not realistic since during wildfires weather, topography and fuels create localized patches of high intensity, passive crown fires. Rather, the goal will be to reduce the likelihood of the type of fires that burned through forests in October 2003.

Monitoring and Evaluation: Progress toward these desired conditions will be monitored annually by reporting accomplishments in vegetation treatments. Every fifth year, progress toward desired conditions will be evaluated using the fire condition class rating, focusing on reducing acreage in classes 2 and 3 (forest stands at risk) and increases in condition class 1. In addition, Forest Inventory and Analysis data from regional or national monitoring programs will evaluate whether indicator tree species are within the natural range of variability. Occupancy of spotted owl (MIS) territories will be used as another indirect indicator of old-forest habitat conditions (see table 1.1).

Chaparral (2,000,000 acres)

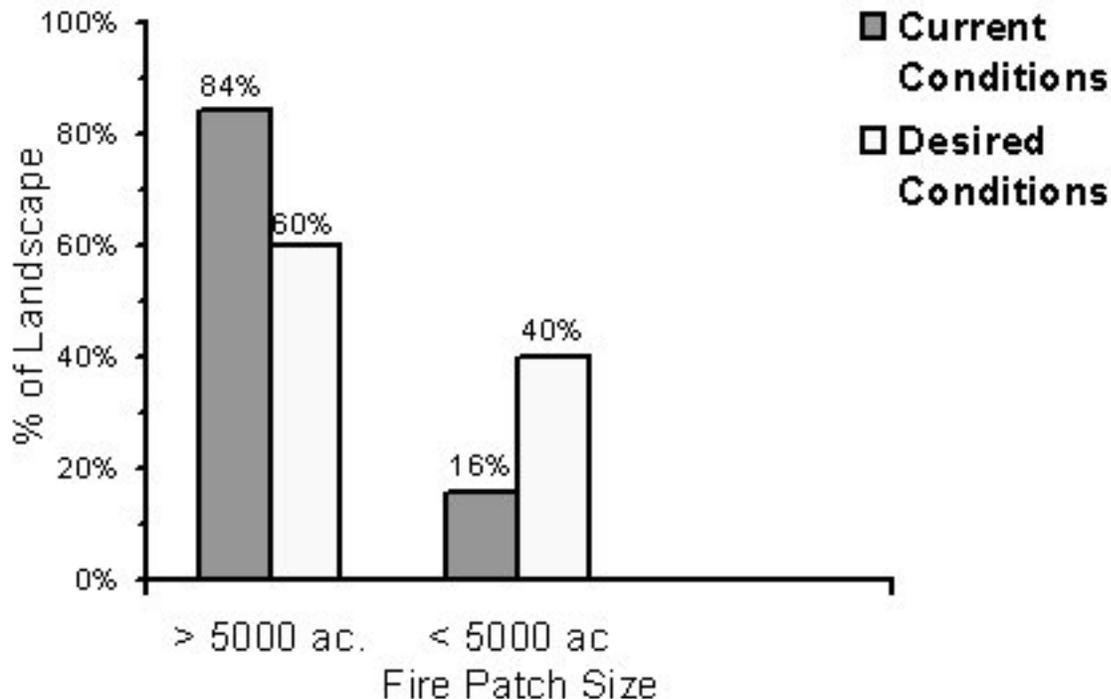
These habitats support nine animal and 68 plant species of concern.

Chaparral shrublands cover almost two million acres of National Forest System land in southern California. The combination of California's Mediterranean climate, steep topography and a continuous fuelbed of shrubs covering thousands of acres guarantee that unsuppressed wildfires will burn large tracts of land. It is important to note, however, that high intensity, stand-replacing fires have burned chaparral for millennia and, except for areas of unusually high ignition rates at the wildland urban interface or next to major transportation routes, the interval between fires probably has changed little from prehistoric times. Thus, unlike montane conifer forests, fire size and intensities in chaparral are still within the natural range of variability.

Largely because human populations in southern California have increased exponentially in the last fifty years, urban and suburban development has expanded unchecked into the fire-prone wildlands. One unwanted outcome of this growth is that chaparral fires increasingly pose a major threat to life and property, as was made clear by the fires of October 2003 and by other fires in recent years. Indeed, most of the homes lost in the recent fires can be attributed to high-intensity fires spreading uncontrolled from chaparral into the wildland-urban interface (WUI).

Vegetation management strategies to mitigate the effects of large-scale chaparral fires on human communities must focus on protection. Of necessity, there will be a heavy emphasis on direct community protection by

removing shrublands immediately adjacent to communities as well as by strategically creating areas of young, less flammable vegetation that halts or significantly slows the rate of wildfire spread. To complement these management activities, local building codes and land use zoning needs to ensure that homes at the urban-wildland interface are constructed of nonflammable exteriors and that communities are designed in a way that minimize their exposure to shrubland fires. The role of the Forest Service in this effort is to address the vegetation management side of the equation on public lands.



