

# Chapter 1. Introduction

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## Overview

Professor Emanuel Fritz championed the concept of the State Forest System during the 1940s because of the need to demonstrate responsible and innovative forest management practices for the private timberland owners of California. At almost 50,000 acres in size, Jackson Demonstration State Forest (JDSF) is the largest public ownership dedicated to this purpose in the coast redwood region. This State Forest has demonstrated sustainable management practices for private timberland landowners since 1947, balancing economical timber production with the protection of public trust resources. Due to the long-standing practice of harvesting less than growth, inventories of standing timber on the Forest continue to increase. Some of the densest and highest volume stands of second-growth timber in the redwood region can be observed on JDSF.

Looking to the broader context of forests in California today, the need for forest products as well as associated ecosystem services, and thus the need for effective forest management continues to evolve. Coast redwood forest is among the most productive of temperate forest ecosystems on Earth with respect to growing harvestable wood on appropriate sites. The natural range of this species lies almost entirely within California, and 85 percent of the land base is in private ownership.

Today's conception of forest sustainability includes the sustainability of forest ecosystems, both terrestrial and aquatic. Current issues particularly revolve around the restoration of managed forest ecosystems to maintain biodiversity and system functions. However, a portfolio of goals weighted primarily to biodiversity and system functions is not likely to succeed on private timberlands if it is not financially viable to implement them. Incentives for continued investment are needed to relieve economic pressures to convert to other land uses with a higher and more immediate payoff. While these issues are in some ways beyond the scope of state forest management, they also create an important research and demonstration mission for the Demonstration State Forests, including JDSF, to test a range of timber/ecosystem services outputs for their economic and financial viability.

The JDSF management approach incorporates proposals designed to provide for ecosystem health as well as a financially viable management program. The need to demonstrate this potential is compelling. Demonstration of diverse timber management practices within the context of a working forest will enable this State Forest to facilitate research needed to answer relevant questions concerning the maintenance of biodiversity on private timberlands. Research conducted within this context also will help guide private landowners on how best to allocate funds to those restoration efforts that will have the greatest likelihood of success. In addition, this plan is intended to implement timber management practices on JDSF that are compatible with local and state public interest values so that visitors and neighbors will continue to use and enjoy the State Forest.

## Content of the Management Plan

This management plan consists of five chapters and ten appendices. Chapter 1 details the purpose of and need for the Plan. It discusses the importance of the research and demonstration role that is the primary mission of the Forest. Importantly, it lays out the detailed goals and objectives of the Plan. The chapter also explains how the Plan fits in with other related documents, the planning process that led to the creation of the Plan, as well as how the plan will be implemented, monitored, and revised. The chapter closes with a presentation of how public input was provided to the planning process and the key public concerns that were identified as a part of that process.

Chapter 2, Current Situation, focuses on the setting for JDSF and the management direction that has been applied under the 1983 Management Plan, and earlier plans, that are being superseded by this new plan. Biophysical as well as economic factors are addressed in this review.

Chapter 3, Desired Future Conditions and Planned Management, constitutes the core of the new Management Plan. It describes the specific management measures that will be applied to achieve the Goals and Objectives presented in Chapter 1. For example, it presents the desired future forest structure conditions and the silvicultural means that will be applied to attain these conditions over time and space. The chapter describes the specific management measures that will be used to protect and enhance wildlife and aquatic species habitat. It addresses how heritage resources will be surveyed and protected, as well as how invasive species and forest pests will be managed. Chapter 3 also discusses the recreation program, fire protection, law enforcement, and budget and staffing issues.

Chapter 4, Research and Demonstration, details how the research and demonstration program will be carried out on JDSF. Since research and demonstration, per legislative direction and Board policy, is the overarching mission of JDSF, this chapter is a very important one. Chapter 4 reiterates and discusses the Board policy in detail. It identifies research and demonstration opportunities and needs and looks to future research and demonstration activities. The chapter also provides a summary of existing, ongoing research and demonstration projects.

Chapter 5, Monitoring and Adaptive Management, presents key elements that will help to ensure that implementation of the Management Plan actually achieves its desired goals. Monitoring is the process used to evaluate whether these goals are being met. Adaptive management is the strategy that will be used to bring management back on course to achieving Plan goals.

The Management Plan includes ten appendices to provide additional background information (such as legislation, Board policy, and regulations relevant to JDSF) and more detail on certain elements of Plan implementation (such as the Road Management Plan and specific management and mitigation measures).

### **Purpose of the Management Plan**

The Forest Management Plan directs the management of Jackson Demonstration State Forest for the next 10 to 15 years, or until a subsequent plan or major revision is approved. The Plan and the projects undertaken also will be evaluated by the Board of Forestry and Fire Protection every five years (Board Policy 0351.10; see Appendix I). The Plan's purposes are to guide the integrated use and protection of the Forest's resources, to meet requirements of legislation and Board of Forestry and Fire Protection (Board) policy, and to address local, regional, and statewide issues.

The Public Resources Code ("PRC") specifically addresses the management of state forests. PRC section 4645 provides that the department, in accordance with plans approved by the Board of Forestry, shall manage state forests. PRC section 4646 provides that the Director of the department shall administer all the statutory requirements relating to state forests in accordance with policies adopted by the Board of Forestry. Thus, management of the state forests is a cooperative effort between the department and the Board of Forestry. Management which is inconsistent with policies of the Board of Forestry violates these statutory provisions.

The Legislature's stated purpose in acquiring land for state forest designation is multifaceted: to hold and reforest cutover timber lands, both young and old growth timber, to demonstrate management of small areas (2000 acres) in timber counties where management of small areas needs investigation, demonstration and education, and for larger areas (up to 40,000 acres) to demonstrate economical forest management (PRC section 4631). PRC section 4631.5 states that it is in the public interest to retain the land base of state forests in timber production for research and demonstration purposes.

The State Forest system was established to demonstrate how to make private timberlands 'fully productive' (PRC 4631). Jackson Demonstration State Forest was acquired for the purpose of demonstration of economical forest management. Management is further defined by the Legislature as "...the handling of forest crop and forest soil so as to achieve maximum sustained production of high quality forest products while giving consideration to values relating to recreation, watershed, wildlife, range and forage, fisheries, and aesthetic enjoyment" (PRC 4639).

Read as a whole, the management of Jackson Demonstration State Forest is primarily for sustainable timber production with the primary purpose of education and research relating to economical timber management. Specifically, the management plan for JDSF must adhere to these goals. JDSF must demonstrate sustainable timber production, and that timber production must be managed primarily to provide research and educational values. Within that broad statutory mandate, the management plan must adhere to policies and regulations developed by the Board of Forestry.