Desired Condition: Chaparral is resilient to a wide range of fire return intervals and fire size. Nevertheless, the desired condition for chaparral is to create a more balanced mix of fire intensities that do not alter species composition but moves toward an overall reduction in fire size over time. At present, 84% of the burn acres in chaparral are caused by fires that exceed 5,000 acres. This is in sharp contrast to the desired condition where 40% of burned acres are in fires that exceed 5,000 acres. Fires that create openings of less than 5,000 acres of early successional (young/new vegetation material) are more likely to reduce the chance of destructive fires at the wildland urban interface. Furthermore, this mosaic of age classes favors mule deer, a management indicator species.

Monitoring and Evaluation: Annually the forests will report the acres of chaparral vegetation treated both within and outside the urban wildland interface. Every fifth year the forests will evaluate progress toward the desired condition of reducing the average fire size. The forests also will use deer (MIS) populations as indicators of trends in wildlife habitat conditions in chaparral (see table 1.1).

Coastal Sage Scrub (522,735 Acres)

These habitats support five animal and seven plant species of concern.

Coastal sage scrub is the most flammable of the native shrub communities. Fires can be more frequent in this vegetation type because it forms a continuous fuelbed within five to ten years of the last fire. Shrub species are particularly flammable because they have a high percentage of volatile oils and many naturally die back in response to summer drought (drought-deciduous). Thus coastal sage scrub is capable of burning under a wider range of conditions and at a younger age than chaparral. In addition, mature coastal sage scrub provides important habitat for threatened and endangered species, including the California gnatcatcher.

In areas with high rates of ignitions, coastal sage scrub is at risk of type conversion to grasslands because of excessively short fire return intervals. For example, coastal sage scrub in portions of the Upper San Diego River of the Cleveland National Forest has burned three times since 1995. For this reason, management will emphasize prevention to reduce the number of ignitions near populated areas and community protection will focus on the creation and maintenance of fuelbreaks and fire safe construction of structures at the wildland-urban interface.

Desired Condition: The desired condition for coastal sage scrub is to increase the interval between fires and reduce fire size through fire prevention and suppression. Establishment of community fuelbreaks immediately adjacent to structures in the wildland-urban interface will reduce the threat of frequent fires and fires burning into residential areas.

Monitoring and Evaluation: Annually monitor the miles of community fuelbreak construction. Every fifth year evaluate the age class distribution of coastal sage scrub to determine if forests have been successful in lengthening the fire-return interval, especially in areas of high ignition risk.

Lower Montane Forest Habitats (272,929 Acres)

These habitats support 17 animal and one plant species of concern.

Lower montane forests generally occur between elevations of 3,000 and 5,500 feet and are composed of tree species such as bigcone Douglas-fir, Coulter pine, canyon live oak, black oak, coast live oak and, in the northern Santa Lucia Mountains, a combination of hardwood species together called mixed evergreen forests. In general, these forests are patchily distributed across the landscape and are widely interspersed in expansive areas of chaparral. As a result, they generally burn at the same frequency of the surrounding chaparral. Bigcone Douglas-fir is the exception. Because it occupies relatively fireproof topographic sites such as cliffs, steep slopes and landslides, it has a much higher stand-to-stand variability in fire frequency and intensity.

Aerial photographic and written historic evidence indicates that the extent of bigcone Douglas-fir on the Angeles and San Bernardino National Forests has declined in the last century. This loss has been mainly attributed to more frequent high-intensity fires in chaparral that have penetrated these forests killing entire stands. In recent years, extensive drought-caused dieback of bigcone Douglas forests has occurred in the San Bernardino National Forest, especially in low-elevation forests. There is concern that these losses may have further reduced the area of this species. Bigcone Douglas-forests are of special conservation interest because they are the preferred habitat for the California spotted owl.

Desired Condition: The desired condition is to perpetuate lower montane forests in their current aerial extents. In the case of bigcone Douglas-fir, vegetation management will focus on strategically reducing chaparral fuel loading to reduce the risk of stand-killing crown fires

Monitoring and Evaluation: Every five years the aerial extent of lower montane forests will be evaluated to determine trends in forest cover. In addition, territory occupancy rates by spotted owl will be used to assess owl habitat quality of these forests.

Oak Woodland, Savanna, Grassland Habitats

These habitats support 17 animal and 10 plant species of concern.

Oak woodlands and savannas are characteristically two-layered plant communities consisting of a tree overstory that ranges from 10 to 60 percent and a continuous understory herbaceous layer made up of a species-rich mixture of forbs and grasses. The most common oaks in these woodlands and savannas are coast live oak and blue oak. Engelmann oak and valley oak are much less common and more restricted in their distributions.

Habitat loss due to urban development has been the major threat to Engelmann oak on private lands making populations on the CNF essential to the conservation of this species. In the case of valley oak woodlands a combination of urbanization, agricultural conversion and poor to non-existent natural regeneration has imperiled this habitat type throughout the State. Natural recruitment of this species may be inadequate to maintain valley oak populations over time and without management intervention, some areas may eventually convert to annual grasslands. It is expected that some areas of oak woodland and savannas, especially in Engelmann oak, valley oak and blue oak that are dominated by large, old trees with little or no natural regeneration will begin to convert to

annual grasslands as old oaks die without replacement.

Desired Condition: The desired condition is to retain existing oak woodlands and savannas. Future management in oak woodlands and savannas prevents the conversion of these savannas and woodlands to annual grasslands or other non-oak vegetation.

Monitoring and Evaluation: Every five years monitor tree mortality in mapped areas of blue oak, valley oak and Englemann oak savannas that are likely to convert to grasslands in the next 15 years because there is inadequate recruitment of saplings into the tree layer. Target areas in which constant losses are occurring for management intervention and restoration.

California annual grassland is a single-layered herbaceous community made up entirely of forbs and grasses. Most grass species are non-native, having been introduced from Europe and Asia during the period of Spanish colonization of California, but forb species are still mainly native.

Annual grasslands often are interspersed in oak woodlands and savannas, but they also occur as isolated islands in chaparral called potreros. In the Monterey region of the Los Padres National Forest, coastal prairies contain numerous non-native annual grassland species but they also harbor many native plant species found nowhere else on the four forests.

Desired Condition: Retain annual grasslands in their current extent. Restoration efforts focused on grasslands that have been overrun by invasives like yellow star thistle, minimize changes in grassland species composition by preventing the invasion and spread of non-native exotic species.

Monitoring and Evaluation: Every 5 years monitor a representative sample of annual grasslands for invasive species.

Monterey Coastal Habitats (99,872 acres)

These habitats support five animal and five plant species of concern.

The Monterey Ranger District in the northern Santa Lucia Range sits at the transition between the northern and southern California floras. As a consequence, there is a rich array of plant communities in this region found nowhere else in the other three national forests such as coast redwood riparian forests, mixed evergreen forests, Franciscan, Diablan and Venturan coastal sage scrubs, coastal prairies and the endemic Santa Lucia fir. This also is a region of periodic, large, lightning-ignited wildfires. In the last 30 years two fires greater than 100,000 acres have burned in the district.

Desired Condition: The desired condition is to perpetuate the existing mosaic of plant communities in their current distributions and relative abundances. The major threat to the region's vegetation is human-caused wildfires that burn in the interval between lightning fires.

Monitoring and Evaluation: Every five years monitor and evaluate the condition of plant communities at the greatest risk from frequent fires such as Sargent cypress, ponderosa pine forests, coastal sage scrub and perhaps Santa Lucia fir.

Desert Montane (288,096 acres)

These habitats support 18 animal and 28 plant species of concern.

Invasion of nonnative grasses may be increasing the likelihood of excessively frequent fire. The open nature of vegetation allows for illegal off-route vehicle travel.

Desert woodlands, forests and scrub are made up of sparse to dense singleleaf pinyon - California juniper woodlands and forests, juniper woodlands, semi-desert chaparral, sagebrush scrub, Joshua tree woodlands, and other desert scrub types. In the past, pinyon woodlands on the San Bernardino and Los Padres National Forests have burned in stand-replacing fires that typically have occurred at long intervals (greater than 75 years).

In much of the Mojave, Great Basin and Sonoran Deserts, intense fires have been followed by the invasion of exotic grass such as the ubiquitous cheatgrass. The interval between fires has been greatly reduced due to a more continuous and inflammable understory. There are concerns that more frequent fires, to which singleleaf pinyon

and other desert species lack resilience, may convert extensive areas of desert vegetation to grasslands. While the potential for this conversion on national forest lands is a definite possibility, there is no indication that cheatgrass invasion has as yet become a widespread problem in these vegetation types.

Desired Condition: The overall desired condition is to maintain long fire-free intervals in these types and prevent frequent fires from eliminating them or significantly reducing their distributions. This will be accomplished by a heavy emphasis on prevention. Because desert woodlands and scrub on the Los Padres National Forest have burned naturally at a higher frequency than those on the San Bernardino, fire management objective in these types will tolerate shorter intervals between fires (greater than 100 years).