The State Board of Forestry and Fire Protection sets policy for management of the state forests. This policy builds upon legislation, directing the California Department of Forestry and Fire Protection (CDF or Department) to prepare detailed management plans and to conduct programs in timber management, recreation, demonstration, and research. Echoing the Legislature, the Board cites a large acreage of potentially productive timberland in California not producing satisfactory growth of young timber. To attain proper management, the Board states that there is a need to investigate, develop, and demonstrate new and improved forest management methods to timberland owners and the public. The State Forests serve this purpose while contributing to the economic stability of local communities by providing high yields of forest products that help sustain local employment and create tax revenues.

The Board of Forestry forest management policies are defined in Chapter 0350 (0350-0351.10); these policies outline and guide management actions (see Appendix I). Board policy 0351.3 establishes the primary purpose of the State Forest program to conduct innovative demonstrations, experiments, and education in forest management. Additionally, this article establishes timber production as the primary land use on Jackson Demonstration State Forest, while recognizing that recreation is a secondary but compatible land use.

### **Necessity of the Forest Management Plan**

The preparation of Forest Management Plans is specified in Public Resources Code Section 4645. The content of the Forest Management Plan conforms to State Board of Forestry and Fire Protection policy Article 8 (Management Plans).

Provisions of the California Environmental Quality Act (CEQA) require analysis of a Forest Management Plan's potential environmental impacts. An Environmental Impact Report (EIR) has been prepared that describes the management alternatives considered for the Jackson Demonstration State Forest Management Plan and the potential environmental effects of each alternative. The preferred alternative has been developed in this Forest Management Plan. For purposes of consideration of environmental effects, the Forest Management Plan and the EIR are to be considered as a whole, rather than as separate documents.

### **Research and Demonstration – *Meeting the Needs of Today and Tomorrow***

The scientific community conducts research that reflects the advancing state of knowledge, technological advancements, social priorities and economic pressures. Demonstration, research and experimental forests have responded to these realities over time. Experiments early in the twentieth century focused on basic information development, such as appropriate tree species (including the testing of exotics), reforestation, and monitoring forest response to human induced changes. Multiple-use forestry inaugurated an inclusion of a wider range of disciplines. Recreation, watershed, wildlife and fisheries research increased, for example. The creation of the Caspar Creek Watershed study in 1962, in partnership with the USDA Forest Service Redwood Sciences Lab (RSL) is an example on JDSF. The closing of the redwood silviculture lab at the RSL around 1970, the wood sciences lab in Berkeley last year, and the intensive data collection at the Onion Creek snow lab are some examples of research programs adapting to changing organizational priorities. Other examples include the creation of the Center for Forestry at UC Berkeley, the initiation of watershed studies at Cal Poly's Swanton Pacific forest, and the advanced instrumentation of ecological monitoring occurring at the USDA Forest Service's

most recent (2005) experimental forest, Sagehen Experimental Forest, which is operated by UC Berkeley in the Sierra Nevada.

As noted by Irland and Camp (2005), long-term studies are crucial to understanding the effects of forest management actions as well as the effects of broader changes in forest influences, such as global climate change. As a publicly-owned forest dedicated to research and demonstration, JDSF provides an ideal venue for long-term research. Some research projects on JDSF have been periodically monitored for decades. The Caspar Creek Watershed study, mentioned above, is one example of long-term research projects on the Forest.

The current context of forestry in California is one of increased demand for wood products, reduced timber supply from Federal forestlands creating more economic pressures for supply from private forestlands, combined with a high level of regulation and permit compliance costs. Increased fragmentation of wildlands due to development and wildland fire issues related to urban interface and fuel loads are also prominent concerns. All of these forest issues must be viewed in light of societal concerns for sustainability. Floyd (2002) discusses the challenge of addressing forest sustainability, giving it a historic and social context. He points out that sustainability can be considered from an ecological, social and economic viewpoint, or combinations of these. At larger scales, he suggests that a combination of forests that have different management goals is beneficial, including reserves and intensively managed plantations. Approaches to forest management depend on scale.

The individual tree is the smallest scale and is the smallest element that may be manipulated for management purposes. Silviculture is the art and science of regeneration and density management of trees to achieve the objectives of management. Monoculture tree farms and mixed species stands designed to mimic old growth gap dynamics both will have specific silvicultural prescriptions. The existing forest landscape contains a myriad of conditions. Overlain on this graph are the objectives for the desired future conditions by the owners. The challenge for the Forest is to facilitate the creation of knowledge over time to fulfill the needs of the forestry community.

Having young stands that can be manipulated towards a variety of conditions is informative for researchers interested in ecological restoration and intensive management. Examples from JDSF include thinning studies used by ecologists to thin recently acquired young stands on state parks to accelerate late seral conditions and a spacing study to maximize growing space efficiency and product yield. Forest management that yields high quality ecological and wood products requires the implementation and testing of ideas centered on mimicking ecological processes (Kohm and Franklin 1997). One means of doing this is by the “lifeboating” of ecosystem elements through a consideration of microclimate, species requirements, and spatial and temporal scales. For example, the retention of unique habitat elements such as nesting platforms or basal hollows by keeping trees with these characteristics and protecting them with surrounding trees. This is termed group retention. Groups that are large enough may also provide a source for the reoccupation of the stand of organisms such as epiphytes and mycorrhizae (refugia and inocula). Dispersed retention, or keeping larger trees scattered throughout a stand, may be beneficial by supplying a source of dead wood through time. The intentional creation of nesting platforms may also be done through the creation of epicormic sprouting (Franklin and Van Pelt 2004) by exposing the bole of a large tree to sunlight.

On a larger scale, one that encompasses many stands over multiple planning watersheds, additional ecological considerations come into play. Population health and viability for organisms like raptors, vascular plants, and aquatic animals are influenced by critical range sizes, connectivity of suitable habitat (Hilty, Lidicker Jr. et al. 2006), and predation. Competition from invasives—such as French broom crowding native plants and, of particular near-term concern, barred owls taking over northern spotted owl habitat—are also considered at a landscape level. The discipline of landscape ecology focuses on scientific study at this scale. By planning at this scale as well as the stand level we can prepare for further inquiry into these issues. The following axiom from (Kohm and Franklin 1997) is appropriate as a guiding principle:

***This is a key lesson of 20<sup>th</sup>-century forestry: Beware of simple formulas applied over broad areas.***

The ecosystems found on JDSF are unique on a global scale. While the redwoods found in California are now technically considered to be in the Cupressaceae family, until the late 1970s they were classified in the separate Taxodiaceae family. Current botanical classification puts the Taxodiceous group as the ancestors of the rest of the family. In previous epochs the group was more widely distributed with pollen and fossil records showing a distribution primarily in the northern hemisphere during warmer and moister climates. The unique fog conditions of the northern California coast are responsible for the persistence of the coast redwood. This potentially puts the species at high risk under potential climate change scenarios. The outcome will depend on the complex interactions of global climate response to increasing average temperatures.

JDSF's approach to climate change may be described by three factors: monitoring, mitigation and adaptation. Monitoring will be accomplished through repeated vegetation inventories with growth and mortality analyses along with weather station data capture. Mitigation will be accomplished by increasing our standing inventory and sequestering carbon from the atmosphere. By increasing our understanding of the climatic tolerances of the species represented on the forest we may best plan for adaptation to observed climate changes. As a cautionary note we consider the dawn redwood (*Metasequoia glyptostroboides*), which was thought extinct, but was found in 1940 by a Chinese forester in an isolated valley.

Ecological theory used to focus on seral stages: pioneer through climax conditions. Once reaching a climax condition it was thought that stands of trees would always proceed in a steady-state small scale disturbance regime. This concept is now considered the exception for most ecosystems, with disturbance being the rule rather than the exception (Botkin 2006). Our challenge is to understand the disturbance regimes of the past and future to provide a productive outdoor laboratory for the scientists of today and tomorrow. This Management Plan puts us on a course to do just that.

Climate change, along with geological processes, has been shaping the range and genetic configuration of redwood and associated species for millions of years. Scientists have modeled what may be near term alterations in climate, but there is a large degree of uncertainty. There is no significant environmental climate change impact related to management of JDSF that can be predicted given the current state of scientific knowledge.

Three strategies will be employed on JDSF to address the uncertainty regarding climate change:

- Keep the Forest healthy to maximize resilience to perturbations in moisture, temperature, pests, and storm events.
- Monitor species abundance and health as part of a long-term monitoring strategy.
- Develop partnerships and fund research, giving priority to information gaps such as below-ground carbon cycles, fog drip utilization by tree and understory plants, and climatic tolerances of species.

Research efforts at JDSF could build on the information from the LaTour Demonstration State Forest carbon sequestration demonstration project. In particular, there is a need to integrate coastal growth models with carbon budget models and accounting systems. By providing an example and quantifying the costs and volumes of carbon, this research could facilitate the ability of forest landowners to have a basis for setting prices based on agreed upon measures that would be needed for a financial market for sequestered carbon throughout the redwood region if a cap and trade system should develop.

The JDSF is the premier redwood research forest. The size of the forest, its location near the center of the species range, and its orientation along the ecological gradient of increasing elevation and distance from the coast are its unique features. The USDA Forest Service does not own appreciable acreage of the ecotype. Other government ownerships are parks and therefore lack the ability to extend their research to the private working forests, which are abundant in the redwood region. Nor do the universities have significant acreages. However, there are many scientists at the universities and with government that study this ecosystem. We will not attempt to duplicate their expertise but rather provide a rich experimental palette for their use.

### Detailed Goals and Objectives

These Goals and Objectives are based upon legislative statutes, regulations, Board of Forestry and Fire Protection policies, and the direction provide by the Director of the Department of Forestry and Fire Protection and the Board of Forestry and Fire Protection.

**Goal #1 - RESEARCH & DEMONSTRATION: Improve the amount and quality of information concerning economic forest and timber management, forest ecosystem processes, watershed processes, performance of forest protection measures, that is available to the general public, forest landowners, resource professionals, timber operators, the timber industry, and researchers.**

Objectives:

Maintain a diverse, dynamic matrix of forest habitats and seral stages to provide a broad range of forest conditions available for research and demonstration.

Make the State Forest available to educational institutions and other agencies for conducting research and demonstration projects.

Conduct resource management demonstrations and investigations directed to the needs of the general public, small forest landowners, resource professionals, timber operators, and the timber industry.

Design a range of demonstrations and comparisons to serve a broad set of clients such as conservation-oriented, restoration-oriented, small landowner, and intensive production approaches to forest management.

Increase the use of JDSF for research that tests and demonstrates the short-term and long-term costs and effectiveness of various forest resource protection measures.

Develop demonstration areas incorporating a wide range of forest management approaches within a compact, easily accessible area.

As a demonstration project, complete certification of JDSF management under the umbrellas of the Forest Stewardship Council and the Sustainable Forestry Initiative.

Conduct monitoring of resource management activities to gauge their effectiveness in meeting project objectives.

Demonstrate the compatibilities and conflicts involved in multiple use of forest land, and investigate methods to mitigate conflicts.

Ensure that knowledge gained is also shared by disseminating information obtained through research and demonstration to the general public, forest landowners (especially small owners), resource professionals, and timber operators.

Establish a Forest Education Center at Jackson Demonstration State Forest to support and facilitate forest management research and learning activities.

Accelerate the expansion of knowledge about redwood forests by seeking increased funding to support research and demonstration projects.

Consult and cooperate with universities and colleges, the U. S. Forest Service, other public and private researchers, and private forest conservation organizations in conducting research and demonstration projects. Enter into cooperative agreements for investigations of mutual interest.

**Goal #2 - FOREST RESTORATION: Work towards active restoration by managing the Forest to promote and enhance forest health and productivity.**

Objectives:

Increase the amount of older forest structure and late seral forest available for terrestrial wildlife, including areas adjacent to aquatic habitats.

Improve habitat connectivity and reduce forest fragmentation, including the concepts of corridors and contiguous habitat.

Use a range of management techniques to compare natural and accelerated forest restoration approaches while maintaining high canopy cover across the whole Older Forest Structure Zone (OFSZ) and other areas designated for development of late seral forest characteristics.

Cooperate with other agencies and private conservation organizations interested in forest restoration on research into approaches to increase the pace at which older forest structure characteristics can be developed through active management.

Focus on restoring more productive river and stream systems from the low gradient floodplains to intermittent streams in the upper reaches to improve the habitat conditions and populations of salmonids, other fish species, amphibians, and other plants and animals dependent on riparian ecosystems.

Work with neighboring landowners, including State Parks and the Conservation Fund, to explore opportunities for multiple-landowner, landscape-level approaches to forest restoration, including the protection and enhancement of watershed and ecological processes.

Restore conifer forests where early successional hardwoods or invasive plants have become established at densities far above those typical of the mature conifer forests dominated by redwoods, Douglas-fir, Grand fir, and hemlock.

Add large woody debris to streams and enhance overall habitat conditions for salmonids.

Increase forest structural elements in stands (snags, large trees, large diameter limbs, cavities, flat tops).