Monitoring and Evaluation: Monitor fire frequency in desert woodlands and scrub every five years. Examine areas with excessively high fire frequency for possible conversions to other types (e.g., grasslands).

Desert Scrub (20,682 acres)

These habitats support 18 animal and 28 plant species of concern. Invasion of nonnative grasses may be increasing the likelihood of excessively frequent fire. The open nature of vegetation allows for illegal off-route vehicle travel.

Desired Condition: Maintain long fire-free intervals (100 - 300 years) in desert montane plant communities. Restrict vehicle use to designated roads and trails.

Monitoring and Evaluation: Annually document the extent of off-route travel. Every fifth year evaluate fire history data to determine if fire management has been successful in maintaining a long fire-free intervals.

Alpine and Subalpine Habitats (15,604 acres)

Alpine and subalpine habitats cover a small portion of high-elevation (greater than 8,000 ft.) areas of Los Padres, Angeles and San Bernardino National Forests. Subalpine conifer forest is the most extensive vegetation type on the forests and is composed of lodgepole pine, limber pine, white fir, and western juniper. Canopy cover is generally sparse except where dense lodgepole stands can be found in and around meadows and in basins. Ecological conditions including fire regimes in these habitats are within the range of natural variability.

Desired Condition: The desired condition is to maintain long fire-free intervals in subalpine habitats to encourage the natural sporadic tree recruitment and to limit the effects of human trampling on alpine plant communities.

Monitoring and Evaluation: Every five years assess the frequency of fires in subalpine forests and evaluate the degree of recreational disturbance in alpine vegetation.

Gabbro (81,680 acres)

This habitat supports 15 plant species of concern.

Gabbro habitats are small disjunct areas that are derived from gabbro, a type of ultra mafic rock. Past disturbance has been mostly from ground disturbance for infrastructure development and the influence of invasive species.

Closed cone conifer trees (e.g. Cuyamaca, and Tecate cypress) are those that maintain an aerial seed bank that is released following the death of the tree either by insect and disease, drought, or more likely, crown fire. Unlike the montane conifer forests, these trees grow in smaller patches intermixed with the chaparral. These trees are threatened by both excessively frequent fire and extremely long fire-free intervals. As an example, Cuyamaca cypress is found on only 293 acres on the west slope of Cuyamaca Mountain. These stands all burned in the October 2003 fires and had previously burned in the 1950 Canejos fire and a small portion burned in the 1970 Boulder fire. It is assumed that these trees had a sufficient aerial seed bank to reestablish following the recent fires; however if a subsequent fire occurs before the seed bank is reestablished the trees could be lost.

Desired Condition: The desired condition is to retain low levels of ground disturbance in these areas. For closed cone conifer the desired condition is to establish 35- to 100-year stand-replacing fire intervals retaining well

distributed patches of closed cone forest species across the landscapes where they naturally occur. Loss of the aerial seed bank is avoided by preventing either excessively frequent fires or fires that burn after significant mortality has occurred.

Monitoring and Evaluation: Annually the Cleveland National Forest will report on the level of ground disturbance in serpentine habitats. Every fifth year an evaluation of the habitat status will document how the forest has met this desired condition.

Serpentine (31,470 acres)

Serpentine habitats are typically small, disjunct areas that are scattered about the northern Santa Lucia Ranges of Los Padres National Forest as well as in several localized areas of the Cleveland National Forest (e.g., Pleasants Peak candidate Research Natural Area). Serpentine soils develop from ultramaphic rocks and have a highly skewed calcium:magnesium (Ca:Mg) ratio, making them inhospitable to most plant species. As a result, these habitats support many endemic plant species. In fact, on the Los Padres National Forest the Alder Creek, Lion's Den and Cuesta Ridge Botanical Areas have been set aside to protect Sargent cypress and rare taxa growing almost exclusively on this soil type. There are nine plant species at risk that are endemic to serpentine. Past disturbance has been mostly from mining of economic minerals that are associated with serpentinite.

Desired Condition: Ground disturbing activities such as mining are significantly limited. In the case of Sargent cypress and knobcone pine, short-interval fires that would preclude the development of aerial cone banks sufficient to regenerate the stands are prevented.

Monitoring and Evaluation: Los Padres and Cleveland National Forests will report annually on ground disturbing activities in serpentine habitats. Every five years the forests will conduct an evaluation of these areas to see that the desired condition is being met.

Pebble Plain (4,000 acres)

This habitat contains 17 plant species at risk.