Minimize the influence of exotic plants and animals.

**Goal #3 - WATERSHED AND ECOLOGICAL PROCESSES: Promote and maintain the health, sustainability, ecological processes, and biological diversity of the forest and watersheds during the conduct of all land management activities.**

Objectives:

Maintain a diverse, dynamic matrix of forest habitats and seral stages suitable for a wide variety of native fish and wildlife populations. Manage designated old growth reserves for maintenance of late seral habitat values.

Maintain and recruit structural elements necessary for properly functioning habitats. In riparian areas, manage for late seral habitats, while allowing for flexibility to conduct research on riparian protection zones. Create or naturally develop recovery habitat for listed species.

Work with partners to conduct research and demonstration on the effectiveness of measures to protect watershed and ecological processes from potential management impacts.

Determine which native species, in addition to listed species, are most susceptible to adverse impacts from land management activities and which therefore warrant extra concern.

Provide protection to listed species, to species of concern, and to their occupied habitats. Avoid disturbance to uncommon plant communities such as meadows and pygmy forest.

Utilize forestry practices that will maintain stability of hillslope areas and control sedimentation caused by accelerated mass wasting and surface erosion.

Monitor the development and condition of terrestrial and aquatic habitats over time, and apply adaptive management principles to ensure that goals are met.

Implement a comprehensive road management plan to reduce sediment production, including upgrading roads remaining in the permanent transportation network and properly abandoning high risk riparian roads where possible.

**Goal #4 - TIMBER MANAGEMENT: Manage the forest on the sustained yield principle, defined as management which will achieve continuous high yields of timber production that contribute to local employment and tax revenue, consistent with environmental constraints related to watershed, wildlife, fisheries, and aesthetic and recreational enjoyment and constraints related to providing diverse, dynamic matrix of forest habitats and seral stages for researchers**

Objectives:

Manage forest stands to produce sustained yields of high quality timber products and public trust resources. Maintain flexibility in forest management in order to provide a comprehensive demonstration, education and research program.

Include a sustainable regulated growing stock as a feature of the State Forest's desired future condition. Establish stand-level rotation ages and cutting cycles to meet sustained yield objectives. Based on management goals and constraints, determine a forest-level allowable annual cut that will lead towards achievement of the desired future conditions. Project the short-term, site-specific harvest schedule at least 5 years into the future, and the long-term schedule at least 100 years.

Implement state-of-the-art forest management practices to increase total wood production and improve timber quality, designed and carried out for maximum applicability and demonstration value for private lands.

Contribute to the vitality and stability of the economy of the North Coast of California by conducting regular periodic timber sales.

**Goal #5 - RECREATION and AESTHETIC ENJOYMENT: Plan for and provide enhanced levels of low impact recreational opportunities that are compatible with forest management objectives and healthy ecological processes, that are consistent with historic recreational use characteristics, and that allow for engagement of recreation user groups.**

Objectives:

Base the development of future recreation programs and facilities on a plan that assesses needs, opportunities and available resources.

Maintain campgrounds, picnic areas, trails and other recreational facilities in a safe, healthy and attractive condition.

Continue to utilize a style of recreational improvement that is generally low impact and rustic in nature. Develop campground and day use areas so that they are concentrated in identified recreation corridors.

Extend existing trails to create a more extensive trail system, including linkages with neighboring State Parks.

Demonstrate that recreation is compatible with demonstration and timber management land uses, as well as many research activities, through the integration of recreational development and use with these other activities. Utilize this opportunity to explain forest research and management to the recreating public. Include appropriate mitigations in harvest plans that may impact recreation and aesthetic values.

During timber management activities conducted adjacent to residential areas, consider and mitigate the project's effects on the casual and informal recreational uses of the State Forest by the Forest's neighbors.

In cooperation with the California Department of Parks and Recreation, establish forest management demonstration areas compatible with recreation for educational purposes adjacent to the Mendocino Woodlands Outdoor Center and the Pygmy Forest Reserve.

Engage various recreation user groups interested in cooperating in the design, implementation, and stewardship of a more extensive recreational facilities system.

**Goal #6 – INFORMATION, PLANNING, & STAFFING: Develop, maintain, and update management plans and other planning documents and processes. Manage and support the information needs and staffing needs of all State Forest programs. Communicate with the public regarding management of the Forest.**

Objectives:

Collect, process, interpret, analyze, update, store, index, and make retrievable the array of information and data about the State Forest and its resources needed to support Forest planning and management and to provide baseline information to researchers.

Prepare, monitor and update State Forest Management Plans and program area plans.

Initiate an adaptive management process for all phases of State Forest planning and plan implementation. Monitor forest operations and make modifications as necessary to achieve management goals.

Utilize State budgetary processes to seek increased funding and staffing to provide the Forest with the resources needed to restart full operations and to achieve Management Plan goals.

Provide regular information to the local community regarding educational and recreational opportunities on the Forest, as well as research, demonstration, and management activities in general.

Provide opportunities for public and other agency input into planning processes, including any advisory groups that CDF or the Board may establish.

Provide periodic reports to local government entities.

**Goal #7 - PROTECTION: Protect the forest from damage and preserve the peace within.**

Objectives:

Preserve native plant species and limit the invasion and spread of exotics. Protect native communities from insect, disease, and plant pests using the concept of integrated pest management.

Include fire hazard and risk assessment in forest planning. Manage forest fuels to reduce the incidence and severity of wildfire. Incorporate a fire protection and pre-attack plan into the State Forest management plan.

Maintain a physical presence in the forest to enforce forest and fire laws. Make regular contact with forest users to ensure understanding of and compliance with regulations and use limitations. Use public contact as an opportunity to deliver forest management education messages.

Inventory and protect historic and pre-historic archaeological resources. Identify and prioritize archeological sites that are susceptible to disturbance and schedule data collection prior to planned activities.

**Goal #8 - MINOR FOREST PRODUCTS: Maintain a program that provides an opportunity for the public and small businesses to purchase minor forest products.**

Objectives:

Continue to make both personal-use and commercial firewood available following timber harvesting operations.

Restrict the utilization of forest products where potential environmental effects are unacceptable, such as cutting of green redwood burls, manufacture of split products from desirable large woody debris, and salvage of windthrow from riparian areas.

Increase opportunities for small-volume sales.

Consider a system for contracting logging and selling delivered logs.

**Goal #9 - PROPERTY CONFIGURATION: Improve the boundary layout of the State Forest to facilitate management logistics and increase research and demonstration opportunities.**

Objectives:

Consider making boundary line adjustments through cooperation with neighboring timberland owners to configure state forest boundaries to ridgelines and watershed boundaries.