Pebble plains are entirely confined to a 92-mile area of the Mountaintop Ranger District in the northeastern San Bernardino Mountains. They occur as small, scattered, open habitats in a matrix of conifer forests and woodlands. The unusual clay-quartzite soils in these plains are derived from an ancient lake bed and support one of the most threatened and biologically unique plant communities in the San Bernardino National Forest or in southern California. A combination of easy road access and flat terrain has resulted in a high level of unauthorized off-highway vehicle use of these plains, resulting in significant damage to some of them.

Desired Condition: Pebble plains habitats are conserved where they occur on public lands (see habitat management strategy) and protected from incompatible use. Those plains degraded by past use are restored. Listed threatened and endangered species are recovered.

Monitoring and Evaluation: The San Bernardino National Forest annually will report on conservation actions taken to preserve, protect and restore pebble plains habitats. Every five years, the forest will evaluate the conservation status of all the pebble plains and will document progress toward achieving the desired conditions.

Carbonate Habitat (20,893 acres)

There are 10 plant species-at-risk associated with the carbonate habitat.

In an area of 15,600 acres on the eastern flank of the San Bernardino National Forest, limestone and dolomite soils have developed from outcrops of limestone bedrock. Like serpentine and gabbro soils, carbonate soils are low in fertility and support an assortment of plant species and plant communities found nowhere else in southern California. The principal disturbance threat to carbonate habitats has been mining for high-grade carbonate deposits. Almost all carbonate habitat on national forest lands is under mining claims.

Carbonate habitats are highly sensitive to ground disturbance and vegetation removal. Once disturbed, vegetation recovery is exceedingly slow. Although mining remains the primary threat to this habitat, illegal off-highway

driving is posing an increasing threat to these disturbance-sensitive areas. Recently, however, an intensive collaborative effort has led to the development of a carbonate endemic plant conservation strategy designed to improve the protection of this habitat.

Desired Condition: Key carbonate habitats are withdrawn from mineral entry as identified in the habitat conservation strategy. Areas disturbed through past activity are restored. Incompatible uses are prevented.

Monitoring and Evaluation: The San Bernardino National Forest will annually report on accomplishment of conservation measures. Every five years the forest will evaluate the status of this habitat and will document successes in reaching the desired condition.

Riparian and Aquatic Habitat Condition

Riparian and aquatic ecosystems are those geographic areas on all four southern California forests associated with water. They play an important role in watershed functioning and in the survival of most of the species-at-risk. These ecosystems contain aquatic and terrestrial features and lands adjacent to perennial, intermittent, and ephemeral streams as well as in and around meadows, lakes, reservoirs, ponds, wetlands, vernal pools, seeps, and springs and other water bodies.

Riparian areas are where slope and fluvial processes are tightly interconnected; terrestrial and aquatic systems strongly interact; and where aquatic species and many terrestrial animals migrate and travel throughout the forests. Many species in southern California depend on water and riparian areas. These riparian-dependent resources include fish, amphibians, reptiles, fairy shrimp, aquatic insects, plants, birds, mammals, soil and water quality, and other species that owe their existence to the area.

Riparian Conservation Areas (RCAs) are administratively designated areas designed to protect riparian and aquatic ecosystems and the dependent natural resources associated with them. A variety of forest management activities occur within RCAs, both as planned activities and as emergency actions. These land management activities have the potential to disrupt ecosystem processes and interactions in riparian and aquatic environments which can result in adverse effects. Although southern California meadows are generally “dry meadows” and are not truly “aquatic”, they are associated with high water tables during portions of the year. Dry meadows are susceptible to impacts from compaction, erosion and head-cutting.

Desired Condition: Both riparian and aquatic ecosystems are managed primarily to protect and maintain water quality, site productivity, channel stability, riparian vegetation, and habitat for riparian dependent species through the designation of riparian conservation areas (RCAs). Watercourses are in proper functioning condition and support healthy populations of native and desirable nonnative of riparian dependent resources.

Monitoring and Evaluation: Annually report acres of riparian and lake habitat and miles of stream habitat restoration. Every fifth year monitor and evaluate trends from the results of aquatic insect monitoring to determine stream conditions related to water quality.

Physical Landscape Condition

Watershed Function

The National Forests generally provide the headwaters and primary source areas for most of the major river systems in southern California. Streams and rivers offer habitat to numerous aquatic and riparian dependent species-at-risk found on all of the forests, in addition to providing water for municipal, commercial and agricultural uses off of the forests. Watershed conditions, or watershed health, on the Forests vary depending upon the amount of disturbance that has occurred within each watershed and the affect of the disturbance on the natural integrity of the watershed as a whole.