Seek to reduce private in-holdings through purchase or exchange.

Investigate opportunities to purchase additional forest land to add to the State Forest, particularly where it completes ownership of a planning watershed, creates new or adds control over important road access, or provides new opportunities for research and demonstration projects.

### **Relationship of the Forest Management Plan to Other Documents**

This comprehensive, integrated Plan applies to all areas and resources of the Forest. Therefore, it supersedes existing plans.

Upon approval of this Plan by the Director of CDF (Director) and the Board of Forestry and Fire Protection, all land and resource management activities and all budget proposals will be based on the Plan. As soon as practicable after approval, all permits, contracts, cooperative agreements, and other instruments for use and occupancy of the Forest's lands will be brought into conformance with the Plan, subject to existing rights. Note that previous sale contracts for timber or other commodities not yet harvested may preclude bringing such activities into full conformance with this Plan.

### **The Planning Process**

The last management plan for Jackson Demonstration State Forest was prepared in 1983. As in previous plans, it focused heavily on timber management. However, for the first time it included a comprehensive discussion of the demonstration and education role of the Forest. The 1983 plan recognized the need for more in-depth information about the resource base of the State Forest, and laid out a series of steps to begin gathering that information.

During the 1990s there was increased awareness of the impacts of forest management on wildlife species and their habitats. Northern spotted owls, marbled murrelets, coho salmon, and steelhead trout were listed under the federal Endangered Species Act, and the California Forest Practice Rules were amended to provide increased consideration and protection for these species and for ecosystem processes in general.

This plan builds on the 1983 plan by elevating wildlife, watersheds, and ecosystem processes to a level of importance equivalent to the timber management and the research, demonstration and education programs. The desired future condition of the Forest, discussed in detail in Chapter 3, describes both the development of habitat and biological diversity and the establishment of a forest growing stock that provides for a sustained high yield of timber products.

The planning team was drawn from both State Forest and CDF headquarters staff and included specialists in forestry, silviculture, harvest scheduling, forest economics, wildlife biology, hydrology, geology, and archeology.

A key part of plan preparation was the development of a set of goals and objectives that provide the framework for describing the desired future conditions of the various resources being managed. The goals and objectives were derived from planning team collaboration, public input, and review by Department managers.

Monitoring and adaptive management are key elements of this plan, and they affect all of the individual management programs as well as the management plan as a whole. While the desired future condition described in this plan creates a diverse forest landscape that is flexible and able to respond to many changes, the plan cannot anticipate all of the possible developments in how the State Forest can best serve the needs of California's citizens. As part of the ongoing planning for management of the State Forest, this plan will be reviewed periodically in the context of changing policies and priorities. Since the timing of these potential changes cannot be predicted, it is not appropriate to institute a fixed schedule of plan reviews. This means that the forest staff must remain familiar with the contents of the plan and alert to external influences that may reduce the plan's relevance and trigger a comprehensive review.

### **Plan Implementation**

The Forest Management Plan will be carried out by the Unit Chief, the State Forest Manager, and the Forest and Sacramento staffs. The Plan is based on a set of Goals and Objectives for the Forest and for each area of management. These reflect the capability and suitability of the land to support various activities. The Unit Chief's staff will plan and conduct resource projects that meet this direction. Projects will continue to be planned and evaluated through an interdisciplinary process. The Unit and Forest staffs will conduct environmental analyses and document them in the appropriate environmental documents (such as Timber Harvesting Plans and Environmental Impact Reports) which will be tiered to the Forest Management Plan Environmental Impact Report.

If a proposed project on the State Forest is determined to be inconsistent with the direction of the Plan, the project will be revised or not permitted. Conflicts that recur will result in a review of the relevant management direction of the Plan, according to its monitoring and evaluation process, and may lead to Plan amendment or revision.

By the time the Forest Plan is implemented in 2007, budget processes for fiscal year 2007/2008 will be largely completed. Thus, budget plans for that fiscal year may or may not meet the budget requirements of the approved Forest Management Plan. Moreover, legislative appropriations and allocations of the Director during any future period may or may not meet the budget requirements of the approved Plan. In these situations, the Unit Chief will modify the proposed Plan implementation schedules to reflect differences between proposed Plan budgets and actual appropriated funds. Resource Management Program managers in Sacramento will notify the Board of Forestry and Fire Protection of these modifications.

Currently, all revenues derived from management activities on the State Forest are deposited into the Forest Resource Improvement Fund (FRIF). The FRIF is designated as the source of money available to budget management activities on the Forest, though the State's General Fund has contributed to Forest operations over the past few years. There is potential for failure to produce revenues sufficient to support the management level specified in the Plan. In this situation, the Unit Chief in consultation with the Forest

manager will change the proposed Plan implementation schedules to reflect differences between proposed Plan budgets and actual available funds.

### **Monitoring and Evaluation**

The Forest staff will monitor Plan implementation to determine (1) if the Plan is being implemented as designed (implementation monitoring), (2) if implementation is effective in meeting the Plan's objectives (effectiveness monitoring), and (3) if the Plan's initial assumptions are correct (validation monitoring). Specific monitoring and adaptive management requirements are listed in Chapter 5 of this Plan. The Forest staff will collect and evaluate the monitoring results regularly to determine the need for changes in the Plan or Plan implementation.

### **Revisions and Amendments**

The anticipated implementation period for this management plan is ten years. As directed by the Board of Forestry and Fire Protection, the Forest Management Plan is expected to be thoroughly reviewed at least every five years and updated as necessary. It may also be revised whenever the Director determines that conditions or demands have changed sufficiently to affect goals or uses for the entire Forest. Under a schedule approved by the Board, the Director prepares and the Board approves Forest Management Plan revisions. The Forest manager will continually review conditions of the lands covered by the Plan to assess the need for Plan revisions.

Between revisions, the Plan can be amended to reflect changing conditions. The State Forest Manager can prepare and approve an amendment if the change is not significant; such changes can be expected annually to adjust some of the Plan's details. If the change is significant, the State Forest Manager will prepare the amendment for the Director's consideration and, ultimately, for the Board's approval.

Public notification requirements and adherence to CEQA procedures apply to any significant Plan amendments.

### **Public Input into the Planning Process**

There has been substantial public input in recent years on the management of JDSF. A number of forums have enabled the public to offer suggestions concerning the management direction of the Forest. In 1997, a Citizens' Advisory Committee was appointed by then CDF Director Richard Wilson. The committee met periodically over an 18-month period and produced a number of recommendations for management of the Forest. A number of the recommendations of the committee have been incorporated into the Management Plan, as well as providing many of the elements found in Alternative D.

In 2000, CDF initiated a public input and scoping process for the development of the DFMP and an associated draft EIR. That process included a Technical Session, open to the public, held on March 30, 2000, in Ukiah, where JDSF staff as well as researchers presented information about the management of the forest and received public comments. Subsequently, a total of six CEQA public scoping hearings were held in Ukiah (April 11, 2000), Ft. Bragg (April 12, 2000) and Sacramento (April 13, 2000) where the public was invited to provide testimony. In addition, written comments were received through May 1, 2000. Comments collected from the public were summarized, categorized and utilized in the development of the May 17, 2002 DFMP and in the formulation of alternatives in the May 2002 draft EIR.

In compliance with Board Policy 0351.10 an early draft of the DFMP was made available by CDF for public review in June of 2001. Comments received were utilized in the development of the May 17, 2002 draft, which was presented to the Board. This draft Plan was the proposed project analyzed in CDF's May 2002 draft EIR as well as the Board's current draft EIR.

Following the Mendocino Superior Court's 2003 finding that the 2002 CEQA process and EIR were flawed, the Board embarked on a new EIR scoping effort in February 2004. Once again public comments were solicited through a Facilitated Scoping session (facilitated by U.C. Cooperative Extension) in Ft. Bragg on February 27, 2004, and a Public Scoping Session held in Sacramento on March 12, 2004. In addition, written comments were accepted through March 18, 2004. Comments received were considered along with those already compiled for the May 2002 draft EIR and Plan prepared by CDF (see section VI Alternatives in the 2005 DEIR).

As lead agency, the Board was required to approve the administrative draft prior to its distribution for public comment<sup>1</sup>. The Board provided another opportunity for public comment at the time of that consideration. Following the Board's consideration of the administrative draft EIR, the Board released the draft EIR for public comment and agency review in late 2005. There is a minimum 45-day public and agency comment period required on this draft EIR (PRC § 21091). Comments received during the comment period will be responded to in writing by the Board (PRC 21092.5; CCR §15088) and incorporated into the final EIR (CCR §15132). The Board held two public forums on the proposed plan and DEIR (February 2, 2005, in Ukiah, and February 9, 2005, in Sacramento) between the time the DEIR is released and the close of the comment period in the DEIR.

In late 2006, the Board of Forestry and Fire Protection requested CDF to prepare a new alternative to address many of the issues raised during the public comment period. CDF presented the basic outline of the Alternative at the September 2006 Board meeting and has presented progress at each successive Board meeting. In December 2006, key elements of a draft revised management plan were presented to the Board and the public. In February 2007, this complete draft Plan was released to the Board (and the public) for the Board's consideration of its readiness for formal public comment and CEQA recirculation.

### **Public Concerns Regarding the Management of JDSF**

A number of forest management issues covering a broad spectrum of topics have been identified through the processes of public scoping, advisory committee meetings, and personal contacts. The issues are listed below, not in order of importance. This list of issues and concerns is not all-inclusive, but represents those issues expressed most frequently or considered most substantive.

Concerns expressed by the public have played an important role in the management of the State Forest. A number of management actions, strategies, and decisions have been implemented in response to these concerns. Briefly outlined below are most of the key public issues, accompanied by a brief discussion of measures being implemented to address these issues.

#### Forest Management for Various Goals

##### Fish and Aquatic Habitat

A great number of individuals have expressed concern for the health and protection of native fish and aquatic habitat. Recommendations have been made by the public to expand riparian corridors, to increase the level of road maintenance, and to control impacts that could result from all aspects of forest management, especially from logging activity. The Forest is managed to prevent "take" of listed species, and to allow aquatic habitat recovery to proceed. This management plan outlines an aggressive road management program intended to protect and enhance the riparian area and aquatic habitat over time. Riparian zones are either not harvested or are lightly harvested, primarily by cable skyline systems, and will be managed to develop late seral forest characteristics. Stream channels are protected, and shade

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<sup>1</sup> CCR §15084 (e) "Before using a draft prepared by another person, the lead agency shall subject the draft to the agency's own review and analysis. The draft EIR which is sent out for public review must reflect the independent judgment of the lead agency. The lead agency is responsible for the adequacy and objectivity of the draft EIR."

canopy is retained at or near preharvest levels. The implementation of this management plan will provide for continued recovery of aquatic habitat throughout the Forest.

#### Wildlife Habitat

Concern has been expressed for the well being of wildlife species and their populations. To many people, timber management is synonymous with habitat damage. The Forest is managed to produce and maintain a dynamic mosaic of habitat conditions. The Plan provides for retention of old-growth groves and late seral habitats, as well as recruitment of these important habitat types. The plan also provides for the development of an older forest structure zone that serves as a corridor to connect old growth groves and late seral development area. There are also provisions to increase the availability of essential habitat elements such as snags and downed logs. Surveys are conducted annually to locate and protect selected listed species such as the northern spotted owl and the marbled murrelet. The variety and quality of habitats is expected to increase through the planning period and beyond.

#### Late Seral and Other Forest Reserves

The amount of late seral forest is expected to increase over time, due to dedication of additional area to recruitment of late seral conditions and a no-silvicultural treatment designation to specified areas of the Forest. Much of the area dedicated to the production of late seral forest conditions is in large, contiguous patches or stream zones. Large patches of habitat may be beneficial to many forest-dwelling species, due to a lesser amount of forest edge and habitat fragmentation. The Older Forest Structure Zone provides another large unfragmented area where the development of structure closely associated with old forests (large trees, large snags, large downed logs, and a wide diversity of trees in terms of diameter and crown height) will be a dominant goal.

#### Restoration

Requests have been received to alter management direction so that recovery of natural ecosystems and old-growth forest becomes the primary mandate of the State Forest. Some writers have limited their concern to a request that aquatic habitats and some areas of old-growth be restored. Although the restoration of old-growth or late seral forest has not been adopted as the primary mandate by the Department, existing old-growth forest and other areas of second-growth will be managed to expand the area of late seral forest and older forest structure. Riparian ecosystems will be protected or enhanced to provide for restoration in those areas.

#### Endangered Species

The protection and recovery of endangered species is of concern to most individuals, and this concern has been expressed to the Department by many people. As part of the planning process, the Department has examined the availability of habitat for endangered species, and has planned to maintain or create habitat to contribute to the viability of regional populations. For example, the Plan specifically designates the area surrounding Russian Gulch for recruitment of habitat suitable for marbled murrelet.

#### Old-Growth Management

Descriptions of old-growth historically have been based largely on social perceptions of old-growth values rather than legal precepts or biological principles.