Each of the 88 watersheds on the southern California National Forests have been analyzed and have been assigned a watershed condition rating. These ratings were based on quantitative indicators about hydrology, soils, and geology, and professional judgment indicators such as floodplain connectivity, water quality and quantity, riparian vegetation, channel stability and aquatic integrity. Almost half (48%) of the watersheds received a good condition rating, 38% were rated in moderate condition, and 13% were given a low or poor rating. Watersheds

with a condition rating of poor frequently contain only a small amount of NFS land relative to the total watershed acreage. Most of the conditions leading to the poor ratings were associated with high road densities, agriculture and urban developments within the floodplains off National Forest System lands.

Desired Condition: National Forest watersheds are healthy, dynamic and resilient, and are capable of responding to natural and human caused disturbances while maintaining the integrity of their biological and physical processes.

Watersheds, streams, groundwater recharge areas, springs, wetlands and aquifers are managed to assure the sustainability of high quantity and quality water. Where water extraction or diversion is allowed, those facilities should be located as close to the boundary of the forest as possible in order to avoid long-term adverse impacts to forest water and riparian resources. The Forest Service has acquired water rights where necessary to support resource management and healthy forest conditions. Ecosystems are protected from hazardous materials.

Monitoring and Evaluation: Annually acres of soil and water improvement are reported. Every fifth year watershed condition is evaluated to determine if the forests have made progress in improving condition ratings including review of macro-invertebrate data as an indicator of water quality.

Geologic Resources

Desired Condition: Geologic resources are managed to protect, preserve and interpret unique resources and values, and to improve management of activities that affect watershed condition and ecosystem health.

Geologic hazards are identified, analyzed and managed to reduce risks and impacts where there is a threat to human life, natural resources, or financial investment.

Monitoring and Evaluation: Geologic resources and hazards are identified, recorded and monitored for value and risk, respectively.

Landownership Pattern

Land Administration

Desired Condition: Land adjustment administration contributes to the reduction of the complexity of land ownership and consolidates the National Forest System land base; reduces administrative problems and costs; enhances public access and use; supports resource management objectives, including the protection and improvement of habitat condition and linkage. Strategic easements for access and species conservation are acquired. Clear title to National Forest System land is retained. Occupancy trespass is eliminated and National Forest boundaries are clearly posted.

Monitoring and Evaluation: Annually forests will report acres of land adjustment (purchase, easements, etc) and the reasons for that adjustment. Also report annually on miles surveyed to establish clear boundaries and the number of occupancy trespasses resolved. Every fifth year an evaluation of the land ownership complexity will determine if the forests have made progress in reducing the amount of interface with private lands and the number of occupancy trespasses. A map of current ownership and desirable areas for acquisition or exchange will be maintained as a visual display of complexity.

Heritage Resource Condition

Heritage Stewardship

Desired Condition: Significant heritage resource sites are preserved or enhanced. Connections are made with the American people on the importance of public land heritage stewardship through public involvement programs. The past, present, and future of heritage resources' role in ecosystem management, including socio-cultural values in an environmental context, are recognized.

Monitoring and Evaluation: Annually forests will report sites managed to standard (sites inventoried, evaluated, protected, promoted, preserved, restored, rehabilitated, monitored or enhanced). The report will include the number of management plans developed, conflicting site-specific land use activities identified and

resolved, Section 110 targets achieved, the number of public involvement programs/projects initiated, agreements with research entities, reports and data base updates. Every fifth year forests will evaluate if they are making progress in increasing the number of heritage resources protected and managed to standard.

Tribal and Native American Interests

Desired Condition: The forests are maintained in a condition that allows tribes and other Native American groups and individuals to retain traditional connections to the land and to foster both traditional and contemporary cultural uses of the forests. The forests have active agreements and protocols to facilitate consultation and government-to-government relationships.

Monitoring and Evaluation: Annually the forests will report the number and acres of resources protected, conserved or restored; agreements and protocols executed; and number of consultations. Every fifth year forests will evaluate Native American feedback and satisfaction as an indicator of progress toward the desired condition.

Public Use and Enjoyment

Recreation Participation

Desired Condition: Recreation participation, activities and services contribute to visitors' physical and mental well-being and represent a variety of skill levels, needs and desires in partnership with permit holders, private entities, nonprofit/volunteer groups, State, federal and tribal partners. Quality hunting and fishing habitat and access opportunities are available to the public. Facilities and infrastructure are high quality, well maintained, safe, accessible, and consistent with visitors' expectations.

Monitoring and Evaluation: Annually forests will report the number, type and quality of recreation sites, areas, permits and activities, including occupancy/use rates. A facility condition index and maintenance back log will be maintained. Every fifth year forests will evaluate trends in annual indicators and visitor satisfaction surveys to determine if the forest has provided quality recreational experiences that result in increased visitor satisfaction.