Old-growth management and protection on Jackson Demonstration State Forest is a complex issue that rests largely on the values that different sectors of society associate with older forests. Implementing a conservation strategy for this remnant forest condition must start with recognition of these different

perceptions of old-growth. Many Californians have strong opinions regarding older forests. However, this conservation strategy recognizes that without further categorization the term "old-growth" is too nebulous to support analysis and decision making. For example, tree size in and of itself is not a reliable indicator of tree age due to the influence of site conditions on tree growth rates.

Old growth stands will be preserved, and additional forest will be managed to develop late seral characteristics. There will be no reduction in old growth forest. Large old growth trees and old trees with specific structural habitat value will be retained within managed stands.

#### Even-Aged Management

Numerous comments included the request that even-aged management on the Forest be discontinued. To many, even-aged management is perceived as damaging to aquatic resources, slopes, and wildlife. Although even-aged management will be used on the Forest, the area where it can be demonstrated has been restricted to specific management units. In addition, structural elements of value to wildlife will be retained within or adjacent to even-aged harvest units. Clearcutting, the most intensive form of even-aged management, will be limited to research and where needed to address particularly problematic regeneration challenges.

#### Small-Volume Sales

There have been a few requests to make more timber available to local small businesses, such as micro-mill operators and licensed timber operators. Recently, a few small-volume sales were offered, but there is room for expansion and improvement in this aspect of timber sales. The degree to which this program is enhanced will depend upon the availability of staff to administer the program, due to the substantial increase in administrative effort needed per unit of volume sold.

#### Jobs for Locals

There has been concern expressed that a reduction in available timber supply will result in a loss of local jobs. As planned, the level of harvest will decline from the levels under previous management plans. However, the anticipated level of harvest will still provide a substantial amount of jobs, economic activity, and tax revenues.

#### Timber Supply

Concern has been expressed that future management will result in a reduction of available timber for harvest. There have been requests to maintain or increase the level of harvest. The level of harvest will be determined by the biological capacity of the Forest, in consideration of all applicable constraints. The Forest will continue to meet the legislative mandate to manage for maximum sustained production of high quality timber products, subject to specified constraints. As planned, the level of annual harvest will slowly increase over the coming decades, as the growth capacity of the forest increases.

#### Logging in General

A number of comments received during the public scoping process requested changes in the amount or purpose of logging activity. Many requested that logging be curtailed, or restricted only to instances where "forest restoration" was enhanced. A few requests for maintenance or increase in logging activity were also received. Logging is being planned within the Forest to implement the intent of the legislation that created the State Forest, to implement policies established by the Board of Forestry and Fire Protection, and to achieve a number of the goals specified in this plan. Logging and timber production are being planned to maintain JDSF as a research and demonstration forest, where sustainable forest

management occurs for the benefit of the public, landowners, and professional land managers and regulators.

### Herbicides

The Draft Forest Management Plan noted that there have been requests from the public as well as the Citizens Advisory Committee, that the use of herbicides on the forest be curtailed and alternatives to their use be evaluated. It also noted that a few of the people who commented requested the continuation or increase in herbicide use to control invasive weeds on the Forest. The recent comments on the December 2005 DEIR also contained a range of public concerns about herbicide use. Some individuals and some advocacy groups requested a cessation of all herbicide use. A few comments received have requested the continuation or increase in the use of herbicides to control exotic species on the Forest.

In Mendocino County, herbicides are not used for roadside vegetation control on state or county roads. County-wide, forestry use of herbicides has declined from 1.2% of total county pesticide use in 2002 to 0.4% of total pesticide use in 2004. JDSF use has declined as well from the 1990s. A variety of techniques are used on the Forest to control invasive weeds.

A total ban on herbicide use may compromise the broad demonstration value of the Forest and could result in environmental and economic consequences. New information on alternatives to herbicides that are relevant to the Forest has become available in the eight years since the Citizen's Advisory Committee's Report. JDSF will adopt the following limitations to potential herbicide use:

- Seek opportunities to demonstrate a range of vegetation treatments so that local information is available on vegetation treatment options.
- No herbicide will be used unless it is integral to long-term, ecological based management. Projects will be proactive rather than reactive.
- Herbicides will be used only after consideration of the scope of the problem, opportunities to effectively manage the situation, and available alternatives and their potential effectiveness.
- Public and environmental safety is a priority. When herbicide use is indicated, JDSF staff will seek opportunities to reduce risk by selecting appropriate herbicide formulations and application techniques.
- Recognize that some forest visitors may experience negative aesthetic reaction to dead treated plants, even if they are invasive weeds. Herbicide use will be evaluated for aesthetics where treatments could have this potential effect.

Historically herbicides have been utilized for management related to roads, reforestation, restoration of conifer/ hardwood site occupancy ratios, and invasive exotic weed management. The plan has evaluated which of these four types of management would continue to use herbicides. Any herbicide use remaining would be carried out in the context of ecologically based Integrated Pest Management Principles. This program will utilize a combination of control methods and will rely much less upon herbicide use as a preferred method of choice. Please see Chapter 3 for more information on four aspects of vegetation management; reforestation brush control, conifer/hardwood ratio adjustments, invasive weed management, and road maintenance.

### Implement a Road Maintenance Program for Restoration and to Serve as a Public Education Tool

Due to widespread recognition that forest roads, especially older roads, can damage hill-slopes and aquatic habitats, there have been many requests for an intensive program of road maintenance on the Forest. To deal with this issue, a comprehensive road management plan has been prepared (Appendix V). In addition, increased funds will be made available from revenues generated on the Forest to manage and maintain the road system. A recent budget change will add a second heavy equipment operator to the Unit staff in order to increase road maintenance capabilities. The road management program will be integrated with the demonstration and education programs to offer the public and private timberland owners information and first-hand experience with appropriate road management.

### Promote Hardwood Development as a Forest and Timber Resource

The Citizen's Advisory Committee appointed by the Director in 1997 recommended that more emphasis be placed upon the value of hardwoods for quality wood products, and as important habitat elements within the forest ecosystem. Retention of hardwoods within timber stands for purposes of habitat maintenance and recruitment is an important element of the wildlife management program on the State Forest. See Chapter 3 for greater detail on habitat management. Over the past decade, the Department has promoted the growth and utilization of hardwoods in the region, but the relative value of hardwoods remains low in the marketplace. In the management of timber stands throughout the Forest, hardwoods are now considered individually, in a similar fashion as conifers. Individual hardwoods are retained in most stands in order to recruit hardwoods into larger size classes, and to develop valuable wildlife habitat elements. In areas of the forest with either an overabundance or a lack of hardwoods, an effort will be made to restore the stands to a pre-management ratio of conifers to hardwoods.

### Research and Demonstration

#### Forest Certification

The Department has made a commitment to pursue independent certification of forest management activities for JDSF.

#### Demonstration and Research Applicable to Private Landowners

Timberland owners and resource professionals have expressed an interest in maintaining or increasing the research and demonstration of forest management applicable to private timberlands within the region and the state. It is the Department's intention to increase the amount of research and demonstration conducted on the Forest, and to improve the dispersal of the information. The Board has emphasized the importance increasing the research and demonstration emphasis of the management of JDSF. This plan is a reflection of that direction.

#### Public Input into Management Process

A number of people have requested that the public be given a greater voice in the management of JDSF. Most of these concerns have been expressed by local individuals. Public participation in the planning process for the State Forest is provided for during the public comment periods for the Management Plan and for the Environmental Impact Report prepared for the Management Plan, and during subsequent review processes for individual timber harvest plans and other actions requiring environmental review. In addition, the Director has appointed an advisory committee to assist in the planning and management of the state forest system. The local staff has made a practice of notifying neighbors when timber harvest projects are in the planning phase to enable them to discuss concerns with Forest staff. This often results in the application of mitigation or limited alteration of plans in response to concerns.

As this plan is being completed, CDF and the Board are discussing appropriate new advisory structures to increase scientific and local public input regarding the management of JDSF.

#### Utilize Revenues Only for Restoration of the Forest

Requests have been received to limit the use of revenues generated by forest management to restoration activities on the Forest. Over the past few years, the amount of revenue spent on habitat restoration and erosion control projects has increased, and an even greater amount has been allocated to the road management program. However, much of the revenue generated on the State Forest will continue to be deposited in the Forest Resource Improvement Fund (FRIF), which, per legislative direction, provides

monies to support all of the Demonstration State Forests. No other programs are currently funded out of the FRIF.

### Recreation and Aesthetic Enjoyment

#### Aesthetics

During the past decade, campgrounds, picnic areas, designated trails, and other high-use recreational areas have been buffered from the visual impacts of even-aged timber management activity. Views of mature forest have been maintained adjacent to most of these features. In addition, the spatial allocation of management systems has been designed to maintain forested views from much of Highway 20 and other popular travel corridors. Even-aged management is generally thought of as not aesthetically pleasing in the short-term, and is located in areas with lesser amounts of recreational activity. Future management will continue to place a priority upon aesthetics near homes, recreational facilities, and main travel corridors.

#### Recreation

**Camping** In general, the public has requested that the availability of rustic campsites be increased. In response, the Department has re-opened the Big River Campground and will consider the opening of other historically-used camping areas throughout the Forest.

**Hiking** The public has shown an interest in expanding the Forest trail system. Concern has also been expressed that logging and the formal abandonment (decommissioning) of riparian roads leads to a loss of riding and hiking opportunities. The State Forest has initiated a process by which major trails within timber harvest areas are examined prior to harvest, and reopened upon completion with the exception of non-sanctioned trails in locations that are damaging to the environment. When riparian roads are formally abandoned, an attempt will be made to incorporate riding and hiking trails into their former locations, or to relocate the trails to nearby areas so that loss of recreational opportunity does not occur.

**Horseback Riding Trails** Some equestrian groups have requested expansion of the riding trail system. During the planning period, expansion of the system will be evaluated and implemented to the extent that staffing and funding allow. Top priority will be given to loop trail segments in proximity to campgrounds, watering locations, and other areas with easy access.

**Bicycle Riding Trails** Many local mountain bikers and their associations have requested the opportunity to build and maintain trails systems similar to those on other State Forest such as Boggs Mountain and Soquel. Concerns expressed regarding bicycle trails have been similar to those for horseback riding and hiking. In general, an expansion of the system has been requested. An expansion will be considered, and implemented to the extent that staffing, funding, and collaborative efforts with mountain biker groups allows.

**Hunting** Hunting groups have requested that Forest roads remain open throughout the year. In response, the road system was examined, and roads with firm native surfaces or rocked surfaces were not subjected to seasonal closure if their use was not considered potentially damaging to water quality or aquatic habitat. Road closures are considered individually on an annual basis.

**Off-Road Vehicle Use Opportunities** A number of requests have been made to allow off-road vehicle use on the State Forest. It may be within the authority of CDF to allow this use, subject to limitations. To date, the Department has declined to allow off-road vehicle use on the State Forest due to anticipation of substantial usage of an uncontrollable nature. It is currently illegal to operate unlicensed motor vehicles on the State Forest, yet substantial usage occurs. Most of this use is perceived as local, since access to the Forest is generally made from rural residential neighborhoods, not from areas utilized by visitors to the area. If this use were legalized, it is anticipated that a substantial increase in activity would occur, originating from both local and regional areas. Resource damage would be very difficult to prevent, given

the staffing levels dedicated to law enforcement on the Forest. A number of individuals have also requested that off-road vehicle use not be allowed.

**Target Shooting** It has been requested that the Forest establish formal shooting areas or “ranges” for recreational shooters. The Department has declined to establish these areas due to concern regarding potential for impacts to result from concentrated shooting activity. In addition, there are very few areas that are both easily accessible and well away from permanent residences where noise and safety are major concerns. Other individuals have expressed both safety and noise concerns, requesting that shooting not be allowed in areas of the Forest, or in the Forest as a whole.

#### Management Adjacent to Mendocino Woodlands

The Mendocino Woodlands camps are utilized by a large number of local and regional residents. There has been long-standing concern that management of timber stands within the legislatively established special treatment area (STA) would reduce the recreational value of the park. Due partially to these concerns, only one timber harvest has occurred within the STA during the past planning period. A large portion of the STA has been designated as an area for demonstration of the development of late seral habitat, where timber management will be tightly constrained to maintain pleasing forest views. Recently, a memorandum of understanding between the Department of Forestry and Fire Protection and the Department of Parks and Recreation was signed. Many of the provisions of the memorandum are intended to protect the use and values associated with the Mendocino Woodlands camp area. Two limited timber harvests are planned to occur in the STA within the planning period. One is the continuation of a selective harvest demonstration for non-industrial timberland owners, and the second is a thinning demonstration in the upper area of Thompson Gulch designed to eventually produce late seral habitat with a large average tree size. The majority of the Thompson Gulch demonstration will be located outside of the STA. The Department will maintain ongoing communication and cooperation with State Parks to ensure that management of JDSF adjacent to Woodlands State Park and the recently established Big River Unit of Mendocino Headlands State Park retains a high level of compatibility with State Park values.