Conservation Education and Stewardship

Desired Condition: People connect to the land and to each other through expanded public information, interpretive services, and environmental education programs/activities, with well-supported nonprofit partners in a lead role. Proactive efforts reach both traditional and nontraditional users and lead to a greater citizen understanding, appreciation, advocacy, and participation in forest stewardship and ecosystem conservation. Connections are made with the American people on the importance of public land heritage stewardship through public involvement programs. Recreation and natural resource management as well as conservation education is improved through increased knowledge of social science. The role heritage resources play in the ecosystem management including the role of socio-cultural values within an environmental context, both past, present, and future, is recognized. Better services are supplied to forest visitors through the use of current knowledge of who is using the forests and how.

Monitoring and Evaluation: Each year forests will document the number of citations for depreciative behavior; number of nongovernment organizations, groups and volunteers involved in stewardship activities; and the number of and type of educational programs developed and the number of students reached. Every fifth year forests will evaluate if they have developed an effective interdisciplinary conservation education program that results in greater stewardship and less depreciative behavior.

Landscape Management

Desired Condition: The natural and cultural features of landscapes that provide their "sense of place" are intact. Landscapes possess a vegetation pattern and species mix that is natural in appearance. Built elements and landscape alterations complement landscape characteristics.

Monitoring and Evaluation: Each year forests will report the number of projects that conform to the scenic integrity objectives. Every fifth year forests will evaluate the trend in the number of places moving toward landscape characteristics described in place specific desired conditions.

Law Enforcement

Desired Condition: A safe environment for the public and agency employees is provided while on National Forest System land; natural resources and other property under the agency's jurisdiction are protected.

Monitoring and Evaluation: Each year forests will report on the number of accidents, citations, and acres and type of impact of each illegal activity. Every fifth year forests will evaluate trends in unlawful or criminal behaviors including cumulative impacts to natural resources.

Facility Operation and Maintenance

Facility Administration

Desired Condition: Facilities and infrastructure are high quality, well maintained, safe, accessible, and consistent with visitor expectations and support the built environment image guide principles. Facility maintenance meets established national standards. Structures are well integrated into the landscape and advance environmentally sensitive technology.

Monitoring and Evaluation: Annually forests will report numbers of facilities maintained to standard. Every fifth year trends in the facility condition index and maintenance back log will be evaluated to determine if the forests is making progress toward the desired condition.

Transportation System

Desired Condition: The transportation system of roads and trails is safe, affordable, and environmentally sound, responds to public needs, and is efficient to manage. The system provides public access for recreation, special uses and fire protection activities and supports forest-management objectives. The system is well maintained commensurate with levels of use and available funding. The system is connected to state, county or local public roads and trails. Unnecessary roads and trails are removed and the landscape restored. Rights-of-way to access National Forest System lands satisfy public needs and facilitate planned resource activities. Over the planning period, the number of inventoried unclassified roads and trail is reduced, and the development and proliferation of new unclassified facilities is minimized.

Monitoring and Evaluation: Each year forests will report the number of miles of road and trails, maintained and operated to meet the objective maintenance level and class; the miles of unclassified roads removed or classified into the system. Every fifth year forests will evaluate trends in miles of road and trail facilities that are compatible with the designated land use zone and trends in number of accidents per year.

Non-motorized Trails System

Desired Condition: An environmentally sustainable, integrated system of backcountry, urban and rural nonmotorized trails is maintained. The system can accommodate a range of experience in high-quality settings, and is managed to minimize conflicts while providing opportunities for partnerships, learning, stewardship and mental and physical renewal for a diverse, urban visitor population. The availability of day use "loop hikes" is improved.

Monitoring and Evaluation: Annually forests will report the miles of trail operated to standard, the acres/miles of trail-system impact areas treated, the miles of unclassified trails removed or classified into the system, and the number of accessible day use loop hikes created. Every fifth year forests will evaluate visitor surveys, including number of accidents/complaints to determine if progress toward the desired condition is occurring.

Off-Highway Vehicles (OHV)

Desired Condition: Off-highway vehicle systems provide a range of recreation opportunities, experiences, and challenges for OHV enthusiasts through the development of an integrated system of trails, low maintenance-standard roads, and areas designated as open for OHV use. OHV use is occurring on designated roads and trails. High use areas are managed within capacities in order to maintain the quality of experiences. Facilities that provide access to the OHV system are developed in conjunction with the development of the overall OHV system. Conflicts between OHV enthusiasts and other recreationists, with private lands and homeowners adjacent to National Forest land, and with resource issues are addressed and resolved in a timely manner. Resolutions are consistent with area objectives and management direction.

Monitoring and Evaluation: Each year forests will report the miles of road and trail designated for use by nonhighway licensed vehicles differentiated by vehicle type and by route difficulty level, and the miles of road open to an OHV experience for highway licensed vehicles and differentiated by route difficulty level. Every fifth year forests will evaluate visitor satisfaction surveys including the number of conflicts identified by field staff or reported by the public and the resolution to the complaint to determine if progress is being made toward the desired condition.

Commodity and Commercial Uses

Minerals and Energy Development

Desired Condition: Minerals and energy developments are managed to facilitate production of mineral and energy resources as well as to minimize adverse impacts to surface and groundwater resources and protect or enhance ecosystem health.

Monitoring and Evaluation: Annually forests will report the number of operating plans managed to standard including the number and type of mitigation standards implemented. Every fifth year forests will evaluate the percentage of mineral developments that reduce the surface disturbance footprint and reduce siltation or other sources of environmental degradation.

Livestock Grazing

Desired Condition: Livestock grazing opportunities are maintained commensurate with other resource values in designated livestock grazing areas.

Monitoring and Evaluation: Each year forests will document the number of acres in allotments managed to standard. Every fifth year an evaluation of rangeland condition and trend will determine progress toward the desired condition.

Lands Special Uses (Non-recreation)

Desired Condition: Facilities are centrally located or concentrated on existing sites or designated corridors, minimizing the number of acres encumbered by special use authorizations. Special uses serve public needs, provide public benefits, and conform to resource management and protection objectives. All uses are authorized and are in full compliance with the terms and conditions of the authorization.

Monitoring and Evaluation: Annually forests will report the number of permits managed to standard including number of permits with resource conflicts resolved vs. unresolved. Every fifth year forests will evaluate suitable areas are being used efficiently (minimizing acres encumbered), in harmony with other uses and resources, and environmentally sustainable.

Firefighting and Aviation Management

Community Protection and Safety

Large fires are an inevitable and increasingly common part southern California ecosystems (see vegetation condition). Suburban communities have been developed in more remote areas and urban areas have pushed up into the foothills in many areas. This has led to an explosion in the amount of Wildland Urban Interface areas that are at risk and in need of protection from wildfire. The majority of National Forest System lands in southern California are in the Wildland Urban Interface (WUI) environment.

Desired Condition: Vegetation is treated to enhance community protection and reduce the risk of loss of human life, structures, improvements, and natural resources from wildland fire and subsequent floods. Firefighters have improved opportunities for tactical operations and safety near structures, improvements, and high resource values. By providing for defensible space, public and firefighter safety is enhanced. Local jurisdictional authorities, citizen groups and the Forest Service act together to mitigate hazardous fuel conditions in areas surrounding urban interface, urban intermix, and/or outlying improvements.

Monitoring and Evaluation: Annually each forest will report the number of acres of hazardous fuel reduction in Wildland/Urban Interface (WUI) including those implemented through cooperative agreements. In addition, the number of communities or facilities protected by treatment will be documented. Every fifth year forests will evaluate progress toward the desired condition through an analysis of the status of high hazard and high risk areas.

Place Based Desired Conditions

Place based desired conditions are found in Part 2 for each place.

Angeles National Forest Places

- The Front Country
- Angeles High Country
- Angeles Uplands East
- Angeles Uplands West
- Big Tujunga Canyon
- I-5 Corridor
- Liebre-Sawmill
- San Gabriel Canyon
- Santa Clara Canyons
- Soledad Front Country

Cleveland National Forest Places

- Aguanga
- Elsinore
- Laguna
- Morena
- Palomar
- Pine Creek
- San Dieguito/Black Mountain

- San Mateo
- Silverado
- Sweetwater
- Upper San Diego River

Los Padres National Forest Places

- Arroyo Seco
- Avenales
- Big Sur
- Black Mountain
- Colson
- Cuesta
- Cuhama-Highway 166 Front
- Figueroa-Santa Ynez
- Highway 33 Corridor
- Hungry Valley/Mutau
- Mt. Pinos
- Ojai-Piru Front Country
- Pozo/La Panza
- Rockfront
- San Rafael
- Santa Barbara Front
- Sespe
- Ventana

San Bernardino National Forest Places

- Anza
- Arrowhead
- Big Bear
- Big Bear Back Country
- Cajon
- Desert Rim
- Garner Valley
- Idyllwild
- Lytle Creek
- Mojave Front Country

- San Bernardino Front Country
- San Geronio
- Santa Rosa and San Jacinto Mountains National Monument
- Silverwood
- The Front Country